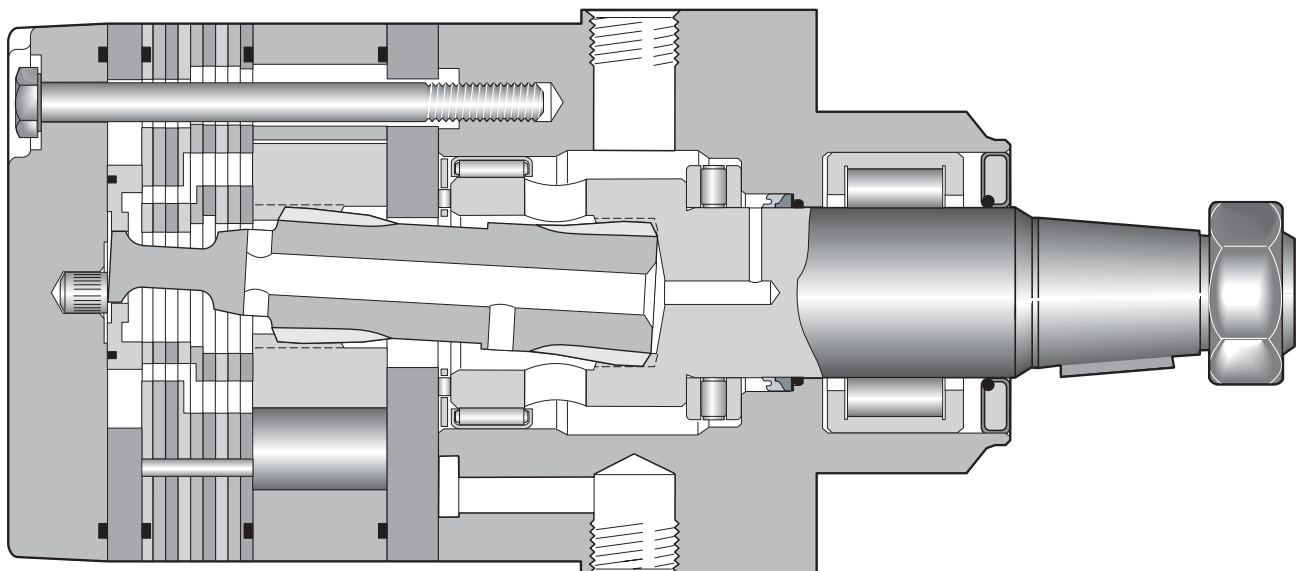
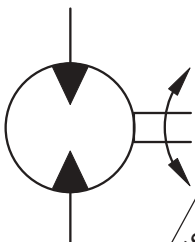


12 Displacements	(8.6 to 58.5 in ³ /rev)	
12 Schluckvolumen	140 . . . 958 cm ³ /rev	
12 Cylindrée		
12 Desplazamientos		
	Cont.	Int.
Maximum Pressure	(to 3000 psi)	(to 4000 psi)
Eingangsdruck	. . . 210 bar	. . . 281 bar
Pression entrée		
Presion Maxima		
Maximum Oil Flow	(to 30 gpm)	
Schluckstrom	. . . 114 lpm	
Débit d'huile		
Caudal Maximo de Aceite		
Maximum Speed	(660 rpm)	
Drehzahl	660 rpm	
Vitesse de rotation		
Velocidad Maxima		
	Cont.	Int.
Maximum Torque	(8,772 lb in)	(11,876 lb in)
MaxDrehmoment	991 Nm	1342 Nm
Couple		
Torque Maximo		
Maximum Side Load at Key	(to 4800 lb)	
Seitenlast	. . . 21360 N	
Charges latérales		
Carga Maxima Lateral		

A Rugged Motor for Heavy Duty, High Side Load Applications

This motor was designed for tough applications. A stout drive link with patented 60:40 spline geometry will transmit over 13,000 lb-in of torque. The 1-1/2" output shaft can support 7000 pounds of radial load. Efficiency is assured by the use of roller vanes and sealed commutator. Durability is maintained by continually washing the powertrain splines and shaft seal in cooling fluid.





	Geometric displacement Geom. Schluckvolumen Cylindrée Cilindrata	Max. speed @ Max. Drehzahl vitesse de rotation maxi Velocidad maxima a caudal intermitente	Max. intermittent flow Max. intermittierender Betrieb: Max. oil flow Max. Schluckstrom Débit d'huile maxi Portata Max	Max. differential pressure Max. Druckgefälle Presion diferencial maxima Max. supply pressure Max. Eingangsdruck Presion maxi entrada Max. torque Max. Drehmoment Couple maxi Torque Maximo	Max. performance Max. Leistungsbegrabe Maximo rendimiento	Min. starting torque Min. Anlaufmoment Couple min. fourni au démarrage Torque minimo de arranque		
Motor Series TH	cm³/rev in³/rev	rev/min	cont / int* l/min g/min	cont / int* bar psi	max bar psi	cont / int* Nm lb-in	max KW HP	cont / int* Nm lb-in
TH0140	140 8.6	660	76 95 20 25	207 276 3000 4000	300 4350	390 530 3455 4692	33 44.88	315 418 2791 3706
TH0170	169 10.3	554	76 95 20 25	207 276 3000 4000	300 4350	476 646 4216 5714	33 44.88	376 505 3331 4469
TH0195	195 11.9	477	76 95 20 25	207 276 3000 4000	300 4350	556 753 4919 6663	33 44.88	451 611 3989 5408
TH0240	237 14.5	393	76 95 20 25	207 276 3000 4000	300 4350	677 913 5991 8081	32 43.52	582 776 5152 6865
TH0280	280 17.1	334	76 95 20 25	207 276 3000 4000	300 4350	796 1073 7044 9499	31 42.16	675 870 5972 7699
TH0335	337 20.6	277	76 95 20 25	207 276 3000 4000	300 4350	964 1297 8533 11479	30 40.8	843 1117 7458 9889
TH0405	405 24.7	232	76 95 20 25	172 241 2500 3500	300 4350	942 1342 8336 11877	27 36.72	791 1145 7002 10133
TH0475	476 29.1	237	76 114 20 30	138 207 2000 3000	300 4350	887 1372 7853 12145	28 38.08	740 1120 6549 9909
TH0530	529 32.3	213	76 114 20 30	138 172 2000 2500	300 4350	983 1253 8701 11086	23 31.28	874 1091 7737 9657
TH0625	624 38.0	182	76 114 20 30	121 155 1750 2250	300 4350	986 1291 8725 11424	20 27.2	895 1165 7924 10312
TH0785	786 48.0	143	76 114 20 30	103 138 1500 2000	300 4350	1044 1428 9239 12636	17 23.12	991 1341 8772 11876
TH0960	958 58.5	118	76 114 20 30	69 103 1000 1500	300 4350	773 1268 6843 11227	12 16.32	763 1177 6752 10419

Performance data based on testing using 10W40 oil with a viscosity of 200 SUS at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.

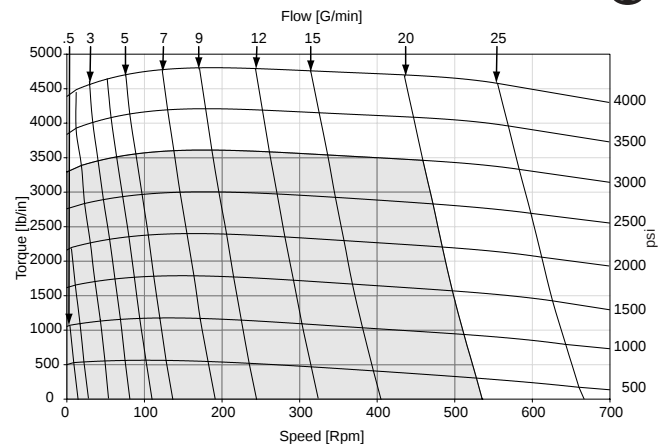
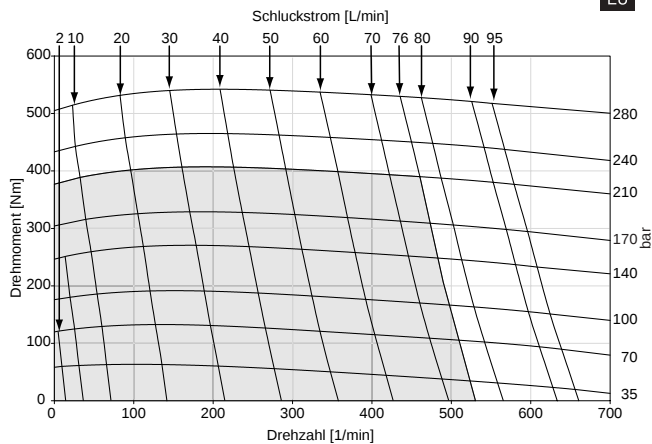
Les données sur les performances sont basées sur des tests utilisant de l'huile 10W40 d'une viscosité de 200 SUS à 54°C (130°F). Ces données correspondent à des situations typiques. Les données réelles peuvent varier légèrement d'un moteur de production à l'autre.

Leistungsdaten sind gemessen mit SAE 10W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogdaten sind möglich.

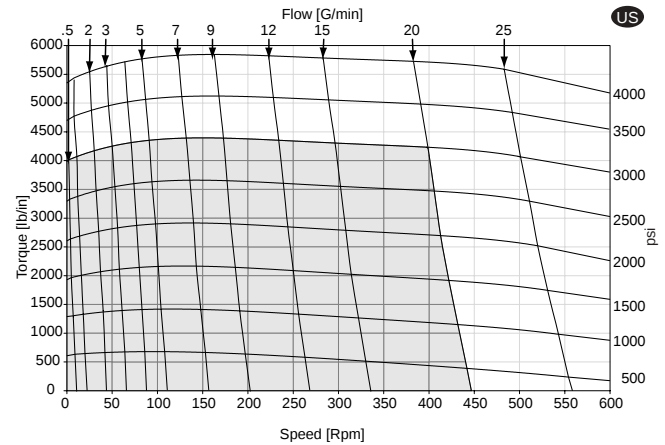
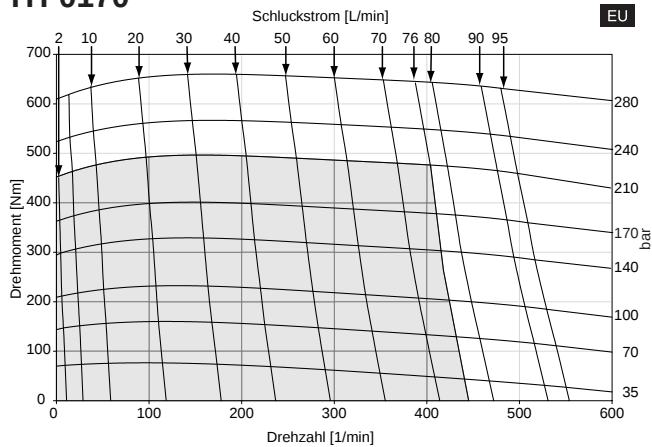
Datos tecnicos obtenidos con aceite 10W40 de 200 SUS de viscosidad a 54°C (130°F). Los datos proporcionados son valores típicos. Los valores exactos reales podrían tener una pequeña variación entre distintos motores.

* Intermittent operation rating applies to 10% of every minute.
Intermittierende Werte maximal 10% von jeder Betriebsminute.
Fonctionnement interm. 10% max. de chaque minute d'utilisation.
Capacidad de funcionamiento intermitente valida para 10% por cada minuto.

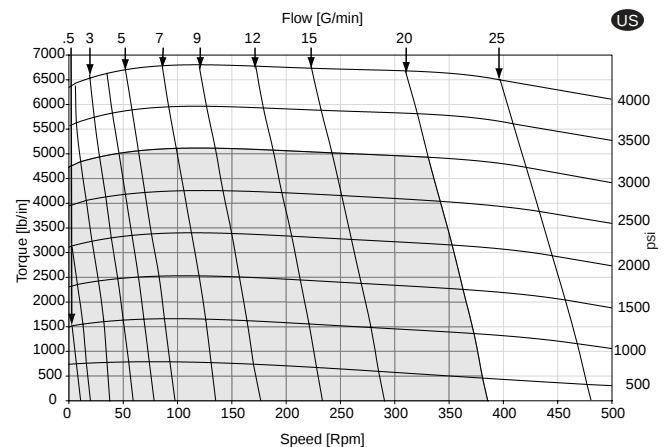
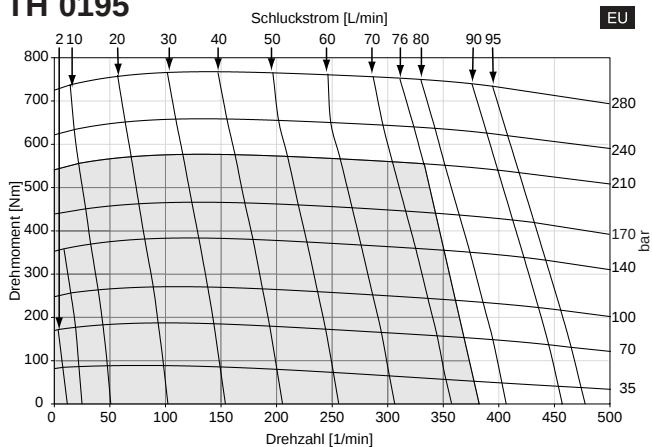
TH 0140



TH 0170



TH 0195



□ Cont.

□ Int.

Intermittent operation rating applies to 10% of every minute.

Fonctionnement interm. 10% max. de chaque minute d'utilisation.

Performance data based on testing using 10W40 oil with a viscosity of 200 SUS at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.

Les donnees sur les performances sont basees sur des tests utilisant de l'huile 10W40 d'une viscosite de 200 SUS a 54°C (130°F). Ces donnees correspondent a des situations typiques. Les donnees reelles peuvent varier legerement d'un moteur de production a l'autre.

Global TH.p65, pfm, fm

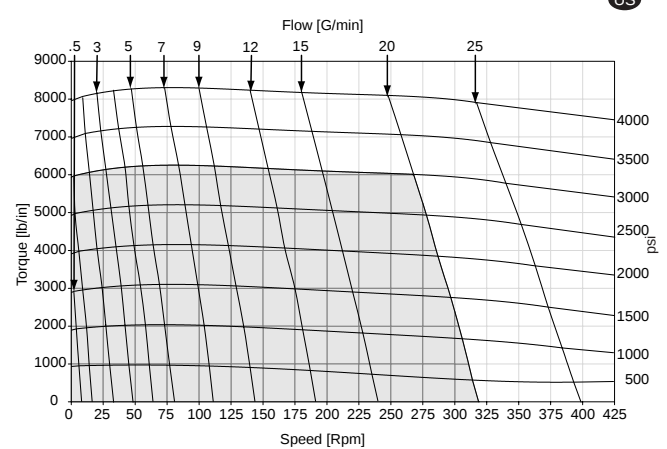
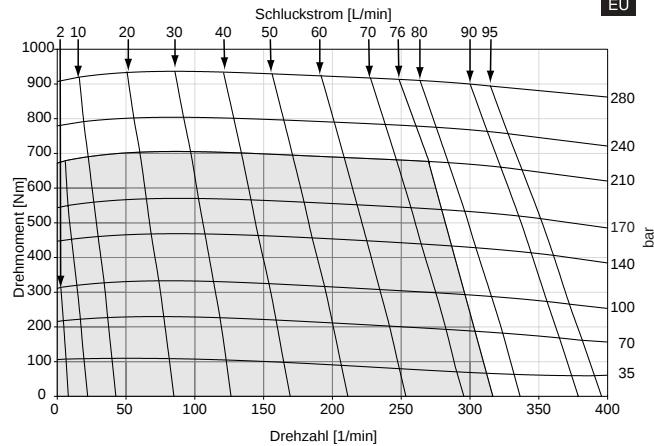
Intermittierende Werte maximal 10% von jeder Betriebsminute.

Capacidad de funcionamiento intermitente valida para 10% por cada minuto.

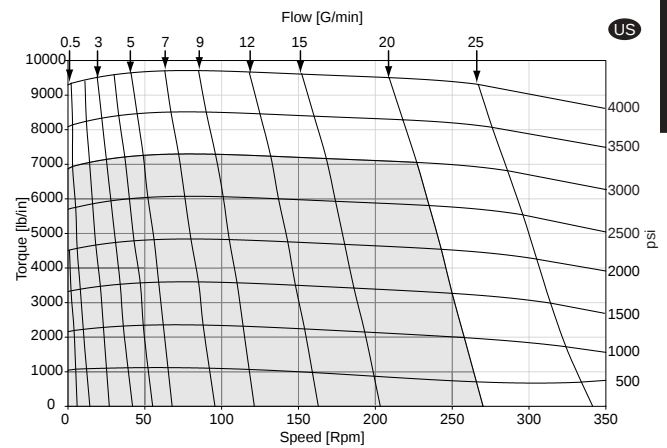
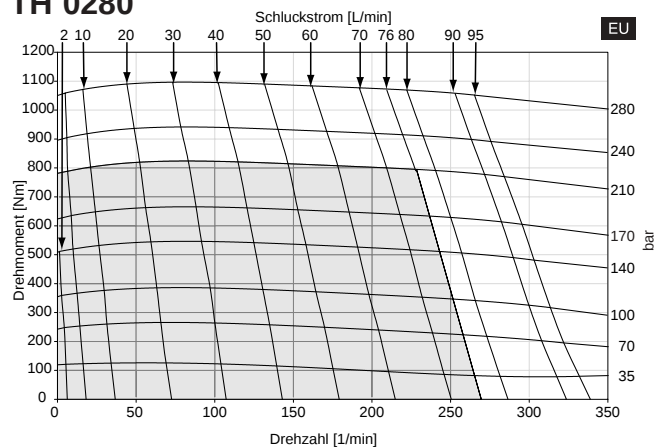
Leistungsdaten sind gemessen mit SAE 10W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogdaten sind möglich.

Datos tecnicos obtenidos con aceite 10W40 de 200 SUS de viscosidad a 54°C (130°F). Los datos proporcionados son valores tipicos. Los valores exactos reales podrian tener una pequena variación entre distintos motores.

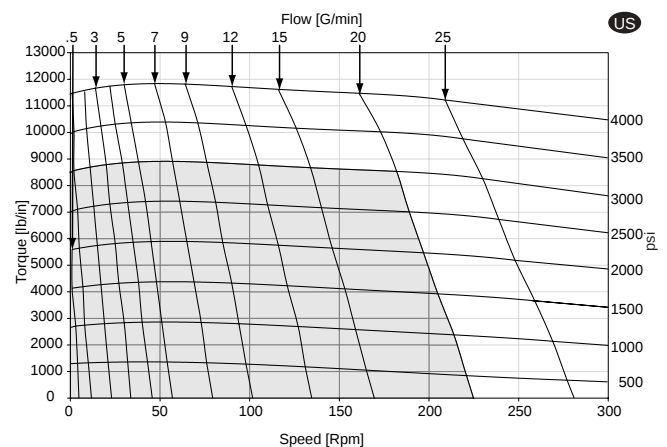
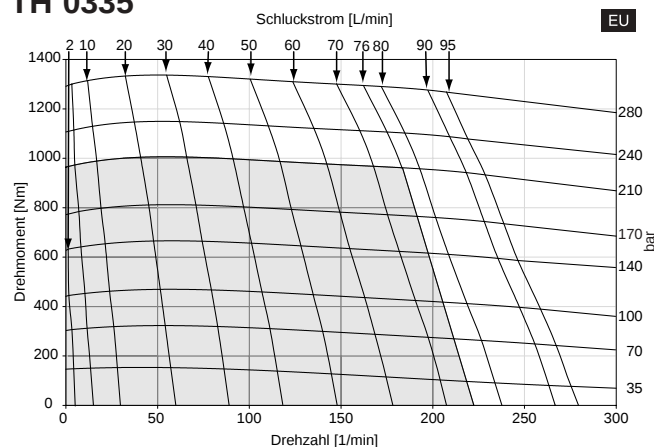
TH 0240



TH 0280



TH 0335



□ Cont.

□ Int.

Intermittent operation rating applies to 10% of every minute.

Fonctionnement interm. 10% max. de chaque minute d'utilisation.

Performance data based on testing using 10W40 oil with a viscosity of 200 SUS at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.

Les données sur les performances sont basées sur des tests utilisant de l'huile 10W40 d'une viscosité de 200 SUS à 54°C (130°F). Ces données correspondent à des situations typiques. Les données réelles peuvent varier légèrement d'un moteur de production à l'autre.

Global TH.p65, pfm, fm

Intermittierende Werte maximal 10% von jeder Betriebsminute.

Capacidad de funcionamiento intermitente valida para 10% por cada minuto.

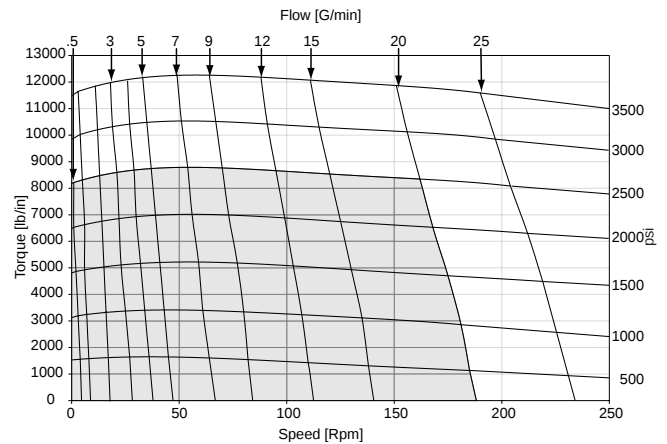
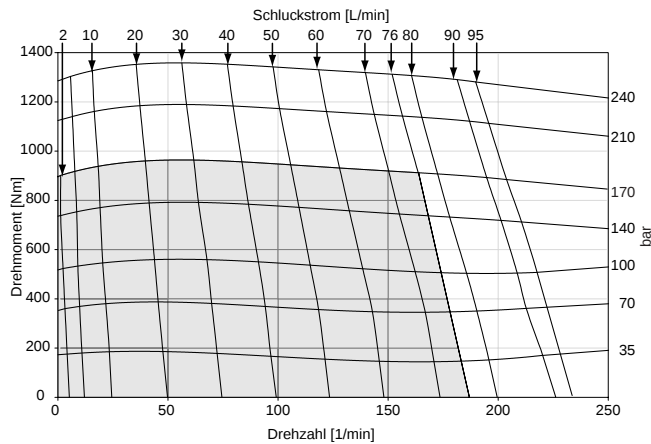
Leistungsdaten sind gemessen mit SAE 10W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogdaten sind möglich.

Datos tecnicos obtenidos con aceite 10W40 de 200 SUS de viscosidad a 54°C (130°F). Los datos proporcionados son valores tipicos. Los valores exactos reales podrian tener una pequena variacion entre distintos motores.

TH 0405

EU

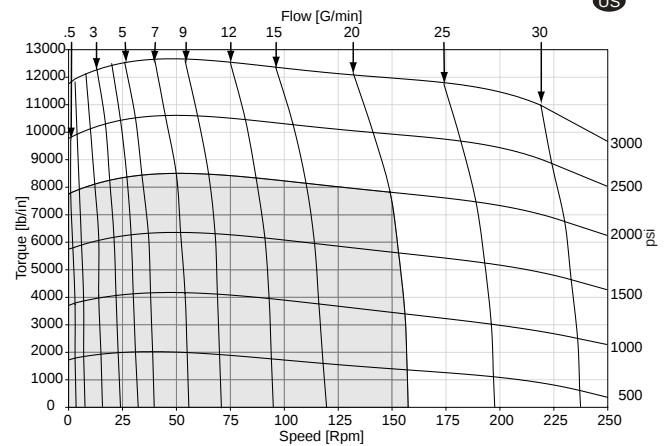
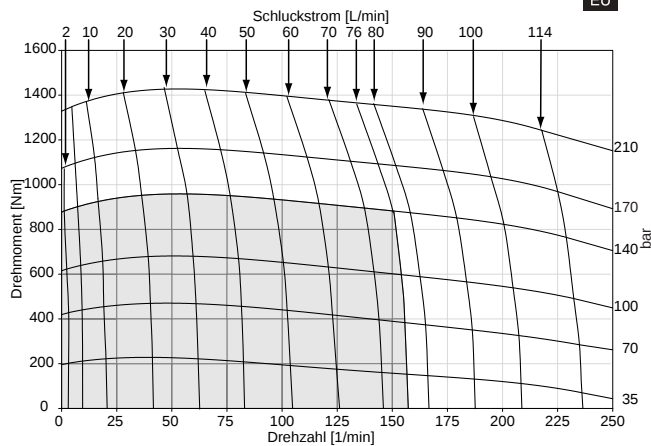
US



TH 0475

EU

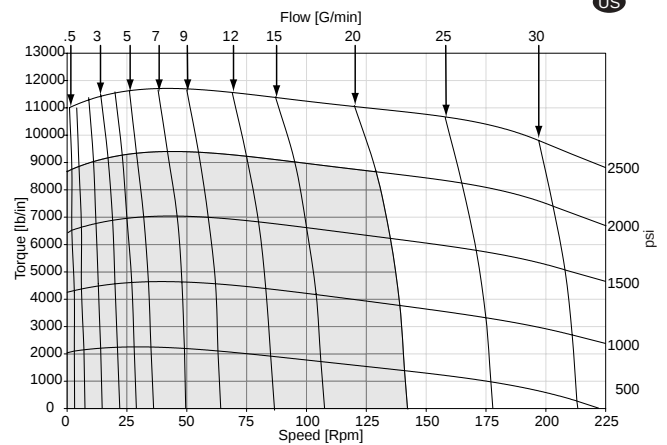
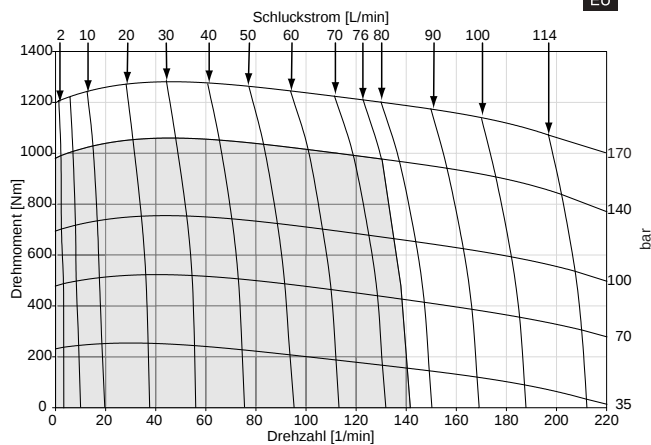
US



TH 0530

EU

US



□ Cont.

□ Int.

Intermittent operation rating applies to 10% of every minute.

Fonctionnement interm. 10% max. de chaque minute d'utilisation.

Performance data based on testing using 10W40 oil with a viscosity of 200 SUS at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.

Les données sur les performances sont basées sur des tests utilisant de l'huile 10W40 d'une viscosité de 200 SUS à 54°C (130°F). Ces données correspondent à des situations typiques. Les données réelles peuvent varier légèrement d'un moteur de production à l'autre.

Global TH.p65, pfm, fm

Intermittierende Werte maximal 10% von jeder Betriebsminute.

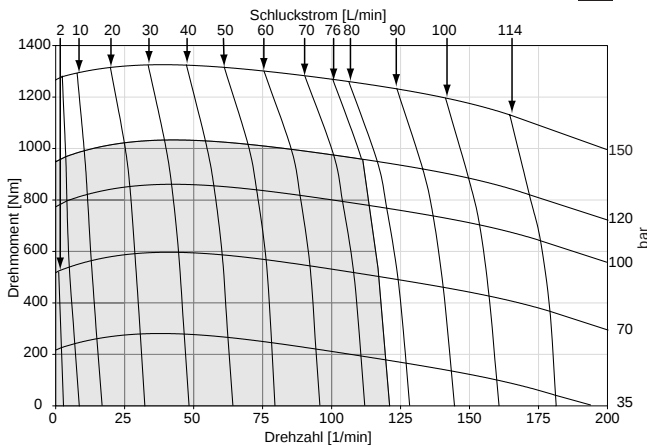
Capacidad de funcionamiento intermitente valida para 10% por cada minuto.

Leistungsdaten sind gemessen mit SAE 10W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogdaten sind möglich.

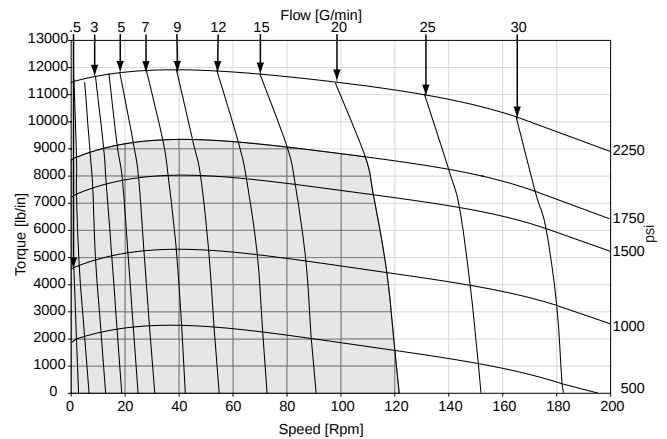
Datos tecnicos obtenidos con aceite 10W40 de 200 SUS de viscosidad a 54°C (130°F). Los datos proporcionados son valores típicos. Los valores exactos reales podrían tener una pequeña variación entre distintos motores.

TH 0625

EU

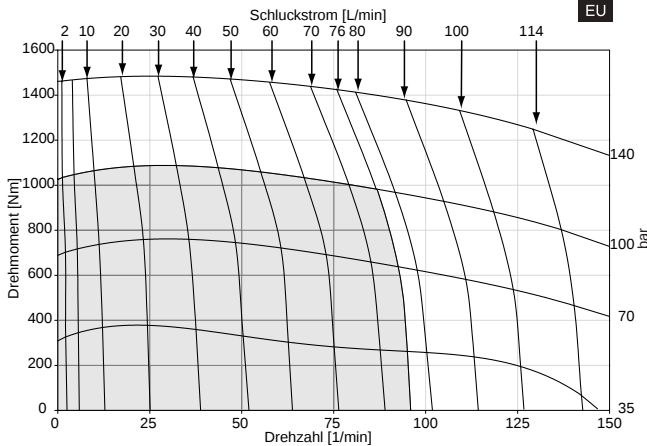


US

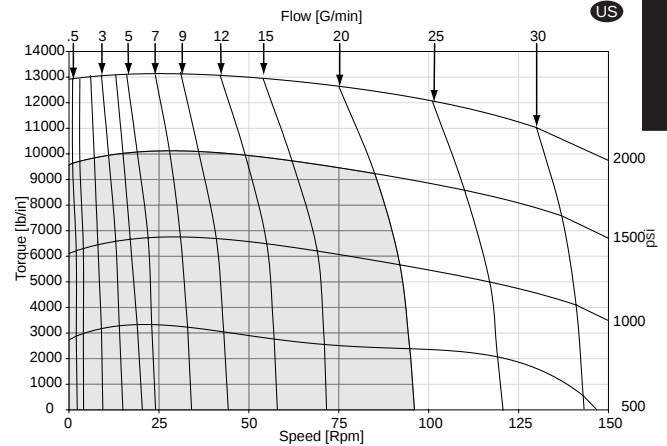


TH 0785

EU

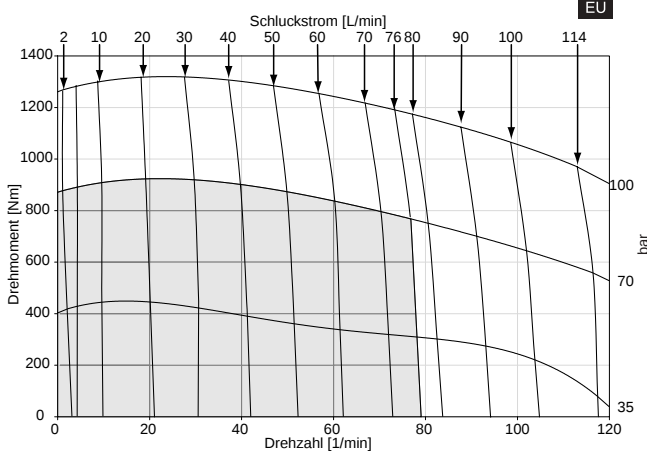


US

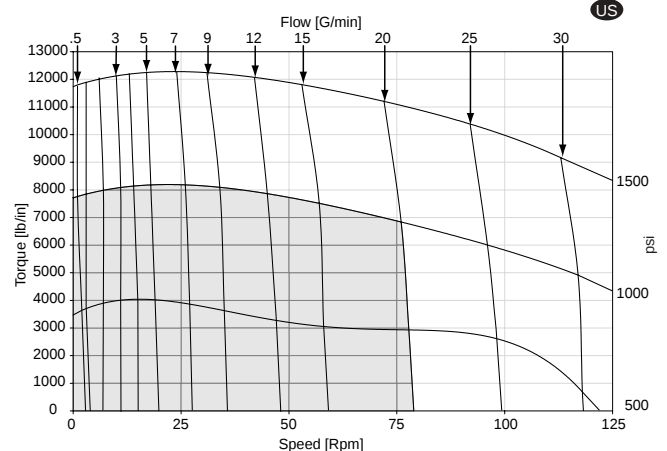


TH 0960

EU



US



Cont.

Int.

Intermittent operation rating applies to 10% of every minute.

Fonctionnement interm. 10% max. de chaque minute d'utilisation.

Performance data based on testing using 10W40 oil with a viscosity of 200 SUS at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.

Les données sur les performances sont basées sur des tests utilisant de l'huile 10W40 d'une viscosité de 200 SUS à 54°C (130°F). Ces données correspondent à des situations typiques. Les données réelles peuvent varier légèrement d'un moteur de production à l'autre.

Global TH.p65, pfm, fm

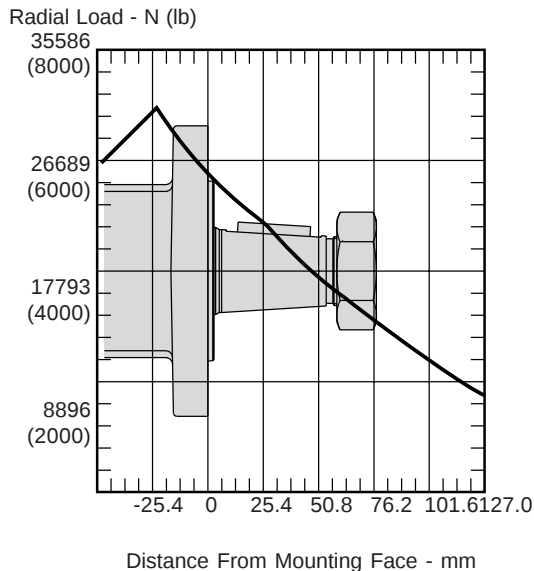
Intermittierende Werte maximal 10% von jeder Betriebsminute.

Capacidad de funcionamiento intermitente valida para 10% por cada minuto.

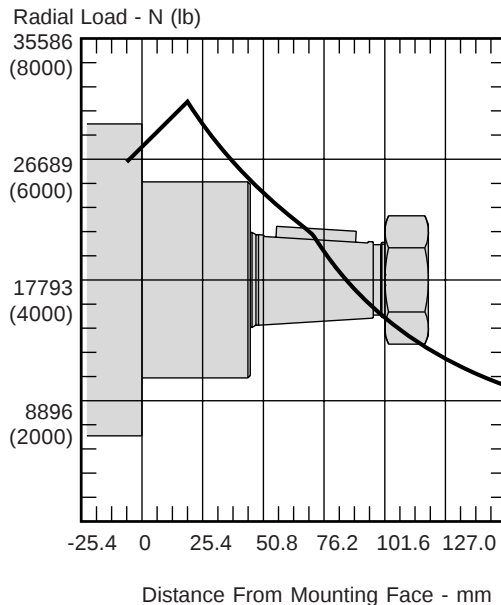
Leistungsdaten sind gemessen mit SAE 10W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogdaten sind möglich.

Datos tecnicos obtenidos con aceite 10W40 de 200 SUS de viscosidad a 54°C (130°F). Los datos proporcionados son valores típicos. Los valores exactos reales podrían tener una pequeña variación entre distintos motores.

Flange Mount / Standardgehäuse
Monture à bride(s) / Montaje de brida



Wheel Mount / Radnabengehäuse
Monture à roue / Montaje de rueda



The allowable side load curve is based on uni-directional steady state loads for L_{10} bearing life at 3×10^6 revolutions.

Die zulässige auslegbare radiale Wellenbelastungskurve ist unter ruhenden, einseitig statisch gerichteten Lastverhältnissen auf eine L_{10} Lebensdauer mit 3×10^6 Umdrehungen kalkuliert.

La courbe de charge latérale permise se base sur des charges unidirectionnelles en régime permanent pour le roulement L_{10} à 3×10^6 révolutions.

La curva de valores admisibles de carga lateral está basada en cargas constantes para cojinetes L_{10} a 3×10^6 revoluciones.

Equation to Calculate the Expected Radial Bearing Life
Gleichung zur Ermittlung der Lagerlebensdauer

Equation to calculate the allowable side load "for a given load":
 Bestimmung der erlaubten radialen Wellenbelastung mit vorgegebener Last

Use F_a , F_b and S in equation to determine hours of L_{10} bearing life.
 Die Lebensdauer in Stunden ergibt sich durch einsetzen von F_a , F_b , und S in die nachstehende Formel.

$$L = \frac{3 \times 10^6}{60 \times S} \left\{ \frac{F_a}{F_b} \right\}^{3.33}$$

Where / Mit:

S = Shaft Speed RPM / Abtriebswellendrehzahl in min^{-1}

L = Life In Hours / Lebensdauer in Stunden

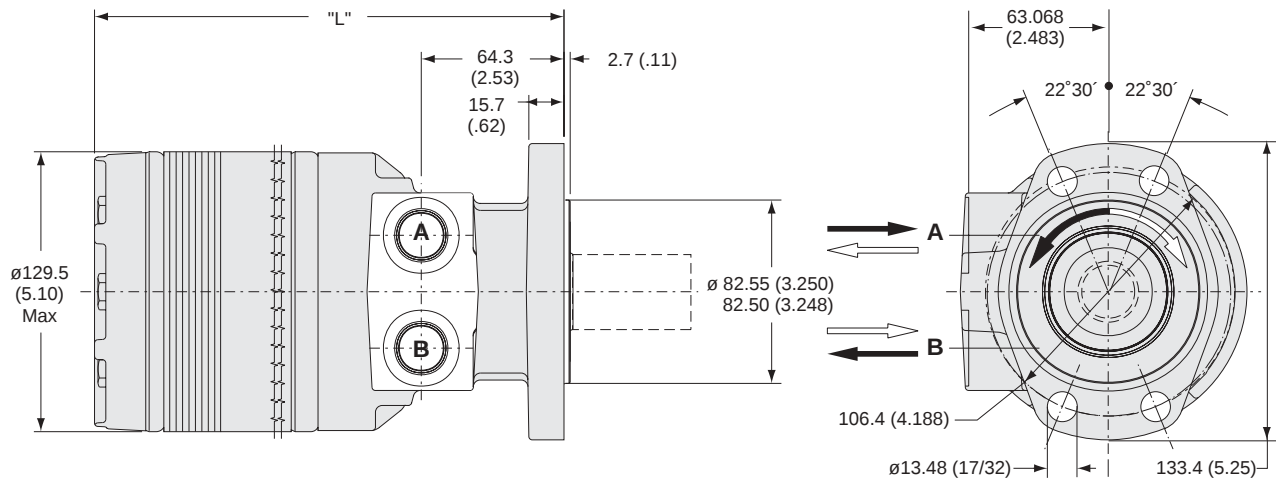
F_a = Allowable side load defined by above curve at a distance from mounting flange. / Erlaubte radiale Wellenbelastung als Funktion der Länge

F_b = Application side load. / Anwendungsseitige Wellenbelastung

Note: Calculations are based on L_{10} bearing life per ISO 281.
 Auslegung basiert auf einer L_{10} Lebensdauer nach ISO 281.

Code: M  

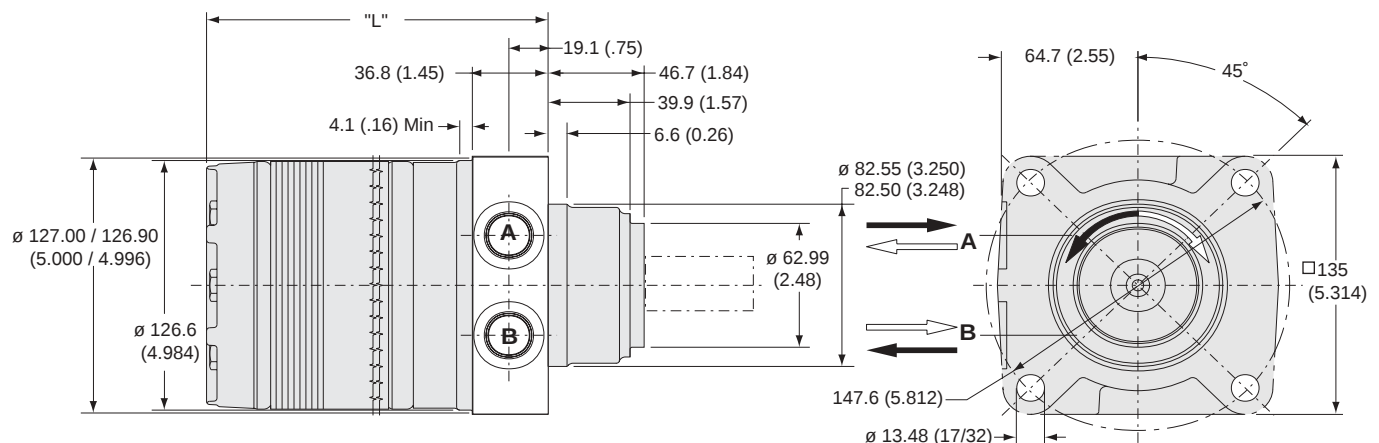
Magneto



Code M	disp.	0140	0170	0195	0240	0280	0335	0405	0475	0530	0625	0785	0960
Weight/Gewicht	kg	14.7	14.9	15.2	15.5	15.9	16.3	16.9	17.6	18.3	19.0	20.6	22.3
Poids/Peso	(lb)	(32.3)	(32.8)	(33.4)	(34.2)	(35.1)	(35.9)	(37.3)	(38.7)	(40.4)	(41.9)	(45.4)	(49.1)
Length	"L" mm	216	219	222	227	232	238	245	254	260	270	289	308
	"L" (in)	(8.50)	(8.62)	(8.75)	(8.94)	(9.12)	(9.37)	(9.66)	(10.00)	(10.25)	(10.62)	(11.37)	(12.12)

Code: U  

Wheel, Standard



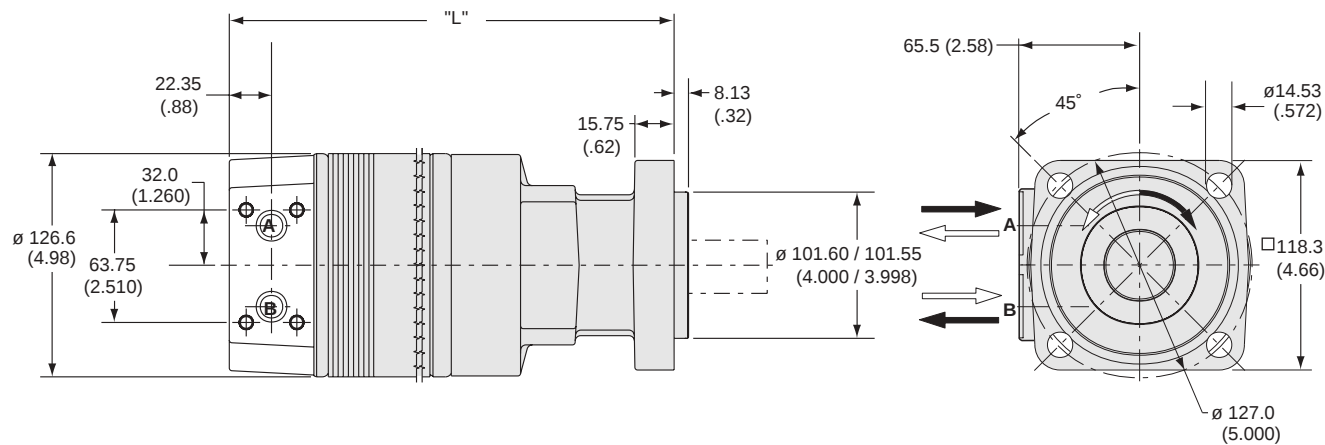
Code U	disp.	0140	0170	0195	0240	0280	0335	0405	0475	0530	0625	0785	0960
Weight/Gewicht	kg	16.9	17.2	17.4	17.8	18.2	18.6	19.2	19.8	20.6	21.3	22.9	24.5
Poids/Peso	(lb)	(37.3)	(37.8)	(38.4)	(39.2)	(40.1)	(40.9)	(42.3)	(43.7)	(45.4)	(46.9)	(50.4)	(54.1)
Length	"L" mm	173	177	180	184	189	196	203	212	218	227	246	265
	"L" (in)	(6.82)	(6.95)	(7.07)	(7.26)	(7.45)	(7.70)	(7.99)	(8.32)	(8.57)	(8.95)	(9.70)	(10.45)

English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm

Code: P 

SAE "B" 4 Bolt



Code P	disp.	0140	0170	0195	0240	0280	0335	0405	0475	0530	0625	0785	0960
Weight/Gewicht	kg	16.9	17.2	17.4	17.8	18.2	18.6	19.2	19.8	20.6	21.3	22.9	24.5
Poids/Peso	(lb)	(37.3)	(37.8)	(38.4)	(39.2)	(40.1)	(40.9)	(42.3)	(43.7)	(45.4)	(46.9)	(50.4)	(54.1)
Length	"L" mm	235	238	242	246	251	257	265	273	280	289	308	327
	"L" (in)	(9.26)	(9.38)	(9.51)	(9.70)	(9.88)	(10.13)	(10.43)	(10.76)	(11.01)	(11.39)	(12.14)	(12.89)

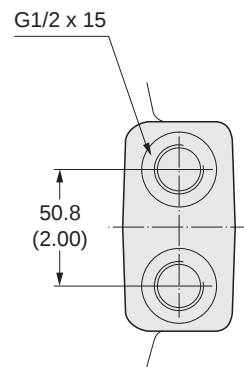
English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm

C

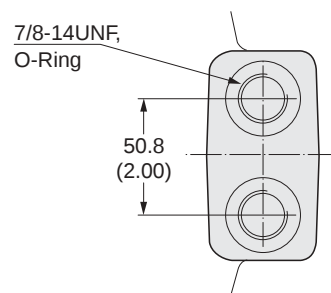
Code: W **EU**

G 1/2



Code: V **EU**

7/8-14 UNF O-Ring

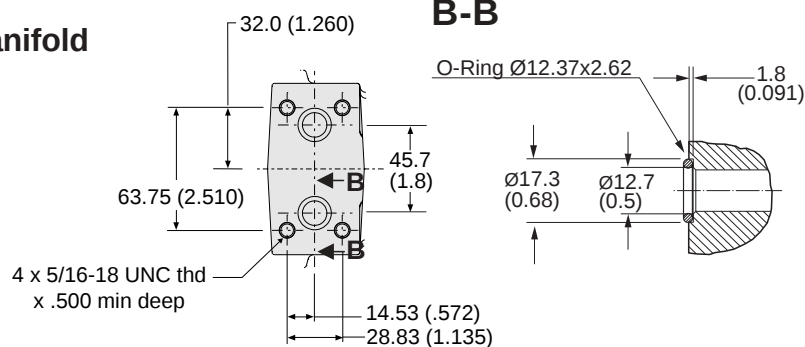


English equivalents for metric specifications are shown in ().

Global TH,p65, pfm, fm

Code: M **US**

Manifold



Motor with manifold mount is supplied with 2 o-rings.

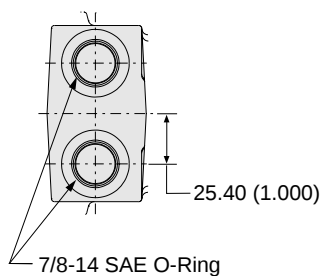
Zum Motor mit Universalanschluß werden 2 o-ringe geliefert.

Deux joints toriques sont livrés avec les moteurs a plan de raccordement universel.

Il blocchetto connessioni é corredato da 2 OR.

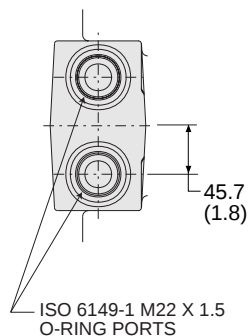
Code: S **US**

7/8-14 SAE O-Ring



Code: H **US**

ISO 6149 M22 x 1.5

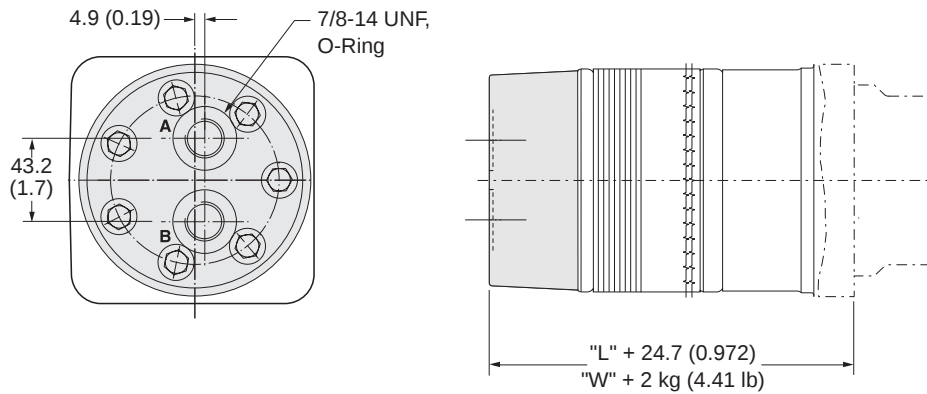


English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm

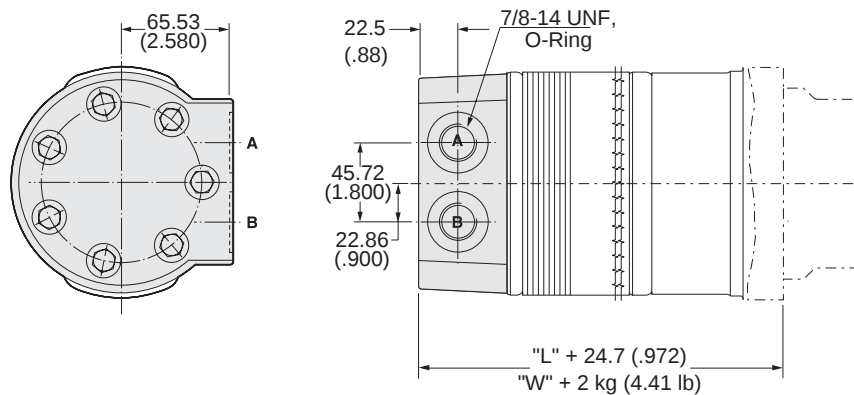
Code: A  

7/8-14 UNF, Axial



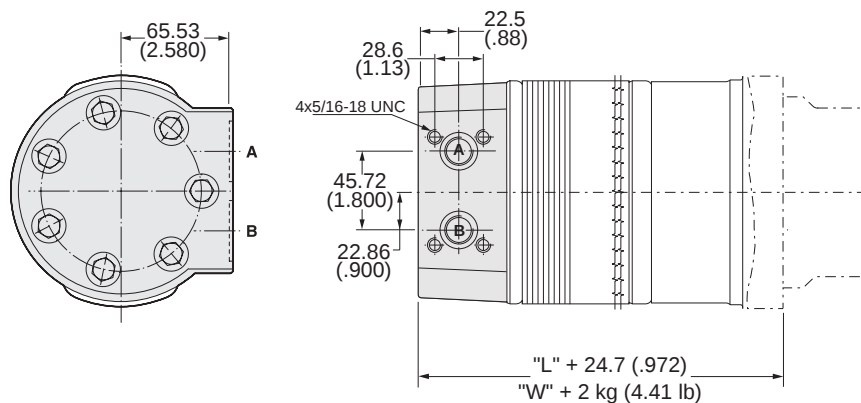
Code: B  

7/8-14 UNF, Radial



Code: E 

Manifold



See pages 193-194 for length "L" and Weight "W".

Längen "L" / Gewichte "W" siehe Seite 193...194.

Voir page 193-194 pour les longueurs "L" et les poids "W".

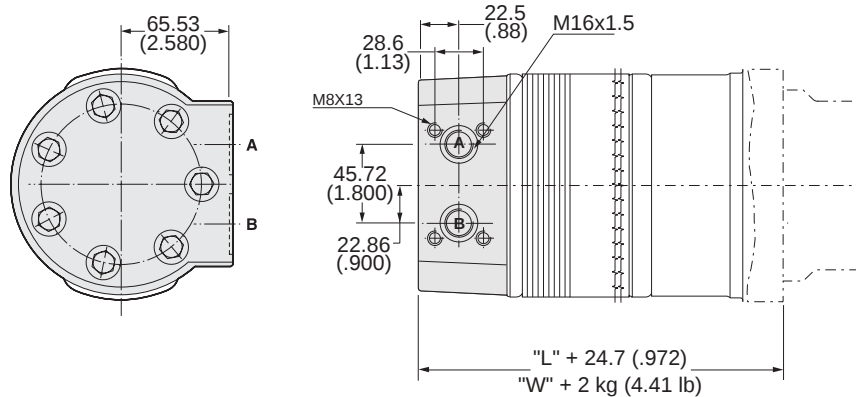
Consultar en la Página 193-194 los valores de largo "L" y peso "W".

English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm

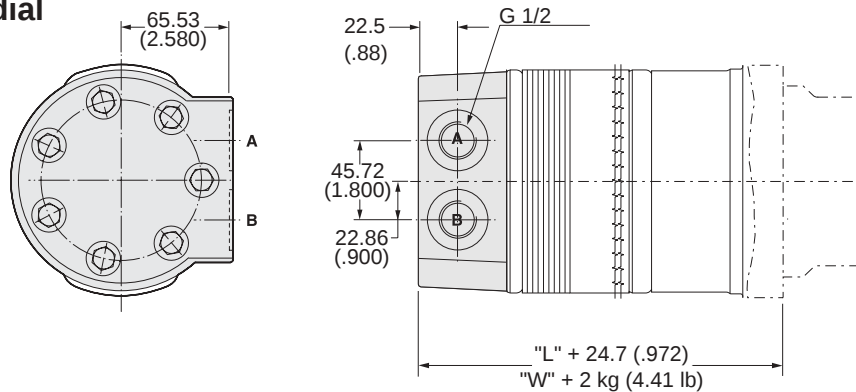
Code: L EU

Manifold, M8



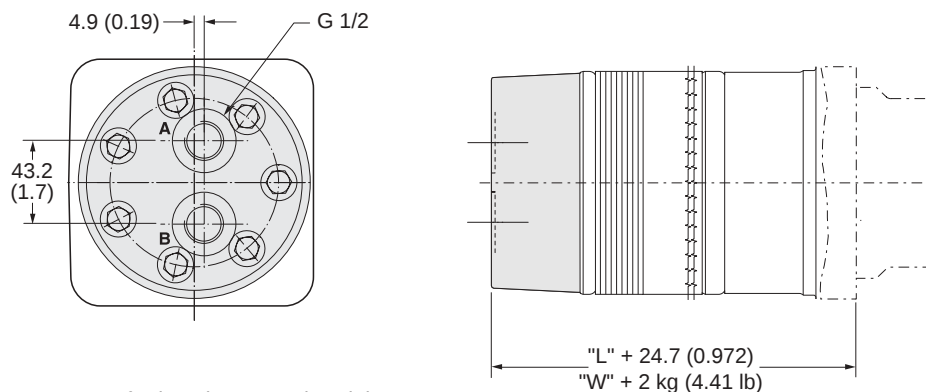
Code: X EU

G 1/2, Radial



Code: Y EU

G 1/2, Axial



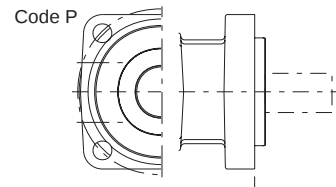
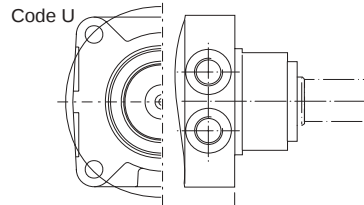
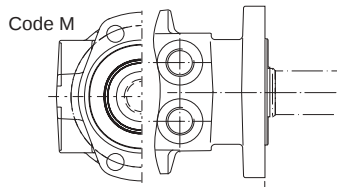
See pages 193-194 for length " L " and Weight " W ".
Längen " L " / Gewichte " W " siehe Seite 193...194.

Voir page 193-194 pour les longueurs "L" et les poids "W".

Consultar en la Página 193-194 los valores de largo "L" y peso "W".

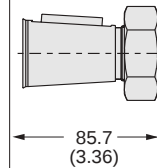
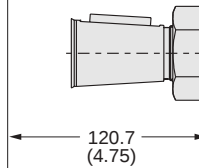
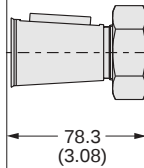
English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm



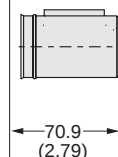
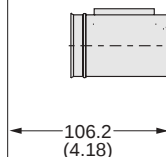
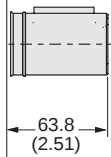
Code: 31 EU US

1 1/2" J501 Taper



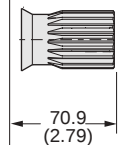
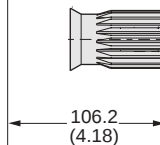
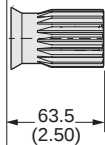
Code: 32 EU US

1 1/2" Keyed



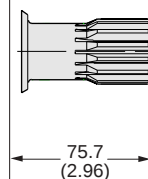
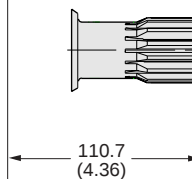
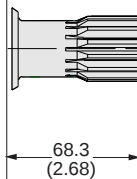
Code: 36 US

**1 1/2" 17 Tooth
12/24 Spline**



Code: 62 US

1 1/4" 14 Tooth

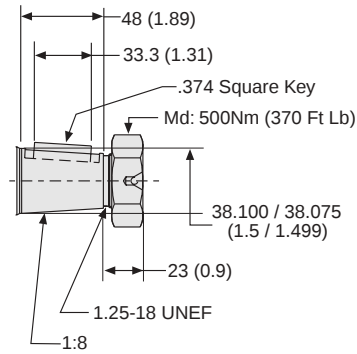


English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm

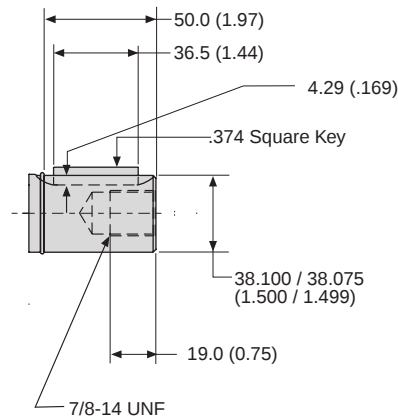
Code: 31 EU US

1 1/2" J501 Taper



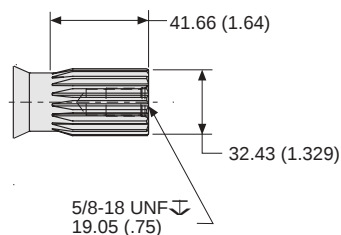
Code: 32 EU US

1 1/2" Keyed



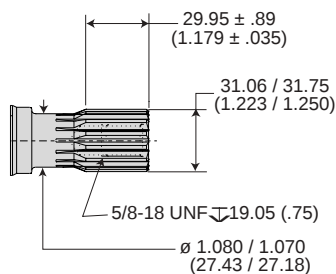
Code: 36 US

**1 1/2" 17 Tooth
12/24 Spline**



Code: 62 US

1 1/4" 14 Tooth



English equivalents for metric specifications are shown in ().

Global TH.p65, pfm, fm

TH

Series

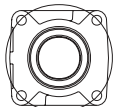
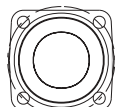
XXXX

Displacement
Schluckvolumen
Cylindrée
Desplazamiento

Code	cm ³ /U / cm ³ /rev cm ³ /tr / cm ³ /giro
0140	8.6 / 141
0170	10.3 / 169
0195	12.0 / 195
0240	14.5 / 237
0280	17.1 / 280
0335	20.6 / 335
0405	24.7 / 405
0475	29.1 / 477
0530	32.3 / 530
0625	38.0 / 625
0785	48.0 / 785
0960	58.5 / 960

X

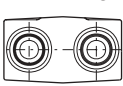
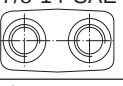
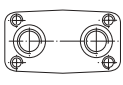
Mounting
Gehäuse
Carter
Montaje

Code	Mounting	Avail.
M	Magneto 	US EU
U	Wheel, Standard 	US EU
P*	SAE "B" 4 Bolt 	US

* Requires rear porting.
Nur Endanschluss möglich
Exige des orifices en arriere
Necesita lumbrera posterior

X

Ports
Anschluß
Plan de raccordement
Lumbreras

Code		Avail.
H	ISO 6149 M22 x 1.5 	US
S	7/8-14 SAE 	US
M ¹	5/16-18 UNC Manifold 	US
W	G 1/2 	EU
V	7/8-14 SAE 	EU

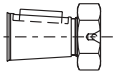
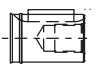
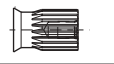
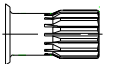
1 Not available on U Mounting
Nicht Verfügbar für U Gehäuse
Pas disponible pour le
montage U
No disponible para montaje U

US US Standard

EU Euro Standard

XX

Shaft
Welle
Arbre
Eje

Code	Shaft	Avail.
31	1 1/2" J501 Taper 	EU US
32	1 1/2" Keyed 	EU US
36	1 1/2" 17 Tooth 12/24 Spline 	US
62	1 1/4" 14 Tooth 	US

X

Rotation
Drehrichtung
Direction de rotation
Rotacion

Code	Front Port Rotation	Avail.
0	Standard 	EU US
1	Reverse Timed Manifold 	EU US

XXXX

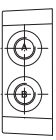
Options
Opciones

Code	Rear Port Rotation	Avail.
0	Standard 	EU US
1	Reverse Timed Manifold 	EU US

Code		Avail.
AAAB	No Paint No lackiert	EU US
AAAA	Black Paint Schwarz lackiert	EU US

See Page 219 for Additional Options

Rear Ports
Endanschluß
Alimentazione Laterale
Orifices arriér

Code		Avail.
A	Axial 	7/8-14 US
Y		G 1/2 EU
B	Radial 	7/8-14 US
X		G 1/2 EU
E	Manifold 	5/16-18 US
L		M8x13 EU

C