



The RE Series motors offer the perfect compromise between price and performance by producing workhorse power at a reasonable cost. Although these motors perform well in a wide range of applications, they are especially suited for low flow, high-pressure applications. During startup, pressure causes the balance plate to flex toward the rotor, vastly improving volumetric efficiency. As the motor reaches operating pressure, the balance plate relaxes, allowing the rotor to turn freely, which translates into higher mechanical efficiencies. Transmitting this power to the output shaft is the most durable drive link in its class. Three bearing options, combined with standard mounting flanges and output shafts, allow the motor to be configured to suit nearly any application.

Features

Heavy-Duty Drive Link is most durable in its class and receives full flow lubrication to provide long life.

Valve-In-Rotor Design provides cost effective, efficient distribution of oil and reduces overall motor length.

Pressure-Compensated Balance Plate improves volumetric efficiency at low flows and high pressure.

Three Bearing Options allow load carrying capability of motor to be matched to application.

High Pressure Viton® Shaft Seal offers superior seal life and performance and eliminates need for case drain.

Code	Displacement in ³ /rev (cm ³ /rev)	Max Speed RPM		Max Flow GPM (LPM)		Max Torque lb-in (Nm)			Pressure Δ PSI(Δ Bar)		
		Cont.	Inter.	Cont.	Inter.	Cont.	Inter.	*Stall	Cont.	Inter.	Peak
									3000 (207)	3500 (241)	4000 (276)
07	7.4 (121)	360	490	12 (45)	16 (61)	2900 (327)	3400 (383)	2240 (253)	3000 (207)	3500 (241)	4000 (276)
10	9.9 (162)	370	470	16 (61)	20 (76)	4200 (473)	4800 (540)	3100 (350)	3000 (207)	3500 (241)	4000 (276)
12	12.4 (204)	300	370	18 (68)	22 (83)	4800 (540)	5600 (631)	4200 (475)	3000 (207)	3500 (241)	4000 (276)
14	14.2 (232)	260	320	18 (68)	22 (83)	5700 (642)	6300 (709)	4905 (554)	3000 (207)	3500 (241)	4000 (276)
16	15.9 (261)	260	350	20 (76)	24 (91)	6300 (709)	7000 (788)	5345 (604)	3000 (207)	3500 (241)	4000 (276)
18	18.3 (300)	250	320	22 (83)	25 (95)	7300 (822)	8300 (935)	6095 (689)	3000 (207)	3500 (241)	4000 (276)
20	21.2 (348)	220	270	22 (83)	25 (95)	8150 (918)	9250 (1042)	6290 (711)	3000 (207)	3500 (241)	4000 (276)
24	22.8 (375)	200	250	20 (76)	24 (91)	8900 (1002)	10250 (1154)	7600 (859)	3000 (207)	3500 (241)	4000 (276)
26	28.3 (465)	160	200	20 (76)	24 (91)	9650 (1076)	10475 (1179)	8040 (909)	2500 (172)	2750 (189)	3000 (207)
32	32.7 (536)	140	170	20 (76)	24 (91)	8700 (980)	11000 (1239)	7260 (820)	2000 (138)	2500 (172)	3000 (207)
45	45.6 (748)	100	130	20 (76)	24 (91)	9400 (1028)	10950 (1233)	7905 (893)	1500 (103)	1750 (121)	2000 (138)



WHITE MOTORS

RE SERIES

120 7.4 in.³/r (121cc)

Flow GPM (LPM)	Pressure, psi (bars)								Max. Cont.	Max. Inlet.	Theo. RPM							
	250 (17)	500 (35)	1000 (69)	1500 (104)	2000 (138)	2500 (173)	3000 (207)	3500 (242)										
0.5 (2)											16							
1 (4)																	32	
2 (8)									500 (35)	1043 (118)							65	
4 (15)									479 (34)	1030 (116)							125	
6 (23)									453 (49)	1023 (116)	1488 (168)						168	
8 (30)										984 (111)	1487 (168)	1973 (223)					250	
10 (38)										923 (104)	1468 (166)	1930 (218)	2411 (272)				313	
Max. Cont.										872 (98)	1428 (161)	1918 (217)	2444 (278)				378	
14 (53)											1372 (155)	1845 (208)	2363 (267)	2962 (338)			428	
Max. Inlet.												1884 (211)	2403 (272)	2987 (327)			500	
16 (61)													467	447	437			
Stall Torque											771 (87)	1178 (133)	1488 (168)	1788 (200)	2240 (258)			
Theo. Torque									295 (33)	589 (67)	1178 (133)	1788 (200)	2357 (268)	2948 (338)	3526 (399)	4124 (468)		

Areas within white represent maximum motor efficiencies.

160 9.9 in.³/r (162cc)

Flow GPM (LPM)	Pressure, psi (bars)								Max. Cont.	Max. Inlet.	Theo. RPM							
	250 (17)	500 (35)	1000 (69)	1500 (104)	2000 (138)	2500 (173)	3000 (207)	3500 (242)										
0.5 (2)											12							
1 (4)																	24	
2 (8)									264 (30)	704 (80)							47	
4 (15)									317 (36)	711 (80)	1423 (161)	2143 (242)	2782 (318)				94	
6 (23)									342 (39)	684 (75)	1610 (171)	2241 (253)	2838 (321)	3351 (378)			140	
8 (30)										631 (71)	1395 (158)	2078 (236)	2606 (317)	3447 (388)	4088 (462)		167	
10 (38)										598 (67)	1448 (164)	2090 (238)	2780 (312)	3411 (385)	4093 (458)		224	
12 (45)											1323 (149)	2074 (234)	2756 (308)	3328 (378)	4022 (455)		290	
14 (53)											1278 (144)	1998 (226)	2689 (304)	3270 (368)	3880 (440)		327	
Max. Cont.											2022 (228)	2738 (310)	3317 (378)	4040 (467)			374	
18 (65)												2634 (298)	3253 (368)	3847 (436)			420	
Max. Inlet.													364	361	367		467	
Stall Torque											1090 (123)	1682 (207)	2326 (268)	2816 (318)	3104 (351)			
Theo. Torque									394 (45)	789 (89)	1678 (178)	2265 (267)	3153 (358)	3941 (445)	4729 (534)	5518 (622)		

Torque, lb-in (Nm)
Speed, RPM

Note: Max Flow and Max Pressure must not occur simultaneously.

Note: Performance data is typical. Performance of production units varies slightly from one motor to another.



WHITE MOTORS

RE SERIES

350 21.2 in.³/r (348cc)

Flow GPM (LPM)	Pressure, psi (bars)								Max. Cont.	Max. Inter.							
	250 (17)	500 (35)	1000 (69)	1500 (104)	2000 (138)	2500 (173)	3000 (207)	3500 (242)									
0.5 (2)																	
1 (4)																	
2 (8)											507 (35)	1263 (145)	2754 (312)				
4 (15)											21	29	19				
6 (23)											627 (71)	1340 (151)	2787 (313)	4189 (471)	5577 (530)		
8 (30)											42	41	49	30	37		
10 (36)												1318 (149)	2788 (316)	4191 (474)	5577 (530)		
12 (45)												63	62	60	57		
14 (53)												1233 (139)	2713 (307)	4008 (458)	5537 (526)	6793 (768)	
16 (61)												85	84	82	79	75	
18 (68)													2839 (320)	3814 (431)	5317 (591)	6595 (745)	
20 (75)													198	198	192	188	
22 (83)													2945 (283)	3906 (445)	5144 (581)	6322 (740)	
24 (91)													129	129	125	117	
25 (95)														3788 (422)	5044 (570)	6395 (723)	
														180	147	139	
														3819 (409)	4859 (548)	6375 (720)	
														172	170	163	
															5054 (571)	6134 (693)	
															180	187	
															4544 (513)	5044 (563)	
															214	213	
															4905 (554)	5954 (685)	
															228	235	
Min. Torque			2078 (235)	3102 (351)	4161 (469)	5145 (581)	6231 (711)										
Thru. Torque	844 (85)	1698 (181)	2576 (281)	3584 (372)	4792 (523)	6439 (654)	10127 (1144)	11815 (1335)									

Areas within white represent maximum motor efficiencies.

Flow, RPM
6
11
21
41
61
81
101
121
141
161
175
197
218
240
262
273

375 22.8 in.³/r (375cc)

Flow GPM (LPM)	Pressure, psi (bars)								Max. Cont.	Max. Inter.								
	250 (17)	500 (35)	1000 (69)	1500 (104)	2000 (138)	2500 (173)	3000 (207)	3500 (242)										
0.5 (2)																		
1 (4)																		
2 (8)											724 (82)	1510 (171)	3198 (361)	4754 (537)				
4 (15)											19	17	16	14				
6 (23)											680 (77)	1439 (163)	3184 (358)	4758 (537)				
8 (30)											36	37	37	36				
10 (36)												1306 (150)	3182 (354)	4661 (527)	6155 (695)			
12 (45)												89	85	84	82			
14 (53)												1821 (149)	3018 (340)	4812 (518)	6154 (689)			
16 (61)												88	78	77	71			
18 (68)													2948 (322)	4363 (486)	6024 (661)	7386 (830)		
20 (75)													99	99	92	87		
22 (83)													2881 (301)	4248 (466)	5711 (646)	7169 (808)		
24 (91)													129	129	123	108		
														4218 (477)	5632 (633)	7036 (795)		
														125	134	126		
														3797 (428)	5289 (586)	6817 (770)		
														188	180	161		
														3843 (434)	5282 (587)			
														181	177			
Min. Torque													2718 (307)	3761 (425)	4897 (538)	6236 (705)	7988 (899)	
Thru. Torque											698 (105)	1816 (295)	2851 (418)	3448 (515)	4261 (582)	5076 (1026)	10902 (1231)	12707 (1458)

Torque, lb-in (Nm)
Speed, RPM

Flow, RPM
6
11
21
41
61
81
101
121
141
161
181
203
223
244

Note: Max Flow and Max Pressure must not occur simultaneously.

Note: Performance data is typical. Performance of production units varies slightly from one motor to another.



WHITE MOTORS

RE SERIES

470 | 28.3 in.³/r (465cc)

Flow GPM (LPM)	Pressure, psi (bars)						Theor. RPM						
	250 (17)	500 (35)	1000 (69)	1500 (104)	2000 (138)	2500 (173)		3000 (207)					
0.5 (2)							5						
1 (4)							5						
2 (8)							17						
4 (15)							33						
6 (23)							48						
8 (30)							66						
10 (36)							82						
12 (45)							98						
14 (53)							116						
16 (61)							131						
18 (68)							147						
Max. Cont. 20 (75)							164						
Max. Inter. 22 (83)							180						
24 (91)							198						
Still Torque							3645 (401)	5000 (565)	6537 (730)	8030 (908)	9632 (1077)		
Theor. Torque							1127 (127)	2263 (255)	4656 (526)	6780 (764)	9013 (1018)	11288 (1273)	13519 (1528)

Areas within white represent maximum motor efficiencies.

Torque, lb-in (Nm)
Speed, RPM

540 | 32.7 in.³/r (536cc)

Flow GPM (LPM)	Pressure, psi (bars)					Theor. RPM					
	250 (17)	500 (35)	1000 (69)	1500 (104)	2000 (138)		2500 (173)				
0.5 (2)						4					
1 (4)						4					
2 (8)						16					
4 (15)						29					
6 (23)						43					
8 (30)						57					
10 (36)						71					
12 (45)						86					
14 (53)						99					
16 (61)						114					
18 (68)						129					
Max. Cont. 20 (75)						142					
Max. Inter. 22 (83)						158					
24 (91)						170					
Still Torque						3622 (432)	5613 (634)	7262 (821)	8230 (1044)		
Theor. Torque						1802 (147)	2804 (294)	5207 (595)	7811 (883)	10414 (1177)	13018 (1471)

Note: Max Flow and Max Pressure must not occur simultaneously.

Note: Performance data is typical. Performance of production units varies slightly from one motor to another.



WHITE MOTORS

RE
 SERIES

750 45.6 in.³/r (748cc)

Flow GPM (LPM)	Pressure, psi (bars)				Theor. RPM
	250 (17)	500 (35)	1000 (69)	1500 (104)	
0.5 (2)	[White Area]				3
1 (4)					5
2 (8)	[White Area]				11
4 (15)					19
6 (22)	[White Area]				31
8 (30)					49
10 (36)	[White Area]				41
12 (45)					59
14 (53)	[White Area]				51
16 (61)					69
18 (68)	[White Area]				61
20 (76)					79
22 (83)	[White Area]				71
24 (91)					89
Max. Cent.	[White Area]				102
Max. Motor.	[White Area]				112
	[White Area]				122
Max. Torque	1915 (266)	3031 (410)	7241 (821)	10682 (1231)	14622 (1641)
Min. Torque			3325 (362)	7905 (865)	10164 (1151)

Areas within white represent maximum motor efficiencies.

Torque, lb-in (Nm)
 Speed, RPM

Note: Max Flow and Max Pressure must not occur simultaneously.

Note: Performance data is typical. Performance of production units varies slightly from one motor to another.

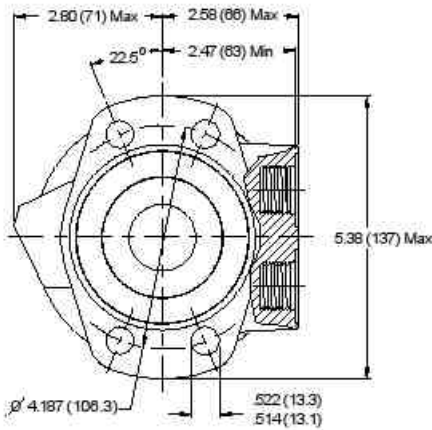


WHITE MOTORS

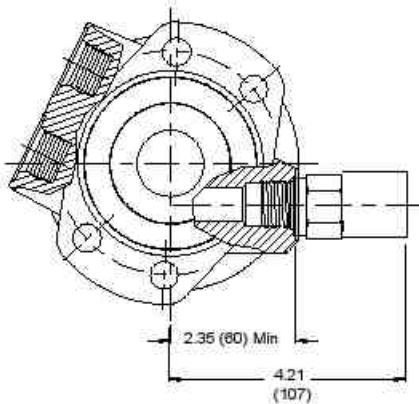
RE
 SERIES

HOUSINGS
 SAE 'A' Flange

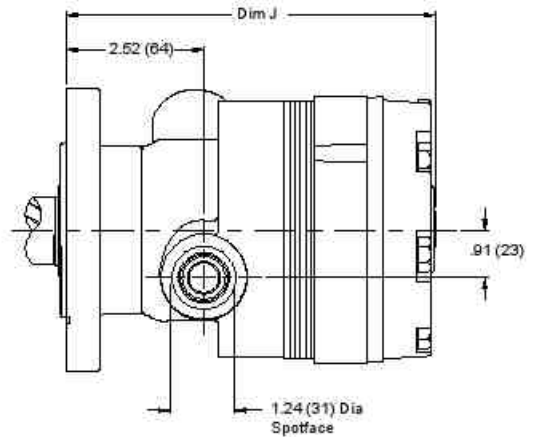
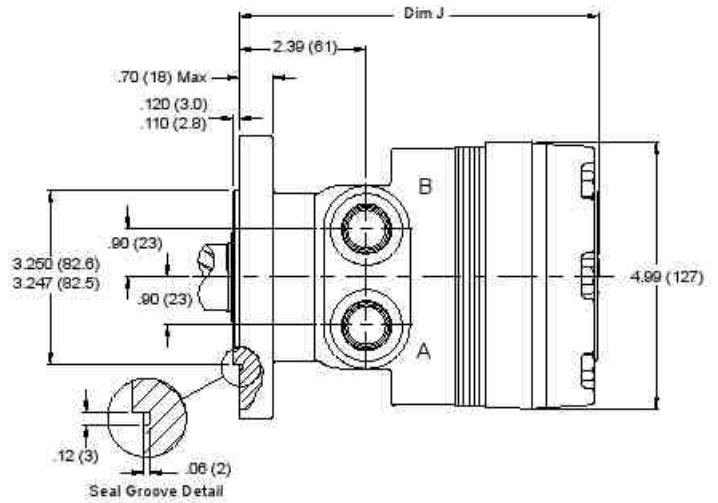
A31	4-Hole Front Aligned Ports 7/8 O-Ring
A38	4-Hole Front Aligned Ports 1/2 BSPF



Optional Relief Cartridge shown installed and is available for both A31 and A38 housings.

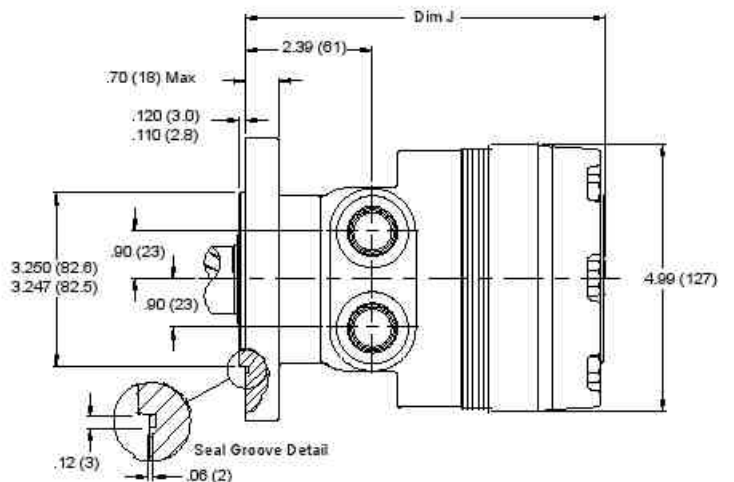
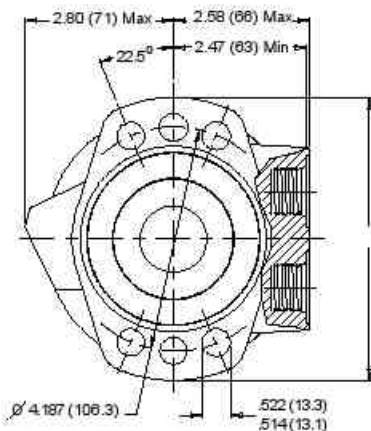


Valve Cavity - 10 Series/2-way (7/8-14 UNF-2B)



Dim J is on page 8.10

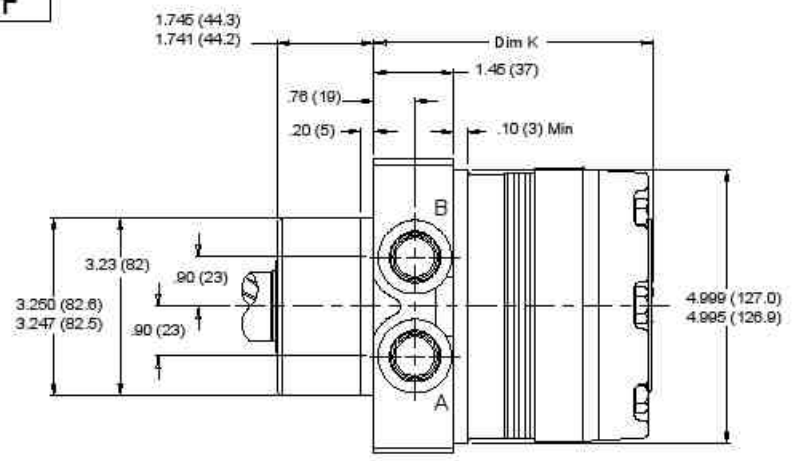
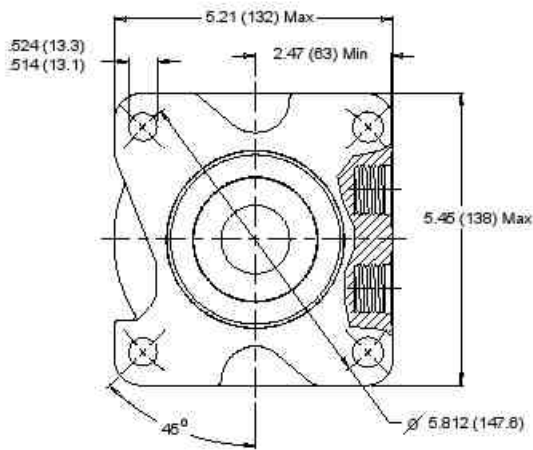
A51	6-Hole Front Aligned Ports 7/8 O-Ring
A58	6-Hole Front Aligned Ports 1/2 BSPF



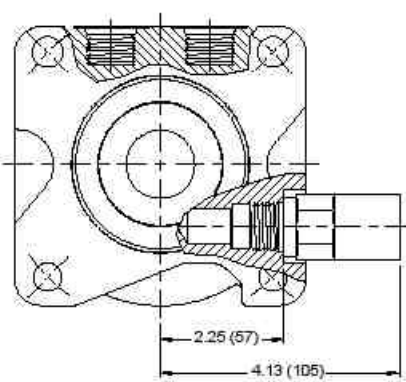


HOUSINGS
 Wheel Mount

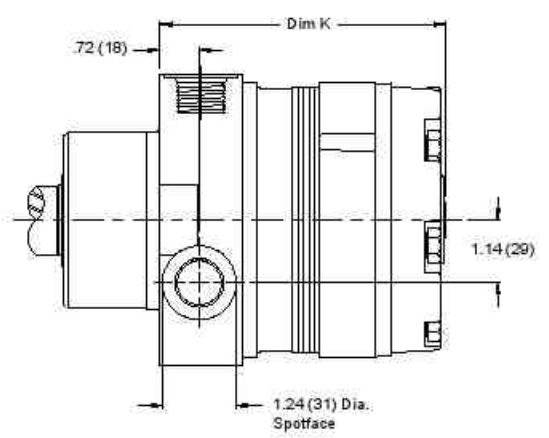
N31	4-Hole Front Aligned Ports 7/8 O-Ring
N38	4-Hole Front Aligned Ports 1/2 BSP.F



Optional Relief Cartridge shown installed and is available for both W31 and W38 housings.



Valve Cavity - 10 Series/2-way (7/8-14 UNF-2B)



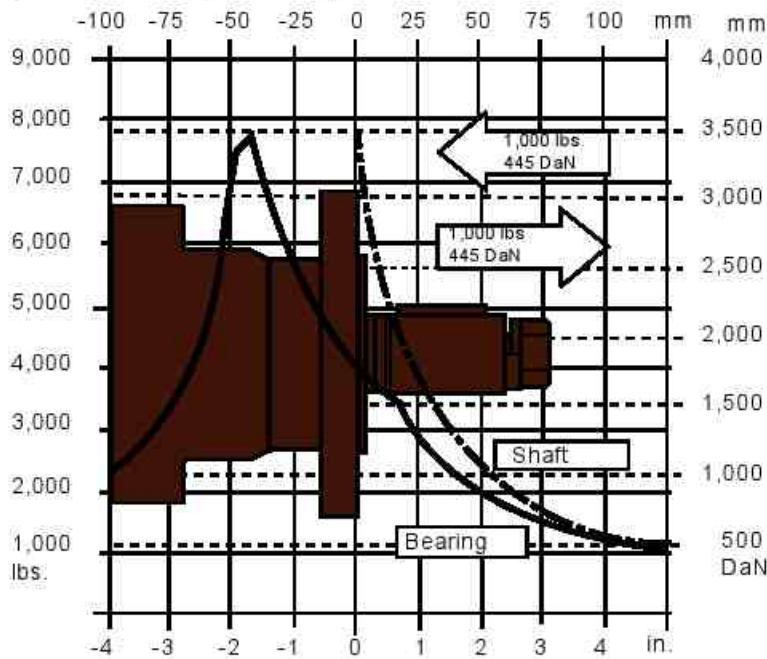
Dim K is on page 8.10

Allowable Bearing And Shaft Loading

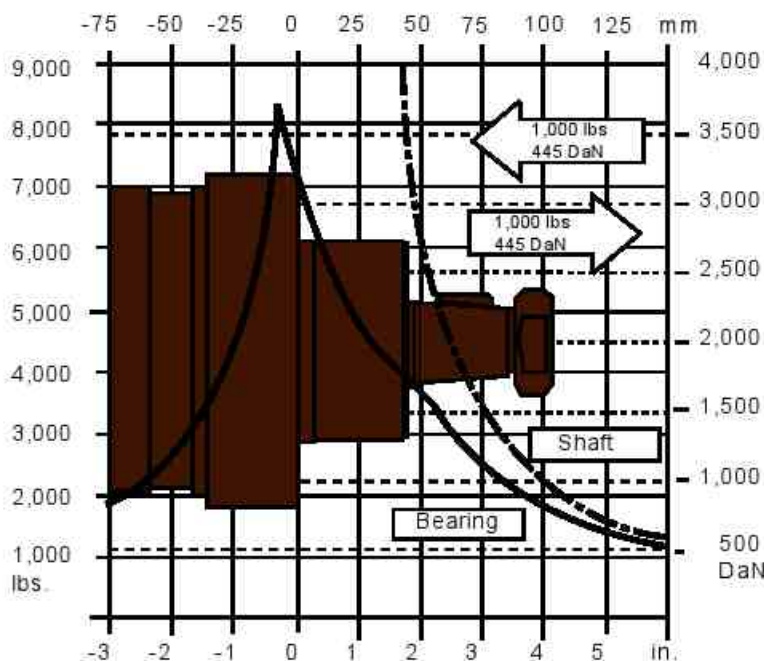
Bearing Curve: The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2000 hours at 100 RPM. Radial loads for speed other than 100 RPM may be calculated using the multiplication factor table below.

Shaft Curve: The shaft curve represents a 3:1 safety factor based on a tensile strength of 330 kpsi.

A Style Flange



Wheel Mount



Technical

Length and Weight Tables

A Style Flange

Disp. Code	Dim. J in (mm)	Weight lbs (kg)
120	6.37 (162)	23.4 (10,6)
160	6.37 (162)	23.4 (10,9)
200	6.51 (165)	24.2 (11,0)
230	6.61 (168)	24.4 (11,1)
260	6.70 (170)	25.0 (11,3)
300	6.83 (174)	25.8 (11,7)
350	7.38 (187)	28.2 (12,8)
375	7.08 (180)	27.0 (12,2)
470	7.38 (187)	28.2 (12,8)
540	7.62 (194)	29.4 (13,3)
750	8.33 (212)	32.5 (14,7)

RE motor weights vary +/- 1 lb. (.45 kg) depending upon motor configuration.

Wheel Mount

Disp. Code	Dim. K in (mm)	Weight lbs (kg)
120	4.72 (120)	25.8 (11,7)
160	4.72 (120)	25.8 (11,7)
200	4.86 (123)	26.6 (12,1)
230	4.95 (126)	26.8 (12,2)
260	5.05 (128)	27.4 (12,4)
300	5.18 (132)	28.2 (12,8)
350	5.73 (146)	30.6 (13,9)
375	5.43 (138)	29.4 (13,3)
470	5.73 (146)	30.6 (13,9)
540	5.97 (152)	31.8 (14,4)
750	6.68 (170)	34.9 (15,8)

RE motor weights vary +/- 1 lb. (.45 kg) depending upon motor configuration.

Bearing Load Multiplication Factor Table

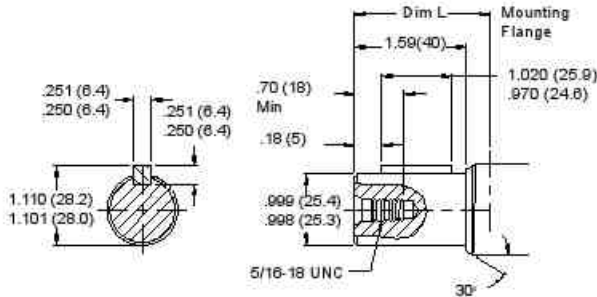
RPM	Multiplication Factor
50	1.23
100	1.00
200	0.81
300	0.72
400	0.66
500	0.62
600	0.58
700	0.56
800	0.50

www.khadamathydraulic.com
 Tell: 021-55882749
 Tell: 021-33488178
 Fax: 021-33488105

Shafts

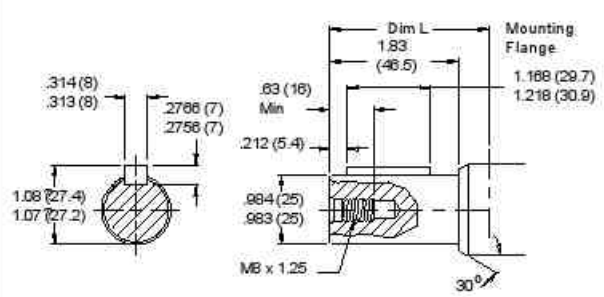
10 1 Inch Straight

Max. Torque: 5,880lb-in
660 Nm



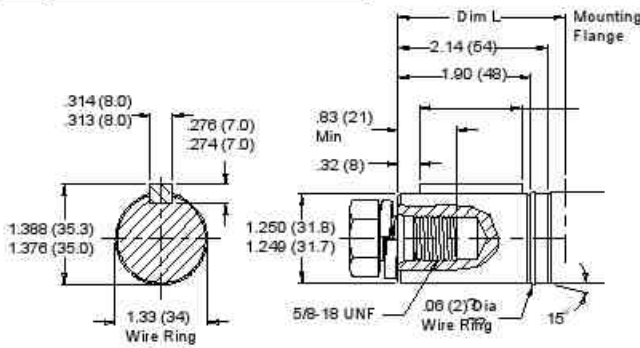
12 25mm Straight

Max. Torque: 5,617lb-in
635 Nm



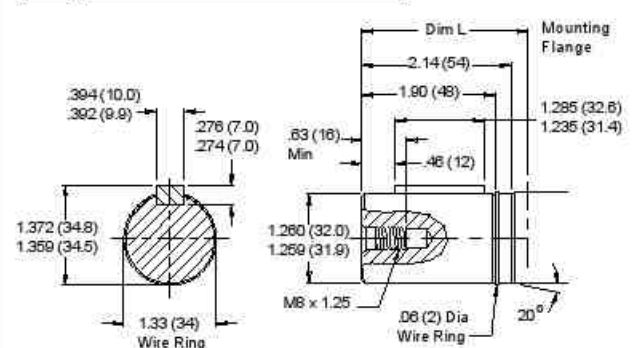
20 1-1/4 Inch Straight

Max. Torque: 10,600lb-in
1,200 Nm



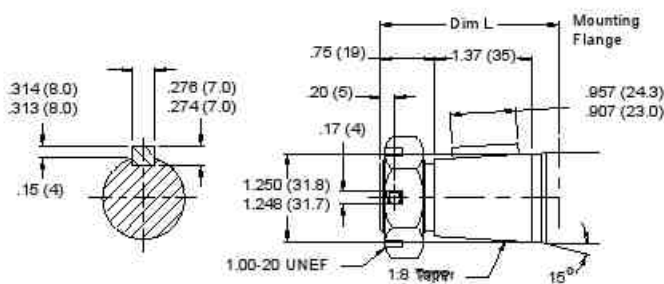
21 32mm Straight

Max. Torque: 10,600lb-in
1,200 Nm



22 1-1/4 Inch Tapered

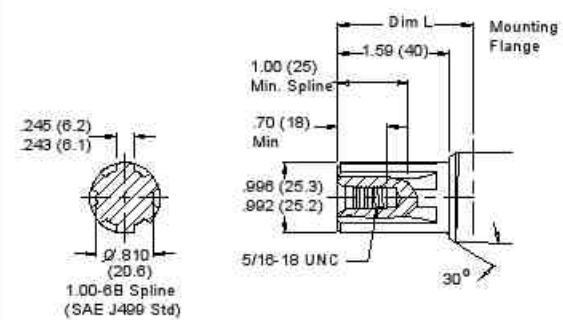
Max. Torque: 10,600lb-in
1,200 Nm



Note: A slotted nut is standard on this shaft.

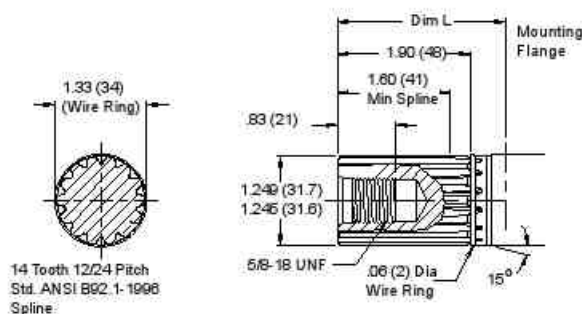
02 6-B Spline

Max. Torque: 10,600 lb-in
1,200 Nm



23 14 Tooth Spline

Max. Torque: 10,600lb-in
1,200 Nm

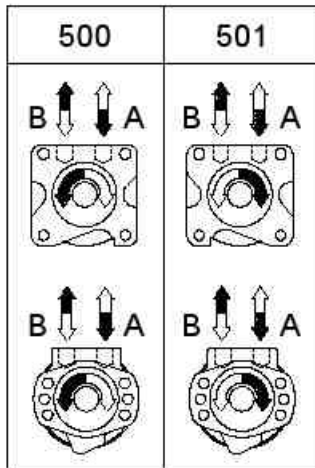


14 Tooth 12/24 Pitch
Std. ANSI B92.1-1998
Spline

Shaft Lengths

Dim L	Shaft Code	"A" Style Flange in (mm)	Wheel Mount in (mm)
	02	1.97 (50)	3.60 (91)
	22	2.58 (66)	4.22 (107)
	20	2.41 (61)	4.05 (103)
	23	2.42 (61)	4.06 (103)
	10	1.97 (50)	3.60 (91)
	21	2.41 (61)	4.05 (103)
	12	2.21 (56)	3.84 (98)

Shaft lengths vary +/- .030 in. (.8mm)



Rotation Selection

For applications requiring the motor to rotate in only one direction, shaft seal life may be prolonged by pressurizing the A port of the motor. To obtain the desired direction of shaft rotation, use the graphic at the left to determine the rotation code for the motor. For bidirectional applications, the 500 series is recommended. Preferred rotation direction is determined by the internal valving design.

Ordering Information

SERIES
 501 REVERSED TIMING
 500

DISPLACEMENT HOUSING SHAFT OPTIONS

Code	Displacement	Code	Housing	Code	Shafts	Code	Options
120	7.4 in ³ /r 121 cc	W38	4-Hole Front Ports 1/2" BSP.F	02	6-B Spline	O	No Options
160	9.9 in ³ /r 162 cc	A38	4-Hole Front Ports 1/2" BSP.F (S)	22	1-1/4" Tapered	F	Free Turn
200	12.4 in ³ /r 204 cc	W31	4-Hole Front Ports 7/8" O-ring	20	1-1/4" Straight	J	Declutch
230	14.2 in ³ /r 232 cc	A31	4-Hole Front Ports 7/8" O-ring (S)	23	14 Tooth Spline	X	Solid Nut
260	15.9 in ³ /r 261 cc	A51	6-Hole Front Ports 7/8" O-ring	10	1" Straight	P	Lock Nut
300	18.3 in ³ /r 300 cc	A58	6-Hole Front Ports 1/2" BSP.F	12	25mm Straight	*R	Relief Valve Cavity
350	21.2 in ³ /r 348 cc			21	32mm Straight	*R1	1000 PSI (69 Bar) Relief Valve Installed
375	22.8 in ³ /r 375 cc					*R2	2000 PSI (138 Bar) Relief Valve Installed
470	28.3 in ³ /r 465 cc					*R3	3000 PSI (207 Bar) Relief Valve Installed
540	32.7 in ³ /r 536 cc					**Z	50 Pulse Sensor w/4pin Connector
750	45.6 in ³ /r 748 cc					**Z1	50 Pulse Sensor w/Male (tower) Hsg. Weather Pack Connector
						**Z2	90 Pulse Sensor w/4pin Connector
						**Z3	90 Pulse Sensor w/Male (tower) Hsg. Weather Pack Connector
						**Z4	30 Pulse Sensor w/Female (shroud) Hsg. Weather Pack Connector
						**Z5	100 Pulse Sensor w/4pin Connector
						**Z6	100 Pulse Sensor w/Male (tower) Hsg. Weather Pack Connector

* Available with A31, A38, W31, and W38 housings

** Available with A31 and A38 housings and must use a medium duty shaft (see page 18 for order codes)

(S) Speed sensor components