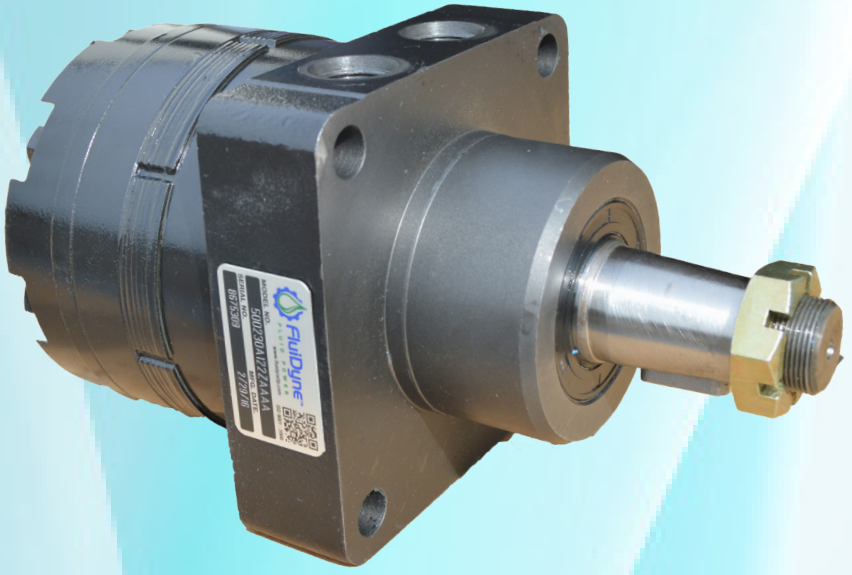
FluiDyne™

FLUID POWER

500 Series Motor

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



www.FluiDyneFP.com

Our People Make the Difference

Our promise at FluiDyne is to provide the fluid power industry with high quality, fully tested and technically supported hydraulic pumps, motors and valves. We understand and value the local service and support provided by repair shops, resellers and distributors to the OEM's and users of fluid power applications. We do not compete with our customers, but rather we partner with them. FluiDyne supports the channels of distribution that contribute to our partners' success.

Our strength is our people. We focus on personal development and a long term commitment to our staff. We recognize knowledgeable people are a valuable part of the service a business organization provides. We stress a commitment to learning and customer support at every level of the FluiDyne organization. Accounting, Customer Service, Engineering, Inventory, Marketing, Management, Manufacturing, Quality and Shipping all work together to serve our customer. We believe in treating everyone inside and outside the company with professionalism and respect.

Application and technical support for our products is easily accessible, and we pride ourselves in not having a switchboard or phone tree. The person, who picks up the phone, helps the customer. We like it simple, we like it direct. Our inventory is extensive and our people are skilled at assembly, modifications and testing. Our product leaves the factory fast (often the same day) and it leaves correct, tested and documented.

Call, email or visit our website to learn more about FluiDyne. Our products and people make us special.

- **18 month warranty**
- **Blind drop shipments**
- **Custom proprietary software allows immediate and accurate technical support, quoting, order entry and bill of material information**
- **Extensive Michigan inventory**
- **ISO Certified 9001:2008**
- **New FluiDyne and remanufactured products**
- **Outstanding customer service**
- **Performance you have come to expect**
- **Same day shipments**
- **Standard and modified products**
- **Multiple test stands which allow for quick 100% testing of all units shipped**

Visit our Website to learn more about what makes us so great!

FLUIDYNE FLUID POWER
OVER 35 YEARS OF QUALITY
1976-2018

POWERFUL FORCES WORKING TOGETHER
NFPA

THE FPDA
MOTION & CONTROL NETWORK
MEMBER

www.FluiDyneFP.com

Features and Benefits:

High Pressure 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.

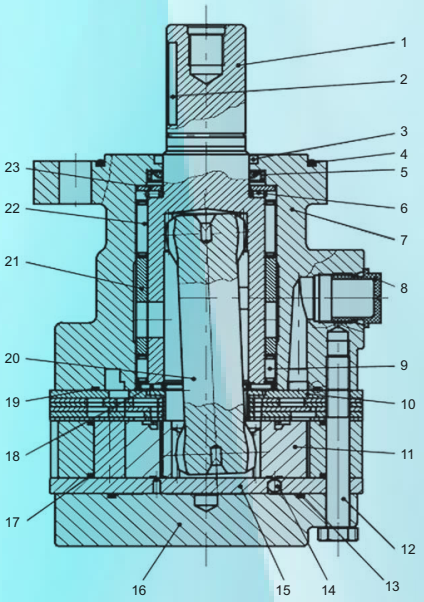


Diagram Key

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 Bearing
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 Bearing
23 Thrust Washer

Technical Specifications

Model		125	160	200	230	250	300	350	375	475	540	750
Displacement *cm^3/rev (in^3/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 lb.		27	29	29	29	30	31	32	32	33	35	38

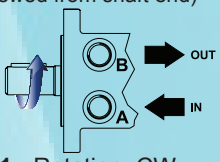
Continuous (Cont.) = maximum of continuous operation. Intermittent (Int.) = maximum operating range for 6 seconds per minute

Model Code Breakdown

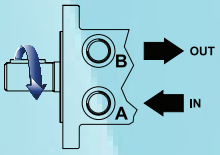
500 **160** **A51** **02** **A** **A** **A** **AA**

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)

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

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.

Shaft Options

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

Paint

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

Valve Cavity / Cartridge Option

A - None

Add-On Option

A - Standard

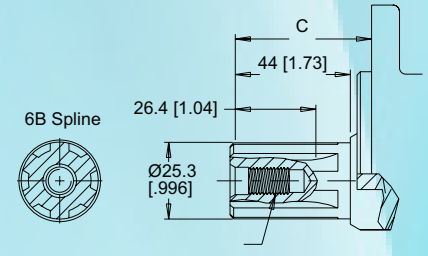
Miscellaneous Option

AA - None
AC - Free Turning Rotor

500/501 - 500 Series

Medium Duty Hydraulic Motor

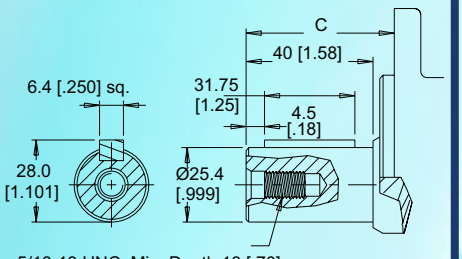
02 1" 6B Spline



5/16-18 UNC, Depth 15.5 [.61]

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

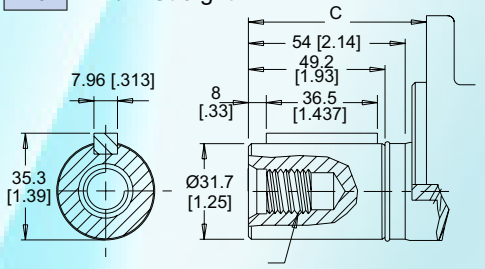
10 1" Straight



5/16-18 UNC, Min. Depth 18 [.70]

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

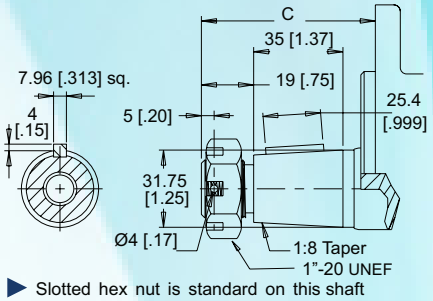
20 1-1/4" Straight



5/8-18 UNF, Min. Depth 21 [.83]

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

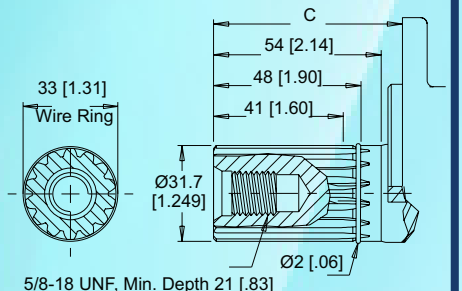
22 1-1/4" Tapered



▶ Slotted hex nut is standard on this shaft

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

23 14 Tooth Spline
12/24 Pitch



5/8-18 UNF, Min. Depth 21 [.83]

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

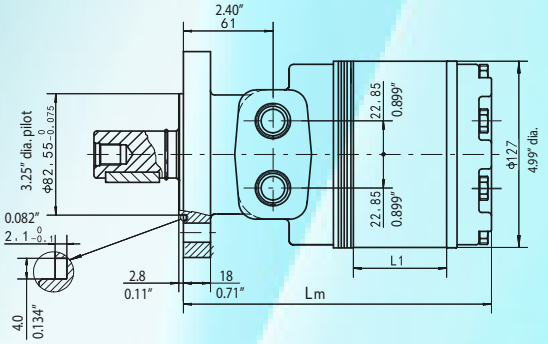
From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	**Magneto Mount mm (in)**	**Wheel Mount mm (in)**
02	50 (1.97)	91 (3.58)
10	50 (1.97)	91 (3.58)
20	61 (2.40)	103 (4.06)
22	65 (2.56)	107 (4.21)
23	61 (2.40)	103 (4.06)

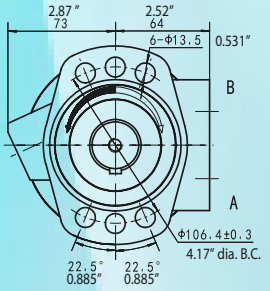
500/501 - 500 Series

Medium Duty Hydraulic Motor

A51 - SAE A and Magneto Mount

Port A, B Ports 7/8-14UNF

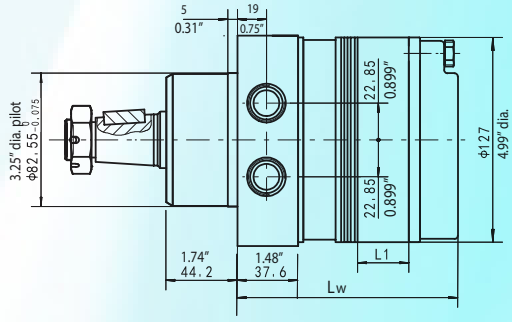


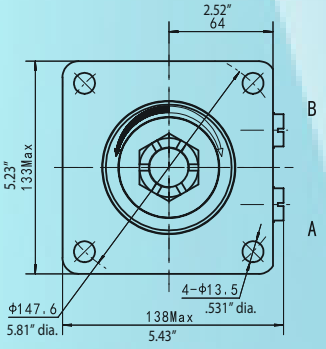


Model Size	125	160	200	230	250	300	350	375	475	540	750
Displacement cm^3/rev (in^3/rev)	118 (7.2)	156 (9.5)	196 (11.9)	228 (13.9)	257 (15.7)	296 (18.1)	345 (21.1)	371 (22.6)	462 (28.2)	540 (32.9)	745 (45.6)
L_m (mm), Magneto	157	160	163.5	166	168.5	172	176	178.5	186	194	210
L_m (inches)	6.18"	6.30"	6.44"	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	24	25	25	25	26	27	28	29	30	33

W31 - Wheel Mount

Port A, B Ports 7/8-14UNF





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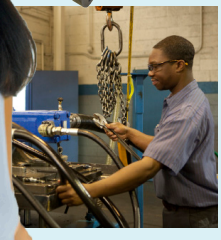
Displacement cm^3/rev (in^3/rev)	118 (7.2)	156 (9.5)	196 (11.9)	228 (13.9)	257 (15.7)	296 (18.1)	345 (21.1)	371 (22.6)	462 (28.2)	540 (32.9)	745 (45.6)
L_w (mm), Wheel	119	122	125.5	128	130.5	134.5	138	140.5	148	156	176
L_w (inches)	4.68"	4.80"	4.94"	5.04"	5.14"	5.30"	5.43"	5.53"	5.83"	6.14"	6.93"
L1 (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)	27	27	27	27	28	29	29	30	31	32	35

FluiDyne supports the distributors providing local knowledge and assistance to fluid power customers.

Our people provide extensive support:

- Engineering Expertise
- Decoding special part numbers
- Identification of parts within units
- Advice on component repair and assembly
- Component failure analysis
- 18 month warranty
- New application component selection
- Same day shipment



Reman Units & Parts Available for Racine, Oilgear, Bosch, Continental and More!

Powered by Customer Service!

Call, email, chat...we're ready to help!

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FLUID POWER

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FluiDyne Contact Info and Website

FLUIDYNE FLUID POWER OVER 35 YEARS OF QUALITY 1976-2018

THE FPDA MOTION & CONTROL NETWORK MEMBER

NATIONAL FLUID POWER ASSOCIATION NFPA MEMBER

ISO 9001:2008 REGISTERED FIRM

07/2018