



MOTORS

Gear Motors	144
Vane Motors	145
Orbital Motors	146
Radial Piston Motors	158

The product information and specifications within this catalogue should be viewed as a guide only and are subject to change without notice. Please refer to inside front cover for further details.



GEAR MOTORS

Eaton Model 21300



SPECIFICATIONS:

Rotation:	Dual
Mounting Flange:	SAE 2 Bolt "A"
Rated Pressure:	2000 PSI (138 bar)
Maximum Pressure:	2500 PSI (172 bar)
Maximum Drain Line Pressure:	100 PSI (7 bar)
Maximum Continuous Inlet Temperature:	225°F (107°C)
Minimum Operating Temperature:	-20°F (-29°C)
Maximum Thrust Load:	50 lbs (222.4 N)
Maximum Shaft Side Load @ 1" from Mounting Face:	310 lbs (1379 N)
Weight:	5 lbs (2.3 Kg)
Paint:	Primer

Model Code	Displacement Cu. In./Rev (mL/Rev)	Rated RPM	Maximum PSI (bar)	*Input GPM (L/min.) @ 2000 PSI & Rated Speed	Output Horsepower (kW) @ 2000 PSI & Rated Speed	Output Torque lbs. in.(N-m) 2000 PSI & Rated Speed
21300	0.40 (6.6)	4000	2500 (172)	9.3 (36.3)	7.0 (5.2)	110 (12)
21301	0.49 (8.0)	4000	2500 (172)	11.3 (42.8)	9.0 (6.7)	142 (16)
21302	0.58 (9.5)	3850	2500 (172)	13.0 (49.2)	10.6 (7.9)	172 (20)
21303	0.70 (11.5)	3750	2500 (172)	14.0 (53.0)	11.8 (8.8)	198 (22)
21304	0.84 (13.8)	3650	2500 (172)	16.0 (60.6)	13.5 (10.1)	233 (26)
21305	1.02 (16.7)	3500	2500 (172)	18.5 (70.0)	15.8 (11.8)	284 (32)
21306	1.24 (20.3)	3400	2500 (172)	21.0 (79.5)	18.5 (13.8)	342 (38)
21307	1.48 (24.3)	3200	2500 (172)	25.5 (96.5)	20.2 (15.1)	399 (45)
21308	1.77 (29.0)	3000	2500 (172)	28.0 (106.0)	22.0 (16.4)	462 (52)

* GPM Reading taken at 180°F temperature

ORDERING INFORMATION:

2130 4 D SC
(1) (2) (3) (4)

(1) BASIC MODEL NUMBER
2130

(2) DISPLACEMENT	
0 = 0.40	5 = 1.02
1 = 0.49	6 = 1.24
2 = 0.58	7 = 1.48
3 = 0.70	8 = 1.77
4 = 0.84	

(3) ROTATION
D = Dual

(4) A-SHAFT TYPE B-PORT LOCATION C-PORT SIZE		
SA = A - Spline (9tooth)	B - Side	C - 1-1/16-12 SAE
SB = A - Spline (9tooth)	B - Rear	C - 1-1/16-12 SAE
SC = A - Keyed .625 Dia. 1.25 Lg.	B - Side	C - 1-1/16-12 SAE
SD = A - Keyed .625 Dia. 1.25 Lg.	B - Rear	C - 1-1/16-12 SAE
SE = A - Keyed .625 Dia. 2.31 Lg.	B - Side	C - 1-1/16-12 SAE
SF = A - Keyed .625 Dia. 2.31 Lg.	B - Rear	C - 1-1/16-12 SAE



VANE MOTORS

Vickers M2U Series - Pilot Assisted, Single Directional Vane Motor

M2U has an integral check valve for internally providing under-vane pressure utilising the cracking pressure. It has an advantage for free wheeling applications.



Model Code	Mounting & Inlet Port	Torque lb-in/100 PSI	Outlet Port	Shaft Option	Port Orientation	Design Code	Displ. cc/rev.	Max. Bar	Max RPM
M2U	1S: SAE-A-2 1-5/16"-12 UNO	15 (1.6Nm@7bar)	S: 1-5/16" UNO	1: Keyed (3/4" dia)	A: St'd Oppos.	10-S60	18	140	2800
		18 (2.0)		3: Threaded			21.6	140	2800
		25 (2.8)		11: Splined (11T)			25.4	140	2500
		35 (4.0)					37.5	140	2000

S60 Suffix in the design code represents a high pressure shaft seal for up to 50 PSI (3.4 bar).

Vickers M2-210 Series - Rocker Arm Assisted, Bi-directional Vane Motors



Model Code	Mounting & Inlet Port	Torque lb-in/100 PSI	Outlet Port	Shaft Option	Port Orientation	Design Code	Displ. cc/rev.	Max. Bar	Max RPM
M2-210	SAE-A-2	25 (2.8Nm@7bar)	3/4" NPT	1: Keyed (3/4" dia)	C: St'd	13	24.7	140	2200
		35 (4.0)		3: Threaded			35.4	123	1800
				11: Splined (11T)					

Minimum speed for M2U and M2-210 can vary between 50 and 100 RPM depending on motor size and drive load.

Vickers M Series - High Pressure Vane Motors

FEATURES:

- Replaceable cartridge design - Serviceability
- Dual pressure plate design - High efficiency
- Hydraulic balance principle - Longer life/bearing life
- Simply convertible port orientation - Mounting flexibility



Model Code	Torque lb-in per 100PSI (NM/7bar)	Mounting & Ports	Shaft Options	Port Orient.	Design Code	Displ. cc/rev	Max. RPM@bar	Weight Kg
26M	30 (3.3)	A: St'd SAE B-2	1: 7/8" dia keyed	C: St'd in line	20	31.5		18
	42 (4.7)	1.25" Flange	11: 13T splined			43.9	3600 @ 34	
	55 (6.2)					57.7	4000 @ 34	
	65 (7.3)					68.7		
35M	80 (9.0)	A: St'd SAE C-2	1: 1.25" dia keyed	C: St'd in line	20	83.6		29
	95 (10.7)	1.5" Flange	11: 14T splined			100.3	2600 @ 155	
	115 (13.0)					121.9	3000* @ 172	
45M	130 (14.7)	A: St'd SAE C-2	1: 1.25" dia keyed	C: St'd in line	20	138		39
	155 (17.5)	2" Flange	11: 14T splined			163.2		
	185 (20.9)					193.2		
50M	220 (24.9)	A: St'd SAE D-2	1: 1.75" dia keyed	C: St'd in line	20-S114	231.2	2800/3200* @ 34	73
	255 (28.8)	2.5" Flange	11: 13T splined			268.1	2200 @ 155	
	300 (33.9)					317.1	2400* @ 172**	

26M uses heavy duty shaft bearing in 25M Series

* Maximum speeds for intermittent operation

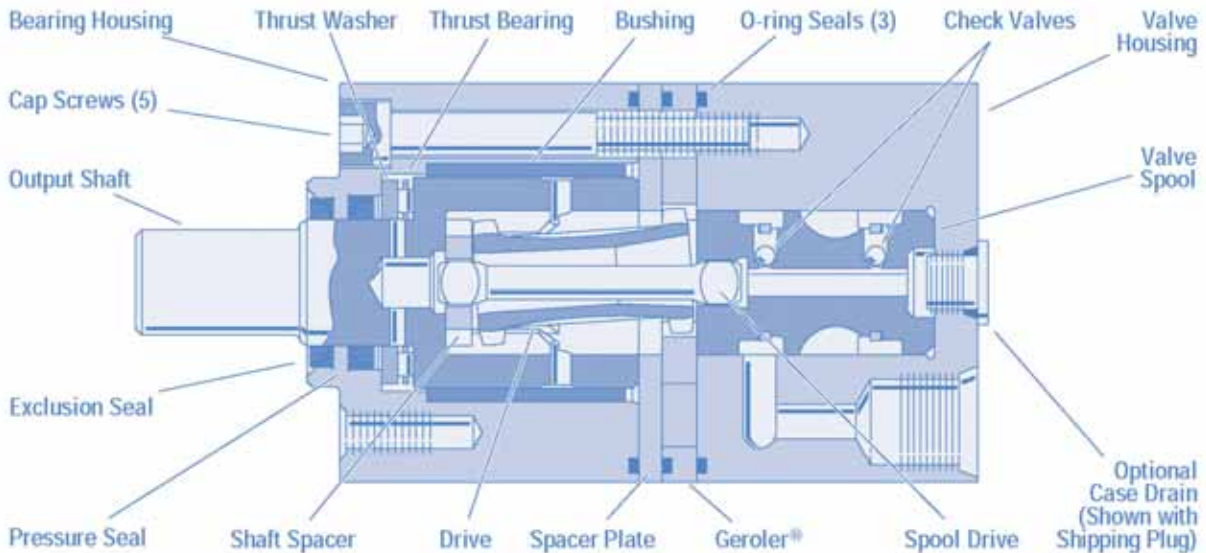
** 172 bar for CCW rotation only, 155 bar for CW (suffix S124 model)

*** Minimum speed normally 100 RPM, but can vary with drive load and other conditions.



ORBITAL MOTORS

Char-Lynn J-2 Series



Char-Lynn®

Acquired by Eaton in 1970, Char-Lynn brand products have continued the tradition of being a well-respected line of hydraulic steering units and general-purpose motors. Char-Lynn is also known for its spool-valve, disc-valve and high performance motors.

Char-Lynn high torque low speed motors pack a lot of power into a small package.

These hydraulic motors offer overall compactness in addition to taking full advantage of the high pressure ratings typical of present-day hydraulic components.

The highly precise manufacture of parts ensures consistent, dependable performance and long life, even under varying conditions.



SPECIFICATION DATA: J-2 SERIES

Displacement cm³/r (in³/r)		8.2 (.50)	12.9 (.79)	19.8 (1.21)	31.6 (1.93)	50.0 (3.00)
Max.Speed(RPM) @ Cont. Flow		1992	1575	1043	650	393
Flow	Continuous	17 (4.5)	21 (5.5)	21 (5.5)	21 (5.5)	21 (5.5)
LPM (GPM)	Intermittent	21 (5.5)	25 (6.5)	25 (6.5)	25 (6.5)	25 (6.5)
Torque	Continuous	16 (141)	25 (225)	38 (333)	50 (446)	62 (549)
Nm (in-lb)	Intermittent	19 (164)	30 (263)	46 (405)	62 (546)	84 (743)
	Peak	22 (193)	36 (321)	48 (425)	83 (733)	86 (765)
Pressure	Continuous	140 (2030)	140 (2030)	140 (2030)	121 (1750)	97 (1400)
bar (PSI)	Intermittent	165 (2400)	165 (2400)	165 (2400)	150 (2175)	140 (2030)
	Peak	220 (3190)	220 (3190)	220 (3190)	190 (2756)	150 (2175)

PRODUCT NUMBERS: J-2 SERIES 129-xxxx

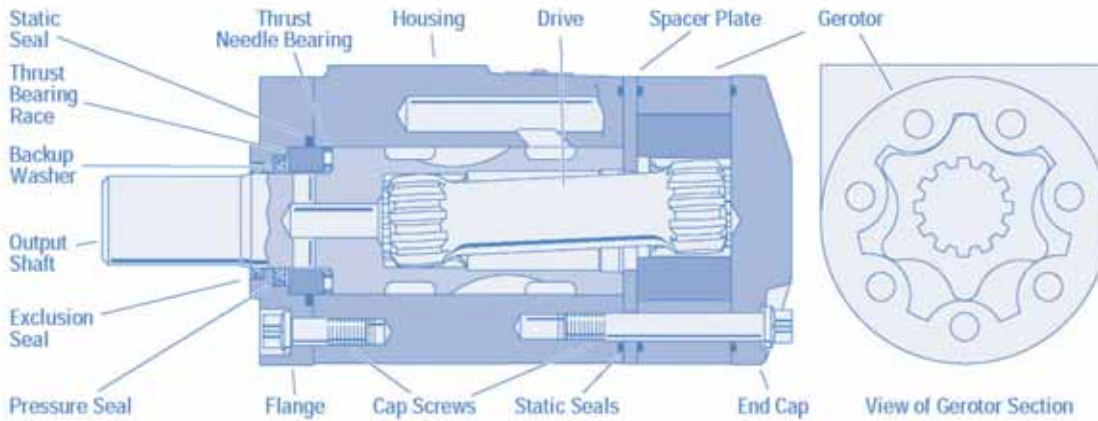
Add three digit prefix - 129-to four digit number from chart for complete product number
eg. 129-0382

Orders will not be accepted without three digit prefix.

	Port Location	Port Size	Mounting Holes (5)	Shaft	Displ. cm ³ /r (in ³ /r)/Product number 129-xxxx			
					8.2(.50)	12.9(.79)	19.8(1.21)	31.6(1.93)
End Port	9/16-18 UNF - 2B O-ring (2)		1/4-28 UNF 2B	5/8 inch straight	129-0001	-0002	-0003	-0004
Motors	G3/8 (BSP) (2)		M6 x 1 - 6H	16 mm inch straight	129-0113	-0114	-0115	-0116
Side Port	9/16-18 UNF - 2B O-ring (2)		1/4-28 UNF 2B	5/8 inch straight	129-0017	-0018	-0019	-0020
Motors	G3/8 (BSP) (2)		M6 x 1 - 6H	16 mm inch straight	129-0021	-0022	-0023	-0024



Char-Lynn H Series



SPECIFICATION DATA: H SERIES

Displacement cm³/r (in³/r)		36 (2.2)	46 (2.8)	59 (3.6)	74 (4.5)	97 (5.9)	120 (7.3)	146 (8.9)
Max.Speed(RPM) @ Cont. Flow		1021	969	953	760	585	469	385
Flow	Continuous	38 (10)	45 (12)	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)
LPM (GPM)	Intermittent	38 (10)	53 (14)	64 (17)	68 (18)	68 (18)	76 (20)	76 (20)
Torque	Continuous	56 (497)	73 (650)	91 (802)	118 (1044)	155 (1368)	192 (1699)	221 (1954)
Nm (in-lb)	Intermittent	75 (668)	99 (876)	122 (1076)	158 (1401)	207 (1829)	257 (2278)	300 (2653)
Min. Starting Torque @ Continuous		46 (410)	59 (520)	76 (670)	95 (840)	124 (1100)	154 (1360)	176 (1560)
Nm (in-lb) @ Intermittent		63 (560)	81 (720)	104 (920)	130 (1150)	171 (1510)	210 (1860)	246 (2180)
Pressure	Continuous	124 (1800)	124 (1800)	124 (1800)	124 (1800)	124 (1800)	124 (1800)	117 (1700)
bar (PSI)	Intermittent	165 (2400)	165 (2400)	165 (2400)	165 (2400)	165 (2400)	165 (2400)	159 (2300)

Displacement cm³/r (in³/r)		159 (9.7)	185 (11.3)	231 (14.1)	293 (17.9)	370 (22.6)	739 (45.1)
Max.Speed(RPM) @ Cont. Flow		353	304	243	192	152	74
Flow	Continuous	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)
LPM (GPM)	Intermittent	76 (20)	76 (20)	76 (20)	76 (20)	76 (20)	76 (20)
Torque	Continuous	233 (2059)	265 (2343)	302 (2669)	351 (3110)	407 (3604)	389 (3440)
Nm (in-lb)	Intermittent	319 (2824)	356 (3151)	415 (3671)	466 (4121)	484 (4283)	520 (4600)
Min. Starting Torque @ Continuous		186 (1650)	211 (1870)	238 (2110)	282 (2500)	330 (2920)	316 (2800)
Nm (in-lb) @ Intermittent		262 (2320)	293 (2590)	339 (3000)	388 (3430)	408 (3610)	434 (3840)
Pressure	Continuous	114 (1650)	110 (1600)	100 (1450)	93 (1350)	86 (1250)	41 (600)
bar (PSI)	Intermittent	155 (2250)	148 (2150)	138 (2000)	124 (1800)	103 (1500)	55 (800)

Maximum Case Pressure - without Case Drain - 103 bar (1500 PSI)

PRODUCT NUMBERS: H SERIES 101-xxxx

Add three digit prefix - 101-to four digit number from chart for complete product number
eg. 101-1868.

Orders will not be accepted without three digit prefix.

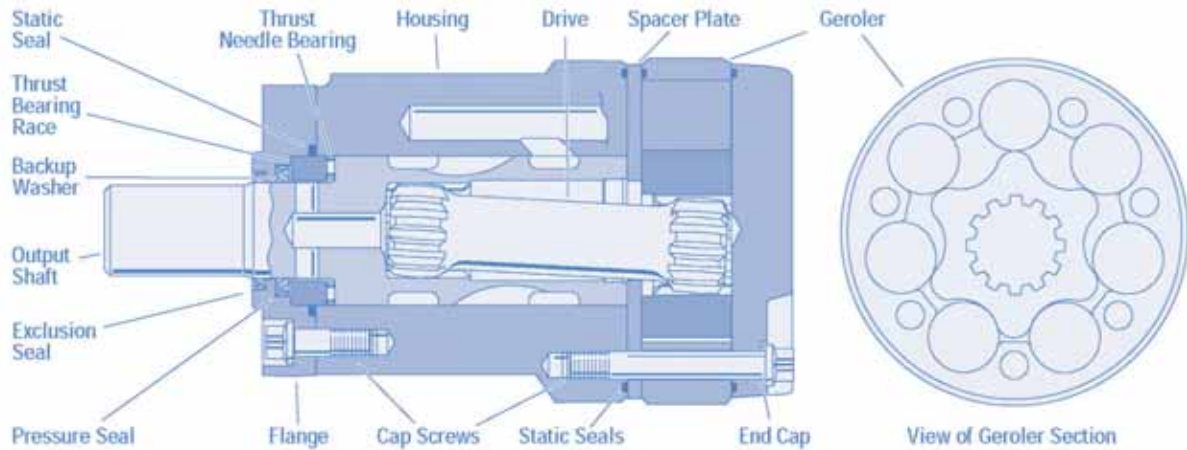
Mounting	Shaft	Displ. cm ³ /r (in ³ /r)/Product number 101-xxxx												
		36(2.2)	46(2.8)	59(3.6)	74(4.5)	97(5.9)	120(7.3)	146(8.9)	159(9.7)	185(11.3)	231(14.1)	293(17.9)	370(22.6)	740(45.0)
2 Bolt	1 in. straight w/ woodruff key	101-1700	-1033	-1701	-1034	-1035	-1702	-1703	-1036	-1037	-1038	-1039	-1040	-
Flange	1 in. SAE 6B Splined	101-1721	-1081	-1722	-1082	-1083	-1723	-1724	-1084	-1085	-1086	-1087	-1088	-
4 Bolt	1 in. straight w/ woodruff key	101-1749	-1009	-1750	-1010	-1011	-1751	-1752	-1012	-1013	-1014	-1015	-1016	-
Flange	1 in. SAE 6B Splined	101-1761	-1057	-1762	-1058	-1059	-1872	-1763	-1060	-1061	-1062	-1063	-1064	-

* Port = 7/8-14 O-ring

Note: 36 and 59 cc/rev have motors have free running gerotor as standard.



Char-Lynn S Series



SPECIFICATION DATA: S SERIES

Displacement cm³/r (in³/r)		59 (3.6)	74 (4.5)	97 (5.9)	120 (7.3)	146 (8.9)	159 (9.7)	185 (11.3)
Max.Speed(RPM) @ Cont. Flow		962	762	585	470	385	353	303
Flow	Continuous	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)
LPM (GPM)	Intermittent	68 (18)	76 (20)	76 (20)	76 (20)	76 (20)	76 (20)	76 (20)
Torque	Continuous	107 (943)	139 (1228)	181 (1591)	227 (2010)	263 (2332)	291 (2567)	324 (2870)
Nm (in-lb)	Intermittent	133 (1174)	173 (1529)	225 (1991)	281 (2490)	323 (2861)	347 (3072)	390 (3450)
Min. Starting Torque @ Continuous		90 (800)	113 (1000)	148 (1310)	184 (1630)	212 (1880)	232 (2050)	263 (2330)
Nm (in-lb)	@ Intermittent	116 (1030)	146 (1290)	190 (1680)	236 (2090)	271 (2400)	289 (2560)	329 (2910)
Pressure	Continuous	138 (2000)	138 (2000)	138 (2000)	138 (2000)	131 (1900)	131 (1900)	128 (1850)
bar (PSI)	Intermittent	172 (2500)	172 (2500)	172 (2500)	172 (2500)	162 (2350)	159 (2300)	155 (2250)

Displacement cm³/r (in³/r)		231 (14.1)	293 (17.9)	370 (22.6)
Max.Speed(RPM) @ Cont. Flow		243	192	153
Flow	Continuous	57 (15)	57 (15)	57 (15)
LPM (GPM)	Intermittent	76 (20)	76 (20)	76 (20)
Torque	Continuous	369 (3265)	411 (3641)	452 (4004)
Nm (in-lb)	Intermittent	438 (3877)	485 (4295)	514 (4548)
Min. Starting Torque @ Continuous		302 (2670)	338 (2990)	369 (3270)
Nm (in-lb)	@ Intermittent	374 (3310)	417 (3690)	438 (3880)
Pressure	Continuous	117 (1700)	103 (1500)	90 (1300)
bar (PSI)	Intermittent	141 (2050)	124 (1900)	103 (1500)

Maximum Case Pressure - without Case Drain - 103 bar (1500 PSI)

PRODUCT NUMBERS: S SERIES 103-xxxx

Add three digit prefix - 103-to four digit number from chart for complete product number
eg. 103-1537.

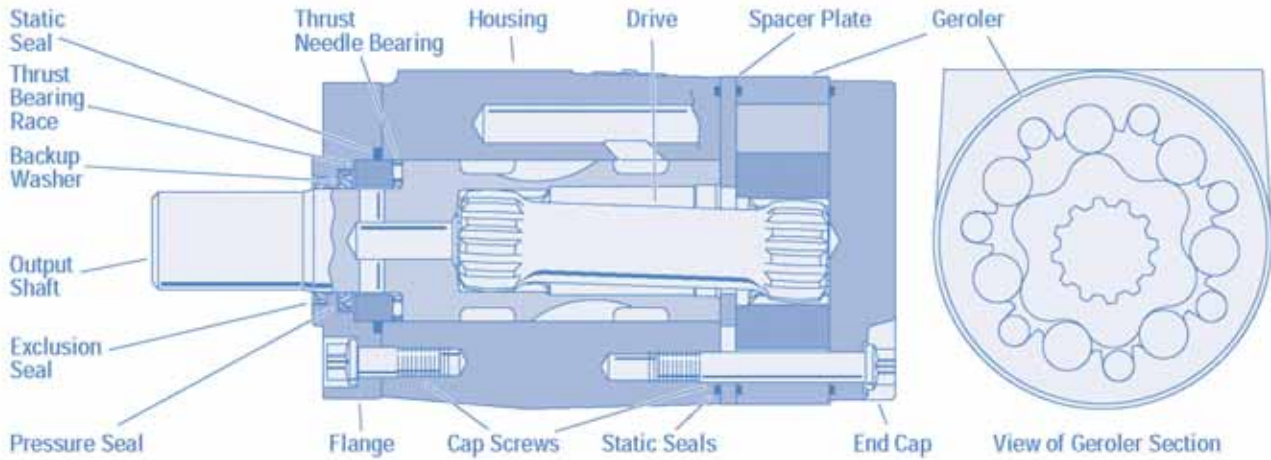
Orders will not be accepted without three digit prefix.

Mounting	Shaft	Displ. cm ³ /r (in ³ /r)/Product number 103-xxxx									
		59(3.6)	74(4.5)	97(5.9)	120(7.3)	146(8.9)	159(9.7)	185(11.3)	231(14.1)	293(17.9)	370(22.6)
2 Bolt	1 in. straight w/ woodruff key	103-1635	-2034	-2035	-1639	-1539	-2036	-2037	-2038	-2039	-2040
Flange	1 in. SAE 6B Splined	103-1652	-2082	-2083	-1553	-1554	-2084	-2085	-2086	-2087	-2088
4 Bolt	1 in. straight w/ woodruff key	103-1638	-2010	-2011	-1640	-1641	-2012	-2013	-2014	-2015	-2016
Flange	1 in. SAE 6B Splined	103-1579	-2058	-2059	-1580	-1581	-2060	-2061	-2062	-2063	-2064

* Port = 7/8-14 O-ring



Char-Lynn T Series



SPECIFICATION DATA: T SERIES

Displacement cm³/r (in³/r)		36 (2.2)	49 (3.0)	66 (4.0)	80 (2.2)	102 (6.2)	131 (8.0)	157 (9.6)
Max.Speed(RPM) @ Cont. Flow		1021	906	849	694	550	426	355
Flow	Continuous	38 (10)	45 (12)	57 (15)	57 (15)	57 (15)	57 (15)	57 (15)
LPM (GPM)	Intermittent	38 (10)	57 (15)	68 (18)	76 (20)	76 (20)	76 (20)	76 (20)
Torque	Continuous	76 (672)	105 (928)	138 (1222)	174 (1541)	219 (1936)	251 (2226)	297 (2628)
Nm (in-lb)	Intermittent	93 (824)	118 (1131)	168 (1488)	212 (1872)	264 (2339)	307 (2718)	359 (3178)
Pressure	Continuous	155 (2250)	155 (2250)	155 (2250)	155 (2250)	155 (2250)	138 (2000)	138 (2000)
bar (PSI)	Intermittent	190 (2750)	190 (2750)	190 (2750)	190 (2750)	190 (2750)	172 (2500)	172 (2500)
Displacement cm³/r (in³/r)		195 (11.9)	244 (14.9)	306 (18.7)	370 (22.6)			
Max.Speed(RPM) @ Cont. Flow		287	229	183	152			
Flow	Continuous	57 (15)	57 (15)	57 (15)	57 (15)			
LPM (GPM)	Intermittent	76 (20)	76 (20)	76 (20)	76 (20)			
Torque	Continuous	359 (3178)	410 (3633)	441 (3905)	430 (3811)			
Nm (in-lb)	Intermittent	437 (3864)	485 (4290)	483 (4275)	486 (4300)			
Pressure	Continuous	138 (2000)	127 (1850)	110 (1600)	90 (1300)			
bar (PSI)	Intermittent	172 (2500)	155 (2250)	124 (1800)	103 (1500)			

Maximum Case Pressure - without Case Drain - 103 bar (1500 PSI)

PRODUCT NUMBERS: T SERIES 158-xxxx

Add three digit prefix - 158-to four digit number from chart for complete product number eg. 158-1537.

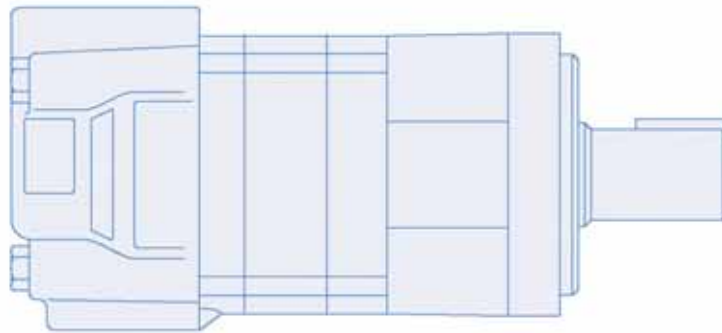
Orders will not be accepted without three digit prefix.

Mounting	Shaft	Displ. cm ³ /r (in ³ /r)/Product number 158-xxxx										
		36(2.2)	49(3.0)	66(4.0)	80(4.9)	102(6.2)	131(8.0)	157(9.6)	195(11.9)	244(14.9)	306(18.7)	370(22.6)
2 Bolt	1 in. straight w/ woodruff key	-	-	103-1537	-2034	-2035	-1639	-2036	-2037	-2038	-2039	-2040
Flange	1 in. SAE 6B Splined	-	-	103-1552	-2082	-2083	-1553	-2084	-2085	-2086	-2087	-2088
4 Bolt	1 in. straight w/ woodruff key	-	-	103-1570	-2010	-2011	-1640	-2012	-2013	-2014	-2015	-2016
Flange	1 in. SAE 6B Splined	-	-	103-1579	-2058	-2059	-1580	-2060	-2061	-2062	-2063	-2064

* Port = 7/8-14 O-ring



Char-Lynn 2,000 Series



SPECIFICATION DATA: 2,000 SERIES

Displacement cm³/r (in³/r)		80 (4.9)	100 (6.2)	130 (8.0)	160 (9.6)	195 (11.9)	245 (14.9)	305 (18.7)	390 (24.0)	490 (29.8)
Max.Speed(RPM) @ Continuous		799	742	576	477	385	308	246	191	153
..... Flow Intermittent		908	924	720	713	577	462	365	287	230
Flow	Continuous	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)
LPM (GPM)	Intermittent	75 (20)	95 (25)	95 (25)	115 (30)	115 (30)	115 (30)	115 (30)	115 (30)	115 (30)
Torque	Continuous	235 (2065)	295 (2630)	385 (3420)	455 (4040)	540 (4780)	660 (5850)	765 (6750)	775 (6840)	845 (7470)
Nm (in-lb)	Intermittent	345 (3035)	445 (3950)	560 (4970)	570 (5040)	665 (5890)	820 (7250)	885 (7820)	925 (8170)	930 (8225)
Pressure	Continuous	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	155 (2250)	120 (1750)
bar (PSI)	Intermittent	310 (4500)	310 (4500)	310 (4500)	260 (3750)	260 (3750)	260 (3750)	240 (3500)	190 (2750)	140 (2000)
	Peak	310 (4500)	310 (4500)	310 (4500)	310 (4500)	310 (4500)	310 (4500)	310 (4500)	225 (3250)	170 (2500)

Maximum Case Pressure - without Case Drain* - 140 bar (2000 PSI)

PRODUCT NUMBERS: 2,000 SERIES

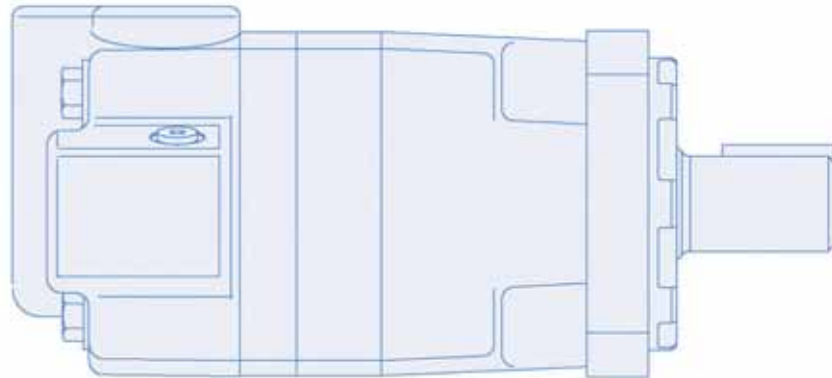
Add three digit prefix - 104-, 105- or 106-to four digit number from chart for complete product number eg. 106-1008.

Orders will not be accepted without three digit prefix.

Mounting	Shaft	Ports	Displ. cm ³ /r (in ³ /r)/Product number								
			80(4.9)	100(6.2)	130(8.0)	160(9.6)	195(11.9)	245(14.9)	305(18.7)	395(24.0)	490(29.8)
2 Bolt SAE A	1 inch straight	7/8-14 O-ring Staggered	104-1001	-1002	-1003	-1004	-1005	-1006	-1007	-1143	-
		1-1/16-12 O-ring 180° Apart	104-1037	-1038	-1039	-1040	-1041	-1042	-1043	-1044	-
	1-1/4 inch straight	7/8-14 O-ring Staggered	104-1022	-1023	-1024	-1025	-1026	-1027	-1028	-1228	-1420
		1-1/16-12 O-ring 180° Apart	104-1061	-1062	-1063	-1064	-1065	-1066	-1067	-1068	-1421
	1-1/4 inch 14T splined	7/8-14 O-ring Staggered	104-1029	-1030	-1031	-1032	-1033	-1034	-1035	-1229	-1422
		1-1/16-12 O-ring 180° Apart	104-1087	-1088	-1089	-1090	-1091	-1092	-1093	-1094	-1423
2 Bolt SAE B	1-1/4 inch straight	7/8-14 O-ring Staggered	104-1200	-1201	-1202	-1203	-1204	-1205	-1206	-1207	-
		1-1/4 inch involute SAE C splined	104-1208	-1209	-1210	-1211	-1212	-1213	-1214	-1215	-
	1 inch SAE 6B splined	7/8-14 O-ring Staggered	104-1193	-1194	-1195	-1196	-1197	-1198	-1199	-	-
		7/8 inch SAE 6B splined	104-1216	-1217	-1218	-1219	-1220	-	-	-	-
Std w/4 Bolt	32mm straight	G1/2 (BSP)	104-1384	-1385	-1386	-1387	-1388	-1389	-1390	-1391	-
Wheel	1-1/4 inch tapered	7/8-14 O-ring Staggered	105-1001	-1002	-1003	-1004	-1005	-1006	-1007	-1060	-1152
Motor	1-1/4 inch 14T splined	7/8-14 O-ring Staggered	105-1029	-1030	-1031	-1032	-1033	-1034	-1035	-1096	-
Bearingless	-	7/8-14 O-ring Staggered	106-1008	-1009	-1010	-1011	-1012	-1013	-1014	-1015	-1047



Char-Lynn 4,000 Series



SPECIFICATION DATA: 4,000 SERIES

		110 (6.7)	130 (7.9)	160 (9.9)	205 (12.5)	245 (15.0)	310 (19.0)	395 (24.0)	495 (30.0)	625 (38.0)
Displacement cm³/r (in³/r)		110 (6.7)	130 (7.9)	160 (9.9)	205 (12.5)	245 (15.0)	310 (19.0)	395 (24.0)	495 (30.0)	625 (38.0)
Max.Speed(RPM) @ Continuous		697	722	582	459	383	303	239	191	151
..... Flow Intermittent		868	862	693	546	532	422	376	305	241
Flow	Continuous	75 (20)	95 (25)	95 (25)	95 (25)	95 (25)	95 (25)	95 (25)	95 (25)	95 (25)
LPM (GPM)	Intermittent	95 (25)	115 (30)	115 (30)	115 (30)	130 (35)	130 (35)	150 (40)	150 (40)	150 (40)
Torque	Continuous	320 (2850)	375 (3330)	485 (4290)	600 (5300)	705 (6240)	850 (7530)	930 (8240)	945 (8375)	970 (8605)
Nm (in-lb)	Intermittent	470 (4160)	560 (4940)	705 (6240)	800 (7100)	845 (7470)	1065(9420)	1185 (10470)	1170 (10350)	1180 (10450)
Pressure	Continuous	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	190 (2750)	140 (2000)	115 (1700)
bar (PSI)	Intermittent	310 (4500)	310 (4500)	310 (4500)	310 (4500)	260 (3750)	260 (3750)	240 (3500)	170 (2500)	140 (2000)
	Peak	310 (4500)	310 (4500)	310 (4500)	310 (4500)	310 (4500)	310 (4500)	295 (4250)	230 (3300)	180 (2600)

Maximum Case Pressure - without Case Drain* - 100 bar (1500 PSI)

PRODUCT NUMBERS: 4,000 SERIES

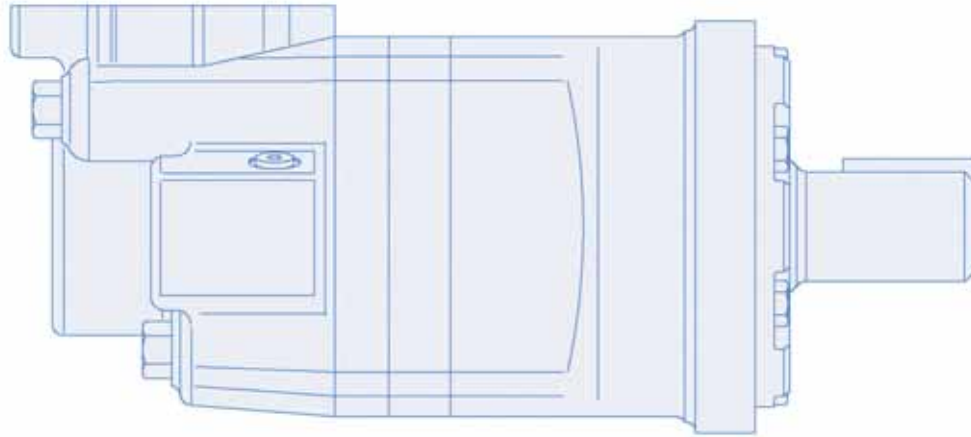
Add three digit prefix - 109-, 110- or 111-to four digit number from chart for complete product number eg. 111-1033.

Orders will not be accepted without three digit prefix.

Mounting	Shaft	Ports	Displ. cm ³ /r (in ³ /r)/Product number								
			110(6.7)	130(7.9)	160(9.9)	205(12.5)	245(15.0)	310(19.0)	395(24.0)	465(30.0)	625(38.0)
Std SAE B-Mount	1-1/4 inch straight	1-1/16 O-ring	109-1100	-1101	-1102	-1103	-1104	-1105	-1106	-1212	-1215
	1-5/8 inch tapered	1-1/16 O-ring	109-1107	-1108	-1109	-1110	-1111	-1112	-1113	-	-
	1-1/4 inch 14T splined	1-1/16 O-ring	109-1114	-1115	-1116	-1117	-1118	-1119	-1120	-	-
Wheel Motor	1-1/4 inch straight	1-1/16 O-ring	110-1074	-1075	-1076	-1077	-1078	-1079	-1080	-	-1122
	1-5/8 inch tapered	1-1/16 O-ring	110-1081	-1082	-1083	-1084	-1085	-1086	-1087	-1116	-1117
	1-1/4 inch 14T splined	1-1/16 O-ring	110-1088	-1089	-1090	-1091	-1092	-1093	-1094	-	-
Bearingless	-	1-1/16 O-ring	111-1033	-1034	-1035	-1036	-1037	-1038	-1039	-1062	-1063



Char-Lynn 6,000 Series



SPECIFICATION DATA: 6,000 SERIES

Displacement cm³/r (in³/r)		195 (11.9)	245 (15.0)	310 (19.0)	390 (23.9)	490 (30.0)	625 (38.0)	985 (60.0)
Max.Speed(RPM) @	Continuous	775	615	485	387	307	241	153
..... Flow	Intermittent	866	834	698	570	454	355	230
Flow	Continuous	150 (40)	150 (40)	150 (40)	150 (40)	150 (40)	150 (40)	150 (40)
LPM (GPM)	Intermittent	170 (45)	210 (55)	225 (60)	225 (60)	225 (60)	225 (60)	225 (60)
Torque	Continuous	575 (5100)	735 (6510)	930 (8230)	1155 (10230)	1445 (12800)	1480 (13100)	1685 (14920)
Nm (in-lb)	Intermittent	860 (7620)	1100(9740)	1355 (11990)	1635 (14490)	1885 (16670)	1898 (16800)	1875 (16580)
Pressure	Continuous	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	170 (2500)	140 (2000)
bar (PSI)	Intermittent	310 (4500)	310 (4500)	310 (4500)	310 (4500)	275 (4000)	221 (3200)	140 (2000)
	Peak	310 (4500)	310 (4500)	310 (4500)	310 (4500)	310 (4500)	240 (3500)	170 (2250)

Maximum Case Pressure - without Case Drain* - 100 bar (1500 PSI)

PRODUCT NUMBERS: 6,000 SERIES

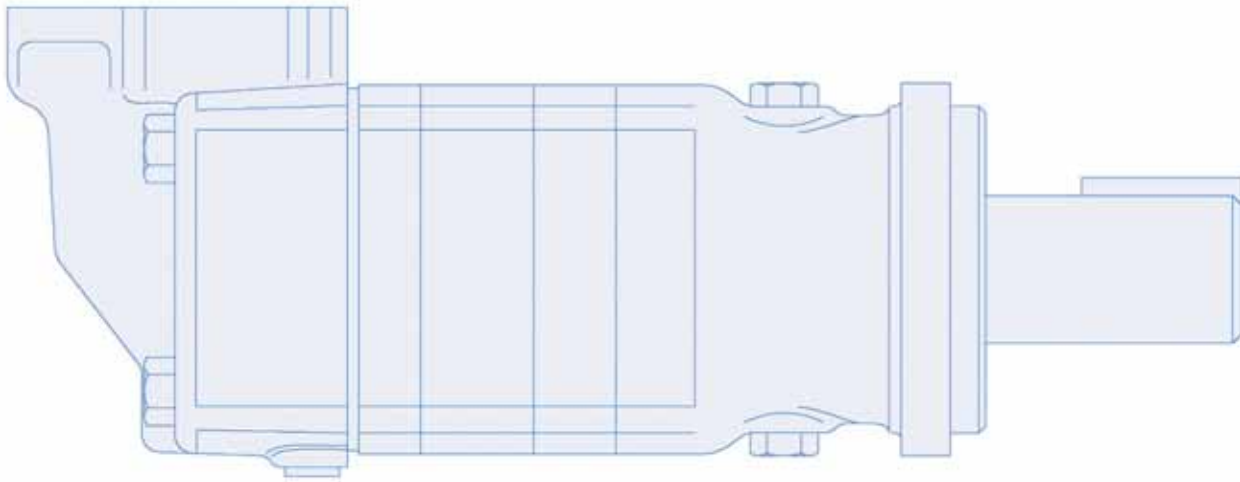
Add three digit prefix - 112-, 113- or 114-to four digit number from chart for complete product number eg. 114-1031.

Orders will not be accepted without three digit prefix.

Mounting	Shaft	Ports	Displ. cm ³ /r (in ³ /r)/Product number						
			110(6.7)	130(7.9)	160(9.9)	205(12.5)	245(15.0)	310(19.0)	395(24.0)
Standard	1-1/2 inch straight	1-5/16 O-ring	112-1064	-1065	-1066	-1067	-1068	-1107	-1069
	1-1/2 inch 17T splined	1-5/16 O-ring	112-1058	-1059	-1060	-1061	-1062	-1109	-1063
Wheel Motor	1-3/4 inch tapered	1-5/16 O-ring	113-1070	-1071	-1072	-1073	-1074	-1093	-1075
Bearingless	-	1-5/16 O-ring	114-1031	-1032	-1033	-1034	-1035	-1055	-1036



Char-Lynn 10,000 Series



SPECIFICATION DATA: 10,000 SERIES

Displacement cm³/r (in³/r)		345 (21.0)	480 (29.3)	665 (40.6)	940 (57.4)
Max.Speed(RPM) @	Continuous	501	354	254	179
Flow	Intermittent	784	552	396	279
Flow	Continuous	170 (45)	170 (45)	170 (45)	170 (45)
LPM (GPM)	Intermittent	265 (70)	265 (70)	265 (70)	265 (70)
Torque	Continuous	1040 (9220)	1475 (13050)	2085 (18450)	2700 (23910)
Nm (in-lb)	Intermittent	1390 (12310)	1965 (17410)	2610 (23080)	3440 (30460)
Pressure	Continuous	205 (3000)	205 (3000)	205 (3000)	190 (2750)
bar (PSI)	Intermittent	275 (4000)	275 (4000)	260 (3750)	240 (3500)
	Peak	275 (4000)	275 (4000)	275 (4000)	260 (3750)

Maximum Case Pressure - without Case Drain* - 20 bar (300 PSI)

PRODUCT NUMBERS: 10,000 SERIES

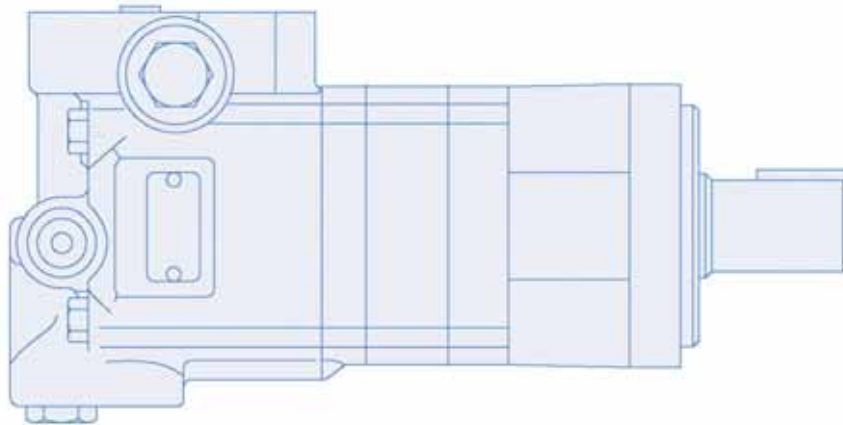
Add three digit prefix - 119-, 120- or 121-to four digit number from chart for complete product number eg. 121-1007.

Orders will not be accepted without three digit prefix.

Mounting	Shaft	Ports	Displ. cm ³ /r (in ³ /r)/Product number			
			345(21.0)	480(29.3)	665(40.6)	940(57.4)
Standard	2-1/4 inch straight	1-5/16 O-ring	119-1028	-1029	-1030	-1031
	2-1/8 inch 16T splined	1-5/16 O-ring	119-1032	-1033	-1034	-1035
	2-1/4 inch tapered	1-5/16 O-ring	119-1036	-1037	-1038	-1039
Wheel Motor	2-1/4 inch tapered	1-5/16 O-ring	120-1013	-1014	-1015	-1016
Bearingless	-	1-5/16 O-ring	121-1007	-1008	-1009	-1010



Char-Lynn Two Speed Motor - 2,000 Series



SPECIFICATION DATA: 2,000 SERIES - TWO SPEED

Displacement cm³/r (in³/r)		40 (2.45)	50 (3.1)	65 (4.0)	80 (4.8)	95 (5.95)	120 (7.45)	155 (9.35)	195 (12.0)	245 (15.0)
Max.Speed(RPM) @		1000	1000	990	860	700	560	450	350	230
Continuous Flow		500	500	495	430	350	280	225	175	115
Flow		45 (12)	55 (15)	70 (19)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)
LPM (GPM)		45 (12)	55 (15)	70 (19)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)	75 (20)
Torque Nm (in-lb)	Continuous	100 (880)	125 (1115)	165 (1450)	195 (1725)	240 (2150)	300 (2675)	380 (3350)	365 (3225)	448 (3970)
	1-1/4 Inch or 32mm Dia. Shaft Intermittent	145 (1300)	185 (1660)	240 (2150)	240 (2150)	300 (2650)	375 (3330)	440 (3900)	445 (3940)	486 (4300)
Torque Nm (in-lb)	Continuous	235 (2065)	295 (2630)	385 (3420)	455 (4040)	540 (4780)	660 (5850)	760 (6750)	770 (6840)	845 (7470)
	1-1/4 Inch or 32mm Dia. Shaft Intermittent	345 (3040)	445 (3950)	560 (4970)	570 (5040)	665 (5890)	820 (7250)	885 (7820)	925 (8170)	930 (8225)
Pressure bar (PSI)	Continuous	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	205 (3000)	155 (2250)	120 (1750)
	1-1/4 Inch or 32mm Dia. Shaft Intermittent	310 (4500)	310 (4500)	310 (4500)	260 (3750)	260 (3750)	260 (3750)	240 (3500)	190 (2750)	140 (2000)

Maximum Case Pressure - without Case Drain* - 140 bar (20000 PSI)

= HIGH SPEED MODE

= LOW SPEED MODE

PRODUCT NUMBERS: 2,000 SERIES - TWO SPEED

Add three digit prefix - 104-, 105- or 106-to four digit number from chart for complete product number eg. 106-2001.

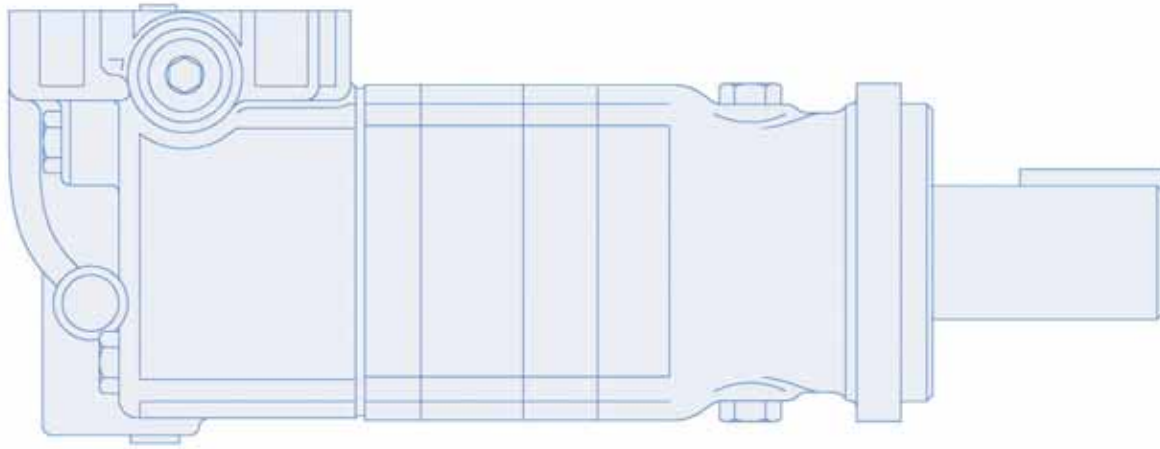
Orders will not be accepted without three digit prefix.

Mounting	Shaft	Displ. cm ³ /r (in ³ /r)/Product number								
		80(4.9)	100(6.2)	130(8.0)	160(9.6)	195(11.9)	245(14.9)	305(18.7)	395(24.0)	490(29.8)
2 Bolt SAE A	1 inch straight	104-2001	-2002	-2003	-2004	-2005	-2006	-2007	-2008	-
Flange	1-1/4 inch straight	104-2009	-2010	-2011	-2012	-2013	-2014	-2015	-2016	-
	1-1/4 inch 14T splined	104-2017	-2018	-2019	-2020	-2021	-2022	-2023	-2024	-
Wheel Motor	1-1/4 inch tapered	105-2001	-2002	-2003	-2004	-2005	-2006	-2007	-2008	-
	1-1/4 inch 14T splined	105-2009	-2010	-2011	-2012	-2013	-2014	-2015	-2016	-
Bearingless	-	106-2001	-2002	-2003	-2004	-2005	-2006	-2007	-2008	-

* Port = 7/8-14 O-ring Staggered



Char-Lynn Two Speed Motor - 10,000 Series



SPECIFICATION DATA: 10,000 SERIES - TWO SPEED

Displacement cm³/r		169 (10.3)	239 (14.6)	332.7 (20.3)	470 (28.7)
(in³/r)		345 (21.0)	480 (29.3)	665 (40.6)	940 (57.4)
Max.Speed(RPM) @		750	630	500	400
Continuous Flow		375	315	250	200
Flow		130 (35)	170 (45)	170 (45)	170 (45)
LPM (GPM)		130 (35)	170 (45)	170 (45)	170 (45)
Torque Nm (in-lb)	Continuous	440 (3900)	630 (5600)	905 (8000)	1175 (10400)
	1-1/4 Inch or 32mm Dia. Shaft Intermittent	585 (5200)	845 (7500)	1130 (10000)	1470 (13000)
Torque Nm (in-lb)	Continuous	1015 (9000)	1470 (13000)	2090 (18500)	2710 (24000)
	1-1/4 Inch or 32mm Dia. Shaft Intermittent	1355 (12000)	1965 (17400)	2600 (23000)	3445 (30500)
Pressure bar (PSI)	Continuous	205 (3000)	205 (3000)	205 (3000)	190 (2750)
	1-1/4 Inch or 32mm Dia. Shaft Intermittent	275 (4000)	275 (4000)	260 (3750)	240 (3500)

Maximum Case Pressure - without Case Drain* - 140 bar (20000 PSI)

 = HIGH SPEED MODE

 = LOW SPEED MODE

PRODUCT NUMBERS: 2,000 SERIES - TWO SPEED

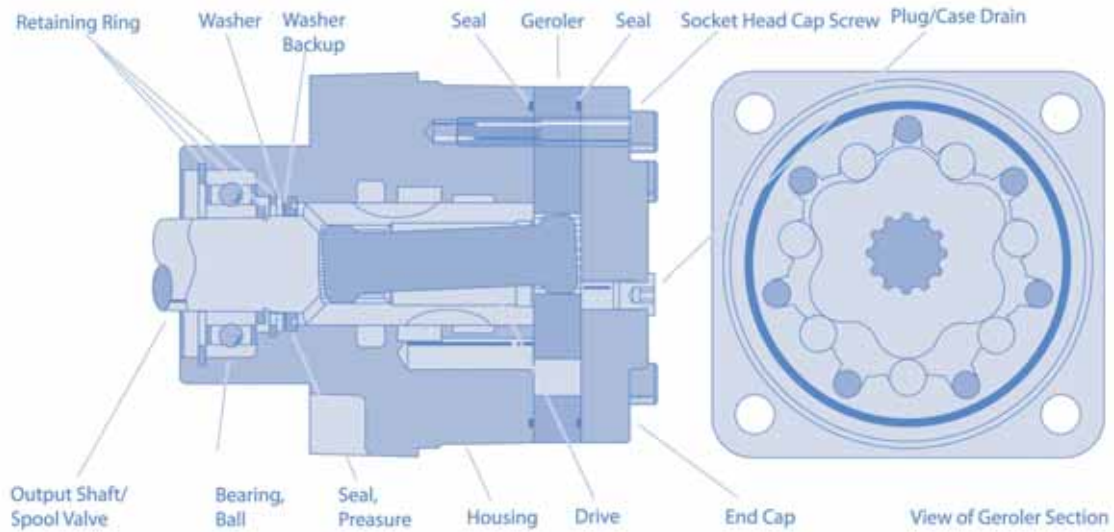
Add three digit prefix - 119-, 120- or 121-to four digit number from chart for complete product number eg. 121-2005.

Orders will not be accepted without three digit prefix.

Mounting	Shaft	Port	Displ. cm ³ /r (in ³ /r)/Product number			
			345(21.0)	480(29.3)	665(40.6)	940(57.4)
Standard	2-1/4 inch straight	1-5/16 O-ring	119-2013	-2014	-2015	-2016
	2-1/4 inch tapered	1-5/16 O-ring	119-2017	-2018	-2019	-2020
	2-1/8 inch 16T splined	1-5/16 O-ring	119-2021	-2022	-2023	-2024
Wheel Motor	2-1/4 inch tapered	1-5/16 O-ring	120-2013	-2014	-2015	-2016
Bearingless	-	1-5/16 O-ring	121-2005	-2006	-2007	-2008



Char-Lynn W Series



SPECIFICATION DATA: W SERIES

Displacement cm³/r (in³/r)		80 (4.9)	126 (7.7)	154 (9.4)	195 (11.9)	251 (15.3)	303 (18.5)	374 (22.8)
Max.Speed(RPM)		267	288	214	200	200	200	200
Flow	Continuous	23 (6)	30 (8)	34 (9)	38 (10)	53 (14)	62 (16.5)	68 (18)
LPM (GPM)	Intermittent	23 (6)	30 (8)	34 (9)	38 (10)	53 (14)	62 (16.5)	76 (20)
Torque	Continuous	176 (1555)	279 (2470)	318 (2813)	318 (2816)	375 (3319)	387 (3429)	410 (3624)
Nm (in-lb)	Intermittent	189 (1676)	298 (2640)	373 (3301)	439 (3882)	548 (4849)	539 (4769)	562 (4970)
Pressure	Continuous	165 (2400)	165 (2400)	152 (2200)	124 (1800)	110 (1600)	97 (1400)	83 (1200)
bar (PSI)	Intermittent	179 (2600)	179 (2600)	179 (2600)	179 (2600)	165 (2400)	138 (2000)	124 (1800)

PRODUCT NUMBERS: W SERIES

Add three digit prefix - 162-to four digit number from chart for complete product number
eg. 162-1016.

Orders will not be accepted without three digit prefix.

Mounting	Shaft	Ports	Displ. cm ³ /r (in ³ /r)/Product number						
			80(4.9)	126(7.7)	154(9.4)	195(11.9)	251(15.3)	303(18.5)	374(22.8)
Standard	1-1/4 inch tapered	7/8 inch O-ring	162-1016	-1017	-1018	-1019	-1020	-1021	-1022
w/Case Drain	1-1/4 inch tapered	7/8 inch O-ring	162-1023	-1024	-1025	-1009	-1008	-1026	-1027



RADIAL PISTON MOTORS

SAI GM Series

FEATURES:

- Freewheeling
- Smooth operation at very low speeds
- High mechanical and volumetric efficiencies
- High power weight ratio

SPECIFICATIONS:

GM05	25kg	Nom. Displacement	40	60	75	90	110	130	150	170	200	-	
		Peak Power KW	20	20	33	33	33	33	33	33	33	33	-
		Peak Speed RPM	1000	1000	1000	1000	900	900	900	900	800	800	-
GM1	31kg	Nom. Displacement	100	150	175	200	250	300	320	-	-	-	
		Peak Power KW	48	48	48	48	48	48	48	48	-	-	-
		Peak Speed RPM	1000	1000	900	800	700	650	600	-	-	-	
GM2	48kg	Nom. Displacement	200	250	300	350	420	500	600	630	-	-	
		Peak Power KW	59	59	59	59	59	59	59	59	59	-	-
		Peak Speed RPM	800	800	750	750	750	700	700	700	650	-	-
GM3	86kg	Nom. Displacement	350	425	500	600	700	800	900	1000	-	-	
		Peak Power KW	80	80	80	80	80	80	80	80	80	-	-
		Peak Speed RPM	700	650	600	575	500	500	400	350	-	-	
GM4	110kg	Nom. Displacement	400	500	600	800	900	1000	1100	1250	1300	-	
		Peak Power KW	100	100	100	100	100	100	100	100	100	100	-
		Peak Speed RPM	600	600	550	550	450	400	400	400	400	350	-
GM5	170kg	Nom. Displacement	525	650	800	1000	1200	1300	1450	1600	1800	2000	
		Peak Power KW	140	140	140	140	140	140	140	140	140	140	140
		Peak Speed RPM	500	500	500	425	425	375	375	300	300	260	
GM6	278kg	Nom. Displacement	1700	2100	2500	300	-	-	-	-	-	-	
		Peak Power KW	170	170	170	170	-	-	-	-	-	-	-
		Peak Speed RPM	350	300	250	225	-	-	-	-	-	-	-

ORDERING INFORMATION:

GM **100** **7** **H** **SV** **D40** **J** **R** **DM_**
(1) **(2)** **(3)** **(4)** **(5)** **(6)** **(7)** **(8)** **(9)**

(1) MOTOR SIZE

See Motor Specification Table

(2) NOMINAL DISPLACEMENT

See Motor Specification Table

(3) SHAFT OPTION

7 = Male DIN5480 (std)
 1 = Male UNI221
 9 = Female DIN5480
 3 = Female UNI221
 2 = Tapered keyed
 8 = Cylindrical keyed

(4) BEARINGS

Models GM05 - GM3
 = Ball bearings (no code)
 H = Roller bearings
 GP = Spherical roller bearing in motor cover
Models GM4 - GM5
 = Roller bearings (no code)
 G = Spherical roller bearings
Models GM6
 E = Reinforced version (standard)

(5) OTHER OPTIONS

U = Without shaft seals
 A = high pressure shaft seal
 SV = Stainless steel shaft sleeve
 V = Viton seals
 I = Case pressure relief valve 3 bar

(6) DISTRIBUTOR

D40 = Standard (GM1 - GM5)
 D90 = Standard (GM6)

(7) TACHOMETER

K = Predisposed for tachometer
 J = With tachometer coupling

(8) DIRECTION OF SHAFT ROTATION*

R = Clockwise rotation
 L = Anti-clockwise rotation

(9) DISTRIBUTOR COVER POSITION

= Position DM1 (no code)
 DM_ = Other position

* Standard motors are supplied with clockwise rotation (viewed from shaft end) with flow in Port A & out Port B

