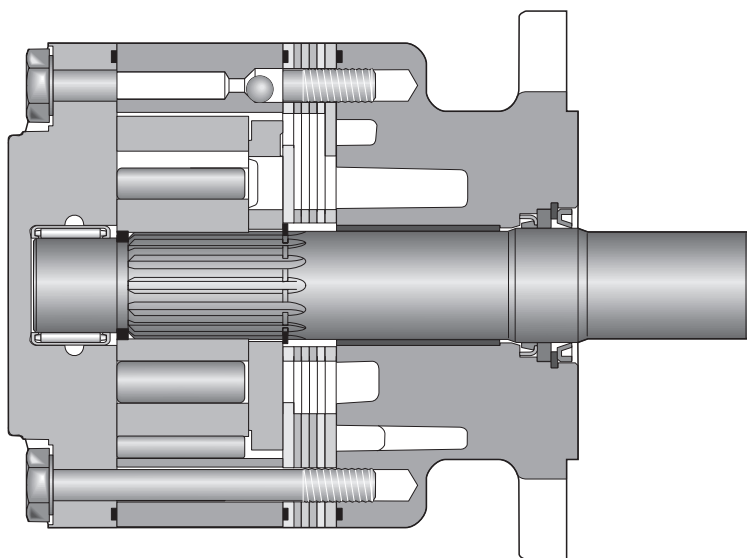
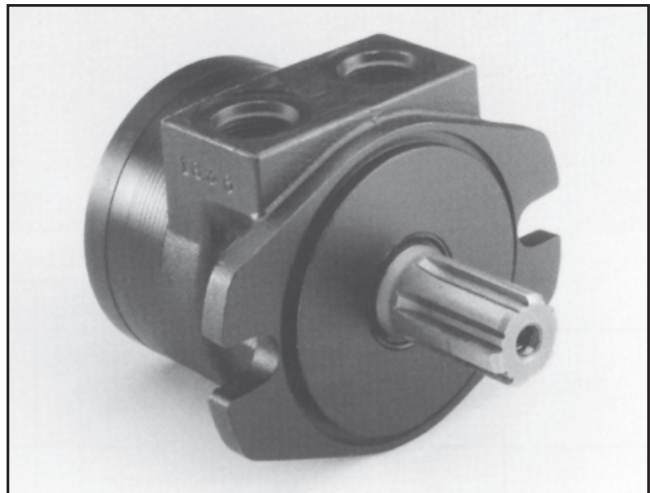
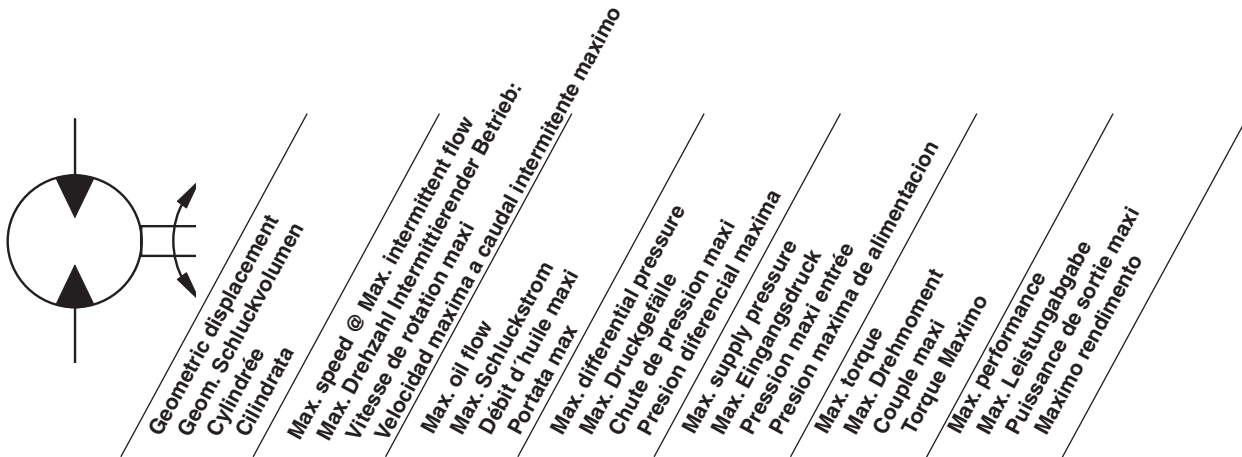


9 Displacements 9 Schluckvolumen 9 Cylindrée 9 Despazamientos	(3.6 – 24.1 in ³ /rev) 59...395 cm ³ /rev	
Maximum Pressure Eingangsdruck Pression entrée Presion Maxima	Cont (to 2500 psi) ...172.4 bar	Int (to 3000 psi) ...206.8 bar
Maximum Oil Flow Schluckstrom Débit d'huile Caudal Maximo de Aceite	(to 30 gpm) ...113.6 lpm	
Maximum Speed Drehzahl Vitesse de rotation Velocidad Maxima	858 rpm	
Maximum Torque Max Drehmoment Couple Torque Maximo	Cont (to 4164 lb in) ...470 Nm	Int (to 5215 lb in) ...589 Nm
Maximum Side Load at Key Seitenlast Charges latérales Carga Maxima Lateral	(to 1450 lb) ... 6450 N	

When the Ultimate in Efficiency and Reliability is a Must

This high performance motor contains a power element that is pressure loaded against internal leakage for high volumetric efficiency. It is wear compensated, so that its volumetric efficiency will not degrade with use. It can provide up to 5215 lb-in of torque through a one-piece solid fixed axis shaft. This shaft design allows for full stationary spline contact between shaft and rotor, minimizing spline contact stresses. It also allows the shaft to be extended through the rear cover for mounting parking brakes, auxiliary drive functions or encoders for speed readout or closed loop control. Low internal pressure drop means high mechanical efficiency and higher flow capability. This rugged motor is the most compact on the market.





Motor Series 110A	cm ³ /rev in ³ /rev	rev/min	cont / int* l/min g/min		cont / int* bar psi		max bar psi	cont / int* Nm lb-in		max KW HP
110A 036	59 3.6	858	45.4 12	53 14	170 2500	210 3000	225 3250	127 1125	149 1319	8.5 11.4
110A 054	89 5.4	740	60.6 16	68.1 18	170 2500	210 3000	225 3250	182 1608	213 1884	11.2 15.1
110A 071	116 7.1	684	75.7 20	83.3 22	170 2500	210 3000	225 3250	256 2267	308 2725	14.2 19.1
110A 088	144 8.8	622	75.7 20	94.6 25	170 2500	210 3000	225 3250	324 2874	389 3449	14.6 19.6
110A 106	174 10.6	519	75.7 20	94.5 25	155 2250	210 3000	225 3250	352 3115	465 4121	13.1 17.6
110A 129	211 12.9	437	75.7 20	94.6 25	155 2250	190 2750	225 3250	412 3651	503 4453	12.9 17.3
110A 164	269 16.4	415	75.7 20	114 30	140 2000	170 2500	225 3250	470 4164	589 5215	12.1 16.2
110A 189	310 18.9	350	75.7 20	114 30	140 2000	170 2500	225 3250	542 4803	675 5977	7.9 10.6
110A 241	395 24.1	279	75.7 20	114 30	120 1750	155 2250	225 3250	594 5261	764 6765	9.2 12.4

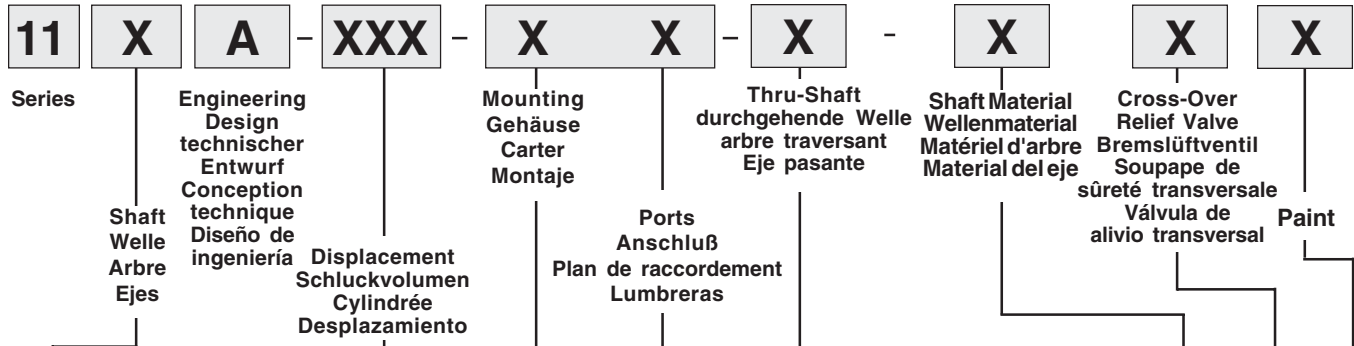
Performance data based on tests using 15W40 oil with a viscosity of 55 cSt (215 SUS) at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.

Les donnees sur les performances sont basees sur des tests utilisant de l'huile 15W40 d'une viscosite de 55 cSt (215 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.

Leistungsdaten sind gemessen mit SAE 15W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogerten sind möglich.

Datos tecnicos obtenidos con aceite 15W40 de 55 cSt (215 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.

* 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.



Code	Description
0	1" Keyed
1	1" 6B Spline
2	25mm Keyed
3	1-1/4" Keyed
5	1-1/4"-14 Tooth Spline
6	7/8"-13 Tooth Spline

Code	cm ³ /U cm ³ /tr cm ³ /giro cu in ³ /rev
036	59 / 3.6
054	89 / 5.4
071	116 / 7.1
088	144 / 8.8
106	174 / 10.6
129	211 / 12.9
164	269 / 16.4
189	310 / 18.9
241	395 / 24.1

Code	Description
AM	SAE A 2-Bolt, Manifold
AS	SAEA2-Bolt, 7/8"-14SAE
AP	SAEA2-Bolt, 1/2"-BSPP
BM	SAE B 2-Bolt, Manifold
BS	SAEB2-Bolt, 7/8"-14SAE

Code	Description
0	No Thru Shaft
1	Thru Shaft
E	Endcoder

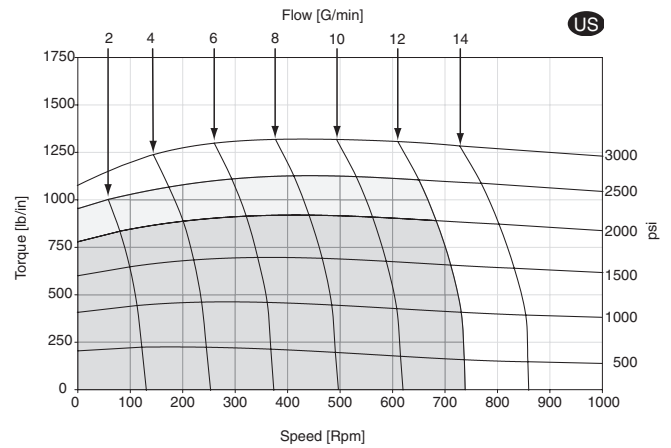
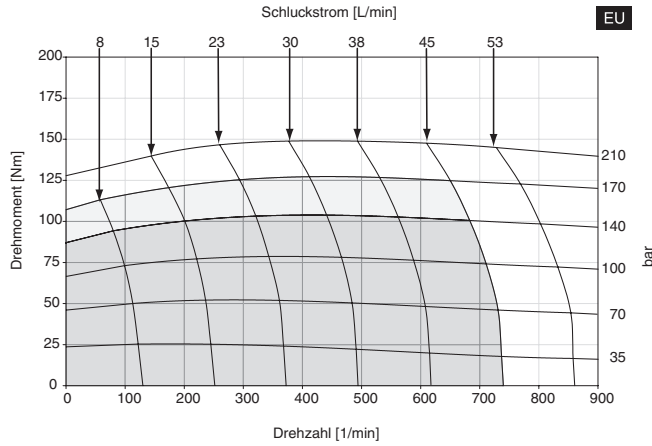
Code	Description
Omit	If Not Required
S	Stainless Steel

Code	Description
Omit	If Not Required
R1	Cross-Over Relief Valve

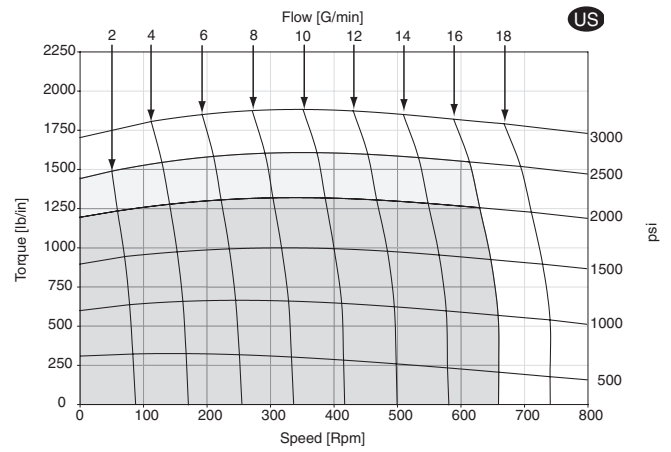
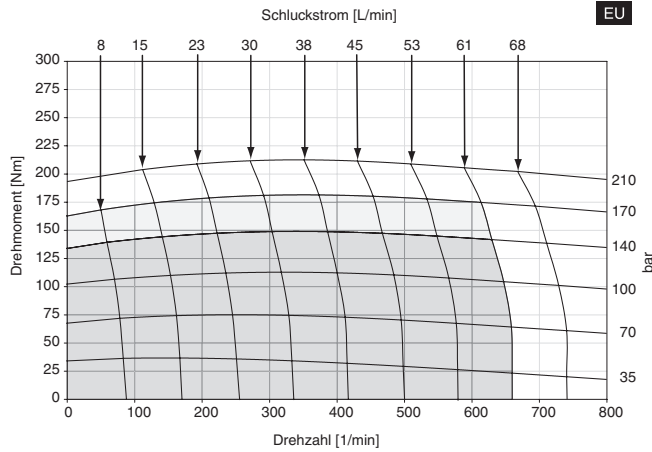
Code	Description
Omit	No Paint
F	Black Paint Schwarz lackiert

Consult factory for other available options, configurations ordering codes and lead times.

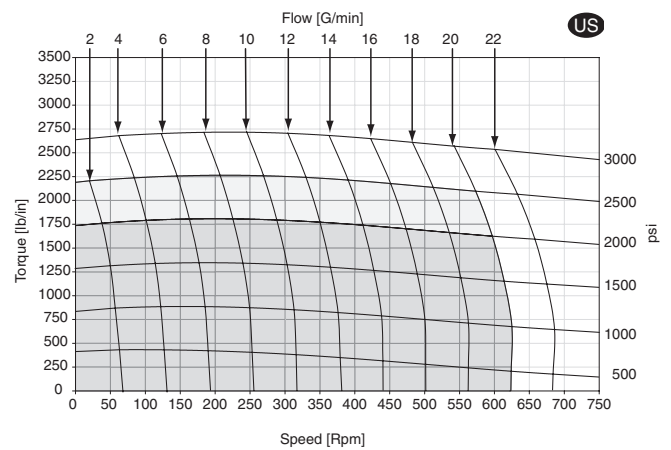
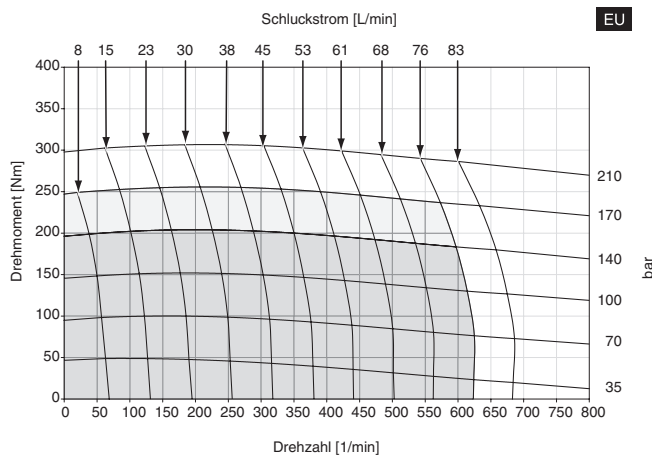
110A 036



110A 054



110A 071

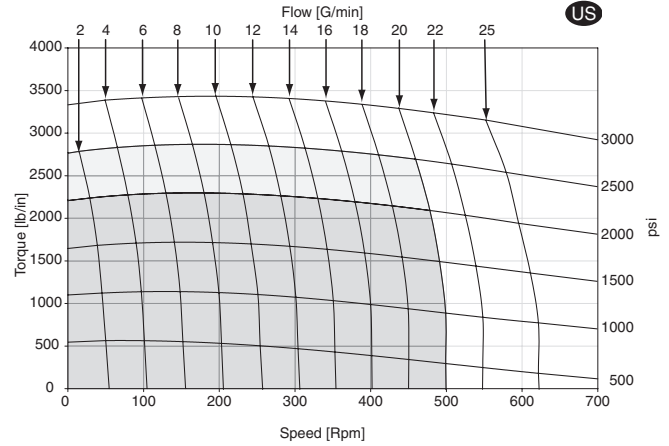
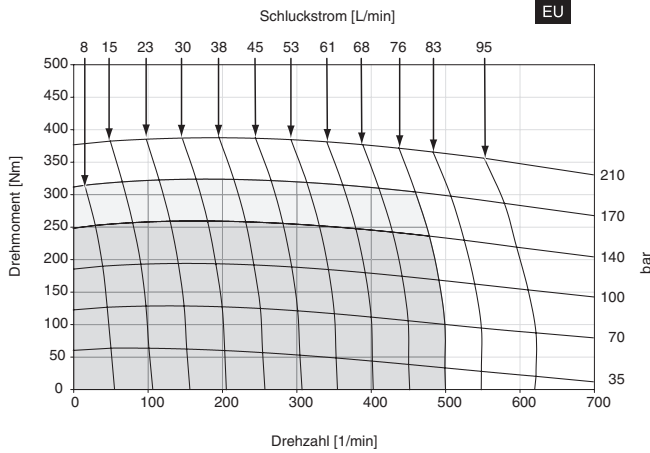


Cont.
 Cont. with no side load
 Int. with rated side load
 Int.

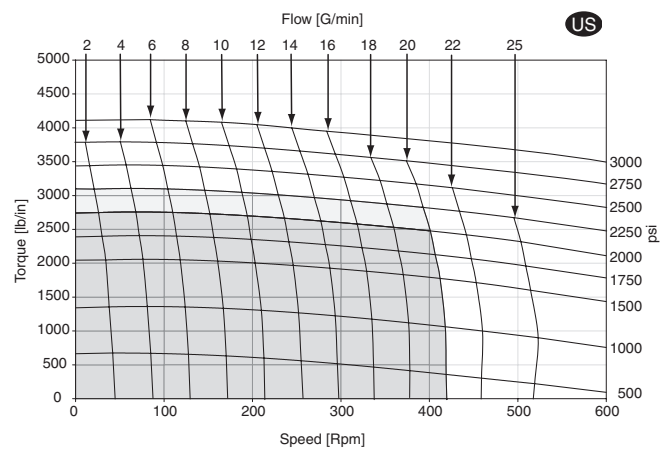
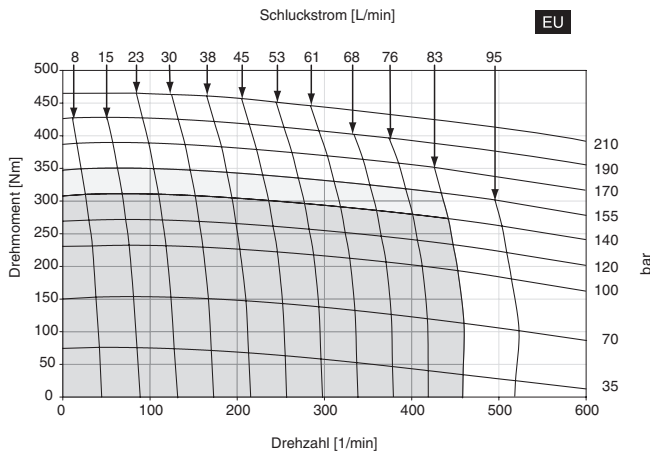
Intermittent operation rating applies to 10% of every minute.
 Fonctionnement interm. 10% max. de chaque minute d'utilisation.
 Performance data based on tests using 15W40 oil with a viscosity of 55 cSt (215 SUS) at 54° C (130° F). Performance data is typical. Actual data may vary slightly from one production motor to another.
 Les données sur les performances sont basées sur des tests utilisant de l'huile 15W40 d'une viscosité de 55 cSt (215 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.
 020 110A.indd, js

Intermittierende Werte maximal 10% von jeder Betriebsminute.
 Capacidad de funcionamiento intermitente valida para 10% por cada minuto.
 Leistungsdaten sind gemessen mit SAE 15W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogerten sind möglich.
 Datos tecnicos obtenidos con aceite 15W40 de 55 cSt (215 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.

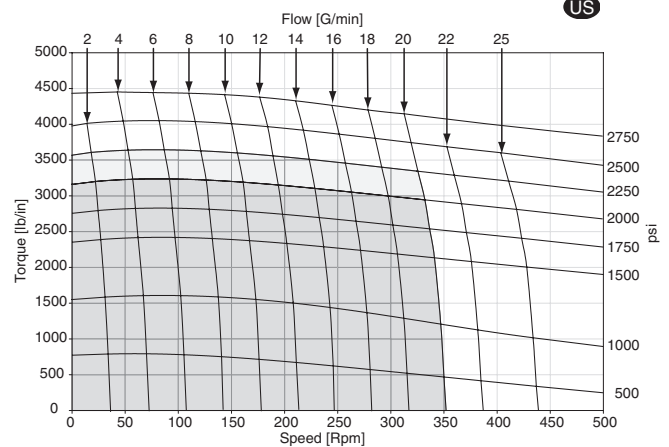
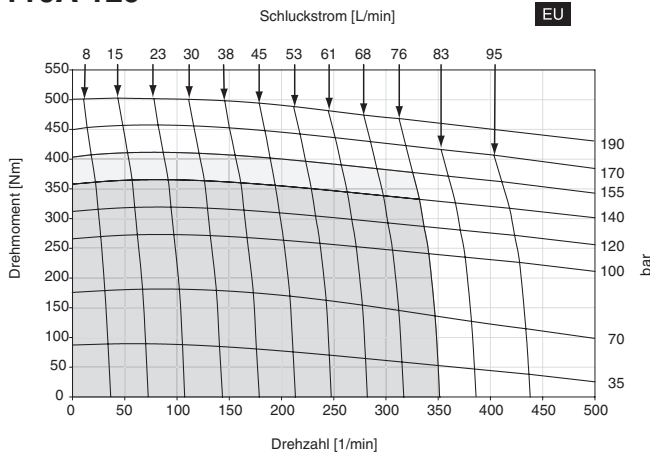
110A 088



110A 106



110A 129



Cont.
 Cont. with no side load
 Int. with rated side load
 Int.

Intermittent operation rating applies to 10% of every minute.

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

Performance data based on tests using 15W40 oil with a viscosity of 55 cSt (215 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 15W40 d'une viscosité de 55 cSt (215 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.

020 110A.indd, js

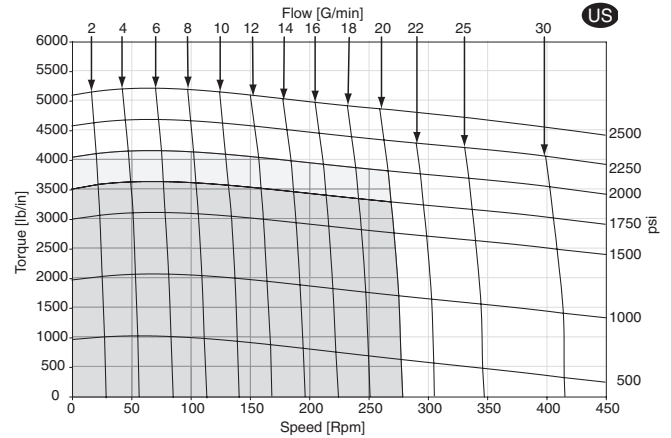
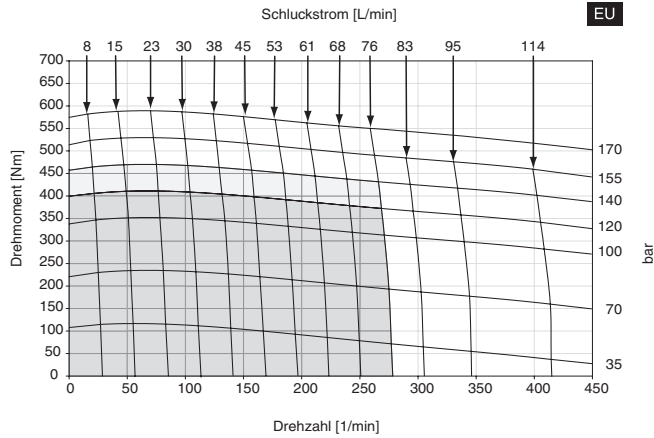
Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

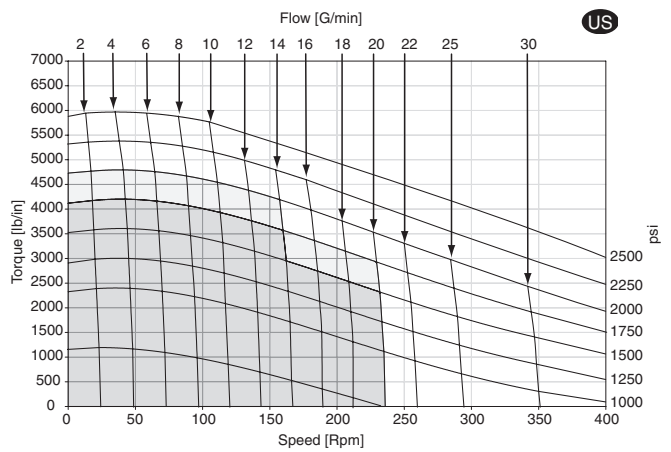
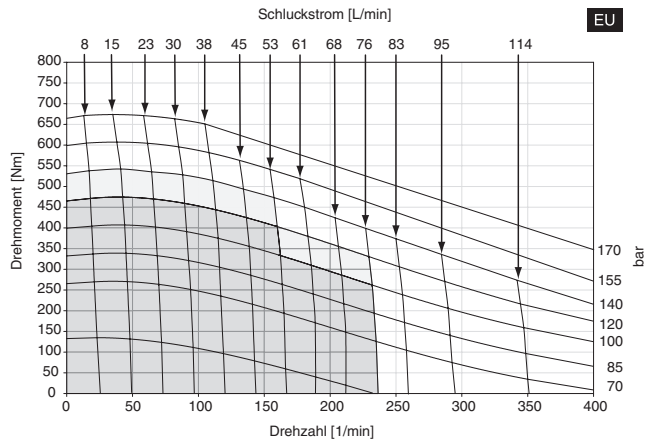
Leistungsdaten sind gemessen mit SAE 15W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogerten sind möglich.

Datos técnicos obtenidos con aceite 15W40 de 55 cSt (215 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.

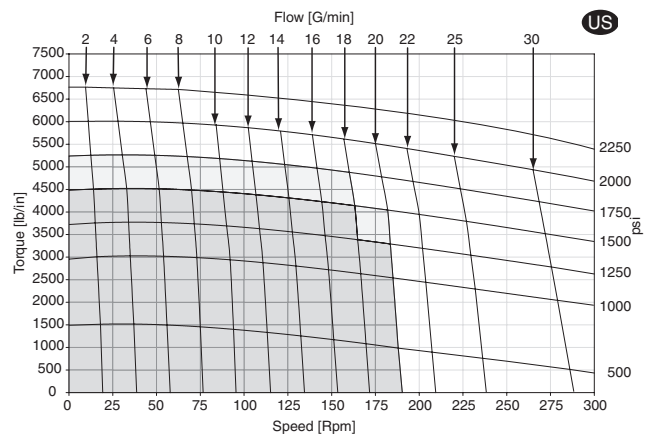
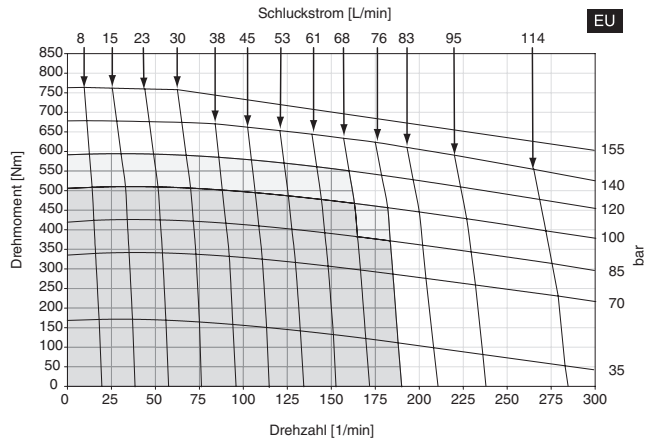
110A 164



110A 189



110A 241



Cont. Cont. with no side load
 Int. with rated side load Int.

Intermittent operation rating applies to 10% of every minute.

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

Performance data based on tests using 15W40 oil with a viscosity of 55 cSt (215 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 15W40 d'une viscosité de 55 cSt (215 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.

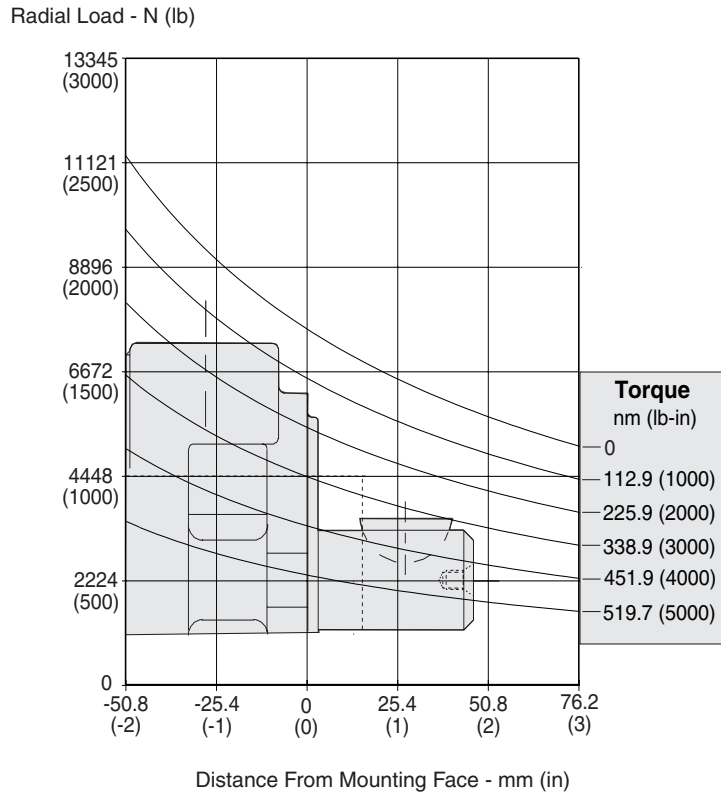
020 110A.indd, js

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistungsdaten sind gemessen mit SAE 15W40 bei einer Viskosität von 43,1 Cst bei 54°C. Geringfügige Abweichungen von den Katalogerten sind möglich.

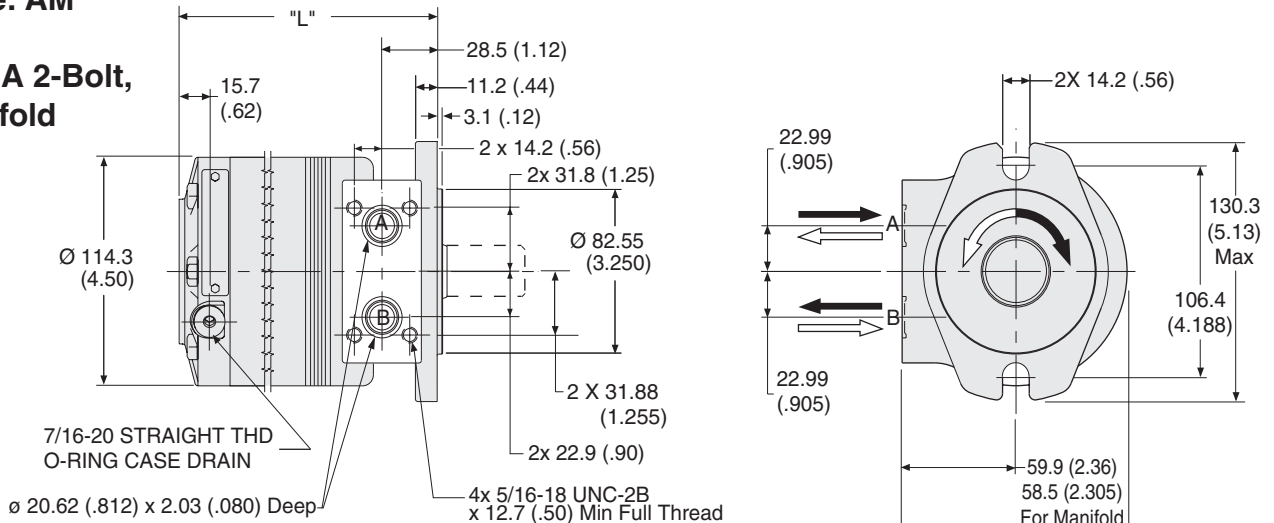
Datos tecnicos obtenidos con aceite 15W40 de 55 cSt (215 SUS) de viscosidad a 54°C (130°F). Los datos proporcionados son valores típicos. Los valores exactos reales podrían tener una pequeña variación entre distintos motores.



The allowable side load curve is based on L_{10} bushing life of 3×10^6 revolutions @ 100 RPM.
 Die zulässige radiale Wellenbelastung bezieht sich auf die Lager-Lebensdauer 3×10^6 Umdrehungen.
 L'effort radial admissible sur l'arbre depend a une duree de vie 3×10^6 de rotation.
 La curva de carga lateral admisible se basa en vida util de cojinete de 3×10^6 revoluciones.

Code: AM

**SAE A 2-Bolt,
Manifold**

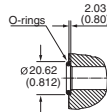


Motor with manifold mount is supplied with 2 O-rings.

Zum Motor mit Universalanschluß werden 2 O-Ringe geliefert.

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

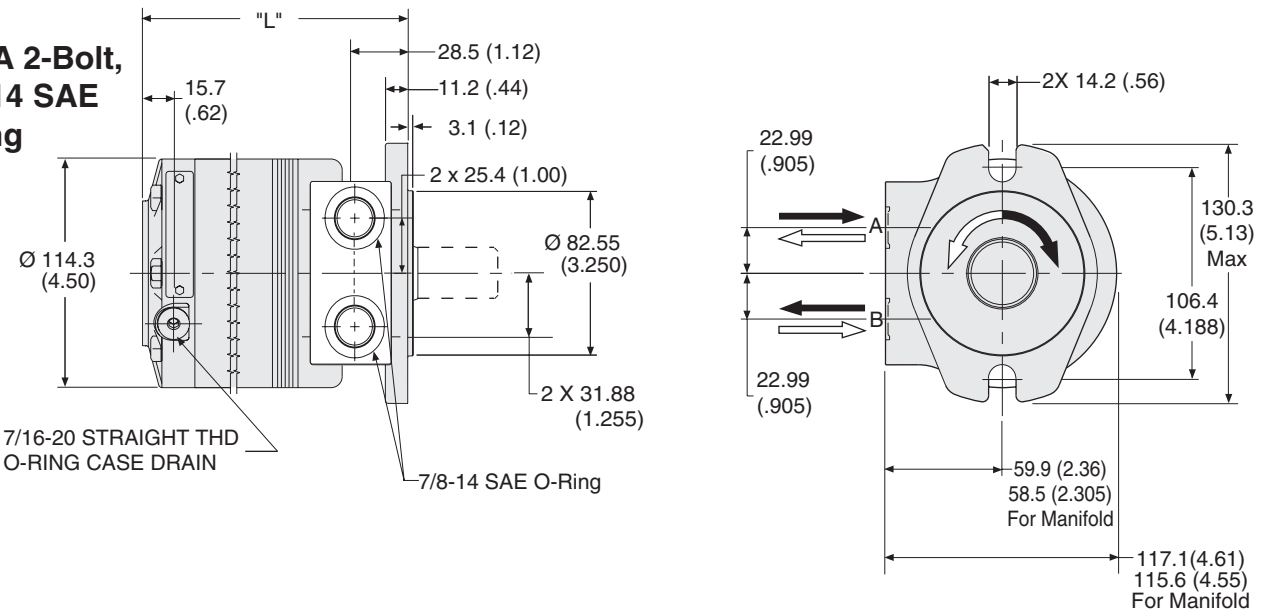
Il blocchetto connessioni è corredato da 2 OR.



Code AM	036	054	071	088	106	129	164	189	241
Weight/Gewicht kg	7.0	7.4	7.7	8.0	8.4	8.7	9.4	9.8	10.8
Poids/Peso (lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length "L" mm	112	117	121	127	131	138	147	154	169
"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

Code: AS

**SAE A 2-Bolt,
7/8"-14 SAE
O-Ring**



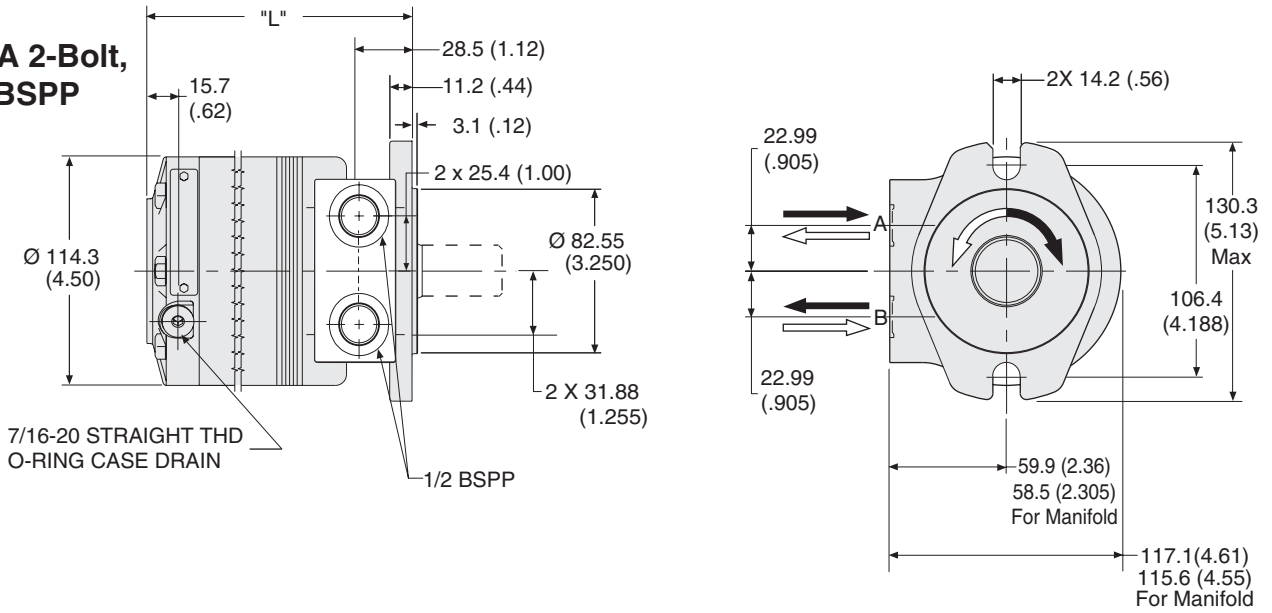
Code AS	036	054	071	088	106	129	164	189	241
Weight/Gewicht kg	7.0	7.4	7.7	8.0	8.4	8.7	9.4	9.8	10.8
Poids/Peso (lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length "L" mm	112	117	121	127	131	138	147	154	169
"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

English equivalents for metric specifications are shown in ().

020 110A.indd, js

Code: AP

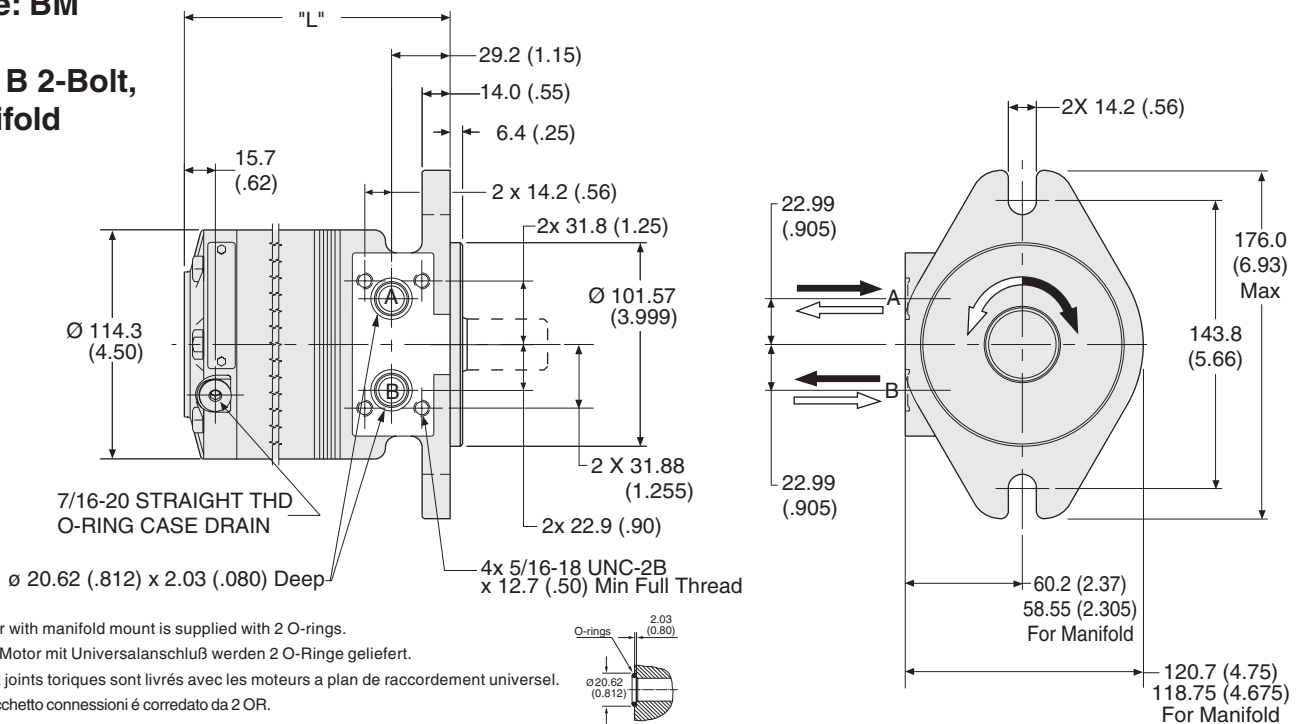
SAE A 2-Bolt,
1/2" BSPP



Code AT		036	054	071	088	106	129	164	189	241
Weight/Gewicht	kg	7.0	7.4	7.7	8.0	8.4	8.7	9.4	9.8	10.8
Poids/Peso	(lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length	"L" mm	112	117	121	127	131	138	147	154	169
	"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

Code: BM

SAE B 2-Bolt,
Manifold



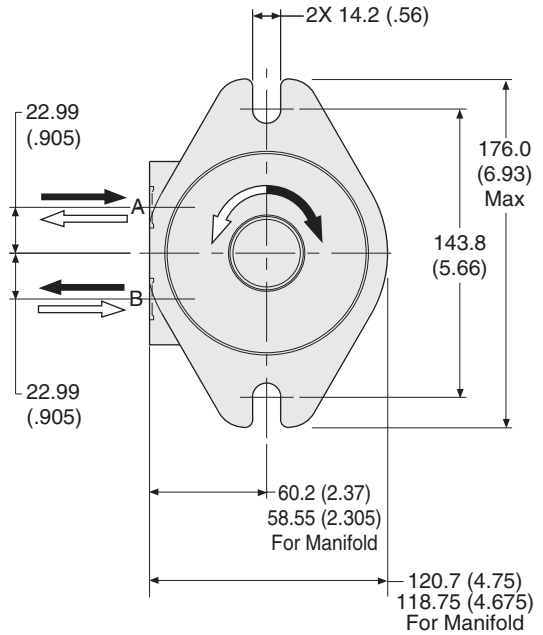
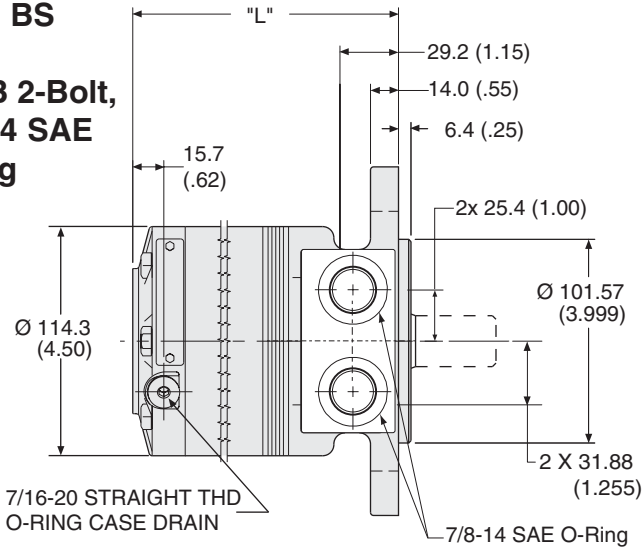
Motor with manifold mount is supplied with 2 O-rings.
Zum Motor mit Universalanschluß werden 2 O-Ringe geliefert.
Deux joints toriques sont livrés avec les moteurs a plan de raccordement universel.
Il blocchetto connessioni è corredato da 2 OR.

Code BM		036	054	071	088	106	129	164	189	241
Weight/Gewicht	kg	7.0	7.4	7.7	8.0	8.4	8.7	9.4	9.8	10.8
Poids/Peso	(lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length	"L" mm	112	117	121	127	131	138	147	154	169
	"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

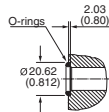
English equivalents for metric specifications are shown in ().

Code: BS

**SAE B 2-Bolt,
 7/8"-14 SAE
 O-Ring**



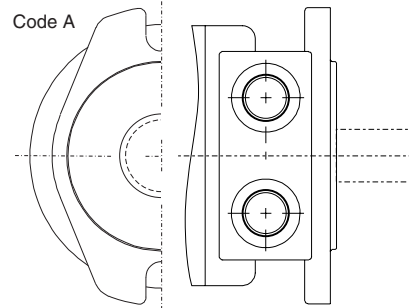
Motor with manifold mount is supplied with 2 O-rings.
 Zum Motor mit Universalanschluß werden 2 O-Ringe geliefert.
 Deux joints toriques sont livrés avec les moteurs a plan de raccordement universel.
 Il blocchetto connessioni é corredato da 2 OR.



Code BS	036	054	071	088	106	129	164	189	241
Weight/Gewicht kg	7.0	7.4	7.7	8.0	8.4	8.7	9.4	9.8	10.8
Poids/Peso (lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length "L" mm	112	117	121	127	131	138	147	154	169
"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

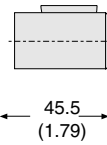
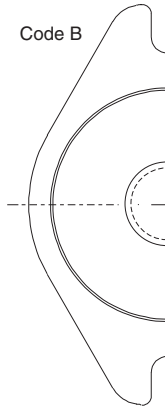
English equivalents for metric specifications are shown in ().

020 110A.indd, js



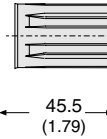
Code: 0

1" Keyed



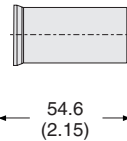
Code: 1

1" 6B Spline



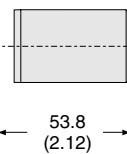
Code: 2

25mm Keyed



Code: 3

1-1/4" Keyed

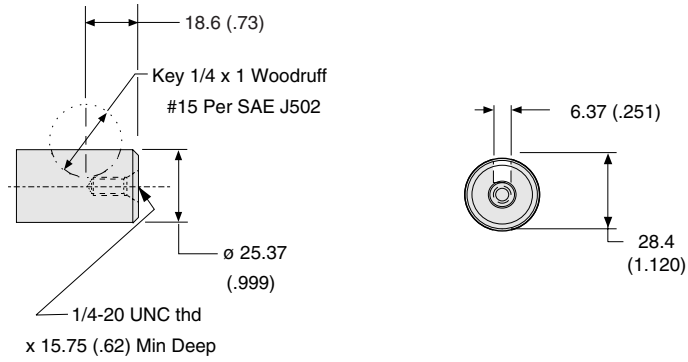


English equivalents for metric specifications are shown in ().

020 110A.indd, js

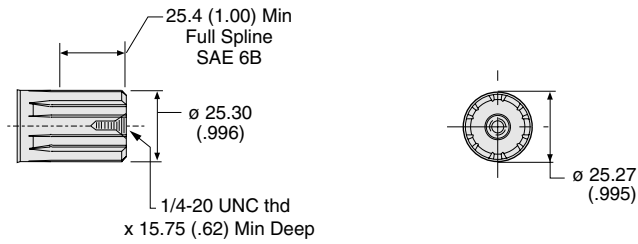
Code: 0

1" Keyed



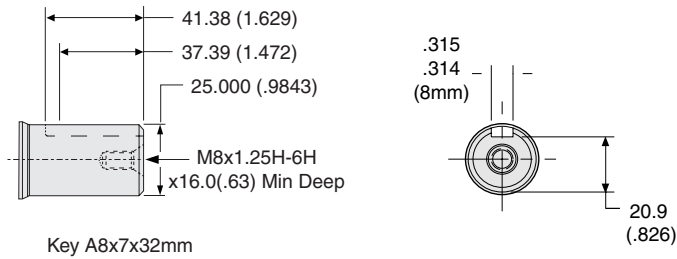
Code: 1

1" 6B Spline



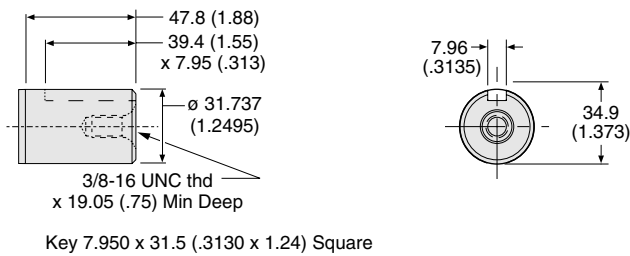
Code: 2

25mm Keyed



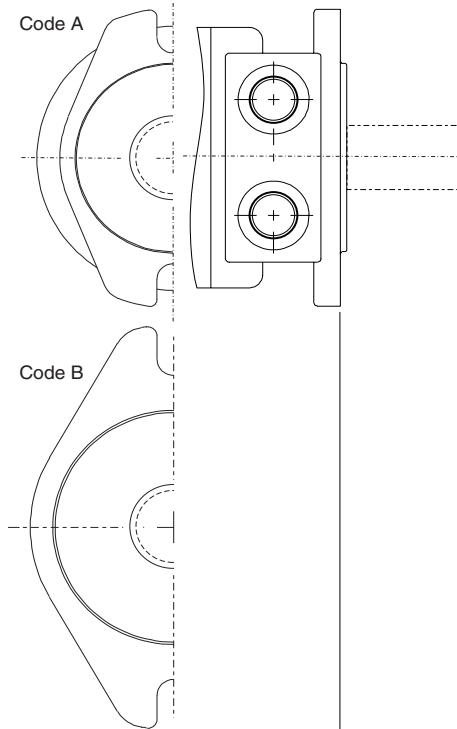
Code: 3

1-1/4" Keyed



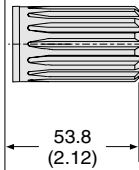
English equivalents for metric specifications are shown in ().

020 110A.indd, js



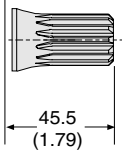
Code: 5

1-1/4"-14 Tooth Spline



Code: 6

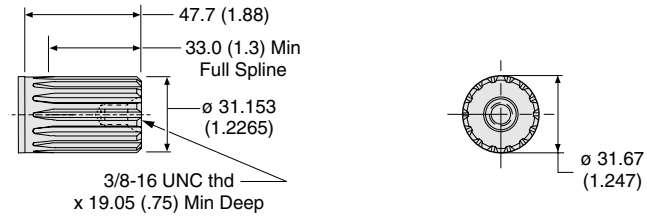
7/8"-13 Tooth Spline



English equivalents for metric specifications are shown in ().

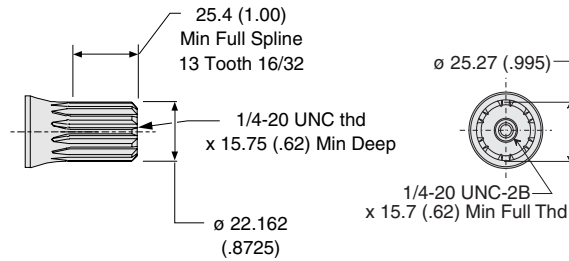
Code: 5

1-1/4"-14 Tooth Spline



Code: 6

7/8"-13 Tooth Spline



English equivalents for metric specifications are shown in ().