Itahydraulic
Power Tecnology

ENGINEERING DATA

High Torque,
Low Speed Motors
H, S, 2000, 6000, and 10,000 Series

Interchangeable with:

- **Charlynn**
- **White**
- **Ross**
- **Parker**
- **Danfoss**

7223 NW 43rd St, DPT 2254 Choice, Miami, FL-33166

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HIGH TORQUE, LOW SPEED MOTORS

Extensive range of multiple displacement Low Speed – High Torque (LSHT) hydraulic motors are form fit and function interchangeable with many of the common motor products from Parker, White, Charlynn and Danfoss. Both Geroter and Geroler technologies are incorporated in the “H” Series, “S” series, “2000” series, “6000” series and “10,000” series.

These motors are manufactured with ISO 9001:2000 documented quality standards which results in product which consistently meets or exceeds the life and performance expectations of similar products.
The product is built to perform in even the harsh environments where rugged mobile equipment is ex- pected to operate. For optimal life the following guidelines are recommended:

1) Motors should be operated at less than 30% of full rated performance for the first hour of operation
2) During normal sustained operations, oil temperature should be between 70 to 150 degrees F (20 to 60 degrees C)
3) Maximum operating temperature should not exceed 190 degrees F (90 degrees C)
4) ISO oil cleanliness level should be 18/13 or cleaner. Normally this is achieved with Beta 10=100 full flow return line filtration.
5) High grade petroleum based hydraulic oil must be used
6) Minimum oil viscosity should be 100 SUS
7) Simultaneous maximum torque and maximum speed is not recommend for this design of motor

Technical Data Summary:

Model	Distributor type	Displacement		Maximum Operating Pressure		Speed RPM
		in3/rev	cm3/rev	PSI	BAR	
H Series	Axial	3-23	50-400	2400	163	30-800
S Series	Axial	3-23	50-375	3000	200	30-970
2000 Series	Disc	5-23	80-375	3250	225	30-800
6000 Series	Disc	10-49	160-800	3400	240	30-705
10,000 Series	Disc	19-49	315- 800	4000	280	10-446

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HIGH TORQUE, LOW SPEED MOTORS

H-SERIES

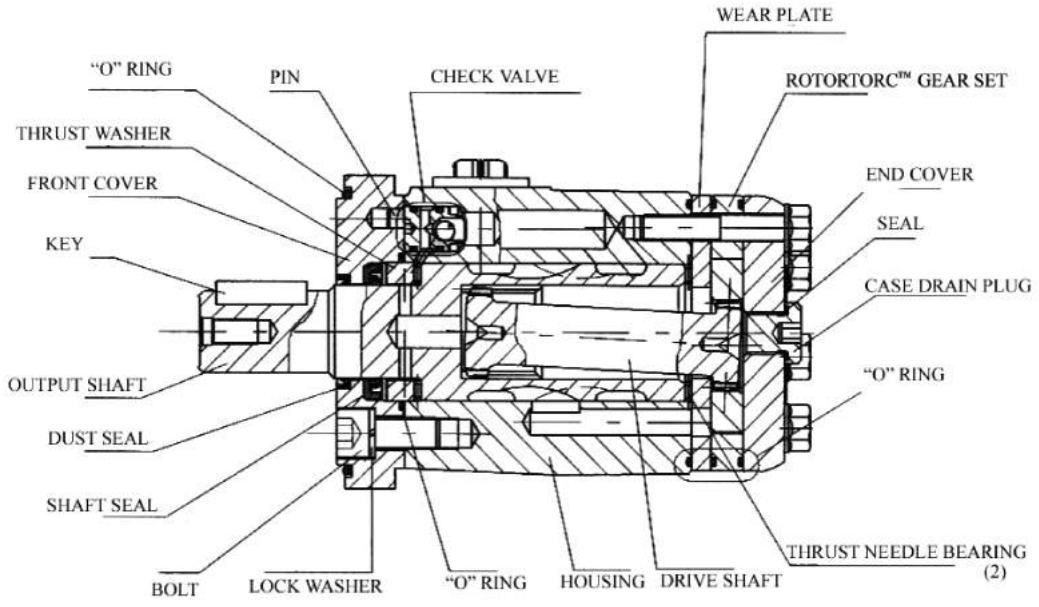
The -101 (H) Geroter™ gear set, spool valve flow distribution, hydraulic motors are a compact, highly efficient, low speed-high torque design which can be used in either parallel or series systems. These low weight advanced construction design motors are manufactured in accordance with the requirements of the ISO 9001:2000 quality system.

Technical Specifications

101 H SERIES

			DISPLACEMENT cm3/r (in3/r)									
			36 cm3 (2.2)	**50 cm3 (2.8)**	**80 cm3 (4.9)**	**100 cm3 (6.1)**	**125 cm3 (7.7)**	**160 cm3 (9.8)**	**200 cm3 (12.2)**	**250 cm3 (15.3)**	**315 cm3 (19.2)**	**400 cm3 (24.4)**
		Char-Lynn reference	*36 cm3 (2.2)*	*46 cm3 (3.0)*	*74 cm3 (4.5)*	*97 cm3 (5.9)*	*120 cm3 (7.3)*	*159 cm3 (9.7)*	*185 cm3 (11.3)*	*231 cm3 (14.1)*	*293 cm3 (17.9)*	*370 cm3 (22.6)*
MOUNTING	**SHAFTS**	**PORTS**										
2 BOLT FLANGE MOUNT	1" STRAIGHT WOODRUFF KEY	7/8" -14 O-RING	1011700	1011033	1011034	1011035	1011702	1011036	1011037	1011038	1011039	1011040
		1/2" NPTF O-RING	1011704	1011025	1011026	1011027	1011706	1011028	1011029	1011030	1011031	1011032
		MANIFOLD	1011708	1011041	1011042	1011043	1011710	1011044	1011045	1011046	1011047	1011048
	1" SAE 6B SPLINED	7/8" -14 O-RING	1011721	1011081	1011082	1011083	1011723	1011084	1011085	1011086	1011087	1011088
		1/2" NPTF O-RING	1011725	1011073	1011074	1011075	1011727	1011076	1011077	1011078	1011079	1011080
		MANIFOLD	1011729	1011089	1011090	1011091	1011731	1011092	1011093	1011094	1011095	1011096
4 BOLT FLANGE MOUNT	1" STRAIGHT WOODRUFF KEY	7/8" -14 O-RING	1011749	1011009	1011010	1011011	1011751	1011012	1011013	1011014	1011015	1011016
		1/2" NPTF O-RING	1011753	1011001	1011002	1011003	1011755	1011004	1011005	1011006	1011007	1011008
		MANIFOLD	1011757	1011017	1011018	1011019	1011759	1011020	1011021	1011022	1011023	1011024
	1" SAE 6B SPLINED	7/8" -14 O-RING	1011761	1011057	1011058	1011059	1011872	1011060	1011061	1011062	1011063	1011064
		1/2" NPTF O-RING	1011764	1011049	1011050	1011051	1011766	1011052	1011053	1011054	1011055	1011056
		MANIFOLD	1011768	1011065	1011066	1011067	1011770	1011068	1011069	1011070	1011071	1011072
Max Torque (in-lbs)	Continuous		504	717	1142	1425	1788	1806	2292	2877	3054	3850
	Intermittent		672	956	1513	1885	2372	3027	3452	4036	4470	4717
Max Pressure (PSI)	Continuous		1,840	1,813	1,813	1,813	1,813	1,813	1,596	1,596	1,596	1,451
	Intermittent		2,425	2,394	2,394	2,394	2,394	2,394	2,394	2,031	1,813	1,523
Max Flow (GPM)	Continuous		10	12	16	16	16	16	16	16	16	16
	Intermittent		12	13	20	20	20	20	20	20	20	20
Max RPM	Continuous		1050	850	650	520	390	310	260	200	156	130
	Intermittent		1270	879	740	589	475	370	296	237	189	149
Weight (LBS)			12	12	13	13	13	14	14	15	15	16

Continuous = maximum of continuous operation
Intermittent = maximum operating range for 6 seconds per minute



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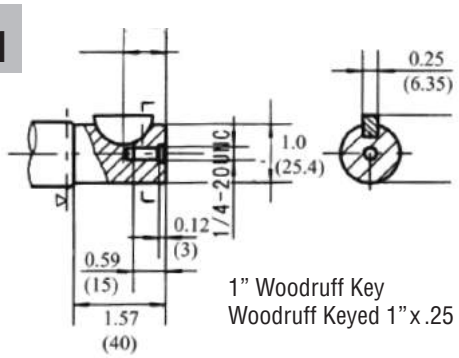
HIGH TORQUE, LOW SPEED MOTORS

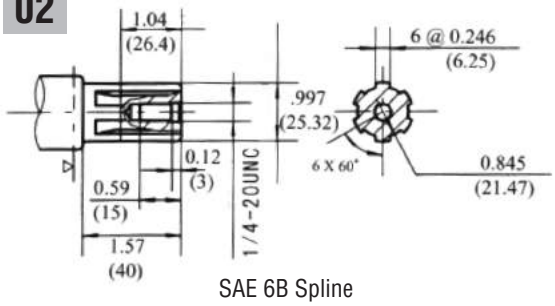
H-SERIES SHAFT DATA

01



1" Woodruff Key
Woodruff Keyed 1" x .25

02



SAE 6B Spline

H SERIES MODEL CODE (-101)

M0H - 50 - A - 01 - B - 0 - 0

H SERIES (-101)

FRAME SIZE
(In3/REV)
36 (2.20)
50 (3.15)
80 (4.74)
100 (5.87)
125 (7.20)
160 (9.51)
200 (11.59)
250 (14.09)
315 (19.02)
400 (24.4)

MOUNTING FLANGE TYPE
A - 2 BOLT - SAE - "A"
B - 4 BOLT SQUARE
K - 4 BOLT MAGNETO

DRIVE SHAFT
01 - 1" Woodruff Key
02 - SAE 6B Spline

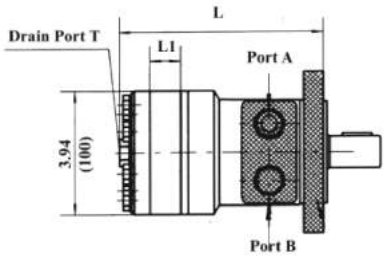
PORT SIZE
A - 7/8 -14 SAE
B - 1/2 NPTF
C - Manifold

SPECIAL OPTIONS
00 - None
01 - Reverse Rotation
02 - Flange Rotated 90°
AA - Free Running*
AC - Viton Shaft Seal

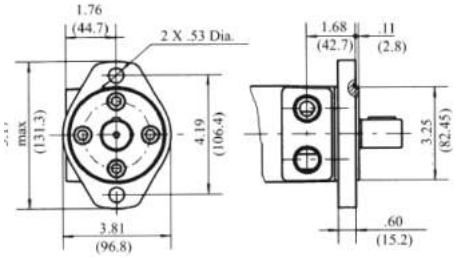
0 -No Paint
1 - Black Paint
NP - Nickel Plated

Additional flange and drive shaft options available please consult factory
*Available on selected models

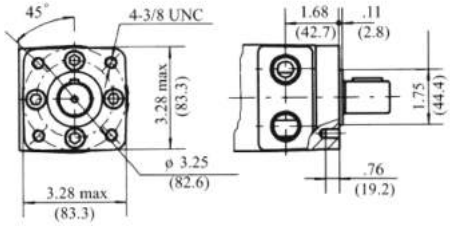
H SERIES INSTALLATION DATA



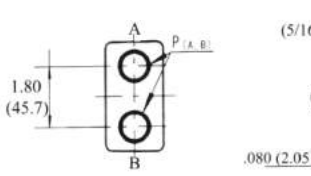
MODEL H Series	L		L1	
	inches	mm	inches	mm
H 36	5.51	140	0.27	6.8
H 50	5.55	141	0.28	7
H 80	5.69	144.5	0.41	10.
H 100	5.79	147	0.51	13
H 125	5.91	150	0.63	16
H 160	6.10	155	0.83	21
H 200	6.30	160	1.02	26
H 250	6.54	166	1.26	32
H 315	7.72	176	1.65	42
H 400	7.32	186	2.04	52



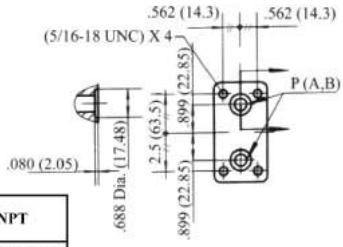
A- SAE -"A" 2 BOLT



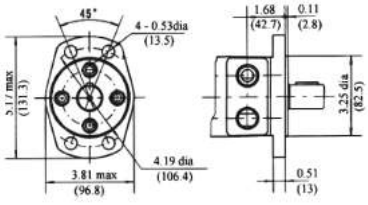
B - 4 BOLT SQUARE



PORT SIZES	SAE	NPT
P (A,B)	7/8-14 SAE	1/2-14 NPTF
T	7/16-20 SAE	7/16-20 SAE



MANIFOLD MOUNT



K - MAGNETO

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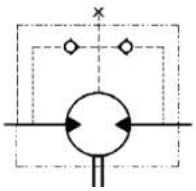
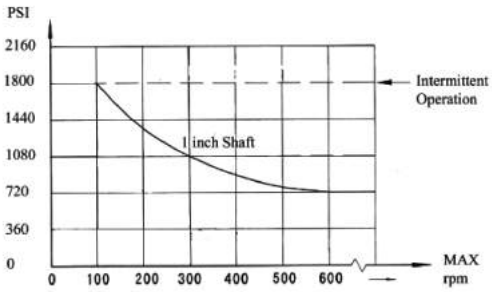
H SERIES SHAFT SEAL RATED PRESSURE





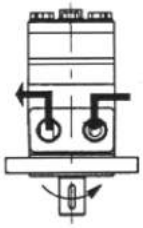
CASE DRAIN

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the drain line is used the pressure exerted on the shaft seal is equal to the return line pressure.

SHAFT ROTATION DIRECTION

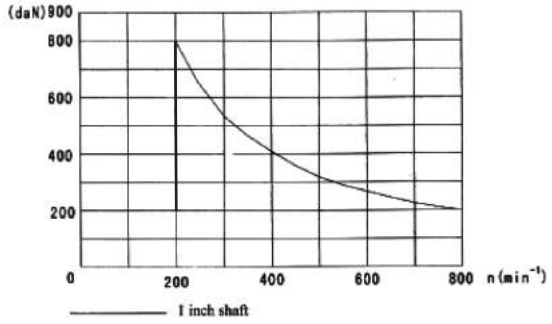
STANDARD ROTATION VIEWED FROM SHAFT END

Port A pressurized = CW rotation
Port B pressurized = CCW rotation

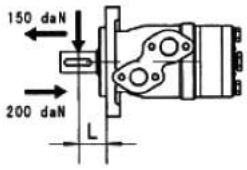


RADIAL FORCES

Status of the shaft's radial force



$$F_r = \frac{800}{n} \cdot \frac{2500}{95+L} \text{ daN}$$



F_r =Radial Force (daN)
L =Distance (mm)
n =Speed (rpm)
Round-flange L=30mm
Square-flange L=24mm

H 36 (02/022)		36 CM³/REV 2.20 IN³/REV						Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	125 (1840)	165 (2429)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
	8 (2.10)	13 (115)	24 (212)	29 (256)	34 (300)	43 (380)	48 (424)	55 (486)	74 (654)
		214 rpm	205 rpm	200 rpm	194 rpm	187 rpm	179 rpm	168 rpm	138 rpm
	15 (3.95)	13 (115)	25 (221)	29 (256)	34 (300)	43 (380)	48 (424)	56 (495)	75 (663)
		406 rpm	398 rpm	391 rpm	383 rpm	374 rpm	366 rpm	353 rpm	324 rpm
	20 (5.25)	13 (115)	24 (212)	29 (256)	34 (300)	43 (380)	48 (424)	56 (495)	76 (672)
		541 rpm	534 rpm	528 rpm	521 rpm	513 rpm	500 rpm	486 rpm	458
	30 (7.90)	12 (106)	24 (212)	29 (256)	34 (300)	43 (380)	48 (424)	56 (495)	76 (672)
		814 rpm	804 rpm	792 rpm	778 rpm	763 rpm	749 rpm	726 rpm	701 rpm
	35 (9.20)	12 (106)	23 (203)	28 (247)	34 (300)	43 (380)	48 (424)	56 (495)	76 (672)
		952 rpm	944 rpm	930 rpm	913 rpm	897 rpm	879 rpm	858 rpm	833 rpm
Max Cont.	40 (10.50)	12 (106)	23 (203)	28 (247)	32 (283)	41 (362)	47 (415)	55 (486)	75 (663)
		1090 rpm	1078 rpm	1064 rpm	1048 rpm	1024 rpm	998 rpm	977 rpm	943 rpm
Max Int.	45 (11.90)	11 (97)	22 (194)	26 (230)	32 (283)	41 (362)	46 (407)	54 (477)	
		1232 rpm	1218 rpm	1196 rpm	1175 rpm	1149 rpm	1118 rpm	1080 rpm	

H 50 (03/028)		51.7 CM³/REV 3.15 IN³/REV						Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	125 (1840)	165 (2429)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
	8 (2.10)	17 (150)	38 (336)	44 (390)	50 (443)	63 (558)	70 (620)	79 (700)	104 (920)
		154 rpm	149 rpm	144 rpm	141 rpm	135 rpm	129 rpm	123 rpm	92 rpm
	15 (3.95)	19 (168)	38 (336)	44 (389)	50 (443)	64 (566)	71 (628)	80 (708)	105 (930)
		292 rpm	286 rpm	238 rpm	277 rpm	273 rpm	267 rpm	262 rpm	231 rpm
	20 (5.25)	17 (150)	38 (336)	44 (389)	51 (451)	64 (566)	71 (628)	80 (708)	107 (947)
		390 rpm	385 rpm	328 rpm	326 rpm	374 rpm	367 rpm	360 rpm	332 rpm
	30 (7.90)	16 (142)	37 (328)	44 (389)	50 (443)	64 (566)	71 (628)	80 (708)	108 (956)
		586 rpm	579 rpm	572 rpm	568 rpm	562 rpm	556 rpm	546 rpm	516 rpm
	35 (9.20)	15 (134)	36 (320)	43 (320)	50 (443)	63 (558)	71 (628)	80 (708)	107 (947)
		683 rpm	675 rpm	670 rpm	663 rpm	656 rpm	647 rpm	641 rpm	614 rpm
Max Cont.	45 (11.90)	14 (126)	34 (304)	42 (374)	49 (435)	63 (558)	70 (620)	80 (708)	107 (947)
		879 rpm	868 rpm	862 rpm	855 rpm	849 rpm	840 rpm	833 rpm	799 rpm
Max Int.	50 (13.20)	13 (118)	33 (296)	41 (368)	48 (427)	62 (550)	68 (605)	79 (700)	
		975 rpm	962 rpm	955 rpm	949 rpm	943 rpm	937 rpm	927 rpm	

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H SERIES TECHNICAL DATA

H 80 (05/045)		77.7 CM³/REV 4.74 IN³/REV						Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	125 (1840)	165 (2429)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	8 (2.10)	29 (256)	60 (531)	70 (620)	80 (708)	101 (894)	111 (982)	128 (1133)	168 (1487)
		97 rpm	94 rpm	91 rpm	88 rpm	84 rpm	79 rpm	74 rpm	50 rpm
	15 (3.95)	29 (256)	61 (539)	71 (628)	81 (717)	101 (894)	114 (1009)	129 (1142)	170 (1505)
		184 rpm	181 rpm	178 rpm	175 rpm	171 rpm	167 rpm	162 rpm	140 rpm
	20 (5.25)	28 (248)	60 (531)	71 (628)	81 (717)	101 (894)	112 (991)	129 (1142)	170 (1505)
		247 rpm	243 rpm	241 rpm	238 rpm	235 rpm	231 rpm	225 rpm	205 rpm
	30 (7.90)	25 (221)	58 (513)	69 (610)	79 (699)	100 (855)	111 (982)	128 (1133)	171 (1513)
		370 rpm	366 rpm	363 rpm	360 rpm	356 rpm	351 rpm	346 rpm	323 rpm
	35 (9.20)	24 (212)	57 (504)	68 (602)	78 (690)	99 (876)	110 (974)	126 (1115)	171 (1513)
		432 rpm	427 rpm	424 rpm	421 rpm	416 rpm	412 rpm	407 rpm	387 rpm
	45 (11.90)	22 (195)	54 (478)	66 (584)	77 (681)	97 (858)	109 (965)	124 (1097)	169 (1496)
		555 rpm	550 rpm	546 rpm	542 rpm	538 rpm	532 rpm	528 rpm	503 rpm
	50 (13.20)	20 (177)	53 (469)	54 (566)	75 (664)	96 (850)	107 (947)	123 (1089)	168 (1487)
		616 rpm	609 rpm	606 rpm	603 rpm	599 rpm	594 rpm	588 rpm	561 rpm
Max Cont.	60 (15.85)	19 (168)	52 (460)	63 (558)	74 (655)	95 (841)	107 (947)	123 (1089)	168 (1487)
		740 rpm	732 rpm	727 rpm	723 rpm	718 rpm	713 rpm	707 rpm	675 rpm
Max Int.	75 (19.75)	16 (142)	47 (416)	59 (522)	72 (637)	91 (805)	105 (929)	121 (1071)	
		827 rpm	820 rpm	817 rpm	813 rpm	808 rpm	804 rpm	796 rpm	

H 100 (06/059)		96.2 CM³/REV 5.87 IN³/REV						Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	125 (1840)	165 (2429)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	8 (2.10)	36 (319)	75 (664)	88 (779)	101 (984)	126 (1115)	141 (1248)	160 (1460)	210 (1859)
		78 rpm	75 rpm	73 rpm	70 rpm	67 rpm	63 rpm	56 rpm	34 rpm
	15 (3.95)	35 (310)	75 (664)	89 (788)	101 (894)	128 (1133)	141 (1248)	160 (1416)	213 (1885)
		149 rpm	145 rpm	143 rpm	141 rpm	137 rpm	134 rpm	129 rpm	109 rpm
	20 (5.25)	33 (292)	74 (665)	88 (779)	101 (984)	126 (1115)	140 (1239)	161 (1451)	212 (1876)
		199 rpm	196 rpm	195 rpm	191 rpm	189 rpm	185 rpm	179 rpm	161 rpm
	30 (7.90)	31 (274)	72 (637)	85 (752)	98 (867)	123 (1089)	137 (1212)	157 (1389)	213 (1885)
		299 rpm	296 rpm	293 rpm	291 rpm	288 rpm	284 rpm	280 rpm	259 rpm
	35 (9.20)	29 (257)	69 (611)	83 (735)	96 (850)	121 (1070)	135 (1195)	155 (1372)	212 (1876)
		349 rpm	345 rpm	344 rpm	341 rpm	337 rpm	335 rpm	330 rpm	310 rpm
	45 (11.90)	28 (248)	66 (584)	81 (717)	94 (832)	119 (1053)	133 (1177)	153 (1354)	208 (1841)
		449 rpm	445 rpm	442 rpm	439 rpm	435 rpm	432 rpm	428 rpm	405 rpm
	50 (13.20)	24 (217)	65 (575)	78 (690)	93 (823)	117 (1035)	132 (1168)	152 (1345)	207 (1832)
		498 rpm	493 rpm	491 rpm	490 rpm	486 rpm	481 rpm	477 rpm	457 rpm
Max Cont.	60 (15.85)	23 (204)	63 (558)	77 (681)	92 (814)	116 (1027)	131 (1159)	151 (1336)	207 (1832)
		598 rpm	593 rpm	589 rpm	587 rpm	583 rpm	578 rpm	573 rpm	549 rpm
Max Int.	75 (19.75)	20 (117)	57 (504)	74 (655)	88 (779)	113 (1000)	129 (1142)	150 (1328)	
		673 rpm	667 rpm	664 rpm	661 rpm	657 rpm	654 rpm	648 rpm	

H 125 (07/073)		117.9 CM³/REV 7.20 IN³/REV						Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	125 (1840)	165 (2429)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	8 (2.10)	45 (398)	94 (832)	111 (982)	127 (1124)	158 (1398)	176 (1558)	201 (1719)	263 (2328)
		62 rpm	60 rpm	59 rpm	56 rpm	54 rpm	50 rpm	46 rpm	26 rpm
	15 (3.95)	44 (389)	94 (832)	111 (982)	127 (1124)	160 (1416)	177 (1566)	202 (1788)	267 (2363)
		118 rpm	115 rpm	114 rpm	113 rpm	110 rpm	108 rpm	105 rpm	86 rpm
	20 (5.25)	42 (372)	93 (823)	110 (974)	127 (1124)	159 (1407)	176 (1558)	202 (1788)	268 (2372)
		158 rpm	156 rpm	155 rpm	152 rpm	150 rpm	148 rpm	144 rpm	129 rpm
	30 (7.90)	40 (354)	91 (805)	108 (956)	124 (1097)	156 (1381)	174 (1540)	198 (1752)	268 (378)
		238 rpm	235 rpm	233 rpm	231 rpm	229 rpm	225 rpm	222 rpm	205 rpm
	35 (9.20)	38 (356)	89 (788)	106 (938)	122 (1080)	154 (1363)	172 (1522)	196 (1735)	267 (2363)
		227 rpm	274 rpm	273 rpm	272 rpm	268 rpm	266 rpm	263 rpm	247 rpm
	45 (11.90)	37 (327)	85 (752)	103 (912)	120 (1062)	151 (1336)	170 (1505)	194 (1717)	263 (2328)
		356 rpm	353 rpm	352 rpm	349 rpm	347 rpm	343 rpm	341 rpm	321 rpm
	50 (13.20)	33 (292)	84 (743)	100 (885)	118 (1044)	149 (1319)	167 (1478)	192 (1699)	260 (2301)
		396 rpm	392 rpm	390 rpm	390 rpm	387 rpm	383 rpm	380 rpm	363 rpm
Max Cont.	60 (15.85)	32 (283)	81 (717)	99 (876)	116 (1027)	147 (1301)	166 (1469)	191 (1690)	259 (2292)
		421 rpm	471 rpm	469 rpm	467 rpm	465 rpm	461 rpm	457 rpm	436 rpm
Max Int.	75 (20.8)	26 (230)	75 (664)	93 (823)	110 (974)	142 (1257)	159 (1407)	185 (1837)	
		594 rpm	588 rpm	587 rpm	581 rpm	576 rpm	584 rpm	579 rpm	

Itahydraulic
Power Tecnology

H SERIES TECHNICAL DATA

H 160 (10/097)		156 CM³/REV 9.51 IN³/REV					Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	125 (1840)	165 (2429)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
	8 (2.10)	57 (505)	121(1070)	142 (1260)	162 (1435)	202 (1790)	225 (1990)	243 (2150)	334 (2955)
		48 rpm	47 rpm	46 rpm	44 rpm	42 rpm	40 rpm	39 rpm	24 rpm
	15 (3.95)	56 (496)	121 (1071)	142 (1260)	162 (1435)	204 (1805)	227 (2010)	245 (2170)	341 (3020)
		93 rpm	90 rpm	90 rpm	89 rpm	88 rpm	86 rpm	86 rpm	75 rpm
	20 (5.25)	55 (487)	120 (1060)	140 (1240)	162 (1435)	203 (1795)	226 (2000)	244 (2160)	342 (3025)
		123 rpm	122 rpm	121 rpm	119 rpm	117 rpm	116 rpm	116 rpm	104 rpm
F	30 (7.90)	54 (478)	117 (1035)	139 (1230)	160 (1415)	201 (1780)	224 (1980)	242 (2140)	340 (3010)
L		185 rpm	183 rpm	182 rpm	180 rpm	178 rpm	176 rpm	175 rpm	163 rpm
O	35 (9.20)	52 (460)	115 (1020)	137 (1215)	159 (1410)	199 (1760)	220 (1950)	242 (2140)	337 (2980)
W		215 rpm	213 rpm	213 rpm	211 rpm	210 rpm	208 rpm	207 rpm	196 rpm
	45 (11.90)	50 (442)	112 (995)	134 (1185)	156 (1380)	196 (1735)	220 (1950)	238 (2105)	335 (2965)
		277 rpm	275 rpm	275 rpm	273 rpm	271 rpm	169 rpm	268 rpm	256 rpm
	50 (13.20)	45 (398)	110 (975)	132 (1170)	153 (1355)	194 (1720)	216 (1975)	233 (1975)	330 (2920)
		308 rpm	307 rpm	305 rpm	303 rpm	302 rpm	299 rpm	299 rpm	287 rpm
Max Cont.	60 (15.85)	44 (390)	106 (940)	130 (1150)	151 (1340)	192 (1670)	214 (1895)	231 (2045)	328 (2905)
		370 rpm	368 rpm	368 rpm	364 rpm	362 rpm	360 rpm	359 rpm	347 rpm
Max Int.	75 (19.75)	32 (283)	96 (850)	119 (1055)	142 (1260)	182 (1610)	205 (1815)	222 (19650	
		458 rpm	463 rpm	457 rpm	456 rpm	453 rpm	451 rpm	451 rpm	

H 200 (11/113)		190 CM³/REV 11.50 IN³/REV					Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	150 (2208)
	LPM (GPM)	Torque Mn (in.Lbs) Speed Specification						
	8 (2.10)	73 (646)	153 (1354)	179 (1584)	204 (1805)	256 (2266)	283 (2505)	385 (3407)
		39 rpm	37 rpm	36 rpm	35 rpm	32 rpm	28 rpm	12 rpm
	15 (3.95)	73 (646)	152 (1345)	180 (1593)	205 (1814)	259 (2292)	266 (2354)	390 (3407)
		74 rpm	72 rpm	71 rpm	71 rpm	70 rpm	68 rpm	58 rpm
	20 (5.25)	71 (628)	151 (1336)	178 (1575)	204 (1805)	256 (2266)	285 (2522)	390 (3452)
F		99 rpm	98 rpm	97 rpm	95 rpm	94 rpm	91 rpm	81 rpm
L	30 (7.90)	68 (602)	149 (1319)	175 (1549)	202 (1788)	254 (2248)	283 (2505)	388 (3434)
O		148 rpm	147 rpm	146 rpm	144 rpm	142 rpm	139 rpm	128 rpm
W	35 (9.20)	65 (575)	146 (1292)	173 (1531)	200 (1770)	252 (2230)	281 (2487)	386 (3416)
		173 rpm	172 rpm	171 rpm	169 rpm	168 rpm	165 rpm	155 rpm
	45 (11.9)	63 (558)	142 (1237)	170 (1505)	196 (1735)	247 (2186)	277 (2451)	382 (3380)
		222 rpm	221 rpm	220 rpm	218 rpm	216 rpm	214 rpm	203 rpm
	50 (13.2)	58 (513)	138 (1221)	166 (1469)	193 (1708)	244 (2159)	272 (2407)	378 (3345)
		247 rpm	245 rpm	244 rpm	244 rpm	242 rpm	239 rpm	229 rpm
Max Cont.	60 (15.85)	56 (496)	136 (1204)	163 (1443)	191 (1690)	241 (2133)	269 (2381)	375 (3319)
		296 rpm	294 rpm	293 rpm	292 rpm	290 rpm	287 rpm	277 rpm
Max Int.	75 (19.75)	42 (372)	121 (1070)	150 (1328)	177 (1566)	226 (2000)		
		370 rpm	367 rpm	367 rpm	365 rpm	364 rpm		

H 250 (14/141)		231 CM³/REV 14.09 IN³/REV					Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	110 (1620)	140 (2060)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
	8 (2.10)	93 (823)	195 (1726)	226 (2000)	259 (2292)	325 (2876)	357 (3159)	
		31 rpm	29 rpm	29 rpm	27 rpm	25 rpm	24 rpm	
	15 (3.95)	92 (814)	192 (1699)	226 (2000)	260 (2301)	325 (2876)	360 (3186)	456 (4036)
		60 rpm	58 rpm	57 rpm	57 rpm	55 rpm	55 rpm	46 rpm
	20 (5.25)	90 (797)	191 (1690)	225 (1991)	258 (2283)	322 (2850)	356 (3151)	455 (4027)
F		79 rpm	78 rpm	77 rpm	76 rpm	75 rpm	75 rpm	65 rpm
L	30 (7.90)	86 (761)	188 (1664)	221 (1956)	255 (2257)	319 (2823)	354 (3153)	452 (4000)
O		119 rpm	118 rpm	117 rpm	116 rpm	114 rpm	114 rpm	103 rpm
W	35 (9.20)	82 (726)	184 (1628)	217 (1920)	251 (2221)	317 (2805)	350 (3098)	448 (3965)
		138 rpm	137 rpm	135 rpm	133 rpm	133 rpm	124 rpm	124 rpm
	45 (11.9)	79 (699)	179 (1584)	214 (1894)	246 (2177)	312 (2761)	345 (3053)	442 (3912)
		179 rpm	178 rpm	177 rpm	176 rpm	173 rpm	173 rpm	163 rpm
	50 (13.2)	74 (655)	174 (1540)	209 (1850)	243 (2151)	306 (2708)	339 (3000)	438 (3876)
		198 rpm	197 rpm	197 rpm	195 rpm	194 rpm	193 rpm	185 rpm
Max Cont.	60 (15.85)	71 (628)	171 (1513)	206 (1823)	239 (2115)	303 (2682)	336 (2974)	433 (3832)
		237 rpm	236 rpm	236 rpm	234 rpm	232 rpm	232 rpm	224 rpm
Max Int.	75 (19.75)	53 (469)	153 (1353)	189 (1673)	221 (1956)	280 (2478)	312 (2761)	
		297 rpm	295 rpm	295 rpm	293 rpm	292 rpm	291 rpm	

Itahydraulic
Power Tecnology

H SERIES TECHNICAL DATA

H 315 (18/179)		312 CM³/REV 19.03 IN³/REV				Max Cont.	Max Int.
Pressure	bar (psi)	30 (440)	60 (880)	70 (1030)	80 (1175)	100 (1470)	125 (1840)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification					
	8 (2.10)	116 (1027)	243 (2151)	282 (2496)	313 (2770)	388 (3434)	
		25 rpm	24 rpm	22 rpm	16 rpm	13 rpm	
	15 (3.95)	115 (1018)	243 (2151)	284 (2513)	324 (2867)	406 (3593)	503 (4452)
		47 rpm	46 rpm	45 rpm	43 rpm	41 rpm	20 rpm
	20 (5.25)	114 (1009)	242 (2142)	282 (2496)	323 (2859)	405 (3584)	505 (4469)
F		63 rpm	62 rpm	61 rpm	58 rpm	56 rpm	44 rpm
L	30 (7.90)	109 (956)	237 (2097)	277 (2451)	319 (2823)	401 (3549)	501 (4433)
O		94 rpm	93 rpm	92 rpm	90 rpm	88 rpm	77 rpm
W	35 (9.20)	105 (929)	232 (2053)	273 (2416)	314 (2779)	397 (3513)	497 (4398)
		110 rpm	109 rpm	108 rpm	106 rpm	103 rpm	93 rpm
	45 (11.9)	99 (876)	226 (2000)	268 (2372)	309 (2735)	391 (3460)	491 (4345)
		141 rpm	141 rpm	139 rpm	137 rpm	135 rpm	124 rpm
	50 (13.2)	92 (814)	218 (1929)	262 (2319)	304 (3960)	384 (3398)	486 (4301)
		157 rpm	157 rpm	155 rpm	154 rpm	151 rpm	141 rpm
Max Cont.	60 (15.85)	89 (788)	215 (1903)	258 (2283)	299 (2646)	379 (3554)	479 (4239)
		189 rpm	188 rpm	187 rpm	185 rpm	182 rpm	171 rpm
Max Int.	75 (19.75)	69 (611)	194 (1717)	237 (2097)	278 (2460)	355 (3141)	
		236 rpm	235 rpm	234 rpm	232 rpm	229 rpm	

H 400 (23/226)		387 CM³/REV 23.61 IN³/REV				Max Cont.	Max Int.
Pressure	bar (psi)	30 (44)	60 (880)	70 (1030)	80 (1175)	85 (1251)	125 (1840)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification					
	8 (2.10)	147 (140)	304 (2690)	354 (3133)			
		20 rpm	19 rpm	16 rpm			
	15 (3.95)	147 (1301)	308 (2726)	359 (3177)	408 (3611)	435 (3850)	532 (4708)
		37 rpm	36 rpm	35 rpm	33 rpm	32 rpm	25 rpm
	20 (5.25)	144 (1274)	305 (2699)	358 (3168)	406 (3602)	435 (34850)	533 (4717)
F		50 rpm	49 rpm	47 rpm	45 rpm	43 rpm	38 rpm
L	30 (7.90)	139 (1230)	302 (2664)	352 (3115)	402 (3558)	430 (3806)	530 (4691)
O		74 rpm	73 rpm	72 rpm	70 rpm	68 rpm	62 rpm
W	35 (9.20)	133 (1177)	294 (2602)	345 (3053)	396 (3505)	423 (3744)	525 (4646)
		86 rpm	86 rpm	85 rpm	82 rpm	80 rpm	75 rpm
	45 (11.9)	125 (1106)	287 (2540)	339 (3000)	389 (3443)	416 (3682)	517 (4575)
		111 rpm	111 rpm	109 rpm	106 rpm	105 rpm	100 rpm
	50 (13.2)	117 (1035)	278 (2460)	330 (2920)	282 (3381)	409 (3620)	509 (4505)
		124 rpm	124 rpm	122 rpm	120 rpm	119 rpm	113 rpm
Max Cont.	60 (15.85)	112 (991)	274 (2425)	326 (2177)	377 (3337)	404 (3575)	505 (4469)
		149 rpm	149 rpm	147 rpm	145 rpm	144 rpm	137 rpm
Max Int.	75 (19.75)	88 (779)	246 (2177)	298 (2637)	351 (3106)	376 (3328)	
		185 rpm	185 rpm	185 rpm	182 rpm	181 rpm	

Itahydraulic
Power Tecnology

S-SERIES

The -103(S) series advanced GEROLER™ gear set hydraulic motor, with spool valve flow distribution, is a compact, low noise, high efficient high torque low speed design. The GEROLER™ gear set also provides higher efficiencies at start up and during low speed conditions.

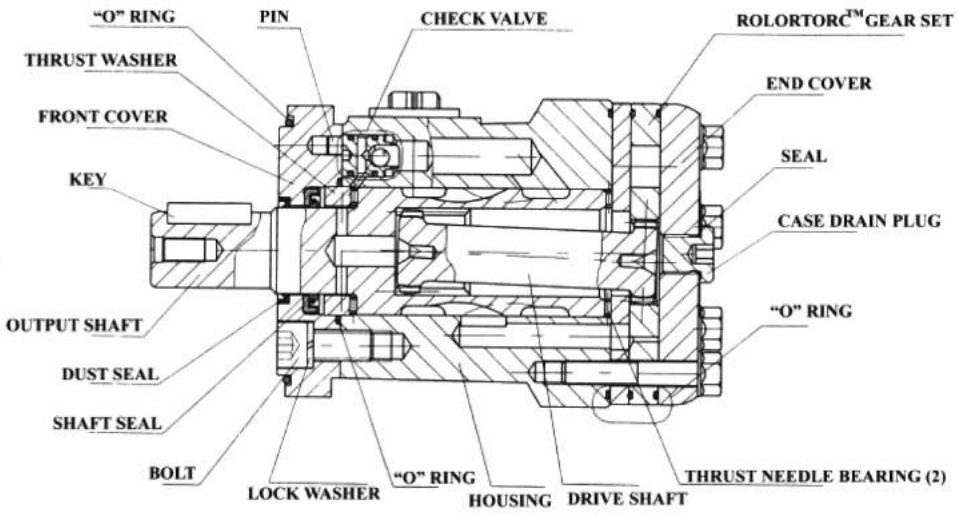
The special design of the valve linkage and high pressure capability of the shaft seal provides a long operating life and these motors can be used in either series or parallel operation.

The low weight advanced construction design is manufactured in accordance with the requirements of ISO 9001:2000 quality system.

Technical Specifications

103 S SERIES										
			DISPLACEMENT cm3/r (in3/r)								
			50 cm3 (3.0)	80 cm3 (4.9)	100 cm3 (6.1)	125 cm3 (7.6)	160 cm3 (9.6)	200 cm3 (12.2)	250 cm3 (15.4)	315 cm3 (19.2)	370 cm3 (22.6)
		Char-Lynn reference	*59 cm3 (3.6)*	*74 cm3 (4.5)*	*97 cm3 (5.9)*	*120 cm3 (7.3)*	*159 cm3 (9.7)*	*185 cm3 (11.3)*	*231 cm3 (14.1)*	*293 cm3 (17.9)*	*370 cm3 (22.6)*
MOUNTING	**Shafts**	**PORTS**									
2 BOLT FLANGE MOUNT	1" STRAIGHT WOODRUFF KEY	7/8" -14 O-RING	1031537	1031034	1031035	1031538	1031036	1031037	1031038	1031039	1031040
		1/2" NPTF O-RING	1031540	1031026	1031027	1031541	1031028	1031029	1031030	1031031	1031032
		MANIFOLD	1031543	1031042	1031043	1031544	1031044	1031045	1031046	1031047	1031048
	1" SAE 6B SPLINED	7/8" -14 O-RING	1031552	1031082	1031083	1031553	1031084	1031085	1031086	1031087	1031088
		1/2" NPTF O-RING	1031555	1031074	1031075	1031556	1031076	1031077	1031078	1031079	1031080
4 BOLT FLANGE MOUNT	1" STRAIGHT WOODRUFF KEY	7/8" -14 O-RING	1031570	1031010	1031011	1031571	1031012	1031013	1031014	1031015	1031016
		1/2" NPTF O-RING	1031573	1031002	1031003	1031574	1031004	1031005	1031006	1031007	1031008
	1" SAE 6B SPLINED	7/8" -14 O-RING	1031579	1031058	1031059	1031580	1031060	1031061	1031062	1031063	1031064
		1/2" NPTF O-RING	1031582	1031050	1031051	1031583	1031052	1031053	1031054	1031055	1031056
4 BOLT MAGNETO MOUNT	1" STRAIGHT WOODRUFF KEY	7/8" -14 O-RING	-	1032725	1033195	1033196	1033197	1031665	1033198	1033199	-
	1" SAE 6B SPLINED	7/8" -14 O-RING	-	-	1032711	-	1033176	1032750	1031652	1031653	-
Max Torque (in-lbs)	Continuous		884	1,680	2,123	2,582	3,210	3,166	3,113	3,184	3,714
	Intermittent		1,114	1,946	2,476	3,007	3,803	3,962	4,157	4,157	4,847
Max Pressure (PSI)	Continuous		2,031	2,539	2,539	2,539	2,394	1,886	1,596	1,233	1,233
	Intermittent		2,539	2,901	2,901	2,901	2,901	2,539	2,031	1,668	1,668
Max Flow (GPM)	Continuous		11	16	16	16	16	16	16	16	16
	Intermittent		13	20	20	20	20	20	20	20	20
Max RPM	Continuous		755	750	600	475	375	300	240	190	160
	Intermittent		970	940	750	600	470	375	300	240	200
Weight (LBS)			15	15	15	16	17	18	19	20	21

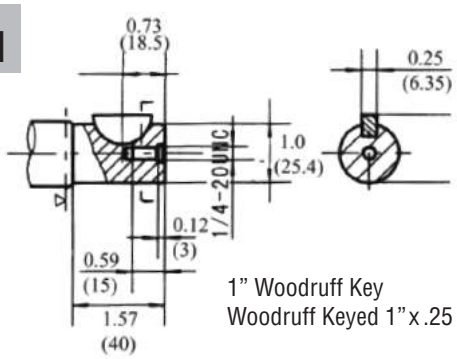
Continuous = maximum of continuous operation
Intermittent = maximum operating range for 6 seconds per minute



Itahydraulic
Power Tecnology

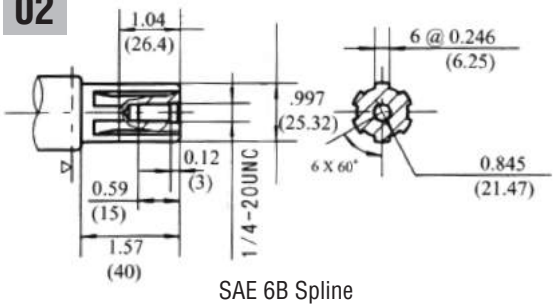
S-SERIES SHAFT DATA

01



1" Woodruff Key
Woodruff Keyed 1"x .25

02



SAE 6B Spline

S SERIES MODEL CODE

M0S - 50 - A - 01 - A - 0 - 1

S SERIES-103

FRAME SIZE (IN3/REV)
50 (3.05)
80 (4.92)
100 (6.15)
125 (7.63)
160 (9.60)
200 (12.16)
250 (15.38)
315 (19.20)
375 (22.60)

MOUNTING FLANGE TYPE
A - 2 BOLT SAE-A
B - 4 BOLT Square Mount
K - 4 BOLT Magneto

DRIVE SHAFT
01 - 1" Woodruff Key
02 - SAE 6B Spline

PORT SIZE
A - 7/8 -14 SAE
B - 1/2 NPTF
C - Manifold

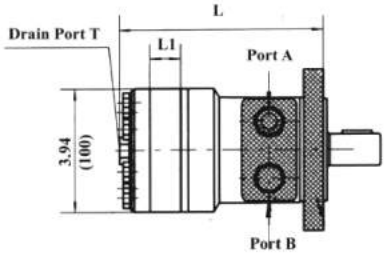
SPECIAL OPTIONS
0 - None
01 - Reverse Rotation
02 - Flange Rotated 90°
AA - Free Running*
AC - Viton Shaft Seal
DS - High Pressure Shaft Seal

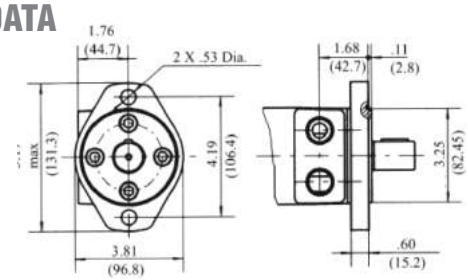
0 - No Paint
1 - Black
NP - Nickel Plate

Additional flange and drive shaft options available please consult factory

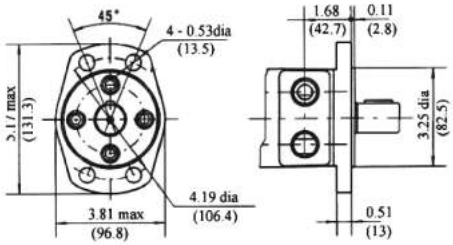
* Available on selected models

S SERIES INSTALLATION DATA



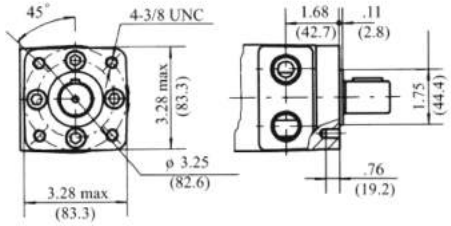


A- SAE -"A" 2 BOLT

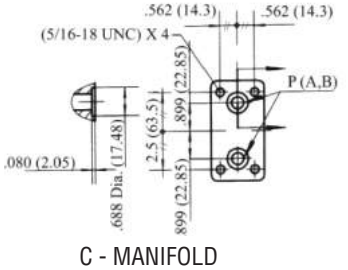


K - MAGNETO

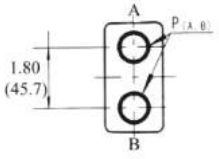
MODEL -103 (S)	L		L1	
	inches	mm	inches	mm
S 50	5.67	144	.39	10
S 80	5.90	150	.63	16
S 100	6.06	154	.79	20
S 125	6.26	159	.98	25
S 160	6.51	165.5	1.24	31.5
S 200	6.85	174	1.57	40
S 250	7.24	184	1.97	50
S 315	7.72	196	2.44	62
S 375	8.19	208	2.91	74



B - 4 BOLT SQUARE



C - MANIFOLD



PORT SIZES	A	B
P (A,B)	7/8-14 SAE	1/2-14 NPTF
T	7/16-20 SAE	7/16-20 SAa

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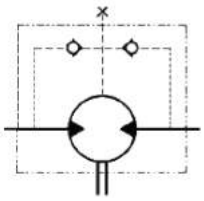
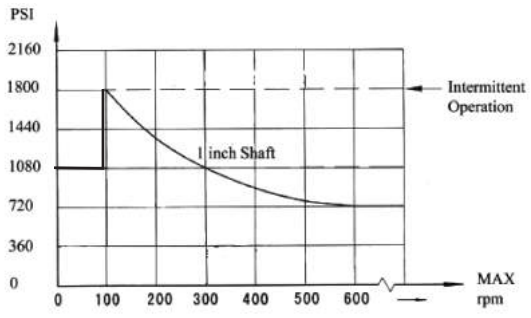
S SERIES TECHNICAL DATA

SHAFT SEAL RATED PRESSURE





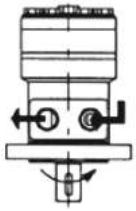
CASE DRAIN

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the drain line is used the pressure exerted on the shaft seal is equal to the return line pressure.

SHAFT ROTATION DIRECTION

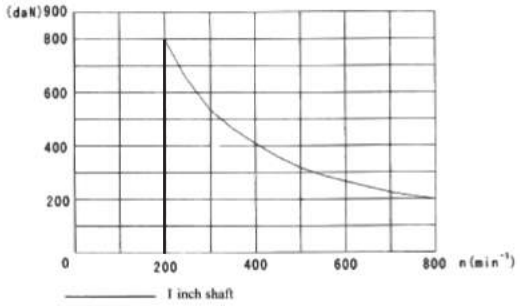
STANDARD ROTATION VIEWED FROM SHAFT END

Port A pressurized = CW rotation
Port B pressurized = CCW rotation

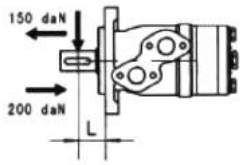


RADIAL FORCES

Status of the shaft's radial force



$$F_r = \frac{800}{n} \cdot \frac{2500}{95+L} \text{ daN}$$



F_r =Radial Force (daN)
L =Distance (mm)
n =Speed (rpm)
Round-flange L=30mm
Square-flange L=24mm

S 50		51.3 Cm³/Rev 3.13 in³/Rev					Max Cont.	Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	160 (2355)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	5 (1.32)	35 (310)	45 (398)	61 (540)	67 (593)	77 (681)	88 (779)		
		95 rpm	84 rpm	76 rpm	73 rpm	69 rpm	46 rpm		
	10 (2.65)	36 (316)	46 (407)	62 (549)	69 (611)	80 (708)	95 (841)	108 (956)	120 (1062)
		184 rpm	176 rpm	165 rpm	162 rpm	150 rpm	130 rpm	111 rpm	84 rpm
	15 (3.95)	35 (310)	49 (434)	63 (558)	73 (646)	88 (779)	100 (885)	109 (965)	123 (1089)
		283 rpm	277 rpm	269 rpm	261 rpm	250 rpm	230 rpm	211 rpm	185 rpm
	20 (5.26)	34 (301)	47 (416)	61 (540)	69 (611)	83 (735)	96 (850)	109 (965)	126 (1115)
		377 rpm	375 rpm	365 rpm	361 rpm	346 rpm	330 rpm	308 rpm	276 rpm
	25 (6.60)	34 (301)	45 (398)	61 (540)	69 (611)	81 (717)	96 (850)	109 (965	126 (1115)
		476 rpm	468 rpm	460 rpm	453 rpm	438 rpm	423 rpm	395 rpm	361 rpm
	30 (7.90)	33 (292)	44 (389)	60 (531)	67 (593)	80 (708)	95 (841)	108 (956)	126 (1115)
		576 rpm	569 rpm	561 rpm	554 rpm	542 rpm	531 rpm	500 rpm	465 rpm
	35 (9.20)	31 (274)	42 (372)	59 (522)	66 (584)	80 (708)	93 (823)	107 (947)	124 (1097)
		669 rpm	665 rpm	657 rpm	654 rpm	638 rpm	623 rpm	598 rpm	561 rpm
Max Cont.	40 (10.50)	30 (266)	41 (363)	58 (513)	66 (584)	79 (699)	92 (814)	106 (938)	122 (1080)
		760 rpm	758 rpm	753 rpm	750 rpm	738 rpm	727 rpm	700 rpm	670 rpm
Max Int.	45 (11.85)	29.5 (281)	40 (354)	57 (504)	65 (575)	78 (690)	90 (797)	105 (929)	121 (1071)
		856 rpm	856 rpm	850 rpm	845 rpm	835 rpm	815 rpm	799 rpm	780 rpm

S 80		80.6 Cm³/Rev 4.9 in³/Rev					Max Cont.	Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	160 (2355)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	10 (2.65)	55 (487)	77 (681)	98 (867)	107 (947)	130 (1151)	149 (1319)	170 (1505)	180 (1593)
		115 rpm	109 rpm	106 rpm	101 rpm	91 rpm	75 rpm	53 rpm	45 rpm
	20 (5.25)	50 (443)	81.6 (722)	105 (938)	118 (1044)	132 (1168)	160 (1416)	178 (1575)	189 (1673)
		239 rpm	235 rpm	227 rpm	224 rpm	209 rpm	196 rpm	172 rpm	160 rpm
	30 (7.90)	48 (425)	74 (655)	97 (858)	114 (1009)	131 (1159)	150 (1328)	179 (1584)	190 (1682)
		364 rpm	360 rpm	357 rpm	345 rpm	332 rpm	321 rpm	300 rpm	284 rpm
	40 (10.50)	45 (398)	71 (628)	95 (841)	105 (929)	128 (1133)	149 (1319)	177 (1566)	188 (1664)
		488 rpm	483 rpm	475 rpm	472 rpm	460 rpm	447 rpm	420 rpm	408 rpm
	50 (13.15)	42 (372)	70 (620)	90 (797)	98 (867)	125 (1106)	147 (1301)	171 (1513)	187 (1655)
		619 rpm	615 rpm	607 rpm	598 rpm	593 rpm	568 rpm	547 rpm	535 rpm
	60 (15.80)	38 (336)	63 (558)	85 (752)	95 (841)	118 (1044)	142 (1257)	169 (1496)	185 (1637)
		740 rpm	725 rpm	721 rpm	715 rpm	707 rpm	688 rpm	667 rpm	657 rpm
Max Cont.	70 (18.40)	36 (319)	58 (513)	80 (708)	89 (788)	112 (991)	139 (1230)	164 (1451)	179 (1584)
		860 rpm	853 rpm	839 rpm	837 rpm	823 rpm	811 rpm	790 rpm	776 rpm
Max Int.	75 (19.75)	29 (257)	56 (496)	77 (681)	85 (752)	110 (974)	133 (1177)	161 (1425)	177 (1566)
		925 rpm	915 rpm	910 rpm	899 rpm	888 rpm	871 rpm	853 rpm	837 rpm

Itahydraulic
Power Tecnology

S SERIES TECHNICAL DATA

S 100		100.8 Cm³/Rev 6.15 in³/Rev				Max Cont.		Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	160 (2355)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	10 (2.65)	70 (620)	100 (885)	122 (1080)	138 (1221)	159 (1407)	182 (1611)	210 (1859)	222 (1965)
		99 rpm	95 rpm	87 rpm	84 rpm	74 rpm	63 rpm	52 rpm	44 rpm
	20 (5.25)	68 (602)	95 (841)	123 (1089)	143 (1266)	165 (1460)	200 (1770)	221 (1956)	238 (2106)
		199 rpm	194 rpm	188 rpm	182 rpm	175 rpm	162 rpm	150 rpm	138 rpm
	30 (7.90)	62 (547)	94 (832)	121 (1071)	140 (1239)	164 (1451)	194 (1717)	220 (1947)	240 (2124)
		299 rpm	294 rpm	288 rpm	284 rpm	278 rpm	263 rpm	249 rpm	236 rpm
	40 (10.50)	59 (522)	88 (779)	119 (1053)	134 (1186)	161 (1425)	192 (1699)	218 (1929)	238 (2106)
		400 rpm	398 rpm	387 rpm	385 rpm	380 rpm	366 rpm	350 rpm	336 rpm
	50 (13.15)	55 (487)	83 (735)	117 (1035)	125 (1106)	157 (1389)	185 (1637)	217 (1920)	235 (2080)
		498 rpm	496 rpm	488 rpm	484 rpm	475 rpm	464 rpm	450 rpm	436 rpm
	60 (15.80)	48 (425)	79 (699)	110 (974)	119 (1053)	152 (1345)	180 (1593)	214 (1894)	233 (2062)
		599 rpm	595 rpm	587 rpm	585 rpm	579 rpm	569 rpm	552 rpm	538 rpm
Max Cont.	70 (18.40)	43 (381)	70 (620)	100 (885)	112 (991)	142 (1257)	170 (1505)	201 (1789)	229 (2027)
		699 rpm	693 rpm	687 rpm	683 rpm	679 rpm	668 rpm	648 rpm	636 rpm
Max Int.	75 (19.75)	39 (345)	63 (558)	97 (858)	105 (929)	140 (1239)	167 (1478)	197 (1743)	227 (2009)
		748 rpm	741 rpm	737 rpm	735 rpm	720 rpm	713 rpm	697 rpm	686 rpm

S 125		124.9 Cm³/Rev 7.63 in³/Rev				Max Cont.		Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	160 (2355)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	10 (2.65)	90 (797)	122 (1080)	160 (1416)	173 (1531)	205 (1814)	237 (2097)	258 (2283)	270 (2390)
		73 rpm	71 rpm	66 rpm	63 rpm	55 rpm	42 rpm	23 rpm	14 rpm
	20 (5.25)	85 (752)	118 (1044)	159 (1407)	172 (1522)	208 (1841)	250 (2213)	278 (2460)	292 (2584)
		154 rpm	152 rpm	150 rpm	145 rpm	138 rpm	123 rpm	109 rpm	91 rpm
	30 (7.90)	82 (726)	107 (947)	158 (1398)	164 (1451)	206 (1823)	241 (2133)	277 (2451)	291 (2575)
		237 rpm	236 rpm	233 rpm	226 rpm	219 rpm	207 rpm	192 rpm	170 rpm
	40 (10.50)	79 (699)	105 (929)	150 (1320)	161 (1425)	204 (1895)	238 (2106)	275 (2434)	289 (2558)
		315 rpm	313 rpm	309 rpm	307 rpm	302 rpm	297 rpm	272 rpm	254 rpm
	50 (13.15)	75 (664)	96 (850)	145 (1283)	160 (1416)	198 (1752)	236 (2089)	262 (2319)	282 (2496)
		398 rpm	397 rpm	395 rpm	391 rpm	381 rpm	368 rpm	353 rpm	337 rpm
	60 (15.80)	62 (549)	95 (841)	139 (1230)	158 (1938)	183 (1389)	222 (1965)	254 (2248)	279 (2469)
		475 rpm	473 rpm	471 rpm	470 rpm	463 rpm	450 rpm	427 rpm	416 rpm
Max Cont.	70 (18.40)	59 (522)	83 (735)	125 (1106)	150 (1328)	178 (1575)	212 (1876)	250 (2213)	262 (2319)
		554 rpm	553 rpm	551 rpm	550 rpm	546 rpm	538 rpm	514 rpm	500 rpm
Max Int.	75 (19.75)	56 (496)	80 (708)	122 (1080)	145 (1283)	172 (1522)	205 (1814)	245 (2168)	261 (2310)
		598 rpm	597 rpm	593 rpm	590 rpm	586 rpm	577 rpm	551 rpm	537 rpm

S 160		157.2 Cm³/Rev 9.60 in³/Rev				Max Cont.		Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	160 (2355)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	10 (2.65)	115 (1018)	160 (14160	203 (1797)	220 (1947)	260 (2301)	300 (2655)	340 (3009)	363 (3204)
		58 rpm	55 rpm	52 rpm	50 rpm	44 rpm	38 rpm	34 rpm	26 rpm
	20 (5.25)	114 (1009)	160 (1416)	205 (1814)	230 (2036)	265 (2345)	320 (2832)	355 (3142)	380 (3363)
		119 rpm	115 rpm	111 rpm	108 rpm	103 rpm	95 rpm	84 rpm	76 rpm
	30 (7.90)	105 (929)	158 (1398)	202 (1788)	221 (1956)	261 (2310)	305 (2699)	344 (3044)	378 (3345)
		184 rpm	181 rpm	177 rpm	172 rpm	165 rpm	153 rpm	134 rpm	130 rpm
	40 (10.50)	100 (885)	145 (1283)	196 (1735)	218 (1929)	257 (2274)	299 (2646)	340 (3009)	374 (3310)
		246 rpm	244 rpm	239 rpm	237 rpm	230 rpm	218 rpm	199 rpm	184 rpm
	50 (13.15)	90 (797)	140 (1239)	190 (1682)	209 (1850)	250 (2213)	295 (2611)	336 (2974)	366 (3239)
		307 rpm	305 rpm	302 rpm	300 rpm	292 rpm	280 rpm	262 rpm	244 rpm
	60 (15.80)	84 (743)	136 (1204)	180 (1593)	199 (1761)	240 (2124)	286 (2531)	330 (2921)	360 (3186)
		370 rpm	368 rpm	364 rpm	362 rpm	355 rpm	342 rpm	334 rpm	304 rpm
Max Cont.	70 (18.40)	65 (575)	120 (1062)	164 (1451)	180 (1593)	223 (1974)	280 (2478)	320 (2832)	350 (3098)
		435 rpm	434 rpm	430 rpm	427 rpm	416 rpm	405 rpm	335 rpm	366 rpm
Max Int.	75 (19.75)	59 (522)	116 (1026)	158 (1398)	175 (1549)	220 (1947)	272 (2407)	314 (2779)	342 (3027)
		465 rpm	462 rpm	458 rpm	456 rpm	447 rpm	433 rpm	416 rpm	395 rpm

Itahydraulic
Power Tecnology

S SERIES TECHNICAL DATA

S 200		199.2 Cm³/Rev 12.16 in³/Rev				Max Cont.	Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	10 (2.65)	148 (1310)	205 (1814)	255 (2257)	290 (2567)	327 (2894)	370 (3275)	442 (3912)
		49 rpm	47 rpm	45 rpm	43 rpm	40 rpm	30 rpm	24 rpm
	20 (5.25)	140 (1239)	202 (1788)	250 (2213)	323 (2859)	330 (2921)	411 (3637)	448 (3965)
		99 rpm	97 rpm	93 rpm	90 rpm	86 rpm	78 rpm	65 rpm
	30 (7.90)	130 (1151)	193 (1708)	241 (2133)	307 (2717)	325 (2876)	377 (3336)	445 (3938)
		149 rpm	146 rpm	140 rpm	136 rpm	131 rpm	122 rpm	105 rpm
	40 (10.50)	125 (1106)	186 (1646)	232 (2953)	305 (2699)	313 (2770)	390 (3452)	436 (3860)
		200 rpm	197 rpm	192 rpm	188 rpm	181 rpm	170 rpm	149 rpm
	50 (13.15)	120 (1062)	177 (1566)	225 (1991)	295 (2611)	305 (2699)	382 (3381)	427 (3779)
		250 rpm	247 rpm	242 rpm	238 rpm	231 rpm	218 rpm	193 rpm
	60 (15.80)	110 (974)	166 (1469)	221 (1956)	285 (25220	292 (2584)	372 (3292)	419 (3708)
		300 rpm	298 rpm	291 rpm	287 rpm	282 rpm	268 rpm	236 rpm
Max Cont.	70 (18.40)	98 (867)	150 (1328)	205 (1814)	244 (2159)	278 (2461)	331 (2929)	410 (3629)
		350 rpm	347 rpm	342 rpm	338 rpm	331 rpm	318 rpm	282 rpm
Max Int.	75 (19.75)	85 (752)	141 (1248)	199 (1761)	235 (2080)	268 (2372)	323 (2859)	400 (3540)
		375 rpm	372 rpm	366 rpm	362 rpm	357 rpm	343 rpm	310 rpm

S 250		252 Cm³/Rev 15.39 in³/Rev					Max Cont.	Max Int.	
Pressure bar (psi)		50 (376)	70 (1030)	90 (1352)	100 (1470)	120 (1766)	140 (2060)	160 (2355)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification							
FLOW	10 (2.65)	115 (1018)	180 (1593)	251 (2221)	295 (2611)	350 (3098)	380 (3363)	470 (4160)	535 (4735)
		40 rpm	38 rpm	37 rpm	35 rpm	32 rpm	30 rpm	22 rpm	16 rpm
	20 (5.25)	110 (974)	178 (1575)	252 (2230)	294 (2602)	352 (3115)	385 (3407)	470 (4160)	548 (4850)
		79 rpm	78 rpm	75 rpm	74 rpm	70 rpm	68 rpm	57 rpm	48 rpm
	30 (7.90)	100 (885)	170 (1505)	248 (2195)	285 (2522)	348 (3080)	381 (3372)	469 (4151)	545 (4823)
		120 rpm	119 rpm	117 rpm	116 rpm	110 rpm	107 rpm	95 rpm	79 rpm
	40 (10.50)	91 (805)	159 (1407)	232 (2053)	268 (2372)	332 (2938)	366 (3239)	460 (4071)	530 (4691)
		158 rpm	157 rpm	156 rpm	154 rpm	151 rpm	148 rpm	130 rpm	110 rpm
	50 (13.15)	81 (717)	148 (1310)	216 (1912)	252 (2230)	320 (2832)	352 (3115)	453 (4009)	521 (4611)
		200 rpm	198 rpm	196 rpm	195 rpm	163 rpm	160 rpm	152 rpm	147 rpm
	60 (15.80)	75 (664)	132 (1168)	201 (1769)	235 (2080)	305 (2699)	340 (3009)	433 (3832)	505 (4469)
		241 rpm	240 rpm	239 rpm	237 rpm	232 rpm	228 rpm	210 rpm	180 rpm
Max Cont.	70 (18.40)	50 (443)	117 (1035)	189 (1673)	220 (1947)	290 (2567)	320 (2832)	412 (3646)	495 (4381)
		280 rpm	279 rpm	277 rpm	276 rpm	271 rpm	268 rpm	250 rpm	215 rpm
Max Int.	75 (19.75)	42 (372)	105 (929)	180 (1593)	211 (1867)	281 (2487)	310 (2744)	405 (3584)	486 (4301)
		300 rpm	299 rpm	298 rpm	297 rpm	295 rpm	289 rpm	272 rpm	239 rpm

S 315		314.5 Cm³/Rev 19.2 in³/Rev				Max Cont.	Max Int.	
Pressure bar (psi)		30 (442)	50 (376)	65 (957)	80 (1175)	90 (1325)	130 (1914)	135 (1987)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	10 (2.65)	135 (1195)	215 (1903)	279 (2469)	343 (3036)	383 (3390)	515 (4558)	550 (4868)
		31 rpm	29 rpm	28 rpm	27 rpm	27 rpm	24 rpm	22 rpm
	20 (5.25)	133 (1177)	216 (1912)	289 (2558)	349 (3089)	380 (3363)	508 (4496)	552 (4886)
		62 rpm	61 rpm	60 rpm	58 rpm	57 rpm	52 rpm	50 rpm
	30 (7.90)	125 (1106)	205 (1814)	275 (2434)	341 (3018)	375 (3319)	494 (4372)	543 (4801)
		95 rpm	92 rpm	91 rpm	90 rpm	88 rpm	81 rpm	79 rpm
	40 (10.50)	113 (1000)	195 (1726)	267 (2363)	335 (2965)	367 (3248)	485 (4292)	526 (4655)
		123 rpm	121 rpm	120 rpm	118 rpm	117 rpm	106 rpm	104 rpm
	50 (13.15)	92 (814)	170 (1505)	253 (2239)	321 (2841)	352 (3115)	474 (4195)	511 (4522)
		155 rpm	154 rpm	152 rpm	149 rpm	147 rpm	137 rpm	133 rpm
	60 (15.80)	80 (708)	160 (1416)	231 (2040)	305 (2699)	334 (2956)	458 (4053)	492 (4354)
		190 rpm	187 rpm	193 rpm	179 rpm	176 rpm	163 rpm	157 rpm
Max Cont.	70 (18.40)	57 (504)	136 (1204)	215 (1903)	285 (2522)	320 (2832)	444 (3929)	480 (4248)
		222 rpm	220 rpm	217 rpm	212 rpm	208 rpm	192 rpm	185 rpm
Max Int.	75 (19.75)	55 (487)	124 (1097)	205 (1814)	269 (2381)	308 (2726)	427 (3779)	469 (4151)
		235 rpm	234 rpm	231 rpm	227 rpm	225 rpm	408 rpm	201 rpm

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S SERIES TECHNICAL DATA

S 375		370 Cm³/Rev 22.6 in³/Rev				Max Cont.	Max Int.	
Pressure bar (psi)		30 (442)	50 (376)	65 (957)	80 (1175)	90 (1325)	130 (1914)	135 (1987)
FLOW	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
	10 (2.65)	160 (1416)	270 (2390)	340 (3009)	420 (3717)	470 (4160)	550 (4868)	610 (5399)
		26 rpm	25 rpm	24 rpm	22 rpm	21 rpm	19 rpm	17 rpm
	20 (5.25)	159 (14070	260 (2301)	340 (3009)	410 (3629)	470 (4160)	540 (4779)	605 (5354)
		53 rpm	52 rpm	51 rpm	49 rpm	47 rpm	42 rpm	37 rpm
	30 (7.90)	150 (1328)	255 (2257)	330 (2921)	400 (3540)	450 (3983)	530 (4691)	600 (5310)
		79 rpm	78 rpm	77 rpm	75 rpm	73 rpm	67 rpm	60 rpm
	40 (10.50)	135 (1195)	240 (2124)	310 (2744)	375 (3319)	430 (3805)	520 (4602)	590 (5222)
		106 rpm	105 rpm	104 rpm	102 rpm	99 rpm	93 rpm	85 rpm
	50 (13.15)	120 (1062)	230 (2036)	295 (2511)	360 (3186)	420 (3717)	505 (4469)	570 (5045)
		134 rpm	132 rpm	131 rpm	129 rpm	126 rpm	120 rpm	110 rpm
	60 (15.80)	98 (867)	210 (1859)	275 (2434)	340 (3009)	390 (3452)	490 (4337)	550 (4868)
		159 rpm	158 rpm	157 rpm	155 rpm	153 rpm	147 rpm	135 rpm
Max Cont.	70 (18.40)	75 (664)	175 (1549)	250 (2213)	320 (2832)	370 (3275)	465 (4115)	530 (4691)
		187 rpm	186 rpm	185 rpm	183 rpm	180 rpm	175 rpm	160 rpm
Max Int.	75 (19.75)	65 (575)	160 (1416)	230 (2036)	310 (2744)	360 (3186)	450 (3983)	515 (4558)
		200 rpm	199 rpm	198 rpm	195 rpm	192 rpm	187 rpm	178 rpm

Itahydraulic
Power Tecnology

2000-SERIES

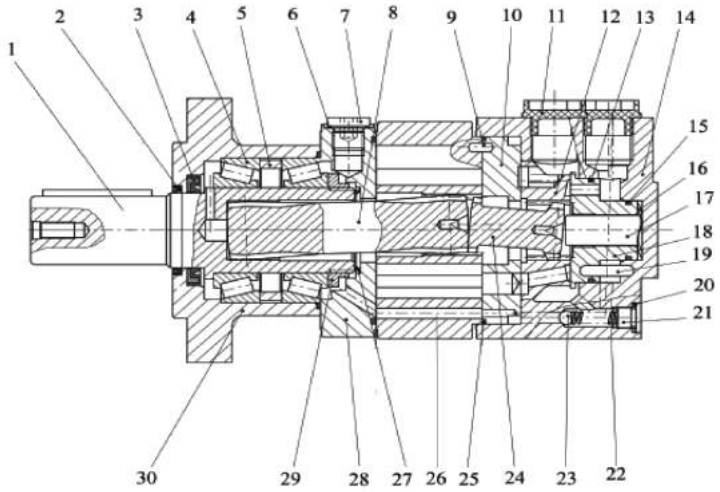
The 2000 series motor adapts the advanced Geroler™ gear set design with DISC flow distribution and high pressure. The output shaft tapered roller bearings permit high axial and radial forces offering a smooth operation during low pressure start up and high pressure operation. These low weight advanced construction design motors are manufactured in accordance with the requirements of the ISO 9001:2000 quality system.

Technical Specifications

104 2000 SERIES

			DISPLACEMENT cm3/r (in3/r)								
			80 cm3 (4.9)	100 cm3 (6.2)	125 cm3 (7.2)	160 cm3 (9.6)	200 cm3 (12.2)	250 cm3 (15.3)	315 cm3 (19.2)	394 cm3 (24.0)	475 cm3 (29.0)
		Char Lynn reference	*80 cm3 (4.9)*	*100 cm3 (6.2)*	*130 cm3 (8.0)*	*160 cm3 (9.6)*	*195 cm3 (11.9)*	*245 cm3 (14.9)*	*305 cm3 (18.7)*	*395 cm3 (24.0)*	*490 cm3 (29.8)*
MOUNTING	**SHAFTS**	**PORTS**									
2-BOLT SAE "A" FLANGE MOUNT	1" STRAIGHT W/KEY	7/8"-14 O-RING STAGGERED	1041001	1041002	1041003	1041004	1041005	1041006	1041007	1041143	-
		1 1/16"-12 O-RING 180° APART	1041037	1041038	1041039	1041040	1041041	1041042	1041043	1041044	-
	1 1/4" STRAIGHT W/KEY	7/8"-14 O-RING STAGGERED	1041022	1041023	1041024	1041025	1041026	1041027	1041028	1041228	1041420
		1 1/16"-12 O-RING 180° APART	1041061	1041062	1041063	1041064	1041065	1041066	1041067	1041068	1041421
	1 1/4" 14 TOOTH SPLINED	7/8"-14 O-RING STAGGERED	1041029	1041030	1041031	1041032	1041033	1041034	1041035	1041229	1041422
		1 1/16"-12 O-RING 180° APART	1041087	1041088	1041089	1041090	1041091	1041092	1041093	1041094	1041423
4-BOLT SQUARE FLANGE	1 1/4" 14 TOOTH SPLINED	G 1/2 (BSP)	1041376	1041377	1041378	1041379	1041380	1041381	1041382	1041383	1041660
2-BOLT SAE "B" MOUNT	1" SAE 6B SPLINE	7/8" O-RING STAGGERED	1041193	1041194	1041195	1041196	1041197	1041198	1041199	1041797	-
	7/8" 13 TOOTH		1041216	1041217	1041218	1041219	1041220	1041455	1043205	-	1043052
4-BOLT MAGNETO MOUNT	1 1/4" STRAIGHT W/KEY	7/8" O-RING STAGGERED	1041855	1041343	1041837	1041626	1041346	1041627	1041401	1041445	1041397
	1 1/4" 14 TOOTH SPLINED		1041700	1041449	1041374	1041701	1041415	1041491	1041406	1041769	1041901
BEARINGLESS		7/8" O-RING STAGGERED	1061008	1061009	1061010	1061011	1061012	1061013	1061014	1061015	1061047
Max Torque (in-Lbs)	Continuous		1,990	2,565	3,228	4,292	5,185	6,262	7,783	7,783	8,048
	Intermittent		2,211	2,830	3,538	4,776	5,704	7,128	8,490	8,490	8,490
Max Differential Pressure (PSI)	Continuous		2,576	2,576	2,576	3,045	3,045	2,900	2,900	2,320	2,030
	Intermittent		3,091	3,091	2,576	3,265	3,265	3,265	3,265	2,563	2,175
Max Flow (GPM)	Continuous		18	20	20	20	20	20	20	20	20
	Intermittent		21	24	24	24	24	24	24	24	24
Max RPM	Continuous		800	748	600	470	375	300	240	185	155
	Intermittent		990	900	720	560	450	360	280	225	185
Weight	Weight		22	22	23	24	24	26	27	29	32

Continuous = maximum of continuous operation
Intermittent = maximum operating range for 6 seconds per minute



1 Output shaft
2 Dust seal
3 Shaft seal
4 Roller bearing
5 Bearing spacer
6 Seal washer
7 Case drain plug
8 Drive link
9 Pin
10 Timing plate
11 Shipping plug
12 Distributor plate
13 "O" ring
14 Rear housing
15 "O" ring
16 Balancer spring
17 Spacer
18 Balance plate
19 Pin
20 Seal washer
21 Check valve plug
22 Check valve spring
23 Ball check (steel)
24 Distributor drive link
25 Body "O" ring
26 Rolortorc™ set
27 Oil control ring
28 Drain manifold
29 Bearing nut
30 Shaft housing

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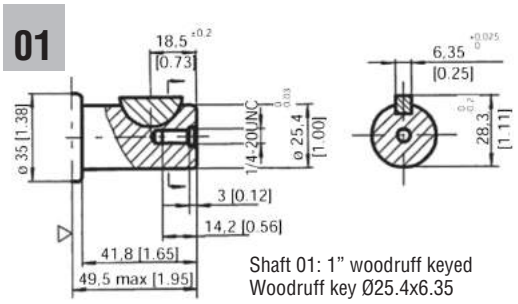
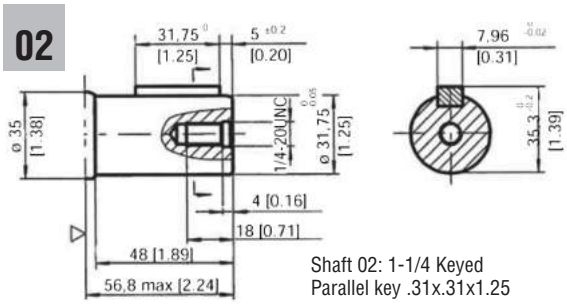
2000-SERIES SHAFT DATA

01



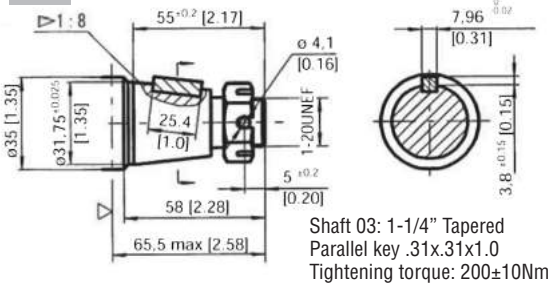
Shaft 01: 1" woodruff keyed
Woodruff key Ø25.4x6.35

02



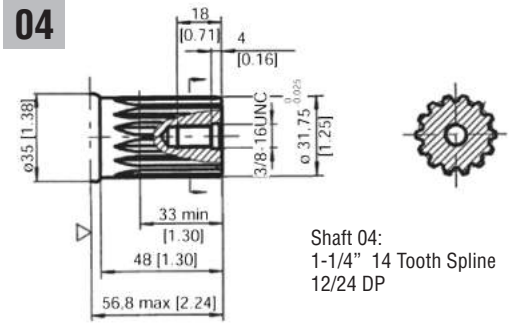
Shaft 02: 1-1/4 Keyed
Parallel key .31x.31x1.25

03



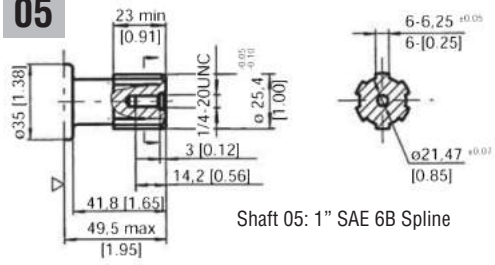
Shaft 03: 1-1/4" Tapered
Parallel key .31x.31x1.0
Tightening torque: 200±10Nm

04



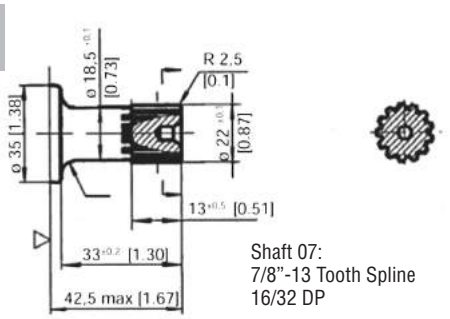
Shaft 04:
1-1/4" 14 Tooth Spline
12/24 DP

05



Shaft 05: 1" SAE 6B Spline

07



Shaft 07:
7/8"-13 Tooth Spline
16/32 DP

MODEL CODE - 2000 SERIES

M02 - 200 - AC - 01 - AG - 1 - 0

2000 SERIES (-104)

FRAME SIZE (IN3/REV)
80 (4.90)
100 (6.20)
125 (7.20)
160 (9.59)
200 (12.20)
250 (15.40)
315 (19.20)
400 (24.04)
475 (28.98)

MOUNTING FLANGE TYPE
AC - SAE -"A" 2 BOLT
AB - 4 BOLT Wheel
AF - SAE - "B" 2 BOLT
AH - 4 BOLT Square
AJ - 4 BOLT Magneto
AD - 4 BOLT Bearingless

DRIVE SHAFT
01 - 1" Woodruff Key
02 - 1-1/4" Parallel Key
03 - 1-1/4" Tappered Shaft SAE J501
04 - 1-1/4" 14 Tooth Spline
05 - 1" SAE 6B Spline
07 - 7/8" 13 Tooth 16/32 DP

PORT SIZE
AA - 7/8" -14 SAE O-Ring
AB - Manifold
AF - 1 1/16"-12 SAE O-Ring 180° Apart
AG - G-1/2 BSP
AP - All Port (7/8"-14, 1-1/16"-12, 2x3/8" UNC Thread)

SPECIAL OPTIONS
0 -None
01 - Viton Seals
03 - Free Running*
31 - Dual Cross Port Reliefs
41 - High Pressure Shaft Seal*
B - Reverse Rotation

0 - No Paint
1 - Black
NP - Nickel Plate

Additional flange and drive shaft options available please consult factory

*Available on selected models

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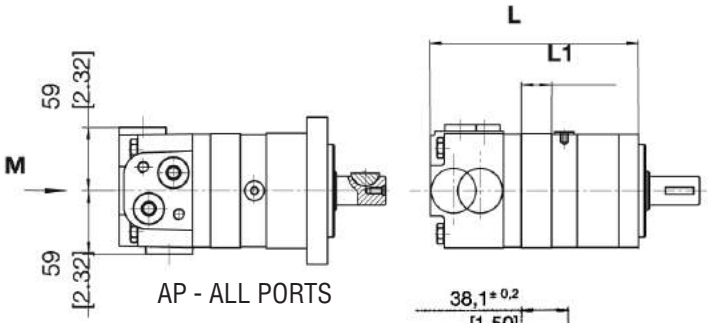
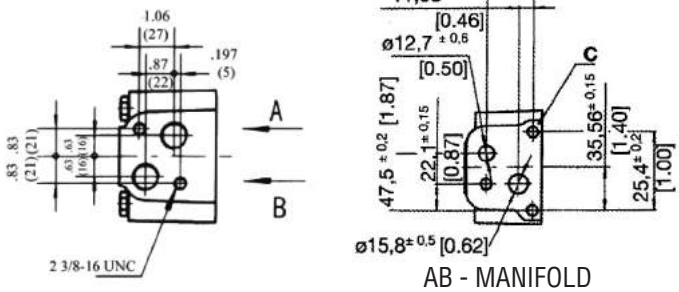
2000 SERIES INSTALLATION DATA



AP - ALL PORTS

	[INCHES]		MILLIMETERS	
MODEL	L	L1	L	L1
80	[6.93]	[0.63]	176	16
100	[7.09]	[0.79]	180	20
125	[7.28]	[0.98]	185	25
160	[7.36]	[1.06]	187	27
200	[7.64]	[1.34]	194	34
250	[7.95]	[1.65]	202	42
315	[8.43]	[2.13]	214	54
400	[9.02]	[2.72]	229	69
475	[9.57]	[3.27]	243	83

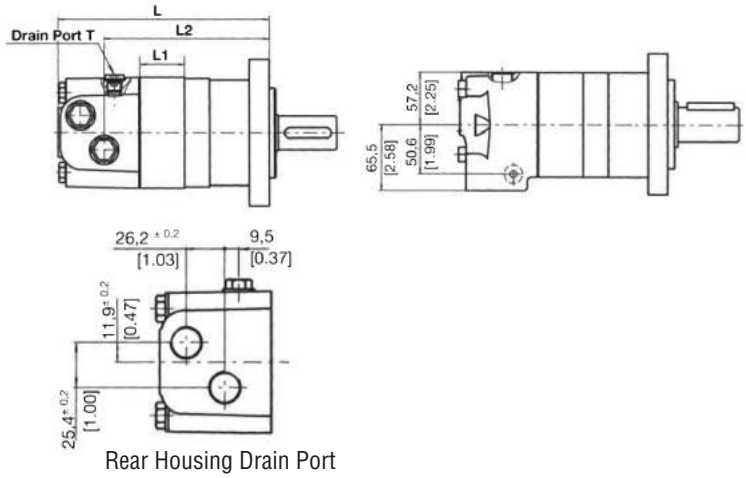


AB - MANIFOLD

PORT & DRAIN PORT ORDERING CODES

ORDER CODE	AG		Depth	AA	Depth	AF
PORTS - A AND B	G 1/2	18 mm	M22x1.5	18 mm	7/8-14 O-ring	18 mm
TANK PORT - T	G 1/4	12 mm	M14x1.5	12 mm	7/16-20 UNF	12 mm

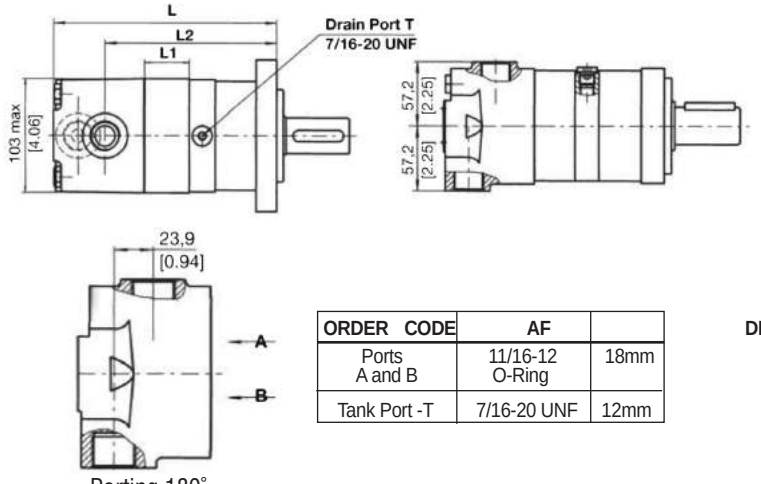
DRAIN ON REAR HOUSING



Rear Housing Drain Port

	[INCHES]			MILLIMETERS		
MODEL	L	L1	L2	L	L1	L2
80	[6.74]	[.52]	[4.85]	171	13	123.2
100	[6.89]	[.67]	[5.01]	175	17	127.2
125	[7.09]	[.87]	[5.21]	180	22	132.2
160	[7.27]	[1.09]	[5.43]	184.5	27.5	137.7
200	[7.60]	[1.39]	[5.72]	193	35.1	145.2
250	[8.07]	[1.85]	[6.19]	205	47	157.2
315	[8.55]	[2.33]	[6.67]	217	59	169.2
375	[9.02]	[2.80]	[7.14]	229	71	181.2

180° APART PORT MOUNTING DATA



Porting 180°

ORDER CODE	AF	
Ports A and B	11/16-12 O-Ring	18mm
Tank Port -T	7/16-20 UNF	12mm

DEPTH

	[INCHES]			MILLIMETERS		
MODEL	L	L1	L2	L	L1	L2
80	[6.81]	[.51]	[4.95]	173	13	125.7
100	[6.97]	[.67]	[5.11]	177	17	129.7
125	[7.17]	[.87]	[5.30]	182	22	134.7
160	[7.38]	[1.08]	[5.52]	187.5	27.5	140.2
200	[7.68]	[1.38]	[5.81]	195	35.1	147.7
250	[8.15]	[1.85]	[6.29]	207	47	159.7
315	[8.62]	[2.32]	[6.76]	219	59	171.7
375	[9.09]	[2.80]	[7.23]	231	71	183.7

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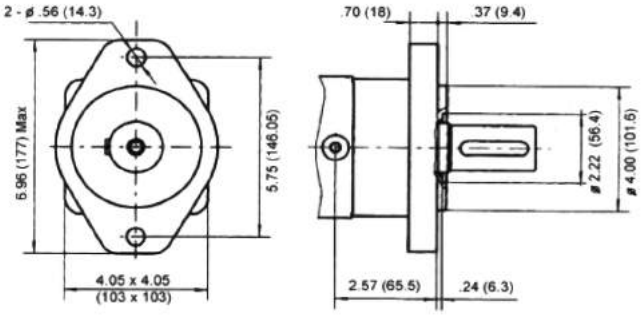
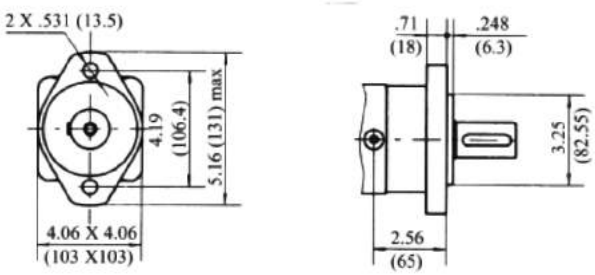
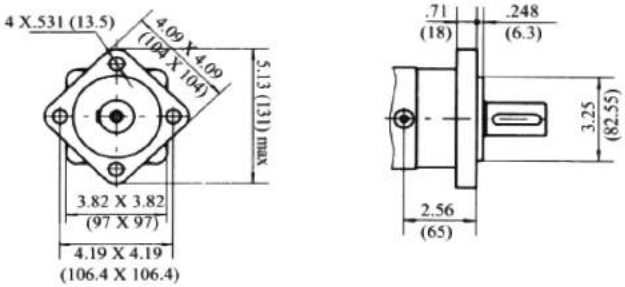
2000 SERIES INSTALLATION DATA



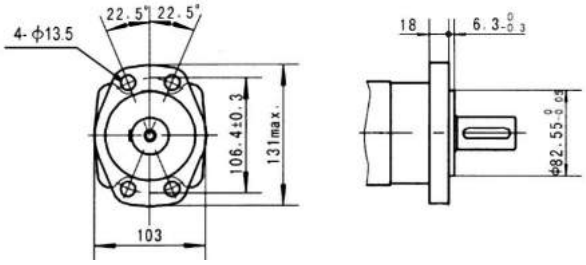
AF - SAE "B" 2 BOLT



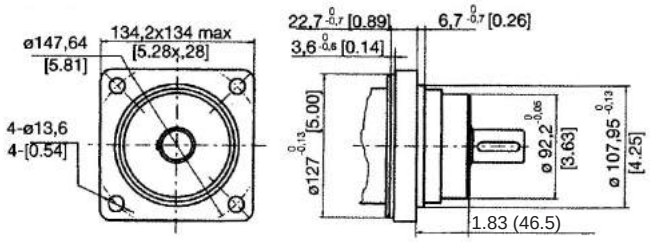
AC - SAE "A" 2 BOLT



AH - 4 BOLT SQUARE



AJ - 4 BOLT MAGNETO



AB - 4 BOLT WHEEL MOUNT

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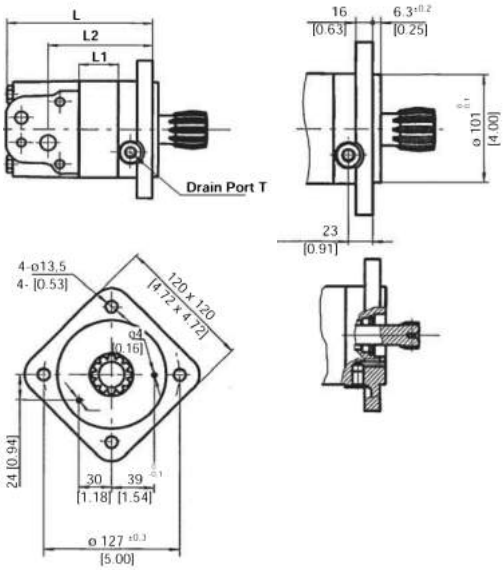
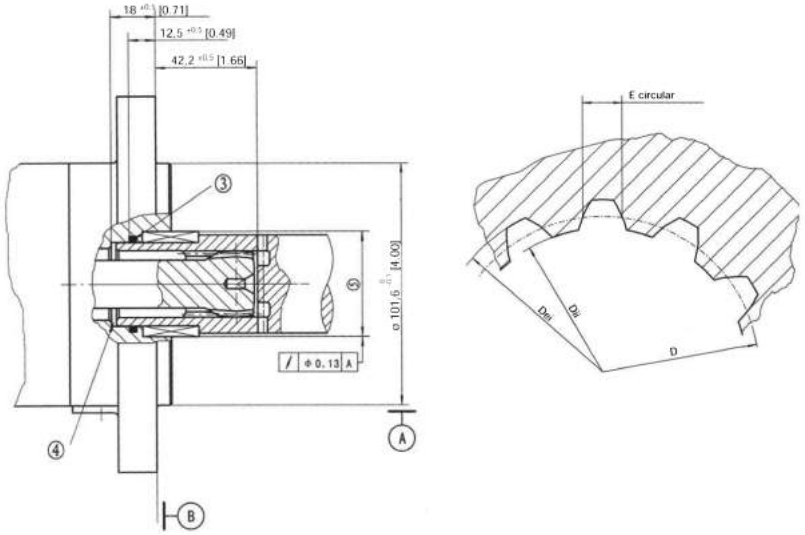
2000 SERIES BEARINGLESS MOUNTING DATA



	[INCHES]			MILLIMETERS		
MODEL	L	L1	L2	L	L1	L2
80	[5.28]	[0.52]	[3.39]	134	13	86
100	[5.44]	[0.67]	[3.55]	138	17	90
125	[5.63]	[0.87]	[3.74]	143	22	95
160	[5.85]	[12.90]	[3.96]	148.5	27.5	100.5
200	[6.15]	[1.39]	[4.26]	156	35.1	108
250	[6.62]	[1.85]	[4.73]	168	47	120
315	[7.09]	[2.33]	[5.20]	180	59	132
375	[7.56]	[2.80]	[5.67]	192	71	144

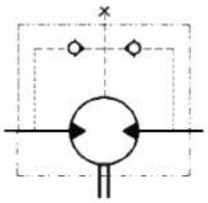
Internal Spline Data for 2000-Series Bearingless Motor

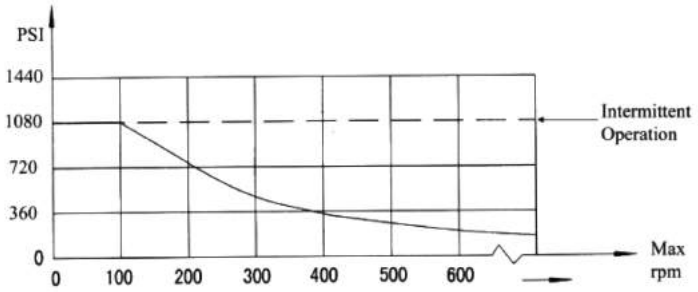


FILLET ROOT SIDE FIT		mm
NUMBER OF TEETH	Z	12
DIAMETRAL PITCH	DP	12/24
PRESSURE ANGLE	D	30°
PITCH DIA.	D	ø 25.4
MAJOR DIA.	Dei	ø 27.6 $_{0}^{+0.14}$
MINOR DIA.	Dii	ø 23.1 $_{0}^{+0.12}$
SPACE WIDTH CIRCULAR	E	4.282 $_{\pm 0.036}$
DIMENSION BETWEEN TWO PINS (Ø4)	Me	19.02-19.19

1. Internal spline in mating part to be as follows: Material to be ASTM A304, 8620H. Carborize to a hardness of 58-62 HRC with case depth (to 50HRC) of 0.75-1 [.030-.040] (dimensions apply after heat treat).
2. Mating part to have critical dimensions as shown. Oil holes must be provided and open for proper oil circulation.
3. Some means of maintaning clearance between shaft and mounting flange must be provided
4. Seal to be furnished with motor for proper oil circulation thru splines
5. Counterbore designed to adapt to a standard sleeve bearing 35.040 [1.3784-1.3795] ID by 44.040-44.070 [1.7339-1.7350] O.D. (Oilite Bronze sleeve bearing AAM3544-22)

SHAFT SEAL RATED PRESSURE





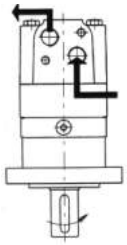
CASE DRAIN

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the drain line is used the pressure exerted on the shaft seal is equal to the return line pressure.

SHAFT ROTATION DIRECTION

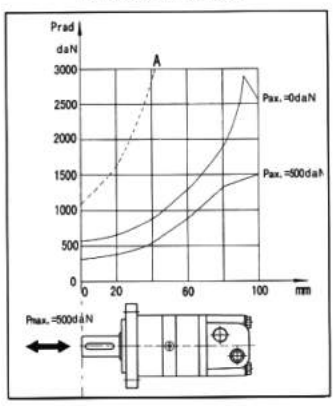
STANDARD ROTATION VIEWED FROM SHAFT END

Port A pressurized = CW rotation
Port B pressurized = CCW rotation



RADIAL FORCES

Curve “A” shows max radial shaft load. Any shaft loads exceeding these values quoted in the curve will involve risk of breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.



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2000 SERIES TECHNICAL DATA

2000 SERIES 80		80.6 Cm³/Rev 4.92 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	35 (310)	80 (708)	120 (1062)	158 (1398)	195 (1726)	235 (2080)	249 (2204)
		180 rpm	174 rpm	168 rpm	164 rpm	158 rpm	151 rpm	143 rpm
	30 (7.90)	35 (310)	80 (708)	120 (1062)	158 (1398)	195 (1726)	240 (2124)	260 (2301)
		362 rpm	352 rpm	346 rpm	338 rpm	330 rpm	322 rpm	310 rpm
	40 (10.50)	35 (310)	79 (699)	119 (1053)	155 (1372)	193 (1708)	234 (2071)	250 (2213)
		482 rpm	473 rpm	464 rpm	453 rpm	444 rpm	434 rpm	415 rpm
	50 (13.20)	30 (266)	77 (681)	117 (1035)	153 (1354)	192 (1699)	232 (2053)	248 (2195)
		602 rpm	594 rpm	587 rpm	569 rpm	560 rpm	551 rpm	522 rpm
	60 (15.85)	28 (248)	77 (681)	117 (1035)	153 (1354)	192 (1699)	232 (2053)	247 (2186)
		724 rpm	713 rpm	707 rpm	683 rpm	673 rpm	664 rpm	629 rpm
Max Cont.	75 (19.75)	25 (221)	75 (664)	114 (1009)	152 (1345)	190 (1682)	230 (2036)	245 (2168)
		840 rpm	832 rpm	817 rpm	796 rpm	786 rpm	777 rpm	737 rpm
Max Int.	90 (23.85)	24 (217)	73 (646)	110 (974)	150 (1328)	185 (1637)	225 (1991)	240 (2124)
		900 rpm	893 rpm	872 rpm	853 rpm	843 rpm	834 rpm	792 rpm

2000 SERIES 100		100.8 Cm³/Rev 6.15 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	48 (425)	95 (841)	150 (1328)	200 (1770)	250 (2213)	289 (2558)	310 (2744)
		146 rpm	144 rpm	139 rpm	135 rpm	130 rpm	120 rpm	105 rpm
	30 (7.90)	45 (398)	94 (832)	146 (1292)	198 (1752)	250 (2213)	295 (2611)	317 (2805)
		291 rpm	289 rpm	278 rpm	274 rpm	269 rpm	258 rpm	242 rpm
	40 (10.50)	43 (381)	89 (788)	142 (1492)	196 (1735)	248 (2195)	293 (2593)	316 (2797)
		387 rpm	384 rpm	374 rpm	359 rpm	350 rpm	335 rpm	320 rpm
	50 (13.20)	40 (354)	88 (779)	135 (1195)	194 (1717)	247 (2186)	292 (2584)	315 (2788)
		486 rpm	483 rpm	473 rpm	462 rpm	450 rpm	430 rpm	420 rpm
	60 (15.85)	37 (327)	88 (779)	132 (1168)	185 (1657)	244 (2159)	289 (2558)	312 (2761)
		588 rpm	584 rpm	574 rpm	562 rpm	550 rpm	538 rpm	520 rpm
Max Cont.	75 (19.75)	35 (310)	80 (708)	130 (1151)	180 (1593)	240 (2124)	286 (2531)	310 (2744)
		740 rpm	735 rpm	720 rpm	705 rpm	696 rpm	676 rpm	653 rpm
Max Int.	90 (23.85)	30 (266)	75 (664)	124 (1097)	170 (1505)	236 (2089)	277 (24510	303 (2682)
		850 rpm	840 rpm	810 rpm	787 rpm	770 rpm	750 rpm	747 rpm

2000 SERIES 125		125 Cm³/Rev 7.65 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	55 (487)	120 (1062)	176 (1558)	245 (2168)	309 (2735)	349 (3089)	375 (3319)
		112 rpm	110 rpm	103 rpm	96 rpm	93 rpm	90 rpm	84 rpm
	30 (7.90)	55 (487)	120 (1062)	175 (1549)	250 (2213)	324 (2867)	375 (3319)	408 (3611)
		222 rpm	220 rpm	217 rpm	208 rpm	200 rpm	199 rpm	190 rpm
	40 (10.50)	55 (487)	120 (1062)	175 (1549)	250 (2213)	324 (2867)	370 (3275)	408 (3611)
		302 rpm	298 rpm	292 rpm	284 rpm	276 rpm	268 rpm	260 rpm
	50 (13.20)	50 (443)	115 (443)	176 (1558)	248 (2195)	320 (3832)	370 (3275)	406 (3593)
		379 rpm	373 rpm	368 rpm	363 rpm	350 rpm	339 rpm	328 rpm
	60 (15.85)	45 (398)	113 (1000)	171 (1513)	245 (2168)	324 (2867)	368 (3257)	406 (3593)
		456 rpm	448 rpm	443 rpm	439 rpm	425 rpm	406 rpm	393 rpm
Max Cont.	75 (19.75)	45 (398)	110 (974)	167 (1478)	240 (2724)	314 (2779)	370 (3275)	401 (3549)
		570 rpm	563 rpm	555 rpm	546 rpm	533 rpm	515 rpm	503 rpm
Max Int.	90 (23.85)	40 (354)	105 (938)	162 (1434)	237 (2097)	309 (2735)	365 (3230)	398 (3522)
		685 rpm	676 rpm	670 rpm	659 rpm	644 rpm	625 rpm	610 rpm

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2000 SERIES TECHNICAL DATA

2000 SERIES 160		154 Cm³/Rev 9.39 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	70 (620)	142 (1257)	215 (1904)	298 (2639)	372 (3295)	435 (3852)	476 (4216)
		93 rpm	91 rpm	89 rpm	85 rpm	80 rpm	76 rpm	58 rpm
	30 (7.90)	73 (646)	151 (1337)	225 (1992)	312 (2763)	382 (3383)	456 (4038)	492 (4357)
		189 rpm	187 rpm	181 rpm	176 rpm	170 rpm	162 rpm	153 rpm
	40 (10.50)	75 (664)	152 (1346)	228 (2019)	314 (2781)	383 (3392)	454 (4021)	488 (4322)
		252 rpm	250 rpm	246 rpm	239 rpm	234 rpm	228 rpm	212 rpm
	50 (13.20)	70 (620)	148 (1310)	225 (1992)	305 (2701)	372 (3294)	445 (3941)	480 (4251)
		313 rpm	310 rpm	306 rpm	298 rpm	293 rpm	285 rpm	272 rpm
	60 (15.85)	68 (575)	143 (1266)	218 (1930)	296 (2621)	370 (3277)	442 (3914)	480 (4251)
		378 rpm	376 rpm	370 rpm	362 rpm	353 rpm	346 rpm	332 rpm
Max Cont.	75 (19.75)	62 (549)	140 (1239)	211 (1868)	291 (2577)	365 (3232)	439 (3888)	475 (4207)
		475 rpm	469 rpm	461 rpm	450 rpm	441 rpm	432 rpm	414 rpm
Max Int.	90 (23.85)	59 (522)	131 (1160)	202 (1789)	286 (2533)	337 (2984)	425 (3764)	460 (4074)
		567 rpm	561 rpm	554 rpm	543 rpm	532 rpm	520 rpm	509 rpm

2000 SERIES 200		200 Cm³/Rev 12.2 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	87 (771)	179 (1585)	273 (2737)	371 (3286)	471 (4171)	562 (4977)	610 (5403)
		74 rpm	73 rpm	71 rpm	68 rpm	64 rpm	60 rpm	48 rpm
	30 (7.90)	91 (806)	190 (1682)	288 (2550)	386 (3418)	489 (4331)	572 (5066)	618 (5473)
		150 rpm	148 rpm	143 rpm	140 rpm	134 rpm	128 rpm	119 rpm
	40 (10.50)	94 (832)	193 (1709)	296 (2621)	394 (3489)	498 (4410)	584 (5172)	645 (5712)
		198 rpm	195 rpm	192 rpm	188 rpm	183 rpm	178 rpm	167 rpm
	50 (13.20)	90 (797)	191 (1691)	292 (2586)	389 (3445)	493 (4366)	580 (5137)	634 (5615)
		248 rpm	246 rpm	241 rpm	236 rpm	230 rpm	223 rpm	212 rpm
	60 (15.85)	85 (752)	185 (1638)	279 (2471)	382 (3383)	483 (4277)	575 (5092)	622 (5509)
		300 rpm	295 rpm	288 rpm	281 rpm	273 rpm	263rpm	251 rpm
Max Cont.	75 (19.75)	78 (690)	176 (1558)	271 (2400)	370 (3277)	472 (4180)	561 (4968)	610 (5402)
		374 rpm	370 rpm	364 rpm	360 rpm	352 rpm	340 rpm	331 rpm
Max Int.	90 (23.85)	68 (602)	163 (1443)	265 (2347)	361 (3197)	456 (4038)	545 (4827)	599 (5305)
		443 rpm	440 rpm	435 rpm	428 rpm	424 rpm	413 rpm	400 rpm

2000 SERIES 250		243 Cm³/Rev 14.8 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	110 (974)	231 (2045)	351 (3108)	462 (4091)	585 (5181)	681 (6031)	778 (6890)
		59 rpm	58 rpm	56 rpm	53 rpm	50 rpm	46 rpm	35 rpm
	30 (7.90)	116 (1027)	236 (2090)	359 (3179)	475 (4207)	597 (5287)	700 (6199)	790 (6997)
		119 rpm	117 rpm	114 rpm	108 rpm	102 rpm	92 rpm	80 rpm
	40 (10.50)	118 (1045)	241 (2134)	363 (3215)	480 (4251)	599 (5305)	706 (6253)	796 (7050)
		162 rpm	159 rpm	156 rpm	150 rpm	143 rpm	134 rpm	121 rpm
	50 (13.20)	111 (983)	234 (2072)	352 (3117)	472 (4180)	591 (5234)	693 (6137)	788 (6979)
		203 rpm	201 rpm	197 rpm	191 rpm	182 rpm	173 rpm	158 rpm
	60 (15.85)	106 (929)	224 (1947)	345 (3055)	462 (4091)	582 (5154)	685 (6067)	772 (6837)
		244 rpm	242 rpm	237 rpm	230 rpm	220 rpm	208 rpm	194 rpm
Max Cont.	75 (19.75)	101 (841)	214 (1895)	340 (3011)	454 (4021)	570 (5048)	670 (5934)	760 (6731)
		303 rpm	299 rpm	294 rpm	285 rpm	272 rpm	260 rpm	244 rpm
Max Int.	90 (23.85)	93 (797)	209 (1851)	335 (2967)	447 (3959)	559 (4951)	657 (5819)	749 (6633)
		363 rpm	359 rpm	354 rpm	348 rpm	340 rpm	328 rpm	303 rpm

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2000 SERIES TECHNICAL DATA

2000 SERIES 315		311 Cm³/Rev 18.9 in³/Rev					Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	175 (2576)	210 (3090)	225 (3308)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification						
FLOW	15 (3.95)	148 (1310)	304 (2692)	456 (4038)	613 (5429)	762 (6749)	879 (7785)	978 (8662)
		48 rpm	47 rpm	45 rpm	43 rpm	41 rpm	39 rpm	27 rpm
	30 (7.90)	155 (1372)	314 (2781)	465 (4118)	635 (5624)	778 (6890)	884 (7829)	988 (8750)
		95 rpm	93 rpm	91 rpm	89 rpm	86 rpm	82 rpm	67 rpm
	40 (10.50)	160 (1417)	321 (2843)	479 (4242)	650 (5757)	796 (7050)	906 (8024)	997 (8830)
		127 rpm	125 rpm	121 rpm	117 rpm	115 rpm	109 rpm	91 rpm
	50 (13.20)	155 (1372)	314 (2781)	465 (4118)	638 (5650)	780 (6908)	886 (7847)	988 (8750)
		159 rpm	157 rpm	153 rpm	149 rpm	145 rpm	142 rpm	128 rpm
	60 (15.85)	151 (1337)	306 (2710)	453 (4012)	620 (5491)	756 (6695)	886 (7847)	976 (8644)
		187 rpm	185 rpm	181 rpm	176 rpm	169 rpm	157 rpm	143 rpm
Max Cont.	75 (19.75)	146 (1293)	300 (2657)	445 (3941)	613 (5429)	755 (6681)	755 (7743)	966 (8549)
		238 rpm	236 rpm	232 rpm	227 rpm	224 rpm	220 rpm	196 rpm
Max Int.	90 (23.85)	135 (1194)	284 (2513)	436 (3858)	601 (5318)	740 (6549)	863 (7637)	952 (8425)
		286 rpm	283 rpm	278 rpm	272 rpm	265 rpm	257 rpm	232 rpm

2000 SERIES 400		394 Cm³/Rev 24 in³/Rev				Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	160 (2354)	175 (2576)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification					
FLOW	15 (3.95)	186 (1646)	379 (3354)	578 (5115)	779 (6894)	896 (5204)	986 (8726)
		37 rpm	36 rpm	35 rpm	33 rpm	31 rpm	29 rpm
	30 (7.90)	190 (1681)	388 (3433)	590 (5221)	791 (7000)	905 (8009)	991 (8770)
		75 rpm	73 rpm	71 rpm	68 rpm	65 rpm	61 rpm
	40 (10.50)	195 (1725)	394 (3486)	569 (5035)	797 (7053)	912 (8071)	998 (8832)
		99 rpm	97 rpm	95 rpm	93 rpm	90 rpm	85 rpm
	50 (13.20)	191 (1690)	388 (3433)	587 (5194)	785 (6947)	904 (8000)	983 (8699)
		125 rpm	123 rpm	118 rpm	114 rpm	109 rpm	102 rpm
	60 (15.85)	186 (1646)	388 (3433)	587 (5194)	785 (6947)	904 (8000)	983 (8699)
		149 rpm	146 rpm	142 rpm	137 rpm	131 rpm	122 rpm
Max Cont.	75 (19.75)	181 (1601)	372 (3292)	576 (5097)	770 (6814)	891 (7885)	973 (8611)
		187 rpm	183 rpm	177 rpm	171 rpm	764 rpm	153 rpm
Max Int.	90 (23.85)	176 (1557)	367 (3247)	571 (5053)	766 (6779)	883 (7814)	965 (8540)
		226 rpm	221 rpm	214 rpm	208 rpm	199 rpm	183 rpm

2000 SERIES 475		475 Cm³/Rev 28.9 in³/Rev			Max Cont.	Max Int.
Pressure Bar (psi)		35 (515)	70 (1030)	105 (1546)	140 (2060)	150 (2207)
	LPM (GPM)	Torque Nm (in.Lbs) Speed Specification				
FLOW	15 (3.95)	218 (1929)	439 (3885)	661 (5849)	892 (7894)	995 (8805)
	rpm	30	29	28	27	25
	30 (7.90)	223 (1973)	450 (3982)	676 (5982)	910 (8053)	1002 (8867)
	rpm	61	60	58	56	53
	40 (10.50)	228 (2017)	461 (4079)	689 (6097)	927 (8203)	1017 (9000)
	rpm	82	80	77	74	68
	50 (13.20)	224 (1982)	456 (4035)	682 (6035)	920 (8142)	1008 (8920)
	rpm	103	101	97	92	86
	60 (15.85)	220 (1947)	451 (3991)	677 (5991)	913 (8080)	998 (8832)
	rpm	123	121	118	112	105
Max Cont.	75 (19.75)	212 (1876)	443 (3920)	664 (5876)	901 (7973)	980 (8673)
	rpm	155	153	147	140	132
Max Int.	90 (23.85)	196 (1734)	421 (3725)	643 (5690)	877 (7761)	959 (8487)
	rpm	186	184	178	170	157

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6000-SERIES

The 6000 series motor is a large volume, disc valve, high pressure motor, with a radial ball-bearing design. They are capable of handling greater loads and higher torque applications. The advance design in disc distribution flow provides improved performance at low speed. The disc valve compensates for wear providing volumetric efficiencies. The double taper roller bearings allow for high radial loads making these motors ideal for heavier vehicles in traction drive applications.

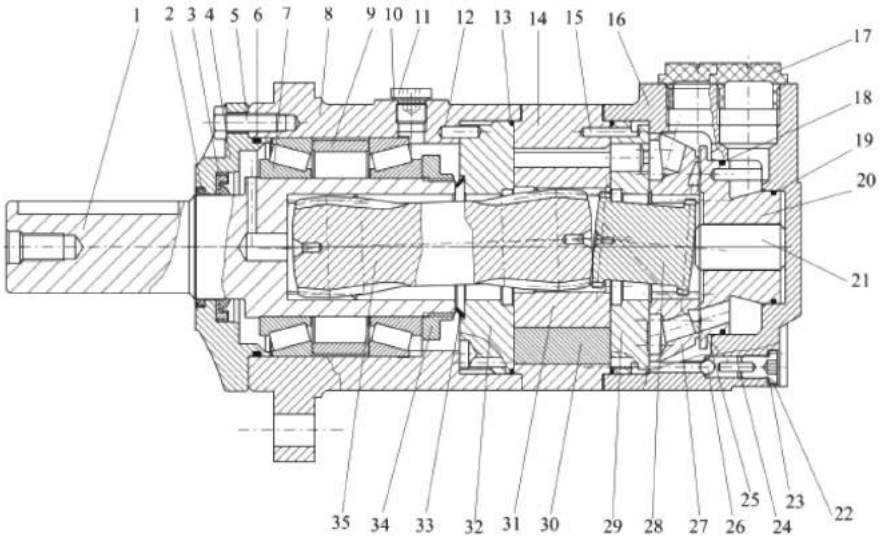
These low weight advanced construction design motors are manufactured in accordance with the requirements of the ISO 9001:2000 quality system.

Technical Specifications

112 6000 SERIES

			195 cm3 (11.9)	245 cm3 (15)	310 cm3 (19)	395 cm3 (24.2)	490 cm3 (30)	625 cm3 (38)	800 cm3 (49)	985 cm3 (60)
		Char-Lynn reference	*195 cm3 (11.9)*	*245 cm3 (15)*	*310 cm3 (19)*	*390 cm3 (23.9)*	*490 cm3 (30)*	*625 cm3 (38)*	*800 cm3 (49)*	*985 cm3 (60)*
MOUNTING	**Shafts**	**PORTS**								
4 BOLT STD SAE CC FLANGE	1 1/2" STRAIGHT KEY	1 5/16" -12 O-RING	1121064	1121065	1121066	1121067	1121068	1121107	-	1121069
	40 mm STRAIGHT KEY	G 1 (BSP) O-RING	1121094	1121095	1121096	1121097	1121098	1121111	-	112-1099
	1 1/2" 17 TOOTH SPLINE	1 5/16" -12 O-RING	1121058	1121059	1121060	1121061	1121062	1121109	-	1121063
		G 1 (BSP) O-RING	1121088	1121089	1121090	1121091	1121092	-	-	1121093
	1 3/4" TAPERED	1 5/16" -12 O-RING	1121052	1121053	1121054	1121055	1121056	-	1121325	1121057
4 BOLT STD GLOBAL (ISO) MOUNT	50 mm STRAIGHT KEY	G 1 (BSP) O-RING	-	-	1121217	1121218	1121215	1121216	1121219	1121220
	1 3/4" TAPERED	1 5/16" -12 O-RING	-	-	1121282	1121248	1121212	1121230	1121231	1121237
WHEEL MOTOR	40 mm STRAIGHT KEY	1 5/16" -12 O-RING	1131082	1131083	1131084	1131085	1131086	1131100	-	1131087
	1 3/4" TAPERED	G 1 (BSP) O-RING	1131070	1131071	1131072	1131073	1131074	1131093	-	1131075
BEARINGLESS		G 1 (BSP)	1141043	1141044	1141045	1141046	1141047	-	-	1141048
		1 5/16" O-RING	1141031	1141032	1141033	1141034	1141035	1141055	-	1141036
Max Torque (in-lbs)	Continuous		5,088	6,504	8,232	10,344	10,752	11,772	12,216	13,896
	Intermittent		7,608	10,440	11,820	14,652	16,680	12,216	14,604	16,596
Max Pressure (PSI)	Continuous		3,000	3,000	3,000	3,000	2,500	2,000	1,800	1,800
	Intermittent		4,500	4,500	4,500	4,500	4,000	2,500	2,000	2,000
Max Flow (GPM)	Continuous		40	40	40	40	40	40	40	40
	Intermittent		45	55	60	60	60	60	60	60
Max RPM	Continuous		775	615	485	383	307	241	184	153
	Intermittent		866	834	698	563	454	355	276	230
Weight (LBS)	Weight		45	45	46	47	49	51	29	30

Continuous = maximum of continuous operation
Intermittent = maximum operating range for 6 seconds per minute



1 Output shaft
2 Dust seal
3 Shaft seal
4 Front cover
5 Bolt
6 "O" ring
7 Bearing
8 Housing
9 Spacer bearing
10 Washer
11 Drian plug
12 Pin
13 "O" ring
14 Staror
15 Rotor
16 End cover
17 Drain plug
18 "O" ring
19 "O" ring
20 Balance plate
21 Spacer
22 Drian plug
23 Washer
24 Pin
25 Butterfly ring
26 Ball Check
27 Distributor plate
28 Coupling
29 Channel plate
30 Rolortorc™ set
31 Rotor
32 Intermediate plate
33 Butterfly washer
34 Lock nut
35 Drive shaft

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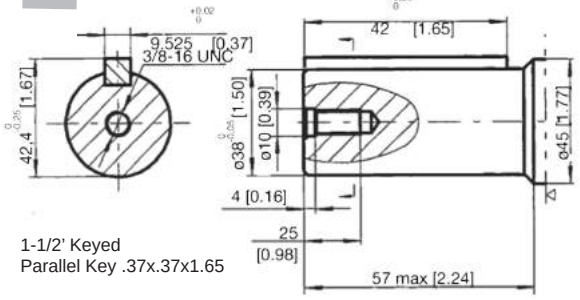
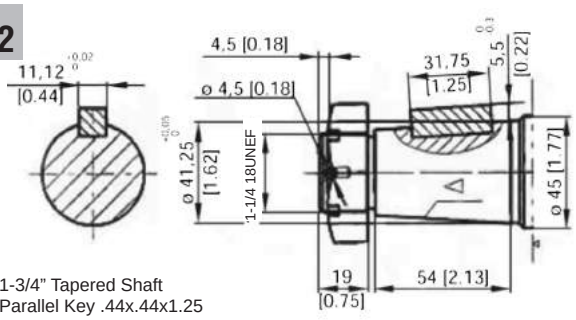
6000-SERIES SHAFT DATA

01



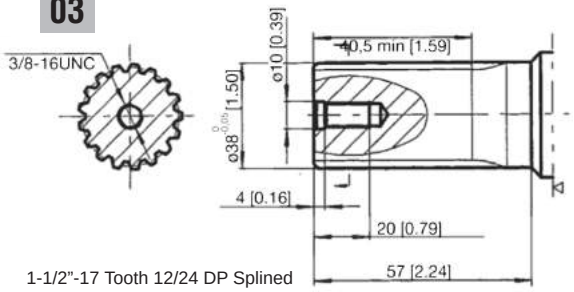
1-1/2' Keyed
Parallel Key .37x.37x1.65

02



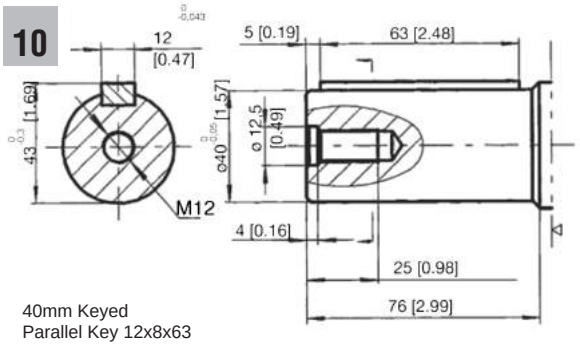
1-3/4" Tapered Shaft
Parallel Key .44x.44x1.25
Tightening torque: 500±10Nm

03



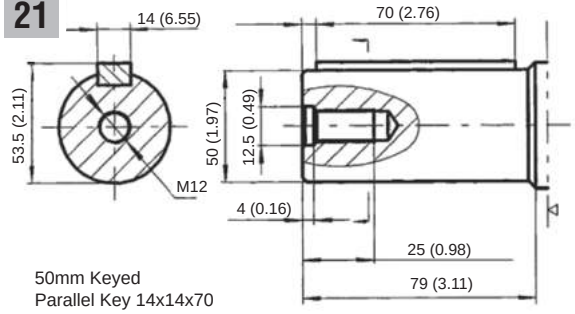
1-1/2"-17 Tooth 12/24 DP Splined

10



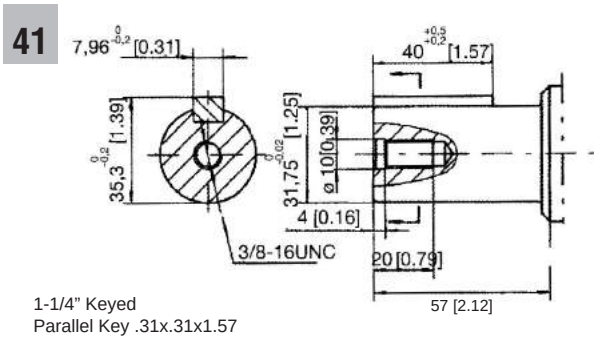
40mm Keyed
Parallel Key 12x8x63

21



50mm Keyed
Parallel Key 14x14x70

41



1-1/4" Keyed
Parallel Key .31x.31x1.57

MODEL CODE - 6000 SERIES

M06 - 490 - B - 01 - A - 1 - 0

6000 SERIES (-112)

FRAME SIZE (IN3/REV)
195 (11.9)
245 (15.0)
310 (19.0)
395 (24.2)
490 (30.0)
625 (38.0)
800 (49.0)
985 (60.0)

MOUNTING FLANGE TYPE
A - BEARINGLESS 4-BOLT
B - 4 BOLT (SAE CC)
C - 4 BOLT WHEEL MOUNT
H - 4 BOLT GLOBAL (ISO)

DRIVE SHAFT
00 - Bearingless
01 - 1-1/2" Parallel Key
02 - 1-3/4" Tapered Key
03 - 1-1/2-17 Tooth Spline
10 - 40mm Straight Key
21 - 50mm Straight Key
(avail on mounting flange H only)
41 - 1-1/4" Straight Key

PORT SIZE
A - 1-5/16"-12 SAE
C - G1 (BSP)
T - 1-1/16"-12 SAE
V - G3/4 (BSP)

OPTIONS
00 - None
10 - Viton Shaft Seal
13 - Reverse Rotation
65 - Free Running*

PAINT
0 - No Paint
1 - Black
NP - Nickel Plated

Additional flange and drive shaft options available please consult factory

*Available on selected models

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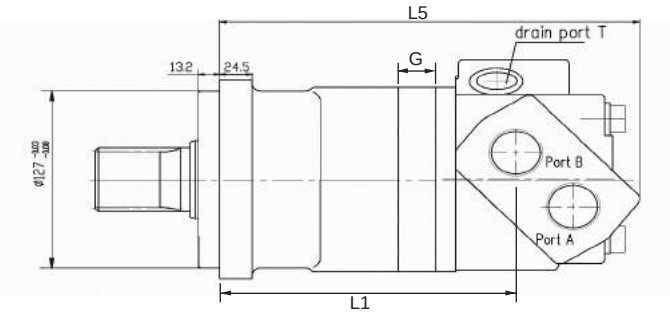
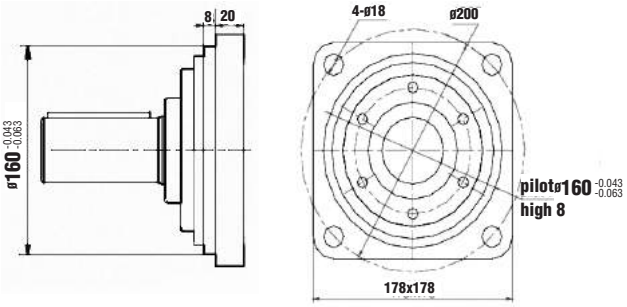
6000 SERIES INSTALLATION DATA

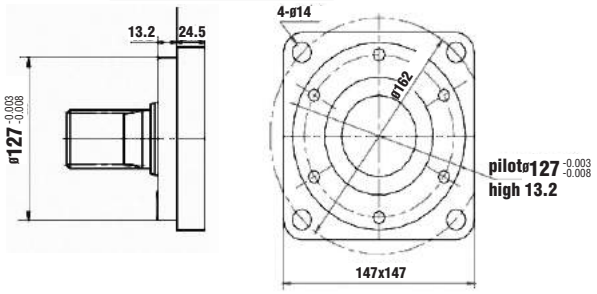


H-Global (ISO) Mount

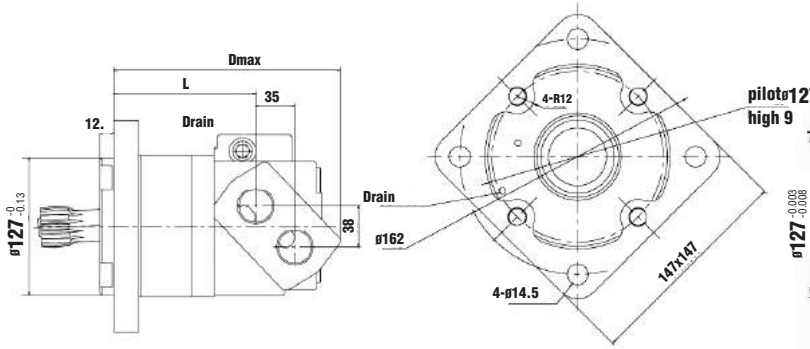


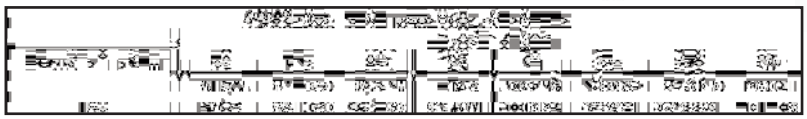
6000 - Series Installation Data								
	Dimension cm (inch)							
Displacement - cm3/rev	195	245	310	390	490	625	800	985
L5	266 (10.47)	271 (10.67)	278 (10.9)	288 (11.34)	298 (11.73)	313 (12.32)	333 (13.11)	352 (13.86)
L1	187.7 (7.39)	193.3 (7.6)	200.5 (7.89)	211 (8.31)	220.4 (8.68)	235 (9.25)	256 (10.08)	274.5 (10.81)
G	21.7 (0.85)	27.3 (1.07)	34.5 (1.36)	45 (1.77)	54.4 (2.14)	69 (2.72)	90 (3.54)	108.5 (4.27)

B-Std SAE CC Mount

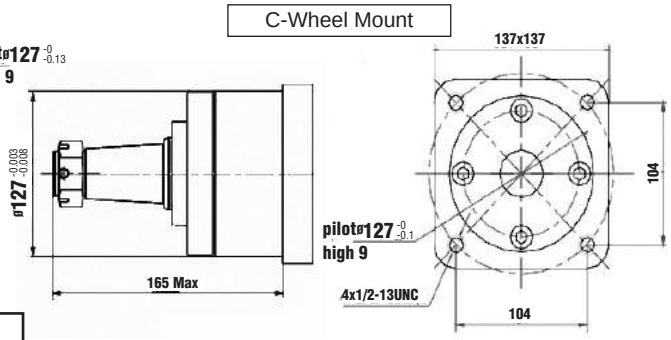


BEARINGLESS MOTOR

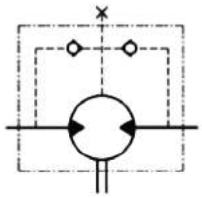


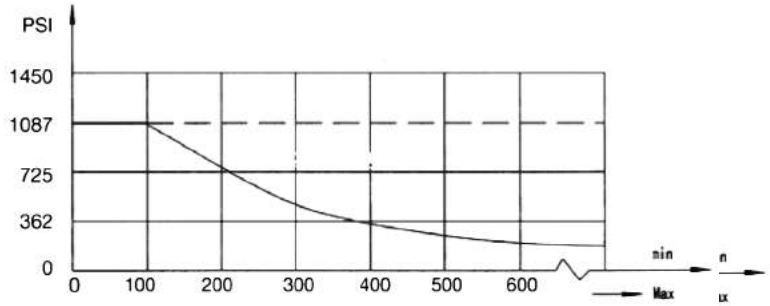


C-Wheel Mount



SHAFT SEAL RATED PRESSURE





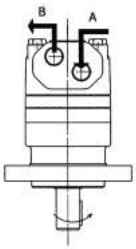
CASE DRAIN

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the drain line is used the pressure exerted on the shaft seal is equal to the return line pressure.

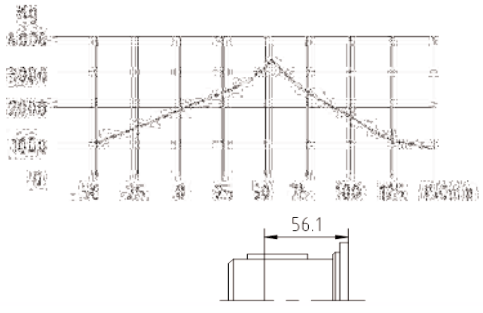
SHAFT ROTATION DIRECTION

STANDARD ROTATION VIEWED FROM SHAFT END

Port A pressurized = CW rotation
Port B pressurized = CCW rotation



RADIAL FORCES



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6000 SERIES TECHNICAL DATA

6000 SERIES 195		195 Cm³/Rev 11.9 in³/Rev					Max Cont.	Max Int.		
Pressure	Bar (PSI)	35 (500)	70 (1000)	105 (1500)	140 (2000)	170 (2500)	205 (3000)	240 (3500)	275 (4000)	310 (4500)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification								
	15 (3.95)	80 (708)	175 (1549)	271 (2399)	366 (3239)	454 (4018)	521 (4611)	589 (5213)	654 (5788)	
	(rpm)	76	74	71	65	62	45	32	18	
	30 (7.90)	86 (761)	179 (1584)	274 (2425)	371 (3284)	464 (4107)	545 (4824)	626 (5541)	704 (6231)	779 (6895)
	(rpm)	153	148	144	130	119	116	99	82	65
	45 (12.0)	85 (752)	180 (1593)	279 (2469)	374 (3310)	476 (4213)	565 (5000)	654 (5788)	751 (6647)	825 (7302)
	(rpm)	230	226	221	212	202	186	168	148	118
F	61 (16.0)	79 (699)	179 (1584)	280 (2478)	376 (3328)	475 (4204)	574 (5080)	664 (5877)	760 (6727)	845 (7479)
L	(rpm)	307	303	300	290	283	258	236	214	181
O	76 (20.0)	80 (708)	179 (1584)	281 (2487)	380 (3363)	480 (4248)	574 (5080)	671 (5939)	769 (6806)	860 (7612)
W	(rpm)	385	379	373	365	255	332	305	280	246
	91 (24.0)	80 (708)	174(1540)	274 (2425)	375 (3319)	474 (4195)	575 (5089)	669 (5921)	770 (6815)	
	(rpm)	462	456	450	439	430	412	388	363	
	106 (28.0)	74 (655)	176 (1558)	271 (2399)	375 (3319)	474 (4195)	570 (5045)	669 (5921)	770 (6815)	
	(rpm)	539	532	525	513	502	475	448	420	
	121 (32.0)	70 (620)	169 (1496)	269 (2381)	369 (3266)	470 (4160)	570 (5045)	670 (5930)	763 (6753)	
	(rpm)	617	609	602	590	575	541	510	480	
	136 (36.0)	70 (620)	163 (1443)	264 (2337)	364 (3222)	465 (4116)	565 (5000)	664 (5877)	763 (6753)	
	(rpm)	692	684	674	660	645	600	564	527	
	151 (40.0)	70 (620)	164 (1452)	261 (2310)	364 (3222)	466 (4124)	559 (4948)	660 (5841)		
Max Cont.	(rpm)	770	759	745	733	717	666	624		
	170 (45.0)	65 (575)	161 (1425)	259 (2292)	360 (3186)	461 (4080)	555 (4912)	655 (5797)		
Max Int.	(rpm)	866	854	844	825	808	749	702		

6000 SERIES 245		245 Cm³/Rev 15.0 in³/Rev					Max Cont.	Max Int.		
Pressure	Bar (PSI)	35 (500)	70 (1000)	105 (1500)	140 (2000)	170 (2500)	205 (3000)	240 (3500)	275 (4000)	310 (4500)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification								
	15 (3.95)	106 (938)	227 (2009)	346 (3062)	461 (4080)	577 (5107)	643 (5691)	751 (6647)	853 (7550)	960 (8497)
	(rpm)	60	56	54	48	42	39	30	12	6
	30 (7.90)	110 (974)	237 (2098)	354 (3133)	475 (4204)	596 (5275)	701 (6204	800 (7081)	905 (8010)	1018(9010)
	(rpm)	120	116	113	104	95	81	67	48	35
	45 (12.0)	110 (974)	235 (2080)	360 (3186)	482 (4266)	607 (5372)	721 (6381	840 (7435)	955 (8452)	1075(9515)
	(rpm)	182	179	175	165	157	141	123	107	90
F	61 (16.0)	112 (991)	236 (2089)	360 (3186)	487 (4310)	611 (5408)	730 (6461	844 (7470)	960 (8497)	1181(10543)
L	(rpm)	244	240	236	228	221	202	184	163	144
O	76 (20.0)	105 (929)	232 (2053)	354 (3133)	485 (4293)	614 (5434)	735 (6505)	853 (7550)	980 (8674)	1100(9736)
W	(rpm)	306	301	297	287	277	256	238	217	197
	91 (24.0)	104 (920)	231 (2045)	356 (3151)	482 (4266)	612 (5417)	735 (6505)	861 (7620)	979 (8665)	
	(rpm)	365	361	357	348	338	314	290	270	
	106 (28.0)	102 (903)	227 (2009)	352 (3115)	483 (4275)	611 (5408)	7336488)	855 (7567)	980 (8674)	
	(rpm)	426	421	416	403	375	355	335	320	
	121 (32.0)	91 (805)	216 (1912)	346 (3062)	470 (4160)	600 (5310)	725 (6417)	7523)	975 (8629)	
	(rpm)	489	481	474	461	447	422	395	370	
	136 (36.0)	80 (708)	210 (1859)	334 (2956)	460 (4071)	580 (5133)	710 (6284)	840 (7435)		
	(rpm)	550	544	537	524	510	480	454		
	151 (40.0)	80 (708)	202 (1788)	330 (2921)	456 (4036)	580 (5133)	700 (6196)	800 (7081)		
Max Cont.	(rpm)	612	606	600	585	570	538	507		
	170 (45.0)	66 (584)	202 (1788)	326 (2885)	446 (3947)	575 (5089)	685 (6063)	755 (6682)		
	(rpm)	688	682	674	685	640	606	571		
Max Int.	189 (50.0)		195 (1726)	316 (2797)	441 (3903)	555 (4912)	670 (5930)			
	(rpm)		758	749	731	710	675			
	208 (55.0)		191 (1690)	311 (2753)	431 (3815)	551 (4877)	665 (5886)			
	(rpm)		834	824	804	783	742			

6000 SERIES 310		310 Cm³/Rev 19.0 in³/Rev					Max Cont.	Max Int.		
Pressure	Bar (PSI)	35 (500)	70 (1000)	105 (1500)	140 (2000)	170 (2500)	205 (3000)	240 (3500)	275 (4000)	310 (4500)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification								
	15 (3.95)	136 (1204)	292 (2584)	431 (3815)	573 (5071)	684 (6054)	801 (7089)	934 (8267)	1020(9028)	1070 (9470
	(rpm)	47	45	42	38	32	24	17	10	3
	30 (7.90)	140 (1239)	300 (2655)	451 (3992)	596 (5275)	732 (6479)	870 (7700)	985 (8718)	1100(9736)	1235(10931
	(rpm)	95	92	87	81	73	63	54	44	32
	45 (12.0)	140 (1239)	306 (2708)	461 (4080)	612 (5417)	760 (6727)	909 (8045)	1045(9249)	1180(10444)	1330(11771
	(rpm)	143	140	135	129	120	110	99	88	75
F	61 (16.0)	140 (1239)	302 (2673)	462 (4089)	615 (5443)	771 (6824)	920 (8143)	1060(9382)	1200(10621)	1350(11949
L	(rpm)	192	188	184	178	167	154	140	124	109
O	76 (20.0)	135 (1195)	296 (2620)	457 (4045)	617 (5461)	772 (6833)	925 (8187)	1075(9515)	1220(10798)	
W	(rpm)	241	236	232	226	216	200	182	165	
	91 (24.0)	130 (1151)	296 (2620)	456 (4036)	614 (5434)	774 (6850)	929 (8222)	1078(9541)	1226(10851)	
	(rpm)	289	282	278	273	260	248	232	215	
	106 (28.0)	130 (1151)	290 (2567)	450 (3983)	609 (5390)	768 (6797)	928 (8213)	1073(9497)	1220(10798)	
	(rpm)	336	333	327	320	308	295	276	257	
	121 (32.0)	125 (1106)	285 (2522)	444 (3930)	600 (5310)	763 (6753)	918 (8125)	1060(9382)		
	(rpm)	384	381	375	367	354	341	320		
	136 (36.0)	120 (1062)	276 (2443)	434 (3841)	590 (5222)	748 (6620)	912 (8072)	1050(9293)		
	(rpm)	430	421	416	410	396	383	360		
	151 (40.0)	115 (1018)	271 (2399)	424 (3753)	578 (5116)	743 (6576)	902 (7983)	1035(9161)		
Max Cont.	(rpm)	478	466	461	456	441	427	403		
	189 (50.0)	110 (974)	245 (2168)	384 (3399)	523 (4629)	682 (6036)	836 (7399)			
Max Int.	(rpm)	597	582	576	570	551	534			
	227 (60.0)		220 (1947)	364 (3222)	513 (4540)	647 (5726)	796 (7045)			
	(rpm)		698	691	684	661	641			

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6000 SERIES 395		395 Cm³/Rev 24.17 in³/Rev					Max Cont.	Max Int.		
Pressure	Bar (PSI)	35 (500)	70 (1000)	105 (1500)	140 (2000)	170 (2500)	205 (3000)	240 (3500)	275 (4000)	310 (4500)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification								
FLOW	15 (3.95)	188 (1664)	378(3346)	563(4983)	743(6576)	923(8169)	1083(9585)	1276(11294)	1371(12134)	1635(14471)
	(rpm)	37	36	34	32	28	21	13	5	1
	30 (7.90)	188 (1664)	383(3390)	578(5116)	763(6753)	953(8435)	1137(10063)	1316(11648)	1456(12887)	1635(14471)
	(rpm)	75	73	71	67	64	54	44	32	20
	45 (12.0)	188 (1664)	388(3434)	583(5160)	773(6842)	968(8568)	1152(10196)	1341(11869)	1540(13630)	
	(rpm)	114	111	108	104	99	90	80	78	
	61 (16.0)	183 (1620)	383(3390)	583(5160)	773(6842)	968(8568)	1156(10231)	1345(11904)		
	(rpm)	153	150	146	143	131	125	115		
	76 (20.0)	183 (1620)	383(3390)	583(5160)	778(6886)	973(8612)	1161(10276)	1356(12002		
	(rpm)	192	188	186	181	174	161	151		
	91 (24.0)	173 (1531)	373(3301)	573(5071)	768(6797)	968(8568)	1156(10231)			
	(rpm)	228	228	224	219	211	203			
	106 (28.0)	168 (1487)	368(3257)	568(5027)	763(6753)	963(8523)	1151(10187)			
	(rpm)	267	265	260	254	247	235			
	121 (32.0)	163 (1443)	358(3469)	558(4939)	753(6665)	947(8382)	1146(10143)			
	(rpm)	305	303	298	291	281	268			
	136 (36.0)	158 (1398)	343(3036)	548(4850)	733(6488)	733(6488)	1131(10010)			
	(rpm)	345	339	335	328	316	300			
Max Cont.	151 (40.0)	153 (1354)	328(2903)	538(4762)	733(6488)	917(8116)				
	(rpm)	385	379	374	367	358				
Max Int.	189 (50.0)	133 (1177)	303(2682)	518(4585)	733(6488)	913(8081)				
	(rpm)	481	474	468	459	448				
	227 (60.0)		283(2505)	502(4443)	721(6381)	891(7886)				
	(rpm)		569	561	551	537				

6000 SERIES 490		490 Cm³/Rev 30.0 in³/Rev				Max Cont.	Max Int.		
Pressure	Bar (PSI)	35 (500)	70 (1000)	105 (1500)	140 (2000)	170 (2500)	205 (3000)	240 (3500)	275 (4000)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification							
FLOW	15 (3.95)	235(2080)	468(4301)	725(6417)	962(8514)	1195(10577)	1408(12462)	1643(14542)	1880(16639)
	(rpm)	30	29	28	27	25	21	17	12
	30 (7.90)	235(2080)	468(4301)	734(6496)	973(8612)	1213(10736)	1442(12763)	1680(14869)	
	(rpm)	60	59	57	54	51	45	38	
	45 (12.0)	235(2080)	467(4133)	733(6488)	974(8621)	1218(10780)	1450(12834)		
	(rpm)	91	89	87	84	79	71		
	61 (16.0)	234(2071)	480(4248)	728(6443)	973(8612)	1217(10771)	1456(12887)		
	(rpm)	122	121	118	114	109	100		
	76 (20.0)	225(1991)	470(4160)	723(6399)	972(8603)	1217(10771)			
	(rpm)	152	150	147	144	139			
	91 (24.0)	220(1947)	469(4151)	719(6364)	968(8568)	1210(10709)			
	(rpm)	184	181	180	176	171			
	106 (28.0)	209(1850)	459(4062)	708(6266)	957(8470)	1205(10665)			
	(rpm)	214	211	208	204	198			
	121 (32.0)	194(1717)	448(3965)	700(6196)	947(8382)	1200(10620)			
	(rpm)	244	241	237	232	226			
	136 (36.0)	175(1549)	433(3832)	683(6045)	937(8293)	1170(10355)			
	(rpm)	275	272	265	260	255			
	151 (40.0)	160(1416)	423(3744)	673(5957)	917(8116)	1145(10134)			
Max Cont.	(rpm)	306	303	295	290	284			
	189 (50.0)	130(1151)	364(3222)	588(5204)	857(7585)				
	(rpm)	382	379	365	362				
Max Int.	227 (60.0)		323(2859)	546(4833)	800(7081)				
	(rpm)		454	442	435				

6000 SERIES 625		625 Cm³/Rev 38.0 in³/Rev				Max Cont.	Max Int.		
Pressure	Bar (PSI)	35 (500)	50 (715)	70 (1015)	85 (1232)	105 (1522)	120 (1740)	140 (2030)	275 (4000)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification							
FLOW	15 (3.95)	275 (2434)	425 (3762)	570 (5045)	709 (6275)	849 (7514)	954 (8444)	1063 (9408)	1190 (10532)
	(rpm)	24	24	23	22	21	18	16	15
	30 (7.90)	295 (2611)	450 (3983)	604 (5346)	754 (6673)	923 (8169)	1093 (9674)	1267 (11214)	1355 (11992)
	(rpm)	45	44	44	43	42	39	37	36
	45 (12.0)	295 (2611)	448 (3965)	609 (5390)	764 (6712)	918 (8125)	1123 (9939)	1327 (11745)	1375 (12170)
	(rpm)	72	71	71	70	68	66	64	63
	61 (16.0)	285 (2522)	445 (3938)	604 (5346)	759 (6718)	914 (8089)	1118 (9895)	1324 (11718)	1370 (12126)
	(rpm)	94	93	92	91	89	87	85	83
	76 (20.0)	280 (2478)	439 (3885)	594 (5257)	754 (6673)	914 (8089)	1118 (9895)	1323 (11709)	1372 (12143)
	(rpm)	119	118	117	116	115	112	110	107
	91 (24.0)	264 (2337)	429 (3797)	585 (5178)	744 (6585)	904 (8001)	1108 (9806)	1317 (11656)	1365 (12081)
	(rpm)	143	142	140	139	138	135	132	130
	106 (28.0)	255 (2257)	414 (3664)	574 (5080)	734 (6496)	893 (7904)	1103 (9762)	1312 (11612)	1360 (1203)
	(rpm)	168	166	165	164	162	159	156	153
	121 (32.0)	240 (2124)	400 (3540)	559 (4948)	719 (6364)	878 (7771)	1088 (9630)	1297 (11479(	1345 (11904)
	(rpm)	192	190	188	187	185	182	179	176
	136 (36.0)	220 (1947)	379 (3354)	539 (4771)	698 (6178)	853 (7550)	1047 (9266)		
	(rpm)	216	214	213	212	210	207		
	151 (40.0)	200 (1770)	360 (3186)	519 (4594)	679 (6010)	833 (7373)	1012 (8957)		
Max Cont.	(rpm)	240	239	238	237	236	233		
	189 (50.0)		310 (2744)	469 (4151)	629 (5567)	788 (6974)			
Max Int.	(rpm)		298	296	294	290			
	227 (60.0)		254 (2248)	430 (3805)	588 (5204)	742 (6567			
	(rpm)		355	353	350	345			

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6000 SERIES 800		800 Cm³/Rev 49.0 in³/Rev					Max Cont.	Max Int.
Pressure	Bar (PSI)	35 (500)	50 (715)	70 (1015)	85 (1232)	105 (1522)	120 (1740)	140 (2030)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification						
	15 (3.95)	434 (3841)	607 (5372)	838 (7417)	1018 (9010)	1238(10957)	1337(12188)	1646(12568)
	(rpm)	18	17	17	16	15	14	13
	30 (7.90)	419 (3708)	395 (3496)	828 (7328)	1003 (8877)	1238(10957)	1412(12497)	1606(14214)
	(rpm)	36	35	35	34	33	31	25
	45 (12.0)	379 (3354)	564 (4991)	794 (7028)	970 (8585)	1187(10506)	1358(12019)	
	(rpm)	55	55	54	54	53	51	
F	61 (16.0)	339 (3000)	519 4594)	758 (6709)	937 (8293)	1167(10329)		
L	(rpm)	75	74	72	71	70		
O	76 (20.0)	324 (2868)	498 (4408)	728 (6443)	897 (7939)	1135(10046)		
W	(rpm)	93	92	90	89	87		
	91 (24.0)	314 (2779)	468 (4142)	698 (5293)	857 (7585)	1076 (9523)		
	(rpm)	111	110	109	108	105		
	106 (28.0)	309 (2735)	448 (3965)	648 (5735)	797 (7054)	1016 (8992)		
	(rpm)	129	128	127	125	123		
	121 (32.0)	279 (2469)	419 (3708)	608 (5381)	746 (6603)			
	(rpm)	148	146	145	143			
	136 (36.0)	269 (2381)	398 (3523)	547 (4841)	695 (6151)			
	(rpm)	166	165	165	164			
	151 (40.0)	249 (2204)	348 (3080)	497 (4310)	631 (5585)			
Max Cont.	(rpm)	191	183	182	180			
	189 (50.0)		299 (2646)	438 (3877)	576 (5098)			
Max Int.	(rpm)		230	228	225			
	227 (60.0)			378 (3346)	516 (4567)			
	(rpm)			276	273			

6000 SERIES 985		985 Cm³/Rev 60.0 in³/Rev					Max Cont.	Max Int.
Pressure	Bar (PSI)	35 (500)	50 (715)	70 (1015)	85 (1232)	105 (1522)	120 (1740)	140 (2030)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification						
	15 (3.95)	484 (4284)	774 (6850)	964 (8532)	1203(10647)	1443(12772)	1567(13869)	1786(15807)
	(rpm)	15	15	14	14	13	13	13
	30 (7.90)	494 (4372)	749 (6629)	994 (8798)	1233(10913)	1477(13073)	1637(14489)	1871(16560)
	(rpm)	30	30	29	28	27	26	25
	45 (12.0)	494 (4372)	749 (6629)	1000(8850)	1258(11046)	1492(13205)	1696(15011)	
	(rpm)	45	45	221	43	42	41	
F	61 (16.0)	489 (4328)	739 (6541)	995 (8806)	1243(11001)	1497(13250)		
L	(rpm)	61	61	60	59	58		
O	76 (20.0)	475 (4204)	730 (6461)	983 (8700)	1233(10913)	1481(13108)		
W	(rpm)	77	379	76	75	74		
	91 (24.0)	460 (4071)	704 (6231)	959(8488)	1217(10771)	1466(12975)		
	(rpm)	92	92	91	90	89		
	106 (28.0)	444 (3929)	700 (6195)	949 (8399)	1197(10594)	1446(12798)		
	(rpm)	107	107	106	105	103		
	121 (32.0)	425 (3762)	674 (5965)	923 (8169)	1156(10231)			
	(rpm)	123	122	121	120			
	136 (36.0)	394 (3487)	645 (5708)	893 (7903)	1120(9912)			
	(rpm)	138	138	137	135			
	151 (40.0)	365 (3230)	609 (5390)	864 (7647)	1080(9559)			
Max Cont.	(rpm)	153	152	151	150			
	189 (50.0)	325 (2876)	585 (5178)	829 (7337)	1047(9267)			
	(rpm)	191	190	189	188			
Max Int.	227 (60.0)		525 (4647)	809 (7160)	1020(9028)			
	(rpm)		230	229	226			

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10,000-SERIES

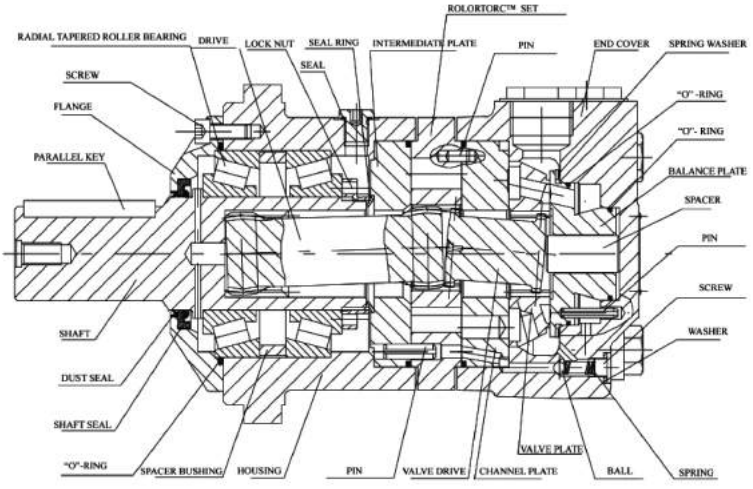
The 10,000 series motor adapts the advanced GEROLER™ gear set design with DISC distribution flow and high pressure. These motors can be supplied with various options to meet application requirements. The output shaft tapered roller bearings permit high axial and radial forces offering a smooth operation during low pressure start up and high pressure operation.

These low weight advanced construction design motors are manufactured in accordance with the ºrequirements of the ISO 9001:2000 quality system.

Technical Specifications

119 - 10,000 SERIES						
			DISPLACEMENT cm3/r (in3/r)			
			315 cm3 333 (20.3)	500 cm3 518 (31.6)	630 cm3 666 (40.6)	1000 cm3 990 (60.4)
		Char Lynn reference	*345 cm3 (21.0)*	*480 cm3 (29.3)*	*665 cm3 (40.6)*	*940 cm3 (57.4)*
MOUNTING	**SHAFTS**	**PORTS**				
Standard SAE C-Mount	2-1/4 inch Straight Key Shaft	1-5/16 O-ring	1191028	1191029	1191030	1191031
		1 1/4 inch Split Flange	1191040	1191041	1191042	1191043
	2-1/8 inch 16T Spline	1-5/16 O-ring	1191032	1191033	1191034	1191035
		1 1/4 inch Split Flange	1191044	1191045	1191046	1191047
	2-1/4 Inch Tapered	1-5/16 O-ring	1191036	1191037	1191038	1191039
		1 1/4 inch Split Flange	1191048	1191049	1191050	1191051
Wheel Mount	2-1/4 inch Straight Key Shaft	1-5/16 O-ring	1201005	1201006	1201007	1201008
		1 1/4 inch Split Flange	1201017	1201018	1201019	1201020
	2-1/8 inch 16T Spline	1-5/16 O-ring	1201009	1201010	1201011	1201012
		1 1/4 inch Split Flange	1201021	1201022	1201023	1201024
	2-1/4 Inch Tapered	1-5/16 O-ring	1201013	1201014	1201015	1201016
		1 1/4 inch Split Flange	1201025	1201026	1201027	1201028
BEARINGLESS		1-5/16 O-ring	1211007	1211008	1211009	1211010
		1 1/4 inch Split Flange	1211011	1211012	1211013	I21-1014
Max Torque (in-lbs)	Continuous		8,181	12,824	14,504	17,821
	Intermittent		9,728	15,742	17,688	20,164
Max Pressure (PSI)	Continuous		3,045	3,045	3,045	3,045
	Intermittent		3,625	3,625	3,625	3,625
Max Flow (GPM)	Continuous		39.6	39.6	39.6	39.6
	Intermittent		59.4	59.4	59.4	59.4
Max RPM	Continuous		446	386	223	145
	Intermittent		649	425	331	220
Weight kg (lbs)	Standard or Wheel Mount		43.5 (96.0)	45.5 (100.0)	46.3 (100.)	47.2 (104.0)
	Bearingless		31.3 (69.0)	33.1 (73.0)	33.1 (73.0)	34.9 (77.0)

Continuous = maximum of continuous operation
Intermittent = maximum operating range for 6 seconds per minute



Itahydraulic
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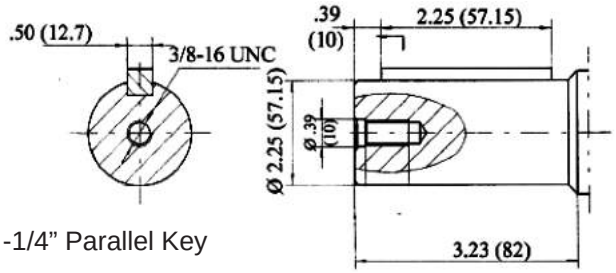
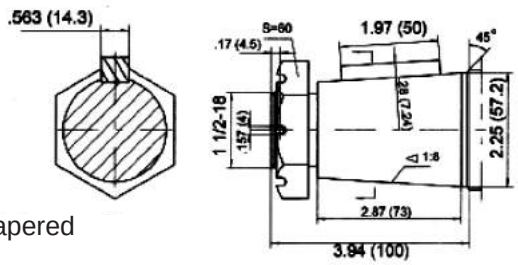
10,000-SERIES SHAFT DATA

01



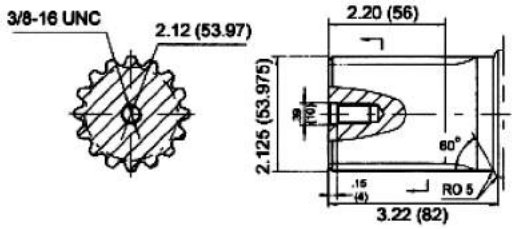
2-1/4” Parallel Key

02



2-1/4” Tapered

03



2-1/8” 16 Tooth Spline 8/16 DP 30º FRSF

MODEL CODE - 10,000 SERIES

M10 - 500 - A - 03 - A - 1 - 0

10,000 SERIES

FRAME SIZE (IN3/REV)
315 (20.32)
500 (31.61)
630 (40.64)
1000 (60.4)

MOUNTING FLANGE TYPE
A - 4 BOLT SAE CC Mount
B - 4 BOLT Wheel Mount

DRIVE SHAFT
01 - 2-1/4” Parallel Key
02 - 2-1/4” Tapered
03 - 2-1/8” 16 Tooth Spline

PORT SIZE
A - 1-5/16 -12 SAE
B - 1-1/4" Split Flange

SPECIAL OPTIONS
00 - None
01 - Free Running*
03 - Reverse Rotation

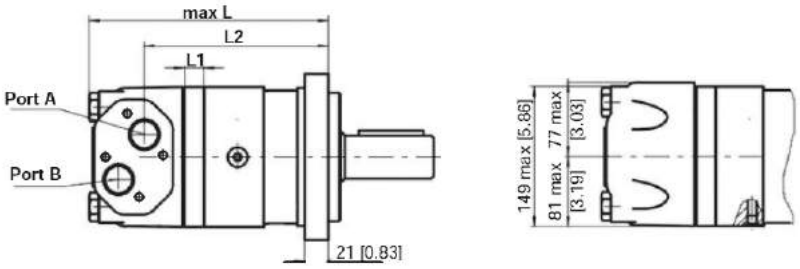
0 - No Paint
A - Black
NP - Nickel Plate

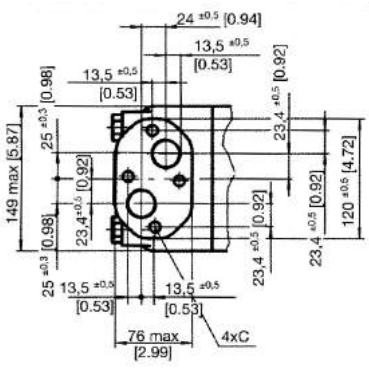
Additional flange and drive shaft options available please consult factory

*Available on selected models

Itahydraulic
Power Tecnology

10,000 SERIES INSTALLATION DATA



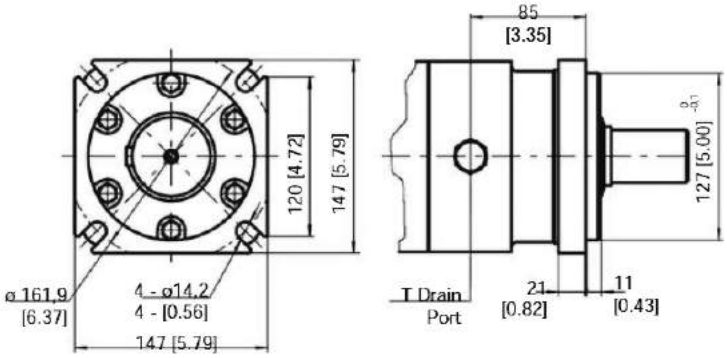


	[INCHES]			MILLIMETERS			
MODEL	**L**	**L1**	**L2**		**L**	**L1**	**L2**
315	[9.69]	[0.79]	[7.44]	246	20	189	
500	[10.28]	[1.38]	[8.03]	261	35	204	
630	[10.75]	[1.85]	[8.50]	273	47	216	
1000	[11.89]	[3.02]	[9.84]	302	74	241	

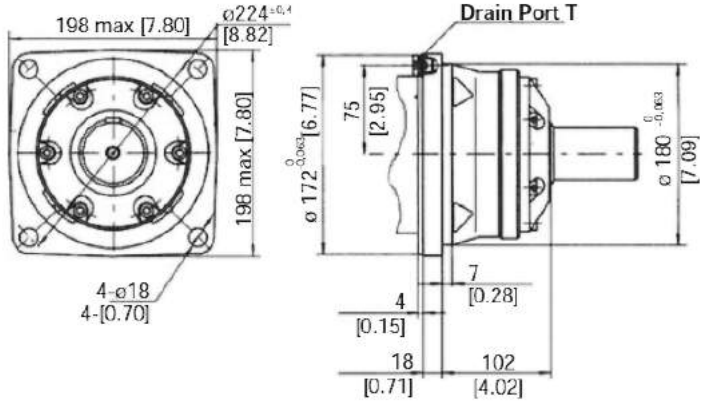
PORT & DRAIN PORT ORDERING CODES

ORDER CODE	A	DEPTH
PORTS - A and B	1-5/16-12UN	18 mm
TANK PORT - T	9/16-18UNF	12 mm
BOLTS - C	4-M12	10 mm

A - 4 Bolt SAE CC Mount



B - 4 Bolt Wheel Mount



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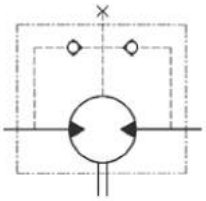
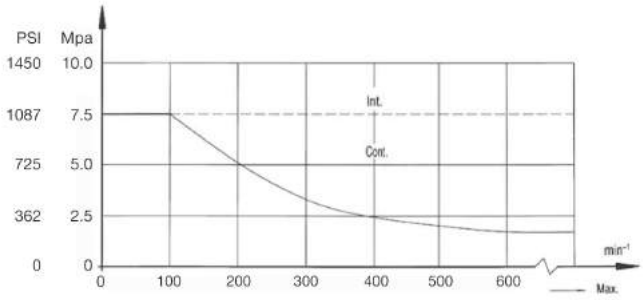
SHAFT SEAL RATED PRESSURE





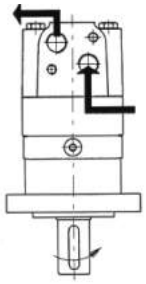
CASE DRAIN

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the drain line is used the pressure exerted on the shaft seal is equal to the return line pressure.

SHAFT ROTATION DIRECTION

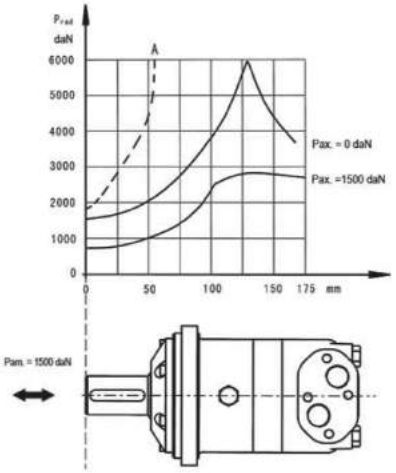
STANDARD ROTATION VIEWED FROM SHAFT END

Port A pressurized = CW rotation
Port B pressurized = CCW rotation



RADIAL FORCES

Curve “A” shows max radial shaft load. Any shaft loads exceeding these values quoted in the curve will involve risk of breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.



Itahydraulic
Power Tecnology

10,000 SERIES TECHNICAL DATA

10,000 SERIES 315		333 Cm³/Rev 20.32 in³/Rev					Max Cont.	Max Int.	
Pressure Bar (psi)		70 (1030)	100 (1470)	140 (2060)	160 (2355)	180 (2652)	200 (2950)	210 (3090)	240 (3535)
	LPM (GPM)	Torque Mn (in.Lbs) Speed Specification							
FLOW	30 (7.92)	305 (2588)	435 (3850)	605 (5143)	718 (6354)	790 (6992)	892 (7894)	942 (8337)	1060 (9381
		89 rpm	85 rpm	79 rpm	71 rpm	70 rpm	68 rpm	62 rpm	55 rpm
	60 (15.85)	303 (2672)	445 (3938)	625 (5531)	736 (6514)	828 (7528)	925 (8186)	968 (8567)	1097 (9708)
		183 rpm	179 rpm	174 rpm	168 rpm	163 rpm	160 rpm	154 rpm	148 rpm
	90 (23.77)	300 (2655)	440 (3894)	625 (5531)	730 (6461)	826 (7310)	922 (8160)	962 (8514)	1082 (9576)
		275 rpm	272 rpm	266 rpm	258 rpm	254 rpm	248 rpm	242 rpm	235 rpm
	105 (27.74)	295 (2611)	435 (3850)	620 (5487)	726 (6425)	822 (7275)	917 (8115)	958 (8478)	1078 (9540)
		325 rpm	320 rpm	312 rpm	306 rpm	300 rpm	292 rpm	290 rpm	285 rpm
	120 (31.70)	290 (2566)	431 (3814)	610 (5399)	720 (6372)	820 (7257)	912 (8071)	952 (8425)	1070 (9470)
		371 rpm	366 rpm	359 rpm	350 rpm	345 rpm	337 rpm	332 rpm	325 rpm
Max Cont.	150 (39.50)	278 (2460)	411 (3637)	602 (5328)	716 (6337)	802 (7098)	904 (8000)	942 (8337)	1057 (9354)
		464 rpm	459 rpm	454 rpm	445 rpm	435 rpm	428 rpm	422 rpm	412 rpm
Max Int.	190 (50.19)	260 (2301)	392 (3469)	588 (5204)	710 (6284)	795 (7036)	892 (7894)	930 (8231)	
		595 rpm	588 rpm	582 rpm	575 rpm	568 rpm	562 rpm	555 rpm	

10,000 SERIES 500		518 Cm³/Rev 31.61 in³/Rev					Max Cont.	Max Int.	
Pressure Bar (psi)		70 (1030)	100 (1470)	140 (2060)	160 (2355)	180 (2652)	200 (2950)	210 (3090)	240 (3535)
	LPM (GPM)	Torque Mn (in.Lbs) Speed Specification							
FLOW	30 (7.92)	442 (3912)	675 (5975)	998 (8832)	1180 (10443)	1260 (11151)	1410 (12478)	1485 (13142)	1759 (15567)
		57 rpm	55 rpm	53 rpm	52 rpm	50 rpm	48 rpm	44 rpm	40 rpm
	60 (15.85)	455 (4026)	685 (6062)	1025 (9071)	1210 (10708)	1265 (11195)	1445 (12788)	1510 (13364)	1780 (10930)
		117 rpm	115 rpm	111 rpm	106 rpm	101 rpm	97 rpm	95 rpm	90 rpm
	90 (23.77)	450 (3982)	678 (6000)	1020 (9023)	1205 (10664)	1260 (11151)	1450 (12832)	1520 (13452)	1786 (15806)
		186 rpm	184 rpm	183 rpm	180 rpm	178 rpm	173 rpm	170 rpm	166 rpm
	105 (27.74)	445 (3938)	672 (5947)	1012 (8956)	1200 (10620)	1255 (11106)	1446 (12797)	1513 (13390)	
		205 rpm	202 rpm	198 rpm	194 rpm	192 rpm	187 rpm	186 rpm	
	120 (31.70)	440 (3894)	668 (4553)	1005 (8894)	1194 (10567)	1250 (11062)	1399 (12381)	1510 (13363)	
		240 rpm	238 rpm	235 rpm	232 rpm	230 rpm	226 rpm	225 rpm	
Max Cont.	150 (39.50)	435 (3850)	663 (5867)	1000 (8850)	1186 (10496)	1246 (11027)			
		294 rpm	290 rpm	286 rpm	282 rpm	278 rpm			
Max Int.	190 (50.19)	428 (3788)	658 (5823)	993 (8788))					
		373 rpm	368 rpm	362 rpm					

Itahydraulic
Power Tecnology

10,000 SERIES TECHNICAL DATA

10,000 SERIES 630		666 Cm³/Rev 40.64 in³/Rev				Max Cont.	Max Int.	
Pressure Bar (psi)		70 (1030)	100 (1470)	140 (2060)	160 (2355)	180 (2652)	200 (2950)	210 (3090)
	LPM (GPM)	Torque Mn (in.Lbs) Speed Specification						
FLOW	30 (7.92)	610 (5399)	880 (7788)	1280 (11328)	1404 (12425)	1616 (14302)	1780 (15753)	1843 (16311
		43 rpm	41 rpm	38 rpm	36 rpm	34 rpm	31 rpm	30 rpm
	60 (15.85)	615 (5443)	888 (5443)	1336 (11824)	1412 (12496)	1628 (14408)	1800 (15930)	
		90 rpm	87 rpm	84 rpm	82 rpm	81 rpm	77 rpm	
	90 (23.77)	608 (5381)	878 (7770)	1331 (11779)	1422 (12585)	1640 (14514)	1810 (16019)	
		140 rpm	138 rpm	136 rpm	134 rpm	132 rpm	128 rpm	
	105 (27.74)	600 (5310)	872 (7717)	1326 (11135)	1415 (12523)	1632 (14443)	1790 (15842)	
		164 rpm	162 rpm	158 rpm	155 rpm	153 rpm	149 rpm	
	120 (31.70)	595 (5266)	865 (7655)	1310 (11594)	1405 (12434)	1625 (14381)	1780 (15753)	
		186 rpm	183 rpm	180 rpm	177 rpm	174 rpm	171 rpm	
Max Cont.	150 (39.50)	590 (5222)	855 (7567)	1302 (11533)	1398 (12372)			
		235 rpm	232 rpm	228 rpm	224 rpm			
Max Int.	190 (50.19)	586 (5186)	864 (7487)					
		298 rpm	292 rpm					

10,000 SERIES 1000		990 Cm³/Rev 60.4 in³/Rev		Max Cont.	Max Int.
Pressure	Bar (PSI)	70 (1015)	100 (1450)	140 (2030)	160 (2320)
	LPM (GPM)	Torque in Nm (in.Lbs) Speed specification			
FLOW	30 (7.90)	978 (8649)	1410 (12410)	1980(12511)	20075(2270)
	(rpm)	28	27	26	24
	60 (15.9)	992 (8773)	1422 (12576)	2015(17821)	2280(20129)
	(rpm)	58	56	55	51
	90 (23.8)	987 (8129)	1425 (12603)	2003(17715)	2276(20129)
	(rpm)	87	85	82	76
	105 (27.7)	983 (8694)	1418 (12541)	1994(17635)	2243(19837)
	(rpm)	101	98	94	87
	120 (31.7)	975 (8623)	1409 (12461)	1988(17582)	2224(19669)
	(rpm)	113	109	105	100
Max Cont.	150 (39.6)	961 (8499)	1368 (12099)	1903(16830)	
	(rpm)	140	136	123	
Max Int.	190 (50.2)	943 (8340)	1338 (11833)		
	(rpm)	170	158		