

Danfoss Char-Lynn 2000 Series orbital motor 104-1028-006

Manufacturer: Danfoss

Manufacturer part number / published order designation: 104-1028-006

Published model: M02187AC02AA0100010000000AAAAF

About this compilation

Prepared by Hydmaster from selected manufacturer documentation. Original technical pages follow without cropped drawings, rewritten data or altered units. This cover and index are Hydmaster editorial material, not a manufacturer-issued exact-execution datasheet.

Coverage: selected pages relevant to the identified size and configuration. Other options or neighbouring models retained on an original page apply only where explicitly identified.

Execution notes and conditions

Manufacturer card proves the complete factory PN and full type code. Ordering diagrams only decode that existing execution.

Typical performance envelopes are conditioned on 25 cSt and joint pressure/flow/duty limits; family maxima are not promoted to unconstrained full-execution ratings.

Applicable source components are AC flange, shaft 02, AA staggered ports and standard single-speed 2000 motor; no sensor/brake/two-speed/relief extras assigned.

Source-page index

Source page numbers below are physical pages of each complete original PDF. The original printed page labels and technical content remain unchanged. Compiled page numbers count this cover/index.

Source A: Danfoss Char Lynn Orbital Motors Technical Information

Original pages	Compiled pages	Relevant content
110-112	2-4	2000 Series construction and operating principle for standard single-speed Geroler disc-valve motors.; Exact size-family specification row with distinct continuous/intermittent/peak limits and shaft/case limitations; not a new full SKU-specific test rating.; Duty definitions, break-in, fluid/viscosity/temperature/filtration, thermal shock and minimum differential requirements.
119	5	Actual motor size 305 typical torque/speed/pressure/flow envelope at 25 cSt; retain duty-region legend.
122	6	Standard-mount general body-length size row and rotation definition. Illustrated AF/AD port arrangements are not assigned; actual AA staggered ports are documented separately on physical page 134.
129-130	7-8	Actual AC SAE A two-bolt flange tolerances and mounting pattern; neighbouring flange choices not assigned.; Actual output shaft code 02 dimensional view, end-thread/key/spline and torque-capacity limits.
132-134	9-11	Tapered-bearing shaft side-load/life curves and load-position conditions.; Standard shaft-seal case-pressure speed limits and required/optional drain conditions.; Actual AA7/8-14 UNF-2B staggered main ports and 7/16-20 UNF-2B case-drain geometry.
137-139	12-14	Published base article-number table where listed; fullPN design suffix006 identity comes from exactcurrent factorycard, not manufactured from this table.; Decode already published M02 displacement/AC flange/shaft02 execution; no option-code generation.; Decode already published AA ports/defaultseal/check-valve/noaccessory configuration; optional features not included.

Description:

The popular 2000 Series provides torque up to 850 Nm. [7,500 lb-in]. This proven design is reliable and durable. Danfoss has added options that make the motor more flexible to use in a wide variety of applications. The expanded displacement range using patented "Drive in Drive" technology is the latest innovation in the 2000 series of motors.



Features:

- Three zone design for longer life and true bi-directionality
- Bearings that meet the highest standards of the industry
- Options to optimize performance in every application
- Integrated cross-over relief valve option

Benefits:

- Easy to design in a system
- Proven reliability and performance in tough applications
- Compact design that maximizes power density

Applications:

- Skid steer attachments
- Swing motor
- Brush cutters & mowers
- Harvesting equipment
- Directional Boring any place pressure relief protection is optimal for system or motor performance and life
- Turf equipment

C-1

2000 Series

Geroler element	13 Displacements
Flow l/min [GPM]	75 [20] Continuous** 115 [30] Intermittent*
Speed RPM	1215 Cont.** 1215 Inter.*
Pressure bar [PSI]	205 [3000] Cont.** 310 [4500] Inter.*
Torque Nm [lb-in]	845 [7470] Cont.** 930 [8225] Inter.*

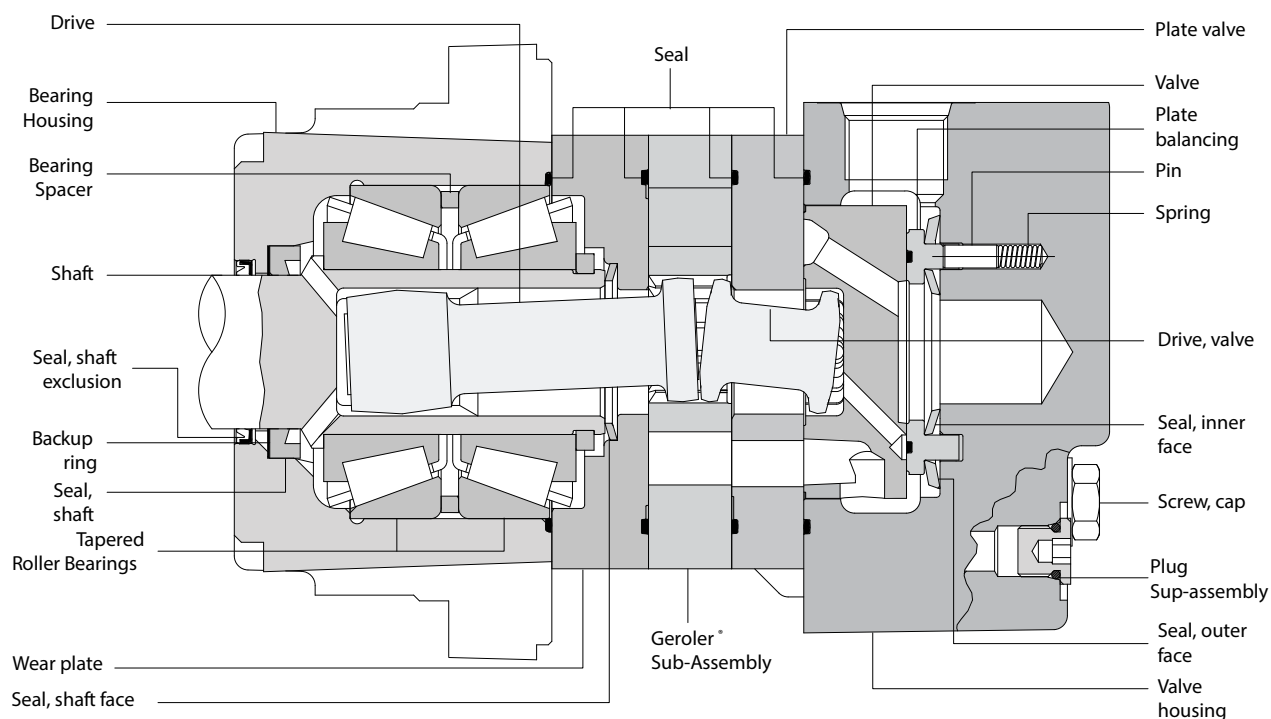
** Continuous— (Cont.) Continuous rating, motor may be run continuously at these ratings.

* Intermittent— (Inter.) Intermittent operation, 10% of every minute.

2000 Series

Specifications

C-1



Specification data — 2000 series motors

Displ. cm ³ /r [in ³ /r]	34	41	66	80	90	100	130	160	195	245	305	395	490
	[2.1]	[2.5]	[4.0]	[4.9]	[5.5]	[6.2]	[8.0]	[9.6]	[11.9]	[14.9]	[18.7]	[24.0]	[29.8]
Max. Speed (RPM) @ Flow	Continuous	1215	1104	1075	908	836	742	576	477	385	308	246	153
	Intermittent	1215	1216	1214	908	1042	924	720	713	577	462	365	230
Flow l/min [GPM]	Continuous	42	45	72	75	75	75	75	75	75	75	75	75
		[11]	[12]	[19]	[20]	[20]	[20]	[20]	[20]	[20]	[20]	[20]	[20]
	Intermittent	42	53	87	75	95	95	95	115	115	115	115	115
		[11]	[14]	[23]	[20]	[25]	[25]	[25]	[30]	[30]	[30]	[30]	[30]
Torque* Nm [lb - in]	Continuous	98	112	186	235	265	295	385	455	540	660	765	845
		[864]	[988]	[1643]	[2065]	[2326]	[2630]	[3420]	[4040]	[4780]	[5850]	[6750]	[7470]
	Intermittent	142	169	276	345	390	445	560	570	665	820	885	930
		[1261]	[1497]	[2446]	[3035]	[3458]	[3950]	[4970]	[5040]	[5890]	[7250]	[7820]	[8225]
Pressure Δ bar [Δ PSI]	Continuous	205	205	205	205	205	205	205	205	205	205	155	120
		[3000]	[3000]	[3000]	[3000]	[3000]	[3000]	[3000]	[3000]	[3000]	[3000]	[2250]	[1750]
	Intermittent	310	310	310	310	310	310	310	260	260	260	240	190
		[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[3750]	[3750]	[3750]	[3500]	[2750]
	Peak	310	310	310	310	310	310	310	310	310	310	310	170
		[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[4500]	[2500]
Weight kg [lb]	Standard or Wheel mount	8.8	8.8	8.8	9.3	9.3	9.5	9.8	10.0	10.4	11.3	11.3	12.2
		[19.4]	[19.4]	[19.4]	[20.5]	[20.5]	[21.0]	[21.5]	[22.0]	[23.0]	[25.0]	[25.0]	[27.0]
	Bearingless	6.8	6.8	6.8	7.3	7.3	7.5	7.7	7.9	8.4	9.3	9.3	10.2
		[15.0]	[15.0]	[15.0]	[16.0]	[16.0]	[16.5]	[17.0]	[17.5]	[18.5]	[20.5]	[20.5]	[22.5]

Maximum case pressure: See case pressure seal limitation graph. *See shaft torque ratings for limitations.

Note: To assure best motor life, run motor in low speed high torque mode at approximately 30% of continuous pressure and 50% of continuous flow for 30 minutes in each direction before application of full load. Ensure that motor is filled with fluid prior to operation.

Maximum inlet pressure:

310 bar [4500 PSI]

Do not exceed Δ pressure rating (see chart above).

Maximum return pressure:

310 bar [4500 PSI] with case drain line installed.

Do not exceed Δ pressure rating (see chart above).

Δ bar [Δ PSI]

The true pressure difference between inlet port and outlet port

Continuous rating:

Motor may be run continuously at these ratings

Intermittent operation:

10% of every minute

Peak operation:

1% of every minute

Recommended fluids:

Premium quality, anti-wear type hydraulic oil with a viscosity of not less than 13 cSt [70 SUS] at operating temperature.

Recommended system operating temp:

-34°C to 82°C [-30°F to 180°F]

Recommended filtration:

per ISO Cleanliness Code, 4406: 20/18/13

Thermal shock warning:

Do not operate the motor with fluid that is 70F or more above the motor temperature.

Minimum delta pressure warning:

Motors must not run with equal inlet and outlet pressure 50 PSID minimum delta pressure between motor ports is required at all times (except when switching direction of rotation)

2000 Series

Performance data

Motors run with high efficiency in all areas designated with a number for torque and speed. For best motor life select a motor to run with a torque and speed range shown in the light shaded area.

Performance data is typical at 25 cSt [120 SUS]. Actual data may vary slightly from unit to unit in production.



Δ Pressure bar [PSI]
305 cm³/r [18.7in³/r]

[250]	[500]	[750]	[1000]	[1250]	[1500]	[1750]	[2000]	[2250]	[2500]	[2750]	[3000]	[3250]	[3500]
17	34	52	69	86	103	121	138	155	172	190	207	224	241

C-1

Flow LPM [GPM]

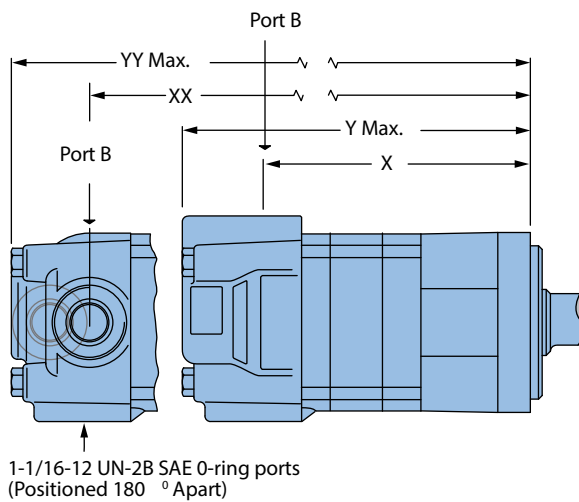
[0.5]	[500]	[1050]											
1.9	55	120											
	4	2											
[1]	[610]	[1180]	[1750]	[2330]	[2870]	[3440]	[3930]	[4410]	[4900]	[5380]			
4	70	135	200	260	325	390	445	500	555	610			
	12	11	11	10	10	9	8	6	3	1			
[2]	[620]	[1210]	[1800]	[2400]	[2970]	[3510]	[4050]	[4600]	[5140]	[5680]	[6220]	[6750]	[7290]
8	70	135	205	270	335	395	460	520	580	640	705	765	825
	24	24	23	22	22	20	19	18	17	15	13	11	8
[4]	[680]	[1250]	[1880]	[2500]	[3120]	[3690]	[4260]	[4840]	[5410]	[5980]	[6550]	[7120]	[7690]
15	75	140	210	280	355	415	480	545	610	675	740	805	870
	49	49	48	47	47	45	43	42	40	38	36	34	33
[6]	[620]	[1270]	[1920]	[2560]	[3230]	[3810]	[4390]	[4970]	[5560]	[6130]	[6710]	[7290]	
23	70	145	215	290	365	430	495	560	630	695	760	825	
	74	74	72	72	71	69	66	64	61	58	55	52	
[8]	[600]	[1270]	[1940]	[2600]	[3290]	[3880]	[4470]	[5070]	[5660]	[6250]	[6840]		
30	70	145	220	295	370	440	505	575	640	705	775		
	98	98	97	96	95	93	90	86	83	80	77		
[10]	[570]	[1250]	[1940]	[2610]	[3310]	[3920]	[4530]	[5150]	[5760]	[6370]			
38	65	140	220	295	375	440	510	580	650	720			
	123	122	121	120	119	117	113	110	106	102			
[12]	[530]	[1220]	[1920]	[2600]	[3300]	[3920]	[4530]	[5150]	[5760]	[6370]			
45	60	140	215	295	375	440	510	580	650	720			
	148	147	145	144	143	142	138	133	128	124			
[14]	[480]	[1180]	[1870]	[2560]	[3260]	[3900]	[4510]	[5120]	[5730]				
53	55	135	210	290	370	440	510	580	645				
	172	172	170	168	167	165	160	156	152				
[16]	[430]	[1120]	[1820]	[2500]	[3210]	[3870]	[4480]	[5080]	[5690]				
61	50	125	205	280	365	440	505	575	645				
	196	196	194	192	191	188	183	178	174				
[18]	[370]	[1060]	[1760]	[2440]	[3140]	[3800]	[4420]	[5050]					
68	40	120	200	275	355	440	500	570					
	221	221	218	217	215	212	207	202					
[20]	[320]	[980]	[1680]	[2360]	[3050]	[3710]	[4370]	[5020]					
76	35	110	190	265	345	420	495	565					
	246	245	243	241	239	236	231	226					
[22]	[240]	[920]	[1620]	[2300]	[2990]	[3560]	[4190]	[4820]					
83	25	105	185	260	340	400	475	545					
	271	270	268	266	263	260	258	255					
[24]	[180]	[870]	[1550]	[2240]	[2920]	[3420]	[4020]	[4630]					
91	20	100	175	255	330	385	455	525					
	296	294	293	290	288	285	283	280					
[25]	[150]	[840]	[1520]	[2200]	[2890]	[3340]	[3930]	[4520]					
95	15	95	170	250	325	375	445	510					
	308	307	305	303	300	298	295	293					
[30]		[680]	[1360]	[2040]	[2720]	[3140]	[3810]						
114		75	155	230	305	355	430						
		365	362	360	357	356	352						

Standard mount

Ports

7/8 -14 UNF-2B SAE O-ring staggered ports (2)
 7/16 -20 UNF-2B SAE O-ring case drain port (1)
 1 1/16 -12 UN-2B SAE O-ring ports (positioned 180° apart) (2)
 7/16 -20 UNF-2B SAE O-ring case drain port (1)
 7/8 -14 UNF-2B SAE O-ring end ports (2)
 7/16 -20 UNF-2B SAE O-ring case drain port (1) or
 G 1/2 (BSP) staggered ports (2)
 G 1/4 (BSP) case drain port (1)

Standard mount

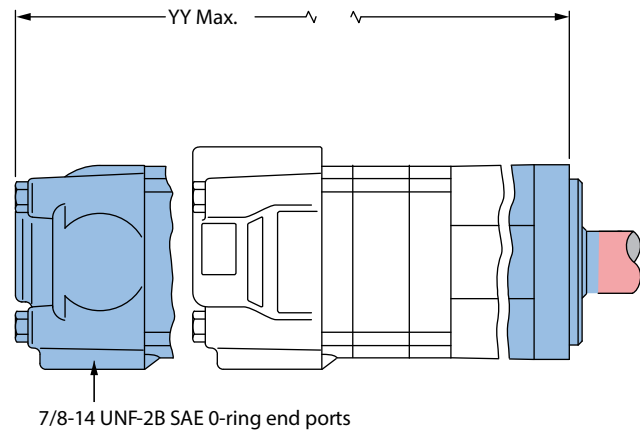


Manifold mount

7/16 -20 UNF-2B SAE O-ring case drain port (1)

Standard rotation viewed from shaft end

Port A Pressurized — CW
 Port B Pressurized — CCW



Standard mount motor dimensions

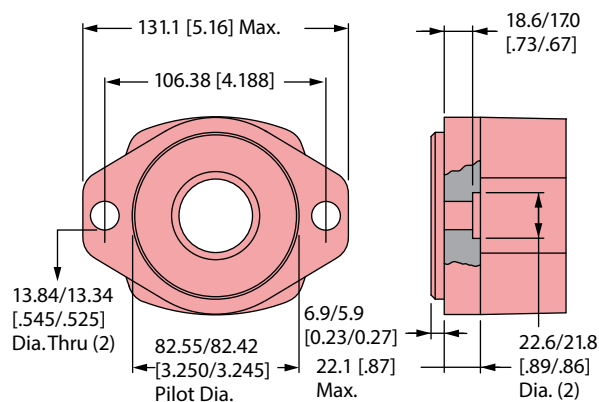
Displacement cm ³ /r [in ³ /r]	X mm [inch]	Y mm [inch]	XX mm [inch]	YY mm [inch]
34 [2.1]	126.7 [4.99]	1740 [6.85]	1290 [5.08]	175.3 [6.90]
41 [2.5]	128.0 [5.04]	175.3 [6.90]	130.5 [5.14]	176.8 [6.96]
66 [4.0]	133.9 [5.27]	181.1 [7.13]	136.1 [5.36]	182.4 [7.18]
80 [4.9]	136.9 [5.39]	184.2 [7.25]	139.2 [5.48]	185.4 [7.30]
100 [6.2]	141.5 [5.57]	189.0 [7.44]	143.8 [5.66]	190.3 [7.49]
130 [8.0]	147.9 [5.83]	195.4 [7.69]	150.2 [5.92]	196.6 [7.74]
160 [9.6]	147.9 [5.83]	195.4 [7.69]	150.2 [5.92]	196.6 [7.74]
195 [11.9]	154.7 [6.09]	202.2 [7.96]	157.0 [6.18]	203.2 [8.00]
245 [14.9]	163.7 [6.45]	211.1 [8.31]	166.0 [6.54]	212.4 [8.36]
305 [18.7]	175.1 [6.90]	222.3 [8.75]	177.4 [6.99]	223.5 [8.80]
395 [24.0]	191.0 [7.52]	238.6 [9.39]	193.3 [7.61]	239.8 [9.44]
490 [29.8]	208.4 [8.21]	255.8 [10.07]	210.7 [8.30]	257.0 [10.12]

2000 Series

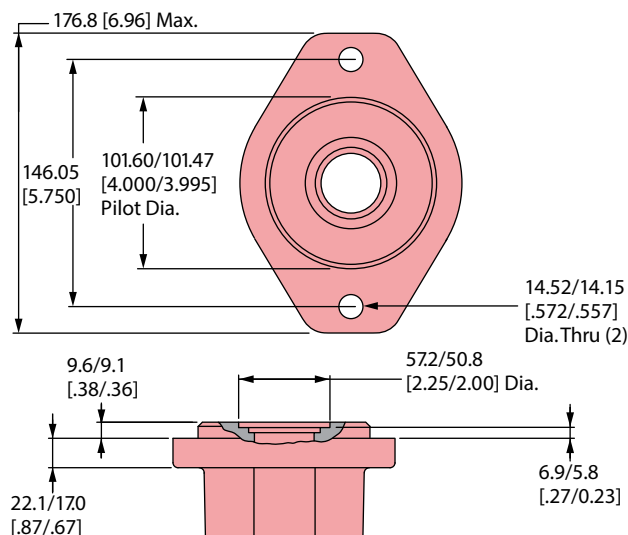
Dimensions

Mounting options

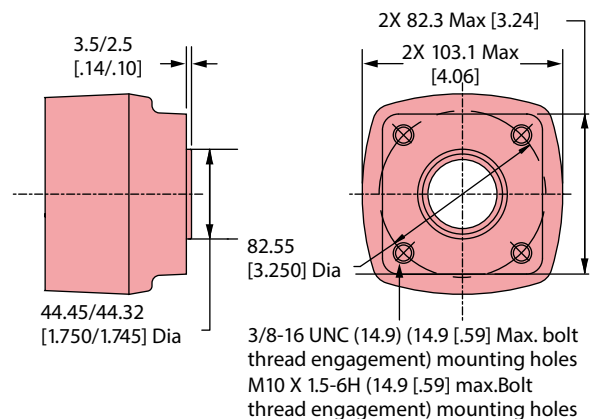
Code:AC SAE A - Two bolt (Standard motor)



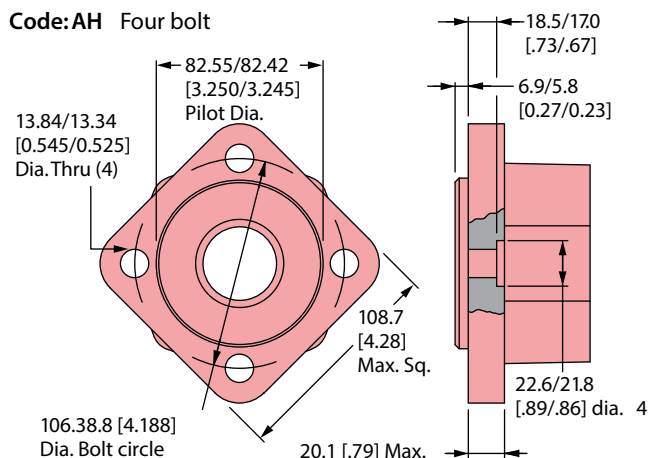
Code:AF SAE B - Two bolt



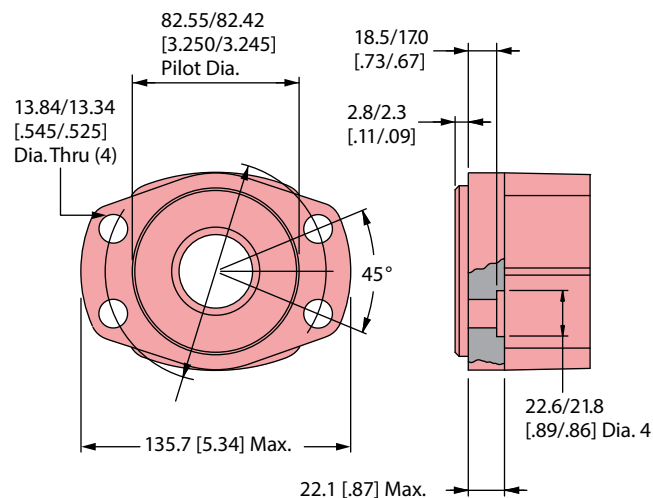
Code:BY Four bolt (Standard motor)



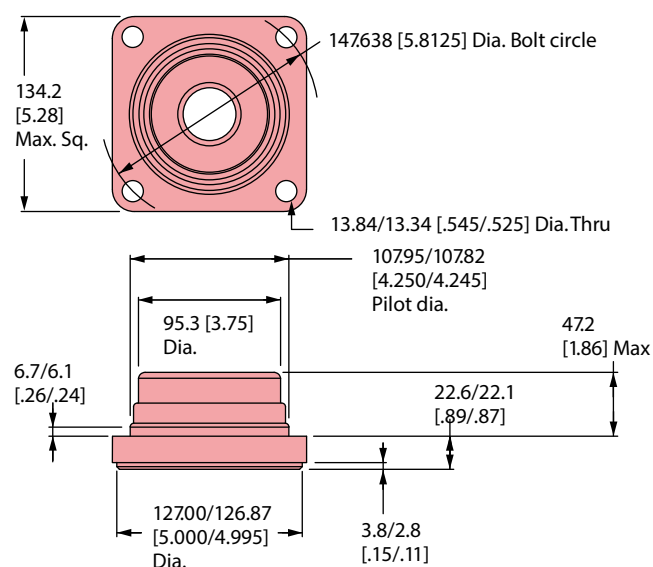
Code:AH Four bolt



Code:AJ Four bolt magneto



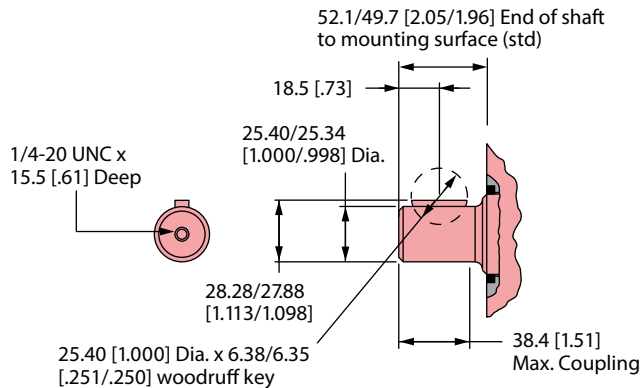
Code:AB Four bolt (Wheel motor)



Shafts

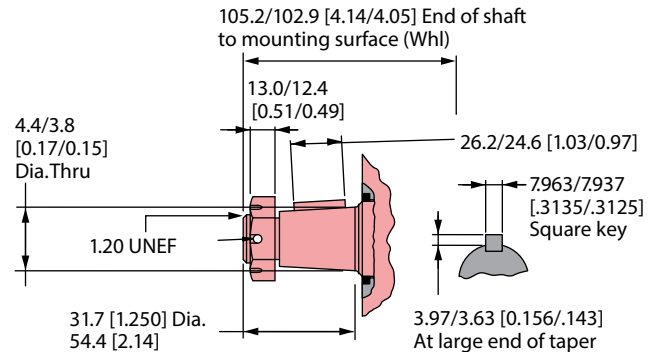
Code: 01 1 Inch straight

395 [3500] Max.Torque Nm [lb-in]

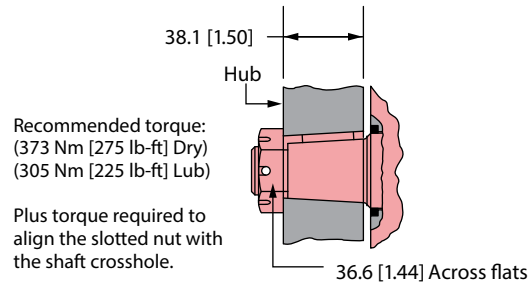


Code: 03 1 1/4 Inch tapered

768 [6800] Max.Torque Nm [lb-in]

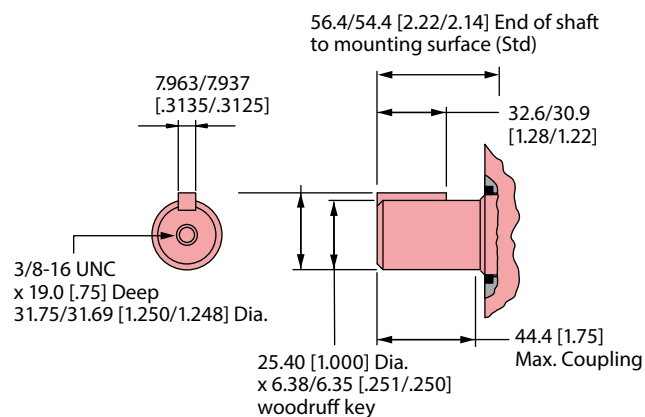


SAE J501 Standard tapered shaft 125.00±0.17Taper per meter [1.500±.002Taper per foot]



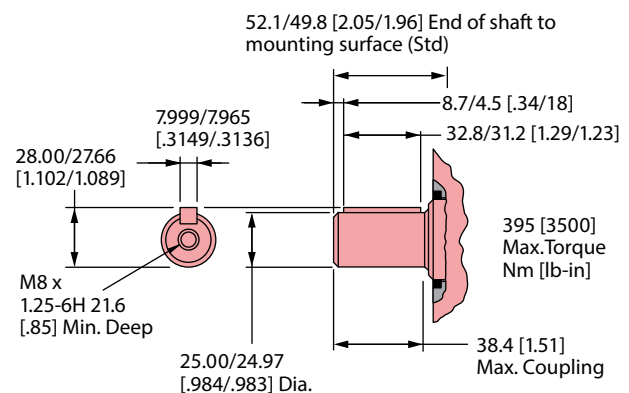
Code: 02 1 1/4 Inch straight

768 [6800] Max.Torque Nm [lb-in]



Code: 19 25 mm straight

395 [3500] Max.Torque Nm [lb-in]



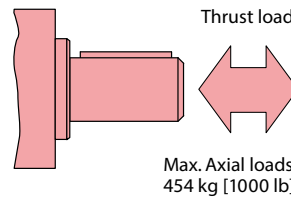
C-1

These curves indicate the radial load capacity on the motor shaft at various locations with an allowable external thrust load of 454 kg [1000 lb].

Note: Case pressure will increase the allowable inward thrust load and decrease the allowable outward thrust load. Case pressure will push outward on the shaft at 61 kg/7 Bar [135 lb/100 PSI].

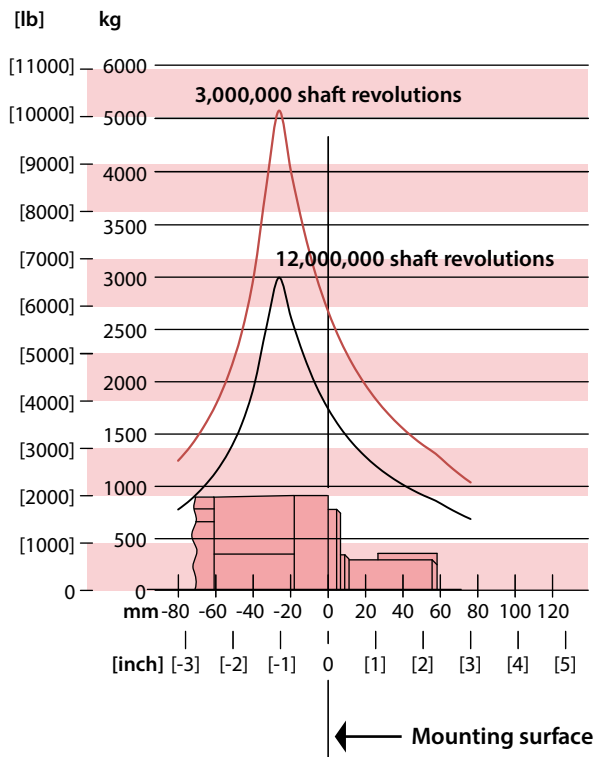
Each curve is based on B 10 bearing life (2000 Hours of 12,000,000 shaft revolutions at 100 RPM) at rated output torque.

To determine radial load at speeds other than 100 RPM, multiply the load values given on the bearing curve by the factors in the chart below.

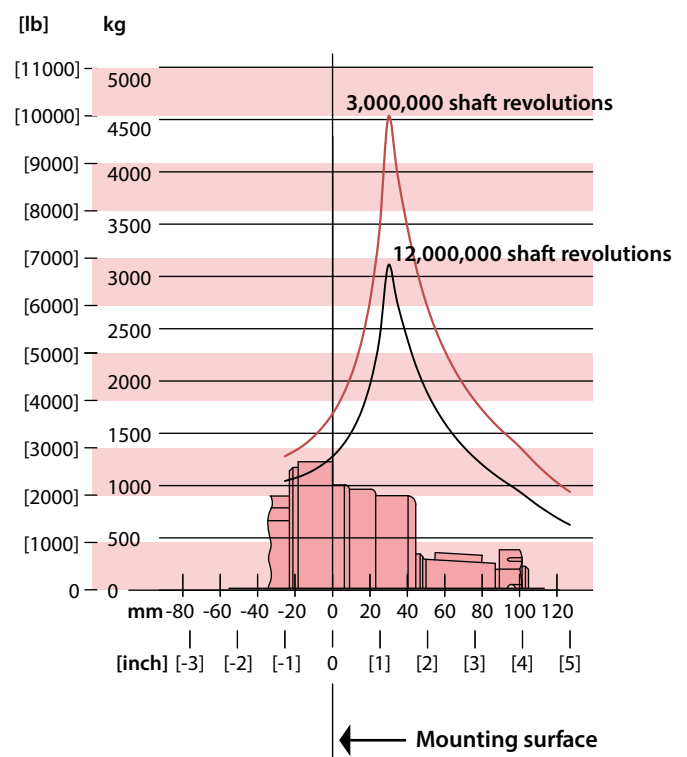


RPM	Multiplication factor
50	1.23
100	1.00
200	0.81
300	0.72
400	0.66
500	0.62
600	0.58
700	0.56
800	0.54

Standard motor straight and splined shafts



Wheel motor Tapered shaft



2000 Series

Case pressure and case porting

Char-Lynn 2000 Series motors are durable and have long life as long as the recommended case pressure is not exceeded. Allowable case pressure is highest at low shaft speeds. Consequently, motor life will be shortened if case pressure exceeds these ratings (acceptability may vary with application). Determine if an external case drain is required from the case pressure seal limitation chart.

Case porting advantages:

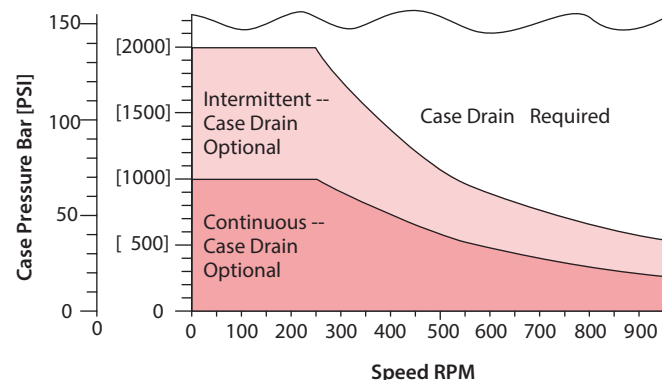
Contamination control — flushing the motor case.

Cooler motor — exiting oil draws motor heat away.

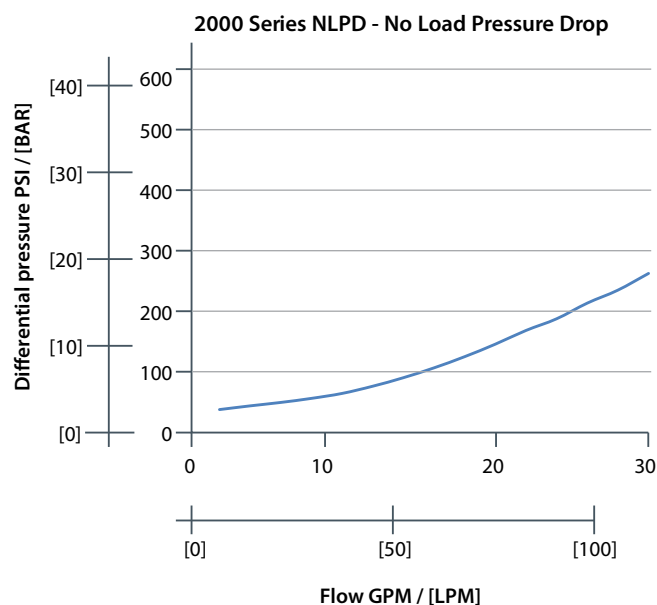
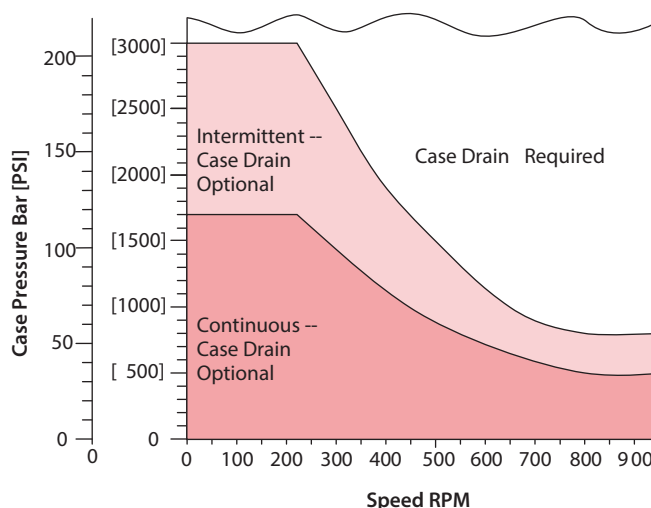
Extend motor seal life — maintain low case pressure with a preset restriction in the case drain line.

Case pressure seal limitation

Standard shaft seal



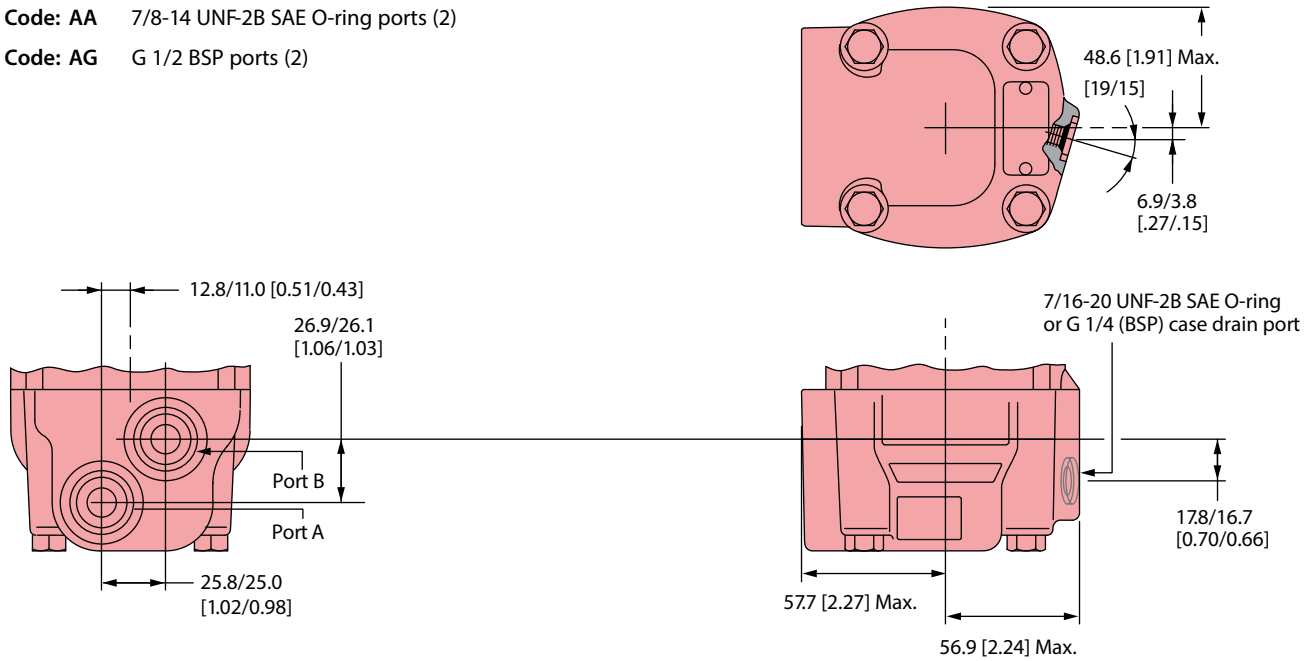
High pressure shaft seal



Ports

Code: AA 7/8-14 UNF-2B SAE O-ring ports (2)

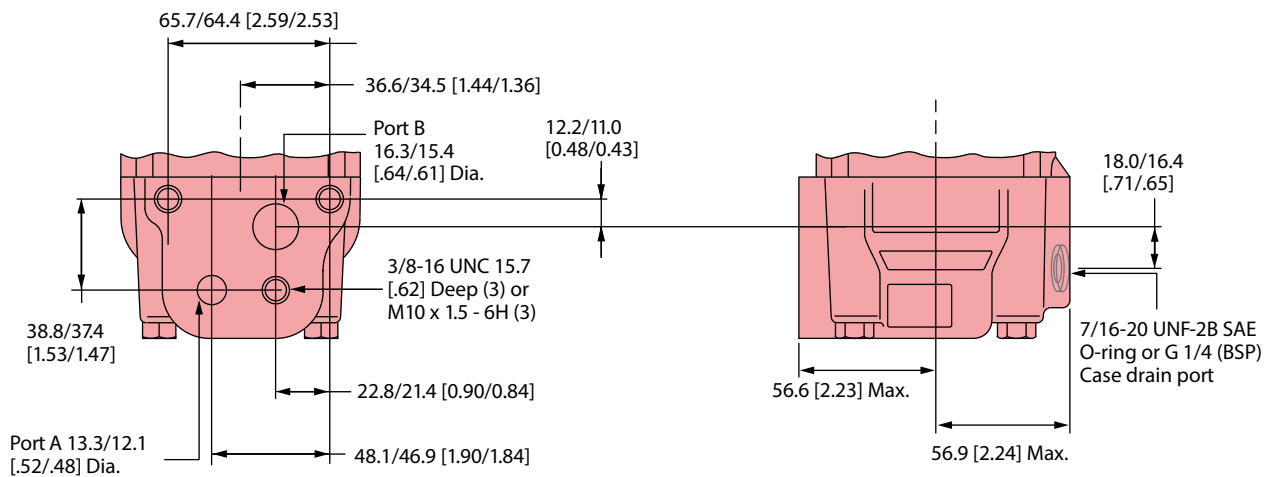
Code: AG G 1/2 BSP ports (2)



C-1

Code: AB 3/8-16 UNC threaded holes

Code: AE M10x1.5 -6H threaded holes



2000 Series

Product numbers

Note: For 2000 Series Motors with a configuration **Not Shown** in the charts below: Use model code number system on the next page to specify product in detail.

Use digit prefix — 104-, 105-, or 106- plus four digit number from charts for complete product number— Example 106-1043.

Orders will not be accepted without three digit prefix.

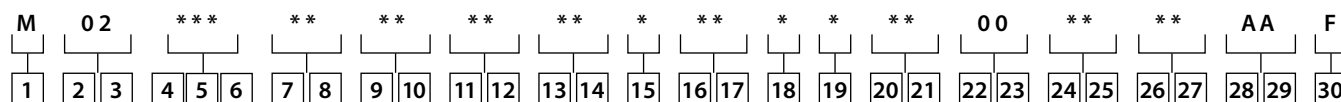
C-1

Mounting	Shaft	Port size	Displ. cm ³ / r [in ³ /r] / product number										
			41	80	90	100	130	160	195	245	305	395	490
			[2.5]	[4.9]	[5.5]	[6.2]	[8.0]	[9.6]	[11.9]	[14.9]	[18.7]	[24.0]	[29.8]
2 Bolt sae A flange	1 Inch straight	7/8 -14 O-ring staggered	104-4708	-1001	—	-1002	-1003	-1004	-1005	-1006	-1007	-1143	—
		1 1/16 -12 O-ring 180° apart	104----	-1037	—	-1038	-1039	-1040	-1041	-1042	-1043	-1044	—
	1 ¼ Inch straight	7/8 -14 O-ring staggered	104-4774	-1022	—	-1023	-1024	-1025	-1026	-1027	-1028	-1228	-1420
		1 1/16 -12 O-ring 180° apart	104----	-1061	—	-1062	-1063	-1064	-1065	-1066	-1067	-1068	-1421
	1 ¼ Inch - 14 T splined	7/8 -14 O-ring staggered	104-4764	-1029	—	-1030	-1031	-1032	-1033	-1034	-1035	-1229	-1422
		1 1/16 -12 O-ring 180° apart	104----	-1087	—	-1088	-1089	-1090	-1091	-1092	-1093	-1094	-1423
2 Bolt SAE B flange	1 ¼ Inch straight	7/8-14 O-ring staggered	104----	-1200	—	1201	-1202	-1203	-1204	-1205	-1206	-1207	—
	1 ¼ Inch involute SAE C splined	7/8 -14 O-ring staggered	104----	-1208	—	-1209	-1210	-1211	-1212	-1213	-1214	-1215	—
	1 Inch SAE 6B splined	7/8 -14 O-ring staggered	104----	-1193	—	-1194	-1195	-1196	-1197	-1198	-1199	—	—
	7/8 Inch SAE B splined	7/8 -14 O-ring staggered	104----	-1216	—	-1217	-1218	-1219	-1220	—	—	—	—
Standard with 4 bolt flange	32 mm Straight	G 1/2 (BSP))	104-4672	-1384	—	-1385	-1386	-1387	-1388	-1389	-1390	-1391	—
	1 ¼ Inch 14 T splined	G 1/2 (BSP)	104----	-1376	—	-1377	-1378	-1379	-1380	-1381	-1382	-1383	—
Wheel motor	1 ¼ Inch straight	7/8 -14 O-ring staggered	105----	—	—	—	—	—	—	—	—	—	-1148
		1 1/16 -12 O-ring 180° Apart	105----	—	—	—	—	—	—	—	—	—	-1149
	32 mm straight	G 1/2 (BSP)	105----	-1134	—	-1135	-1136	-1137	-1138	-1139	-1140	-1141	—
	1 ¼ Inch tapered	7/8 -14 O-ring staggered	105----	-1001	—	-1002	-1003	-1004	-1005	-1006	-1007	-1060	-1152
		1 1/16 -12 O-ring 180° apart	105----	-1071	—	-1072	-1073	-1074	-1075	-1076	-1077	-1078	—
	1 ¼ Inch 14 T splined	7/8 -14 O-ring staggered	105----	-1029	—	-1030	-1031	-1032	-1033	-1034	-1035	-1096	—
		1 1/16 -12 O-ring 180° apart	105----	-1079	—	—	—	-1082	-1083	-1084	-1085	-1086	—
Bearingless	7/8 -14 O-ring staggered		106----	-1008	—	-1009	-1010	-1011	-1012	-1013	-1014	-1015	-1047
	G 1/2 (BSP)		106----	-1038	—	-1039	-1040	-1041	-1042	-1043	-1044	-1045	—

↑
106-1044

Mounting	Shaft	Port size	Displ. cm ³ / r [in ³ /r] / product number										
			41	80	90	100	130	160	195	245	305	395	490
			[2.5]	[4.9]	[5.5]	[6.2]	[8.0]	[9.6]	[11.9]	[14.9]	[18.7]	[24.0]	[29.8]
2 Bolt SAE A flange	1 Inch straight	7/8 -14 O-ring Staggered	104----	-1528	—	-1529	-1530	-1531	-1532	-1533	-1534	-1519	-1535
	1 1/4 Inch straight	7/8 -14 O-ring	104----	-3615	—	-1536	-1537	-1568	-1539	-1452	-1479	-1509	-1489

The following 30-digit coding system has been developed to identify all of the configuration options for the 2000 Series motor. Use this model code to specify a motor with the desired features. All 30 digits of the code must be present when ordering.



1

Product

M

2000 Series motor

2

3

Product series

02

2000 Series Motor

4

5

6

Displacement

021

34.0 cm³/r [in³/r]

025

40.8 cm³/r [in³/r]

040

66.5 cm³/r [in³/r]

049

80.6 cm³/r [4.92 in³/r]

055

90.6 cm³/r [5.53 in³/r]

062

101.6 cm³/r [6.20 in³/r]

080

130.6 cm³/r [7.97 in³/r]

096

158.1 cm³/r [9.65 in³/r]

119

194.8 cm³/r [11.89 in³/r]

149

244.3 cm³/r [14.91 in³/r]

187

306.6 cm³/r [18.71 in³/r]

240

393.8 cm³/r [24.03 in³/r]

298

489.0 cm³/r [29.84 in³/r]

7

8

Mounting type

AB

Wheel, 4 Bolt: 108.0 [4.25] Pilot Dia. 13.59 [.535] Dia. Holes on 147.6 [5.81] Dia. Bolt circle. 127.0 [5.00] Dia. Rear mount pilot

AC

Standard, 2 Bolt: 82.6 [3.25] Pilot Dia. 13.59 [.535] Dia. Holes on 106.4 [4.19] Dia. Bolt circle. SAE A

AD

Bearingless (w/ leakage slots), 4 Bolt: 101.6 [4.00] Pilot Dia. 13.59 [.535] Dia. Holes on 127.0 [5.00] Dia. Bolt circle

AF

Standard, 2 Bolt: 101.6 [4.00] Pilot dia. 14.35 [.565] Dia. Holes on 146.0 [5.75] Dia. Bolt circle. SAE B

AH

Standard, 4 Bolt: 82.6 [3.25] Pilot Dia. 13.59 [.535] Dia. Holes on 106.4 [4.19] Dia. Bolt circle

AJ

Standard (Magnet), 4 Bolt: 82.6 [3.25] Pilot Dia. 13.59 [.535] Dia. Holes on 106.4 [4.19] Dia. Bolt Circle. 2.79 [.110] Pilot Length

AL

Wheel (European), 4 Bolt: 125 [4.92] Pilot Dia. 13.79 [.543] Dia. Holes on 159.99 [6.299] Dia. Bolt Circle

AP

Wheel, 4 Bolt: 108.0 [4.25] Pilot Dia. 13.59 [.535] Dia. Holes on 147.6 [5.81] Dia. Bolt Circle. 127.0 [5.00] Dia. Rear mount pilot. Spigot reduced to 88.9 [3.50] Dia. by 25.4 [1.00] Depth.

AZ

Bearingless (w/ leakage slots), 4 Bolt: 100.0 [3.94] Pilot Dia. 11.0 [.43] Dia. Holes on 125.0 [4.92] Dia bolt circle (european)

9

10

Output shaft

00

None (Bearingless)

01

25.40 [1.000] Dia. Straight shaft with 1/4-20UNC-2B Thread in End, 6.35 [.250] wide x 25.40 [1.000] Dia. Woodruff key

02

31.75 [1.250] Dia. Straight shaft with .375-16UNC-2B Thread in end, 7.938 [.3125] Sq x 31.75 [1.250] straight key

03

31.75 [1.250] Dia. 0.125:1 tapered shaft per SAE J501 with/1.000-20 UNEF-2A Threaded shaft end and slotted hex nut, 7.938 [.3125] Sq x 25.40 [1.0] straight key

04

31.75 [1.250] Dia. Flat root side fit, 14 tooth, 12/24 DP 30° involute spline w/ .375-16UNC-2B Thread in end, 33.0 [1.30] Min. Full spline length

05

25.40 [1.000] Dia. 6B spline per SAE J499 with .250- 20UNC-2B thread in end, 22.76 [.896] Min. Full spline length

07

22.22 [.875] Dia. Flat root side fit, 13 tooth, 16/32 DP 30° SAE B Involute Spline, 15.2 [.60] Min. Full Spline Length

16

32.00 [1.260] Dia. Straight Shaft with M8 x 1.25-6H Thread in End, 9.982 [.3930] W x 7.995 [.3132] H x 45.00 [1.772] L Key

17

31.75 [1.250] Dia. Straight shaft with 3/8 -16 UNC-2B Thread in end, 7.938 [.3125] Sq x 31.75 [1.250] straight key, corrosion resistant (seal area to shaft end)

19

25.00 [.984] Dia. Straight shaft with M8 x 1.25-6h thread in end, 7.982 [.3142] W x 6.954 [.2738] H x 31.82 [1.254] L key

41

35.00 [1.378] Dia. 10:1 Tapered shaft per ISO R775 with M20 x 1.5-6g threaded shaft end and slotted hex nut, 6.00 [.236] Sq. X 20.00 [.787] Key

42

35.00 [1.378] Dia. Straight shaft with M8 x 1.25-6h thread in end, 9.982 [.3930] W x 7.995 [.3132] H x 45.00 [1.772] L key

2000 Series

Model code

M	02		***			**		**		**		**		*	**		*	*	**		00		**		**		AA		F
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

11 12

Ports

- AA** .875-14 UNF-2B SAE O-ring Ports - Staggered Ports
- AB** 12.70 [.500] and 15.88 [.625] Dia. Manifold ports with 3 x .375-16 UNC-2B port block mounting holes
- AC** .875-14 UNF-2B SAE O-ring ports - ports oriented 180° to each other
- AE** 12.70 [.500] and 15.88 [.625] Dia. Manifold ports with 3 x M10 x 1.5-6H Port block mounting holes
- AF** 1.0625-12 UN-2B SAE O-ring ports - ports oriented 180° to each other
- AG** G-1/2 BSP straight THD ports - staggered ports
- AN** G-1/2 BSP Straight THD Ports - end ported
- AS** G-1/2 Bsp Straight THD ports - staggered port with 2 x M10 x 1.5-6H port block mounting holes - european

13 14

Case flow options

(Shuttles available with port code AA only)

- 01** .4375-20 UNF-2B SAE O-Ring Port
- 02** G 1/4 BSP Straight THD Port
- 13** Reverse flow shuttle valve w/ .4375-20 UNF-2B SAE O-Ring port, .062 Dia. Shuttle flow orifice

15

Low pressure relief

- 0** None
- A** Set at 4.5 bar [65 lbf/in²]
- B** Set at 15.2 bar [220 lbf/in²]
- C** Set at 20.7 bar [300 lbf/in²]
- E** Set at 11.03 bar [160 lbf/in²]

16 17

Pressure/flow option

- 0** None
- Integral cross-over relief valve:
- 30** Set at 103.4 bar [1500 lbf/in²]
- 31** Set at 120.6 bar [1750 lbf/in²]
- 32** Set at 137.9 bar [2000 lbf/in²]
- 33** Set at 155.1 bar [2250 lbf/in²]
- 34** Set at 172.4 bar [2500 lbf/in²]
- 35** Set at 189.6 bar [2750 lbf/in²]
- 36** Set at 206.8 bar [3000 lbf/in²]
- 37** Set at 234.4 bar [3400 lbf/in²]

18

Geroler option

- 1** Standard
- 2** Free running
- 6** Reduced side clearance, no warranty for galling

19

Seal option

- 0** Standard
- 1** Viton
- 2** Viton shaft seal
- 3** High pressure shaft seal
- 4** Seal guard
- 5** Extreme duty seal guard
- 6** High pressure shaft seal, seal guard

20 21

Accessories

- 00** None
- AA** Digital speed pickup (30 pulse), 127 [5.0] lead wire with weather pack shroud connector (A=Power, B=Signal, C=Common)
- AD** Digital speed pickup (30 pulse), M12 connector (A=Power, B=Common, C=Signal)
- AG** M12 connector (60 pulse per rev speed signal and one directional signal, (Pin 1=Power, Pin 2= Direction, Pin 3=Common, Pin 4=Speed)

22 23

Special features (hardware)

- 00** None

24 25

Special features (assembly)

- 00** None
- AA** Flange rotated 90 degrees
- AB** Reverse rotation
- AE** Flange rotated 45 degrees

26 27

Paint/packageing

- AA** No paint, indiv. Box
- AB** Low gloss black primer, indiv. Box
- AT** Epoxy coated black, individual box
- BJ** Nickel plated motor (excluding shaft), individual box

28 29

Customer ID

- AA** None

30

Design code

- F** Sixth

C-1