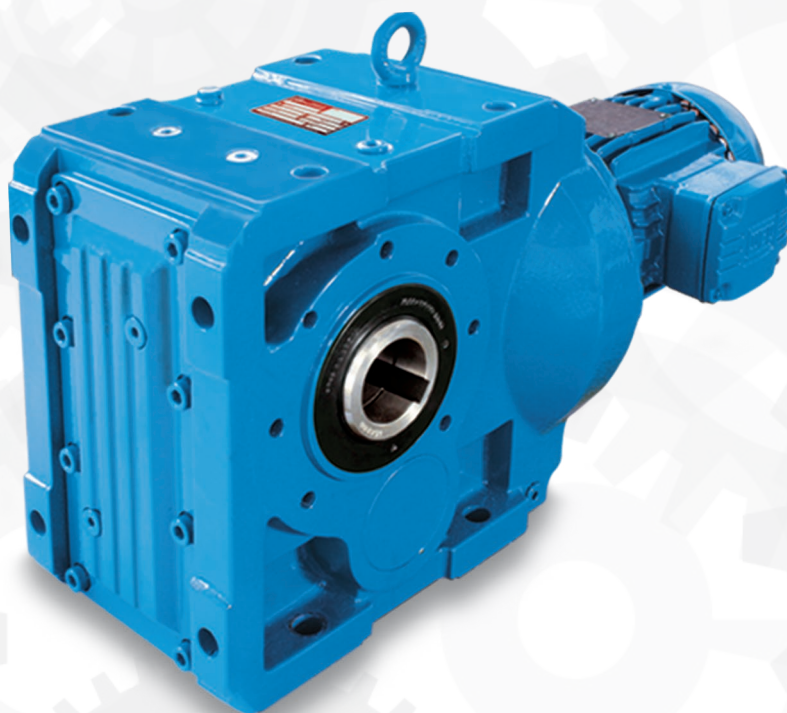
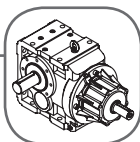


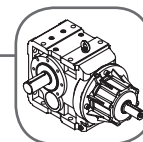
CONIMAX

Motorreductores e Redutores de Engrenagens Cônicas





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Motorredutores

Os motorredutores CONIMAX são de estilo compacto, de construção sólida e estão disponíveis com reduções triplas, quintuplas e sextuplas; a lubrificação é por imersão em banho de óleo.

São fabricadas com engrenagens cilíndricas de dentes helicoidais e engrenagens cônicas espiral. O motor de construção compacta, com refrigeração através de ventilador, é acoplado à carcaça do redutor por intermédio do flange com ajuste preciso, sendo o flange do motor a parede divisória entre o motor e os pares de engrenagens.

Redutores

As carcaças são fabricadas em ferro fundido cinzento de alta qualidade para que se obtenha uma usinagem precisa sem deformações posteriores.

Os pares de engrenagens cônicas são fabricados em aço liga, com dentes em espiral, sendo após o tratamento térmico lapidados, objetivando um perfeito contato e funcionamento silencioso.

As engrenagens e pinhões são fabricados em aço liga de alta qualidade e seus dentes são helicoidais com ângulo de pressão a 20° que, após operação de desbaste sofrem tratamento termoquímico de cementação. Posteriormente, os flancos dos dentes são retificados pelo processo de geração, garantindo um funcionamento silencioso. Os furos e faces das engrenagens, encostos e assentos de rolamentos e retentores são retificados garantindo um engrenamento preciso.

Os eixos são fabricados em aço carbono usado na construção de máquinas com os encostos e assentos dos rolamentos / retentores retificados.

Os rolamentos utilizados nas unidades são de precisão e resistentes a cargas radiais e axiais, dimensionados para uma longa vida.

Motores Elétricos

Os motores elétricos são trifásicos, assíncronos de indução com rotor de gaiola de esquilo, totalmente fechado com ventilação externa (TFVE).

As carcaças são conforme norma ABNT-NBR 5432, e fornecidas com grau de proteção IP55 (protegidos contra o acúmulo de poeira nociva e jatos d'água de qualquer direção), nas tensões de 220/380 ou 220/380/440/760 V e frequência de 60 Hz.

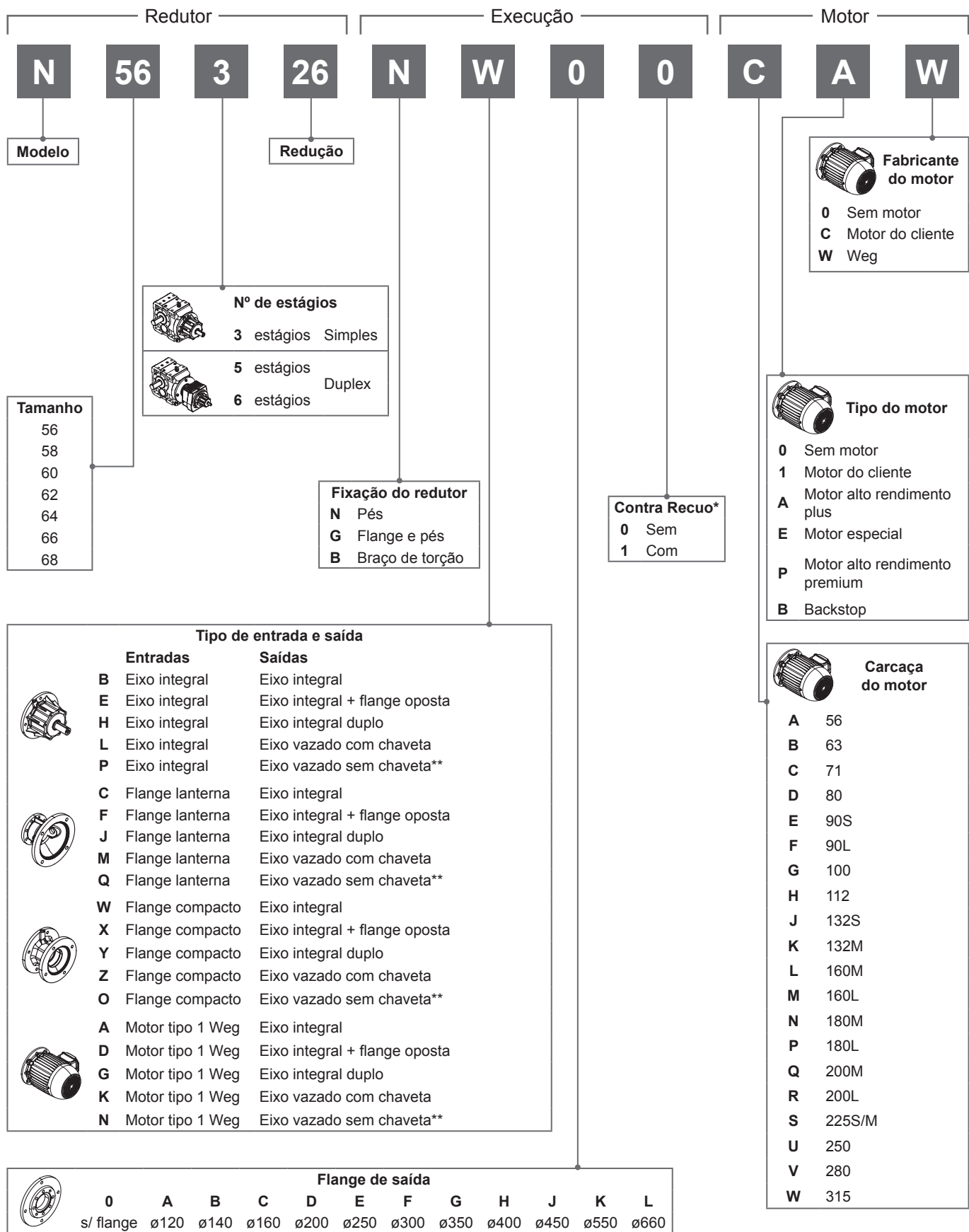
Motofreio

O motofreio consiste de um motor de indução assíncrono trifásico, acoplado a um freio monodisco, formando uma unidade integral compacta e robusta.

O freio possui poucas partes móveis, assegurando longa duração com o mínimo de manutenção. A dupla face de encosto com o disco de frenagem forma uma grande superfície de atrito, que proporciona uma pressão específica adequada sobre os elementos de fricção evitando o aquecimento exagerado, mantendo assim o mínimo de desgaste. Além disso, o freio é resfriado pela própria ventilação do motor. A bobina de acionamento do eletroímã é protegido com resina epóxi, funciona com tensões contínuas obtidas através de uma ponte retificadora, alimentada com tensão alternada de 220, 380 ou 440 V, obtida dos terminais do motor ou de uma fonte independente.

A ponte retificadora é composta por 4 diodos retificadores de silício e 2 varistores que imprimem picos indesejáveis de tensão permitindo um rápido desligamento da corrente.

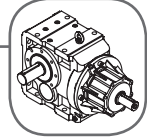
As pontes podem ser fornecidas em 220, 380 ou 440 V; quando não especificadas são fornecidas em 220 V.



2

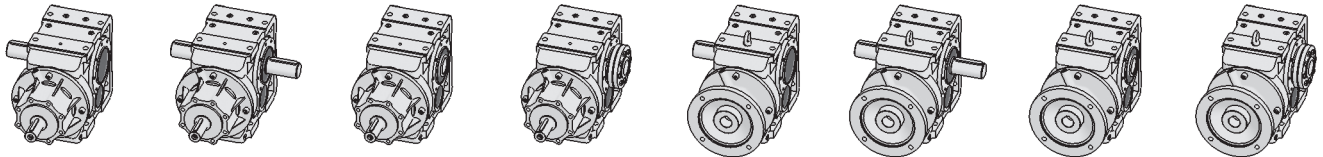
* Para motor Weg Tipo 1 o contra recuo será instalado na traseira do motor elétrico, somente para carcaças 90 até 250.

**Eixo vazado sem chaveta. Opções: disco de contração ou Easy lock

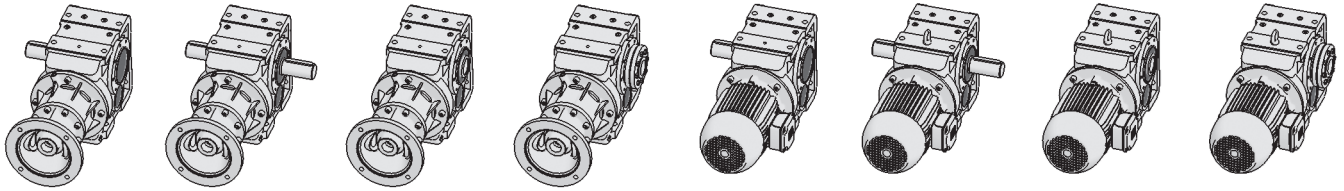


3

Fixação por Pés

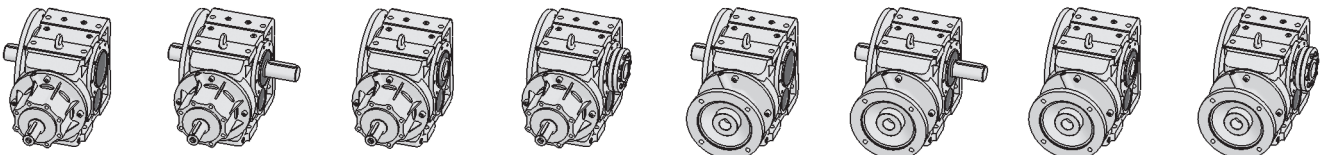


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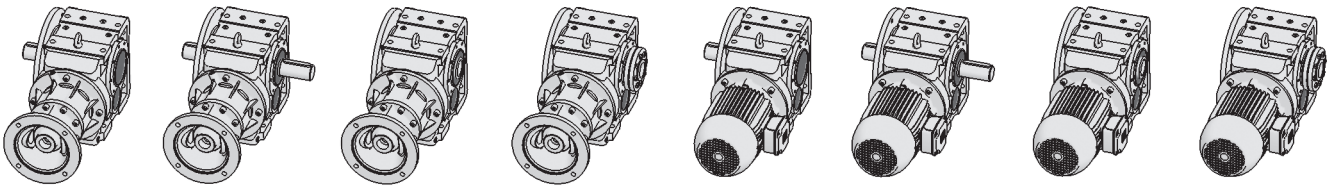


NC00 NJ00 NM00 NQ00 NA00 NG00 NK00 NN00

Fixação por Flange e Pés

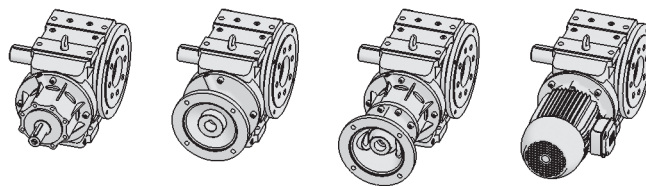


GB_0 GH_0 GL_0 GP_0 GW_0 GY_0 GZ_0 GO_0



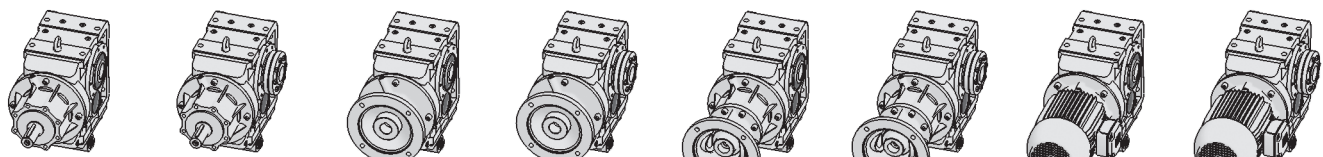
GC_0 GJ_0 GM_0 GQ_0 GA_0 GG_0 GK_0 GN_0

Fixação por Flange Oposta

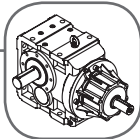


GE_0 GX_0 GF_0 GD_0

Fixação por Braço de Torção

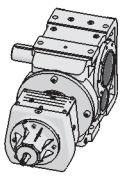


BL00 BP00 BZ00 BO00 BM00 BQ00 BK00 BN00

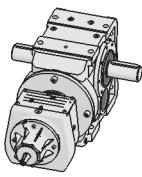


Execução - Programa padrão - duplex

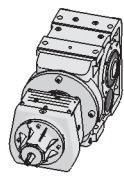
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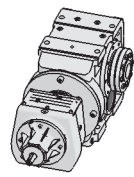
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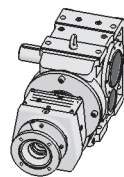
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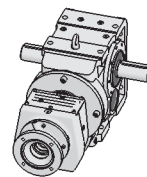
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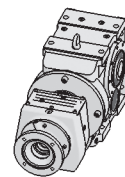
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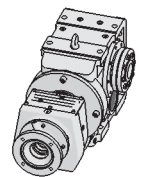
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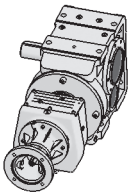
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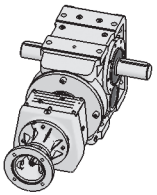
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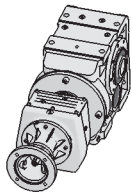
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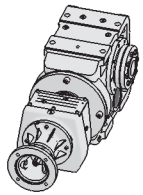
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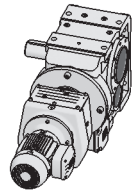
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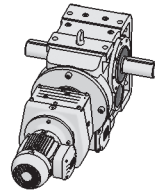
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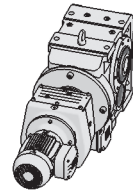
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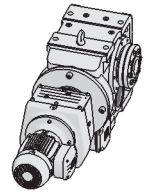
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NG00



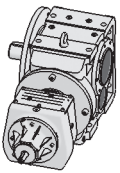
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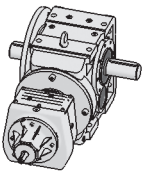
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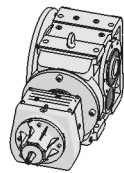
Fixação por Flange e Pés



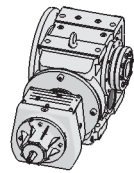
GB_0



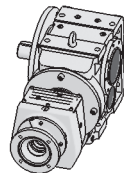
GH_0



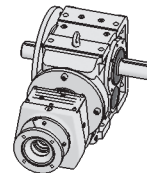
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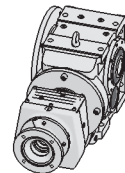
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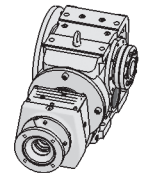
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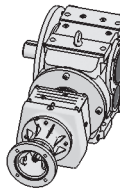
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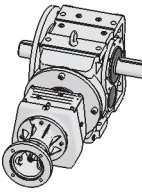
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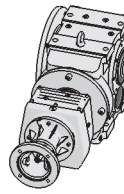
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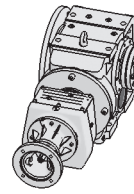
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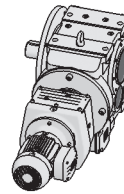
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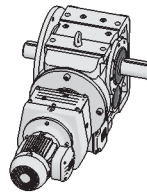
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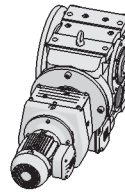
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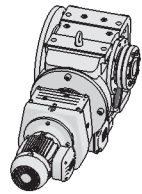
GA_0



GG_0

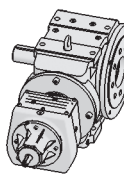


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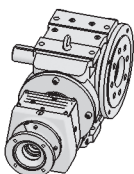


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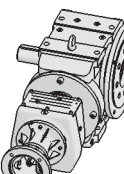
Fixação por Flange Oposta



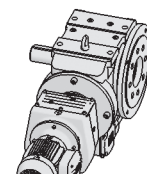
GE_0



GX_0

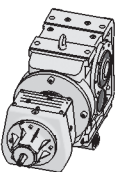


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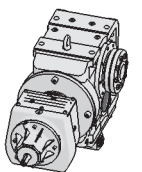


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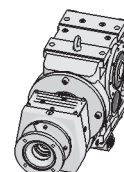
Fixação por Braço de Torção



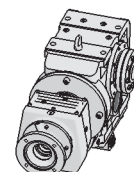
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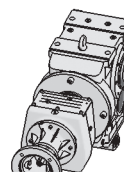
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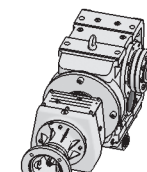
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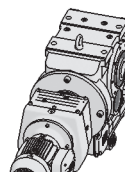
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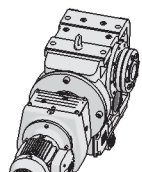
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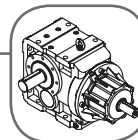
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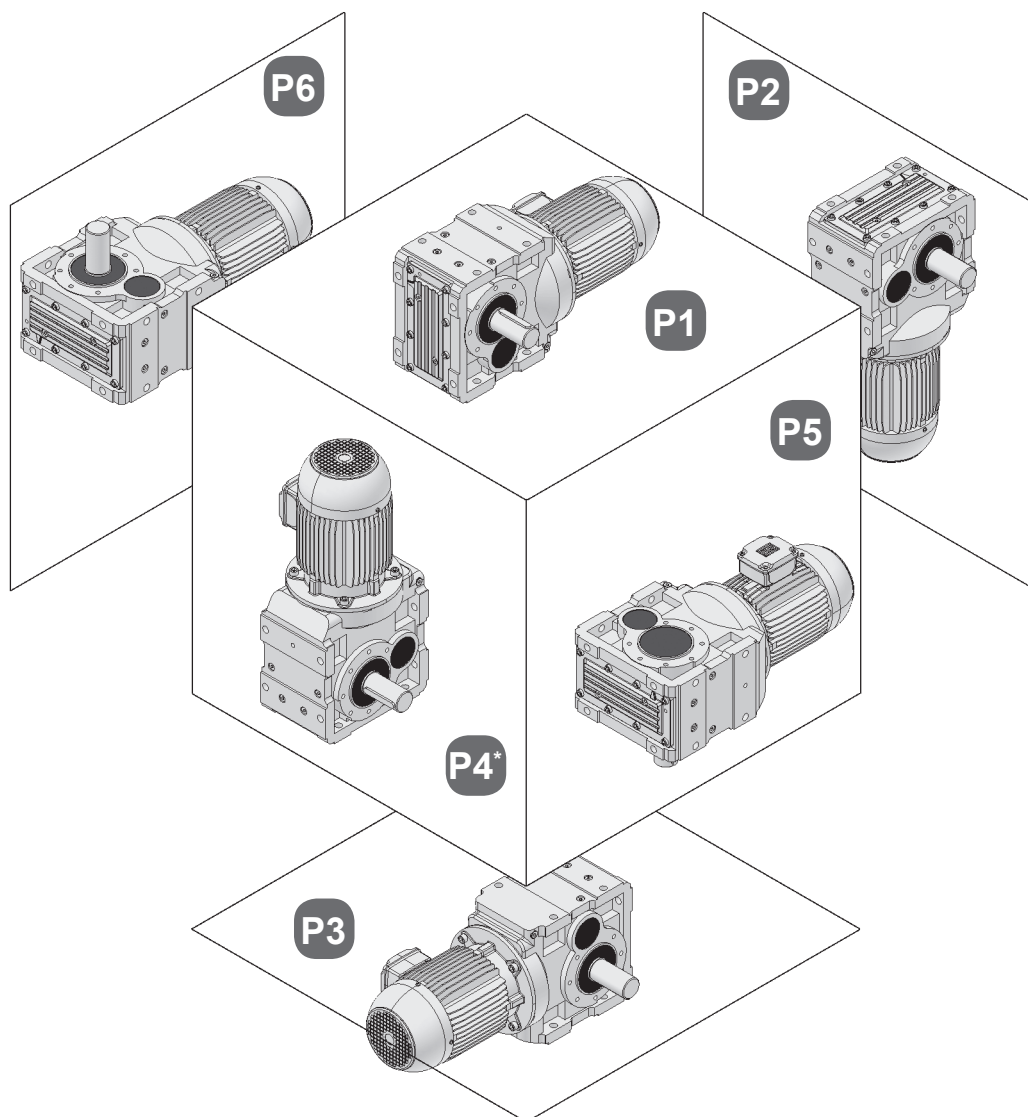
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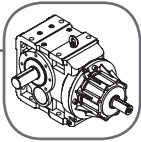
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4

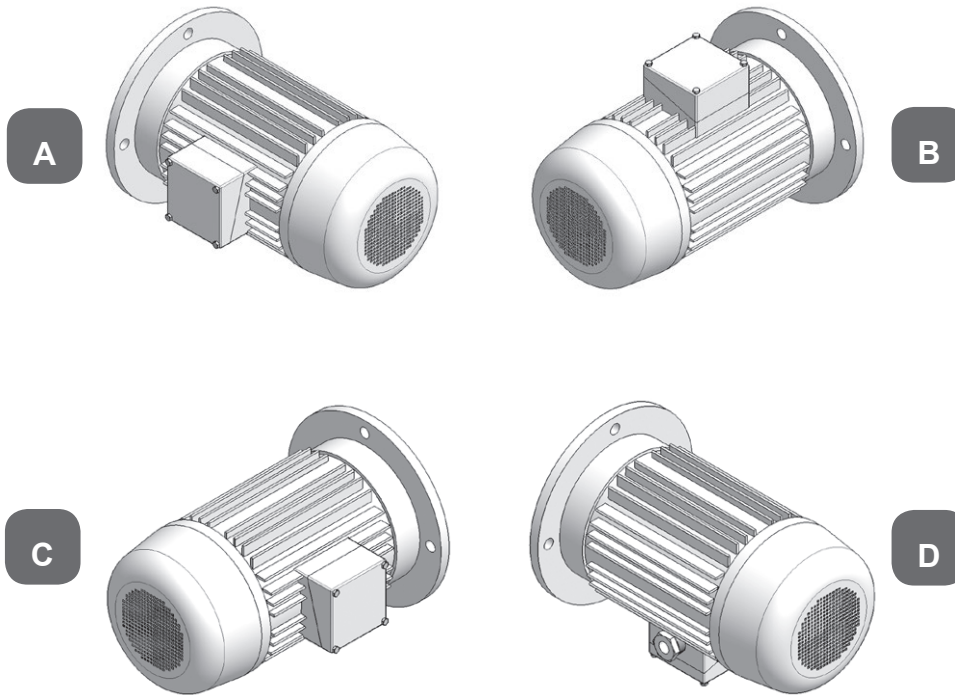


* Para motorreductores na posição de trabalho P4 (motores com forma construtiva V1 ou V18), recomendamos a utilização de motor elétrico com proteção defletora (calota), principalmente quando expostos ao tempo.



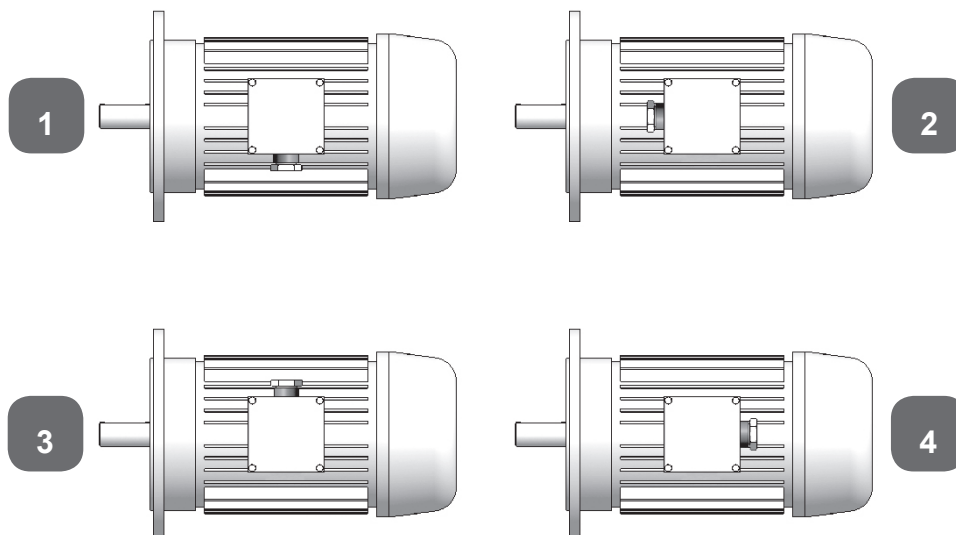
Posição para caixa / cabos do motor

Posição da caixa de ligação

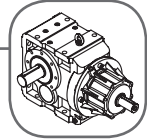


A caixa de ligação poderá ser montada conforme posições **A**, **B**, **C** e **D** olhando pela traseira do motor. Para a posição da caixa de ligação é considerado como referência a posição de trabalho P1 do redutor.

Posição da entrada dos cabos do motor

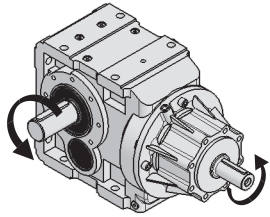


Os cabos de conexões serão disponíveis nas posições **1**, **2**, **3** e **4**, olhando de frente para a caixa de ligação.
Posição caixa / cabos de ligação preferencial: A1 (itens mantidos em estoque).

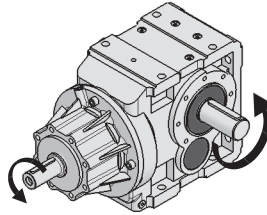
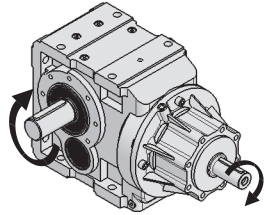
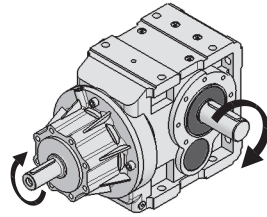


3 estágios

Lado 1

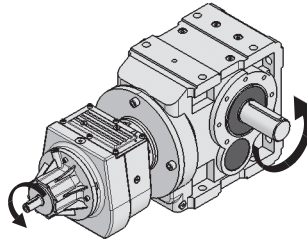
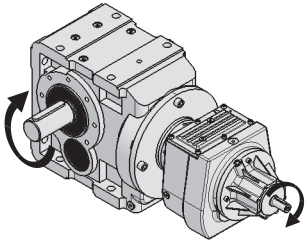
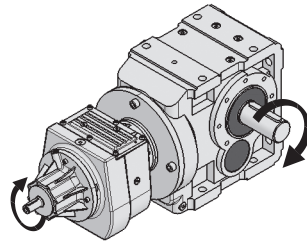
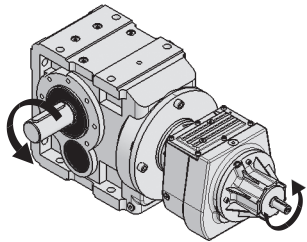


Lado 2

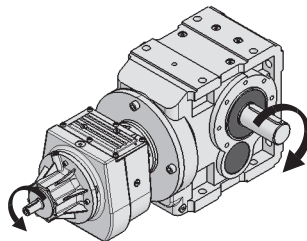
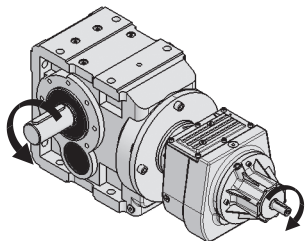
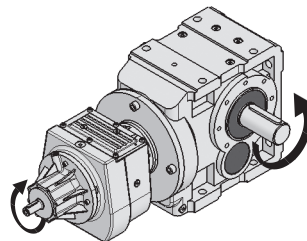
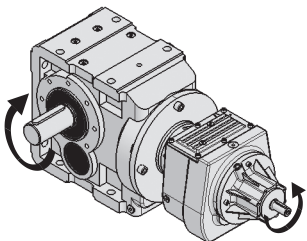


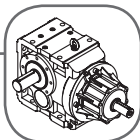
6

5 estágios



6 estágios





A seleção de um tipo adequado e a determinação do tamanho do Motorreductor ou Redutor mais apropriado sempre poderão ser feitas com segurança, quando se levam devidamente em consideração todas as influências as quais o Motorreductor ou Redutor ficará exposto durante seu funcionamento.

A observância das informações que se seguem fará com que se evitem erros e consultas repetidas na escolha, além de assegurar uma alta segurança operacional e uma longa vida útil do acionamento selecionado.

Os Motorredutores e Redutores **CONIMAX** são calculados para um fator de serviço igual a 1 ($fs=1$), isto é, um funcionamento livre de choques e um tempo de funcionamento diário de 10 horas. Para outras condições de trabalho necessitamos do fator de serviço "fa" de acordo com o indicado na tabela 1 da página 9; estes fatores de serviço são para um acionamento com até 6 partidas por hora. Com mais de 6 partidas, consultar a WEG-CESTARI.

Todos os Motorredutores e Redutores nas tabelas de potências trazem indicações das forças radiais e axiais admissíveis. Estas cargas são para condições normais de catálogo, considerando-se que a carga esteja atuando sobre o ponto central do comprimento da ponta do eixo. Outras informações sobre as forças externas admissíveis constam nas páginas 10 e 11.

Os momentos de inércia dos Redutores são relativamente pequenos em comparação com os momentos de inércia dos Motores elétricos, sendo portanto desprezíveis na maioria dos casos.

Os valores de rotação de saída (n_2) dos Motorredutores indicados nas tabelas de potências são aproximados, estes dependem do tamanho do Motor e da carga relativa que incide sobre o mesmo, bem como da rede elétrica. Variações de até $\pm 4\%$ são admissíveis.

1) Determinação do tamanho do motorreductor ou reductor

I. Escolha do Motorreductor:

Conhecendo-se a potência necessária de acionamento "Pa" (kW) e a rotação de saída do Motorreductor "n2" (rpm) e com o fator de serviço "fa" obtido na tabela 1 da página 9, podemos escolher o Motorreductor diretamente nas tabelas de potência das páginas 12 até 77, cuidando-se para que:

Fator de serviço do reductor = $fs \geq fa$

II. Escolha do reductor:

Com a potência necessária de acionamento "Pa" (kW) e a rotação de saída do Redutor "n2" (rpm), determinamos o momento torçor de acionamento "Ma" (Nm) de acordo com a equação:

$$Ma = 9550 \cdot \frac{Pa}{n_2} \text{ (Nm)}$$

E de conformidade com a tabela 1 da página 9, aplica-se o fator de serviço "fa", para obtermos o momento torçor equivalente de acionamento "Me" (Nm):

$$Me = Ma \cdot fa$$

Para a seleção do Redutor devemos encontrar nas tabelas de potência das páginas 12 até 77, um tamanho de Redutor que atenda a condição:

Momento torçor máx. admissível do Redutor = $M_{max} \geq Me$

A rotação de entrada do Redutor "n1" (rpm) é obtida pela equação:

$$n_1 = n_2 \cdot itot$$

itot = redução total do Redutor

2) Verificação da Potência Térmica

É necessário verificar a Potência Térmica admissível do reductor ou motorreductor, conforme as fórmulas a seguir:

$$PT = PTG \cdot fe \cdot fb \cdot fc \cdot ft \cdot fo$$

Onde:

- PT = Potência térmica admissível corrigida
- PTG = Potência térmica natural (ver tabela 1)
- fe = Fator temperatura ambiente (ver tabela 2)
- fb = Fator duração de operação (ver tabela 2)
- fc = Fator de ambiente (ver tabela 2)
- ft = Fator máxima temperatura do óleo (ver tabela 2)
- fo = Fator de agitação do óleo (ver tabela 2)

Sendo que a potência térmica corrigida (PT) deve ser maior que a potência de acionamento (Pa).

$$Pa \leq PT$$

Caso não seja atendida essa condição, deverá ser aplicado sistema de refrigeração complementar por Trocador de Calor (sob consulta).

Tabela 1 - Potência Térmica Natural (PTG) - em kW

| Estágios | Tamanho | | | | | | |
|----------|---------|----|----|----|----|----|-----|
| | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
| 3 | 16 | 23 | 35 | 50 | 66 | 89 | 115 |

Tabela 2 - Fatores para Potência Térmica

| fe - Fator para temperatura ambiente | | | | | | | |
|--------------------------------------|------|------|------|------|------|------|------|
| Temperatura ambiente em °C | 10° | 18° | 25° | 30° | 40° | 43° | 50° |
| Fator fe | 1,15 | 1,07 | 1,00 | 0,93 | 0,83 | 0,75 | 0,67 |

| fb - Fator de duração da operação | | | | | |
|-----------------------------------|----------------|------|------|------|------|
| % Tempo de operação/hora | 100 (contínuo) | 80 | 70 | 40 | 20 |
| Fator fb | 1,00 | 1,05 | 1,15 | 1,35 | 1,80 |

| fc - Fator de ambiente | |
|--|----------|
| Tipos de ambiente | Fator fc |
| Área aberta, fluxo de ar > 3,7m/s | 1,40 |
| Fechado em área grande, fluxo de ar > 1,4m/s | 1,00 |
| Fechado com pouco espaço, fluxo de ar > 0,5m/s | 0,75 |

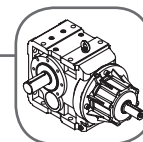
| ft - Fator de máxima temperatura do óleo | | | |
|--|-------|-------|--------|
| Máxima temperatura do óleo | 85° C | 95° C | 100° C |
| Fator ft | 0,81 | 1,00 | 1,13 |

| fo - Fator de agitação do óleo | | | | | |
|--------------------------------|--------------------------------|------|------|------|------|
| Posição de Trabalho | Rotação de entrada do reductor | | | | |
| | 3500 | 1750 | 1150 | 870 | 500 |
| P1 / P4 | 1,00 | 1,00 | 1,00 | 1,00 | 1,00 |
| P3 / P5 / P6 | 0,63 | 0,86 | 0,95 | 0,97 | 1,00 |
| P2 | 0,50 | 0,79 | 0,91 | 0,95 | 1,00 |

Rotações intermediárias, entre 500 e 3500rpm, podem ser obtidas por interpolação simples.

Observações:

- 1) Para temperatura ambiente acima de 40° C, é recomendado o uso de óleo sintético (ver catálogo)
- 2) Para temperatura ambiente abaixo de 8° C, é recomendado o uso de óleo sintético (sob consulta)
- 3) Para temperatura do óleo superior a 95° C, é necessário o uso de óleo sintético (sob consulta)
- 4) Rotação máxima admissível na entrada do reductor, ver tabelas de características técnicas



3) Escolha da posição de trabalho

De acordo com a página 5.

4) Escolha da execução

De acordo com a coluna execução nas tabelas de dimensões das páginas 95 a 166 para Motorredutores e Redutores.

5) Escolha da posição da caixa de ligação e de entrada dos cabos do motor

De acordo com a página 6.

6) Verificação dos esforços externos

Quando for montado um elemento de transmissão (polias, engrenagens, pinhões de corrente, etc.) no eixo do Motorreductor ou Redutor devemos verificar a máxima carga externa radial e axial admissível. (ver pág. 10 e 11)

7) Denominação do redutor

De acordo com a página 3.

8) Exemplo

| | |
|--|--------------------------------|
| MOTORREDUTOR | C56331 NW00 CAW 1 A1 (pág. 30) |
| Redução | 34,2 |
| Tamanho do Redutor | 52 |
| Rotação de saída | 51,2 rpm |
| Fator de serviço | 1,43 |
| Código do Motor | CAW (carcaça 71, pág. 94) |
| Potência do Motor | 0.75 kW |
| Execução | NW00 |
| Posição de trabalho | 1 (página 5) |
| Posição da caixa de ligação e entrada dos cabos do Motor | A1 (página 6) |

1) Informações para seleção dos motorredutores e redutores

- a. Tipo de máquina a ser acionada
Potência nominal em kW, Rotação em rpm
Redução total desejada
- b. Momento de inércia "J" a serem acionados
Tipo de funcionamento (uniforme, com choques moderados ou fortes)
- c. Tempo de funcionamento diário em horas
Ciclos de trabalho
- d. Condições ambientais
Temperatura ambiente, humidade, gases corrosivos, ambientes sujos, etc.
- e. Força radial e axial externas (ver páginas 10 e 11)
- f. Partidas por horas
- g. Posição de trabalho (ver página 5)
- h. Execução
Conforme coluna execução nas tabelas de dimensões
- i. Tensão elétrica em volts
- j. Posição da caixa de ligação e de entrada dos cabos do Motor (ver página 6)
- k. Tipos e dimensões dos elementos montados no eixo do Redutor: polia, engrenagens, pinhões de corrente, etc.

2) Exemplo de cálculo e seleção:

Selecionar um motorreductor **CONIMAX** para acionamento de um Transportador de Correia para minérios.

Dados conhecidos

- Potência de acionamento
- Rotação de saída desejada
- Período de funcionamento

Pa = 9,2kW
n2=50 rpm
t = 24 horas,
serviço contínuo
40° C
95° C
Área externa,
ventilada
P1

- Temperatura ambiente
- Máx. temperatura do óleo desejada
- Ambiente

- Posição de trabalho

Solução

Na tabela 3 obtemos o Fator de Serviço:

| | |
|---------------------------|--------------------------|
| - Equipamento acionado: | Transportador de Correia |
| - Classe de carga: | Choques moderados |
| - Tempo de funcionamento: | 24 horas |
| - Fator de serviço: | fa = 1,5 |

Conforme a tabela de potência Pa = 9,2kW da pág. 48 selecionamos para a condição fs > fa o motorreductor N60331 ____ KNW, que nos fornece:

| | |
|-----------------------------|----------------|
| Tamanho do redutor | 60 |
| Rotação de saída | n2 = 50,7 rpm |
| Potência do motor | Pa = 9,2kW |
| Código do motor | KAW |
| Fator de serviço do redutor | fs = 1,73 > fa |

É necessário verificar a potência térmica do redutor.

Condição: Pa < PT

Onde: PT = PTG.fe.fb.fc.ft.fo

| | |
|-------|--|
| PA = | 9,2kW |
| PTG = | 35kW (vide tabela 1 – pág11) |
| Fe = | 0,83 (temperatura ambiente 40° C) |
| Fb = | 1,00 (serviço contínuo) |
| Fc = | 1,40 (ambiente aberto, fluxo de > 3,7 m/s) |
| Ft = | 1,00 (temperatura máxima do óleo 95° C) |
| Fo = | 1,00 (posição de trabalho P1, motor de 1750 rpm) |

$$9,2 < 35 \times 0,83 \times 1,00 \times 1,40 \times 1,00 \times 1,00$$

$$9,2 < 40,67 \text{ kW} \quad : \quad \text{OK}$$

Portanto, essa aplicação não necessita de sistema de refrigeração complementar.

Para uma seleção completa do Motorreductor deve-se determinar a execução, posição da caixa de ligação e entrada dos cabos do motor.

Exemplo de especificação completa

| | |
|-------------------------------|---------------|
| Código: | N60331NA00KAW |
| Posição de trabalho: | P1 |
| Posição da caixa de ligação: | A |
| Posição da entrada dos cabos: | 1 |

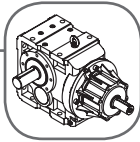


Tabela 3

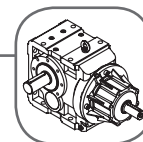
Fator de serviço (fa)

U Cargas uniformes
M Choques moderados
F Choques fortes

| Aplicação | Classe de carga | Aplicação | Classe de carga | Aplicação | Classe de carga |
|--|-----------------|--|-----------------|---|-----------------|
| Agitadores | | Dragas | | Máquinas operatrizes | |
| Líquidos puros | U | Guinchos, transportadores e bombas | M | Acionamento principal - Cargas pesadas | F |
| Líquidos de densidade consistente | M | Cabeçotes rotativos e peneiras | F | Acionamento principal - Cargas uniformes | M |
| Líquidos de densidade variável | M | Esteira de translação | F | Acionamento auxiliar | U |
| Alimentadores | | Elevadores | | Rosqueadoras | F |
| Alimentadores de rosca | M | Caçambas - cargas uniformes | U | Misturadores | |
| Transportadores (esteira e correia) | M | Caçambas - cargas pesadas | F | Betoneiras | M |
| Ascensores | | Elevadores de carga | M | Borracha | F |
| Sorilhos de elevação | F | Elevadores de canecas carregadas normalmente | U | Polpa de papel | M |
| Máquinas de extração | F | Elevadores de canecas muito carregadas | M | Fluidos com substâncias sólidas | M |
| Monta - cargas solicitadas normalmente | M | Elevadores para pessoas** | ** | Fluidos limpos | U |
| Monta - cargas solicitadas fortemente | F | Engarrafadoras e Enlatadoras | | Moinhos Rotativos | |
| Monta - cargas inclinadas | F | | | De bolas e rolos | F |
| Bobinadoras | | Fornos Rotativos | | De martelos | F |
| Metal | M | | | Papel | |
| Papel | M | Geradores | | Agitadores misturadores, alvejadores, batedores, despalpadores, calandras e prensas | M |
| Têxtil | U | Alternadores | U | Supercalandras* | * |
| Bombas | | Conversores de frequência | F | Descascadores hidráulicos e mecânicos | M |
| Centrífugas - liq. de baixa viscosidade | U | Guinchos e Guindastes | | Tambores descascadores | F |
| Centrífugas - liq. de alta viscosidade | M | Elevação moderada | M | Esticadores de feltro | M |
| Dupla ação, multicilíndricas | M | Elevação pesada | F | Secadores | F |
| Recíprocos de descarga livre | M | Giro | M | Peneiras | |
| Rotativas a engrenagens | U | Translação | F | Peneiras horizontais | M |
| Pistão submerso | F | Indústrias Açucareiras | | Peneiras para filtragem do ar | U |
| Pressão | F | Moendas* | * | Peneiras rotativas para pedras e areia | M |
| Borracha e Plástico | | Facas de cana* | * | Pontes rolantes | |
| Calandras* | * | Cristalizadores | F | Acionamento do carro e da ponte | F |
| Equipamentos de laboratório | M | Indústrias Alimentícias | | Acionamento do guincho | U |
| Extrusoras* | * | Cozinhadores de cereais | M | Saneamento | |
| Laminadores | F | Misturadores de massa, moedores de carne, picadores | M | Aeradores | F |
| Máquinas de placas | M | Centrífugas ligeiras | M | Alimentadores, bombas, decantadores | U |
| Máquinas de tubo e peneiras | M | Centrífugas pesadas | F | Filtros mexedores e peneiras | M |
| Moinhos cilíndricos 2 em linha* | * | Indústrias Madeireiras | | Clarificadores | U |
| Moinhos cilíndricos 3 em linha* | * | Alimentadores de plaina | M | Secadores e resfriadores rotativos | |
| Refinadores* | * | Serras, tambores despalpadores, transportadores de toras | F | Produtos alimentícios, Bagaça | M |
| Trituradores e misturadores* | * | Máquinas p/ trabalhar madeira em geral | M | Torres de refrigeração** | |
| Britadores | | Indústrias Metalúrgicas | | | |
| Pedras e minerais | F | Cortadores de chapa rotativas | M | Transportadores | |
| Cerâmica | | Cortadores de chapa de faca | F | Caçamba, correia, corrente, esteira, rosca: | |
| Amassadores de barro | M | Viradeiras | F | - Cargas uniformes | U |
| Extrusoras e misturadores | M | Trefilas | M | - Cargas pesadas e intermitentes | M |
| Moinhos de barro* | * | Desempenadeiras a rolos | F | Transmissões | |
| Prensas de tijolos e ladrilhos | F | Enroladores de fitas ou bobinadoras de chapas | F | Transmissões ligeiras | U |
| Cimento | | Laminadores | F | Transmissões para acionamentos de máquinas ferramentas | M |
| Britadores de mandíbulas | F | Máquinas de soldar tubos | F | Ventiladores | |
| Moinhos rotativos* | * | Indústrias de óleo | | Centrífugas | U |
| Moinhos de bolas e rolos* | * | Prensas - filtros de parafina | M | Para minas | F |
| Classificadores Rotativos | | Bombas de pipe-line | M | Para torres de refrigeração | M |
| | | Máquinas de refinação | M | Tempo máximo de funcionamento diário | |
| Compressores | | Instalações de perfuradores rotativos | F | | |
| Centrífugos | U | Indústrias têxteis | | | |
| Êmbolo giratório | M | Calandras, cardas, filatórios, retorcedeiras, maçoqueiras e máquinas de tinturaria | M | Até 3 horas | 0,8 1,0 1,5 |
| Pistão (um cilindro) | F | Lavanderias | | Até 10 horas | 1,0 1,25 1,75 |
| Pistão (2 cilindros) coeficiente de irregularidade < 1:100 | F | Secadores rotativos | M | 24 horas | 1,25 1,5 2,0 |
| Destilarias | | Máquinas de lavar roupa | M | | |
| Cozinhadores - serviço contínuo | U | Acionamento de grelhas móveis | F | | |
| Tachas de fermentação- serviço contínuo | U | | | | |
| Misturadores | U | | | | |

*Fator de serviço mínimo recomendado: 2,00

** Para torres de refrigeração e elevadores de pessoas, deve ser analisado redutor específico.

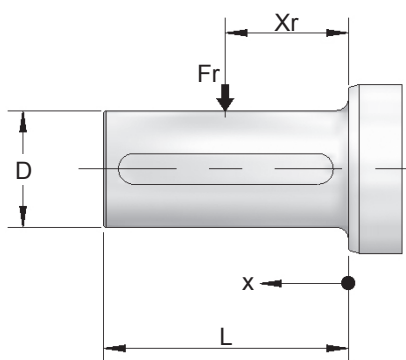


Quando a transmissão de força for através de acoplamento elástico, não ocorrerá força radial e axial no eixo do redutor. Entretanto, se a transmissão for por intermédio de elementos montados no eixo (engrenagens, pinhões de corrente ou polias), será constatado a existência de cargas radiais e/ou axiais.

Usando as tabelas de Potências (motorredutores - página 15 até 59) ou Características Técnicas (redutores - página 61 até 70) obtém-se as cargas radiais admissíveis no eixo do redutor. Forças axiais até 50% das forças radiais admissíveis podem ser absorvidas simultaneamente com as forças radiais.

Os valores das forças radiais indicado nas tabelas referem-se a carga aplicada no centro do comprimento "L" (figura abaixo). Quando a distância de aplicação "x" for diferente de "Xr" deverá haver um recálculo conforme fórmulas e tabelas abaixo; se a carga radial for aplicada a uma distância "x" menor que "Xr", e o seu valor igual ou menor que o admissível, não haverá necessidade de recálculo.

Determinação da força radial admissível no ponto x: F(x)



a) F1 (x) baseada no tempo de vida do rolamento:

$$F1(x) = \frac{k}{m + x} \cdot Fr \quad [N]$$

b) F2 (x) baseada em flexão máxima do eixo:

$$F2(x) = \frac{1000 \cdot n}{p + x} \quad [N]$$

Tabela 4

Carga radial (Fr) em N - Eixo de entrada (3 estágios)

| Redução | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
|------------|------|------|------|------|------|------|-------|
| >6,3 a 9 | 1200 | 1500 | 1800 | 2200 | 3000 | 4200 | 5000 |
| >9 a 18 | 1600 | 2200 | 2500 | 3500 | 4000 | 5000 | 5400 |
| >18 a 35,5 | 1800 | 2400 | 3000 | 4000 | 5200 | 5800 | 7000 |
| >35,5 a 90 | 2000 | 2600 | 3500 | 5000 | 6300 | 6500 | 9000 |
| >90 a 180 | 2200 | 2800 | 4200 | 6000 | 7800 | 8000 | 15000 |

Tabela 5

Valores para recálculo de cargas radiais no eixo de saída

| Tamanho | k | m | n | p | D | L |
|---------|-----|-----|-------|----|-----|-----|
| 56 | 180 | 140 | 650 | 25 | 40 | 80 |
| 58 | 225 | 175 | 1170 | 28 | 50 | 100 |
| 60 | 252 | 192 | 2430 | 30 | 60 | 120 |
| 62 | 300 | 230 | 4080 | 32 | 70 | 140 |
| 64 | 350 | 295 | 8645 | 48 | 90 | 170 |
| 66 | 380 | 275 | 12480 | 55 | 110 | 210 |
| 68 | 410 | 305 | 16500 | 60 | 120 | 210 |

Tabela 6

Valores para recálculo de cargas radiais no eixo de entrada

| Tamanho | k | m | n | p | D | L |
|---------|-----|-----|-------|----|----|-----|
| 56 | 170 | 140 | 121 | 25 | 28 | 60 |
| 58 | 210 | 170 | 190,4 | 28 | 38 | 80 |
| 60 | 245 | 205 | 294 | 30 | 42 | 80 |
| 62 | 280 | 225 | 522 | 32 | 55 | 110 |
| 64 | 290 | 235 | 702 | 35 | 55 | 110 |
| 66 | 330 | 260 | 880 | 40 | 70 | 140 |
| 68 | 370 | 300 | 1690 | 42 | 70 | 140 |

* Força radial na entrada pode ser aumentada considerando mancal reforçado - consultar.

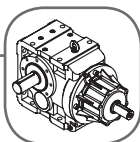


Tabela 7

Carga radial (Fr) em N - Eixo de entrada (5 e 6 estágios)

| Estágios | 56 | 58, 60 | 62, 64 | 66 | 68 |
|----------|------|--------|--------|------|------|
| 5 | 900 | 1000 | 1600 | 1200 | 1800 |
| 6 | 1800 | 1800 | 2200 | 1800 | 3000 |

Tabela 8

Valores para recálculo de cargas radiais no eixo de entrada para redutores duplex

| Tamanho | k | m | n | p | D | L |
|------------|-----|-----|------|----|----|-----|
| 56 | 130 | 110 | 72 | 20 | 19 | 40 |
| 58, 60 | 150 | 130 | 75,6 | 22 | 19 | 40 |
| 62, 64, 66 | 170 | 140 | 121 | 25 | 28 | 60 |
| 685, 686 | 254 | 205 | 294 | 30 | 42 | 80 |
| 684 | 280 | 225 | 522 | 32 | 55 | 110 |

Diâmetro mínimo admissível para o elemento de transmissão montado no eixo

9

Em conjunto com a carga radial obtida, o menor diâmetro admissível para o elemento de transmissão (engrenagens, pinhões de corrente ou polias) pode ser calculado usando a seguinte fórmula:

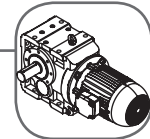
Valores para o fator Kr

| | |
|--|------|
| Correia plana com esticador | 2,5 |
| Correia plana sem esticador | 5 |
| Correia trapezoidal sem esticador | 1,75 |
| Corrente de rolos ou corrente silenciosa | 1,4 |
| Engrenagens | 1,15 |

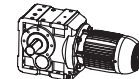
$$D_{min} = \frac{2.000 \cdot M_c}{F_r} \cdot K_r$$

Onde

- D_{min} = Diâmetro mínimo admissível (mm)
M_c = Momento a ser transmitido (Nm)
F_r = Carga radial admissível no eixo do redutor (N)
K_r = Fator adicional



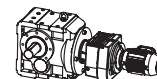
0,12 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|--------|--------|--------|---------|
| 239 | 7,31 | 84,01 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 84,29 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 84,87 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 84,53 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 84,30 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 83,71 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 84,93 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 72,92 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 63,05 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 53,31 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 41,95 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 37,61 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 34,78 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 28,77 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 24,87 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 21,03 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 18,75 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 15,82 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 14,72 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 13,11 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 11,71 | 10000 | N56341 | 73 a 75 |
| 14,7 | 119 | 10,49 | 10000 | N56342 | 73 a 75 |
| 12,8 | 136 | 9,19 | 10000 | N56343 | 73 a 75 |
| 11,8 | 148 | 8,48 | 10000 | N56344 | 73 a 75 |
| 108 | 16,3 | 145,59 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 93,48 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 57,43 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 42,57 | 15000 | N58335 | 76 a 78 |
| 10,4 | 168 | 14,09 | 15000 | N58345 | 76 a 78 |



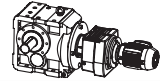
0,12 kW - 1750 rpm



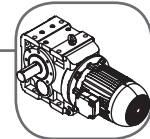
| | | | | | |
|------|-------|-------|-------|--------|---------|
| 9,63 | 182 | 6,89 | 10000 | N56545 | 94 a 96 |
| 7,85 | 223 | 5,62 | 10000 | N56547 | 94 a 96 |
| 6,88 | 254 | 4,92 | 10000 | N56548 | 94 a 96 |
| 6,00 | 292 | 4,29 | 10000 | N56549 | 94 a 96 |
| 5,58 | 313 | 4,00 | 10000 | N56550 | 94 a 96 |
| 4,93 | 355 | 3,53 | 10000 | N56551 | 94 a 96 |
| 4,02 | 436 | 2,88 | 10000 | N56553 | 94 a 96 |
| 3,52 | 497 | 2,52 | 10000 | N56554 | 94 a 96 |
| 3,07 | 570 | 2,20 | 10000 | N56555 | 94 a 96 |
| 2,86 | 612 | 2,04 | 10000 | N56556 | 94 a 96 |
| 2,73 | 640 | 1,96 | 10000 | N56557 | 94 a 96 |
| 2,23 | 785 | 1,59 | 10000 | N56558 | 94 a 96 |
| 1,95 | 896 | 1,40 | 10000 | N56559 | 94 a 96 |
| 1,70 | 1.028 | 1,22 | 10000 | N56560 | 94 a 96 |
| 1,58 | 1.104 | 1,13 | 10000 | N56561 | 94 a 96 |
| 1,46 | 1.197 | 1,05 | 10000 | N56562 | 94 a 96 |
| 1,28 | 1.366 | 0,92 | 10000 | N56563 | 94 a 96 |
| 1,13 | 1.542 | 0,81 | 10000 | N56564 | 94 a 96 |
| 8,65 | 202 | 11,70 | 15000 | N58546 | 97 a 99 |
| 3,62 | 483 | 4,90 | 15000 | N58554 | 97 a 99 |
| 2,99 | 584 | 4,05 | 15000 | N58555 | 97 a 99 |
| 2,61 | 671 | 3,53 | 15000 | N58556 | 97 a 99 |
| 2,34 | 748 | 3,16 | 15000 | N58557 | 97 a 99 |



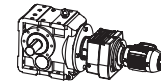
0,12 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|--------|------|--------|--------|-----------|
| 2,16 | 809 | 2,92 | 15000 | N58558 | 97 a 99 |
| 1,79 | 978 | 2,42 | 15000 | N58560 | 97 a 99 |
| 1,55 | 1.132 | 2,09 | 15000 | N58561 | 97 a 99 |
| 1,31 | 1.338 | 1,77 | 15000 | N58562 | 97 a 99 |
| 1,17 | 1.501 | 1,58 | 15000 | N58563 | 97 a 99 |
| 0,984 | 1.779 | 1,33 | 15000 | N58564 | 97 a 99 |
| 0,915 | 1.912 | 1,24 | 15000 | N58565 | 97 a 99 |
| 0,815 | 2.148 | 1,10 | 15000 | N58566 | 97 a 99 |
| 0,826 | 2.119 | 1,12 | 15000 | N58667 | 97 a 99 |
| 0,673 | 2.599 | 0,91 | 15000 | N58668 | 97 a 99 |
| 0,590 | 2.967 | 0,80 | 15000 | N58669 | 97 a 99 |
| 1,88 | 931 | 4,92 | 27000 | N60559 | 100 a 102 |
| 1,63 | 1.077 | 4,26 | 27000 | N60561 | 100 a 102 |
| 1,37 | 1.273 | 3,60 | 27000 | N60562 | 100 a 102 |
| 1,23 | 1.428 | 3,21 | 27000 | N60563 | 100 a 102 |
| 1,03 | 1.693 | 2,71 | 27000 | N60564 | 100 a 102 |
| 0,962 | 1.819 | 2,52 | 27000 | N60565 | 100 a 102 |
| 0,856 | 2.043 | 2,24 | 27000 | N60566 | 100 a 102 |
| 0,868 | 2.016 | 2,27 | 27000 | N60667 | 100 a 102 |
| 0,708 | 2.473 | 1,85 | 27000 | N60668 | 100 a 102 |
| 0,620 | 2.823 | 1,62 | 27000 | N60669 | 100 a 102 |
| 0,540 | 3.239 | 1,41 | 27000 | N60670 | 100 a 102 |
| 0,503 | 3.478 | 1,32 | 27000 | N60671 | 100 a 102 |
| 0,448 | 3.908 | 1,17 | 27000 | N60672 | 100 a 102 |
| 0,365 | 4.794 | 0,96 | 27000 | N60674 | 100 a 102 |
| 0,320 | 5.471 | 0,84 | 27000 | N60675 | 100 a 102 |
| 1,09 | 1.603 | 4,29 | 40000 | N62564 | 103 a 105 |
| 0,981 | 1.784 | 3,85 | 40000 | N62565 | 103 a 105 |
| 0,833 | 2.100 | 3,27 | 40000 | N62566 | 103 a 105 |
| 0,781 | 2.240 | 3,07 | 40000 | N62567 | 103 a 105 |
| 0,632 | 2.767 | 2,48 | 40000 | N62669 | 103 a 105 |
| 0,547 | 3.200 | 2,15 | 40000 | N62670 | 103 a 105 |
| 0,512 | 3.416 | 2,01 | 40000 | N62671 | 103 a 105 |
| 0,459 | 3.810 | 1,80 | 40000 | N62672 | 103 a 105 |
| 0,425 | 4.120 | 1,67 | 40000 | N62673 | 103 a 105 |
| 0,351 | 4.981 | 1,38 | 40000 | N62674 | 103 a 105 |
| 0,304 | 5.761 | 1,19 | 40000 | N62675 | 103 a 105 |
| 0,257 | 6.814 | 1,01 | 40000 | N62676 | 103 a 105 |
| 0,229 | 7.642 | 0,90 | 40000 | N62678 | 103 a 105 |
| 0,647 | 2.706 | 4,51 | 65000 | N64669 | 106 a 108 |
| 0,559 | 3.129 | 3,90 | 65000 | N64670 | 106 a 108 |
| 0,524 | 3.340 | 3,66 | 65000 | N64671 | 106 a 108 |
| 0,434 | 4.029 | 3,03 | 65000 | N64672 | 106 a 108 |
| 0,359 | 4.871 | 2,51 | 65000 | N64674 | 106 a 108 |
| 0,311 | 5.633 | 2,17 | 65000 | N64675 | 106 a 108 |
| 0,263 | 6.663 | 1,83 | 65000 | N64676 | 106 a 108 |
| 0,234 | 7.472 | 1,63 | 65000 | N64677 | 106 a 108 |
| 0,198 | 8.857 | 1,38 | 65000 | N64679 | 106 a 108 |
| 0,184 | 9.518 | 1,28 | 65000 | N64680 | 106 a 108 |
| 0,146 | 11.961 | 1,02 | 65000 | N64682 | 106 a 108 |
| 0,131 | 13.359 | 0,91 | 65000 | N64683 | 106 a 108 |



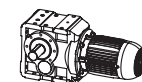
0,12 kW - 1750 rpm



| rpm | ltot | fs | Fr (N) | código | páginas |
|-------|--------|------|--------|--------|-----------|
| 0,115 | 15.242 | 0,80 | 65000 | N64684 | 105 a 107 |
| 0,414 | 4.229 | 4,69 | 78000 | N66673 | 109 a 111 |
| 0,371 | 4.718 | 4,21 | 78000 | N66674 | 109 a 111 |
| 0,343 | 5.102 | 3,89 | 78000 | N66675 | 109 a 111 |
| 0,284 | 6.168 | 3,22 | 78000 | N66676 | 109 a 111 |
| 0,245 | 7.133 | 2,78 | 78000 | N66677 | 109 a 111 |
| 0,207 | 8.437 | 2,35 | 78000 | N66678 | 109 a 111 |
| 0,185 | 9.462 | 2,10 | 78000 | N66679 | 109 a 111 |
| 0,156 | 11.216 | 1,77 | 78000 | N66681 | 109 a 111 |
| 0,145 | 12.053 | 1,65 | 78000 | N66682 | 109 a 111 |
| 0,129 | 13.538 | 1,47 | 78000 | N66683 | 109 a 111 |
| 0,116 | 15.147 | 1,31 | 78000 | N66684 | 109 a 111 |
| 0,103 | 16.917 | 1,17 | 78000 | N66685 | 109 a 111 |
| 0,091 | 19.301 | 1,03 | 78000 | N66686 | 109 a 111 |
| 0,084 | 20.926 | 0,95 | 78000 | N66687 | 109 a 111 |
| 0,314 | 5.572 | 4,93 | 100000 | N68675 | 112 a 114 |
| 0,270 | 6.470 | 4,25 | 100000 | N68676 | 112 a 114 |
| 0,230 | 7.612 | 3,61 | 100000 | N68677 | 112 a 114 |
| 0,210 | 8.343 | 3,29 | 100000 | N68678 | 112 a 114 |
| 0,189 | 9.264 | 2,97 | 100000 | N68679 | 112 a 114 |
| 0,175 | 10.014 | 2,74 | 100000 | N68680 | 112 a 114 |
| 0,153 | 11.408 | 2,41 | 100000 | N68681 | 112 a 114 |
| 0,137 | 12.800 | 2,15 | 100000 | N68682 | 112 a 114 |
| 0,118 | 14.882 | 1,85 | 100000 | N68683 | 112 a 114 |
| 0,106 | 16.457 | 1,67 | 100000 | N68684 | 112 a 114 |
| 0,090 | 19.411 | 1,42 | 100000 | N68685 | 112 a 114 |
| 0,085 | 20.576 | 1,34 | 100000 | N68686 | 112 a 114 |



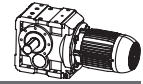
0,18 kW - 1750 rpm



| | | | | | |
|------|------|-------|-------|--------|---------|
| 239 | 7,31 | 56,01 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 56,19 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 56,58 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 56,36 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 56,20 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 55,81 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 56,62 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 48,62 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 42,04 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 35,54 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 27,97 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 25,07 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 23,18 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 19,18 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 16,58 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 14,02 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 12,50 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 10,55 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 9,81 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 8,74 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 7,81 | 10000 | N56341 | 73 a 75 |
| 14,7 | 119 | 6,99 | 10000 | N56342 | 73 a 75 |
| 12,8 | 136 | 6,13 | 10000 | N56343 | 73 a 75 |
| 11,8 | 148 | 5,65 | 10000 | N56344 | 73 a 75 |



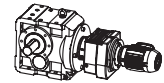
0,18 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|-------|--------|--------|---------|
| 108 | 16,3 | 97,06 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 62,32 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 38,29 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 28,38 | 15000 | N58335 | 76 a 78 |
| 10,4 | 168 | 9,39 | 15000 | N58345 | 76 a 78 |



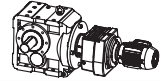
0,18 kW - 1750 rpm



| | | | | | |
|-------|-------|------|-------|--------|-----------|
| 9,63 | 182 | 4,59 | 10000 | N56545 | 94 a 96 |
| 7,85 | 223 | 3,75 | 10000 | N56547 | 94 a 96 |
| 6,88 | 254 | 3,28 | 10000 | N56548 | 94 a 96 |
| 6,00 | 292 | 2,86 | 10000 | N56549 | 94 a 96 |
| 5,58 | 313 | 2,66 | 10000 | N56550 | 94 a 96 |
| 4,93 | 355 | 2,35 | 10000 | N56551 | 94 a 96 |
| 4,02 | 436 | 1,92 | 10000 | N56553 | 94 a 96 |
| 3,52 | 497 | 1,68 | 10000 | N56554 | 94 a 96 |
| 3,07 | 570 | 1,46 | 10000 | N56555 | 94 a 96 |
| 2,86 | 612 | 1,36 | 10000 | N56556 | 94 a 96 |
| 2,73 | 640 | 1,30 | 10000 | N56557 | 94 a 96 |
| 2,23 | 785 | 1,06 | 10000 | N56558 | 94 a 96 |
| 1,95 | 896 | 0,93 | 10000 | N56559 | 94 a 96 |
| 1,70 | 1.028 | 0,81 | 10000 | N56560 | 94 a 96 |
| 8,65 | 202 | 7,80 | 15000 | N58546 | 97 a 99 |
| 5,12 | 342 | 4,62 | 15000 | N58551 | 97 a 99 |
| 4,37 | 401 | 3,94 | 15000 | N58552 | 97 a 99 |
| 3,92 | 447 | 3,53 | 15000 | N58553 | 97 a 99 |
| 3,62 | 483 | 3,26 | 15000 | N58554 | 97 a 99 |
| 2,99 | 584 | 2,70 | 15000 | N58555 | 97 a 99 |
| 2,61 | 671 | 2,35 | 15000 | N58556 | 97 a 99 |
| 2,34 | 748 | 2,11 | 15000 | N58557 | 97 a 99 |
| 2,16 | 809 | 1,95 | 15000 | N58558 | 97 a 99 |
| 1,79 | 978 | 1,61 | 15000 | N58560 | 97 a 99 |
| 1,55 | 1.132 | 1,39 | 15000 | N58561 | 97 a 99 |
| 1,31 | 1.338 | 1,18 | 15000 | N58562 | 97 a 99 |
| 1,17 | 1.501 | 1,05 | 15000 | N58563 | 97 a 99 |
| 0,984 | 1.779 | 0,89 | 15000 | N58564 | 97 a 99 |
| 0,915 | 1.912 | 0,83 | 15000 | N58565 | 97 a 99 |
| 2,74 | 638 | 4,78 | 27000 | N60556 | 100 a 102 |
| 2,46 | 712 | 4,29 | 27000 | N60557 | 100 a 102 |
| 2,27 | 770 | 3,97 | 27000 | N60558 | 100 a 102 |
| 1,88 | 931 | 3,28 | 27000 | N60559 | 100 a 102 |
| 1,63 | 1.077 | 2,84 | 27000 | N60561 | 100 a 102 |
| 1,37 | 1.273 | 2,40 | 27000 | N60562 | 100 a 102 |
| 1,23 | 1.428 | 2,14 | 27000 | N60563 | 100 a 102 |
| 1,03 | 1.693 | 1,80 | 27000 | N60564 | 100 a 102 |
| 0,962 | 1.819 | 1,68 | 27000 | N60565 | 100 a 102 |
| 0,856 | 2.043 | 1,49 | 27000 | N60566 | 100 a 102 |
| 0,868 | 2.016 | 1,51 | 27000 | N60667 | 100 a 102 |
| 0,708 | 2.473 | 1,23 | 27000 | N60668 | 100 a 102 |
| 0,620 | 2.823 | 1,08 | 27000 | N60669 | 100 a 102 |
| 0,540 | 3.239 | 0,94 | 27000 | N60670 | 100 a 102 |
| 0,503 | 3.478 | 0,88 | 27000 | N60671 | 100 a 102 |



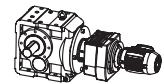
0,18 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|--------|------|--------|--------|-----------|
| 1,85 | 944 | 4,85 | 40000 | N62559 | 103 a 105 |
| 1,69 | 1.035 | 4,43 | 40000 | N62560 | 103 a 105 |
| 1,47 | 1.194 | 3,84 | 40000 | N62561 | 103 a 105 |
| 1,28 | 1.365 | 3,36 | 40000 | N62563 | 103 a 105 |
| 1,09 | 1.603 | 2,86 | 40000 | N62564 | 103 a 105 |
| 0,981 | 1.784 | 2,57 | 40000 | N62565 | 103 a 105 |
| 0,833 | 2.100 | 2,18 | 40000 | N62566 | 103 a 105 |
| 0,781 | 2.240 | 2,04 | 40000 | N62567 | 103 a 105 |
| 0,632 | 2.767 | 1,66 | 40000 | N62669 | 103 a 105 |
| 0,547 | 3.200 | 1,43 | 40000 | N62670 | 103 a 105 |
| 0,512 | 3.416 | 1,34 | 40000 | N62671 | 103 a 105 |
| 0,459 | 3.810 | 1,20 | 40000 | N62672 | 103 a 105 |
| 0,425 | 4.120 | 1,11 | 40000 | N62673 | 103 a 105 |
| 0,351 | 4.981 | 0,92 | 40000 | N62674 | 103 a 105 |
| 0,304 | 5.761 | 0,80 | 40000 | N62675 | 103 a 105 |
| 1,00 | 1.745 | 4,67 | 65000 | N64565 | 106 a 108 |
| 0,852 | 2.054 | 3,97 | 65000 | N64566 | 106 a 108 |
| 0,782 | 2.238 | 3,64 | 65000 | N64667 | 106 a 108 |
| 0,647 | 2.706 | 3,01 | 65000 | N64669 | 106 a 108 |
| 0,559 | 3.129 | 2,60 | 65000 | N64670 | 106 a 108 |
| 0,524 | 3.340 | 2,44 | 65000 | N64671 | 106 a 108 |
| 0,434 | 4.029 | 2,02 | 65000 | N64672 | 106 a 108 |
| 0,359 | 4.871 | 1,67 | 65000 | N64674 | 106 a 108 |
| 0,311 | 5.633 | 1,45 | 65000 | N64675 | 106 a 108 |
| 0,263 | 6.663 | 1,22 | 65000 | N64676 | 106 a 108 |
| 0,234 | 7.472 | 1,09 | 65000 | N64677 | 106 a 108 |
| 0,198 | 8.857 | 0,92 | 65000 | N64679 | 106 a 108 |
| 0,184 | 9.518 | 0,86 | 65000 | N64680 | 106 a 108 |
| 0,631 | 2.774 | 4,77 | 78000 | N66569 | 109 a 111 |
| 0,511 | 3.427 | 3,86 | 78000 | N66671 | 109 a 111 |
| 0,442 | 3.963 | 3,34 | 78000 | N66672 | 109 a 111 |
| 0,414 | 4.229 | 3,13 | 78000 | N66673 | 109 a 111 |
| 0,371 | 4.718 | 2,81 | 78000 | N66674 | 109 a 111 |
| 0,343 | 5.102 | 2,59 | 78000 | N66675 | 109 a 111 |
| 0,284 | 6.168 | 2,15 | 78000 | N66676 | 109 a 111 |
| 0,245 | 7.133 | 1,86 | 78000 | N66677 | 109 a 111 |
| 0,207 | 8.437 | 1,57 | 78000 | N66678 | 109 a 111 |
| 0,185 | 9.462 | 1,40 | 78000 | N66679 | 109 a 111 |
| 0,156 | 11.216 | 1,18 | 78000 | N66681 | 109 a 111 |
| 0,145 | 12.053 | 1,10 | 78000 | N66682 | 109 a 111 |
| 0,129 | 13.538 | 0,98 | 78000 | N66683 | 109 a 111 |
| 0,116 | 15.147 | 0,87 | 78000 | N66684 | 109 a 111 |
| 0,449 | 3.895 | 4,70 | 100000 | N68672 | 112 a 114 |
| 0,406 | 4.314 | 4,25 | 100000 | N68673 | 112 a 114 |
| 0,343 | 5.108 | 3,59 | 100000 | N68674 | 112 a 114 |
| 0,314 | 5.572 | 3,29 | 100000 | N68675 | 112 a 114 |
| 0,270 | 6.470 | 2,83 | 100000 | N68676 | 112 a 114 |
| 0,230 | 7.612 | 2,41 | 100000 | N68677 | 112 a 114 |
| 0,210 | 8.343 | 2,20 | 100000 | N68678 | 112 a 114 |
| 0,189 | 9.264 | 1,98 | 100000 | N68679 | 112 a 114 |
| 0,175 | 10.014 | 1,83 | 100000 | N68680 | 112 a 114 |
| 0,153 | 11.408 | 1,61 | 100000 | N68681 | 112 a 114 |



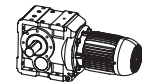
0,18 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|--------|------|--------|--------|-----------|
| 0,137 | 12.800 | 1,43 | 100000 | N68682 | 112 a 114 |
| 0,118 | 14.882 | 1,23 | 100000 | N68683 | 112 a 114 |
| 0,106 | 16.457 | 1,11 | 100000 | N68684 | 112 a 114 |
| 0,090 | 19.411 | 0,94 | 100000 | N68685 | 112 a 114 |
| 0,085 | 20.576 | 0,89 | 100000 | N68686 | 112 a 114 |



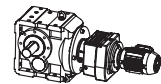
0,25 kW - 1750 rpm



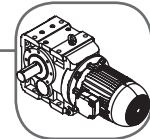
| | | | | | |
|------|------|-------|-------|--------|---------|
| 239 | 7,31 | 40,32 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 40,46 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 40,74 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 40,58 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 40,46 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 40,18 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 40,77 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 35,00 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 30,27 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 25,59 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 20,14 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 18,05 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 16,69 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 13,81 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 11,94 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 10,09 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 9,00 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 7,59 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 7,07 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 6,29 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 5,62 | 10000 | N56341 | 73 a 75 |
| 14,7 | 119 | 5,03 | 10000 | N56342 | 73 a 75 |
| 12,8 | 136 | 4,41 | 10000 | N56343 | 73 a 75 |
| 11,8 | 148 | 4,07 | 10000 | N56344 | 73 a 75 |
| 108 | 16,3 | 69,88 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 44,87 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 27,57 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 20,43 | 15000 | N58335 | 76 a 78 |
| 10,4 | 168 | 6,76 | 15000 | N58345 | 76 a 78 |



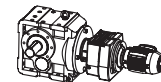
0,25 kW - 1750 rpm



| | | | | | |
|------|-----|------|-------|--------|---------|
| 9,63 | 182 | 3,31 | 10000 | N56545 | 94 a 96 |
| 7,85 | 223 | 2,70 | 10000 | N56547 | 94 a 96 |
| 6,88 | 254 | 2,36 | 10000 | N56548 | 94 a 96 |
| 6,00 | 292 | 2,06 | 10000 | N56549 | 94 a 96 |
| 5,58 | 313 | 1,92 | 10000 | N56550 | 94 a 96 |
| 4,93 | 355 | 1,69 | 10000 | N56551 | 94 a 96 |
| 4,02 | 436 | 1,38 | 10000 | N56553 | 94 a 96 |
| 3,52 | 497 | 1,21 | 10000 | N56554 | 94 a 96 |
| 3,07 | 570 | 1,05 | 10000 | N56555 | 94 a 96 |
| 2,86 | 612 | 0,98 | 10000 | N56556 | 94 a 96 |
| 2,73 | 640 | 0,94 | 10000 | N56557 | 94 a 96 |
| 7,17 | 244 | 4,65 | 15000 | N58548 | 97 a 99 |
| 5,93 | 295 | 3,85 | 15000 | N58549 | 97 a 99 |
| 5,71 | 306 | 3,71 | 15000 | N58550 | 97 a 99 |



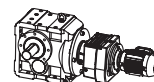
0,25 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|-------|------|--------|--------|-----------|
| 5,12 | 342 | 3,32 | 15000 | N58551 | 97 a 99 |
| 4,37 | 401 | 2,84 | 15000 | N58552 | 97 a 99 |
| 3,92 | 447 | 2,54 | 15000 | N58553 | 97 a 99 |
| 3,62 | 483 | 2,35 | 15000 | N58554 | 97 a 99 |
| 2,99 | 584 | 1,94 | 15000 | N58555 | 97 a 99 |
| 2,61 | 671 | 1,69 | 15000 | N58556 | 97 a 99 |
| 2,34 | 748 | 1,52 | 15000 | N58557 | 97 a 99 |
| 2,16 | 809 | 1,40 | 15000 | N58558 | 97 a 99 |
| 1,79 | 978 | 1,16 | 15000 | N58560 | 97 a 99 |
| 1,55 | 1.132 | 1,00 | 15000 | N58561 | 97 a 99 |
| 1,31 | 1.338 | 0,85 | 15000 | N58562 | 97 a 99 |
| 3,81 | 460 | 4,78 | 27000 | N60553 | 100 a 102 |
| 3,15 | 556 | 3,96 | 27000 | N60555 | 100 a 102 |
| 2,74 | 638 | 3,44 | 27000 | N60556 | 100 a 102 |
| 2,46 | 712 | 3,09 | 27000 | N60557 | 100 a 102 |
| 2,27 | 770 | 2,86 | 27000 | N60558 | 100 a 102 |
| 1,88 | 931 | 2,36 | 27000 | N60559 | 100 a 102 |
| 1,63 | 1.077 | 2,04 | 27000 | N60561 | 100 a 102 |
| 1,37 | 1.273 | 1,73 | 27000 | N60562 | 100 a 102 |
| 1,23 | 1.428 | 1,54 | 27000 | N60563 | 100 a 102 |
| 1,03 | 1.693 | 1,30 | 27000 | N60564 | 100 a 102 |
| 0,962 | 1.819 | 1,21 | 27000 | N60565 | 100 a 102 |
| 0,856 | 2.043 | 1,08 | 27000 | N60566 | 100 a 102 |
| 0,868 | 2.016 | 1,09 | 27000 | N60667 | 100 a 102 |
| 0,708 | 2.473 | 0,89 | 27000 | N60668 | 100 a 102 |
| 2,28 | 767 | 4,30 | 40000 | N62557 | 103 a 105 |
| 2,09 | 839 | 3,93 | 40000 | N62558 | 103 a 105 |
| 1,85 | 944 | 3,50 | 40000 | N62559 | 103 a 105 |
| 1,69 | 1.035 | 3,19 | 40000 | N62560 | 103 a 105 |
| 1,47 | 1.194 | 2,76 | 40000 | N62561 | 103 a 105 |
| 1,28 | 1.365 | 2,42 | 40000 | N62563 | 103 a 105 |
| 1,09 | 1.603 | 2,06 | 40000 | N62564 | 103 a 105 |
| 0,981 | 1.784 | 1,85 | 40000 | N62565 | 103 a 105 |
| 0,833 | 2.100 | 1,57 | 40000 | N62566 | 103 a 105 |
| 0,781 | 2.240 | 1,47 | 40000 | N62567 | 103 a 105 |
| 0,632 | 2.767 | 1,19 | 40000 | N62669 | 103 a 105 |
| 0,547 | 3.200 | 1,03 | 40000 | N62670 | 103 a 105 |
| 0,512 | 3.416 | 0,97 | 40000 | N62671 | 103 a 105 |
| 0,459 | 3.810 | 0,87 | 40000 | N62672 | 103 a 105 |
| 0,425 | 4.120 | 0,80 | 40000 | N62673 | 103 a 105 |
| 1,31 | 1.334 | 4,39 | 65000 | N64563 | 106 a 108 |
| 1,12 | 1.568 | 3,74 | 65000 | N64564 | 106 a 108 |
| 1,00 | 1.745 | 3,36 | 65000 | N64565 | 106 a 108 |
| 0,852 | 2.054 | 2,86 | 65000 | N64566 | 106 a 108 |
| 0,782 | 2.238 | 2,62 | 65000 | N64667 | 106 a 108 |
| 0,647 | 2.706 | 2,17 | 65000 | N64669 | 106 a 108 |
| 0,559 | 3.129 | 1,87 | 65000 | N64670 | 106 a 108 |
| 0,524 | 3.340 | 1,76 | 65000 | N64671 | 106 a 108 |
| 0,434 | 4.029 | 1,46 | 65000 | N64672 | 106 a 108 |
| 0,359 | 4.871 | 1,20 | 65000 | N64674 | 106 a 108 |
| 0,311 | 5.633 | 1,04 | 65000 | N64675 | 106 a 108 |



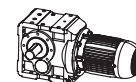
0,25 kW - 1750 rpm



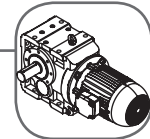
| rpm | ítot | fs | Fr (N) | código | páginas |
|-------|--------|------|--------|--------|-----------|
| 0,263 | 6.663 | 0,88 | 65000 | N64676 | 105 a 107 |
| 0,882 | 1.985 | 4,80 | 78000 | N66566 | 109 a 111 |
| 0,792 | 2.210 | 4,31 | 78000 | N66567 | 109 a 111 |
| 0,673 | 2.601 | 3,66 | 78000 | N66568 | 109 a 111 |
| 0,631 | 2.774 | 3,43 | 78000 | N66569 | 109 a 111 |
| 0,511 | 3.427 | 2,78 | 78000 | N66671 | 109 a 111 |
| 0,442 | 3.963 | 2,40 | 78000 | N66672 | 109 a 111 |
| 0,414 | 4.229 | 2,25 | 78000 | N66673 | 109 a 111 |
| 0,371 | 4.718 | 2,02 | 78000 | N66674 | 109 a 111 |
| 0,343 | 5.102 | 1,87 | 78000 | N66675 | 109 a 111 |
| 0,284 | 6.168 | 1,54 | 78000 | N66676 | 109 a 111 |
| 0,245 | 7.133 | 1,34 | 78000 | N66677 | 109 a 111 |
| 0,207 | 8.437 | 1,13 | 78000 | N66678 | 109 a 111 |
| 0,185 | 9.462 | 1,01 | 78000 | N66679 | 109 a 111 |
| 0,156 | 11.216 | 0,85 | 78000 | N66681 | 109 a 111 |
| 0,569 | 3.075 | 4,29 | 100000 | N68670 | 112 a 114 |
| 0,522 | 3.354 | 3,93 | 100000 | N68671 | 112 a 114 |
| 0,449 | 3.895 | 3,39 | 100000 | N68672 | 112 a 114 |
| 0,406 | 4.314 | 3,06 | 100000 | N68673 | 112 a 114 |
| 0,343 | 5.108 | 2,58 | 100000 | N68674 | 112 a 114 |
| 0,314 | 5.572 | 2,37 | 100000 | N68675 | 112 a 114 |
| 0,270 | 6.470 | 2,04 | 100000 | N68676 | 112 a 114 |
| 0,230 | 7.612 | 1,73 | 100000 | N68677 | 112 a 114 |
| 0,210 | 8.343 | 1,58 | 100000 | N68678 | 112 a 114 |
| 0,189 | 9.264 | 1,42 | 100000 | N68679 | 112 a 114 |
| 0,175 | 10.014 | 1,32 | 100000 | N68680 | 112 a 114 |
| 0,153 | 11.408 | 1,16 | 100000 | N68681 | 112 a 114 |
| 0,137 | 12.800 | 1,03 | 100000 | N68682 | 112 a 114 |
| 0,118 | 14.882 | 0,89 | 100000 | N68683 | 112 a 114 |
| 0,106 | 16.457 | 0,80 | 100000 | N68684 | 112 a 114 |



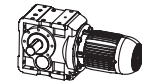
0,37 kW - 1750 rpm



| | | | | | |
|------|------|-------|-------|--------|---------|
| 239 | 7,31 | 27,25 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 27,34 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 27,53 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 27,42 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 27,34 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 27,15 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 27,55 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 23,65 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 20,45 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 17,29 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 13,61 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 12,20 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 11,28 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 9,33 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 8,07 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 6,82 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 6,08 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 5,13 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 4,77 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 4,25 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 3,80 | 10000 | N56341 | 73 a 75 |



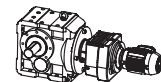
0,37 kW - 1750 rpm



| rpm | itot | fs | Fr (N) | código | páginas |
|------|------|-------|--------|--------|---------|
| 14,7 | 119 | 3,40 | 10000 | N56342 | 73 a 75 |
| 12,8 | 136 | 2,98 | 10000 | N56343 | 73 a 75 |
| 11,8 | 148 | 2,75 | 10000 | N56344 | 73 a 75 |
| 108 | 16,3 | 47,22 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 30,32 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 18,63 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 13,81 | 15000 | N58335 | 76 a 78 |
| 10,4 | 168 | 4,57 | 15000 | N58345 | 76 a 78 |



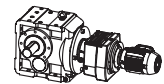
0,37 kW - 1750 rpm



| | | | | | |
|-------|-------|------|-------|--------|-----------|
| 9,63 | 182 | 2,24 | 10000 | N56545 | 94 a 96 |
| 7,85 | 223 | 1,82 | 10000 | N56547 | 94 a 96 |
| 6,88 | 254 | 1,60 | 10000 | N56548 | 94 a 96 |
| 6,00 | 292 | 1,39 | 10000 | N56549 | 94 a 96 |
| 5,58 | 313 | 1,30 | 10000 | N56550 | 94 a 96 |
| 4,93 | 355 | 1,14 | 10000 | N56551 | 94 a 96 |
| 4,02 | 436 | 0,93 | 10000 | N56553 | 94 a 96 |
| 3,52 | 497 | 0,82 | 10000 | N56554 | 94 a 96 |
| 8,65 | 202 | 3,79 | 15000 | N58546 | 97 a 99 |
| 7,75 | 226 | 3,40 | 15000 | N58547 | 97 a 99 |
| 7,17 | 244 | 3,14 | 15000 | N58548 | 97 a 99 |
| 5,93 | 295 | 2,60 | 15000 | N58549 | 97 a 99 |
| 5,71 | 306 | 2,51 | 15000 | N58550 | 97 a 99 |
| 5,12 | 342 | 2,25 | 15000 | N58551 | 97 a 99 |
| 4,37 | 401 | 1,92 | 15000 | N58552 | 97 a 99 |
| 3,92 | 447 | 1,72 | 15000 | N58553 | 97 a 99 |
| 3,62 | 483 | 1,59 | 15000 | N58554 | 97 a 99 |
| 2,99 | 584 | 1,31 | 15000 | N58555 | 97 a 99 |
| 2,61 | 671 | 1,14 | 15000 | N58556 | 97 a 99 |
| 2,34 | 748 | 1,03 | 15000 | N58557 | 97 a 99 |
| 2,16 | 809 | 0,95 | 15000 | N58558 | 97 a 99 |
| 5,85 | 299 | 4,97 | 27000 | N60549 | 100 a 102 |
| 5,65 | 310 | 4,80 | 27000 | N60550 | 100 a 102 |
| 5,07 | 345 | 4,30 | 27000 | N60551 | 100 a 102 |
| 4,12 | 425 | 3,49 | 27000 | N60552 | 100 a 102 |
| 3,81 | 460 | 3,23 | 27000 | N60553 | 100 a 102 |
| 3,15 | 556 | 2,67 | 27000 | N60555 | 100 a 102 |
| 2,74 | 638 | 2,33 | 27000 | N60556 | 100 a 102 |
| 2,46 | 712 | 2,09 | 27000 | N60557 | 100 a 102 |
| 2,27 | 770 | 1,93 | 27000 | N60558 | 100 a 102 |
| 1,88 | 931 | 1,60 | 27000 | N60559 | 100 a 102 |
| 1,63 | 1.077 | 1,38 | 27000 | N60561 | 100 a 102 |
| 1,37 | 1.273 | 1,17 | 27000 | N60562 | 100 a 102 |
| 1,23 | 1.428 | 1,04 | 27000 | N60563 | 100 a 102 |
| 1,03 | 1.693 | 0,88 | 27000 | N60564 | 100 a 102 |
| 0,962 | 1.819 | 0,82 | 27000 | N60565 | 100 a 102 |
| 3,62 | 483 | 4,61 | 40000 | N62554 | 103 a 105 |
| 3,22 | 544 | 4,10 | 40000 | N62555 | 103 a 105 |
| 2,75 | 635 | 3,51 | 40000 | N62556 | 103 a 105 |
| 2,28 | 767 | 2,91 | 40000 | N62557 | 103 a 105 |
| 2,09 | 839 | 2,66 | 40000 | N62558 | 103 a 105 |
| 1,85 | 944 | 2,36 | 40000 | N62559 | 103 a 105 |
| 1,69 | 1.035 | 2,15 | 40000 | N62560 | 103 a 105 |
| 1,47 | 1.194 | 1,87 | 40000 | N62561 | 103 a 105 |



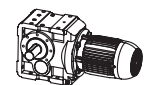
0,37 kW - 1750 rpm



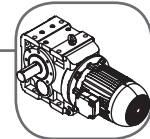
| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|--------|------|--------|--------|-----------|
| 1,28 | 1.365 | 1,63 | 40000 | N62563 | 103 a 105 |
| 1,09 | 1.603 | 1,39 | 40000 | N62564 | 103 a 105 |
| 0,981 | 1.784 | 1,25 | 40000 | N62565 | 103 a 105 |
| 0,833 | 2.100 | 1,06 | 40000 | N62566 | 103 a 105 |
| 0,781 | 2.240 | 0,99 | 40000 | N62567 | 103 a 105 |
| 0,632 | 2.767 | 0,81 | 40000 | N62669 | 102 a 104 |
| 2,13 | 820 | 4,83 | 65000 | N64558 | 106 a 108 |
| 1,90 | 923 | 4,29 | 65000 | N64559 | 106 a 108 |
| 1,73 | 1.012 | 3,92 | 65000 | N64560 | 106 a 108 |
| 1,50 | 1.168 | 3,39 | 65000 | N64561 | 106 a 108 |
| 1,31 | 1.334 | 2,97 | 65000 | N64563 | 106 a 108 |
| 1,12 | 1.568 | 2,53 | 65000 | N64564 | 106 a 108 |
| 1,00 | 1.745 | 2,27 | 65000 | N64565 | 106 a 108 |
| 0,852 | 2.054 | 1,93 | 65000 | N64566 | 106 a 108 |
| 0,782 | 2.238 | 1,77 | 65000 | N64667 | 106 a 108 |
| 0,647 | 2.706 | 1,46 | 65000 | N64669 | 106 a 108 |
| 0,559 | 3.129 | 1,27 | 65000 | N64670 | 106 a 108 |
| 0,524 | 3.340 | 1,19 | 65000 | N64671 | 106 a 108 |
| 0,434 | 4.029 | 0,98 | 65000 | N64672 | 106 a 108 |
| 0,359 | 4.871 | 0,81 | 65000 | N64674 | 106 a 108 |
| 1,18 | 1.479 | 4,35 | 78000 | N66563 | 109 a 111 |
| 1,04 | 1.690 | 3,81 | 78000 | N66564 | 109 a 111 |
| 0,882 | 1.985 | 3,24 | 78000 | N66566 | 109 a 111 |
| 0,792 | 2.210 | 2,91 | 78000 | N66567 | 109 a 111 |
| 0,673 | 2.601 | 2,48 | 78000 | N66568 | 109 a 111 |
| 0,631 | 2.774 | 2,32 | 78000 | N66569 | 109 a 111 |
| 0,511 | 3.427 | 1,88 | 78000 | N66671 | 109 a 111 |
| 0,442 | 3.963 | 1,62 | 78000 | N66672 | 109 a 111 |
| 0,414 | 4.229 | 1,52 | 78000 | N66673 | 109 a 111 |
| 0,371 | 4.718 | 1,36 | 78000 | N66674 | 109 a 111 |
| 0,343 | 5.102 | 1,26 | 78000 | N66675 | 109 a 111 |
| 0,284 | 6.168 | 1,04 | 78000 | N66676 | 109 a 111 |
| 0,245 | 7.133 | 0,90 | 78000 | N66677 | 109 a 111 |
| 0,877 | 1.996 | 4,47 | 100000 | N68566 | 115 a 117 |
| 0,674 | 2.597 | 3,43 | 100000 | N68669 | 112 a 114 |
| 0,569 | 3.075 | 2,90 | 100000 | N68670 | 112 a 114 |
| 0,522 | 3.354 | 2,66 | 100000 | N68671 | 112 a 114 |
| 0,449 | 3.895 | 2,29 | 100000 | N68672 | 112 a 114 |
| 0,406 | 4.314 | 2,07 | 100000 | N68673 | 112 a 114 |
| 0,343 | 5.108 | 1,75 | 100000 | N68674 | 112 a 114 |
| 0,314 | 5.572 | 1,60 | 100000 | N68675 | 112 a 114 |
| 0,270 | 6.470 | 1,38 | 100000 | N68676 | 112 a 114 |
| 0,230 | 7.612 | 1,17 | 100000 | N68677 | 112 a 114 |
| 0,210 | 8.343 | 1,07 | 100000 | N68678 | 112 a 114 |
| 0,189 | 9.264 | 0,96 | 100000 | N68679 | 112 a 114 |
| 0,175 | 10.014 | 0,89 | 100000 | N68680 | 112 a 114 |



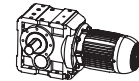
0,55 kW - 1750 rpm



| | | | | | |
|-----|------|-------|-------|--------|---------|
| 239 | 7,31 | 18,33 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 18,39 | 10000 | N56318 | 73 a 75 |



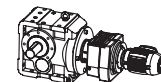
0,55 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|-------|--------|--------|---------|
| 198 | 8,82 | 18,52 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 18,44 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 18,39 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 18,26 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 18,53 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 15,91 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 13,76 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 11,63 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 9,15 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 8,21 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 7,59 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 6,28 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 5,43 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 4,59 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 4,09 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 3,45 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 3,21 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 2,86 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 2,56 | 10000 | N56341 | 73 a 75 |
| 14,7 | 119 | 2,29 | 10000 | N56342 | 73 a 75 |
| 12,8 | 136 | 2,01 | 10000 | N56343 | 73 a 75 |
| 11,8 | 148 | 1,85 | 10000 | N56344 | 73 a 75 |
| 108 | 16,3 | 31,76 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 20,39 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 12,53 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 9,29 | 15000 | N58335 | 76 a 78 |
| 15,5 | 113 | 4,58 | 15000 | N58341 | 76 a 78 |
| 14,5 | 120 | 4,29 | 15000 | N58342 | 76 a 78 |
| 13,0 | 134 | 3,85 | 15000 | N58343 | 76 a 78 |
| 11,7 | 150 | 3,45 | 15000 | N58344 | 76 a 78 |
| 10,4 | 168 | 3,07 | 15000 | N58345 | 76 a 78 |



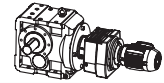
0,55 kW - 1750 rpm



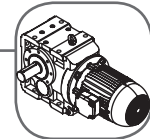
| | | | | | |
|------|-----|------|-------|--------|-----------|
| 9,63 | 182 | 1,50 | 10000 | N56545 | 94 a 96 |
| 7,85 | 223 | 1,23 | 10000 | N56547 | 94 a 96 |
| 6,88 | 254 | 1,07 | 10000 | N56548 | 94 a 96 |
| 6,00 | 292 | 0,94 | 10000 | N56549 | 94 a 96 |
| 5,58 | 313 | 0,87 | 10000 | N56550 | 94 a 96 |
| 8,65 | 202 | 2,55 | 15000 | N58546 | 97 a 99 |
| 7,75 | 226 | 2,29 | 15000 | N58547 | 97 a 99 |
| 7,17 | 244 | 2,12 | 15000 | N58548 | 97 a 99 |
| 5,93 | 295 | 1,75 | 15000 | N58549 | 97 a 99 |
| 5,71 | 306 | 1,69 | 15000 | N58550 | 97 a 99 |
| 5,12 | 342 | 1,51 | 15000 | N58551 | 97 a 99 |
| 4,37 | 401 | 1,29 | 15000 | N58552 | 97 a 99 |
| 3,92 | 447 | 1,16 | 15000 | N58553 | 97 a 99 |
| 3,62 | 483 | 1,07 | 15000 | N58554 | 97 a 99 |
| 2,99 | 584 | 0,88 | 15000 | N58555 | 97 a 99 |
| 8,53 | 205 | 4,87 | 27000 | N60546 | 100 a 102 |
| 7,65 | 229 | 4,37 | 27000 | N60547 | 100 a 102 |
| 7,07 | 247 | 4,04 | 27000 | N60548 | 100 a 102 |
| 5,85 | 299 | 3,34 | 27000 | N60549 | 100 a 102 |
| 5,65 | 310 | 3,23 | 27000 | N60550 | 100 a 102 |



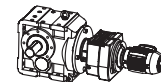
0,55 kW - 1750 rpm









| rpm | 103 a 105 | fs | Fr (N) | código | páginas |
|-------|-----------|------|--------|--------|-----------|
| 5,07 | 345 | 2,89 | 27000 | N60551 | 100 a 102 |
| 4,12 | 425 | 2,35 | 27000 | N60552 | 100 a 102 |
| 3,81 | 460 | 2,17 | 27000 | N60553 | 100 a 102 |
| 3,15 | 556 | 1,80 | 27000 | N60555 | 100 a 102 |
| 2,74 | 638 | 1,57 | 27000 | N60556 | 100 a 102 |
| 2,46 | 712 | 1,40 | 27000 | N60557 | 100 a 102 |
| 2,27 | 770 | 1,30 | 27000 | N60558 | 100 a 102 |
| 1,88 | 931 | 1,07 | 27000 | N60559 | 100 a 102 |
| 1,63 | 1.077 | 0,93 | 27000 | N60561 | 100 a 102 |
| 5,44 | 322 | 4,66 | 40000 | N62550 | 103 a 105 |
| 4,98 | 352 | 4,26 | 40000 | N62551 | 103 a 105 |
| 4,78 | 366 | 4,09 | 40000 | N62552 | 103 a 105 |
| 3,96 | 442 | 3,39 | 40000 | N62553 | 103 a 105 |
| 3,62 | 483 | 3,10 | 40000 | N62554 | 103 a 105 |
| 3,22 | 544 | 2,76 | 40000 | N62555 | 103 a 105 |
| 2,75 | 635 | 2,36 | 40000 | N62556 | 103 a 105 |
| 2,28 | 767 | 1,96 | 40000 | N62557 | 103 a 105 |
| 2,09 | 839 | 1,79 | 40000 | N62558 | 103 a 105 |
| 1,85 | 944 | 1,59 | 40000 | N62559 | 103 a 105 |
| 1,69 | 1.035 | 1,45 | 40000 | N62560 | 103 a 105 |
| 1,47 | 1.194 | 1,26 | 40000 | N62561 | 103 a 105 |
| 1,28 | 1.365 | 1,10 | 40000 | N62563 | 103 a 105 |
| 1,09 | 1.603 | 0,94 | 40000 | N62564 | 103 a 105 |
| 0,981 | 1.784 | 0,84 | 40000 | N62565 | 103 a 105 |
| 3,00 | 583 | 4,57 | 65000 | N64555 | 106 a 108 |
| 2,82 | 621 | 4,29 | 65000 | N64556 | 106 a 108 |
| 2,33 | 750 | 3,55 | 65000 | N64557 | 106 a 108 |
| 2,13 | 820 | 3,25 | 65000 | N64558 | 106 a 108 |
| 1,90 | 923 | 2,89 | 65000 | N64559 | 106 a 108 |
| 1,73 | 1.012 | 2,63 | 65000 | N64560 | 106 a 108 |
| 1,50 | 1.168 | 2,28 | 65000 | N64561 | 106 a 108 |
| 1,31 | 1.334 | 2,00 | 65000 | N64563 | 106 a 108 |
| 1,12 | 1.568 | 1,70 | 65000 | N64564 | 106 a 108 |
| 1,00 | 1.745 | 1,53 | 65000 | N64565 | 106 a 108 |
| 0,852 | 2.054 | 1,30 | 65000 | N64566 | 106 a 108 |
| 0,782 | 2.238 | 1,19 | 65000 | N64667 | 106 a 108 |
| 0,647 | 2.706 | 0,99 | 65000 | N64669 | 106 a 108 |
| 0,559 | 3.129 | 0,85 | 65000 | N64670 | 106 a 108 |
| 0,524 | 3.340 | 0,80 | 65000 | N64671 | 106 a 108 |
| 1,84 | 950 | 4,56 | 78000 | N66559 | 109 a 111 |
| 1,69 | 1.038 | 4,17 | 78000 | N66560 | 109 a 111 |
| 1,50 | 1.169 | 3,71 | 78000 | N66561 | 109 a 111 |
| 1,37 | 1.281 | 3,38 | 78000 | N66562 | 109 a 111 |
| 1,18 | 1.479 | 2,93 | 78000 | N66563 | 109 a 111 |
| 1,04 | 1.690 | 2,56 | 78000 | N66564 | 109 a 111 |
| 0,882 | 1.985 | 2,18 | 78000 | N66566 | 109 a 111 |
| 0,792 | 2.210 | 1,96 | 78000 | N66567 | 109 a 111 |
| 0,673 | 2.601 | 1,67 | 78000 | N66568 | 109 a 111 |
| 0,631 | 2.774 | 1,56 | 78000 | N66569 | 109 a 111 |
| 0,511 | 3.427 | 1,26 | 78000 | N66671 | 109 a 111 |
| 0,442 | 3.963 | 1,09 | 78000 | N66672 | 109 a 111 |
| 0,414 | 4.229 | 1,02 | 78000 | N66673 | 109 a 111 |
| 0,371 | 4.718 | 0,92 | 78000 | N66674 | 109 a 111 |
| 0,343 | 5.102 | 0,85 | 78000 | N66675 | 109 a 111 |



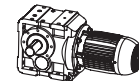
0,75 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| 1,45 | 1.206 | 4,97 | 100000 | N68562 | 115 a 117 |
| 1,26 | 1.392 | 4,31 | 100000 | N68563 | 115 a 117 |
| 1,05 | 1.673 | 3,59 | 100000 | N68564 | 115 a 117 |
| 1,05 | 1.673 | 3,59 | 100000 | N68565 | 115 a 117 |
| 0,877 | 1.996 | 3,00 | 100000 | N68566 | 115 a 117 |
| 0,674 | 2.597 | 2,31 | 100000 | N68669 | 112 a 114 |
| 0,569 | 3.075 | 1,95 | 100000 | N68670 | 112 a 114 |
| 0,522 | 3.354 | 1,79 | 100000 | N68671 | 112 a 114 |
| 0,449 | 3.895 | 1,54 | 100000 | N68672 | 112 a 114 |
| 0,406 | 4.314 | 1,39 | 100000 | N68673 | 112 a 114 |
| 0,343 | 5.108 | 1,17 | 100000 | N68674 | 112 a 114 |
| 0,314 | 5.572 | 1,08 | 100000 | N68675 | 112 a 114 |
| 0,270 | 6.470 | 0,93 | 100000 | N68676 | 112 a 114 |



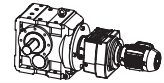
0,75 kW - 1750 rpm



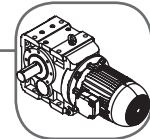
| | | | | | |
|------|------|-------|-------|--------|---------|
| 239 | 7,31 | 13,44 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 13,49 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 13,58 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 13,53 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 13,49 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 13,39 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 13,59 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 11,67 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 10,09 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 8,53 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 6,71 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 6,02 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 5,56 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 4,60 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 3,98 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 3,36 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 3,00 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 2,53 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 2,36 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 2,10 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 1,87 | 10000 | N56341 | 73 a 75 |
| 14,7 | 119 | 1,68 | 10000 | N56342 | 73 a 75 |
| 108 | 16,3 | 23,29 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 14,96 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 9,19 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 6,81 | 15000 | N58335 | 76 a 78 |
| 20,3 | 86,1 | 4,40 | 15000 | N58338 | 76 a 78 |
| 18,2 | 95,9 | 3,95 | 15000 | N58340 | 76 a 78 |
| 15,5 | 113 | 3,36 | 15000 | N58341 | 76 a 78 |
| 14,5 | 120 | 3,15 | 15000 | N58342 | 76 a 78 |
| 13,0 | 134 | 2,82 | 15000 | N58343 | 76 a 78 |
| 11,7 | 150 | 2,53 | 15000 | N58344 | 76 a 78 |
| 10,4 | 168 | 2,25 | 15000 | N58345 | 76 a 78 |
| 11,3 | 155 | 4,72 | 27000 | N60344 | 79 a 81 |
| 10,6 | 165 | 4,45 | 27000 | N60345 | 79 a 81 |



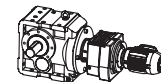
0,75 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|-------|------|--------|--------|-----------|
| 9,63 | 182 | 1,10 | 10000 | N56545 | 94 a 96 |
| 7,85 | 223 | 0,90 | 10000 | N56547 | 94 a 96 |
| 8,65 | 202 | 1,87 | 15000 | N58546 | 97 a 99 |
| 7,75 | 226 | 1,68 | 15000 | N58547 | 97 a 99 |
| 7,17 | 244 | 1,55 | 15000 | N58548 | 97 a 99 |
| 5,93 | 295 | 1,28 | 15000 | N58549 | 97 a 99 |
| 5,71 | 306 | 1,24 | 15000 | N58550 | 97 a 99 |
| 5,12 | 342 | 1,11 | 15000 | N58551 | 97 a 99 |
| 4,37 | 401 | 0,95 | 15000 | N58552 | 97 a 99 |
| 3,92 | 447 | 0,85 | 15000 | N58553 | 97 a 99 |
| 8,53 | 205 | 3,57 | 27000 | N60546 | 100 a 102 |
| 7,65 | 229 | 3,20 | 27000 | N60547 | 100 a 102 |
| 7,07 | 247 | 2,96 | 27000 | N60548 | 100 a 102 |
| 5,85 | 299 | 2,45 | 27000 | N60549 | 100 a 102 |
| 5,65 | 310 | 2,37 | 27000 | N60550 | 100 a 102 |
| 5,07 | 345 | 2,12 | 27000 | N60551 | 100 a 102 |
| 4,12 | 425 | 1,72 | 27000 | N60552 | 100 a 102 |
| 3,81 | 460 | 1,59 | 27000 | N60553 | 100 a 102 |
| 3,15 | 556 | 1,32 | 27000 | N60555 | 100 a 102 |
| 2,74 | 638 | 1,15 | 27000 | N60556 | 100 a 102 |
| 2,46 | 712 | 1,03 | 27000 | N60557 | 100 a 102 |
| 2,27 | 770 | 0,95 | 27000 | N60558 | 100 a 102 |
| 7,62 | 230 | 4,79 | 40000 | N62547 | 103 a 105 |
| 6,77 | 258 | 4,25 | 40000 | N62548 | 103 a 105 |
| 6,18 | 283 | 3,88 | 40000 | N62549 | 103 a 105 |
| 5,44 | 322 | 3,42 | 40000 | N62550 | 103 a 105 |
| 4,98 | 352 | 3,13 | 40000 | N62551 | 103 a 105 |
| 4,78 | 366 | 3,00 | 40000 | N62552 | 103 a 105 |
| 3,96 | 442 | 2,49 | 40000 | N62553 | 103 a 105 |
| 3,62 | 483 | 2,27 | 40000 | N62554 | 103 a 105 |
| 3,22 | 544 | 2,02 | 40000 | N62555 | 103 a 105 |
| 2,75 | 635 | 1,73 | 40000 | N62556 | 103 a 105 |
| 2,28 | 767 | 1,43 | 40000 | N62557 | 103 a 105 |
| 2,09 | 839 | 1,31 | 40000 | N62558 | 103 a 105 |
| 1,85 | 944 | 1,17 | 40000 | N62559 | 103 a 105 |
| 1,69 | 1.035 | 1,06 | 40000 | N62560 | 103 a 105 |
| 1,47 | 1.194 | 0,92 | 40000 | N62561 | 103 a 105 |
| 1,28 | 1.365 | 0,81 | 40000 | N62563 | 103 a 105 |
| 4,05 | 432 | 4,52 | 65000 | N64552 | 106 a 108 |
| 3,70 | 473 | 4,13 | 65000 | N64553 | 106 a 108 |
| 3,29 | 532 | 3,67 | 65000 | N64554 | 106 a 108 |
| 3,00 | 583 | 3,35 | 65000 | N64555 | 106 a 108 |
| 2,82 | 621 | 3,15 | 65000 | N64556 | 106 a 108 |
| 2,33 | 750 | 2,61 | 65000 | N64557 | 106 a 108 |
| 2,13 | 820 | 2,38 | 65000 | N64558 | 106 a 108 |
| 1,90 | 923 | 2,12 | 65000 | N64559 | 106 a 108 |
| 1,73 | 1.012 | 1,93 | 65000 | N64560 | 106 a 108 |
| 1,50 | 1.168 | 1,67 | 65000 | N64561 | 106 a 108 |
| 1,31 | 1.334 | 1,46 | 65000 | N64563 | 106 a 108 |
| 1,12 | 1.568 | 1,25 | 65000 | N64564 | 106 a 108 |
| 1,00 | 1.745 | 1,12 | 65000 | N64565 | 106 a 108 |
| 0,852 | 2.054 | 0,95 | 65000 | N64566 | 106 a 108 |
| 0,782 | 2.238 | 0,87 | 65000 | N64667 | 106 a 108 |



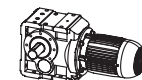
0,75 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|-------|------|--------|--------|-----------|
| 2,37 | 739 | 4,30 | 78000 | N66557 | 109 a 111 |
| 2,22 | 787 | 4,04 | 78000 | N66558 | 109 a 111 |
| 1,84 | 950 | 3,34 | 78000 | N66559 | 109 a 111 |
| 1,69 | 1.038 | 3,06 | 78000 | N66560 | 109 a 111 |
| 1,50 | 1.169 | 2,72 | 78000 | N66561 | 109 a 111 |
| 1,37 | 1.281 | 2,48 | 78000 | N66562 | 109 a 111 |
| 1,18 | 1.479 | 2,15 | 78000 | N66563 | 109 a 111 |
| 1,04 | 1.690 | 1,88 | 78000 | N66564 | 109 a 111 |
| 0,882 | 1.985 | 1,60 | 78000 | N66566 | 109 a 111 |
| 0,792 | 2.210 | 1,44 | 78000 | N66567 | 109 a 111 |
| 0,673 | 2.601 | 1,22 | 78000 | N66568 | 109 a 111 |
| 0,631 | 2.774 | 1,14 | 78000 | N66569 | 109 a 111 |
| 0,511 | 3.427 | 0,93 | 78000 | N66671 | 109 a 111 |
| 0,442 | 3.963 | 0,80 | 78000 | N66672 | 109 a 111 |
| 1,81 | 968 | 4,54 | 100000 | N68559 | 115 a 117 |
| 1,68 | 1.043 | 4,22 | 100000 | N68560 | 115 a 117 |
| 1,45 | 1.206 | 3,65 | 100000 | N68562 | 115 a 117 |
| 1,26 | 1.392 | 3,16 | 100000 | N68563 | 115 a 117 |
| 1,05 | 1.673 | 2,63 | 100000 | N68564 | 115 a 117 |
| 1,05 | 1.673 | 2,63 | 100000 | N68565 | 115 a 117 |
| 0,877 | 1.996 | 2,20 | 100000 | N68566 | 115 a 117 |
| 0,674 | 2.597 | 1,69 | 100000 | N68669 | 112 a 114 |
| 0,569 | 3.075 | 1,43 | 100000 | N68670 | 112 a 114 |
| 0,522 | 3.354 | 1,31 | 100000 | N68671 | 112 a 114 |
| 0,449 | 3.895 | 1,13 | 100000 | N68672 | 112 a 114 |
| 0,406 | 4.314 | 1,02 | 100000 | N68673 | 112 a 114 |
| 0,343 | 5.108 | 0,86 | 100000 | N68674 | 112 a 114 |



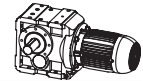
1,10 kW - 1750 rpm



| | | | | | |
|------|------|-------|-------|--------|---------|
| 239 | 7,31 | 9,16 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 9,20 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 9,26 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 9,22 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 9,20 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 9,13 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 9,27 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 7,96 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 6,88 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 5,82 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 4,58 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 4,10 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 3,79 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 3,14 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 2,71 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 2,29 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 2,05 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 1,73 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 1,61 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 1,43 | 10000 | N56340 | 73 a 75 |
| 16,4 | 107 | 1,28 | 10000 | N56341 | 73 a 75 |
| 14,7 | 119 | 1,14 | 10000 | N56342 | 73 a 75 |
| 108 | 16,3 | 15,88 | 15000 | N58324 | 76 a 78 |



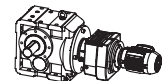
1,10 kW - 1750 rpm



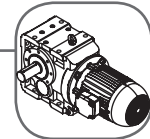
| rpm | itot | fs | Fr (N) | código | páginas |
|------|------|-------|--------|--------|---------|
| 69,1 | 25,3 | 10,20 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 6,27 | 15000 | N58332 | 76 a 78 |
| 31,5 | 55,6 | 4,64 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 4,02 | 15000 | N58336 | 76 a 78 |
| 23,9 | 73,3 | 3,52 | 15000 | N58337 | 76 a 78 |
| 20,3 | 86,1 | 3,00 | 15000 | N58338 | 76 a 78 |
| 18,2 | 95,9 | 2,69 | 15000 | N58340 | 76 a 78 |
| 15,5 | 113 | 2,29 | 15000 | N58341 | 76 a 78 |
| 14,5 | 120 | 2,14 | 15000 | N58342 | 76 a 78 |
| 13,0 | 134 | 1,92 | 15000 | N58343 | 76 a 78 |
| 11,7 | 150 | 1,73 | 15000 | N58344 | 76 a 78 |
| 10,4 | 168 | 1,54 | 15000 | N58345 | 76 a 78 |
| 17,1 | 102 | 4,88 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 4,20 | 27000 | N60342 | 79 a 81 |
| 13,3 | 132 | 3,80 | 27000 | N60343 | 79 a 81 |
| 11,3 | 155 | 3,22 | 27000 | N60344 | 79 a 81 |
| 10,6 | 165 | 3,04 | 27000 | N60345 | 79 a 81 |
| 10,7 | 163 | 4,59 | 40000 | N62344 | 82 a 84 |



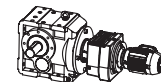
1,10 kW - 1750 rpm



| | | | | | |
|------|-----|------|-------|--------|-----------|
| 8,65 | 202 | 1,28 | 15000 | N58546 | 97 a 99 |
| 7,75 | 226 | 1,14 | 15000 | N58547 | 97 a 99 |
| 7,17 | 244 | 1,06 | 15000 | N58548 | 97 a 99 |
| 5,93 | 295 | 0,87 | 15000 | N58549 | 97 a 99 |
| 5,71 | 306 | 0,84 | 15000 | N58550 | 97 a 99 |
| 8,53 | 205 | 2,44 | 27000 | N60546 | 100 a 102 |
| 7,65 | 229 | 2,18 | 27000 | N60547 | 100 a 102 |
| 7,07 | 247 | 2,02 | 27000 | N60548 | 100 a 102 |
| 5,85 | 299 | 1,67 | 27000 | N60549 | 100 a 102 |
| 5,65 | 310 | 1,61 | 27000 | N60550 | 100 a 102 |
| 5,07 | 345 | 1,45 | 27000 | N60551 | 100 a 102 |
| 4,12 | 425 | 1,18 | 27000 | N60552 | 100 a 102 |
| 3,81 | 460 | 1,09 | 27000 | N60553 | 100 a 102 |
| 3,15 | 556 | 0,90 | 27000 | N60555 | 100 a 102 |
| 10,1 | 174 | 4,31 | 40000 | N62545 | 103 a 105 |
| 8,33 | 210 | 3,57 | 40000 | N62546 | 103 a 105 |
| 7,62 | 230 | 3,26 | 40000 | N62547 | 103 a 105 |
| 6,77 | 258 | 2,90 | 40000 | N62548 | 103 a 105 |
| 6,18 | 283 | 2,65 | 40000 | N62549 | 103 a 105 |
| 5,44 | 322 | 2,33 | 40000 | N62550 | 103 a 105 |
| 4,98 | 352 | 2,13 | 40000 | N62551 | 103 a 105 |
| 4,78 | 366 | 2,05 | 40000 | N62552 | 103 a 105 |
| 3,96 | 442 | 1,70 | 40000 | N62553 | 103 a 105 |
| 3,62 | 483 | 1,55 | 40000 | N62554 | 103 a 105 |
| 3,22 | 544 | 1,38 | 40000 | N62555 | 103 a 105 |
| 2,75 | 635 | 1,18 | 40000 | N62556 | 103 a 105 |
| 2,28 | 767 | 0,98 | 40000 | N62557 | 103 a 105 |
| 2,09 | 839 | 0,89 | 40000 | N62558 | 103 a 105 |
| 6,32 | 277 | 4,81 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 4,24 | 65000 | N64550 | 106 a 108 |
| 4,89 | 358 | 3,72 | 65000 | N64551 | 106 a 108 |
| 4,05 | 432 | 3,08 | 65000 | N64552 | 106 a 108 |



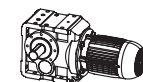
1,10 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|-------|------|--------|--------|-----------|
| 3,70 | 473 | 2,82 | 65000 | N64553 | 106 a 108 |
| 3,29 | 532 | 2,51 | 65000 | N64554 | 106 a 108 |
| 3,00 | 583 | 2,28 | 65000 | N64555 | 106 a 108 |
| 2,82 | 621 | 2,15 | 65000 | N64556 | 106 a 108 |
| 2,33 | 750 | 1,78 | 65000 | N64557 | 106 a 108 |
| 2,13 | 820 | 1,63 | 65000 | N64558 | 106 a 108 |
| 1,90 | 923 | 1,44 | 65000 | N64559 | 106 a 108 |
| 1,73 | 1.012 | 1,32 | 65000 | N64560 | 106 a 108 |
| 1,50 | 1.168 | 1,14 | 65000 | N64561 | 106 a 108 |
| 1,31 | 1.334 | 1,00 | 65000 | N64563 | 106 a 108 |
| 1,12 | 1.568 | 0,85 | 65000 | N64564 | 106 a 108 |
| 3,86 | 454 | 4,78 | 78000 | N66553 | 109 a 111 |
| 3,20 | 547 | 3,96 | 78000 | N66555 | 109 a 111 |
| 2,92 | 599 | 3,62 | 78000 | N66556 | 109 a 111 |
| 2,37 | 739 | 2,93 | 78000 | N66557 | 109 a 111 |
| 2,22 | 787 | 2,75 | 78000 | N66558 | 109 a 111 |
| 1,84 | 950 | 2,28 | 78000 | N66559 | 109 a 111 |
| 1,69 | 1.038 | 2,09 | 78000 | N66560 | 109 a 111 |
| 1,50 | 1.169 | 1,85 | 78000 | N66561 | 109 a 111 |
| 1,37 | 1.281 | 1,69 | 78000 | N66562 | 109 a 111 |
| 1,18 | 1.479 | 1,46 | 78000 | N66563 | 109 a 111 |
| 1,04 | 1.690 | 1,28 | 78000 | N66564 | 109 a 111 |
| 0,882 | 1.985 | 1,09 | 78000 | N66566 | 109 a 111 |
| 0,792 | 2.210 | 0,98 | 78000 | N66567 | 109 a 111 |
| 0,673 | 2.601 | 0,83 | 78000 | N66568 | 109 a 111 |
| 2,90 | 604 | 4,96 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 4,62 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 3,99 | 100000 | N68557 | 115 a 117 |
| 2,04 | 858 | 3,49 | 100000 | N68558 | 115 a 117 |
| 1,81 | 968 | 3,10 | 100000 | N68559 | 115 a 117 |
| 1,68 | 1.043 | 2,87 | 100000 | N68560 | 115 a 117 |
| 1,45 | 1.206 | 2,49 | 100000 | N68562 | 115 a 117 |
| 1,26 | 1.392 | 2,15 | 100000 | N68563 | 115 a 117 |
| 1,05 | 1.673 | 1,79 | 100000 | N68564 | 115 a 117 |
| 1,05 | 1.673 | 1,79 | 100000 | N68565 | 115 a 117 |
| 0,877 | 1.996 | 1,50 | 100000 | N68566 | 115 a 117 |
| 0,674 | 2.597 | 1,15 | 100000 | N68669 | 112 a 114 |
| 0,569 | 3.075 | 0,98 | 100000 | N68670 | 112 a 114 |
| 0,522 | 3.354 | 0,89 | 100000 | N68671 | 112 a 114 |



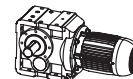
1,50 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 6,72 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 6,74 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 6,79 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 6,76 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 6,74 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 6,70 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 6,79 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 5,83 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 5,04 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 4,26 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 3,36 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 3,01 | 10000 | N56330 | 73 a 75 |



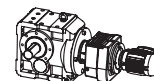
1,50 kW - 1750 rpm



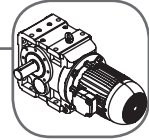
| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|-------|--------|--------|---------|
| 48,6 | 36,0 | 2,78 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 2,30 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 1,99 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 1,68 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 1,50 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 1,27 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 1,18 | 10000 | N56339 | 73 a 75 |
| 18,3 | 95,5 | 1,05 | 10000 | N56340 | 73 a 75 |
| 108 | 16,3 | 11,65 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 7,48 | 15000 | N58328 | 76 a 78 |
| 42,5 | 41,2 | 4,59 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 4,20 | 15000 | N58333 | 76 a 78 |
| 34,5 | 50,7 | 3,73 | 15000 | N58334 | 76 a 78 |
| 31,5 | 55,6 | 3,41 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 2,95 | 15000 | N58336 | 76 a 78 |
| 23,9 | 73,3 | 2,58 | 15000 | N58337 | 76 a 78 |
| 20,3 | 86,1 | 2,20 | 15000 | N58338 | 76 a 78 |
| 18,2 | 95,9 | 1,97 | 15000 | N58340 | 76 a 78 |
| 15,5 | 113 | 1,68 | 15000 | N58341 | 76 a 78 |
| 14,5 | 120 | 1,57 | 15000 | N58342 | 76 a 78 |
| 13,0 | 134 | 1,41 | 15000 | N58343 | 76 a 78 |
| 23,6 | 74,1 | 4,95 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 4,58 | 27000 | N60338 | 79 a 81 |
| 19,2 | 91,2 | 4,02 | 27000 | N60339 | 79 a 81 |
| 17,1 | 102 | 3,58 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 3,08 | 27000 | N60342 | 79 a 81 |
| 13,3 | 132 | 2,78 | 27000 | N60343 | 79 a 81 |
| 11,3 | 155 | 2,36 | 27000 | N60344 | 79 a 81 |
| 10,6 | 165 | 2,23 | 27000 | N60345 | 79 a 81 |
| 15,4 | 114 | 4,84 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 4,30 | 40000 | N62342 | 82 a 84 |
| 11,9 | 147 | 3,74 | 40000 | N62343 | 82 a 84 |
| 10,7 | 163 | 3,37 | 40000 | N62344 | 82 a 84 |



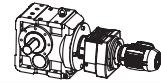
1,50 kW - 1750 rpm



| | | | | | |
|------|-----|------|-------|--------|-----------|
| 8,65 | 202 | 0,94 | 15000 | N58546 | 97 a 99 |
| 7,75 | 226 | 0,84 | 15000 | N58547 | 97 a 99 |
| 8,53 | 205 | 1,79 | 27000 | N60546 | 100 a 102 |
| 7,65 | 229 | 1,60 | 27000 | N60547 | 100 a 102 |
| 7,07 | 247 | 1,48 | 27000 | N60548 | 100 a 102 |
| 5,85 | 299 | 1,23 | 27000 | N60549 | 100 a 102 |
| 5,65 | 310 | 1,18 | 27000 | N60550 | 100 a 102 |
| 5,07 | 345 | 1,06 | 27000 | N60551 | 100 a 102 |
| 4,12 | 425 | 0,86 | 27000 | N60552 | 100 a 102 |
| 3,81 | 460 | 0,80 | 27000 | N60553 | 100 a 102 |
| 10,1 | 174 | 3,16 | 40000 | N62545 | 103 a 105 |
| 8,33 | 210 | 2,62 | 40000 | N62546 | 103 a 105 |
| 7,62 | 230 | 2,39 | 40000 | N62547 | 103 a 105 |
| 6,77 | 258 | 2,13 | 40000 | N62548 | 103 a 105 |
| 6,18 | 283 | 1,94 | 40000 | N62549 | 103 a 105 |
| 5,44 | 322 | 1,71 | 40000 | N62550 | 103 a 105 |
| 4,98 | 352 | 1,56 | 40000 | N62551 | 103 a 105 |



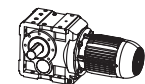
1,50 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|-------|-------|------|--------|--------|-----------|
| 4,78 | 366 | 1,50 | 40000 | N62552 | 103 a 105 |
| 3,96 | 442 | 1,24 | 40000 | N62553 | 103 a 105 |
| 3,62 | 483 | 1,14 | 40000 | N62554 | 103 a 105 |
| 3,22 | 544 | 1,01 | 40000 | N62555 | 103 a 105 |
| 2,75 | 635 | 0,87 | 40000 | N62556 | 103 a 105 |
| 8,11 | 216 | 4,53 | 65000 | N64547 | 106 a 108 |
| 6,94 | 252 | 3,88 | 65000 | N64548 | 106 a 108 |
| 6,32 | 277 | 3,53 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 3,11 | 65000 | N64550 | 106 a 108 |
| 4,89 | 358 | 2,73 | 65000 | N64551 | 106 a 108 |
| 4,05 | 432 | 2,26 | 65000 | N64552 | 106 a 108 |
| 3,70 | 473 | 2,07 | 65000 | N64553 | 106 a 108 |
| 3,29 | 532 | 1,84 | 65000 | N64554 | 106 a 108 |
| 3,00 | 583 | 1,68 | 65000 | N64555 | 106 a 108 |
| 2,82 | 621 | 1,57 | 65000 | N64556 | 106 a 108 |
| 2,33 | 750 | 1,30 | 65000 | N64557 | 106 a 108 |
| 2,13 | 820 | 1,19 | 65000 | N64558 | 106 a 108 |
| 1,90 | 923 | 1,06 | 65000 | N64559 | 106 a 108 |
| 1,73 | 1.012 | 0,97 | 65000 | N64560 | 106 a 108 |
| 1,50 | 1.168 | 0,84 | 65000 | N64561 | 106 a 108 |
| 5,22 | 335 | 4,74 | 78000 | N66551 | 109 a 111 |
| 4,32 | 405 | 3,92 | 78000 | N66552 | 109 a 111 |
| 3,86 | 454 | 3,50 | 78000 | N66553 | 109 a 111 |
| 3,20 | 547 | 2,90 | 78000 | N66555 | 109 a 111 |
| 2,92 | 599 | 2,65 | 78000 | N66556 | 109 a 111 |
| 2,37 | 739 | 2,15 | 78000 | N66557 | 109 a 111 |
| 2,22 | 787 | 2,02 | 78000 | N66558 | 109 a 111 |
| 1,84 | 950 | 1,67 | 78000 | N66559 | 109 a 111 |
| 1,69 | 1.038 | 1,53 | 78000 | N66560 | 109 a 111 |
| 1,50 | 1.169 | 1,36 | 78000 | N66561 | 109 a 111 |
| 1,37 | 1.281 | 1,24 | 78000 | N66562 | 109 a 111 |
| 1,18 | 1.479 | 1,07 | 78000 | N66563 | 109 a 111 |
| 1,04 | 1.690 | 0,94 | 78000 | N66564 | 109 a 111 |
| 0,882 | 1.985 | 0,80 | 78000 | N66566 | 109 a 111 |
| 3,69 | 474 | 4,64 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 4,18 | 100000 | N68554 | 115 a 117 |
| 2,90 | 604 | 3,64 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 3,39 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 2,93 | 100000 | N68557 | 115 a 117 |
| 2,04 | 858 | 2,56 | 100000 | N68558 | 115 a 117 |
| 1,81 | 968 | 2,27 | 100000 | N68559 | 115 a 117 |
| 1,68 | 1.043 | 2,11 | 100000 | N68560 | 115 a 117 |
| 1,45 | 1.206 | 1,82 | 100000 | N68562 | 115 a 117 |
| 1,26 | 1.392 | 1,58 | 100000 | N68563 | 115 a 117 |
| 1,05 | 1.673 | 1,31 | 100000 | N68564 | 115 a 117 |
| 1,05 | 1.673 | 1,31 | 100000 | N68565 | 115 a 117 |
| 0,877 | 1.996 | 1,10 | 100000 | N68566 | 115 a 117 |
| 0,674 | 2.597 | 0,85 | 100000 | N68669 | 112 a 114 |



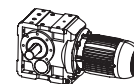
2,20 kW - 1750 rpm



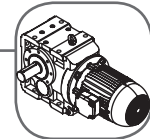
| | | | | | |
|-----|------|------|-------|--------|---------|
| 239 | 7,31 | 4,58 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 4,60 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 4,63 | 10000 | N56319 | 73 a 75 |



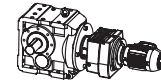
2,20 kW - 1750 rpm



| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 164 | 10,7 | 4,61 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 4,60 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 4,57 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 4,63 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 3,98 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 3,44 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 2,91 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 2,29 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 2,05 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 1,90 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 1,57 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 1,36 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 1,15 | 10000 | N56336 | 73 a 75 |
| 26,2 | 66,8 | 1,02 | 10000 | N56337 | 73 a 75 |
| 22,1 | 79,2 | 0,86 | 10000 | N56338 | 73 a 75 |
| 20,6 | 85,1 | 0,80 | 10000 | N56339 | 73 a 75 |
| 108 | 16,3 | 7,94 | 15000 | N58324 | 76 a 78 |
| 69,1 | 25,3 | 5,10 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 4,46 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 3,78 | 15000 | N58331 | 76 a 78 |
| 42,5 | 41,2 | 3,13 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 2,86 | 15000 | N58333 | 76 a 78 |
| 34,5 | 50,7 | 2,55 | 15000 | N58334 | 76 a 78 |
| 31,5 | 55,6 | 2,32 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 2,01 | 15000 | N58336 | 76 a 78 |
| 23,9 | 73,3 | 1,76 | 15000 | N58337 | 76 a 78 |
| 20,3 | 86,1 | 1,50 | 15000 | N58338 | 76 a 78 |
| 18,2 | 95,9 | 1,35 | 15000 | N58340 | 76 a 78 |
| 15,5 | 113 | 1,14 | 15000 | N58341 | 76 a 78 |
| 14,5 | 120 | 1,07 | 15000 | N58342 | 76 a 78 |
| 13,0 | 134 | 0,96 | 15000 | N58343 | 76 a 78 |
| 33,8 | 51,8 | 4,83 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 4,10 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 3,37 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 3,12 | 27000 | N60338 | 79 a 81 |
| 19,2 | 91,2 | 2,74 | 27000 | N60339 | 79 a 81 |
| 17,1 | 102 | 2,44 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 2,10 | 27000 | N60342 | 79 a 81 |
| 13,3 | 132 | 1,90 | 27000 | N60343 | 79 a 81 |
| 11,3 | 155 | 1,61 | 27000 | N60344 | 79 a 81 |
| 10,6 | 165 | 1,52 | 27000 | N60345 | 79 a 81 |
| 22,5 | 77,9 | 4,81 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 4,40 | 40000 | N62339 | 82 a 84 |
| 17,2 | 102 | 3,69 | 40000 | N62340 | 82 a 84 |
| 15,4 | 114 | 3,30 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 2,93 | 40000 | N62342 | 82 a 84 |
| 11,9 | 147 | 2,55 | 40000 | N62343 | 82 a 84 |
| 10,7 | 163 | 2,30 | 40000 | N62344 | 82 a 84 |
| 12,2 | 144 | 4,63 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 4,18 | 65000 | N64344 | 85 a 87 |



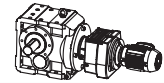
2,20 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|-------|------|--------|--------|-----------|
| 8,53 | 205 | 1,22 | 27000 | N60546 | 100 a 102 |
| 7,65 | 229 | 1,09 | 27000 | N60547 | 100 a 102 |
| 7,07 | 247 | 1,01 | 27000 | N60548 | 100 a 102 |
| 5,85 | 299 | 0,84 | 27000 | N60549 | 100 a 102 |
| 5,65 | 310 | 0,81 | 27000 | N60550 | 100 a 102 |
| 10,1 | 174 | 2,15 | 40000 | N62545 | 103 a 105 |
| 8,33 | 210 | 1,78 | 40000 | N62546 | 103 a 105 |
| 7,62 | 230 | 1,63 | 40000 | N62547 | 103 a 105 |
| 6,77 | 258 | 1,45 | 40000 | N62548 | 103 a 105 |
| 6,18 | 283 | 1,32 | 40000 | N62549 | 103 a 105 |
| 5,44 | 322 | 1,17 | 40000 | N62550 | 103 a 105 |
| 4,98 | 352 | 1,07 | 40000 | N62551 | 103 a 105 |
| 4,78 | 366 | 1,02 | 40000 | N62552 | 103 a 105 |
| 3,96 | 442 | 0,85 | 40000 | N62553 | 103 a 105 |
| 9,98 | 175 | 3,80 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 3,47 | 65000 | N64546 | 106 a 108 |
| 8,11 | 216 | 3,09 | 65000 | N64547 | 106 a 108 |
| 6,94 | 252 | 2,64 | 65000 | N64548 | 106 a 108 |
| 6,32 | 277 | 2,41 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 2,12 | 65000 | N64550 | 106 a 108 |
| 4,89 | 358 | 1,86 | 65000 | N64551 | 106 a 108 |
| 4,05 | 432 | 1,54 | 65000 | N64552 | 106 a 108 |
| 3,70 | 473 | 1,41 | 65000 | N64553 | 106 a 108 |
| 3,29 | 532 | 1,25 | 65000 | N64554 | 106 a 108 |
| 3,00 | 583 | 1,14 | 65000 | N64555 | 106 a 108 |
| 2,82 | 621 | 1,07 | 65000 | N64556 | 106 a 108 |
| 2,33 | 750 | 0,89 | 65000 | N64557 | 106 a 108 |
| 2,13 | 820 | 0,81 | 65000 | N64558 | 106 a 108 |
| 7,50 | 233 | 4,64 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 4,24 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 3,77 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 3,44 | 78000 | N66550 | 109 a 111 |
| 5,22 | 335 | 3,23 | 78000 | N66551 | 109 a 111 |
| 4,32 | 405 | 2,68 | 78000 | N66552 | 109 a 111 |
| 3,86 | 454 | 2,39 | 78000 | N66553 | 109 a 111 |
| 3,20 | 547 | 1,98 | 78000 | N66555 | 109 a 111 |
| 2,92 | 599 | 1,81 | 78000 | N66556 | 109 a 111 |
| 2,37 | 739 | 1,47 | 78000 | N66557 | 109 a 111 |
| 2,22 | 787 | 1,38 | 78000 | N66558 | 109 a 111 |
| 1,84 | 950 | 1,14 | 78000 | N66559 | 109 a 111 |
| 1,69 | 1.038 | 1,04 | 78000 | N66560 | 109 a 111 |
| 1,50 | 1.169 | 0,93 | 78000 | N66561 | 109 a 111 |
| 1,37 | 1.281 | 0,85 | 78000 | N66562 | 109 a 111 |
| 5,25 | 334 | 4,50 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 4,19 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 3,62 | 100000 | N68552 | 115 a 117 |
| 3,69 | 474 | 3,16 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 2,85 | 100000 | N68554 | 115 a 117 |
| 2,90 | 604 | 2,48 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 2,31 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 2,00 | 100000 | N68557 | 115 a 117 |
| 2,04 | 858 | 1,75 | 100000 | N68558 | 115 a 117 |
| 1,81 | 968 | 1,55 | 100000 | N68559 | 115 a 117 |
| 1,68 | 1.043 | 1,44 | 100000 | N68560 | 115 a 117 |



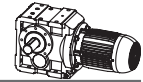
2,20 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|-------|------|--------|--------|-----------|
| 1,45 | 1.206 | 1,24 | 100000 | N68562 | 115 a 117 |
| 1,26 | 1.392 | 1,08 | 100000 | N68563 | 115 a 117 |
| 1,05 | 1.673 | 0,90 | 100000 | N68564 | 115 a 117 |
| 1,05 | 1.673 | 0,90 | 100000 | N68565 | 115 a 117 |



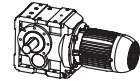
3,00 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 3,36 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 3,37 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 3,39 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 3,38 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 3,37 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 3,35 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 3,40 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 2,92 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 2,52 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 2,13 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 1,68 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 1,50 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 1,39 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 1,15 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 0,99 | 10000 | N56334 | 73 a 75 |
| 29,4 | 59,5 | 0,84 | 10000 | N56336 | 73 a 75 |
| 108 | 16,3 | 5,82 | 15000 | N58324 | 76 a 78 |
| 87,5 | 20,0 | 4,73 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 4,32 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 3,74 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 3,27 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 2,77 | 15000 | N58331 | 76 a 78 |
| 42,5 | 41,2 | 2,30 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 2,10 | 15000 | N58333 | 76 a 78 |
| 34,5 | 50,7 | 1,87 | 15000 | N58334 | 76 a 78 |
| 31,5 | 55,6 | 1,70 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 1,47 | 15000 | N58336 | 76 a 78 |
| 23,9 | 73,3 | 1,29 | 15000 | N58337 | 76 a 78 |
| 20,3 | 86,1 | 1,10 | 15000 | N58338 | 76 a 78 |
| 18,2 | 95,9 | 0,99 | 15000 | N58340 | 76 a 78 |
| 15,5 | 113 | 0,84 | 15000 | N58341 | 76 a 78 |
| 42,8 | 40,9 | 4,49 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 4,11 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 3,54 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 3,01 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 2,47 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 2,29 | 27000 | N60338 | 79 a 81 |
| 19,2 | 91,2 | 2,01 | 27000 | N60339 | 79 a 81 |
| 17,1 | 102 | 1,79 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 1,54 | 27000 | N60342 | 79 a 81 |
| 13,3 | 132 | 1,39 | 27000 | N60343 | 79 a 81 |
| 11,3 | 155 | 1,18 | 27000 | N60344 | 79 a 81 |
| 10,6 | 165 | 1,11 | 27000 | N60345 | 79 a 81 |
| 29,9 | 58,6 | 4,69 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 4,09 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 3,53 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 3,23 | 40000 | N62339 | 82 a 84 |



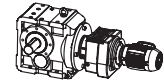
3,00 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 17,2 | 102 | 2,70 | 40000 | N62340 | 82 a 84 |
| 15,4 | 114 | 2,42 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 2,15 | 40000 | N62342 | 82 a 84 |
| 11,9 | 147 | 1,87 | 40000 | N62343 | 82 a 84 |
| 10,7 | 163 | 1,68 | 40000 | N62344 | 82 a 84 |
| 17,6 | 99,4 | 4,92 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 4,40 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 3,90 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 3,40 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 3,06 | 65000 | N64344 | 85 a 87 |
| 9,83 | 178 | 4,46 | 78000 | N66345 | 87 a 89 |



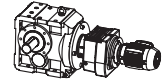
3,00 kW - 1750 rpm



| | | | | | |
|------|-----|------|--------|--------|-----------|
| 8,53 | 205 | 0,89 | 27000 | N60546 | 100 a 102 |
| 7,65 | 229 | 0,80 | 27000 | N60547 | 100 a 102 |
| 10,1 | 174 | 1,58 | 40000 | N62545 | 103 a 105 |
| 8,33 | 210 | 1,31 | 40000 | N62546 | 103 a 105 |
| 7,62 | 230 | 1,20 | 40000 | N62547 | 103 a 105 |
| 6,77 | 258 | 1,06 | 40000 | N62548 | 103 a 105 |
| 6,18 | 283 | 0,97 | 40000 | N62549 | 103 a 105 |
| 5,44 | 322 | 0,85 | 40000 | N62550 | 103 a 105 |
| 9,98 | 175 | 2,79 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 2,55 | 65000 | N64546 | 106 a 108 |
| 8,11 | 216 | 2,26 | 65000 | N64547 | 106 a 108 |
| 6,94 | 252 | 1,94 | 65000 | N64548 | 106 a 108 |
| 6,32 | 277 | 1,76 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 1,55 | 65000 | N64550 | 106 a 108 |
| 4,89 | 358 | 1,36 | 65000 | N64551 | 106 a 108 |
| 4,05 | 432 | 1,13 | 65000 | N64552 | 106 a 108 |
| 3,70 | 473 | 1,03 | 65000 | N64553 | 106 a 108 |
| 3,29 | 532 | 0,92 | 65000 | N64554 | 106 a 108 |
| 3,00 | 583 | 0,84 | 65000 | N64555 | 106 a 108 |
| 9,05 | 193 | 4,11 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 3,40 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 3,11 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 2,77 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 2,52 | 78000 | N66550 | 109 a 111 |
| 5,22 | 335 | 2,37 | 78000 | N66551 | 109 a 111 |
| 4,32 | 405 | 1,96 | 78000 | N66552 | 109 a 111 |
| 3,86 | 454 | 1,75 | 78000 | N66553 | 109 a 111 |
| 3,20 | 547 | 1,45 | 78000 | N66555 | 109 a 111 |
| 2,92 | 599 | 1,33 | 78000 | N66556 | 109 a 111 |
| 2,37 | 739 | 1,08 | 78000 | N66557 | 109 a 111 |
| 2,22 | 787 | 1,01 | 78000 | N66558 | 109 a 111 |
| 1,84 | 950 | 0,84 | 78000 | N66559 | 109 a 111 |
| 6,92 | 253 | 4,35 | 100000 | N68548 | 115 a 117 |
| 6,03 | 290 | 3,79 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 3,30 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 3,07 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 2,65 | 100000 | N68552 | 115 a 117 |



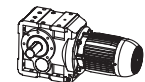
3,00 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|-------|------|--------|--------|-----------|
| 3,69 | 474 | 2,32 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 2,09 | 100000 | N68554 | 115 a 117 |
| 2,90 | 604 | 1,82 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 1,70 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 1,46 | 100000 | N68557 | 115 a 117 |
| 2,04 | 858 | 1,28 | 100000 | N68558 | 115 a 117 |
| 1,81 | 968 | 1,14 | 100000 | N68559 | 115 a 117 |
| 1,68 | 1.043 | 1,05 | 100000 | N68560 | 115 a 117 |
| 1,45 | 1.206 | 0,91 | 100000 | N68562 | 115 a 117 |



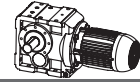
3,70 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 2,72 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 2,73 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 2,75 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 2,74 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 2,73 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 2,71 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 2,75 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 2,37 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 2,05 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 1,73 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 1,36 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 1,22 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 1,13 | 10000 | N56331 | 73 a 75 |
| 40,2 | 43,5 | 0,93 | 10000 | N56333 | 73 a 75 |
| 34,8 | 50,3 | 0,81 | 10000 | N56334 | 72 a 74 |
| 108 | 16,3 | 4,72 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 4,32 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 3,84 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 3,50 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 3,03 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 2,65 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 2,25 | 15000 | N58331 | 76 a 78 |
| 42,5 | 41,2 | 1,86 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 1,70 | 15000 | N58333 | 76 a 78 |
| 34,5 | 50,7 | 1,51 | 15000 | N58334 | 76 a 78 |
| 31,5 | 55,6 | 1,38 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 1,20 | 15000 | N58336 | 76 a 78 |
| 23,9 | 73,3 | 1,05 | 15000 | N58337 | 76 a 78 |
| 20,3 | 86,1 | 0,89 | 15000 | N58338 | 76 a 78 |
| 18,2 | 95,9 | 0,80 | 15000 | N58340 | 76 a 78 |
| 55,2 | 31,7 | 4,69 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 4,31 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 3,64 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 3,33 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 2,87 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 2,44 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 2,01 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 1,86 | 27000 | N60338 | 79 a 81 |
| 19,2 | 91,2 | 1,63 | 27000 | N60339 | 79 a 81 |
| 17,1 | 102 | 1,45 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 1,25 | 27000 | N60342 | 79 a 81 |
| 13,3 | 132 | 1,13 | 27000 | N60343 | 79 a 81 |
| 11,3 | 155 | 0,96 | 27000 | N60344 | 79 a 81 |
| 10,6 | 165 | 0,90 | 27000 | N60345 | 79 a 81 |



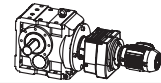
3,70 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 37,5 | 46,7 | 4,77 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 4,11 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 3,80 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 3,32 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 2,86 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 2,62 | 40000 | N62339 | 82 a 84 |
| 17,2 | 102 | 2,19 | 40000 | N62340 | 82 a 84 |
| 15,4 | 114 | 1,96 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 1,74 | 40000 | N62342 | 82 a 84 |
| 11,9 | 147 | 1,51 | 40000 | N62343 | 82 a 84 |
| 10,7 | 163 | 1,37 | 40000 | N62344 | 82 a 84 |
| 21,0 | 83,3 | 4,76 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 4,28 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 3,99 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 3,57 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 3,17 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 2,75 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 2,48 | 65000 | N64344 | 85 a 87 |
| 12,6 | 138 | 4,65 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 4,15 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 3,62 | 78000 | N66345 | 88 a 90 |



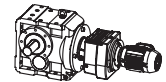
3,70 kW - 1750 rpm



| | | | | | |
|------|-----|------|--------|--------|-----------|
| 10,1 | 174 | 1,28 | 40000 | N62545 | 103 a 105 |
| 8,33 | 210 | 1,06 | 40000 | N62546 | 103 a 105 |
| 7,62 | 230 | 0,97 | 40000 | N62547 | 103 a 105 |
| 6,77 | 258 | 0,86 | 40000 | N62548 | 103 a 105 |
| 9,98 | 175 | 2,26 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 2,07 | 65000 | N64546 | 106 a 108 |
| 8,11 | 216 | 1,84 | 65000 | N64547 | 106 a 108 |
| 6,94 | 252 | 1,57 | 65000 | N64548 | 106 a 108 |
| 6,32 | 277 | 1,43 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 1,26 | 65000 | N64550 | 106 a 108 |
| 4,89 | 358 | 1,11 | 65000 | N64551 | 106 a 108 |
| 4,05 | 432 | 0,92 | 65000 | N64552 | 106 a 108 |
| 3,70 | 473 | 0,84 | 65000 | N64553 | 106 a 108 |
| 9,05 | 193 | 3,33 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 2,76 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 2,52 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 2,24 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 2,05 | 78000 | N66550 | 109 a 111 |
| 5,22 | 335 | 1,92 | 78000 | N66551 | 109 a 111 |
| 4,32 | 405 | 1,59 | 78000 | N66552 | 109 a 111 |
| 3,86 | 454 | 1,42 | 78000 | N66553 | 109 a 111 |
| 3,20 | 547 | 1,18 | 78000 | N66555 | 109 a 111 |
| 2,92 | 599 | 1,08 | 78000 | N66556 | 109 a 111 |
| 2,37 | 739 | 0,87 | 78000 | N66557 | 109 a 111 |
| 2,22 | 787 | 0,82 | 78000 | N66558 | 109 a 111 |
| 8,82 | 198 | 4,49 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 4,05 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 3,52 | 100000 | N68548 | 115 a 117 |



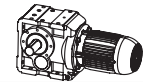
3.70 kW - 1750 rpm



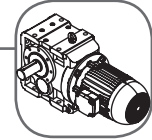
| rpm | ítot | fs | Fr (N) | código | páginas |
|------|-------|------|--------|--------|-----------|
| 6,03 | 290 | 3,07 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 2,67 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 2,49 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 2,15 | 100000 | N68552 | 115 a 117 |
| 3,69 | 474 | 1,88 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 1,70 | 100000 | N68554 | 115 a 117 |
| 2,90 | 604 | 1,48 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 1,37 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 1,19 | 100000 | N68557 | 115 a 117 |
| 2,04 | 858 | 1,04 | 100000 | N68558 | 115 a 117 |
| 1,81 | 968 | 0,92 | 100000 | N68559 | 115 a 117 |
| 1,68 | 1.043 | 0,85 | 100000 | N68560 | 115 a 117 |



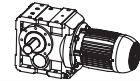
4,50 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 2,24 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 2,25 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 2,26 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 2,25 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 2,25 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 2,23 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 2,26 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 1,94 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 1,68 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 1,42 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 1,12 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 1,00 | 10000 | N56330 | 73 a 75 |
| 48,6 | 36,0 | 0,93 | 10000 | N56331 | 73 a 75 |
| 195 | 8,98 | 4,44 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 4,45 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 4,45 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 4,45 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 3,88 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 3,55 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 3,15 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 2,88 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 2,49 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 2,18 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 1,85 | 15000 | N58331 | 76 a 78 |
| 42,5 | 41,2 | 1,53 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 1,40 | 15000 | N58333 | 76 a 78 |
| 34,5 | 50,7 | 1,24 | 15000 | N58334 | 76 a 78 |
| 31,5 | 55,6 | 1,14 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 0,98 | 15000 | N58336 | 76 a 78 |
| 23,9 | 73,3 | 0,86 | 15000 | N58337 | 76 a 78 |
| 66,3 | 26,4 | 4,63 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 4,17 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 3,86 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 3,54 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 2,99 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 2,74 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 2,36 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 2,01 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 1,65 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 1,53 | 27000 | N60338 | 79 a 81 |



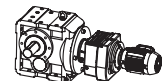
4,50 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 19,2 | 91,2 | 1,34 | 27000 | N60339 | 79 a 81 |
| 17,1 | 102 | 1,19 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 1,03 | 27000 | N60342 | 79 a 81 |
| 13,3 | 132 | 0,93 | 27000 | N60343 | 79 a 81 |
| 43,2 | 40,5 | 4,53 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 3,92 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 3,38 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 3,13 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 2,73 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 2,35 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 2,15 | 40000 | N62339 | 82 a 84 |
| 17,2 | 102 | 1,80 | 40000 | N62340 | 82 a 84 |
| 15,4 | 114 | 1,61 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 1,43 | 40000 | N62342 | 82 a 84 |
| 11,9 | 147 | 1,25 | 40000 | N62343 | 82 a 84 |
| 10,7 | 163 | 1,12 | 40000 | N62344 | 82 a 84 |
| 26,7 | 65,6 | 4,96 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 4,28 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 3,91 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 3,52 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 3,28 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 2,93 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 2,60 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 2,26 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 2,04 | 65000 | N64344 | 85 a 87 |
| 15,1 | 116 | 4,56 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 3,83 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 3,41 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 2,97 | 78000 | N66345 | 88 a 90 |
| 10,4 | 168 | 4,35 | 100000 | N68344 | 91 a 93 |



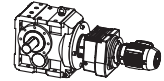
4,50 kW - 1750 rpm



| | | | | | |
|------|-----|------|-------|--------|-----------|
| 10,1 | 174 | 1,05 | 40000 | N62545 | 103 a 105 |
| 8,33 | 210 | 0,87 | 40000 | N62546 | 103 a 105 |
| 7,62 | 230 | 0,80 | 40000 | N62547 | 103 a 105 |
| 9,98 | 175 | 1,86 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 1,70 | 65000 | N64546 | 106 a 108 |
| 8,11 | 216 | 1,51 | 65000 | N64547 | 106 a 108 |
| 6,94 | 252 | 1,29 | 65000 | N64548 | 106 a 108 |
| 6,32 | 277 | 1,18 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 1,04 | 65000 | N64550 | 106 a 108 |
| 4,89 | 358 | 0,91 | 65000 | N64551 | 106 a 108 |
| 9,05 | 193 | 2,74 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 2,27 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 2,07 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 1,84 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 1,68 | 78000 | N66550 | 109 a 111 |
| 5,22 | 335 | 1,58 | 78000 | N66551 | 109 a 111 |
| 4,32 | 405 | 1,31 | 78000 | N66552 | 109 a 111 |
| 3,86 | 454 | 1,17 | 78000 | N66553 | 109 a 111 |



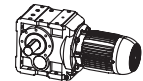
4,50 kW - 1750 rpm



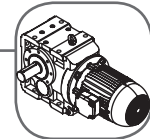
| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|-----------|
| 3,20 | 547 | 0,97 | 78000 | N66555 | 109 a 111 |
| 2,92 | 599 | 0,88 | 78000 | N66556 | 109 a 111 |
| 9,95 | 176 | 4,17 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 3,69 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 3,33 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 2,90 | 100000 | N68548 | 115 a 117 |
| 6,03 | 290 | 2,53 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 2,20 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 2,05 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 1,77 | 100000 | N68552 | 115 a 117 |
| 3,69 | 474 | 1,55 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 1,39 | 100000 | N68554 | 115 a 117 |
| 2,90 | 604 | 1,21 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 1,13 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 0,98 | 100000 | N68557 | 115 a 117 |
| 2,04 | 858 | 0,85 | 100000 | N68558 | 115 a 117 |



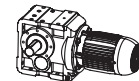
5,50 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 1,83 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 1,84 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 1,85 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 1,84 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 1,84 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 1,83 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 1,85 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 1,59 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 1,38 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 1,16 | 10000 | N56327 | 73 a 75 |
| 58,6 | 29,8 | 0,92 | 10000 | N56329 | 73 a 75 |
| 52,6 | 33,3 | 0,82 | 10000 | N56330 | 73 a 75 |
| 195 | 8,98 | 3,64 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 3,64 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 3,64 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 3,64 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 3,18 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 2,90 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 2,58 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 2,35 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 2,04 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 1,79 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 1,51 | 15000 | N58331 | 76 a 78 |
| 42,5 | 41,2 | 1,25 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 1,15 | 15000 | N58333 | 76 a 78 |
| 34,5 | 50,7 | 1,02 | 15000 | N58334 | 76 a 78 |
| 31,5 | 55,6 | 0,93 | 15000 | N58335 | 76 a 78 |
| 27,3 | 64,2 | 0,80 | 15000 | N58336 | 76 a 78 |
| 182 | 9,60 | 4,61 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 5,03 | 16000 | N60320 | 79 a 81 |
| 144 | 12,2 | 5,48 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 5,86 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 5,15 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 5,67 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 4,88 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 4,15 | 25000 | N60327 | 79 a 81 |



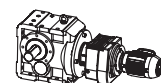
5,50 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 66,3 | 26,4 | 3,79 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 3,41 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 3,15 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 2,90 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 2,45 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 2,24 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 1,93 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 1,64 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 1,35 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 1,25 | 27000 | N60338 | 79 a 81 |
| 19,2 | 91,2 | 1,10 | 27000 | N60339 | 79 a 81 |
| 17,1 | 102 | 0,98 | 27000 | N60340 | 79 a 81 |
| 14,7 | 119 | 0,84 | 27000 | N60342 | 79 a 81 |
| 53,1 | 33,0 | 4,55 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 4,34 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 3,70 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 3,21 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 2,76 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 2,56 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 2,23 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 1,92 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 1,76 | 40000 | N62339 | 82 a 84 |
| 17,2 | 102 | 1,48 | 40000 | N62340 | 82 a 84 |
| 15,4 | 114 | 1,32 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 1,17 | 40000 | N62342 | 82 a 84 |
| 11,9 | 147 | 1,02 | 40000 | N62343 | 82 a 84 |
| 10,7 | 163 | 0,92 | 40000 | N62344 | 82 a 84 |
| 30,5 | 57,3 | 4,65 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 4,06 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 3,50 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 3,20 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 2,88 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 2,68 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 2,40 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 2,13 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 1,85 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 1,67 | 65000 | N64344 | 85 a 87 |
| 18,1 | 96,5 | 4,49 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 4,11 | 78000 | N66340 | 88 a 90 |
| 15,1 | 116 | 3,73 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 3,13 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 2,79 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 2,43 | 78000 | N66345 | 88 a 90 |
| 13,4 | 131 | 4,58 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 4,09 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 3,56 | 100000 | N68344 | 91 a 93 |



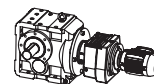
5,50 kW - 1750 rpm



| | | | | | |
|------|-----|------|-------|--------|-----------|
| 10,1 | 174 | 0,86 | 40000 | N62545 | 103 a 105 |
| 9,98 | 175 | 1,52 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 1,39 | 65000 | N64546 | 106 a 108 |
| 8,11 | 216 | 1,24 | 65000 | N64547 | 106 a 108 |



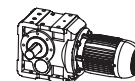
5,50 kW - 1750 rpm



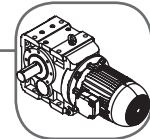
| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|-----------|
| 6,94 | 252 | 1,06 | 65000 | N64548 | 106 a 108 |
| 6,32 | 277 | 0,96 | 65000 | N64549 | 106 a 108 |
| 5,57 | 314 | 0,85 | 65000 | N64550 | 106 a 108 |
| 9,05 | 193 | 2,24 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 1,86 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 1,70 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 1,51 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 1,38 | 78000 | N66550 | 109 a 111 |
| 5,22 | 335 | 1,29 | 78000 | N66551 | 109 a 111 |
| 4,32 | 405 | 1,07 | 78000 | N66552 | 109 a 111 |
| 3,86 | 454 | 0,96 | 78000 | N66553 | 109 a 111 |
| 9,95 | 176 | 3,41 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 3,02 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 2,72 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 2,37 | 100000 | N68548 | 115 a 117 |
| 6,03 | 290 | 2,07 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 1,80 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 1,67 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 1,45 | 100000 | N68552 | 115 a 117 |
| 3,69 | 474 | 1,27 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 1,14 | 100000 | N68554 | 115 a 117 |
| 2,90 | 604 | 0,99 | 100000 | N68555 | 115 a 117 |
| 2,70 | 649 | 0,92 | 100000 | N68556 | 115 a 117 |
| 2,33 | 751 | 0,80 | 100000 | N68557 | 115 a 117 |



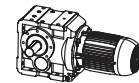
7,50 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 1,34 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 1,35 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 1,36 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 1,35 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 1,35 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 1,34 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 1,36 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 1,17 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 1,01 | 10000 | N56326 | 73 a 75 |
| 74,5 | 23,5 | 0,85 | 10000 | N56327 | 73 a 75 |
| 195 | 8,98 | 2,67 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 2,67 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 2,67 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 2,67 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 2,33 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 2,13 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 1,89 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 1,73 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 1,50 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 1,31 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 1,11 | 15000 | N58331 | 76 a 78 |
| 42,5 | 41,2 | 0,92 | 15000 | N58332 | 76 a 78 |
| 38,8 | 45,1 | 0,84 | 15000 | N58333 | 76 a 78 |
| 216 | 8,11 | 3,88 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 3,38 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 3,69 | 16000 | N60320 | 79 a 81 |



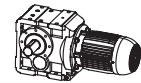
7,50 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 144 | 12,2 | 4,02 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 4,30 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 3,78 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 4,16 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 3,58 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 3,04 | 25000 | N60327 | 79 a 81 |
| 66,3 | 26,4 | 2,78 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 2,50 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 2,31 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 2,12 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 1,79 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 1,64 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 1,42 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 1,20 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 0,99 | 27000 | N60337 | 79 a 81 |
| 21,9 | 80,1 | 0,92 | 27000 | N60338 | 79 a 81 |
| 19,2 | 91,2 | 0,80 | 27000 | N60339 | 79 a 81 |
| 76,2 | 23,0 | 4,79 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 4,43 | 34000 | N62328 | 82 a 84 |
| 61,6 | 28,4 | 3,87 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 3,33 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 3,18 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 2,72 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 2,35 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 2,03 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 1,88 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 1,64 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 1,41 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 1,29 | 40000 | N62339 | 82 a 84 |
| 17,2 | 102 | 1,08 | 40000 | N62340 | 82 a 84 |
| 15,4 | 114 | 0,97 | 40000 | N62341 | 82 a 84 |
| 13,7 | 128 | 0,86 | 40000 | N62342 | 82 a 84 |
| 44,2 | 39,6 | 4,94 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 4,28 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 3,69 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 3,41 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 2,98 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 2,57 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 2,35 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 2,11 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 1,97 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 1,76 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 1,56 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 1,36 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 1,23 | 65000 | N64344 | 85 a 87 |
| 24,2 | 72,3 | 4,39 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 3,80 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 3,29 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 3,01 | 78000 | N66340 | 88 a 90 |
| 15,1 | 116 | 2,74 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 2,30 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 2,05 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 1,78 | 78000 | N66345 | 88 a 90 |
| 19,2 | 91,2 | 4,82 | 100000 | N68339 | 91 a 93 |



7,50 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 17,5 | 99,7 | 4,41 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 4,01 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 3,36 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 3,00 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 2,61 | 100000 | N68344 | 91 a 93 |



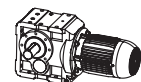
7,50 kW - 1750 rpm



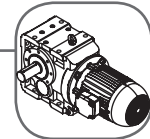
| | | | | | |
|------|-----|------|--------|--------|-----------|
| 9,98 | 175 | 1,11 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 1,02 | 65000 | N64546 | 106 a 108 |
| 8,11 | 216 | 0,91 | 65000 | N64547 | 106 a 108 |
| 9,05 | 193 | 1,64 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 1,36 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 1,24 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 1,11 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 1,01 | 78000 | N66550 | 109 a 111 |
| 5,22 | 335 | 0,95 | 78000 | N66551 | 109 a 111 |
| 9,95 | 176 | 2,50 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 2,22 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 2,00 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 1,74 | 100000 | N68548 | 115 a 117 |
| 6,03 | 290 | 1,52 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 1,32 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 1,23 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 1,06 | 100000 | N68552 | 115 a 117 |
| 3,69 | 474 | 0,93 | 100000 | N68553 | 115 a 117 |
| 3,33 | 526 | 0,84 | 100000 | N68554 | 115 a 117 |



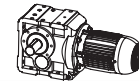
9,20 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 1,10 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 1,10 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 1,11 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 1,10 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 1,10 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 1,09 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 1,11 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 0,95 | 10000 | N56325 | 73 a 75 |
| 88,1 | 19,9 | 0,82 | 10000 | N56326 | 73 a 75 |
| 195 | 8,98 | 2,17 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 2,18 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 2,18 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 2,17 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 1,90 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 1,74 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 1,54 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 1,41 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 1,22 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 1,07 | 15000 | N58329 | 76 a 78 |
| 51,3 | 34,1 | 0,90 | 15000 | N58331 | 76 a 78 |
| 216 | 8,11 | 3,16 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 2,76 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 3,00 | 16000 | N60320 | 79 a 81 |



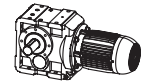
9,20 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 144 | 12,2 | 3,27 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 3,50 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 3,08 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 3,39 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 2,92 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 2,48 | 25000 | N60327 | 79 a 81 |
| 66,3 | 26,4 | 2,26 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 2,04 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 1,89 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 1,73 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 1,46 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 1,34 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 1,15 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 0,98 | 27000 | N60336 | 79 a 81 |
| 23,6 | 74,1 | 0,81 | 27000 | N60337 | 79 a 81 |
| 88,5 | 19,8 | 4,53 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 3,90 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 3,61 | 34000 | N62328 | 82 a 84 |
| 61,6 | 28,4 | 3,15 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 2,72 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 2,59 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 2,21 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 1,92 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 1,65 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 1,53 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 1,34 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 1,15 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 1,05 | 40000 | N62339 | 82 a 84 |
| 17,2 | 102 | 0,88 | 40000 | N62340 | 82 a 84 |
| 51,8 | 33,8 | 4,71 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 4,03 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 3,49 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 3,01 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 2,78 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 2,43 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 2,09 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 1,91 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 1,72 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 1,60 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 1,43 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 1,27 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 1,11 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 1,00 | 65000 | N64344 | 85 a 87 |
| 33,6 | 52,1 | 4,97 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 4,35 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 3,58 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 3,10 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 2,68 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 2,45 | 78000 | N66340 | 88 a 90 |
| 15,1 | 116 | 2,23 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 1,87 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 1,67 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 1,45 | 78000 | N66345 | 88 a 90 |
| 45,8 | 38,2 | 4,69 | 100000 | N68330 | 91 a 93 |



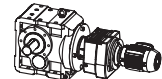
9,20 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 22,2 | 79,0 | 4,54 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 3,93 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 3,60 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 3,27 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 2,74 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 2,45 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 2,13 | 100000 | N68344 | 91 a 93 |



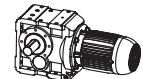
9,20 kW - 1750 rpm



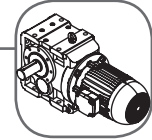
| | | | | | |
|------|-----|------|--------|--------|-----------|
| 9,98 | 175 | 0,91 | 65000 | N64545 | 106 a 108 |
| 9,13 | 192 | 0,83 | 65000 | N64546 | 106 a 108 |
| 9,05 | 193 | 1,34 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 1,11 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 1,01 | 78000 | N66548 | 109 a 111 |
| 6,09 | 287 | 0,90 | 78000 | N66549 | 109 a 111 |
| 5,56 | 315 | 0,82 | 78000 | N66550 | 109 a 111 |
| 9,95 | 176 | 2,04 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 1,81 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 1,63 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 1,42 | 100000 | N68548 | 115 a 117 |
| 6,03 | 290 | 1,24 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 1,08 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 1,00 | 100000 | N68551 | 115 a 117 |
| 4,22 | 415 | 0,86 | 100000 | N68552 | 115 a 117 |



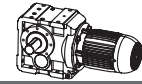
11,00 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 239 | 7,31 | 0,92 | 10000 | N56317 | 73 a 75 |
| 215 | 8,15 | 0,92 | 10000 | N56318 | 73 a 75 |
| 198 | 8,82 | 0,93 | 10000 | N56319 | 73 a 75 |
| 164 | 10,7 | 0,92 | 10000 | N56320 | 73 a 75 |
| 149 | 11,8 | 0,92 | 10000 | N56321 | 73 a 75 |
| 133 | 13,1 | 0,91 | 10000 | N56322 | 73 a 75 |
| 123 | 14,2 | 0,93 | 10000 | N56323 | 73 a 75 |
| 102 | 17,2 | 0,80 | 10000 | N56325 | 73 a 75 |
| 195 | 8,98 | 1,82 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 1,82 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 1,82 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 1,82 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 1,59 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 1,45 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 1,29 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 1,18 | 15000 | N58327 | 76 a 78 |
| 69,1 | 25,3 | 1,02 | 15000 | N58328 | 76 a 78 |
| 60,5 | 28,9 | 0,89 | 15000 | N58329 | 76 a 78 |
| 216 | 8,11 | 2,65 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 2,31 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 2,51 | 16000 | N60320 | 79 a 81 |
| 144 | 12,2 | 2,74 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 2,93 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 2,58 | 21500 | N60324 | 79 a 81 |



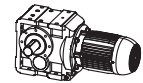
11,00 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 99,3 | 17,6 | 2,83 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 2,44 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 2,07 | 25000 | N60327 | 79 a 81 |
| 66,3 | 26,4 | 1,89 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 1,70 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 1,58 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 1,45 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 1,22 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 1,12 | 27000 | N60333 | 79 a 81 |
| 33,8 | 51,8 | 0,97 | 27000 | N60334 | 79 a 81 |
| 28,7 | 60,9 | 0,82 | 27000 | N60336 | 79 a 81 |
| 102 | 17,1 | 4,38 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 3,79 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 3,27 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 3,02 | 34000 | N62328 | 82 a 84 |
| 61,6 | 28,4 | 2,64 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 2,27 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 2,17 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 1,85 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 1,60 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 1,38 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 1,28 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 1,12 | 40000 | N62337 | 82 a 84 |
| 22,5 | 77,9 | 0,96 | 40000 | N62338 | 82 a 84 |
| 20,5 | 85,2 | 0,88 | 40000 | N62339 | 82 a 84 |
| 61,2 | 28,6 | 4,66 | 59000 | N64329 | 85 a 87 |
| 51,8 | 33,8 | 3,94 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 3,37 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 2,92 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 2,51 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 2,33 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 2,03 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 1,75 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 1,60 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 1,44 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 1,34 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 1,20 | 65000 | N64341 | 85 a 87 |
| 14,0 | 125 | 1,06 | 65000 | N64342 | 85 a 87 |
| 12,2 | 144 | 0,93 | 65000 | N64343 | 85 a 87 |
| 11,0 | 160 | 0,84 | 65000 | N64344 | 85 a 87 |
| 38,9 | 45,0 | 4,82 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 4,16 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 3,64 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 2,99 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 2,59 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 2,24 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 2,05 | 78000 | N66340 | 88 a 90 |
| 15,1 | 116 | 1,87 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 1,56 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 1,40 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 1,22 | 78000 | N66345 | 88 a 90 |
| 27,6 | 63,5 | 4,72 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 4,39 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 3,80 | 100000 | N68338 | 91 a 93 |



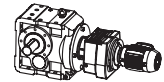
11,00 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 19,2 | 91,2 | 3,29 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 3,01 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 2,74 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 2,29 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 2,05 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 1,78 | 100000 | N68344 | 91 a 93 |



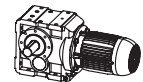
11,00 kW - 1750 rpm



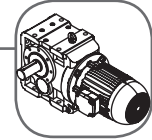
| | | | | | |
|------|-----|------|--------|--------|-----------|
| 9,05 | 193 | 1,12 | 78000 | N66546 | 109 a 111 |
| 7,50 | 233 | 0,93 | 78000 | N66547 | 109 a 111 |
| 6,86 | 255 | 0,85 | 78000 | N66548 | 109 a 111 |
| 9,95 | 176 | 1,71 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 1,51 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 1,36 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 1,19 | 100000 | N68548 | 115 a 117 |
| 6,03 | 290 | 1,03 | 100000 | N68549 | 115 a 117 |
| 5,25 | 334 | 0,90 | 100000 | N68550 | 115 a 117 |
| 4,89 | 358 | 0,84 | 100000 | N68551 | 115 a 117 |



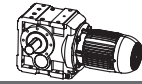
15,00 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 195 | 8,98 | 1,33 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 1,34 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 1,33 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 1,33 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 1,16 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 1,07 | 15000 | N58325 | 76 a 78 |
| 87,5 | 20,0 | 0,95 | 15000 | N58326 | 76 a 78 |
| 79,8 | 21,9 | 0,86 | 15000 | N58327 | 76 a 78 |
| 216 | 8,11 | 1,94 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 1,69 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 1,84 | 16000 | N60320 | 79 a 81 |
| 144 | 12,2 | 2,01 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 2,15 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 1,89 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 2,08 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 1,79 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 1,52 | 25000 | N60327 | 79 a 81 |
| 66,3 | 26,4 | 1,39 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 1,25 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 1,16 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 1,06 | 27000 | N60331 | 79 a 81 |
| 42,8 | 40,9 | 0,90 | 27000 | N60332 | 79 a 81 |
| 39,3 | 44,6 | 0,82 | 27000 | N60333 | 79 a 81 |
| 216 | 8,09 | 3,68 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 3,68 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 3,67 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 3,67 | 23000 | N62321 | 82 a 84 |
| 129 | 13,5 | 4,03 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 3,76 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 3,21 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 2,78 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 2,39 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 2,22 | 34000 | N62328 | 82 a 84 |



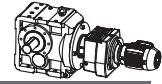
15,00 kW - 1750 rpm



| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 61,6 | 28,4 | 1,93 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 1,67 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 1,59 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 1,36 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 1,18 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 1,01 | 40000 | N62335 | 82 a 84 |
| 29,9 | 58,6 | 0,94 | 40000 | N62336 | 82 a 84 |
| 26,1 | 67,1 | 0,82 | 40000 | N62337 | 82 a 84 |
| 153 | 11,4 | 4,70 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 4,72 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 5,20 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 5,14 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 5,15 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 4,91 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 4,23 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 3,91 | 55000 | N64328 | 85 a 87 |
| 61,2 | 28,6 | 3,42 | 59000 | N64329 | 85 a 87 |
| 51,8 | 33,8 | 2,89 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 2,47 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 2,14 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 1,84 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 1,71 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 1,49 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 1,28 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 1,17 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 1,05 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 0,98 | 65000 | N64340 | 85 a 87 |
| 15,8 | 111 | 0,88 | 65000 | N64341 | 85 a 87 |
| 50,0 | 35,0 | 4,54 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 3,79 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 3,53 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 3,05 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 2,67 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 2,20 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 1,90 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 1,65 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 1,51 | 78000 | N66340 | 88 a 90 |
| 15,1 | 116 | 1,37 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 1,15 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 1,02 | 78000 | N66344 | 88 a 90 |
| 9,83 | 178 | 0,89 | 78000 | N66345 | 88 a 90 |
| 35,6 | 49,2 | 4,47 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 3,91 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 3,46 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 3,22 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 2,78 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 2,41 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 2,20 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 2,01 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 1,68 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 1,50 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 1,31 | 100000 | N68344 | 91 a 93 |



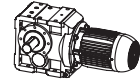
15.00 kW - 1750 rpm



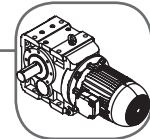
| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|-----------|
| 9,05 | 193 | 0,82 | 78000 | N66546 | 109 a 111 |
| 9,95 | 176 | 1,25 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 1,11 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 1,00 | 100000 | N68547 | 115 a 117 |
| 6,92 | 253 | 0,87 | 100000 | N68548 | 115 a 117 |



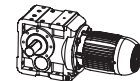
18,50 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 195 | 8,98 | 1,08 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 1,08 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 1,08 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 1,08 | 15000 | N58322 | 76 a 78 |
| 108 | 16,3 | 0,94 | 15000 | N58324 | 76 a 78 |
| 98,4 | 17,8 | 0,86 | 15000 | N58325 | 76 a 78 |
| 216 | 8,11 | 1,57 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 1,37 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 1,49 | 16000 | N60320 | 79 a 81 |
| 144 | 12,2 | 1,63 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 1,74 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 1,53 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 1,69 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 1,45 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 1,23 | 25000 | N60327 | 79 a 81 |
| 66,3 | 26,4 | 1,13 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 1,01 | 27000 | N60329 | 79 a 81 |
| 55,2 | 31,7 | 0,94 | 27000 | N60330 | 79 a 81 |
| 50,7 | 34,5 | 0,86 | 27000 | N60331 | 79 a 81 |
| 216 | 8,09 | 2,98 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 2,98 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 2,97 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 2,98 | 23000 | N62321 | 82 a 84 |
| 129 | 13,5 | 3,27 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 3,05 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 2,60 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 2,25 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 1,94 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 1,80 | 34000 | N62328 | 82 a 84 |
| 61,6 | 28,4 | 1,57 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 1,35 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 1,29 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 1,10 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 0,95 | 40000 | N62333 | 82 a 84 |
| 32,3 | 54,2 | 0,82 | 40000 | N62335 | 82 a 84 |
| 194 | 9,04 | 3,83 | 31000 | N64319 | 85 a 87 |
| 179 | 9,77 | 3,80 | 35000 | N64320 | 85 a 87 |
| 153 | 11,4 | 3,81 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 3,83 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 4,21 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 4,17 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 4,18 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 3,98 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 3,43 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 3,17 | 55000 | N64328 | 85 a 87 |



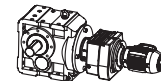
18,50 kW - 1750 rpm



| rpm | itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 61,2 | 28,6 | 2,77 | 59000 | N64329 | 85 a 87 |
| 51,8 | 33,8 | 2,34 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 2,00 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 1,73 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 1,49 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 1,38 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 1,21 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 1,04 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 0,95 | 65000 | N64338 | 85 a 87 |
| 18,9 | 92,7 | 0,86 | 65000 | N64339 | 85 a 87 |
| 17,6 | 99,4 | 0,80 | 65000 | N64340 | 85 a 87 |
| 62,3 | 28,1 | 4,58 | 78000 | N66329 | 88 a 90 |
| 57,8 | 30,3 | 4,25 | 78000 | N66330 | 88 a 90 |
| 50,0 | 35,0 | 3,68 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 3,07 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 2,86 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 2,47 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 2,16 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 1,78 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 1,54 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 1,33 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 1,22 | 78000 | N66340 | 88 a 90 |
| 15,1 | 116 | 1,11 | 78000 | N66341 | 88 a 90 |
| 12,6 | 138 | 0,93 | 78000 | N66343 | 88 a 90 |
| 11,3 | 155 | 0,83 | 78000 | N66344 | 88 a 90 |
| 44,2 | 39,6 | 4,50 | 100000 | N68332 | 91 a 93 |
| 41,2 | 42,5 | 4,19 | 100000 | N68333 | 91 a 93 |
| 35,6 | 49,2 | 3,62 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 3,17 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 2,81 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 2,61 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 2,26 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 1,96 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 1,79 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 1,63 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 1,36 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 1,22 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 1,06 | 100000 | N68344 | 91 a 93 |



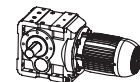
18,50 kW - 1750 rpm



| | | | | | |
|------|-----|------|--------|--------|-----------|
| 9,95 | 176 | 1,01 | 100000 | N68545 | 115 a 117 |
| 8,82 | 198 | 0,90 | 100000 | N68546 | 115 a 117 |
| 7,95 | 220 | 0,81 | 100000 | N68547 | 115 a 117 |



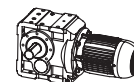
22,00 kW - 1750 rpm



| | | | | | |
|-----|------|------|-------|--------|---------|
| 195 | 8,98 | 0,91 | 14500 | N58319 | 76 a 78 |
| 161 | 10,8 | 0,91 | 14800 | N58320 | 76 a 78 |
| 148 | 11,9 | 0,91 | 15000 | N58321 | 76 a 78 |
| 131 | 13,3 | 0,91 | 15000 | N58322 | 76 a 78 |
| 216 | 8,11 | 1,32 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 1,15 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 1,26 | 16000 | N60320 | 79 a 81 |



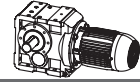
22,00 kW - 1750 rpm



| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 144 | 12,2 | 1,37 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 1,46 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 1,29 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 1,42 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 1,22 | 24000 | N60326 | 79 a 81 |
| 72,7 | 24,1 | 1,04 | 25000 | N60327 | 79 a 81 |
| 66,3 | 26,4 | 0,95 | 26000 | N60328 | 79 a 81 |
| 59,7 | 29,3 | 0,85 | 27000 | N60329 | 79 a 81 |
| 216 | 8,09 | 2,51 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 2,51 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 2,50 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 2,50 | 23000 | N62321 | 82 a 84 |
| 129 | 13,5 | 2,75 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 2,56 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 2,19 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 1,89 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 1,63 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 1,51 | 34000 | N62328 | 82 a 84 |
| 61,6 | 28,4 | 1,32 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 1,14 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 1,08 | 39000 | N62331 | 82 a 84 |
| 43,2 | 40,5 | 0,93 | 40000 | N62332 | 82 a 84 |
| 37,5 | 46,7 | 0,80 | 40000 | N62333 | 82 a 84 |
| 194 | 9,04 | 3,22 | 31000 | N64319 | 85 a 87 |
| 179 | 9,77 | 3,20 | 35000 | N64320 | 85 a 87 |
| 153 | 11,4 | 3,20 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 3,22 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 3,54 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 3,51 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 3,51 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 3,35 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 2,88 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 2,67 | 55000 | N64328 | 85 a 87 |
| 61,2 | 28,6 | 2,33 | 59000 | N64329 | 85 a 87 |
| 51,8 | 33,8 | 1,97 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 1,68 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 1,46 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 1,26 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 1,16 | 65000 | N64335 | 85 a 87 |
| 26,7 | 65,6 | 1,02 | 65000 | N64336 | 85 a 87 |
| 23,0 | 76,2 | 0,87 | 65000 | N64337 | 85 a 87 |
| 21,0 | 83,3 | 0,80 | 65000 | N64338 | 85 a 87 |
| 80,3 | 21,8 | 4,97 | 75000 | N66327 | 88 a 90 |
| 70,2 | 24,9 | 4,35 | 77000 | N66328 | 88 a 90 |
| 62,3 | 28,1 | 3,85 | 78000 | N66329 | 88 a 90 |
| 57,8 | 30,3 | 3,58 | 78000 | N66330 | 88 a 90 |
| 50,0 | 35,0 | 3,09 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 2,59 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 2,41 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 2,08 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 1,82 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 1,50 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 1,30 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 1,12 | 78000 | N66339 | 88 a 90 |
| 16,6 | 106 | 1,03 | 78000 | N66340 | 88 a 90 |



22,00 kW - 1750 rpm



| rpm | itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 15,1 | 116 | 0,93 | 78000 | N66341 | 88 a 90 |
| 61,1 | 28,6 | 4,95 | 90000 | N68329 | 91 a 93 |
| 52,9 | 33,1 | 4,53 | 95000 | N68330 | 91 a 93 |
| 44,2 | 39,6 | 3,79 | 100000 | N68332 | 91 a 93 |
| 41,2 | 42,5 | 3,53 | 100000 | N68333 | 91 a 93 |
| 35,6 | 49,2 | 3,05 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 2,67 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 2,36 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 2,19 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 1,90 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 1,64 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 1,50 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 1,37 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 1,15 | 100000 | N68342 | 91 a 93 |
| 11,9 | 147 | 1,02 | 100000 | N68343 | 91 a 93 |
| 10,4 | 168 | 0,89 | 100000 | N68344 | 91 a 93 |



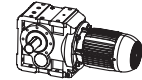
22,00 kW - 1750 rpm



| | | | | | |
|------|-----|------|--------|--------|-----------|
| 9,95 | 176 | 0,85 | 100000 | N68545 | 115 a 117 |
|------|-----|------|--------|--------|-----------|



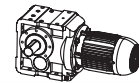
30,00 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 216 | 8,11 | 0,97 | 15000 | N60318 | 79 a 81 |
| 182 | 9,60 | 0,85 | 15500 | N60319 | 79 a 81 |
| 167 | 10,5 | 0,92 | 16000 | N60320 | 79 a 81 |
| 144 | 12,2 | 1,00 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 1,07 | 21000 | N60323 | 79 a 81 |
| 108 | 16,2 | 0,94 | 21500 | N60324 | 79 a 81 |
| 99,3 | 17,6 | 1,04 | 22000 | N60325 | 79 a 81 |
| 85,5 | 20,5 | 0,90 | 24000 | N60326 | 79 a 81 |
| 216 | 8,09 | 1,84 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 1,84 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 1,83 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 1,84 | 23000 | N62321 | 82 a 84 |
| 129 | 13,5 | 2,02 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 1,88 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 1,60 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 1,39 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 1,20 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 1,11 | 34000 | N62328 | 82 a 84 |
| 61,6 | 28,4 | 0,97 | 36000 | N62329 | 82 a 84 |
| 53,1 | 33,0 | 0,83 | 38000 | N62330 | 82 a 84 |
| 50,6 | 34,6 | 0,80 | 39000 | N62331 | 82 a 84 |
| 194 | 9,04 | 2,36 | 31000 | N64319 | 85 a 87 |
| 179 | 9,77 | 2,34 | 35000 | N64320 | 85 a 87 |
| 153 | 11,4 | 2,35 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 2,36 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 2,60 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 2,57 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 2,57 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 2,45 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 2,11 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 1,96 | 55000 | N64328 | 85 a 87 |
| 61,2 | 28,6 | 1,71 | 59000 | N64329 | 85 a 87 |



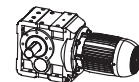
30,00 kW - 1750 rpm



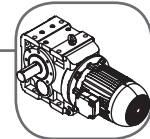
| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 51,8 | 33,8 | 1,45 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 1,23 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 1,07 | 65000 | N64333 | 85 a 87 |
| 33,0 | 53,0 | 0,92 | 65000 | N64334 | 85 a 87 |
| 30,5 | 57,3 | 0,85 | 65000 | N64335 | 85 a 87 |
| 210 | 8,33 | 4,68 | 43000 | N66318 | 88 a 90 |
| 183 | 9,58 | 4,69 | 45000 | N66319 | 88 a 90 |
| 170 | 10,3 | 4,69 | 47000 | N66320 | 88 a 90 |
| 147 | 11,9 | 4,67 | 56000 | N66321 | 88 a 90 |
| 129 | 13,6 | 4,67 | 60000 | N66322 | 88 a 90 |
| 115 | 15,3 | 3,80 | 67000 | N66324 | 88 a 90 |
| 99,8 | 17,5 | 4,53 | 70000 | N66325 | 88 a 90 |
| 80,3 | 21,8 | 3,64 | 75000 | N66327 | 88 a 90 |
| 70,2 | 24,9 | 3,19 | 77000 | N66328 | 88 a 90 |
| 62,3 | 28,1 | 2,82 | 78000 | N66329 | 88 a 90 |
| 57,8 | 30,3 | 2,62 | 78000 | N66330 | 88 a 90 |
| 50,0 | 35,0 | 2,27 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 1,90 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 1,77 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 1,52 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 1,33 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 1,10 | 78000 | N66337 | 88 a 90 |
| 20,9 | 83,6 | 0,95 | 78000 | N66338 | 88 a 90 |
| 18,1 | 96,5 | 0,82 | 78000 | N66339 | 88 a 90 |
| 74,3 | 23,6 | 4,67 | 83000 | N68327 | 91 a 93 |
| 65,9 | 26,6 | 3,79 | 85000 | N68328 | 91 a 93 |
| 61,1 | 28,6 | 3,63 | 90000 | N68329 | 91 a 93 |
| 52,9 | 33,1 | 3,32 | 95000 | N68330 | 91 a 93 |
| 44,2 | 39,6 | 2,78 | 100000 | N68332 | 91 a 93 |
| 41,2 | 42,5 | 2,59 | 100000 | N68333 | 91 a 93 |
| 35,6 | 49,2 | 2,23 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 1,95 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 1,73 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 1,61 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 1,39 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 1,21 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 1,10 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 1,00 | 100000 | N68341 | 91 a 93 |
| 13,4 | 131 | 0,84 | 100000 | N68342 | 91 a 93 |



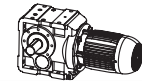
37,00 kW - 1750 rpm



| | | | | | |
|------|------|------|-------|--------|---------|
| 144 | 12,2 | 0,81 | 19000 | N60322 | 79 a 81 |
| 128 | 13,6 | 0,87 | 21000 | N60323 | 79 a 81 |
| 99,3 | 17,6 | 0,84 | 22000 | N60325 | 79 a 81 |
| 216 | 8,09 | 1,49 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 1,49 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 1,49 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 1,49 | 23000 | N62321 | 82 a 84 |
| 129 | 13,5 | 1,63 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 1,52 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 1,30 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 1,13 | 31000 | N62326 | 82 a 84 |



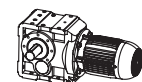
37,00 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 76,2 | 23,0 | 0,97 | 33000 | N62327 | 82 a 84 |
| 70,5 | 24,8 | 0,90 | 34000 | N62328 | 82 a 84 |
| 194 | 9,04 | 1,92 | 31000 | N64319 | 85 a 87 |
| 179 | 9,77 | 1,90 | 35000 | N64320 | 85 a 87 |
| 153 | 11,4 | 1,90 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 1,91 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 2,11 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 2,08 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 2,09 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 1,99 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 1,71 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 1,59 | 55000 | N64328 | 85 a 87 |
| 61,2 | 28,6 | 1,39 | 59000 | N64329 | 85 a 87 |
| 51,8 | 33,8 | 1,17 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 1,00 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 0,87 | 65000 | N64333 | 85 a 87 |
| 210 | 8,33 | 3,80 | 43000 | N66318 | 88 a 90 |
| 183 | 9,58 | 3,80 | 45000 | N66319 | 88 a 90 |
| 170 | 10,3 | 3,81 | 47000 | N66320 | 88 a 90 |
| 147 | 11,9 | 3,79 | 56000 | N66321 | 88 a 90 |
| 129 | 13,6 | 3,79 | 60000 | N66322 | 88 a 90 |
| 115 | 15,3 | 3,08 | 67000 | N66324 | 88 a 90 |
| 99,8 | 17,5 | 3,67 | 70000 | N66325 | 88 a 90 |
| 80,3 | 21,8 | 2,95 | 75000 | N66327 | 88 a 90 |
| 70,2 | 24,9 | 2,58 | 77000 | N66328 | 88 a 90 |
| 62,3 | 28,1 | 2,29 | 78000 | N66329 | 88 a 90 |
| 57,8 | 30,3 | 2,13 | 78000 | N66330 | 88 a 90 |
| 50,0 | 35,0 | 1,84 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 1,54 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 1,43 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 1,24 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 1,08 | 78000 | N66336 | 88 a 90 |
| 24,2 | 72,3 | 0,89 | 78000 | N66337 | 88 a 90 |
| 84,9 | 20,6 | 4,33 | 80000 | N68326 | 91 a 93 |
| 74,3 | 23,6 | 3,79 | 83000 | N68327 | 91 a 93 |
| 65,9 | 26,6 | 3,08 | 85000 | N68328 | 91 a 93 |
| 61,1 | 28,6 | 2,94 | 90000 | N68329 | 91 a 93 |
| 52,9 | 33,1 | 2,69 | 95000 | N68330 | 91 a 93 |
| 44,2 | 39,6 | 2,25 | 100000 | N68332 | 91 a 93 |
| 41,2 | 42,5 | 2,10 | 100000 | N68333 | 91 a 93 |
| 35,6 | 49,2 | 1,81 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 1,58 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 1,40 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 1,30 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 1,13 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 0,98 | 100000 | N68339 | 91 a 93 |
| 17,5 | 99,7 | 0,89 | 100000 | N68340 | 91 a 93 |
| 16,0 | 110 | 0,81 | 100000 | N68341 | 91 a 93 |



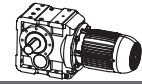
45,00 kW - 1750 rpm



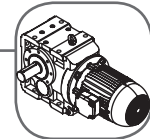
| | | | | | |
|-----|------|------|-------|--------|---------|
| 216 | 8,09 | 1,23 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 1,23 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 1,22 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 1,22 | 23000 | N62321 | 82 a 84 |



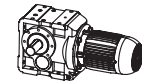
45,00 kW - 1750 rpm



| rpm | Itot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 129 | 13,5 | 1,34 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 1,25 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 1,07 | 28000 | N62325 | 82 a 84 |
| 88,5 | 19,8 | 0,93 | 31000 | N62326 | 82 a 84 |
| 76,2 | 23,0 | 0,80 | 33000 | N62327 | 82 a 84 |
| 194 | 9,04 | 1,58 | 31000 | N64319 | 85 a 87 |
| 179 | 9,77 | 1,56 | 35000 | N64320 | 85 a 87 |
| 153 | 11,4 | 1,57 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 1,57 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 1,73 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 1,71 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 1,72 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 1,64 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 1,41 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 1,30 | 55000 | N64328 | 85 a 87 |
| 61,2 | 28,6 | 1,14 | 59000 | N64329 | 85 a 87 |
| 51,8 | 33,8 | 0,96 | 63000 | N64331 | 85 a 87 |
| 44,2 | 39,6 | 0,82 | 65000 | N64332 | 85 a 87 |
| 38,3 | 45,7 | 0,87 | 65000 | N64333 | 85 a 87 |
| 210 | 8,33 | 3,12 | 43000 | N66318 | 88 a 90 |
| 183 | 9,58 | 3,13 | 45000 | N66319 | 88 a 90 |
| 170 | 10,3 | 3,13 | 47000 | N66320 | 88 a 90 |
| 147 | 11,9 | 3,11 | 56000 | N66321 | 88 a 90 |
| 129 | 13,6 | 3,11 | 60000 | N66322 | 88 a 90 |
| 115 | 15,3 | 2,53 | 67000 | N66324 | 88 a 90 |
| 99,8 | 17,5 | 3,02 | 70000 | N66325 | 88 a 90 |
| 80,3 | 21,8 | 2,43 | 75000 | N66327 | 88 a 90 |
| 70,2 | 24,9 | 2,12 | 77000 | N66328 | 88 a 90 |
| 62,3 | 28,1 | 1,88 | 78000 | N66329 | 88 a 90 |
| 57,8 | 30,3 | 1,75 | 78000 | N66330 | 88 a 90 |
| 50,0 | 35,0 | 1,51 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 1,26 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 1,18 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 1,02 | 78000 | N66334 | 88 a 90 |
| 29,4 | 59,5 | 0,89 | 78000 | N66336 | 88 a 90 |
| 207 | 8,47 | 4,46 | 50000 | N68318 | 91 a 93 |
| 180 | 9,74 | 4,45 | 52000 | N68319 | 91 a 93 |
| 167 | 10,5 | 4,46 | 57000 | N68320 | 91 a 93 |
| 145 | 12,1 | 4,46 | 64000 | N68322 | 91 a 93 |
| 127 | 13,8 | 4,46 | 68000 | N68323 | 91 a 93 |
| 106 | 16,6 | 4,26 | 71000 | N68324 | 91 a 93 |
| 98,3 | 17,8 | 4,12 | 73000 | N68325 | 91 a 93 |
| 84,9 | 20,6 | 3,56 | 80000 | N68326 | 91 a 93 |
| 74,3 | 23,6 | 3,11 | 83000 | N68327 | 91 a 93 |
| 65,9 | 26,6 | 2,53 | 85000 | N68328 | 91 a 93 |
| 61,1 | 28,6 | 2,42 | 90000 | N68329 | 91 a 93 |
| 52,9 | 33,1 | 2,22 | 95000 | N68330 | 91 a 93 |
| 44,2 | 39,6 | 1,85 | 100000 | N68332 | 91 a 93 |
| 41,2 | 42,5 | 1,72 | 100000 | N68333 | 91 a 93 |
| 35,6 | 49,2 | 1,49 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 1,30 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 1,15 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 1,07 | 100000 | N68337 | 91 a 93 |
| 22,2 | 79,0 | 0,93 | 100000 | N68338 | 91 a 93 |
| 19,2 | 91,2 | 0,80 | 100000 | N68339 | 91 a 93 |

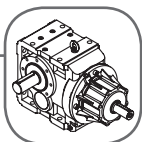


55,00 kW - 1750 rpm



| rpm | ítot | fs | Fr (N) | código | páginas |
|------|------|------|--------|--------|---------|
| 216 | 8,09 | 1,00 | 18000 | N62318 | 82 a 84 |
| 200 | 8,73 | 1,00 | 21000 | N62319 | 82 a 84 |
| 171 | 10,2 | 1,00 | 22000 | N62320 | 82 a 84 |
| 148 | 11,8 | 1,00 | 23000 | N62321 | 82 a 84 |
| 129 | 13,5 | 1,10 | 26000 | N62323 | 82 a 84 |
| 120 | 14,6 | 1,02 | 27000 | N62324 | 82 a 84 |
| 102 | 17,1 | 0,88 | 28000 | N62325 | 82 a 84 |
| 194 | 9,04 | 1,29 | 31000 | N64319 | 85 a 87 |
| 179 | 9,77 | 1,28 | 35000 | N64320 | 85 a 87 |
| 153 | 11,4 | 1,28 | 39000 | N64321 | 85 a 87 |
| 133 | 13,2 | 1,29 | 41000 | N64322 | 85 a 87 |
| 128 | 13,6 | 1,42 | 43000 | N64323 | 85 a 87 |
| 119 | 14,7 | 1,40 | 45000 | N64324 | 85 a 87 |
| 101 | 17,2 | 1,40 | 48000 | N64325 | 85 a 87 |
| 87,9 | 19,9 | 1,34 | 51000 | N64326 | 85 a 87 |
| 75,7 | 23,1 | 1,15 | 53000 | N64327 | 85 a 87 |
| 70,1 | 25,0 | 1,07 | 55000 | N64328 | 85 a 87 |
| 61,2 | 28,6 | 0,93 | 59000 | N64329 | 85 a 87 |
| 210 | 8,33 | 2,56 | 43000 | N66318 | 88 a 90 |
| 183 | 9,58 | 2,56 | 45000 | N66319 | 88 a 90 |
| 170 | 10,3 | 2,56 | 47000 | N66320 | 88 a 90 |
| 147 | 11,9 | 2,55 | 56000 | N66321 | 88 a 90 |
| 129 | 13,6 | 2,55 | 60000 | N66322 | 88 a 90 |
| 115 | 15,3 | 2,07 | 67000 | N66324 | 88 a 90 |
| 99,8 | 17,5 | 2,47 | 70000 | N66325 | 88 a 90 |
| 80,3 | 21,8 | 1,99 | 75000 | N66327 | 88 a 90 |
| 70,2 | 24,9 | 1,74 | 77000 | N66328 | 88 a 90 |
| 62,3 | 28,1 | 1,54 | 78000 | N66329 | 88 a 90 |
| 57,8 | 30,3 | 1,43 | 78000 | N66330 | 88 a 90 |
| 50,0 | 35,0 | 1,24 | 78000 | N66331 | 88 a 90 |
| 41,8 | 41,9 | 1,03 | 78000 | N66332 | 88 a 90 |
| 38,9 | 45,0 | 0,96 | 78000 | N66333 | 88 a 90 |
| 33,6 | 52,1 | 0,83 | 78000 | N66334 | 88 a 90 |
| 207 | 8,47 | 3,65 | 50000 | N68318 | 91 a 93 |
| 180 | 9,74 | 3,64 | 52000 | N68319 | 91 a 93 |
| 167 | 10,5 | 3,65 | 57000 | N68320 | 91 a 93 |
| 145 | 12,1 | 3,65 | 64000 | N68322 | 91 a 93 |
| 127 | 13,8 | 3,65 | 68000 | N68323 | 91 a 93 |
| 106 | 16,6 | 3,49 | 71000 | N68324 | 91 a 93 |
| 98,3 | 17,8 | 3,37 | 73000 | N68325 | 91 a 93 |
| 84,9 | 20,6 | 2,91 | 80000 | N68326 | 91 a 93 |
| 74,3 | 23,6 | 2,55 | 83000 | N68327 | 91 a 93 |
| 65,9 | 26,6 | 2,07 | 85000 | N68328 | 91 a 93 |
| 61,1 | 28,6 | 1,98 | 90000 | N68329 | 91 a 93 |
| 52,9 | 33,1 | 1,81 | 95000 | N68330 | 91 a 93 |
| 44,2 | 39,6 | 1,51 | 100000 | N68332 | 91 a 93 |
| 41,2 | 42,5 | 1,41 | 100000 | N68333 | 91 a 93 |
| 35,6 | 49,2 | 1,22 | 100000 | N68334 | 91 a 93 |
| 31,1 | 56,2 | 1,07 | 100000 | N68335 | 91 a 93 |
| 27,6 | 63,5 | 0,94 | 100000 | N68336 | 91 a 93 |
| 25,6 | 68,4 | 0,88 | 100000 | N68337 | 91 a 93 |

Obs.: Fatores de serviço para rotações inferiores a 1750 decrescem linearmente. Para rotações superiores, consulte-nos.



Nas tabelas de características técnicas, a rotação máxima é válida para motorreductores.

Para reductores com mancal a rotação máxima é 1800 rpm ou o valor da coluna rpm.max caso este for inferior a 1800 rpm.

Para rotações abaixo de 1750 rpm a potência admissível pode ser obtida com uma regra de 3 simples.

Para rotações acima de 1750 rpm até o limite máximo admissível obtido nas tabelas de Características Técnicas (págs. 61 a 70), deve ser utilizado o fator conforme abaixo:

| nx | fn |
|-----------|-----------|
| 3600 | 1,54 |
| 3200 | 1,43 |
| 3000 | 1,38 |
| 2800 | 1,32 |
| 2500 | 1,23 |
| 2200 | 1,14 |
| 2000 | 1,08 |

Exemplo:

Redutor: N56331

Redução: 36,0

Potência: 4,17 kW

Rotação de entrada: 1750

Rotação de saída: 48,6

Rotação desejada: 78

Rotação de entrada: 2800

Redução: 36,0

Rotação de saída (corrigida): 77,7

$P_{2800} = 4,17 \times 1,32 = 5,50 \text{ kW}$

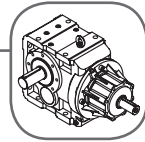
$$P_x = P_n \cdot f_n$$

P_x= Potência na rotação nx

P_n= Potência nominal a 1750 rpm (Tabelas nas págs. 61 a 70)

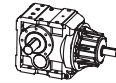
f_n= Fator da rotação nx

***Para rotação de entrada abaixo de 100 rpm a lubrificação do redutor pode ficar prejudicada, neste caso solicitamos consultar a WEG-CESTARI.**



390 - 820 Nm

56

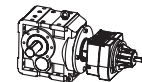


| rpm | Itot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|------|------|------|---------|--------|---------|--------|----------|
| 239 | 7,31 | 10,1 | 390 | 10000 | 2500 | N56317 | 63-160 |
| 215 | 8,15 | 10,1 | 450 | 10000 | 2500 | N56318 | 63-160 |
| 198 | 8,82 | 10,2 | 490 | 10000 | 2500 | N56319 | 63-160 |
| 164 | 10,7 | 10,1 | 590 | 10000 | 2500 | N56320 | 63-160 |
| 149 | 11,8 | 10,1 | 650 | 10000 | 2500 | N56321 | 63-160 |
| 133 | 13,1 | 10,0 | 720 | 10000 | 2500 | N56322 | 63-160 |
| 123 | 14,2 | 10,2 | 790 | 10000 | 2500 | N56323 | 63-160 |
| 102 | 17,2 | 8,75 | 820 | 10000 | 2500 | N56325 | 63-160 |
| 88,1 | 19,9 | 7,57 | 820 | 10000 | 2500 | N56326 | 63-132 |
| 74,5 | 23,5 | 6,40 | 820 | 10000 | 2500 | N56327 | 63-132 |
| 58,6 | 29,8 | 5,03 | 820 | 10000 | 2500 | N56329 | 63-160 |
| 52,6 | 33,3 | 4,51 | 820 | 10000 | 2500 | N56330 | 63-160 |
| 48,6 | 36,0 | 4,17 | 820 | 10000 | 2500 | N56331 | 63-160 |
| 40,2 | 43,5 | 3,45 | 820 | 10000 | 2500 | N56333 | 63-160 |
| 34,8 | 50,3 | 2,98 | 820 | 10000 | 2500 | N56334 | 63-132 |
| 29,4 | 59,5 | 2,52 | 820 | 10000 | 2500 | N56336 | 63-132 |
| 26,2 | 66,8 | 2,25 | 820 | 10000 | 2500 | N56337 | 63-132 |
| 22,1 | 79,2 | 1,90 | 820 | 10000 | 2500 | N56338 | 63-100 |
| 20,6 | 85,1 | 1,77 | 820 | 10000 | 2500 | N56339 | 63-100 |
| 18,3 | 95,5 | 1,57 | 820 | 10000 | 2500 | N56340 | 63-90 |
| 16,4 | 107 | 1,41 | 820 | 10000 | 2500 | N56341 | 63-80 |
| 14,7 | 119 | 1,26 | 820 | 10000 | 2500 | N56342 | 63-80 |
| 12,8 | 136 | 1,10 | 820 | 10000 | 2500 | N56343 | 63-71 |
| 11,8 | 148 | 1,02 | 820 | 10000 | 2500 | N56344 | 63-71 |



820 Nm

56



| | | | | | | | |
|-------|-------|-------|-----|-------|------|--------|--------|
| 9,63 | 182 | 0,827 | 820 | 10000 | 2500 | N56545 | 63-100 |
| 7,85 | 223 | 0,674 | 820 | 10000 | 2500 | N56547 | 63-100 |
| 6,88 | 254 | 0,591 | 820 | 10000 | 2500 | N56548 | 63-100 |
| 6,00 | 292 | 0,515 | 820 | 10000 | 2500 | N56549 | 63-100 |
| 5,58 | 313 | 0,479 | 820 | 10000 | 2500 | N56550 | 63-100 |
| 4,93 | 355 | 0,423 | 820 | 10000 | 2500 | N56551 | 63-100 |
| 4,02 | 436 | 0,345 | 820 | 10000 | 2500 | N56553 | 63-100 |
| 3,52 | 497 | 0,302 | 820 | 10000 | 2500 | N56554 | 63-100 |
| 3,07 | 570 | 0,263 | 820 | 10000 | 2500 | N56555 | 63-100 |
| 2,86 | 612 | 0,245 | 820 | 10000 | 2500 | N56556 | 63-100 |
| 2,73 | 640 | 0,235 | 820 | 10000 | 2500 | N56557 | 63-100 |
| 2,23 | 785 | 0,191 | 820 | 10000 | 2500 | N56558 | 63-100 |
| 1,95 | 896 | 0,168 | 820 | 10000 | 2500 | N56559 | 63-100 |
| 1,70 | 1.028 | 0,146 | 820 | 10000 | 2500 | N56560 | 63-100 |
| 1,58 | 1.104 | 0,136 | 820 | 10000 | 2500 | N56561 | 63-100 |
| 1,46 | 1.197 | 0,125 | 820 | 10000 | 2500 | N56562 | 63-100 |
| 1,28 | 1.366 | 0,110 | 820 | 10000 | 2500 | N56563 | 63-90 |
| 1,13 | 1.542 | 0,097 | 820 | 10000 | 2500 | N56564 | 63-80 |
| 1,01 | 1.731 | 0,087 | 820 | 10000 | 2500 | N56565 | 63-80 |
| 0,879 | 1.992 | 0,075 | 820 | 10000 | 2500 | N56566 | 63-71 |
| 0,815 | 2.147 | 0,070 | 820 | 10000 | 2500 | N56567 | 63-71 |
| 0,743 | 2.356 | 0,064 | 820 | 10000 | 2500 | N56568 | 63-71 |

* Verificar limites motor / redutor na página 117



820 Nm

56

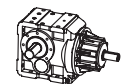


| rpm | ítot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça |
|-------|-------|-------|---------|--------|---------|--------|---------|
| 0,641 | 2.728 | 0,055 | 820 | 10000 | 2500 | N56669 | 63-100 |
| 0,602 | 2.905 | 0,052 | 820 | 10000 | 2500 | N56670 | 63-100 |
| 0,504 | 3.474 | 0,043 | 820 | 10000 | 2500 | N56671 | 63-100 |
| 0,446 | 3.920 | 0,038 | 820 | 10000 | 2500 | N56672 | 63-100 |
| 0,413 | 4.237 | 0,035 | 820 | 10000 | 2500 | N56673 | 63-100 |
| 0,376 | 4.649 | 0,032 | 820 | 10000 | 2500 | N56674 | 63-100 |
| 0,326 | 5.369 | 0,028 | 820 | 10000 | 2500 | N56675 | 63-90 |
| 0,286 | 6.110 | 0,025 | 820 | 10000 | 2500 | N56676 | 63-80 |
| 0,254 | 6.881 | 0,022 | 820 | 10000 | 2500 | N56677 | 63-80 |
| 0,219 | 7.975 | 0,019 | 820 | 10000 | 2500 | N56678 | 63-71 |
| 0,203 | 8.625 | 0,017 | 820 | 10000 | 2500 | N56679 | 63-71 |
| 0,184 | 9.523 | 0,016 | 820 | 10000 | 2500 | N56680 | 63-71 |



914 - 1550 Nm

58

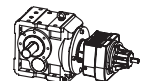


| | | | | | | | |
|------|------|------|------|-------|------|--------|---------|
| 195 | 8,98 | 20,0 | 980 | 14500 | 2200 | N58319 | 100-180 |
| 161 | 10,8 | 20,0 | 1185 | 14800 | 2200 | N58320 | 100-180 |
| 148 | 11,9 | 20,0 | 1295 | 15000 | 2200 | N58321 | 80-180 |
| 131 | 13,3 | 20,0 | 1456 | 15000 | 2200 | N58322 | 80-160 |
| 108 | 16,3 | 17,5 | 1550 | 15000 | 2200 | N58324 | 100-180 |
| 98,4 | 17,8 | 16,0 | 1550 | 15000 | 2200 | N58325 | 80-180 |
| 87,5 | 20,0 | 14,2 | 1550 | 15000 | 2200 | N58326 | 80-180 |
| 79,8 | 21,9 | 13,0 | 1550 | 15000 | 2200 | N58327 | 80-160 |
| 69,1 | 25,3 | 11,2 | 1550 | 15000 | 2200 | N58328 | 80-160 |
| 60,5 | 28,9 | 9,82 | 1550 | 15000 | 2200 | N58329 | 80-132 |
| 51,3 | 34,1 | 8,32 | 1550 | 15000 | 2200 | N58331 | 100-180 |
| 42,5 | 41,2 | 6,89 | 1550 | 15000 | 2200 | N58332 | 100-180 |
| 38,8 | 45,1 | 6,30 | 1550 | 15000 | 2200 | N58333 | 80-180 |
| 34,5 | 50,7 | 5,60 | 1550 | 15000 | 2200 | N58334 | 80-180 |
| 31,5 | 55,6 | 5,11 | 1550 | 15000 | 2200 | N58335 | 80-160 |
| 27,3 | 64,2 | 4,42 | 1550 | 15000 | 2200 | N58336 | 80-160 |
| 23,9 | 73,3 | 3,87 | 1550 | 15000 | 2200 | N58337 | 80-160 |
| 20,3 | 86,2 | 3,30 | 1550 | 15000 | 2200 | N58338 | 80-132 |
| 18,2 | 95,9 | 2,96 | 1550 | 15000 | 2200 | N58340 | 80-132 |
| 15,5 | 113 | 2,52 | 1550 | 15000 | 2200 | N58341 | 80-100 |
| 14,5 | 120 | 2,36 | 1550 | 15000 | 2200 | N58342 | 80-100 |
| 13,0 | 134 | 2,12 | 1550 | 15000 | 2200 | N58343 | 80-90 |
| 11,7 | 150 | 1,90 | 1550 | 15000 | 2200 | N58344 | 80 |
| 10,4 | 168 | 1,69 | 1550 | 15000 | 2200 | N58345 | 80 |



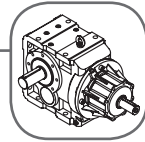
914 - 1550 Nm

58



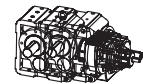
| | | | | | | | |
|------|-----|-------|------|-------|------|--------|---------|
| 8,65 | 202 | 1,40 | 1550 | 15000 | 2200 | N58546 | 100-132 |
| 7,75 | 226 | 1,26 | 1550 | 15000 | 2200 | N58547 | 100-132 |
| 7,17 | 244 | 1,16 | 1550 | 15000 | 2200 | N58548 | 100-132 |
| 5,93 | 295 | 0,962 | 1550 | 15000 | 2200 | N58549 | 100-132 |

* Verificar limites motor / reductor na página 117



914 - 1550 Nm

58



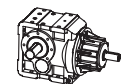
| rpm | ítot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|-------|--------|-------|---------|--------|---------|--------|----------|
| 5,71 | 306 | 0,927 | 1550 | 15000 | 2200 | N58550 | 100-132 |
| 5,12 | 342 | 0,831 | 1550 | 15000 | 2200 | N58551 | 100-132 |
| 4,37 | 401 | 0,709 | 1550 | 15000 | 2200 | N58552 | 100-132 |
| 3,92 | 447 | 0,635 | 1550 | 15000 | 2200 | N58553 | 100-132 |
| 3,62 | 483 | 0,588 | 1550 | 15000 | 2200 | N58554 | 100-132 |
| 2,99 | 584 | 0,486 | 1550 | 15000 | 2200 | N58555 | 100-132 |
| 2,61 | 671 | 0,423 | 1550 | 15000 | 2200 | N58556 | 100-132 |
| 2,34 | 748 | 0,380 | 1550 | 15000 | 2200 | N58557 | 100-132 |
| 2,16 | 809 | 0,351 | 1550 | 15000 | 2200 | N58558 | 100-132 |
| 1,79 | 978 | 0,290 | 1550 | 15000 | 2200 | N58560 | 100-132 |
| 1,55 | 1.132 | 0,251 | 1550 | 15000 | 2200 | N58561 | 63-132 |
| 1,31 | 1.338 | 0,212 | 1550 | 15000 | 2200 | N58562 | 63-132 |
| 1,17 | 1.501 | 0,189 | 1550 | 15000 | 2200 | N58563 | 63-132 |
| 0,984 | 1.779 | 0,160 | 1550 | 15000 | 2200 | N58564 | 63-100 |
| 0,915 | 1.912 | 0,149 | 1550 | 15000 | 2200 | N58565 | 63-100 |
| 0,815 | 2.148 | 0,132 | 1550 | 15000 | 2200 | N58566 | 63-90 |
| 0,826 | 2.119 | 0,134 | 1550 | 15000 | 2200 | N58667 | 63-132 |
| 0,673 | 2.599 | 0,109 | 1550 | 15000 | 2200 | N58668 | 63-132 |
| 0,590 | 2.967 | 0,096 | 1550 | 15000 | 2200 | N58669 | 63-132 |
| 0,514 | 3.404 | 0,083 | 1550 | 15000 | 2200 | N58670 | 63-112 |
| 0,479 | 3.655 | 0,078 | 1550 | 15000 | 2200 | N58671 | 63-100 |
| 0,426 | 4.107 | 0,069 | 1550 | 15000 | 2200 | N58672 | 63-132 |
| 0,347 | 5.038 | 0,056 | 1550 | 15000 | 2200 | N58674 | 63-132 |
| 0,304 | 5.750 | 0,049 | 1550 | 15000 | 2200 | N58675 | 63-132 |
| 0,265 | 6.598 | 0,043 | 1550 | 15000 | 2200 | N58676 | 63-112 |
| 0,247 | 7.085 | 0,040 | 1550 | 15000 | 2200 | N58677 | 63-100 |
| 0,228 | 7.683 | 0,037 | 1550 | 15000 | 2200 | N58678 | 63-100 |
| 0,200 | 8.762 | 0,032 | 1550 | 15000 | 2200 | N58679 | 63-90 |
| 0,177 | 9.896 | 0,029 | 1550 | 15000 | 2200 | N58680 | 63-80 |
| 0,158 | 11.104 | 0,026 | 1550 | 15000 | 2200 | N58681 | 63-80 |
| 0,137 | 12.780 | 0,022 | 1550 | 15000 | 2200 | N58682 | 63-71 |
| 0,127 | 13.776 | 0,021 | 1550 | 15000 | 2200 | N58683 | 63-71 |
| 0,116 | 15.114 | 0,019 | 1550 | 15000 | 2200 | N58684 | 63-71 |

12



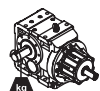
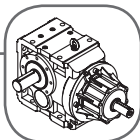
1250 - 3000 Nm

60



| | | | | | | | |
|------|------|------|------|-------|------|--------|---------|
| 216 | 8,11 | 29,1 | 1250 | 15000 | 2000 | N60318 | 100-225 |
| 182 | 9,60 | 25,4 | 1330 | 15500 | 2000 | N60319 | 100-225 |
| 167 | 10,5 | 27,6 | 1580 | 16000 | 2000 | N60320 | 80-225 |
| 144 | 12,2 | 30,1 | 2000 | 19000 | 2000 | N60322 | 80-225 |
| 128 | 13,6 | 32,2 | 2400 | 21000 | 2000 | N60323 | 100-225 |
| 108 | 16,2 | 28,3 | 2500 | 21500 | 2000 | N60324 | 100-225 |
| 99,3 | 17,6 | 31,2 | 3000 | 22000 | 2000 | N60325 | 80-225 |
| 85,5 | 20,5 | 26,9 | 3000 | 24000 | 2000 | N60326 | 80-225 |
| 72,7 | 24,1 | 22,8 | 3000 | 25000 | 2000 | N60327 | 80-180 |
| 66,3 | 26,4 | 20,8 | 3000 | 26000 | 2000 | N60328 | 80-180 |
| 59,7 | 29,3 | 18,8 | 3000 | 27000 | 2000 | N60329 | 80-160 |
| 55,2 | 31,7 | 17,4 | 3000 | 27000 | 2000 | N60330 | 80-160 |

* Verificar limites motor / reductor na página 117



1250 - 3000 Nm

60

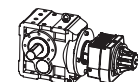


| rpm | ítot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça |
|------|------|------|---------|--------|---------|--------|---------|
| 50,7 | 34,5 | 15,9 | 3000 | 27000 | 2000 | N60331 | 100-225 |
| 42,8 | 40,9 | 13,5 | 3000 | 27000 | 2000 | N60332 | 100-225 |
| 39,3 | 44,6 | 12,3 | 3000 | 27000 | 2000 | N60333 | 80-225 |
| 33,8 | 51,8 | 10,6 | 3000 | 27000 | 2000 | N60334 | 80-225 |
| 28,7 | 60,9 | 9,03 | 3000 | 27000 | 2000 | N60336 | 80-180 |
| 23,6 | 74,1 | 7,42 | 3000 | 27000 | 2000 | N60337 | 80-160 |
| 21,9 | 80,1 | 6,86 | 3000 | 27000 | 2000 | N60338 | 80-160 |
| 19,2 | 91,2 | 6,02 | 3000 | 27000 | 2000 | N60339 | 80-160 |
| 17,1 | 102 | 5,37 | 3000 | 27000 | 2000 | N60340 | 80-132 |
| 14,7 | 119 | 4,62 | 3000 | 27000 | 2000 | N60342 | 80-132 |
| 13,3 | 132 | 4,18 | 3000 | 27000 | 2000 | N60343 | 80-132 |
| 11,3 | 155 | 3,54 | 3000 | 27000 | 2000 | N60344 | 80-100 |
| 10,6 | 165 | 3,34 | 3000 | 27000 | 2000 | N60345 | 80-100 |



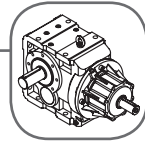
3000 Nm

60



| | | | | | | | |
|-------|-------|-------|------|-------|------|--------|---------|
| 8,53 | 205 | 2,68 | 3000 | 27000 | 2000 | N60546 | 100-132 |
| 7,65 | 229 | 2,40 | 3000 | 27000 | 2000 | N60547 | 100-132 |
| 7,07 | 247 | 2,22 | 3000 | 27000 | 2000 | N60548 | 100-132 |
| 5,85 | 299 | 1,84 | 3000 | 27000 | 2000 | N60549 | 100-132 |
| 5,65 | 310 | 1,78 | 3000 | 27000 | 2000 | N60550 | 100-132 |
| 5,07 | 345 | 1,59 | 3000 | 27000 | 2000 | N60551 | 100-132 |
| 4,12 | 425 | 1,29 | 3000 | 27000 | 2000 | N60552 | 100-132 |
| 3,81 | 460 | 1,20 | 3000 | 27000 | 2000 | N60553 | 100-132 |
| 3,15 | 556 | 0,989 | 3000 | 27000 | 2000 | N60555 | 100-132 |
| 2,74 | 638 | 0,861 | 3000 | 27000 | 2000 | N60556 | 100-132 |
| 2,46 | 712 | 0,772 | 3000 | 27000 | 2000 | N60557 | 100-132 |
| 2,27 | 770 | 0,714 | 3000 | 27000 | 2000 | N60558 | 100-132 |
| 1,88 | 931 | 0,591 | 3000 | 27000 | 2000 | N60559 | 100-132 |
| 1,63 | 1.077 | 0,511 | 3000 | 27000 | 2000 | N60561 | 63-132 |
| 1,37 | 1.273 | 0,432 | 3000 | 27000 | 2000 | N60562 | 63-132 |
| 1,23 | 1.428 | 0,385 | 3000 | 27000 | 2000 | N60563 | 63-132 |
| 1,03 | 1.693 | 0,325 | 3000 | 27000 | 2000 | N60564 | 63-100 |
| 0,962 | 1.819 | 0,302 | 3000 | 27000 | 2000 | N60565 | 63-100 |
| 0,856 | 2.043 | 0,269 | 3000 | 27000 | 2000 | N60566 | 63-90 |
| 0,868 | 2.016 | 0,273 | 3000 | 27000 | 2000 | N60667 | 63-132 |
| 0,708 | 2.473 | 0,222 | 3000 | 27000 | 2000 | N60668 | 63-132 |
| 0,620 | 2.823 | 0,195 | 3000 | 27000 | 2000 | N60669 | 63-132 |
| 0,540 | 3.239 | 0,170 | 3000 | 27000 | 2000 | N60670 | 63-112 |
| 0,503 | 3.478 | 0,158 | 3000 | 27000 | 2000 | N60671 | 63-100 |
| 0,448 | 3.908 | 0,141 | 3000 | 27000 | 2000 | N60672 | 63-132 |
| 0,365 | 4.794 | 0,115 | 3000 | 27000 | 2000 | N60674 | 63-132 |
| 0,320 | 5.471 | 0,100 | 3000 | 27000 | 2000 | N60675 | 63-132 |
| 0,279 | 6.277 | 0,088 | 3000 | 27000 | 2000 | N60676 | 63-112 |
| 0,260 | 6.741 | 0,082 | 3000 | 27000 | 2000 | N60677 | 63-100 |
| 0,239 | 7.310 | 0,075 | 3000 | 27000 | 2000 | N60678 | 63-100 |
| 0,210 | 8.337 | 0,066 | 3000 | 27000 | 2000 | N60679 | 63-90 |

* Verificar limites motor / reductor na página 117



3000 Nm

60

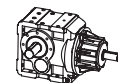


| rpm | itot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|-------|--------|-------|---------|--------|---------|--------|----------|
| 0,186 | 9.416 | 0,058 | 3000 | 27000 | 2000 | N60680 | 63-80 |
| 0,166 | 10.565 | 0,052 | 3000 | 27000 | 2000 | N60681 | 63-80 |
| 0,144 | 12.160 | 0,045 | 3000 | 27000 | 2000 | N60682 | 63-71 |
| 0,134 | 13.107 | 0,042 | 3000 | 27000 | 2000 | N60683 | 63-71 |
| 0,122 | 14.381 | 0,038 | 3000 | 27000 | 2000 | N60684 | 63-71 |



2360 - 4500 Nm

62

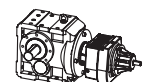


| | | | | | | | |
|------|------|------|------|-------|------|--------|---------|
| 216 | 8,09 | 55,1 | 2360 | 18000 | 1800 | N62318 | 100-280 |
| 200 | 8,74 | 55,2 | 2630 | 21000 | 1800 | N62319 | 100-280 |
| 171 | 10,2 | 55,0 | 3070 | 22000 | 1800 | N62320 | 100-280 |
| 148 | 11,8 | 55,1 | 3550 | 23000 | 1800 | N62321 | 100-280 |
| 129 | 13,5 | 60,5 | 4470 | 26000 | 1800 | N62323 | 100-280 |
| 120 | 14,6 | 56,4 | 4500 | 27000 | 1800 | N62324 | 100-280 |
| 102 | 17,1 | 48,1 | 4500 | 28000 | 1800 | N62325 | 100-280 |
| 88,5 | 19,8 | 41,7 | 4500 | 31000 | 1800 | N62326 | 100-280 |
| 76,2 | 23,0 | 35,9 | 4500 | 33000 | 1800 | N62327 | 100-280 |
| 70,5 | 24,8 | 33,2 | 4500 | 34000 | 1800 | N62328 | 100-225 |
| 61,6 | 28,4 | 29,0 | 4500 | 36000 | 1800 | N62329 | 100-225 |
| 53,1 | 33,0 | 25,0 | 4500 | 38000 | 1800 | N62330 | 100-180 |
| 50,6 | 34,6 | 23,9 | 4500 | 39000 | 1800 | N62331 | 100-280 |
| 43,2 | 40,5 | 20,4 | 4500 | 40000 | 1800 | N62332 | 100-280 |
| 37,5 | 46,7 | 17,7 | 4500 | 40000 | 1800 | N62333 | 100-280 |
| 32,3 | 54,2 | 15,2 | 4500 | 40000 | 1800 | N62335 | 100-280 |
| 29,9 | 58,6 | 14,1 | 4500 | 40000 | 1800 | N62336 | 100-225 |
| 26,1 | 67,1 | 12,3 | 4500 | 40000 | 1800 | N62337 | 100-225 |
| 22,5 | 77,9 | 10,6 | 4500 | 40000 | 1800 | N62338 | 100-180 |
| 20,5 | 85,2 | 9,68 | 4500 | 40000 | 1800 | N62339 | 100-180 |
| 17,2 | 102 | 8,11 | 4500 | 40000 | 1800 | N62340 | 100-160 |
| 15,4 | 114 | 7,26 | 4500 | 40000 | 1800 | N62341 | 100-160 |
| 13,7 | 128 | 6,44 | 4500 | 40000 | 1800 | N62342 | 100-132 |
| 11,9 | 147 | 5,60 | 4500 | 40000 | 1800 | N62343 | 100-132 |
| 10,7 | 163 | 5,05 | 4500 | 40000 | 1800 | N62344 | 100-132 |



4500 Nm

62



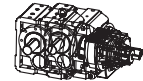
| | | | | | | | |
|------|-----|------|------|-------|------|--------|---------|
| 10,1 | 174 | 4,74 | 4500 | 40000 | 1800 | N62545 | 100-160 |
| 8,33 | 210 | 3,93 | 4500 | 40000 | 1800 | N62546 | 100-160 |
| 7,62 | 230 | 3,59 | 4500 | 40000 | 1800 | N62547 | 63-160 |
| 6,77 | 258 | 3,19 | 4500 | 40000 | 1800 | N62548 | 63-160 |
| 6,18 | 283 | 2,91 | 4500 | 40000 | 1800 | N62549 | 63-160 |
| 5,44 | 322 | 2,56 | 4500 | 40000 | 1800 | N62550 | 100-160 |
| 4,98 | 352 | 2,35 | 4500 | 40000 | 1800 | N62551 | 100-160 |
| 4,78 | 366 | 2,25 | 4500 | 40000 | 1800 | N62552 | 100-160 |

* Verificar limites motor / redutor na página 117



4500 Nm

62

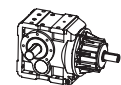


| rpm | ítot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|-------|--------|-------|---------|--------|---------|--------|----------|
| 3,96 | 442 | 1,87 | 4500 | 40000 | 1800 | N62553 | 100-160 |
| 3,62 | 483 | 1,71 | 4500 | 40000 | 1800 | N62554 | 63-160 |
| 3,22 | 544 | 1,52 | 4500 | 40000 | 1800 | N62555 | 63-160 |
| 2,75 | 635 | 1,30 | 4500 | 40000 | 1800 | N62556 | 100-160 |
| 2,28 | 767 | 1,08 | 4500 | 40000 | 1800 | N62557 | 100-160 |
| 2,09 | 839 | 0,983 | 4500 | 40000 | 1800 | N62558 | 63-160 |
| 1,85 | 944 | 0,874 | 4500 | 40000 | 1800 | N62559 | 63-160 |
| 1,69 | 1.035 | 0,797 | 4500 | 40000 | 1800 | N62560 | 63-160 |
| 1,47 | 1.194 | 0,690 | 4500 | 40000 | 1800 | N62561 | 63-160 |
| 1,28 | 1.365 | 0,604 | 4500 | 40000 | 1800 | N62563 | 63-132 |
| 1,09 | 1.603 | 0,514 | 4500 | 40000 | 1800 | N62564 | 63-132 |
| 0,981 | 1.784 | 0,462 | 4500 | 40000 | 1800 | N62565 | 63-132 |
| 0,833 | 2.100 | 0,393 | 4500 | 40000 | 1800 | N62566 | 63-100 |
| 0,781 | 2.240 | 0,368 | 4500 | 40000 | 1800 | N62567 | 63-100 |
| 0,632 | 2.767 | 0,298 | 4500 | 40000 | 1800 | N62669 | 63-100 |
| 0,547 | 3.200 | 0,258 | 4500 | 40000 | 1800 | N62670 | 63-100 |
| 0,512 | 3.416 | 0,241 | 4500 | 40000 | 1800 | N62671 | 63-100 |
| 0,459 | 3.810 | 0,216 | 4500 | 40000 | 1800 | N62672 | 63-100 |
| 0,425 | 4.120 | 0,200 | 4500 | 40000 | 1800 | N62673 | 63-100 |
| 0,351 | 4.981 | 0,166 | 4500 | 40000 | 1800 | N62674 | 63-100 |
| 0,304 | 5.761 | 0,143 | 4500 | 40000 | 1800 | N62675 | 63-100 |
| 0,257 | 6.814 | 0,121 | 4500 | 40000 | 1800 | N62676 | 63-100 |
| 0,229 | 7.642 | 0,108 | 4500 | 40000 | 1800 | N62678 | 63-100 |
| 0,193 | 9.058 | 0,091 | 4500 | 40000 | 1800 | N62679 | 63-100 |
| 0,180 | 9.734 | 0,085 | 4500 | 40000 | 1800 | N62680 | 63-100 |
| 0,160 | 10.933 | 0,075 | 4500 | 40000 | 1800 | N62681 | 63-90 |
| 0,128 | 13.662 | 0,060 | 4500 | 40000 | 1800 | N62683 | 63-80 |
| 0,112 | 15.588 | 0,053 | 4500 | 40000 | 1800 | N62684 | 63-71 |
| 0,104 | 16.900 | 0,049 | 4500 | 40000 | 1800 | N62685 | 63-71 |



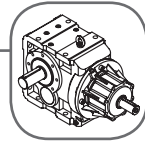
3500 - 8000 Nm

64



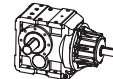
| | | | | | | | |
|------|------|------|------|-------|------|--------|---------|
| 194 | 9,04 | 70,9 | 3500 | 31000 | 1800 | N64319 | 132-315 |
| 179 | 9,77 | 70,3 | 3750 | 35000 | 1800 | N64320 | 132-315 |
| 153 | 11,4 | 70,5 | 4400 | 39000 | 1800 | N64321 | 132-315 |
| 133 | 13,2 | 70,8 | 5100 | 41000 | 1800 | N64322 | 132-315 |
| 128 | 13,6 | 78,0 | 5800 | 43000 | 1800 | N64323 | 132-315 |
| 119 | 14,7 | 77,1 | 6200 | 45000 | 1800 | N64324 | 132-315 |
| 101 | 17,2 | 77,2 | 7270 | 48000 | 1800 | N64325 | 132-315 |
| 87,9 | 19,9 | 73,6 | 8000 | 51000 | 1800 | N64326 | 132-315 |
| 75,7 | 23,1 | 63,5 | 8000 | 53000 | 1800 | N64327 | 132-280 |
| 70,1 | 25,0 | 58,7 | 8000 | 55000 | 1800 | N64328 | 132-225 |
| 61,2 | 28,6 | 51,3 | 8000 | 59000 | 1800 | N64329 | 132-225 |
| 51,8 | 33,8 | 43,4 | 8000 | 63000 | 1800 | N64331 | 132-315 |
| 44,2 | 39,6 | 37,0 | 8000 | 65000 | 1800 | N64332 | 132-315 |
| 38,3 | 45,7 | 32,1 | 8000 | 65000 | 1800 | N64333 | 132-315 |
| 33,0 | 53,0 | 27,7 | 8000 | 65000 | 1800 | N64334 | 132-280 |

* Verificar limites motor / redutor na página 117



3500 - 8000 Nm

64

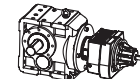


| rpm | itot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|------|------|------|---------|--------|---------|--------|----------|
| 30,5 | 57,3 | 25,6 | 8000 | 65000 | 1800 | N64335 | 132-225 |
| 26,7 | 65,6 | 22,3 | 8000 | 65000 | 1800 | N64336 | 132-225 |
| 23,0 | 76,2 | 19,2 | 8000 | 65000 | 1800 | N64337 | 132-180 |
| 21,0 | 83,3 | 17,6 | 8000 | 65000 | 1800 | N64338 | 132-180 |
| 18,9 | 92,7 | 15,8 | 8000 | 65000 | 1800 | N64339 | 132-160 |
| 17,6 | 99,4 | 14,8 | 8000 | 65000 | 1800 | N64340 | 132-160 |
| 15,8 | 111 | 13,2 | 8000 | 65000 | 1800 | N64341 | 132-160 |
| 14,0 | 125 | 11,7 | 8000 | 65000 | 1800 | N64342 | 132-132 |
| 12,2 | 144 | 10,2 | 8000 | 65000 | 1800 | N64343 | 132-132 |
| 11,0 | 160 | 9,19 | 8000 | 65000 | 1800 | N64344 | 132-132 |



8000 Nm

64



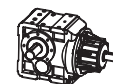
| | | | | | | | |
|-------|--------|-------|------|-------|------|--------|---------|
| 9,98 | 175 | 8,36 | 8000 | 65000 | 1800 | N64545 | 100-160 |
| 9,13 | 192 | 7,64 | 8000 | 65000 | 1800 | N64546 | 63-160 |
| 8,11 | 216 | 6,79 | 8000 | 65000 | 1800 | N64547 | 63-160 |
| 6,94 | 252 | 5,82 | 8000 | 65000 | 1800 | N64548 | 100-160 |
| 6,32 | 277 | 5,29 | 8000 | 65000 | 1800 | N64549 | 63-160 |
| 5,57 | 314 | 4,66 | 8000 | 65000 | 1800 | N64550 | 100-160 |
| 4,89 | 358 | 4,09 | 8000 | 65000 | 1800 | N64551 | 100-160 |
| 4,05 | 432 | 3,39 | 8000 | 65000 | 1800 | N64552 | 100-160 |
| 3,70 | 473 | 3,10 | 8000 | 65000 | 1800 | N64553 | 63-160 |
| 3,29 | 532 | 2,76 | 8000 | 65000 | 1800 | N64554 | 63-160 |
| 3,00 | 583 | 2,51 | 8000 | 65000 | 1800 | N64555 | 63-160 |
| 2,82 | 621 | 2,36 | 8000 | 65000 | 1800 | N64556 | 100-160 |
| 2,33 | 750 | 1,95 | 8000 | 65000 | 1800 | N64557 | 100-160 |
| 2,13 | 820 | 1,79 | 8000 | 65000 | 1800 | N64558 | 63-160 |
| 1,90 | 923 | 1,59 | 8000 | 65000 | 1800 | N64559 | 63-160 |
| 1,73 | 1.012 | 1,45 | 8000 | 65000 | 1800 | N64560 | 63-160 |
| 1,50 | 1.168 | 1,26 | 8000 | 65000 | 1800 | N64561 | 63-160 |
| 1,31 | 1.334 | 1,10 | 8000 | 65000 | 1800 | N64563 | 63-132 |
| 1,12 | 1.568 | 0,935 | 8000 | 65000 | 1800 | N64564 | 63-132 |
| 1,00 | 1.745 | 0,840 | 8000 | 65000 | 1800 | N64565 | 63-132 |
| 0,852 | 2.054 | 0,714 | 8000 | 65000 | 1800 | N64566 | 63-100 |
| 0,782 | 2.238 | 0,655 | 8000 | 65000 | 1800 | N64667 | 63-100 |
| 0,647 | 2.706 | 0,542 | 8000 | 65000 | 1800 | N64669 | 63-100 |
| 0,559 | 3.129 | 0,468 | 8000 | 65000 | 1800 | N64670 | 63-100 |
| 0,524 | 3.340 | 0,439 | 8000 | 65000 | 1800 | N64671 | 63-100 |
| 0,434 | 4.029 | 0,364 | 8000 | 65000 | 1800 | N64672 | 63-100 |
| 0,359 | 4.871 | 0,301 | 8000 | 65000 | 1800 | N64674 | 63-100 |
| 0,311 | 5.633 | 0,260 | 8000 | 65000 | 1800 | N64675 | 63-100 |
| 0,263 | 6.663 | 0,220 | 8000 | 65000 | 1800 | N64676 | 63-100 |
| 0,234 | 7.472 | 0,196 | 8000 | 65000 | 1800 | N64677 | 63-100 |
| 0,198 | 8.857 | 0,166 | 8000 | 65000 | 1800 | N64679 | 63-100 |
| 0,184 | 9.518 | 0,154 | 8000 | 65000 | 1800 | N64680 | 63-100 |
| 0,146 | 11.961 | 0,123 | 8000 | 65000 | 1800 | N64682 | 63-80 |
| 0,131 | 13.359 | 0,110 | 8000 | 65000 | 1800 | N64683 | 63-80 |
| 0,115 | 15.242 | 0,096 | 8000 | 65000 | 1800 | N64684 | 63-71 |
| 0,106 | 16.525 | 0,089 | 8000 | 65000 | 1800 | N64685 | 63-71 |

* Verificar limites motor / redutor na página 117



6200 - 13000 Nm

66



| rpm | ítot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|------|------|------|---------|--------|---------|--------|----------|
| 210 | 8,33 | 141 | 6200 | 43000 | 1800 | N66318 | 132-315 |
| 183 | 9,58 | 141 | 7350 | 45000 | 1800 | N66319 | 132-315 |
| 170 | 10,3 | 141 | 7900 | 47000 | 1800 | N66320 | 132-315 |
| 147 | 11,9 | 140 | 9100 | 56000 | 1800 | N66321 | 132-315 |
| 129 | 13,6 | 140 | 10400 | 60000 | 1800 | N66322 | 132-315 |
| 115 | 15,3 | 114 | 9500 | 67000 | 1800 | N66324 | 132-315 |
| 99,8 | 17,5 | 136 | 13000 | 70000 | 1800 | N66325 | 132-315 |
| 80,3 | 21,8 | 109 | 13000 | 75000 | 1800 | N66327 | 132-315 |
| 70,2 | 24,9 | 95,6 | 13000 | 77000 | 1800 | N66328 | 132-315 |
| 62,3 | 28,1 | 84,7 | 13000 | 78000 | 1800 | N66329 | 132-280 |
| 57,8 | 30,3 | 78,7 | 13000 | 78000 | 1800 | N66330 | 132-225 |
| 50,0 | 35,0 | 68,1 | 13000 | 78000 | 1800 | N66331 | 132-225 |
| 41,8 | 41,9 | 56,9 | 13000 | 78000 | 1800 | N66332 | 132-315 |
| 38,9 | 45,0 | 53,0 | 13000 | 78000 | 1800 | N66333 | 132-315 |
| 33,6 | 52,1 | 45,8 | 13000 | 78000 | 1800 | N66334 | 132-315 |
| 29,4 | 59,5 | 40,0 | 13000 | 78000 | 1800 | N66336 | 132-315 |
| 24,2 | 72,3 | 32,9 | 13000 | 78000 | 1800 | N66337 | 132-225 |
| 20,9 | 83,6 | 28,5 | 13000 | 78000 | 1800 | N66338 | 132-225 |
| 18,1 | 96,5 | 24,7 | 13000 | 78000 | 1800 | N66339 | 132-180 |
| 16,6 | 106 | 22,6 | 13000 | 78000 | 1800 | N66340 | 132-180 |
| 15,1 | 116 | 20,5 | 13000 | 78000 | 1800 | N66341 | 132-160 |
| 12,6 | 138 | 17,2 | 13000 | 78000 | 1800 | N66343 | 132-160 |
| 11,3 | 155 | 15,4 | 13000 | 78000 | 1800 | N66344 | 132 |
| 9,83 | 178 | 13,4 | 13000 | 78000 | 1800 | N66345 | 132 |



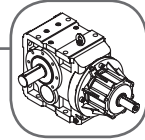
13000 Nm

66



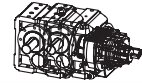
| | | | | | | | |
|-------|-------|------|-------|-------|------|--------|---------|
| 9,05 | 193 | 12,3 | 13000 | 78000 | 1800 | N66546 | 100-160 |
| 7,50 | 233 | 10,2 | 13000 | 78000 | 1800 | N66547 | 100-160 |
| 6,86 | 255 | 9,34 | 13000 | 78000 | 1800 | N66548 | 63-160 |
| 6,09 | 287 | 8,30 | 13000 | 78000 | 1800 | N66549 | 63-160 |
| 5,56 | 315 | 7,57 | 13000 | 78000 | 1800 | N66550 | 63-160 |
| 5,22 | 335 | 7,10 | 13000 | 78000 | 1800 | N66551 | 100-160 |
| 4,32 | 405 | 5,89 | 13000 | 78000 | 1800 | N66552 | 100-160 |
| 3,86 | 454 | 5,25 | 13000 | 78000 | 1800 | N66553 | 100-160 |
| 3,20 | 547 | 4,35 | 13000 | 78000 | 1800 | N66555 | 100-160 |
| 2,92 | 599 | 3,98 | 13000 | 78000 | 1800 | N66556 | 63-160 |
| 2,37 | 739 | 3,23 | 13000 | 78000 | 1800 | N66557 | 63-160 |
| 2,22 | 787 | 3,03 | 13000 | 78000 | 1800 | N66558 | 100-160 |
| 1,84 | 950 | 2,51 | 13000 | 78000 | 1800 | N66559 | 100-160 |
| 1,69 | 1.038 | 2,29 | 13000 | 78000 | 1800 | N66560 | 63-160 |
| 1,50 | 1.169 | 2,04 | 13000 | 78000 | 1800 | N66561 | 63-160 |
| 1,37 | 1.281 | 1,86 | 13000 | 78000 | 1800 | N66562 | 63-160 |
| 1,18 | 1.479 | 1,61 | 13000 | 78000 | 1800 | N66563 | 63-160 |
| 1,04 | 1.690 | 1,41 | 13000 | 78000 | 1800 | N66564 | 63-132 |
| 0,882 | 1.985 | 1,20 | 13000 | 78000 | 1800 | N66566 | 63-132 |
| 0,792 | 2.210 | 1,08 | 13000 | 78000 | 1800 | N66567 | 63-132 |

* Verificar limites motor / reductor na página 117



13000 Nm

66

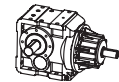


| rpm | Itot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|-------|--------|-------|---------|--------|---------|--------|----------|
| 0,673 | 2.601 | 0,916 | 13000 | 78000 | 1800 | N66568 | 63-100 |
| 0,631 | 2.774 | 0,859 | 13000 | 78000 | 1800 | N66569 | 63-100 |
| 0,511 | 3.427 | 0,695 | 13000 | 78000 | 1800 | N66671 | 63-160 |
| 0,442 | 3.963 | 0,601 | 13000 | 78000 | 1800 | N66672 | 63-132 |
| 0,414 | 4.229 | 0,563 | 13000 | 78000 | 1800 | N66673 | 63-160 |
| 0,371 | 4.718 | 0,505 | 13000 | 78000 | 1800 | N66674 | 63-160 |
| 0,343 | 5.102 | 0,467 | 13000 | 78000 | 1800 | N66675 | 63-160 |
| 0,284 | 6.168 | 0,386 | 13000 | 78000 | 1800 | N66676 | 63-160 |
| 0,245 | 7.133 | 0,334 | 13000 | 78000 | 1800 | N66677 | 63-132 |
| 0,207 | 8.437 | 0,282 | 13000 | 78000 | 1800 | N66678 | 63-132 |
| 0,185 | 9.462 | 0,252 | 13000 | 78000 | 1800 | N66679 | 63-132 |
| 0,156 | 11.216 | 0,212 | 13000 | 78000 | 1800 | N66681 | 63-100 |
| 0,145 | 12.053 | 0,198 | 13000 | 78000 | 1800 | N66682 | 63-100 |
| 0,129 | 13.538 | 0,176 | 13000 | 78000 | 1800 | N66683 | 63-90 |
| 0,116 | 15.147 | 0,157 | 13000 | 78000 | 1800 | N66684 | 63-80 |
| 0,103 | 16.917 | 0,141 | 13000 | 78000 | 1800 | N66685 | 63-80 |
| 0,091 | 19.301 | 0,123 | 13000 | 78000 | 1800 | N66686 | 63-71 |
| 0,084 | 20.926 | 0,114 | 13000 | 78000 | 1800 | N66687 | 63-71 |



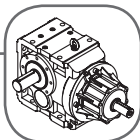
9000 - 18000 Nm

68



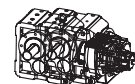
| | | | | | | | |
|------|------|------|-------|--------|------|--------|---------|
| 207 | 8,47 | 201 | 9000 | 50000 | 1800 | N68318 | 160-315 |
| 180 | 9,74 | 200 | 10650 | 52000 | 1800 | N68319 | 160-315 |
| 167 | 10,5 | 201 | 11450 | 57000 | 1800 | N68320 | 160-315 |
| 145 | 12,1 | 201 | 13250 | 64000 | 1800 | N68322 | 160-315 |
| 127 | 13,8 | 201 | 15150 | 68000 | 1800 | N68323 | 160-315 |
| 106 | 16,6 | 192 | 17350 | 71000 | 1800 | N68324 | 160-315 |
| 98,3 | 17,8 | 185 | 18000 | 73000 | 1800 | N68325 | 160-315 |
| 84,9 | 20,6 | 160 | 18000 | 80000 | 1800 | N68326 | 160-315 |
| 74,3 | 23,6 | 140 | 18000 | 83000 | 1800 | N68327 | 160-315 |
| 65,9 | 26,6 | 114 | 16500 | 85000 | 1800 | N68328 | 160-280 |
| 61,1 | 28,6 | 109 | 17000 | 90000 | 1800 | N68329 | 160-225 |
| 52,9 | 33,1 | 99,7 | 18000 | 95000 | 1800 | N68330 | 160-225 |
| 45,8 | 38,2 | 43,2 | 9000 | 100000 | 1800 | N68330 | 160-180 |
| 44,2 | 39,6 | 83,3 | 18000 | 100000 | 1800 | N68332 | 160-315 |
| 41,2 | 42,5 | 77,6 | 18000 | 100000 | 1800 | N68333 | 160-315 |
| 35,6 | 49,2 | 67,0 | 18000 | 100000 | 1800 | N68334 | 160-315 |
| 31,1 | 56,2 | 58,6 | 18000 | 100000 | 1800 | N68335 | 160-315 |
| 27,6 | 63,5 | 52,0 | 18000 | 100000 | 1800 | N68336 | 160-280 |
| 25,6 | 68,4 | 48,3 | 18000 | 100000 | 1800 | N68337 | 160-225 |
| 22,2 | 79,0 | 41,8 | 18000 | 100000 | 1800 | N68338 | 160-225 |
| 19,2 | 91,2 | 36,2 | 18000 | 100000 | 1800 | N68339 | 160-180 |
| 17,5 | 99,7 | 33,1 | 18000 | 100000 | 1800 | N68340 | 160-180 |
| 16,0 | 110 | 30,1 | 18000 | 100000 | 1800 | N68341 | 160-160 |
| 13,4 | 131 | 25,2 | 18000 | 100000 | 1800 | N68342 | 160-160 |
| 11,9 | 147 | 22,5 | 18000 | 100000 | 1800 | N68343 | 132** |
| 10,4 | 168 | 19,6 | 18000 | 100000 | 1800 | N68344 | 132** |

* Verificar limites motor / reductor na página 117 **Disponível somente com flange lanterna



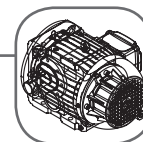
18000 Nm

68



| rpm | ítot | kW | Mt (Nm) | Fr (N) | rpm.máx | código | carcaça* |
|-------|--------|-------|---------|--------|---------|--------|----------|
| 9,95 | 176 | 18,8 | 18000 | 100000 | 1800 | N68545 | 100-280 |
| 8,82 | 198 | 16,6 | 18000 | 100000 | 1800 | N68546 | 100-280 |
| 7,95 | 220 | 15,0 | 18000 | 100000 | 1800 | N68547 | 100-280 |
| 6,92 | 253 | 13,0 | 18000 | 100000 | 1800 | N68548 | 100-280 |
| 6,03 | 290 | 11,4 | 18000 | 100000 | 1800 | N68549 | 100-280 |
| 5,25 | 334 | 9,89 | 18000 | 100000 | 1800 | N68550 | 100-280 |
| 4,89 | 358 | 9,21 | 18000 | 100000 | 1800 | N68551 | 100-280 |
| 4,22 | 415 | 7,96 | 18000 | 100000 | 1800 | N68552 | 100-280 |
| 3,69 | 474 | 6,96 | 18000 | 100000 | 1800 | N68553 | 100-280 |
| 3,33 | 526 | 6,27 | 18000 | 100000 | 1800 | N68554 | 100-280 |
| 2,90 | 604 | 5,46 | 18000 | 100000 | 1800 | N68555 | 100-280 |
| 2,70 | 649 | 5,09 | 18000 | 100000 | 1800 | N68556 | 100-280 |
| 2,33 | 751 | 4,39 | 18000 | 100000 | 1800 | N68557 | 100-280 |
| 2,04 | 858 | 3,84 | 18000 | 100000 | 1800 | N68558 | 100-280 |
| 1,81 | 968 | 3,41 | 18000 | 100000 | 1800 | N68559 | 100-280 |
| 1,68 | 1.043 | 3,16 | 18000 | 100000 | 1800 | N68560 | 100-225 |
| 1,45 | 1.206 | 2,74 | 18000 | 100000 | 1800 | N68562 | 100-225 |
| 1,26 | 1.392 | 2,37 | 18000 | 100000 | 1800 | N68563 | 100-180 |
| 1,05 | 1.673 | 1,97 | 18000 | 100000 | 1800 | N68564 | 100-160 |
| 1,05 | 1.673 | 1,97 | 18000 | 100000 | 1800 | N68565 | 100-160 |
| 0,877 | 1.996 | 1,65 | 18000 | 100000 | 1800 | N68566 | 100-160 |
| 0,674 | 2.597 | 1,27 | 18000 | 100000 | 1800 | N68669 | 80-225 |
| 0,569 | 3.075 | 1,07 | 18000 | 100000 | 1800 | N68670 | 80-225 |
| 0,522 | 3.354 | 0,983 | 18000 | 100000 | 1800 | N68671 | 80-225 |
| 0,449 | 3.895 | 0,847 | 18000 | 100000 | 1800 | N68672 | 80-225 |
| 0,406 | 4.314 | 0,765 | 18000 | 100000 | 1800 | N68673 | 80-225 |
| 0,343 | 5.108 | 0,646 | 18000 | 100000 | 1800 | N68674 | 80-225 |
| 0,314 | 5.572 | 0,592 | 18000 | 100000 | 1800 | N68675 | 80-225 |
| 0,270 | 6.470 | 0,510 | 18000 | 100000 | 1800 | N68676 | 80-225 |
| 0,230 | 7.612 | 0,433 | 18000 | 100000 | 1800 | N68677 | 80-180 |
| 0,210 | 8.343 | 0,395 | 18000 | 100000 | 1800 | N68678 | 80-180 |
| 0,189 | 9.264 | 0,356 | 18000 | 100000 | 1800 | N68679 | 80-160 |
| 0,175 | 10.014 | 0,329 | 18000 | 100000 | 1800 | N68680 | 80-160 |
| 0,153 | 11.408 | 0,289 | 18000 | 100000 | 1800 | N68681 | 80-160 |
| 0,137 | 12.800 | 0,258 | 18000 | 100000 | 1800 | N68682 | 80-132 |
| 0,118 | 14.882 | 0,222 | 18000 | 100000 | 1800 | N68683 | 80-132 |
| 0,106 | 16.457 | 0,200 | 18000 | 100000 | 1800 | N68684 | 80-132 |
| 0,090 | 19.411 | 0,170 | 18000 | 100000 | 1800 | N68685 | 80-100 |
| 0,085 | 20.576 | 0,160 | 18000 | 100000 | 1800 | N68686 | 80-100 |

* Verificar limites motor / reductor na página 117



Weg normal / Tipo 1

| 4 pólos | | | | | 6 pólos | | | | | 8 pólos | | | | |
|---------|------|------|------|------|---------|------|------|------|------|---------|------|------|-----|------|
| Carc. | CV | kW | RPM | Cód. | Carc. | CV | kW | RPM | Cód. | Carc. | CV | kW | RPM | Cód. |
| 63 | 0,16 | 0,12 | 1720 | B_W | 63 | 0,16 | 0,12 | 1130 | B_W | 71 | 0,16 | 0,12 | 805 | C_W |
| 63 | 0,25 | 0,18 | 1710 | B_W | 71 | 0,25 | 0,18 | 1090 | C_W | 80 | 0,25 | 0,18 | 865 | D_W |
| 63 | 0,33 | 0,25 | 1710 | B_W | 71 | 0,33 | 0,25 | 1100 | C_W | 80 | 0,33 | 0,25 | 860 | D_W |
| 71 | 0,5 | 0,37 | 1720 | C_W | 80 | 0,50 | 0,37 | 1150 | D_W | 90S | 0,50 | 0,37 | 850 | E_W |
| 71 | 0,75 | 0,55 | 1705 | C_W | 80 | 0,75 | 0,55 | 1150 | D_W | 90L | 0,75 | 0,55 | 830 | F_W |
| 80 | 1 | 0,75 | 1720 | D_W | 90S | 1,0 | 0,75 | 1130 | E_W | 90L | 1,0 | 0,75 | 820 | F_W |
| 80 | 1,5 | 1,1 | 1720 | D_W | 90S | 1,5 | 1,1 | 1130 | E_W | 100L | 1,5 | 1,1 | 860 | G_W |
| 90S | 2 | 1,5 | 1740 | E_W | 100L | 2,0 | 1,5 | 1150 | G_W | 112M | 2,0 | 1,5 | 855 | H_W |
| 90L | 3 | 2,2 | 1730 | F_W | 100L | 3,0 | 2,2 | 1140 | G_W | 132S | 3,0 | 2,2 | 860 | J_W |
| 100L | 4 | 3 | 1725 | G_W | 112M | 4,0 | 3,0 | 1145 | H_W | 132M | 4,0 | 3,0 | 865 | K_W |
| 100L | 5 | 3,7 | 1715 | G_W | 132S | 5,0 | 3,7 | 1160 | J_W | 132M | 5,0 | 3,7 | 865 | K_W |
| 112M | 6 | 4,5 | 1720 | H_W | 132S | 6,0 | 4,5 | 1160 | J_W | 132M | 5,0 | 3,7 | 865 | K_W |
| 112M | 7,5 | 5,5 | 1740 | H_W | 132M | 7,5 | 5,5 | 1160 | K_W | 160M | 6,0 | 4,5 | 875 | L_W |
| 132S | 10 | 7,5 | 1760 | J_W | 132M | 10 | 7,5 | 1160 | K_W | 160M | 7,5 | 5,5 | 875 | L_W |
| 132M | 12,5 | 9,2 | 1755 | K_W | 160M | 12,5 | 9,2 | 1160 | L_W | 160L | 10 | 7,5 | 875 | M_W |
| 132M | 15 | 11 | 1755 | K_W | 160M | 15 | 11 | 1170 | L_W | 180M | 12,5 | 9,2 | 875 | N_W |
| 160M | 20 | 15 | 1760 | L_W | 160L | 20 | 15 | 1170 | M_W | 180L | 15 | 11 | 875 | P_W |
| 160L | 25 | 18,5 | 1760 | M_W | 180L | 25 | 18,5 | 1165 | P_W | 180L | 20 | 15 | 870 | P_W |
| 180M | 30 | 22 | 1765 | N_W | 200L | 30 | 22 | 1175 | R_W | 200L | 25 | 18,5 | 880 | R_W |
| 200M | 40 | 30 | 1770 | Q_W | 200L | 40 | 30 | 1175 | R_W | 225S/M | 30 | 22 | 880 | S_W |
| 200L | 50 | 37 | 1770 | R_W | 225S/M | 50 | 37 | 1180 | S_W | 225S/M | 40 | 30 | 880 | S_W |
| 225S/M | 60 | 45 | 1775 | S_W | — | — | — | — | — | — | — | — | — | — |
| 225S/M | 75 | 55 | 1770 | S_W | — | — | — | — | — | — | — | — | — | — |

Características padrão

- 60 Hz
- Classe de Isolação "F"
- Caixa de ligação A1
- Grau de Proteção IPW 55
- Motores Weg até 0,75 - 220/380V, acima 4 tensões
- Flange FF (Forma B5E)

Opcionais (sob consulta) inclusive motor tipo 1

- Frequência de 50 Hz e 50/60Hz
- Classe de Isolação "F", "H"
- Calota de Proteção*
- Ventilação Forçada
- Proteção Térmica
- 2ª Ponta de Eixo
- Tensões (V) de 220, 380, 440, 480, 220/380, 380/660, 440/660, 460, 110/220 (monofásico), 220/380/440/760 (4 tensões)
- Freio de 220 V, 380 V, 440 V, 110 V 1F, 24 VDC
- Grau de Proteção IPW 55 ou IP 56
- Placa de Bornes
- Massa Adicion. Inércia
- Resistência Aquecimento
- Faixa do Protetor
- Polaridade do Motor de 2, 2/4, 2/6, 4/6, 4/8, 6/8, 2/8 pólos
- Motores especiais dedicados a aplicações especiais

*Calota de Proteção - recomendado para motorreduzores na posição de trabalho P4

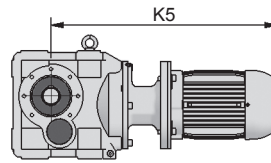
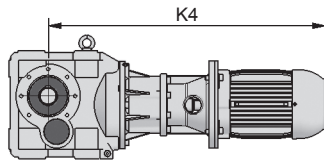


Fixação por pés - N

Simple

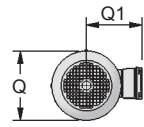
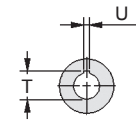
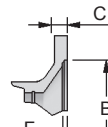
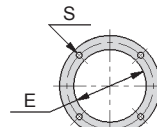
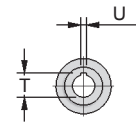
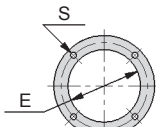
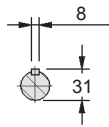
Dimensões

Tamanho **56**

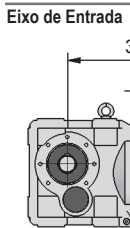


Flange Lanterna com Motor

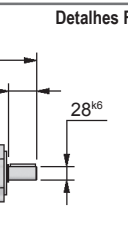
Flange KTR com Motor



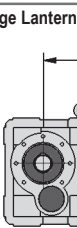
Tipos de Entrada



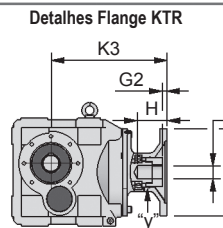
Eixo de Entrada



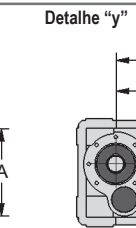
Detalhes Flange Lanterna



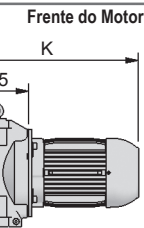
Detalhe "x"



Detalhes Flange KTR



Detalhe "y"



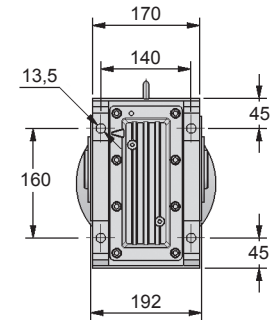
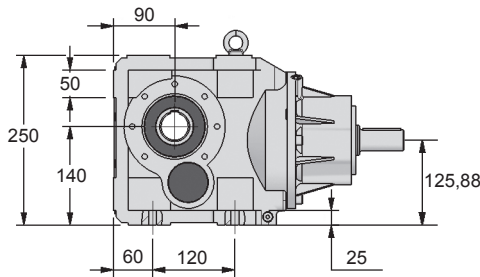
Motor

Mancal

Flange Lanterna

Flange KTR

Motor

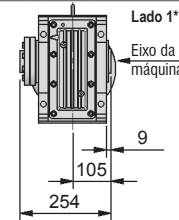
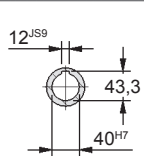
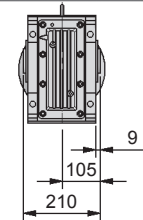
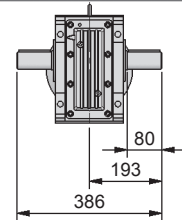
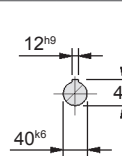
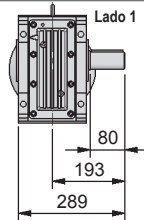


Eixo Integral Simple

Eixo Integral Duplo

Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração

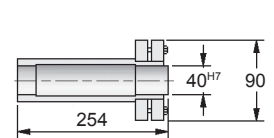
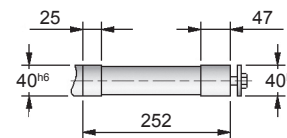
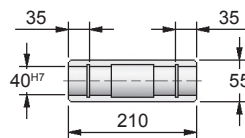
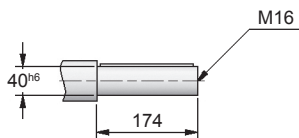


Eixo da máquina

Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|-------|----------------|------|----|-------|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 400 | — | 10 | 12,8 | 4 | 402,5 | 593 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 400 | 247 | 10 | 16,3 | 5 | 434,5 | 618 | 465 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 413 | 285,5 | 12 | 21,8 | 6 | 461,5 | 649 | 521,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 413 | 285,5 | 12 | 27,3 | 8 | 481,5 | 667 | 539,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 413 | 285,5 | 12 | 27,3 | 8 | 506,5 | 692 | 564,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 423 | 306 | 15 | 31,3 | 8 | 556 | 739 | 622 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 423 | 306 | 15 | 31,3 | 8 | 572 | 756 | 639 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 443 | 361 | 15 | 41,3 | 10 | 655 | 815 | 733 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 443 | 361 | 15 | 41,3 | 10 | 693 | 853 | 771 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 706 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 750 | — | — | 317 | 250 |

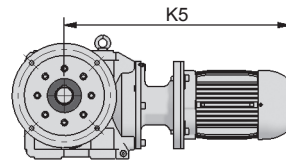
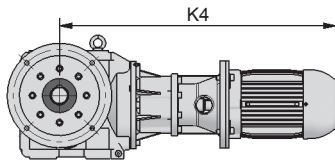
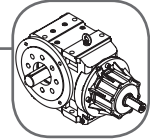
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **56**

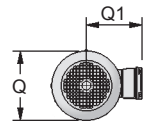
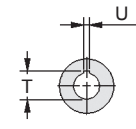
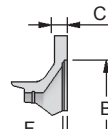
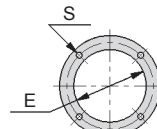
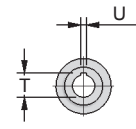
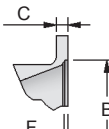
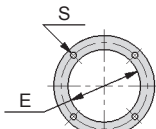
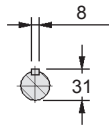
Fixação por flange e pés - G E

Simplex



Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

Eixo de Entrada

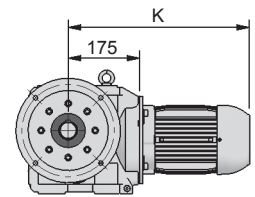
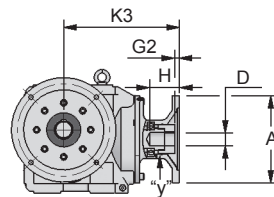
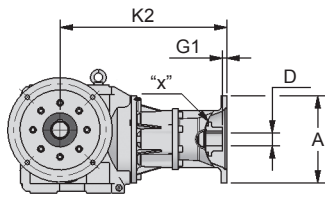
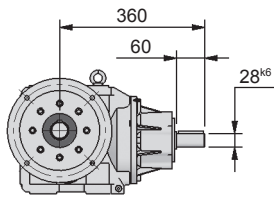
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

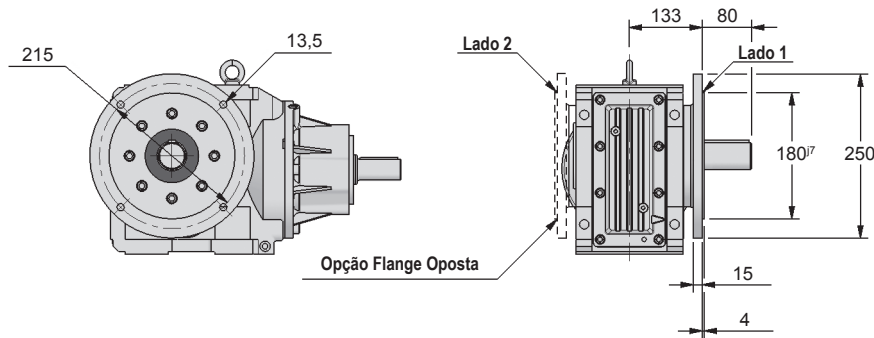


Mancal

Flange Lanterna

Flange KTR

Motor



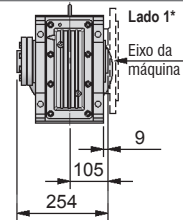
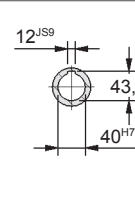
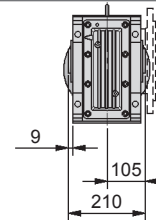
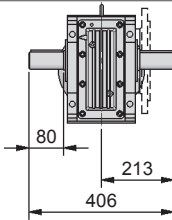
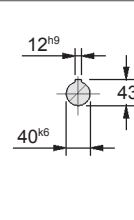
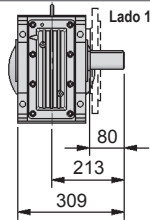
Opção Flange Oposta

Eixo Integral Simplex

Eixo Integral Duplo

Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração

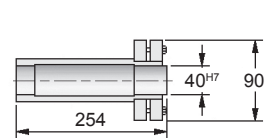
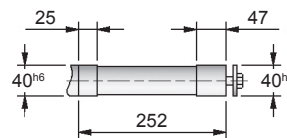
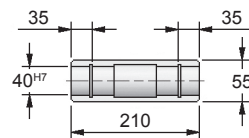
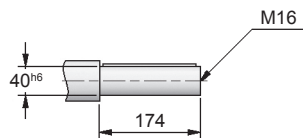


Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração

Tipos de Saída

14



Flange Lanterna / KTR

Motor Elétrico

| Carcaça | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
|---------|-----|-------------------|----|-----|-----|---|-----|----|----|-----|-------|----|------|----|-------|-----|-------|-----|-----|
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 400 | — | 10 | 12,8 | 4 | 402,5 | 593 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 400 | 247 | 10 | 16,3 | 5 | 434,5 | 618 | 465 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 413 | 285,5 | 12 | 21,8 | 6 | 461,5 | 649 | 521,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 413 | 285,5 | 12 | 27,3 | 8 | 481,5 | 667 | 539,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 413 | 285,5 | 12 | 27,3 | 8 | 506,5 | 692 | 564,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 423 | 306 | 15 | 31,3 | 8 | 556 | 739 | 622 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 423 | 306 | 15 | 31,3 | 8 | 572 | 756 | 639 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 443 | 361 | 15 | 41,3 | 10 | 655 | 815 | 733 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 443 | 361 | 15 | 41,3 | 10 | 693 | 853 | 771 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 706 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 750 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



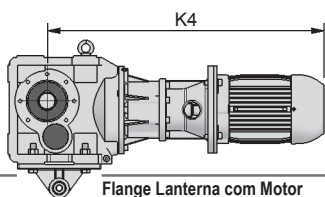
Fixação por braço de torção - B

Simple

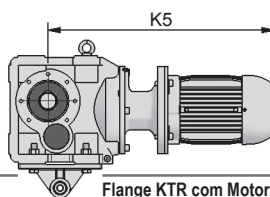
Dimensões

Tamanho **56**

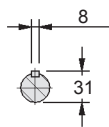
Tipos de Entrada



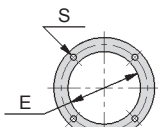
Flange Lanterna com Motor



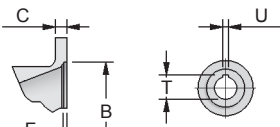
Flange KTR com Motor



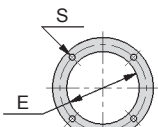
Eixo de Entrada



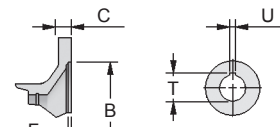
Detalhes Flange Lanterna



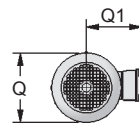
Detalhe "x"



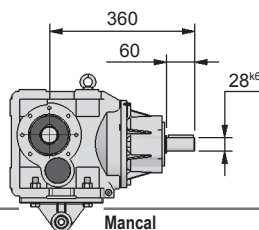
Detalhes Flange KTR



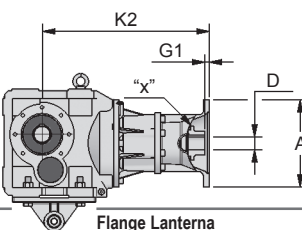
Detalhe "y"



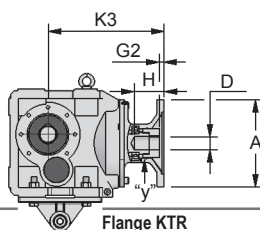
Frete do Motor



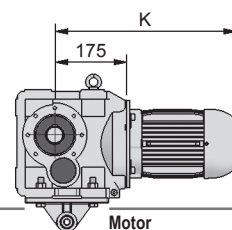
Mancal



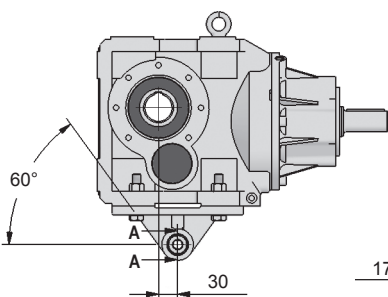
Flange Lanterna



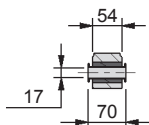
Flange KTR



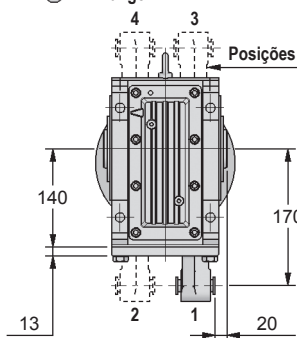
Motor



Eixo Vazado com Chaveta

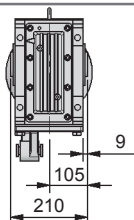


Corte "AA"

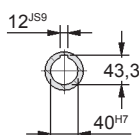


Eixo Vazado com Disco de Contração

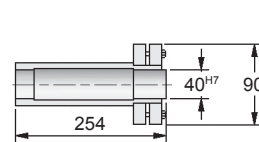
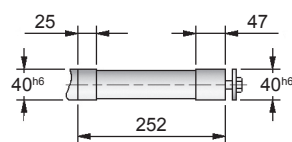
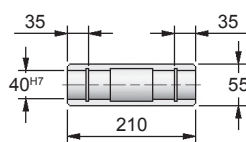
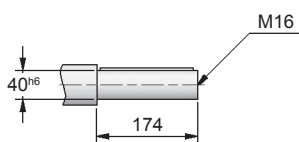
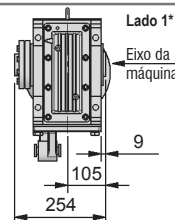
Tipos de Saída



Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|----|-------|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ∅11 | 115 | 4 | 0 | — | — | 400 | — | 10 | 12,8 | 4 | 402,5 | 593 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ∅14 | 130 | 4 | 0,5 | 1 | 34 | 400 | 247 | 10 | 16,3 | 5 | 434,5 | 618 | 465 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 413 | 285,5 | 12 | 21,8 | 6 | 461,5 | 649 | 521,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 413 | 285,5 | 12 | 27,3 | 8 | 481,5 | 667 | 539,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 413 | 285,5 | 12 | 27,3 | 8 | 506,5 | 692 | 564,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 423 | 306 | 15 | 31,3 | 8 | 556 | 739 | 622 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 423 | 306 | 15 | 31,3 | 8 | 572 | 756 | 639 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 443 | 361 | 15 | 41,3 | 10 | 655 | 815 | 733 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 443 | 361 | 15 | 41,3 | 10 | 693 | 853 | 771 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 706 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 750 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

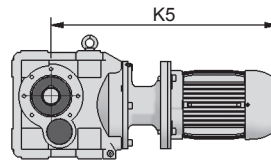
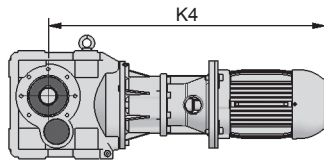
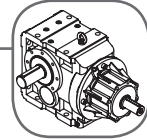
** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

Tamanho **58**

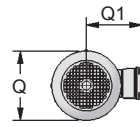
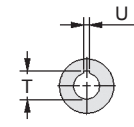
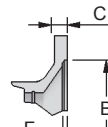
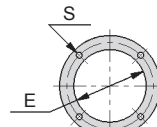
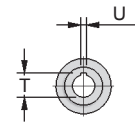
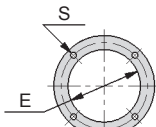
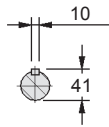
Fixação por pés - N

Simple



Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

Eixo de Entrada

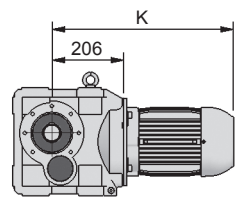
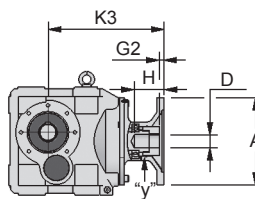
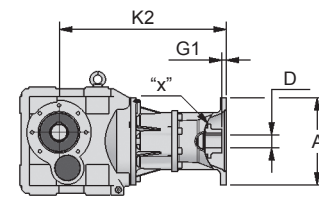
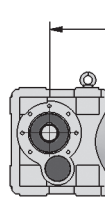
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

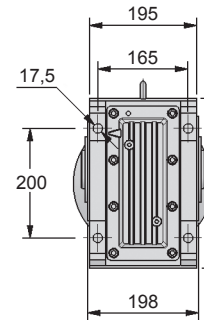
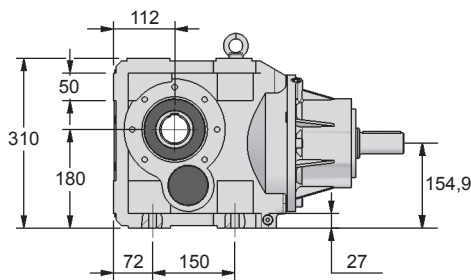


Mancal

Flange Lanterna

Flange KTR

Motor

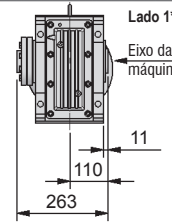
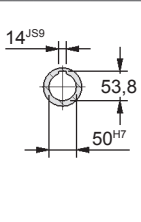
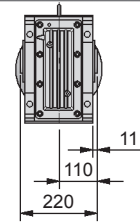
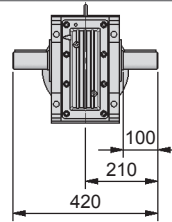
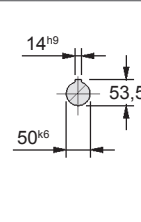
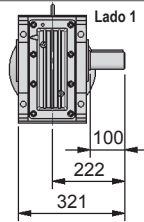


Eixo Integral Simple

Eixo Integral Duplo

Eixo Vazado com Chaveta

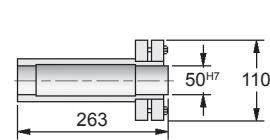
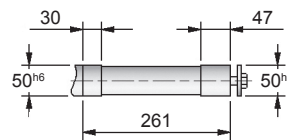
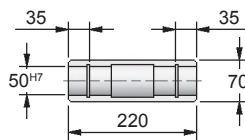
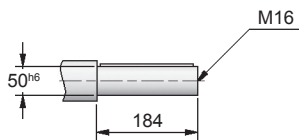
Eixo Vazado com Disco de Contração



Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|----------------|-------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 470 | 311 | 12 | 21,8 | 6 | 487,5 | 706 | 547 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 470 | 311 | 12 | 27,3 | 8 | 508,5 | 724 | 565 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 470 | 311 | 12 | 27,3 | 8 | 533,5 | 749 | 590 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 479 | 334,5 | 15 | 31,3 | 8 | 583 | 795 | 650,5 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 479 | 334,5 | 15 | 31,3 | 8 | 598 | 812 | 667,5 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 499 | 387 | 15 | 41,3 | 10 | 681 | 871 | 759 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 499 | 387 | 15 | 41,3 | 10 | 719 | 909 | 797 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 531 | 435 | 19 | 45,3 | 12 | 732 | 1019 | 923 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 531 | 435 | 19 | 45,3 | 12 | 776 | 1063 | 967 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ∅48 | 300 | 6 | 40 | 1 | 113 | 531 | 435 | 19 | 51,8 | 14 | 806 | 1085 | 989 | 360 | 270 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

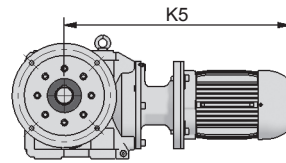
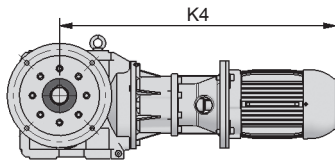


Fixação por flange e pés - G_F

Dimensões

Tamanho **58**

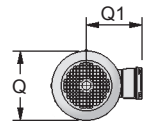
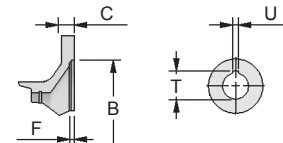
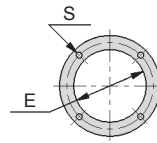
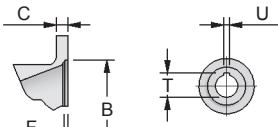
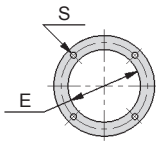
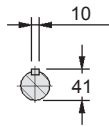
Simplex



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada



Eixo de Entrada

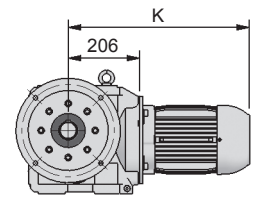
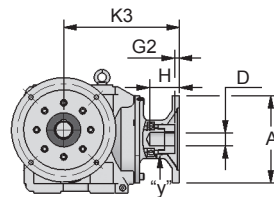
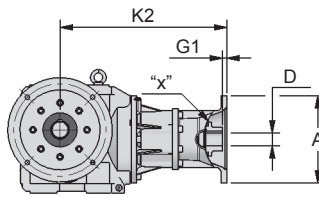
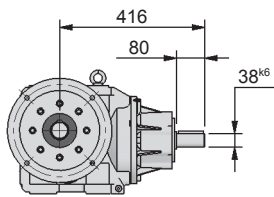
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

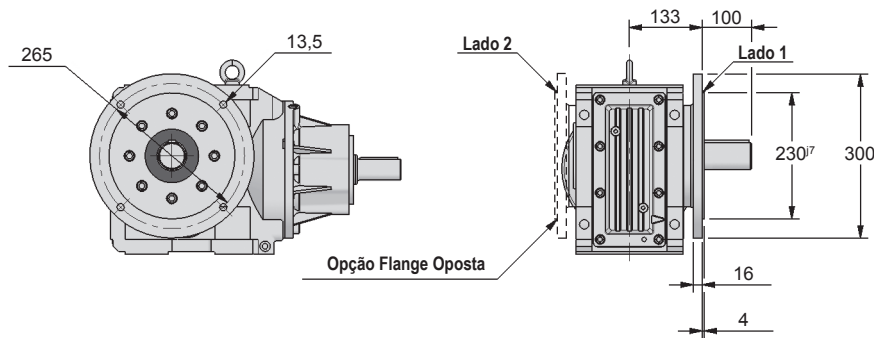


Mancal

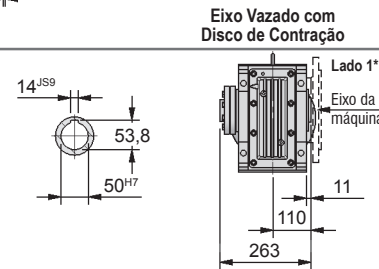
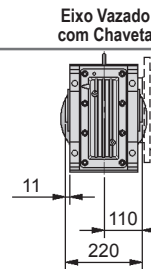
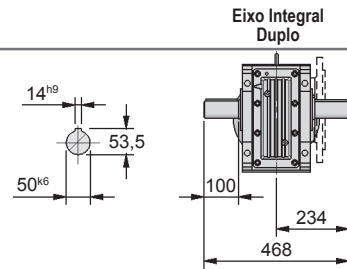
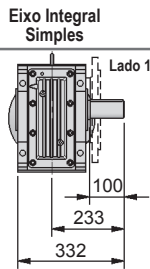
Flange Lanterna

Flange KTR

Motor



Tipos de Saída



Eixo Integral Simplex

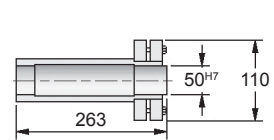
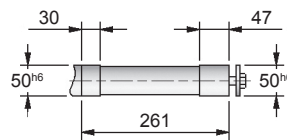
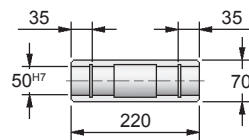
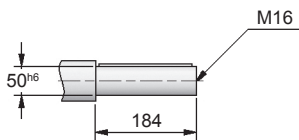
Eixo Integral Duplo

Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 470 | 311 | 12 | 21,8 | 6 | 487,5 | 706 | 547 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 470 | 311 | 12 | 27,3 | 8 | 508,5 | 724 | 565 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 470 | 311 | 12 | 27,3 | 8 | 533,5 | 749 | 590 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 479 | 334,5 | 15 | 31,3 | 8 | 583 | 795 | 650,5 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 479 | 334,5 | 15 | 31,3 | 8 | 598 | 812 | 667,5 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 499 | 387 | 15 | 41,3 | 10 | 681 | 871 | 759 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 499 | 387 | 15 | 41,3 | 10 | 719 | 909 | 797 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 531 | 435 | 19 | 45,3 | 12 | 732 | 1019 | 923 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 531 | 435 | 19 | 45,3 | 12 | 776 | 1063 | 967 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ∅48 | 300 | 6 | 40 | 1 | 113 | 531 | 435 | 19 | 51,8 | 14 | 806 | 1085 | 989 | 360 | 270 |

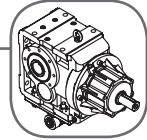
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **58**

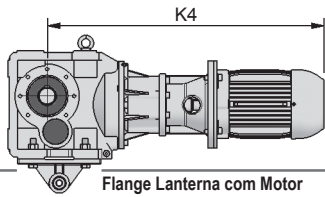
Fixação por braço de torção - B

Simple

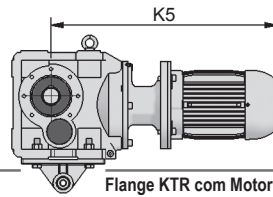


Tipos de Entrada

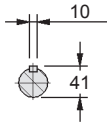
Tipos de Saída



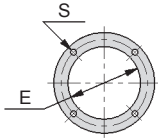
Flange Lanterna com Motor



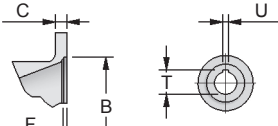
Flange KTR com Motor



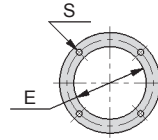
Eixo de Entrada



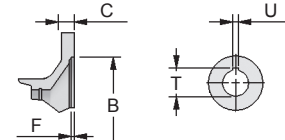
Detalhes Flange Lanterna



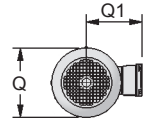
Detalhe "x"



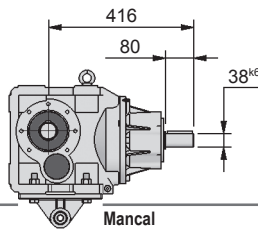
Detalhes Flange KTR



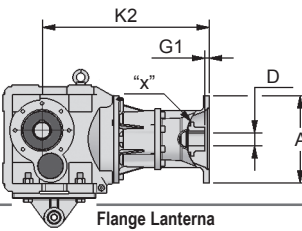
Detalhe "y"



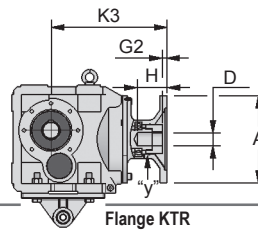
Frente do Motor



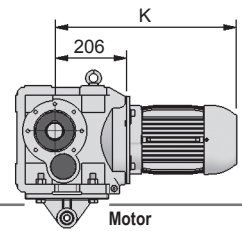
Mancal



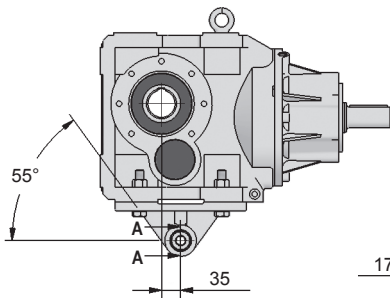
Flange Lanterna



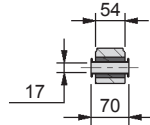
Flange KTR



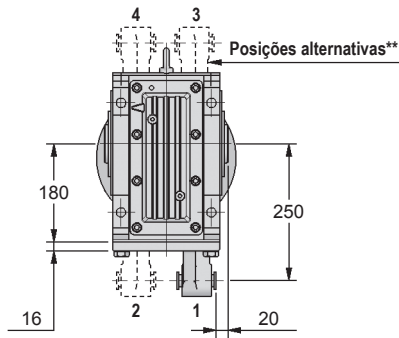
Motor



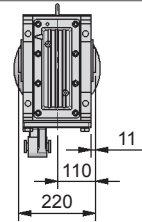
Eixo Vazado com Chaveta



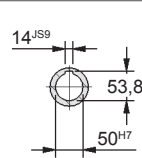
Corte "AA"



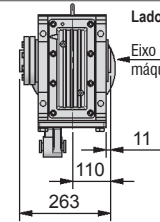
Eixo Vazado com Disco de Contração



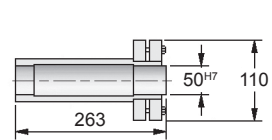
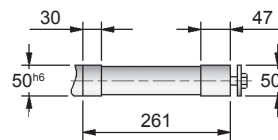
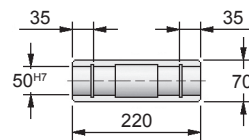
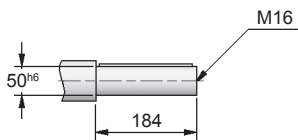
Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 470 | 311 | 12 | 21,8 | 6 | 487,5 | 706 | 547 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 470 | 311 | 12 | 27,3 | 8 | 508,5 | 724 | 565 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 470 | 311 | 12 | 27,3 | 8 | 533,5 | 749 | 590 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 479 | 334,5 | 15 | 31,3 | 8 | 583 | 795 | 650,5 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 479 | 334,5 | 15 | 31,3 | 8 | 598 | 812 | 667,5 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 499 | 387 | 15 | 41,3 | 10 | 681 | 871 | 759 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 499 | 387 | 15 | 41,3 | 10 | 719 | 909 | 797 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 531 | 435 | 19 | 45,3 | 12 | 732 | 1019 | 923 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 531 | 435 | 19 | 45,3 | 12 | 776 | 1063 | 967 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 531 | 435 | 19 | 51,8 | 14 | 806 | 1085 | 989 | 360 | 270 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.



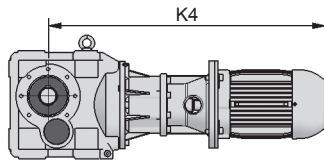
Fixação por pés - N

Simple

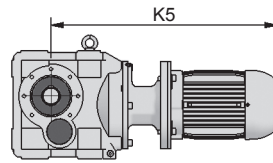
Dimensões

Tamanho **60**

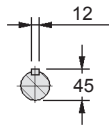
Tipos de Entrada



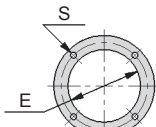
Flange Lanterna com Motor



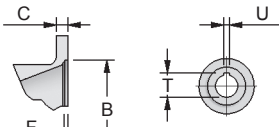
Flange KTR com Motor



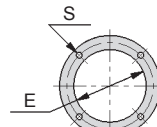
Eixo de Entrada



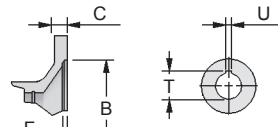
Detalhes Flange Lanterna



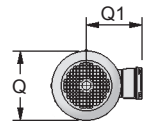
Detalhe "x"



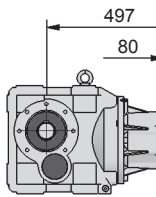
Detalhes Flange KTR



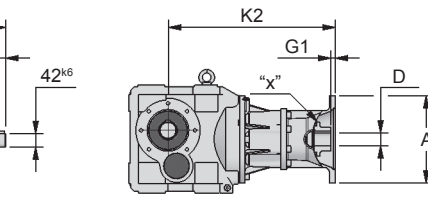
Detalhe "y"



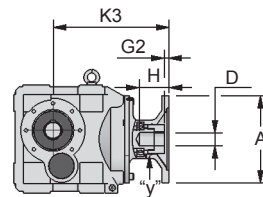
Frente do Motor



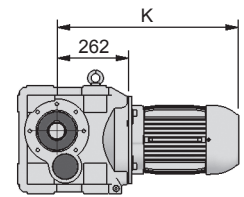
Mancal



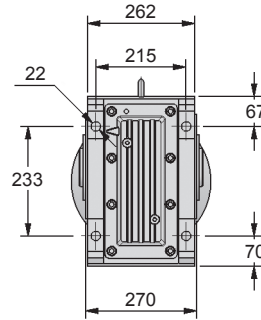
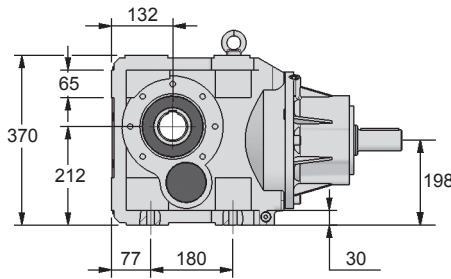
Flange Lanterna



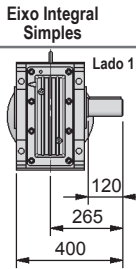
Flange KTR



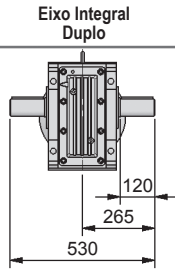
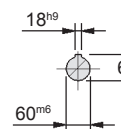
Motor



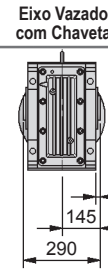
Tipos de Saída



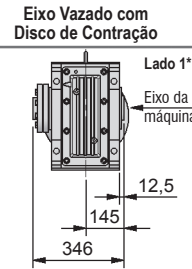
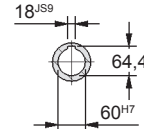
Eixo Integral Simple



Eixo Integral Duplo



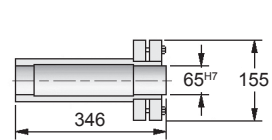
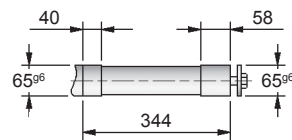
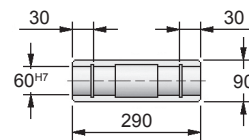
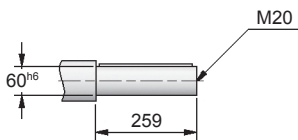
Eixo Vazado com Chaveta



Eixo Vazado com Disco de Contração

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|-----|----------------|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 551 | 361 | 12 | 21,8 | 6 | 537 | 787 | 597 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 551 | 361 | 12 | 27,3 | 8 | 559 | 805 | 615 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 551 | 361 | 12 | 27,3 | 8 | 584 | 830 | 640 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 560 | 383 | 15 | 31,3 | 8 | 633 | 876 | 699 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 560 | 383 | 15 | 31,3 | 8 | 649 | 893 | 716 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 580 | 438 | 15 | 41,3 | 10 | 732 | 952 | 810 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 580 | 438 | 15 | 41,3 | 10 | 770 | 990 | 848 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 612 | 486 | 19 | 45,3 | 12 | 783 | 1100 | 974 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 612 | 486 | 19 | 45,3 | 12 | 827 | 1144 | 1018 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ∅48 | 300 | 6 | 40 | 1 | 113 | 612 | 486 | 19 | 51,8 | 14 | 857 | 1166 | 1040 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ∅55 | 350 | 6 | — | 1 | 114 | — | 531 | 19 | 59,3 | 16 | 820 | — | 1150 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ∅55 | 350 | 6 | — | 1 | 114 | — | 531 | 19 | 59,3 | 16 | 958 | — | 1188 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ∅60 | 400 | 6 | — | 11 | 124 | — | 546 | 19 | 64,4 | 18 | 1001 | — | 1253 | 466 | 368 |

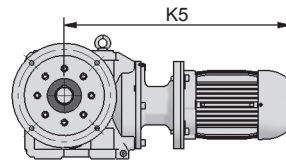
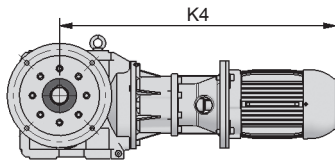
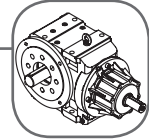
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **60**

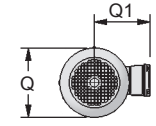
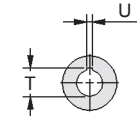
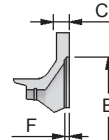
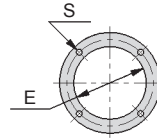
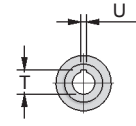
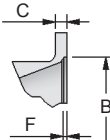
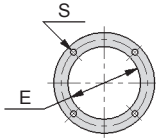
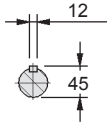
Fixação por flange e pés - G G

Simplex

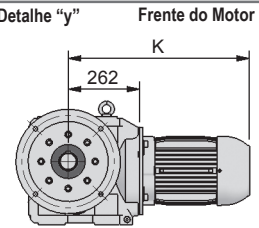
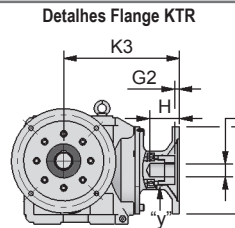
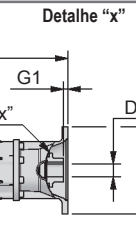
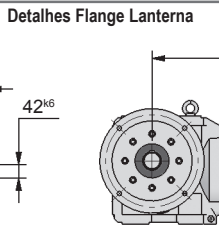
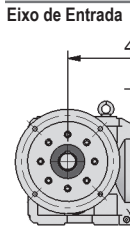


Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

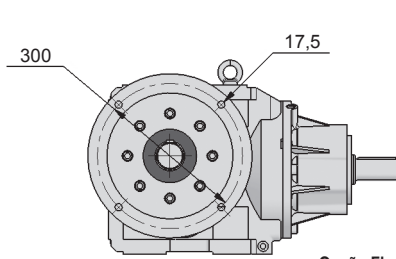


Mancal

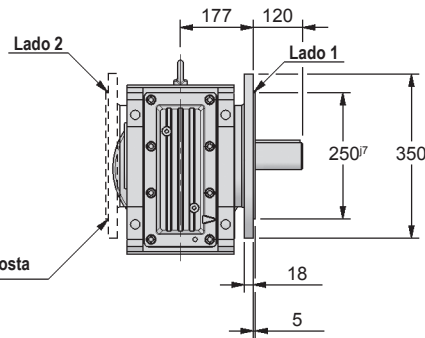
Flange Lanterna

Flange KTR

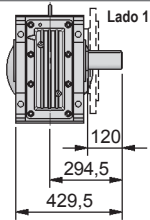
Motor



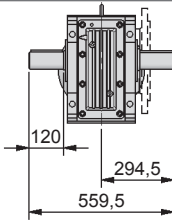
Opção Flange Oposta



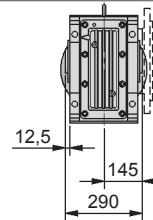
Eixo Integral Simplex



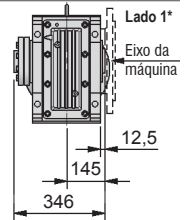
Eixo Integral Duplo



Eixo Vazado com Chaveta



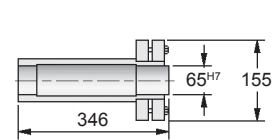
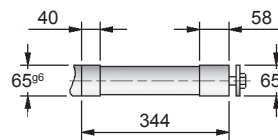
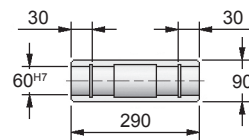
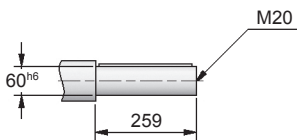
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração

Tipos de Saída



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|-----|----------------|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 551 | 361 | 12 | 21,8 | 6 | 537 | 787 | 597 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 551 | 361 | 12 | 27,3 | 8 | 559 | 805 | 615 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 551 | 361 | 12 | 27,3 | 8 | 584 | 830 | 640 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 560 | 383 | 15 | 31,3 | 8 | 633 | 876 | 699 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 560 | 383 | 15 | 31,3 | 8 | 649 | 893 | 716 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 580 | 438 | 15 | 41,3 | 10 | 732 | 952 | 810 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 580 | 438 | 15 | 41,3 | 10 | 770 | 990 | 848 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 612 | 486 | 19 | 45,3 | 12 | 783 | 1100 | 974 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 612 | 486 | 19 | 45,3 | 12 | 827 | 1144 | 1018 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 612 | 486 | 19 | 51,8 | 14 | 857 | 1166 | 1040 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 531 | 19 | 59,3 | 16 | 820 | — | 1150 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 531 | 19 | 59,3 | 16 | 958 | — | 1188 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | — | 11 | 124 | — | 546 | 19 | 64,4 | 18 | 1001 | — | 1253 | 466 | 368 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



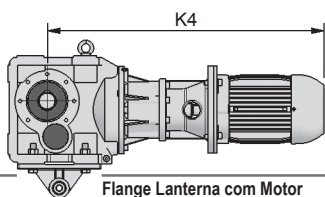
Fixação por braço de torção - B

Simple

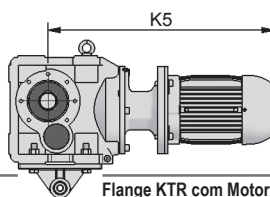
Dimensões

Tamanho **60**

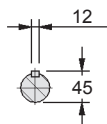
Tipos de Entrada



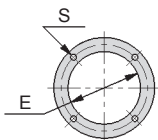
Flange Lanterna com Motor



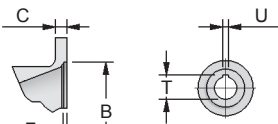
Flange KTR com Motor



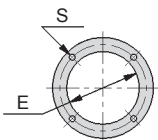
Eixo de Entrada



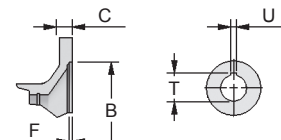
Detalhes Flange Lanterna



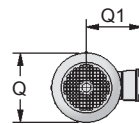
Detalhe "x"



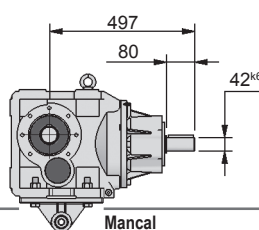
Detalhes Flange KTR



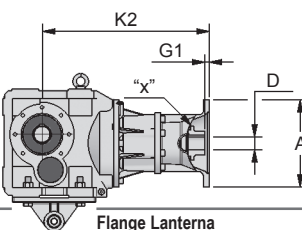
Detalhe "y"



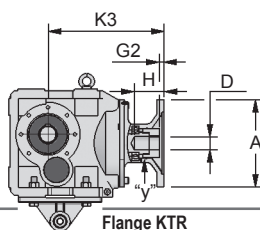
Frente do Motor



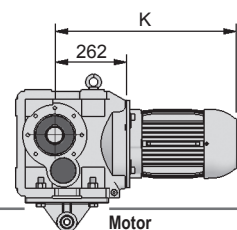
Mancal



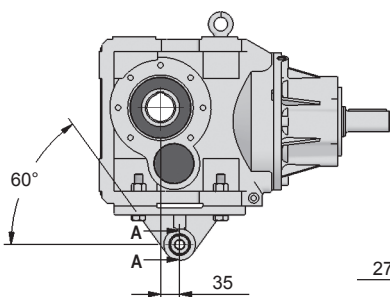
Flange Lanterna



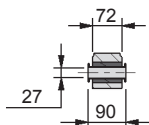
Flange KTR



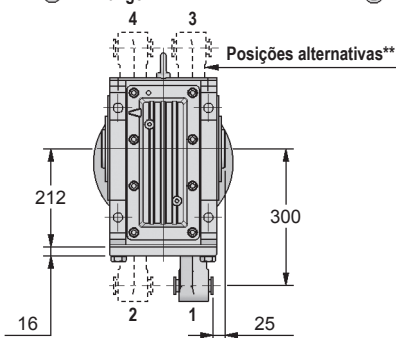
Motor



Eixo Vazado com Chaveta

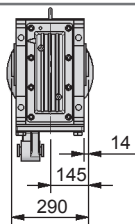


Corte "AA"

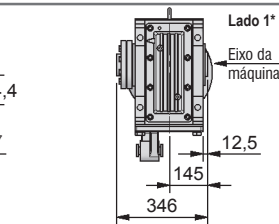
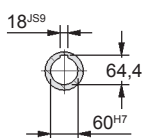


Eixo Vazado com Disco de Contração

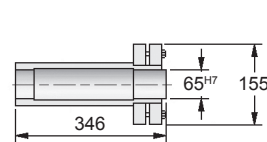
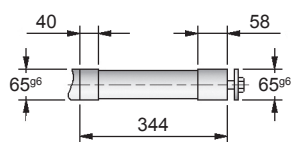
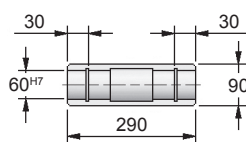
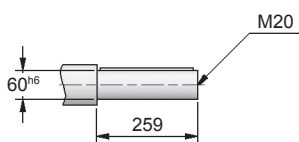
Tipos de Saída



Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|-----|----------------|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 551 | 361 | 12 | 21,8 | 6 | 537 | 787 | 597 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 551 | 361 | 12 | 27,3 | 8 | 559 | 805 | 615 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 551 | 361 | 12 | 27,3 | 8 | 584 | 830 | 640 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 560 | 383 | 15 | 31,3 | 8 | 633 | 876 | 699 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 560 | 383 | 15 | 31,3 | 8 | 649 | 893 | 716 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 580 | 438 | 15 | 41,3 | 10 | 732 | 952 | 810 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 580 | 438 | 15 | 41,3 | 10 | 770 | 990 | 848 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 612 | 486 | 19 | 45,3 | 12 | 783 | 1100 | 974 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 612 | 486 | 19 | 45,3 | 12 | 827 | 1144 | 1018 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 612 | 486 | 19 | 51,8 | 14 | 857 | 1166 | 1040 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 531 | 19 | 59,3 | 16 | 820 | — | 1150 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 531 | 19 | 59,3 | 16 | 958 | — | 1188 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | — | 11 | 124 | — | 546 | 19 | 64,4 | 18 | 1001 | — | 1253 | 466 | 368 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

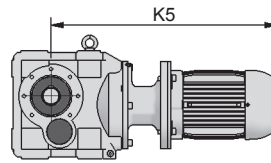
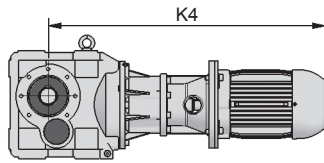
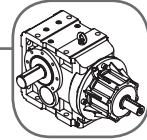
** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

Tamanho **62**

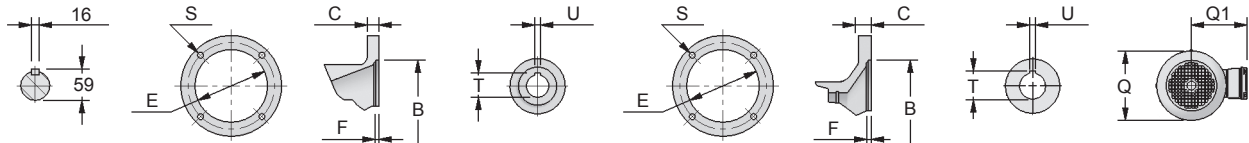
Fixação por pés - N

Simplex

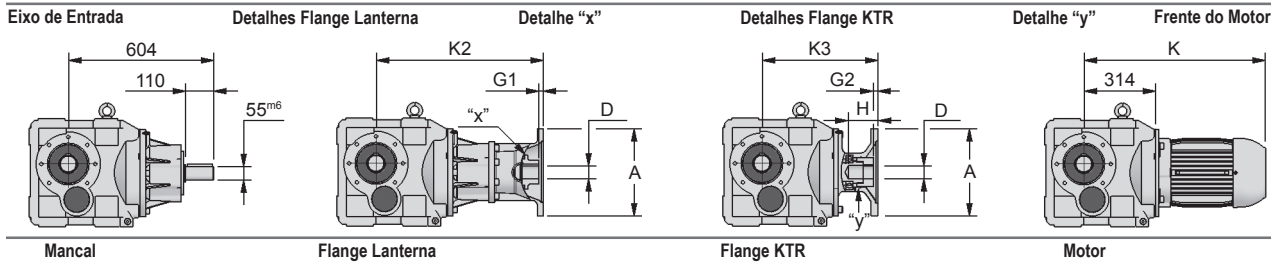


Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

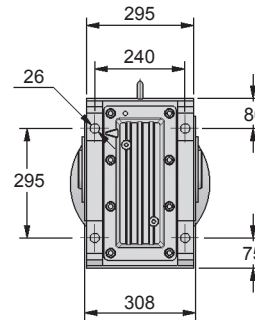
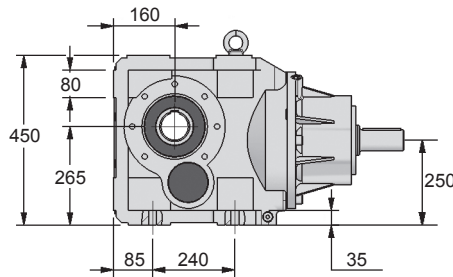


Mancal

Flange Lanterna

Flange KTR

Motor

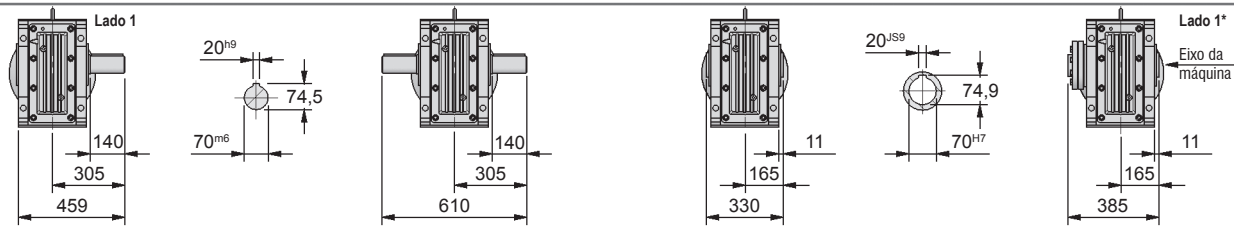


Eixo Integral Simplex

Eixo Integral Duplo

Eixo Vazado com Chaveta

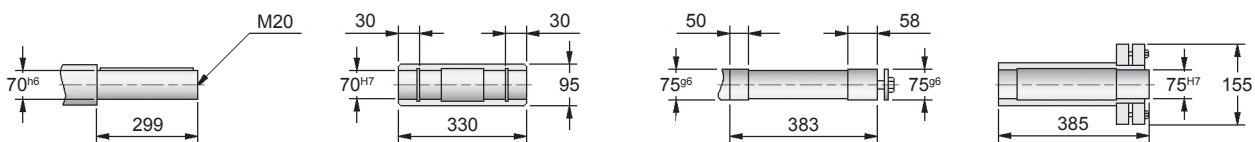
Eixo Vazado com Disco de Contração



Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|--------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H17} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 669 | 429 | 15 | 31,3 | 8 | 679 | 985 | 745 | 198 | 160 |
| 112 | 250 | 180 ^{H17} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 669 | 429 | 15 | 31,3 | 8 | 695 | 1002 | 762 | 235 | 180 |
| 132S | 300 | 230 ^{H17} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 689 | 484 | 15 | 41,3 | 10 | 778 | 1061 | 856 | 274 | 207 |
| 132M | 300 | 230 ^{H17} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 689 | 484 | 15 | 41,3 | 10 | 816 | 1099 | 894 | 274 | 207 |
| 160M | 350 | 250 ^{H17} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 719 | 532 | 19 | 45,3 | 12 | 829 | 1207 | 1020 | 317 | 250 |
| 160L | 350 | 250 ^{H17} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 719 | 532 | 19 | 45,3 | 12 | 873 | 1251 | 1064 | 317 | 250 |
| 180M | 350 | 250 ^{H17} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 719 | 532 | 19 | 51,8 | 14 | 903 | 1273 | 1086 | 360 | 270 |
| 200M | 400 | 300 ^{H17} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 719 | 577 | 19 | 59,3 | 16 | 866 | 1338 | 1196 | 360 | 294 |
| 200L | 400 | 300 ^{H17} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 719 | 577 | 19 | 59,3 | 16 | 1004 | 1376 | 1234 | 402 | 294 |
| 225 | 450 | 350 ^{H17} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 749 | 592 | 19 | 64,4 | 18 | 1053 | 1456 | 1299 | 466 | 368 |
| 250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1129 | — | — | 491 | 368 |
| 280 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1241 | — | — | 578 | 463 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



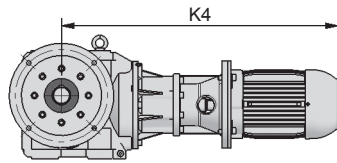
Fixação por flange e pés - G_J

Simplex

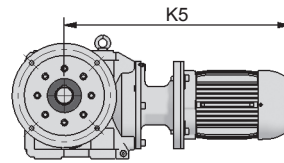
Dimensões

Tamanho **62**

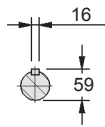
Tipos de Entrada



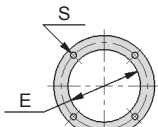
Flange Lanterna com Motor



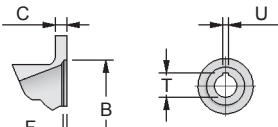
Flange KTR com Motor



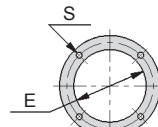
Eixo de Entrada



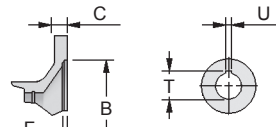
Detalhes Flange Lanterna



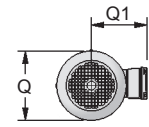
Detalhe "x"



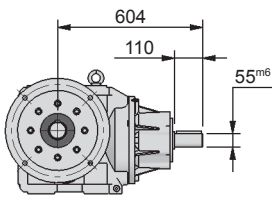
Detalhes Flange KTR



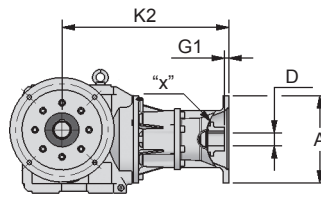
Detalhe "y"



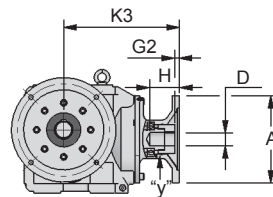
Frente do Motor



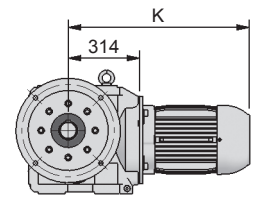
Mancal



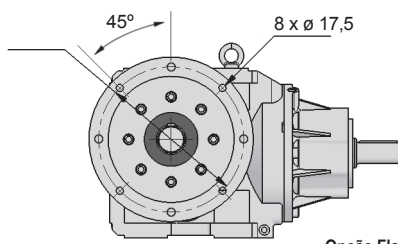
Flange Lanterna



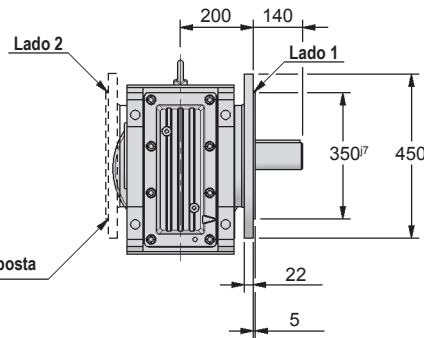
Flange KTR



Motor

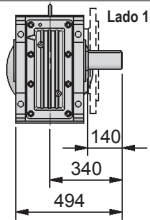


Opção Flange Oposta

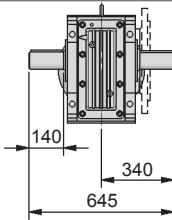


Tipos de Saída

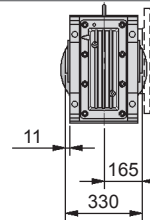
Eixo Integral Simples



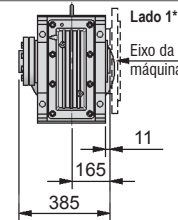
Eixo Integral Duplo



Eixo Vazado com Chaveta

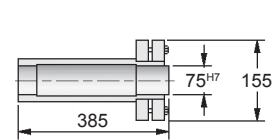
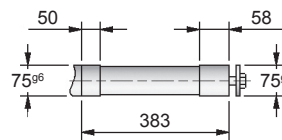
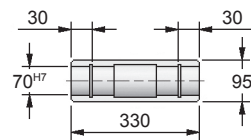
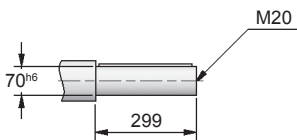


Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 669 | 429 | 15 | 31,3 | 8 | 679 | 985 | 745 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 669 | 429 | 15 | 31,3 | 8 | 695 | 1002 | 762 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 689 | 484 | 15 | 41,3 | 10 | 778 | 1061 | 856 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 689 | 484 | 15 | 41,3 | 10 | 816 | 1099 | 894 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 719 | 532 | 19 | 45,3 | 12 | 829 | 1207 | 1020 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 719 | 532 | 19 | 45,3 | 12 | 873 | 1251 | 1064 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 719 | 532 | 19 | 51,8 | 14 | 903 | 1273 | 1086 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 719 | 577 | 19 | 59,3 | 16 | 866 | 1338 | 1196 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 719 | 577 | 19 | 59,3 | 16 | 1004 | 1376 | 1234 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 749 | 592 | 19 | 64,4 | 18 | 1053 | 1456 | 1299 | 466 | 368 |
| 250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1129 | — | — | 491 | 368 |
| 280 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1241 | — | — | 578 | 463 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **62**

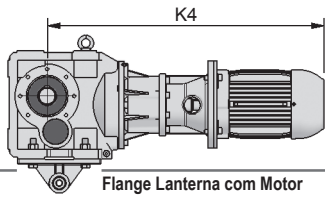
Fixação por braço de torção - B

Simple

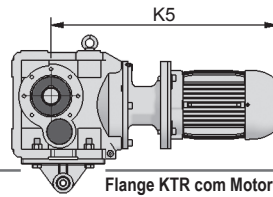


Tipos de Entrada

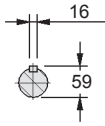
Tipos de Saída



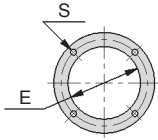
Flange Lanterna com Motor



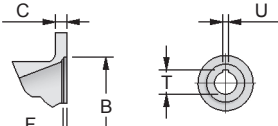
Flange KTR com Motor



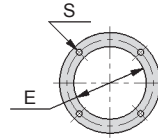
Eixo de Entrada



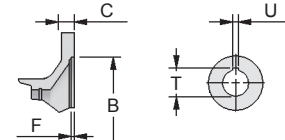
Detalhes Flange Lanterna



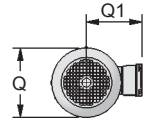
Detalhe "x"



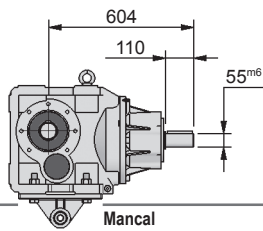
Detalhes Flange KTR



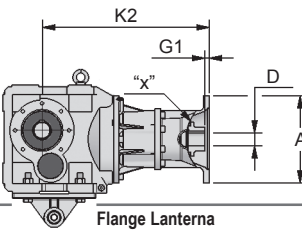
Detalhe "y"



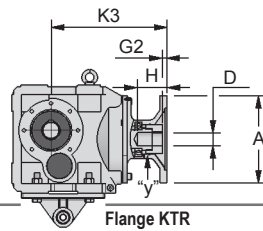
Frente do Motor



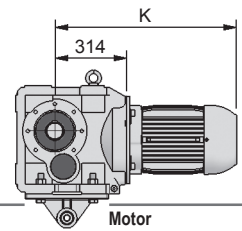
Mancal



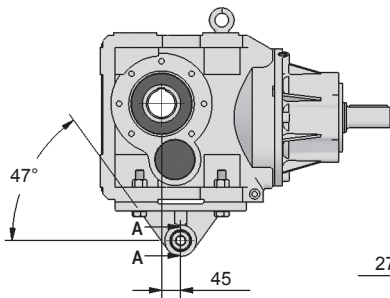
Flange Lanterna



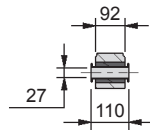
Flange KTR



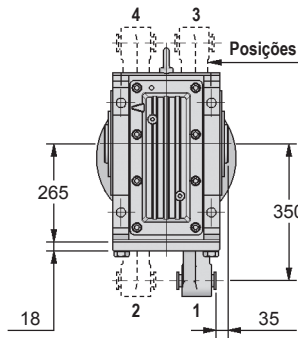
Motor



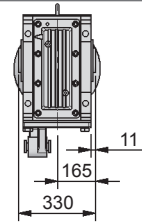
Eixo Vazado com Chaveta



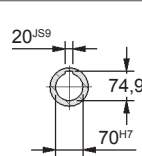
Corte "AA"



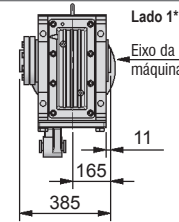
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

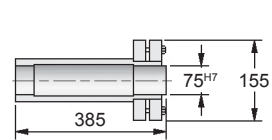
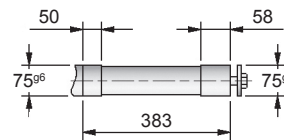
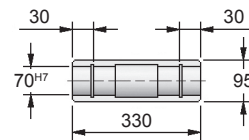
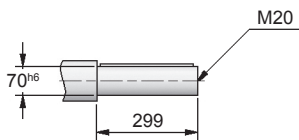


Sugestão de acoplamento no Eixo Vazado com Disco de Contração



Lado 1*
Eixo da máquina

14



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|-----|----------------|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 669 | 429 | 15 | 31,3 | 8 | 679 | 985 | 745 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 669 | 429 | 15 | 31,3 | 8 | 695 | 1002 | 762 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 689 | 484 | 15 | 41,3 | 10 | 778 | 1061 | 856 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 689 | 484 | 15 | 41,3 | 10 | 816 | 1099 | 894 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 719 | 532 | 19 | 45,3 | 12 | 829 | 1207 | 1020 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 719 | 532 | 19 | 45,3 | 12 | 873 | 1251 | 1064 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 719 | 532 | 19 | 51,8 | 14 | 903 | 1273 | 1086 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 719 | 577 | 19 | 59,3 | 16 | 866 | 1338 | 1196 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 719 | 577 | 19 | 59,3 | 16 | 1004 | 1376 | 1234 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 749 | 592 | 19 | 64,4 | 18 | 1053 | 1456 | 1299 | 466 | 368 |
| 250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1129 | — | — | 491 | 368 |
| 280 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1241 | — | — | 578 | 463 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.

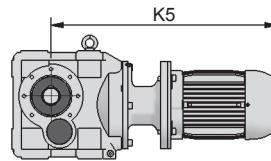
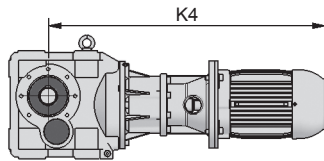


Fixação por pés - N

Simple

Dimensões

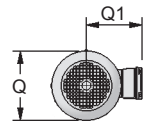
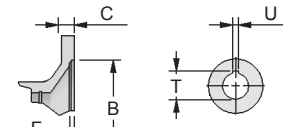
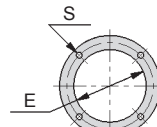
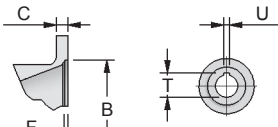
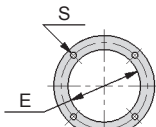
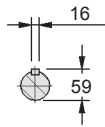
Tamanho **64**



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada



Eixo de Entrada

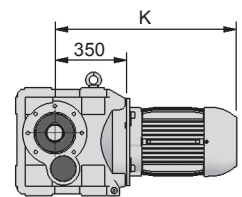
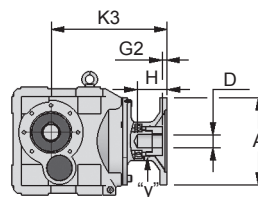
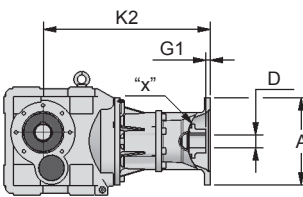
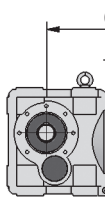
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

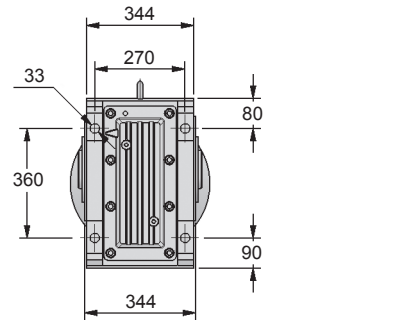
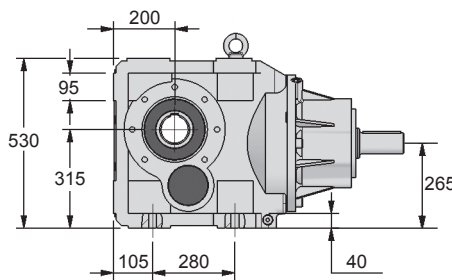


Mancal

Flange Lanterna

Flange KTR

Motor

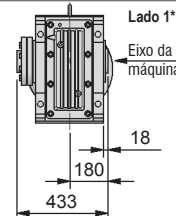
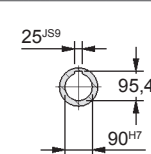
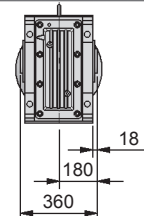
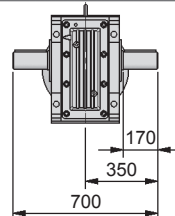
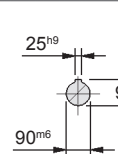
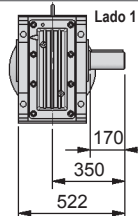


Eixo Integral Simple

Eixo Integral Duplo

Eixo Vazado com Chaveta

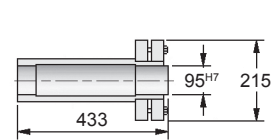
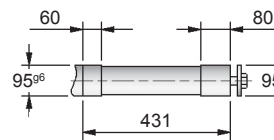
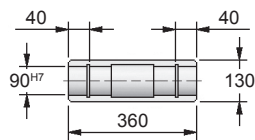
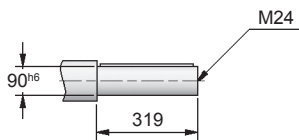
Eixo Vazado com Disco de Contração



Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|-----|----------------|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 715 | — | 15 | 31,3 | 8 | — | 1031 | — | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 715 | — | 15 | 31,3 | 8 | — | 1048 | — | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 735 | 513 | 15 | 41,3 | 10 | 807 | 1107 | 885 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 735 | 513 | 15 | 41,3 | 10 | 845 | 1145 | 923 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 765 | 561 | 19 | 45,3 | 12 | 858 | 1253 | 1049 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 765 | 561 | 19 | 45,3 | 12 | 902 | 1297 | 1093 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 765 | 561 | 19 | 51,8 | 14 | 932 | 1319 | 1115 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 765 | 606 | 19 | 59,3 | 16 | 895 | 1384 | 1225 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 765 | 606 | 19 | 59,3 | 16 | 1033 | 1422 | 1263 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 795 | 621 | 19 | 64,4 | 18 | 1089 | 1502 | 1328 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 740 | 19 | 64,4 | 18 | 1165 | — | 1523 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 740 | 19 | 69,4 | 18 | 1277 | — | 1636 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1367 | — | — | 613 | 492 |

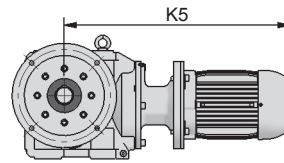
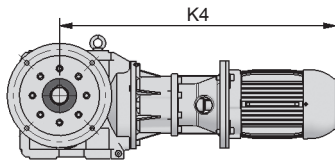
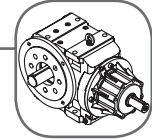
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **64**

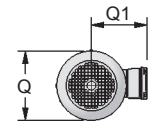
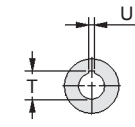
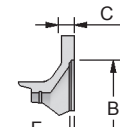
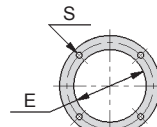
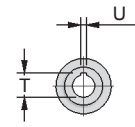
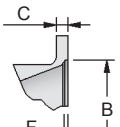
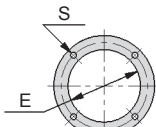
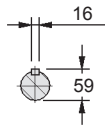
Fixação por flange e pés - G J

Simplex

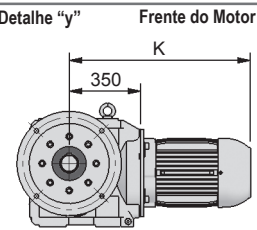
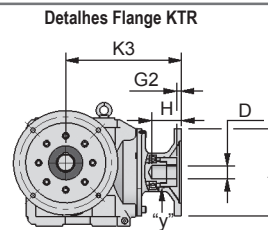
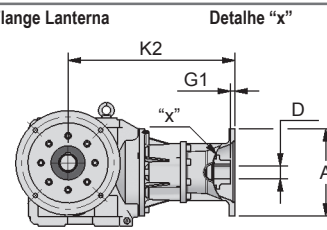
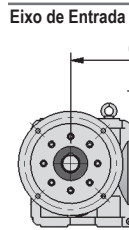


Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

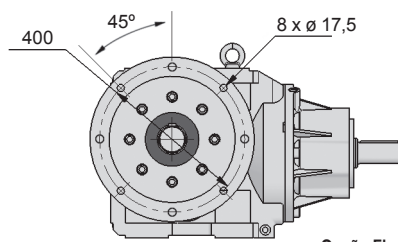


Mancal

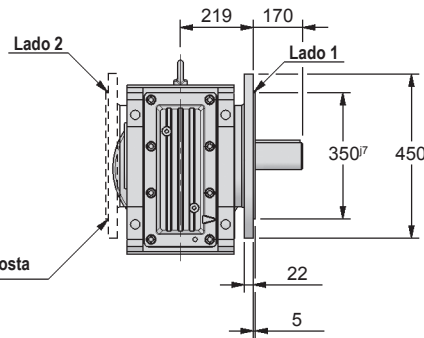
Flange Lanterna

Flange KTR

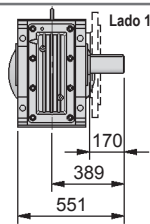
Motor



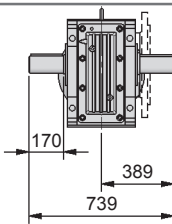
Opção Flange Oposta



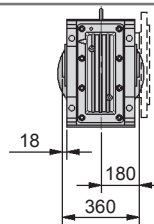
Eixo Integral Simplex



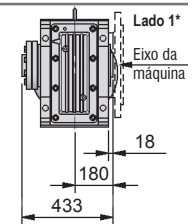
Eixo Integral Duplo



Eixo Vazado com Chaveta



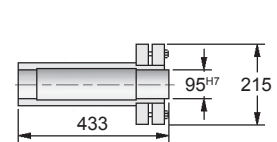
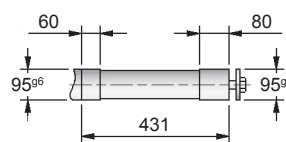
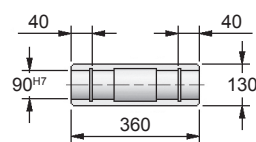
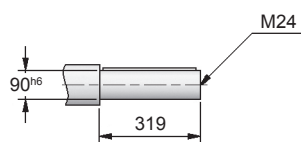
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração

Tipos de Saída



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 715 | — | 15 | 31,3 | 8 | — | 1031 | — | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 715 | — | 15 | 31,3 | 8 | — | 1048 | — | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 735 | 513 | 15 | 41,3 | 10 | 807 | 1107 | 885 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 735 | 513 | 15 | 41,3 | 10 | 845 | 1145 | 923 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 765 | 561 | 19 | 45,3 | 12 | 858 | 1253 | 1049 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 765 | 561 | 19 | 45,3 | 12 | 902 | 1297 | 1093 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 765 | 561 | 19 | 51,8 | 14 | 932 | 1319 | 1115 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 765 | 606 | 19 | 59,3 | 16 | 895 | 1384 | 1225 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 765 | 606 | 19 | 59,3 | 16 | 1033 | 1422 | 1263 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 795 | 621 | 19 | 64,4 | 18 | 1089 | 1502 | 1328 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 740 | 19 | 64,4 | 18 | 1165 | — | 1523 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 740 | 19 | 69,4 | 18 | 1277 | — | 1636 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1367 | — | — | 613 | 492 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



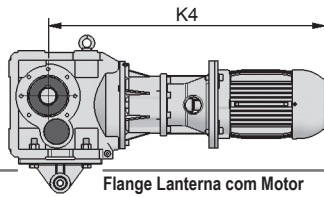
Fixação por braço de torção - B

Simple

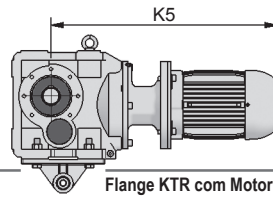
Dimensões

Tamanho **64**

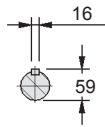
Tipos de Entrada



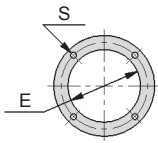
Flange Lanterna com Motor



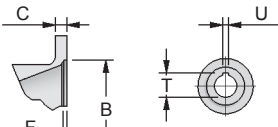
Flange KTR com Motor



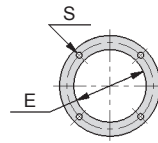
Eixo de Entrada



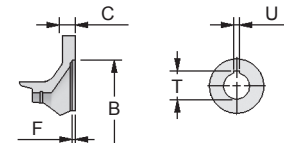
Detalhes Flange Lanterna



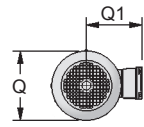
Detalhe "x"



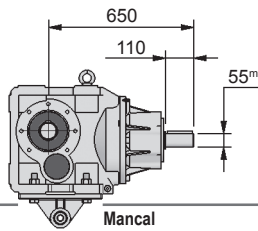
Detalhes Flange KTR



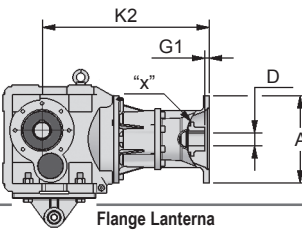
Detalhe "y"



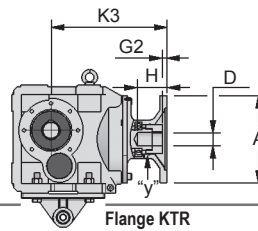
Frente do Motor



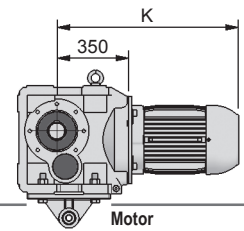
Mancal



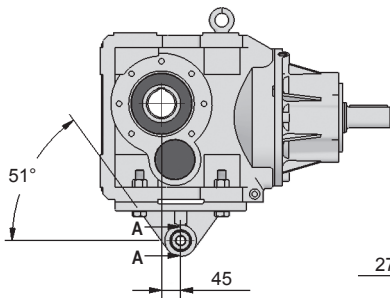
Flange Lanterna



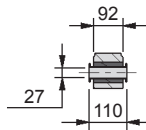
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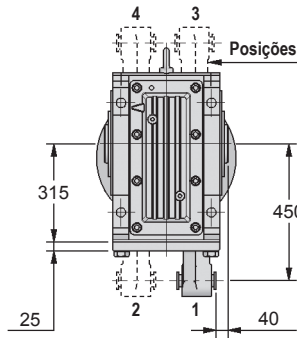
Motor



Eixo Vazado com Chaveta



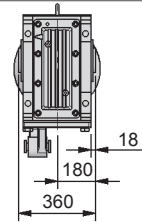
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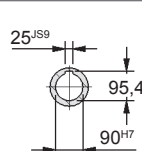
Eixo Vazado com Disco de Contração

Posições alternativas**

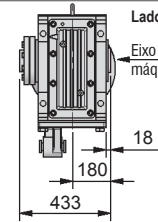
Tipos de Saída



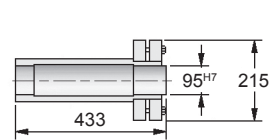
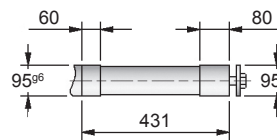
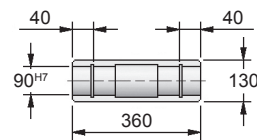
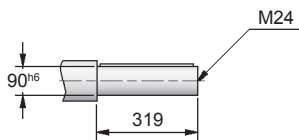
Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



Lado 1*
Eixo da máquina



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 715 | — | 15 | 31,3 | 8 | — | 1031 | — | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 715 | — | 15 | 31,3 | 8 | — | 1048 | — | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 735 | 513 | 15 | 41,3 | 10 | 807 | 1107 | 885 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 735 | 513 | 15 | 41,3 | 10 | 845 | 1145 | 923 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 765 | 561 | 19 | 45,3 | 12 | 858 | 1253 | 1049 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 765 | 561 | 19 | 45,3 | 12 | 902 | 1297 | 1093 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 765 | 561 | 19 | 51,8 | 14 | 932 | 1319 | 1115 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 765 | 606 | 19 | 59,3 | 16 | 895 | 1384 | 1225 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 765 | 606 | 19 | 59,3 | 16 | 1033 | 1422 | 1263 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 795 | 621 | 19 | 64,4 | 18 | 1089 | 1502 | 1328 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 740 | 19 | 64,4 | 18 | 1165 | — | 1523 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 740 | 19 | 69,4 | 18 | 1277 | — | 1636 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1367 | — | — | 613 | 492 |

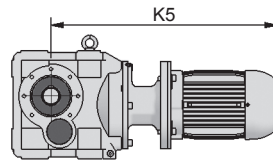
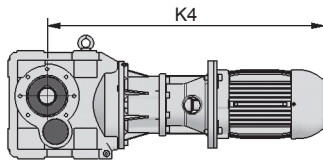
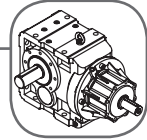
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

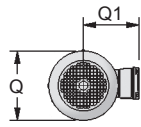
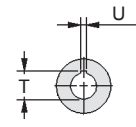
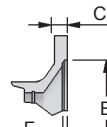
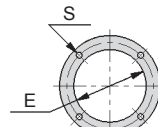
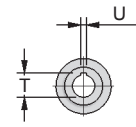
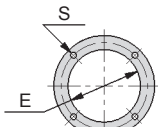
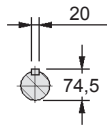
Tamanho **66**

Fixação por pés - N Simples



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

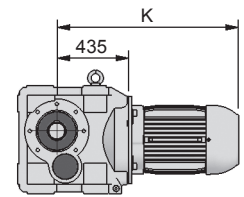
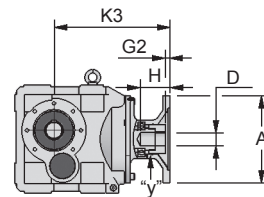
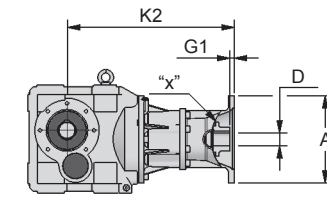
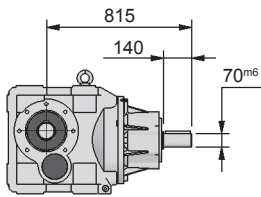
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

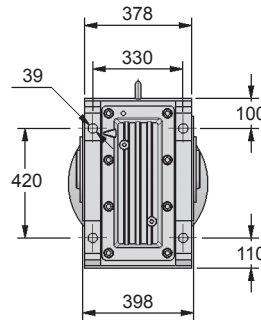
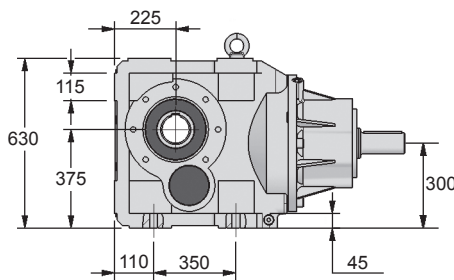


Mancal

Flange Lanterna

Flange KTR

Motor

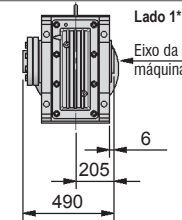
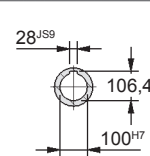
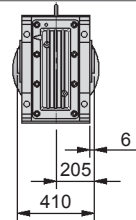
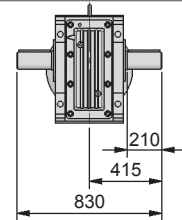
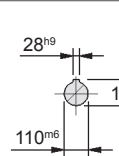
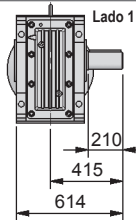


Eixo Integral Simples

Eixo Integral Duplo

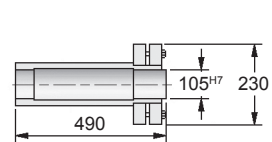
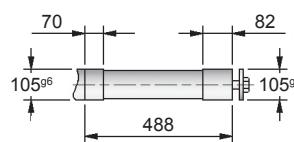
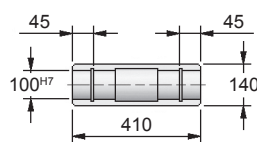
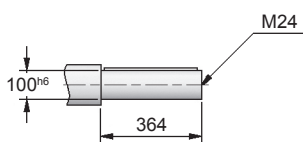
Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|----------------|-----|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 132S | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 899 | 590 | 15 | 41,3 | 10 | 884 | 1271 | 962 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 899 | 590 | 15 | 41,3 | 10 | 922 | 1309 | 1000 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 929 | 638 | 19 | 45,3 | 12 | 935 | 1417 | 1126 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ∅42 | 300 | 6 | 40 | 1 | 112 | 929 | 638 | 19 | 45,3 | 12 | 979 | 1461 | 1170 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ∅48 | 300 | 6 | 40 | 1 | 113 | 929 | 638 | 19 | 51,8 | 14 | 1009 | 1483 | 1192 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ∅55 | 350 | 6 | 30 | 1 | 114 | 929 | 683 | 19 | 59,3 | 16 | 972 | 1548 | 1302 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ∅55 | 350 | 6 | 30 | 1 | 114 | 929 | 683 | 19 | 59,3 | 16 | 1110 | 1586 | 1340 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ∅60 | 400 | 6 | 60 | 11 | 124 | 959 | 698 | 19 | 64,4 | 18 | 1174 | 1666 | 1405 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ∅60 | 500 | 6 | — | 2 | 144 | — | 816 | 19 | 64,4 | 18 | 1250 | — | 1599 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ∅65 | 500 | 6 | — | 2 | 144 | — | 816 | 19 | 69,4 | 18 | 1362 | — | 1712 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1452 | — | — | 613 | 492 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

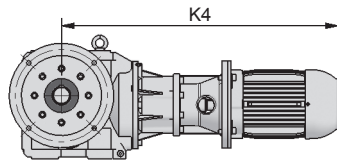


Fixação por flange e pés - G_K

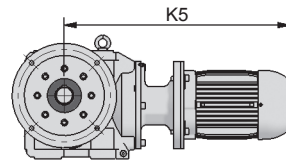
Dimensões
Tamanho **66**

Simplex

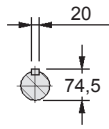
Tipos de Entrada



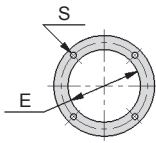
Flange Lanterna com Motor



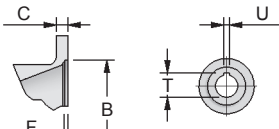
Flange KTR com Motor



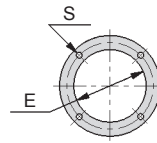
Eixo de Entrada



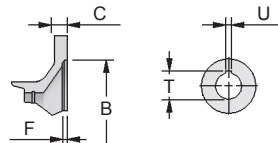
Detalhes Flange Lanterna



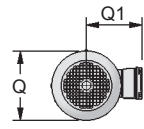
Detalhe "x"



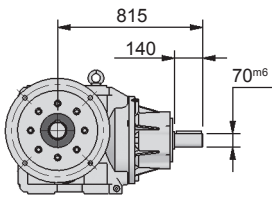
Detalhes Flange KTR



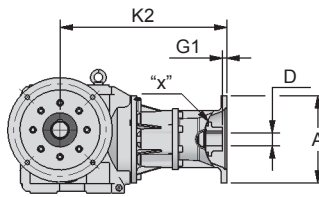
Detalhe "y"



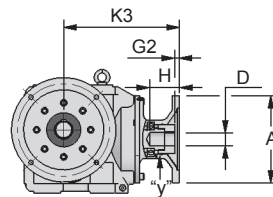
Frente do Motor



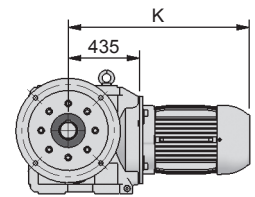
Mancal



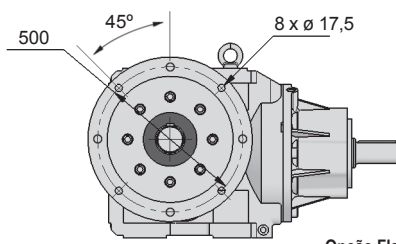
Flange Lanterna



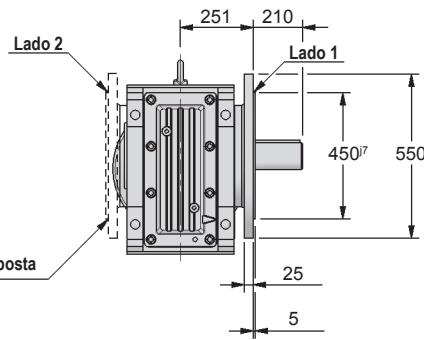
Flange KTR



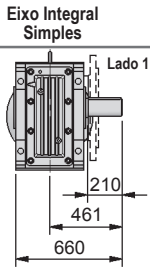
Motor



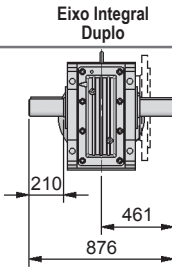
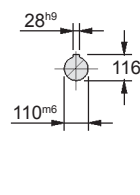
Opção Flange Oposta



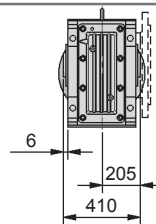
Tipos de Saída



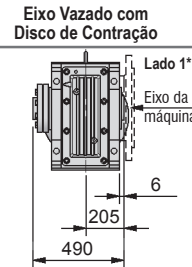
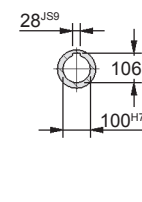
Eixo Integral Simplex



Eixo Integral Duplo



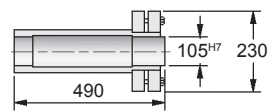
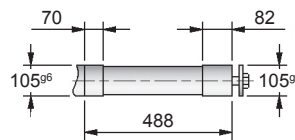
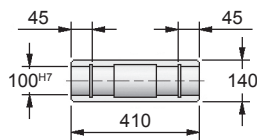
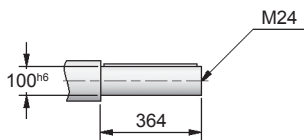
Eixo Vazado com Chaveta



Eixo Vazado com Disco de Contração

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|-----|----------------|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 899 | 590 | 15 | 41,3 | 10 | 884 | 1271 | 962 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 899 | 590 | 15 | 41,3 | 10 | 922 | 1309 | 1000 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 929 | 638 | 19 | 45,3 | 12 | 935 | 1417 | 1126 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 929 | 638 | 19 | 45,3 | 12 | 979 | 1461 | 1170 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 929 | 638 | 19 | 51,8 | 14 | 1009 | 1483 | 1192 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 929 | 683 | 19 | 59,3 | 16 | 972 | 1548 | 1302 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 929 | 683 | 19 | 59,3 | 16 | 1110 | 1586 | 1340 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 959 | 698 | 19 | 64,4 | 18 | 1174 | 1666 | 1405 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 816 | 19 | 64,4 | 18 | 1250 | — | 1599 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 816 | 19 | 69,4 | 18 | 1362 | — | 1712 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1452 | — | — | 613 | 492 |

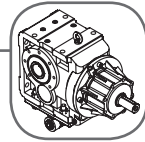
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **66**

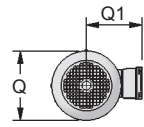
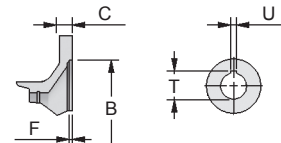
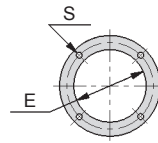
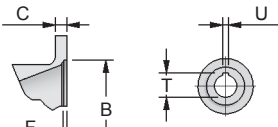
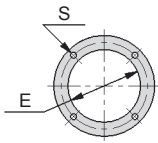
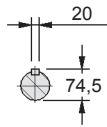
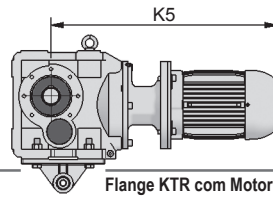
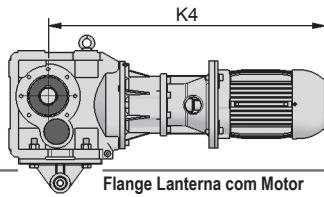
Fixação por braço de torção - B

Simple



Tipos de Entrada

Tipos de Saída



Eixo de Entrada

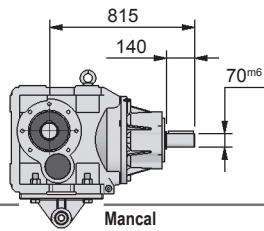
Detalhes Flange Lanterna

Detalhe "x"

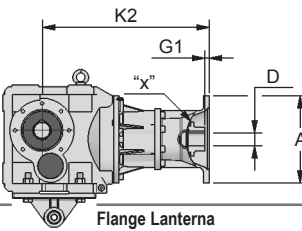
Detalhes Flange KTR

Detalhe "y"

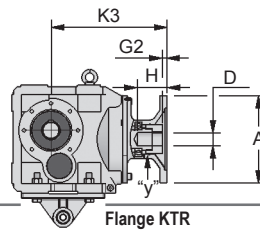
Frente do Motor



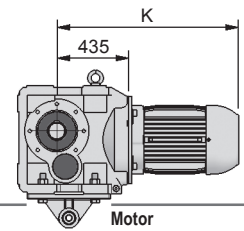
Mancal



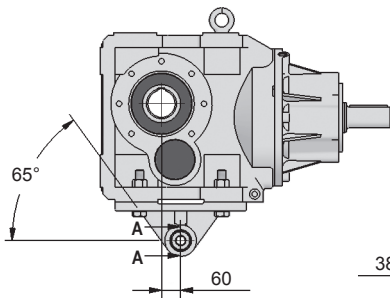
Flange Lanterna



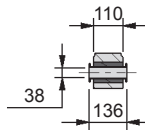
Flange KTR



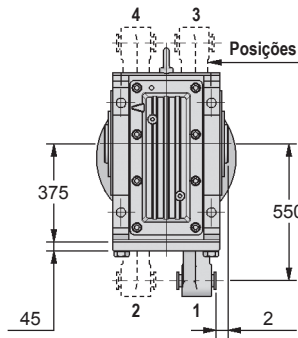
Motor



Eixo Vazado com Chaveta

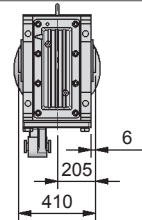


Corte "AA"

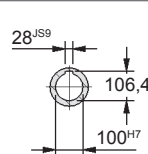


Eixo Vazado com Disco de Contração

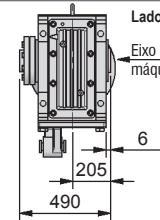
Posições alternativas**



Sugestão de acoplamento no Eixo Vazado

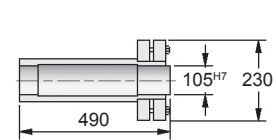
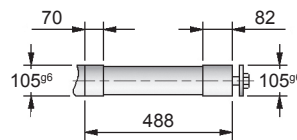
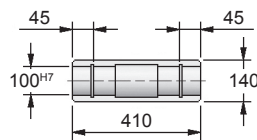
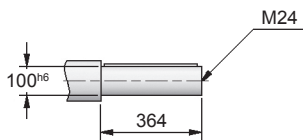


Sugestão de acoplamento no Eixo Vazado com Disco de Contração



Lado 1*
Eixo da máquina

14



| Carcasa | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 899 | 590 | 15 | 41,3 | 10 | 884 | 1271 | 962 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 899 | 590 | 15 | 41,3 | 10 | 922 | 1309 | 1000 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 929 | 638 | 19 | 45,3 | 12 | 935 | 1417 | 1126 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 929 | 638 | 19 | 45,3 | 12 | 979 | 1461 | 1170 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 929 | 638 | 19 | 51,8 | 14 | 1009 | 1483 | 1192 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 929 | 683 | 19 | 59,3 | 16 | 972 | 1548 | 1302 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 929 | 683 | 19 | 59,3 | 16 | 1110 | 1586 | 1340 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 959 | 698 | 19 | 64,4 | 18 | 1174 | 1666 | 1405 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 816 | 19 | 64,4 | 18 | 1250 | — | 1599 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 816 | 19 | 69,4 | 18 | 1362 | — | 1712 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1452 | — | — | 613 | 492 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.



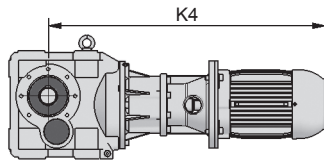
Fixação por pés - N

Simple

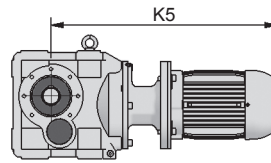
Dimensões

Tamanho **68**

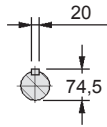
Tipos de Entrada



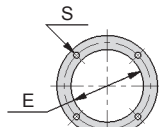
Flange Lanterna com Motor



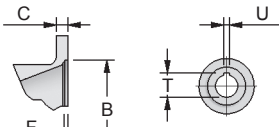
Flange KTR com Motor



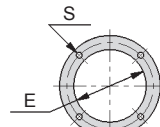
Eixo de Entrada



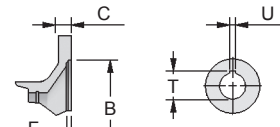
Detalhes Flange Lanterna



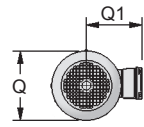
Detalhe "x"



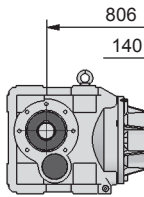
Detalhes Flange KTR



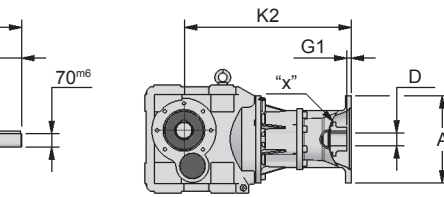
Detalhe "y"



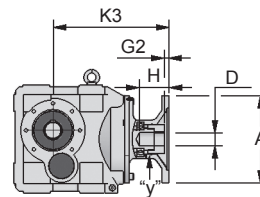
Frete do Motor



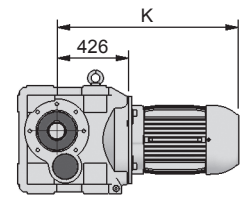
Mancal



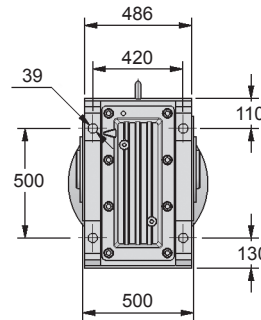
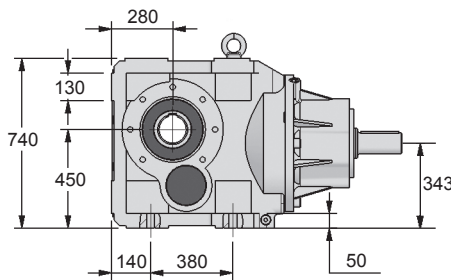
Flange Lanterna



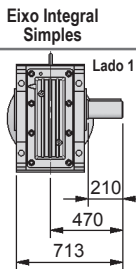
Flange KTR



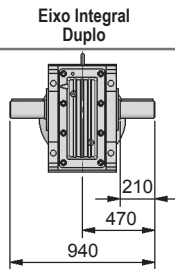
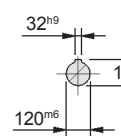
Motor



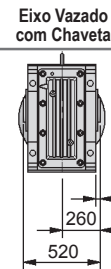
Tipos de Saída



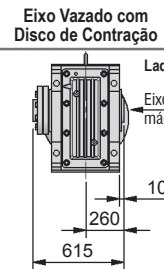
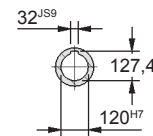
Eixo Integral Simple



Eixo Integral Duplo



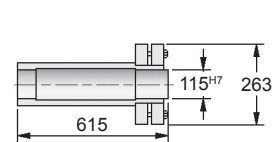
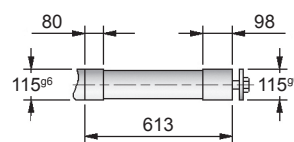
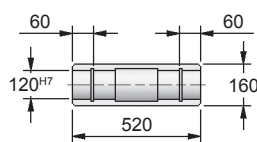
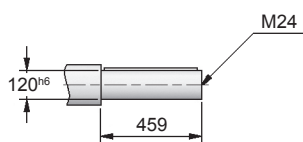
Eixo Vazado com Chaveta



Eixo Vazado com Disco de Contração

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | — | — | 890 | — | 15 | 41,3 | 10 | — | 1262 | — | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | — | — | 890 | — | 15 | 41,3 | 10 | — | 1300 | — | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 920 | 621 | 19 | 45,3 | 12 | 918 | 1408 | 1109 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 920 | 621 | 19 | 45,3 | 12 | 962 | 1452 | 1153 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 920 | 621 | 19 | 51,8 | 14 | 992 | 1474 | 1175 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 920 | 666 | 19 | 59,3 | 16 | 955 | 1539 | 1285 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 920 | 666 | 19 | 59,3 | 16 | 1093 | 1577 | 1323 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 950 | 681 | 19 | 64,4 | 18 | 1165 | 1657 | 1388 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 798 | 19 | 64,4 | 18 | 1241 | — | 1581 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 798 | 19 | 69,4 | 18 | 1353 | — | 1694 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1443 | — | — | 613 | 492 |

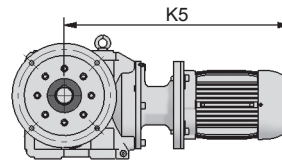
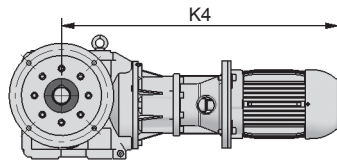
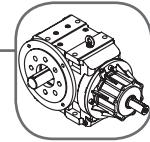
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **68**

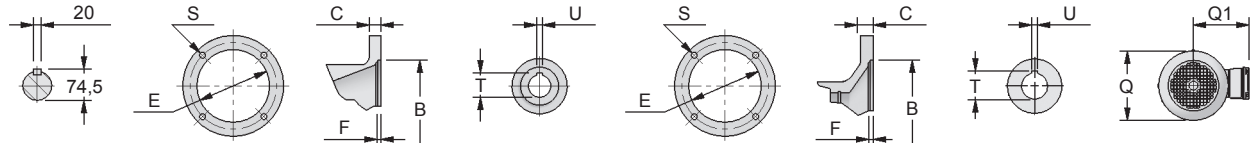
Fixação por flange e pés - G L

Simplex



Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

Eixo de Entrada

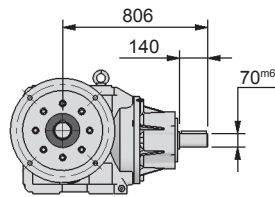
Detalhes Flange Lanterna

Detalhe "x"

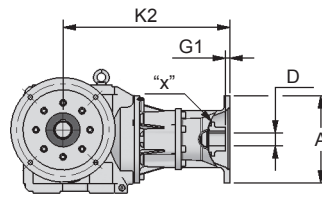
Detalhes Flange KTR

Detalhe "y"

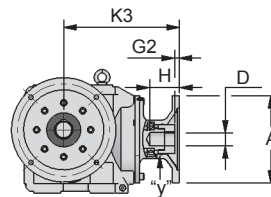
Frente do Motor



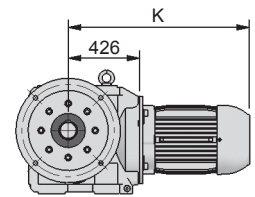
Mancal



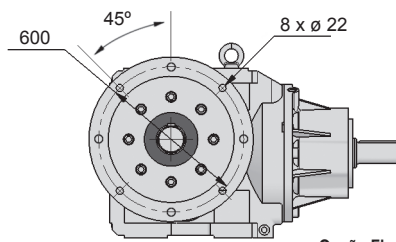
Flange Lanterna



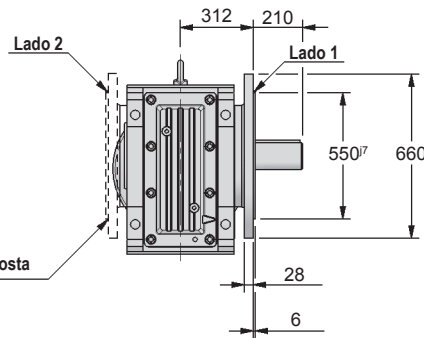
Flange KTR



Motor



Opção Flange Oposta

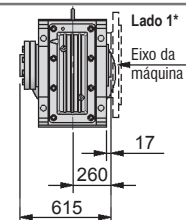
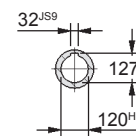
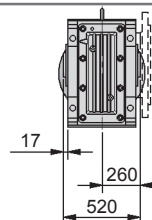
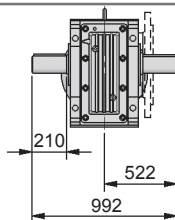
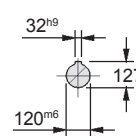
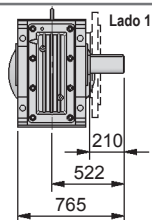


Eixo Integral Simplex

Eixo Integral Duplo

Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração

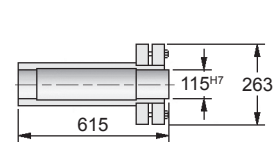
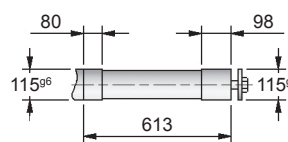
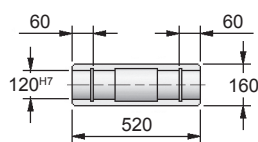
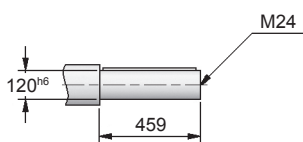


Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração

Tipos de Saída

14



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | — | — | 890 | — | 15 | 41,3 | 10 | — | 1262 | — | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | — | — | 890 | — | 15 | 41,3 | 10 | — | 1300 | — | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 920 | 621 | 19 | 45,3 | 12 | 918 | 1408 | 1109 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 920 | 621 | 19 | 45,3 | 12 | 962 | 1452 | 1153 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 920 | 621 | 19 | 51,8 | 14 | 992 | 1474 | 1175 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 920 | 666 | 19 | 59,3 | 16 | 955 | 1539 | 1285 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 920 | 666 | 19 | 59,3 | 16 | 1093 | 1577 | 1323 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 950 | 681 | 19 | 64,4 | 18 | 1165 | 1657 | 1388 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 798 | 19 | 64,4 | 18 | 1241 | — | 1581 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 798 | 19 | 69,4 | 18 | 1353 | — | 1694 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1443 | — | — | 613 | 492 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



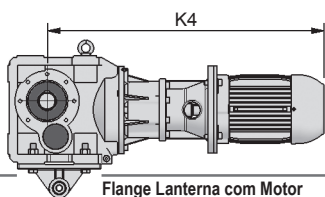
Fixação por braço de torção - B

Simple

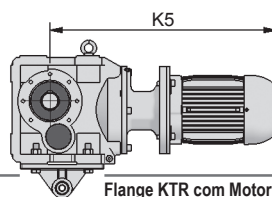
Dimensões

Tamanho **68**

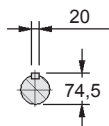
Tipos de Entrada



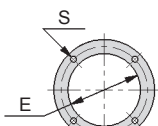
Flange Lanterna com Motor



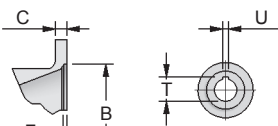
Flange KTR com Motor



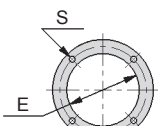
Eixo de Entrada



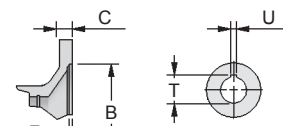
Detalhes Flange Lanterna



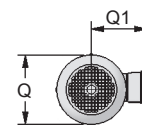
Detalhe "x"



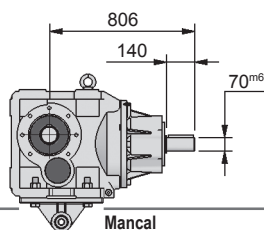
Detalhes Flange KTR



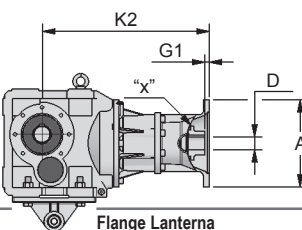
Detalhe "y"



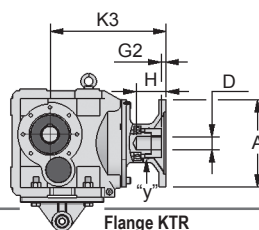
Frente do Motor



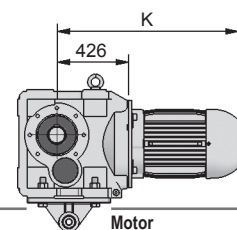
Mancal



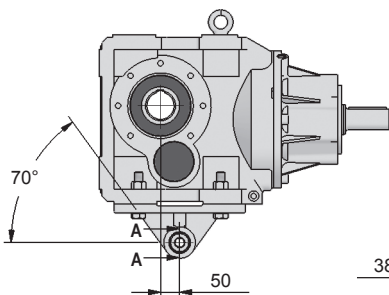
Flange Lanterna



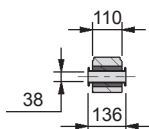
Flange KTR



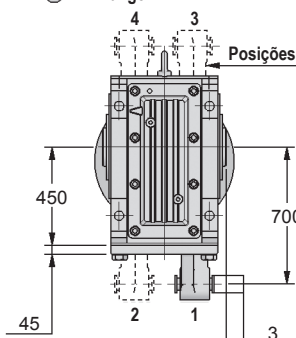
Motor



Eixo Vazado com Chaveta



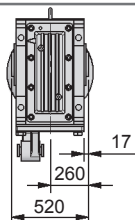
Corte "AA"



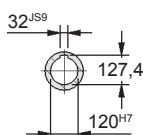
Eixo Vazado com Disco de Contração

Posições alternativas**

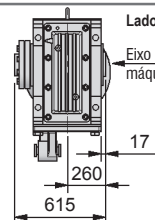
Tipos de Saída



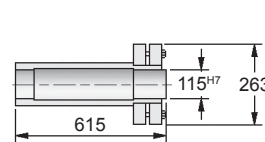
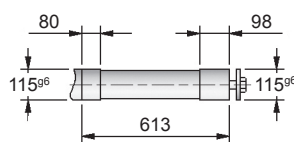
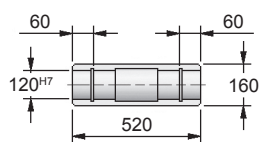
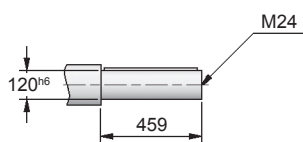
Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



Lado 1*
Eixo da máquina



| Carcasa | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|-----|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | — | — | 890 | — | 15 | 41,3 | 10 | — | 1262 | — | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | — | — | 890 | — | 15 | 41,3 | 10 | — | 1300 | — | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 920 | 621 | 19 | 45,3 | 12 | 918 | 1408 | 1109 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 920 | 621 | 19 | 45,3 | 12 | 962 | 1452 | 1153 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 920 | 621 | 19 | 51,8 | 14 | 992 | 1474 | 1175 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 920 | 666 | 19 | 59,3 | 16 | 955 | 1539 | 1285 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 920 | 666 | 19 | 59,3 | 16 | 1093 | 1577 | 1323 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 950 | 681 | 19 | 64,4 | 18 | 1165 | 1657 | 1388 | 466 | 368 |
| 250 | 550 | 450 ^{H7} | 25 | ø60 | 500 | 6 | — | 2 | 144 | — | 798 | 19 | 64,4 | 18 | 1241 | — | 1581 | 491 | 368 |
| 280 | 550 | 450 ^{H7} | 25 | ø65 | 500 | 6 | — | 2 | 144 | — | 798 | 19 | 69,4 | 18 | 1353 | — | 1694 | 578 | 463 |
| 315 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1443 | — | — | 613 | 492 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

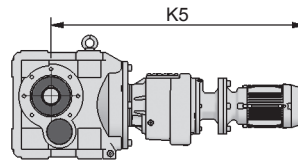
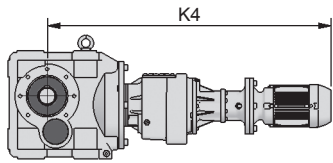
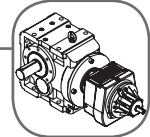
** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

Tamanho **56**

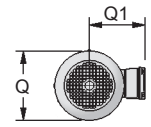
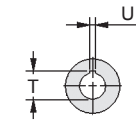
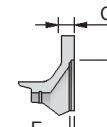
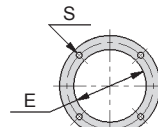
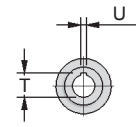
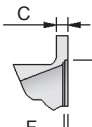
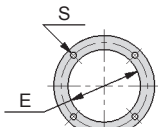
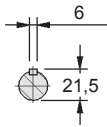
Fixação por pés - N

Duplex



Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

Eixo de Entrada

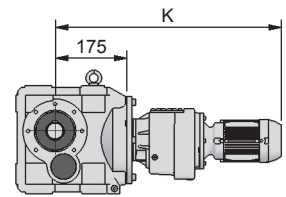
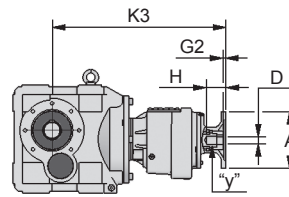
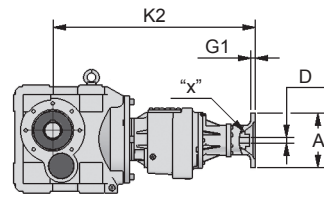
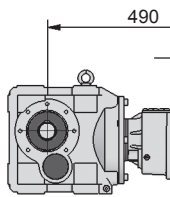
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

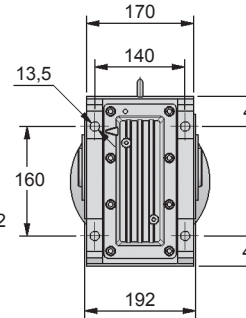
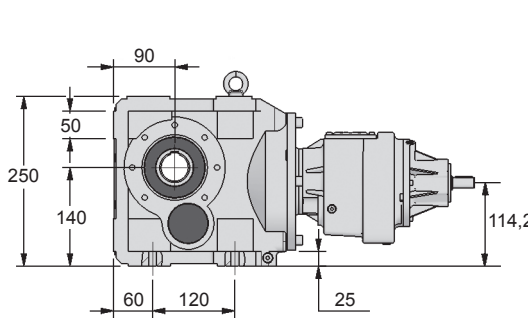


Mancal

Flange Lanterna

Flange KTR

Motor

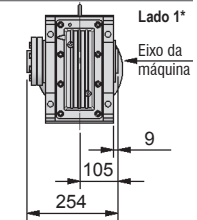
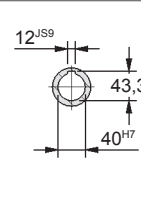
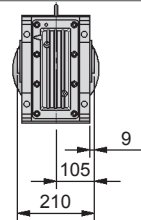
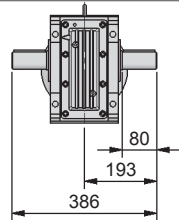
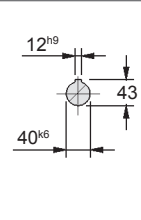
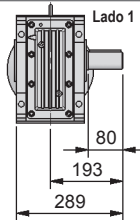


Eixo Integral Simples

Eixo Integral Duplo

Eixo Vazado com Chaveta

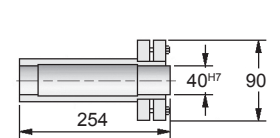
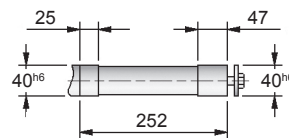
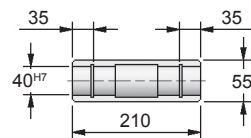
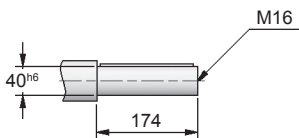
Eixo Vazado com Disco de Contração



Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|---|-----|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | 1 | 25 | 524 | 444,5 | 10 | 12,8 | 4 | 600 | 717 | 637,5 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 525 | 444,5 | 10 | 16,3 | 5 | 632 | 743 | 662,5 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 542 | 483 | 12 | 21,8 | 6 | 659 | 778 | 719 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 542 | 483 | 12 | 27,3 | 8 | 681 | 796 | 737 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 542 | 483 | 12 | 27,3 | 8 | 706 | 821 | 762 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 554 | — | 15 | 31,3 | 8 | 758 | 870 | — | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 554 | — | 15 | 31,3 | 8 | — | 887 | — | 235 | 180 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

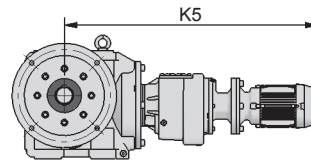
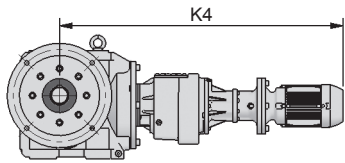


Fixação por flange e pés - G_E

Dimensões

Tamanho **56**

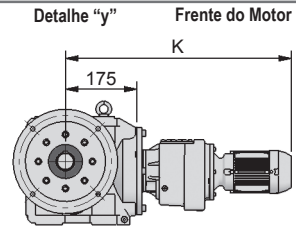
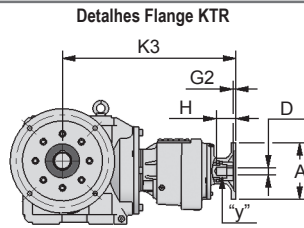
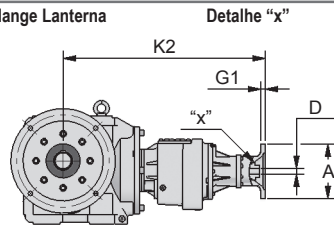
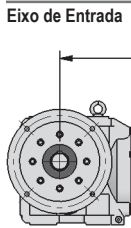
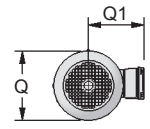
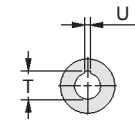
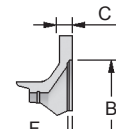
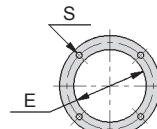
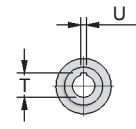
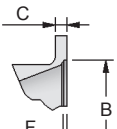
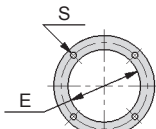
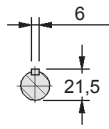
Duplex



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada

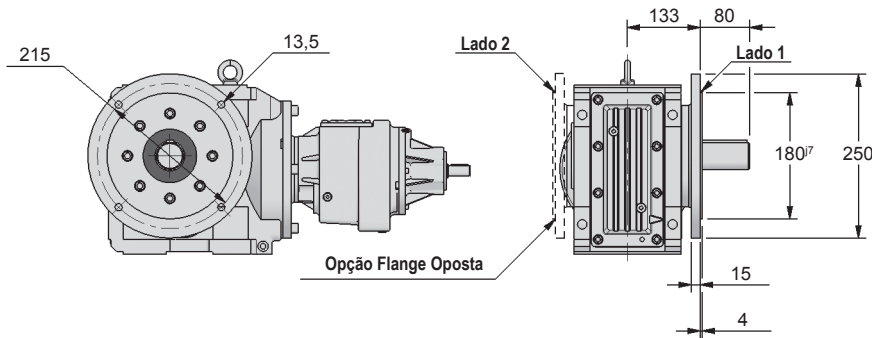


Mancal

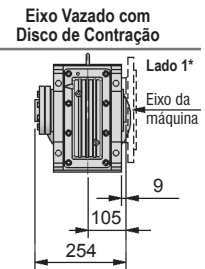
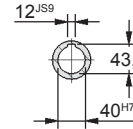
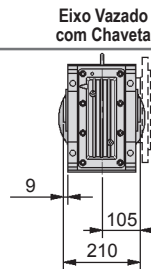
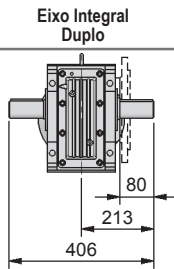
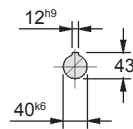
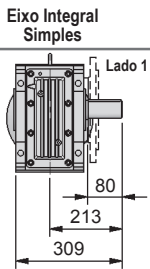
Flange Lanterna

Flange KTR

Motor

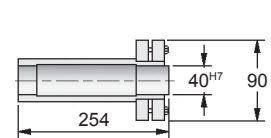
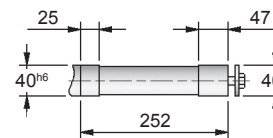
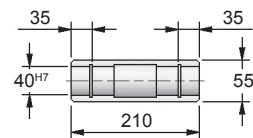
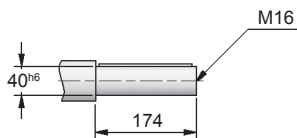


Tipos de Saída



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|---|-----|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | 1 | 25 | 524 | 444,5 | 10 | 12,8 | 4 | 600 | 717 | 637,5 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 525 | 444,5 | 10 | 16,3 | 5 | 632 | 743 | 662,5 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 542 | 483 | 12 | 21,8 | 6 | 659 | 778 | 719 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 542 | 483 | 12 | 27,3 | 8 | 681 | 796 | 737 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 542 | 483 | 12 | 27,3 | 8 | 706 | 821 | 762 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 554 | — | 15 | 31,3 | 8 | 758 | 870 | — | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 554 | — | 15 | 31,3 | 8 | — | 887 | — | 235 | 180 |

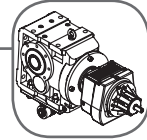
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **56**

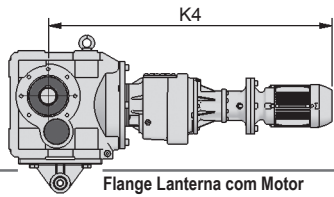
Fixação por braço de torção - B

Duplex

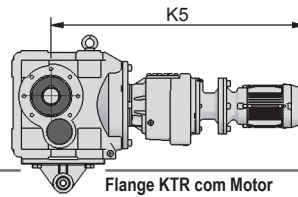


Tipos de Entrada

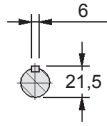
Tipos de Saída



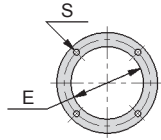
Flange Lanterna com Motor



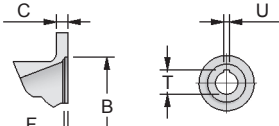
Flange KTR com Motor



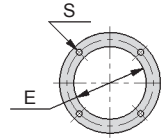
Eixo de Entrada



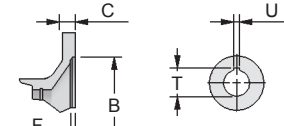
Detalhes Flange Lanterna



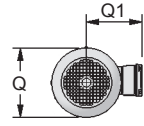
Detalhe "x"



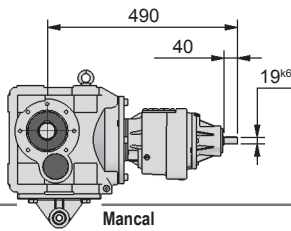
Detalhes Flange KTR



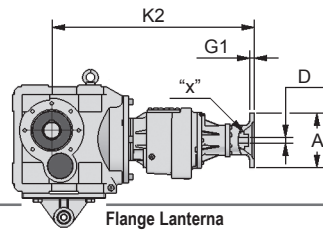
Detalhe "y"



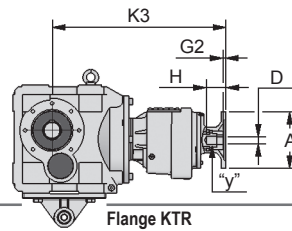
Frente do Motor



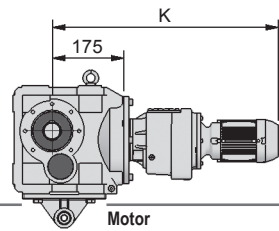
Mancal



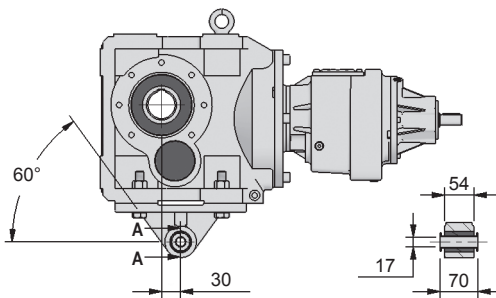
Flange Lanterna



Flange KTR

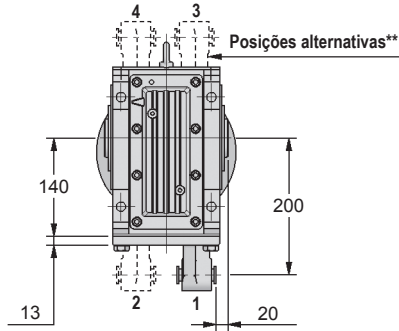


Motor

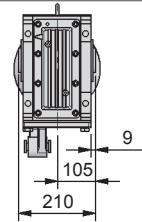


Eixo Vazado com Chaveta

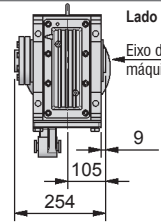
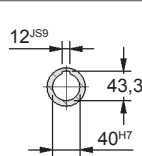
Corte "AA"



Eixo Vazado com Disco de Contração

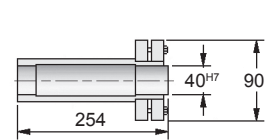
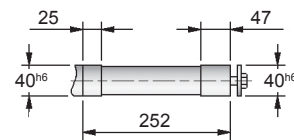
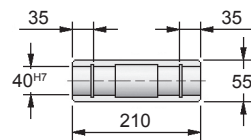
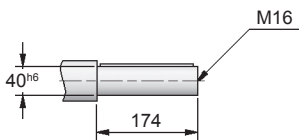


Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração

14



| Carcaca | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|---|-----|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | 1 | 25 | 524 | 444,5 | 10 | 12,8 | 4 | 600 | 717 | 637,5 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 525 | 444,5 | 10 | 16,3 | 5 | 632 | 743 | 662,5 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 542 | 483 | 12 | 21,8 | 6 | 659 | 778 | 719 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 542 | 483 | 12 | 27,3 | 8 | 681 | 796 | 737 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 542 | 483 | 12 | 27,3 | 8 | 706 | 821 | 762 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 554 | — | 15 | 31,3 | 8 | 758 | 870 | — | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | — | — | 554 | — | 15 | 31,3 | 8 | — | 887 | — | 235 | 180 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.

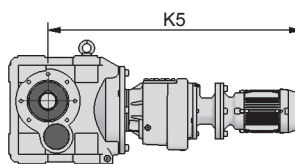
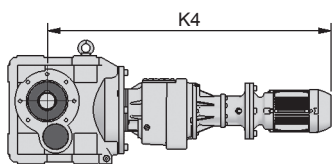


Fixação por pés - N

Duplex

Dimensões

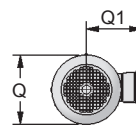
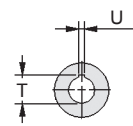
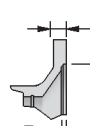
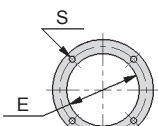
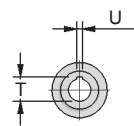
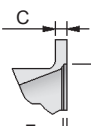
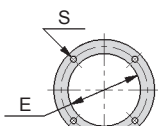
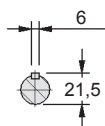
Tamanho **58**



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada



Eixo de Entrada

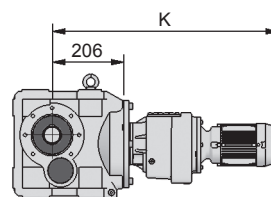
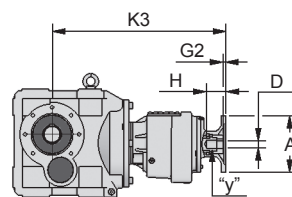
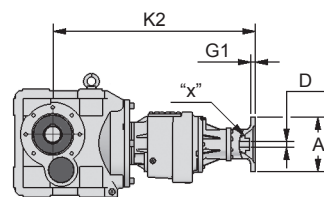
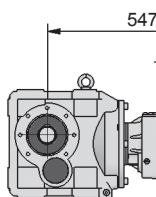
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

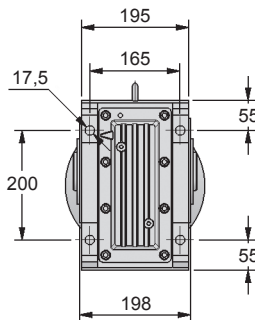
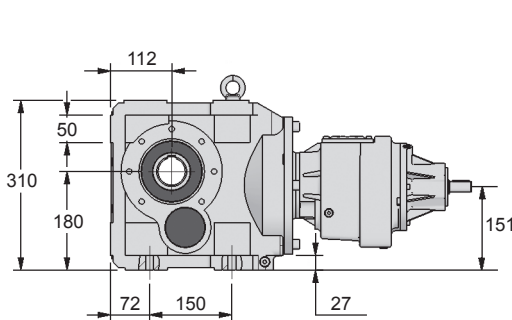


Mancal

Flange Lanterna

Flange KTR

Motor

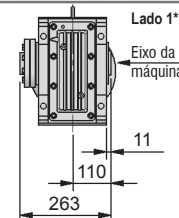
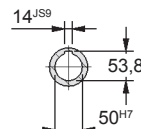
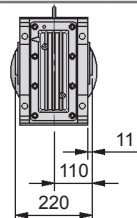
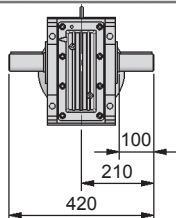
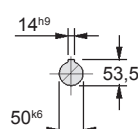
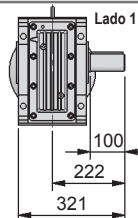


Eixo Integral Simples

Eixo Integral Duplo

Eixo Vazado com Chaveta

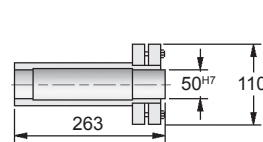
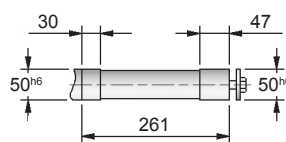
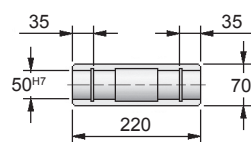
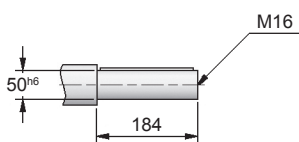
Eixo Vazado com Disco de Contração



Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|---|-------|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ∅11 | 115 | 4 | 0 | 1 | 25 | 581 | 495 | 10 | 12,8 | 4 | 650,5 | 774 | 688 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ∅14 | 130 | 4 | 0,5 | 1 | 34 | 582 | 495 | 10 | 16,3 | 5 | 682,5 | 800 | 713 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 599 | 533,5 | 12 | 21,8 | 6 | 709,5 | 835 | 769,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 599 | 533,5 | 12 | 27,3 | 8 | 731,5 | 853 | 787,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 599 | 533,5 | 12 | 27,3 | 8 | 756,5 | 878 | 812,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 611 | 556 | 15 | 31,3 | 8 | 806 | 927 | 872 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 611 | 556 | 15 | 31,3 | 8 | 823 | 944 | 889 | 235 | 180 |
| 132S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 909 | — | — | 274 | 207 |
| 132M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 947 | — | — | 274 | 207 |

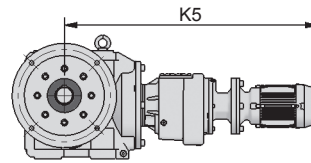
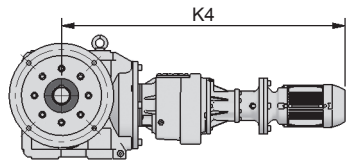
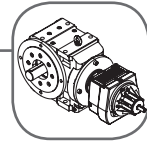
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **58**

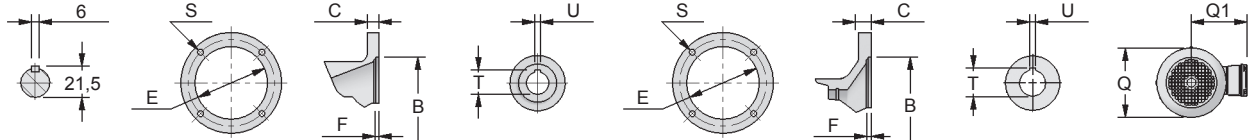
Fixação por flange e pés - G F

Duplex



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

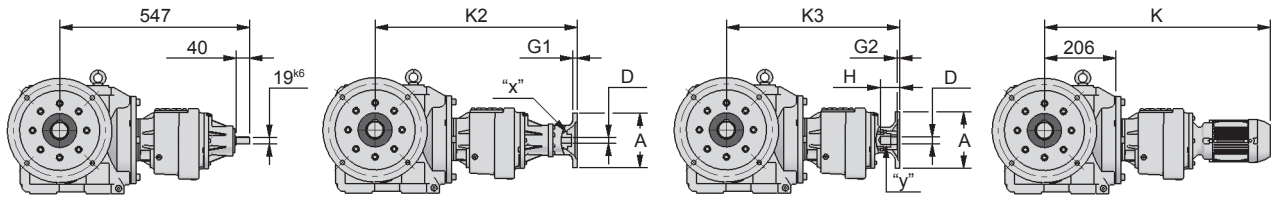
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor



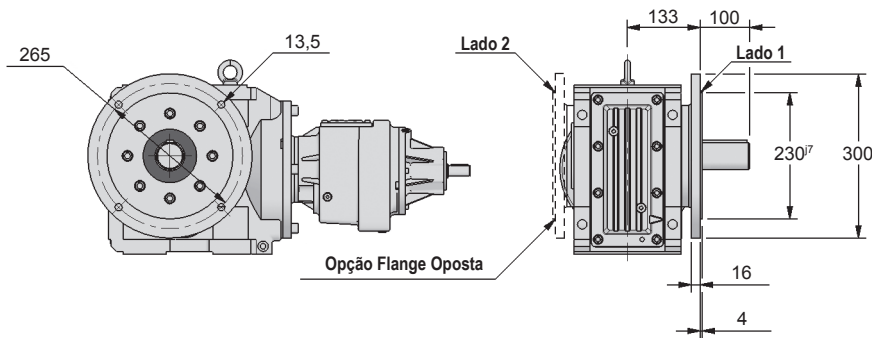
Mancal

Flange Lanterna

Flange KTR

Motor

Tipos de Entrada

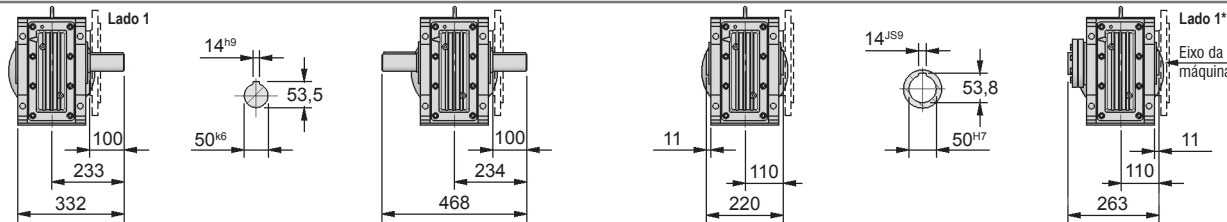


Eixo Integral Simples

Eixo Integral Duplo

Eixo Vazado com Chaveta

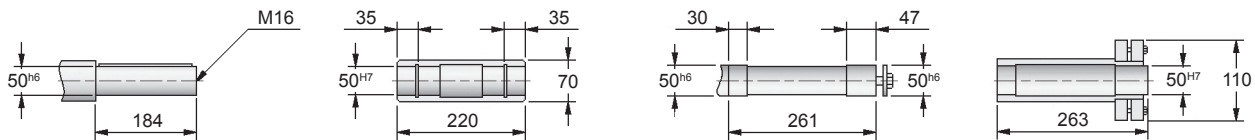
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração

Tipos de Saída



14

| Carcaca | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|---|-------|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ∅11 | 115 | 4 | 0 | 1 | 25 | 581 | 495 | 10 | 12,8 | 4 | 650,5 | 774 | 688 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ∅14 | 130 | 4 | 0,5 | 1 | 34 | 582 | 495 | 10 | 16,3 | 5 | 682,5 | 800 | 713 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 599 | 533,5 | 12 | 21,8 | 6 | 709,5 | 835 | 769,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 599 | 533,5 | 12 | 27,3 | 8 | 731,5 | 853 | 787,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 599 | 533,5 | 12 | 27,3 | 8 | 756,5 | 878 | 812,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 611 | 556 | 15 | 31,3 | 8 | 806 | 927 | 872 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 611 | 556 | 15 | 31,3 | 8 | 823 | 944 | 889 | 235 | 180 |
| 132S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 909 | — | — | 274 | 207 |
| 132M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 947 | — | — | 274 | 207 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



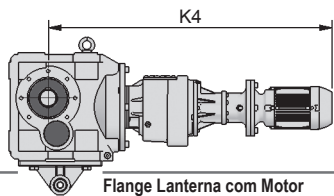
Fixação por braço de torção - B

Duplex

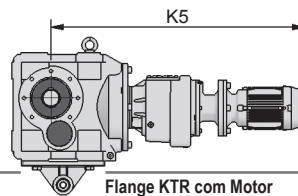
Dimensões

Tamanho **58**

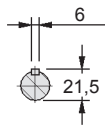
Tipos de Entrada



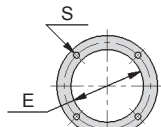
Flange Lanterna com Motor



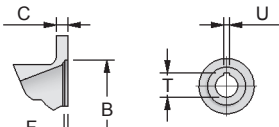
Flange KTR com Motor



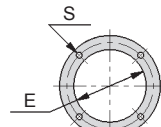
Eixo de Entrada



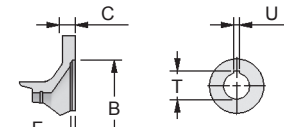
Detalhes Flange Lanterna



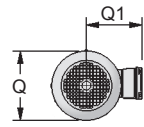
Detalhe "x"



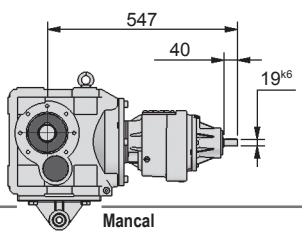
Detalhes Flange KTR



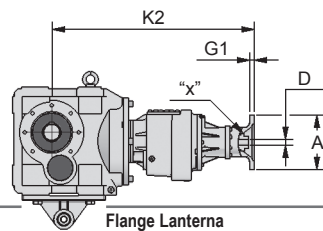
Detalhe "y"



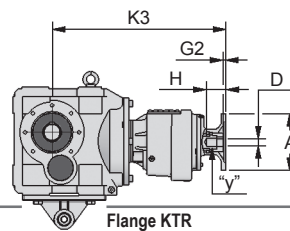
Frente do Motor



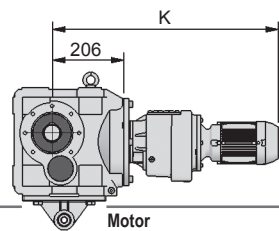
Mancais



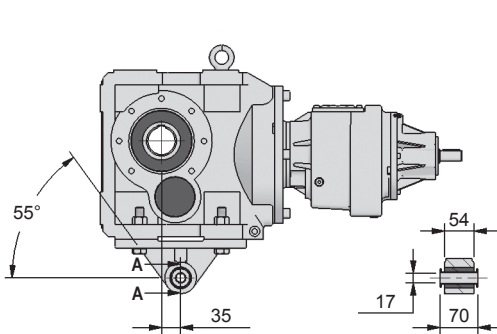
Flange Lanterna



Flange KTR

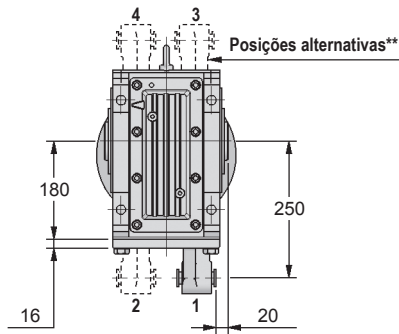


Motor



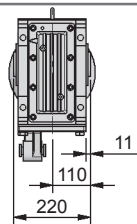
Eixo Vazado com Chaveta

Corte "AA"

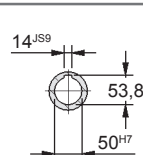


Eixo Vazado com Disco de Contração

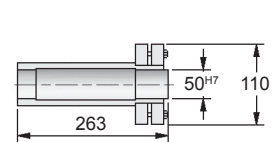
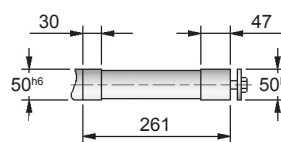
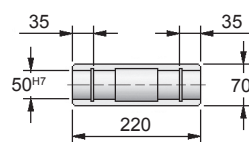
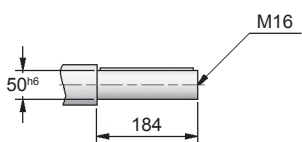
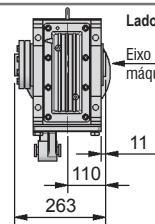
Tipos de Saída



Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaca | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|---|-------|-----|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | 1 | 25 | 581 | 495 | 10 | 12,8 | 4 | 650,5 | 774 | 688 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 582 | 495 | 10 | 16,3 | 5 | 682,5 | 800 | 713 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 599 | 533,5 | 12 | 21,8 | 6 | 709,5 | 835 | 769,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 599 | 533,5 | 12 | 27,3 | 8 | 731,5 | 853 | 787,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 599 | 533,5 | 12 | 27,3 | 8 | 756,5 | 878 | 812,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 611 | 556 | 15 | 31,3 | 8 | 806 | 927 | 872 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 611 | 556 | 15 | 31,3 | 8 | 823 | 944 | 889 | 235 | 180 |
| 132S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 909 | — | — | 274 | 207 |
| 132M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 947 | — | — | 274 | 207 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

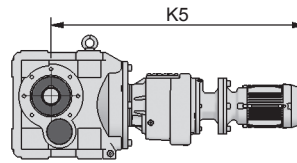
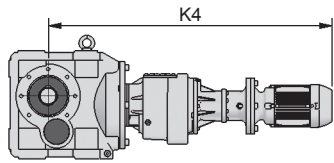
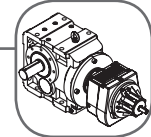
** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

Tamanho **60**

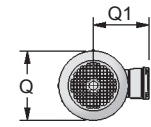
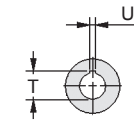
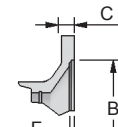
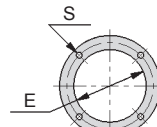
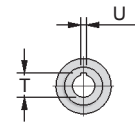
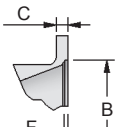
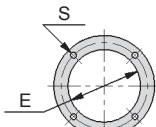
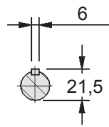
Fixação por pés - N

Duplex



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

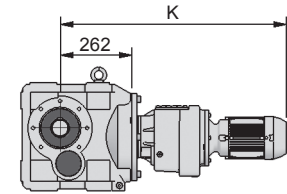
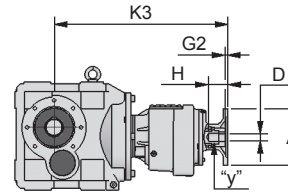
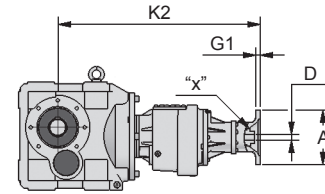
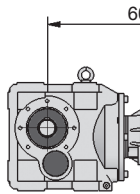
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

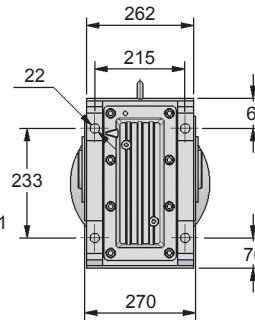
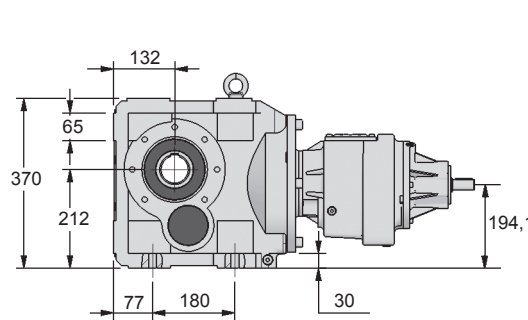


Mancal

Flange Lanterna

Flange KTR

Motor

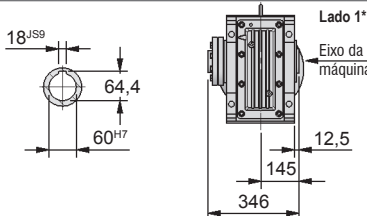
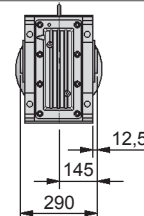
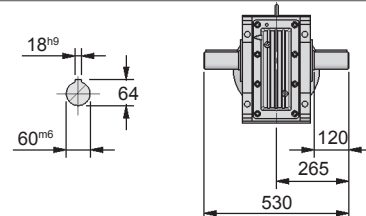
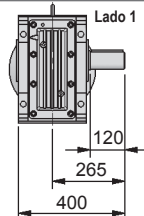


Eixo Integral Simples

Eixo Integral Duplo

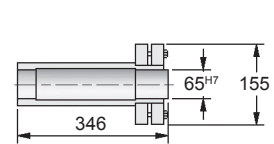
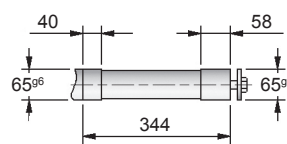
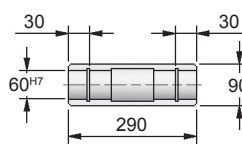
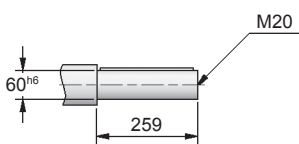
Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|---|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | 1 | 25 | 637 | 551 | 10 | 12,8 | 4 | 706,5 | 830 | 744 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 638 | 551 | 10 | 16,3 | 5 | 738,5 | 856 | 769 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 655 | 589,5 | 12 | 21,8 | 6 | 765,5 | 891 | 825,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 655 | 589,5 | 12 | 27,3 | 8 | 787,5 | 909 | 843,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 655 | 589,5 | 12 | 27,3 | 8 | 812,5 | 934 | 868,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 667 | 612 | 15 | 31,3 | 8 | 862 | 983 | 928 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 667 | 612 | 15 | 31,3 | 8 | 879 | 1000 | 945 | 235 | 180 |
| 132S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 965 | — | — | 274 | 207 |
| 132M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1003 | — | — | 274 | 207 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

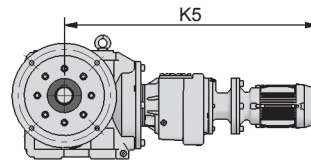
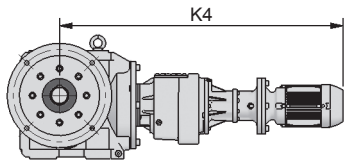


Fixação por flange e pés - G_G

Dimensões

Tamanho **60**

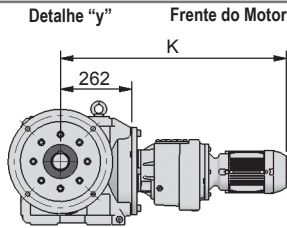
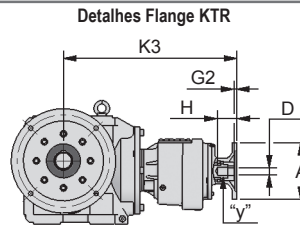
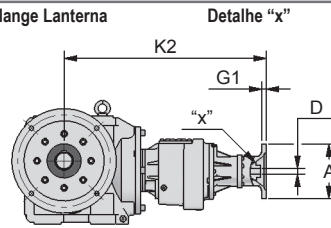
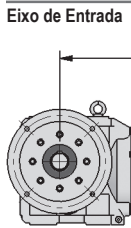
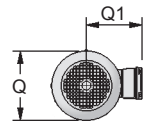
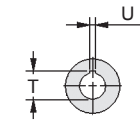
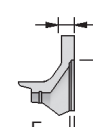
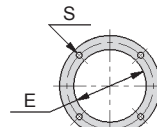
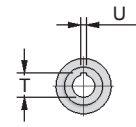
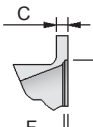
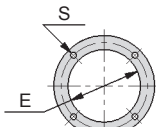
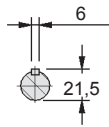
Duplex



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada

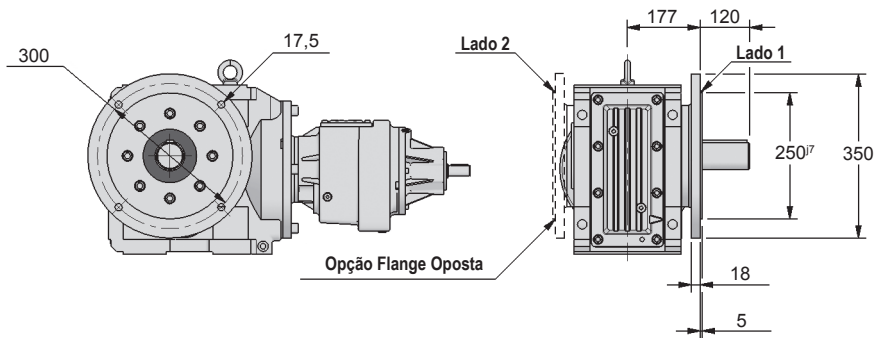


Mancais

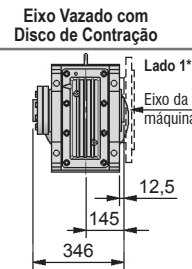
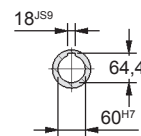
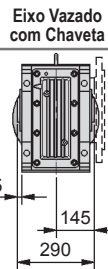
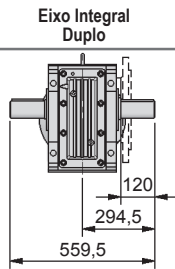
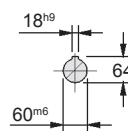
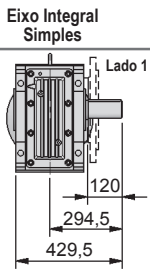
Flange Lanterna

Flange KTR

Motor

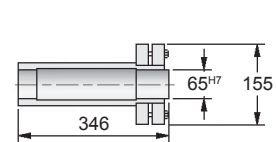
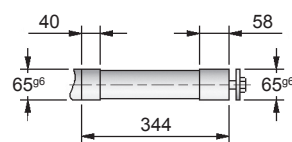
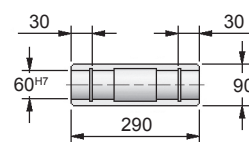
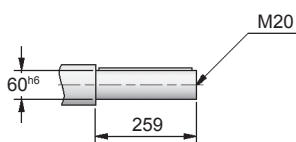


Tipos de Saída



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|-------|----------------|------|---|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ∅11 | 115 | 4 | 0 | 1 | 25 | 637 | 551 | 10 | 12,8 | 4 | 706,5 | 830 | 744 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ∅14 | 130 | 4 | 0,5 | 1 | 34 | 638 | 551 | 10 | 16,3 | 5 | 738,5 | 856 | 769 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 655 | 589,5 | 12 | 21,8 | 6 | 765,5 | 891 | 825,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 655 | 589,5 | 12 | 27,3 | 8 | 787,5 | 909 | 843,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 655 | 589,5 | 12 | 27,3 | 8 | 812,5 | 934 | 868,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 667 | 612 | 15 | 31,3 | 8 | 862 | 983 | 928 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 667 | 612 | 15 | 31,3 | 8 | 879 | 1000 | 945 | 235 | 180 |
| 132S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 965 | — | — | 274 | 207 |
| 132M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1003 | — | — | 274 | 207 |

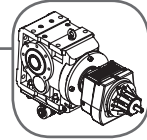
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **60**

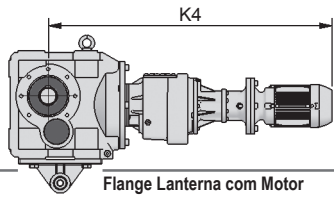
Fixação por braço de torção - B

Duplex

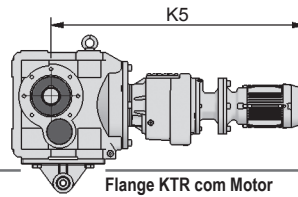


Tipos de Entrada

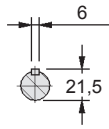
Tipos de Saída



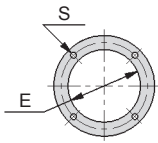
Flange Lanterna com Motor



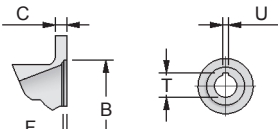
Flange KTR com Motor



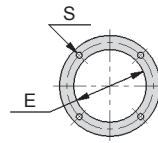
Eixo de Entrada



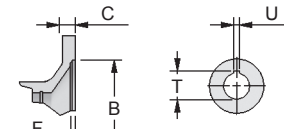
Detalhes Flange Lanterna



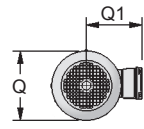
Detalhe "x"



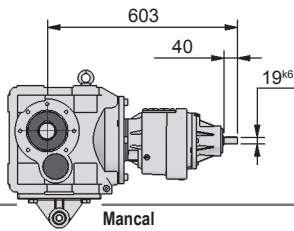
Detalhes Flange KTR



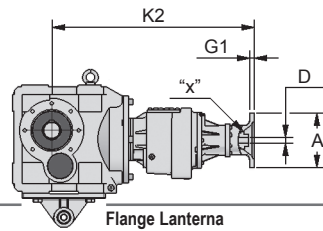
Detalhe "y"



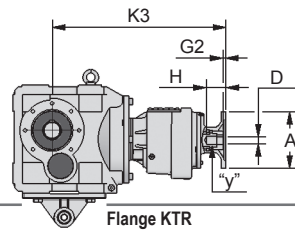
Frente do Motor



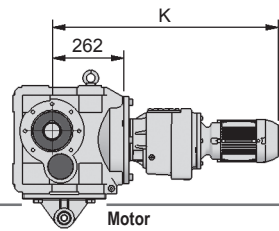
Mancal



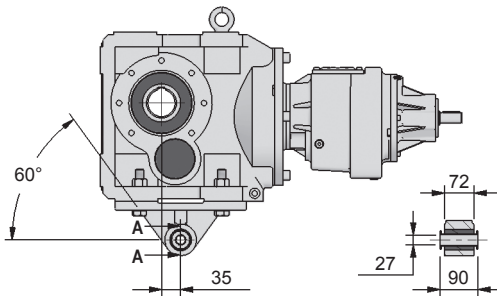
Flange Lanterna



Flange KTR

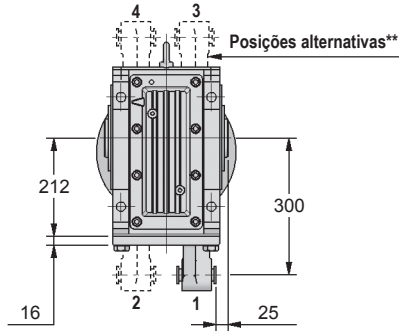


Motor

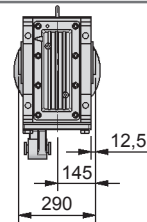


Eixo Vazado com Chaveta

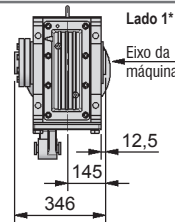
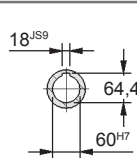
Corte "AA"



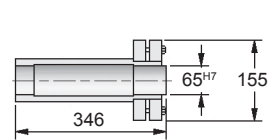
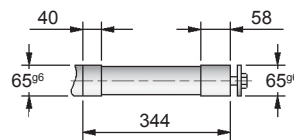
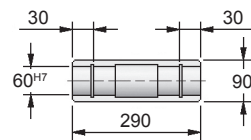
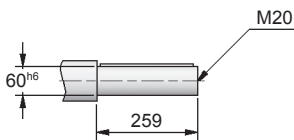
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaca | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|---|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | 1 | 25 | 637 | 551 | 10 | 12,8 | 4 | 706,5 | 830 | 744 | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 638 | 551 | 10 | 16,3 | 5 | 738,5 | 856 | 769 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 655 | 589,5 | 12 | 21,8 | 6 | 765,5 | 891 | 825,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 655 | 589,5 | 12 | 27,3 | 8 | 787,5 | 909 | 843,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 655 | 589,5 | 12 | 27,3 | 8 | 812,5 | 934 | 868,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 667 | 612 | 15 | 31,3 | 8 | 862 | 983 | 928 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 667 | 612 | 15 | 31,3 | 8 | 879 | 1000 | 945 | 235 | 180 |
| 132S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 965 | — | — | 274 | 207 |
| 132M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1003 | — | — | 274 | 207 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.

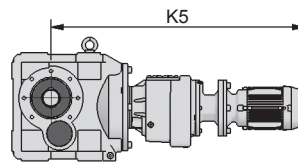
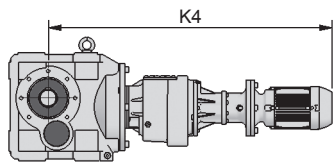


Fixação por pés - N

Duplex

Dimensões

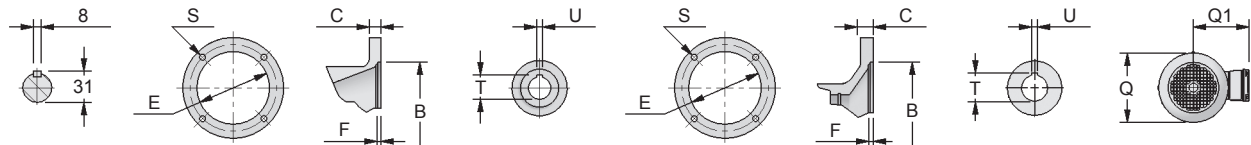
Tamanho **62**



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada



Eixo de Entrada

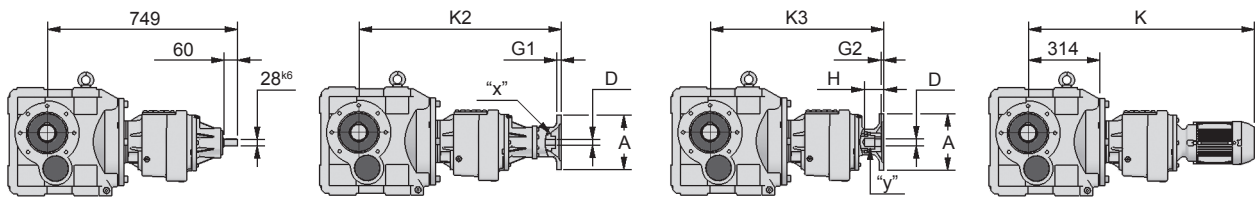
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

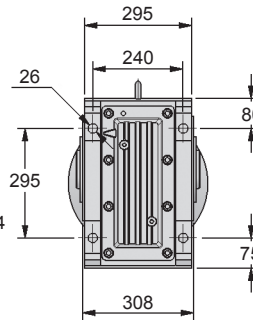
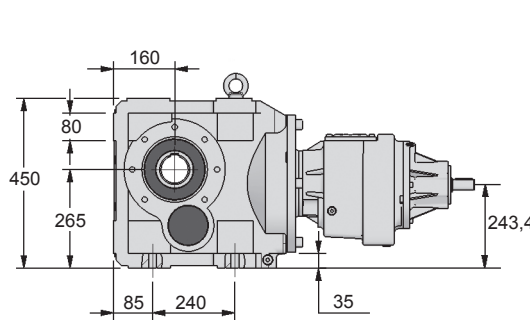


Mancal

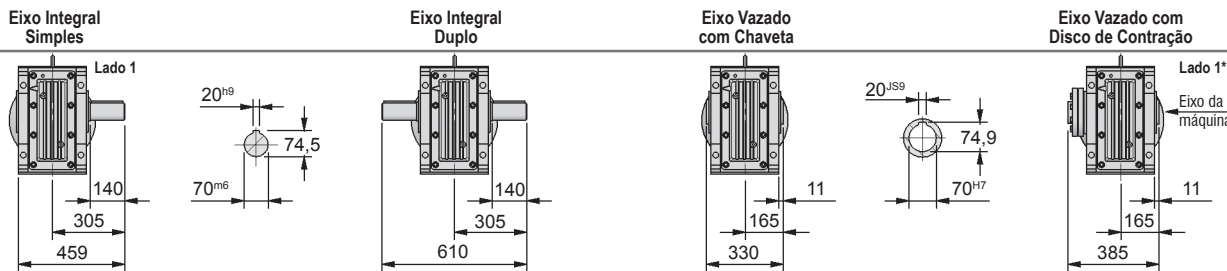
Flange Lanterna

Flange KTR

Motor



Tipos de Saída



Eixo Integral Simples

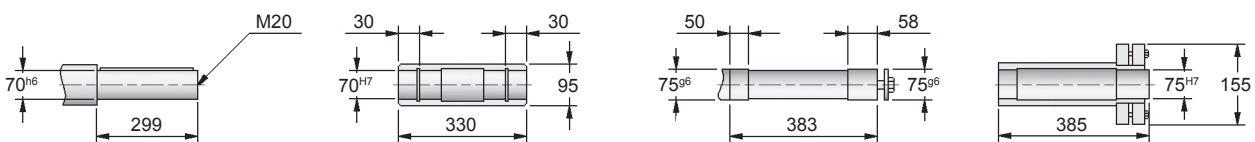
Eixo Integral Duplo

Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 789 | — | 10 | 12,8 | 4 | 791,5 | 982 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 789 | 636 | 10 | 16,3 | 5 | 823,5 | 1007 | 854 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 802 | 674,5 | 12 | 21,8 | 6 | 850,5 | 1038 | 910,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 802 | 674,5 | 12 | 27,3 | 8 | 870,5 | 1056 | 928,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 802 | 674,5 | 12 | 27,3 | 8 | 895,5 | 1081 | 953,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 812 | 695 | 15 | 31,3 | 8 | 945 | 1128 | 1011 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 812 | 695 | 15 | 31,3 | 8 | 961 | 1145 | 1028 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 832 | 750 | 15 | 41,3 | 10 | 1044 | 1204 | 1122 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 832 | 750 | 15 | 41,3 | 10 | 1082 | 1242 | 1160 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1095 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1139 | — | — | 317 | 250 |

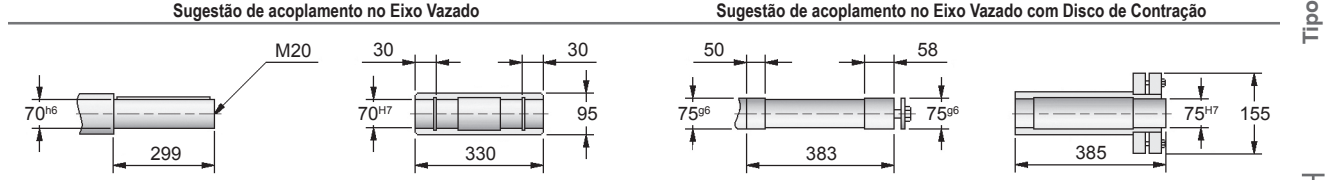
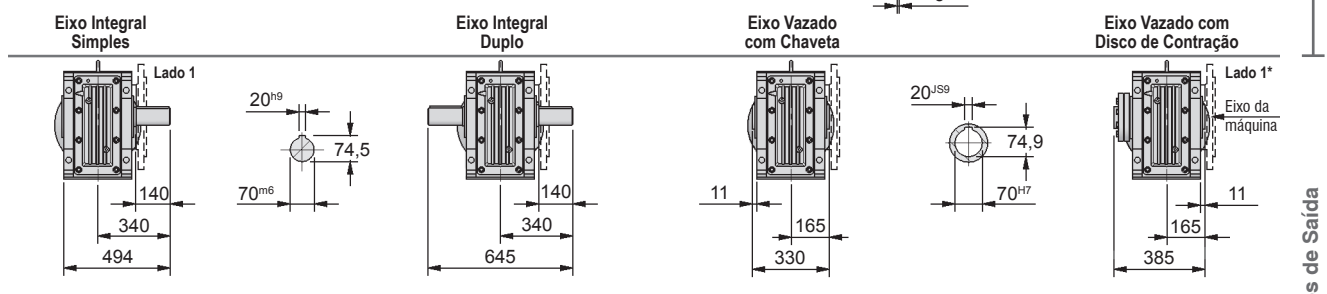
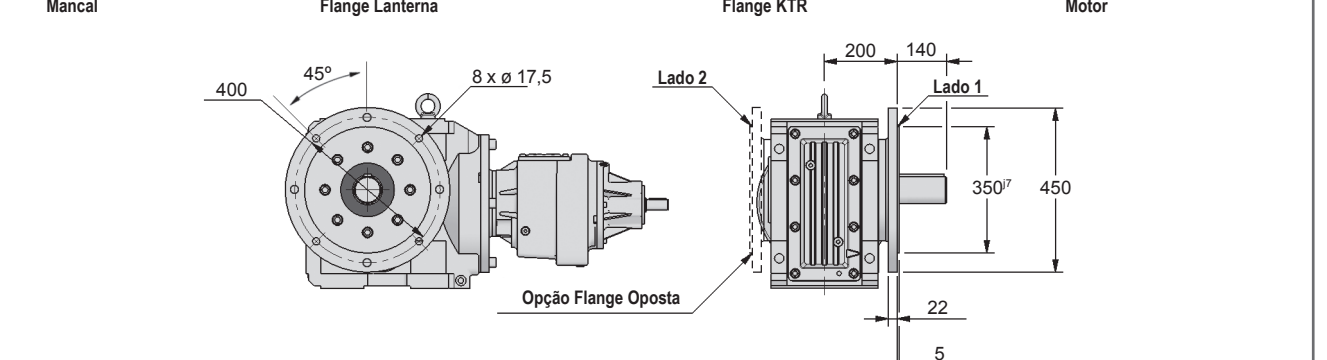
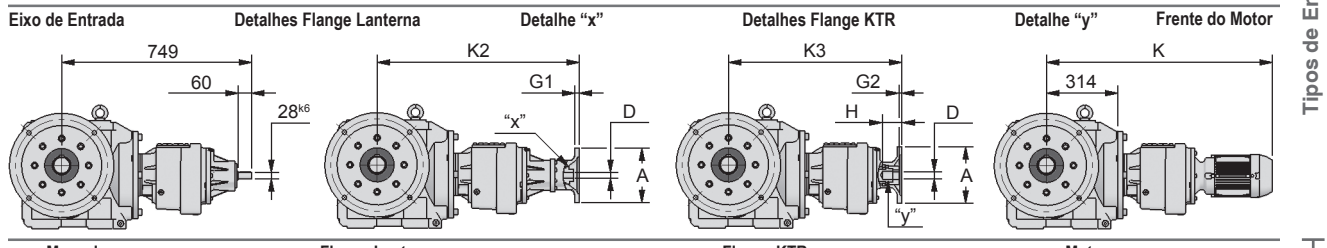
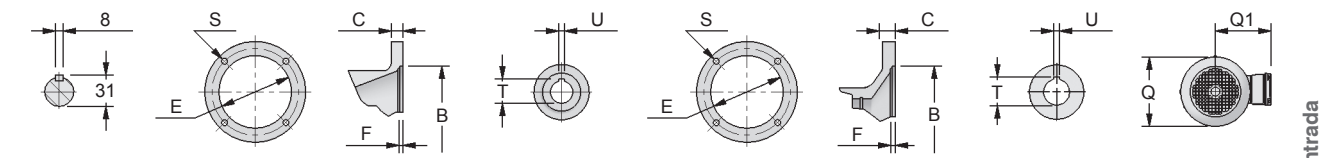
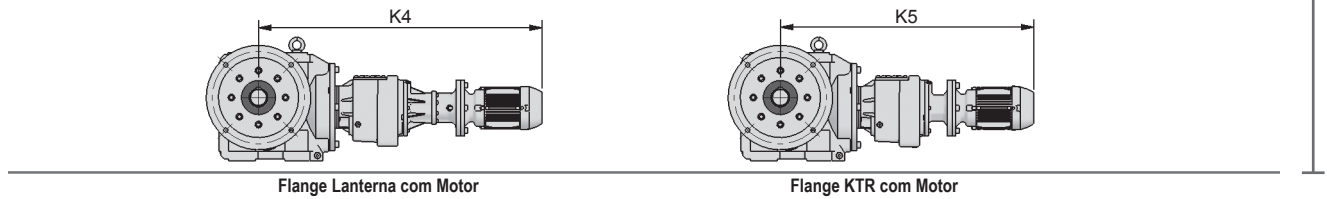
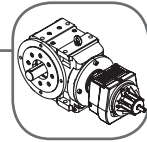
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **62**

Fixação por flange e pés - G J

Duplex



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 789 | — | 10 | 12,8 | 4 | 791,5 | 982 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 789 | 636 | 10 | 16,3 | 5 | 823,5 | 1007 | 854 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 802 | 674,5 | 12 | 21,8 | 6 | 850,5 | 1038 | 910,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 802 | 674,5 | 12 | 27,3 | 8 | 870,5 | 1056 | 928,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 802 | 674,5 | 12 | 27,3 | 8 | 895,5 | 1081 | 953,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 812 | 695 | 15 | 31,3 | 8 | 945 | 1128 | 1011 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 812 | 695 | 15 | 31,3 | 8 | 961 | 1145 | 1028 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 832 | 750 | 15 | 41,3 | 10 | 1044 | 1204 | 1122 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 832 | 750 | 15 | 41,3 | 10 | 1082 | 1242 | 1160 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1095 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1139 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



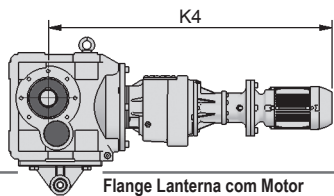
Fixação por braço de torção - B

Duplex

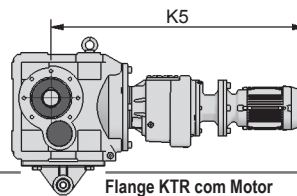
Dimensões

Tamanho **62**

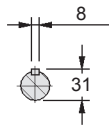
Tipos de Entrada



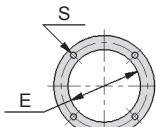
Flange Lanterna com Motor



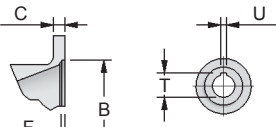
Flange KTR com Motor



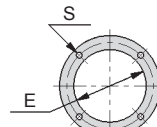
Eixo de Entrada



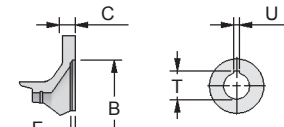
Detalhes Flange Lanterna



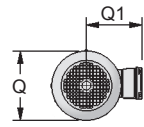
Detalhe "x"



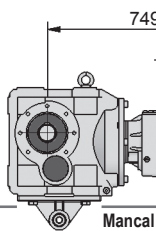
Detalhes Flange KTR



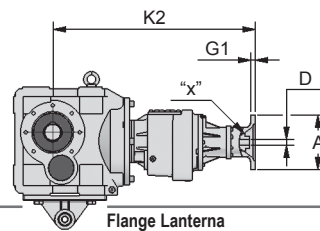
Detalhe "y"



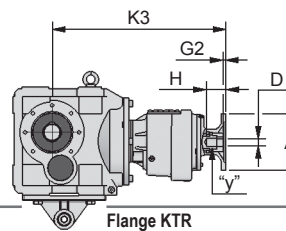
Frete do Motor



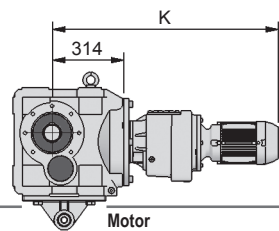
Mancal



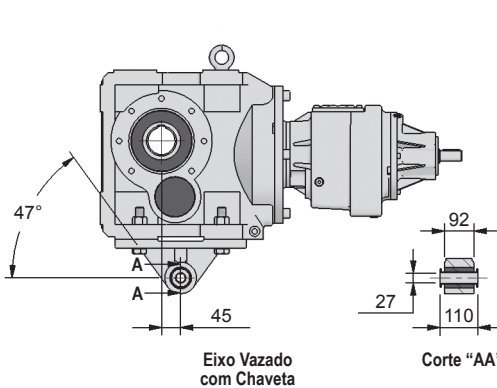
Flange Lanterna



Flange KTR

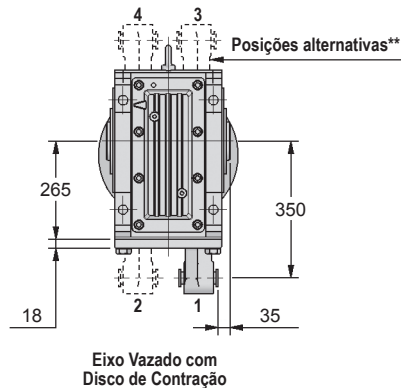


Motor



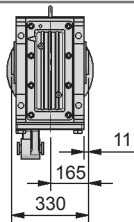
Eixo Vazado com Chaveta

Corte "AA"

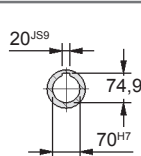


Eixo Vazado com Disco de Contração

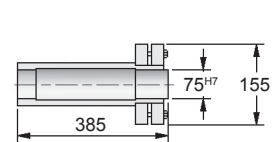
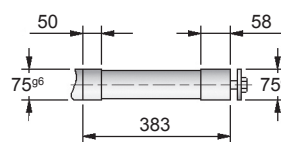
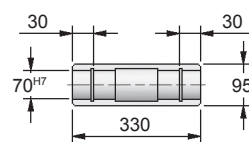
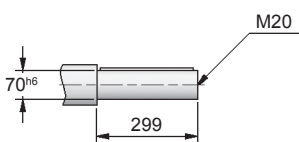
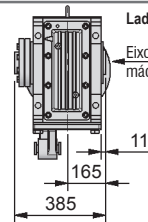
Tipos de Saída



Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcassa | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|----------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 789 | — | 10 | 12,8 | 4 | 791,5 | 982 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 789 | 636 | 10 | 16,3 | 5 | 823,5 | 1007 | 854 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 802 | 674,5 | 12 | 21,8 | 6 | 850,5 | 1038 | 910,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 802 | 674,5 | 12 | 27,3 | 8 | 870,5 | 1056 | 928,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 802 | 674,5 | 12 | 27,3 | 8 | 895,5 | 1081 | 953,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 812 | 695 | 15 | 31,3 | 8 | 945 | 1128 | 1011 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 812 | 695 | 15 | 31,3 | 8 | 961 | 1145 | 1028 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 832 | 750 | 15 | 41,3 | 10 | 1044 | 1204 | 1122 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 832 | 750 | 15 | 41,3 | 10 | 1082 | 1242 | 1160 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1095 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1139 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

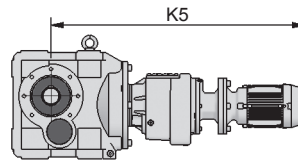
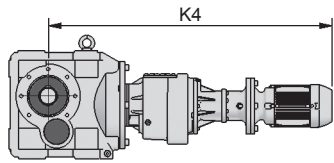
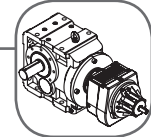
** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

Tamanho **64**

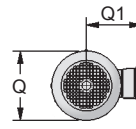
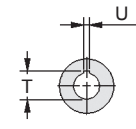
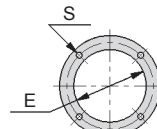
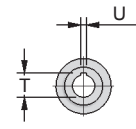
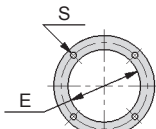
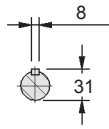
Fixação por pés - N

Duplex



Flange Lanterna com Motor

Flange KTR com Motor



Tipos de Entrada

Eixo de Entrada

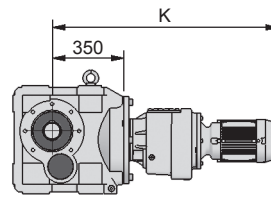
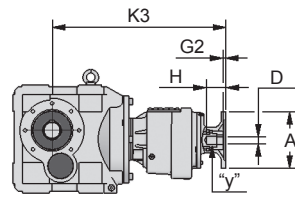
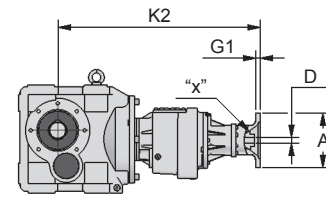
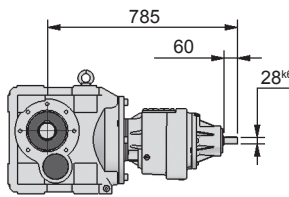
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frete do Motor

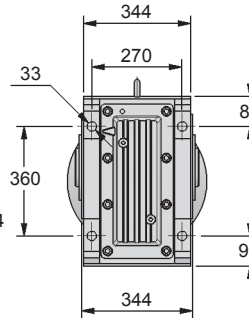
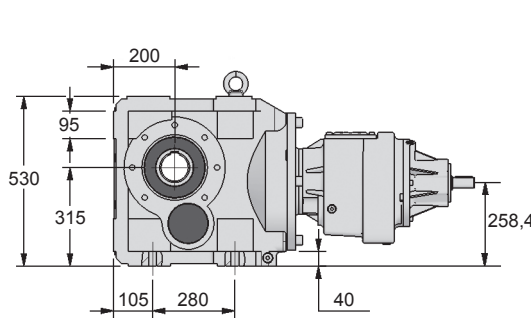


Mancal

Flange Lanterna

Flange KTR

Motor

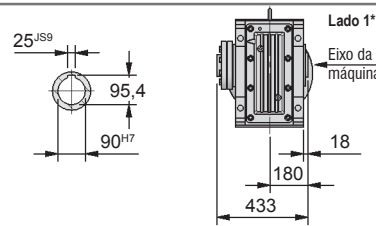
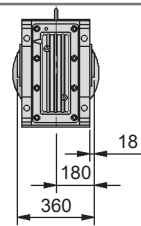
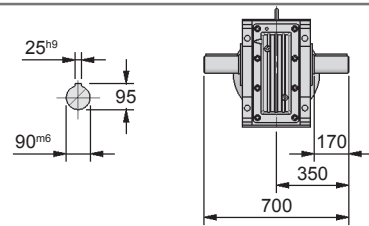
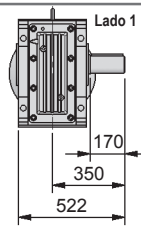


Eixo Integral Simples

Eixo Integral Duplo

Eixo Vazado com Chaveta

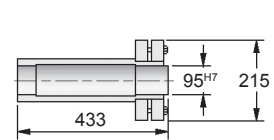
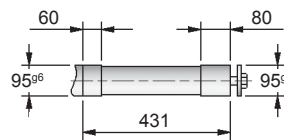
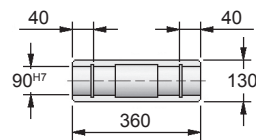
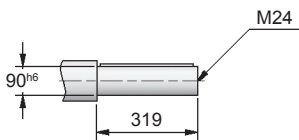
Eixo Vazado com Disco de Contração



Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ∅11 | 115 | 4 | 0 | — | — | 825 | — | 10 | 12,8 | 4 | 827,5 | 1018 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ∅14 | 130 | 4 | 0,5 | 1 | 34 | 825 | 672 | 10 | 16,3 | 5 | 859,5 | 1043 | 890 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ∅19 | 165 | 4 | 10 | 1 | 44 | 838 | 710,5 | 12 | 21,8 | 6 | 886,5 | 1074 | 946,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 838 | 710,5 | 12 | 27,3 | 8 | 906,5 | 1092 | 964,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ∅24 | 165 | 4 | 10 | 1 | 52 | 838 | 710,5 | 12 | 27,3 | 8 | 931,5 | 1117 | 989,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 848 | 731 | 15 | 31,3 | 8 | 981 | 1164 | 1047 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ∅28 | 215 | 5 | 20 | 1 | 63 | 848 | 731 | 15 | 31,3 | 8 | 997 | 1181 | 1064 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 868 | 786 | 15 | 41,3 | 10 | 1080 | 1240 | 1158 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ∅38 | 265 | 5 | 30 | 1 | 83 | 868 | 786 | 15 | 41,3 | 10 | 1118 | 1278 | 1196 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1131 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1175 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

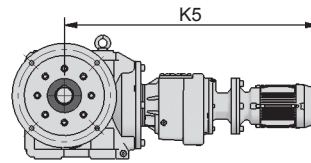
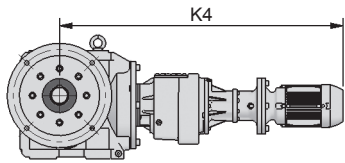


Fixação por flange e pés - G_J

Dimensões

Tamanho **64**

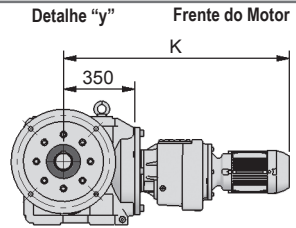
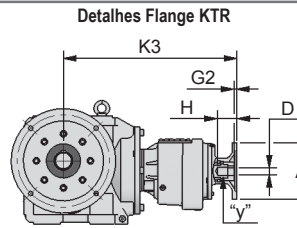
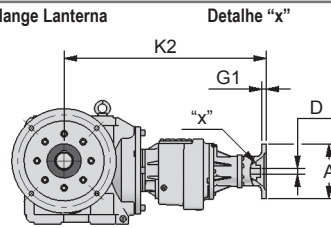
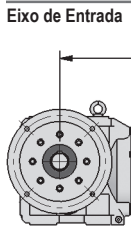
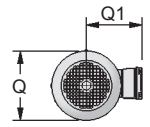
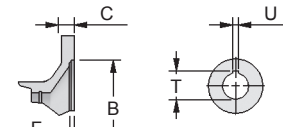
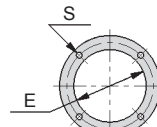
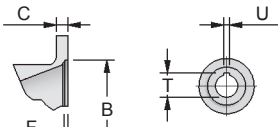
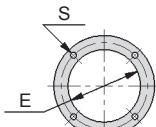
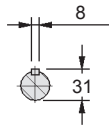
Duplex



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada

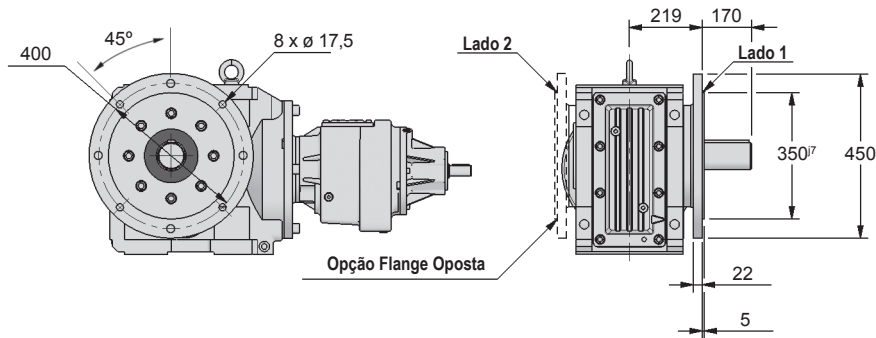


Mancal

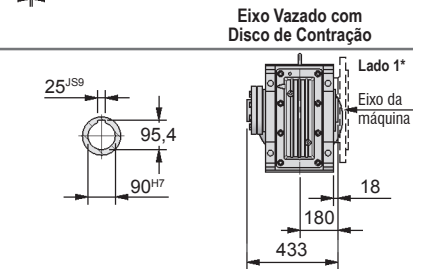
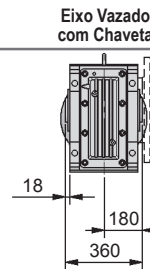
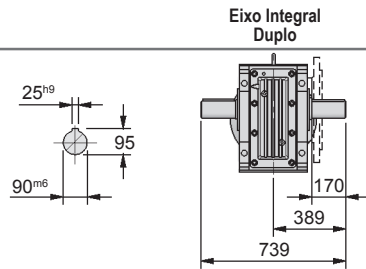
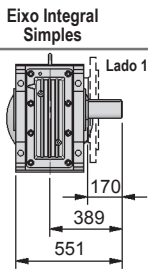
Flange Lanterna

Flange KTR

Motor

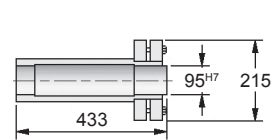
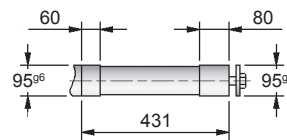
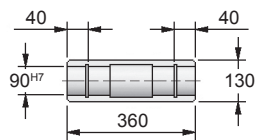
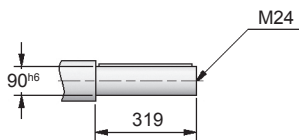


Tipos de Saída



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 825 | — | 10 | 12,8 | 4 | 827,5 | 1018 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 825 | 672 | 10 | 16,3 | 5 | 859,5 | 1043 | 890 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 838 | 710,5 | 12 | 21,8 | 6 | 886,5 | 1074 | 946,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 838 | 710,5 | 12 | 27,3 | 8 | 906,5 | 1092 | 964,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 838 | 710,5 | 12 | 27,3 | 8 | 931,5 | 1117 | 989,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 848 | 731 | 15 | 31,3 | 8 | 981 | 1164 | 1047 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 848 | 731 | 15 | 31,3 | 8 | 997 | 1181 | 1064 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 868 | 786 | 15 | 41,3 | 10 | 1080 | 1240 | 1158 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 868 | 786 | 15 | 41,3 | 10 | 1118 | 1278 | 1196 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1131 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1175 | — | — | 317 | 250 |

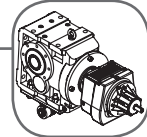
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **64**

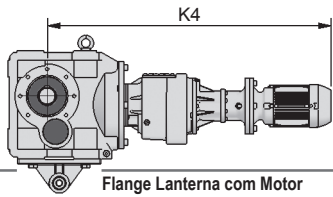
Fixação por braço de torção - B

Duplex

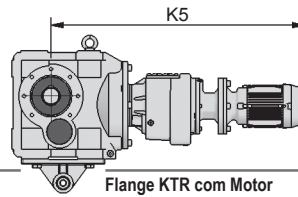


Tipos de Entrada

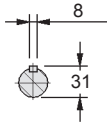
Tipos de Saída



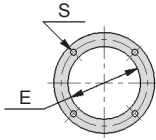
Flange Lanterna com Motor



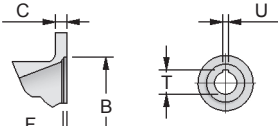
Flange KTR com Motor



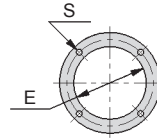
Eixo de Entrada



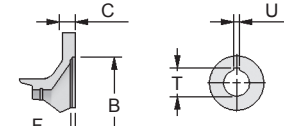
Detalhes Flange Lanterna



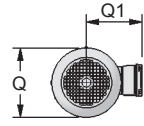
Detalhe "x"



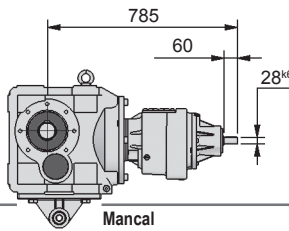
Detalhes Flange KTR



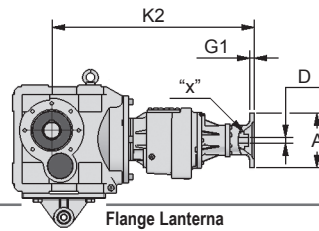
Detalhe "y"



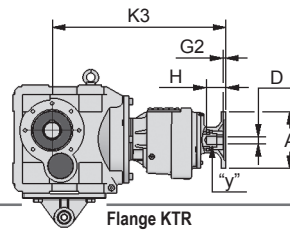
Frente do Motor



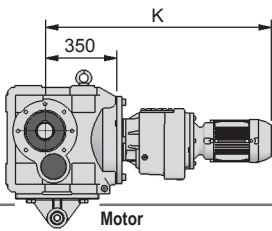
Mancal



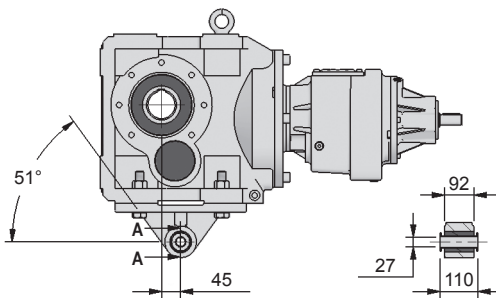
Flange Lanterna



Flange KTR

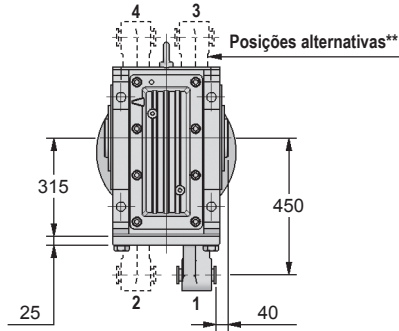


Motor

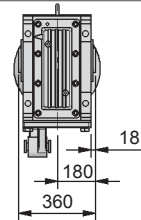


Eixo Vazado com Chaveta

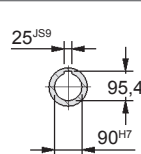
Corte "AA"



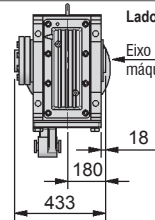
Eixo Vazado com Disco de Contração



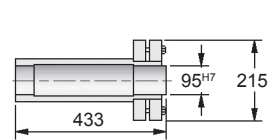
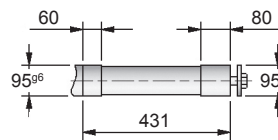
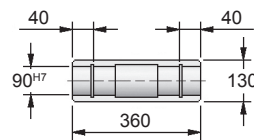
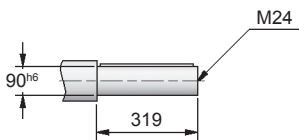
Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14



| Carcaca | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|----|-------|------|-------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 825 | — | 10 | 12,8 | 4 | 827,5 | 1018 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 825 | 672 | 10 | 16,3 | 5 | 859,5 | 1043 | 890 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 838 | 710,5 | 12 | 21,8 | 6 | 886,5 | 1074 | 946,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 838 | 710,5 | 12 | 27,3 | 8 | 906,5 | 1092 | 964,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 838 | 710,5 | 12 | 27,3 | 8 | 931,5 | 1117 | 989,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 848 | 731 | 15 | 31,3 | 8 | 981 | 1164 | 1047 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 848 | 731 | 15 | 31,3 | 8 | 997 | 1181 | 1064 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 868 | 786 | 15 | 41,3 | 10 | 1080 | 1240 | 1158 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 868 | 786 | 15 | 41,3 | 10 | 1118 | 1278 | 1196 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1131 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1175 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.



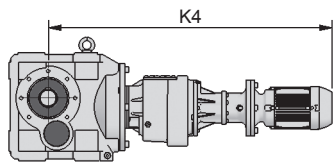
Fixação por pés - N

Duplex

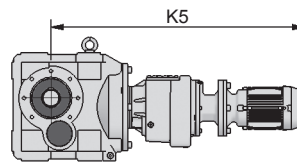
Dimensões

Tamanho **66**

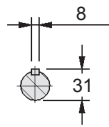
Tipos de Entrada



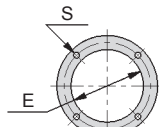
Flange Lanterna com Motor



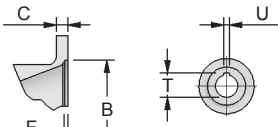
Flange KTR com Motor



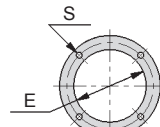
Eixo de Entrada



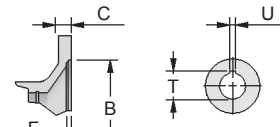
Detalhes Flange Lanterna



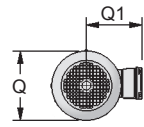
Detalhe "x"



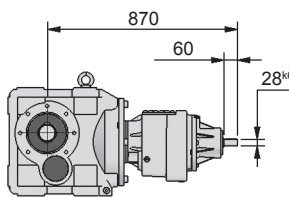
Detalhes Flange KTR



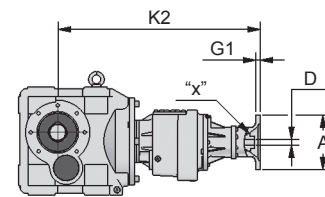
Detalhe "y"



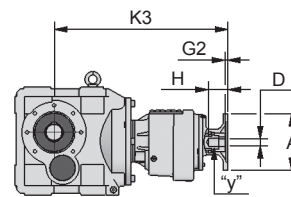
Frente do Motor



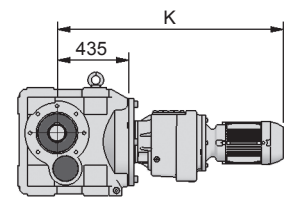
Mancal



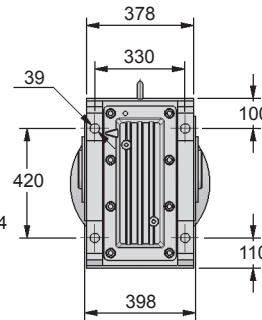
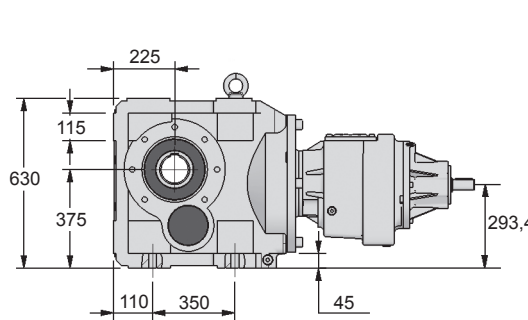
Flange Lanterna



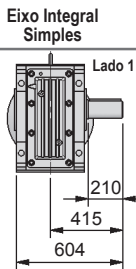
Flange KTR



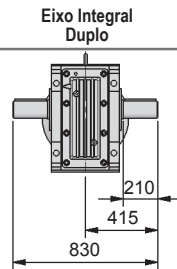
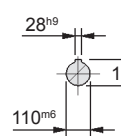
Motor



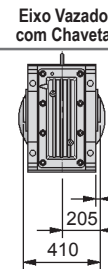
Tipos de Saída



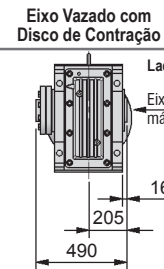
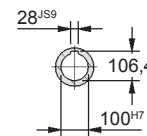
Eixo Integral Simples



Eixo Integral Duplo



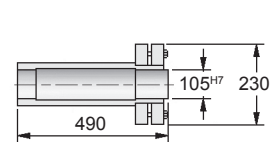
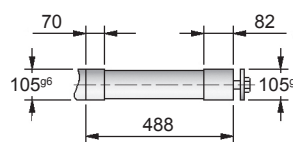
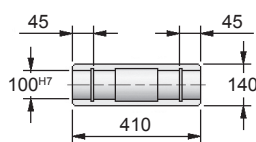
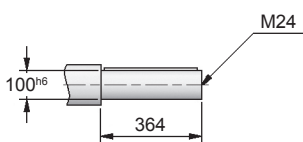
Eixo Vazado com Chaveta



Eixo Vazado com Disco de Contração

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|----|--------|------|--------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 910 | — | 10 | 12,8 | 4 | 912,5 | 1103 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 910 | 757 | 10 | 16,3 | 5 | 944,5 | 1128 | 975 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 923 | 795,5 | 12 | 21,8 | 6 | 971,5 | 1159 | 1031,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 44 | 923 | 795,5 | 12 | 27,3 | 8 | 991,5 | 1177 | 1049,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 923 | 795,5 | 12 | 27,3 | 8 | 1016,5 | 1202 | 1074,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 933 | 816 | 15 | 31,3 | 8 | 1066 | 1249 | 1132 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 933 | 816 | 15 | 31,3 | 8 | 1082 | 1266 | 1149 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 953 | 871 | 15 | 41,3 | 10 | 1165 | 1325 | 1243 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 953 | 871 | 15 | 41,3 | 10 | 1203 | 1363 | 1281 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1216 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1260 | — | — | 317 | 250 |

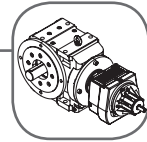
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **66**

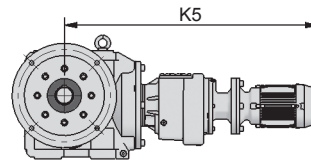
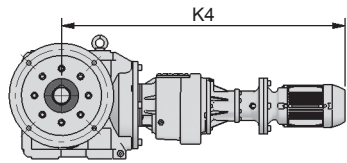
Fixação por flange e pés - G K

Duplex



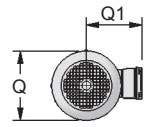
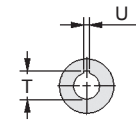
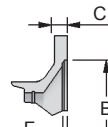
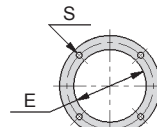
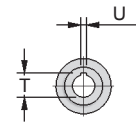
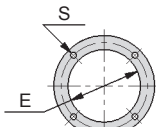
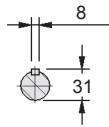
Tipos de Entrada

Tipos de Saída



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

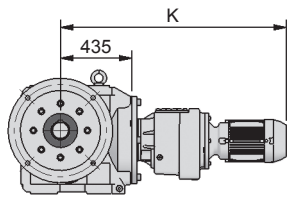
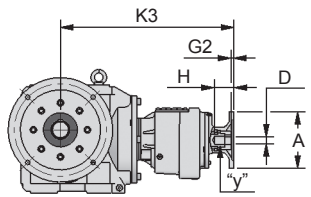
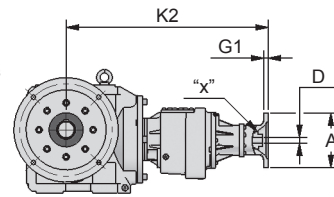
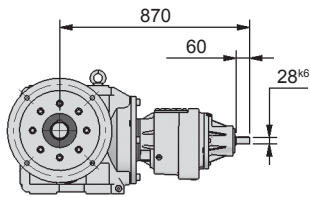
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frete do Motor

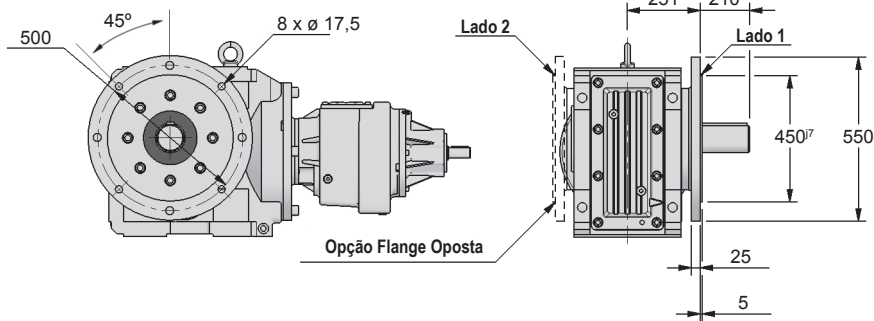


Mancal

Flange Lanterna

Flange KTR

Motor



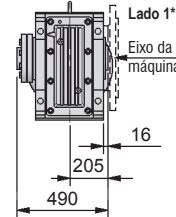
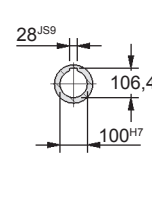
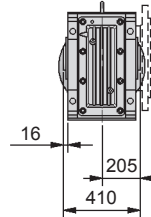
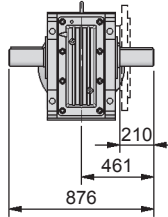
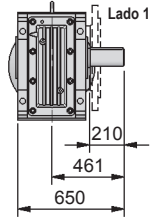
Opção Flange Oposta

Eixo Integral Simples

Eixo Integral Duplo

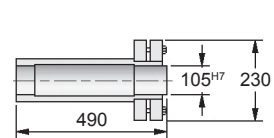
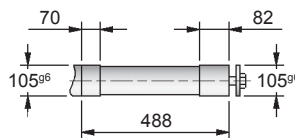
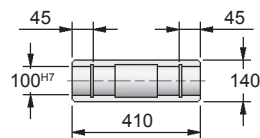
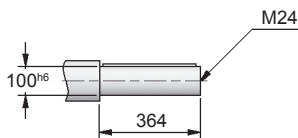
Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaca | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|----------------|-------|----|------|----|--------|------|--------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 910 | — | 10 | 12,8 | 4 | 912,5 | 1103 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 910 | 757 | 10 | 16,3 | 5 | 944,5 | 1128 | 975 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 923 | 795,5 | 12 | 21,8 | 6 | 971,5 | 1159 | 1031,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 923 | 795,5 | 12 | 27,3 | 8 | 991,5 | 1177 | 1049,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 923 | 795,5 | 12 | 27,3 | 8 | 1016,5 | 1202 | 1074,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 933 | 816 | 15 | 31,3 | 8 | 1066 | 1249 | 1132 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 933 | 816 | 15 | 31,3 | 8 | 1082 | 1266 | 1149 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 953 | 871 | 15 | 41,3 | 10 | 1165 | 1325 | 1243 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 953 | 871 | 15 | 41,3 | 10 | 1203 | 1363 | 1281 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1216 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1260 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



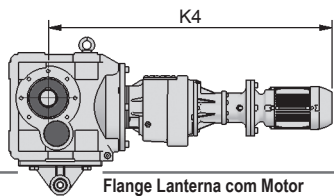
Fixação por braço de torção - B

Duplex

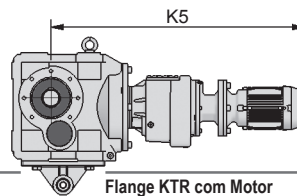
Dimensões

Tamanho **66**

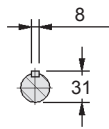
Tipos de Entrada



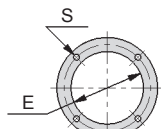
Flange Lanterna com Motor



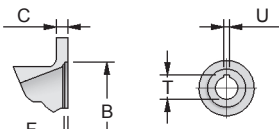
Flange KTR com Motor



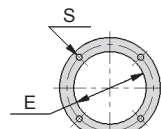
Eixo de Entrada



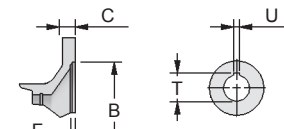
Detalhes Flange Lanterna



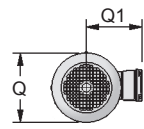
Detalhe "x"



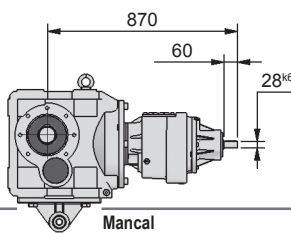
Detalhes Flange KTR



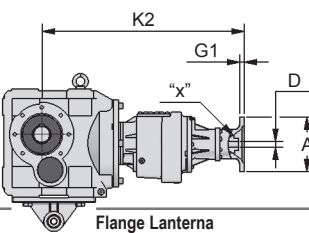
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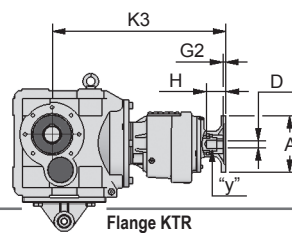
Frente do Motor



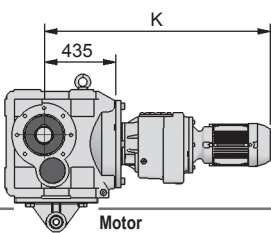
Mancal



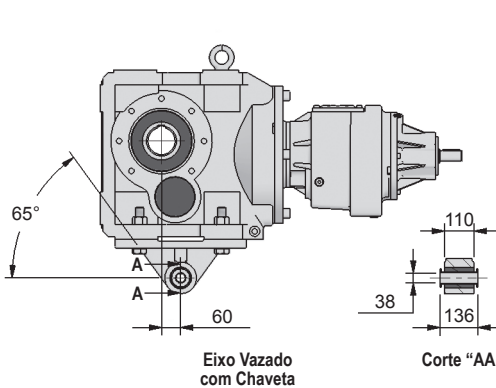
Flange Lanterna



Flange KTR

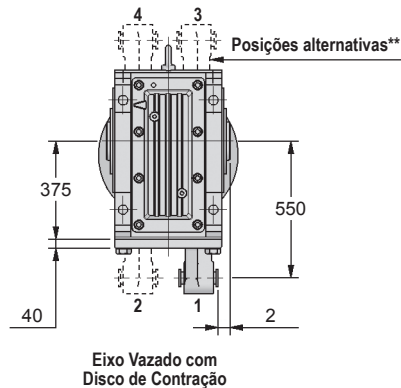


Motor



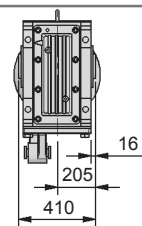
Eixo Vazado com Chaveta

Corte "AA"

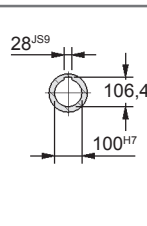


Eixo Vazado com Disco de Contração

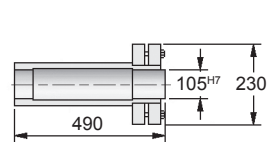
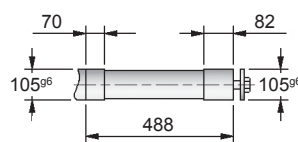
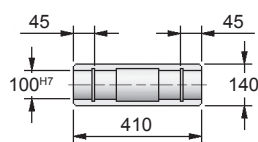
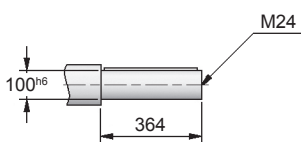
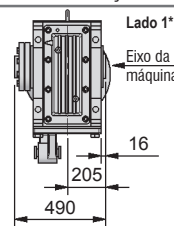
Tipos de Saída



Sugestão de acoplamento no Eixo Vazado



Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|-----|----|----|-----|----------------|----|------|----|--------|------|--------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 63 | 140 | 95 ^{H7} | 13 | ø11 | 115 | 4 | 0 | — | — | 910 | — | 10 | 12,8 | 4 | 912,5 | 1103 | — | 124 | 113 |
| 71 | 160 | 110 ^{H7} | 14 | ø14 | 130 | 4 | 0,5 | 1 | 34 | 910 | 757 | 10 | 16,3 | 5 | 944,5 | 1128 | 975 | 139 | 121 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 923 | 795,5 | 12 | 21,8 | 6 | 971,5 | 1159 | 1031,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 923 | 795,5 | 12 | 27,3 | 8 | 991,5 | 1177 | 1049,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 923 | 795,5 | 12 | 27,3 | 8 | 1016,5 | 1202 | 1074,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 933 | 816 | 15 | 31,3 | 8 | 1066 | 1249 | 1132 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 933 | 816 | 15 | 31,3 | 8 | 1082 | 1266 | 1149 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 953 | 871 | 15 | 41,3 | 10 | 1165 | 1325 | 1243 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 953 | 871 | 15 | 41,3 | 10 | 1203 | 1363 | 1281 | 274 | 207 |
| 160M | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1216 | — | — | 317 | 250 |
| 160L | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1260 | — | — | 317 | 250 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

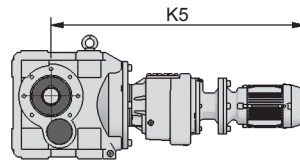
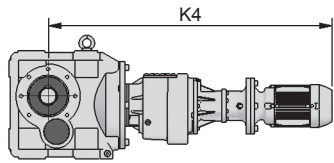
** Considerar como referência a posição de trabalho 1, conforme página 6.

Dimensões

Tamanho **68-60**

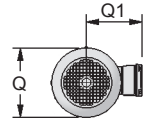
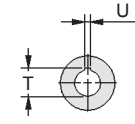
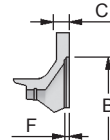
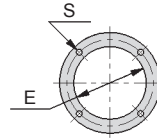
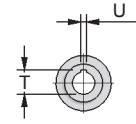
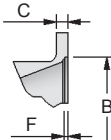
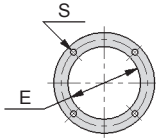
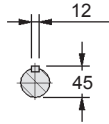
Fixação por pés - N

Duplex (6 estágios)



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

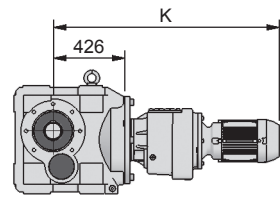
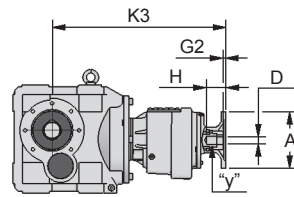
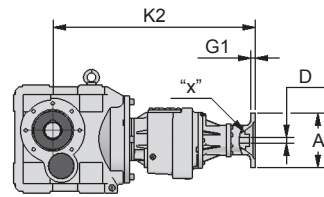
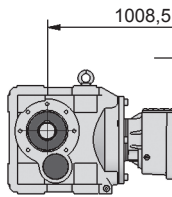
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

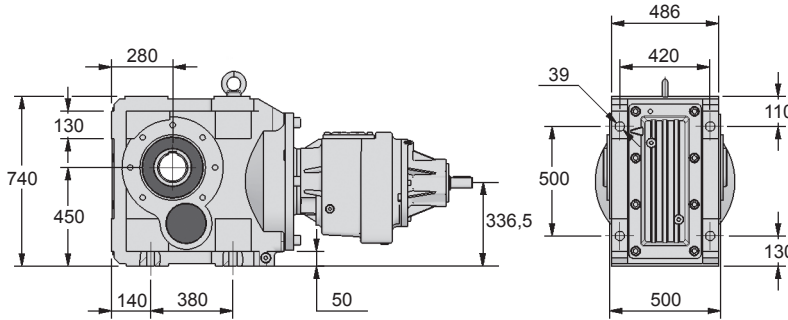


Mancal

Flange Lanterna

Flange KTR

Motor

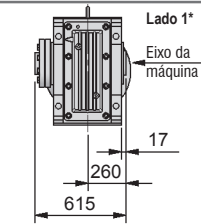
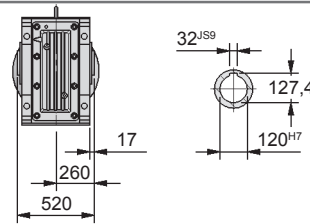
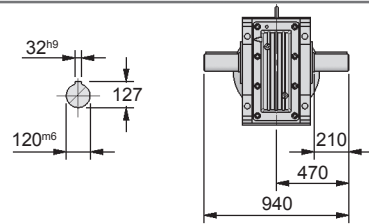
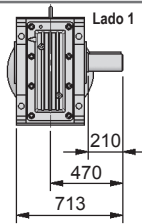


Eixo Integral Simples

Eixo Integral Duplo

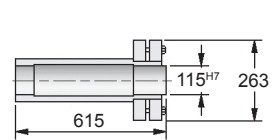
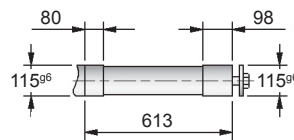
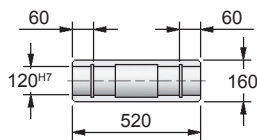
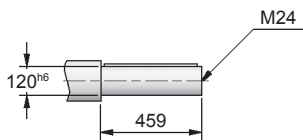
Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



14

| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|--------|--------|----------------|------|----|--------|--------|--------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 1062,5 | 872,5 | 12 | 21,8 | 6 | 1048,5 | 1298,5 | 1108,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 1062,5 | 872,5 | 12 | 27,3 | 8 | 1070,5 | 1316,5 | 1126,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 1062,5 | 872,5 | 12 | 27,3 | 8 | 1095,5 | 1341,5 | 1151,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1071,5 | 894,5 | 15 | 31,3 | 8 | 1144,5 | 1387,5 | 1210,5 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1071,5 | 894,5 | 15 | 31,3 | 8 | 1160,5 | 1404,5 | 1227,5 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1091,5 | 949,5 | 15 | 41,3 | 10 | 1243,5 | 1463,5 | 1321,5 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1091,5 | 949,5 | 15 | 41,3 | 10 | 1281,5 | 1501,5 | 1359,5 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1123,5 | 997,5 | 19 | 45,3 | 12 | 1294,5 | 1611,5 | 1485,5 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1123,5 | 997,5 | 19 | 45,3 | 12 | 1338,5 | 1655,5 | 1529,5 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 1123,5 | 997,5 | 19 | 51,8 | 14 | 1368,5 | 1677,5 | 1551,5 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 1042,5 | 19 | 59,3 | 16 | 1331,5 | — | 1661,5 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 1042,5 | 19 | 59,3 | 16 | 1469,5 | — | 1699,5 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | — | 11 | 124 | — | 1057,5 | 19 | 64,4 | 18 | 1512,5 | — | 1764,5 | 466 | 368 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

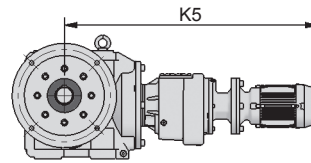
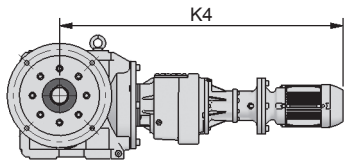


Fixação por flange e pés - G_L

Duplex (6 estágios)

Dimensões

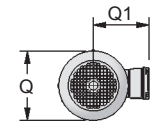
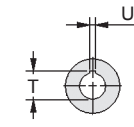
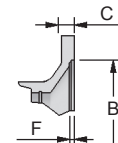
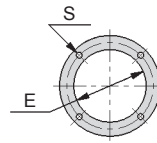
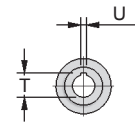
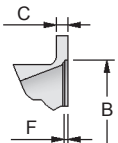
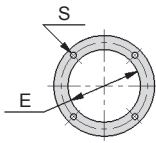
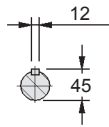
Tamanho **68-60**



Flange Lanterna com Motor

Flange KTR com Motor

Tipos de Entrada



Eixo de Entrada

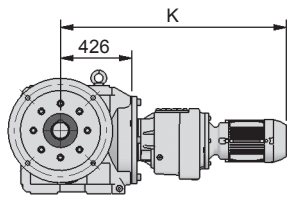
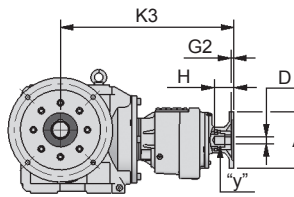
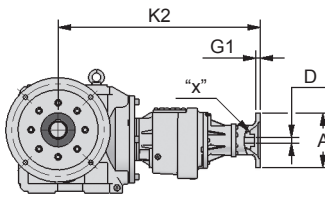
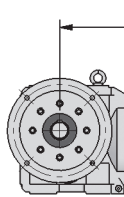
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

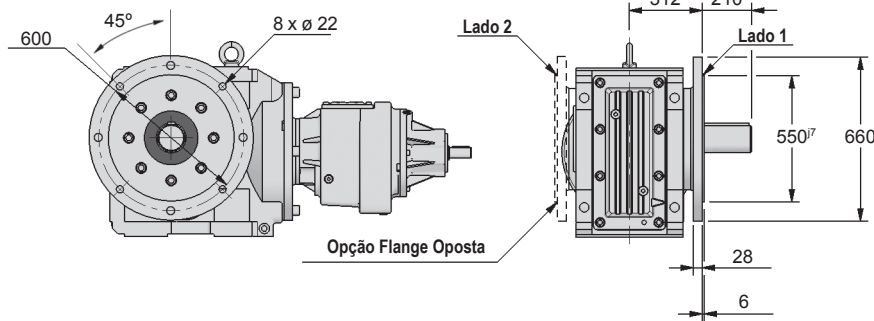


Mancal

Flange Lanterna

Flange KTR

Motor



Opção Flange Oposta

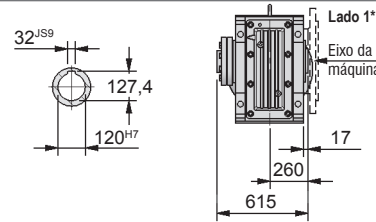
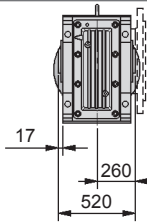
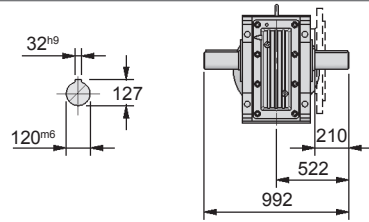
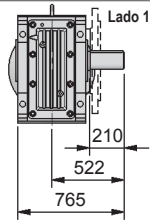
Tipos de Saída

Eixo Integral Simples

Eixo Integral Duplo

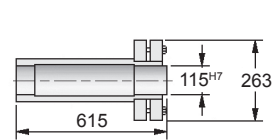
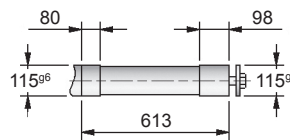
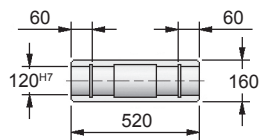
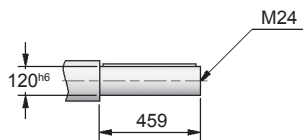
Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|--------|--------|----------------|------|----|--------|--------|--------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 1062,5 | 872,5 | 12 | 21,8 | 6 | 1048,5 | 1298,5 | 1108,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 1062,5 | 872,5 | 12 | 27,3 | 8 | 1070,5 | 1316,5 | 1126,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 1062,5 | 872,5 | 12 | 27,3 | 8 | 1095,5 | 1341,5 | 1151,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1071,5 | 894,5 | 15 | 31,3 | 8 | 1144,5 | 1387,5 | 1210,5 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1071,5 | 894,5 | 15 | 31,3 | 8 | 1160,5 | 1404,5 | 1227,5 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1091,5 | 949,5 | 15 | 41,3 | 10 | 1243,5 | 1463,5 | 1321,5 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1091,5 | 949,5 | 15 | 41,3 | 10 | 1281,5 | 1501,5 | 1359,5 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1123,5 | 997,5 | 19 | 45,3 | 12 | 1294,5 | 1611,5 | 1485,5 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1123,5 | 997,5 | 19 | 45,3 | 12 | 1338,5 | 1655,5 | 1529,5 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 1123,5 | 997,5 | 19 | 51,8 | 14 | 1368,5 | 1677,5 | 1551,5 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 1042,5 | 19 | 59,3 | 16 | 1331,5 | — | 1661,5 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 1042,5 | 19 | 59,3 | 16 | 1469,5 | — | 1699,5 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | — | 11 | 124 | — | 1057,5 | 19 | 64,4 | 18 | 1512,5 | — | 1764,5 | 466 | 368 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **68-60**

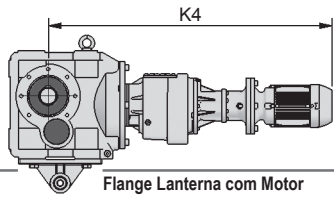
Fixação por braço de torção - B

Duplex (6 estágios)

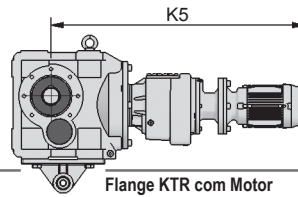


Tipos de Entrada

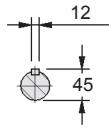
Tipos de Saída



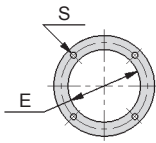
Flange Lanterna com Motor



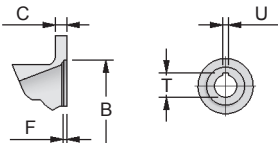
Flange KTR com Motor



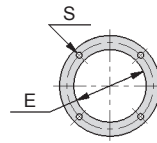
Eixo de Entrada



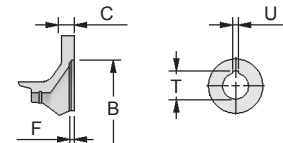
Detalhes Flange Lanterna



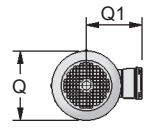
Detalhe "x"



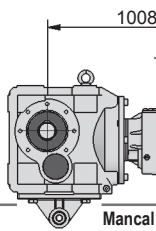
Detalhes Flange KTR



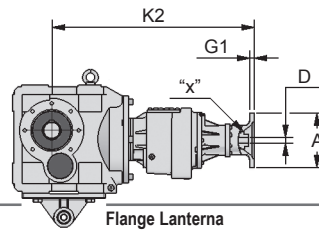
Detalhe "y"



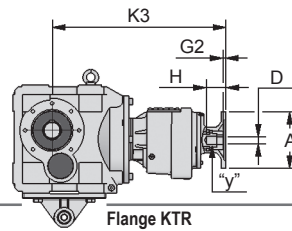
Frente do Motor



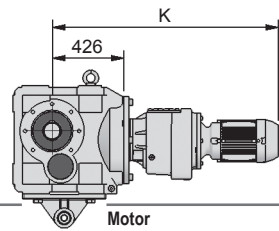
Mancal



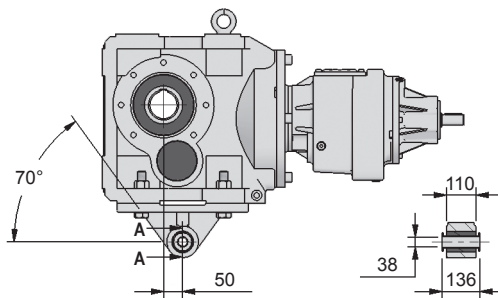
Flange Lanterna



Flange KTR

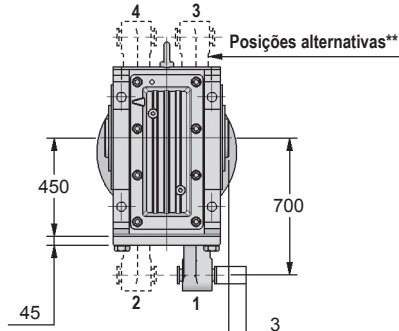


Motor

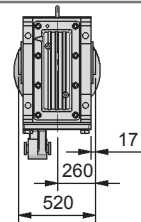


Eixo Vazado com Chaveta

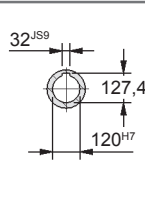
Corte "AA"



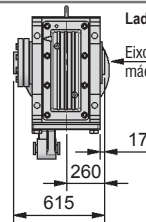
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

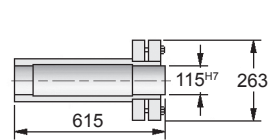
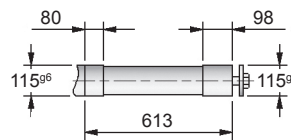
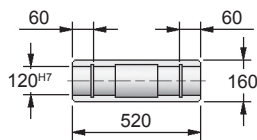
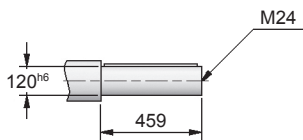


Sugestão de acoplamento no Eixo Vazado com Disco de Contração



Lado 1*
Eixo da máquina

14



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | | Motor Elétrico | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|--------|--------|----------------|------|----|--------|--------|--------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 80 | 200 | 130 ^{H7} | 15 | ø19 | 165 | 4 | 10 | 1 | 44 | 1062,5 | 872,5 | 12 | 21,8 | 6 | 1048,5 | 1298,5 | 1108,5 | 157 | 130 |
| 90S | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 1062,5 | 872,5 | 12 | 27,3 | 8 | 1070,5 | 1316,5 | 1126,5 | 177 | 150 |
| 90L | 200 | 130 ^{H7} | 15 | ø24 | 165 | 4 | 10 | 1 | 52 | 1062,5 | 872,5 | 12 | 27,3 | 8 | 1095,5 | 1341,5 | 1151,5 | 177 | 150 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1071,5 | 894,5 | 15 | 31,3 | 8 | 1144,5 | 1387,5 | 1210,5 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1071,5 | 894,5 | 15 | 31,3 | 8 | 1160,5 | 1404,5 | 1227,5 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1091,5 | 949,5 | 15 | 41,3 | 10 | 1243,5 | 1463,5 | 1321,5 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1091,5 | 949,5 | 15 | 41,3 | 10 | 1281,5 | 1501,5 | 1359,5 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1123,5 | 997,5 | 19 | 45,3 | 12 | 1294,5 | 1611,5 | 1485,5 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1123,5 | 997,5 | 19 | 45,3 | 12 | 1338,5 | 1655,5 | 1529,5 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 1123,5 | 997,5 | 19 | 51,8 | 14 | 1368,5 | 1677,5 | 1551,5 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 1042,5 | 19 | 59,3 | 16 | 1331,5 | — | 1661,5 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | — | 1 | 114 | — | 1042,5 | 19 | 59,3 | 16 | 1469,5 | — | 1699,5 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | — | 11 | 124 | — | 1057,5 | 19 | 64,4 | 18 | 1512,5 | — | 1764,5 | 466 | 368 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.



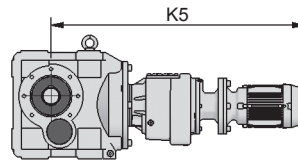
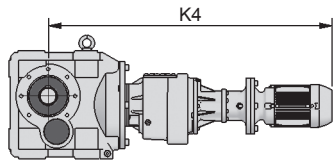
Fixação por pés - N

Duplex (5 estágios)

Dimensões

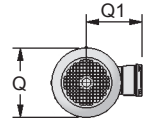
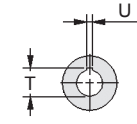
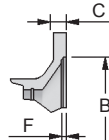
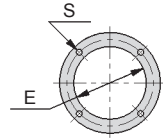
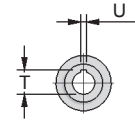
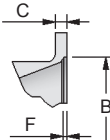
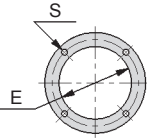
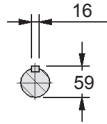
Tamanho **68-62**

Tipos de Entrada



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

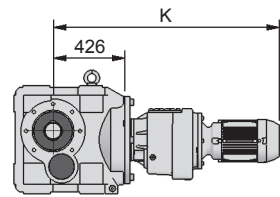
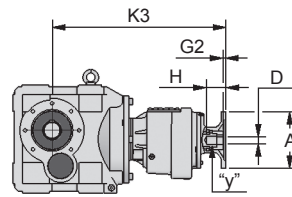
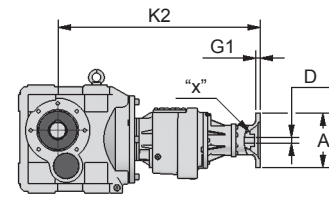
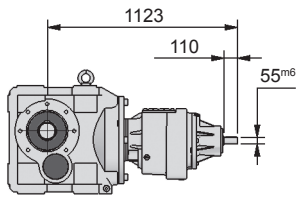
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor

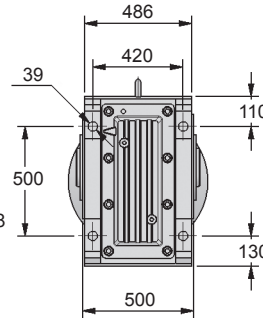
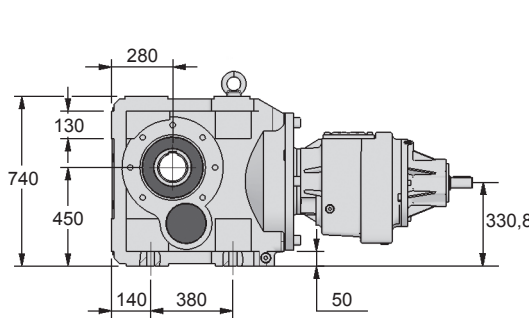


Mancais

Flange Lanterna

Flange KTR

Motor

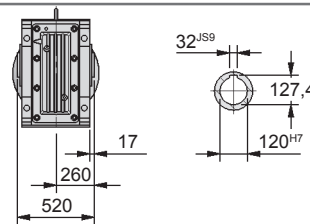
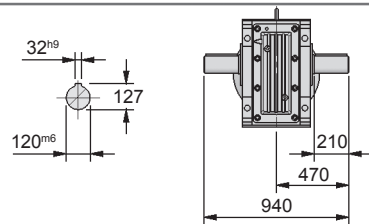
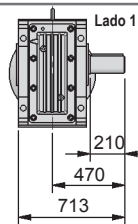


Eixo Integral Simples

Eixo Integral Duplo

Eixo Vazado com Chaveta

Eixo Vazado com Disco de Contração



Lado 1

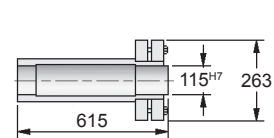
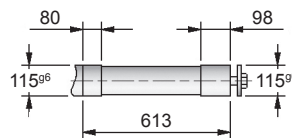
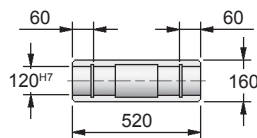
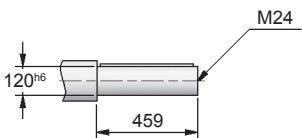
Lado 1*

Eixo da máquina

Tipos de Saída

Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|------|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1188 | 948 | 15 | 31,3 | 8 | 1198 | 1504 | 1264 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1188 | 948 | 15 | 31,3 | 8 | 1214 | 1521 | 1281 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1208 | 1003 | 15 | 41,3 | 10 | 1297 | 1580 | 1375 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1208 | 1003 | 15 | 41,3 | 10 | 1335 | 1618 | 1413 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1238 | 1051 | 19 | 45,3 | 12 | 1348 | 1726 | 1539 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1238 | 1051 | 19 | 45,3 | 12 | 1392 | 1770 | 1583 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 1238 | 1051 | 19 | 51,8 | 14 | 1422 | 1792 | 1605 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 1238 | 1096 | 19 | 59,3 | 16 | 1385 | 1857 | 1715 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 1238 | 1096 | 19 | 59,3 | 16 | 1523 | 1895 | 1753 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 1268 | 1111 | 19 | 64,4 | 18 | 1572 | 1975 | 1818 | 466 | 368 |
| 250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1648 | — | — | 491 | 368 |
| 280 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1760 | — | — | 578 | 463 |

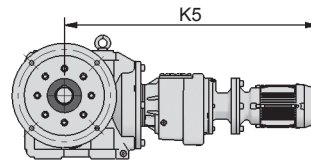
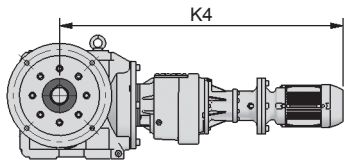
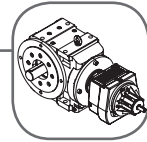
* Lado 2: inverter as posições do disco e entrada do eixo da máquina

Dimensões

Tamanho **68-62**

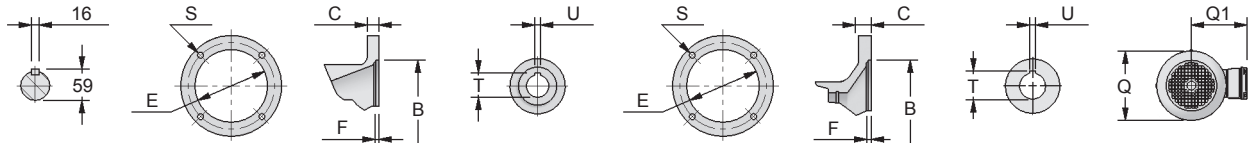
Fixação por flange e pés - G L

Duplex (5 estágios)



Flange Lanterna com Motor

Flange KTR com Motor



Eixo de Entrada

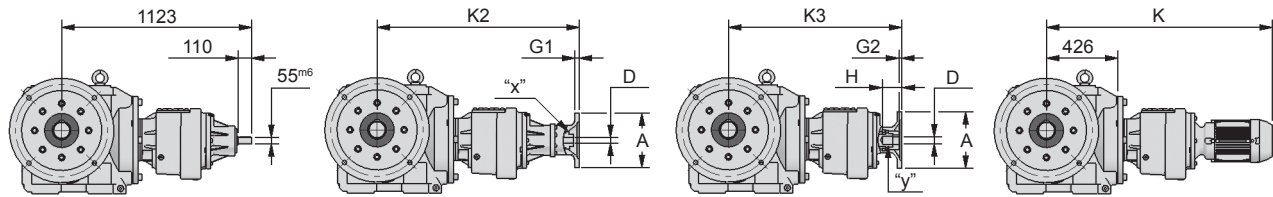
Detalhes Flange Lanterna

Detalhe "x"

Detalhes Flange KTR

Detalhe "y"

Frente do Motor



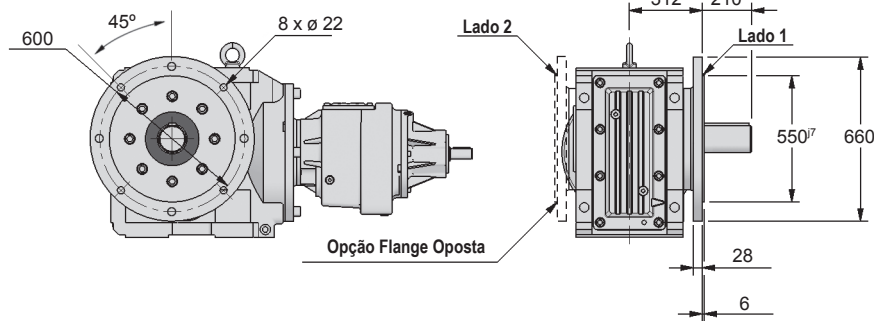
Mancal

Flange Lanterna

Flange KTR

Motor

Tipos de Entrada



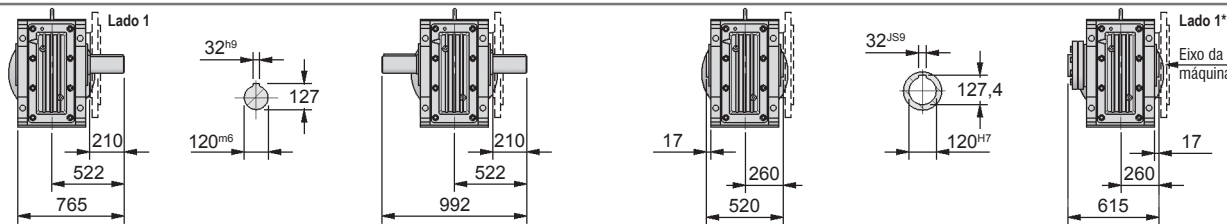
Opção Flange Oposta

Eixo Integral Simples

Eixo Integral Duplo

Eixo Vazado com Chaveta

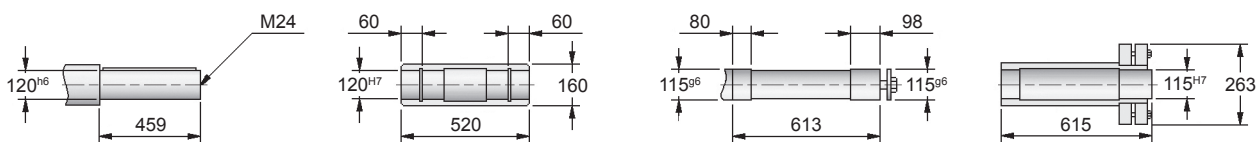
Eixo Vazado com Disco de Contração



Sugestão de acoplamento no Eixo Vazado

Sugestão de acoplamento no Eixo Vazado com Disco de Contração

Tipos de Saída



14

| Carcaca | Flange Lanterna / KTR | | | | | | | | | Motor Elétrico | | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|----------------|------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1188 | 948 | 15 | 31,3 | 8 | 1198 | 1504 | 1264 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1188 | 948 | 15 | 31,3 | 8 | 1214 | 1521 | 1281 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1208 | 1003 | 15 | 41,3 | 10 | 1297 | 1580 | 1375 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1208 | 1003 | 15 | 41,3 | 10 | 1335 | 1618 | 1413 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1238 | 1051 | 19 | 45,3 | 12 | 1348 | 1726 | 1539 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1238 | 1051 | 19 | 45,3 | 12 | 1392 | 1770 | 1583 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 1238 | 1051 | 19 | 51,8 | 14 | 1422 | 1792 | 1605 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 1238 | 1096 | 19 | 59,3 | 16 | 1385 | 1857 | 1715 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 1238 | 1096 | 19 | 59,3 | 16 | 1523 | 1895 | 1753 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 1268 | 1111 | 19 | 64,4 | 18 | 1572 | 1975 | 1818 | 466 | 368 |
| 250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1648 | — | — | 491 | 368 |
| 280 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1760 | — | — | 578 | 463 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina



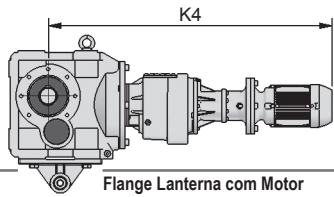
Fixação por braço de torção - B

Duplex (5 estágios)

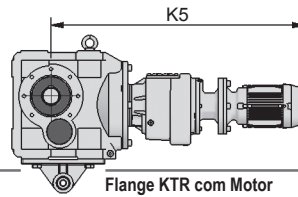
Dimensões

Tamanho **68-62**

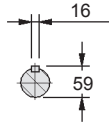
Tipos de Entrada



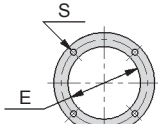
Flange Lanterna com Motor



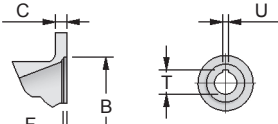
Flange KTR com Motor



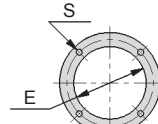
Eixo de Entrada



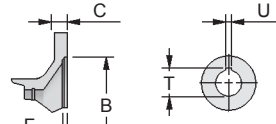
Detalhes Flange Lanterna



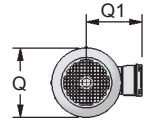
Detalhe "x"



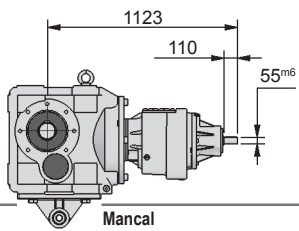
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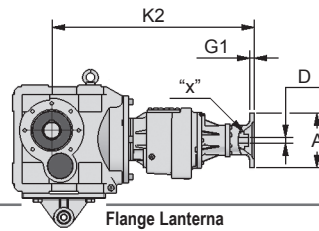
Detalhe "y"



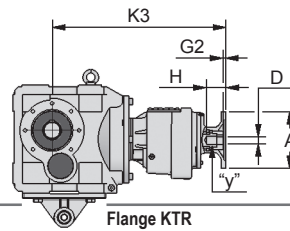
Frente do Motor



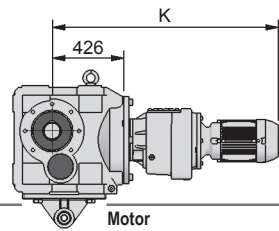
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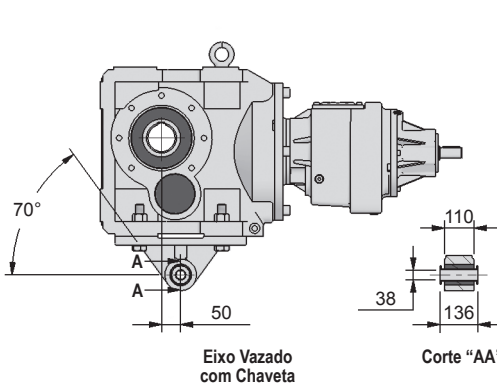
Flange Lanterna



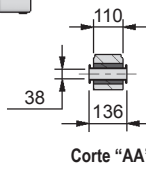
Flange KTR



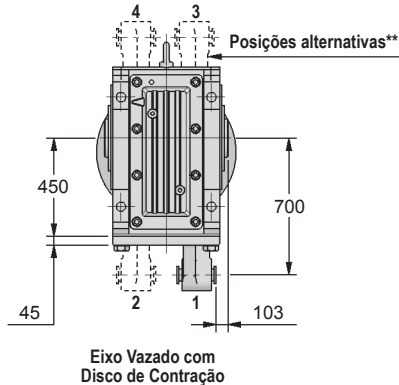
Motor



Eixo Vazado com Chaveta

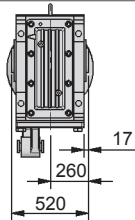


Corte "AA"

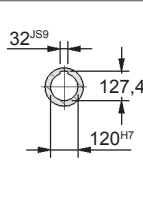


Eixo Vazado com Disco de Contração

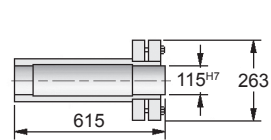
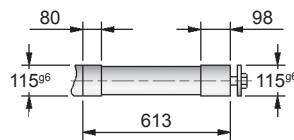
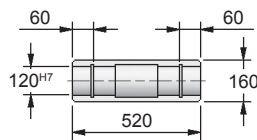
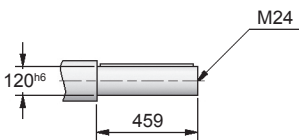
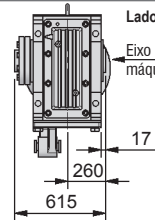
Tipos de Saída



Sugestão de acoplamento no Eixo Vazado



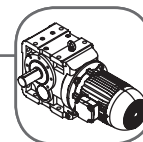
Sugestão de acoplamento no Eixo Vazado com Disco de Contração



| Carcaça | Flange Lanterna / KTR | | | | | | | | | | Motor Elétrico | | | | | | | | |
|---------|-----------------------|-------------------|----|-----|-----|---|----|----|-----|------|----------------|----|------|----|------|------|------|-----|-----|
| | A | B | C | D | E | F | G1 | G2 | H | K2 | K3 | S | T | U | K | K4 | K5 | Q | Q1 |
| 100 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1188 | 948 | 15 | 31,3 | 8 | 1198 | 1504 | 1264 | 198 | 160 |
| 112 | 250 | 180 ^{H7} | 16 | ø28 | 215 | 5 | 20 | 1 | 63 | 1188 | 948 | 15 | 31,3 | 8 | 1214 | 1521 | 1281 | 235 | 180 |
| 132S | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1208 | 1003 | 15 | 41,3 | 10 | 1297 | 1580 | 1375 | 274 | 207 |
| 132M | 300 | 230 ^{H7} | 17 | ø38 | 265 | 5 | 30 | 1 | 83 | 1208 | 1003 | 15 | 41,3 | 10 | 1335 | 1618 | 1413 | 274 | 207 |
| 160M | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1238 | 1051 | 19 | 45,3 | 12 | 1348 | 1726 | 1539 | 317 | 250 |
| 160L | 350 | 250 ^{H7} | 24 | ø42 | 300 | 6 | 40 | 1 | 112 | 1238 | 1051 | 19 | 45,3 | 12 | 1392 | 1770 | 1583 | 317 | 250 |
| 180M | 350 | 250 ^{H7} | 24 | ø48 | 300 | 6 | 40 | 1 | 113 | 1238 | 1051 | 19 | 51,8 | 14 | 1422 | 1792 | 1605 | 360 | 270 |
| 200M | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 1238 | 1096 | 19 | 59,3 | 16 | 1385 | 1857 | 1715 | 360 | 294 |
| 200L | 400 | 300 ^{H7} | 24 | ø55 | 350 | 6 | 30 | 1 | 114 | 1238 | 1096 | 19 | 59,3 | 16 | 1523 | 1895 | 1753 | 402 | 294 |
| 225 | 450 | 350 ^{H7} | 24 | ø60 | 400 | 6 | 60 | 11 | 124 | 1268 | 1111 | 19 | 64,4 | 18 | 1572 | 1975 | 1818 | 466 | 368 |
| 250 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1648 | — | — | 491 | 368 |
| 280 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1760 | — | — | 578 | 463 |

* Lado 2: inverter as posições do disco e entrada do eixo da máquina

** Considerar como referência a posição de trabalho 1, conforme página 6.



Motor Weg Tipo 1

| Redutor | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|
| Carcaças | | | | | | | |
| 63 | Shaded | | | | | | |
| 71 | Shaded | | | | | | |
| 80 | Shaded | Shaded | Shaded | | | | |
| 90 | Shaded | Shaded | Shaded | | | | |
| 100 | Shaded | | | Shaded | | | |
| 112 | Shaded | | | Shaded | | | |
| 132 | Shaded | | | Shaded | Shaded | Shaded | |
| 160 | | | | Shaded | Shaded | Shaded | Shaded |
| 180 | | Shaded | | Shaded | Shaded | Shaded | Shaded |
| 200 | | | Shaded | Shaded | Shaded | Shaded | Shaded |
| 225 | | | Shaded | Shaded | Shaded | Shaded | Shaded |
| 250 | | | | Shaded | Shaded | Shaded | Shaded |
| 280 | | | | Shaded | Shaded | Shaded | Shaded |
| 315 | | | | | Shaded | Shaded | Shaded |

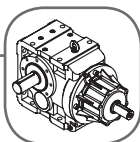
Flange Compacta KTR

| Redutor | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|
| Carcaças | | | | | | | |
| 63 | | | | | | | |
| 71 | Shaded | | | | | | |
| 80 | Shaded | Shaded | Shaded | | | | |
| 90 | Shaded | Shaded | Shaded | | | | |
| 100 | Shaded | | | Shaded | | | |
| 112 | Shaded | | | Shaded | | | |
| 132 | Shaded | | | Shaded | Shaded | Shaded | |
| 160 | | Shaded | | Shaded | Shaded | Shaded | Shaded |
| 180 | | Shaded | | Shaded | Shaded | Shaded | Shaded |
| 200 | | | Shaded | Shaded | Shaded | Shaded | Shaded |
| 225 | | | Shaded | Shaded | Shaded | Shaded | Shaded |
| 250 | | | | | Shaded | Shaded | Shaded |
| 280 | | | | | Shaded | Shaded | Shaded |

Flange Lanterna

| Redutor | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|
| Carcaças | | | | | | | |
| 63 | Shaded | | | | | | |
| 71 | Shaded | | | | | | |
| 80 | Shaded | Shaded | Shaded | | | | |
| 90 | Shaded | Shaded | Shaded | | | | |
| 100 | Shaded | | | Shaded | Shaded | | |
| 112 | Shaded | | | Shaded | Shaded | | |
| 132 | Shaded | | | | | Shaded | Shaded |
| 160 | | Shaded | | Shaded | Shaded | Shaded | Shaded |
| 180 | | Shaded | | Shaded | Shaded | Shaded | Shaded |
| 200 | | | | Shaded | Shaded | Shaded | Shaded |
| 225 | | | | Shaded | Shaded | Shaded | Shaded |

▲ Antes de escolher um redutor com flange, verificar a tabela acima juntamente com os limites mencionados na coluna Carcaças, nas páginas de Características Técnicas (redutores).



1. Controle de recebimento

Recomendamos que, quando do recebimento de nosso Motorreductor Conimax, seja verificado se o produto corresponde ao especificado e seu estado. Caso algum dano tenha sido percebido no produto, solicitamos a imediata comunicação do fato à transportadora e à WEG-CESTARI.

2. Armazenamento

O local de armazenamento deverá ser seco, isento de gases, fungos, agentes corrosivos e excesso de poeira. Quanto a forma de armazenamento o produto deverá, preferencialmente, ser guardado na posição de trabalho.

3. Instalação

As pontas dos eixos e superfícies de fixação são protegidas por uma fina camada de verniz anticorrosivo. Este verniz deverá ser removido, quando da instalação, utilizando-se solventes normais.

ATENÇÃO: O solvente não poderá atingir os retentores e jamais use lixa para remoção do verniz.

O Motorreductor deverá ser instalado na posição de trabalho, sobre uma base plana e rígida, permitindo fácil acesso aos dispositivos de lubrificação. Na conexão entre equipamento e Motorreductor é importante um alinhamento preciso.

Quando for acoplada polia, engrenagem ou roda dentada no eixo do Motorreductor, será necessário observar o paralelismo entre os eixos envolvidos, sendo aconselhável que o ponto de aplicação da carga esteja o mais próximo possível da carcaça do redutor.

A montagem do elemento de transmissão deverá ser feita com todo cuidado para evitar danos ao Motorreductor (se necessário utilize o furo de centro rosqueado, na ponta do eixo do redutor, para o travamento axial do elemento de transmissão).

Deverá ser instalado de tal maneira que a carcaça do redutor quando em funcionamento seja pressionada contra a base.

4. Operação

Os Motorredutores Conimax são fornecidos prontos para operação. Contudo, antes de iniciar a operação é conveniente verificar o nível do lubrificante. Para evitar vazamento de lubrificante durante o transporte é utilizado um bujão normal, que deverá ser substituído pelo bujão com respiro antes do início de operação.

5. Conexão elétrica

A perfeita ligação à rede é fundamental para o bom funcionamento do motor elétrico.

Ao instalar o motor elétrico devem ser observadas as tensões, frequências normais, ambiente (temperatura, ambiente agressivo), altitude e bitola correta dos fios de alimentação.

O esquema de ligação que consta na plaqueta de identificação dos motores deve ser seguido rigorosamente; caso seja necessária a alteração do sentido de rotação, as fases de ligação deverão ser invertidas.

Para maior proteção do usuário, o motor, assim como todo equipamento elétrico, deve possuir uma conexão que o ligue à terra.

6. Manutenção

Os Motorredutores Conimax requerem um mínimo de manutenção. Ela é limitada ao controle regular do lubrificante, que deverá ser trocado conforme a Tabela 9 - Tempo de Troca de Óleo, conforme o óleo que está sendo utilizado, sendo que, para condições normais, o óleo fornecido é o Óleo Mineral CLP. Nas primeiras 500 horas de operação, recomenda-se a verificação da qualidade do óleo e, se houver contaminação por partículas, recomenda-se a troca do mesmo e o acompanhamento do redutor.

A temperatura de operação é a temperatura do óleo lubrificante após o período de estabilização da temperatura em plena carga (aproximadamente 3 horas de funcionamento contínuo), sendo que a temperatura externa da carcaça é aproximadamente 15°C menor que a temperatura de operação (temperatura do óleo).

A temperatura de operação para os redutores WEG-CESTARI é de 18°C (mínima) e 90°C (máxima), em condições normais de funcionamento.

Para trocar o óleo é necessário remover o bujão de dreno e o respiro, devendo o óleo ser drenado ainda quente, para facilitar o escoamento e a limpeza. Recomenda-se lavar o redutor com óleo da mesma marca e tipo, porém com viscosidade menor, e verificação da limpeza de funis e bujões utilizados.

Em caso de condições desfavoráveis de ambiente (alta umidade, agressividade, poeira), recomenda-se reduzir o tempo de troca recomendado, devendo ser consultada a WEG-CESTARI para orientação específica.

ATENÇÃO: Não misture óleos de diferentes tipos ou de diferentes marcas.

Em determinadas execuções existem mancais que são lubrificados a graxa. Tais pontos possuem lubrificação permanente ou então niples de relubrificação.

7. Reparos

Os reparos e eventuais desmontagens deverão ser realizados por pessoas qualificadas. Caso isto não seja possível, a unidade deverá ser enviada a WEG-CESTARI para execução do serviço.

Quando for necessária a substituição de algum componente, o cliente deverá contactar a WEG-CESTARI, fornecendo o número de série do Motorreductor (ver plaqueta de identificação), através do qual poderemos identificar mais rapidamente o componente desejado.

8. Lubrificação

A tabela 10 fornece os tipos de lubrificantes recomendados e respectivos fabricantes. A quantidade de lubrificante indicado na plaqueta de identificação e nas tabelas 11 e 12, serve como valor de referência. O volume exato é determinado pelo bujão de nível de óleo.

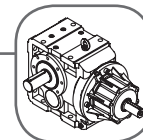


Tabela 9 Tempo de troca de óleo

| Temperatura de Operação | Óleo Mineral CLP | Óleo Sintético CLP HCHydrocarbons | Óleo Sintético CLP PG Polyglycol |
|-------------------------|------------------|-----------------------------------|----------------------------------|
| 80° C | 5000 horas | 15000 horas | 25000 horas |
| 85° C | 3500 horas | 10000 horas | 18000 horas |
| 90° C | 2500 horas | 7500 horas | 13000 horas |
| 95° C | 2000 horas | 6000 horas | 8500 horas |
| 100° C | — | 3800 horas | 6000 horas |
| 105° C | — | 2500 horas | 4000 horas |
| 110° C | — | 2000 horas | 3000 horas |

Tabela 10 Óleos lubrificantes

| Temperatura ambiente | Óleo para redutores | | | |
|--------------------------------------|-----------------------------|----------------------------|-----------------------|---------------------------|
| | -10°C + 40°C | -10°C + 40°C | +40°C +80°C | -40°C +10°C |
| Grau de Viscosidade ISO VG DIN 51519 | ISO VG 220 CLP* DIN 51517-3 | ISO VG 220 CLP HC | ISO VG 220 CLP PG | ISO VG 32 CLP HC |
| Fabricantes | | | | |
| Castrol | Optigear BM 220 | — | — | — |
| Repsol/YPF | Transmisión EP 220 | — | — | — |
| Kluber | Kluberoil GEM1 - 220N | Klubersynth EG4 - 220 | Klubersynth GH6 - 220 | Kluber-Summit HySyn FG-32 |
| Mobil | Mobilgear 630 | Mobil SHC 630 | Mobil Glycolyle 30 | Mobil SHC 624 |
| Petrobrás | Lubrax Industrial EGF220-PS | Lubrax Syntesis Gear O 220 | — | — |
| Shell | Omala 220 | Omala 220 HD | Shell Tivela WB | — |
| Texaco | Meropa 220 | Pinnacle EP 220 | Synlube CLP 220 | Cetus PAO 46 |
| Material do retentor | Nitrílica NBR | NBR / FPM | Viton FPM | Nitrílica NBR |

*Óleo padrão

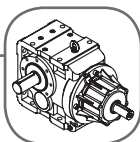
**Óleo lubrificante para a indústria alimentícia e farmacêutica com requisitos do registro NSF H1 - sob consulta

Tabela 11 Quantidade de lubrificante em litros dos redutores simples e redutores do 2º estágio dos redutores Duplex

| Posição de trabalho | Tamanho do redutor | | | | | | |
|---------------------|--------------------|-----|-----|----|----|------|----|
| | 56 | 58 | 60 | 62 | 64 | 66 | 68 |
| P1 | 1,1 | 2,1 | 3,7 | 7 | 10 | 21 | 31 |
| P2 | 2,4 | 4,1 | 8,2 | 15 | 22 | 41,5 | 66 |
| P3 | 3 | 4,5 | 9 | 17 | 26 | 46 | 69 |
| P4 | 3,7 | 6 | 12 | 22 | 35 | 55 | 92 |
| P5 | 2,7 | 4,5 | 8,5 | 16 | 25 | 41 | 62 |
| P6 | 2,7 | 4,5 | 8,5 | 17 | 25 | 41 | 62 |

16 Tabela 12 Quantidade de lubrificante em litros dos redutores do 1º estágio dos redutores Duplex

| Posição de trabalho | Tamanho do redutor | | | | | |
|---------------------|--------------------|--------|-------------|-----|------|------|
| | 56 | 58, 60 | 62, 64, 666 | 665 | 686 | 685 |
| P1 | 0,7 | 0,8 | 1,1 | 3 | 5 | 5,3 |
| P2 | 2,2 | 2,3 | 3,9 | 8,2 | 12,6 | 21 |
| P3 | 1,3 | 1,4 | 2,4 | 4,5 | 7,6 | 12,3 |
| P4 | 2,2 | 2,3 | 3,8 | 8 | 12,6 | 21 |
| P5 | 1,8 | 1,9 | 2,4 | 4,5 | 7,6 | 12,3 |
| P6 | 1,7 | 1,8 | 2,6 | 4,7 | 8,2 | 13,5 |


Tabela 13 Unidades - Grandezas e símbolos

| Grandezas Físicas | Símbolo | Unidade SI | Abreviatura da unidade |
|-------------------------|----------|-------------------------------------|------------------------|
| Tempo | t | Segundo | s |
| Espaço | s | Metro | m |
| Velocidade Escalar | v | Metro por segundo | m/s |
| Aceleração Escalar | α | Metro por segundo ao quadrado | m/s ² |
| Massa | m | Quilograma | kg |
| Força | F | Newton | N |
| Trabalho | τ | Joule | J |
| Energia | E | Joule | J |
| Potência | Pot | Watt | W |
| Impulso | I | Newton x segundo | N . s |
| Quantidade de movimento | Q | Quilograma x metro por segundo | kg . m/s |
| Pressão | P | Newton por metro quadrado ou pascal | N/m ² ou Pa |
| Densidade | d | Quilograma por metro cúbico | kg/m ³ |

Tabela 14 Conversões de unidades

| Multiplique | por | para obter |
|-------------------------------------|----------|----------------------|
| Atmosfera física (atm) 760 mmHg | 101.325 | Pa |
| Bar | 100.000 | Pa |
| Cavalo vapor (CV) | 0,7355 | KW |
| Dina (dyn) | 0,00001 | N |
| Pé (ft) | 12 | in |
| Pé (ft) | 0,3048 | m |
| Galão (U.S. liquid) (gal) | 3,785412 | dm ³ |
| Galão (U.K. liquid) (Imp. gal) | 4,546087 | dm ³ |
| Horsepower (HP) | 0,7457 | KW |
| Polegada (in) | 0,0254 | m |
| Kilograma força Kgf) | 9,80665 | N |
| Kilopond (Kp) | 9,80665 | N |
| Kilopound (Kip) | 4448,222 | N |
| Metros cúbicos (m ³) | 1.000 | litros (l) |
| Milha, U.S. statute | 1609,343 | m |
| Nó (U.S. Knot) | 0,514791 | m/s |
| Onça (avoirdupois) (oz) | 28,4131 | g |
| Onça (troy) (oz tr) | 31,10348 | g |
| Poise (p) | 0,1 | N , s/m ² |
| Pound (avoirdupois) (lb) | 0,4536 | kg |
| Pound (avoirdupois) (lb) | 16 | onca (avdp) |
| Libra-força por poleg. quadr. (psi) | 0,070306 | kgf/cm ² |
| Libra-força por poleg. quadr. (psi) | 6894,757 | Pa |
| RPM | 0,1047 | radianos / s |
| Stoke (St) | 0,0001 | m ² / s |
| Tonelada (t) | 1.000 | kg |
| Torr | 133,322 | Pa |
| Jarda (yd) | 3 | ft |
| Jarda (yd) | 0,9144 | m |

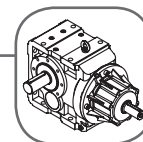
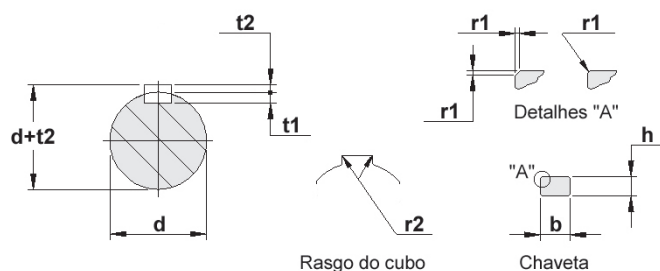


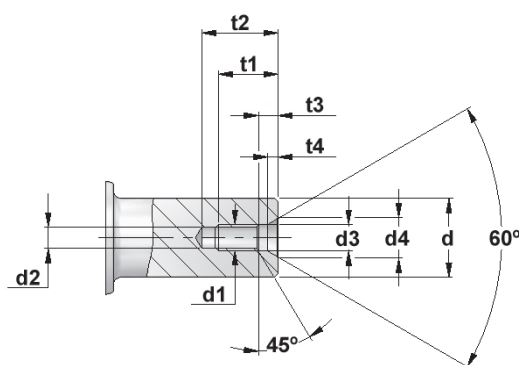
Tabela 15 Chavetas plana - Norma DIN 6885 - Folha 1



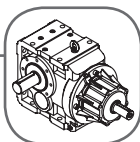
| Tolerâncias recomendadas | | |
|--------------------------|---------------|------------|
| Rasgo da chaveta no cubo | Maior pressão | P9 |
| | Menor pressão | JS9 |
| Rasgo de chaveta no eixo | Maior pressão | P9 |
| | Menor pressão | N9 |
| Chaveta plana | Altura | h11 |
| | Largura | h9 |

| Diâmetro do eixo | Largura b | Altura h | Profundidade do rasgo | | Tolerância para t1 e t2 | Cantos do rasgo do cubo r2 | | Cantos da chaveta r1 | |
|------------------|-----------|----------|-----------------------|---------|-------------------------|----------------------------|--------|----------------------|--------|
| | | | Eixo t1 | Cubo t2 | | mínimo | máximo | mínimo | máximo |
| > 8 a 10 | 3 | 3 | 1,8 | 1,4 | + 0,1 | 0,08 | 0,16 | 0,16 | 0,25 |
| > 10 a 12 | 4 | 4 | 2,5 | 1,8 | + 0,1 | 0,08 | 0,16 | 0,16 | 0,25 |
| > 12 a 17 | 5 | 5 | 3 | 2,3 | + 0,1 | 0,16 | 0,25 | 0,25 | 0,40 |
| >17 a 22 | 6 | 6 | 3,5 | 2,8 | + 0,1 | 0,16 | 0,25 | 0,25 | 0,40 |
| > 22 a 30 | 8 | 7 | 4 | 3,3 | + 0,2 | 0,16 | 0,25 | 0,25 | 0,40 |
| > 30 a 38 | 10 | 8 | 5 | 3,3 | + 0,2 | 0,25 | 0,40 | 0,40 | 0,60 |
| > 38 a 44 | 12 | 8 | 5 | 3,3 | + 0,2 | 0,25 | 0,40 | 0,40 | 0,60 |
| > 44 a 50 | 14 | 9 | 5,5 | 3,8 | + 0,2 | 0,25 | 0,40 | 0,40 | 0,60 |
| > 50 a 58 | 16 | 10 | 6 | 4,3 | + 0,2 | 0,25 | 0,40 | 0,40 | 0,60 |
| > 58 a 65 | 18 | 11 | 7 | 4,4 | + 0,2 | 0,25 | 0,40 | 0,40 | 0,60 |
| > 65 a 75 | 20 | 12 | 7,5 | 4,9 | + 0,2 | 0,40 | 0,60 | 0,60 | 0,80 |
| > 75 a 85 | 22 | 14 | 9 | 5,4 | + 0,2 | 0,40 | 0,60 | 0,60 | 0,80 |
| > 85 a 95 | 25 | 14 | 9 | 5,4 | + 0,2 | 0,40 | 0,60 | 0,60 | 0,80 |
| > 95 a 110 | 28 | 16 | 10 | 6,4 | + 0,2 | 0,40 | 0,60 | 0,60 | 0,80 |
| > 110 a 130 | 32 | 18 | 11 | 7,4 | + 0,2 | 0,40 | 0,60 | 0,60 | 0,80 |
| > 130 a 150 | 36 | 20 | 12 | 8,4 | + 0,3 | 0,70 | 1,00 | 1,00 | 1,20 |
| > 150 a 170 | 40 | 22 | 13 | 9,4 | + 0,3 | 0,70 | 1,00 | 1,00 | 1,20 |
| > 170 a 200 | 45 | 25 | 15 | 10,4 | + 0,3 | 0,70 | 1,00 | 1,00 | 1,20 |
| > 200 a 230 | 50 | 28 | 17 | 11,4 | + 0,3 | 0,70 | 1,00 | 1,00 | 1,20 |
| > 230 a 260 | 56 | 32 | 20 | 12,4 | + 0,3 | 1,20 | 1,60 | 1,60 | 2,00 |
| > 260 a 290 | 63 | 32 | 20 | 12,4 | + 0,3 | 1,20 | 1,60 | 1,60 | 2,00 |
| > 290 a 330 | 70 | 36 | 22 | 14,4 | + 0,3 | 1,20 | 1,60 | 1,60 | 2,00 |
| > 330 a 380 | 80 | 40 | 25 | 15,4 | + 0,3 | 2,00 | 2,50 | 2,50 | 3,00 |
| > 380 a 440 | 90 | 45 | 28 | 17,4 | + 0,3 | 2,00 | 2,50 | 2,50 | 3,00 |
| > 440 a 500 | 100 | 50 | 31 | 19,5 | + 0,3 | 2,00 | 2,50 | 2,50 | 3,00 |

Tabela 16 Furos de centro 60° com rosca métrica - Norma DIN 332 - Folha 2 - Forma B



| Eixos d | Diâmetro | | | | Profundidade | | | |
|------------|----------|------|------|------|--------------|------|-----|-----|
| | d1 | d2 | d3 | d4 | t1 | t2 | t3 | ~t4 |
| > 7 a 10 | M3 | 2,5 | 3,2 | 5,3 | 9 | 13 | 2,6 | 1,8 |
| > 10 a 13 | M4 | 3,3 | 4,3 | 6,7 | 10 | 14 | 3,2 | 2,1 |
| > 13 a 16 | M5 | 4,2 | 5,3 | 8,1 | 12,5 | 17 | 4 | 2,4 |
| > 16 a 21 | M6 | 5 | 6,4 | 9,6 | 16 | 21 | 5 | 2,8 |
| > 21 a 24 | M8 | 6,8 | 8,4 | 12,2 | 19 | 25 | 6 | 3,3 |
| > 24 a 30 | M10 | 8,5 | 10,5 | 14,9 | 22 | 30 | 7,5 | 3,8 |
| > 30 a 38 | M12 | 10,2 | 13 | 18,1 | 28 | 37,5 | 9,5 | 4,4 |
| > 38 a 50 | M16 | 14 | 17 | 23 | 36 | 45 | 12 | 5,2 |
| > 50 a 85 | M20 | 17,5 | 21 | 28,4 | 42 | 53 | 15 | 6,4 |
| > 85 a 130 | M24 | 21 | 25 | 34,2 | 50 | 63 | 18 | 8 |



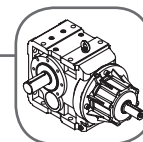
Furos - Afastamentos em μm (0,001 mm)

| Dimensões do furo (mm) | Campos de tolerância | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|----------------------|-------------|------------|------------|----------|----------|----------|-----------|-----------|------------|----------------|----------------|----------------|----------------|-----------|------------|-----------|----------|------------|------------|-----------|-----------|------------|------------|-------------|-------------|
| | F7 | F8 | G6 | G7 | H6 | H7 | H8 | H9 | J6 | J7 | JS6 | JS7 | JS8 | JS9 | K6 | K7 | M6 | M7 | N6 | N7 | N8 | N9 | P6 | P7 | P8 | P9 |
| >3 até 6 | +22 +10 | +28 +10 | +12 +4 | +16 +4 | +8 0 | +12 0 | +18 0 | +30 0 | +5 -3 | +6 -6 | +4 -4 | +6 -6 | +9 -9 | +15 -15 | +2 -6 | +3 -9 | -1 -9 | 0 -12 | -5 -13 | -4 -16 | -2 -20 | 0 -30 | -9 -17 | -8 -20 | -12 -30 | -12 -42 |
| >6 até 10 | +28 +13 | +35 +13 | +14 +5 | +20 +5 | +9 0 | +15 0 | +22 0 | +36 0 | +5 -4 | +8 -7 | +4,5 -4,5 | +7,5 -7,5 | +11 -11 | +18 -18 | +2 -7 | +5 -10 | -3 -12 | 0 -15 | -7 -16 | -4 -19 | -3 -25 | 0 -36 | -12 -21 | -9 -24 | -15 -37 | -15 -51 |
| >10 até 18 | +34 +16 | +43 +16 | +17 +6 | +24 +6 | +11 0 | +18 0 | +27 0 | +43 0 | +6 -5 | +10 -8 | +5,5 -5,5 | +9 -9 | +13,5 -13,5 | +21,5 -21,5 | +2 -9 | +6 -12 | -4 -15 | 0 -18 | -9 -20 | -5 -23 | -3 -30 | 0 -43 | -15 -26 | -11 -29 | -18 -45 | -18 -61 |
| >18 até 30 | +41 +20 | +53 +20 | +20 +7 | +28 +7 | +13 0 | +21 0 | +33 0 | +52 0 | +8 -5 | +12 -9 | +6,5 -6,5 | +10,5 -10,5 | +16,5 -16,5 | +26 -26 | +2 -11 | +6 -15 | -4 -17 | 0 -21 | -11 -24 | -7 -28 | -3 -36 | 0 -52 | -18 -31 | -14 -35 | -22 -55 | -22 -74 |
| >30 até 50 | +50 +25 | +64 +25 | +25 +9 | +34 +9 | +16 0 | +25 0 | +39 0 | +62 0 | +10 -6 | +14 -11 | +8 -8 | +12,5 -12,5 | +19,5 -19,5 | +31 -31 | +3 -13 | +7 -18 | -4 -20 | 0 -25 | -12 -28 | -8 -33 | -3 -42 | 0 -62 | -21 -37 | -17 -42 | -26 -65 | -26 -88 |
| >50 até 80 | +60 +30 | +76 +30 | +29 +10 | +40 +10 | +19 0 | +30 0 | +46 0 | +74 0 | +13 -6 | +18 -12 | +9,5 -9,5 | +15 -15 | +23 -23 | +37 -37 | +4 -15 | +9 -21 | -5 -24 | 0 -30 | -14 -33 | -9 -39 | -4 -50 | 0 -74 | -26 -45 | -21 -51 | -32 -78 | -32 -106 |
| >80 até 120 | +71 +36 | +90 +36 | +34 +12 | +47 +12 | +22 0 | +35 0 | +54 0 | +87 0 | +16 -6 | +22 -13 | +11 -11 | +17,5 -17,5 | +27 -27 | +43,5 -43,5 | +4 -18 | +10 -25 | -6 -28 | 0 -35 | -16 -38 | -10 -45 | -4 -58 | 0 -87 | -30 -52 | -24 -59 | -37 -91 | |
| >120 até 180 | +83 +43 | +106 +43 | +39 +14 | +54 +14 | +25 0 | +40 0 | +63 0 | +100 0 | +18 -7 | +26 -14 | +12,5 -12,5 | +20 -20 | +31,5 -31,5 | +50 -50 | +4 -21 | +12 -28 | -8 -33 | 0 -40 | -20 -45 | -12 -52 | -4 -67 | 0 -100 | -36 -61 | -28 -68 | -43 -106 | |
| >180 até 250 | +96 +50 | +122 +50 | +44 +15 | +61 +15 | +29 0 | +46 0 | +72 0 | +115 0 | +22 -7 | +30 -16 | +14,5 -14,5 | +23 -23 | +36 -36 | +57,5 -57,5 | +5 -24 | +13 -33 | -8 -37 | 0 -46 | -22 -51 | -14 -60 | -5 -77 | 0 -115 | -41 -70 | -33 -79 | -50 -122 | |
| >250 até 315 | +108 +56 | +137 +56 | +49 +17 | +69 +17 | +32 0 | +52 0 | +81 0 | +130 0 | +25 -7 | +36 -16 | +16 -16 | +26 -26 | +40,5 -40,5 | +65 -65 | +5 -27 | +16 -36 | -9 -41 | 0 -52 | -25 -57 | -14 -66 | -5 -86 | 0 -130 | -47 -79 | -36 -88 | -56 -137 | |

Eixos - Afastamentos em μm (0,001 mm)

| Dimensões do eixo (mm) | Campos de tolerância | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|----------------------|-------------|------------|------------|----------|----------|----------|----------|-----------|-----------|------------|------------|----------------|----------------|----------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|-------------|
| | f6 | f7 | g5 | g6 | h5 | h6 | h7 | h8 | h9 | j5 | j6 | j7 | js5 | js6 | js7 | k5 | k6 | k7 | m5 | m6 | m7 | n5 | n6 | n7 | p5 | p6 |
| >3 até 6 | -10 -18 | -10 -22 | -4 -9 | -4 -12 | 0 -5 | 0 -8 | 0 -12 | 0 -18 | 0 -30 | +3 -2 | +6 -2 | +8 -4 | +2,5 -2,5 | +4 -4 | +6 -6 | +9 +1 | +13 +1 | +9 +1 | +12 +4 | +16 +4 | +13 +4 | +16 +8 | +20 +8 | +17 +8 | +20 +8 | +24 +12 |
| >6 até 10 | -13 -22 | -13 -28 | -5 -11 | -5 -14 | 0 -6 | 0 -9 | 0 -15 | 0 -22 | 0 -36 | +4 -2 | +7 -2 | +10 -5 | +3 -3 | +4,5 -4,5 | +7,5 -7,5 | +7 +1 | +10 +1 | +16 +1 | +12 +6 | +15 +6 | +21 +6 | +16 +10 | +19 +10 | +25 +10 | +21 +15 | +24 +21 |
| >10 até 18 | -16 -27 | -16 -34 | -6 -14 | -6 -17 | 0 -8 | 0 -11 | 0 -18 | 0 -27 | 0 -43 | +5 -3 | +8 -3 | +12 -6 | +4 -4 | +5,5 -5,5 | +9 -9 | +9 +1 | +12 +1 | +19 +1 | +15 +7 | +18 +7 | +25 +7 | +20 +12 | +23 +12 | +30 +12 | +26 +18 | +29 +18 |
| >18 até 30 | -20 -33 | -20 -41 | -7 -16 | -7 -20 | 0 -9 | 0 -13 | 0 -21 | 0 -33 | 0 -52 | +5 -4 | +9 -4 | +13 -8 | +4,5 -4,5 | +6,5 -6,5 | +10,5 -10,5 | +11 +2 | +15 +2 | +23 +2 | +17 +8 | +21 +8 | +29 +8 | +24 +15 | +28 +15 | +36 +15 | +31 +22 | +35 +22 |
| >30 até 50 | -25 -41 | -25 -50 | -9 -20 | -9 -25 | 0 -11 | 0 -16 | 0 -25 | 0 -39 | 0 -62 | +6 -5 | +11 -5 | +15 -10 | +5,5 -5,5 | +8 -8 | +12,5 -12,5 | +13 +2 | +18 +2 | +27 +2 | +20 +9 | +25 +9 | +34 +9 | +28 +17 | +33 +17 | +42 +17 | +37 +26 | +42 +26 |
| >50 até 80 | -30 -49 | -30 -60 | -10 -23 | -10 -29 | 0 -13 | 0 -19 | 0 -30 | 0 -46 | 0 -74 | +6 -7 | +12 -7 | +18 -12 | +6,5 -6,5 | +9,5 -9,5 | +15 -15 | +15 +2 | +21 +2 | +32 +2 | +24 +11 | +30 +11 | +41 +11 | +33 +20 | +39 +20 | +50 +20 | +45 +32 | +62 +32 |
| >80 até 120 | -36 -58 | -36 -71 | -12 -27 | -12 -34 | 0 -15 | 0 -22 | 0 -35 | 0 -54 | 0 -87 | +6 -9 | +13 -9 | +20 -15 | +7,5 -7,5 | +11 -11 | +17,5 -17,5 | +18 +3 | +25 +3 | +38 +3 | +28 +13 | +35 +13 | +48 +13 | +38 +13 | +45 +23 | +58 +23 | +52 +23 | +72 +37 |
| >120 até 180 | -43 -68 | -43 -83 | -14 -32 | -14 -39 | 0 -18 | 0 -25 | 0 -40 | 0 -63 | 0 -100 | +7 -11 | +14 -11 | +22 -18 | +9 -9 | +12,5 -12,5 | +20 -20 | +21 +3 | +28 +3 | +43 +3 | +33 +15 | +40 +15 | +55 +15 | +45 +27 | +52 +27 | +67 +27 | +61 +43 | +83 +43 |
| >180 até 250 | -50 -79 | -50 -96 | -15 -35 | -15 -44 | 0 -20 | 0 -29 | 0 -46 | 0 -72 | 0 -115 | +7 -13 | +16 -13 | +25 -21 | +10 -10 | +14,5 -14,5 | +23 -23 | +24 +4 | +33 +4 | +50 +4 | +37 +17 | +46 +17 | +63 +17 | +51 +31 | +60 +27 | +77 +27 | +70 +50 | +96 +50 |
| >250 até 315 | -56 -88 | -56 -108 | -17 -40 | -17 -49 | 0 -23 | 0 -32 | 0 -52 | 0 -81 | 0 -130 | +7 -16 | +16 -16 | +26 -26 | +11,5 -11,5 | +16 -16 | +26 -26 | +27 +4 | +36 +4 | +56 +4 | +43 +20 | +52 +20 | +72 +20 | +57 +34 | +66 +34 | +86 +34 | +79 +56 | +108 +56 |

Peso dos Redutores (kg)



| | | Motorreductores | | | | | | | | | | | | | | | | | |
|---------|-----------|-----------------|---------|---------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|----------|----------|----------|----------|
| Simplex | Redutores | 63 B | 71 C | 80 D | 90S E | 90L F | 100 G | 112 H | 132S J | 132M K | 160M L | 160L M | 180 N/P | 200M Q | 200L R | 225 S | 250 U | 280 V | 315 W |
| 56 | 52 | 60 | 63 | 68 | 73 | 75 | 85 | 96 | 114 | 124 | 166 | 180 | — | — | — | — | — | — | — |
| 58 | 71 | 79 | 82 | 87 | 92 | 94 | 104 | 115 | 133 | 143 | 185 | 199 | 229 | — | — | — | — | — | — |
| 60 | 155 | — | — | 171 | 176 | 178 | 188 | 199 | 217 | 227 | 269 | 283 | 313 | 371 | 407 | — | — | — | — |
| 62 | 230 | — | — | — | — | — | 263 | 274 | 292 | 302 | 344 | 358 | 388 | 446 | 482 | 616 | — | — | — |
| 64 | 310 | — | — | — | — | — | 343 | 354 | 372 | 382 | 424 | 438 | 468 | 526 | 562 | 696 | 796 | — | — |
| 66 | 480 | — | — | — | — | — | — | — | 542 | 552 | 594 | 608 | 638 | 696 | 732 | 866 | 966 | 1233 | — |
| 68 | 790 | — | — | — | — | — | — | — | — | — | 904 | 918 | 948 | 1006 | 1042 | 1176 | 1276 | 1543 | 1800 |

| Duplex | Redutores | 63 B | 71 C | 80 D | 90S E | 90L F | 100 G | 112 H | 132S J | 132M K | 160M L | 160L M | 180 N/P | 200M Q | 200L R | 225 S | 250 U | 280 V | 315 W |
|--------|-----------|---------|---------|---------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|----------|----------|----------|----------|
| 56 | 68 | 76 | 79 | 84 | 89 | 91 | 101 | — | — | — | — | — | — | — | — | — | — | — | — |
| 58 | 96 | 104 | 107 | 112 | 117 | 119 | 129 | 140 | 158 | 168 | — | — | — | — | — | — | — | — | — |
| 60 | 180 | 188 | 191 | 196 | 201 | 203 | 213 | 224 | 242 | 252 | — | — | — | — | — | — | — | — | — |
| 62 | 274 | 282 | 285 | 290 | 295 | 297 | 307 | 318 | 336 | 346 | 388 | 402 | — | — | — | — | — | — | — |
| 64 | 354 | 362 | 365 | 370 | 375 | 377 | 387 | 398 | 416 | 426 | 468 | 482 | — | — | — | — | — | — | — |
| 66 | 524 | 532 | 535 | 540 | 545 | 547 | 557 | 568 | 586 | 596 | 638 | 652 | — | — | — | — | — | — | — |
| 68 | 970 | 978 | 981 | 986 | 991 | 993 | 1003 | 1014 | 1032 | 1042 | 1084 | 1098 | 1128 | 1186 | 1222 | 1356 | — | — | — |



FÁBRICA:

Rod. Monte Alto/Vista Alegre, km 3
Monte Alto | SP | Brasil | 15910-000

VENDAS | (16) 3244-1000 | vendas@wegcestari.com

SERVICE | (16) 3244-1020 | service@wegcestari.com

SAC | (16) 3244-1018 | sac@wegcestari.com

www.wegcestari.com

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