9 Displacements	(3.6 – 24.1 in³/rev)
9 Schluckvolumen	**59…395 cm³/rev**
9 Cylindrée	
9 Despazamientos	

	Cont	**Int**
Maximum Pressure	(2500 psid)	(3000 psid)
Eingangsdruck	**…172.4 bar**	**…206.8 bar**
Pression entrée		
Presion Maxima		

Maximum Oil Flow	(30 gpm)
Schluckstrom	**…113.6 lpm**
Débit d'huile	
Caudal Maximo de Aceite	

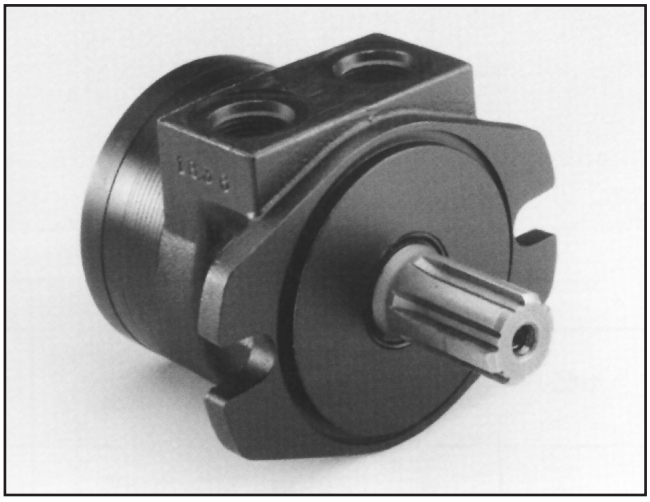
Maximum Speed	**858 rpm**
Drehzahl	
Vitesse de rotation	
Velocidad Maxima	

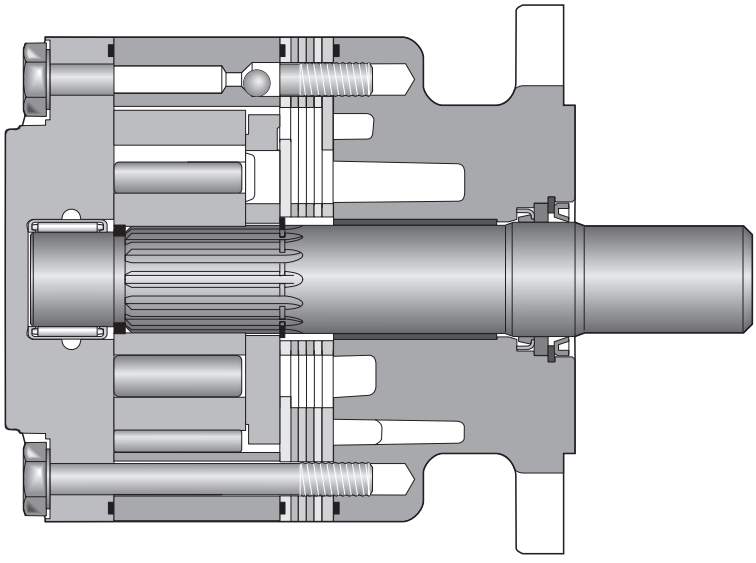
	Cont	**Int**
Maximum Torque	(5548 lb in)	(7247 lb in)
Max Drehmoment	**…627 Nm**	**…819 Nm**
Couple		
Torque Maximo		

Maximum Side Load at Key	(1450 lb)
Seitenlast	**… 6450 N**
Charges latèrales	
Carga Maxima Lateral	

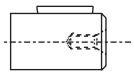
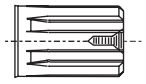
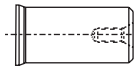
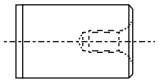
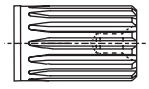
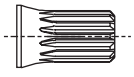
When the Ultimate in Efficiency and Reliability is a Must

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 7247 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.

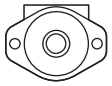
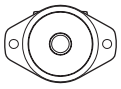
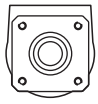




11	X	A	–	XXX	–	X	X	–
Series	Shaft Welle Arbre Ejes	Engineering Design technischer Entwurf Conception technique Diseño de ingeniería		Displacement Schluckvolumen Cylindrée Desplazamiento		Mounting Gehäuse Carter Montaje	Ports Anschluß Plan de raccordement Lumbreras	

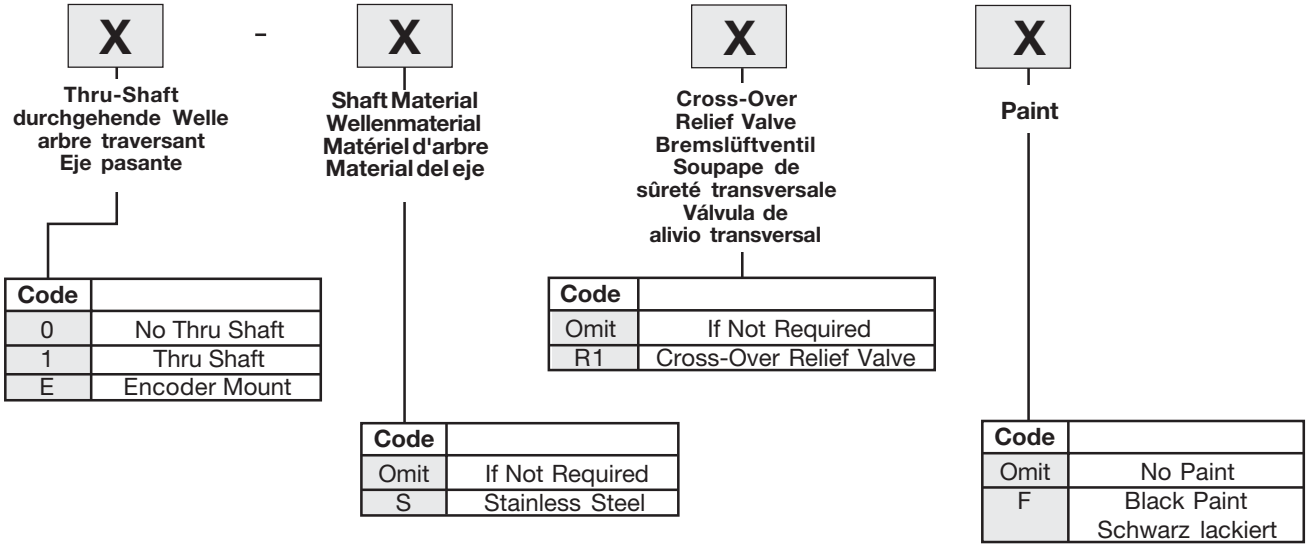
Code	
0	1" Keyed 
1	1" 6B Spline 
2	25mm Keyed 
3	1-1/4" Keyed 
5	1-1/4"-14 Tooth Spline 
6	7/8"-13 Tooth Spline 

Code	cm³/U cm³/tr cm³/giro	in³/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	
A	SAE A 2-Bolt 
B	SAE B 2-Bolt 
F	4 Bolt w/3/8-16 UNC 

Code	
M	5/16-18 UNC Manifold 
S	7/8-14 SAE 
P	1/2-14 NPTF 
T	1/2-14 BSPP 

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



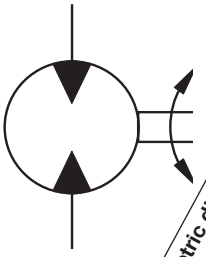
Code	
0	No Thru Shaft
1	Thru Shaft
E	Encoder Mount

Code	
Omit	If Not Required
S	Stainless Steel

Code	
Omit	If Not Required
R1	Cross-Over Relief Valve

Code	
Omit	No Paint
F	Black Paint Schwarz lackiert

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



Motor Series 110A	Geometric displacement Geom. Schluckvolumen Cylindrée Cilindrata cm³/rev in³/rev	Max. speed @ Max. intermittent flow Max. Drehzahl Intermittierender Betrieb: Vitesse de rotation maxi Velocidad maxima a caudal intermitente maximo rev/min	Max. oil flow Max. Schluckstrom Débit d'huile maxi Portata max *cont / int** l/min g/min		Max. differential pressure Max. Druckgefälle Chute de pression maxi Presion diferencial maxima *cont / int** bar psid		Max. supply pressure Max. Eingangsdruck Pression maxi entrée Presion maxima de alimentacion *max* bar psig	Max. torque Max. Drehmoment Couple maxi Torque Maximo *cont / int** Nm lb-in		Max. performance Max. Leistungabgabe Puissance de sortie maxi Maximo rendimento *max* KW HP
110A 036	**59** 3.6	898	**45.4** 12	**53.0** 14	**172** 2500	**207** 3000	**276** 4000	**126** 1117	**152** 1349	**10.4** 13.9
110A 054	**89** 5.4	942	**60.6** 16	**83.3** 22	**172** 2500	**207** 3000	**276** 4000	**199** 1765	**241** 2129	**15.3** 20.5
110A 071	**116** 7.1	716	**75.7** 20	**83.3** 22	**172** 2500	**207** 3000	**276** 4000	**278** 2458	**329** 2915	**20.0** 26.8
110A 088	**144** 8.8	787	**75.7** 20	**113.6** 30	**172** 2500	**207** 3000	**276** 4000	**348** 3080	**406** 3593	**16.7** 22.4
110A 106	**174** 10.6	654	**75.7** 20	**113.6** 30	**155** 2250	**190** 2750	**276** 4000	**380** 3359	**451** 3990	**16.7** 22.4
110A 129	**211** 12.9	537	**75.7** 20	**113.6** 30	**155** 2250	**172** 2500	**276** 4000	**458** 4055	**509** 4503	**14.6** 19.6
110A 164	**269** 16.4	423	**75.7** 20	**113.6** 30	**138** 2000	**172** 2500	**276** 4000	**517** 4573	**617** 5462	**13.3** 17.8
110A 189	**310** 18.9	420	**75.7** 20	**113.6** 30	**121** 1750	**172** 2500	**276** 4000	**627** 5548	**651** 5765	**8.6** 11.5
110A 241	**395** 24.1	288	**75.7** 20	**113.6** 30	**121** 1750	**155** 2250	**276** 4000	**622** 5504	**800** 7077	**8.7** 11.7

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.

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

Datos tecnicos obtenidos con aceite 15W40 de 55 cSt (215 SUS) de viscosidad a 54°C (130°F). Los datos proporcionados son valores tipcos. 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.

110A 036

3.6 cu in / rev

PRESSURE (PSID)

	500	1000	1500	2000	2500	3000	3500
2	244 **128**	473 **124**	688 **119**	882 **105**	1031 **82**		
4	238 **257**	471 **251**	700 **245**	905 **226**	1067 **193**	1203 **139**	1293 **87**
6	232 **385**	470 **381**	713 **377**	928 **362**	1103 **331**	1255 **289**	1344 **250**
8	226 **513**	461 **508**	700 **503**	922 **490**	1117 **454**	1289 **403**	1404 **359**
10	221 **642**	453 **635**	688 **629**	917 **622**	1132 **584**	1324 **526**	1464 **481**
12	216 **770**	443 **762**	675 **755**	897 **747**	1117 **708**	1349 **651**	1564 **601**
14	212 **898**	433 **889**	662 **880**	877 **871**	1103 **835**	1375 **782**	1664 **728**

FLOW (GPM)

TORQUE (LB IN) 1664
SPEED (RPM) **728**

110A 054

5.4 cu in / rev

PRESSURE (PSID)

	500	1000	1500	2000	2500	3000	3500
2	365 **86**	716 **83**	1051 **80**	1368 **72**	1635 **58**		
4	365 **171**	713 **167**	1076 **164**	1407 **153**	1700 **134**	1957 **101**	2134 **60**
6	361 **257**	722 **253**	1100 **250**	1445 **244**	1765 **226**	2055 **198**	2278 **171**
8	352 **342**	713 **338**	1057 **334**	1419 **329**	1731 **309**	2020 **278**	2237 **247**
10	340 **428**	713 **424**	1057 **419**	1392 **415**	1697 **396**	1985 **366**	2196 **332**
12	331 **513**	679 **508**	1038 **503**	1382 **498**	1697 **480**	2011 **450**	2316 **408**
14	318 **599**	653 **593**	1019 **587**	1372 **581**	1732 **566**	2129 **536**	2543 **488**
16	309 **684**	636 **678**	987 **671**	1335 **664**	1700 **645**	2091 **618**	2491 **566**
18	281 **770**	600 **762**	955 **755**	1298 **747**	1668 **724**	2052 **701**	2438 **647**
20	264 **856**	567 **849**	880 **843**	1220 **830**	1581 **804**	1947 **785**	2235 **729**
22	247 **942**	541 **936**	824 **931**	1390 **913**	1593 **885**	2026 **871**	2423 **813**

FLOW (GPM)

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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

110A 071

7.1 cu in / rev

PRESSURE (PSID)

	500	1000	1500	2000	2500	3000	3500
2	480 **65**	949 **63**	1407 **62**	1853 **56**	2260 **47**		
4	480 **130**	994 **128**	1492 **125**	1989 **118**	2430 **105**	2848 **83**	3243 **47**
6	458 **195**	972 **192**	1483 **189**	1966 **187**	2458 **176**	2915 **154**	3322 **133**
8	446 **260**	961 **258**	1475 **255**	1966 **251**	2458 **239**	2915 **219**	3362 **193**
10	424 **325**	927 **322**	1449 **319**	1944 **316**	2444 **306**	2915 **290**	3382 **260**
12	412 **390**	904 **387**	1407 **383**	1921 **379**	2444 **371**	2898 **353**	3391 **316**
14	396 **455**	859 **451**	1373 **447**	1876 **442**	2373 **437**	2882 **419**	3401 **374**
16	379 **521**	825 **515**	1339 **510**	1853 **505**	2345 **497**	2848 **482**	3342 **429**
18	362 **586**	791 **580**	1288 **574**	1785 **568**	2317 **556**	2814 **545**	3283 **486**
20	339 **651**	757 **644**	1237 **638**	1763 **631**	2288 **618**	2780 **608**	3243 **543**
22	305 **716**	701 **709**	1187 **701**	1740 **694**	2232 **680**	2746 **673**	3243 **601**

FLOW (GPM)

TORQUE (LB IN) 701
SPEED (RPM) **709**

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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

110A 088

8.8 cu in / rev

PRESSURE (PSID)

	500	1000	1500	2000	2500	3000	3500
2	605 **52**	1210 **51**	1774 **50**	2324 **48**	2869 **41**		
4	590 **105**	1207 **103**	1804 **102**	2387 **99**	2975 **88**	3475 **73**	3929 **63**
6	574 **158**	1204 **156**	1833 **154**	2451 **152**	3080 **142**	3593 **126**	4141 **107**
8	553 **210**	1183 **208**	1817 **206**	2437 **203**	3067 **192**	3634 **178**	4154 **159**
10	532 **263**	1162 **261**	1801 **259**	2423 **253**	3054 **243**	3675 **235**	4167 **219**
12	509 **315**	1127 **312**	1762 **309**	2381 **303**	3006 **295**	3623 **284**	4179 **264**
14	487 **367**	1092 **363**	1722 **358**	2339 **353**	2958 **347**	3571 **335**	4192 **310**
16	468 **420**	1044 **415**	1659 **411**	2269 **403**	2914 **396**	3529 **384**	4143 **362**
18	448 **472**	997 **468**	1595 **463**	2199 **454**	2870 **444**	3487 **435**	4094 **416**
20	428 **525**	973 **520**	1551 **516**	2178 **507**	2832 **499**	3446 **486**	4051 **458**
22	408 **578**	949 **573**	1506 **569**	2158 **562**	2794 **555**	3405 **537**	4008 **499**
25	348 **656**	846 **651**	1423 **647**	2008 **636**	2610 **625**	3191 **608**	3809 **575**
30	279 **787**	740 **782**	1313 **776**	1821 **760**	2381 **744**	2921 **725**	3555 **697**

FLOW (GPM)

TORQUE (LB IN) 4051
SPEED (RPM) **458**

■ 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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

110A 106

10.6 cu in / rev

PRESSURE (PSID)

	500	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500
2	742 **44**	1501 **43**	2227 **42**	2569 **41**	2919 **40**	3264 **39**	3585 **37**	3897 **34**	4201 **31**	4537 **27**	4871 **23**
4	721 **87**	1485 **86**	2214 **85**	2576 **83**	2935 **82**	3302 **79**	3669 **76**	3990 **71**	4251 **66**	4599 **61**	4945 **57**
6	700 **131**	1468 **129**	2202 **128**	2583 **127**	2969 **126**	3359 **122**	3754 **118**	4036 **112**	4302 **106**	4660 **104**	5019 **102**
8	675 **174**	1442 **173**	2189 **171**	2569 **169**	2952 **166**	3340 **162**	3733 **158**	4071 **153**	4403 **149**	4715 **146**	5019 **144**
10	650 **218**	1417 **216**	2176 **214**	2554 **210**	2935 **207**	3321 **203**	3711 **198**	4106 **197**	4504 **196**	4770 **193**	5019 **190**
12	616 **262**	1383 **258**	2138 **255**	2509 **252**	2885 **248**	3264 **245**	3648 **241**	4025 **238**	4403 **235**	4715 **232**	5019 **229**
14	582 **305**	1350 **301**	2100 **296**	2465 **293**	2834 **290**	3207 **287**	3585 **284**	3943 **279**	4302 **275**	4660 **272**	5019 **268**
16	567 **349**	1278 **344**	2050 **340**	2410 **336**	2775 **331**	3155 **328**	3543 **324**	3903 **320**	4264 **316**	4626 **311**	4989 **307**
18	553 **392**	1206 **388**	1999 **384**	2354 **379**	2716 **373**	3103 **369**	3501 **365**	3862 **361**	4226 **357**	4592 **351**	4960 **345**
20	529 **436**	1168 **431**	1885 **427**	2270 **422**	2674 **416**	3060 **412**	3458 **408**	3822 **403**	4188 **399**		
22	506 **479**	1130 **475**	1771 **470**	2185 **465**	2632 **460**	3018 **455**	3416 **451**	3781 **446**	4150 **441**		
25	492 **545**	1110 **541**	1747 **537**	2145 **531**	2573 **526**	2951 **520**	3342 **515**	3700 **511**	4061 **507**		
30	470 **654**	1076 **651**	1708 **647**	2078 **641**	2474 **634**	2840 **628**	3219 **621**	3564 **615**	3913 **608**		

FLOW (GPM)

TORQUE (LB IN) 5019
SPEED (RPM) 229

■ 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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

021 110A.indd, js

110A 129

12.9 cu in / rev

PRESSURE (PSID)

FLOW (GPM)	500	1000	1500	1750	2000	2250	2500	2750	3000	3250	3500
2	905 **36**	1827 **35**	2698 **34**	3112 **33**	3527 **32**	3943 **31**	4336 **29**	4729 **27**	5115 **25**	5522 **23**	5925 **20**
4	880 **72**	1807 **70**	2691 **69**	3128 **68**	3567 **66**	3999 **64**	4420 **62**	4805 **58**	5180 **55**	5599 **51**	6017 **48**
6	854 **107**	1786 **106**	2684 **105**	3144 **104**	3607 **103**	4055 **100**	4503 **97**	4881 **93**	5245 **89**	5677 **87**	6108 **85**
8	822 **143**	1755 **142**	2666 **140**	3122 **139**	3582 **137**	4035 **134**	4490 **130**	4912 **127**	5330 **123**	5723 **121**	6108 **118**
10	790 **179**	1725 **177**	2648 **175**	3101 **173**	3556 **171**	4015 **168**	4476 **164**	4944 **162**	5416 **160**	5769 **157**	6108 **154**
12	750 **215**	1683 **212**	2605 **210**	3060 **208**	3511 **205**	3965 **202**	4419 **199**	4867 **196**	5324 **193**	5718 **189**	6104 **186**
14	710 **251**	1642 **247**	2562 **244**	3020 **242**	3465 **240**	3914 **237**	4363 **234**	4790 **230**	5233 **226**		
16	685 **287**	1557 **283**	2501 **280**	2948 **277**	3394 **274**	3850 **271**	4309 **268**	4742 **263**	5183 **259**		
18	661 **322**	1472 **319**	2439 **316**	2876 **312**	3322 **307**	3785 **304**	4256 **301**	4695 **297**	5133 **293**		
20	628 **358**	1418 **355**	2294 **351**	2741 **347**	3205 **343**	3651 **339**	4105 **336**	4522 **331**			
22	596 **394**	1363 **390**	2150 **386**	2605 **382**	3089 **378**	3517 **374**	3954 **370**				
25	571 **448**	1322 **444**	2093 **440**	2532 **436**	2997 **431**	3427 **427**	3869 **422**				
30	531 **537**	1254 **533**	1999 **530**	2410 **524**	2843 **519**	3276 **514**					

TORQUE (LB IN) 6108
SPEED (RPM) 154

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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

110A 164

16.4 cu in / rev

PRESSURE (PSID)

FLOW (GPM)	500	1000	1500	1750	2000	2250	2500	2750	3000	3250
2	1155 **28**	2323 **27**	3406 **26**	3928 **25**	4437 **24**	4954 **23**	5462 **22**	5986 **21**	6507 **20**	7020 **19**
4	1122 **56**	2297 **55**	3414 **54**	3963 **53**	4505 **51**	5023 **49**	5530 **48**	6065 **46**	6597 **44**	7124 **43**
6	1088 **85**	2271 **84**	3422 **83**	3997 **82**	4573 **80**	5092 **79**	5599 **77**	6144 **74**	6687 **72**	7227 **70**
8	1047 **113**	2232 **112**	3394 **110**	3963 **109**	4531 **108**	5071 **106**	5605 **104**	6164 **101**	6722 **98**	7247 **95**
10	1005 **141**	2193 **139**	3367 **138**	3928 **137**	4489 **135**	5051 **133**	5612 **131**	6184 **128**	6758 **125**	
12	955 **169**	2061 **167**	3318 **166**	3888 **164**	4463 **163**	5021 **161**	5579 **158**	6141 **155**		
14	904 **197**	2086 **195**	3269 **193**	3878 **192**	4437 **191**	4998 **188**	5547 **185**	6072 **181**		
16	861 **225**	1925 **223**	3191 **221**	3763 **219**	4346 **217**	4908 **215**	5475 **212**			
18	818 **254**	1879 **251**	3113 **248**	3677 **246**	4255 **243**	4827 **241**				
20	783 **282**	1853 **279**	3015 **276**	3577 **273**	4155 **270**	4733 **268**				
22	718 **310**	1710 **307**	2721 **304**	3209 **301**	3706 **297**	4170 **294**				
25	672 **352**	1626 **349**	2596 **345**	3068 **342**	3550 **338**	4038 **335**				
30	596 **423**	1488 **418**	2388 **414**	2832 **410**	3289 **406**	3817 **401**				

TORQUE (LB IN) 6758
SPEED (RPM) 125

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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

110A 189

18.9 cu in / rev

PRESSURE (PSID)

	500	1000	1250	1500	1750	2250	2500
2	1285 **23**	2619 **22**	3224 **21**	3838 **20**	4442 **18**	5548 **16**	6131 **13**
4	1264 **47**	2589 **46**	3250 **45**	3859 **44**	4486 **42**	5668 **40**	6282 **38**
6	1228 **73**	2559 **72**	3240 **71**	3865 **70**	4513 **69**	5765 **67**	6409 **66**
8	1171 **97**	2509 **96**	3176 **95**	3829 **94**	4503 **93**	5771 **90**	6439 **89**
10	1114 **121**	2449 **120**	3111 **119**	3793 **118**	4476 **117**	5777 **114**	6468 **112**
12	1065 **145**	2391 **144**	3061 **143**	3750 **142**	4439 **141**	5747 **137**	
14	1016 **169**	2333 **168**	3011 **167**	3707 **166**	4402 **165**	5717 **161**	
16	975 **200**	2257 **199**	2938 **198**	3636 **197**	4326 **195**	5645 **185**	
18	966 **232**	1988 **230**	2506 **228**	3037 **227**	3563 **226**		
20	941 **263**	1815 **261**	2253 **259**	2702 **258**	3143 **256**		
22	916 **295**	1643 **293**	2001 **290**	2367 **288**	2724 **286**		
25	879 **342**	1384 **339**	1622 **335**	1865 **334**	2094 **331**		
30	816 **420**	952 **417**	990 **412**	1027 **410**	1045 **407**		

FLOW (GPM)

TORQUE (LB IN) 2724
SPEED (RPM) 286

■ 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 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.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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

110A 241

24.1 cu in / rev

PRESSURE (PSID)

FLOW (GPM)	500	1000	1250	1500	1750	2250
2	1515 **15**	3184 **14**	3884 **12**	4660 **11**	5427 **10**	6645 **9**
4	1534 **35**	3145 **34**	4027 **32**	4718 **30**	5504 **29**	6904 **28**
6	1496 **56**	3107 **55**	4027 **54**	4718 **53**	5504 **52**	7077 **51**
8	1400 **74**	3030 **73**	3884 **72**	4660 **70**	5571 **68**	7163 **66**
10	1304 **93**	2915 **92**	3740 **91**	4603 **90**	5571 **89**	
12	1266 **112**	2851 **112**	3708 **110**	4584 **109**	5549 **107**	
14	1227 **130**	2787 **129**	3676 **128**	4564 **127**	5527 **126**	
16	1189 **149**	2723 **148**	3644 **147**	4545 **146**	5504 **144**	
18	1170 **167**	2685 **166**	3596 **165**	4488 **164**	5437 **162**	
20	1151 **184**	2685 **183**	3596 **182**	4430 **180**	5370 **178**	
22	1112 **205**	2608 **204**	3452 **203**	4258 **202**	5169 **200**	
25	1055 **235**	2455 **232**	3260 **231**	4085 **230**	4900 **228**	
30	959 **288**	2225 **285**	2925 **282**	3682 **279**	4363 **273**	

TORQUE (LB IN) 5169
SPEED (RPM) 200

■ 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.

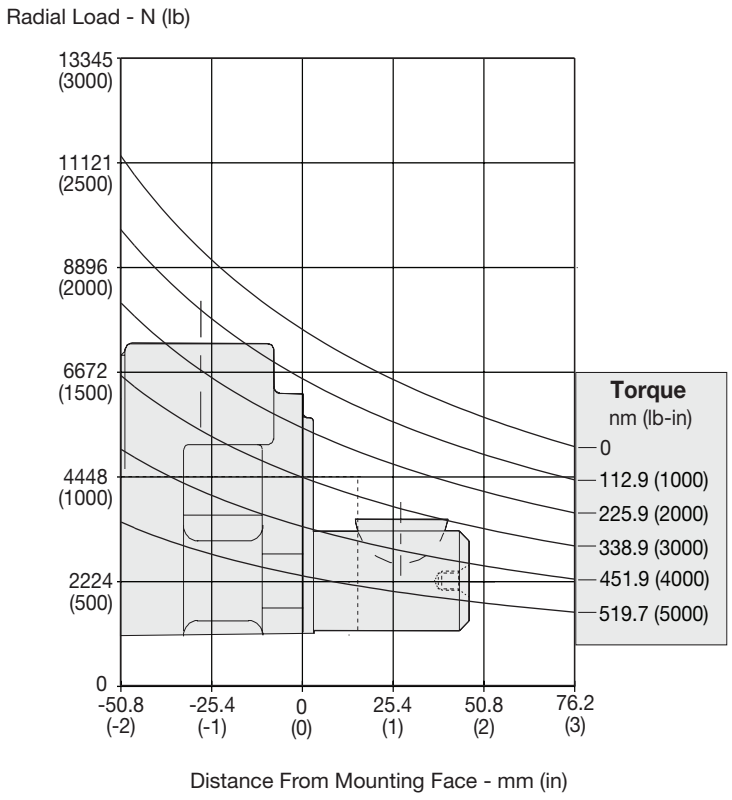
Les donnees sur les performances sont basees sur des tests utilisant de l'huile 15W40 d'une viscosite de 55 cSt (215 SUS) a 54°C (130°F). Ces donnees correspondent a des situations typiques. Les donnees reelles peuvent varier legerement d'un moteur de production a l'autre.

Intermittierende Werte maximal 10% von jeder Betriebsminute.

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

Leistugsdaten sind gemessen mit SAE 15W40 bei einer Viskositaet von 43,1 Cst beo 54°C. Geringfuegige Abweichungen von den Katalogerten sond moeglich.

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



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

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

Equation to calculate the dynamic bearing life 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.

$$L = \frac{3.0 \times 10^6}{60 \times S} \left\{\frac{F_a}{F_b}\right\}^{3.33}$$

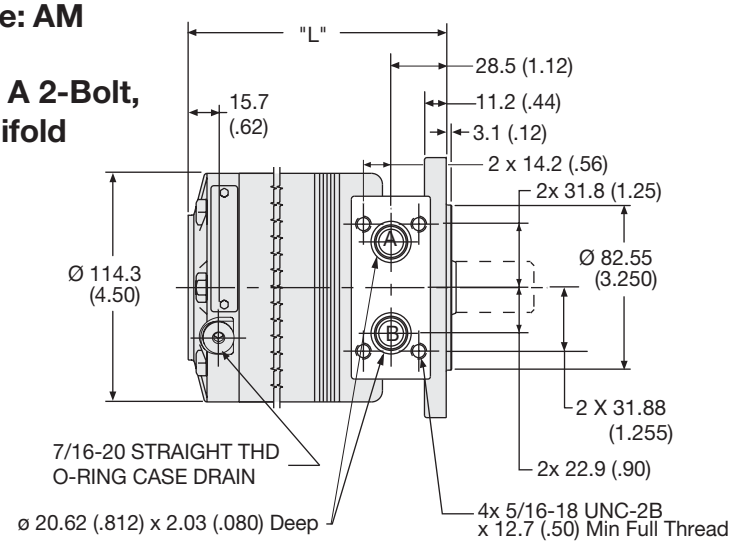
Where / Mit:

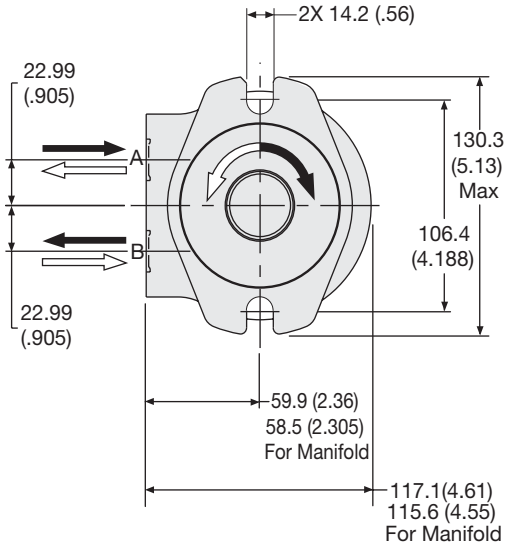
S = Shaft Speed RPM / Abtriebswellendrehzahl in min^{-1}
L = Life In Hours / Lebensdauer in Stunden
F_a = Allowable side load defined by above curve at a distance from mounting flange. / Erlaubte radiale Wellenbelastung als Function der Laenge
F_b = Application side load. / Anwendungsseitige Wellenbelastung

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

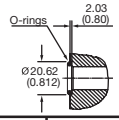
Code: AM

SAE A 2-Bolt, Manifold





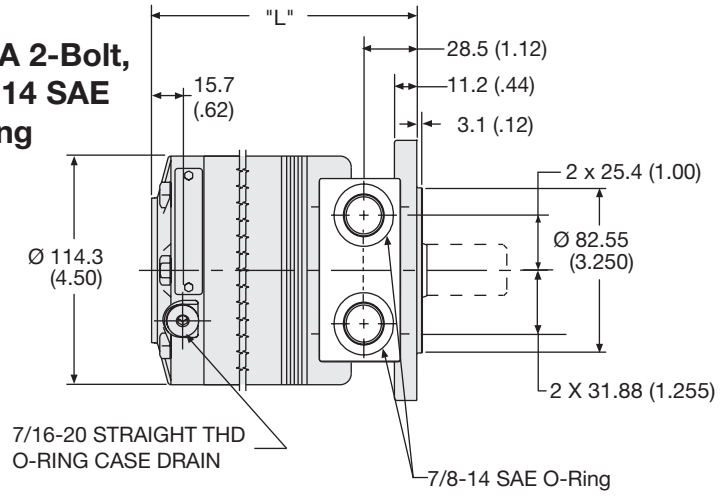
Motor with manifold mount is supplied with 2 O-rings.
Zum Motor mit Universalanschluß werden 2 O-Ringe geliefert.
Deux joints toriques sont livrés avec les moteurs a plan de raccordement universel.
Il blocchetto connessioni é corredato da 2 OR.

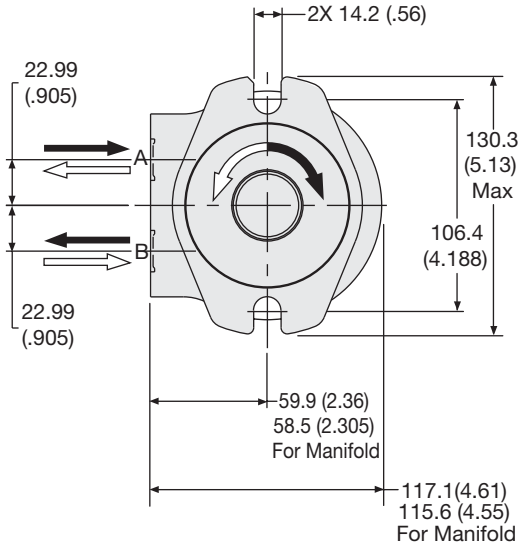


Code AM		036	054	071	088	106	129	164	189	241
Weight/Gewicht	**kg**	**7.0**	**7.4**	**7.7**	**8.0**	**8.4**	**8.7**	**9.4**	**9.8**	**10.8**
Poids/Peso	(lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length	**"L" mm**	**112.0**	**116.8**	**121.4**	**126.5**	**131.3**	**137.7**	**147.3**	**154.2**	**168.7**
	"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



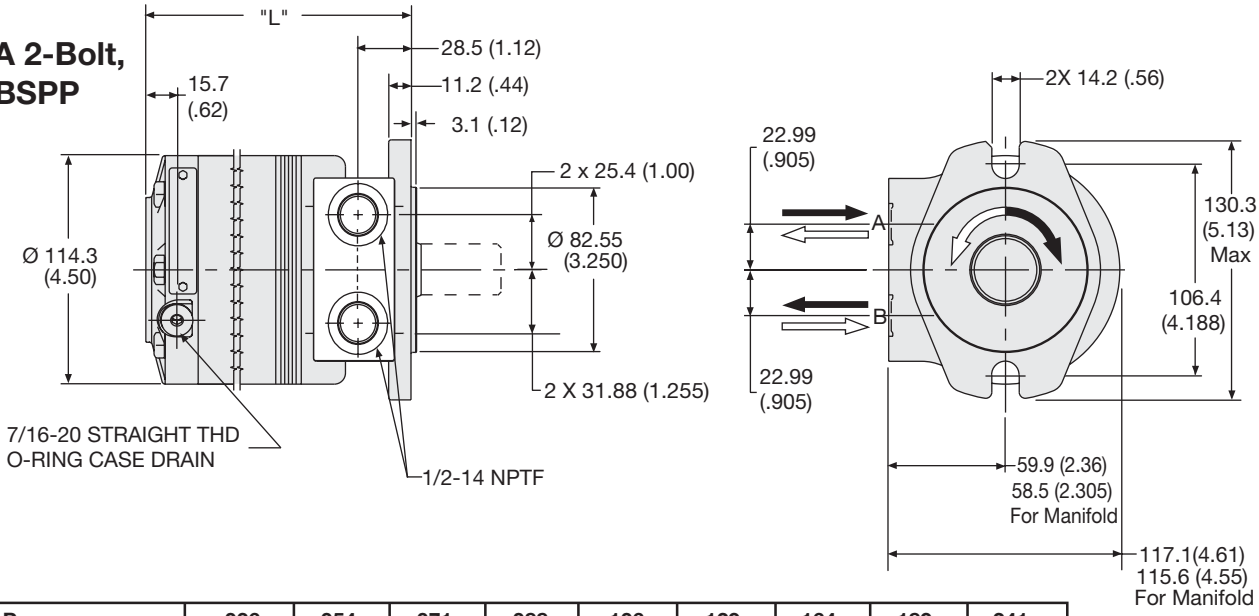


Code AS		036	054	071	088	106	129	164	189	241
Weight/Gewicht	**kg**	**7.0**	**7.4**	**7.7**	**8.0**	**8.4**	**8.7**	**9.4**	**9.8**	**10.8**
Poids/Peso	(lb)	(15.4)	(16.2)	(16.9)	(17.5)	(18.4)	(19.1)	(20.6)	(21.6)	(23.7)
Length	**"L" mm**	**112.0**	**116.8**	**121.4**	**126.5**	**131.3**	**137.7**	**147.3**	**154.2**	**168.7**
	"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: AP

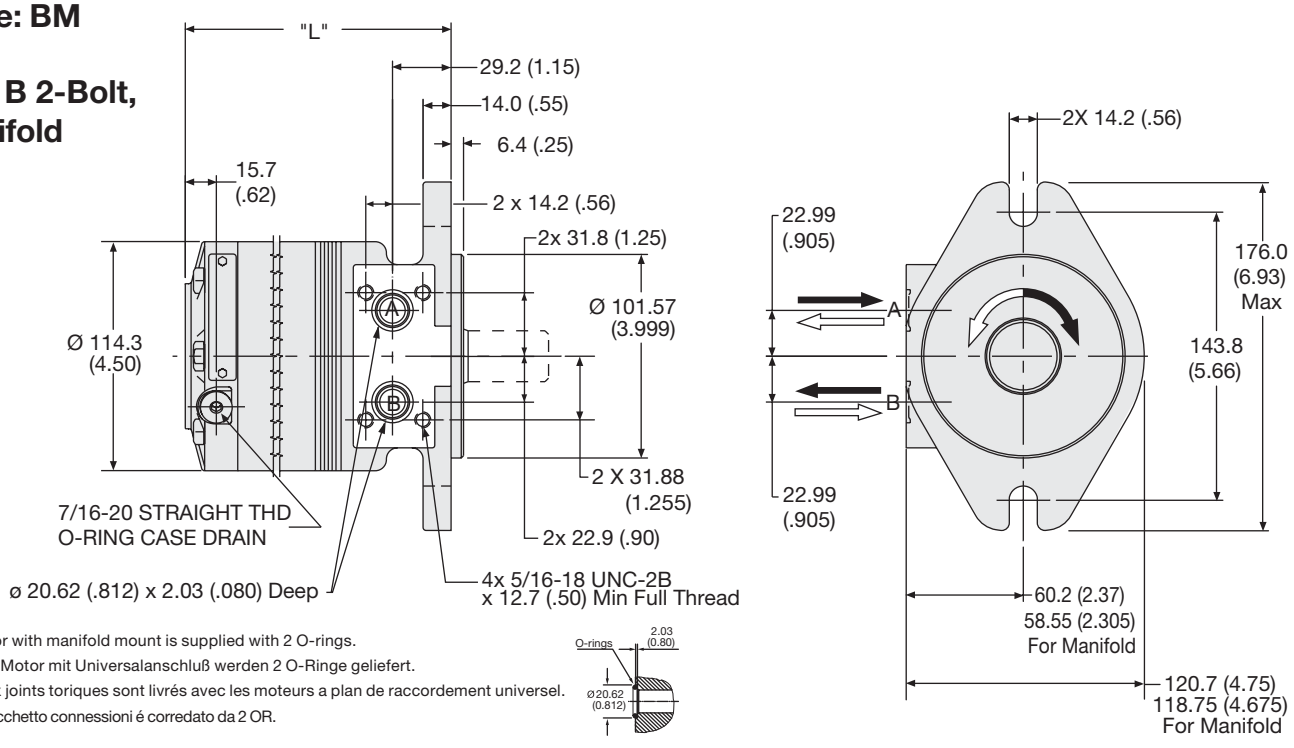
SAE A 2-Bolt, 1/2" BSPP



Code AP		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**	**112.0**	**116.8**	**121.4**	**126.5**	**131.3**	**137.7**	**147.3**	**154.2**	**168.7**
	"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 é 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**	**112.0**	**116.8**	**121.4**	**126.5**	**131.3**	**137.7**	**147.3**	**154.2**	**168.7**
	"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

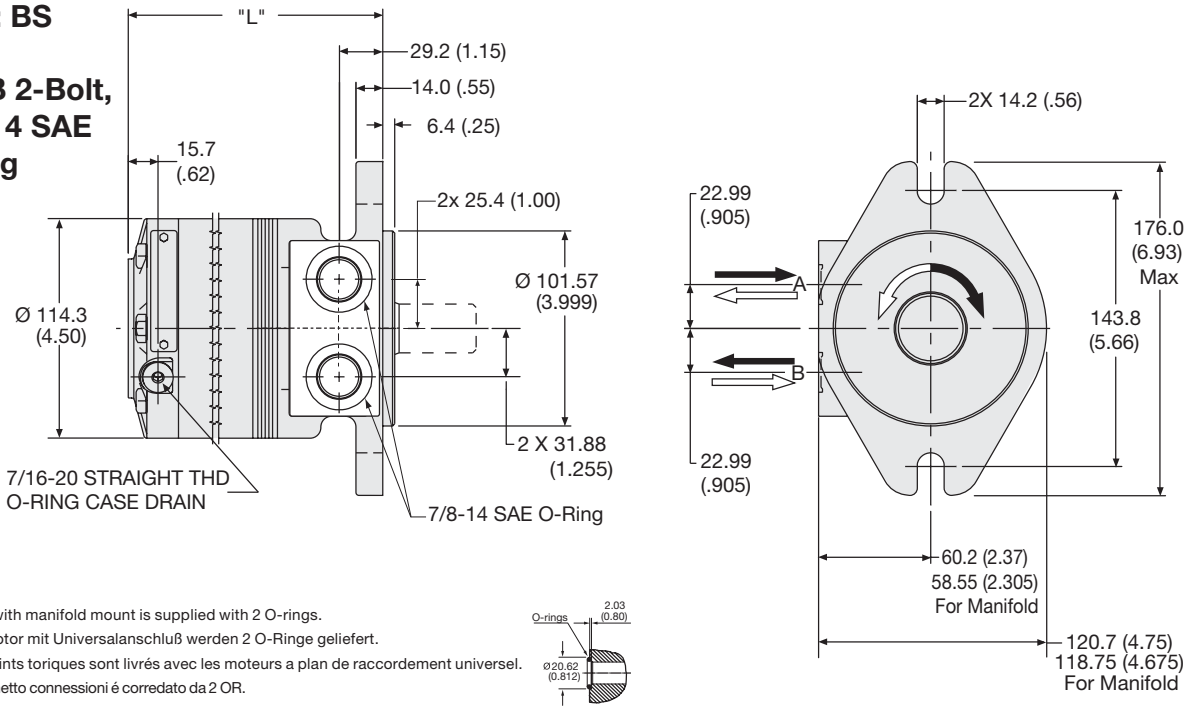
English equivalents for metric specifications are shown in ( ).

021 110A.indd, js

Parker Hannifin Corporation
Hydraulic Pump/Motor Division
Greeneville, Tennessee, USA

Code: BS

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

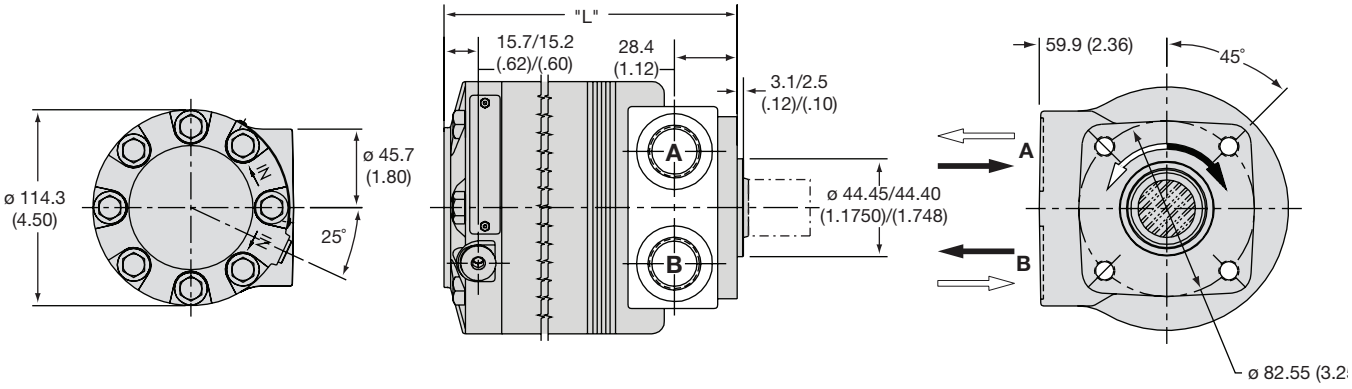


Motor with manifold mount is supplied with 2 O-rings.
Zum Motor mit Universalanschluß werden 2 O-Ringe geliefert.
Deux joints toriques sont livrés avec les moteurs a plan de raccordement universel.
Il blocchetto connessioni é corredato da 2 OR.

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**	**112.0**	**116.8**	**121.4**	**126.5**	**131.3**	**137.7**	**147.3**	**154.2**	**168.7**
	"L" (in)	(4.41)	(4.60)	(4.78)	(4.98)	(5.17)	(5.42)	(5.80)	(6.07)	(6.64)

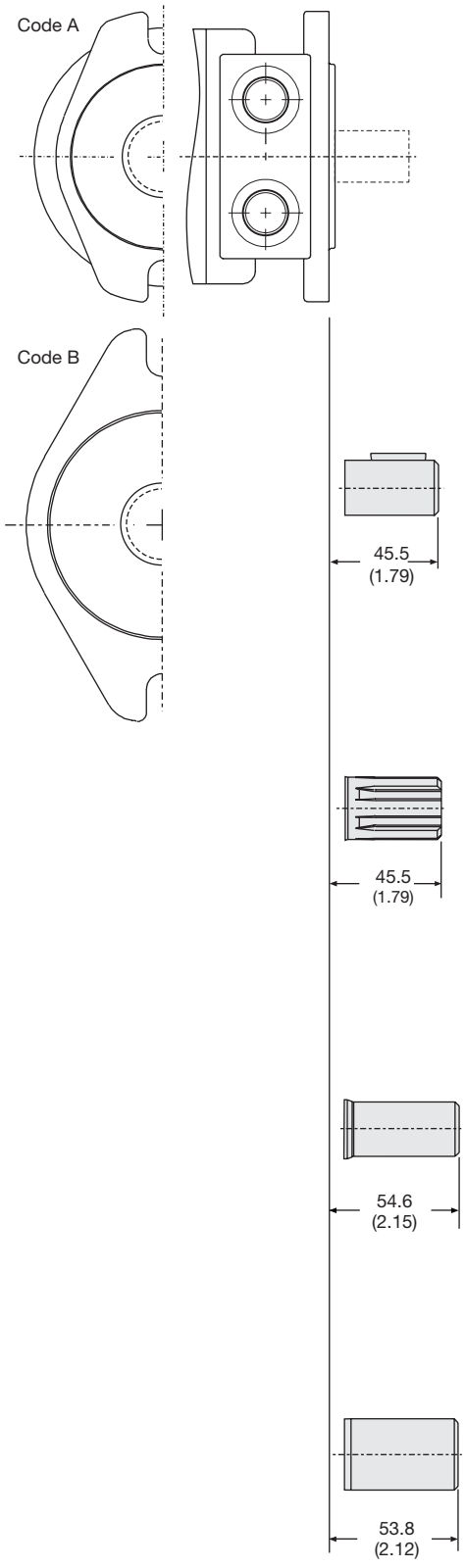
Code: FS

4 Bolt, 7/8-14 SAE O-Ring



Code FS		036	054	071	088	106	129	164	189	241
Weight/Gewicht	**kg**	**6.7**	**7.0**	**7.3**	**7.6**	**8.0**	**8.3**	**9.0**	**9.5**	**10.4**
Poids/Peso	(lb)	(14.7)	(15.5)	(16.2)	(16.8)	(17.7)	(18.4)	(19.9)	(20.9)	(23.0)
Length	**"L" mm**	**112.0**	**116.8**	**121.4**	**126.5**	**131.3**	**137.7**	**147.3**	**154.2**	**168.7**
	"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: 0

1" Keyed

Code: 1

1" 6B Spline

Code: 2

25mm Keyed

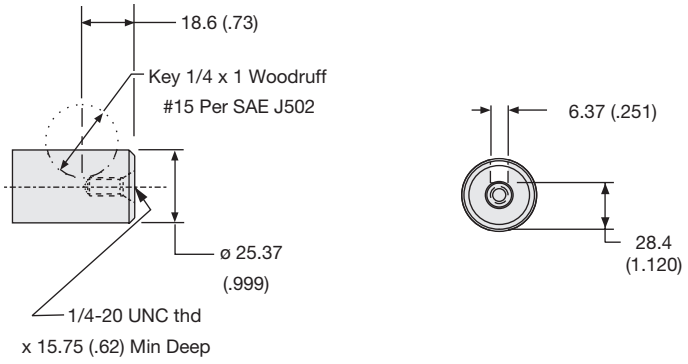
Code: 3

1-1/4" Keyed

English equivalents for metric specifications are shown in ( ).

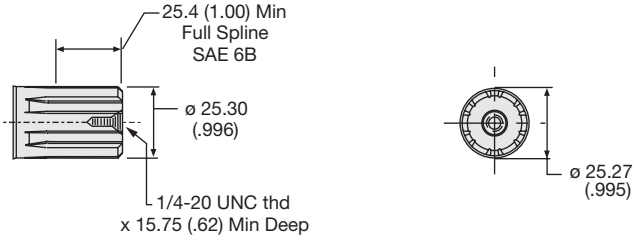
Code: 0

1” Keyed



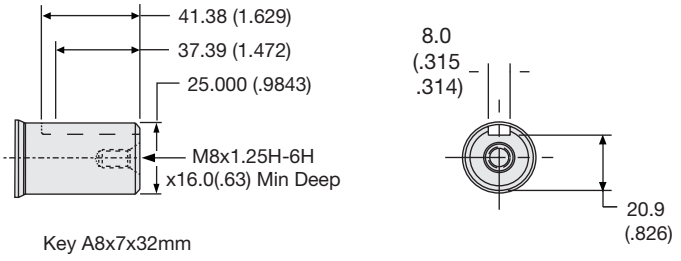
Code: 1

1" 6B Spline



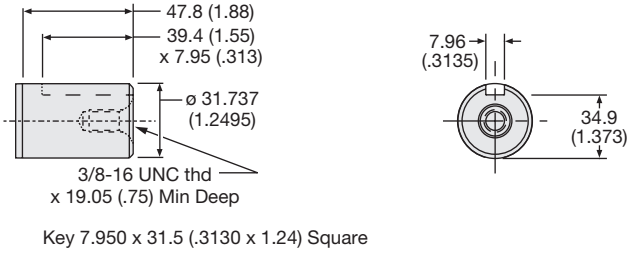
Code: 2

25mm Keyed

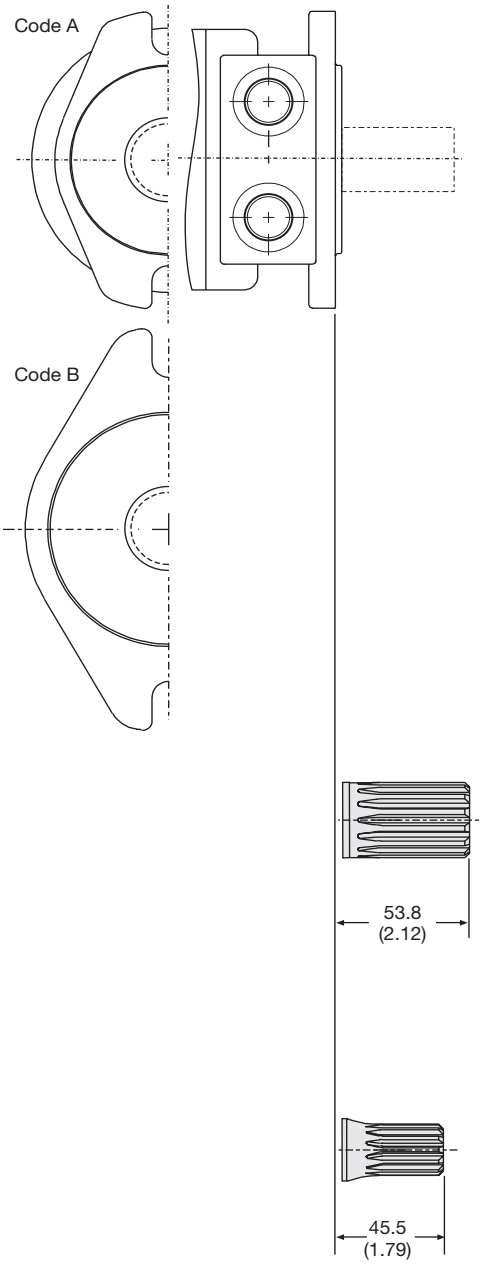


Code: 3

1-1/4" Keyed



English equivalents for metric specifications are shown in ( ).



Code: 5

1-1/4"-14 Tooth Spline

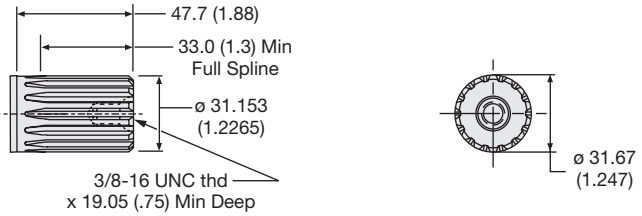
Code: 6

7/8"-13 Tooth Spline

English equivalents for metric specifications are shown in ( ).

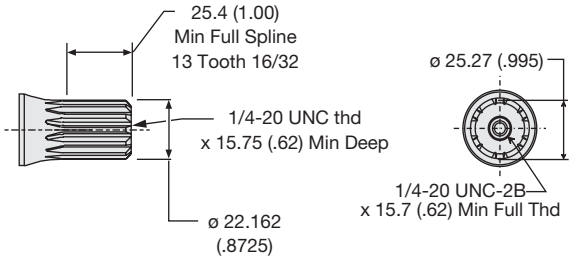
Code: 5

1-1/4"-14 Tooth Spline



Code: 6

7/8"-13 Tooth Spline



English equivalents for metric specifications are shown in ( ).