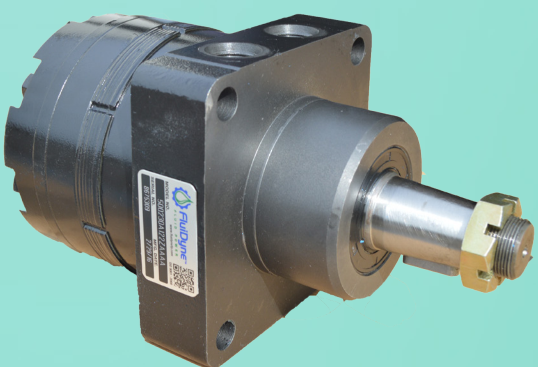
ENGINEERING DATA

FluiDyne™
FLUID POWER

500-Series Motor

- High Pressure Viton Shaft Seal
- Heavy Duty Drive Link
- Valve-In-Rotor Design
- Pressure-Compensated Balance Plate
- High Temperature Seals are Standard



www.FluiDyneFP.com

The **FluiDyne 500-Series Motor** adapts the Geroler gear set design with high speed distribution of flow and high pressure. The 500-Series Motors offer a perfect compromise between price and performance by producing a high torque motor at a reasonable price. These motors are especially suited for low speed, high pressure applications with smooth rotation throughout the speed transitions. The hydrostatic balance pressure plate flexes appropriately to allow for proper lubrication and high operating efficiencies. The combination of shafts, mounts, and displacements allow for these motors to be configured for almost any application requirements.

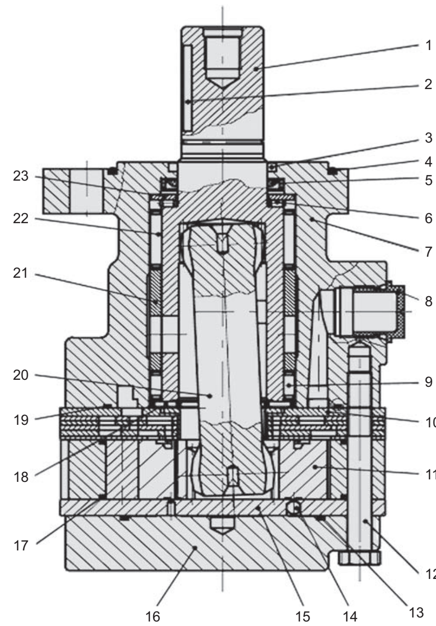


Diagram Key

1 Output Shaft
2 Key
3 Dust Seal
4 "O" Ring
5 Shaft Seal
6 Axial Needle Bearing
7 Housing
8 Port Plug
9 Radial Needle Bearin
10 Timing Plate
11 Rolortorc Gear Set
12 Bolt
13 "O" Ring
14 Ball
15 Balance Plate
16 End Cover
17 "O" Ring
18 Axial Needle Bearing
19 "O" Ring
20 Drive Shaft
21 Spacer Bushing
22 Radial Needle Bearin
23 Thrust Washer

Benefits:

- **High Pressure Viton Shaft Seal** offers superior seal life and performance and eliminates need for case drain.
- **Heavy Duty Drive Link** is very robust, receiving full flow lubrication during operation, providing long life.
- **Valve-In-Rotor Design** provides cost effective, efficient distribution of oil and reduces overall motor length.
- **Pressure-Compensated Balance Plate** improves the volumetric efficiency at low flows and high pressures.

Technical Specifications

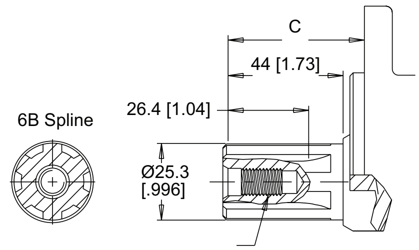
Model		125	160	200	230	250	300	350	375	475	540	750
Displacement *in³/rev (cm³/rev)*		118 (7.20)	156 (9.52)	196 (11.96)	228 (13.91)	257 (15.68)	296 (18.08)	345 (21.05)	371 (22.63)	462 (28.18)	540 (32.94)	745 (45.45)
Max Speed *rpm*	Cont	360	375	330	290	290	250	220	200	160	140	100
	Int	490	470	425	365	350	315	270	240	195	170	120
Max Torque *in-lbf*	Cont	2876	3983	4691	5531	6195	7169	8009	8762	9602	8673	9293
	Int	3363	4646	5310	6284	6992	8231	9160	10089	10443	10974	10443
Max Differential *psi*	Cont	2973	2973	2973	2973	2973	2973	2973	2973	2538	2030	1523
	Int	3481	3481	3481	3481	481	3481	3481	3481	2756	2538	1740
Max Flow *gpm*	Cont	11.88	15.85	18.49	18.49	19.81	21.13	21.13	19.81	19.81	19.81	19.81
	Int	15.85	19.81	22.45	22.45	23.77	25.09	25.09	23.77	23.77	23.77	23.77
Weight		27.45	29	29.20	29.45	30.15	31	32	32.35	33.35	35.10	37.75

Continuous (Cont.) = maximum of continuous operation. Intermittent (Int.) = maximum operating range for 6 seconds per minute

500/501 - 500 Series

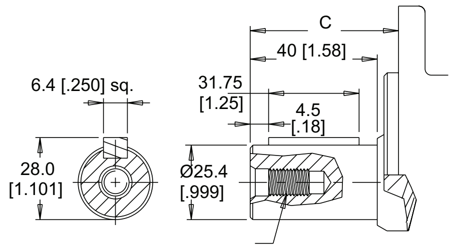
Medium Duty Hydraulic Motor

02 1" 6B Spline



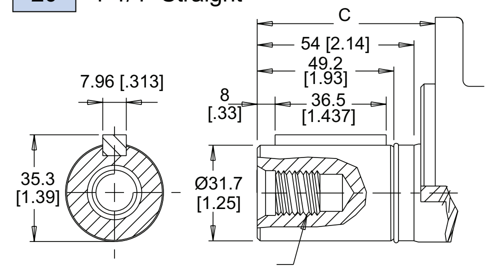
Max. Torque: 678 Nm [6000 lb-in]

10 1" Straight



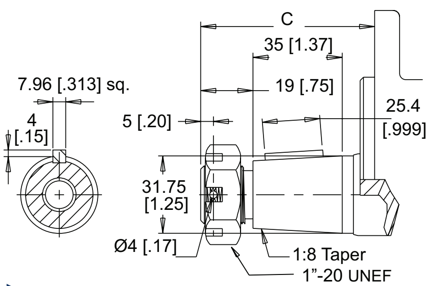
Max. Torque: 655 Nm [5800 lb-in]

20 1-1/4" Straight



Max. Torque: 1200 Nm [10600 lb-in]

22 1-1/4" Tapered

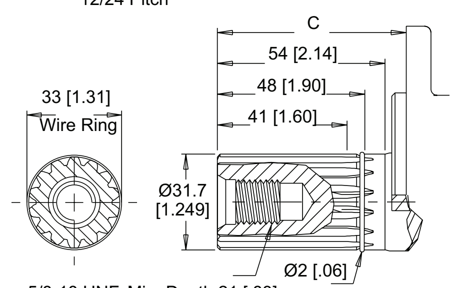


▶ Slotted hex nut is standard on this shaft

Max. Torque: 1200 Nm [10600 lb-in]

23 14 Tooth Spline

12/24 Pitch



Max. Torque: 1200 Nm [10600 lb-in]

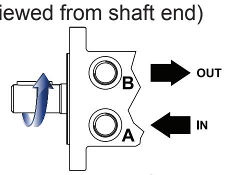
From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	**Magneto Mount mm (in)**	**Wheel Mount mm (in)**
02	50 (1.97)	91 (3.58)
10	50 (1.97)	91 (3.58)
20	61 (2.40)	103 (4.06)
22	65 (2.56)	107 (4.21)
23	61 (2.40)	103 (4.06)

Model Code Breakdown

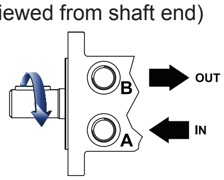
500 160 A51 02 A A A AA

Series

500 - Standard Rotation, CCW
(Viewed from shaft end)



501 - Rotation, CW
(Viewed from shaft end)



The FP500/501 motors are bi-directional.
For applications requiring the motor to rotate in only one direction, shaft seal life may be prolonged by pressurizing the A-Port.

Displacement

125 - 118 cm³/rev (7.2 in³/rev)
160 - 156 cm³/rev (9.5 in³/rev)
200 - 196 cm³/rev (11.9 in³/rev)
230 - 228 cm³/rev (13.9 in³/rev)
250 - 257 cm³/rev (15.7 in³/rev)
300 - 296 cm³/rev (18.1 in³/rev)
350 - 345 cm³/rev (21.1 in³/rev)
375 - 371 cm³/rev (22.6 in³/rev)
475 - 462 cm³/rev (28.2 in³/rev)
540 - 540 cm³/rev (32.9 in³/rev)
750 - 748 cm³/rev (45.6 in³/rev)

Miscellaneous Option

AA - None
AC - Free Turning Rotor

Add-On Option

A - Standard

Valve Cavity / Cartridge Option

A - None

Paint

A - Black
B - Black, Unpainted Mounting Surface
Z - No Paint

Shaft Options

02 - 1" 6B Spline
10 - 1" Straight
20 - 1-1/4" Straight
22 - 1-1/4" Tapered
23 - 14 Tooth Spline

Mount & Port Option

A51 - 6-Hole, SAE -A/Magneto Mount, Aligned Ports, 7/8-14 UNF
W31 - 4-Hole, Wheel Mount, Aligned Ports, 7/8-14 UNF
Use A51 for a replacement A31 4-bolt magneto mounting flange, and for SAE-A 2 bolt mounts.

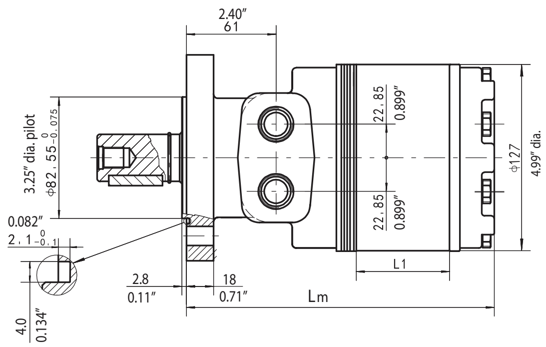
***Additional flange and drive shaft options are available! Contact our customer service team for more information.*

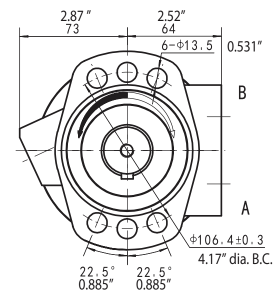
500/501 - 500 Series

Medium Duty Hydraulic Motor

A5I - Magneto Mount

Port A, B Ports 7/8-14UNF

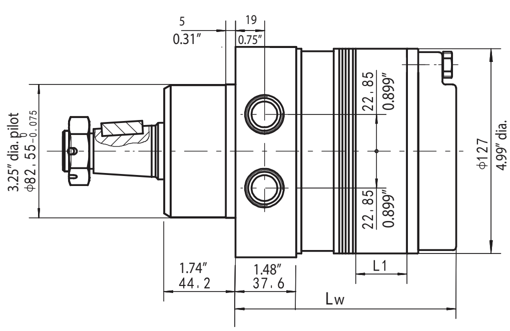


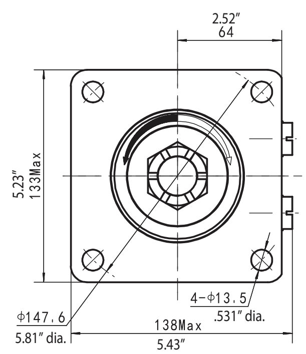


Model Size	125	160	200	230	250	300	350	375	475	540	750
Displacement cm^3/rev (in^3/rev)	118 (7.2)	156 (9.5)	196 (11.9)	228 (13.9)	257 (15.7)	296 (18.1)	345 (21.1)	371 (22.6)	462 (28.2)	540 (32.9)	745 (45.6)
L_m (mm), Magneto	157	160	163.5	166	168.5	172	176	178.5	186	194	210
L_m (inches)	6.18"	6.30"	6.44"	6.54"	6.63"	6.77"	6.93"	7.03"	7.32"	7.64"	8.27"
L1 (mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5
L1 (inches)	0.40"	0.53"	0.67"	0.77"	0.87"	1.00"	1.16"	1.25"	1.55"	1.86"	2.50"
Weight (lbs)	23.3	24.0	24.7	24.9	25.1	25.6	26.5	27.6	28.7	29.8	33

W3I - Wheel Mount

Port A, B Ports 7/8-14UNF





Model Size	125	160	200	230	250	300	350	375	475	540	750
Displacement cm^3/rev (in^3/rev)	118 (7.2)	156 (9.5)	196 (11.9)	228 (13.9)	257 (15.7)	296 (18.1)	345 (21.1)	371 (22.6)	462 (28.2)	540 (32.9)	745 (45.6)
L_w (mm), Wheel	119	122	125.5	128	130.5	134.5	138	140.5	148	156	176
L_w (inches)	4.68"	4.80"	4.94"	5.04"	5.14"	5.30"	5.43"	5.53"	5.83"	6.14"	6.93"
L1 (mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5
L1 (inches)	0.40"	0.53"	0.67"	0.77"	0.87"	1.00"	1.16"	1.25"	1.55"	1.86"	2.50"
Weight (lbs)	26.5	26.7	27.1	27.3	27.8	28.7	29.1	29.8	30.9	32.2	35.3

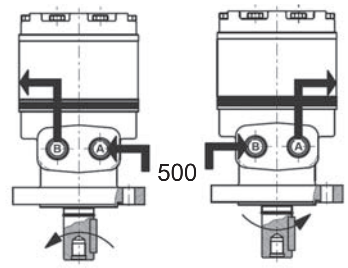
Techincal Data

Shaft Rotation:

500 Timing Manifold (501 would be opposite rotation)

When facing shaft end of motor, shaft to rotate:

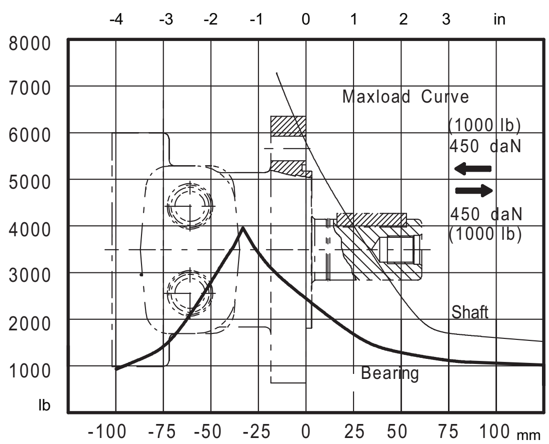
- Clockwise when port "B" is pressurized.
- Counter-clockwise when port "A" is pressurize



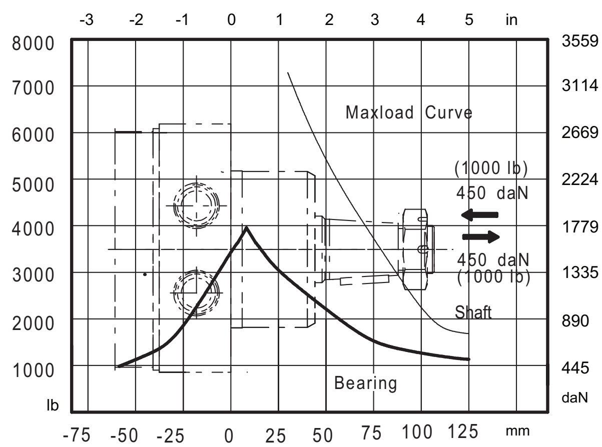
Axial and Radial Forces

Allowable bearing & shaft loads

A51 Mounting



W31 Mounting



The bearing curve represents allowable bearing loads for an L^{10} bearing life at $3x10^6$ revolutions. The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

Radial loads for speeds other than 100rpm may be calculated using the multiplication factor table:

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

Flow Data

125 7.20 cu.in/rev (118 cc/rev)							**Max Cont.**	***Max Int.**	**Theo rpm**
Press bar (psi)	**17.5 (254)**	**35 (508)**	**70 (1015)**	**105 (1523)**	**140 (2031)**	**175 (2538)**	**205 (2973)**	**240 (3481)**	
lpm (gpm)	**Torque (in●lbf) Speed Specification**								
2.0 (.53)	177 14 rpm	443 13 rpm	850 11 rpm	1212 7 rpm					17
4.0 (1.06)	212 28 rpm	469 26 rpm	974 24 rpm	1469 19 rpm	1956 13 rpm				34
8 (2.11)		487 60 rpm	1000 54 rpm	1540 50 rpm	1991 45 rpm	2354 39 rpm	2602 35 rpm	2974 26 rpm	68
15 (3.96)		469 115 rpm	1009 110 rpm	1593 100 rpm	2071 96 rpm	2434 90 rpm	2885 84 rpm	3080 76 rpm	127
25 (6.60)		425 194 rpm	974 185 rpm	1451 173 rpm	2000 168 rpm	2407 160 rpm	2859 155 rpm	3115 149 rpm	212
34 (8.98)			956 276 rpm	1469 260 rpm	1947 244 rpm	2460 232 rpm	2788 225 rpm	3301 217 rpm	288
45 (11.88)			867 362 rpm	1416 350 rpm	1903 342 rpm	2398 325 rpm	2726 322 rpm	3266 303 rpm	381
53 (14.00) *Max Cont.*			797 423 rpm	1345 418 rpm	1841 404 rpm	2345 399 rpm	2690 371 rpm		449
***60 (15.85)** *Max Int.*			726 488 rpm	1248 472 rpm	1814 455 rpm	2301 442 rpm	2655 421 rpm		509

160 9.52 cu.in/rev (156 cc/rev)							**Max Cont.**	***Max Int.**	**Theo rpm**
Press bar (psi)	**17.5 (254)**	**35 (508)**	**70 (1015)**	**105 (1523)**	**140 (2031)**	**175 (2538)**	**205 (2973)**	**240 (3481)**	
lpm (gpm)	**Torque (in●lbf) Speed Specification**								
2.0 (.53)	310 8 rpm	655 4 rpm	1292 3 rpm	1929 3 rpm	2637 2 rpm				13
4.0 (1.06)	257 22 rpm	699 19 rpm	1389 18 rpm	2080 16 rpm	2797 14 rpm	3275 13 rpm	3752 8 rpm		26
8 (2.11)	310 47 rpm	690 44 rpm	1398 42 rpm	2089 40 rpm	2761 37 rpm	3301 34 rpm	3983 32 rpm	4655 27 rpm	51
15 (3.96)	327 93 rpm	655 90 rpm	1372 86 rpm	2071 84 rpm	2744 82 rpm	3257 79 rpm	3894 75 rpm	4575 69 rpm	96
25 (6.60)		602 155 rpm	1345 151 rpm	2009 147 rpm	2726 142 rpm	3221 137 rpm	3859 131 rpm	4416 124 rpm	160
34 (8.98)		602 214 rpm	1345 213 rpm	2009 210 rpm	2726 204 rpm	3221 198 rpm	3859 191 rpm	4416 184 rpm	218
45 (11.88)		566 282 rpm	1266 280 rpm	1929 275 rpm	2620 268 rpm	3186 263 rpm	3761 256 rpm	4257 245 rpm	288
53 (14.00)			1195 330 rpm	1912 327 rpm	2593 322 rpm	3159 315 rpm	3726 306 rpm	4213 296 rpm	340
60 (15.85) *Max Cont.*			1080 379 rpm	1832 376 rpm	2513 368 rpm	3098 362 rpm	3682 356 rpm	4133 345 rpm	385
***68 (17.96)**			965 423 rpm	1682 419 rpm	2416 414 rpm	3053 406 rpm	3151 345 rpm		436
***75 (19.81** *Max Int.*			920 472 rpm	1664 466 rpm	2390 460 rpm	2982 450 rpm	3151 337 rpm		481

***DO NOT** operate at maximum pressure and maximum flow at the same time

200 11.96 cu.in/rev (196 cc/rev)

Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	Max Cont. 205 (2973)	*Max Int. 240 (3481)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification								
2.0 (.53)	345 8 rpm	779 4 rpm	1168 4 rpm	2531 3 rpm	3275 2 rpm				10
4.0 (1.06)	372 16 rpm	752 14 rpm	1664 13 rpm	2390 11 rpm	3186 10 rpm	3779 9 rpm	4478 6 rpm		20
8 (2.11)	381 35 rpm	797 32 rpm	1699 29 rpm	2575 28 rpm	3248 27 rpm	3983 25 rpm	4682 23 rpm	5310 19 rpm	41
15 (3.96)	336 74 rpm	814 71 rpm	1735 68 rpm	2637 64 rpm	3372 60 rpm	4089 58 rpm	4691 55 rpm	5328 50 rpm	76
25 (6.60)		726 124 rpm	1664 121 rpm	2505 117 rpm	3336 113 rpm	4036 108 rpm	4673 103 rpm	5354 92 rpm	127
34 (8.98)		699 170 rpm	1620 169 rpm	2390 167 rpm	3204 160 rpm	3956 154 rpm	4558 146 rpm	5230 135 rpm	173
45 (11.88)			1443 223 rpm	2292 218 rpm	3115 212 rpm	3903 208 rpm	4514 199 rpm	5248 189 rpm	229
53 (14.00)			1319 260 rpm	2266 258 rpm	3098 254 rpm	3894 248 rpm	4514 241 rpm	5151 230 rpm	270
60 (15.85)			1168 299 rpm	2195 292 rpm	2974 284 rpm	3823 276 rpm	4434 272 rpm	5089 263 rpm	306
68 (17.96) *Max Cont.*			1062 336 rpm	2036 332 rpm	2921 327 rpm	3646 319 rpm	4398 310 rpm	5045 301 rpm	347
*75 (19.81)			956 375 rpm	1841 372 rpm	2752 365 rpm	3567 358 rpm	4301 350 rpm		383
*85 (22.44) *Max Int.*				1628 425 rpm	2478 420 rpm	3363 411 rpm	4088 390 rpm		433

230 13.9 cu.in/rev (228 cc/rev)

Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	Max Cont. 205 (2973)	*Max Int. 240 (3481)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification								
2.0 (.53)	389 6 rpm	797 4 rpm	1611 3 rpm	2575 2 rpm	3310 1 rpm				9
4.0 (1.06)	425 15 rpm	885 13 rpm	1912 11 rpm	2744 11 rpm	3584 9 rpm	4283 7 rpm	4859 3 rpm		18
8 (2.11)	443 31 rpm	920 29 rpm	1876 27 rpm	2832 25 rpm	3726 23 rpm	4584 20 rpm	5337 16 rpm	6195 10 rpm	35
15 (3.96)	389 63 rpm	938 61 rpm	1832 58 rpm	2814 55 rpm	3770 52 rpm	4682 47 rpm	5514 41 rpm	6301 34 rpm	66
25 (6.60)		894 103 rpm	1850 100 rpm	2867 96 rpm	3788 92 rpm	4708 87 rpm	5487 81 rpm	6239 71 rpm	110
34 (8.98)		779 145 rpm	1814 143 rpm	2797 139 rpm	3726 133 rpm	4620 126 rpm	5514 120 rpm	6213 109 rpm	149
45 (11.88)			1646 192 rpm	2602 187 rpm	3735 182 rpm	4487 176 rpm	5266 170 rpm	6089 160 rpm	197
53 (14.00)			1549 226 rpm	2567 221 rpm	3478 215 rpm	4390 208 rpm	5266 203 rpm	6000 194 rpm	233
60 (15.85)			1345 256 rpm	2390 253 rpm	3452 248 rpm	4292 242 rpm	5168 235 rpm	5850 222 rpm	263
68 (17.96) *Max Cont.*			1239 292 rpm	2345 288 rpm	3106 283 rpm	4266 278 rpm	5036 273 rpm	5682 256 rpm	298
*75 (19.81)			1097 324 rpm	2080 321 rpm	3044 314 rpm	3965 308 rpm	4983 300 rpm		329
*85 (22.44) *Max Int.*				1832 366 rpm	2965 360 rpm	3912 351 rpm	4832 338 rpm		373

***DO NOT** operate at maximum pressure and maximum flow at the same time

250 15.68 cu.in/rev (257 cc/rev) — Max Cont. *Max Int.

Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	205 (2973)	240 (3481)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification								
2.0 (.53)	425 5 rpm	982 2 rpm							8
4.0 (1.06)	478 12 rpm	1000 11 rpm	2097 10 rpm	3204 9 rpm	4168 8 rpm	5045 6 rpm	5682 3 rpm		16
8 (2.11)	478 27 rpm	1018 26 rpm	2159 24 rpm	3239 22 rpm	4266 20 rpm	5195 18 rpm	6089 14 rpm		31
15 (3.96)	443 57 rpm	1000 56 rpm	2266 54 rpm	3248 51 rpm	4292 48 rpm	5230 45 rpm	6124 43 rpm	7027 37 rpm	58
25 (6.60)	389 95 rpm	1009 93 rpm	2133 90 rpm	3186 86 rpm	4319 82 rpm	5248 77 rpm	6186 72 rpm	6921 63 rpm	97
34 (8.98)		841 129 rpm	2000 125 rpm	3080 121 rpm	4257 116 rpm	5222 111 rpm	6071 106 rpm	6850 96 rpm	132
45 (11.88)		681 174 rpm	1903 173 rpm	3062 170 rpm	4142 166 rpm	5065 161 rpm	5965 155 rpm	6894 143 rpm	175
53 (14.00)		584 203 rpm	1770 202 rpm	2876 200 rpm	3965 196 rpm	4991 190 rpm	5965 184 rpm	6691 175 rpm	206
60 (15.85)			1593 232 rpm	2620 229 rpm	3876 225 rpm	4868 220 rpm	5814 215 rpm	6558 202 rpm	234
68 (17.96)			1434 262 rpm	2602 261 rpm	3673 257 rpm	4850 250 rpm	5682 241 rpm	6461 228 rpm	298
75 (19.81) *Max Cont.*			1212 290 rpm	2425 289 rpm	3434 278 rpm	4602 280 rpm	5637 273 rpm	6425 260 rpm	292
*85 (22.44)			1151 328 rpm	2310 326 rpm	3275 322 rpm	4505 316 rpm	5345 307 rpm		331
*90 (23.76) *Max Int.*			752 348 rpm	1982 347 rpm	3168 344 rpm	4337 336 rpm			350

300 18.06 cu.in/rev (296 cc/rev) — Max Cont. *Max Int.

Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	205 (2973)	240 (3481)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification								
2.0 (.53)	443 3 rpm	823 1 rpm							7
4.0 (1.06)	549 11 rpm	1248 10 rpm	2602 9 rpm	3797 8 rpm	4443 7 rpm	5469 4 rpm			14
8 (2.11)	558 22 rpm	1301 21 rpm	2637 20 rpm	3823 19 rpm	5000 16 rpm	5903 13 rpm	6735 9 rpm	7248 5 rpm	27
15 (3.96)	584 48 rpm	1274 47 rpm	2699 45 rpm	3779 43 rpm	5027 39 rpm	5938 33 rpm	7169 28 rpm	7912 20 rpm	51
25 (6.60)	522 82 rpm	1221 81 rpm	2558 80 rpm	3717 76 rpm	4885 71 rpm	5983 64 rpm	7000 56 rpm	8248 44 rpm	78
34 (8.98)	425 113 rpm	1151 112 rpm	2628 110 rpm	3478 107 rpm	4974 102 rpm	6098 96 rpm	7124 86 rpm	8195 73 rpm	115
45 (11.88)		850 150 rpm	2372 149 rpm	3407 148 rpm	4664 143 rpm	5629 135 rpm	6664 124 rpm	7788 112 rpm	152
53 (14.00)		673 177 rpm	2142 176 rpm	3390 175 rpm	4637 173 rpm	5584 165 rpm	6664 152 rpm	7965 138 rpm	179
60 (15.85)		566 200 rpm	1991 199 rpm	3204 198 rpm	4478 193 rpm	5549 186 rpm	6708 174 rpm	7894 162 rpm	203
68 (17.96)			1770 225 rpm	2947 224 rpm	4160 222 rpm	5576 212 rpm	6664 201 rpm	7806 194 rpm	230
75 (19.81) *Max Cont.*			1575 251 rpm	2850 250 rpm	4106 246 rpm	5399 240 rpm	6638 232 rpm	7700 215 rpm	253
*85 (22.44)			1239 285 rpm	2797 284 rpm	4027 278 rpm	5045 270 rpm	6443 257 rpm		287
*95 (25.08) *Max Int.*			938 316 rpm	2301 314 rpm	3814 311 rpm	4885 307 rpm	6195 292 rpm		321

***DO NOT** operate at maximum pressure and maximum flow at the same time

350 21.2 cu.in/rev (345 cc/rev)

Max Cont. *Max Int.

Torque (in●lbf) Speed Specification

FLOW Press bar (psi) lpm (gpm)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	205 (2973)	240 (3481)	Theo rpm
2.0 (.53)	558 4 rpm	1177 4 rpm							6
4.0 (1.06)	566 10 rpm	1195 9 rpm	2567 8 rpm	3894 7 rpm					12
8 (2.11)	602 21 rpm	1292 20 rpm	2744 20 rpm	4053 19 rpm	5213 18 rpm	6505 16 rpm	7496 12 rpm		23
15 (3.96)	637 42 rpm	1328 41 rpm	2779 40 rpm	4142 39 rpm	5549 37 rpm	6806 35 rpm	7788 32 rpm	8708 26 rpm	43
25 (6.60)	558 70 rpm	1310 69 rpm	2770 68 rpm	4160 66 rpm	5558 63 rpm	6770 60 rpm	7894 55 rpm	9009 46 rpm	72
34 (8.98)	460 97 rpm	1177 96 rpm	2690 95 rpm	4027 93 rpm	5478 89 rpm	6726 85 rpm	8009 78 rpm	9151 68 rpm	98
45 (11.88)		885 129 rpm	2310 128 rpm	3912 127 rpm	5160 125 rpm	6514 118 rpm	7850 112 rpm	9098 101 rpm	129
53 (14.00)		752 152 rpm	2186 150 rpm	3699 148 rpm	5009 145 rpm	6328 139 rpm	7850 132 rpm	9062 118 rpm	153
60 (15.85)		575 171 rpm	2505 170 rpm	3629 169 rpm	4868 167 rpm	6301 162 rpm	7788 155 rpm	8815 143 rpm	173
68 (17.96)			1929 195 rpm	3425 194 rpm	4806 190 rpm	6160 185 rpm	7452 175 rpm	8638 162 rpm	196
75 (19.81) *Max Cont.*			1823 215 rpm	3301 214 rpm	4558 210 rpm	6018 206 rpm	7301 197 rpm	8549 183 rpm	216
*85 (22.44)			1558 243 rpm	3142 242 rpm	4514 239 rpm	6009 234 rpm	7151 227 rpm		245
*95 (25.08) *Max Int.*				3124 272 rpm	4505 269 rpm	5708 265 rpm			273

375 22.8 cu.in/rev (371 cc/rev)

Max Cont. *Max Int.

Torque (in●lbf) Speed Specification

FLOW Press bar (psi) lpm (gpm)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	205 (2973)	240 (3481)	Theo rpm
2.0 (.53)	664 3 rpm								5
4.0 (1.06)	735 8 rpm	1416 8 rpm	2921 7 rpm	4319 6 rpm	5629 5 rpm	6735 3 rpm			11
8 (2.11)	717 18 rpm	1505 17 rpm	3151 17 rpm	4664 16 rpm	6009 14 rpm	7275 12 rpm	8390 9 rpm	9381 5 rpm	21
15 (3.96)	673 39 rpm	1434 38 rpm	3151 37 rpm	4717 35 rpm	6045 32 rpm	7478 29 rpm	8655 25 rpm	9753 18 rpm	40
25 (6.60)	602 65 rpm	1381 64 rpm	3098 62 rpm	4637 59 rpm	6018 55 rpm	7584 48 rpm	8797 44 rpm	10071 35 rpm	67
34 (8.98)	513 90 rpm	1310 89 rpm	3000 87 rpm	4478 83 rpm	6107 77 rpm	7443 71 rpm	8788 63 rpm	10133 53 rpm	91
45 (11.88)		1071 120 rpm	2673 119 rpm	4230 117 rpm	5753 113 rpm	7195 108 rpm	8602 100 rpm	10036 90 rpm	120
53 (14.00)		841 141 rpm	2496 140 rpm	4124 138 rpm	5558 134 rpm	6947 128 rpm	8602 120 rpm	9762 105 rpm	142
60 (15.85)		664 161 rpm	2336 161 rpm	3788 160 rpm	5239 158 rpm	6779 155 rpm	8266 151 rpm	9470 141 rpm	161
68 (17.96)			2053 182 rpm	3735 180 rpm	5177 176 rpm	6691 169 rpm	8186 161 rpm	9434 148 rpm	182
75 (19.81) *Max Cont.*			1832 201 rpm	3363 200 rpm	4921 195 rpm	6531 190 rpm	7974 181 rpm	8956 165 rpm	201
*85 (22.44)			1579 228 rpm	3275 226 rpm	4655 221 rpm	6195 216 rpm	7363 206 rpm		227
*90 (23.76) *Max Int.*			1310 242 rpm	2797 240 rpm	4425 237 rpm	5788 226 rpm			241

***DO NOT** operate at maximum pressure and maximum flow at the same time

475 28.2 cu.in/rev (462 cc/rev) Max Cont. *Max Int.

Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	205 (2973)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification							
2.0 (.53)	823 2 rpm	1646 1 rpm						5
4.0 (1.06)	867 7 rpm	1788 6 rpm	3584 5 rpm	5381 5 rpm	7124 4 rpm			9
8 (2.11)	867 15 rpm	1823 14 rpm	3806 13 rpm	5770 13 rpm	7469 12 rpm	8894 10 rpm	10443 8 rpm	17
15 (3.96)	832 31 rpm	1788 30 rpm	3903 28 rpm	5788 28 rpm	7744 26 rpm	9346 23 rpm	10956 20 rpm	32
25 (6.60)	832 52 rpm	1788 51 rpm	3903 48 rpm	5788 45 rpm	7744 43 rpm	9346 39 rpm	10956 35 rpm	54
34 (8.98)	664 72 rpm	1593 71 rpm	3717 68 rpm	5841 65 rpm	7523 61 rpm	9602 55 rpm	11204 44 rpm	74
45 (11.88)		1274 96 rpm	3363 95 rpm	5549 93 rpm	7390 90 rpm	9399 84 rpm	11160 73 rpm	97
53 (14.00)		1027 113 rpm	3062 112 rpm	5071 111 rpm	7036 107 rpm	8921 102 rpm	10726 90 rpm	115
60 (15.85)		726 128 rpm	2814 128 rpm	4770 127 rpm	6992 124 rpm	8629 119 rpm	10496 110 rpm	130
68 (17.96)		513 146 rpm	2407 145 rpm	4602 144 rpm	6549 141 rpm	8452 136 rpm	10231 125 rpm	147
75 (19.81) *Max Cont.*			2036 161 rpm	4248 160 rpm	6213 158 rpm	8142 153 rpm	9877 140 rpm	162
*85 (22.44)			1770 182 rpm	4018 180 rpm	5859 177 rpm	7753 168 rpm		184
*90 (23.76) *Max Int.*			1328 194 rpm	3345 193 rpm	5443 190 rpm	7434 182 rpm		195

540 32.9 cu.in/rev (540 cc/rev) Max Cont. *Max Int.

Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	140 (2031)	175 (2538)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification						
2.0 (.53)	929 2 rpm	1752 2 rpm					4
4.0 (1.06)	1106 6 rpm	2044 5 rpm	4160 5 rpm	6089 4 rpm	8248 4 rpm	10054 3 rpm	7
8 (2.11)	1186 13 rpm	2106 13 rpm	4390 12 rpm	6629 11 rpm	8549 11 rpm	10399 8 rpm	15
15 (3.96)	1080 27 rpm	2036 26 rpm	4469 26 rpm	6638 25 rpm	8682 24 rpm	10779 21 rpm	28
25 (6.60)	885 44 rpm	1991 43 rpm	4425 42 rpm	6850 41 rpm	8726 39 rpm	10797 35 rpm	46
34 (8.98)	708 62 rpm	1876 61 rpm	4257 60 rpm	6620 58 rpm	8646 54 rpm	11001 49 rpm	63
45 (11.88)		1531 82 rpm	3867 82 rpm	6319 81 rpm	8284 79 rpm	10532 75 rpm	83
53 (14.00)		1257 97 rpm	3682 97 rpm	6000 96 rpm	8301 94 rpm	10355 89 rpm	98
60 (15.85)		938 110 rpm	3363 110 rpm	5876 109 rpm	7930 108 rpm	10248 106 rpm	111
68 (17.96)		752 125 rpm	3159 124 rpm	5452 124 rpm	7700 123 rpm	9806 120 rpm	126
75 (19.81) *Max Cont.*			2814 138 rpm	5310 137 rpm	7310 135 rpm	9735 132 rpm	139
*85 (22.44)			2584 154 rpm	4761 153 rpm	6903 152 rpm		158
*90 (23.76) *Max Int.*			1894 169 rpm	4301 168 rpm	6682 168 rpm		167

***DO NOT** operate at maximum pressure and maximum flow at the same time

750 45.46 cu.in/rev (745 cc/rev)					Max Cont.	*Max Int.	
Press bar (psi)	17.5 (254)	35 (508)	70 (1015)	105 (1523)	175 (2538)	140 (2031)	Theo rpm
FLOW lpm (gpm)	Torque (in●lbf) Speed Specification						
2.0 (.53)	1283 2 rpm	2478 1 rpm					3
4.0 (1.06)	1416 4 rpm	2841 4 rpm	5788 4 rpm	8496 3 rpm	9868 3 rpm	11611 2 rpm	5
8 (2.11)	1434 9 rpm	2965 9 rpm	6089 9 rpm	9080 8 rpm	10257 8 rpm	11921 7 rpm	11
15 (3.96)	1381 19 rpm	2921 19 rpm	6142 18 rpm	9266 18 rpm	10478 17 rpm	12178 16 rpm	20
25 (6.60)	1257 32 rpm	2832 31 rpm	6089 30 rpm	9257 30 rpm	10434 29 rpm	12151 27 rpm	34
34 (8.98)	974 44 rpm	2549 44 rpm	5823 42 rpm	9036 41 rpm	10346 40 rpm	12089 37 rpm	46
45 (11.88)	628 60 rpm	2142 59 rpm	5487 59 rpm	8691 58 rpm	10116 58 rpm	11903 55 rpm	60
53 (14.00)		1788 70 rpm	5027 69 rpm	8328 68 rpm	9779 67 rpm	11576 66 rpm	71
60 (15.85)		1239 79 rpm	4664 78 rpm	7947 77 rpm	9611 76 rpm	11381 74 rpm	81
68 (17.96)		885 90 rpm	4301 90 rpm	7540 89 rpm	9151 88 rpm	11071 87 rpm	91
75 (19.81) *Max Cont.*		575 99 rpm	3761 99 rpm	7186 98 rpm	8673 97 rpm	10425 96 rpm	101
*82.9 (21.91)			3496 110 rpm	6593 109 rpm	8018 108 rpm		111
*90 (23.76) *Max Int.*			2637 120 rpm	5841 119 rpm	7080 117 rpm		121

***DO NOT** operate at maximum pressure and maximum flow at the same time

Cross Reference

FFP 500-Series: 500/501

Manufacturer	Motor Series	Notes
White	RE	500/501, 520/521, 530/531
Parker	TJ, TF, TL, TG	US, MS, AS Mount & Port
Danfoss	OMR, OMEW, OMRW, OMH	151H
Eaton	W, 2000	162-, 104-, 184-
Ross	MP, MB, ME, MJ	

- FFP's 500 series is a drop in replacement for White RE series
- FFP's parts are NOT interchangeable with the OEM motors
- The rotation is not field adjustable. CW and CCW rotation use a different manifold.
  - CCW (500) is most common for White RE motors

Description	FFP Model Code	500xxxA5120AAAAA	500xxxA5122AAAAA	500xxxA5102AAAAA	500xxxA5123AAAAA	500xxxA5110AAAAA	500xxxW3120AAAAA	500xxxW3122AAAAA	500xxxW3102AAAAA	500xxxW3123AAAAA	500xxxW3110AAAAA
	Mount	**Magneto**					**Wheel**				
	Ports	7/8-14 O'ring ports					7/8-14 O'ring ports				
	Shaft	1.25" Keyed Shaft	1.25" Tapered Shaft	1" 6B Spline	1.25" 14-Tooth	1" Keyed Shaft	1.25" Keyed Shaft	1.25" Tapered Shaft	1" 6B Spline	1.25" 14-Tooth	1" Keyed Shaft
xxx = Size (cm³/rev)	**125**	F080000	F080060	F080010	F080015	F080055	F080027	F080038	F080087	F080049	F080052
	160	F080057	F080008	F080011	F080075	F080022	F080028	F080084	F080088	F080095	F080103
	200	F080001	F080061	F080012	F080016	F080023	F080029	F080039	F080089	F080096	F080104
	230	F080058	F080062	F080013	F080017	F080024	F080030	F080040	F080090	F080097	F080053
	250	F080059	F080063	F080069	F080076	F080079	F080031	F080041	F080046	F080050	F080105
	300	F080002	F080009	F080014	F080018	F080025	F080032	F080054	F080047	F080098	F080106
	350	F080003	F080064	F080070	F080019	F080080	F080033	F080043	F080091	F080099	F080107
	375	F080004	F080065	F080071	F080020	F080026	F080034	F080044	F080048	F080051	F080108
	475	F080005	F080066	F080072	F080077	F080081	F080035	F080045	F080092	F080100	F080109
	540	F080006	F080067	F080073	F080078	F080082	F080036	F080085	F080093	F080101	F080110
	750	F080007	F080068	F080074	F080021	F080083	F080037	F080086	F080094	F080102	F080111

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