

# HYDRAULIC MOTORS CATALOG

INNOVATIVE MOBILE SOLUTIONS

# ABOUT US

## “INNOVATIVE MOBILE SOLUTIONS”

Eagle Hydraulic Inc. is a Canadian based manufacturer of engineered and standard hydraulic cylinders. In addition, we also manufacture Eagle branded Hydraulic Power Units in Canada and engineer, manufacture and distribute other hydraulic components like hydraulic motors, pumps, valves and many other products.

Serving the mobile equipment industry, our products are designed and supported from our Head Office located in Mirabel Quebec Canada. We have a fully equipped testing, service and repair facility integrated within our 55,000 square foot Corporate Head Office located in Mirabel, near Montreal, Quebec. We independently own and operate two hydraulic cylinder manufacturing facilities located near Wuxi Area in China. Our manufacturing operations are certified to the ISO TS16949 standard. We are also a certified OEM production supplier to many large North American based corporations.

Our services include custom component or system design, on site visits & support, flexible delivery and stocking programs, inventory updates, flexible warranty and responsive service. We strive to provide the best product for your application and deliver to you on time every time.

Eagle hydraulic adds value through innovation, quality, respect, commitment, loyalty and teamwork.

## OUR CAPABILITIES

1

OEM HYDRAULIC CYLINDERS

2

STANDARD HYDRAULIC CYLINDERS

3

HYDRAULIC POWER UNITS

-AC

-DC

4

HYDRAULIC COMPONENTS

-Pumps

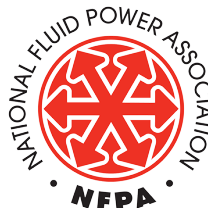
-Motors

5

SYSTEM INTEGRATION

# TABLE OF CONTENTS

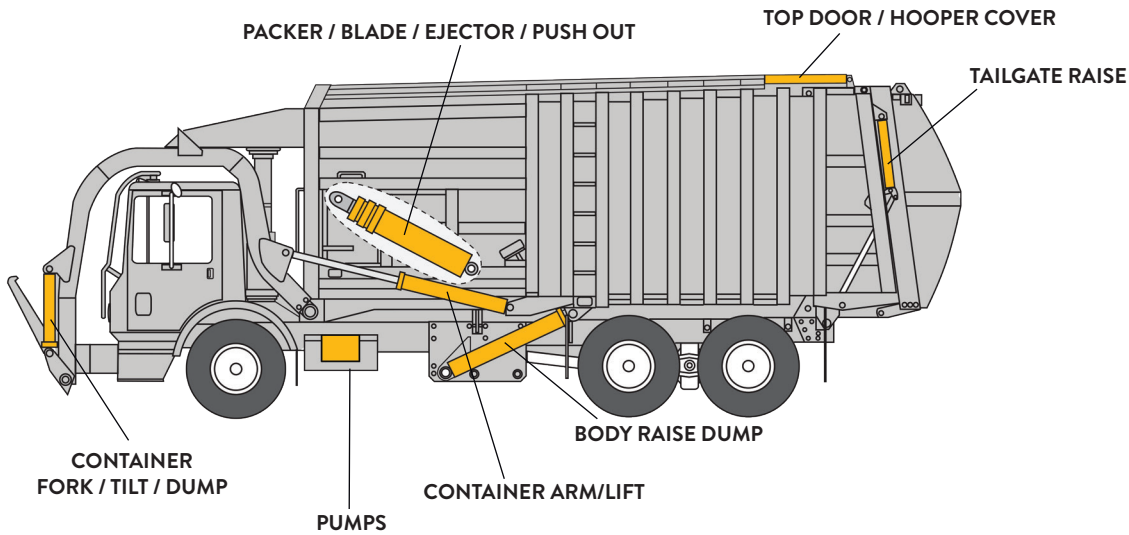
<b>ABOUT US</b>	<b>2</b>
<b>APPLICATIONS</b>	<b>4</b>
<b>EBMM</b>	<b>6</b>
<b>EBMP/ EBMPH/ EBMPW/ EOZ</b>	<b>14</b>
<b>EBMR/ EBMRS/ EBMRWN/ EBMR-BK01/ EOK</b>	<b>41</b>
<b>EBMH</b>	<b>COMING SOON</b>
<b>EBMSY</b>	<b>67</b>
<b>EBMT/ EBMTE/ EBMTJ/ EBMTS</b>	<b>COMING SOON</b>
<b>EBMV</b>	<b>COMING SOON</b>
<b>EBMK2</b>	<b>COMING SOON</b>
<b>EBMK6</b>	<b>COMING SOON</b>
<b>EBME2</b>	<b>COMING SOON</b>
<b>EBMJ</b>	<b>COMING SOON</b>
<b>EBMER-2/ EBMER-4</b>	<b>91</b>
<b>EGM02 GEARMOTOR HIGH SPEED</b>	<b>COMING SOON</b>
<b>VALVES</b> (CROSSOVER RELIEF/ SWITCH/ OVERCENTER/ COUNTERBALANCE)	<b>COMING SOON</b>
<b>HYDRAULIC BRAKES EBK10 / EBK2</b>	<b>COMING SOON</b>
<b>LIMITED WARRANTY</b>	<b>115</b>
<b>HYDRAULIC PRODUCT SAFETY</b>	<b>117</b>
<b>COMPARISON TABLE</b>	<b>120</b>
<b>FLUID POWER FORMULAS</b>	<b>121</b>



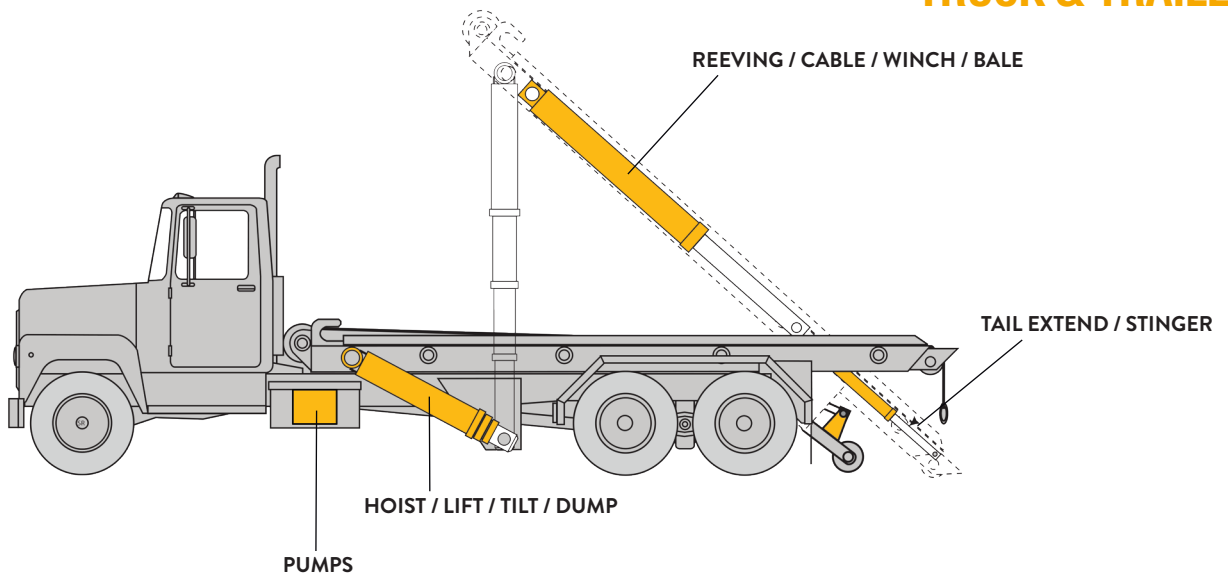
**NATDA**

# APPLICATIONS

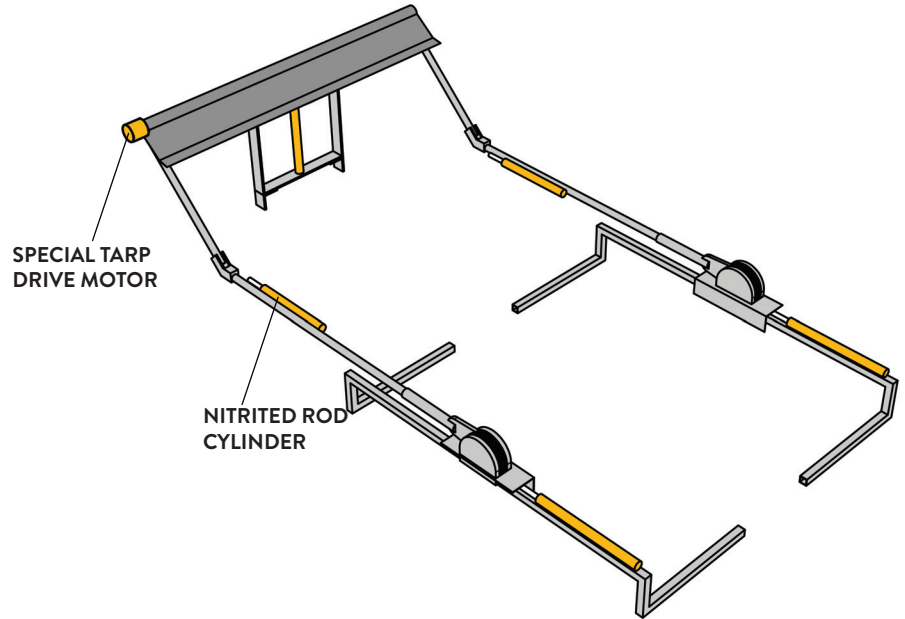
## WASTE & REFUSE



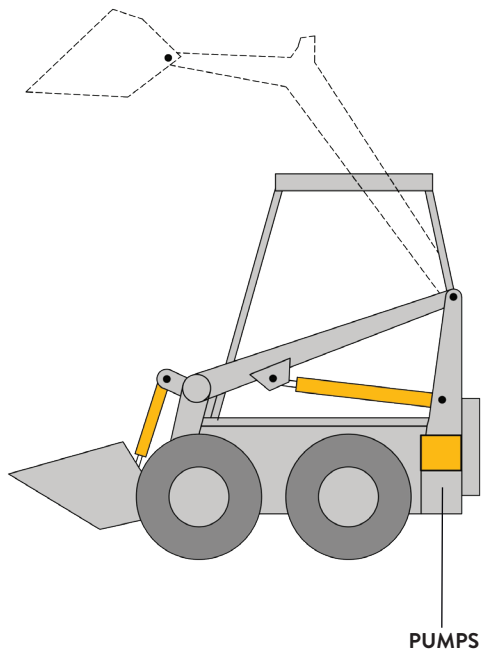
## TRUCK & TRAILER



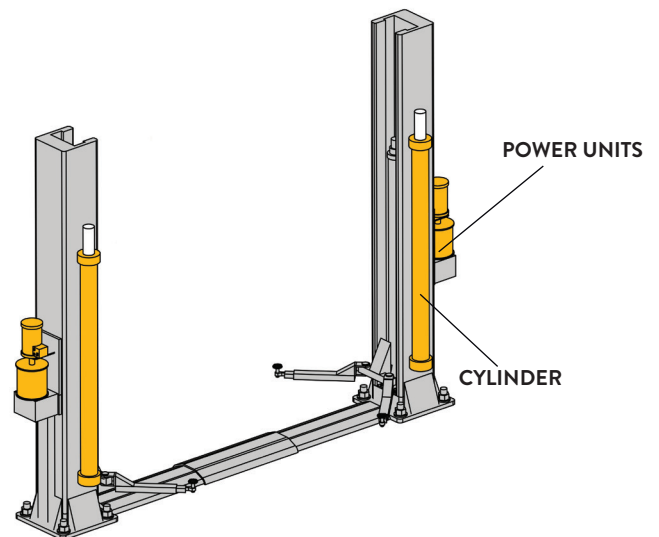
## TARP SYSTEM



## SKID STEER LOADER



## AUTO LIFT



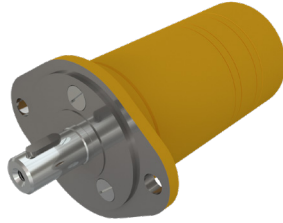
## OTHER APPLICATIONS

FORESTRY - AGRICULTURE - AERIAL TRUCK - SNOW EQUIPMENT  
MATERIAL HANDLING - CONSTRUCTION

EBMM series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

## FEATURES

- Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- Advanced construction design, high power and low weight.



EBMM - Flange F - Rear Port

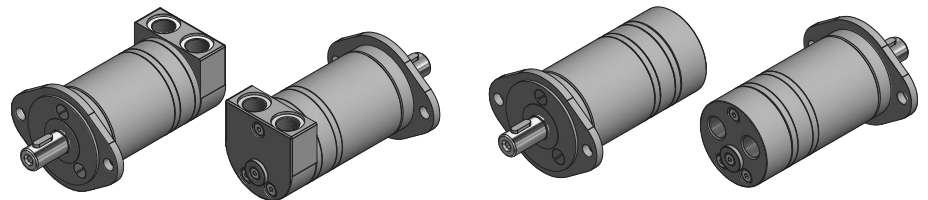
		Max. Inlet Pressure
EBMM8-50	Continuous PSI (bar)	2538 (175)
	Intermittent PSI (bar)	3263 (225)

**EBMM**

		EBMM 8	EBMM 2.5	EBMM 20	EBMM 32	EBMM 40	EBMM 50
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	0.5 (8.2)	0.79 (12.9)	1.21 (19.9)	1.93 (31.6)	2.43 (39.8)	3.07 (50.3)
Max. Speed	Continuous (rpm)	1950	1550	1000	630	500	400
	Intermittent (rpm)	2450	1940	1250	800	630	500
Max. Torque	Continuous lbf•ft (N•m)	8.12 (11)	11.81 (16)	18.45 (25)	29.52 (40)	33.21 (45)	33.95 (46)
	Intermittent lbf•ft (N•m)	11.07 (15)	16.97 (23)	25.83 (35)	42.07 (57)	51.66 (70)	64.94 (88)
	Peak lbf•ft (N•m)	15.5 (21)	24.35 (33)	37.64 (51)	47.23 (64)	60.52 (82)	73.8 (100)
Max. Output	Continuous hp (kW)	2.4 (1.8)	3.2 (2.4)	3.2 (2.4)	3.2 (2.4)	2.9 (2.2)	2.4 (1.8)
	Intermittent hp (kW)	3.5 (2.6)	4.3 (3.2)	4.3 (3.2)	4.3 (3.2)	4.3 (3.2)	4.3 (3.2)
Max. Pressure Drop	Continuous PSI (bar)	1450 (100)	1450 (100)	1450 (100)	1450 (100)	1305 (90)	1015 (70)
	Intermittent PSI (bar)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)
	Peak PSI (bar)	2900 (200)	2900 (200)	2900 (200)	2320 (160)	2320 (160)	2320 (160)
Max. Flow	Continuous GPM (L/min)	4.2 (16)	5.3 (20)	5.3 (20)	5.3 (20)	5.3 (20)	5.3 (20)
	Intermittent GPM (L/min)	5.3 (20)	6.6 (25)	6.6 (25)	6.6 (25)	6.6 (25)	6.6 (25)
Weight	Lbs (kg)	4.2 (1.9)	4.4 (2)	4.62 (2.1)	4.84 (2.2)	5.0 (2.3)	5.28 (2.4)

\* Continuous pressure: Max. value of operating motor continuously.  
 \* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.  
 \* Peak pressure: Max. value of operating motor in 0.6 second per minute.

1	2	3	4	5	6	7	8
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BLANK	8	M 3-M6 Circle-Flange, Pilot Ø31.5x5	A Shaft Ø16, Parallel Key 5x5x16	E G3/8, G1/8	Blank Standard	00 No Paint	Blank Standard
	12.5	U 3-1/4-28UNF Circle-Flange, Pilot Ø31.5x5	B Shaft Ø5/8", Parallel Key 3/16"SQ x 3/4"	U 9/16-18UNF, 3/8-24UNF	R Opposite	Blank Black	0 No Case Drain
	16	F 2-Ø9 Rhomb-Flange, Pilot Ø63x2	C Shaft Ø16.5, Involute B17x14, DIN5482	1E End Port G3/8, G1/8		BI Blue	
	20			1U End Port 9/16-18UNF, 3/8-24UNF		S Silver Grey	
	32						
	40						
50							



## EBMM ORDER INFORMATION

EBMM

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# PERFORMANCE DATA



EBMM

## EBMM8 - 0.5 in<sup>3</sup>/rev (8.2 cm<sup>3</sup>/rev)

		Max. Cont				Max. Int.	
		Pressure PSI (bar)					
		508 (35)	725 (50)	1015 (70)	1450 (100)	1740 (120)	2030 (140)
0.5 (2)	Torque lbf•ft (N•m)	2.2 (3)	3.7 (5)	5.9 (8)	7.4 (10)	8.9 (12)	10.3 (14)
	Speed (rpm)	228	218	206	156	111	58
1.0 (4)	Torque lbf•ft (N•m)	2.2 (3)	3.7 (5)	5.2 (7)	8.1 (11)	9.6 (13)	11.1 (15)
	Speed (rpm)	474	471	463	426	391	331
2.0 (8)	Torque lbf•ft (N•m)	2.2 (3)	3.7 (5)	5.2 (7)	8.1 (11)	9.6 (13)	11.1 (15)
	Speed (rpm)	953	946	926	884	855	816
3.0 (12)	Torque lbf•ft (N•m)	1.5 (2)	3.7 (5)	5.2 (7)	7.4 (10)	9.6 (13)	11.1 (15)
	Speed (rpm)	1444	1426	1402	1360	1324	1288
4.0 (15)	Torque lbf•ft (N•m)		3.0 (4)	5.2 (7)	7.4 (10)	8.9 (12)	10.3 (14)
	Speed (rpm)		1912	1900	1861	1833	1780
5.25 (20)	Torque lbf•ft (N•m)		0	4.4 (6)	7.4 (10)	8.1 (11)	10.3 (14)
	Speed (rpm)		2432	2395	2350	2328	2281

## EBMM12.5 - 0.79 in<sup>3</sup>/rev (12.9 cm<sup>3</sup>/rev)

		Max. Cont				Max. Int.	
		Pressure PSI (bar)					
		508 (35)	725 (50)	1015 (70)	1450 (100)	1740 (120)	2030 (140)
0.5 (2)	Torque lbf•ft (N•m)	4.4 (6)	5.9 (8)	8.1 (11)	11.8 (16)	14.0 (19)	
	Speed (rpm)	140	136	119	68	35	
1.0 (4)	Torque lbf•ft (N•m)	4.4 (6)	5.9 (8)	8.9 (12)	12.5 (17)	14.0 (19)	17.0 (23)
	Speed (rpm)	296	289	274	229	200	145
2.0 (8)	Torque lbf•ft (N•m)	3.7 (5)	5.9 (8)	8.9 (12)	12.5 (17)	14.8 (20)	17.7 (24)
	Speed (rpm)	605	596	583	543	514	469
3.0 (12)	Torque lbf•ft (N•m)	3.7 (5)	5.9 (8)	8.1 (11)	11.8 (16)	14.8 (20)	17.7 (24)
	Speed (rpm)	912	905	895	859	834	784
4.0 (15)	Torque lbf•ft (N•m)	3.7 (5)	5.2 (7)	8.1 (11)	11.8 (16)	14.0 (19)	17.0 (23)
	Speed (rpm)	1152	1144	1136	1102	1078	1036
5.25 (20)	Torque lbf•ft (N•m)	2.2 (3)	5.2 (7)	7.4 (10)	11.0 (15)	14.0 (19)	16.2 (22)
	Speed (rpm)	1542	1532	1521	1500	1482	1437
6.6 (25)	Torque lbf•ft (N•m)	1.5 (2)	4.4 (6)	6.6 (9)	10.3 (14)	13.3 (18)	16.2 (22)
	Speed (rpm)	1910	1891	1878	1848	1828	1788

## EBMM20 - 1.2 in<sup>3</sup>/rev (19.9 cm<sup>3</sup>/rev)

						Max. Cont		Max. Int.		
		Pressure PSI (bar)		246 (17)	508 (35)	725 (50)	1015 (70)	1450 (100)	1740 (120)	2030 (140)
0.5 (2)	Torque lbf•ft (N•m)		2.2 (3)	6.6 (9)	10.3 (14)	14.0 (19)	19.2 (26)	22.1 (30)		
	Speed (rpm)		99	96	89	74	42	21		
1.0 (4)	Torque lbf•ft (N•m)		3.0 (4)	6.6 (9)	10.3 (14)	14.0 (19)	19.2 (26)	22.9 (31)	26.6 (36)	
	Speed (rpm)		197	191	182	178	134	112	74	
2.0 (8)	Torque lbf•ft (N•m)		3.0 (4)	6.6 (9)	9.6 (13)	14.0 (19)	19.9 (27)	22.9 (31)	26.6 (36)	
	Speed (rpm)		398	395	391	377	340	319	288	
3.0 (12)	Torque lbf•ft (N•m)		2.2 (3)	5.9 (8)	9.6 (13)	13.3 (18)	19.2 (26)	22.9 (31)	27.3 (37)	
	Speed (rpm)		596	594	588	579	545	523	493	
4.0 (15)	Torque lbf•ft (N•m)		2.2 (3)	5.9 (8)	8.9 (12)	12.5 (17)	18.5 (25)	22.1 (30)	26.6 (36)	
	Speed (rpm)		745	741	738	728	695	684	660	
5.25 (20)	Torque lbf•ft (N•m)	Max. Cont.	0.7 (1)	4.4 (6)	8.1 (11)	14.0 (19)	17.7 (24)	21.4 (29)	25.8 (35)	
	Speed (rpm)		998	995	991	985	962	916	885	
6.6 (25)	Torque lbf•ft (N•m)	Max. Int.		3.0 (4)	6.6 (9)	10.3 (14)	17.0 (23)	20.7 (28)	24.4 (33)	
	Speed (rpm)			1247	1245	1242	1189	1180	1176	

## EBMM32 - 1.9 in<sup>3</sup>/rev (31.6 cm<sup>3</sup>/rev)

						Max. Cont		Max. Int.		
		Pressure PSI (bar)		290 (20)	508 (35)	725 (50)	1015 (70)	1450 (100)	1740 (120)	2030 (140)
0.5 (2)	Torque lbf•ft (N•m)		5.2 (7)	11.1 (15)	15.5 (21)	20.7 (28)	29.5 (40)			
	Speed (rpm)		61	57	52	47	16			
1.0 (4)	Torque lbf•ft (N•m)		5.2 (7)	11.1 (15)	15.5 (21)	21.4 (29)	30.3 (41)	35.4 (48)	42.1 (57)	
	Speed (rpm)		126	121	114	106	82	67	49	
2.0 (8)	Torque lbf•ft (N•m)		5.2 (7)	11.1 (15)	15.5 (21)	21.4 (29)	30.3 (41)	36.2 (49)	42.8 (58)	
	Speed (rpm)		250	244	239	231	207	194	167	
3.0 (12)	Torque lbf•ft (N•m)		4.4 (6)	9.6 (13)	14.8 (20)	20.7 (28)	29.5 (40)	35.4 (48)	42.8 (58)	
	Speed (rpm)		378	374	369	362	338	322	297	
4.0 (15)	Torque lbf•ft (N•m)		3.0 (4)	8.9 (12)	13.3 (18)	19.9 (27)	28.8 (39)	34.7 (47)	42.1 (57)	
	Speed (rpm)		476	472	468	462	441	426	406	
5.25 (20)	Torque lbf•ft (N•m)	Max. Cont.	2.2 (3)	7.4 (10)	12.5 (17)	18.5 (25)	27.3 (37)	33.9 (46)	40.6 (55)	
	Speed (rpm)		633	630	627	619	601	585	566	
6.6 (25)	Torque lbf•ft (N•m)	Max. Int.	0.7 (1)	5.9 (8)	11.1 (15)	17.0 (23)	25.8 (35)	31.7 (43)	38.4 (52)	
	Speed (rpm)		791	789	787	783	766	753	732	

# PERFORMANCE DATA



EBMM

## EBMM40 - 2.4 in<sup>3</sup>/rev (39.8 cm<sup>3</sup>/rev)

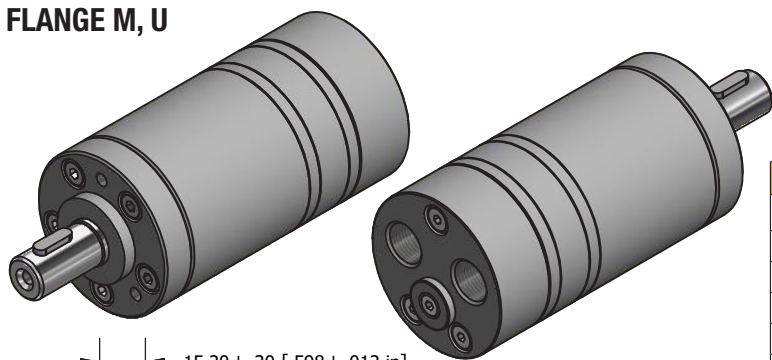
		Pressure PSI (bar)					Max. Cont	Max. Int.
		435 (30)	725 (50)	1015 (70)	1232 (85)	1450 (100)	1740 (120)	
Flow GPM (L/min)	0.5 (2)	Torque lbf•ft (N•m)	11.8 (16)	19.9 (27)	26.6 (36)	32.5 (44)	37.6 (51)	
		Speed (rpm)	45	40	34	28	17	
	1.0 (4)	Torque lbf•ft (N•m)	11.8 (16)	19.9 (27)	27.3 (37)	32.5 (44)	38.4 (52)	45.8 (62)
		Speed (rpm)	96	93	85	79	65	52
	2.0 (8)	Torque lbf•ft (N•m)	11.1 (15)	19.2 (26)	26.6 (36)	32.5 (44)	38.4 (52)	46.5 (63)
		Speed (rpm)	197	195	182	176	166	154
	3.0 (12)	Torque lbf•ft (N•m)	10.3 (14)	18.5 (25)	25.8 (35)	31.7 (43)	37.6 (51)	45.8 (62)
		Speed (rpm)	293	287	282	277	268	257
	4.0 (15)	Torque lbf•ft (N•m)	9.6 (13)	17.7 (24)	25.1 (34)	31.0 (42)	36.9 (50)	45.8 (62)
		Speed (rpm)	371	365	360	355	347	338
	Max. Cont. 5.25 (20)	Torque lbf•ft (N•m)	7.4 (10)	15.5 (21)	22.9 (31)	28.8 (39)	35.4 (48)	43.5 (59)
		Speed (rpm)	497	492	487	480	472	463
Max. Int. 6.6 (25)	Torque lbf•ft (N•m)	5.2 (7)	14.0 (19)	21.4 (29)	27.3 (37)	32.5 (44)	41.3 (56)	
	Speed (rpm)	622	617	612	607	600	591	

## EBMM50 - 3.1 in<sup>3</sup>/rev (50.3 cm<sup>3</sup>/rev)

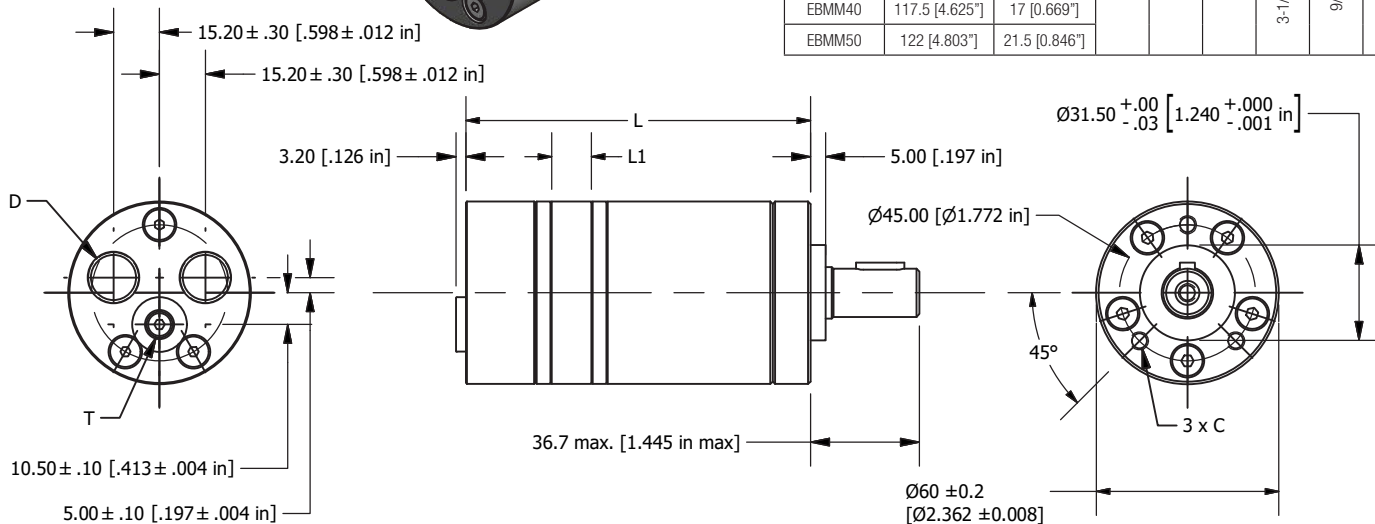
		Pressure PSI (bar)				Max. Cont	Max. Int.
		218 (15)	435 (30)	725 (50)	1015 (70)	1450 (100)	
Flow GPM (L/min)	0.5 (2)	Torque lbf•ft (N•m)	8.1 (11)	17.0 (23)	26.6 (36)	36.9 (50)	
		Speed (rpm)	37	33	27	22	
	1.0 (4)	Torque lbf•ft (N•m)	8.1 (11)	16.2 (22)	26.6 (36)	36.9 (50)	51.7 (70)
		Speed (rpm)	76	73	68	63	55
	2.0 (8)	Torque lbf•ft (N•m)	8.1 (11)	15.5 (21)	25.8 (35)	36.9 (50)	52.4 (71)
		Speed (rpm)	157	154	149	145	137
	3.0 (12)	Torque lbf•ft (N•m)	8.1 (11)	14.8 (20)	24.4 (33)	36.2 (49)	52.4 (71)
		Speed (rpm)	237	234	231	226	218
	4.0 (15)	Torque lbf•ft (N•m)	7.4 (10)	13.3 (18)	23.6 (32)	34.7 (47)	50.9 (69)
		Speed (rpm)	296	295	294	288	282
	Max. Cont. 5.25 (20)	Torque lbf•ft (N•m)	5.9 (8)	10.3 (14)	21.4 (29)	32.5 (44)	47.2 (64)
		Speed (rpm)	395	395	393	390	381
Max. Int. 6.6 (25)	Torque lbf•ft (N•m)	3.0 (4)	7.4 (10)	18.5 (25)	29.5 (40)	43.5 (59)	
	Speed (rpm)	498	496	494	490	484	

# END PORT DIMENSIONS AND MOUNTING DATA

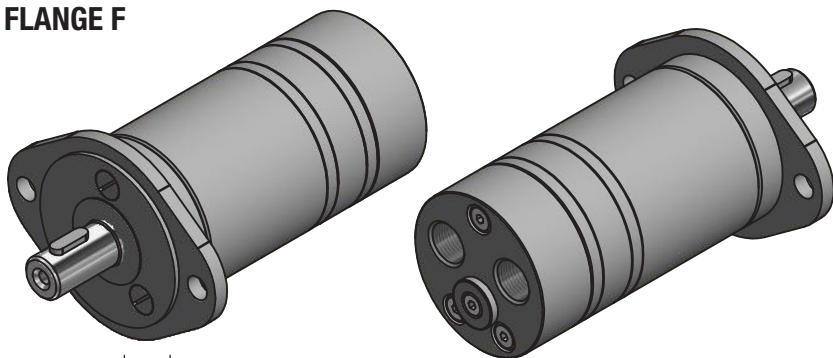
## FLANGE M, U



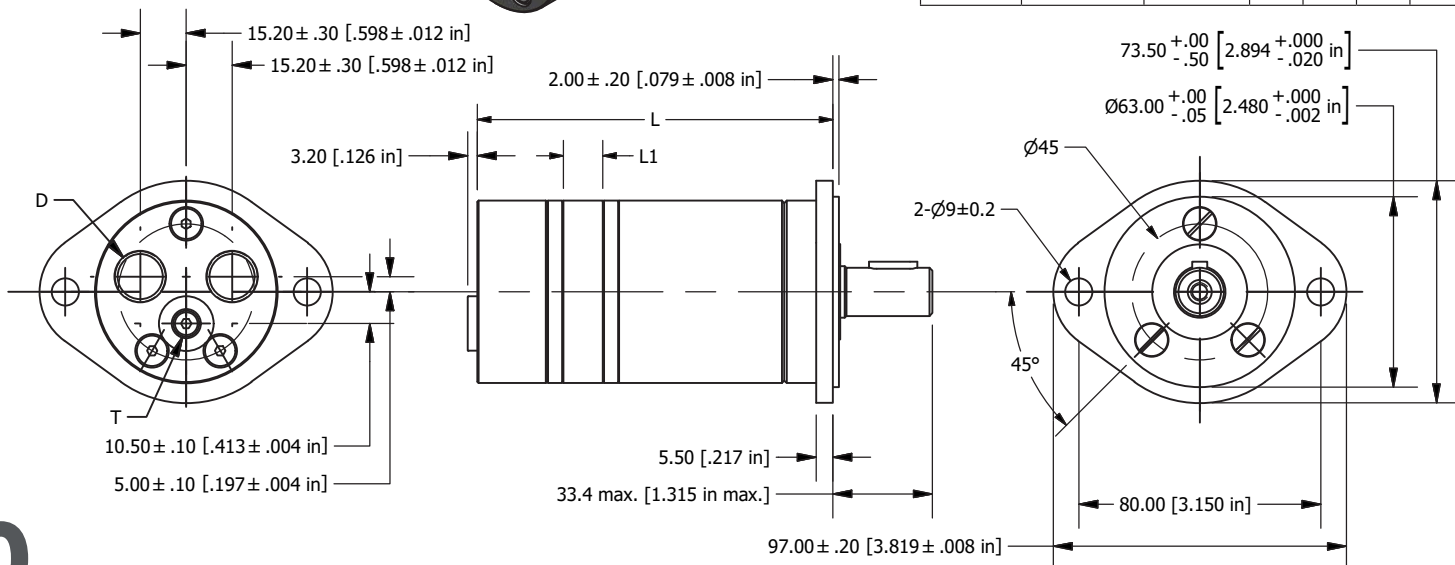
MODEL	L	L1	CODE 1E (Depth)			CODE 1U (Depth)		
			C	D	T	C	D	T
EBMM8	104 [4.094"]	3.5 [0.138"]	3-M6 (10)	G3/8 (12)	G1/8 (8)	3-1/4-28UNF-2B (10)	9/16-18UNF (12)	3/8-24UNF (8)
EBMM12.5	106 [4.094"]	5.5 [0.217"]						
EBMM20	109 [4.291"]	8.5 [0.335"]						
EBMM32	114 [4.488"]	13.5 [0.531"]						
EBMM40	117.5 [4.625"]	17 [0.669"]						
EBMM50	122 [4.803"]	21.5 [0.846"]						



## FLANGE F

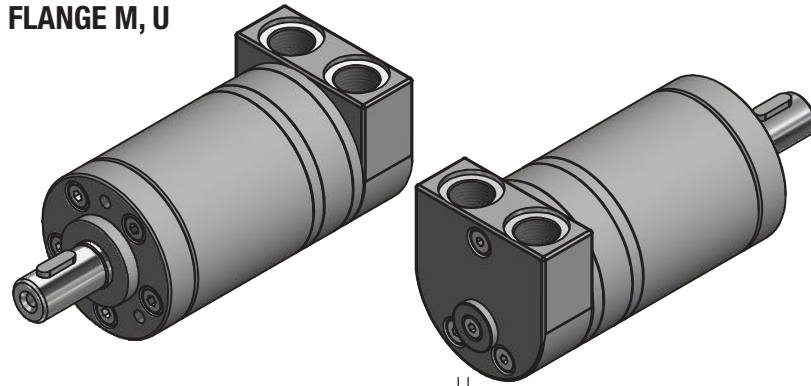


MODEL	L	L1	CODE 1E (Depth)		CODE 1U (Depth)	
			D	T	D	T
EBMM8	107.5 [4.232"]	3.5 [0.138"]	G3/8 (12)	G1/8 (8)	9/16-18UNF (12)	3/8-24UNF (8)
EBMM12.5	109.5 [4.311"]	5.5 [0.217"]				
EBMM20	112.5 [4.429"]	8.5 [0.335"]				
EBMM32	117.5 [4.625"]	13.5 [0.531"]				
EBMM40	121 [4.764"]	17 [0.669"]				
EBMM50	125.5 [4.941"]	21.5 [0.846"]				

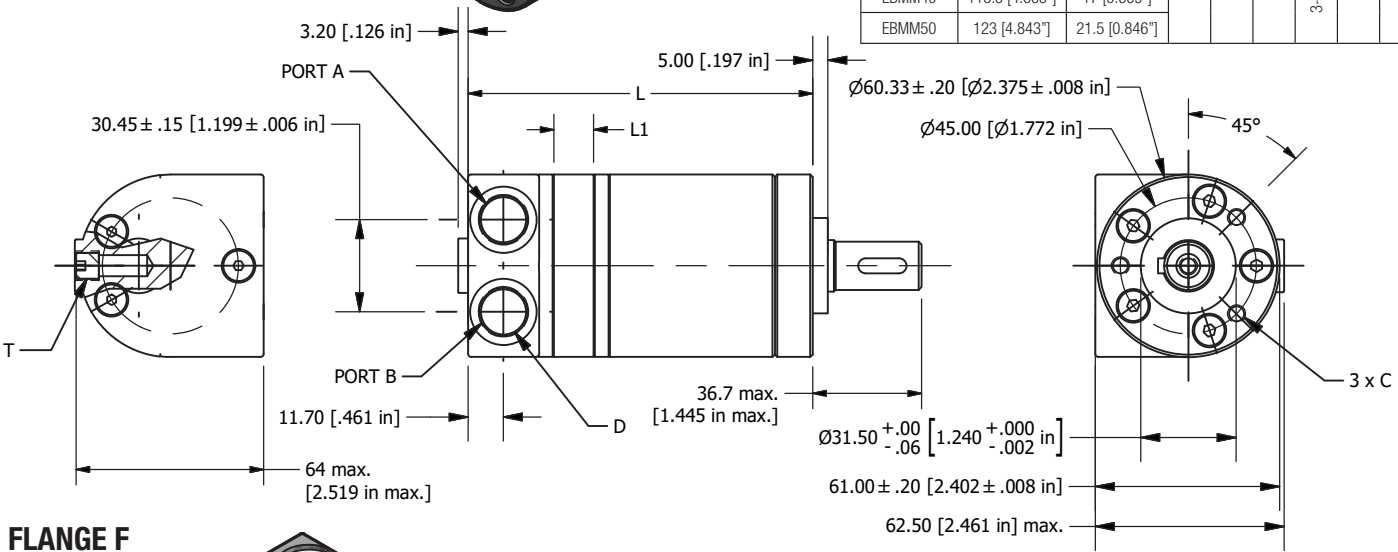


# END PORT DIMENSIONS AND MOUNTING DATA

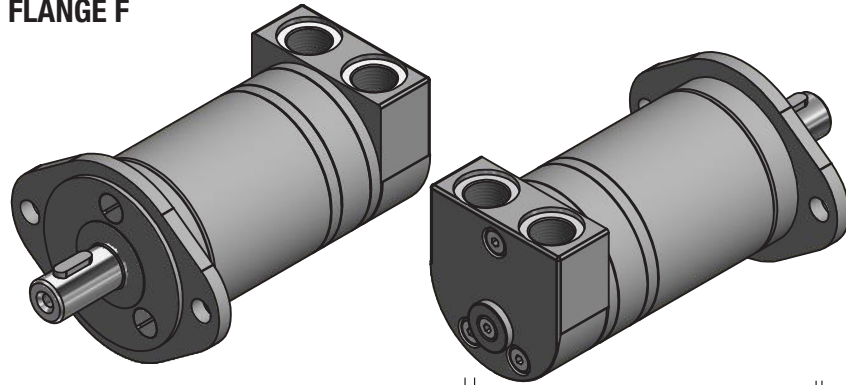
## FLANGE M, U



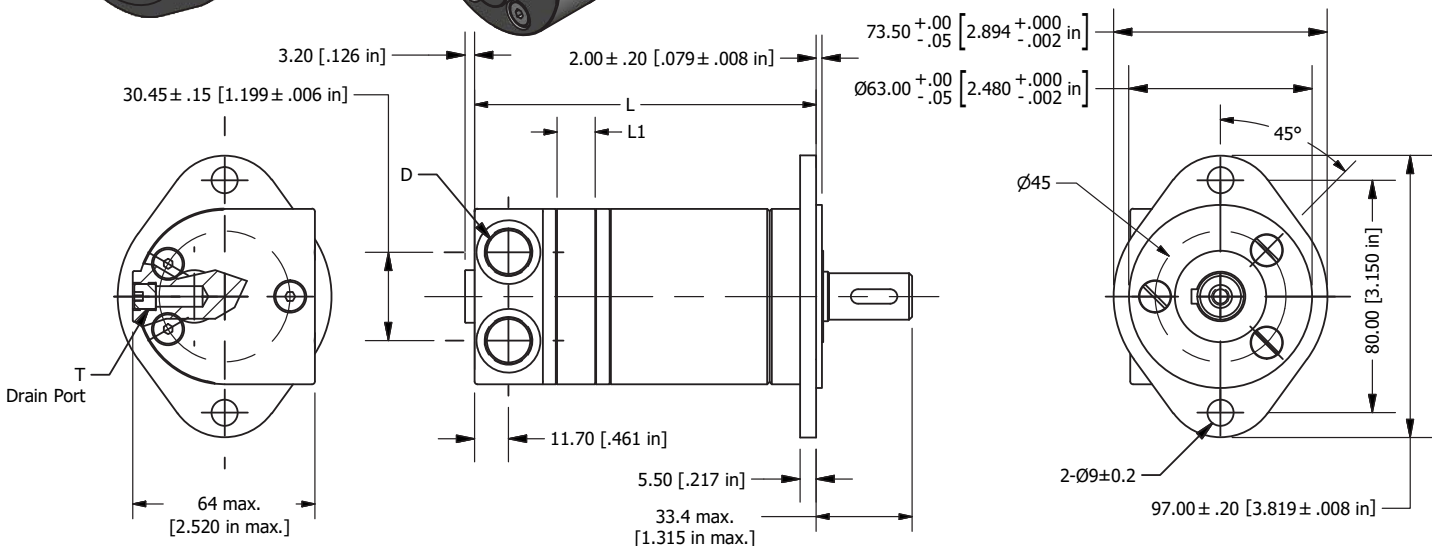
MODEL	L	L1	CODE E (Depth)			CODE U (Depth)		
			C	D	T	C	D	T
EBMM8	105 [4.134"]	3.5 [0.138"]	3-M6 (10)	G3/8 (12)	G1/8 (8)	3-1/4-28UNF-2B (10)	9/16-18UNF (12)	3/8-24UNF (8)
EBMM12.5	107 [4.213"]	5.5 [0.217"]						
EBMM20	110 [4.331"]	8.5 [0.335"]						
EBMM32	115 [4.528"]	13.5 [0.532"]						
EBMM40	118.5 [4.665"]	17 [0.669"]						
EBMM50	123 [4.843"]	21.5 [0.846"]						



## FLANGE F



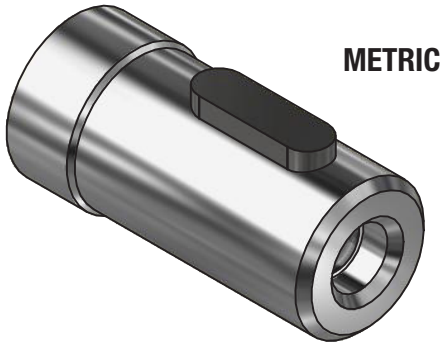
MODEL	L	L1	CODE E (Depth)		CODE U (Depth)	
			D	T	D	T
EBMM8	108.5 [4.272"]	3.5 [0.138"]	G3/8 (12)	G1/8 (8)	9/16-18UNF (12)	3/8-24UNF (8)
EBMM12.5	110.5 [4.350"]	5.5 [0.217"]				
EBMM20	113.5 [4.469"]	8.5 [0.335"]				
EBMM32	118.5 [4.665"]	13.5 [0.532"]				
EBMM40	122 [4.803"]	17 [0.669"]				
EBMM50	126.5 [4.980"]	21.5 [0.846"]				



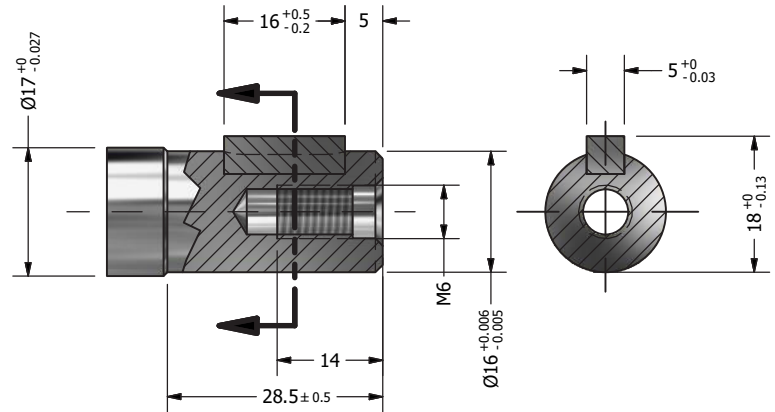
EBMM

## SHAFT A

Cylindrical Shaft  $\varnothing 16$   
Parallel Key 5 x 5 x 16

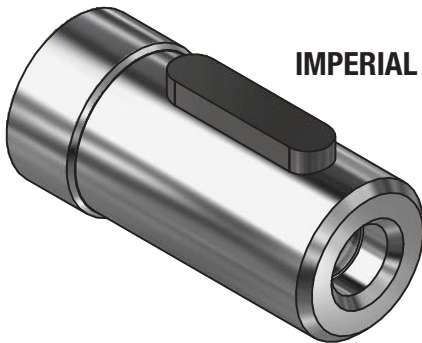


**METRIC**

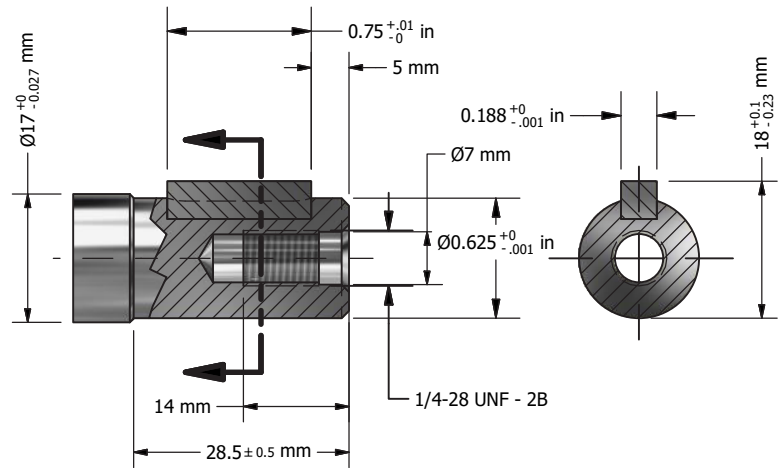


## SHAFT B

Cylindrical Shaft  $\varnothing 5/8$ "  
Parallel Key  $3/16$ " x  $3/16$ " x  $3/4$ "

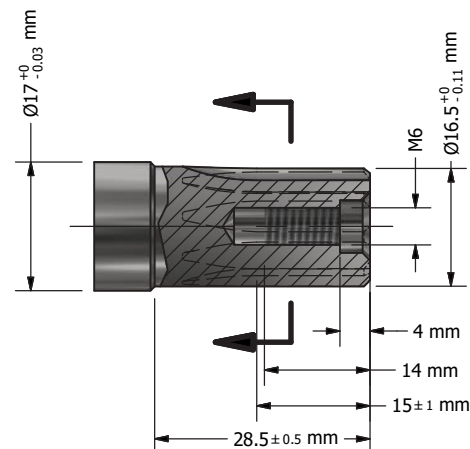


**IMPERIAL**

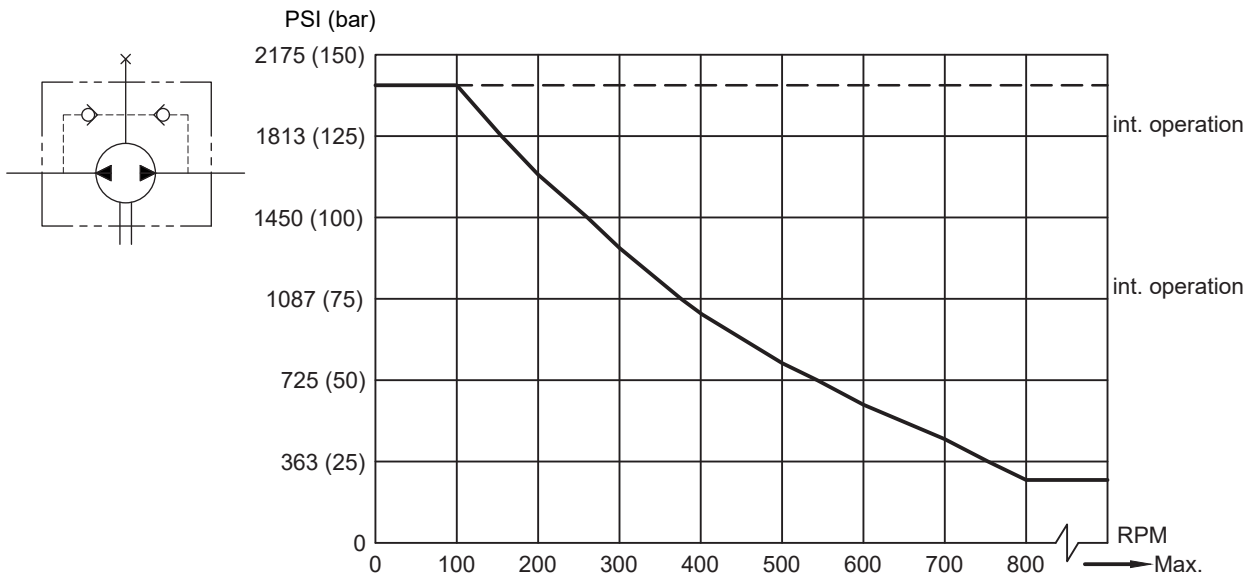


## SHAFT C

Involute Splined Shaft  
B17x14 DIN5482



## PERMISSIBLE SHAFT SEAL PRESSURE



**EBMM**

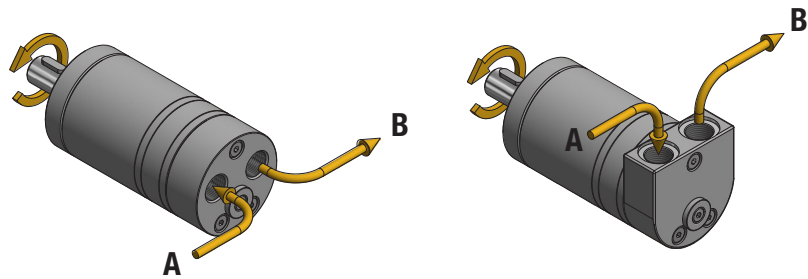
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

## EBMM - DIRECTION OF SHAFT ROTATION : STANDARD

When facing shaft end of motor, shaft is rotating:

Clockwise when port "A" is pressurized.

Counter-Clockwise when port "B" is pressurized.



**EBMM ENDPORT**

**EBMM SIDE PORT**

## STATUS OF THE SHAFT'S RADIAL FORCE

$$F_r = \frac{13040}{61.5 + L} \text{ daN}$$

$F_r$  = Radial Force (daN)

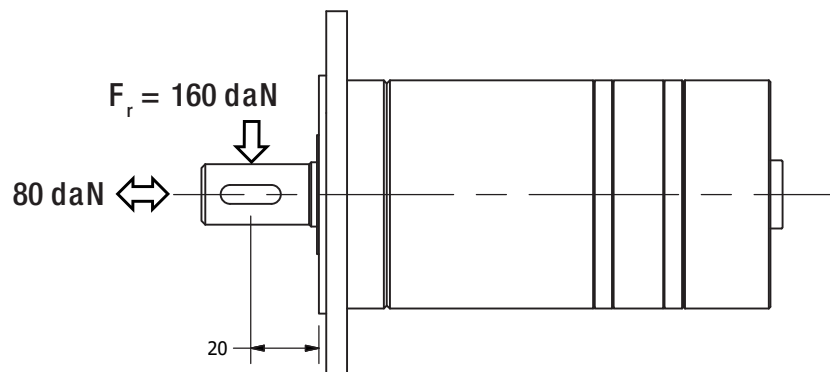
$L$  = Distance (mm)

$n$  = Speed (rpm)

Max. Force Load

Rhomb-flange  $L = 15\text{mm}$

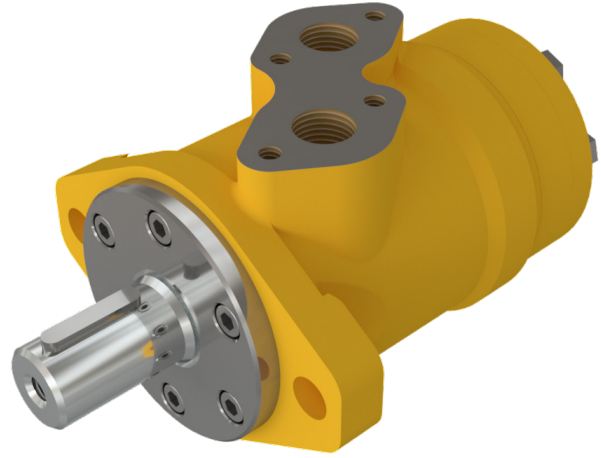
Square-Flange  $L = 20\text{mm}$



EBMP series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

## FEATURES

- Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- Advanced construction design, high power and low weight.



EBMP - Flange 2

## MAIN SPECIFICATIONS

### TECHNICAL DATA FOR EBMP WITH 25mm Shaft / 1in Shaft / 1in Splined and 28.56mm Tapered Shaft

		EBMP EBMPH EBMPW 36	EBMP EBMPH EBMPW 50	EBMP EBMPH EBMPW 80	EBMP EBMPH EBMPW 100	EBMP EBMPH EBMPW 125	EBMP EBMPH EBMPW 160	EBMP EBMPH EBMPW 200	EBMP EBMPH EBMPW 250	EBMP EBMPH EBMPW 315	EBMP EBMPH EBMPW 400	EBMP EBMPH EBMPW 500
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	2.2 (36)	3.15 (51.7)	4.74 (77.7)	5.87 (96.2)	7.34 (120.2)	9.59 (157.2)	11.87 (194.5)	14.66 (240.3)	19.19 (314.5)	23.77 (389.5)	29.69 (486.5)
Max. Speed	Continuous (rpm)	1500	1150	770	615	490	383	310	250	192	155	120
	Intermittent (rpm)	1650	1450	960	770	615	475	385	310	240	190	150
Max. Torque	Continuous lbf•ft (N•m)	40.59 (55)	73.8 (100)	107.75 (146)	134.32 (182)	174.17 (236)	222.88 (302)	265.68 (360)	280.44 (380)	276.75 (375)	265.68 (360)	284.13 (385)
	Intermittent lbf•ft (N•m)	56.09 (76)	94.46 (128)	137.27 (186)	167.53 (227)	214.02 (290)	273.06 (370)	324.72 (440)	339.48 (460)	409.59 (555)	387.45 (525)	413.28 (560)
	Peak lbf•ft (N•m)	70.85 (96)	109.22 (148)	160.88 (218)	194.83 (264)	265.68 (360)	320.29 (434)	398.52 (540)	405.90 (550)	479.7 (650)	501.84 (680)	501.84 (680)
Max. Output	Continuous hp (kW)	10.73 (8)	13.41 (10)	13.41 (10)	14.74 (11)	13.41 (10)	13.41 (10)	13.41 (10)	11.4 (8.5)	9.39 (7)	8.05 (6)	6.71 (5)
	Intermittent hp (kW)	15.42 (11.5)	16.09 (12)	16.09 (12)	17.43 (13)	16.09 (12)	16.09 (12)	16.09 (12)	14.08 (10.5)	11.4 (8.5)	9.39 (7)	8.05 (6)
Max. Pressure Drop	Continuous PSI (bar)	1813 (125)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	1595 (110)	1305 (90)	1015 (70)	870 (60)
	Intermittent PSI (bar)	2395 (165)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2030 (140)	2030 (140)	1523 (105)	1305 (90)
	Peak PSI (bar)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	2610 (180)	2320 (160)	2030 (140)	1740 (120)
Max. Flow	Continuous GPM (L/min)	14.5 (55)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)
	Intermittent GPM (L/min)	15.9 (60)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
Weight	Lbs (kg)	12.32 (5.6)	12.32 (5.6)	12.54 (5.7)	12.98 (5.9)	13.2 (6.0)	13.64 (6.2)	14.08 (6.4)	14.74 (6.7)	15.18 (6.9)	16.28 (7.4)	17.6 (8)

\* Continuous pressure: Max. value of operating motor continuously.

\* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

\* Peak pressure: Max. value of operating motor in 0.6 second per minute.

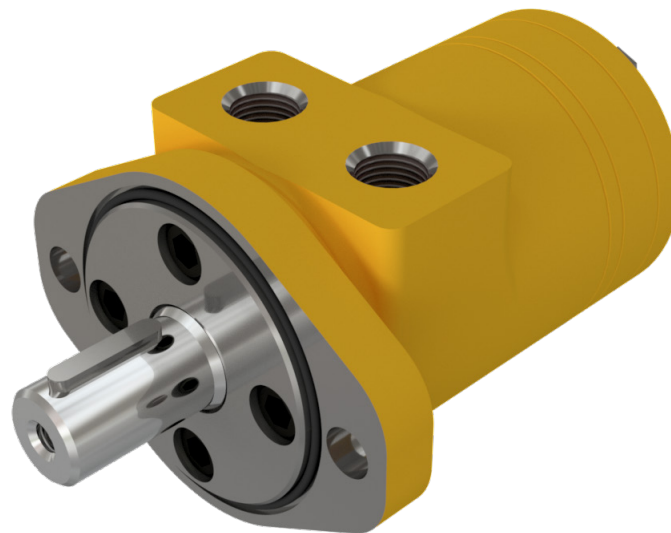
## MAIN SPECIFICATIONS

### TECHNICAL DATA FOR EBMP WITH 31.75mm Shaft and 32mm Shaft

		EBMP EBMPH 36	EBMP EBMPH 50	EBMP EBMPH 80	EBMP EBMPH 100	EBMP EBMPH 125	EBMP EBMPH 160	EBMP EBMPH 200	EBMP EBMPH 250	EBMP EBMPH 315	EBMP EBMPH 400	EBMP EBMPH 500
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	2.2 (36)	3.15 (51.7)	4.74 (77.7)	5.87 (96.2)	7.34 (120.2)	9.59 (157.2)	11.87 (194.5)	14.66 (240.3)	19.19 (314.5)	23.77 (389.5)	29.69 (486.5)
Max. Speed	Continuous (rpm)	1500	1150	770	615	490	383	310	250	192	155	120
	Intermittent (rpm)	1650	1450	960	770	615	475	385	310	240	190	150
Max. Torque	Continuous lbf•ft (N•m)	40.59 (55)	73.8 (100)	107.75 (146)	134.32 (182)	174.17 (236)	222.88 (302)	265.68 (360)	339.48 (460)	350.55 (475)	361.62 (490)	317.34 (430)
	Intermittent lbf•ft (N•m)	56.09 (76)	94.46 (128)	137.27 (186)	167.53 (227)	214.02 (290)	273.06 (370)	324.72 (440)	420.66 (570)	409.59 (555)	428.04 (580)	413.28 (560)
	Peak lbf•ft (N•m)	70.85 (96)	109.22 (148)	160.88 (218)	194.83 (264)	265.68 (360)	320.29 (434)	398.52 (540)	494.46 (670)	619.92 (840)	619.92 (840)	575.64 (780)
Max. Output	Continuous hp (kW)	10.73 (8)	13.41 (10)	13.41 (10)	14.74 (11)	13.41 (10)	13.41 (10)	13.41 (10)	11.4 (8.5)	9.39 (7)	8.05 (6)	8.05 (6)
	Intermittent hp (kW)	15.42 (11.5)	16.09 (12)	16.09 (12)	17.43 (13)	16.09 (12)	16.09 (12)	16.09 (12)	14.08 (10.5)	11.4 (8.5)	9.39 (7)	9.39 (7)
Max. Pressure Drop	Continuous PSI (bar)	1813 (125)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	2030 (140)	1740 (120)	1378 (95)	1015 (70)
	Intermittent PSI (bar)	2395 (165)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2030 (140)	1668 (115)	1305 (90)
	Peak PSI (bar)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	2610 (180)	1885 (130)
Max. Flow	Continuous GPM (L/min)	14.5 (55)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)
	Intermittent GPM (L/min)	15.9 (60)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
Weight	Lbs (kg)	12.32 (5.6)	12.32 (5.6)	12.54 (5.7)	12.98 (5.9)	13.2 (6.0)	13.64 (6.2)	14.08 (6.4)	14.74 (6.7)	15.18 (6.9)	16.28 (7.4)	17.6 (8)

**EBMP**

- \* Continuous pressure: Max. value of operating motor continuously.
- \* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.
- \* Peak pressure: Max. value of operating motor in 0.6 second per minute.



EBMPH - Flange H2

### EBMP ORDER INFORMATION

2
3
4
5
6
7
8

EBMP

-

-

-

-

-

**EBMP**

1	2	3	4	5	6	7	8						
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function						
<b>EBMP</b>	36	2	2-Ø13.5 Rhomb-Flange - Pilot Ø82.5 x 8	A	Shaft Ø25 - Parallel Key 8x7x32	D	G1/2 Manifold Mount 4xM8, G1/4	Blank	Standard	00	No Paint	Blank	Standard
	50	4	4-Ø13.5 Rhomb-Flange - Pilot Ø82.5 x 8	C	Shaft Ø1" - Parallel Key 1/4"x 1/4"x1-1/4"	M	M22x1.5 Manifold Mount 4xM8, M14x1.5	R	Opposite	Blank	Black	N1	Big Radial Force
	80	H4	4-3/8-16 Square Flange - Pilot Ø44.4 x 2.8	E	Shaft Ø1" - Splined Tooth SAE 6B	S	7/8-14 O-Ring Manifold 4x5/16-18UNC, 7/16-20UNF			BI	Blue	0	No Case Drain
	100	H5	4-M10 Square Flange - Pilot Ø44.4 x 2.8	R	Short Shaft Ø1" - Parallel Key 1/4" x 1/4" x 1-1/4"	P	1/2-14 FNPT Manifold 4x5/16-18UNC, 7/16-20UNF			S	Silver Grey	F	Free Running
	125			B	Shaft Ø32 - Parallel Key 10x8x45	R	PT(Rc)1/2 Manifold sxM8, PT(Rc)1/4					LS	Low Speed
	160			F	Shaft Ø1-1/4" - Splined Tooth 14-DP12/24								
	200			FD	Long Shaft Ø1-1/4" - Splined Tooth 14-DP12/24								
	250			G	Shaft Ø1-1/4" - Parallel Key 5/16" x 5/16" x 1-1/4"								
	315			T	Cone Shaft Ø28.5 - Parallel Key B5x5x14								
	400			T3	Cone Shaft Ø1-1/4" - Parallel Key 5/16" x 5/16" x 1"								
500													

**NOTES:**

- The shafts of B/F/FD/G/T/T3 are only suitable for flanges 2 and 4.
- When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

## EBMPH ORDER INFORMATION

EBMPH		-		-		-		-		-	
-------	--	---	--	---	--	---	--	---	--	---	--

1	2	3	4	5	6	7	8						
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction		Paint		Unusually Function				
EBMPH	36	H2	2-Ø13.5 Rhomb-Flange - Pilot Ø82.5 x 8	K	Shaft Ø1" - Woodruff Key Ø1" x 1/4"	G	G1/2, G1/4	Blank	Standard	00	No Paint	Blank	Standard
	50	H6	4-Ø13.5 Rhomb-Flange - Pilot Ø82.5 x 8	S	Shaft Ø1" - Splined Tooth SAE 6B	S	7/8-14 O-Ring, 7/16-20UNF	R	Opposite	Blank	Black	N1	Big Radial Force
	80	H4	4-3/8-16 Square Flange - Pilot Ø44.4 x 2.8	A	Shaft Ø25 - Parrallel Key 8x7x32	P	1/2-14 FNPT, 7/16-20UNF			BI	Blue	0	No Case Drain
	100	H5	4-M10 Square Flange - Pilot Ø44.4 x 2.8	R	Short Shaft Ø1" - Parrallel Key 1/4" x 1/4" x 1-1/4"	T	3/4-16 O-Ring, 7/16-20UNF			S	Silver Grey	F	Free Running
	125			H	Shaft Ø1" - Pin Hole Ø10.3	R	PT(Rc)1/2, PT(Rc)1/4					LS	Low Speed
	160			H1	Shaft Ø1" - Pin Hole Ø8	B4	Ø10 O-Ring Manifold, 4x5/16-18UNC, 7/16-20UNF						
	200			D	Shaft Ø7/8" - Parrallel Key 1/4" x 1/4" x 1"	B5	Ø10 O-Ring Manifold, 4xM8, 7/16-20UNF						
	250			I	Shaft Ø7/8" - Splined Tooth 13-DP16/32								
	315			T2	Cone Shaft Ø1" - Woodruff Key Ø1" x 1/4"								
	400			P	Shaft Ø25 - Parrallel Key 8x7x28								
500			J	Shaft Ø25 - Parrallel Key 7x7x32									

EBMP

**NOTES:**

- When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

## EBMP 36 - 2.2 in<sup>3</sup>/rev (36 cm<sup>3</sup>/rev)

		Pressure PSI (bar)							Max. Cont	Max. Int.
		435 (30)	870 (60)	1015 (70)	1160 (80)	1450 (100)	1595 (110)	1813 (125)	2393 (165)	
2 (8)	Torque lbf•ft (N•m)	9.6 (13)	18.5 (25)	21.4 (29)	25.1 (34)	31.7 (43)	35.4 (48)			
	Speed (rpm)	214	205	200	194	187	179			
4 (15)	Torque lbf•ft (N•m)	9.6 (13)	18.5 (25)	21.4 (29)	25.1 (34)	31.7 (43)	35.4 (48)	41.3 (56)	55.4 (75)	
	Speed (rpm)	406	398	391	383	374	366	353	324	
5.25 (20)	Torque lbf•ft (N•m)	9.6 (13)	17.7 (24)	21.4 (29)	25.1 (34)	31.7 (43)	35.4 (48)	41.3 (56)	56.1 (76)	
	Speed (rpm)	541	534	528	521	513	500	486	458	
8.9 (30)	Torque lbf•ft (N•m)	8.9 (12)	17.7 (24)	21.4 (29)	25.1 (34)	31.7 (43)	35.4 (48)	41.3 (56)	56.1 (76)	
	Speed (rpm)	814	804	792	778	763	749	726	701	
9.2 (35)	Torque lbf•ft (N•m)	8.9 (12)	17 (23)	20.7 (28)	25.1 (34)	31.7 (43)	35.4 (48)	41.3 (56)	56.1 (76)	
	Speed (rpm)	952	944	930	913	897	879	858	833	
10.5 (40)	Torque lbf•ft (N•m)	8.9 (12)	17 (23)	20.7 (28)	23.6 (32)	30.3 (41)	34.7 (47)	40.6 (55)	55.4 (75)	
	Speed (rpm)	1090	1078	1064	1048	1024	998	977	943	
1.8 (45)	Torque lbf•ft (N•m)	8.1 (11)	16.2 (22)	19.2 (26)	23.6 (32)	30.3 (41)	33.9 (46)	39.9 (46)	54.6 (74)	
	Speed (rpm)	1232	1218	1196	1175	1149	1118	1080	1044	
14.4 (55)	Torque lbf•ft (N•m)	4.4 (6)	11.1 (15)	16.2 (22)	20.7 (28)	27.3 (37)	32.5 (44)	38.4 (52)	54.6 (74)	
	Speed (rpm)	1505	1494	1480	1466	1438	1406	1367	1309	
15.8 (60)	Torque lbf•ft (N•m)	2.2 (3)	8.1 (11)	13.3 (18)	14.8 (20)	22.1 (30)	28 (38)	36.2 (49)	49.4 (67)	
	Speed (rpm)	1650	1640	1626	1603	1571	1536	1502	1446	

## EBMP 50 - 3.2 in<sup>3</sup>/rev (51.7 cm<sup>3</sup>/rev)

		Pressure PSI (bar)							Max. Cont	Max. Int.
		435 (30)	870 (60)	1160 (80)	1450 (100)	1813 (125)	2030 (140)	2320 (160)	2538 (175)	
2 (8)	Torque lbf•ft (N•m)	14.8 (20)	30.3 (41)	41.3 (56)	50.9 (69)	65.7 (89)	70.1 (95)			
	Speed (rpm)	151	134	115	90	56	42			
4 (15)	Torque lbf•ft (N•m)	14 (19)	29.5 (40)	41.3 (56)	52.4 (71)	67.2 (91)	73.8 (100)	82.7 (112)	88.6 (120)	
	Speed (rpm)	286	274	261	243	204	182	139	102	
5.25 (20)	Torque lbf•ft (N•m)	13.3 (18)	28.8 (39)	40.6 (55)	52.4 (71)	67.9 (92)	74.5 (101)	86.3 (117)	94.5 (128)	
	Speed (rpm)	382	373	361	348	318	309	287	251	
8.9 (30)	Torque lbf•ft (N•m)	12.5 (17)	28 (38)	40.6 (55)	52.4 (71)	67.2 (91)	72.3 (98)	85.6 (116)	91.5 (124)	
	Speed (rpm)	573	568	558	535	503	488	462	440	
9.2 (35)	Torque lbf•ft (N•m)	12.5 (17)	28 (38)	39.9 (54)	50.9 (69)	65.7 (89)	72.3 (98)	86.3 (117)	91.5 (124)	
	Speed (rpm)	670	661	652	640	606	589	562	548	
11.8 (45)	Torque lbf•ft (N•m)	10.3 (14)	26.6 (36)	39.1 (53)	49.4 (67)	64.9 (88)	72.3 (98)	84.1 (114)	90.8 (123)	
	Speed (rpm)	863	858	849	837	807	807	764	746	
14.4 (55)	Torque lbf•ft (N•m)	8.9 (12)	24.4 (33)	36.9 (50)	48 (65)	62.7 (85)	70.8 (96)	81.9 (111)	89.3 (121)	
	Speed (rpm)	1055	1042	1028	1010	979	963	947	920	
15.8 (60)	Torque lbf•ft (N•m)	7.4 (10)	23.6 (32)	34.7 (47)	47.2 (64)	61.3 (83)	69.4 (94)	79.7 (108)	87.8 (119)	
	Speed (rpm)	1150	1143	1126	1111	1079	1065	1043	1015	
19.8 (75)	Torque lbf•ft (N•m)	4.4 (6)	18.5 (25)	31 (42)	41.3 (56)	56.1 (76)	64.2 (87)	74.5 (101)	82.7 (112)	
	Speed (rpm)	1440	1430	1416	1395	1367	1351	1335	1312	

# PERFORMANCE DATA



**EBMP**

## EBMP 80 - 4.7 in<sup>3</sup>/rev (77.7 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.	
		Pressure PSI (bar)								
		435 (30)	870 (60)	1160 (80)	1450 (100)	1813 (125)	2030 (140)	2320 (160)	2538 (175)	
2 (8)	Torque lbf•ft (N•m)	23.6 (32)	45.8 (62)	62.7 (85)	76.8 (104)	95.2 (129)	106.3 (144)			
	Speed (rpm)	97	87	74	55	33	22			
4 (15)	Torque lbf•ft (N•m)	23.6 (32)	45.5 (63)	62 (84)	79 (107)	93 (126)	106.3 (144)	121.8 (165)		
	Speed (rpm)	186	181	170	154	132	118	86		
5.25 (20)	Torque lbf•ft (N•m)	22.9 (31)	46.5 (63)	62 (84)	79 (107)	97.4 (132)	107.7 (146)	124 (168)	136.5 (185)	
	Speed (rpm)	251	243	236	225	207	196	178	155	
8.9 (30)	Torque lbf•ft (N•m)	22.9 (31)	45.8 (62)	61.3 (83)	78.2 (106)	96.7 (131)	107.7 (146)	124 (168)	137.3 (186)	
	Speed (rpm)	381	379	368	355	332	316	285	263	
9.2 (35)	Torque lbf•ft (N•m)	22.1 (30)	43.5 (59)	59.8 (81)	75.3 (102)	95.9 (130)	106.3 (144)	123.2 (167)	136.5 (185)	
	Speed (rpm)	443	435	426	415	397	383	361	342	
11.8 (45)	Torque lbf•ft (N•m)	18.5 (25)	42.8 (58)	58.3 (79)	73.8 (100)	93 (126)	104.8 (142)	121.8 (165)	134.3 (182)	
	Speed (rpm)	570	564	554	543	526	509	483	458	
14.4 (55)	Torque lbf•ft (N•m)	17 (23)	42.1 (57)	57.6 (78)	71.6 (97)	91.5 (124)	103.3 (140)	118.8 (161)	132.1 (179)	
	Speed (rpm)	696	685	672	656	643	630	602	579	
15.8 (60)	Torque lbf•ft (N•m)	14.8 (20)	39.1 (53)	55.4 (75)	69.4 (94)	88.6 (120)	101.1 (137)	118.1 (160)	130.6 (177)	
	Speed (rpm)	761	753	744	736	720	706	681	660	
19.8 (75)	Torque lbf•ft (N•m)	10.3 (14)	32.5 (44)	49.4 (67)	64.2 (87)	82.7 (112)	111.4 (151)	124.7 (169)	124.7 (169)	
	Speed (rpm)	948	940	931	920	906	890	871	854	

## EBMP 100 - 5.9 in<sup>3</sup>/rev (96.2 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.	
		Pressure PSI (bar)								
		435 (30)	870 (60)	1160 (80)	1450 (100)	1813 (125)	2030 (140)	2320 (160)	2538 (175)	
2 (8)	Torque lbf•ft (N•m)	29.5 (40)	56.8 (77)	77.5 (105)	95.9 (130)	118.8 (161)	132.8 (180)			
	Speed (rpm)	81	75	69	57	36	24			
4 (15)	Torque lbf•ft (N•m)	28.8 (39)	56.8 (77)	78.2 (106)	95.9 (130)	118.1 (160)	132.8 (180)	153.5 (208)		
	Speed (rpm)	152	149	145	140	122	103	81		
5.25 (20)	Torque lbf•ft (N•m)	26.6 (36)	54.6 (74)	76.8 (104)	94.5 (128)	118.8 (161)	132.1 (179)	151.3 (205)	167.5 (227)	
	Speed (rpm)	204	200	195	190	177	166	148	133	
8.9 (30)	Torque lbf•ft (N•m)	24.4 (33)	53.1 (72)	76 (103)	92.3 (125)	118.1 (160)	130.6 (177)	149.8 (203)	166.1 (225)	
	Speed (rpm)	308	304	298	290	280	268	255	231	
9.2 (35)	Torque lbf•ft (N•m)	22.1 (30)	51.7 (70)	72.3 (98)	90 (122)	117.3 (159)	129.9 (176)	149.1 (202)	165.3 (224)	
	Speed (rpm)	360	352	343	331	320	306	294	275	
11.8 (45)	Torque lbf•ft (N•m)	21.4 (29)	49.4 (67)	70.1 (95)	87.1 (118)	114.4 (155)	128.4 (174)	147.6 (200)	162.4 (220)	
	Speed (rpm)	462	458	451	443	433	419	402	383	
14.4 (55)	Torque lbf•ft (N•m)	18.5 (25)	47.2 (64)	68.6 (93)	85.6 (116)	112.2 (152)	125.5 (170)	146.1 (198)	160.1 (217)	
	Speed (rpm)	566	558	549	540	529	515	498	478	
15.8 (60)	Torque lbf•ft (N•m)	16.2 (22)	44.3 (60)	67.2 (91)	84.1 (114)	110 (149)	123.2 (167)	143.2 (194)	157.2 (213)	
	Speed (rpm)	618	611	601	589	580	570	558	540	
19.8 (75)	Torque lbf•ft (N•m)	11.1 (15)	39.9 (54)	61.3 (83)	78.2 (106)	104.1 (141)	118.1 (160)	137.3 (186)	151.3 (205)	
	Speed (rpm)	771	763	755	744	735	724	708	693	

## EBMP 125 - 7.3 in<sup>3</sup>/rev (120.2 cm<sup>3</sup>/rev)

		Pressure PSI (bar)							Max. Cont	Max. Int.
		435 (30)	870 (60)	1160 (80)	1450 (100)	1813 (125)	2030 (140)	2320 (160)	2538 (175)	
<b>Flow GPM (L/min)</b>	<b>2 (8)</b>	Torque lbf•ft (N•m)	37.6 (51)	72.3 (98)	101.1 (137)	124 (168)	153.5 (208)	174.2 (236)		
		Speed (rpm)	63	60	55	47	28	15		
	<b>4 (15)</b>	Torque lbf•ft (N•m)	37.6 (51)	74.5 (101)	101.8 (138)	124 (168)	154.2 (209)	174.2 (236)	197 (267)	
		Speed (rpm)	121	116	110	102	89	73	48	
	<b>5.25 (20)</b>	Torque lbf•ft (N•m)	35.4 (48)	72.3 (98)	99.6 (135)	123.2 (167)	155.7 (211)	174.9 (237)	198.5 (269)	214 (290)
		Speed (rpm)	162	158	153	148	137	128	109	94
	<b>8.9 (30)</b>	Torque lbf•ft (N•m)	33.9 (46)	70.8 (96)	97.4 (132)	121 (164)	154.2 (209)	171.2 (232)	194.8 (264)	211.8 (287)
		Speed (rpm)	243	239	234	227	216	202	189	176
	<b>9.2 (35)</b>	Torque lbf•ft (N•m)	31 (42)	67.9 (92)	95.9 (130)	118.1 (160)	152 (206)	169 (229)	191.9 (260)	209.6 (284)
		Speed (rpm)	284	279	274	269	259	247	231	222
	<b>11.8 (45)</b>	Torque lbf•ft (N•m)	27.3 (37)	65.7 (89)	92.3 (125)	115.9 (157)	148.3 (201)	165.3 (224)	192.6 (261)	207.4 (281)
		Speed (rpm)	370	362	355	348	340	327	310	296
	<b>14.4 (55)</b>	Torque lbf•ft (N•m)	24.4 (33)	62 (84)	80 (122)	112.2 (152)	144.6 (196)	160.9 (218)	186 (252)	203 (275)
		Speed (rpm)	452	446	438	431	420	412	402	384
	<b>15.8 (60)</b>	Torque lbf•ft (N•m)	21.4 (29)	57.6 (78)	86.3 (117)	107.7 (146)	141 (191)	158.7 (215)	183 (248)	200.7 (272)
		Speed (rpm)	490	482	475	468	459	448	439	427
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	13.3 (18)	48.7 (66)	79.0 (107)	98.2 (133)	132.1 (179)	149.1 (202)	174.2 (236)	191.9 (260)	
	Speed (rpm)	615	606	598	586	575	563	549	528	

## EBMP 160 - 9.6 in<sup>3</sup>/rev (157.2 cm<sup>3</sup>/rev)

		Pressure PSI (bar)							Max. Cont	Max. Int.
		435 (30)	870 (60)	1160 (80)	1450 (100)	1813 (125)	2030 (140)	2320 (160)	2538 (175)	
<b>Flow GPM (L/min)</b>	<b>2 (8)</b>	Torque lbf•ft (N•m)	45.8 (62)	88.6 (120)	125.5 (170)	156.5 (212)	194.1 (263)	214 (290)		
		Speed (rpm)	49	48	46	42	26	14		
	<b>4 (15)</b>	Torque lbf•ft (N•m)	44.3 (60)	90 (122)	126.9 (172)	158.7 (215)	194.8 (264)	217 (294)	250.9 (340)	
		Speed (rpm)	93	91	88	85	76	68	48	
	<b>5.25 (20)</b>	Torque lbf•ft (N•m)	42.1 (57)	88.6 (120)	125.5 (170)	157.9 (214)	193.4 (262)	214 (290)	250.9 (340)	273.8 (371)
		Speed (rpm)	125	123	120	117	110	106	92	81
	<b>8.9 (30)</b>	Torque lbf•ft (N•m)	39.1 (53)	84.9 (115)	121 (164)	152 (206)	191.1 (259)	212.5 (288)	247.2 (335)	271.6 (368)
		Speed (rpm)	187	184	181	178	175	168	155	139
	<b>9.2 (35)</b>	Torque lbf•ft (N•m)	36.2 (49)	81.2 (110)	118.1 (160)	149.1 (202)	188.2 (255)	209.6 (284)	242.1 (328)	267.2 (362)
		Speed (rpm)	220	216	213	209	205	202	192	176
	<b>11.8 (45)</b>	Torque lbf•ft (N•m)	32.5 (44)	75.3 (102)	113.7 (154)	144.6 (196)	183 (248)	205.2 (278)	236.9 (321)	264.2 (358)
		Speed (rpm)	283	280	276	272	267	260	250	238
	<b>14.4 (55)</b>	Torque lbf•ft (N•m)	29.5 (40)	73.1 (99)	109.2 (148)	141 (191)	179.3 (243)	200.7 (272)	233.2 (316)	259 (351)
		Speed (rpm)	345	342	340	336	331	328	320	303
	<b>15.8 (60)</b>	Torque lbf•ft (N•m)	24.4 (33)	69.4 (94)	106.3 (144)	138.7 (188)	174.2 (236)	197 (267)	277.3 (308)	254.6 (345)
		Speed (rpm)	377	374	371	367	363	359	353	342
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	14 (19)	59 (80)	91.5 (124)	125.5 (170)	159.4 (216)	186 (252)	218.4 (296)	239.9 (325)	
	Speed (rpm)	473	469	465	459	453	447	440	424	

# PERFORMANCE DATA



**EBMP**

## EBMP 200 - 11.9 in<sup>3</sup>/rev (194.5 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>							
		<b>Pressure PSI (bar)</b>							
		<b>435 (30)</b>	<b>870 (60)</b>	<b>1160 (80)</b>	<b>1450 (100)</b>	<b>1813 (125)</b>	<b>2030 (140)</b>	<b>2320 (160)</b>	<b>2538 (175)</b>
<b>2 (8)</b>	Torque lbf•ft (N•m)	58.3 (79)	121 (164)	152.8 (207)	184.5 (250)	236.2 (320)	265.7 (360)		
	Speed (rpm)	40	39	38	35	28	22		
<b>4 (15)</b>	Torque lbf•ft (N•m)	57.6 (78)	119.6 (162)	151.3 (205)	184.5 (250)	237.6 (322)	266.4 (361)	302.6 (410)	
	Speed (rpm)	76	75	74	71	66	61	51	
<b>5.25 (20)</b>	Torque lbf•ft (N•m)	56.1 (76)	116.6 (158)	149.8 (203)	182.3 (247)	236.2 (320)	264.2 (358)	297.4 (403)	311.4 (422)
	Speed (rpm)	100	98	97	95	92	89	73	57
<b>8.9 (30)</b>	Torque lbf•ft (N•m)	51.7 (70)	112.9 (153)	147.6 (200)	180.8 (245)	232.5 (315)	258.3 (350)	293.7 (398)	307.7 (417)
	Speed (rpm)	151	149	147	145	142	139	131	120
<b>9.2 (35)</b>	Torque lbf•ft (N•m)	48.7 (66)	110 (149)	143.2 (194)	171.2 (232)	219.2 (297)	253.1 (343)	284.9 (386)	306.3 (415)
	Speed (rpm)	177	175	173	171	168	166	160	149
<b>11.8 (45)</b>	Torque lbf•ft (N•m)	46.5 (63)	107.7 (146)	140.2 (190)	169.7 (230)	217 (294)	250.9 (340)	282.7 (383)	302.6 (410)
	Speed (rpm)	228	226	224	221	218	215	210	198
<b>14.4 (55)</b>	Torque lbf•ft (N•m)	39.9 (54)	103.3 (140)	133.6 (181)	165.3 (224)	211.1 (286)	246.5 (334)	273.8 (371)	295.2 (400)
	Speed (rpm)	280	278	276	274	271	269	263	250
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	28 (38)	93.7 (127)	121 (164)	156.5 (212)	199.3 (270)	239.9 (325)	262.7 (356)	291.5 (395)
	Speed (rpm)	304	302	300	297	294	291	286	272
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	16.2 (22)	70.8 (96)	107 (145)	141.7 (192)	173.4 (235)	216.2 (293)	236.9 (321)	270.8 (367)
	Speed (rpm)	382	378	374	371	368	364	360	350

## EBMP 250 - 14.7 in<sup>3</sup>/rev (240.3 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>							
		<b>Pressure PSI (bar)</b>							
		<b>435 (30)</b>	<b>870 (60)</b>	<b>1160 (80)</b>	<b>1450 (100)</b>	<b>1813 (125)</b>	<b>2030 (140)</b>	<b>2320 (160)</b>	<b>2538 (175)</b>
<b>2 (8)</b>	Torque lbf•ft (N•m)	70.8 (96)	140.2 (190)	197.8 (268)	240.6 (326)	297.4 (403)			
	Speed (rpm)	30	28	24	21	11			
<b>4 (15)</b>	Torque lbf•ft (N•m)	72.3 (98)	143.2 (194)	199.3 (270)	241.3 (327)	298.9 (405)	332.1 (450)	376.4 (510)	
	Speed (rpm)	60	58	54	50	40	30	12	
<b>5.25 (20)</b>	Torque lbf•ft (N•m)	67.9 (92)	138.7 (188)	197 (267)	239.9 (325)	298.9 (405)	336.5 (456)	379.3 (514)	417 (565)
	Speed (rpm)	82	80	77	76	69	64	52	38
<b>8.9 (30)</b>	Torque lbf•ft (N•m)	62.7 (85)	132.8 (180)	191.1 (259)	236.2 (320)	295.2 (400)	330.6 (448)	378.6 (513)	414 (561)
	Speed (rpm)	123	120	118	114	106	98	87	76
<b>9.2 (35)</b>	Torque lbf•ft (N•m)	56.8 (77)	129.9 (176)	186 (252)	229.5 (311)	287.1 (389)	321.8 (436)	372 (504)	411.1 (557)
	Speed (rpm)	143	141	139	135	128	122	112	101
<b>11.8 (45)</b>	Torque lbf•ft (N•m)	51.7 (70)	124 (168)	179.3 (243)	221.4 (300)	278.2 (377)	315.9 (428)	365.3 (495)	400.7 (543)
	Speed (rpm)	185	182	178	174	1687	161	152	139
<b>14.4 (55)</b>	Torque lbf•ft (N•m)	46.5 (63)	117.3 (159)	174.9 (237)	214 (290)	272.3 (369)	307.7 (417)	356.5 (483)	391.9 (531)
	Speed (rpm)	226	223	218	213	209	202	193	185
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	44.3 (60)	110.7 (150)	168.3 (228)	206.6 (280)	264.2 (358)	300.4 (407)	349.1 (473)	383.8 (520)
	Speed (rpm)	248	246	243	239	233	226	215	207
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	25.1 (34)	94.5 (128)	149.1 (202)	194.8 (264)	252.4 (342)	285.6 (387)	330.6 (448)	360.1 (488)
	Speed (rpm)	309	306	302	297	292	286	278	264

## EBMP 315 - 19.2 in<sup>3</sup>/rev (314.5 cm<sup>3</sup>/rev)

		Pressure PSI (bar)						Max. Cont.	Max. Int.
		435 (30)	725 (50)	1015 (70)	1305 (90)	1450 (100)	1812 (125)	2030 (140)	
2 (8)	Torque lbf•ft (N•m)	90.8 (123)	158.7 (215)	215.5 (292)	271.6 (368)	298.9 (405)			
	Speed (rpm)	25	23	21	17	11			
4 (15)	Torque lbf•ft (N•m)	87.1 (118)	155.7 (211)	211.8 (287)	270.8 (367)	298.2 (404)	365.3 (495)	419.2 (568)	
	Speed (rpm)	47	46	44	40	28	21	10	
5.25 (20)	Torque lbf•ft (N•m)	81.2 (110)	151.3 (205)	205.2 (278)	265.7 (360)	291.5 (395)	364.6 (494)	417.7 (566)	
	Speed (rpm)	62	61	60	57	46	40	36	
8.9 (30)	Torque lbf•ft (N•m)	74.5 (101)	144.6 (196)	200 (271)	257.6 (349)	286.3 (388)	361.6 (490)	417 (565)	
	Speed (rpm)	94	93	91	88	76	68	65	
9.2 (35)	Torque lbf•ft (N•m)	70.8 (96)	138.7 (188)	194.8 (264)	251.7 (341)	281.9 (382)	352.8 (478)	411.1 (557)	
	Speed (rpm)	109	107	106	104	96	89	84	
11.8 (45)	Torque lbf•ft (N•m)	65.7 (89)	132.8 (180)	187.5 (254)	248.7 (337)	274.5 (372)	345.4 (468)	408.1 (553)	
	Speed (rpm)	141	140	138	135	127	120	115	
14.4 (55)	Torque lbf•ft (N•m)	56.1 (76)	122.5 (166)	176.4 (239)	239.9 (325)	267.2 (362)	337.3 (457)	404.4 (548)	
	Speed (rpm)	173	172	170	167	160	152	143	
15.8 (60)	Torque lbf•ft (N•m)	48 (65)	113.7 (154)	167.5 (227)	227.3 (308)	256.8 (348)	326.9 (443)	390.4 (529)	
	Speed (rpm)	188	186	184	182	178	172	163	
19.8 (75)	Torque lbf•ft (N•m)	29.5 (40)	88.6 (120)	148.3 (201)	205.9 (279)	238.4 (323)	308.5 (418)	366.8 (497)	
	Speed (rpm)	236	234	232	228	226	223	214	

## EBMP 400 - 23.8 in<sup>3</sup>/rev (389.5 cm<sup>3</sup>/rev)

		Pressure PSI (bar)						Max. Cont.	Max. Int.
		435 (30)	653 (45)	797 (55)	943 (65)	1160 (80)	1450 (100)	1812 (125)	
2 (8)	Torque lbf•ft (N•m)	122.5 (166)	171.2 (232)	211.8 (287)	250.9 (340)	308.5 (418)			
	Speed (rpm)	20	19	18	16	12			
4 (15)	Torque lbf•ft (N•m)	121.8 (165)	168.3 (228)	204.4 (277)	248.7 (337)	307.7 (417)	366 (496)	451.7 (612)	
	Speed (rpm)	38	36	35	33	31	27	21	
5.25 (20)	Torque lbf•ft (N•m)	119.6 (162)	164.6 (223)	201.5 (273)	244.3 (331)	304.8 (413)	365.3 (495)	449.4 (609)	
	Speed (rpm)	50	49	49	48	45	41	35	
8.9 (30)	Torque lbf•ft (N•m)	113.7 (154)	159.4 (216)	196.3 (266)	234.7 (318)	298.9 (405)	358.7 (486)	442.8 (600)	
	Speed (rpm)	76	75	74	73	71	67	60	
9.2 (35)	Torque lbf•ft (N•m)	107.7 (146)	155 (210)	188.9 (256)	230.3 (312)	291.5 (395)	354.2 (480)	433.9 (588)	
	Speed (rpm)	88	87	87	86	83	80	75	
11.8 (45)	Torque lbf•ft (N•m)	97.4 (132)	145.4 (197)	179.3 (243)	221.4 (300)	282.7 (383)	342.4 (464)	425.1 (576)	
	Speed (rpm)	114	113	112	110	108	106	99	
14.4 (55)	Torque lbf•ft (N•m)	86.3 (117)	135.8 (184)	167.5 (227)	208.9 (283)	267.9 (363)	332.1 (450)	407.4 (552)	
	Speed (rpm)	139	137	136	135	135	132	123	
15.8 (60)	Torque lbf•ft (N•m)	75.3 (102)	120.3 (163)	158.7 (215)	200.7 (272)	256.1 (347)	321.8 (436)	392.6 (532)	
	Speed (rpm)	153	152	150	148	146	143	138	
19.8 (75)	Torque lbf•ft (N•m)	39.1 (53)	94.5 (128)	134.3 (182)	172.7 (234)	234.7 (318)	288.6 (391)	357.2 (484)	
	Speed (rpm)	191	189	187	185	183	180	176	

# PERFORMANCE DATA



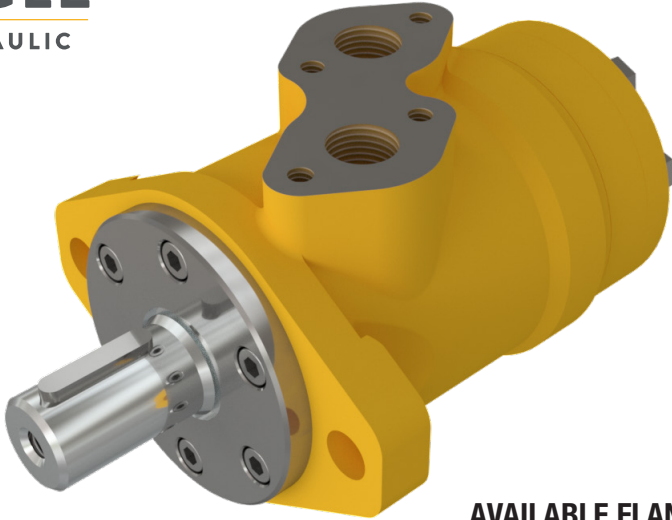
## EBMP 500 - 29.7 in<sup>3</sup>/rev (486.5 cm<sup>3</sup>/rev)

		<i>Max. Cont</i>						<i>Max. Int.</i>		
		<b>Pressure PSI (bar)</b>		<b>218 (15)</b>	<b>435 (30)</b>	<b>653 (45)</b>	<b>870 (60)</b>	<b>1015 (70)</b>	<b>1160 (80)</b>	<b>1305 (90)</b>
<b>1 (4)</b>	Torque lbf•ft (N•m)	70.8 (96)	143.2 (194)	210.3 (285)						
	Speed (rpm)	7	6	4						
<b>2 (8)</b>	Torque lbf•ft (N•m)	72.3 (98)	148.3 (201)	224.4 (304)	288.6 (391)	326.9 (443)	377.9 (512)	423.6 (574)		
	Speed (rpm)	15	15	14	14	12	9	7		
<b>4 (15)</b>	Torque lbf•ft (N•m)	70.8 (96)	141.7 (192)	209.6 (284)	280.4 (380)	310.7 (421)	366 (496)	405.9 (550)		
	Speed (rpm)	30	30	29	28	26	23	22		
<b>5.25 (20)</b>	Torque lbf•ft (N•m)	70.8 (96)	141 (191)	206.6 (280)	274.5 (372)	308.5 (418)	363.8 (493)	402.9 (546)		
	Speed (rpm)	40	40	40	39	37	33	31		
<b>8.9 (30)</b>	Torque lbf•ft (N•m)	67.2 (91)	136.5 (185)	200.7 (272)	265.7 (360)	304.1 (412)	358.7 (486)	399.3 (541)		
	Speed (rpm)	61	60	60	58	56	53	50		
<b>10.6 (40)</b>	Torque lbf•ft (N•m)	63.5 (86)	126.9 (172)	192.6 (261)	253.1 (343)	301.1 (408)	354.2 (480)	397 (538)		
	Speed (rpm)	81	80	80	79	76	73	70		
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	57.6 (78)	118.1 (160)	177.9 (241)	245 (332)	288.6 (391)	343.9 (466)	389.7 (528)		
	Speed (rpm)	102	101	100	98	96	93	90		
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	48.7 (66)	98.9 (134)	157.2 (213)	225.1 (305)	273.8 (371)	323.2 (438)	366 (496)		
	Speed (rpm)	122	121	120	119	117	114	110		
<b>18.5 (70)</b>	Torque lbf•ft (N•m)	38.4 (52)	81.9 (111)	139.5 (189)	215.5 (292)	253.9 (344)	308.5 (418)	350.6 (475)		
	Speed (rpm)	143	142	141	139	137	135	131		
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	25.8 (35)	61.3 (83)	113.7 (154)	177.9 (241)	230.3 (312)	287.1 (389)	330.6 (448)		
	Speed (rpm)	153	152	151	150	149	147	144		

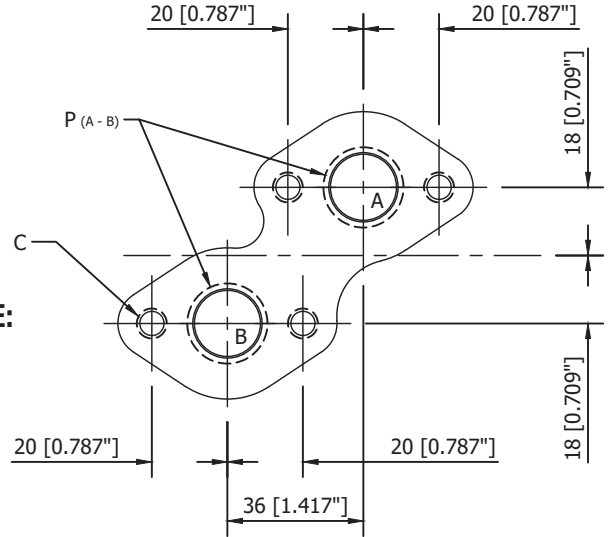
**EBMP**

# EBMP DIMENSIONS AND MOUNTING

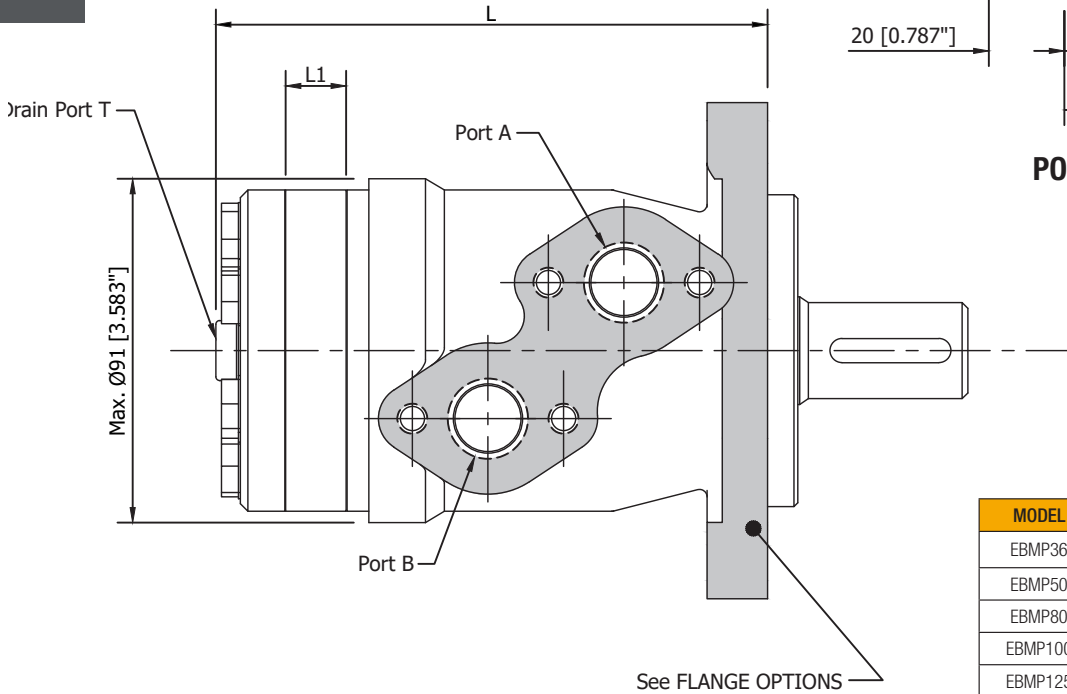
**EBMP**



**AVAILABLE FLANGE:  
2 - 4 - H4/H5**



**PORTS DETAIL**



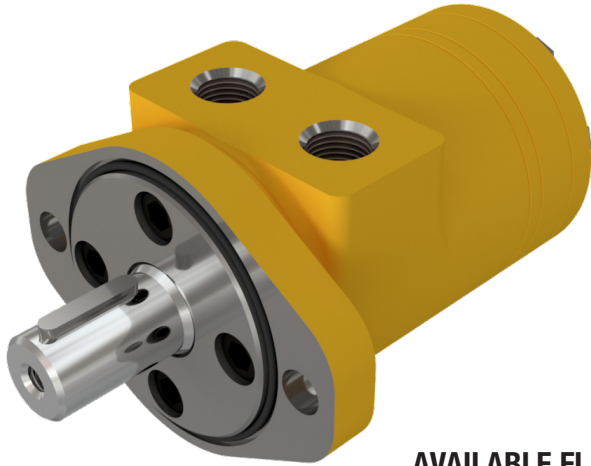
See FLANGE OPTIONS

MODEL	L	L1
EBMP36	137 [5.394"]	7 [0.276"]
EBMP50	137 [5.394"]	7 [0.276"]
EBMP80	140.5 [5.531"]	10.5 [0.413"]
EBMP100	143 [5.630"]	13 [0.512"]
EBMP125	146 [5.748"]	16 [0.630"]
EBMP160	151 [5.945"]	21 [0.827"]
EBMP200	157 [6.181"]	26 [1.024"]
EBMP250	162 [6.378"]	32 [1.260"]
EBMP315	172 [6.772"]	42 [1.654"]
EBMP400	182 [7.165"]	52 [2.047"]
EBMP500	195 [7.677"]	65 [2.559"]

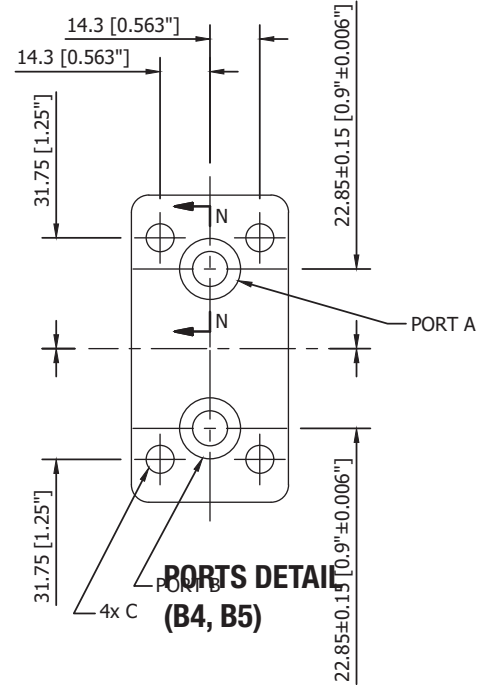
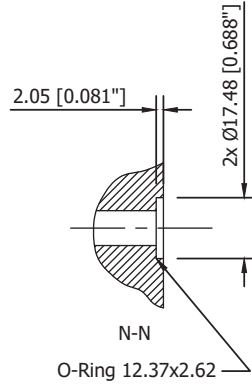
## EBMP BODY DIMENSIONS

MOUNTING	CODE (Depth mm)				
	D	M	S	P	R
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)	PT (RC) 1/2 (15)
C	4x M8 (13)	4x M8 (13)	4x 5/16-18UNC (13)	4x 5/16-18UNC (13)	4x M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20 UNF (12)	7/16-20UNF (12)	PT (RC) 1/4 (9.7)

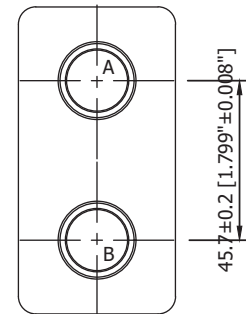
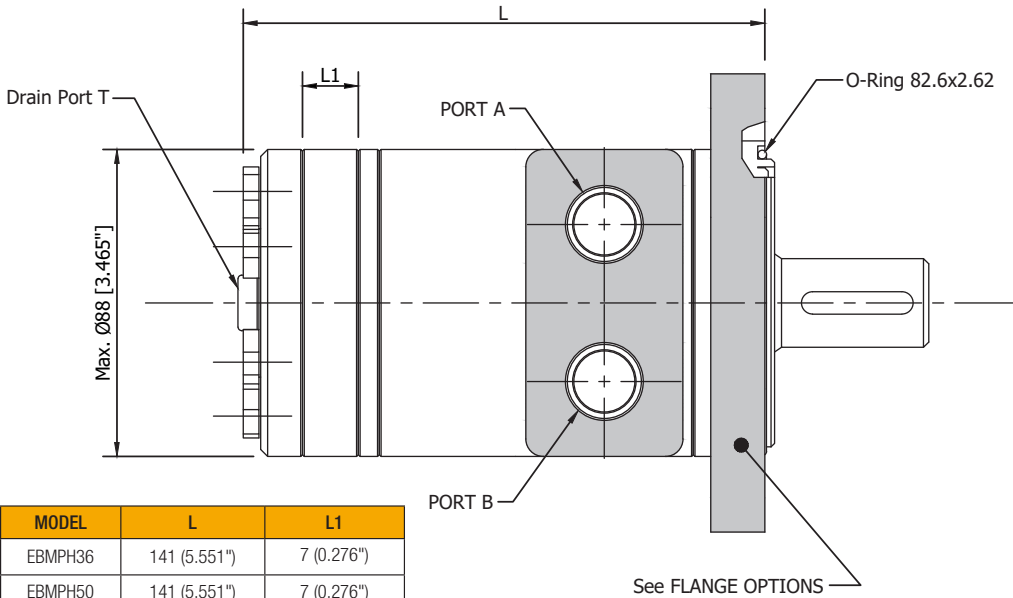
# EBMPH DIMENSIONS AND MOUNTING



**AVAILABLE FLANGE:**  
H2 - H6 - H4/H5



**EBMPH**

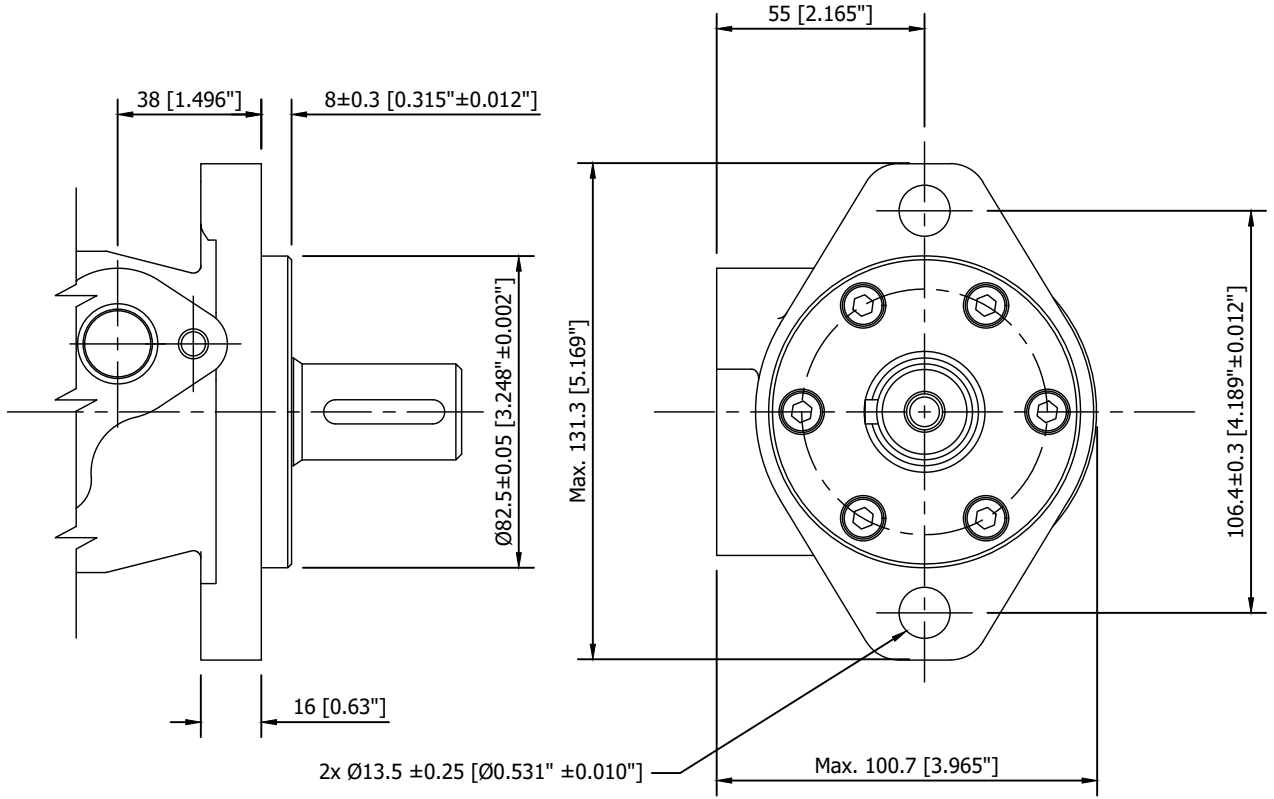


MODEL	L	L1
EBMPH36	141 (5.551")	7 (0.276")
EBMPH50	141 (5.551")	7 (0.276")
EBMPH80	144.5 (5.689")	10.5 (0.413")
EBMPH100	147 (5.787")	13 (0.512")
EBMPH125	150 (5.906")	16 (0.63")
EBMPH160	155 (6.102")	21 (0.827")
EBMPH200	160 (6.299")	26 (1.024")
EBMPH250	166 (6.535")	32 (1.26")
EBMPH315	176 (6.929")	42 (1.654")
EBMPH400	186 (7.323")	52 (2.047")
EBMPH500	199 (7.835")	65 (2.559")

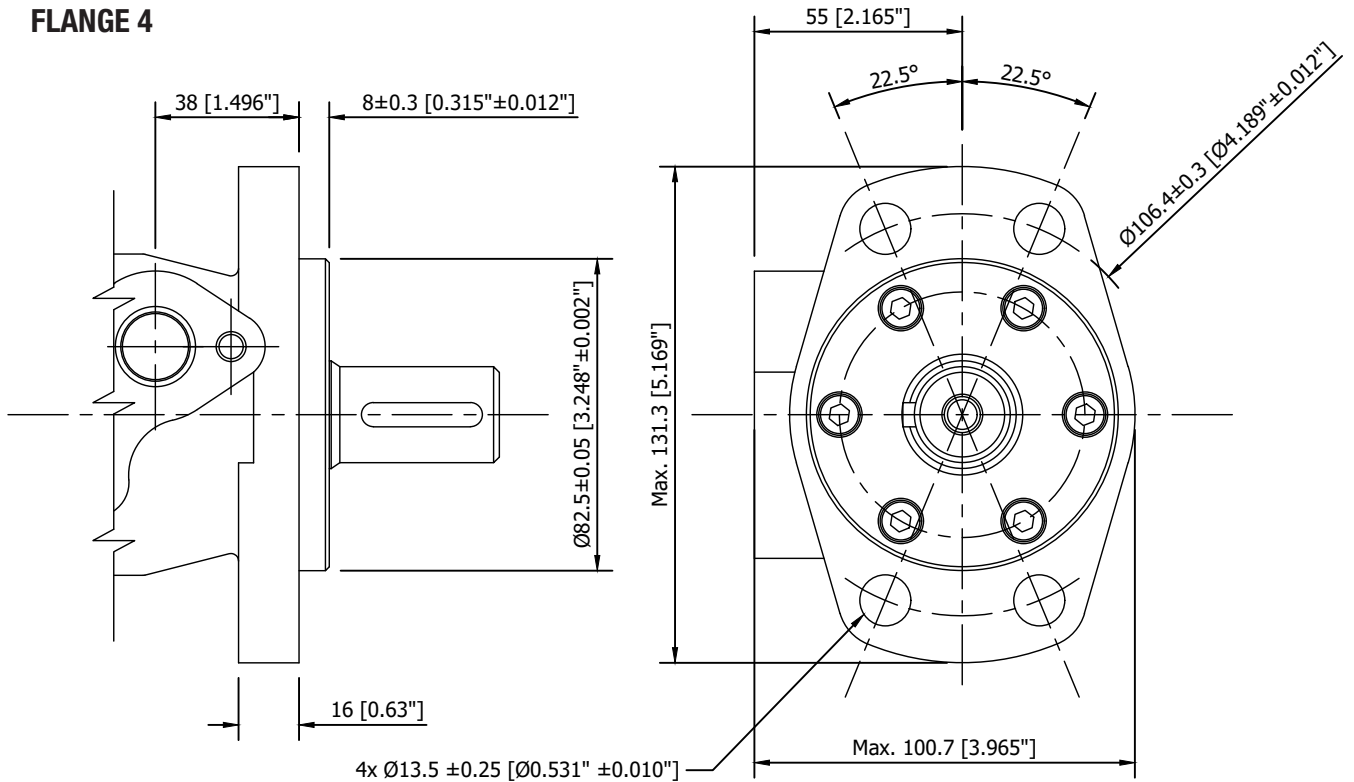
MOUNTING	CODE (Depth mm)						
	G	S	P	T	R	B4	B5
P (A, B)	G 1/2 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)	3/4-16 O-Ring (15)	PT(RC) 1/2 (15)	Ø10	Ø10
T	G1/4 (12)	7/16-20 UNF (12)	7/16-20 UNF (12)	7/16-20 UNF (12)	PT(RC) 1/4 (9.7)	7/16-20 UNF (12)	G1/4 (12)
C	-	-	-	-	-	4-5/16-18UNC(13)	4-M8 (13)

**EBMP**

## FLANGE 2

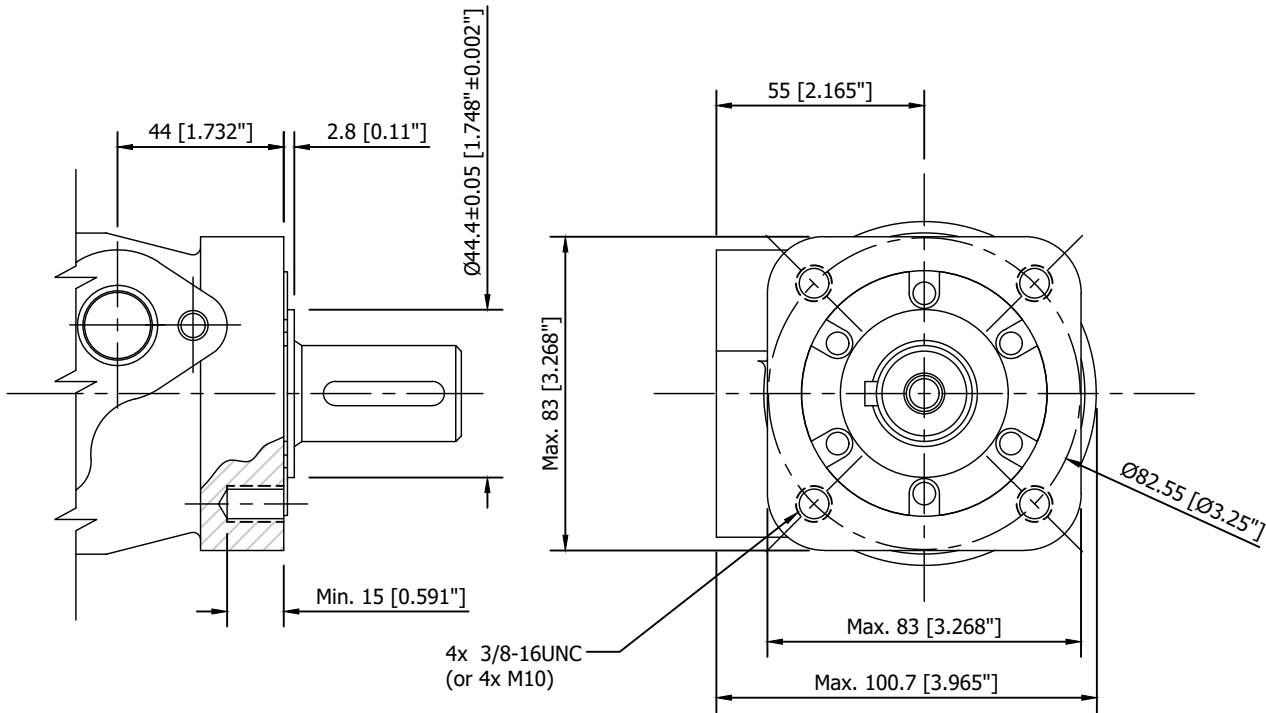


## FLANGE 4



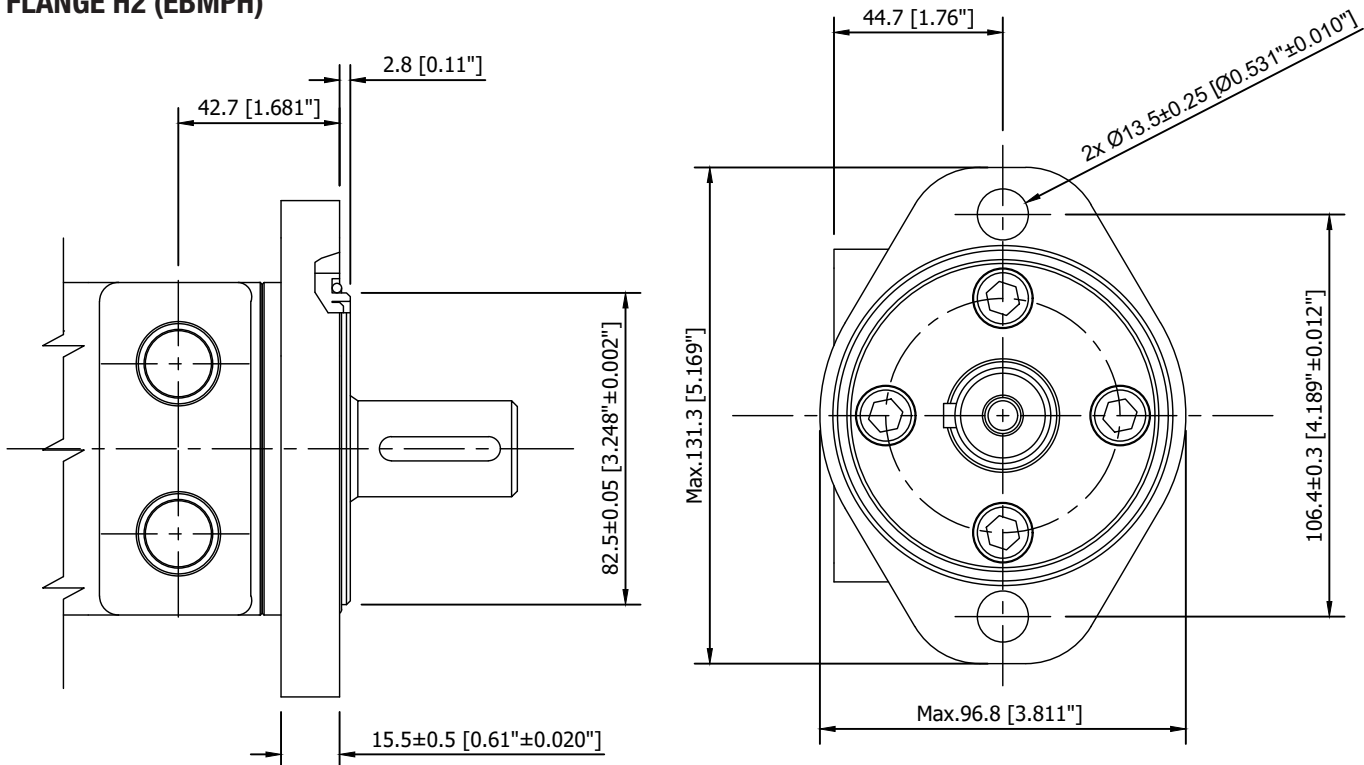
# EBMP/H FLANGE OPTIONS

## FLANGE H4 / H5



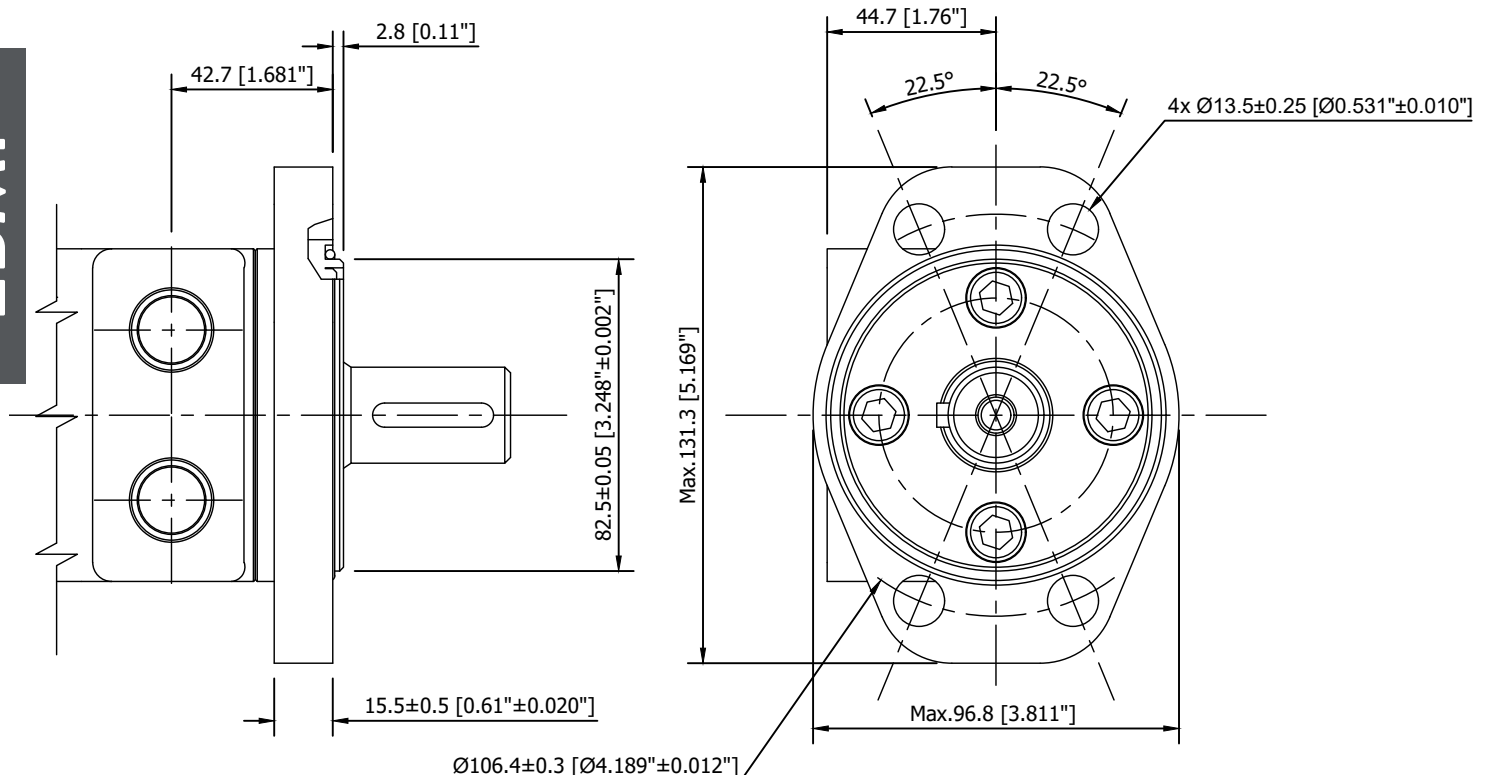
**EBMP**

## FLANGE H2 (EBMPH)

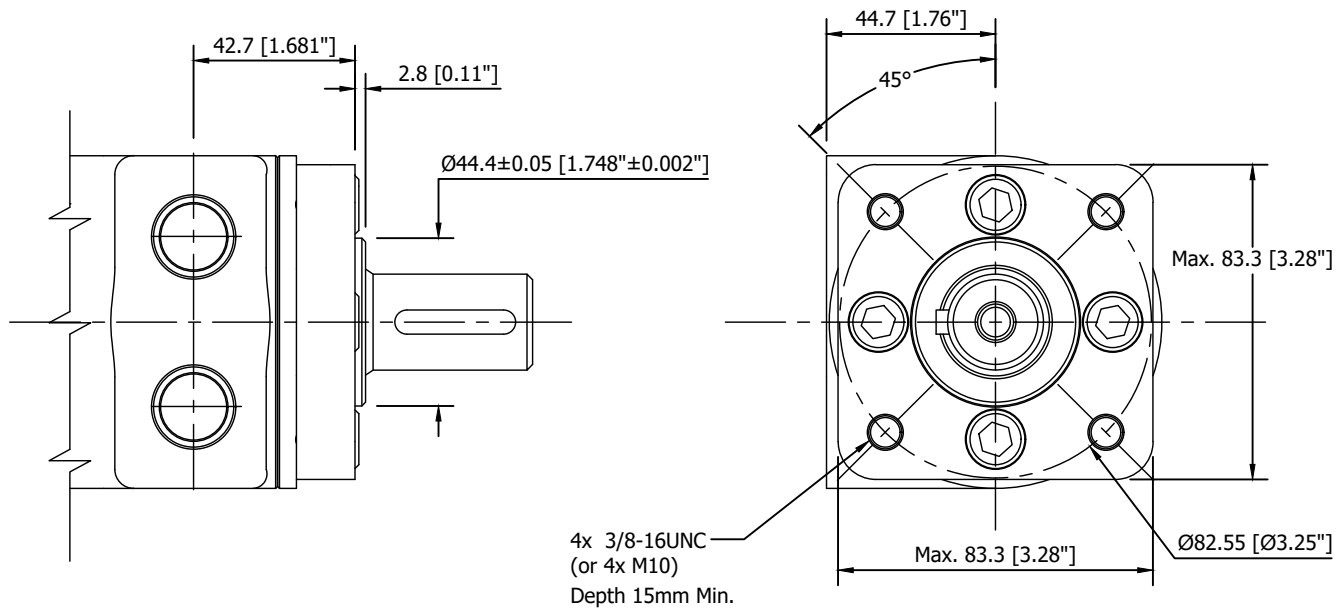


## FLANGE H6 (EBMPH)

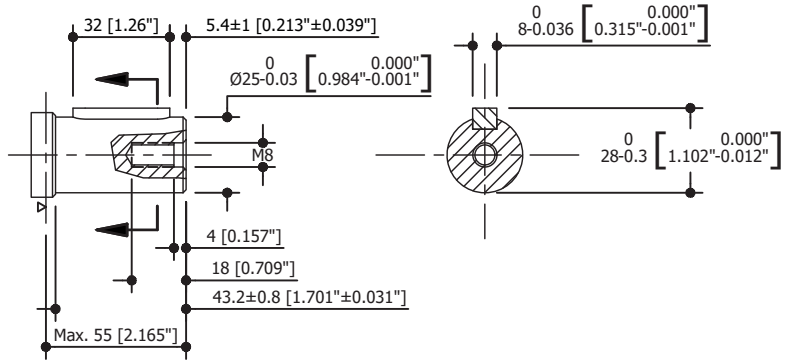
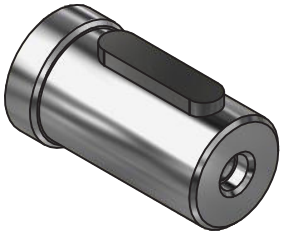
**EBMP**



## FLANGE H4/H5 (EBMPH)

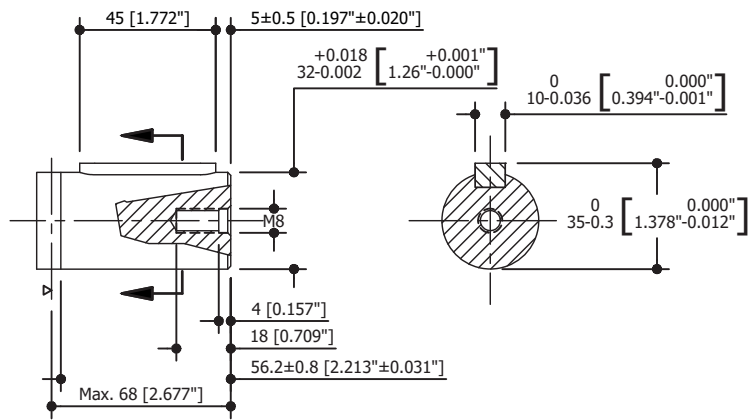


# EBMP SHAFT EXTENSIONS DIMENSIONS



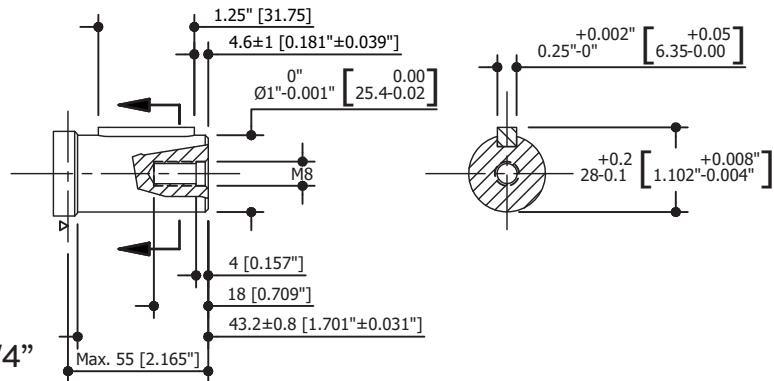
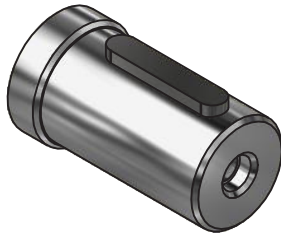
## SHAFT A

Cylindrical Shaft Ø25 - Parallel Key 8x7x32  
METRIC



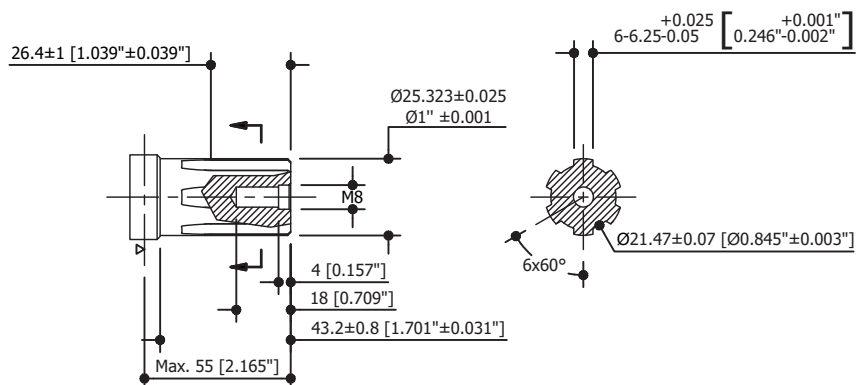
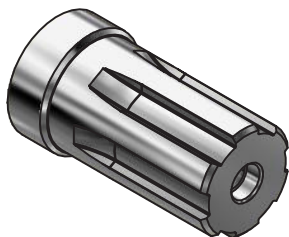
## SHAFT B

Cylindrical Shaft Ø32 - Parallel Key 10x8x45  
METRIC



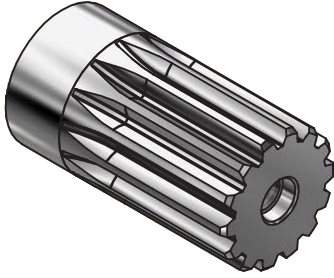
## SHAFT C

Cylindrical Shaft 1" - Parallel Key 1/4"x1/4"x1-1/4"  
IMPERIAL

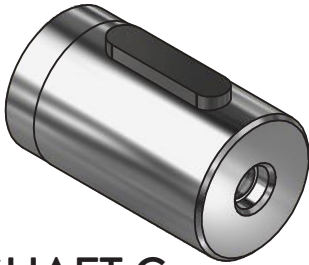
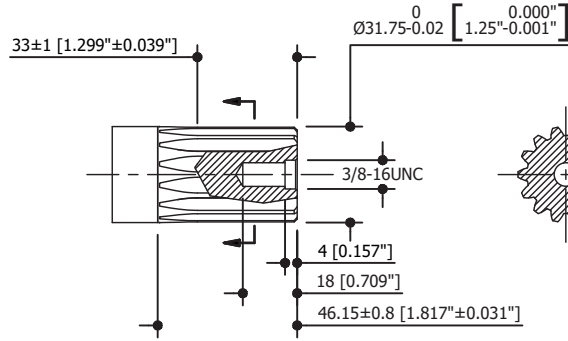


## SHAFT E

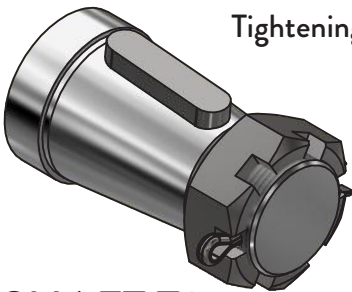
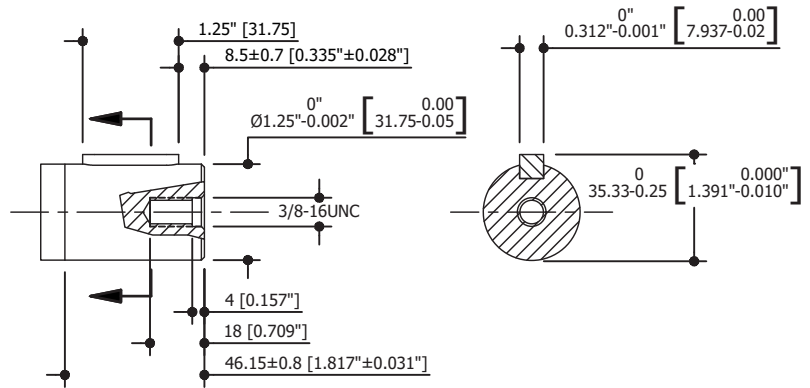
Splined SAE 6B  
IMPERIAL



**SHAFT F**  
Splined 14-DP12/24  
IMPERIAL

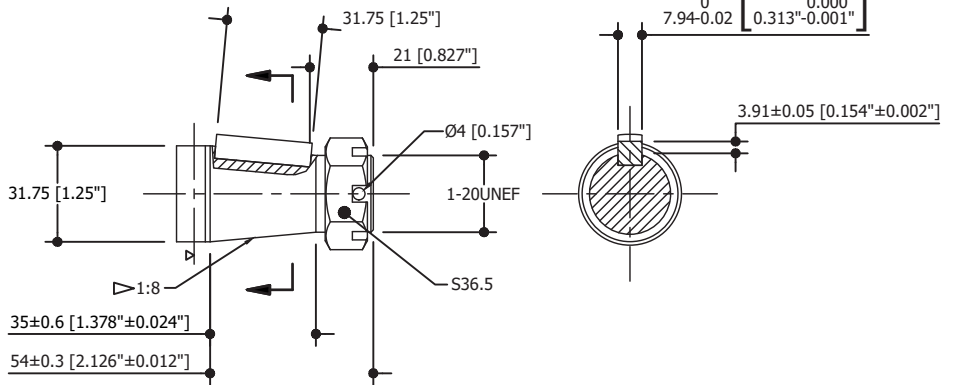


**SHAFT G**  
Cylindrical Shaft Ø1-1/4"  
Parallel Key 5/16"x5/16"x1-1/4"  
IMPERIAL

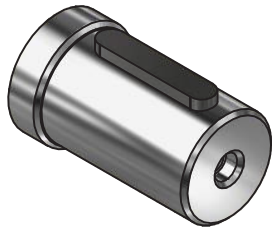


**SHAFT T3**  
Cone Shaft Ø1-1/4"  
Parallel Key 5/16"x5/16"x1-1/4"  
IMPERIAL

Tightening Torque: 200 +/- 10Nm

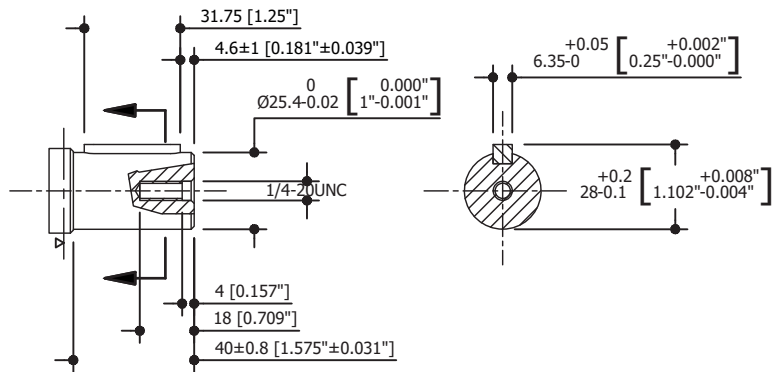


# EBMP SHAFT EXTENSIONS DIMENSIONS

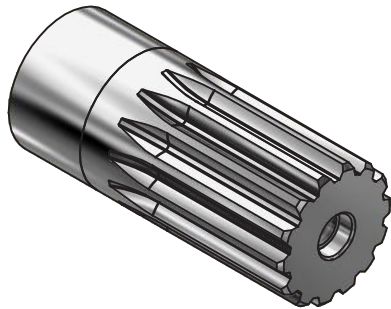


## SHAFT R

Cylindrical Shaft  $\text{Ø}1''$   
Parallel Key  $1/4'' \times 1/4'' \times 1-1/4''$   
IMPERIAL

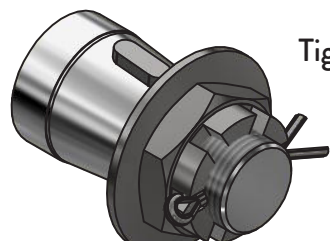
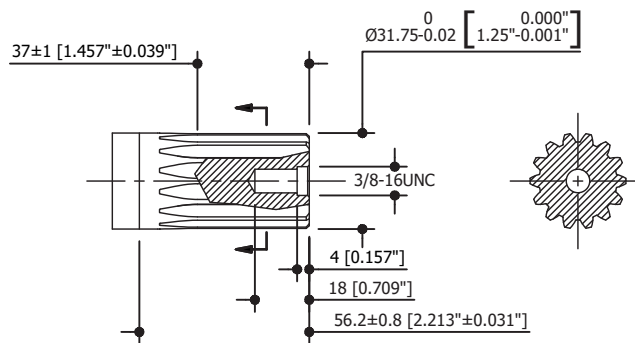


EBMP



## SHAFT FD

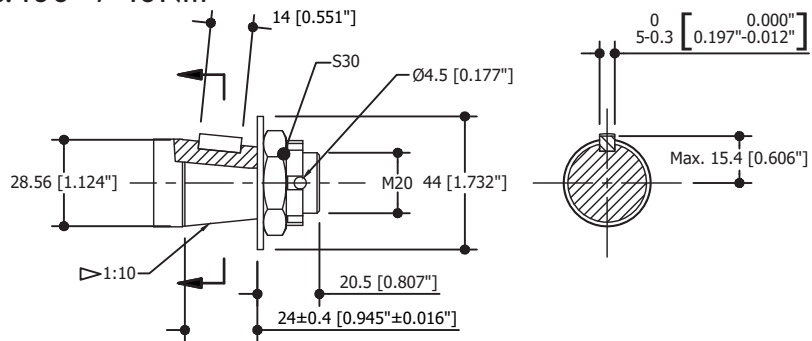
Splined 14-DP112/24  
IMPERIAL

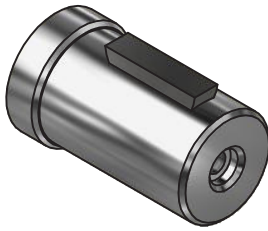


Tightening Torque: 100 +/- 10Nm

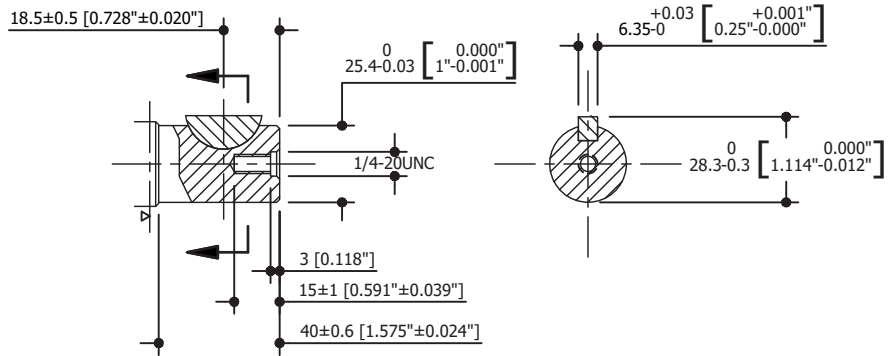
## SHAFT T

Cone Shaft  $\text{Ø}28.56\text{mm}$   
Parallel Key B5x5x14  
METRIC

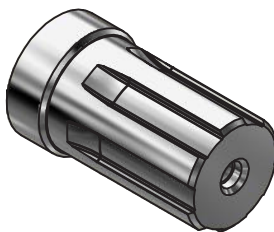
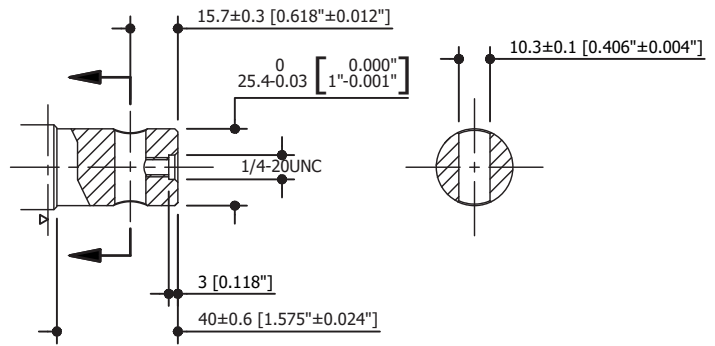




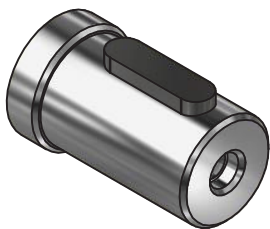
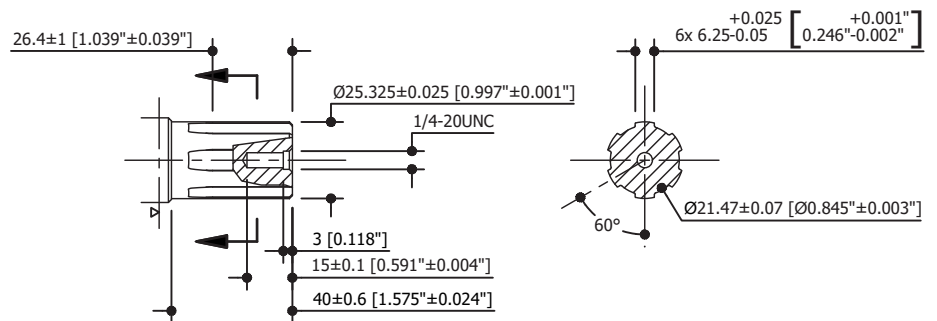
**SHAFT K**  
Cylindrical Shaft  $\varnothing 1''$   
Woodruff Key  $\varnothing 1'' \times 1/4''$   
IMPERIAL



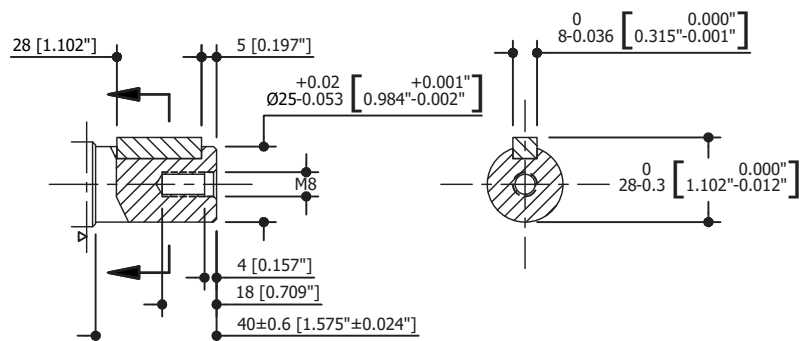
**SHAFT H**  
Cylindrical Shaft  $\varnothing 1''$   
Pin Hole  $\varnothing 10.3\text{mm}$   
IMPERIAL



**SHAFT S**  
Splined SAE 6B  
IMPERIAL



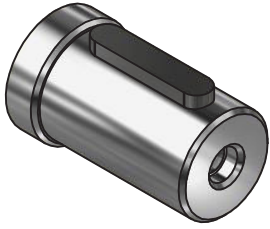
**SHAFT P**  
Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $8 \times 7 \times 28$   
METRIC



# EBMPH SHAFT EXTENSIONS DIMENSIONS

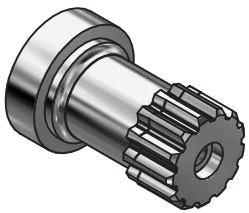
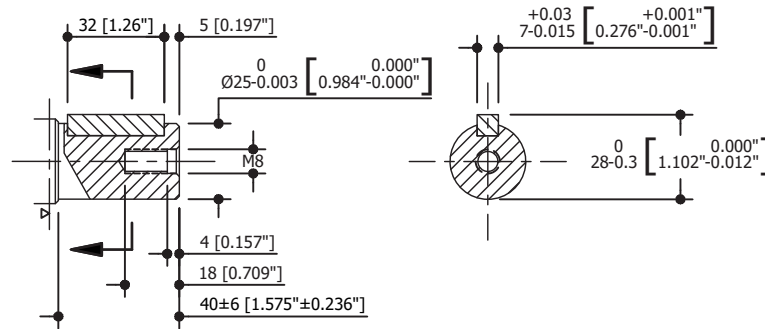


**EAGLE**  
HYDRAULIC



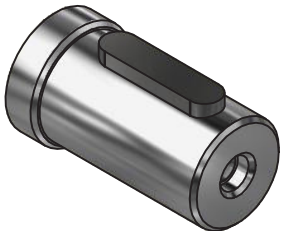
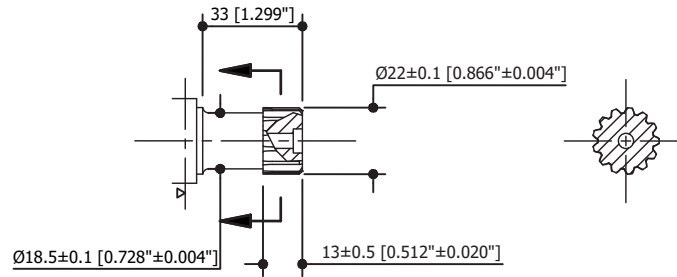
## SHAFT J

Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $\varnothing 7 \times 7 \times 32$   
METRIC



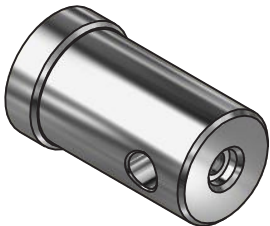
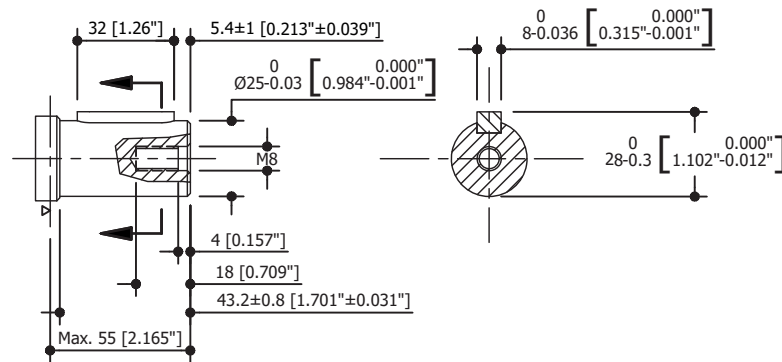
## SHAFT I

Splined 13-DP16/32  
METRIC



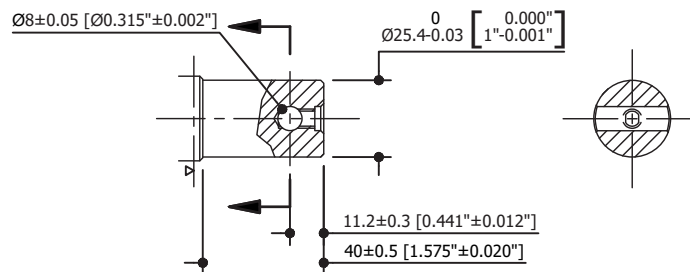
## SHAFT A

Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $8 \times 7 \times 32$   
METRIC



## SHAFT H1

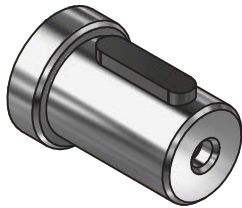
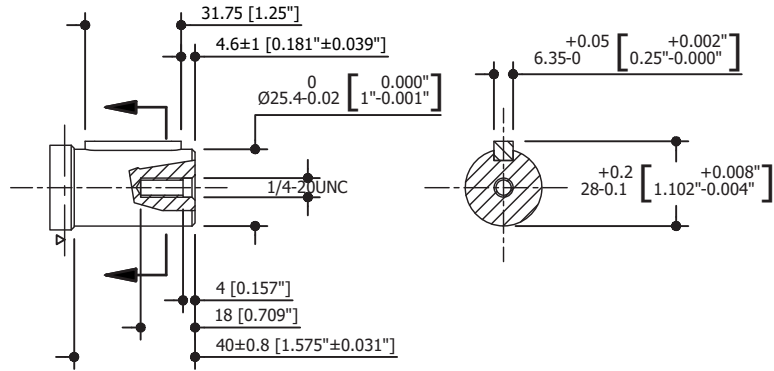
Cylindrical Shaft  $\varnothing 1"$   
Pin Hole  $\varnothing 8$   
IMPERIAL



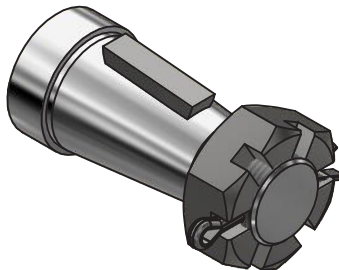
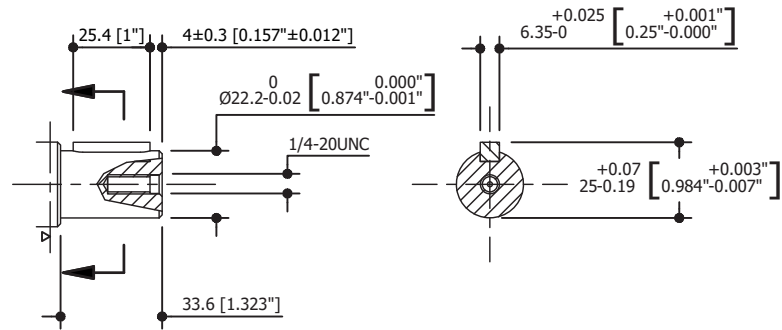
EBMP



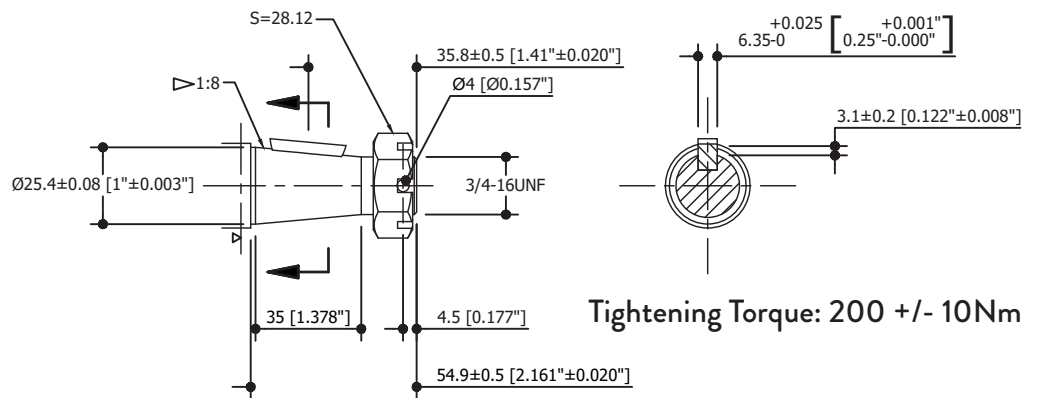
**SHAFT R**  
Cylindrical Shaft  $\varnothing 1''$   
Parallel Key  $1/4'' \times 1/4'' \times 1-1/4''$   
IMPERIAL



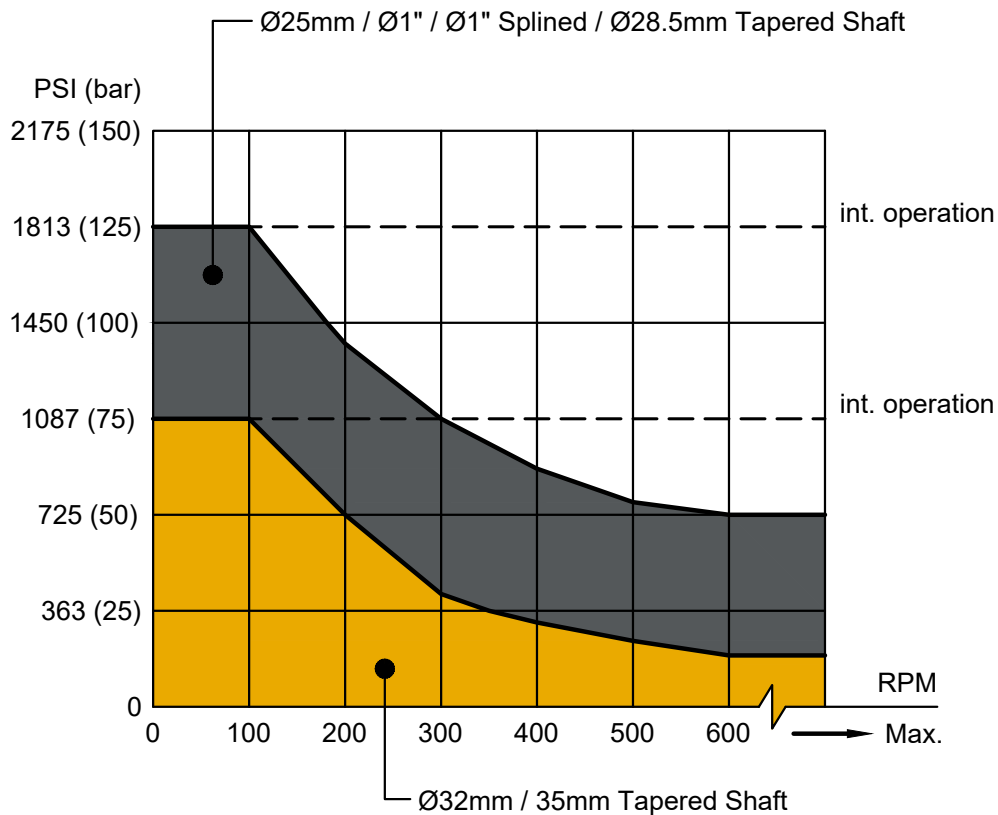
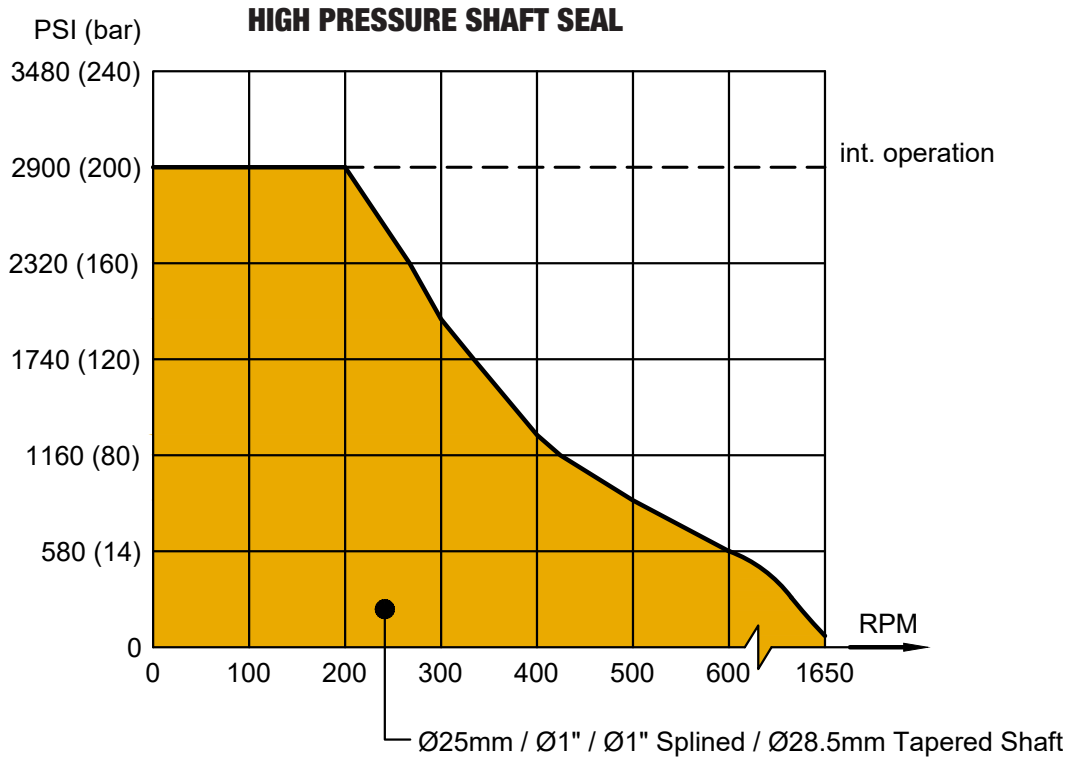
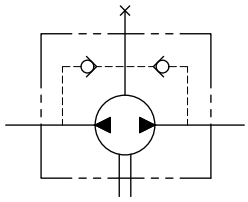
**SHAFT D**  
Cylindrical Shaft  $\varnothing 0.875''$   
Parallel Key  $1/4'' \times 1/4'' \times 1''$   
IMPERIAL



**SHAFT T2**  
Cone Shaft  $\varnothing 1''$   
Woodruff Key  $\varnothing 1'' \times 1/4''$   
IMPERIAL



# PERMISSIBLE SHAFT SEAL PRESSURE EBMP - EBMPH



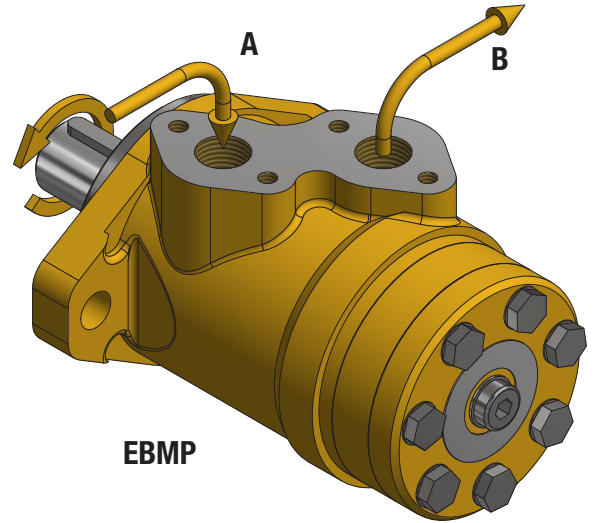
**EBMP**

In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

**EBMP - DIRECTION OF SHAFT ROTATION : STANDARD**

When facing shaft end of motor, shaft is rotating:

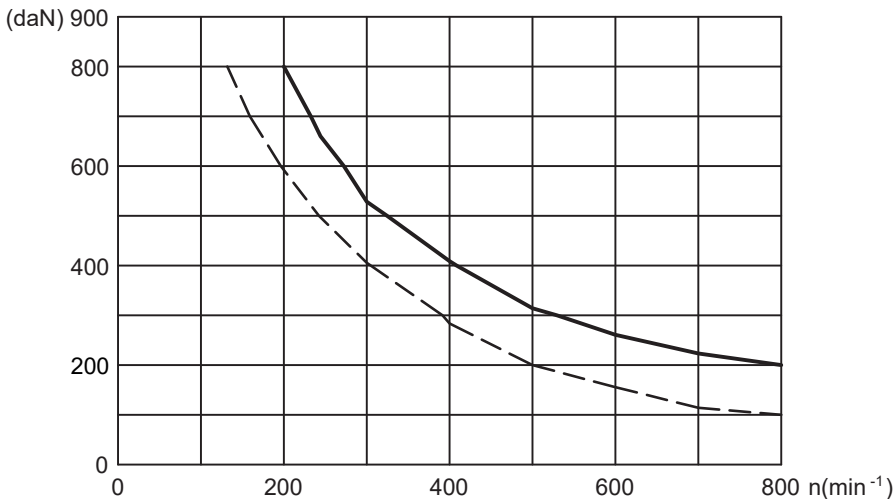
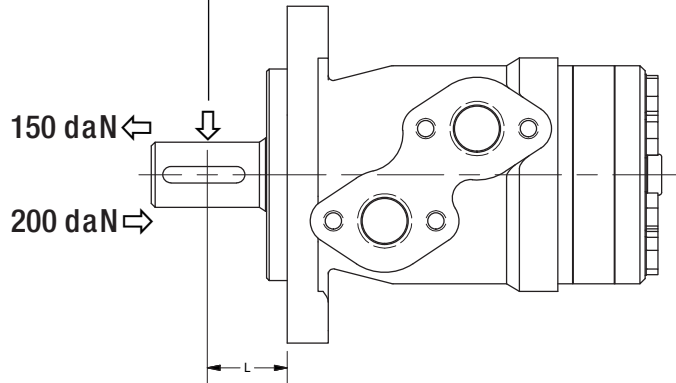
- Clockwise when port "A" is pressurized.
- Counter-Clockwise when port "B" is pressurized.



**STATUS OF THE SHAFT'S RADIAL FORCE**  
(Standard Motor with Journal Bearing)

- $F_r$  = Radial Force (daN)
- L = Distance (mm)
- n = Speed (rpm)
- Max. Force Load
- Rhomb-flange L = 30mm
- Square-Flange L = 24mm

$$F_r = \frac{800}{n} \cdot \frac{25000}{95+L} \text{ daN}$$



— Shaft Ø25mm and Ø1"  
- - - Shaft Ø32mm

**OIL FLOW IN DRAIN LINE**

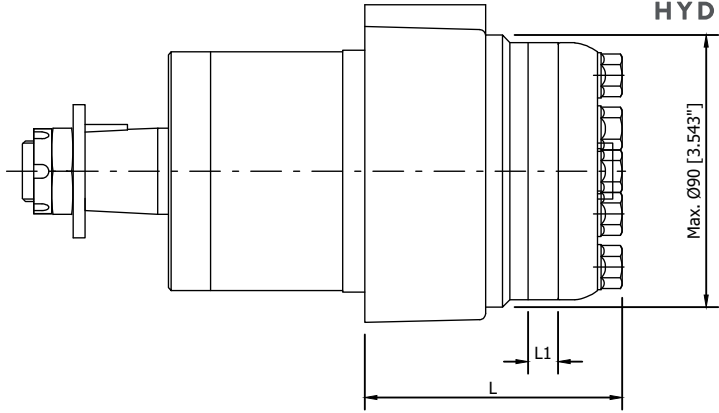
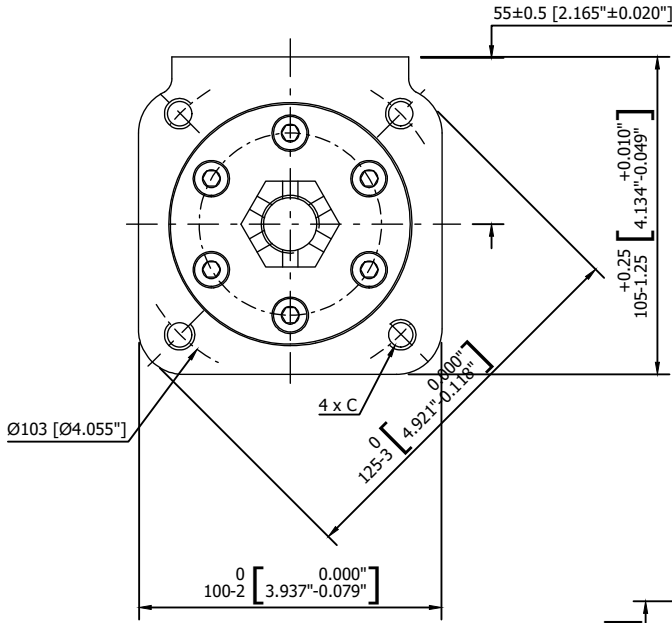
The table shows the Max. oil flow in the drain line at a return pressure less than 72-145 PSI (5-10 bar)

Pressure Drop PSI (bar)	Viscosity in <sup>2</sup> /s (mm <sup>2</sup> /s)	Oil Flow in the Drain Line GPM (L/min)
1450 (100)	0.031 (20)	0.66 (2.5)
	0.054 (35)	0.48 (1.8)
2030 (140)	0.031 (20)	0.93 (3.5)
	0.054 (35)	0.75 (2.8)

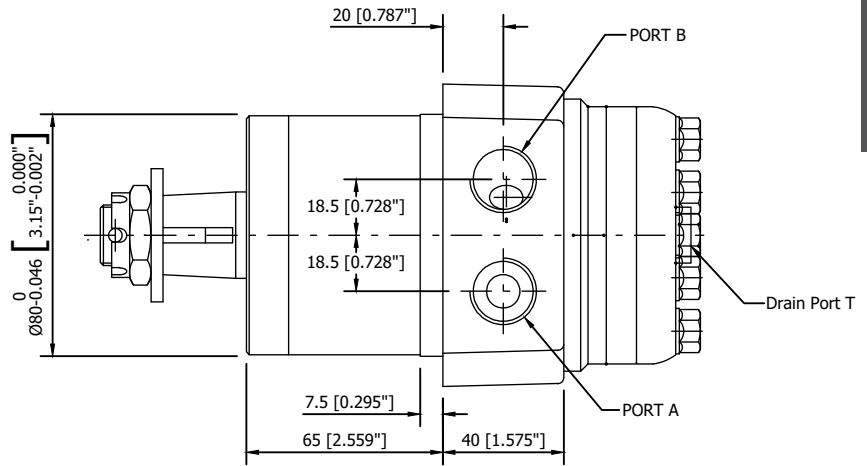
# EBMPW DIMENSIONS AND MOUNTING



**EAGLE**  
HYDRAULIC



MODEL	L	L1
EBMPW50	81 (3.189")	7 (0.276")
EBMPW80	84.5 (3.327")	10.5 (0.413")
EBMPW100	87 (3.425")	13 (0.512")
EBMPW125	90 (3.543")	16 (0.63")
EBMPW160	95 (3.74")	21 (0.827")
EBMPW200	100 (3.937")	26 (1.024")
EBMPW250	106 (4.173")	32 (1.26")
EBMPW315	116 (4.567")	42 (1.654")
EBMPW400	126 (4.961")	52 (2.047")
EBMPW500	139 (5.472")	65 (2.559")



MOUNTING	CODE (Depth mm)		
	G	S	M
P (A, B)	G 1/2 (15)	7/8-14 O-Ring (17)	M22 x 1.5 (15)
T	G1/4 (12)	7/16-20 UNF (12)	M14 x 1.5 (12)
C	4 x M10(20)	4 x 3/8-16UNC (20)	4 x M10 (20)

## EBMPW ORDER INFORMATION



1	2	3	4	5	6	7	8
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
EBMPW	50	Blank Wheel-Flange Pilot Ø80 x 7.5	A Shaft Ø25, Parallel Key 8x7x32	G G1/2, G1/4	Blank Standard	00 No Paint	Blank Standard
	80		C Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"	S 7/8-14 O-Ring, 7/16-20UNF	R Opposite	Blank Black	N1 Big Radial Force
	100		E Shaft Ø1", Splined Tooth SAE 6B	M M22 x 1.5, M14 x 1.5		BI Blue	0 No Case Drain
	125		T Cone-Shaft Ø28.56, Parallel Key B5x5x14			S Silver Grey	
	160						
	200						
	250						
315							
400							
500							

Note: When table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

**EBMPW**

OZ series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor Gear set design and provide compact volume, high power and low weight.

## FEATURES

- Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- Advanced construction design, high power and low weight.

## MAIN SPECIFICATIONS

### TECHNICAL DATA FOR OZ WITH 25mm Shaft / 1in Shaft / 1in Splined and 28.56mm Tapered Shaft

		OZ 36	OZ 50	OZ 80	OZ 100	OZ 125	OZ 160	OZ 200	OZ 250	OZ 315	OZ 400
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	2.26 (37)	3.15 (51.7)	4.74 (77.7)	5.87 (96.2)	7.34 (120.2)	9.59 (157.2)	11.87 (194.5)	14.66 (240.3)	19.19 (314.5)	23.77 (389.5)
Max. Speed	Continuous (rpm)	1081	774	515	416	339	257	211	173	128	104
Max. Torque	Continuous lbf•ft (N•m)	37.6 (51)	53.9 (73)	78.2 (106)	103.3 (140)	119.6 (162)	159.4 (216)	194.8 (264)	207.4 (281)	230.3 (312)	289.3 (392)
	Intermittent lbf•ft (N•m)	50.2 (68)	70.8 (96)	105.5 (143)	131.4 (178)	160.9 (218)	212.5 (288)	259 (351)	259 (351)	319.6 (433)	429.5 (582)
Max. Output	Continuous hp (kW)	7 (5.2)	7 (5.2)	7 (5.2)	7 (5.2)	7 (5.2)	7 (5.2)	7 (5.2)	6.2 (4.6)	4.6 (3.4)	4.6 (3.4)
	Intermittent hp (kW)	11.5 (8.6)	11.5 (8.6)	11.5 (8.6)	11.5 (8.6)	11.5 (8.6)	11.5 (8.6)	11.5 (8.6)	9.4 (7)	7.8 (5.8)	7.8 (5.8)
Max. Pressure Drop	Continuous PSI (bar)	1523 (105)	1523 (105)	1523 (105)	1523 (105)	1523 (105)	1523 (105)	1523 (105)	1305 (90)	1015 (70)	1015 (70)
	Intermittent PSI (bar)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	1668 (115)	1523 (105)	1523 (105)
Max. Flow	Continuous GPM (L/min)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)	10.6 (40)

\* Intermittent operation: the permissible values may occur for max. 10% of every minute

## OZ ORDER INFORMATION

2      3      4      5      6      7      8

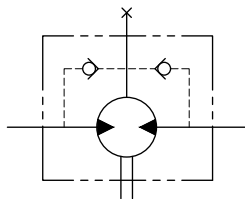
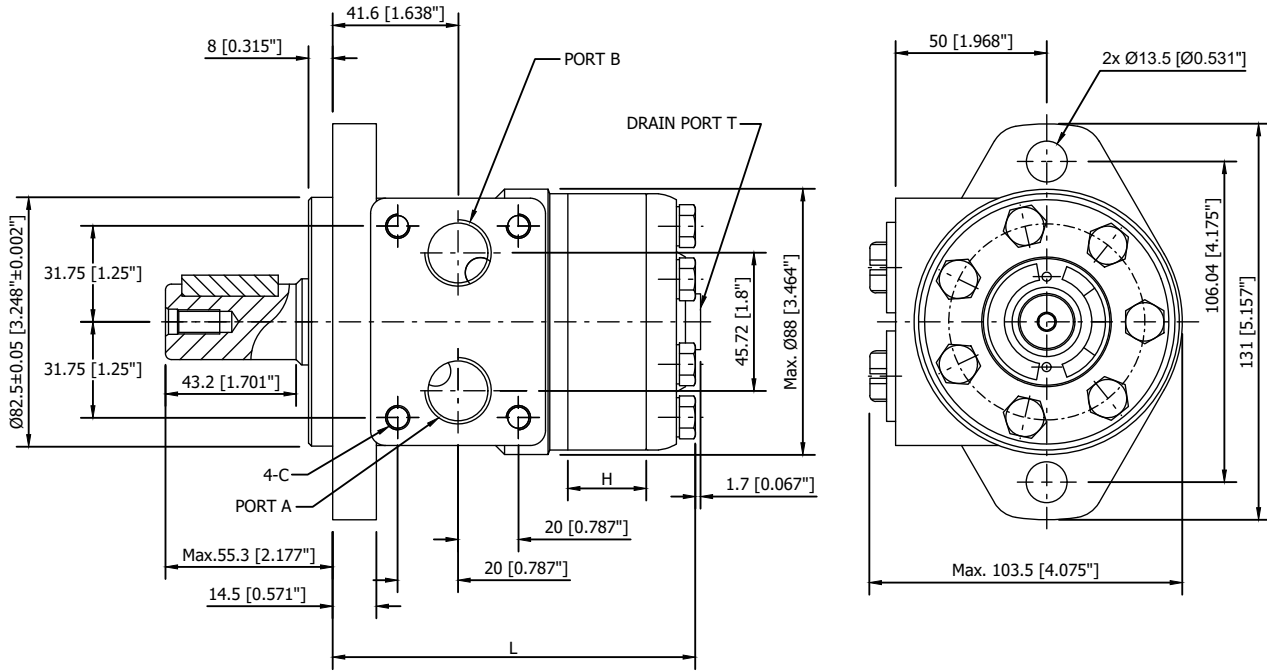
OZ  -  -  -  -  -  -  -

1	2	3	4	5	6	7	8					
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function					
Blank	36	2-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8	A	Shaft Ø25, Parallel Key 8x7x32	D	G1/2 Manifold Mount, 4-M8, G1/4	Blank	Standard	00	No Paint	Blank	Standard
	50		C	Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"	M	M22x1.5 Manifold Mount, 4-M8, M14x1.5	R	Opposite	Blank	Black	F	Free Running
	80		E	Shaft Ø1", Splined Tooth SAE 6B	S	7/8-14 O-Ring Manifold, 4-5/16-18UNC, 7/16-20UNF			Bl	Blue	0	No Case Drain
	100		W	Shaft Ø24.5, Splined B25x22	P	1/2-14 NPTF Manifold, 4-5/16-18UNC, 7/16-20UNF			S	Silver Grey		
	125		T	Cone-Shaft Ø28.56, Parallel Key B5x5x14	R	PT(Rc)1/2 Manifold, 4-M8, PT(Rc) 1/4						
	160											
	200											
250												
315												
400												

# OZ DIMENSIONS AND MOUNTING DATA



OZ



MODEL	H	L
OZ36	7 (0.276")	101 (3.976")
OZ50	7 (0.276")	101 (3.976")
OZ80	10.5 (0.413")	104.5 (4.114")
OZ100	13 (0.512")	107 (4.213")
OZ125	16 (0.63")	110 (4.331")
OZ160	21 (0.827")	115 (4.528")
OZ200	26 (1.024")	120 (4.724")
OZ250	32 (1.26")	126 (4.961")
OZ315	42 (1.654")	136 (5.354")
OZ400	52 (2.047")	146 (5.748")

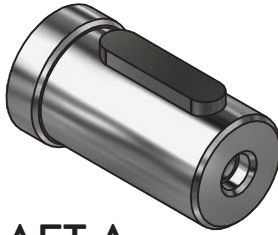
MOUNTING	CODE (Depth mm)				
	D	M	S	P	R
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)	PT (RC) 1/2 (15)
C	4x M8 (13)	4x M8 (13)	4x 5/16-18UNC (13)	4x 5/16-18UNC (13)	4x M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20 UNF (12)	7/16-20UNF (12)	PT (RC) 1/4 (9.7)

## OZ - DIRECTION OF SHAFT ROTATION : STANDARD

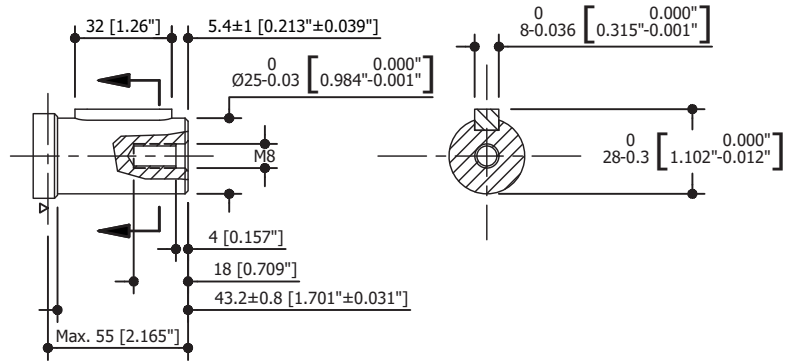
When facing shaft end of motor, shaft is rotating:

Clockwise when port "A" is pressurized.

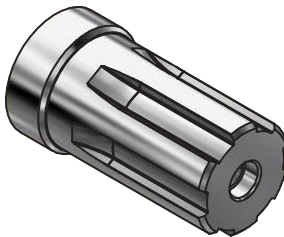
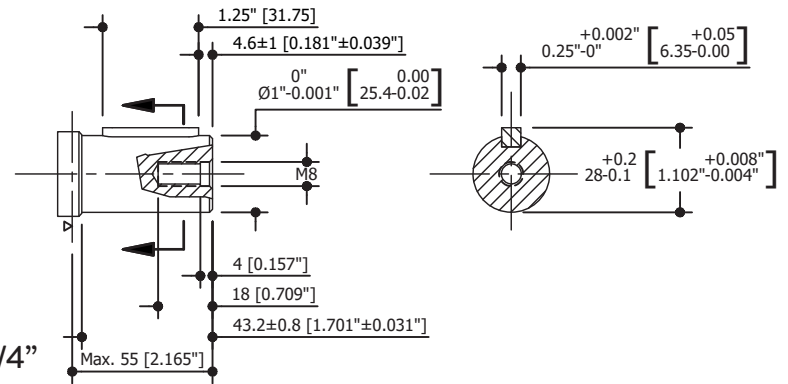
Counter-Clockwise when port "B" is pressurized.



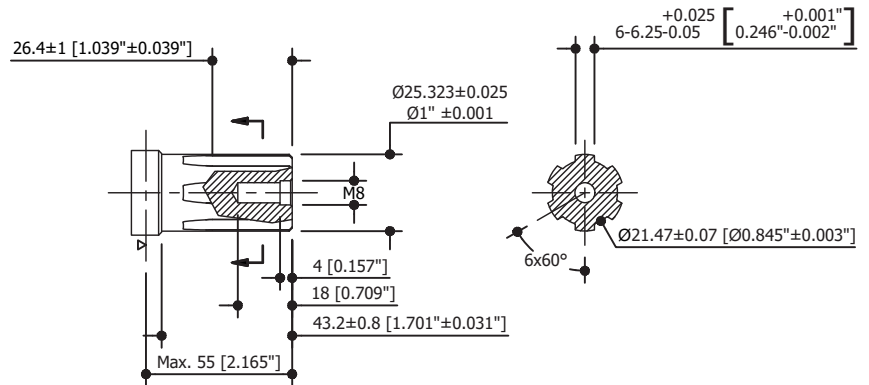
**SHAFT A**  
Cylindrical Shaft  $\text{\O}25$   
Parallel Key 8x7x32  
METRIC



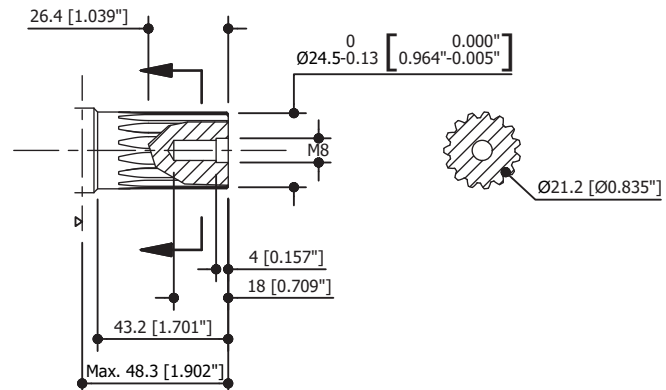
**SHAFT C**  
Cylindrical Shaft 1" - Parallel Key 1/4"x1/4"x1-1/4"  
IMPERIAL



**SHAFT E**  
Splined SAE 6B  
IMPERIAL



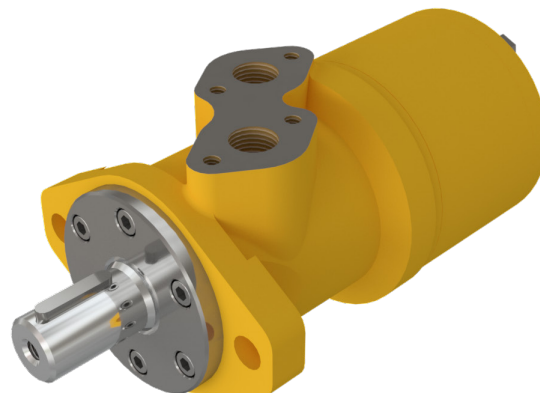
**SHAFT W**  
DIN 5482 B25 x 22h9  
4z1.6mx30Px9h



EBMR series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

## FEATURES

- Advanced manufacturing devices for the Gerotor gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
- Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.
- Special design in the driver-linker and prolong operating life
- Special design for distribution system can meet the requirement of low noise of unit.
- Compact volume and easy installation



EBMR - Flange 2

**EBMR**

## MAIN SPECIFICATIONS

### TECHNICAL DATA FOR EBMR WITH 25mm Shaft / 1in Shaft / 1in Splined and 28.56mm Tapered Shaft

		EBMR EBMRS 36	EBMR EBMRS 50	EBMR EBMRS 80	EBMR EBMRS 100	EBMR EBMRS 125	EBMR EBMRS 160	EBMR EBMRS 200	EBMR EBMRS 250	EBMR EBMRS 315	EBMR EBMRS 375
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	2.2 (36)	3.15 (51.7)	4.97 (81.5)	6.22 (102)	7.76 (127.2)	9.59 (157.2)	11.87 (194.5)	15.46 (253.3)	19.38 (317.5)	23.27 (381.4)
Max. Speed	Continuous (rpm)	1085	960	750	600	475	378	310	240	190	155
	Intermittent (rpm)	1220	1150	940	750	600	475	385	300	240	190
Max. Torque	Continuous lbf•ft (N•m)	53.1 (72)	73.8 (100)	143.9 (195)	177.1 (240)	221.4 (300)	265.7 (360)	265.7 (360)	287.8 (390)	287.8 (390)	269.4 (365)
	Intermittent lbf•ft (N•m)	61.3 (83)	93 (126)	162.4 (220)	206.6 (280)	250.9 (340)	317.3 (430)	324.7 (440)	361.6 (490)	394.8 (535)	365.3 (495)
	Peak lbf•ft (N•m)	77.5 (105)	121.8 (165)	199.3 (270)	236.2 (320)	273.1 (370)	339.5 (460)	413.3 (560)	472.3 (640)	479.7 (650)	501.8 (680)
Max. Output	Continuous hp (kW)	11.4 (8.5)	12.7 (9.5)	16.8 (12.5)	17.4 (13)	16.8 (12.5)	16.8 (12.5)	13.4 (10)	9.4 (7)	8 (6)	6.7 (5)
	Intermittent hp (kW)	13.1 (9.8)	15 (11.2)	20.1 (15)	20.1 (15)	19.4 (14.5)	18.8 (14)	17.4 (13)	12.7 (9.5)	12.1 (9)	10.7 (8)
Max. Pressure Drop	Continuous PSI (bar)	2031 (140)	2031 (140)	2538 (175)	2538 (175)	2538 (175)	2393 (165)	1885 (130)	1595 (110)	1305 (90)	1015 (70)
	Intermittent PSI (bar)	2393 (165)	2538 (175)	2901 (200)	2901 (200)	2901 (200)	2901 (200)	2538 (175)	2176 (150)	1885 (130)	1450 (100)
	Peak PSI (bar)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	2901 (200)	2538 (175)	2176 (150)
Max. Flow	Continuous GPM (L/min)	10.6 (40)	13.2 (50)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)
	Intermittent GPM (L/min)	11.9 (45)	15.9 (60)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
Weight	Lbs (kg)	14.3 (6.5)	14.7 (6.7)	15.2 (6.9)	15.4 (7)	16.1 (7.3)	16.7 (7.6)	17.6 (8)	18.7 (8.5)	19.8 (9)	20.9 (9.5)

\* Continuous pressure: Max. value of operating motor continuously.

\* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

\* Peak pressure: Max. value of operating motor in 0.6 second per minute.

## MAIN SPECIFICATIONS TECHNICAL DATA FOR EBMR WITH 31.75mm Shaft and 32mm Shaft

EBMR

		EBMR EBMRS 36	EBMR EBMRS 50	EBMR EBMRS 80	EBMR EBMRS 100	EBMR EBMRS 125	EBMR EBMRS 160	EBMR EBMRS 200	EBMR EBMRS 250	EBMR EBMRS 315	EBMR EBMRS 375
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	2.2 (36)	3.15 (51.7)	4.97 (81.5)	6.22 (102)	7.76 (127.2)	9.59 (157.2)	11.87 (194.5)	15.46 (253.3)	19.38 (317.5)	23.27 (381.4)
Max. Speed	Continuous (rpm)	1250	960	750	600	475	378	310	240	190	155
	Intermittent (rpm)	1520	1150	940	750	600	475	385	300	240	190
Max. Torque	Continuous lbf•ft (N•m)	53.1 (72)	73.8 (100)	143.9 (195)	177.1 (240)	221.4 (300)	280.4 (380)	332.1 (450)	398.5 (540)	405.9 (550)	428 (580)
	Intermittent lbf•ft (N•m)	617 (836)	93 (126)	162.4 (220)	206.6 (280)	250.9 (340)	317.3 (430)	369 (500)	450.2 (610)	509.2 (690)	509.2 (690)
	Peak lbf•ft (N•m)	77.5 (105)	121.8 (165)	199.3 (270)	236.2 (320)	273.1 (370)	339.5 (460)	413.3 (560)	524 (710)	619.9 (840)	612.5 (830)
Max. Output	Continuous hp (kW)	11.4 (8.5)	12.7 (9.5)	16.8 (12.5)	17.4 (13)	16.8 (12.5)	16.8 (12.5)	14.8 (11)	13.4 (10)	12.1 (9)	10.1 (7.5)
	Intermittent hp (kW)	13.1 (9.8)	15 (11.2)	20.1 (15)	20.1 (15)	19.4 (14.5)	18.8 (14)	17.4 (13)	16.1 (12)	13.4 (10)	12.1 (9)
Max. Pressure Drop	Continuous PSI (bar)	2031 (140)	2031 (140)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	1958 (135)	1668 (115)
	Intermittent PSI (bar)	2393 (165)	2538 (175)	2901 (200)	2901 (200)	2901 (200)	2901 (200)	2901 (200)	2901 (200)	2538 (175)	2176 (150)
	Peak PSI (bar)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3263 (225)	3046 (210)	2538 (175)
Max. Flow	Continuous GPM (L/min)	11.9 (45)	13.2 (50)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)
	Intermittent GPM (L/min)	14.6 (55)	15.9 (60)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
Weight	Lbs (kg)	14.3 (6.5)	14.7 (6.7)	15.2 (6.9)	15.4 (7)	16.1 (7.3)	16.7 (7.6)	17.6 (8)	18.7 (8.5)	19.8 (9)	20.9 (9.5)

- \* Continuous pressure: Max. value of operating motor continuously.
- \* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.
- \* Peak pressure: Max. value of operating motor in 0.6 second per minute.

### EBMR ORDER INFORMATION

2
3
4
5
6
7
8

EBMR

-

-

-

-

-

-

1	2	3	4	5	6	7	8						
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function						
Blank	36	2	2-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8	A	Shaft Ø25, Parallel Key 8x7x32	D	G1/2 Manifold Mount, 4-M8, G1/4	Blank	Standard	00	No Paint	Blank	Standard
	50	4	4-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8	C	Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"	M	M22x1.5 Manifold Mount, 4-M8, M14x1.5	R	Opposite	Blank	Black	N1	Big Radial Force
	80	H4	4-3/8-16 Square-Flange, Pilot Ø44.4 x 2.8	E	Shaft Ø1", Splined Tooth SAE 6B	S	7/8-14 O-Ring Manifold, 4-5/16-18UNC, 7/16-20UNF			BI	Blue	0	No Case Drain
	100	H5	4-M10 Square-Flange, Pilot Ø44.4 x 2.8	R	Short Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"	P	1/2-14 NPTF Manifold, 4-5/16-18UNC, 7/16-20UNF			S	Silver Grey	F	Free Running
	125			B	Shaft Ø32, Parallel Key 10 x 8 x 45	R	PT(Rc)1/2 Manifold, 4-M8, PT(Rc) 1/4					LS	Low Speed
	160			F	Shaft Ø1-1/4", Splined Tooth 14-DP12/24								
	200			FD	Long Shaft Ø1-1/4", Splined Tooth 14-DP12/24								
	250			G	Shaft Ø1-1/4", Parallel Key 5/16" x 5/16" x 1-1/4"								
	315			T	Cone-Shaft Ø28.56, Parallel Key B5x5x14								
375													

Note: The shafts of B \ F \ FD \ G \ T \ T3 are only suitable for flanges of 2 and 4.

## EBMRS ORDER INFORMATION

**2**      **3**      **4**      **5**      **6**      **7**      **8**  
**EBMRS**  -  -  -  -  -  -

1	2	3		4		5		6		7		8							
CODE	Displacement	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function							
Blank	36	H2	2-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8		K	Shaft Ø1" - Woodruff Key Ø1" x 1/4"		G	G1/2, G1/4		Blank	Standard		00	No Paint		Blank	Standard	
	50	H6	4-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8		S	Shaft Ø1" - Splined Tooth SAE 6B		S	7/8-14 O-Ring, 7/16-20UNF (G1/4)		R	Opposite		Blank	Black		N1	Big Radial Force	
	80	H4	4-3/8-16 Square-Flange, Pilot Ø44.4 x 2.8		A	Shaft Ø25 - Parrallel Key 8x7x32		P	1/2-14 FNPT, 7/16-20UNF (G1/4)		Blank	Blank		BI	Blue		0	No Case Drain	
	100	H5	4-M10 Square-Flange, Pilot Ø44.4 x 2.8		R	Short Shaft Ø1" - Parrallel Key 1/4" x 1/4" x 1-1/4"		T	3/4-16 O-Ring, 7/16-20UNF (G1/4)			S	Silver Grey		F	Free Running			
	125				H	Shaft Ø1" - Pin Hole Ø10.3		R	PT(Rc)1/2, PT(Rc)1/4					LS	Low Speed				
	160				H1	Shaft Ø1" - Pin Hole Ø8		B4	Ø10 O-Ring Manifold, 4x5/16-18UNC, 7/16-20UNF										
	200				D	Shaft Ø7/8" - Parrallel Key 1/4" x 1/4" x 1"		B5	Ø10 O-Ring Manifold, 4xM8, 7/16-20UNF										
	250				I	Shaft Ø7/8" - Splined Tooth 13-DP16/32		M1	M18x1.5, M10x1										
	315				T2	Cone Shaft Ø1" - Woodruff Key Ø1" x 1/4"		M2	M20x1.5, M10x1										
	375				P	Shaft Ø25 - Parrallel Key 8x7x28		M3	M22x1.5, M10x1										
				J	Shaft Ø25 - Parrallel Key 7x7x32														

### NOTES:

- When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

**EBMR**

## EBMR 36 - 2.20 in<sup>3</sup>/rev (36 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>									
		<b>Pressure PSI (bar)</b>									
		<b>290 (20)</b>	<b>435 (30)</b>	<b>725 (50)</b>	<b>1015 (70)</b>	<b>1305 (90)</b>	<b>1450 (100)</b>	<b>1813 (125)</b>	<b>2031 (140)</b>	<b>2393 (165)</b>	
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	7.4 (10)	11.8 (16)	18.5 (25)	27.3 (37)	33.9 (46)	36.9 (50)				
	Speed (rpm)	105	100	92	80	71	58				
<b>2.1 (8)</b>	Torque lbf•ft (N•m)	6.6 (9)	11.1 (15)	18.5 (25)	27.3 (37)	34.7 (47)	36.9 (50)	46.5 (63)	52.4 (71)	61.3 (83)	
	Speed (rpm)	208	200	188	175	158	149	134	120	108	
<b>4 (15)</b>	Torque lbf•ft (N•m)	5.9 (8)	10.3 (14)	17 (23)	26.6 (36)	33.2 (45)	37.6 (51)	47.2 (64)	53.1 (72)	60.5 (82)	
	Speed (rpm)	403	392	380	365	348	326	318	302	274	
<b>5.3 (20)</b>	Torque lbf•ft (N•m)	4.4 (6)	9.6 (13)	16.2 (22)	25.8 (35)	32.5 (44)	36.9 (50)	47.2 (64)	53.1 (72)	60.5 (82)	
	Speed (rpm)	540	531	518	500	483	462	450	435	412	
<b>7.9 (30)</b>	Torque lbf•ft (N•m)	4.4 (6)	8.9 (12)	15.5 (21)	23.6 (32)	31 (42)	34.7 (47)	46.5 (63)	51.7 (70)	59 (80)	
	Speed (rpm)	810	798	780	763	742	722	705	694	668	
<b>10.6 (40)</b>	Torque lbf•ft (N•m)	3.7 (5)	8.1 (11)	14 (19)	22.1 (30)	30.3 (41)	33.2 (45)	45 (61)	50.2 (68)	58.3 (79)	
	Speed (rpm)	1092	1080	1069	1056	1042	1028	1011	984	957	
<b>11.9 (45)</b>	Torque lbf•ft (N•m)	3 (4)	7.4 (10)	12.5 (17)	21.4 (29)	29.5 (40)	32.5 (44)	43.5 (59)	48.7 (66)	56.8 (77)	
	Speed (rpm)	1230	1215	1194	1170	1150	1128	1100	1070	1020	

## EBMR 50 - 3.15 in<sup>3</sup>/rev (51.7 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>									
		<b>Pressure PSI (bar)</b>									
		<b>725 (50)</b>	<b>1015 (70)</b>	<b>1305 (90)</b>	<b>1450 (100)</b>	<b>1740 (120)</b>	<b>2321 (160)</b>	<b>2538 (175)</b>	<b>2393 (165)</b>		
<b>1.3 (5)</b>	Torque lbf•ft (N•m)	25.8 (35)	33.2 (45)	45 (61)	49.4 (67)	56.8 (77)	64.9 (88)				
	Speed (rpm)	93	84	76	73	69	46				
<b>2.6 (10)</b>	Torque lbf•ft (N•m)	26.6 (36)	33.9 (46)	45.8 (62)	50.9 (69)	59 (80)	70.1 (95)	79.7 (108)	88.6 (120)		
	Speed (rpm)	186	178	166	162	153	136	118	97		
<b>4 (15)</b>	Torque lbf•ft (N•m)	25.8 (35)	36.2 (49)	46.5 (63)	53.9 (73)	64.9 (88)	73.8 (100)	80.4 (109)	90.8 (123)		
	Speed (rpm)	283	277	269	261	250	230	211	185		
<b>5.3 (20)</b>	Torque lbf•ft (N•m)	25.5 (34.5)	34.7 (47)	45 (61)	50.9 (69)	61.3 (83)	70.8 (96)	80.4 (109)	93 (126)		
	Speed (rpm)	377	375	365	361	346	330	302	270		
<b>7.9 (30)</b>	Torque lbf•ft (N•m)	24.4 (33)	32.5 (44)	44.3 (60)	49.4 (67)	59 (80)	70.1 (95)	79.7 (108)	93 (126)		
	Speed (rpm)	576	569	561	554	542	531	500	465		
<b>10.6 (40)</b>	Torque lbf•ft (N•m)	22.1 (30)	30.3 (41)	42.8 (58)	48.7 (66)	58.3 (79)	67.9 (92)	78.2 (106)	90 (122)		
	Speed (rpm)	760	758	753	750	738	724	700	670		
<b>11.9 (45)</b>	Torque lbf•ft (N•m)	21.8 (29.5)	29.5 (40)	42.1 (57)	48 (65)	57.6 (78)	66.4 (90)	77.5 (105)	89.3 (121)		
	Speed (rpm)	856	853	849	845	835	815	796	770		
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	19.2 (26)	27.3 (37)	39.1 (53)	44.3 (60)	53.9 (73)	62.7 (85)	73.1 (99)	84.1 (114)		
	Speed (rpm)	950	940	925	906	880	852	832	801		
<b>15.9 (60)</b>	Torque lbf•ft (N•m)	14.8 (20)	24.4 (33)	35.4 (48)	41.3 (56)	50.9 (69)	59.8 (81)	70.1 (95)	80.4 (109)		
	Speed (rpm)	1138	1124	1100	1075	1056	1028	1006	970		

# PERFORMANCE DATA



**EBMR**

## EBMR 80 - 4.97 in<sup>3</sup>/rev (81.5 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.		
Pressure PSI (bar)		725 (50)	1015 (70)	1305 (90)	1450 (100)	1740 (120)	2031 (140)	2321 (160)	2538 (175)	2901 (200)	
Flow GPM (L/min)	1.3 (5)	Torque lbf•ft (N•m)	36.9 (50)	47.2 (64)	64.9 (88)	79.7 (108)	98.2 (133)				
		Speed (rpm)	59	56	50	44	38				
	2.6 (10)	Torque lbf•ft (N•m)	39.9 (54)	56.8 (77)	73.1 (99)	79.7 (108)	95.2 (129)	110.7 (150)	73.8 (100)		
		Speed (rpm)	118	113	106	97	86	79	56		
	5.3 (20)	Torque lbf•ft (N•m)	42.1 (57)	57.6 (78)	75.3 (102)	81.9 (111)	98.9 (134)	114.4 (155)	130.6 (177)	144.6 (196)	166.1 (225)
		Speed (rpm)	238	234	227	216	203	190	178	154	135
	7.9 (30)	Torque lbf•ft (N•m)	39.9 (54)	55.4 (75)	73.8 (100)	79.7 (108)	96.7 (131)	112.2 (152)	129.9 (176)	143.9 (195)	164.6 (223)
		Speed (rpm)	360	352	340	332	316	302	290	274	250
	10.6 (40)	Torque lbf•ft (N•m)	35.4 (48)	53.9 (73)	70.8 (96)	77.5 (105)	93.7 (127)	109.2 (148)	126.9 (172)	140.2 (190)	162.4 (220)
		Speed (rpm)	480	470	458	445	430	418	403	388	359
	13.2 (50)	Torque lbf•ft (N•m)	31 (42)	51.7 (70)	68.6 (93)	75.3 (102)	91.5 (124)	108.5 (147)	125.5 (170)	138.7 (188)	160.9 (218)
		Speed (rpm)	604	595	582	570	556	540	521	504	487
	15.9 (60)	Torque lbf•ft (N•m)	27.3 (37)	48.7 (66)	65.7 (89)	72.3 (98)	89.3 (121)	106.3 (144)	122.5 (166)	135.8 (184)	157.2 (213)
		Speed (rpm)	726	715	704	692	678	663	647	622	594
	18.5 (70)	Torque lbf•ft (N•m)	23.6 (32)	44.3 (60)	61.3 (83)	70.1 (95)	85.6 (116)	103.3 (140)	118.1 (160)	130.6 (177)	153.5 (208)
		Speed (rpm)	845	834	820	802	789	767	754	730	705
	19.8 (75)	Torque lbf•ft (N•m)	15.5 (21)	36.9 (50)	57.6 (78)	66.4 (90)	81.9 (111)	99.6 (135)	113.7 (154)	126.2 (171)	147.6 (200)
		Speed (rpm)	910	895	881	867	852	830	806	787	756

## EBMR 100 - 6.22 in<sup>3</sup>/rev (102 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.		
Pressure PSI (bar)		725 (50)	1015 (70)	1305 (90)	1450 (100)	1740 (120)	2031 (140)	2321 (160)	2538 (175)	2901 (200)	
Flow GPM (L/min)	1.3 (5)	Torque lbf•ft (N•m)	48.7 (66)	67.9 (92)	88.6 (120)	99.6 (135)	115.1 (156)				
		Speed (rpm)	45	42	38	34	27				
	2.6 (10)	Torque lbf•ft (N•m)	50.2 (68)	70.8 (96)	92.3 (125)	101.8 (138)	117.3 (159)	138.7 (188)	156.5 (212)		
		Speed (rpm)	93	90	86	81	74	57	42		
	5.3 (20)	Torque lbf•ft (N•m)	48 (65)	69.4 (94)	90.8 (123)	101.1 (137)	114.4 (155)	137.3 (186)	155 (210)	175.6 (238)	202.2 (274)
		Speed (rpm)	189	185	180	173	165	158	150	139	118
	7.9 (30)	Torque lbf•ft (N•m)	46.5 (63)	67.9 (92)	88.6 (120)	98.2 (133)	112.9 (153)	136.5 (185)	154.2 (209)	173.4 (235)	199.3 (270)
		Speed (rpm)	286	281	275	266	257	246	237	225	207
	10.6 (40)	Torque lbf•ft (N•m)	42.1 (57)	64.9 (88)	86.3 (117)	95.9 (130)	112.2 (152)	136.5 (185)	153.5 (208)	172 (233)	197 (267)
		Speed (rpm)	385	378	365	355	345	332	320	314	297
	13.2 (50)	Torque lbf•ft (N•m)	35.4 (48)	58.3 (79)	81.2 (110)	90.8 (123)	110.7 (150)	135.1 (183)	150.6 (204)	168.3 (228)	191.9 (260)
		Speed (rpm)	482	477	470	460	448	435	420	405	389
	15.9 (60)	Torque lbf•ft (N•m)	28 (38)	51.7 (70)	77.5 (105)	88.6 (120)	106.3 (144)	131.4 (178)	147.6 (200)	162.4 (220)	186 (252)
		Speed (rpm)	580	572	560	548	535	523	510	500	478
	18.5 (70)	Torque lbf•ft (N•m)	23.6 (32)	48 (65)	73.8 (100)	87.1 (118)	104.1 (141)	129.9 (176)	145.4 (197)	158.7 (215)	181.5 (246)
		Speed (rpm)	678	670	660	648	638	626	615	606	580
	19.8 (75)	Torque lbf•ft (N•m)	17 (23)	43.5 (59)	68.6 (93)	81.9 (111)	100.4 (136)	125.5 (170)	141.7 (192)	155 (210)	177.1 (240)
		Speed (rpm)	728	720	710	695	681	667	650	634	618

**EBMR 125 - 7.76 in<sup>3</sup>/rev (127.2 cm<sup>3</sup>/rev)**

							<i>Max. Cont</i>		<i>Max. Int.</i>				
		<b>Pressure PSI (bar)</b>		<b>725 (50)</b>	<b>1015 (70)</b>	<b>1305 (90)</b>	<b>1450 (100)</b>	<b>1740 (120)</b>	<b>2031 (140)</b>	<b>2321 (160)</b>	<b>2538 (175)</b>	<b>2901 (200)</b>	
<b>Flow GPM (L/min)</b>	<b>1.3 (5)</b>	Torque lbf•ft (N•m)	56.1 (76)	81.2 (110)	107 (145)	123.2 (167)	139.5 (189)						
		Speed (rpm)	36	31	25	19	13						
	<b>2.6 (10)</b>	Torque lbf•ft (N•m)	62 (84)	87.1 (118)	114.4 (155)	129.9 (176)	149.1 (202)	168.3 (228)	186.7 (253)				
		Speed (rpm)	73	70	60	48	36	25	19				
	<b>5.3 (20)</b>	Torque lbf•ft (N•m)	60.5 (82)	86.3 (117)	112.9 (153)	128.4 (174)	147.6 (200)	169.7 (230)	191.1 (259)	217 (294)	245 (332)		
		Speed (rpm)	153	151	148	144	138	128	117	104	73		
	<b>7.9 (30)</b>	Torque lbf•ft (N•m)	58.3 (79)	85.6 (116)	111.4 (151)	126.2 (171)	146.1 (198)	168.3 (228)	189.7 (257)	215.5 (292)	242.8 (329)		
		Speed (rpm)	231	228	224	218	210	201	183	168	137		
	<b>10.6 (40)</b>	Torque lbf•ft (N•m)	53.1 (72)	84.1 (114)	109.2 (148)	124 (168)	144.6 (196)	166.8 (226)	188.9 (256)	214 (290)	241.3 (327)		
		Speed (rpm)	309	307	303	298	292	280	270	252	218		
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	45.8 (62)	77.5 (105)	105.5 (143)	121.8 (165)	143.9 (195)	164.6 (223)	187.5 (254)	211.8 (287)	238.4 (323)			
	Speed (rpm)	389	386	382	378	370	360	344	328	292			
<b>15.9 (60)</b>	Torque lbf•ft (N•m)	38.4 (52)	72.3 (98)	100.4 (136)	118.1 (160)	141 (191)	162.4 (220)	184.5 (250)	208.1 (282)	235.4 (319)			
	Speed (rpm)	467	463	459	456	448	427	410	399	352			
<b>18.5 (70)</b>	Torque lbf•ft (N•m)	30.3 (41)	66.4 (90)	95.9 (130)	115.1 (156)	138 (187)	158.7 (215)	178.6 (242)	205.2 (278)	231 (313)			
	Speed (rpm)	545	542	538	534	529	520	508	486	430			
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	23.6 (32)	58.3 (79)	93 (126)	109.2 (148)	132.8 (180)	153.5 (208)	172.7 (234)	193.4 (262)	221.4 (300)			
	Speed (rpm)	586	583	578	570	560	546	532	520	480			

**EBMR 160 - 9.59 in<sup>3</sup>/rev (157.2 cm<sup>3</sup>/rev)**

							<i>Max. Cont</i>		<i>Max. Int.</i>				
		<b>Pressure PSI (bar)</b>		<b>725 (50)</b>	<b>1015 (70)</b>	<b>1305 (90)</b>	<b>1450 (100)</b>	<b>1740 (120)</b>	<b>2031 (140)</b>	<b>2321 (160)</b>	<b>2538 (175)</b>	<b>2901 (200)</b>	
<b>Flow GPM (L/min)</b>	<b>1.3 (5)</b>	Torque lbf•ft (N•m)	76.8 (104)	107.7 (146)	140.2 (190)	155 (210)	180.8 (245)						
		Speed (rpm)	26	23	20	16	10						
	<b>2.6 (10)</b>	Torque lbf•ft (N•m)	79 (107)	110.7 (150)	143.9 (195)	159.4 (216)	184.5 (250)	214 (290)	247.2 (335)				
		Speed (rpm)	59	56	50	45	37	30	22				
	<b>5.3 (20)</b>	Torque lbf•ft (N•m)	75.3 (102)	111.4 (151)	146.1 (198)	162.4 (220)	189.7 (257)	219.9 (298)	252.4 (342)	273.1 (370)	310 (420)		
		Speed (rpm)	121	118	115	113	108	102	97	90	78		
	<b>7.9 (30)</b>	Torque lbf•ft (N•m)	71.6 (97)	107.7 (146)	140.2 (190)	160.1 (217)	188.9 (256)	217.7 (295)	250.9 (340)	271.6 (368)	307 (416)		
		Speed (rpm)	184	178	173	170	164	155	143	128	103		
	<b>10.6 (40)</b>	Torque lbf•ft (N•m)	65.7 (89)	103.3 (140)	136.5 (185)	155 (210)	186 (252)	214 (290)	247.2 (335)	267.9 (363)	304.1 (412)		
		Speed (rpm)	246	241	235	228	220	210	194	177	150		
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	53.1 (72)	94.5 (128)	132.1 (179)	149.1 (202)	180.1 (244)	209.6 (284)	241.3 (327)	264.2 (358)	301.8 (409)			
	Speed (rpm)	310	307	300	295	287	278	262	247	210			
<b>15.9 (60)</b>	Torque lbf•ft (N•m)	44.3 (60)	85.6 (116)	125.5 (170)	146.1 (198)	177.1 (240)	205.9 (279)	236.9 (321)	259.8 (352)	295.2 (400)			
	Speed (rpm)	374	367	359	354	346	338	323	306	265			
<b>18.5 (70)</b>	Torque lbf•ft (N•m)	36.2 (49)	79 (107)	121 (164)	142.4 (193)	172 (233)	200 (271)	228 (309)	253.9 (344)	287.8 (390)			
	Speed (rpm)	437	430	421	415	403	393	381	365	318			
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	26.6 (36)	72.3 (98)	112.2 (152)	136.5 (185)	166.8 (226)	195.6 (265)	221.4 (300)	246.5 (334)	279.7 (379)			
	Speed (rpm)	472	463	450	441	431	420	405	389	365			

# PERFORMANCE DATA



**EBMR**

## EBMR 200 - 11.87 in<sup>3</sup>/rev (194.5 cm<sup>3</sup>/rev)

		Max. Cont						Max. Int.		
Pressure PSI (bar)		725 (50)	1015 (70)	1305 (90)	1450 (100)	1740 (120)	2031 (140)	2321 (160)	2538 (175)	2901 (200)
<b>1.3 (5)</b>	Torque lbf•ft (N•m)	97.4 (132)	133.6 (181)	175.6 (238)	193.4 (262)	228.8 (310)				
	Speed (rpm)	24	22	18	13	10				
<b>2.6 (10)</b>	Torque lbf•ft (N•m)	99.6 (135)	137.3 (186)	177.1 (240)	194.8 (264)	232.5 (315)	262.7 (356)	297.4 (403)		
	Speed (rpm)	49	47	45	43	38	33	24		
<b>5.3 (20)</b>	Torque lbf•ft (N•m)	96.7 (131)	135.1 (183)	175.6 (238)	191.9 (260)	231.7 (314)	264.2 (358)	298.2 (404)	323.2 (438)	367.5 (498)
	Speed (rpm)	99	97	94	92	88	83	74	64	56
<b>7.9 (30)</b>	Torque lbf•ft (N•m)	93 (126)	131.4 (178)	172 (233)	187.5 (254)	229.5 (311)	262 (355)	296.7 (402)	318.1 (431)	358.7 (486)
	Speed (rpm)	149	147	144	141	135	126	113	105	91
<b>10.6 (40)</b>	Torque lbf•ft (N•m)	82.7 (112)	124.7 (169)	168.3 (228)	184.5 (250)	226.6 (307)	259.8 (352)	295.2 (400)	314.4 (426)	352 (477)
	Speed (rpm)	200	197	194	191	185	174	160	151	127
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	70.1 (95)	115.1 (156)	163.1 (221)	181.5 (246)	221.4 (300)	258.3 (350)	293.7 (398)	310.7 (421)	346.9 (470)
	Speed (rpm)	252	249	246	243	238	228	212	194	161
<b>15.9 (60)</b>	Torque lbf•ft (N•m)	57.6 (78)	107 (145)	157.2 (213)	175.6 (238)	213.3 (289)	252.4 (342)	287.1 (389)	304.1 (412)	338.7 (459)
	Speed (rpm)	304	301	298	294	286	276	262	243	218
<b>18.5 (70)</b>	Torque lbf•ft (N•m)	49.4 (67)	99.6 (135)	152 (206)	168.3 (228)	204.4 (277)	248 (336)	276.8 (375)	301.1 (408)	334.3 (453)
	Speed (rpm)	355	353	349	340	329	316	300	288	257
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	42.8 (58)	92.3 (125)	145.4 (197)	162.4 (220)	199.3 (270)	236.9 (321)	265.7 (360)	293.7 (398)	326.2 (442)
	Speed (rpm)	382	379	373	362	350	337	322	312	278

## EBMR 250 - 15.47 in<sup>3</sup>/rev (253.5 cm<sup>3</sup>/rev)

		Max. Cont						Max. Int.		
Pressure PSI (bar)		725 (50)	1015 (70)	1305 (90)	1450 (100)	1740 (120)	2031 (140)	2321 (160)	2538 (175)	2901 (200)
<b>1.3 (5)</b>	Torque lbf•ft (N•m)	129.2 (175)	179.3 (243)	224.4 (304)	252.4 (342)	300.4 (407)				
	Speed (rpm)	17	16	14	121	10				
<b>2.6 (10)</b>	Torque lbf•ft (N•m)	131.4 (178)	181.5 (246)	228.8 (310)	253.9 (344)	301.8 (409)	343.2 (465)	387.5 (525)		
	Speed (rpm)	37	35	31	28	23	18	11		
<b>5.3 (20)</b>	Torque lbf•ft (N•m)	129.2 (175)	180.1 (244)	227.3 (308)	250.9 (340)	301.1 (408)	341.7 (463)	383.8 (520)	411.8 (558)	469.4 (636)
	Speed (rpm)	75	73	72	70	66	58	53	50	42
<b>7.9 (30)</b>	Torque lbf•ft (N•m)	119.6 (162)	173.4 (235)	224.4 (304)	245 (332)	295.2 (400)	335.8 (455)	380.8 (516)	405.9 (550)	458.3 (621)
	Speed (rpm)	114	111	108	106	100	92	83	77	65
<b>10.6 (40)</b>	Torque lbf•ft (N•m)	105.5 (143)	164.6 (223)	221.4 (300)	242.8 (329)	292.2 (396)	329.9 (447)	377.9 (512)	402.9 (546)	455.3 (617)
	Speed (rpm)	154	152	150	147	143	132	120	110	90
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	91.5 (124)	153.5 (208)	213.3 (289)	238.4 (323)	283.4 (384)	324.7 (440)	371.2 (503)	394.8 (535)	442.8 (600)
	Speed (rpm)	193	190	187	174	168	160	149	140	116
<b>15.9 (60)</b>	Torque lbf•ft (N•m)	76 (103)	141.7 (192)	206.6 (280)	231.7 (314)	273.8 (371)	314.4 (426)	360.9 (489)	379.3 (514)	426.6 (578)
	Speed (rpm)	233	230	227	224	218	205	190	181	155
<b>18.5 (70)</b>	Torque lbf•ft (N•m)	64.9 (88)	131.4 (178)	194.8 (264)	222.1 (301)	262.7 (356)	308.5 (418)	353.5 (479)	367.5 (498)	413.3 (560)
	Speed (rpm)	273	270	267	263	252	242	226	209	173
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	45.8 (62)	121.8 (165)	188.9 (256)	212.5 (288)	256.1 (347)	304.1 (412)	349.8 (474)	358.7 (486)	400 (542)
	Speed (rpm)	294	291	287	283	274	263	249	236	211

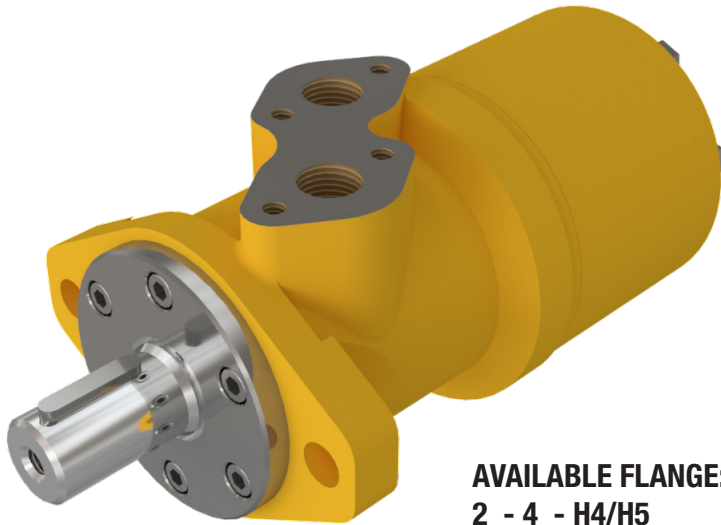
## EBMR 315 - 19.38 in<sup>3</sup>/rev (317.5 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.	
		725 (50)	1015 (70)	1305 (90)	1450 (100)	1740 (120)	2031 (140)	2321 (160)	2538 (175)	
Flow GPM (L/min)	Pressure PSI (bar)									
	1.3 (5)	Torque lbf•ft (N•m)	158.7 (215)	222.9 (302)						
Speed (rpm)		13	11							
2.6 (10)	Torque lbf•ft (N•m)	160.9 (218)	225.1 (305)	282.7 (383)	311.4 (422)	360.1 (488)	406.6 (551)	459 (622)		
	Speed (rpm)	28	27	25	24	21	18	13		
5.3 (20)	Torque lbf•ft (N•m)	158.7 (215)	223.6 (303)	280.4 (380)	308.5 (418)	357.9 (485)	405.2 (549)	457.6 (620)	487.1 (660)	
	Speed (rpm)	60	59	57	55	52	49	45	42	
7.9 (30)	Torque lbf•ft (N•m)	150.6 (204)	218.4 (296)	276.8 (375)	304.8 (413)	354.2 (480)	400 (542)	452.4 (613)	482.7 (654)	
	Speed (rpm)	91	89	86	84	81	78	72	67	
10.6 (40)	Torque lbf•ft (N•m)	144.6 (196)	211.8 (287)	271.6 (368)	302.6 (410)	352 (477)	397.8 (539)	449.4 (609)	479.7 (650)	
	Speed (rpm)	122	120	117	112	106	100	94	85	
13.2 (50)	Torque lbf•ft (N•m)	129.9 (176)	199.3 (270)	262.7 (356)	290 (393)	340.2 (461)	388.2 (526)	440.6 (597)	476 (645)	
	Speed (rpm)	154	151	147	140	131	120	109	100	
15.9 (60)	Torque lbf•ft (N•m)	119.6 (162)	181.5 (246)	250.2 (339)	276 (374)	329.1 (446)	377.1 (511)	432.5 (586)	463.5 (628)	
	Speed (rpm)	185	182	177	172	163	152	140	134	
18.5 (70)	Torque lbf•ft (N•m)	105.5 (143)	173.4 (235)	239.1 (324)	264.2 (358)	317.3 (430)	363.8 (493)	414.8 (562)	453.1 (614)	
	Speed (rpm)	217	213	208	201	190	178	166	158	
19.8 (75)	Torque lbf•ft (N•m)	92.3 (125)	156.5 (212)	223.6 (303)	250.2 (339)	307.7 (417)	355 (481)	400.7 (543)	429.5 (582)	
	Speed (rpm)	232	228	222	216	208	200	183	171	

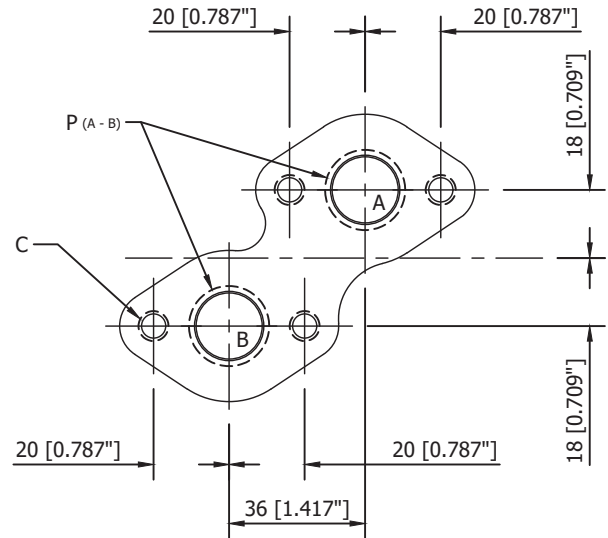
## EBMR 375 - 23.27 in<sup>3</sup>/rev (381.4 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.	
		435 (30)	653 (45)	798 (55)	943 (65)	1160 (80)	1450 (100)	1813 (125)	2031 (140)	
Flow GPM (L/min)	Pressure PSI (bar)									
	1.3 (5)	Torque lbf•ft (N•m)	112.9 (153)	171.2 (232)						
Speed (rpm)		12	10							
2.6 (10)	Torque lbf•ft (N•m)	115.9 (157)	174.2 (236)	209.6 (284)	248.7 (337)	299.6 (406)	366.8 (497)	451.7 (612)	493 (668)	
	Speed (rpm)	24	23	22	21	19	17	15	32	
5.3 (20)	Torque lbf•ft (N•m)	110.7 (150)	171.2 (232)	206.6 (280)	245 (332)	295.9 (401)	361.6 (490)	447.2 (606)	487.1 (660)	
	Speed (rpm)	49	48	47	46	44	41	38	32	
7.9 (30)	Torque lbf•ft (N•m)	104.8 (142)	158.7 (215)	202.2 (274)	241.3 (327)	293.7 (398)	356.5 (483)	445 (603)	481.2 (652)	
	Speed (rpm)	76	75	74	73	71	67	63	50	
10.6 (40)	Torque lbf•ft (N•m)	93 (126)	1568.3 (2125)	197.8 (268)	236.2 (320)	290 (393)	352 (477)	437.6 (593)	468.6 (635)	
	Speed (rpm)	103	101	99	97	95	92	88	70	
13.2 (50)	Torque lbf•ft (N•m)	77.5 (105)	138 (187)	178.6 (242)	222.9 (302)	277.5 (376)	335.8 (455)	430.3 (583)	448.7 (608)	
	Speed (rpm)	128	126	124	121	118	115	111	96	
15.9 (60)	Torque lbf•ft (N•m)	66.4 (90)	123.2 (167)	169 (229)	207.4 (281)	267.2 (362)	327.7 (444)	417.7 (566)	442.8 (600)	
	Speed (rpm)	154	152	150	148	145	138	130	121	
18.5 (70)	Torque lbf•ft (N•m)	66.4 (90)	110 (149)	147.6 (200)	190.4 (258)	251.7 (341)	313.7 (425)	402.9 (546)	428 (580)	
	Speed (rpm)	180	179	178	176	173	168	160	148	
19.8 (75)	Torque lbf•ft (N•m)	41.3 (56)	92.3 (125)	134.3 (182)	177.9 (241)	236.2 (320)	301.1 (408)	386.7 (524)	417 (565)	
	Speed (rpm)	195	194	193	191	189	185	178	170	

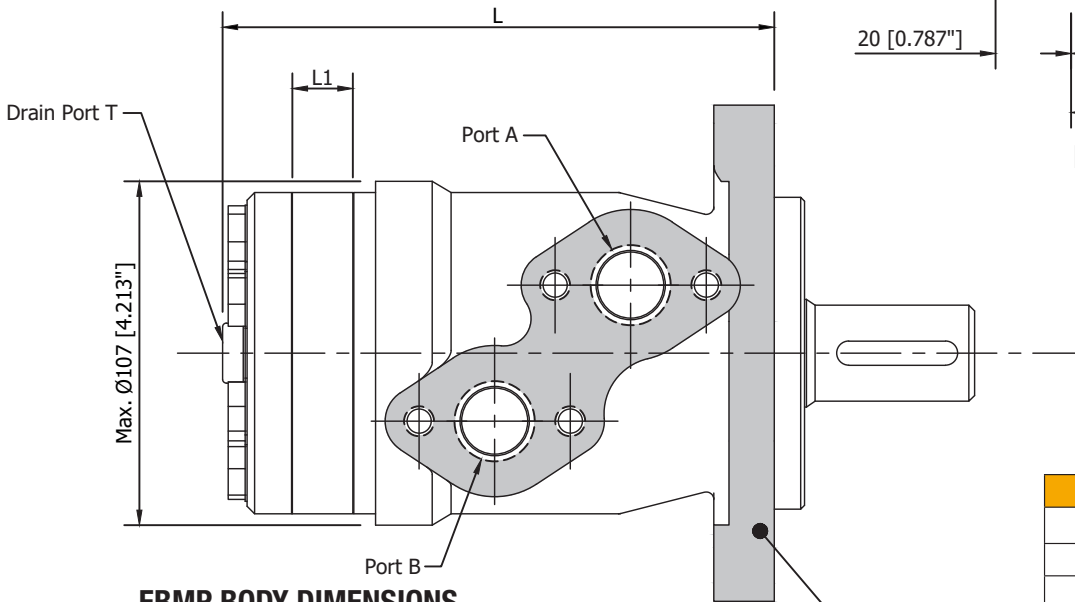
# EBMR DIMENSIONS AND MOUNTING



**AVAILABLE FLANGE:  
2 - 4 - H4/H5**



**PORTS DETAIL**



**EBMP BODY DIMENSIONS**

See FLANGE OPTIONS

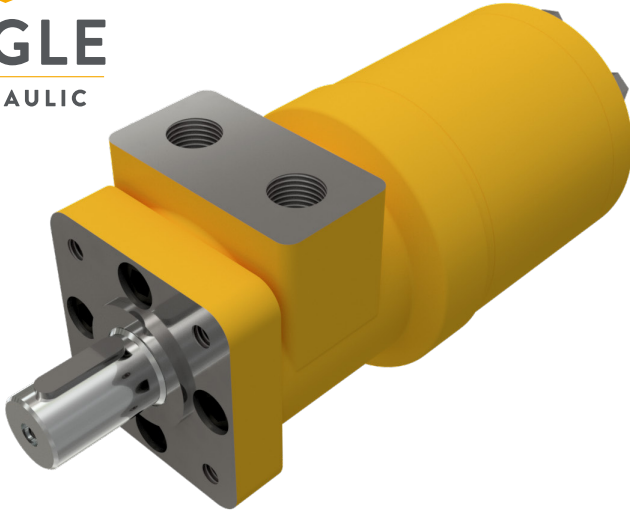
MODEL	L	L1
EBMR36	137 (5.394")	7 (0.276")
EBMR50	140 (5.512")	10 (0.394")
EBMR80	146 (5.748")	16 (0.63")
EBMR100	150 (5.906")	20 (0.787")
EBMR125	155 (6.102")	25 (0.984")
EBMR160	161.5 (6.358")	30.5 (1.201")
EBMR200	170 (6.693")	38.1 (1.5")
EBMR250	180 (7.087")	50 (1.969")
EBMR315	192 (7.559")	62 (2.441")
EBMR375	204 (8.031")	74 (2.913")

MOUNTING	CODE (Depth mm)				
	D	M	S	P	R
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)	PT (RC) 1/2 (15)
C	4x M8 (13)	4x M8 (13)	4x 5/16-18UNC (13)	4x 5/16-18UNC (13)	4x M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20 UNF (12)	7/16-20UNF (12)	PT (RC) 1/4 (9.7)

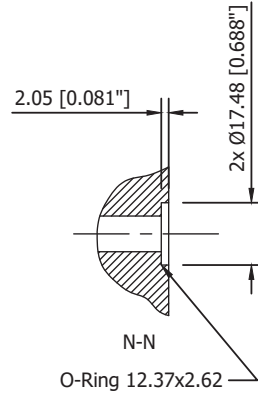
**EBMR**

# EBMRS DIMENSIONS AND MOUNTING

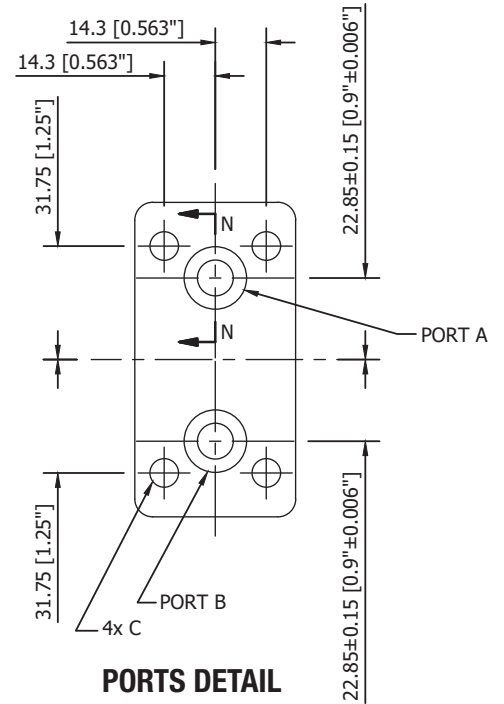
**EBMR**



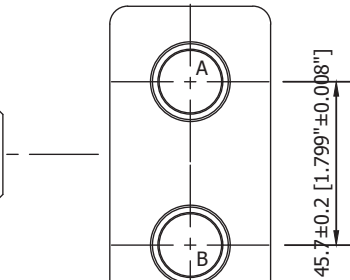
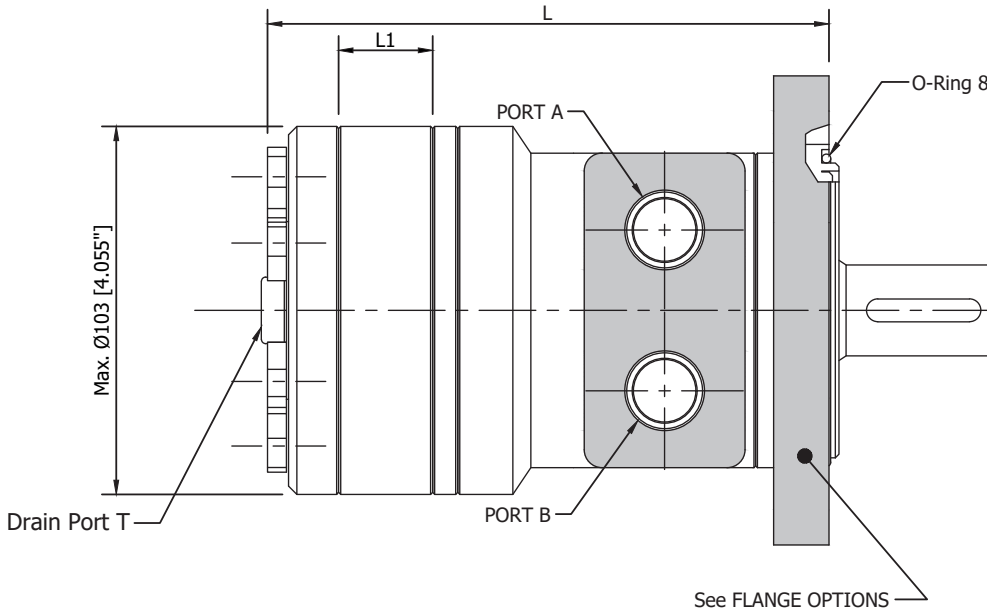
MODEL	L	L1
EBMRS36	143 (5.63")	7 (0.276")
EBMRS50	146 (5.748")	10 (0.394")
EBMRS80	152 (5.984")	16 (0.63")
EBMRS100	156 (6.142")	20 (0.787")
EBMRS125	161 (6.339")	25 (0.984")
EBMRS160	166.5 (6.555")	30.5 (1.201")
EBMRS200	174 (6.85")	38.1 (1.5")
EBMRS250	186 (7.323")	50 (1.969")
EBMRS315	198 (7.795")	62 (2.441")
EBMRS375	210 (8.268")	74 (2.913")



**AVAILABLE FLANGE:  
H2 - H6 - H4/H5**



**PORTS DETAIL  
(B4, B5)**

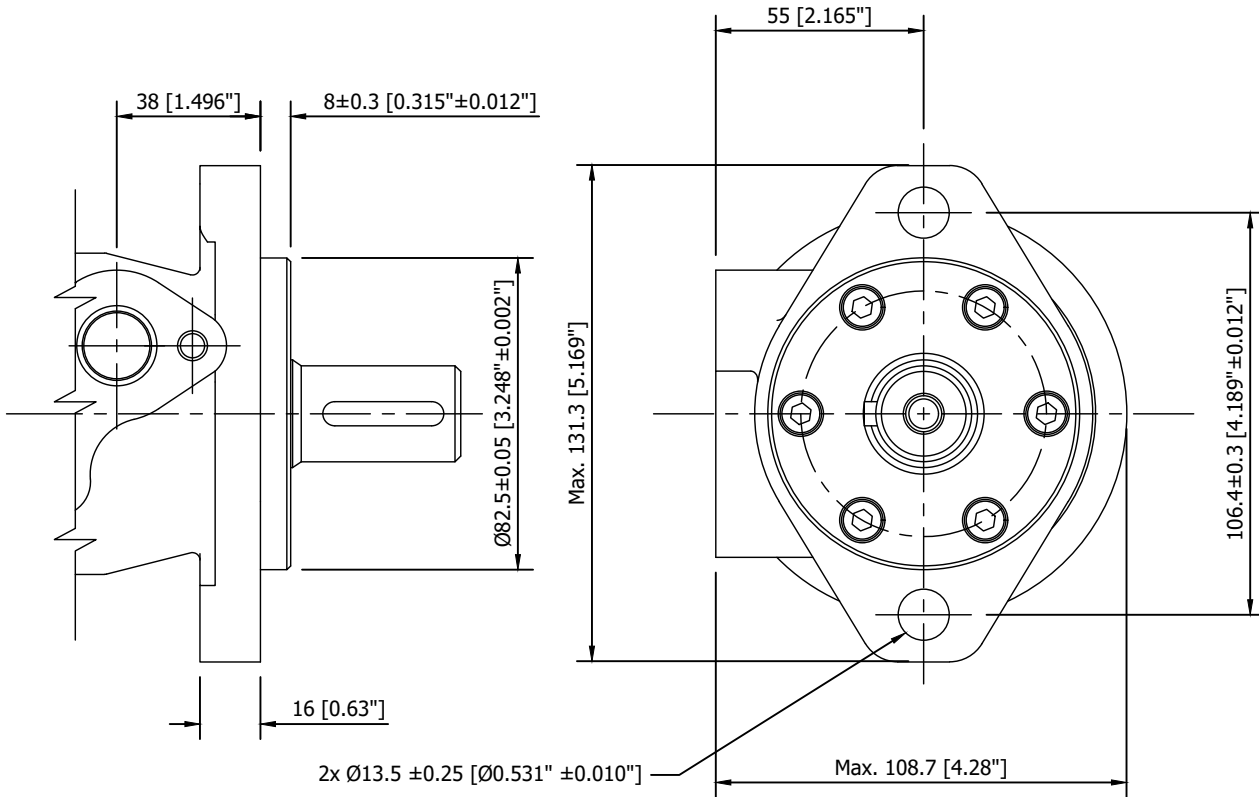


**PORTS DETAIL  
(G, S, P, R, M1, M2, M3)**

MOUNTING	CODE (Depth mm)								
	G	S	P	R	M1	M2	M3	B4	B5
P (A, B)	G 1/2 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)	PT(RC) 1/2 (15)	M18 x 1.5 (15)	M20 x 1.5 (15)	M22 x 1.5 (15)	Ø10	Ø10
T	G1/4 (12)	7/16-20 UNF (12)	7/16-20 UNF (12)	PT(RC) 1/4 (9.7)	M10 x 1 (12)	M10 x 1 (12)	M10 x 1 (12)	7/16-20 UNF (12)	G1/4 (12)
C	-	-	-	-	-	-	-	4-5/16-18UNC(13)	4-M8 (13)

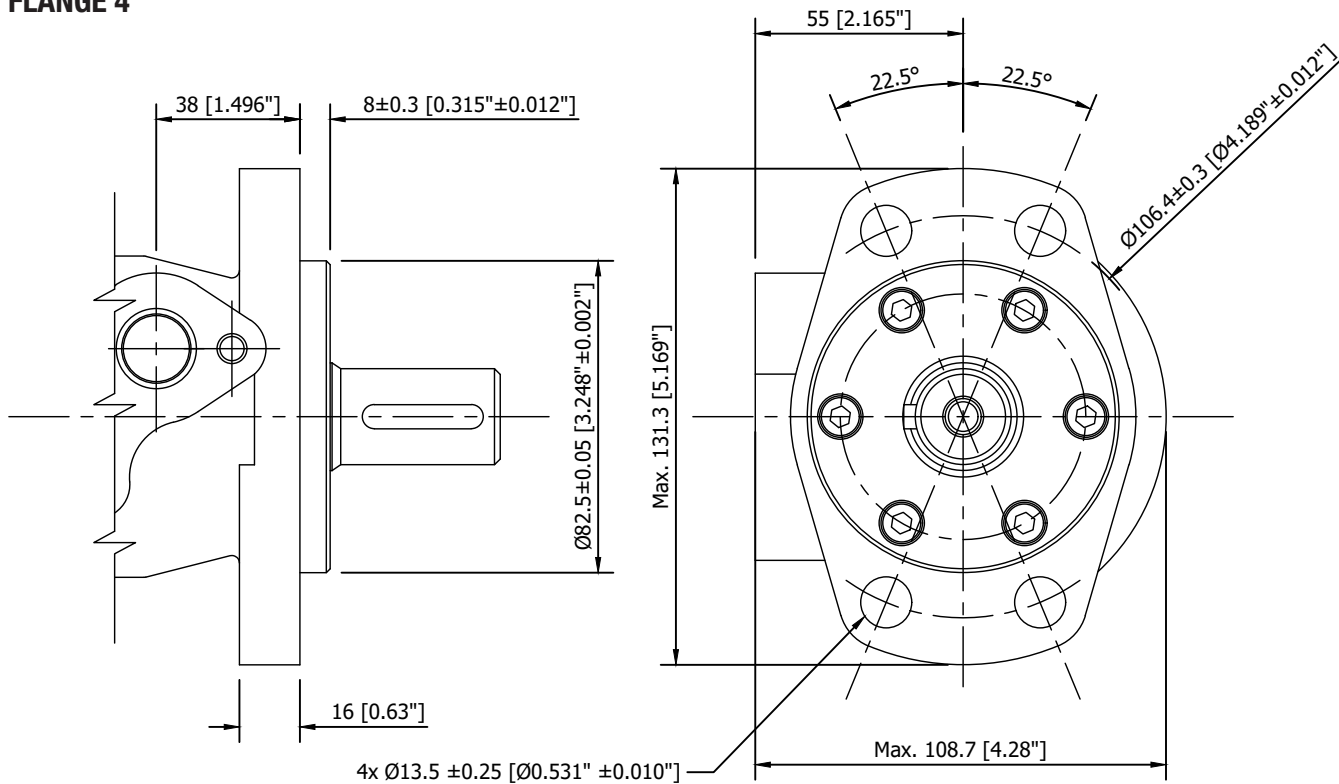
# EBMR/S FLANGE OPTIONS

## FLANGE 2



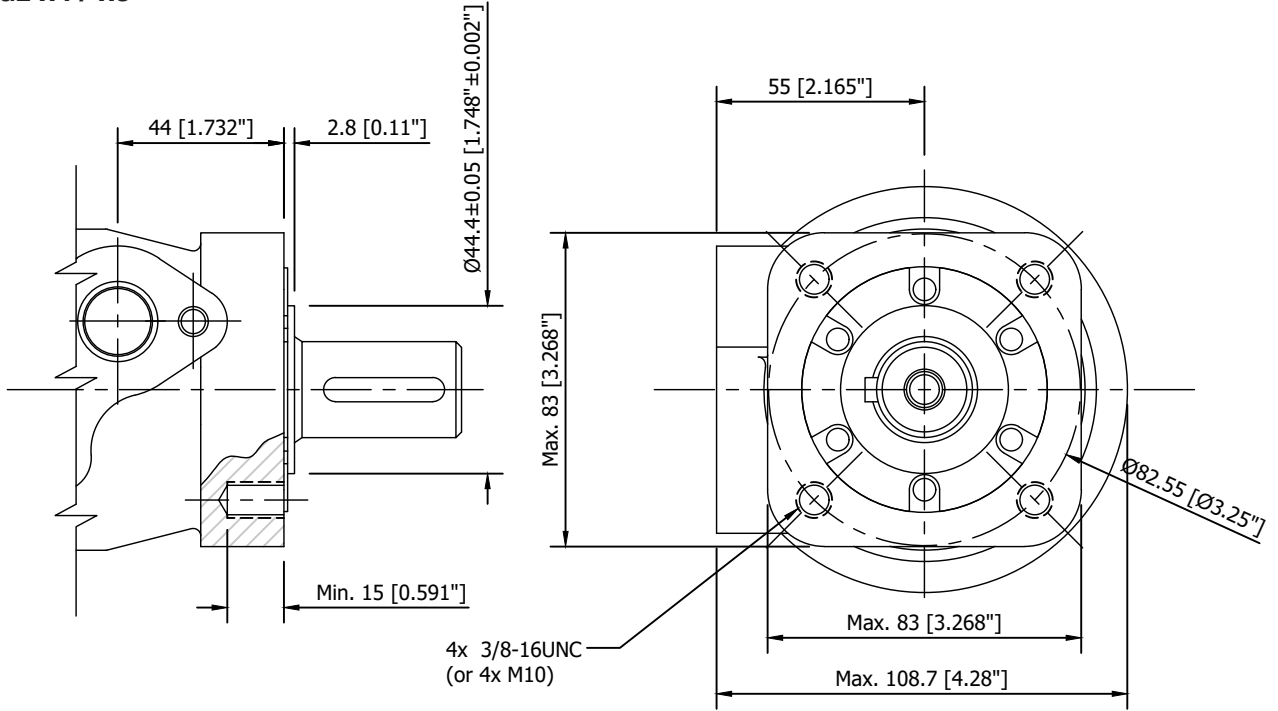
EBMR

## FLANGE 4

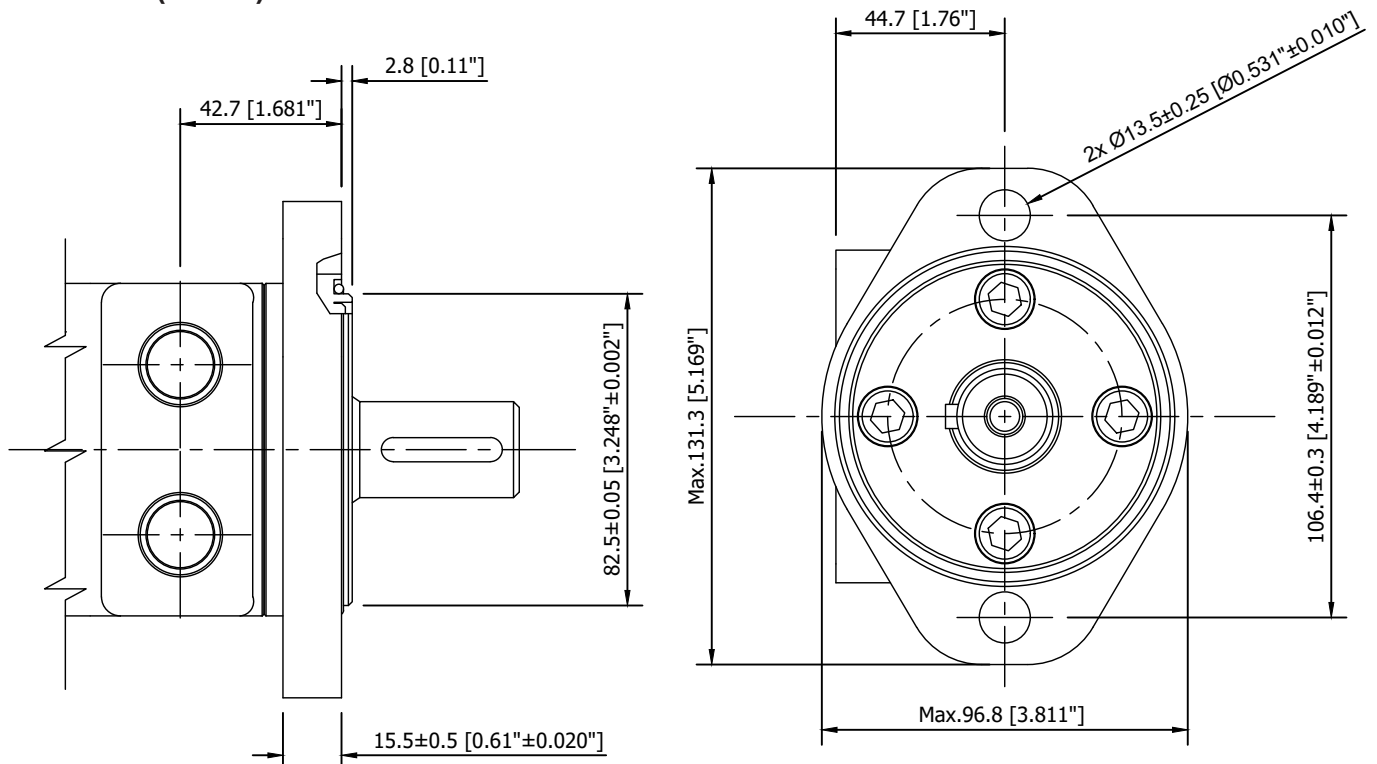


**EBMR**

## FLANGE H4 / H5

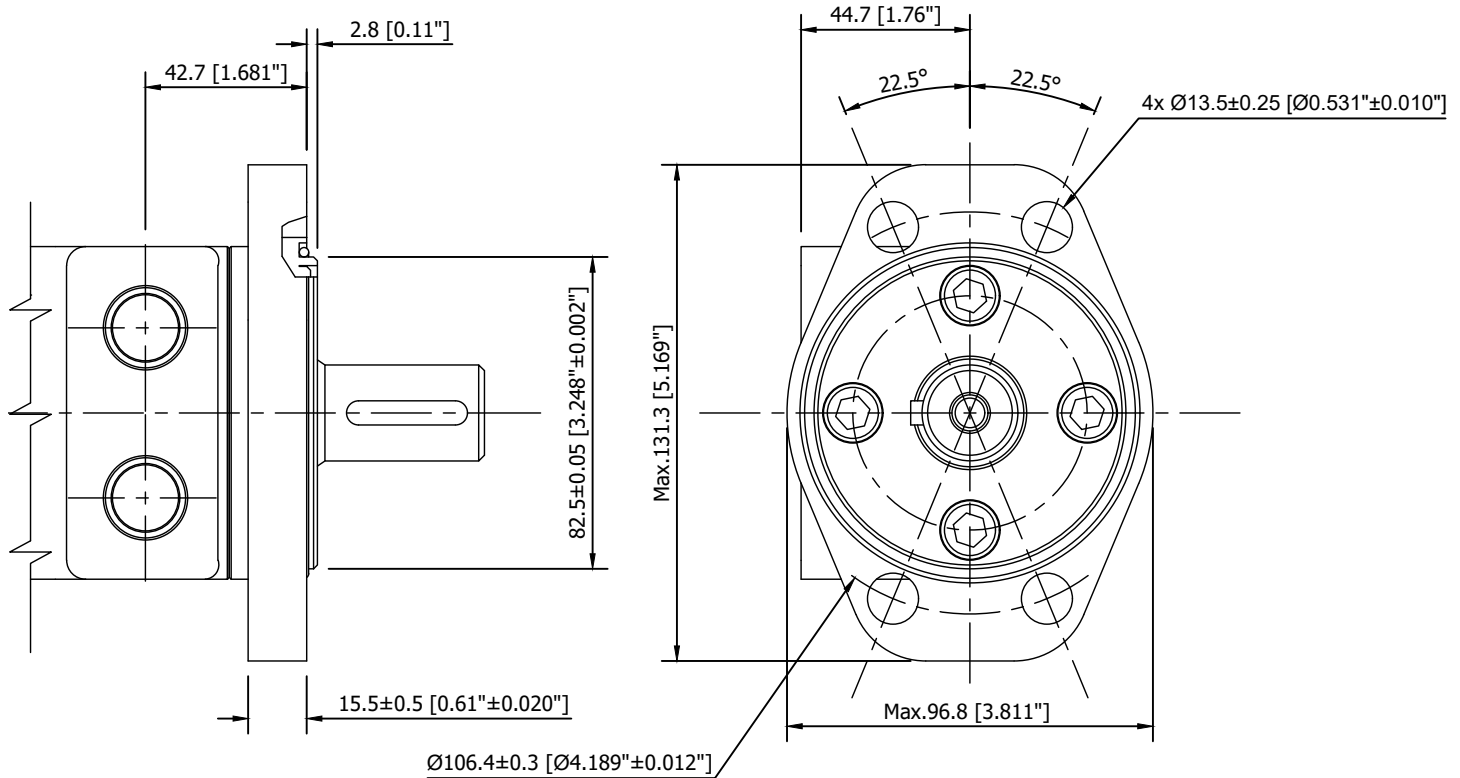


## FLANGE H2 (EBMRS)



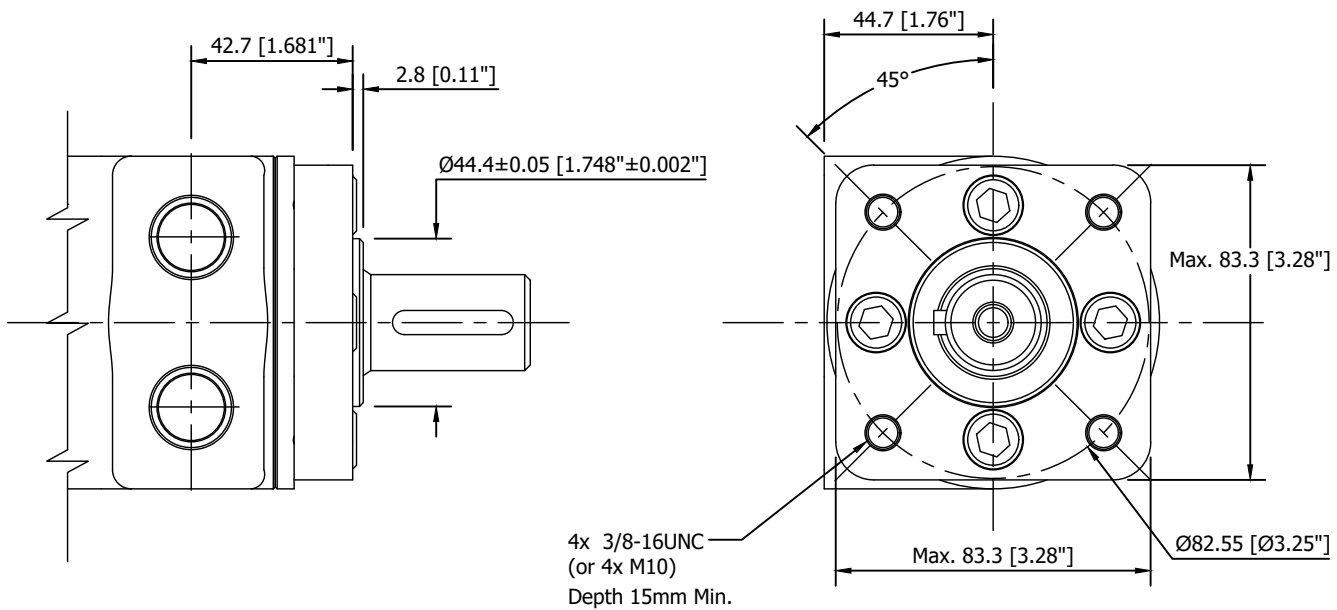
# EBMR/S FLANGE OPTIONS

## FLANGE H6 (EBMPH)

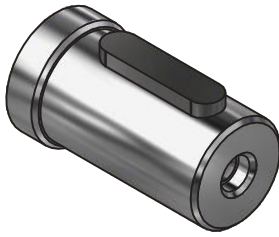


EBMR

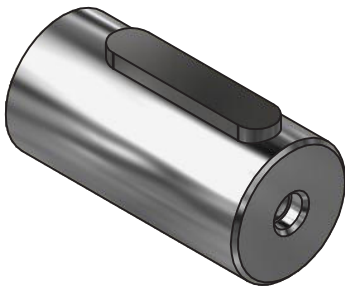
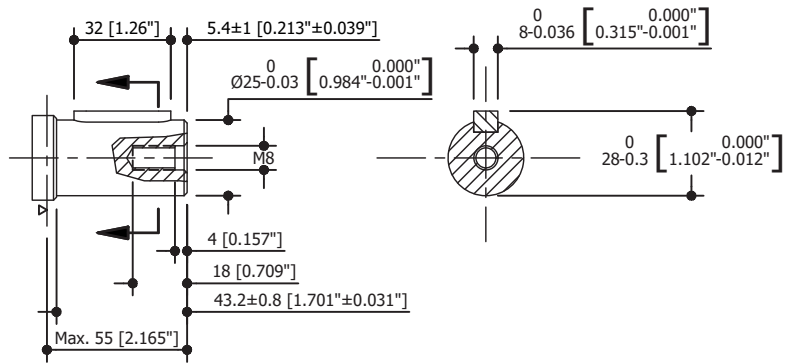
## FLANGE H4/H5 (EBMPH)



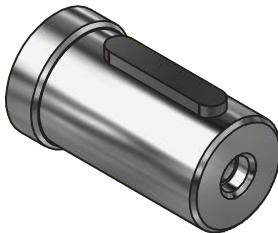
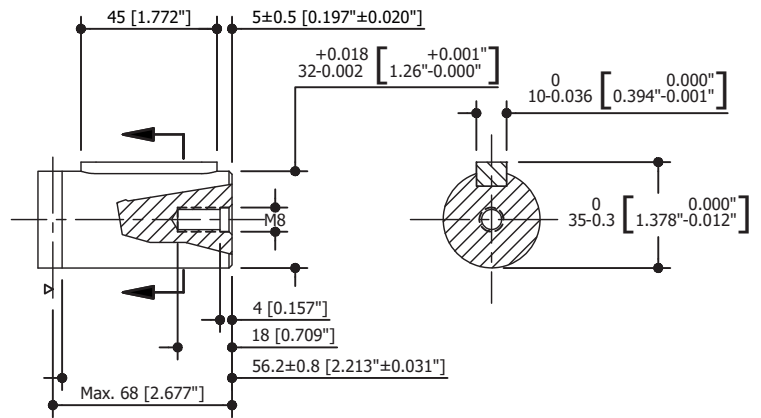
# EBMR SHAFT EXTENSIONS DIMENSIONS



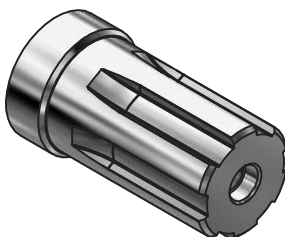
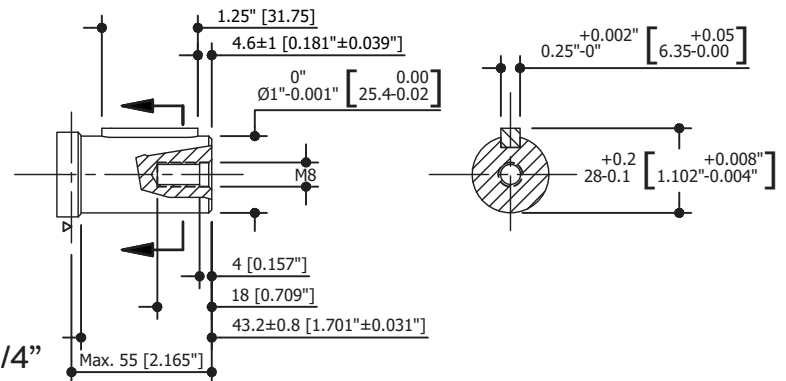
**SHAFT A**  
Cylindrical Shaft  $\text{\O}25$   
Parallel Key  $8 \times 7 \times 32$   
METRIC



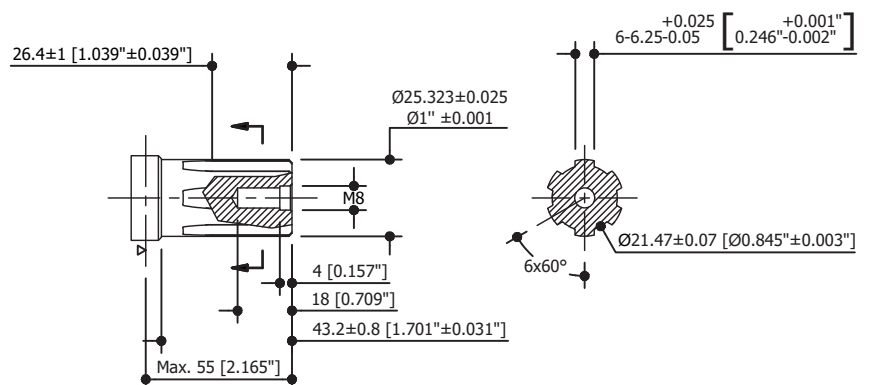
**SHAFT B**  
Cylindrical Shaft  $\text{\O}32$  - Parallel Key  $10 \times 8 \times 45$   
METRIC



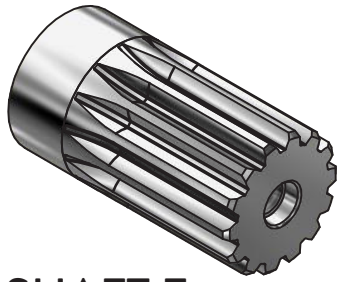
**SHAFT C**  
Cylindrical Shaft 1" - Parallel Key  $1/4" \times 1/4" \times 1-1/4"$   
IMPERIAL



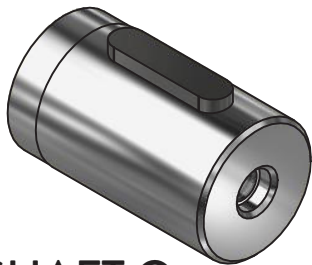
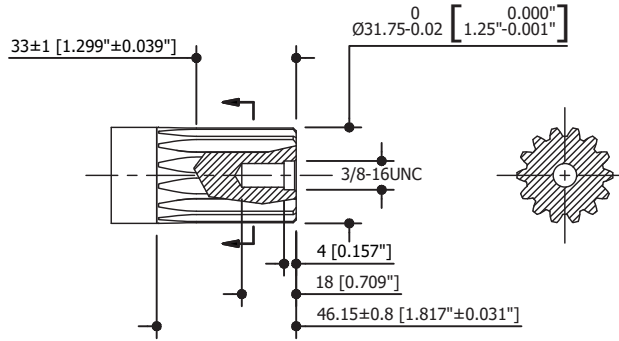
**SHAFT E**  
Splined SAE 6B  
IMPERIAL



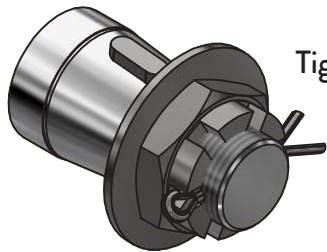
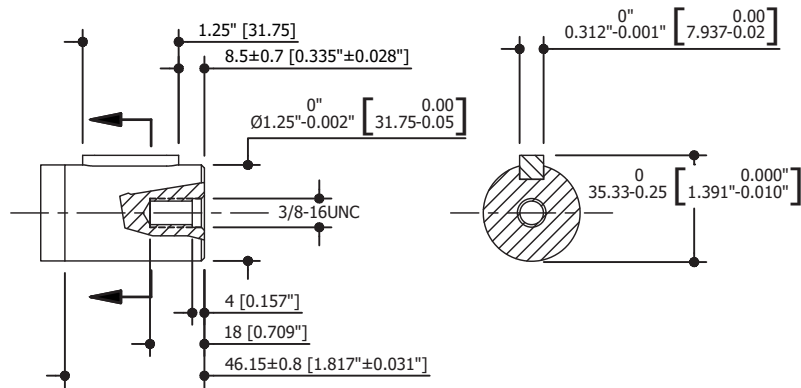
# EBMR SHAFT EXTENSIONS DIMENSIONS



**SHAFT F**  
Splined 14-DP12/24  
IMPERIAL

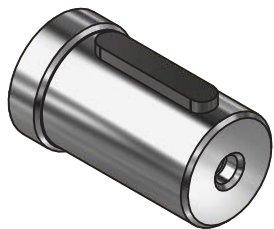
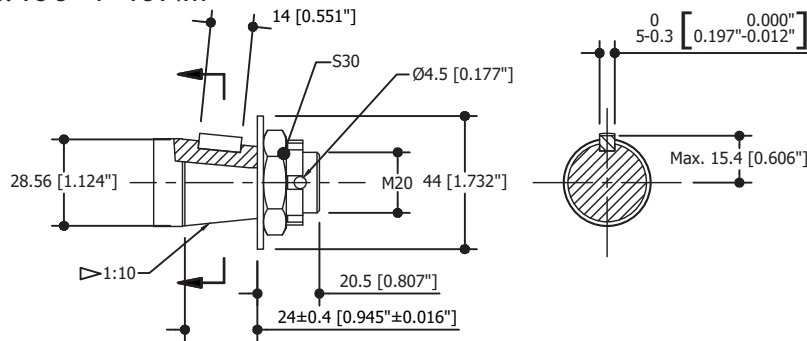


**SHAFT G**  
Cylindrical Shaft  $\varnothing 1 - 1/4''$   
Parallel Key 5/16" x 5/16" x 1-1/4"  
IMPERIAL

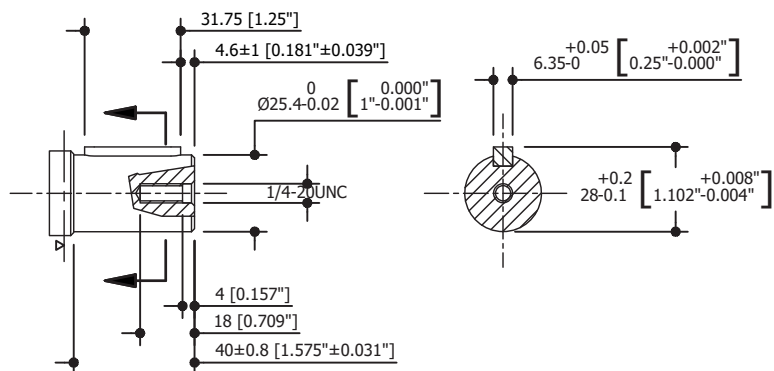


Tightening Torque: 100 +/- 10Nm

**SHAFT T**  
Cone Shaft  $\varnothing 28.56$ mm  
Parallel Key B5x5x14  
METRIC



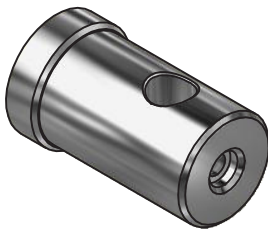
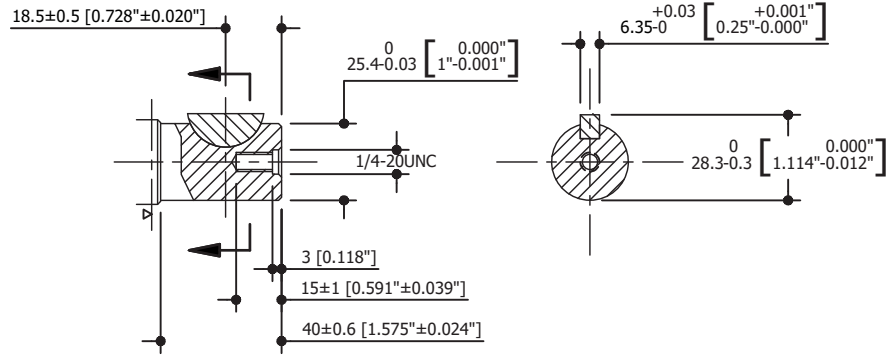
**SHAFT R**  
Cylindrical Shaft  $\varnothing 1''$   
Parallel Key 1/4" x 1/4" x 1-1/4"  
IMPERIAL



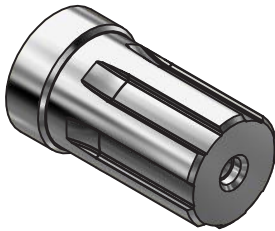
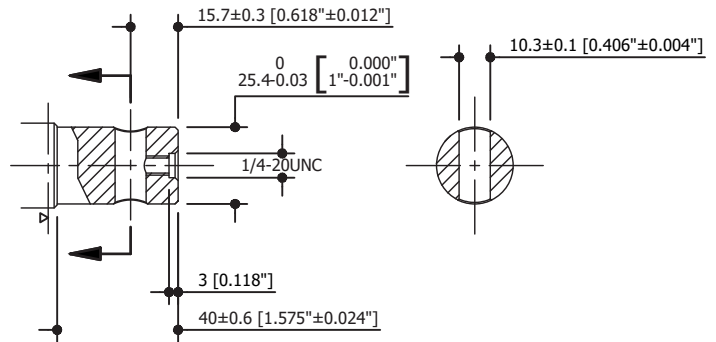
**EBMR**



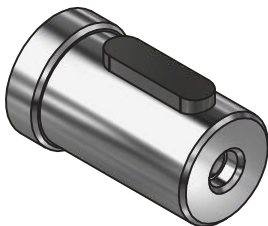
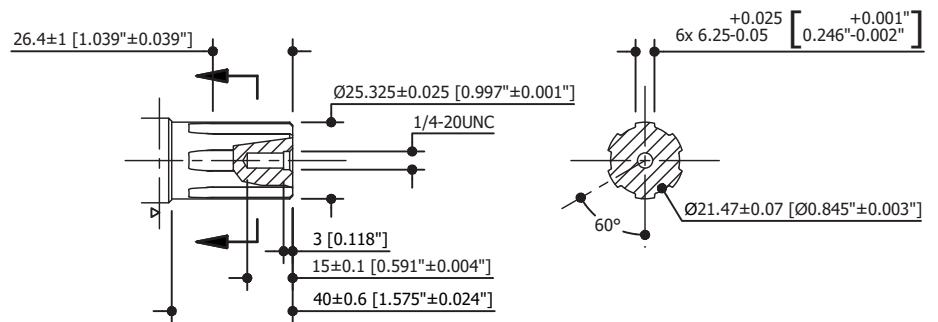
**SHAFT K**  
Cylindrical Shaft  $\varnothing 1"$   
Woodruff Key  $\varnothing 1" \times 1/4"$   
IMPERIAL



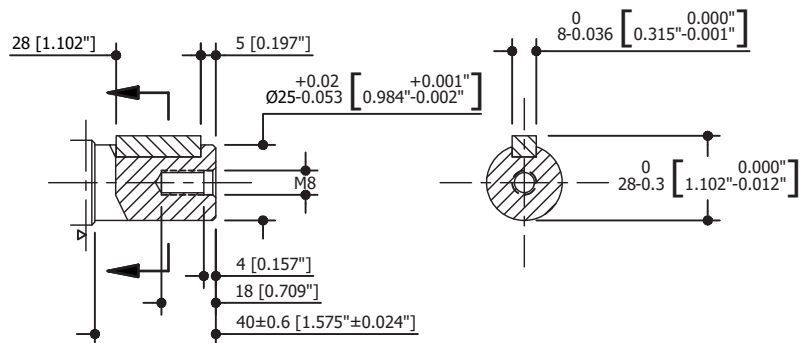
**SHAFT H**  
Cylindrical Shaft  $\varnothing 1"$   
Pin Hole  $\varnothing 10.3 \text{mm}$   
IMPERIAL



**SHAFT S**  
Splined SAE 6B  
IMPERIAL



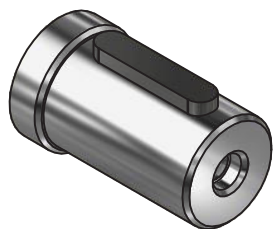
**SHAFT P**  
Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $8 \times 7 \times 28$   
METRIC



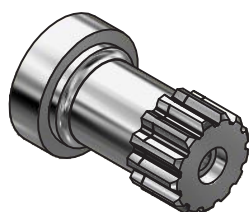
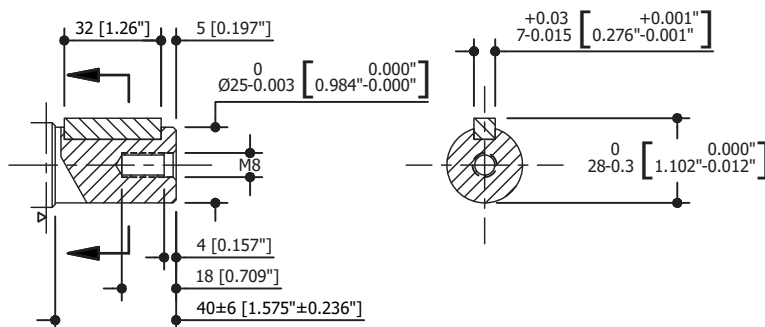
# EBMRS SHAFT EXTENSIONS DIMENSIONS



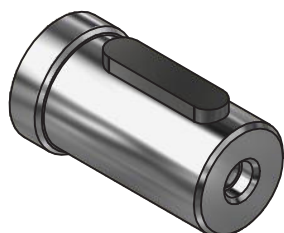
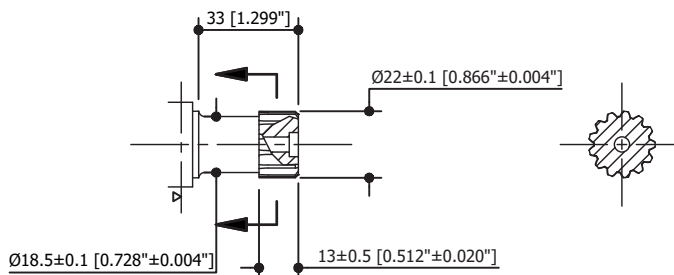
**EAGLE**  
HYDRAULIC



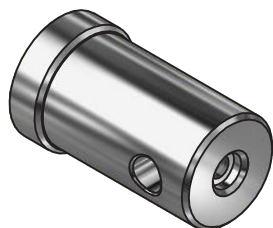
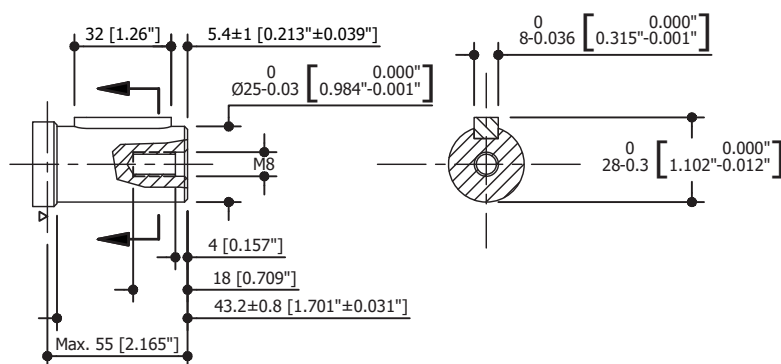
**SHAFT J**  
Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $\varnothing 7 \times 7 \times 32$   
METRIC



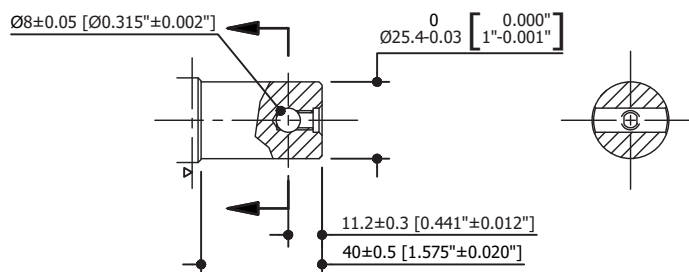
**SHAFT I**  
Splined 13-DP16/32  
METRIC



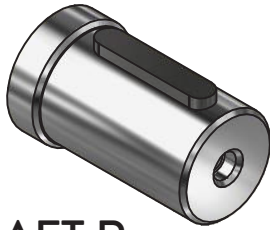
**SHAFT A**  
Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $8 \times 7 \times 32$   
METRIC



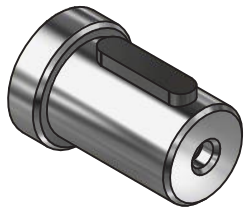
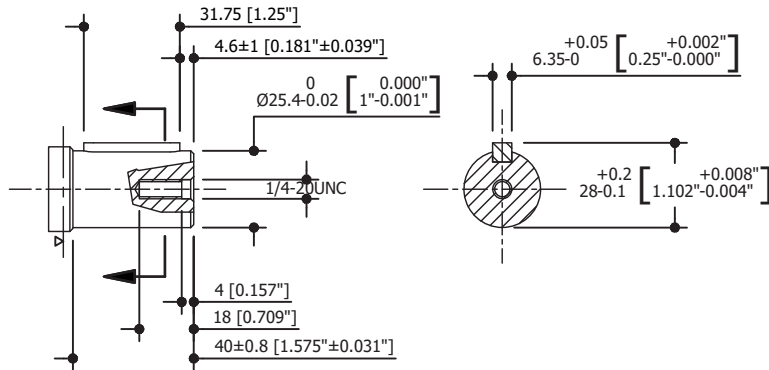
**SHAFT H1**  
Cylindrical Shaft  $\varnothing 1"$   
Pin Hole  $\varnothing 8$   
IMPERIAL



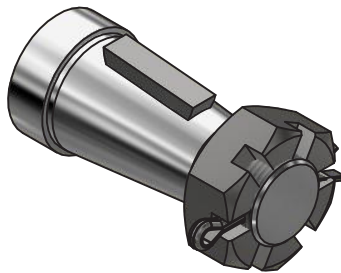
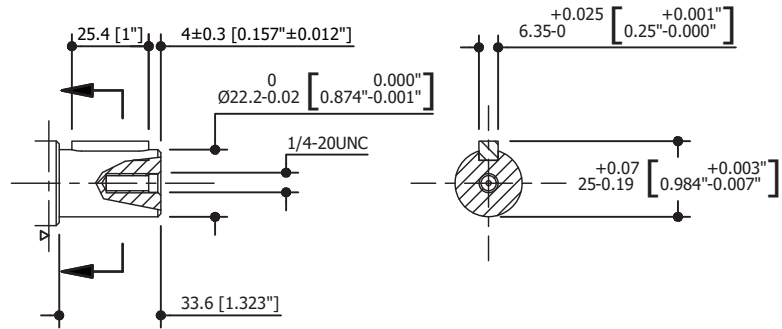
**EBMR**



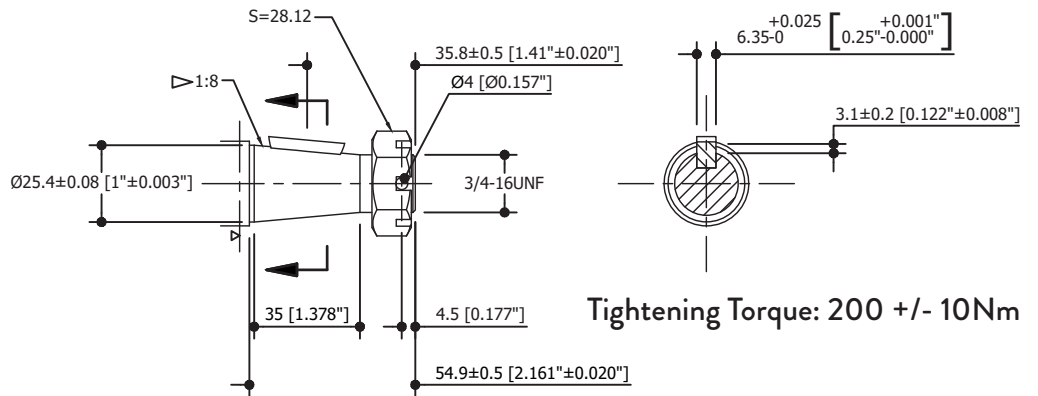
**SHAFT R**  
Cylindrical Shaft  $\varnothing 1''$   
Parallel Key  $1/4'' \times 1/4'' \times 1-1/4''$   
IMPERIAL



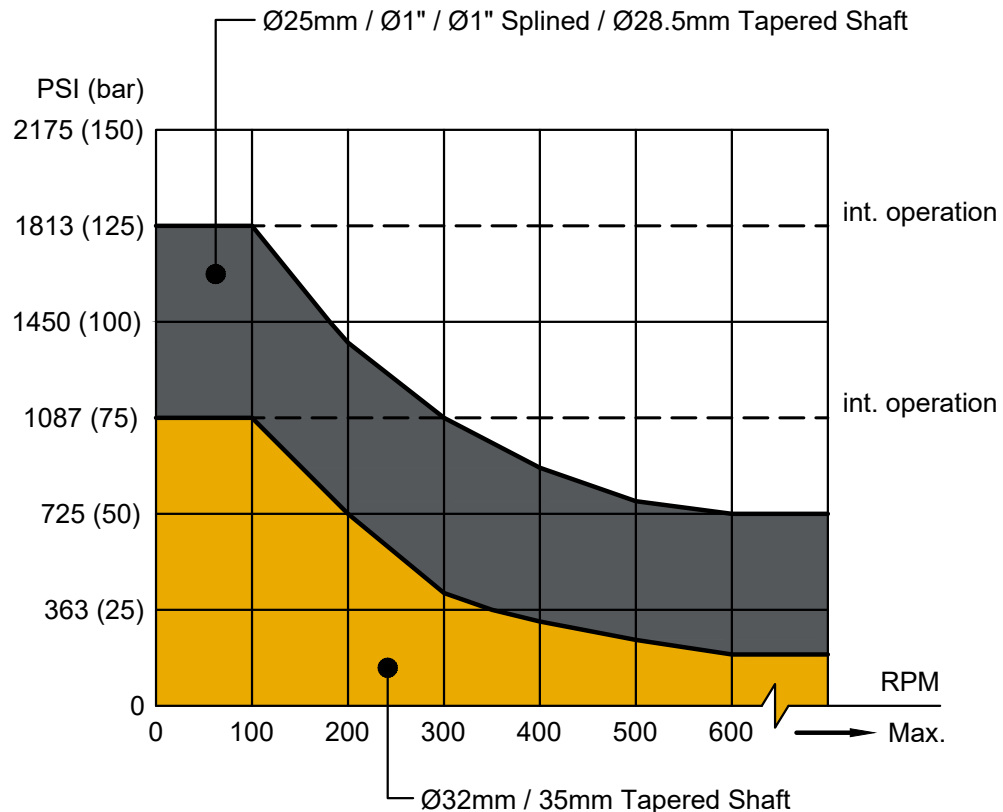
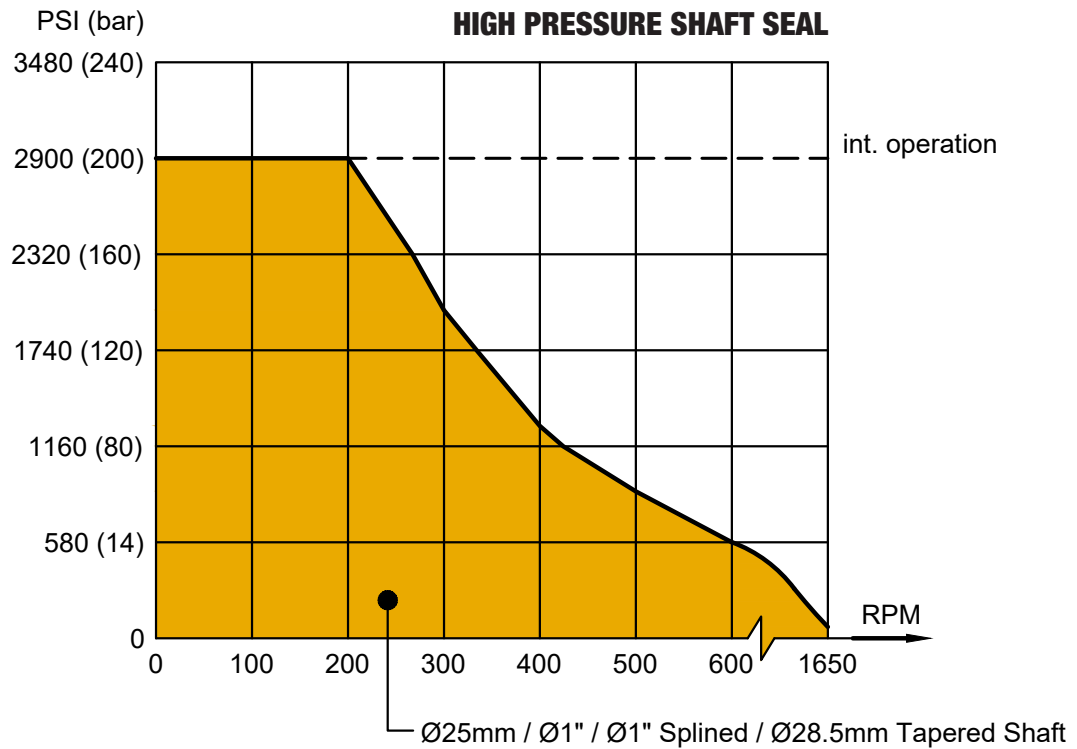
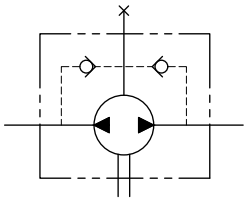
**SHAFT D**  
Cylindrical Shaft  $\varnothing 0.875''$   
Parallel Key  $1/4'' \times 1/4'' \times 1''$   
IMPERIAL



**SHAFT T2**  
Cone Shaft  $\varnothing 1''$   
Woodruff Key  $\varnothing 1'' \times 1/4''$   
IMPERIAL



# EBMR / EBMRS PERMISSIBLE SHAFT SEAL PRESSURE



In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

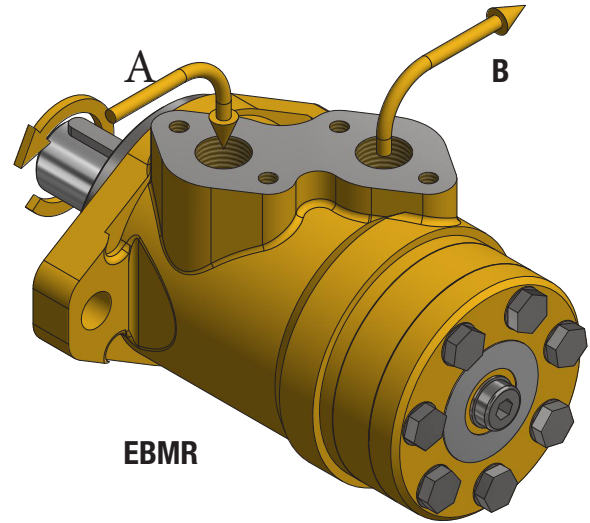
# EBMR DIRECTION OF SHAFT ROTATION : STANDARD

EBMR

When facing shaft end of motor, shaft is rotating:

Clockwise when port "A" is pressurized.

Counter-Clockwise when port "B" is pressurized.



## STATUS OF THE SHAFT'S RADIAL FORCE (Standard Motor with Journal Bearing)

$F_r$  = Radial Force (daN)

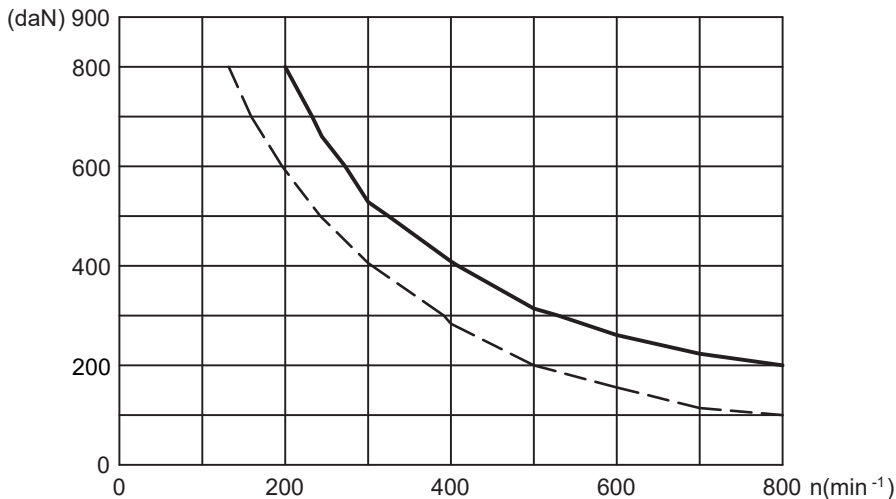
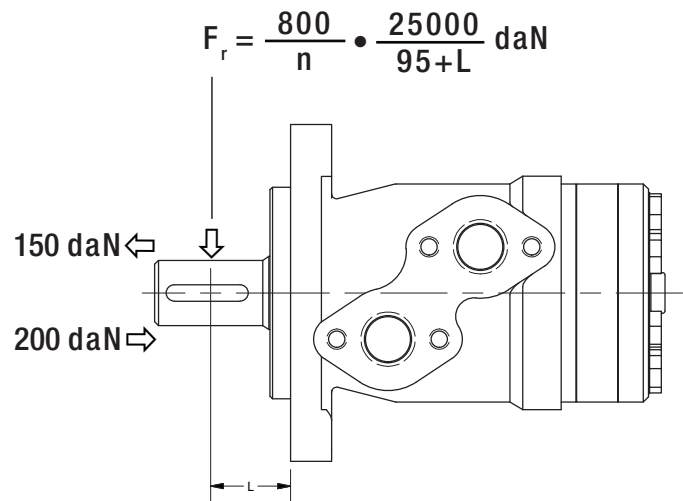
L = Distance (mm)

n = Speed (rpm)

Max. Force Load

Rhomb-flange L = 30mm

Square-Flange L = 24mm



— Shaft Ø25mm and Ø1"  
- - - Shaft Ø32mm

## OIL FLOW IN DRAIN LINE

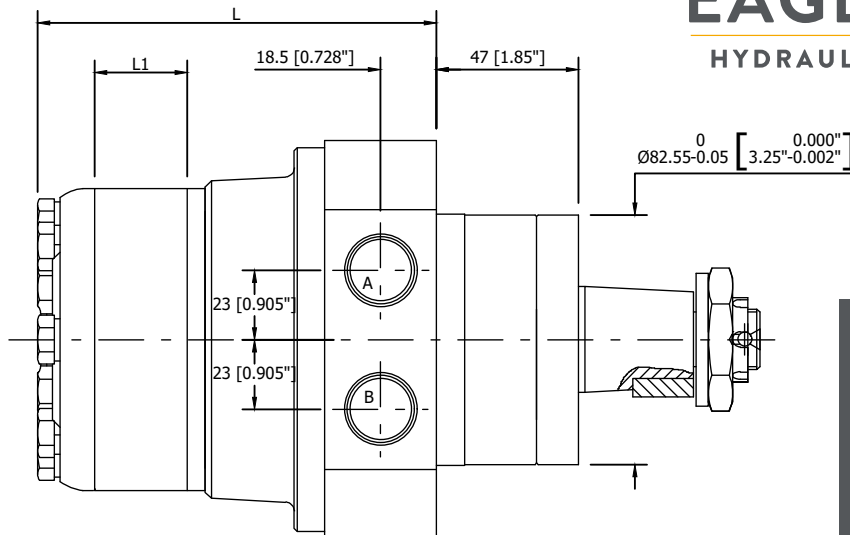
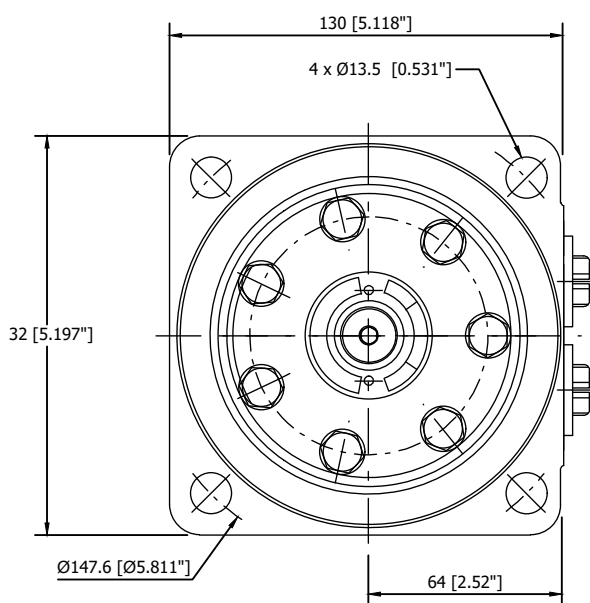
The table shows the Max. oil flow in the drain line at a return pressure less than 72-145 PSI (5-10 bar)

Pressure Drop PSI (bar)	Viscosity in <sup>2</sup> /s (mm <sup>2</sup> /s)	Oil Flow in the Drain Line GPM (L/min)
1450 (100)	0.031 (20)	0.66 (2.5)
	0.054 (35)	0.48 (1.8)
2030 (140)	0.031 (20)	0.93 (3.5)
	0.054 (35)	0.75 (2.8)

# EBMRWN DIMENSIONS AND MOUNTING



**EAGLE**  
HYDRAULIC



**EBMRWN**

MODEL	L	L1
EBMRWN-50	113 (4.449")	10 (0.394")
EBMRWN-80	119 (4.685")	16 (0.63")
EBMRWN-100	123 (4.843")	20 (0.787")
EBMRWN-125	128 (5.039")	25 (0.984")
EBMRWN-160	133.5 (5.256")	30.5 (1.201")
EBMRWN-200	141 (5.551")	38.1 (1.5")
EBMRWN-250	153 (6.024")	50 (1.969")
EBMRWN-315	165 (6.496")	62 (2.441")
EBMRWN-375	177 (6.969")	74 (2.913")

MOUNTING	CODE (Depth mm)			
	G	M	S	P
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14NPTF (15)
C	G 1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)

## EBMRWN ORDER INFORMATION

EBMRWN  -  -  -  -  -  -  -

1	2	3	4	5	6	7	8
CODE	Displacement	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
EBMRWN	50	Blank 4-Ø13.5 Wheel Mount, Ø82.5 x 9.4	T1 Cone Shaft Ø35, Parallel key B6x6x20	D G1/2, G1/4	Blank Standard	00 No Paint	Blank Standard
	80		B Shaft Ø32, Parallel Key 10x8x4	M M22 x 1.5, M14 x 1.5	R Opposite	Blank Black	
	100		F Shaft Ø1-1/4", Splined Key 14-DP12/2	S 7/8-14 O-Ring, 7/16-20UNF		BI Blue	
	125		FD Long Shaft Ø31.75, Splined Key 14-DP12/24	P 1/2-14NPTF, 7/16-20UNF		S Silver Grey	
	160		G Shaft Ø1-1/4", Parallel Key 5/16" x 5/16" x 1-1/4"				
	200						
250							
315							
375							

Note: When table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

EBMR-BK01 Series hydraulic motor with brake extending EBMR series motor range. This motor has an integrates holding brake.

## FEATURES

- Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- Shaft seal can bear high pressure of back an the motor can be use in parallel or in series.
- Special design for distribution system can meet the requirement of low noise of unit.
- Compact volume and easy installation.
- Small volume and radial dimension, high holding torque, power brake, low weight and easy to install.

## MAIN SPECIFICATIONS

		EBMR -BK01 50	EBMR -BK01 80	EBMR -BK01 100	EBMR -BK01 125	EBMR -BK01 160	EBMR -BK01 200	EBMR -BK01 250	EBMR -BK01 315	EBMR -BK01 375
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	3.15 (51.7)	4.97 (81.5)	6.22 (102)	7.76 (127.2)	9.59 (157.2)	11.87 (194.5)	15.46 (253.3)	19.38 (317.5)	23.27 (381.4)
Max. Speed	Rated (rpm)	490	479	478	421	341	276	212	169	141
	Continuous (rpm)	509	502	497	459	372	301	231	184	166
	Intermittent (rpm)	603	598	574	574	465	376	289	230	192
Max. Torque	Rated lbf•ft (N•m)	76.8 (104)	121 (164)	151.3 (205)	188.9 (256)	233.2 (316)	247.2 (335)	322.5 (437)	336.5 (456)	343.2 (465)
	Continuous lbf•ft (N•m)	76 (103)	149.8 (203)	187.5 (254)	233.9 (317)	288.6 (391)	264.9 (359)	322.5 (437)	336.5 (456)	343.2 (465)
	Intermittent lbf•ft (N•m)	65.4 (88.6)	118.1 (160)	147.6 (200)	184.5 (250)	227.3 (308)	245.8 (333)	349.1 (473)	370.5 (502)	383.8 (520)
Max. Output	Rated hp (kW)	7.1 (5.3)	11 (8.2)	13.8 (10.3)	15.2 (11.3)	15.2 (11.3)	13 (9.7)	13 (9.7)	10.9 (8.1)	9.3 (6.9)
	Continuous hp (kW)	7.4 (5.5)	14.3 (10.7)	17.7 (13.2)	20.4 (15.2)	20.4 (15.2)	15.2 (11.3)	14.2 (10.6)	11.8 (8.8)	10.9 (8.1)
	Intermittent hp (kW)	7.5 (5.6)	13.4 (10)	16.1 (12)	20.1 (15)	20.1 (15)	17.6 (13.1)	19.2 (14.3)	16.2 (12.1)	14.1 (10.5)
Max. Pressure Drop	Rated PSI (bar)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	1740 (120)	1740 (120)	1450 (100)	1233 (85)
	Continuous PSI (bar)	2031 (140)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	1885 (130)	1740 (120)	1450 (100)	1233 (85)
	Intermittent PSI (bar)	2538 (175)	2901 (200)	2901 (200)	2901 (200)	2901 (200)	2538 (175)	1885 (130)	1595 (110)	1378 (95)
Max. Flow	Rated GPM (L/min)	6.9 (26)	10.6 (40)	13.2 (50)	14.6 (55)	14.6 (55)	14.6 (55)	14.6 (55)	14.6 (55)	14.6 (55)
	Continuous GPM (L/min)	7.1 (27)	11.1 (42)	13.8 (52)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	17.2 (65)
	Intermittent GPM (L/min)	8.5 (32)	13.2 (50)	15.9 (60)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
Min. Opening Pressure	PSI (bar)	247 (17) --- 319 (22)								
Max. Inlet Pressure	PSI (bar)	3626 (250)								
Max. Brake Release Port Pressure	PSI (bar)	3626 (250)								
Max. Static Torque	lbf•ft (N•m)	369 (500) --- 405.9 (550)								
Weight	lbs (kg)	25.7 (11.7)	26.2 (11.9)	26.2 (11.9)	26.8 (12.2)	27.5 (12.5)	28.6 (13)	29.7 (13.5)	30.8 (14)	31.9 (14.5)

\* Rated speed and rated torque: output value of speed and torque under rated flow and rated pressure.

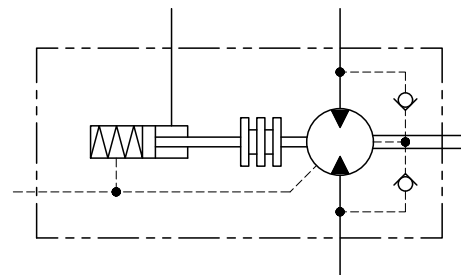
\* Continuous pressure: Max. value of operating motor continuously.

\* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

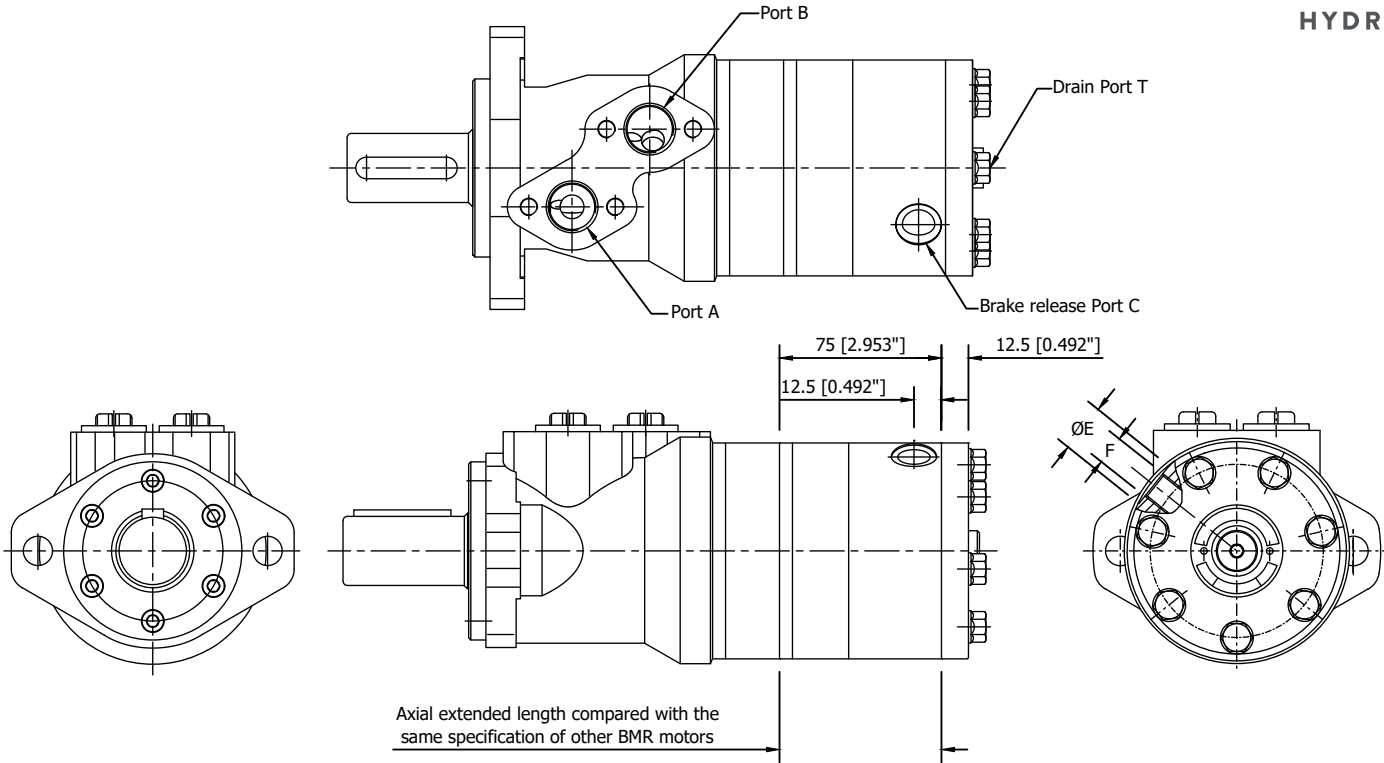
\* Peak pressure: Max. value of operating motor in 0.6 second per minute.

\* Such kind of brake is only used in static paring brake. Dynamic braking is not recommended.

When the motor integrated with brake is working, the pressure at releasing port must be more than 319 PSI (22 bar). In the status of braking, the pressure at releasing port must be less than 247 PSI (17 bar), optymally 0 PSI (0 bar). It is attention in use that the back pressure of the oil circuit is the best 0 PSI (0 bar).



# EBMR-BK01 DIMENSIONS AND MOUNTING DATA



MODEL PORT C	ØE	F
G	22 [0.866"]	G1/4 Depth 9 [0.354"]

Note: The mount data is completely referred to BMR series motor. The axial extended length reduces 75mm as picture. Port C is brake releasing port, the position is as picture.

## EBMR-BK01 ORDER INFORMATION

EBMR-BK01  -  -  -  -  -  -  -  -

1	2	3	4	5	6	7	8	9								
CODE	Displacement	Flange	Output Shaft	Ports and Drain Port	Brake Release Port	Rotation Direction	Paint	Unusually Function								
Blank	50	2	2-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8	A	Shaft Ø25, Parallel Key 8x7x32	D	G1/2 Manifold Mount, 4-M8, G1/4	G	G1/4 Depth 9 facing Ø22	Blank	Standard	00	No Paint	N1	Big Radial Force	
	80	4	4-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 8	C	Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"	M	M22x1.5 Manifold Mount, 4-M8, M14x1.5			R	Opposite	Blank	Black			
	100	H4	4-3/8-16 Square-Flange, Pilot Ø44.4 x 2.8	E	Shaft Ø1", Splined Tooth SAE 6B	S	7/8-14 O-Ring Manifold, 4-5/16-18UNC, 7/16-20UNF					BI	Blue			
	125	H5	4-M10 Square-Flange, Pilot Ø44.4 x 2.8	R	Short Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"	P	1/2-14 NPTF Manifold, 4-5/16-18UNC, 7/16-20UNF					S	Silver Grey			
	160			B	Shaft Ø32, Parallel Key 10 x 8 x 45	R	PT(Rc)1/2 Manifold, 4-M8, PT(Rc) 1/4									
	200			F	Shaft Ø1-1/4", Splined Tooth 14-DP12/24											
	250			FD	Long Shaft Ø1-1/4", Splined Tooth 14-DP12/24											
	315			G	Shaft Ø1-1/4", Parallel Key 5/16" x 5/16" x 1-1/14"											
375			T	Cone-Shaft Ø28.56, Parallel Key B5x5x14												

Note: When the table is used, please fill the code of right rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us. Note: The shafts of B\F\FD\G\T\T3 are only suitable for flanges of 2 and 4.

OK series motor adapt the advanced Gerolor gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

## FEATURES

- Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.
- Special design in the driver-linker and prolong operating life.
- Special design for distribution system can meet the requirement of low noise of unit.
- Compact volume and easy installation.

OK

## MAIN SPECIFICATIONS

### TECHNICAL DATA FOR OK WITH 25mm Shaft / 1in Shaft / 1in Splined and 28.56mm Tapered Shaft

		OK 36	OK 50	OK 80	OK 100	OK 125	OK 160	OK 200	OK 250	OK 315	OK 375
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	2.2 (36)	3.15 (51.7)	4.97 (81.5)	6.22 (102)	7.76 (127.2)	9.59 (157.2)	11.87 (194.5)	15.46 (253.3)	19.38 (317.5)	23.27 (381.4)
Max. Speed	Continuous (rpm)	1111	780	744	595	480	382	301	238	191	162
Max. Torque	Continuous lbf•ft (N•m)	48.7 (66)	73.8 (100)	116.6 (158)	147.6 (200)	183 (248)	232.5 (315)	250.2 (339)	297.4 (403)	293.7 (398)	275.3 (373)
	Intermittent lbf•ft (N•m)	61.3 (83)	95.2 (129)	144.6 (196)	178.6 (242)	219.9 (298)	283.4 (384)	309.2 (419)	349.8 (474)	367.5 (498)	343.9 (466)
Max. Output	Continuous hp (kW)	12.1 (9)	12.1 (9)	13.9 (10.4)	14.5 (10.8)	14.5 (10.8)	13.9 (10.4)	11.8 (8.8)	10.9 (8.1)	9.9 (7.4)	8.3 (6.2)
	Intermittent hp (kW)	13.9 (10.4)	13.9 (10.4)	16.9 (12.6)	17.2 (12.8)	16.8 (12.5)	15.4 (11.5)	13.7 (10.2)	12.6 (9.4)	10.5 (7.8)	9.5 (7.1)
Max. Pressure Drop	Continuous PSI (bar)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	2031 (140)	1813 (125)	1595 (110)	1305 (90)	1088 (75)
	Intermittent PSI (bar)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2538 (175)	2248 (155)	2031 (140)	1813 (125)	1305 (90)
Max. Flow	Continuous GPM (L/min)	10.6 (40)	10.6 (40)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)	15.9 (60)

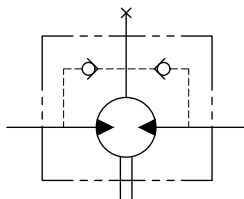
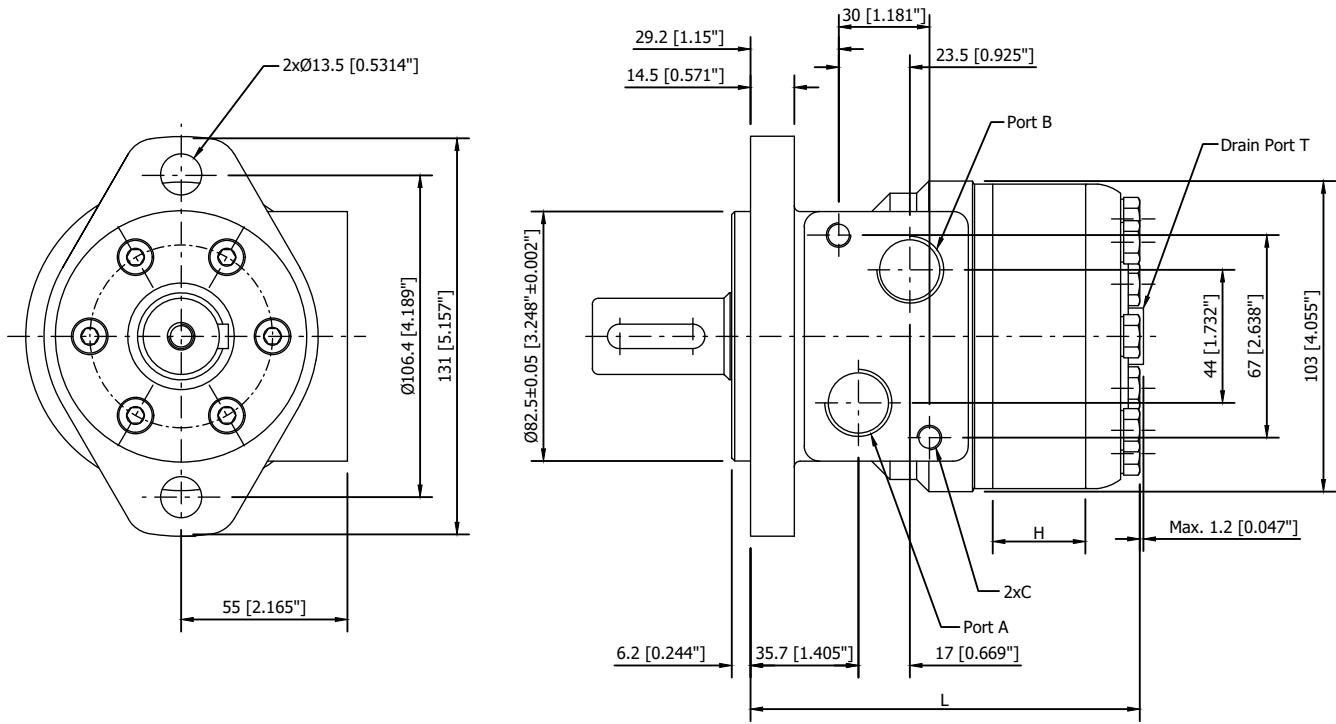
\* Intermittent operation: the permissible values may occur for max. 10% of every minute

## OK ORDER INFORMATION

OK  -  -  -  -  -  -

1	2	3	4	5	6	7	8					
CODE	Displacement	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function					
Blank	36	2-Ø13.5 Rhomb-Flange, Pilot Ø82.5 x 6.2	A	Shaft Ø25, Parrallel Key 8x7x32	D	G1/2 Manifold Mount, 4-M8, G1/4	Blank	Standard	00	No Paint	Blank	Standard
	50		C	Shaft Ø1", Parrallel Key 1/4" x 1/4" x 1-1/4"	M	M22x1.5 Manifold Mount, 4-M8, M14x1.5	R	Opposite	Blank	Black	F	Free Running
	80		E	Shaft Ø1", Splined Tooth SAE 6B	S	7/8-14 O-Ring Manifold, 4-5/16-18UNC, 7/16-20UNF			Bl	Blue	0	No Case Drain
	100		W	Shaft Ø24.5, Splined B25x22	P	1/2-14 NPTF Manifold, 4-5/16-18UNC, 7/16-20UNF			S	Silver Grey		
	125		T	Cone-Shaft Ø28.56, Parrallel Key B5x5x14	R	PT(Rc)1/2 Manifold, 4-M8, PT(Rc) 1/4						
	160											
	200											
250												
315												
375												

# OK DIMENSIONS AND MOUNTING DATA



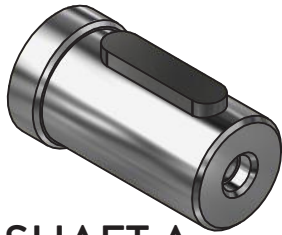
MODEL	H	L
OK36	7 (0.276")	105 (4.134")
OK50	10 (0.394")	108 (4.252")
OK80	16 (0.63")	114 (4.488")
OK100	20 (0.787")	118 (4.646")
OK125	25 (0.984")	123 (4.843")
OK160	30.5 (1.201")	128.5 (5.059")
OK200	38.1 (1.5")	136 (5.354")
OK250	50 (1.969")	148 (5.827")
OK315	62 (2.441")	160 (6.299")
OK375	74 (2.913")	172 (6.772")

MOUNTING	CODE (Depth mm)				
	D	M	S	P	R
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)	PT (RC) 1/2 (15)
C	4x M8 (13)	4x M8 (13)	4x 5/16-18UNC (13)	4x 5/16-18UNC (13)	4x M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20 UNF (12)	7/16-20UNF (12)	PT (RC) 1/4 (9.7)

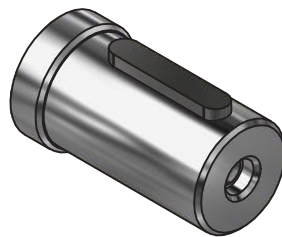
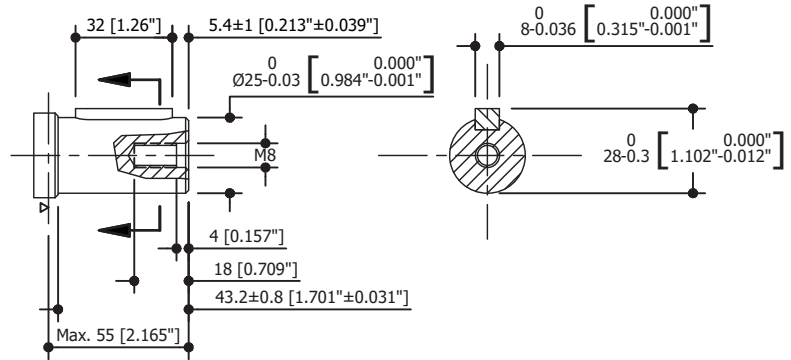
## OK - DIRECTION OF SHAFT ROTATION : STANDARD

When facing shaft end of motor, shaft is rotating:

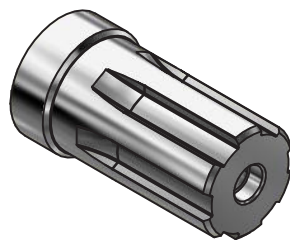
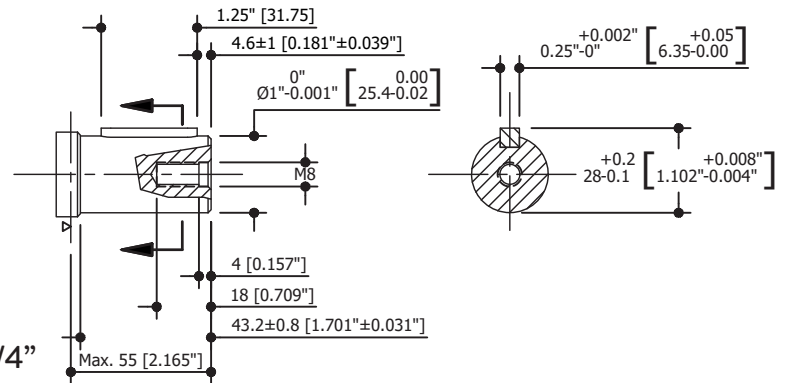
Clockwise when port "A" is pressurized.  
Counter-Clockwise when port "B" is pressurized.



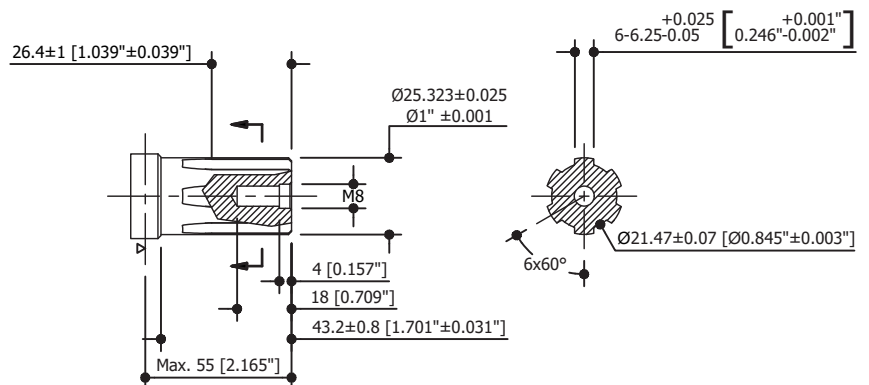
**SHAFT A**  
Cylindrical Shaft  $\varnothing 25$   
Parallel Key 8x7x32  
METRIC



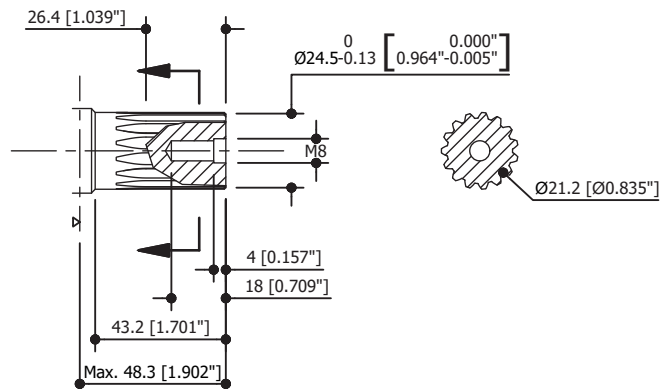
**SHAFT C**  
Cylindrical Shaft 1" - Parallel Key 1/4"x1/4"x1-1/4"  
IMPERIAL



**SHAFT E**  
Splined SAE 6B  
IMPERIAL



**SHAFT W**  
DIN 5482 B25 x 22h9  
4zx1.6mx30Px9h



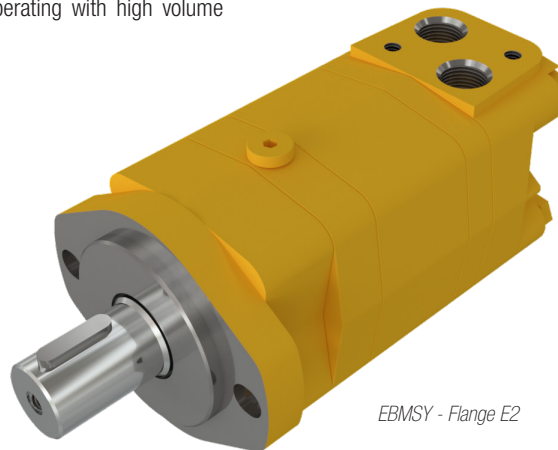
# EBMSY SERIES



EBMSY new series motor adapt the advanced Geroler gear set designed with disc distribution flow and high pressure. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

## FEATURES

- Advanced manufacturing devices for the Gerotor gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
- The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in wide range of applications.
- Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.
- The new series motor is suitable for vehicles with greater loads and pressure drop.



EBMSY - Flange E2

EBMSY

		EBMSY 80	EBMSY 100	EBMSY 125	EBMSY 160	EBMSY 200	EBMSY 250	EBMSY 315	EBMSY 400	EBMSY 475
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	4.92 (80.6)	6.15 (100.8)	7.63 (125)	9.40 (154)	11.84 (194)	14.83 (243)	18.98 (311)	24.04 (394)	28.99 (475)
Max. Speed	Continuous (rpm)	800	748	600	470	375	300	240	185	155
	Intermittent (rpm)	988	900	720	560	450	360	280	225	185
Max. Torque	Continuous lbf•ft (N•m)	166.1 (225)	214 (290)	269.4 (365)	357.9 (485)	432.5 (586)	522.5 (708)	649.4 (880)	649.4 (880)	671.6 (910)
	Intermittent lbf•ft (N•m)	225.1 (305)	287.8 (390)	354.2 (480)	435.4 (590)	520.3 (705)	634.7 (860)	738 (1000)	723.2 (980)	730.6 (990)
Max. Output	Continuous hp (kW)	21.5 (16)	24.1 (18)	24.1 (18)	24.3 (18.1)	24.3 (18.1)	24.1 (18)	22.8 (17)	14.8 (11)	12.1 (9)
	Intermittent hp (kW)	26.8 (20)	29.5 (22)	30.8 (23)	33.5 (25)	32.2 (24)	31.9 (23.8)	27.1 (20.2)	16.1 (12)	14.8 (11)
Max. Pressure Drop	Continuous PSI (bar)	2973 (205)	2973 (205)	2973 (205)	3046 (210)	3046 (210)	2901 (200)	2901 (200)	2321 (160)	2031 (140)
	Intermittent PSI (bar)	3989 (275)	3989 (275)	3989 (275)	3771 (260)	3626 (250)	3626 (250)	3481 (240)	2756 (190)	2176 (150)
	Peak PSI (bar)	4279 (295)	4279 (295)	4279 (295)	4061 (280)	3916 (270)	3916 (270)	3771 (260)	3046 (210)	2538 (175)
Max. Flow	Continuous GPM (L/min)	17.2 (65)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
	Intermittent GPM (L/min)	21.2 (80)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)
Max. Inlet Pressure	Continuous PSI (bar)	3626 (250)	3626 (250)	3626 (250)	3626 (250)	3626 (250)	3626 (250)	3626 (250)	3626 (250)	3626 (250)
	Intermittent PSI (bar)	4351 (300)	4351 (300)	4351 (300)	4351 (300)	4351 (300)	4351 (300)	4351 (300)	4351 (300)	4351 (300)
Weight	Lbs (kg)	21.6 (9.8)	22 (10)	22.7 (10.3)	23.5 (10.7)	24.4 (11.1)	25.5 (11.6)	27.1 (12.3)	29 (13.2)	31.5 (14.3)

\* Continuous pressure: Max. value of operating motor continuously.

\* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

\* Peak pressure: Max. value of operating motor in 0.6 second per minute.

2    3    4    5    6    7    8  
 EBMSY  -  -  -  -  -  -

## TYPICAL PORTS (DMSP)

1	2	3		4		5		6		7		8					
CODE	Disp.	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function					
EBMSY	80	E2	2-Ø13.5 Rhomb-Flange Ø106.4 Pilot Ø82.5x6.3		B	Shaft Ø32 - Parrallel Key 10x8x45		D	G1/2 Manifold Mount 2xM10, G1/4		Blank	Standard	00	No Paint	Blank	Standard	
	100	E4	4-Ø13.5 Rhomb-Flange Ø106.4 Pilot Ø82.5 x 6.3		D	Shaft Ø1" - Parrallel Key 1/4"x1/4"x1"		M	M22x1.5 Manifold Mount 2xM10, M14x1.5		R	Opposite	Blank	Black	F	Free Running	
	125	F6	6-Ø13.5 Rhomb-Flange Ø106.4 Pilot Ø82.5 x 2.6		G	Shaft Ø1-1/4" - Parrallel Key 5/16"x5/16"x1-1/4"		S	7/8-14 O-Ring Manifold 2x3/8-16UNC, 7/16-20UNF		Blank	Standard	BI	Blue	LS	Low Speed	
	160	W	4-Ø13.5 Wheel-Flange Ø160 Pilot Ø125 x 8		F	Shaft Ø1-1/4" - Splined Key 14-DP12/24		P	1/2-14 FNPT Manifold 2x3/8-16UNC, 7/16-20UNF				S	Silver Grey			
	200	E2B	2-Ø14.3 Rhomb-Flange Ø146.05 - Pilot Ø101.6 x 9.4		FD	Long Shaft Ø1-1/4" - Splined Key 14-DP12/24											
	250	SP	4-Ø11.5 Square-Flange Ø106.4 Pilot Ø82.5 x 6.3		SL	Shaft Ø34.85" - Splined Key 6-34.85x 28.14x 8.64											
	315				T1	Cone Shaft Ø35 - Parrallel Key B6x6x20											
	400				T3	Cone Shaft Ø1-1/4" - Parrallel Key 5/16"x5/16"x1-1/4"											
	475				S1	Shaft Ø1" - Splined Key SAE 6B											
				I	Sub-Shaft Ø22 - Splined Key 13-DP16/32												

NOTES:

- When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. The informations of mounting flange, output shaft and ports are the same as EBMS series. The SP flange applies to shafts of T1, D, B, F, G. If the specification is not in the table or you have specific requirements, please contact us.

2    3    4    5    6    7    8  
 EBMSYS  -  -  -  -  -  -

## TYPICAL PORTS (DMSP) WITH CIRCULAR FLANGE

1	2	3		4		5		6		7		8					
CODE	Disp.	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function					
EBMSYS	80	D	4-Ø11 Circular-Flange Ø125 Pilot Ø100 x 6		Blank	Shaft Ø32 - Parrallel Key 10x8x45		D	G1/2 Manifold Mount 2xM10, G1/4		Blank	Standard	00	No Paint	Blank	Standard	
	100	E	4-Ø13.5 Circular-Flange Ø127 Pilot Ø101.6 x 6.3					M	M22x1.5 Manifold Mount 2xM10, M14x1.5		R	Opposite	Blank	Black	F	Free Running	
	125							S	7/8-14 O-Ring Manifold 2x3/8-16UNC, 7/16-20UNF		Blank	Standard	BI	Blue	LS	Low Speed	
	160							P	1/2-14 FNPT Manifold 2x3/8-16UNC, 7/16-20UNF				S	Silver Grey			
	200																
	250																
	315																
400																	
475																	

NOTES:

- When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. The informations of mounting flange, output shaft and ports are the same as EBMS series. The SP flange applies to shafts of T1, D, B, F, G. If the specification is not in the table or you have specific requirements, please contact us.

# EBMSY ORDER INFORMATION



EBMSY

**ALTERNATIVE PORTS**  
(EE-D, EE-M, EE-S2, ED, DB, DU, ...)

1	2	3	4	5	6	7	8						
<b>CODE</b>	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function						
<b>EBMSY</b>	80	E2	2-Ø13.5 Rhomb-Flange Ø106.4 - Pilot Ø82.5x6.3	A	Shaft Ø25 - Parrallel Key 8x7x32	EE-D	G1/2, G1/4	Blank	Standard	00	No Paint	Blank	Standard
	100	E4	4-Ø13.5 Rhomb-Flange Ø106.4 - Pilot Ø82.5 x 6.3	B	Shaft Ø32 - Parrallel Key 10x8x45	EE-M	2M22x1.5, M14x1.5	R	Opposite	Blank	Black	F	Free Run- ning
	125	E6	6-Ø13.5 Rhomb-Flange Ø106.4 - Pilot Ø82.5 x 6.3	K	Shaft Ø1" - Wood- ruff Key Ø1"x1/4"	EE- S2	7/8-14UNF O-Ring, 7/16- 20UNF			BI	Blue	LS	Low Speed
	160	E2B	2-Ø14.3 Rhomb-Flange Ø146.05 - Pilot Ø101.6 x 9.4	G	Shaft Ø1-1/4" - Parrallel Key 5/16"x5/16"x1-1/4"	ED	1-1/16-12UN O-Ring, 7/16- 20UNF			S	Silver Grey		
	200	E2B	2-Ø14.3 Rhomb-Flange Ø146.05 - Pilot Ø101.6 x 9.4	F	Shaft Ø1-1/4" - Splined Key 14- DP12/24	DB	G1/2, G1/4						
	250	WE	4-Ø13.6 Wheel-Flange Ø147.6 - Pilot Ø107.95 x 6.4	FE	Shaft Ø1-1/4" - Splined Key 14- DP12/24	DU	G1/2, 7/16- 20UNF						
	315			T4	Cone Shaft Ø1-1/4" - Parrallel Key 5/16" x 5/16"x 1"	SB	7/8-14UNF O- Ring, G1/4						
	400			S1	Shaft Ø1" - Splined Key SAE 6B	SU	7/8-14 UNF O-Ring, 7/16-20 UNF						
	475			I	Sub-Shaft Ø22 - Splined Key 13- DP16/32	M4	M22x1.5, M14x1.5						
						MU	1/2", 5/8" Cross- hole Manifold 3x3/8-16UNC, 7/16-20UNF						
						MM	1/2", 5/8" Cross- hole Manifold 3xM10, G1/4						
						G	G1/2, G1/4						
						M2	M22x1.5, M14x1.5						
					S2	7/8-14UNF O-Ring, 7/16- 20UNF							

**NOTES:**

- When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. The informations of mounting flange, output shaft and ports are the same as EBMS series. The SP flange applies to shafts of T1, D, B, F, G. If the specification is not in the table or you have specific requirements, please contact us.

**EBMSY**

## EBMSY 80 - 4.92 in<sup>3</sup>/rev (80.6 cm<sup>3</sup>/rev)

		Pressure PSI (bar)						Max. Cont	Max. Int.
		508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	2973 (205)	3263 (225)	
<b>4 (15)</b>	Torque lbf•ft (N•m)	25.8 (35)	59 (80)	88.6 (120)	116.6 (158)	143.9 (195)	168.3 (228)	183.8 (249)	
	Speed (rpm)	180	174	168	164	158	151	143	
<b>8 (30)</b>	Torque lbf•ft (N•m)	25.8 (35)	59 (80)	88.6 (120)	116.6 (158)	143.9 (195)	171.2 (232)	191.9 (260)	
	Speed (rpm)	362	352	346	338	330	322	310	
<b>10.5 (40)</b>	Torque lbf•ft (N•m)	25.8 (35)	58.3 (79)	87.8 (119)	114.4 (155)	142.4 (193)	167.5 (227)	184.5 (250)	
	Speed (rpm)	487	480	468	457	446	438	425	
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	22.1 (30)	56.8 (77)	86.3 (117)	112.9 (153)	141.7 (192)	165.3 (224)	183 (248)	
	Speed (rpm)	612	603	592	581	572	558	542	
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	20.7 (28)	56.8 (77)	86.3 (117)	112.9 (153)	141.7 (192)	165.3 (224)	179.3 (243)	
	Speed (rpm)	735	726	718	703	687	673	646	
<b>17.2 (65)</b>	Torque lbf•ft (N•m)	19.2 (26)	55.4 (75)	85.6 (116)	111.4 (151)	138.7 (188)	160.1 (217)	174.2 (236)	
	Speed (rpm)	794	786	773	760	744	722	706	
<b>21.2 (80)</b>	Torque lbf•ft (N•m)	17.7 (24)	53.1 (72)	80.4 (109)	104.8 (142)	129.9 (176)	152 (206)	167.5 (227)	
	Speed (rpm)	981	968	955	925	893	870	832	

## EBMSY 100 - 6.15 in<sup>3</sup>/rev (100.8 cm<sup>3</sup>/rev)

		Pressure PSI (bar)						Max. Cont	Max. Int.
		508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	2973 (205)	3263 (225)	
<b>4 (15)</b>	Torque lbf•ft (N•m)	35.4 (48)	70.1 (95)	110.7 (150)	147.6 (200)	184.5 (250)	208.1 (282)	228.8 (310)	
	Speed (rpm)	146	144	139	135	130	120	105	
<b>8 (30)</b>	Torque lbf•ft (N•m)	33.2 (45)	69.4 (94)	107.7 (146)	146.1 (198)	184.5 (250)	214 (290)	233.9 (317)	
	Speed (rpm)	291	289	278	274	269	258	242	
<b>10.5 (40)</b>	Torque lbf•ft (N•m)	31.7 (43)	65.7 (89)	104.8 (142)	144.6 (196)	183 (248)	212.5 (288)	233.2 (316)	
	Speed (rpm)	387	384	374	359	350	335	320	
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	29.5 (40)	64.9 (88)	99.6 (135)	143.2 (194)	182.3 (247)	211.1 (286)	232.5 (315)	
	Speed (rpm)	486	483	473	462	450	430	420	
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	27.3 (37)	64.9 (88)	97.4 (132)	136.5 (185)	180.1 (244)	208.9 (283)	230.3 (312)	
	Speed (rpm)	588	584	574	562	550	538	520	
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	25.8 (35)	59 (80)	95.9 (130)	132.8 (180)	177.1 (240)	205.9 (279)	228.8 (310)	
	Speed (rpm)	740	735	720	705	696	676	653	
<b>23.8 (90)</b>	Torque lbf•ft (N•m)	22.1 (30)	55.4 (75)	91.5 (124)	125.5 (170)	174.2 (236)	200 (271)	223.6 (303)	
	Speed (rpm)	850	840	810	787	770	750	747	

# PERFORMANCE DATA



EBMSY

## EBMSY 125 - 7.63 in<sup>3</sup>/rev (125 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.
		508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	2973 (205)	3263 (225)	
Pressure PSI (bar)									
4 (15)	Torque lbf•ft (N•m)	40.6 (55)	88.6 (120)	129.9 (176)	180.8 (245)	228 (309)	254.6 (345)	276.8 (375)	
	Speed (rpm)	115	113	110	104	98	90	84	
8 (30)	Torque lbf•ft (N•m)	40.6 (55)	88.6 (120)	129.2 (175)	184.5 (250)	232.5 (315)	268.6 (364)	298.2 (404)	
	Speed (rpm)	231	228	223	214	202	188	172	
10.5 (40)	Torque lbf•ft (N•m)	39.1 (53)	87.1 (118)	131.4 (178)	184.5 (250)	232.5 (315)	268.6 (364)	297.4 (403)	
	Speed (rpm)	312	309	290	289	278	262	235	
13.2 (50)	Torque lbf•ft (N•m)	36.9 (50)	84.9 (115)	129.9 (176)	183 (248)	232.5 (315)	267.2 (362)	293 (397)	
	Speed (rpm)	391	386	378	365	352	339	308	
15.8 (60)	Torque lbf•ft (N•m)	33.2 (45)	83.4 (113)	126.2 (171)	177.9 (241)	227.3 (308)	264.2 (358)	293 (397)	
	Speed (rpm)	469	461	450	437	425	400	372	
19.8 (75)	Torque lbf•ft (N•m)	33.2 (45)	81.2 (110)	123.2 (167)	177.1 (240)	225.8 (306)	259.8 (352)	287.1 (389)	
	Speed (rpm)	588	574	560	544	526	505	481	
23.8 (90)	Torque lbf•ft (N•m)	29.5 (40)	77.5 (105)	119.6 (162)	174.9 (237)	222.1 (301)	253.1 (343)	279 (378)	
	Speed (rpm)	710	696	680	661	646	628	610	

## EBMSY 160 - 9.40 in<sup>3</sup>/rev (154 cm<sup>3</sup>/rev)

		Max. Cont							Max. Int.
		508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	3045 (210)	3263 (225)	
Pressure PSI (bar)									
4 (15)	Torque lbf•ft (N•m)	51.7 (70)	104.8 (142)	158.7 (215)	219.9 (298)	274.5 (372)	321 (435)	351.3 (476)	
	Speed (rpm)	93	91	89	85	80	76	58	
8 (30)	Torque lbf•ft (N•m)	53.9 (73)	111.4 (151)	166.1 (225)	230.3 (312)	281.9 (382)	336.5 (456)	363.1 (492)	
	Speed (rpm)	189	187	181	176	170	162	153	
10.5 (40)	Torque lbf•ft (N•m)	55.4 (75)	112.2 (152)	168.3 (228)	231.7 (314)	282.7 (383)	335.1 (454)	360.1 (488)	
	Speed (rpm)	252	250	246	239	234	228	212	
13.2 (50)	Torque lbf•ft (N•m)	51.7 (70)	109.2 (148)	166.1 (225)	225.1 (305)	274.5 (372)	328.4 (445)	354.2 (480)	
	Speed (rpm)	313	310	306	298	293	285	272	
15.8 (60)	Torque lbf•ft (N•m)	50.2 (68)	105.5 (143)	160.9 (218)	218.4 (296)	273.1 (370)	326.2 (442)	354.2 (480)	
	Speed (rpm)	378	376	370	362	353	346	332	
19.8 (75)	Torque lbf•ft (N•m)	45.8 (62)	103.3 (140)	155.7 (211)	214.8 (291)	269.4 (365)	324 (439)	350.6 (475)	
	Speed (rpm)	475	469	461	450	441	432	414	
23.8 (90)	Torque lbf•ft (N•m)	43.5 (59)	96.7 (131)	149.1 (202)	211.1 (286)	263.5 (357)	313.7 (425)	339.5 (460)	
	Speed (rpm)	567	561	554	543	532	520	509	

## EBMSY 200 - 11.84 in<sup>3</sup>/rev (194 cm<sup>3</sup>/rev)

								Max. Cont	Max. Int.
		Pressure PSI (bar)	508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	3045 (210)	3263 (225)
<b>4 (15)</b>	Torque lbf•ft (N•m)		64.2 (87)	132.1 (179)	201.5 (273)	273.8 (371)	347.6 (471)	414.8 (562)	450.2 (610)
	Speed (rpm)		74	73	71	68	64	60	48
<b>8 (30)</b>	Torque lbf•ft (N•m)		67.2 (91)	140.2 (190)	212.5 (288)	284.9 (386)	360.9 (489)	422.1 (572)	456.1 (618)
	Speed (rpm)		150	148	143	140	134	128	119
<b>10.5 (40)</b>	Torque lbf•ft (N•m)		69.4 (94)	142.4 (193)	218.4 (296)	290.8 (394)	367.5 (498)	431 (584)	476 (645)
	Speed (rpm)		198	195	192	188	183	178	167
<b>13.2 (50)</b>	Torque lbf•ft (N•m)		66.4 (90)	141 (191)	215.5 (292)	287.1 (389)	363.8 (493)	428 (580)	467.9 (634)
	Speed (rpm)		248	246	241	236	230	223	212
<b>15.8 (60)</b>	Torque lbf•ft (N•m)		62.7 (85)	136.5 (185)	205.9 (279)	281.9 (382)	356.5 (483)	424.4 (575)	459 (622)
	Speed (rpm)		300	295	288	281	273	263	251
<b>19.8 (75)</b>	Torque lbf•ft (N•m)		57.6 (78)	129.9 (176)	200 (271)	273.1 (370)	348.3 (472)	414 (561)	450.2 (610)
	Speed (rpm)		374	370	364	360	352	340	331
<b>23.8 (90)</b>	Torque lbf•ft (N•m)		50.2 (68)	120.3 (163)	195.6 (265)	266.4 (361)	336.5 (456)	402.2 (545)	442.1 (599)
	Speed (rpm)		443	440	435	428	424	413	400

## EBMSY 250 - 14.83 in<sup>3</sup>/rev (243 cm<sup>3</sup>/rev)

								Max. Cont	Max. Int.
		Pressure PSI (bar)	508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	2900 (200)	3263 (225)
<b>4 (15)</b>	Torque lbf•ft (N•m)		81.2 (110)	170.5 (231)	259 (351)	341 (462)	431.7 (585)	502.6 (681)	574.2 (778)
	Speed (rpm)		59	58	56	53	50	46	35
<b>8 (30)</b>	Torque lbf•ft (N•m)		85.6 (116)	174.2 (236)	264.9 (359)	350.6 (475)	440.6 (597)	516.6 (700)	583 (790)
	Speed (rpm)		119	117	114	108	102	92	80
<b>10.5 (40)</b>	Torque lbf•ft (N•m)		87.1 (118)	177.9 (241)	267.9 (363)	354.2 (480)	442.1 (599)	521 (706)	587.4 (796)
	Speed (rpm)		162	159	156	150	143	134	121
<b>13.2 (50)</b>	Torque lbf•ft (N•m)		81.9 (111)	172.7 (234)	259.8 (352)	348.3 (472)	436.2 (591)	511.4 (693)	581.5 (788)
	Speed (rpm)		203	201	197	191	182	173	158
<b>15.8 (60)</b>	Torque lbf•ft (N•m)		78.2 (106)	165.3 (224)	254.6 (345)	341 (462)	429.5 (582)	505.5 (685)	569.7 (772)
	Speed (rpm)		244	242	237	230	220	208	194
<b>19.8 (75)</b>	Torque lbf•ft (N•m)		74.5 (101)	157.9 (214)	250.9 (340)	335.1 (454)	420.7 (570)	494.5 (670)	560.9 (760)
	Speed (rpm)		303	299	294	285	272	260	244
<b>23.8 (90)</b>	Torque lbf•ft (N•m)		68.6 (93)	154.2 (209)	247.2 (335)	329.9 (447)	412.5 (559)	484.9 (657)	552.8 (749)
	Speed (rpm)		363	359	354	348	340	328	303

# PERFORMANCE DATA



EBMSY

## EBMSY 315 - 18.98 in<sup>3</sup>/rev (311 cm<sup>3</sup>/rev)

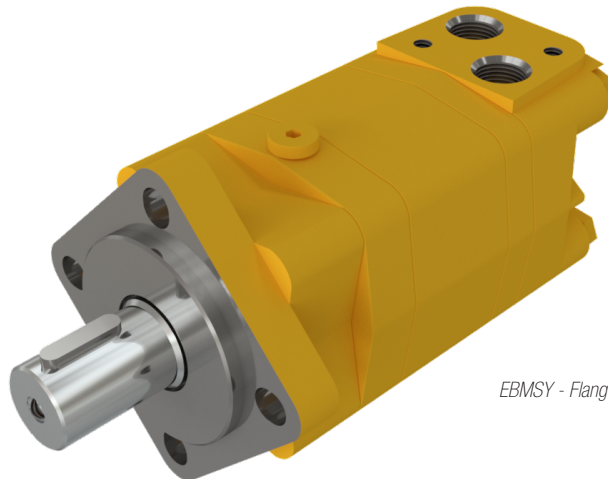
		<i>Max. Cont</i> <i>Max. Int.</i>						
		<b>Pressure PSI (bar)</b>						
		<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2900 (200)</b>	<b>3263 (225)</b>
<b>4 (15)</b>	Torque lbf•ft (N•m)	109.2 (148)	224.4 (304)	336.5 (456)	452.4 (613)	562.4 (762)	648.7 (879)	721.8 (978)
	Speed (rpm)	48	47	45	43	41	39	27
<b>8 (30)</b>	Torque lbf•ft (N•m)	114.4 (155)	231.7 (314)	343.2 (465)	468.6 (635)	574.2 (778)	652.4 (884)	729.1 (988)
	Speed (rpm)	95	93	91	89	86	82	67
<b>10.5 (40)</b>	Torque lbf•ft (N•m)	118.1 (160)	236.9 (321)	353.5 (479)	479.7 (650)	587.4 (796)	668.6 (906)	735.8 (997)
	Speed (rpm)	127	125	121	117	115	109	91
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	114.4 (155)	231.7 (314)	343.2 (465)	470.8 (638)	575.6 (780)	653.9 (886)	729.1 (988)
	Speed (rpm)	159	157	153	149	145	142	128
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	111.4 (151)	225.8 (306)	334.3 (453)	457.6 (620)	564.6 (765)	653.9 (886)	720.3 (976)
	Speed (rpm)	187	185	181	176	169	157	143
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	107.7 (146)	221.4 (300)	328.4 (445)	452.4 (613)	557.2 (755)	645.8 (875)	712.9 (966)
	Speed (rpm)	238	236	232	227	224	220	196
<b>23.8 (90)</b>	Torque lbf•ft (N•m)	99.6 (135)	209.6 (284)	321.8 (436)	443.5 (601)	546.1 (740)	636.9 (863)	702.6 (952)
	Speed (rpm)	286	283	278	272	265	257	232

## EBMSY 400 - 24.04 in<sup>3</sup>/rev (394 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>						
		<b>Pressure PSI (bar)</b>						
		<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2320 (160)</b>	<b>2538 (175)</b>	
<b>4 (15)</b>	Torque lbf•ft (N•m)	137.3 (186)	279.7 (379)	426.6 (578)	574.9 (779)	661.2 (896)	715.1 (969)	
	Speed (rpm)	37	36	35	33	31	29	
<b>8 (30)</b>	Torque lbf•ft (N•m)	140.2 (190)	286.3 (388)	435.4 (590)	583.8 (791)	667.9 (905)	731.4 (991)	
	Speed (rpm)	75	73	71	68	65	61	
<b>10.5 (40)</b>	Torque lbf•ft (N•m)	143.9 (195)	290.8 (394)	439.8 (596)	588.2 (797)	673.1 (912)	736.5 (998)	
	Speed (rpm)	99	97	95	93	90	85	
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	141 (191)	286.3 (388)	433.2 (587)	579.3 (785)	667.2 (904)	725.5 (983)	
	Speed (rpm)	125	123	118	114	109	102	
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	137.3 (186)	286.3 (388)	433.2 (587)	579.3 (785)	667.2 (904)	725.5 (983)	
	Speed (rpm)	149	146	142	137	131	122	
<b>19.8 (75)</b>	Torque lbf•ft (N•m)	133.6 (181)	274.5 (372)	425.1 (576)	568.3 (770)	657.6 (891)	718.1 (973)	
	Speed (rpm)	187	183	177	171	164	153	
<b>23.8 (90)</b>	Torque lbf•ft (N•m)	129.9 (176)	270.8 (367)	421.4 (571)	565.3 (766)	651.7 (883)	712.2 (965)	
	Speed (rpm)	226	221	214	208	199	183	

**EBMSY 475 - 28.99 in<sup>3</sup>/rev (475 cm<sup>3</sup>/rev)**

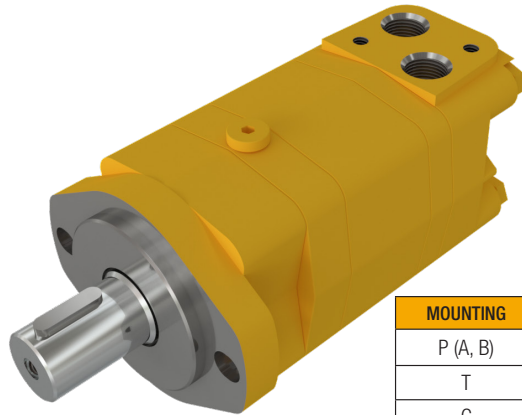
		<i>Max. Int.</i>				
		<b>Pressure PSI (bar)</b>				
		<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2175 (150)</b>
<b>4 (15)</b>	Torque lbf•ft (N•m)	160.9 (218)	324 (439)	487.8 (661)	658.3 (892)	734.3 (995)
	Speed (rpm)	30	29	28	27	25
<b>8 (30)</b>	Torque lbf•ft (N•m)	164.6 (223)	332.1 (450)	498.9 (676)	671.6 (910)	739.5 (1002)
	Speed (rpm)	61	60	58	56	53
<b>10.5 (40)</b>	Torque lbf•ft (N•m)	168.3 (228)	340.2 (461)	508.5 (689)	684.1 (927)	750.5 (1017)
	Speed (rpm)	82	80	77	74	68
<b>13.2 (50)</b>	Torque lbf•ft (N•m)	165.3 (224)	336.5 (456)	503.3 (682)	679 (920)	743.9 (1008)
	Speed (rpm)	103	101	97	92	86
<b>15.8 (60)</b>	Torque lbf•ft (N•m)	162.4 (220)	332.8 (451)	499.6 (677)	673.8 (913)	736.5 (998)
	Speed (rpm)	123	121	118	112	105
<i>Max. Cont.</i> <b>19.8 (75)</b>	Torque lbf•ft (N•m)	156.5 (212)	326.9 (443)	490 (664)	664.9 (901)	723.2 (980)
	Speed (rpm)	155	153	147	140	132
<i>Max. Int.</i> <b>23.8 (90)</b>	Torque lbf•ft (N•m)	144.6 (196)	310.7 (421)	474.5 (643)	647.2 (877)	707.7 (959)
	Speed (rpm)	186	184	178	170	157



EBMSY - Flange E4

# DIMENSIONS AND MOUNTING

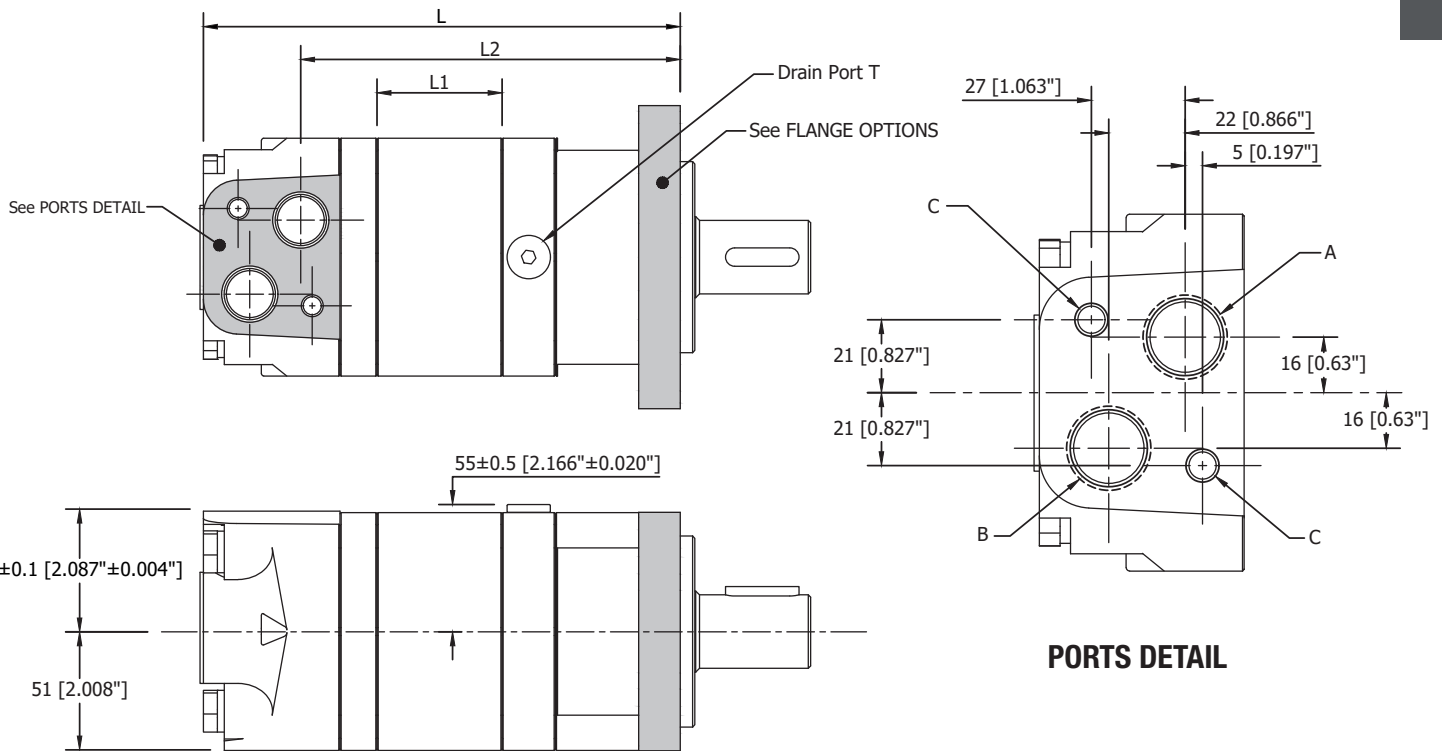
## TYPICAL PORTS (DMSP)



**AVAILABLE FLANGE:**  
E2 - E4 - F6 - E2B - SP - W

MOUNTING	PORTS CODE (Depth mm)			
	D	M	S	P
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)
C	2x M10 (13)	2x M10 (13)	2x 3/8-16UNC (13)	2x 3/8-16UNC (13)

**EBMSY**



### EBMSY BODY DIMENSIONS

MODEL	L	L1	L2
EBMSY-80	170 (6.693")	16 (0.63")	126.5 (4.98")
EBMSY-100	174 (6.85")	20 (0.787")	130.5 (5.138")
EBMSY-125	179 (7.047")	25 (0.984")	135.5 (5.335")
EBMSY-160	181 (7.126")	27 (1.063")	137.5 (5.413")
EBMSY-200	188 (7.402")	34 (1.339")	144.5 (5.689")
EBMSY-250	196 (7.717")	42 (1.654")	152.5 (6.004")
EBMSY-315	208 (8.189")	54 (2.126")	164.5 (6.476")
EBMSY-400	223 (8.78")	69 (2.717")	179.5 (7.067")
EBMSY-475	237 (9.331")	83 (3.268")	193.5 (7.618")

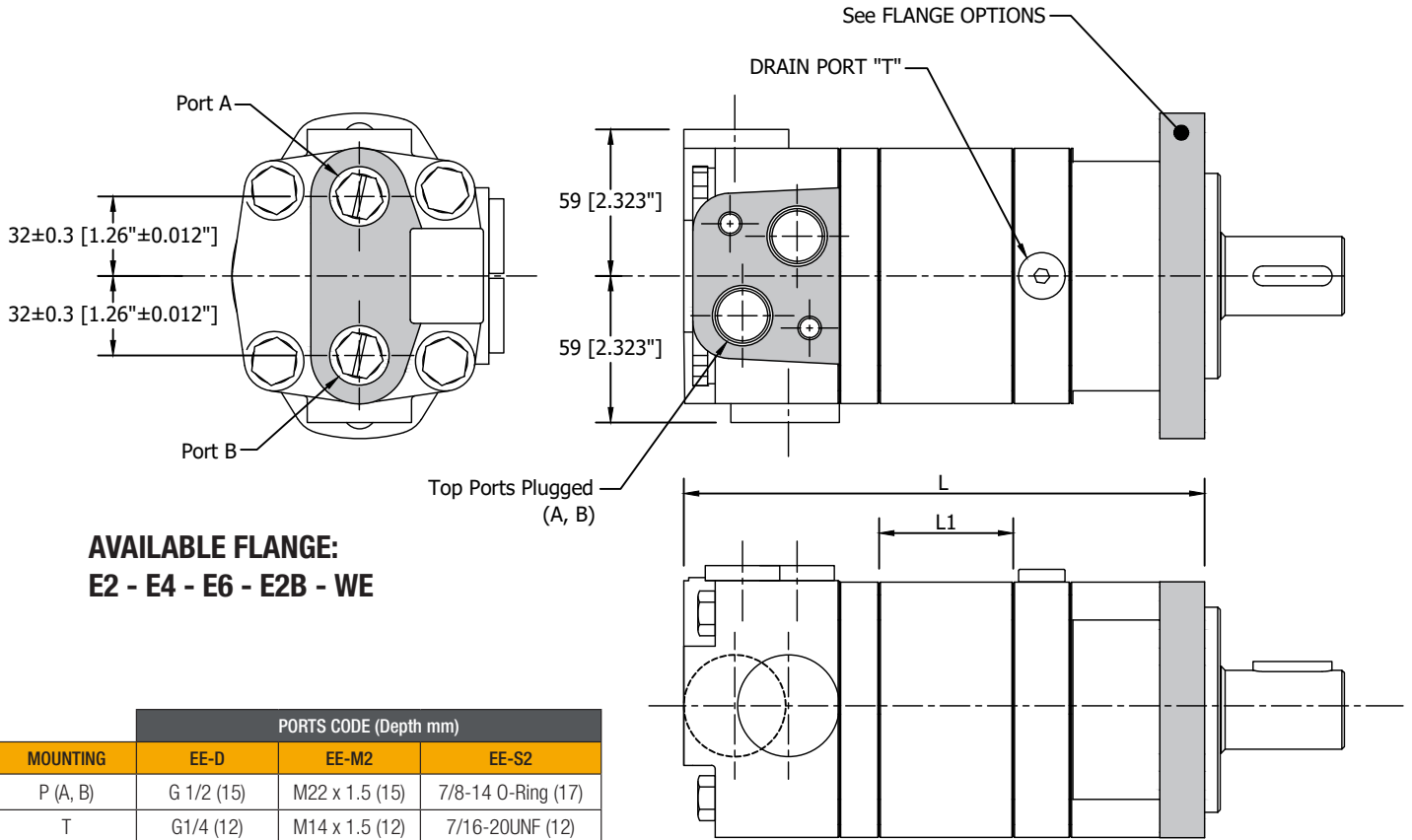
### EBMSY BODY DIMENSIONS WITH FLANGE W

MODEL	L	L1	L2
EBMSY-80-W	132.5 (5.217")	16 (0.63")	89 (3.504")
EBMSY-100-W	136.5 (5.374")	20 (0.787")	93 (3.661")
EBMSY-125-W	141.5 (5.571")	25 (0.984")	98 (3.858")
EBMSY-160-W	143.5 (5.65")	27 (1.063")	100 (3.937")
EBMSY-200-W	150.5 (5.925")	34 (1.339")	107 (4.213")
EBMSY-250-W	158.5 (6.24")	42 (1.654")	115 (4.528")
EBMSY-315-W	170.5 (6.713")	54 (2.126")	127 (5")
EBMSY-400-W	185.5 (7.303")	69 (2.717")	142 (5.591")
EBMSY-475-W	199.5 (7.854")	83 (3.268")	156 (6.142")

Note:  
If the mounting SP is used, add  
12mm to dimensions L and L2

# DIMENSIONS AND MOUNTING END PORTS (EE-D, EE-M2, EE-S2)

**EBMSY**



## EBMSY BODY END PORTS DIMENSIONS

MODEL	L	L1
EBMSY-80	176 (6.929")	16 (0.63")
EBMSY-100	180 (7.087")	20 (0.787")
EBMSY-125	185 (7.283")	25 (0.984")
EBMSY-160	187 (7.362")	27 (1.063")
EBMSY-200	194 (7.638")	34 (1.339")
EBMSY-250	202 (7.953")	42 (1.654")
EBMSY-315	214 (8.425")	54 (2.126")
EBMSY-400	229 (9.016")	69 (2.717")
EBMSY-475	243 (9.567")	83 (3.268")

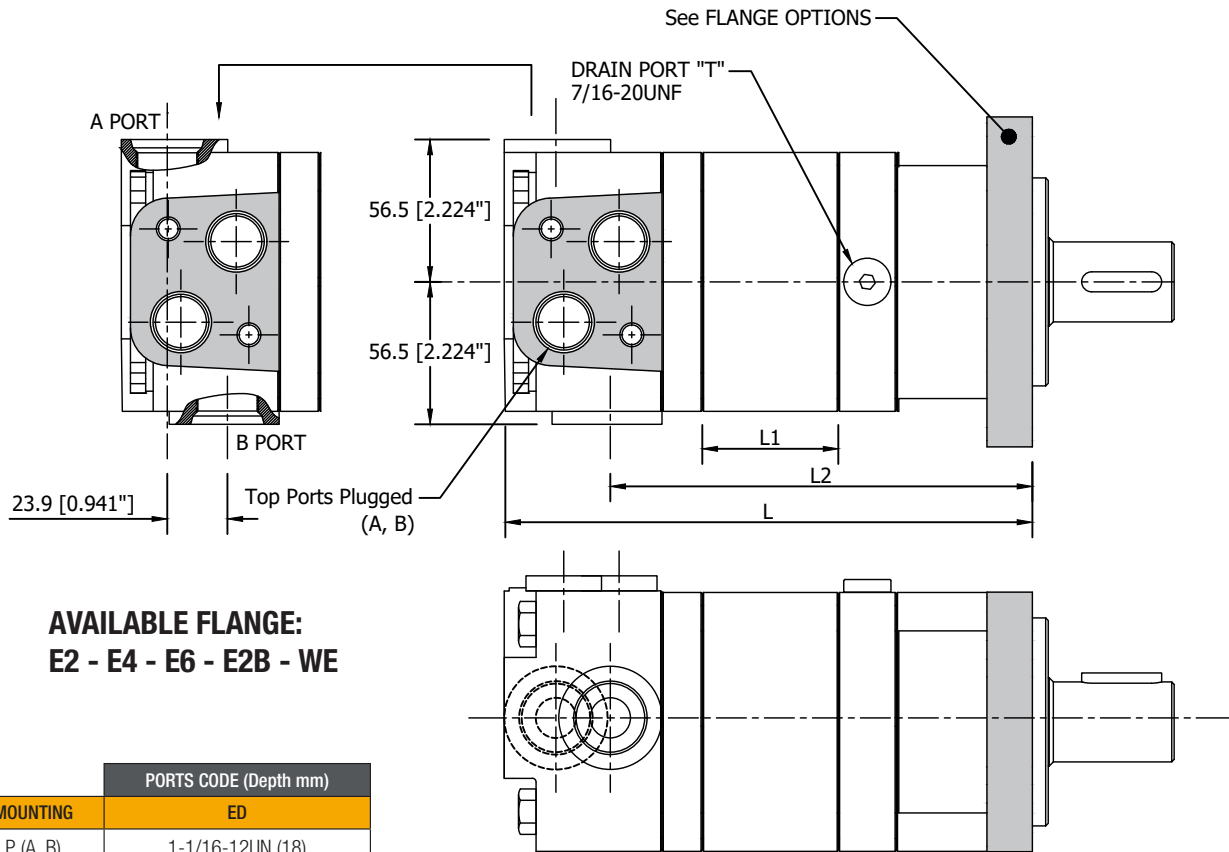
## EBMSY BODY END PORTS DIMENSIONS WITH FLANGE WE

MODEL	L	L1
EBMSY-80-WE	148 (5.827")	16 (0.63")
EBMSY-100-WE	152 (5.984")	20 (0.787")
EBMSY-125-WE	157 (6.181")	25 (0.984")
EBMSY-160-WE	159 (6.26")	27 (1.063")
EBMSY-200-WE	166 (6.535")	34 (1.339")
EBMSY-250-WE	174 (6.85")	42 (1.654")
EBMSY-315-WE	186 (7.323")	54 (2.126")
EBMSY-400-WE	201 (7.913")	69 (2.717")
EBMSY-475-WE	215 (8.465")	83 (3.268")

# DIMENSIONS AND MOUNTING

## ED 1-1/16-12UN O-RING 180°

### APART PORTS (ED)



**AVAILABLE FLANGE:**  
E2 - E4 - E6 - E2B - WE

MOUNTING	PORTS CODE (Depth mm)
	ED
P (A, B)	1-1/16-12UN (18)
T	7/16-20UNF (12)

#### EBMSY BODY 180° PORTS DIMENSIONS

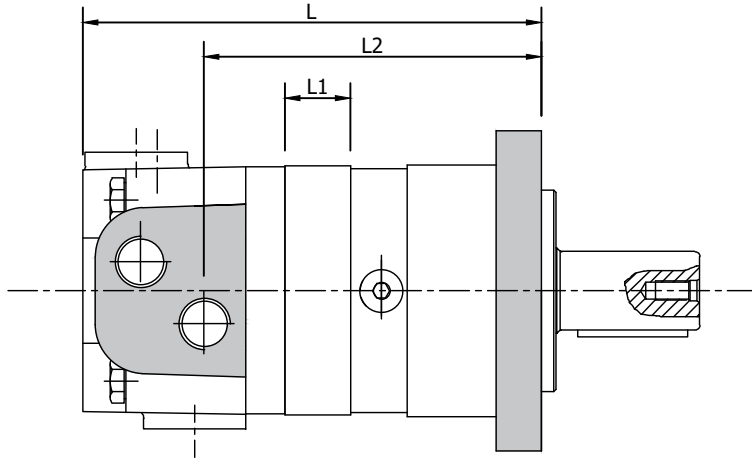
MODEL	L	L1	L2
EBMSY-80	176 (6.929")	16 (0.63")	130 (5.118")
EBMSY-100	180 (7.087")	20 (0.787")	134 (5.276")
EBMSY-125	185 (7.283")	25 (0.984")	139 (5.472")
EBMSY-160	187 (7.362")	27 (1.063")	141 (5.551")
EBMSY-200	194 (7.638")	34 (1.339")	148 (5.827")
EBMSY-250	202 (7.953")	42 (1.654")	156 (6.142")
EBMSY-315	214 (8.425")	54 (2.126")	168 (6.614")
EBMSY-400	229 (9.016")	69 (2.717")	183 (7.205")
EBMSY-475	243 (9.567")	83 (3.268")	197 (7.756")

#### EBMSY BODY 180° PORTS DIMENSIONS WITH FLANGE WE

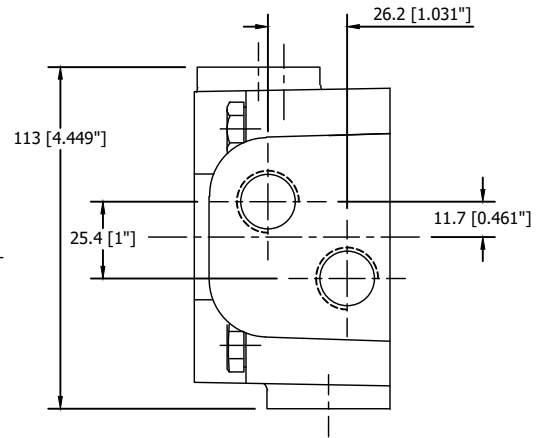
MODEL	L	L1	L2
EBMSY-80-WE	148 (5.827")	16 (0.63")	102 (4.016")
EBMSY-100-WE	152 (5.984")	20 (0.787")	106 (4.173")
EBMSY-125-WE	157 (6.181")	25 (0.984")	111 (4.37")
EBMSY-160-WE	159 (6.26")	27 (1.063")	113 (4.449")
EBMSY-200-WE	166 (6.535")	34 (1.339")	119 (4.685")
EBMSY-250-WE	178 (7.008")	42 (1.654")	127 (5")
EBMSY-315-WE	190 (7.48")	54 (2.126")	139 (5.472")
EBMSY-400-WE	205 (8.071")	69 (2.717")	154 (6.063")
EBMSY-475-WE	219 (8.622")	83 (3.268")	168 (6.614")

# DIMENSIONS AND MOUNTING ALTERNATIVE PORTS (DB, DU, SU, SB, M4, MU, MM)

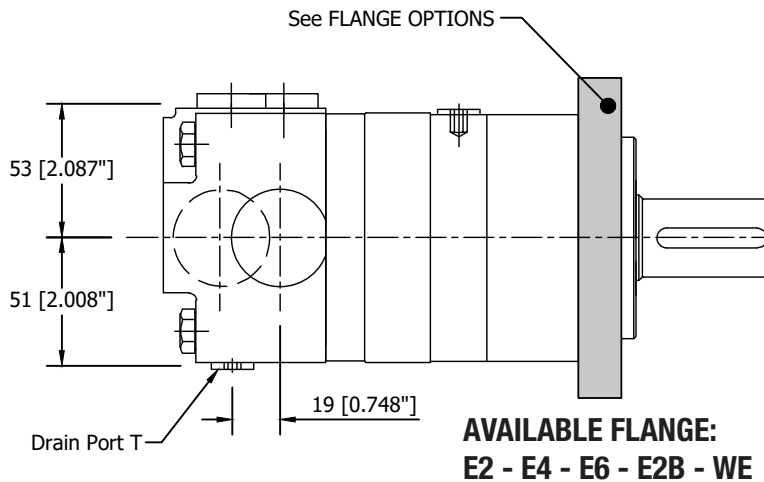
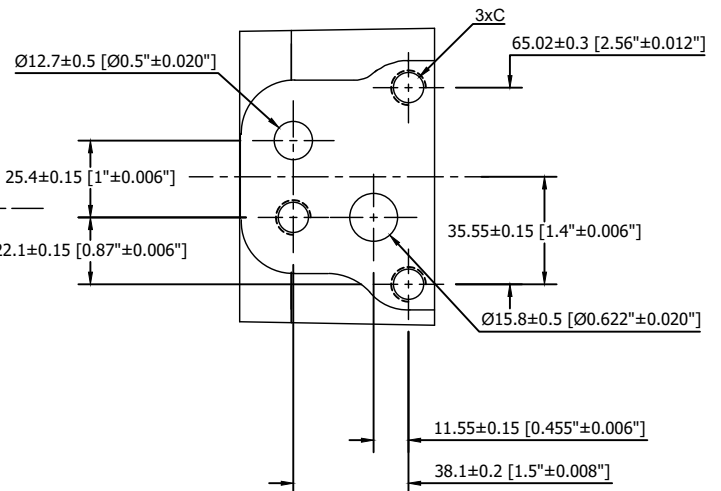
**EBMSY**



**DB, DU, SU, SB, M4**



**MU, MM**



MOUNTING	PORTS CODE (Depth mm)						
	DB	DU	SU	SB	M4	MU	MM
P (A, B)	G 1/2 (15)	G 1/2 (15)	7/8-14 O-Ring (17)	7/8-14 O-Ring (17)	M22 x 1.5 (15)	Ø12.7, Ø15.8	Ø12.7, Ø15.8
T	G1/4 (12)	7/16-20UNF (12)	7/16-20UNF (12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	G1/4 (12)
C			---			3/8-16UNC	M10

## EBMSY BODY ALT. PORTS DIMENSIONS

MODEL	L	L1	L2
EBMSY-80	177 (6.969")	16 (0.63")	126.5 (4.98")
EBMSY-100	181 (7.126")	20 (0.787")	130.5 (5.138")
EBMSY-125	186 (7.323")	25 (0.984")	135.5 (5.335")
EBMSY-160	188 (7.402")	27 (1.063")	137.5 (5.413")
EBMSY-200	195 (7.677")	34 (1.339")	144.5 (5.689")
EBMSY-250	203 (7.992")	42 (1.654")	152.5 (6.004")
EBMSY-315	215 (8.465")	54 (2.126")	164.5 (6.476")
EBMSY-400	230 (9.055")	69 (2.717")	179.5 (7.067")
EBMSY-475	244 (9.606")	83 (3.268")	193.5 (7.618")

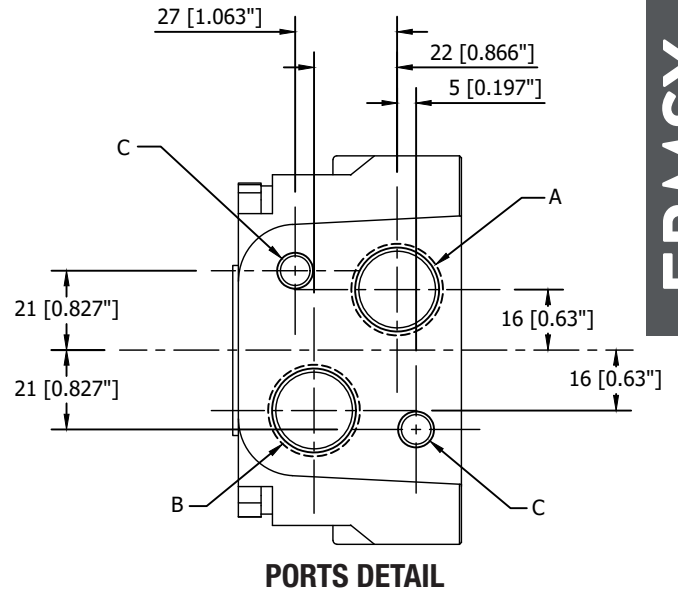
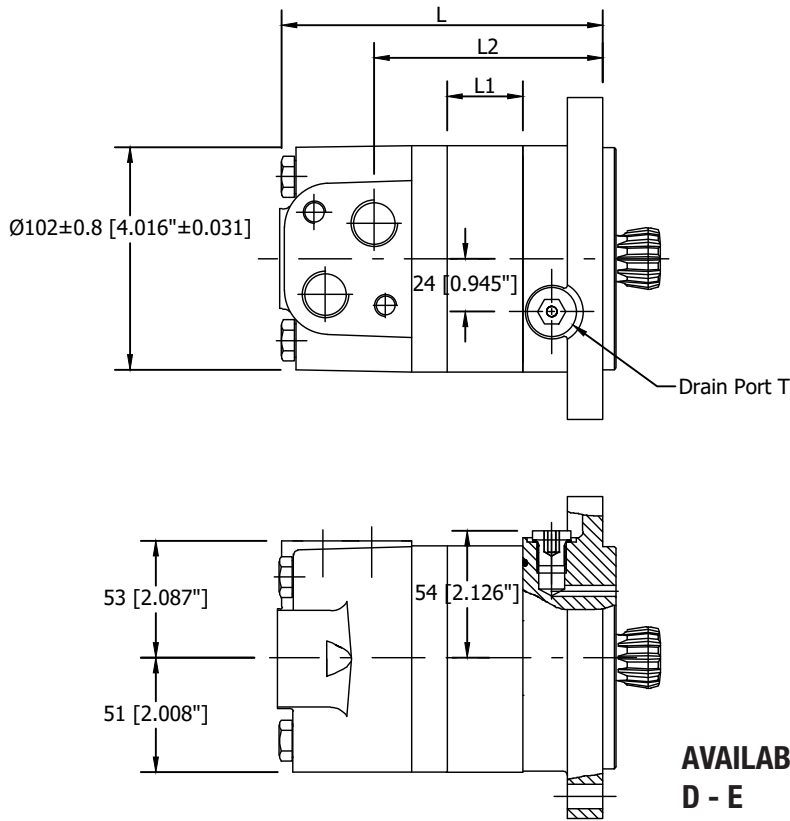
## EBMSY BODY ALT. PORTS DIMENSIONS WITH FLANGE WE

MODEL	L	L1	L2
EBMSY-80-WE	148.5 (5.846")	16 (0.63")	98 (3.858")
EBMSY-100-WE	152.5 (6.004")	20 (0.787")	102 (4.016")
EBMSY-125-WE	157.5 (6.201")	25 (0.984")	107 (4.213")
EBMSY-160-WE	159.5 (6.28")	27 (1.063")	109 (4.291")
EBMSY-200-WE	166.5 (6.555")	34 (1.339")	116 (4.567")
EBMSY-250-WE	174.5 (6.87")	42 (1.654")	124 (4.882")
EBMSY-315-WE	186.5 (7.343")	54 (2.126")	136 (5.354")
EBMSY-400-WE	201.5 (7.933")	69 (2.717")	151 (5.945")
EBMSY-475-WE	215.5 (8.484")	83 (3.268")	165 (6.496")

# DIMENSIONS AND MOUNTING

## CIRCULAR FLANGE

### PORTS (D,M,S,P)

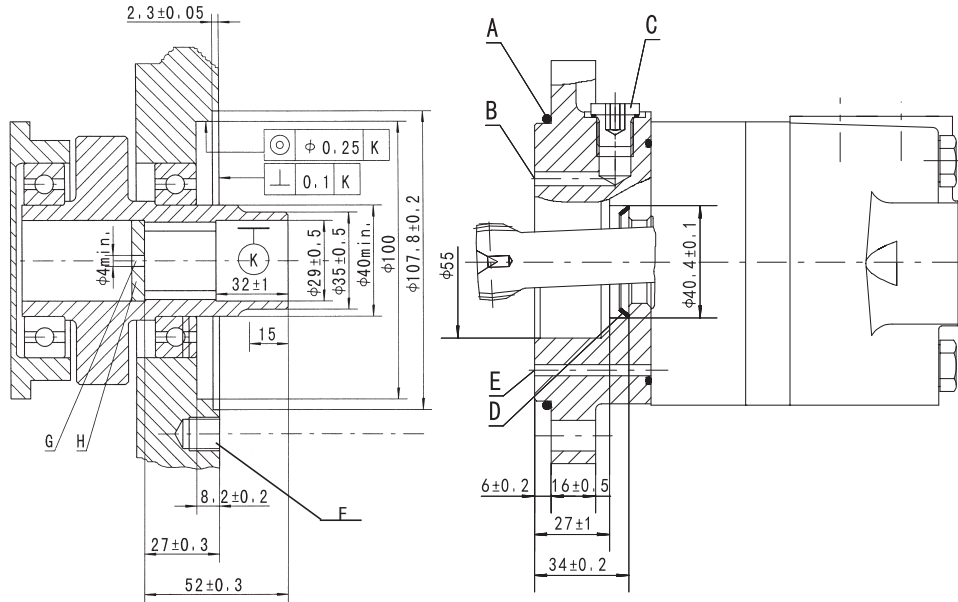


**AVAILABLE FLANGE:**  
**D - E**

MOUNTING	PORTS CODE (Depth mm)			
	D	M	S	P
P (A, B)	G 1/2 (15)	M22 x 1.5 (15)	7/8-14 O-Ring (17)	1/2-14 FNPT (15)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)
C	2x M10 (13)	2x M10 (13)	2x 3/8-16UNC (13)	2x 3/8-16UNC (13)

### EBMSYS BODY DIMENSIONS

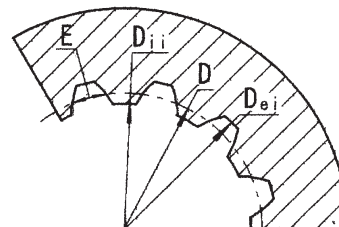
MODEL	L	L1	L2
EBMSY-80	129 (5.079")	16 (0.63")	85 (3.346")
EBMSY-100	133 (5.236")	20 (0.787")	89 (3.504")
EBMSY-125	138 (5.433")	25 (0.984")	94 (3.701")
EBMSY-160	140 (5.512")	27 (1.063")	96 (3.78")
EBMSY-200	147 (5.787")	34 (1.339")	103 (4.055")
EBMSY-250	155 (6.102")	42 (1.654")	111 (4.37")
EBMSY-315	167 (6.575")	54 (2.126")	123 (4.843")
EBMSY-400	182 (7.165")	69 (2.717")	138 (5.433")
EBMSY-475	196 (7.717")	83 (3.268")	152 (5.984")



- A: O-Ring 100 x 3
- B: External Drain Channel
- C: Drain Connection G1/4; 12mm Deep
- D: Conical Seal Ring
- E: Internal Drain Channel
- F: M10; Min. 15mm Deep
- G: Oil Circulation Hole
- H: Hardened Stop Plate

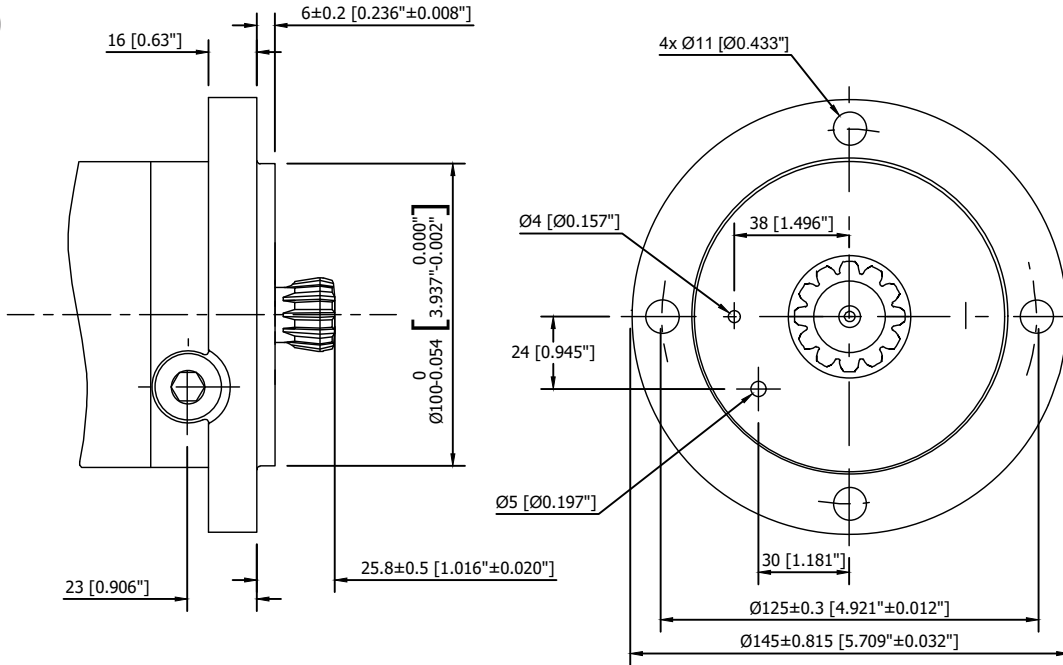
## INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

FILLET ROOT SIDE FIT		mm
Number of Teeth	Z	12
Diametral Pitch	DP	12/24
Pressure Angle	$\alpha_b$	30a
Pitch Diameter	D	Ø25.4
Major Diameter	$D_{ei}$	$Ø28_{-0.1}^0$
Minor Diameter	$D_{ii}$	$Ø23_{0}^{+0.033}$
Space Width (Circular)	E	4.308 ±0.02

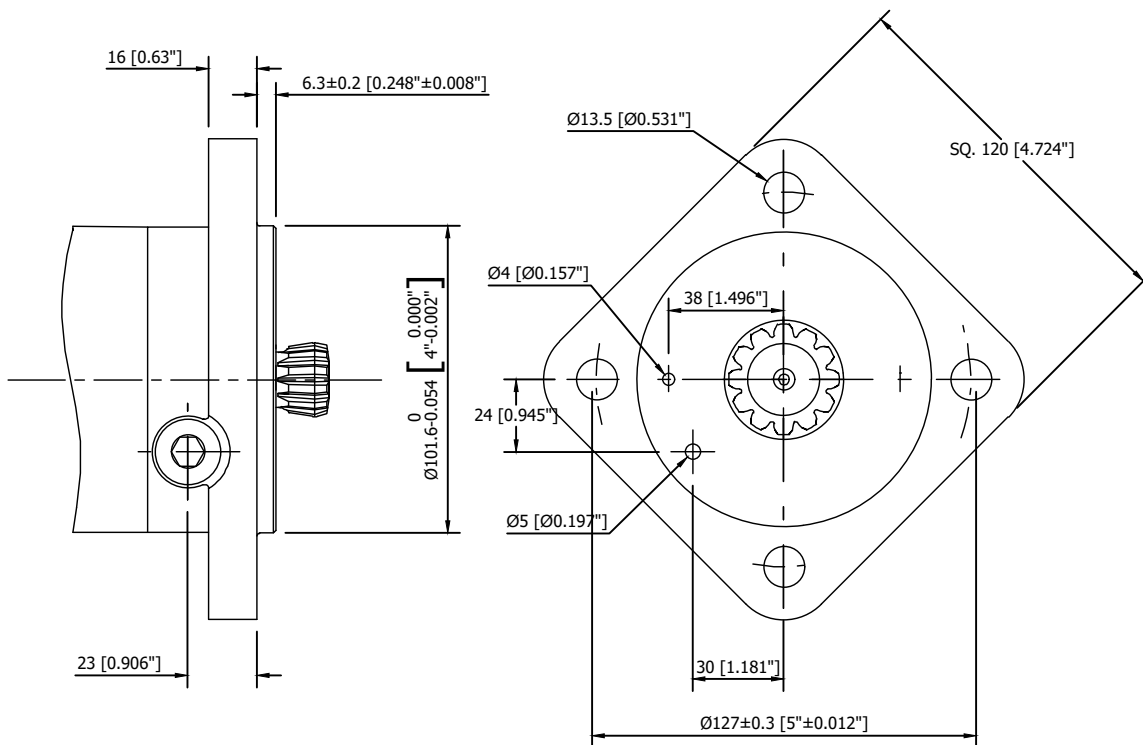


# FLANGE OPTIONS

**FLANGE D**

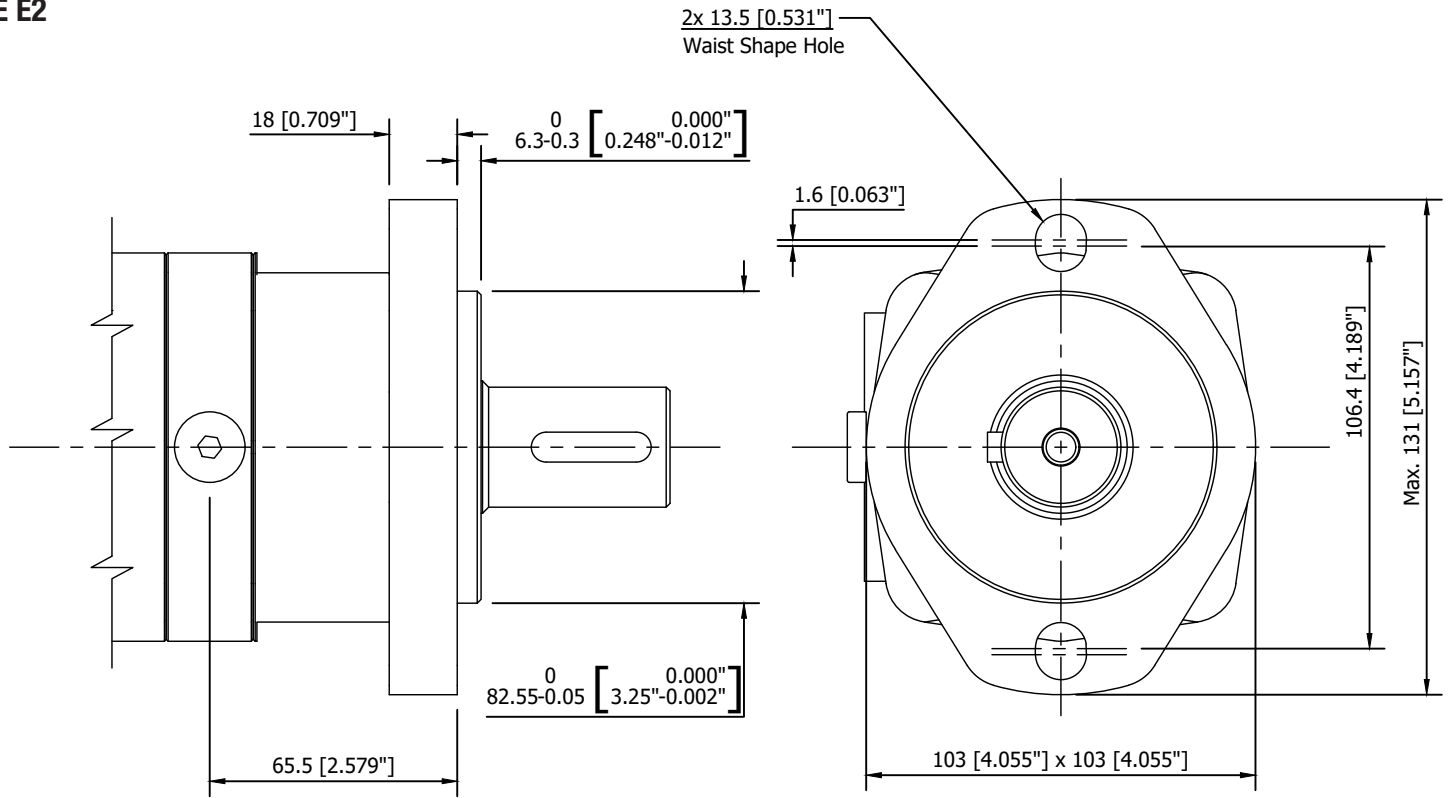


**FLANGE E**

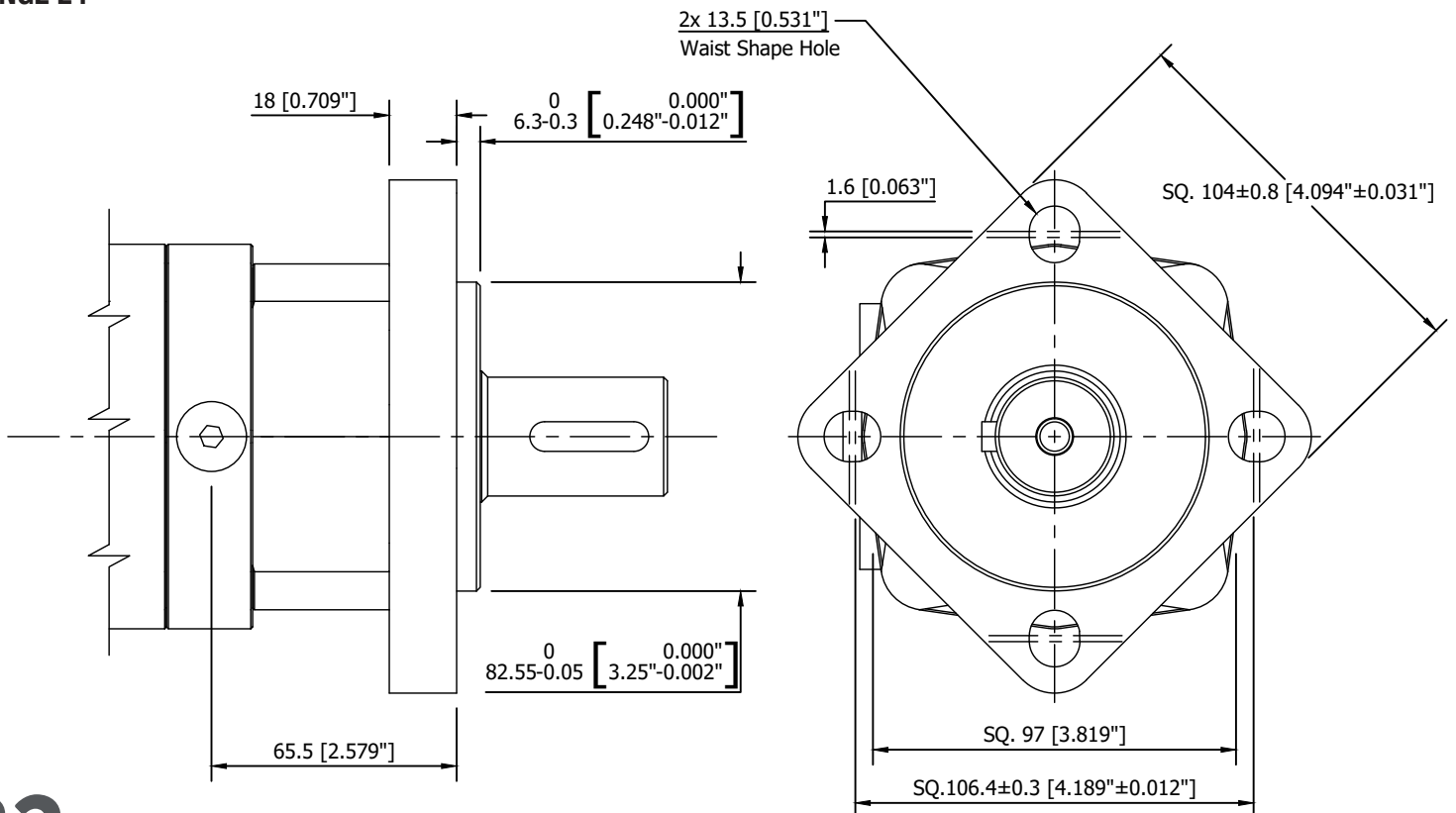


## FLANGE E2

**EBMSY**

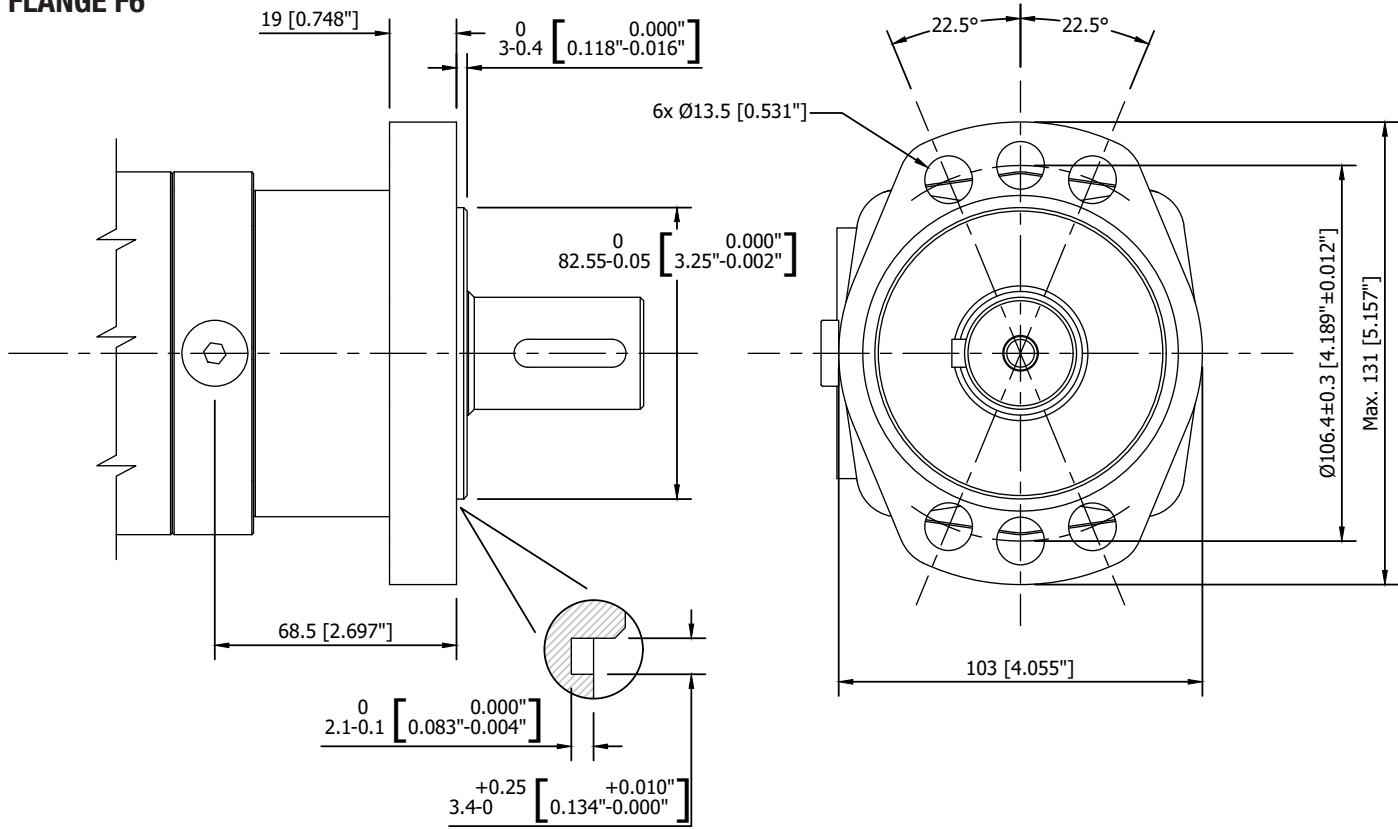


## FLANGE E4

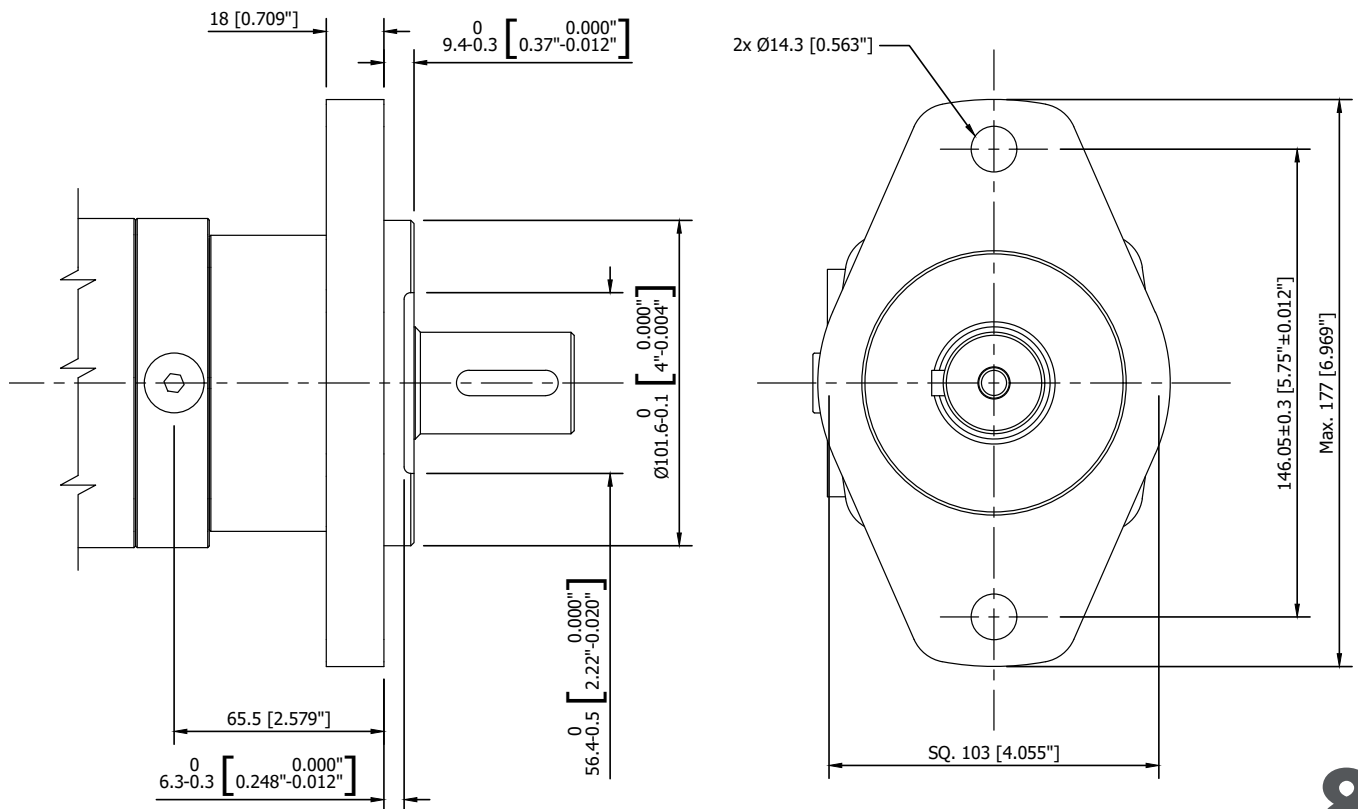


# FLANGE OPTIONS

## FLANGE F6

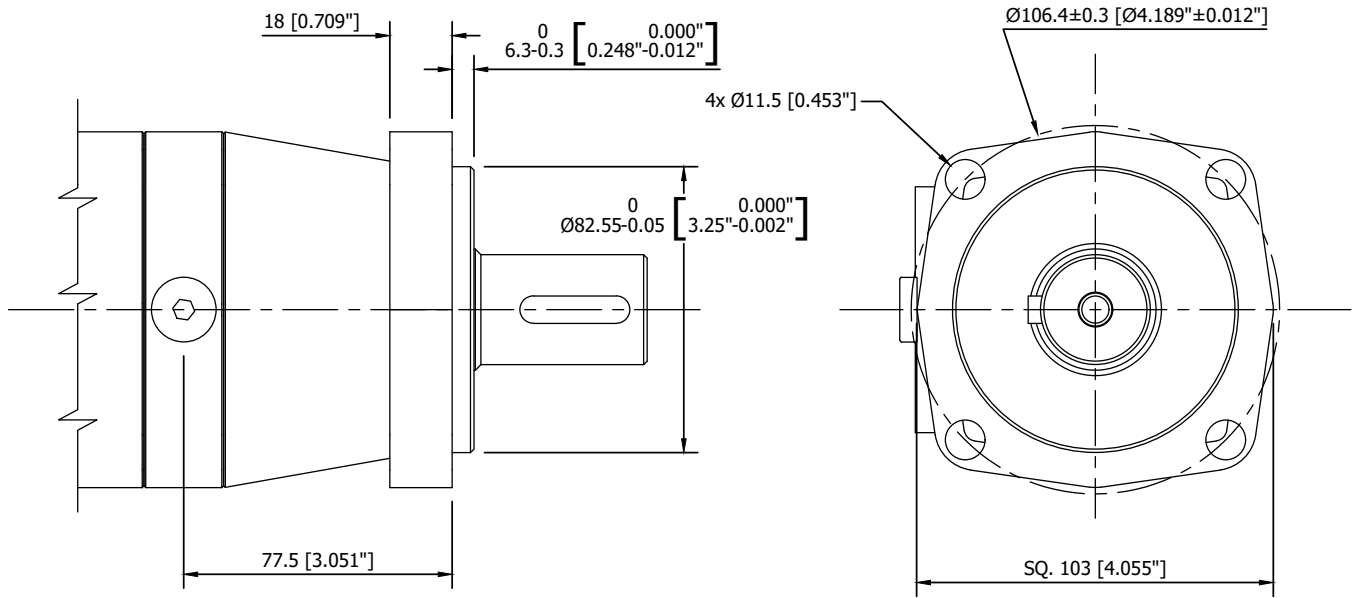


## FLANGE E2B

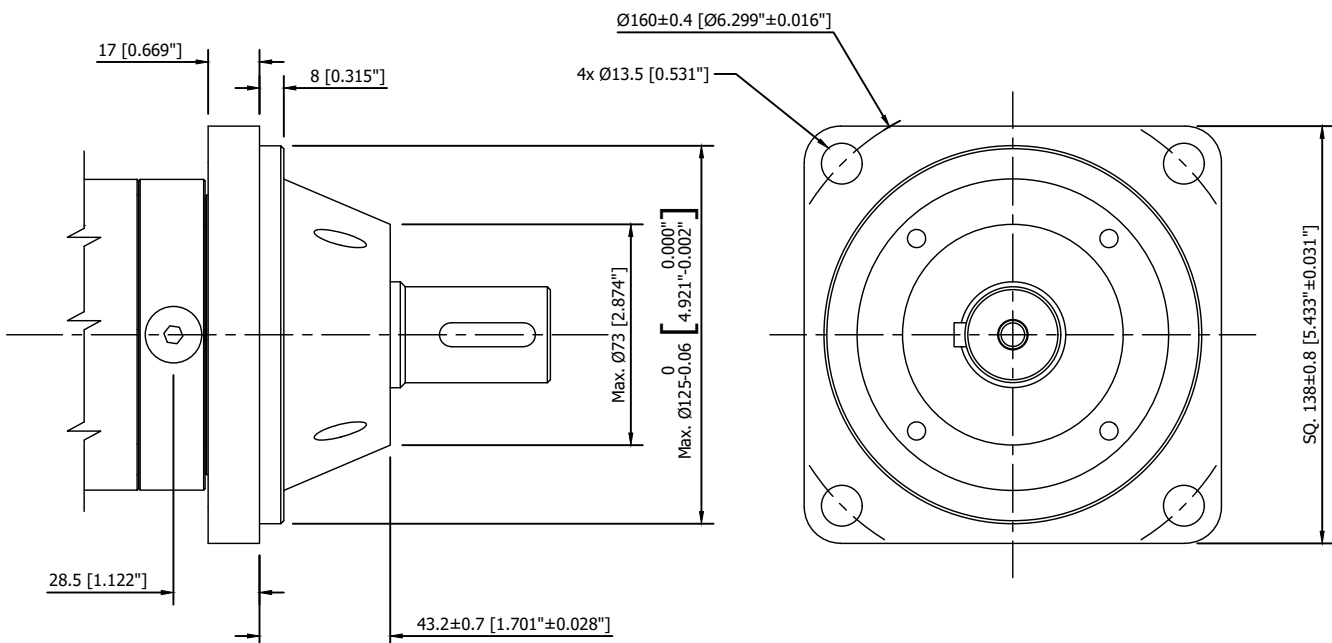


EBMSY

## FLANGE SP

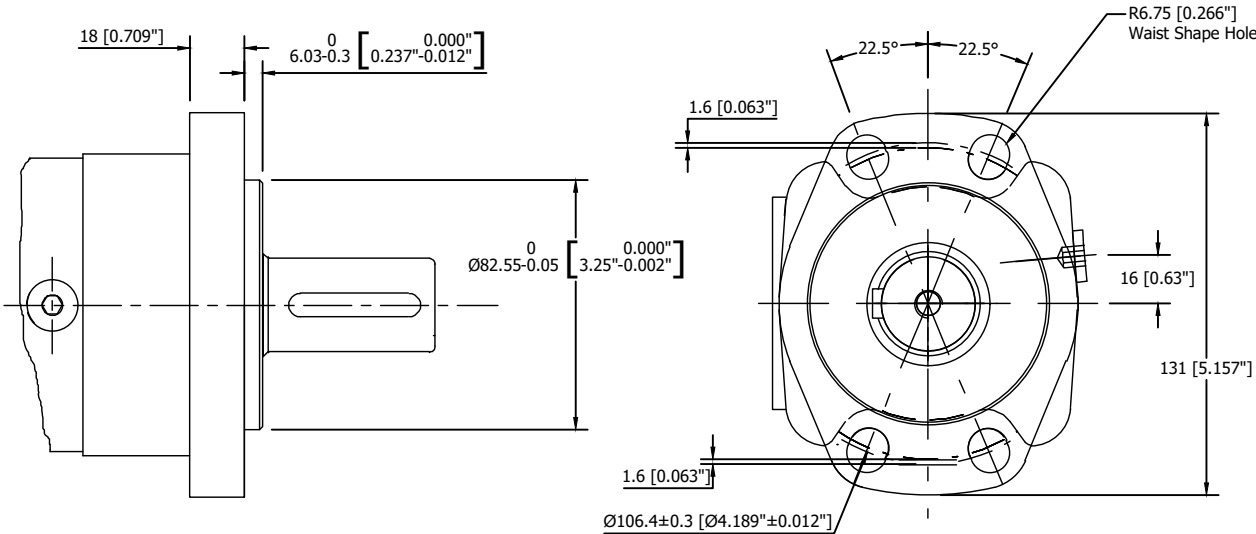


## FLANGE W



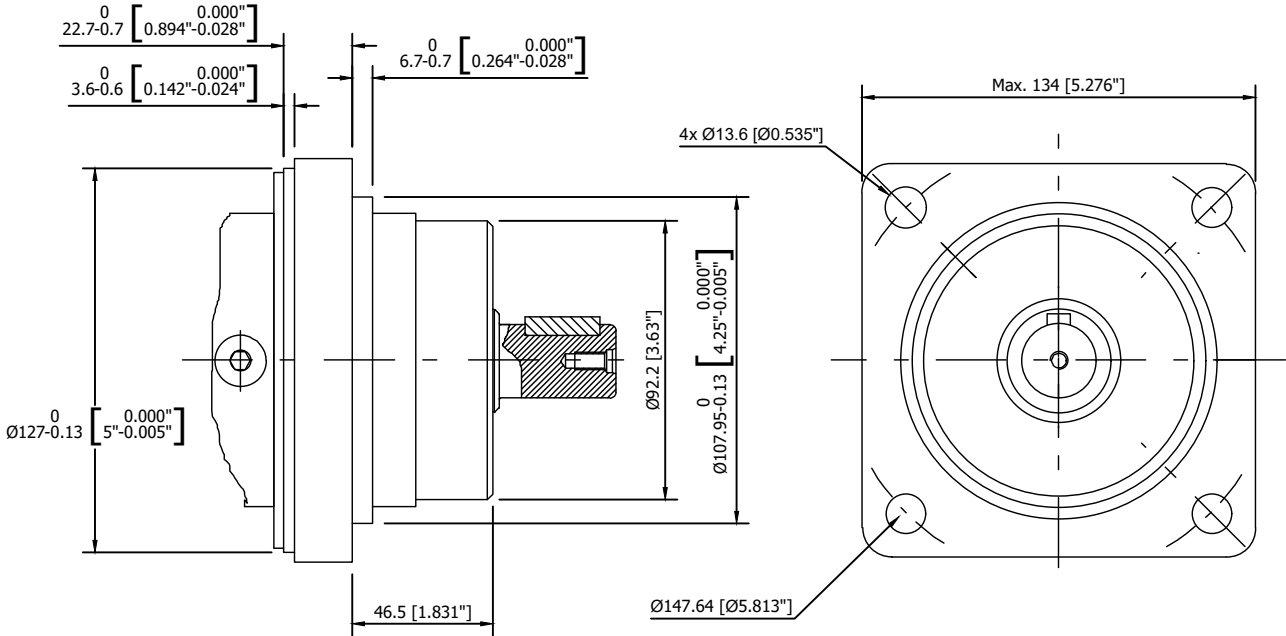
# FLANGE OPTIONS

## FLANGE E6



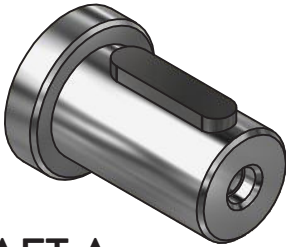
**EBMSY**

## FLANGE We

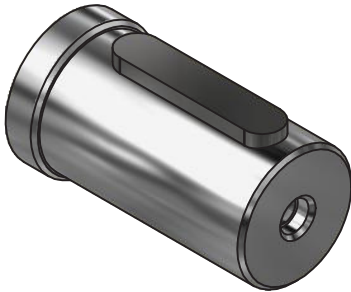
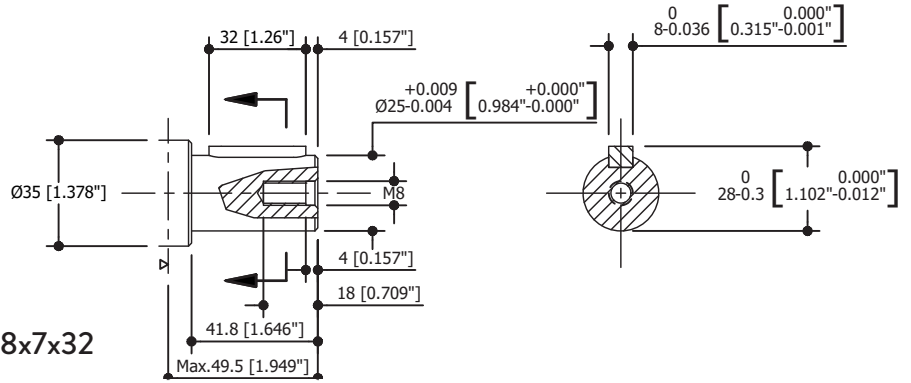


# SHAFT EXTENSIONS DIMENSIONS

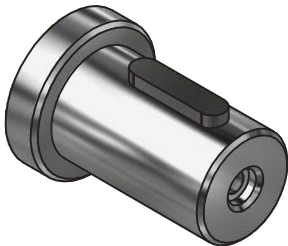
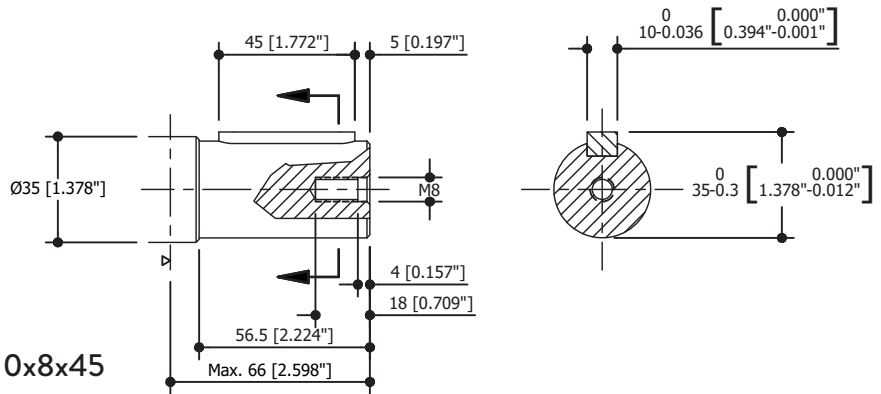
EBMSY



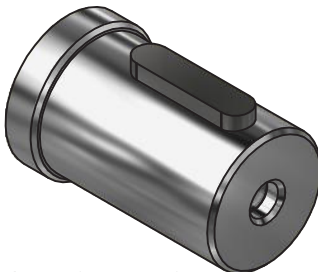
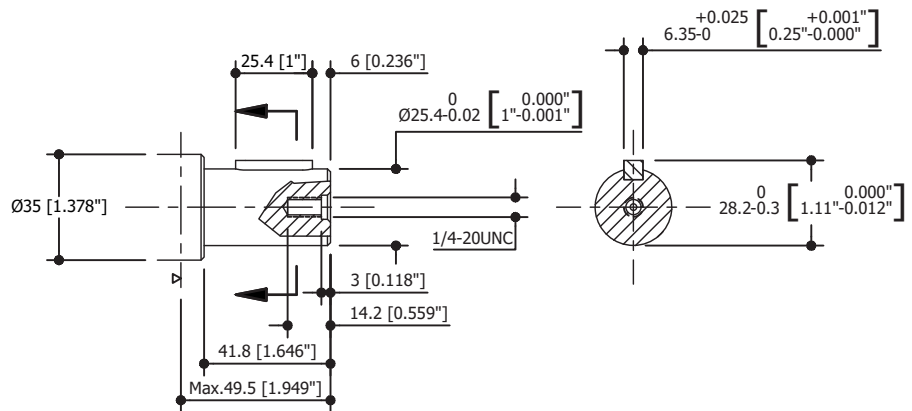
**SHAFT A**  
Cylindrical Shaft  $\varnothing 25$  - Parallel Key 8x7x32  
METRIC



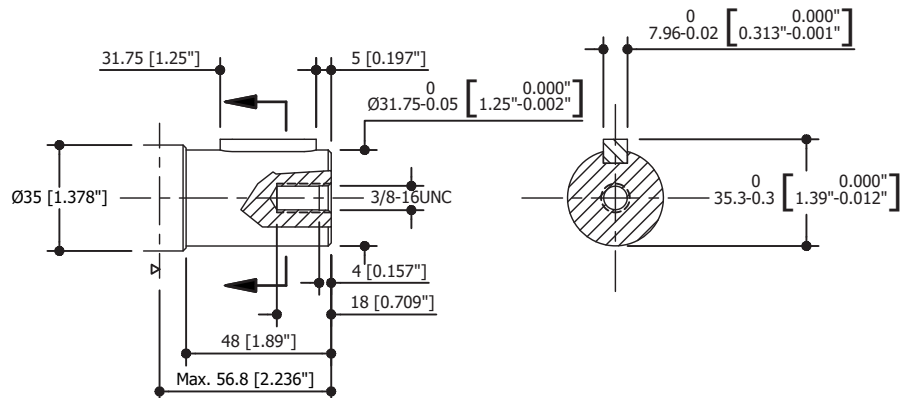
**SHAFT B**  
Cylindrical Shaft  $\varnothing 32$  - Parallel Key 10x8x45  
METRIC



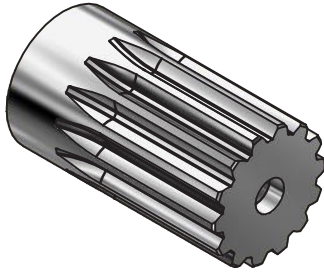
**SHAFT D**  
Cylindrical Shaft  $\varnothing 1$ "  
Parallel Key 1/4"x1/4"x1"  
IMPERIAL



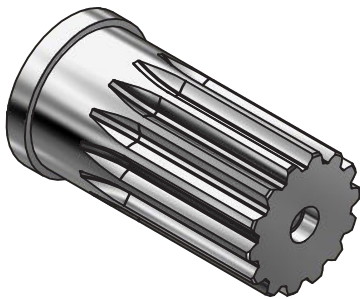
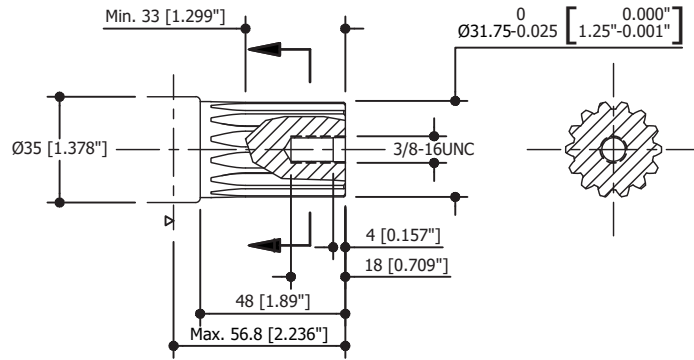
**SHAFT G**  
Cylindrical Shaft  $\varnothing 1-1/4$ "  
Parallel Key 5/16"x5/16"x1-1/4"  
IMPERIAL



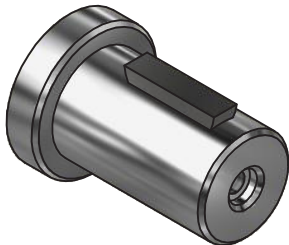
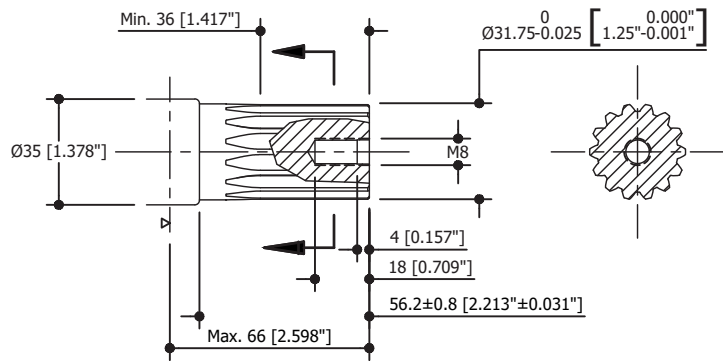
# SHAFT EXTENSIONS DIMENSIONS



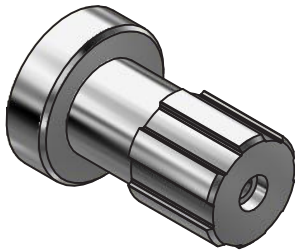
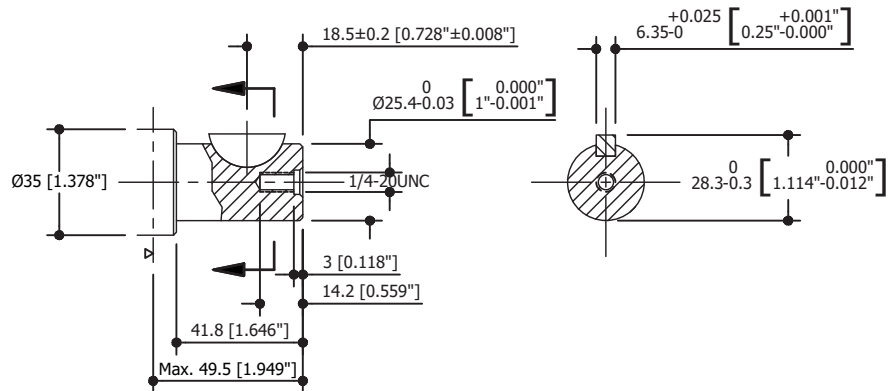
**SHAFT F**  
Splined 14-DP12/24  
IMPERIAL



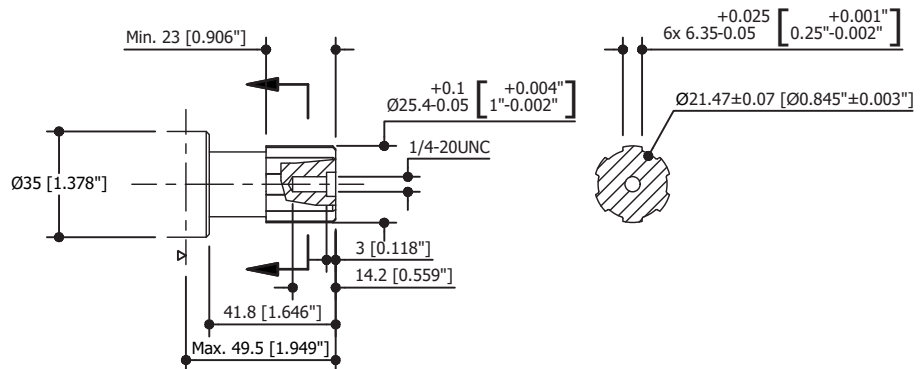
**SHAFT FD**  
Splined 14-DP12/24  
IMPERIAL

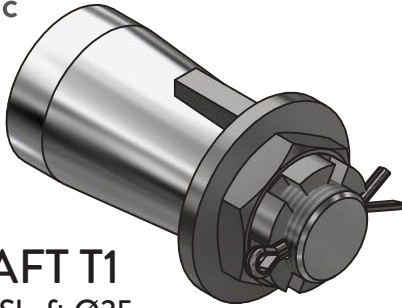


**SHAFT K**  
Cylindrical Shaft  $\text{Ø}1''$   
Woodruff Key  $\text{Ø}1'' \times 1/4''$   
IMPERIAL

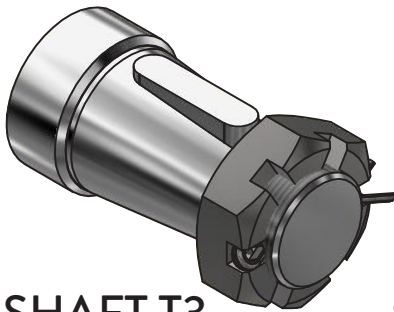
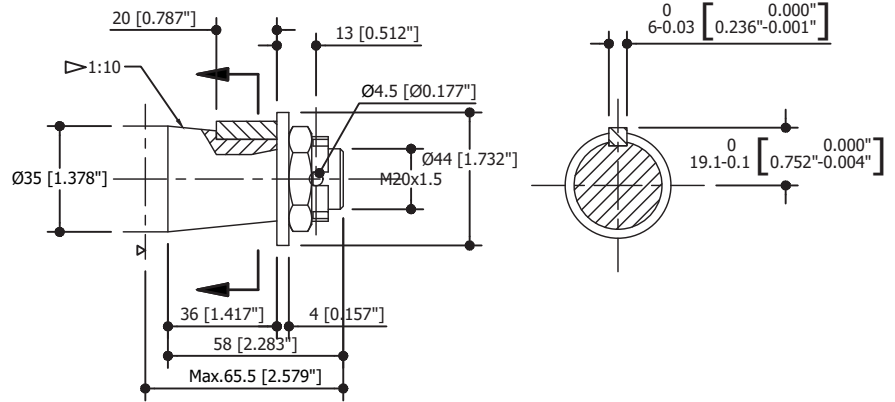


**SHAFT S1**  
Splined SAE 6B  
IMPERIAL

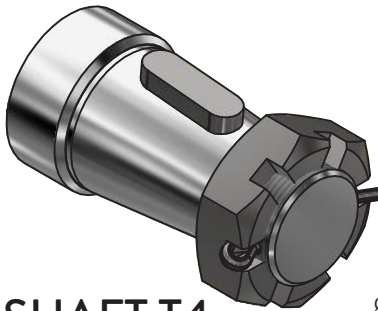
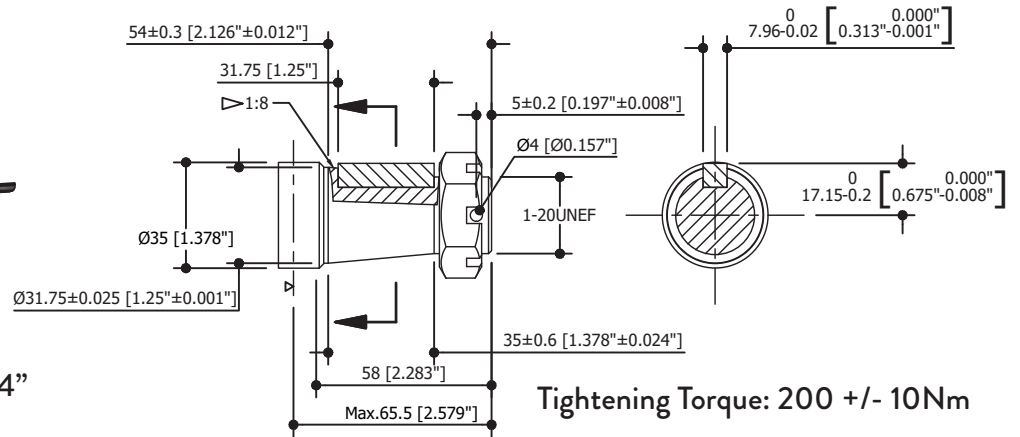




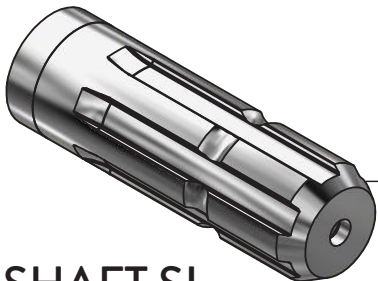
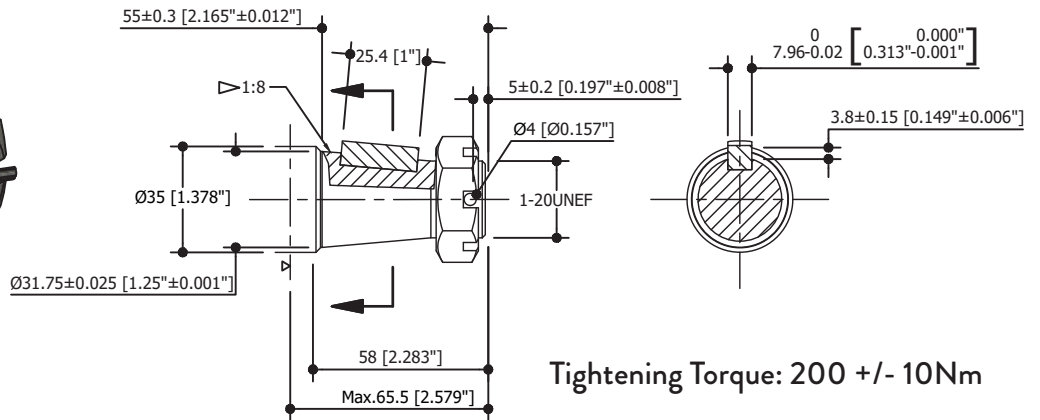
**SHAFT T1**  
Cone Shaft  $\varnothing 35$   
Parallel Key B6x6x20  
METRIC



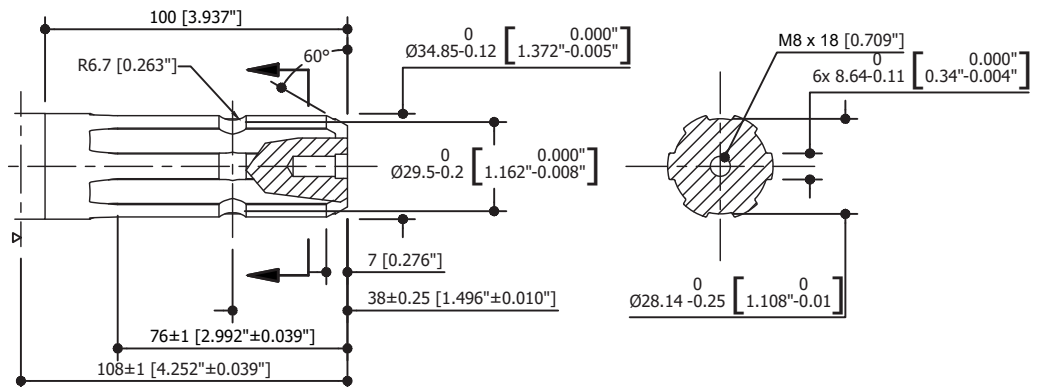
**SHAFT T3**  
Cone Shaft  $\varnothing 1-1/4''$   
Parallel Key  $5/16'' \times 5/16'' \times 1-1/4''$   
IMPERIAL

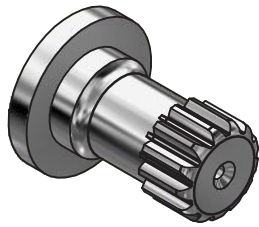


**SHAFT T4**  
Cone Shaft  $\varnothing 1-1/4''$   
Parallel Key  $5/16'' \times 5/16'' \times 1''$   
IMPERIAL

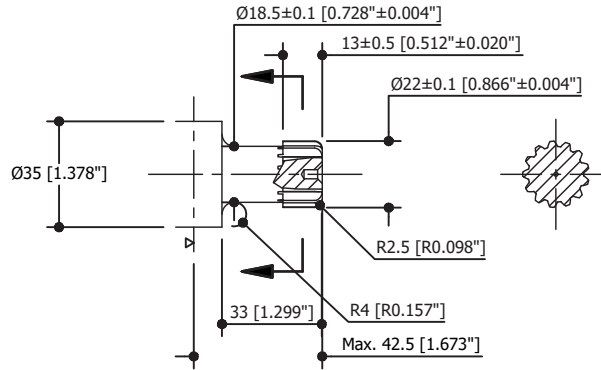


**SHAFT SL**  
Splined 6-34.85 x 28.14 x 8.64  
METRIC

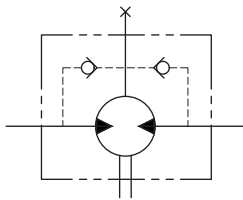




**SHAFT I**  
Splined 13-DP16/32  
METRIC

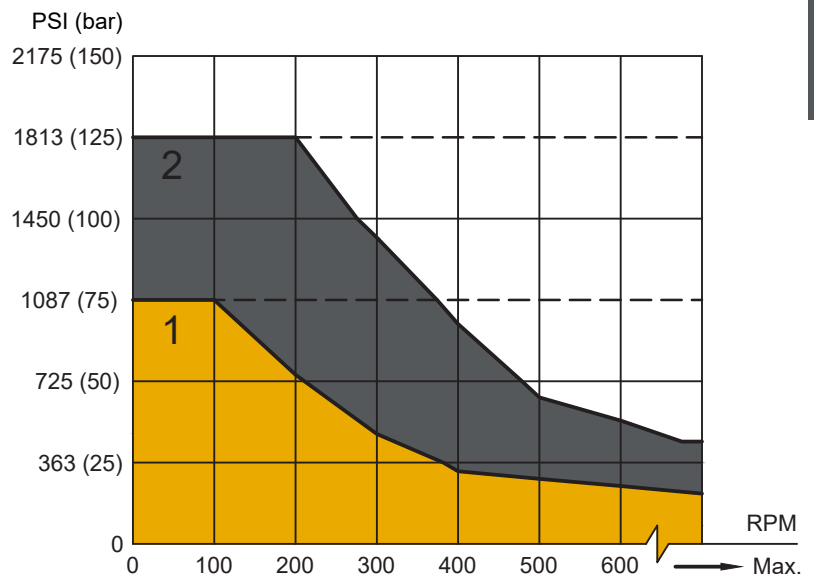


**PERMISSIBLE SHAFT SEAL PRESSURE**



NOTES:

- 1 : Chart for standard shaft seal
- 2 : Chart for High Pressure shaft seal



**EBMP - DIRECTION OF SHAFT ROTATION : STANDARD**

When facing shaft end of motor, shaft is rotating:

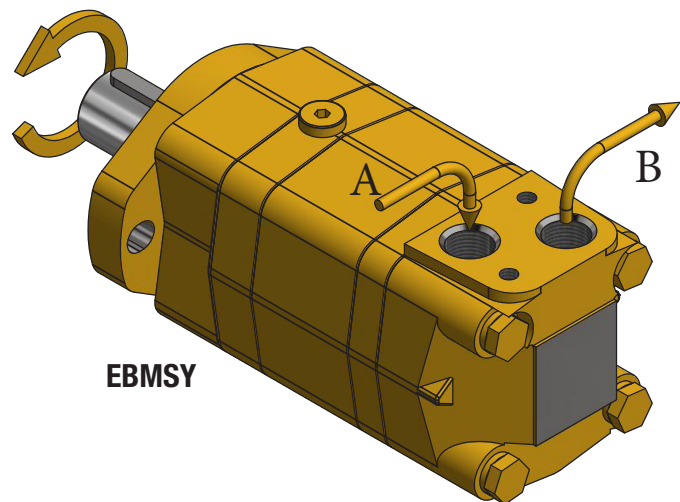
Clockwise when port "A" is pressurized.

Counter-Clockwise when port "B" is pressurized.

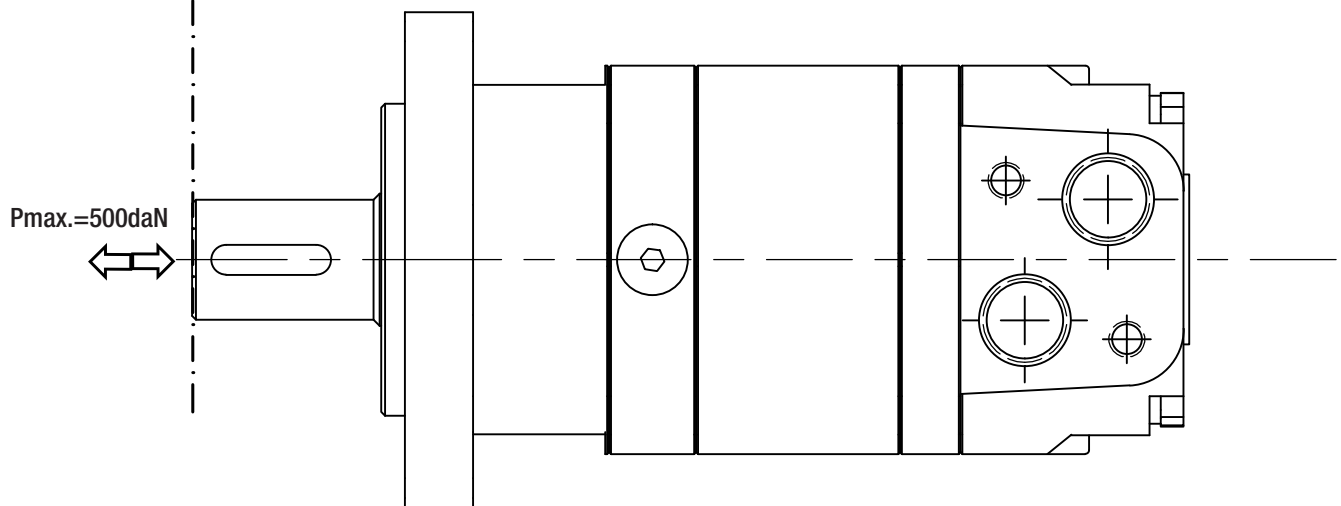
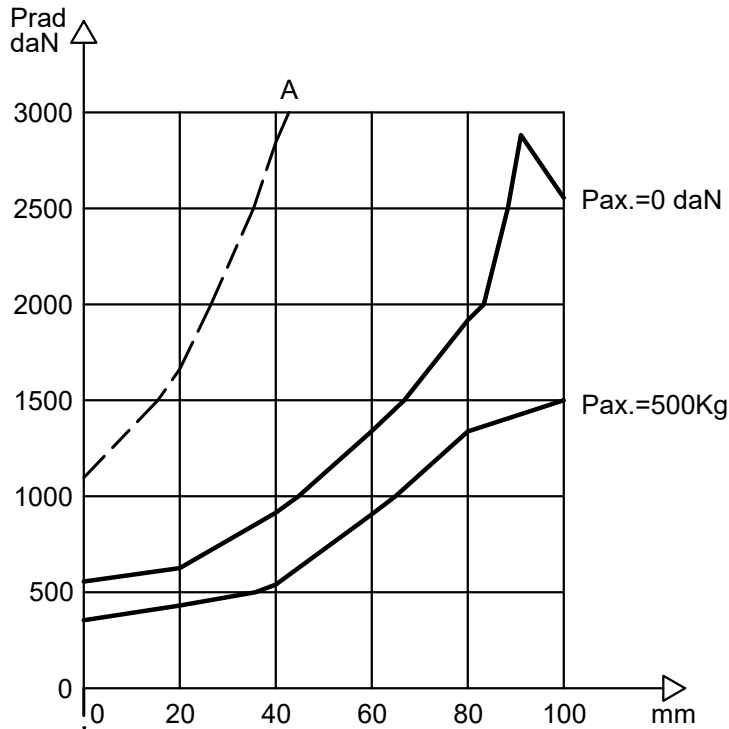
**OIL FLOW IN DRAIN LINE**

The table shows the Max. oil flow in the drain line at a return pressure less than 72-145 PSI (5-10 bar)

Pressure Drop PSI (bar)	Viscosity in <sup>2</sup> /s (mm <sup>2</sup> /s)	Oil Flow in the Drain Line GPM (L/min)
2030 (140)	0.031 (20)	0.40 (1.5)
	0.054 (35)	0.26 (1)
3045 (210)	0.031 (20)	0.79 (3)
	0.054 (35)	0.53 (2)



In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.



The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load. Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

EBMER series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed, and can keep high volume efficiency. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

## FEATURES

- Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- The output shaft adapts in needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.
- Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.
- Lowest leakage rate, most accurate timing methods. Commutator rotates 6x faster than shaft speed. It makes the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

## MAIN SPECIFICATIONS

		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
Max. Speed	Continuous (rpm)	360	375	330	290	290	250	220	200	185	160	140	115	100
	Intermittent (rpm)	490	470	425	365	350	315	270	240	220	195	170	138	120
Max. Torque	Continuous lbf•ft (N•m)	239.9 (325)	332.1 (450)	391.1 (530)	461.3 (625)	516.6 (700)	597.8 (810)	667.9 (905)	730.6 (990)	745.4 (1010)	800.7 (1085)	723.2 (980)	749.1 (1015)	774.9 (1050)
	Intermittent lbf•ft (N•m)	280.4 (380)	387.5 (525)	442.8 (600)	524 (710)	140.2 (190)	686.3 (930)	763.8 (1035)	841.3 (1140)	870.8 (1180)	870.8 (1180)	915.1 (1240)	922.5 (1250)	870.8 (1180)
	Peak lbf•ft (N•m)	332.1 (450)	435.4 (590)	553.5 (750)	642.1 (870)	723.2 (980)	826.6 (1120)	948.3 (1285)	1003.7 (1360)	1003.7 (1360)	929.9 (1260)	1018.4 (1380)	1018.4 (1380)	1011.1 (1370)
Max. Output	Continuous hp (kW)	16.1 (12)	20.1 (15)	20.8 (15.5)	21.5 (16)	23.5 (17.5)	24.1 (18)	23.5 (17.5)	22.1 (16.5)	20.8 (15.5)	19.4 (14.5)	15.4 (11.5)	13.4 (10)	10.7 (8)
	Intermittent hp (kW)	18.8 (14)	23.5 (17.5)	24.1 (18)	25.5 (19)	26.8 (20)	28.2 (21)	26.8 (20)	25.5 (19)	24.1 (18)	22.1 (16.5)	20.1 (15)	16.1 (12)	13.4 (10)
Max. Pressure Drop	Continuous PSI (bar)	2973 (205)	2973 (205)	2973 (205)	2973 (205)	2973 (205)	2973 (205)	2973 (205)	2973 (205)	2756 (190)	2538 (175)	2031 (140)	1740 (120)	1523 (105)
	Intermittent PSI (bar)	3481 (240)	3481 (240)	3481 (240)	3481 (240)	3481 (240)	3481 (240)	3481 (240)	3481 (240)	3263 (225)	2756 (190)	2538 (175)	2248 (155)	1740 (120)
	Peak PSI (bar)	4003 (276)	4003 (276)	4003 (276)	4003 (276)	4003 (276)	4003 (276)	4003 (276)	4003 (276)	4003 (276)	3626 (250)	2973 (205)	2973 (205)	2538 (175)
Max. Flow	Continuous GPM (L/min)	11.9 (45)	15.9 (60)	18.5 (70)	18.5 (70)	19.8 (75)	21.2 (80)	21.2 (80)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)	19.8 (75)
	Intermittent GPM (L/min)	15.9 (60)	19.8 (75)	22.5 (85)	22.5 (85)	23.8 (90)	25.1 (95)	25.1 (95)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)	23.8 (90)

\* Continuous pressure: Max. value of operating motor continuously.

\* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

\* Peak pressure: Max. value of operating motor in 0.6 second per minute.

## EBMER ORDER INFORMATION

2
3
4
5
6
7

EBMER

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**EBMER**

1	2	3		4		5		6		7			
CODE	Displacement	Flange		Output Shaft		Rotation Direction		Paint		Unusually Function			
<b>EBMER</b>	125	MS	4-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Ports 7/8-14 O-Ring		G2	Shaft Ø1-1/4", Parallel Key 5/16" x 7mm x 36.5mm		Blank	Standard	00	No Paint	Blank	Standard
	160	MP	4-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Ports 1/2-14NPTF		B1	Shaft Ø32, Parallel Key 10 x 8 x 45		R	Reverse Timed	Blank	Black		
	200	MD	4-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Ports G1/2		FD1	Shaft Ø1-1/4", Splined Key 14-DP12/24				Bl	Blue		
	230	FS	6-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Ports 7/8-14 O-Ring		T4	Cone-Shaft Ø1-1/4", Parallel Key 5/16" x 5/16" x 1"				S	Silver Grey		
	250	FP	6-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Ports 1/2-14NPTF		RW	Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"							
	300	FD	6-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Ports G1/2		AW	Shaft Ø25, Parallel Key 8 x 7 x 32							
	350	FH	6-Ø13.5 Magneto Mount, Pilot Ø82.55 x 2.8, Manifold Ports 1/2		SW	Shaft Ø1", Splined Key SAE 6B							
	375	WS	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports 7/8-14 O-Ring		M1	Shaft Ø35, Parallel Key 10 x 8 x 45							
	400	WP	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports 1/2-14NPTF		T31	Cone-Shaft Ø1-1/2", Parallel Key 5/16" x 7mm x 36.5mm							
	475	WD	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports G1/2		G32	Shaft Ø1-1/2", Parallel Key 3/8" x 3/8" x 42mm							
	540	TS	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports 7/8-14 O-Ring										
	650	TP	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports 1/2-14NPTF										
	750	TD	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports G1/2										

Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

# PERFORMANCE DATA



**EBMER**

## EBMER 125 - 7.2 in<sup>3</sup>/rev (118 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>							
		<b>Pressure PSI (bar)</b>							
		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>	<b>3481 (240)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)	14.8 (20)	36.9 (50)	70.8 (96)	101.1 (137)				
	Speed (rpm)	14	13	11	7				
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	17.7 (24)	39.1 (53)	81.2 (110)	122.5 (166)	163.1 (221)			
	Speed (rpm)	28	26	24	19	13			
<b>2.1 (8)</b>	Torque lbf•ft (N•m)		40.6 (55)	83.4 (113)	129.2 (175)	166.1 (225)	196.3 (266)	217 (294)	248 (336)
	Speed (rpm)		60	54	50	45	39	35	26
<b>4 (15)</b>	Torque lbf•ft (N•m)		39.1 (53)	84.1 (114)	132.8 (180)	172.7 (234)	203 (275)	240.6 (326)	256.8 (348)
	Speed (rpm)		115	110	100	96	90	84	76
<b>6.6 (25)</b>	Torque lbf•ft (N•m)		35.4 (48)	81.2 (110)	121 (164)	166.8 (226)	200.7 (272)	238.4 (323)	259.8 (352)
	Speed (rpm)		194	185	173	168	160	155	149
<b>9 (34)</b>	Torque lbf•ft (N•m)			79.7 (108)	122.5 (166)	162.4 (220)	205.2 (278)	232.5 (315)	275.3 (373)
	Speed (rpm)			276	260	244	232	225	217
<b>11.9 (45)</b>	Torque lbf•ft (N•m)			72.3 (98)	118.1 (160)	158.7 (215)	200 (271)	227.3 (308)	272.3 (369)
	Speed (rpm)			362	350	342	325	322	303
<b>14 (53)</b>	Torque lbf•ft (N•m)			66.4 (90)	112.2 (152)	153.5 (208)	195.6 (265)	224.4 (304)	
	Speed (rpm)			423	418	404	399	371	
<b>15.9 (60)</b>	Torque lbf•ft (N•m)			60.5 (82)	104.1 (141)	151.3 (205)	191.9 (260)	221.4 (300)	
	Speed (rpm)			488	472	455	442	421	

## EBMER 160 - 9.52 in<sup>3</sup>/rev (156 cm<sup>3</sup>/rev)

		<i>Max. Cont</i> <i>Max. Int.</i>							
		<b>Pressure PSI (bar)</b>							
		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>	<b>3481 (240)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)	25.8 (35)	54.6 (74)	107.7 (146)	160.9 (218)	219.9 (298)			
	Speed (rpm)	8	4	3	3	2			
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	21.4 (29)	57.6 (78)	115.9 (157)	173.4 (235)	233.2 (316)	273.1 (370)	312.9 (424)	
	Speed (rpm)	22	19	18	16	14	13	8	
<b>2.1 (8)</b>	Torque lbf•ft (N•m)	25.8 (35)	57.6 (78)	116.6 (158)	174.2 (236)	230.3 (312)	275.3 (373)	332.1 (450)	388.2 (526)
	Speed (rpm)	47	44	42	40	37	34	32	27
<b>4 (15)</b>	Torque lbf•ft (N•m)	27.3 (37)	54.6 (74)	114.4 (155)	172.7 (234)	228.8 (310)	271.6 (368)	324.7 (440)	381.5 (517)
	Speed (rpm)	93	90	86	84	82	79	75	69
<b>6.6 (25)</b>	Torque lbf•ft (N•m)		50.2 (68)	112.2 (152)	167.5 (227)	227.3 (308)	268.6 (364)	321.8 (436)	368.3 (499)
	Speed (rpm)		155	151	147	142	137	131	124
<b>9 (34)</b>	Torque lbf•ft (N•m)		50.2 (68)	112.2 (152)	167.5 (227)	227.3 (308)	268.6 (364)	321.8 (436)	368.3 (499)
	Speed (rpm)		214	213	210	204	198	191	184
<b>11.9 (45)</b>	Torque lbf•ft (N•m)		47.2 (64)	105.5 (143)	160.9 (218)	218.4 (296)	265.7 (360)	313.7 (425)	355 (481)
	Speed (rpm)		282	280	275	268	263	256	245
<b>14 (53)</b>	Torque lbf•ft (N•m)			99.6 (135)	159.4 (216)	216.2 (293)	263.5 (357)	310.7 (421)	351.3 (476)
	Speed (rpm)			330	327	322	315	306	296
<b>15.9 (60)</b>	Torque lbf•ft (N•m)			90 (122)	152.8 (207)	209.6 (284)	258.3 (350)	307 (416)	344.6 (467)
	Speed (rpm)			379	376	368	362	356	345
<b>18 (68)</b>	Torque lbf•ft (N•m)			80.4 (109)	144.6 (196)	201.5 (273)	254.6 (345)	315.1 (425)	
	Speed (rpm)			423	419	414	406	395	
<b>19.8 (75)</b>	Torque lbf•ft (N•m)			76.8 (104)	138.7 (188)	199.3 (270)	248.7 (337)	315.1 (425)	
	Speed (rpm)			472	466	455	445	437	

## EBMER 200 - 11.96 in<sup>3</sup>/rev (196 cm<sup>3</sup>/rev)

		<i>Max. Cont</i>							<i>Max. Int.</i>
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>	<b>3481 (240)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)	28.8 (39)	64.9 (88)	97.4 (132)	211.1 (286)	273.1 (370)			
	Speed (rpm)	8	4	4	3	2			
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	31 (42)	62.7 (85)	138.7 (188)	199.3 (270)	266.4 (361)	315.1 (427)	373.4 (506)	
	Speed (rpm)	16	14	13	11	10	9	6	
<b>2.1 (8)</b>	Torque lbf•ft (N•m)	31.7 (43)	66.4 (90)	141.7 (192)	214.8 (291)	270.8 (367)	332.1 (450)	390.4 (529)	442.8 (600)
	Speed (rpm)	35	32	29	28	27	25	23	19
<b>4 (15)</b>	Torque lbf•ft (N•m)	28 (38)	67.9 (92)	144.6 (196)	219.9 (298)	281.2 (381)	341 (462)	391.1 (530)	444.3 (602)
	Speed (rpm)	74	71	68	64	60	58	55	50
<b>6.6 (25)</b>	Torque lbf•ft (N•m)		60.5 (82)	138.7 (188)	208.9 (283)	278.2 (377)	336.5 (456)	389.7 (528)	446.5 (605)
	Speed (rpm)		124	121	117	113	108	103	92
<b>9 (34)</b>	Torque lbf•ft (N•m)		58.3 (79)	135.1 (183)	199.3 (270)	267.2 (362)	329.9 (447)	380.1 (515)	436.2 (591)
	Speed (rpm)		170	169	167	160	154	146	135
<b>11.9 (45)</b>	Torque lbf•ft (N•m)			120.3 (163)	191.1 (259)	259.8 (352)	325.5 (441)	376.4 (510)	437.6 (593)
	Speed (rpm)			223	218	212	208	199	189
<b>14 (53)</b>	Torque lbf•ft (N•m)			110 (149)	188.9 (256)	258.3 (350)	324.7 (440)	369.7 (501)	429.5 (582)
	Speed (rpm)			260	258	254	248	241	230
<b>15.9 (60)</b>	Torque lbf•ft (N•m)			97.4 (132)	183 (248)	248 (336)	318.8 (432)	366.8 (497)	424.4 (575)
	Speed (rpm)			299	292	284	276	272	263
<b>18 (68)</b>	Torque lbf•ft (N•m)			88.6 (120)	169.7 (230)	243.5 (330)	304.1 (412)	358.7 (486)	420.7 (570)
	Speed (rpm)			336	332	327	319	310	301
<b>19.8 (75)</b>	Torque lbf•ft (N•m)			79.7 (108)	153.5 (208)	229.5 (311)	297.4 (403)	354.2 (480)	
	Speed (rpm)			375	372	365	358	350	
<b>22.5 (85)</b>	Torque lbf•ft (N•m)				135.8 (184)	206.6 (280)	280.4 (380)	341 (462)	
	Speed (rpm)				425	420	411	390	

## EBMER 230 - 13.91 in<sup>3</sup>/rev (228 cm<sup>3</sup>/rev)

		<i>Max. Cont</i>							<i>Max. Int.</i>
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>	<b>3481 (240)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)	32.5 (44)	66.4 (90)	134.3 (182)	214.8 (291)	276 (374)			
	Speed (rpm)	6	4	3	2	1			
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	35.4 (48)	73.8 (100)	159.4 (216)	228.8 (310)	298.9 (405)	357.2 (484)	405.2 (549)	
	Speed (rpm)	15	13	11	11	9	7	3	
<b>2.1 (8)</b>	Torque lbf•ft (N•m)	36.9 (50)	76.8 (104)	156.5 (212)	236.2 (320)	310.7 (421)	382.3 (518)	445 (603)	516.6 (700)
	Speed (rpm)	31	29	27	25	23	20	16	10
<b>4 (15)</b>	Torque lbf•ft (N•m)	32.5 (44)	78.2 (106)	152.8 (207)	234.7 (318)	314.4 (426)	390.4 (529)	459.8 (623)	525.5 (712)
	Speed (rpm)	63	61	58	55	52	47	41	34
<b>6.6 (25)</b>	Torque lbf•ft (N•m)		74.5 (101)	154.2 (209)	239.1 (324)	315.9 (428)	392.6 (532)	457.6 (620)	520.3 (705)
	Speed (rpm)		103	100	96	92	87	81	71
<b>9 (34)</b>	Torque lbf•ft (N•m)		64.9 (88)	151.3 (205)	233.2 (316)	310.7 (421)	385.2 (522)	459.8 (623)	518.1 (702)
	Speed (rpm)		145	143	139	133	126	120	109
<b>11.9 (45)</b>	Torque lbf•ft (N•m)			137.3 (186)	217 (294)	311.4 (422)	374.2 (507)	439.1 (595)	507.7 (688)
	Speed (rpm)			192	187	182	176	170	160
<b>14 (53)</b>	Torque lbf•ft (N•m)			129.2 (175)	214 (290)	290 (393)	366 (496)	431 (584)	500.4 (678)
	Speed (rpm)			226	221	215	208	203	194
<b>15.9 (60)</b>	Torque lbf•ft (N•m)			112.2 (152)	199.3 (270)	287.8 (390)	357.9 (485)	419.9 (569)	487.8 (661)
	Speed (rpm)			256	253	248	242	235	222
<b>18 (68)</b>	Torque lbf•ft (N•m)			103.3 (140)	195.6 (265)	259 (351)	355.7 (482)	415.5 (563)	473.8 (642)
	Speed (rpm)			292	288	283	278	273	256
<b>19.8 (75)</b>	Torque lbf•ft (N•m)			91.5 (124)	173.4 (235)	253.9 (344)	330.6 (448)	407.4 (552)	
	Speed (rpm)			324	321	316	308	300	
<b>22.5 (85)</b>	Torque lbf•ft (N•m)				152.8 (207)	247.2 (335)	326.2 (442)	402.9 (546)	
	Speed (rpm)				366	360	351	338	

# PERFORMANCE DATA



**EAGLE**  
HYDRAULIC

## EBMER 250 - 15.68 in<sup>3</sup>/rev (257 cm<sup>3</sup>/rev)

Max. Cont Max. Int.

Pressure PSI (bar)		254 (17.5)	508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	2973 (205)	3481 (240)
0.5 (2)	Torque lbf•ft (N•m)	35.4 (48)	81.9 (111)						
	Speed (rpm)	5	2						
1.1 (4)	Torque lbf•ft (N•m)	39.9 (54)	83.4 (113)	174.9 (237)	267.2 (362)	347.6 (471)	420.7 (570)	473.8 (642)	
	Speed (rpm)	12	11	10	9	8	6	3	
2.1 (8)	Torque lbf•ft (N•m)	39.9 (54)	84.9 (115)	180.1 (244)	270.1 (366)	355.7 (482)	433.2 (587)	507.7 (688)	
	Speed (rpm)	27	26	24	22	20	18	14	
4 (15)	Torque lbf•ft (N•m)	36.9 (50)	83.4 (113)	188.9 (256)	270.8 (367)	357.9 (485)	436.2 (591)	510.7 (692)	586 (794)
	Speed (rpm)	57	56	54	51	48	45	43	37
6.6 (25)	Torque lbf•ft (N•m)	32.5 (44)	84.1 (114)	177.9 (241)	265.7 (360)	360.1 (488)	437.6 (593)	515.9 (699)	577.1 (782)
	Speed (rpm)	95	93	90	86	82	77	72	63
9 (34)	Torque lbf•ft (N•m)		70.1 (95)	166.8 (226)	256.8 (348)	355 (481)	435.4 (590)	506.3 (686)	571.2 (774)
	Speed (rpm)		129	125	121	116	111	106	96
11.9 (45)	Torque lbf•ft (N•m)		56.8 (77)	158.7 (215)	255.3 (346)	345.4 (468)	422.1 (572)	497.4 (674)	574.9 (779)
	Speed (rpm)		174	173	170	166	161	155	143
14 (53)	Torque lbf•ft (N•m)		48.7 (66)	147.6 (200)	239.9 (325)	330.6 (448)	416.2 (564)	484.9 (657)	557.9 (756)
	Speed (rpm)		203	202	200	196	190	184	175
15.9 (60)	Torque lbf•ft (N•m)			132.8 (180)	218.4 (296)	323.2 (438)	405.9 (550)	473.8 (642)	546.9 (741)
	Speed (rpm)			232	229	225	220	215	202
18 (68)	Torque lbf•ft (N•m)			119.6 (162)	217 (294)	306.3 (415)	404.4 (548)	470.1 (637)	538.7 (730)
	Speed (rpm)			262	261	257	250	241	228
19.8 (75)	Torque lbf•ft (N•m)			101.1 (137)	202.2 (274)	286.3 (388)	383.8 (520)	456.1 (618)	535.8 (726)
	Speed (rpm)			290	289	285	280	273	260
22.5 (85)	Torque lbf•ft (N•m)			95.9 (130)	192.6 (261)	273.1 (370)	375.6 (509)	445.8 (604)	
	Speed (rpm)			328	326	322	316	307	
23.8 (90)	Torque lbf•ft (N•m)			62.7 (85)	165.3 (224)	264.2 (358)	361.6 (490)		
	Speed (rpm)			348	347	344	336		

## EBMER 300 - 18.06 in<sup>3</sup>/rev (296 cm<sup>3</sup>/rev)

Max. Cont Max. Int.

Pressure PSI (bar)		254 (17.5)	508 (35)	1015 (70)	1523 (105)	2031 (140)	2538 (175)	2973 (205)	3481 (240)
0.5 (2)	Torque lbf•ft (N•m)	36.9 (50)	68.6 (93)						
	Speed (rpm)	3	1						
1.1 (4)	Torque lbf•ft (N•m)	45.8 (62)	104.1 (141)	217 (294)	316.6 (429)	370.5 (502)	456.1 (618)		
	Speed (rpm)	11	10	9	8	7	4		
2.1 (8)	Torque lbf•ft (N•m)	46.5 (63)	108.5 (147)	219.9 (298)	318.8 (432)	417 (565)	492.2 (667)	561.6 (761)	604.4 (819)
	Speed (rpm)	22	21	20	19	16	13	9	5
4 (15)	Torque lbf•ft (N•m)	48.7 (66)	106.3 (144)	225.1 (305)	315.1 (427)	419.2 (568)	495.2 (671)	597.8 (810)	659.8 (894)
	Speed (rpm)	48	47	45	43	39	33	28	20
6.6 (25)	Torque lbf•ft (N•m)	43.5 (59)	101.8 (138)	213.3 (289)	310 (420)	407.4 (552)	498.9 (676)	583.8 (791)	687.8 (932)
	Speed (rpm)	82	81	80	76	71	64	56	44
9 (34)	Torque lbf•ft (N•m)	35.4 (48)	95.9 (130)	219.2 (297)	290 (393)	414.8 (562)	508.5 (689)	594.1 (805)	683.4 (926)
	Speed (rpm)	113	112	110	107	102	96	86	73
11.9 (45)	Torque lbf•ft (N•m)		70.8 (96)	197.8 (268)	284.1 (385)	388.9 (527)	469.4 (636)	555.7 (753)	649.4 (880)
	Speed (rpm)		150	149	148	143	135	124	112
14 (53)	Torque lbf•ft (N•m)		56.1 (76)	178.6 (242)	282.7 (383)	386.7 (524)	465.7 (631)	559.4 (758)	664.2 (900)
	Speed (rpm)		177	176	175	173	165	152	138
15.9 (60)	Torque lbf•ft (N•m)		47.2 (64)	166.1 (225)	267.2 (362)	373.4 (506)	462.7 (627)	555.7 (753)	658.3 (892)
	Speed (rpm)		200	199	198	193	186	174	162
18 (68)	Torque lbf•ft (N•m)			147.6 (200)	245.8 (333)	346.9 (470)	464.9 (630)	553.5 (750)	650.9 (882)
	Speed (rpm)			225	224	222	212	201	194
19.8 (75)	Torque lbf•ft (N•m)			131.4 (178)	237.6 (322)	342.4 (464)	450.2 (610)	546.9 (741)	642.1 (870)
	Speed (rpm)			251	250	247	240	232	215
22.5 (85)	Torque lbf•ft (N•m)			103.3 (140)	233.2 (316)	335.8 (455)	420.7 (570)	537.3 (728)	
	Speed (rpm)			285	284	278	270	257	
23.8 (90)	Torque lbf•ft (N•m)			78.2 (106)	191.9 (260)	318.1 (431)	407.4 (552)	516.6 (700)	
	Speed (rpm)			316	314	311	307	292	

**EBMER**

**EBMER 350 - 21.05 in<sup>3</sup>/rev (345 cm<sup>3</sup>/rev)**

		<i>Max. Cont</i>							<i>Max. Int.</i>	
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>	<b>3481 (240)</b>	
<b>Flow GPM (L/min)</b>	<b>0.5 (2)</b>	Torque lbf•ft (N•m)	46.5 (63)	98.2 (133)						
		Speed (rpm)	4	4						
	<b>1.1 (4)</b>	Torque lbf•ft (N•m)	47.2 (64)	99.6 (135)	214 (290)	324.7 (440)				
		Speed (rpm)	10	9	8	7				
	<b>2.1 (8)</b>	Torque lbf•ft (N•m)	50.2 (68)	107.7 (146)	228.8 (310)	338 (458)	434.7 (589)	542.4 (735)	625.1 (847)	
		Speed (rpm)	21	20	20	19	18	16	12	
	<b>4 (15)</b>	Torque lbf•ft (N•m)	53.1 (72)	110.7 (150)	231.7 (314)	345.4 (468)	462.7 (627)	567.5 (769)	649.4 (880)	726.2 (984)
		Speed (rpm)	42	41	40	39	37	35	32	26
	<b>6.6 (25)</b>	Torque lbf•ft (N•m)	46.5 (63)	109.2 (148)	231 (313)	346.9 (470)	463.5 (628)	564.6 (765)	658.3 (892)	751.3 (1018)
		Speed (rpm)	70	69	68	66	63	60	55	46
	<b>9 (34)</b>	Torque lbf•ft (N•m)	38.4 (52)	98.2 (133)	224.4 (304)	335.8 (455)	456.8 (619)	560.9 (760)	667.9 (905)	763.1 (1034)
		Speed (rpm)	97	96	95	93	89	85	78	68
	<b>11.9 (45)</b>	Torque lbf•ft (N•m)		73.8 (100)	192.6 (261)	326.2 (442)	430.3 (583)	543.2 (736)	654.6 (887)	758.7 (1028)
		Speed (rpm)		129	128	127	125	118	112	101
	<b>14 (53)</b>	Torque lbf•ft (N•m)		62.7 (85)	182.3 (247)	308.5 (418)	417.7 (566)	527.7 (715)	649.4 (880)	755.7 (1024)
		Speed (rpm)		152	150	148	145	139	132	118
	<b>15.9 (60)</b>	Torque lbf•ft (N•m)		48 (65)	172 (233)	302.6 (410)	405.9 (550)	525.5 (712)	621.4 (842)	735 (996)
		Speed (rpm)		171	170	169	167	162	155	143
<b>18 (68)</b>	Torque lbf•ft (N•m)			160.9 (218)	285.6 (387)	400.7 (543)	513.6 (696)	608.9 (825)	720.3 (976)	
	Speed (rpm)			195	194	190	185	175	162	
<i>Max. Cont.</i> <b>19.8 (75)</b>	Torque lbf•ft (N•m)			152 (206)	275.3 (373)	380.1 (515)	501.8 (680)	606.6 (822)	712.9 (966)	
	Speed (rpm)			215	214	212	206	197	183	
<i>Max. Int.</i> <b>22.5 (85)</b>	Torque lbf•ft (N•m)			129.9 (176)	262 (355)	376.4 (510)	501.1 (679)	596.3 (808)		
	Speed (rpm)			243	242	239	234	227		
<i>Max. Int.</i> <b>23.8 (90)</b>	Torque lbf•ft (N•m)				260.5 (353)	375.6 (509)	476 (645)			
	Speed (rpm)				272	269	265			

**EBMER 375 - 22.64 in<sup>3</sup>/rev (371 cm<sup>3</sup>/rev)**

		<i>Max. Cont</i>							<i>Max. Int.</i>	
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>	<b>3481 (240)</b>	
<b>Flow GPM (L/min)</b>	<b>0.5 (2)</b>	Torque lbf•ft (N•m)	55.4 (75)							
		Speed (rpm)	3							
	<b>1.1 (4)</b>	Torque lbf•ft (N•m)	61.3 (83)	118.1 (160)	243.5 (330)	360.1 (488)	469.4 (636)	561.6 (761)		
		Speed (rpm)	8	8	7	6	5	3		
	<b>2.1 (8)</b>	Torque lbf•ft (N•m)	59.8 (81)	125.5 (170)	262.7 (356)	241.3 (327)	501.1 (679)	606.6 (822)	699.6 (948)	782.3 (1060)
		Speed (rpm)	18	17	17	16	14	12	9	5
	<b>4 (15)</b>	Torque lbf•ft (N•m)	56.1 (76)	119.6 (162)	262.7 (356)	393.4 (533)	504.1 (683)	623.6 (845)	721.8 (978)	813.3 (1102)
		Speed (rpm)	39	38	37	35	32	29	25	18
	<b>6.6 (25)</b>	Torque lbf•ft (N•m)	50.2 (68)	115.1 (156)	258.3 (350)	386.7 (524)	501.8 (680)	632.5 (857)	733.6 (994)	839.8 (1138)
		Speed (rpm)	65	64	62	59	55	48	44	35
	<b>9 (34)</b>	Torque lbf•ft (N•m)	42.8 (58)	109.2 (148)	250.2 (339)	373.4 (506)	509.2 (690)	620.7 (841)	732.8 (993)	845 (1145)
		Speed (rpm)	90	89	87	83	77	71	63	53
	<b>11.9 (45)</b>	Torque lbf•ft (N•m)		89.3 (121)	222.9 (302)	352.8 (478)	479.7 (650)	600 (813)	717.3 (972)	836.9 (1134)
		Speed (rpm)		120	119	117	113	108	100	90
	<b>14 (53)</b>	Torque lbf•ft (N•m)		70.1 (95)	208.1 (282)	343.9 (466)	463.5 (628)	579.3 (785)	689.3 (934)	814 (1103)
		Speed (rpm)		141	140	138	134	128	120	105
	<b>15.9 (60)</b>	Torque lbf•ft (N•m)		55.4 (75)	194.8 (264)	315.9 (428)	436.9 (592)	565.3 (766)	682.7 (925)	789.7 (1070)
		Speed (rpm)		161	161	160	158	155	151	141
<b>18 (68)</b>	Torque lbf•ft (N•m)			171.2 (232)	311.4 (422)	431.7 (585)	557.9 (756)	664.9 (901)	786.7 (1066)	
	Speed (rpm)			182	180	176	169	161	148	
<i>Max. Cont.</i> <b>19.8 (75)</b>	Torque lbf•ft (N•m)			152.8 (207)	280.4 (380)	410.3 (556)	544.6 (738)	638.4 (865)	746.9 (1012)	
	Speed (rpm)			201	200	197	190	181	165	
<i>Max. Int.</i> <b>22.5 (85)</b>	Torque lbf•ft (N•m)			129.2 (175)	273.1 (370)	388.2 (526)	516.6 (700)	614 (832)		
	Speed (rpm)			228	226	221	216	206		
<i>Max. Int.</i> <b>23.8 (90)</b>	Torque lbf•ft (N•m)			109.2 (148)	233.2 (316)	369 (500)	482.7 (654)			
	Speed (rpm)			242	240	237	226			

# PERFORMANCE DATA



## EBMER 400 - 24.71 in<sup>3</sup>/rev (405 cm<sup>3</sup>/rev)

		<i>Max. Cont</i>							<i>Peak</i>	
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2756 (190)</b>	<b>3263 (225)</b>	
<b>Flow GPM (L/min)</b>	<b>0.5 (2)</b>	Torque lbf•ft (N•m)	62.7 (85)	125.5 (170)						
		Speed (rpm)	3	2						
	<b>1.1 (4)</b>	Torque lbf•ft (N•m)	66.4 (90)	134.3 (182)	271.6 (368)	398.5 (540)	527.7 (715)	653.1 (885)		
			Speed (rpm)	8	7	6	5	4	3	
	<b>2.1 (8)</b>	Torque lbf•ft (N•m)	68.6 (93)	140.2 (190)	284.1 (385)	424.4 (575)	553.5 (750)	660.5 (895)	701.1 (950)	852.4 (1155)
			Speed (rpm)	17	16	15	14.4	13	10	9
	<b>4 (15)</b>	Torque lbf•ft (N•m)	64.9 (88)	132.8 (180)	280.4 (380)	424.4 (575)	553.5 (750)	667.9 (905)	723.2 (980)	859.8 (1165)
			Speed (rpm)	36	35	34	33	31	28	24
	<b>6.6 (25)</b>	Torque lbf•ft (N•m)	64.9 (88)	132.8 (180)	280.4 (380)	424.4 (575)	553.5 (750)	675.3 (915)	745.4 (1010)	859.8 (1165)
			Speed (rpm)	60	59	58	56	53	49	44
	<b>9 (34)</b>	Torque lbf•ft (N•m)	55.4 (75)	121.8 (165)	269.4 (365)	413.3 (560)	553.5 (750)	675.3 (915)	738 (1000)	870.8 (1180)
			Speed (rpm)	83	83	82	81	77	72	68
	<b>11.9 (45)</b>	Torque lbf•ft (N•m)		110.7 (150)	258.3 (350)	402.2 (545)	542.4 (735)	664.2 (900)	723.2 (980)	859.8 (1165)
			Speed (rpm)		110	110	109	106	102	94
	<b>14 (53)</b>	Torque lbf•ft (N•m)		92.3 (125)	243.5 (330)	387.5 (525)	531.4 (720)	653.1 (885)	708.5 (960)	848.7 (1150)
			Speed (rpm)		130	129	128	125	120	112
	<b>15.9 (60)</b>	Torque lbf•ft (N•m)		73.8 (100)	225.1 (305)	372.7 (505)	501.8 (680)	634.7 (860)	693.7 (940)	830.3 (1125)
			Speed (rpm)		147	147	146	145	142	138
	<b>18 (68)</b>	Torque lbf•ft (N•m)			203 (275)	354.2 (480)	487.1 (660)	623.6 (845)	682.7 (925)	811.8 (1100)
			Speed (rpm)			167	167	164	158	150
<b>19.8 (75)</b>	Torque lbf•ft (N•m)			184.5 (250)	335.8 (455)	468.6 (635)	605.2 (820)	664.2 (900)	786 (1065)	
		Speed (rpm)			184	183	180	176	170	158
<b>22.5 (85)</b>	Torque lbf•ft (N•m)			166.1 (225)	306.3 (415)	442.8 (600)	579.3 (785)	638.4 (865)		
		Speed (rpm)			209	208	206	202	194	
<b>23.8 (90)</b>	Torque lbf•ft (N•m)			118.1 (160)	269.4 (365)	424.4 (575)	568.3 (770)			
		Speed (rpm)			220	218	216	210		

**EBMER**

**EBMER 475 - 28.19 in<sup>3</sup>/rev (462 cm<sup>3</sup>/rev)**

		<i>Max. Cont</i>						<i>Peak</i>
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>	<b>2973 (205)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)	68.6 (93)	137.3 (186)					
	Speed (rpm)	2	1					
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	72.3 (98)	149.1 (202)	298.9 (405)	448.7 (608)	594.1 (805)		
	Speed (rpm)	7	6	5	5	4		
<b>2.1 (8)</b>	Torque lbf•ft (N•m)	72.3 (98)	152 (206)	317.3 (430)	481.2 (652)	622.9 (844)	741.7 (1005)	870.8 (1180)
	Speed (rpm)	15	14	13	13	12	10	8
<b>4 (15)</b>	Torque lbf•ft (N•m)	69.4 (94)	149.1 (202)	325.5 (441)	482.7 (654)	645.8 (875)	779.3 (1056)	913.6 (1238)
	Speed (rpm)	31	30	28	28	26	23	20
<b>6.6 (25)</b>	Torque lbf•ft (N•m)	69.4 (94)	149.1 (202)	325.5 (441)	482.7 (654)	645.8 (875)	779.3 (1056)	913.6 (1238)
	Speed (rpm)	52	51	48	45	43	39	35
<b>9 (34)</b>	Torque lbf•ft (N•m)	55.4 (75)	132.8 (180)	310 (420)	487.1 (660)	627.3 (850)	800.7 (1085)	934.3 (1266)
	Speed (rpm)	72	71	68	65	61	55	44
<b>11.9 (45)</b>	Torque lbf•ft (N•m)		106.3 (144)	280.4 (380)	462.7 (627)	616.2 (835)	783.8 (1062)	930.6 (1261)
	Speed (rpm)		96	95	93	90	84	73
<b>14 (53)</b>	Torque lbf•ft (N•m)		85.6 (116)	255.3 (346)	422.9 (573)	586.7 (795)	743.9 (1008)	894.5 (1212)
	Speed (rpm)		113	112	111	107	102	90
<b>15.9 (60)</b>	Torque lbf•ft (N•m)		60.5 (82)	234.7 (318)	397.8 (539)	583 (790)	719.6 (975)	875.3 (1186)
	Speed (rpm)		128	128	127	124	119	110
<b>18 (68)</b>	Torque lbf•ft (N•m)		42.8 (58)	200.7 (272)	383.8 (520)	546.1 (740)	704.8 (955)	853.1 (1156)
	Speed (rpm)		146	145	144	141	136	125
<b>19.8 (75)</b>	Torque lbf•ft (N•m)			169.7 (230)	354.2 (480)	518.1 (702)	679 (920)	823.6 (1116)
	Speed (rpm)			161	160	158	153	140
<b>22.5 (85)</b>	Torque lbf•ft (N•m)			147.6 (200)	335.1 (454)	488.6 (662)	646.5 (876)	
	Speed (rpm)			182	180	177	168	
<b>23.8 (90)</b>	Torque lbf•ft (N•m)			110.7 (150)	279 (378)	453.9 (615)	619.9 (840)	
	Speed (rpm)			194	193	190	182	

*Max. Cont.*

*Max. Int.*

# PERFORMANCE DATA



## EBMER 540 - 32.95 in<sup>3</sup>/rev (540 cm<sup>3</sup>/rev)

		<i>Max. Cont</i>					<i>Max. Int.</i>		
		<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>2031 (140)</b>	<b>2538 (175)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)		77.5 (105)	146.1 (198)					
	Speed (rpm)		2	2					
<b>1.1 (4)</b>	Torque lbf•ft (N•m)		92.3 (125)	170.5 (231)	346.9 (470)	507.7 (688)	687.8 (932)	838.4 (1136)	
	Speed (rpm)		6	5	5	4	4	3	
<b>2.1 (8)</b>	Torque lbf•ft (N•m)		98.9 (134)	175.6 (238)	366 (496)	552.8 (749)	712.9 (966)	867.2 (1175)	
	Speed (rpm)		13	13	12	11	11	8	
<b>4 (15)</b>	Torque lbf•ft (N•m)		90 (122)	169.7 (230)	372.7 (505)	553.5 (750)	724 (981)	898.9 (1218)	
	Speed (rpm)		27	26	26	25	24	21	
<b>6.6 (25)</b>	Torque lbf•ft (N•m)		73.8 (100)	166.1 (225)	369 (500)	571.2 (774)	727.7 (986)	900.4 (1220)	
	Speed (rpm)		44	43	42	41	39	35	
<b>9 (34)</b>	Torque lbf•ft (N•m)		59 (80)	156.5 (212)	355 (481)	552 (748)	721 (977)	917.3 (1243)	
	Speed (rpm)		62	61	60	58	54	49	
<b>11.9 (45)</b>	Torque lbf•ft (N•m)			127.7 (173)	322.5 (437)	526.9 (714)	690.8 (936)	878.2 (1190)	
	Speed (rpm)			82	82	81	79	75	
<b>14 (53)</b>	Torque lbf•ft (N•m)			104.8 (142)	307 (416)	500.4 (678)	692.2 (938)	863.5 (1170)	
	Speed (rpm)			97	97	96	94	89	
<b>15.9 (60)</b>	Torque lbf•ft (N•m)			78.2 (106)	280.4 (380)	490 (664)	661.2 (896)	854.6 (1158)	
	Speed (rpm)			110	110	109	108	106	
<b>18 (68)</b>	Torque lbf•ft (N•m)			62.7 (85)	263.5 (357)	454.6 (616)	642.1 (870)	817.7 (1108)	
	Speed (rpm)			125	124	124	123	120	
<b>19.8 (75)</b>	Torque lbf•ft (N•m)				234.7 (318)	442.8 (600)	609.6 (826)	811.8 (1100)	
	Speed (rpm)				138	137	135	132	
<b>22.5 (85)</b>	Torque lbf•ft (N•m)				215.5 (292)	397 (538)	575.6 (780)		
	Speed (rpm)				154	153	152		
<b>23.8 (90)</b>	Torque lbf•ft (N•m)				157.9 (214)	358.7 (486)	557.2 (755)		
	Speed (rpm)				169	168	168		

**EBMER**

**EBMER 650 - 39.48 in<sup>3</sup>/rev (647 cm<sup>3</sup>/rev)**

**EBMER**

		<i>Max. Cont</i> <i>Max. Int.</i> <i>Peak</i>					
<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>1740 (120)</b>	<b>2248 (155)</b>
<b>0.5 (2)</b>	Torque lbf•ft (N•m)	87.8 (119)	169.7 (230)				
	Speed (rpm)	2	1				
<b>1.1 (4)</b>	Torque lbf•ft (N•m)	99.6 (135)	197.8 (268)	407.4 (552)	594.1 (805)	693.7 (940)	
	Speed (rpm)	5	5	4	4	3	
<b>2.1 (8)</b>	Torque lbf•ft (N•m)	107 (145)	210.3 (285)	423.6 (574)	608.9 (825)	704.8 (955)	926.2 (1255)
	Speed (rpm)	11	11	10	10	9	7
<b>4 (15)</b>	Torque lbf•ft (N•m)	103.3 (140)	206.6 (280)	439.1 (595)	645.8 (875)	724.7 (982)	941.7 (1276)
	Speed (rpm)	22	22	21	21	20	16
<b>6.6 (25)</b>	Torque lbf•ft (N•m)	95.9 (130)	203 (275)	435.4 (590)	653.9 (886)	741.7 (1005)	960.9 (1302)
	Speed (rpm)	37	36	36	35	34	30
<b>9 (34)</b>	Torque lbf•ft (N•m)	84.9 (115)	191.9 (260)	428 (580)	656.8 (890)	749.1 (1015)	966.8 (1310)
	Speed (rpm)	51	51	50	49	47	44
<b>11.9 (45)</b>	Torque lbf•ft (N•m)		173.4 (235)	409.6 (555)	642.1 (870)	734.3 (995)	944.6 (1280)
	Speed (rpm)		69	68	67	66	63
<b>14 (53)</b>	Torque lbf•ft (N•m)		147.6 (200)	383.8 (520)	627.3 (850)	719.6 (975)	922.5 (1250)
	Speed (rpm)		80	80	79	78	76
<b>15.9 (60)</b>	Torque lbf•ft (N•m)		125.5 (170)	361.6 (490)	608.9 (825)	690 (935)	896.7 (1215)
	Speed (rpm)		91	91	90	89	88
<b>18 (68)</b>	Torque lbf•ft (N•m)		107 (145)	317.3 (430)	572 (775)	649.4 (880)	874.5 (1185)
	Speed (rpm)		104	103	102	101	99
<b>19.8 (75)</b>	Torque lbf•ft (N•m)			310 (420)	538.7 (730)	631 (855)	833.9 (1130)
	Speed (rpm)			114	113	112	110
<b>22 (83)</b>	Torque lbf•ft (N•m)			280.4 (380)	487.1 (660)	586.7 (795)	
	Speed (rpm)			130	129	128	
<b>23.8 (90)</b>	Torque lbf•ft (N•m)			214 (290)	431.7 (585)	538.7 (730)	
	Speed (rpm)			138	137	136	

*Max. Cont.*

*Max. Int.*

# PERFORMANCE DATA



## EBMER 750 - 45.46 in<sup>3</sup>/rev (745 cm<sup>3</sup>/rev)

		<i>Max. Cont</i>					<i>Max. Int.</i>		<i>Peak</i>	
		<b>Pressure PSI (bar)</b>		<b>254 (17.5)</b>	<b>508 (35)</b>	<b>1015 (70)</b>	<b>1523 (105)</b>	<b>1740 (120)</b>	<b>2031 (140)</b>	
<b>Flow GPM (L/min)</b>	<b>0.5 (2)</b>	Torque lbf•ft (N•m)	107 (145)	206.6 (280)						
		Speed (rpm)	2	1						
	<b>1.1 (4)</b>	Torque lbf•ft (N•m)	118.1 (160)	236.9 (321)	482.7 (654)	708.5 (960)	822.9 (1115)	968.3 (1312)		
		Speed (rpm)	4	4	4	3	3	2		
	<b>2.1 (8)</b>	Torque lbf•ft (N•m)	119.6 (162)	247.2 (335)	507.7 (688)	757.2 (1026)	855.3 (1159)	994.1 (1347)		
		Speed (rpm)	9	9	9	8	8	7		
	<b>4 (15)</b>	Torque lbf•ft (N•m)	115.1 (156)	243.5 (330)	512.2 (694)	772.7 (1047)	873.8 (1184)	1015.5 (1376)		
		Speed (rpm)	19	19	18	18	17	16		
	<b>6.6 (25)</b>	Torque lbf•ft (N•m)	104.8 (142)	236.2 (320)	507.7 (688)	771.9 (1046)	870.1 (1179)	1013.3 (1373)		
		Speed (rpm)	32	31	30	30	29	27		
	<b>9 (34)</b>	Torque lbf•ft (N•m)	81.2 (110)	212.5 (288)	485.6 (658)	753.5 (1021)	862.7 (1169)	1008.1 (1366)		
		Speed (rpm)	44	44	42	41	40	37		
	<b>11.9 (45)</b>	Torque lbf•ft (N•m)	52.4 (71)	178.6 (242)	457.6 (620)	724.7 (982)	843.5 (1143)	992.6 (1345)		
		Speed (rpm)	60	59	59	58	58	55		
	<b>14 (53)</b>	Torque lbf•ft (N•m)		149.1 (202)	419.2 (568)	694.5 (941)	815.5 (1105)	965.3 (1308)		
		Speed (rpm)		70	69	68	67	66		
	<b>15.9 (60)</b>	Torque lbf•ft (N•m)		103.3 (140)	388.9 (527)	662.7 (898)	801.5 (1086)	949.1 (1286)		
		Speed (rpm)		79	78	77	76	74		
	<b>18 (68)</b>	Torque lbf•ft (N•m)		73.8 (100)	358.7 (486)	628.8 (852)	763.1 (1034)	923.2 (1251)		
		Speed (rpm)		90	90	89	88	87		
<i>Max. Cont.</i>	<b>19.8 (75)</b>	Torque lbf•ft (N•m)		48 (65)	313.7 (425)	599.3 (812)	723.2 (980)	869.4 (1178)		
		Speed (rpm)		99	99	98	97	96		
<i>Max. Int.</i>	<b>22 (83)</b>	Torque lbf•ft (N•m)			291.5 (395)	549.8 (745)	668.6 (906)			
		Speed (rpm)			110	109	108			
	<b>23.8 (90)</b>	Torque lbf•ft (N•m)			219.9 (298)	487.1 (660)	590.4 (800)			
		Speed (rpm)			120	119	117			

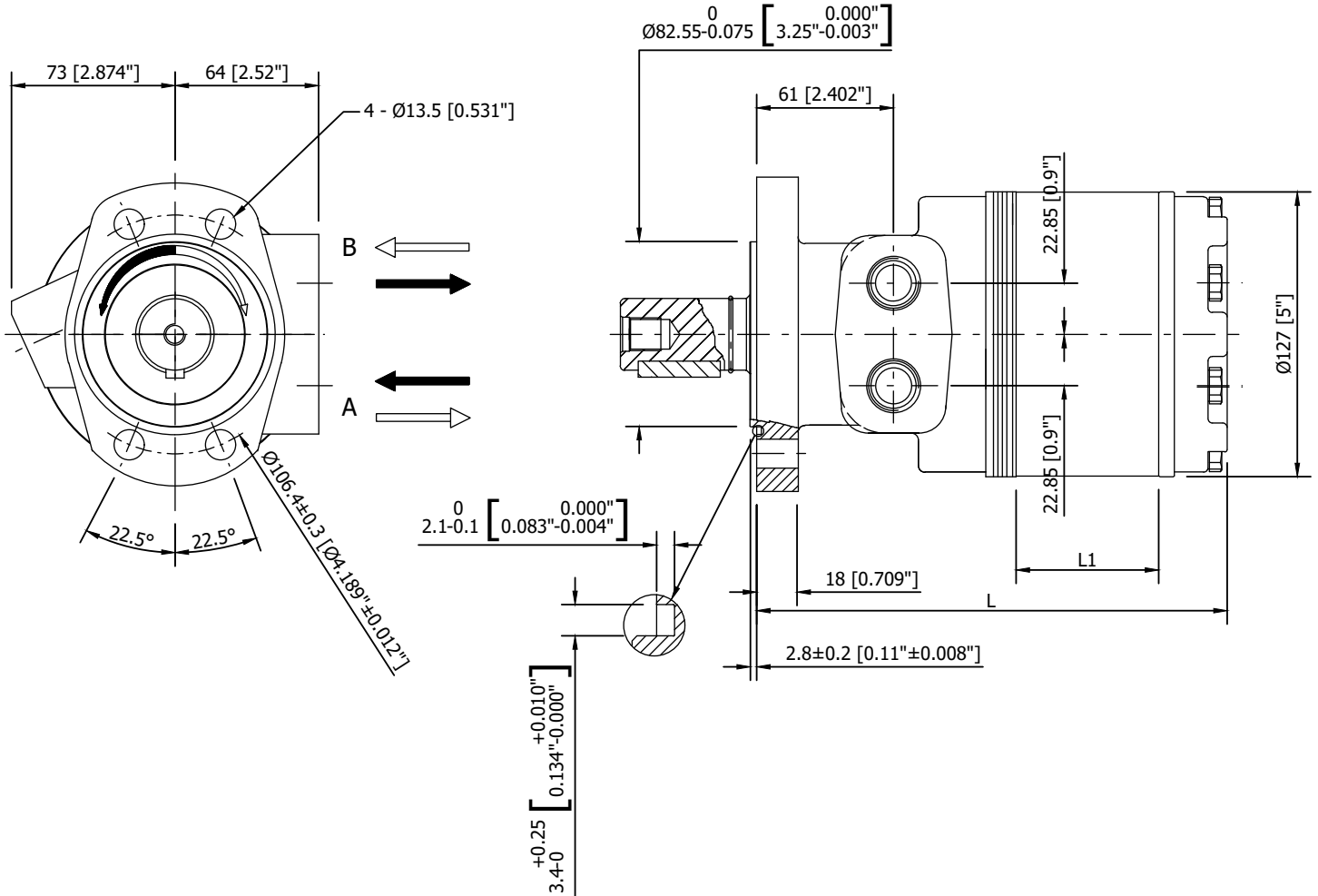
**EBMER**

# EBMER-2 DIMENSIONS AND MOUNTING

**EBMER**

## MAGNETO MOUNT - 4 HOLES

MAGNETO MOUNT - 4 HOLES	
CODE	PORT A - B
MS	7/8-14UNF
MP	1/2-14NPTF
MD	G1/2

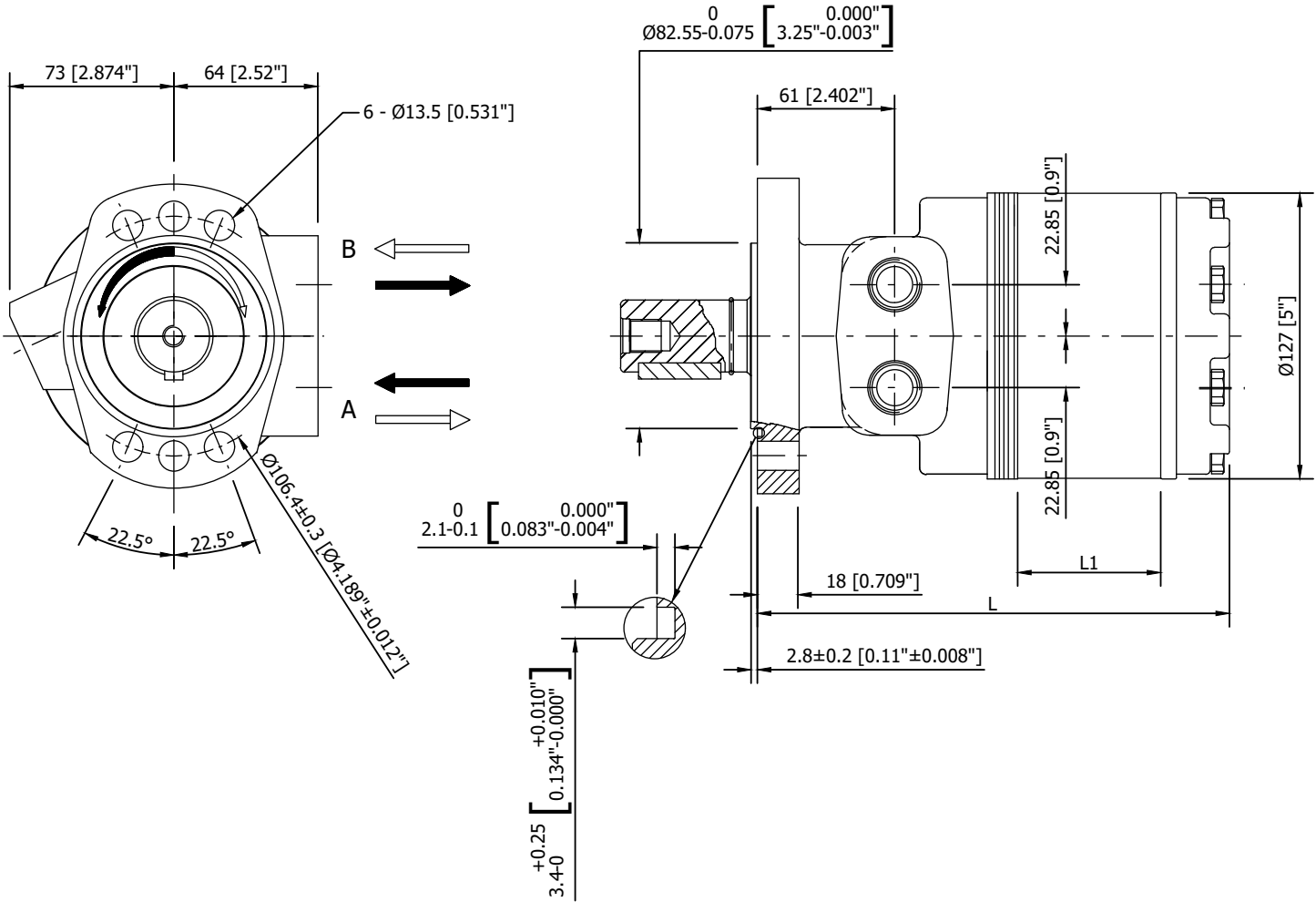


		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
L1	mm (in)	10.2 (0.402")	13.5 (0.531")	17 (0.669")	19.5 (0.768")	22 (0.866")	25.4 (1")	29.5 (1.161")	31.8 (1.252")	35.5 (1.398")	39.4 (1.551")	47.3 (1.862")	57 (2.244")	63.5 (2.5")
L	mm (in)	157 (6.181")	160 (6.299")	163.5 (6.437")	166 (6.535")	168.5 (6.634")	172 (6.772")	176 (6.929")	178.5 (7.028")	182 (7.165")	186 (7.323")	194 (7.638")	204 (8.031")	210 (8.268")
Weight	Lbs (kg)	23.3 (10.6)	24 (10.9)	24.6 (11.2)	24.9 (11.3)	25.1 (11.4)	25.5 (11.6)	26.4 (12)	27.5 (12.5)	27.9 (12.7)	28.6 (13)	29.7 (13.5)	31.9 (14.5)	33 (15)

# EBMER-2 DIMENSIONS AND MOUNTING



## MAGNETO MOUNT - 6 HOLES



MAGNETO MOUNT - 4 HOLES	
CODE	PORT A - B
MS	7/8-14UNF
MP	1/2-14NPTF
MD	G1/2

EBMER

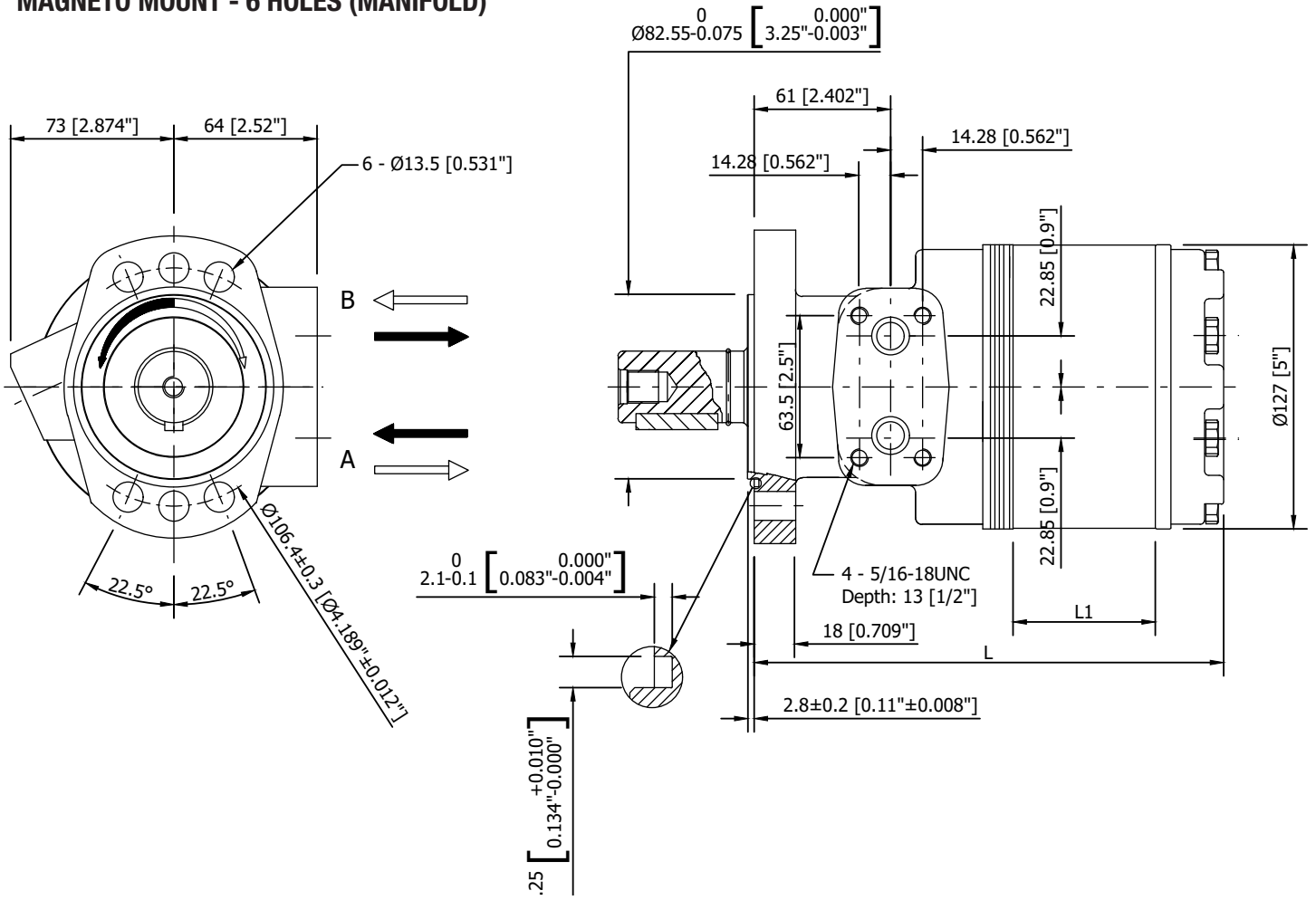
		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
L1	mm (in)	10.2 (0.402")	13.5 (0.531")	17 (0.669")	19.5 (0.768")	22 (0.866")	25.4 (1")	29.5 (1.161")	31.8 (1.252")	35.5 (1.398")	39.4 (1.551")	47.3 (1.862")	57 (2.244")	63.5 (2.5")
L	mm (in)	157 (6.181")	160 (6.299")	163.5 (6.437")	166 (6.535")	168.5 (6.634")	172 (6.772")	176 (6.929")	178.5 (7.028")	182 (7.165")	186 (7.323")	194 (7.638")	204 (8.031")	210 (8.268")
Weight	Lbs (kg)	23.3 (10.6)	24 (10.9)	24.6 (11.2)	24.9 (11.3)	25.1 (11.4)	25.5 (11.6)	26.4 (12)	27.5 (12.5)	27.9 (12.7)	28.6 (13)	29.7 (13.5)	31.9 (14.5)	33 (15)

# EBMER-2 DIMENSIONS AND MOUNTING

MAGNETO MOUNT - 6 HOLES (MANIFOLD)	
CODE	MANIFOLD PORT A - B
FH	Ø12.7 (1/2")

## MAGNETO MOUNT - 6 HOLES (MANIFOLD)

**EBMER**



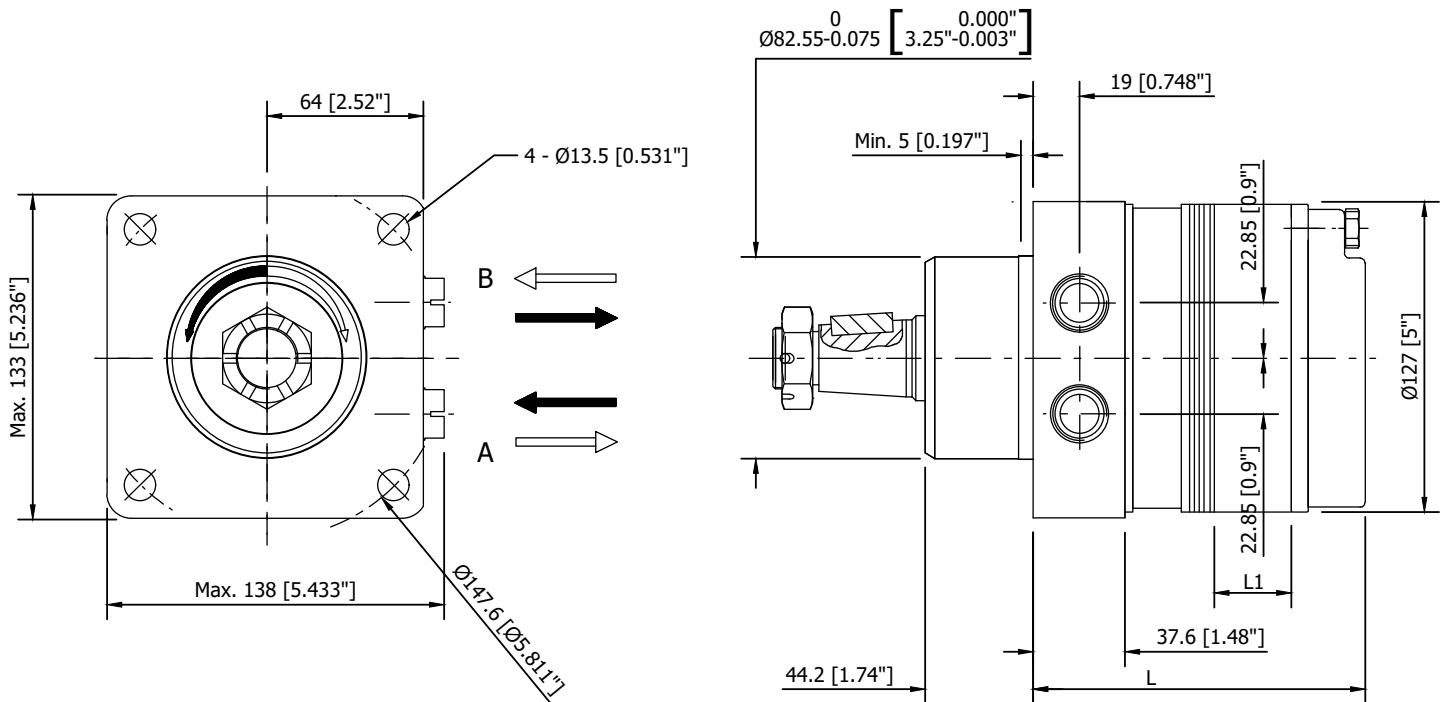
		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
L1	mm (in)	10.2 (0.402")	13.5 (0.531")	17 (0.669")	19.5 (0.768")	22 (0.866")	25.4 (1")	29.5 (1.161")	31.8 (1.252")	35.5 (1.398")	39.4 (1.551")	47.3 (1.862")	57 (2.244")	63.5 (2.5")
L	mm (in)	157 (6.181")	160 (6.299")	163.5 (6.437")	166 (6.535")	168.5 (6.634")	172 (6.772")	176 (6.929")	178.5 (7.028")	182 (7.165")	186 (7.323")	194 (7.638")	204 (8.031")	210 (8.268")
Weight	Lbs (kg)	23.3 (10.6)	24 (10.9)	24.6 (11.2)	24.9 (11.3)	25.1 (11.4)	25.5 (11.6)	26.4 (12)	27.5 (12.5)	27.9 (12.7)	28.6 (13)	29.7 (13.5)	31.9 (14.5)	33 (15)

# EBMER-2 DIMENSIONS AND MOUNTING



## WHEEL MOUNT

WHEEL MOUNT	
CODE	PORT A - B
WS	7/8-14UNF
WP	1/2-14NPTF
WD	G1/2



**EBMER**

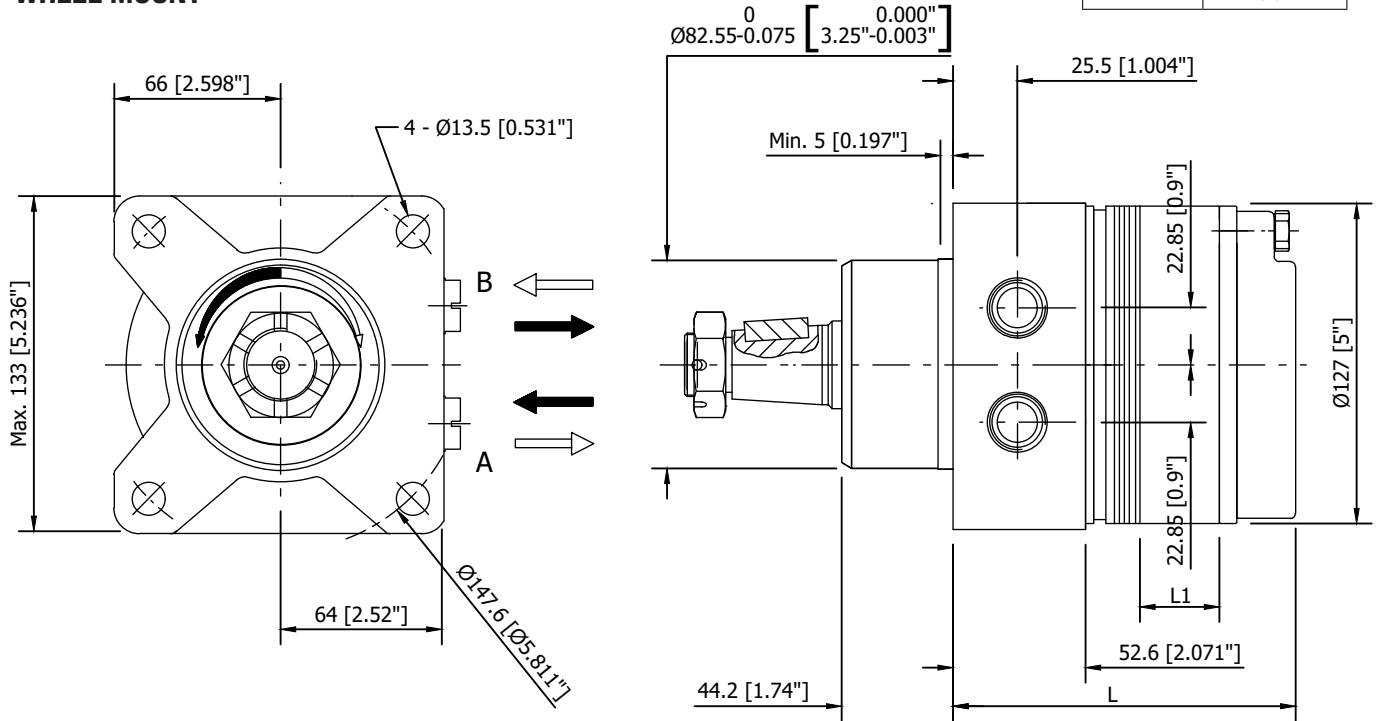
		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
L1	mm (in)	10.2 (0.402)	13.5 (0.531)	17 (0.669)	19.5 (0.768)	22 (0.866)	25.4 (1")	29.5 (1.161)	31.8 (1.252)	35.5 (1.398)	39.4 (1.551)	47.3 (1.862)	57 (2.244)	63.5 (2.5)
L	mm (in)	119 (4.685)	122 (4.803)	125.5 (4.941)	128 (5.039)	130.5 (5.138)	134.5 (5.295)	138 (5.433)	140.5 (5.531)	144 (5.669)	148 (5.827)	156 (6.142)	166 (6.535)	173 (6.811)
Weight	Lbs (kg)	26.4 (12)	26.6 (12.1)	27.1 (12.3)	27.3 (12.4)	27.7 (12.6)	28.6 (13)	29 (13.2)	29.7 (13.5)	30.1 (13.7)	30.8 (14)	32.1 (14.6)	34.1 (15.5)	35.2 (16)

# EBMER-2 DIMENSIONS AND MOUNTING

**EBMER**

## WHEEL MOUNT

WHEEL MOUNT	
CODE	PORT A - B
WS	7/8-14UNF
WP	1/2-14NPTF
WD	G1/2



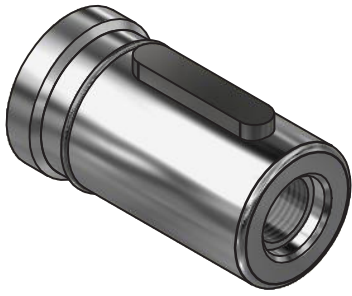
		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
L1	mm (in)	10.2 (0.402")	13.5 (0.531")	17 (0.669")	19.5 (0.768")	22 (0.866")	25.4 (1")	29.5 (1.161")	31.8 (1.252")	35.5 (1.398")	39.4 (1.551")	47.3 (1.862")	57 (2.244")	63.5 (2.5")
L	mm (in)	119 (4.685")	122 (4.803")	125.5 (4.941")	128 (5.039")	130.5 (5.138")	134.5 (5.295")	138 (5.433")	140.5 (5.531")	144 (5.669")	148 (5.827")	156 (6.142")	166 (6.535")	173 (6.811")
Weight	Lbs (kg)	26.4 (12)	26.6 (12.1)	27.1 (12.3)	27.3 (12.4)	27.7 (12.6)	28.6 (13)	29 (13.2)	29.7 (13.5)	30.1 (13.7)	30.8 (14)	32.1 (14.6)	34.1 (15.5)	35.2 (16)

# EBMER SHAFT EXTENSIONS DIMENSIONS

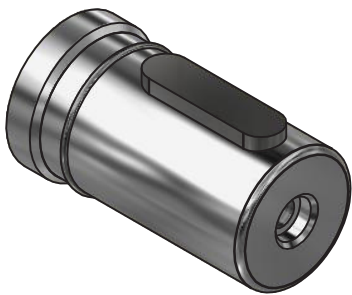
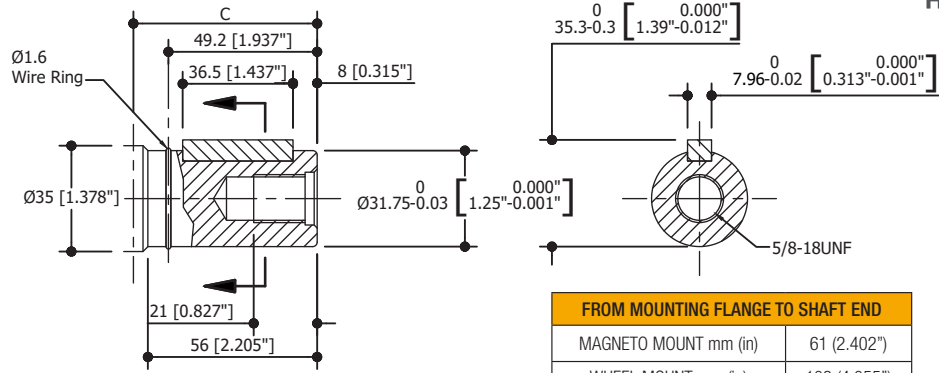


**EAGLE**  
HYDRAULIC

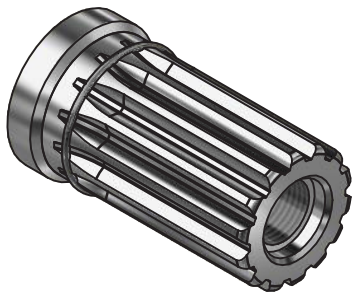
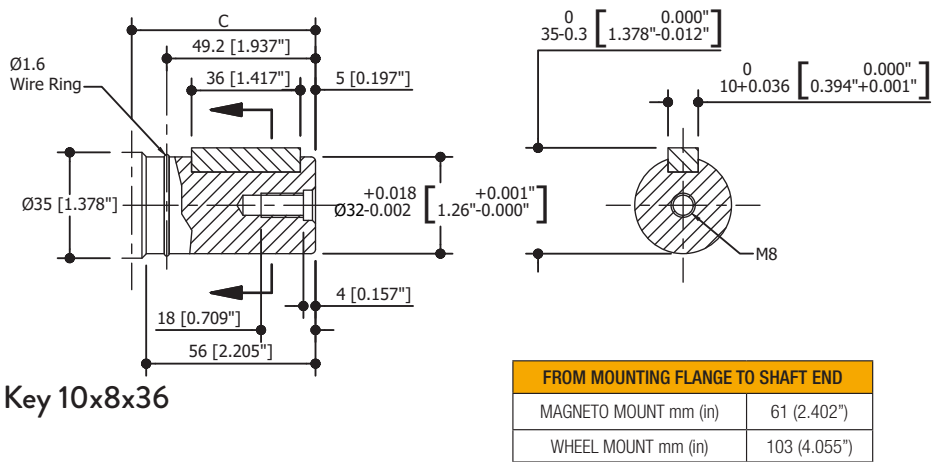
**EBMER**



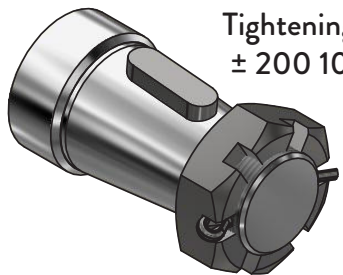
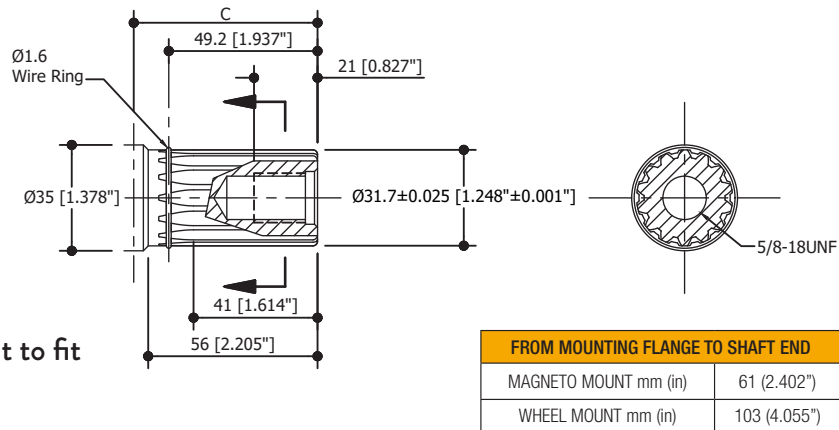
**SHAFT G2**  
Cylindrical Shaft  $\text{\O}1\text{-}1/4\text{'}$   
Parallel Key  $5/16\text{'}\times 7\times 36.5$   
IMPERIAL



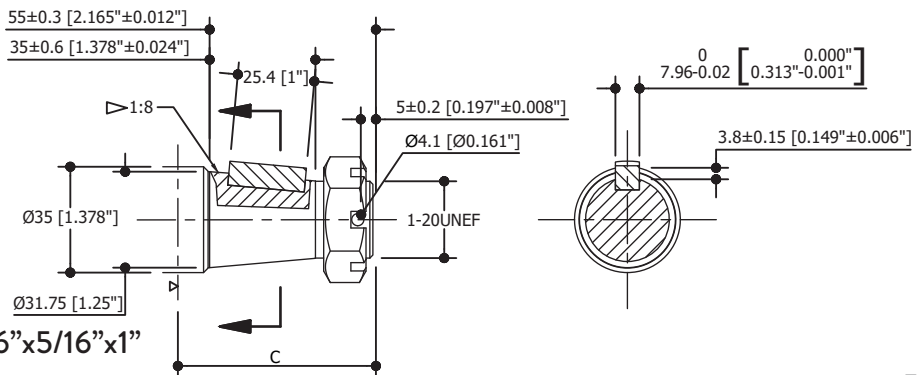
**SHAFT B1**  
Cylindrical Shaft  $\text{\O}32$  - Parallel Key  $10\times 8\times 36$   
METRIC



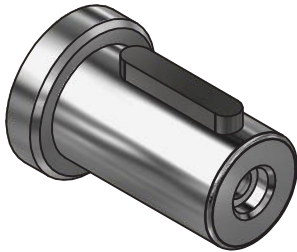
**SHAFT FD1**  
Splined 14-DP12/24 Flat root side fit to fit  
ANSI B92.1 1996  
IMPERIAL



Tightening Torque:  
 $\pm 200 \text{ 10Nm}$

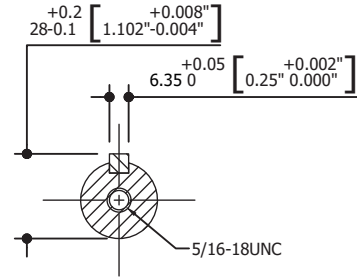
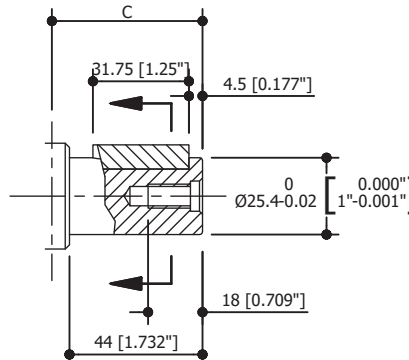


**SHAFT T4**  
Cone-Shaft  $\text{\O}1\text{-}1/4\text{'}$  - Parallel Key  $5/16\text{'}\times 5/16\text{'}\times 1\text{'}$   
IMPERIAL



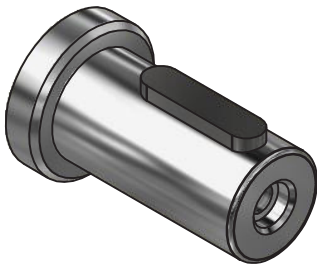
## SHAFT RW

Cylindrical Shaft  $\varnothing 1"$  - Parallel Key  $1/4" \times 1/4" \times 1-1/4"$   
IMPERIAL



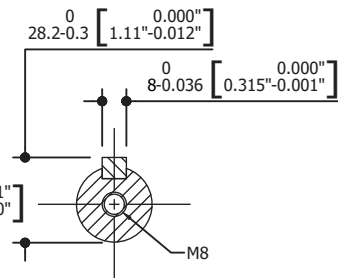
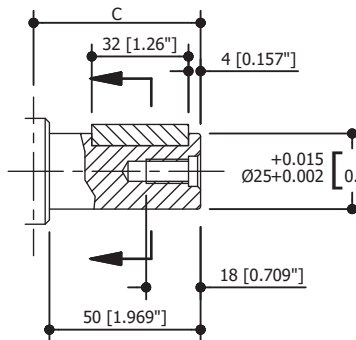
### FROM MOUNTING FLANGE TO SHAFT END

MAGNETO MOUNT mm (in)	50 (1.969")
WHEEL MOUNT mm (in)	91 (3.583")



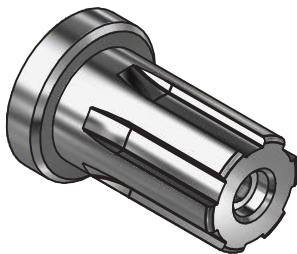
## SHAFT AW

Cylindrical Shaft  $\varnothing 25$   
Parallel Key  $8 \times 7 \times 32$   
METRIC



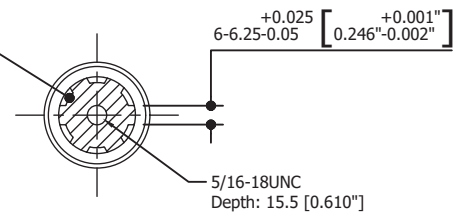
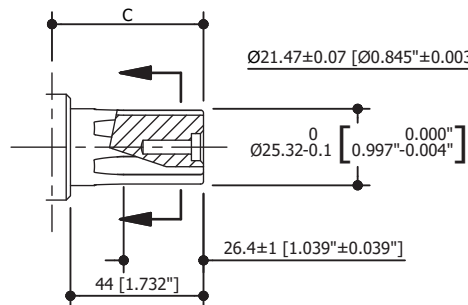
### FROM MOUNTING FLANGE TO SHAFT END

MAGNETO MOUNT mm (in)	56 (2.205")
WHEEL MOUNT mm (in)	97 (3.819")



## SHAFT SW

Splined SAE 6B  
METRIC



### FROM MOUNTING FLANGE TO SHAFT END

MAGNETO MOUNT mm (in)	50 (1.969")
WHEEL MOUNT mm (in)	91 (3.583")

EBMER-2 can be configured  $\varnothing 1-1/2"$  (38.1mm) shaft seal. Shaft type T31 and M1 and G32. Please consult the sales manager.

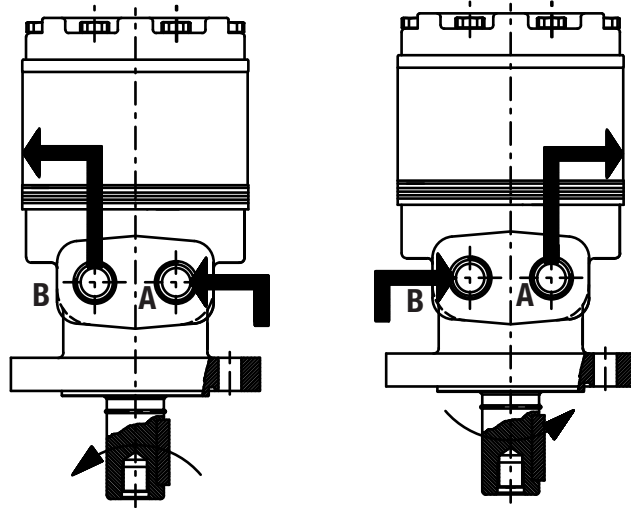
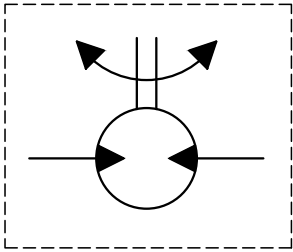
# EBMER-2 SERIES HYDRAULIC MOTOR



## EBMR - DIRECTION OF SHAFT ROTATIONn : REVERSE TIMED

When facing shaft end of motor, shaft is rotating:

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



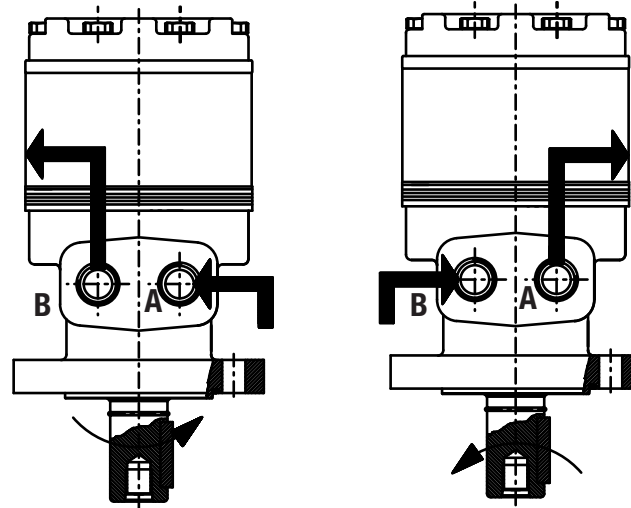
EBMER

## EBMR - DIRECTION OF SHAFT ROTATIONn : STANDARD

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft is rotating:

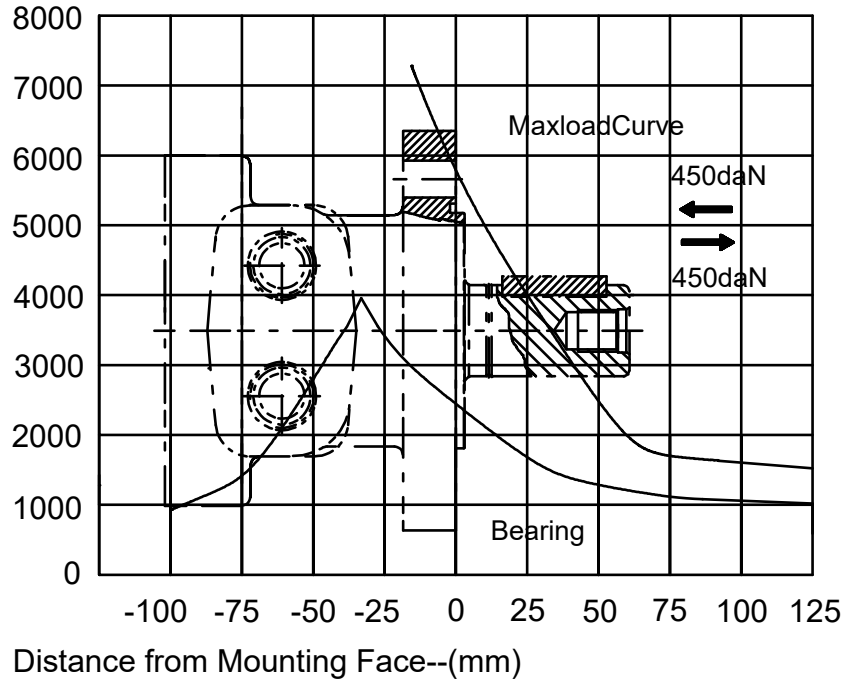
Clockwise when port "A" is pressurized.  
Counter-Clockwise when port "B" is pressurized.



# EBMER AXIAL AND RADIAL FORCES

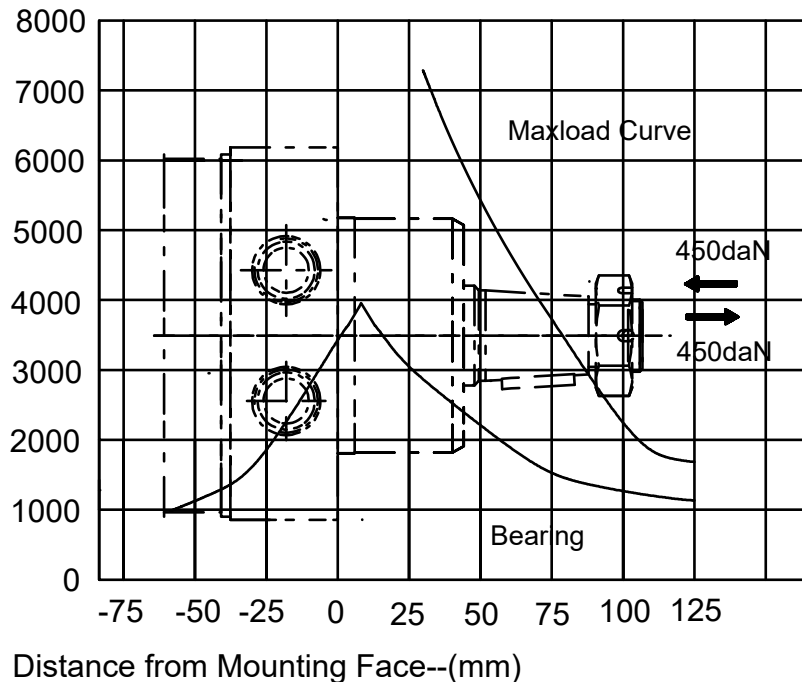
## EBMER-2 or M# / F# Mounting

Side Load-(daN)



## EBMER-2 or W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an L10 bearing life at  $12 \times 10^6$  revolutions. The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

# EBMER-4 SERIES



## EBMER-4 ORDER INFORMATION

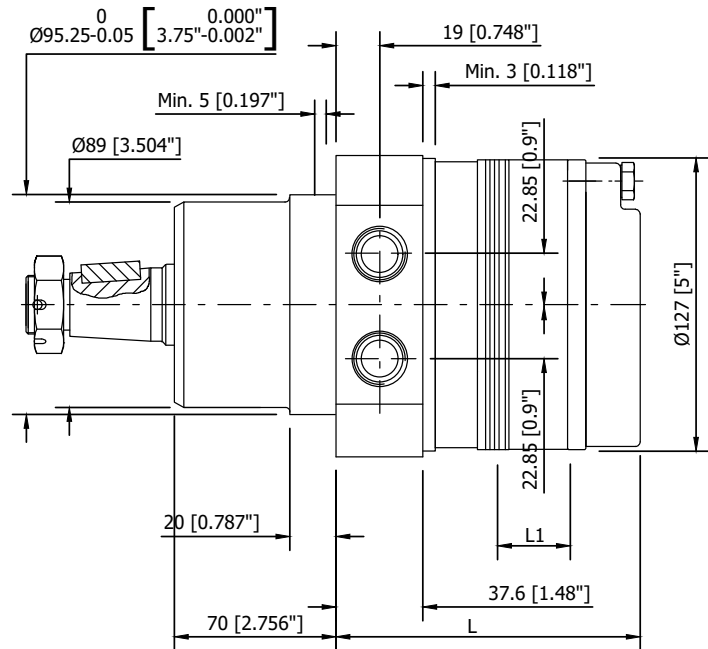
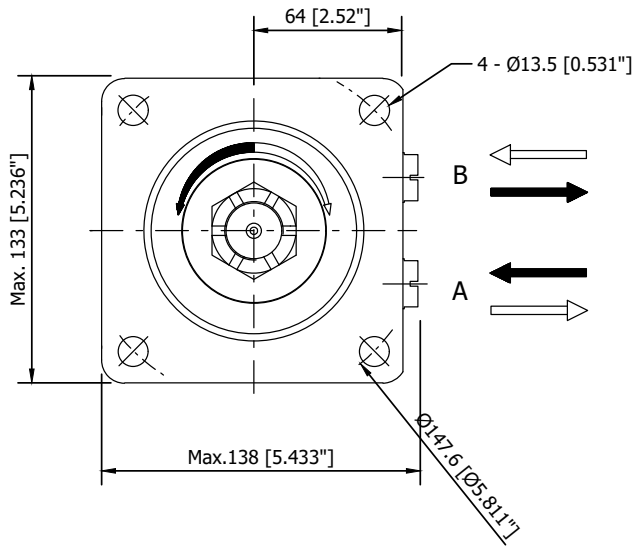
EBMER4  -  -  -  -  -

1	2	3		4		5		6		7			
CODE	Displacement	Flange		Output Shaft		Rotation Direction		Paint		Unusually Function			
2	125	WS	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports 7/8-14 O-Ring		G2	Shaft Ø1-1/4", Parallel Key 5/16" x 7mm x 36.5mm		Blank	Standard	00	No Paint	Blank	Standard
	160	WP	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports 1/2-14NPTF		B1	Shaft Ø32, Parallel Key 10 x 8 x 45		R	Reverse Timed	Blank	Black		
	200	WD	4-Ø13.5 Wheel Mount, Pilot Ø82.55 x 5, Ports G1/2		FD1	Shaft Ø1-1/4", Splined Key 14-DP12/24				Bl	Blue		
	230				T4	Cone-Shaft Ø1-1/4", Parallel Key 5/16" x 5/16" x 1"				S	Silver Grey		
	250				RW	Shaft Ø1", Parallel Key 1/4" x 1/4" x 1-1/4"							
	300				SW	Shaft Ø1", Splined Key SAE 6B							
	350				AW	Shaft Ø25, Parallel Key 8 x 7 x 32							
	375												
400													
475													
540													
650													
750													

Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

WHEEL MOUNT	
CODE	PORT A - B
WS	7/8-14UNF
WP	1/2-14NPTF
WD	G1/2

## WHEEL MOUNT



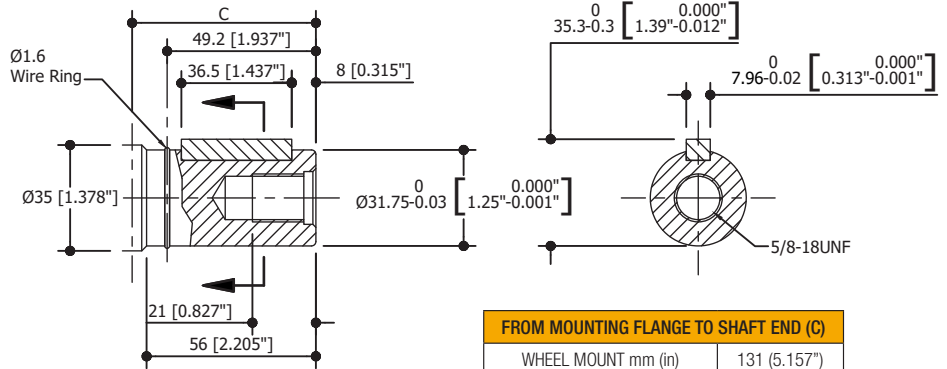
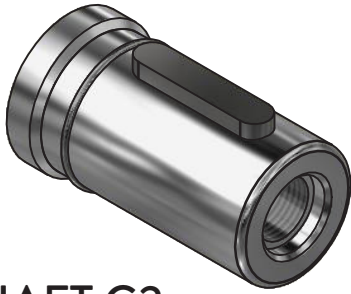
		EBMER 125	EBMER 160	EBMER 200	EBMER 230	EBMER 250	EBMER 300	EBMER 350	EBMER 375	EBMER 400	EBMER 475	EBMER 540	EBMER 650	EBMER 750
Geometric displacement	in <sup>3</sup> /rev (cm <sup>3</sup> /rev.)	7.2 (118)	9.52 (156)	11.96 (196)	13.91 (228)	15.68 (257)	18.06 (296)	21.05 (345)	22.64 (371)	24.71 (405)	28.19 (462)	32.95 (540)	39.48 (647)	45.46 (745)
L1	mm (in)	10.2 (0.402")	13.5 (0.531")	17 (0.669")	19.5 (0.768")	22 (0.866")	25.4 (1")	29.5 (1.161")	31.8 (1.252")	35.5 (1.398")	39.4 (1.551")	47.3 (1.862")	57 (2.244")	63.5 (2.5")
L	mm (in)	119 (4.685")	122 (4.803")	125.5 (4.941")	128 (5.039")	130.5 (5.138")	134.5 (5.295")	138 (5.433")	140.5 (5.531")	144 (5.669")	148 (5.827")	156 (6.142")	165.5 (6.516")	172 (6.772")
Weight	Lbs (kg)	28.2 (12.8)	28.8 (13.1)	29.5 (13.4)	29.9 (13.6)	30.4 (13.8)	31 (14.1)	31.9 (14.5)	32.6 (14.8)	33.4 (15.2)	34.3 (15.6)	35.4 (16.1)	37.2 (16.9)	38.3 (17.4)

EBMER

# EBMER-4 SHAFT EXTENSIONS DIMENSIONS

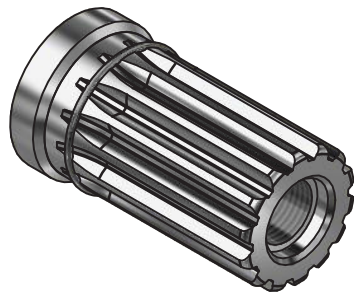
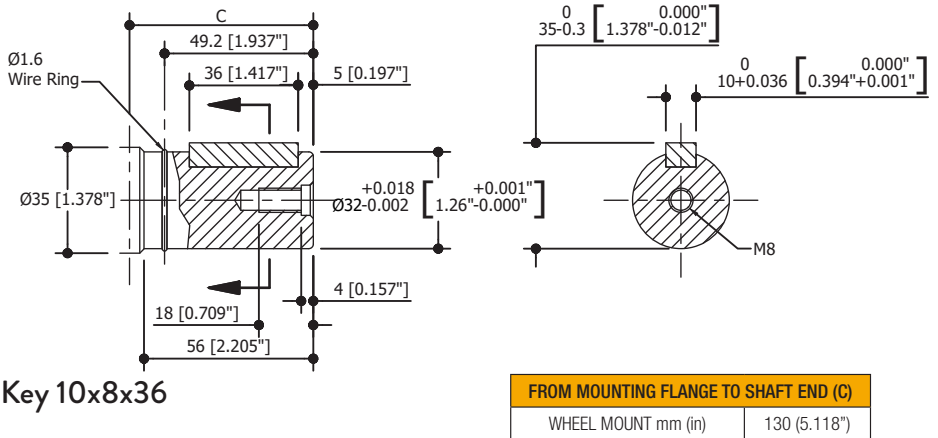
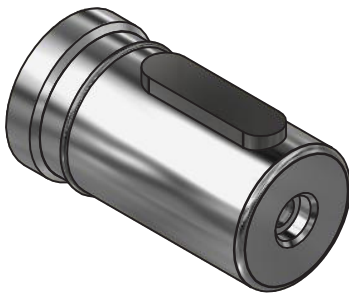
## SHAFT G2

Cylindrical Shaft  $\text{\O}1\text{-}1/4\text{'}$   
Parallel Key  $5/16\text{'}\times 7\times 36.5$   
IMPERIAL



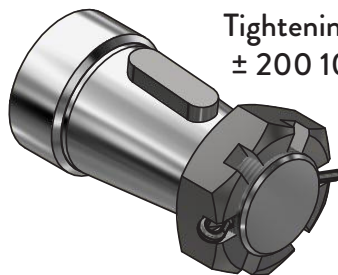
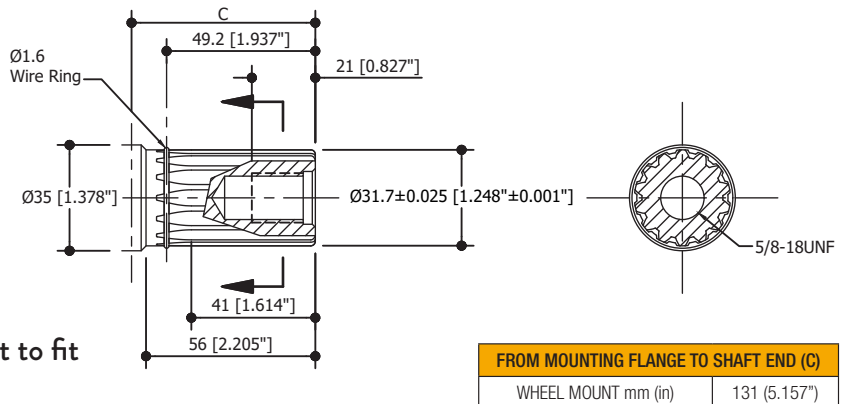
## SHAFT B1

Cylindrical Shaft  $\text{\O}32$  - Parallel Key  $10\times 8\times 36$   
METRIC



## SHAFT FD1

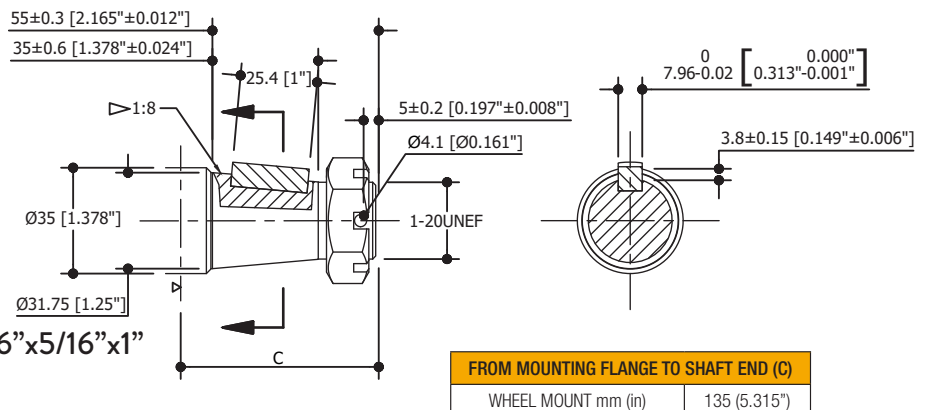
Splined 14-DP12/24 Flat root side fit to fit  
ANSI B92.1 1996  
IMPERIAL



## SHAFT T4

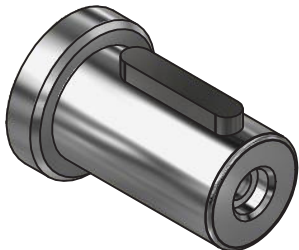
Cone-Shaft  $\text{\O}1\text{-}1/4\text{'}$  - Parallel Key  $5/16\text{'}\times 5/16\text{'}\times 1\text{'}$   
IMPERIAL

Tightening Torque:  
 $\pm 200$  10Nm



# EBMER-4 SHAFT EXTENSIONS

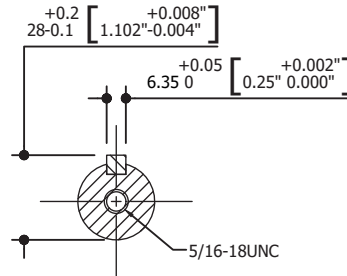
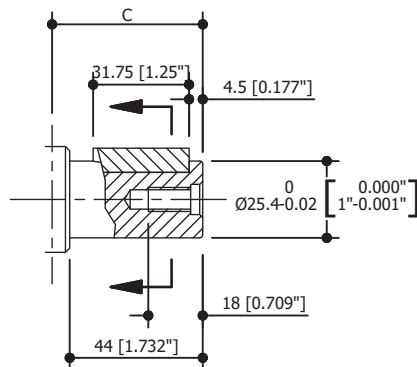
## DIMENSIONS



### SHAFT RW

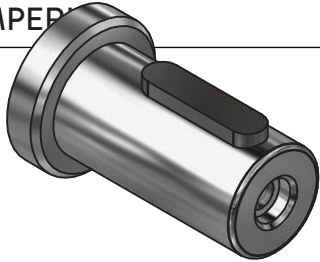
Cylindrical Shaft  $\varnothing 1"$  - Parallel Key  $1/4" \times 1/4" \times 1-1/4"$

IMPER



FROM MOUNTING FLANGE TO SHAFT END (C)

WHEEL MOUNT mm (in)	119 (4.685")
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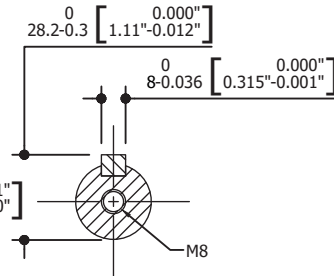
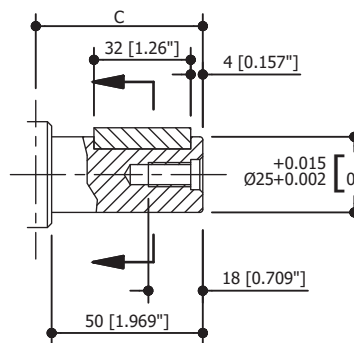


### SHAFT AW

Cylindrical Shaft  $\varnothing 25$

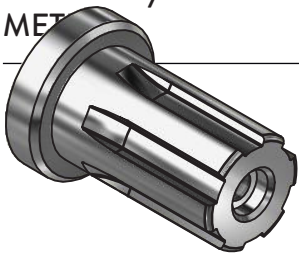
Parallel Key  $8 \times 7 \times 32$

MET



FROM MOUNTING FLANGE TO SHAFT END (C)

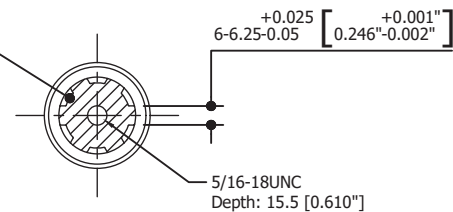
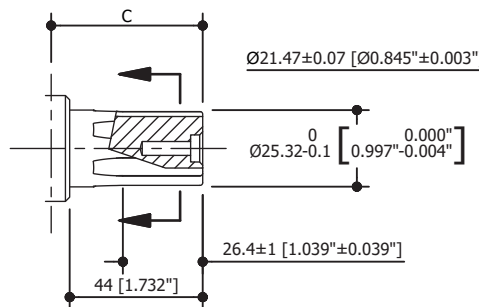
WHEEL MOUNT mm (in)	125 (4.921")
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### SHAFT SW

Splined SAE 6B

METRIC



FROM MOUNTING FLANGE TO SHAFT END (C)

WHEEL MOUNT mm (in)	119 (4.685")
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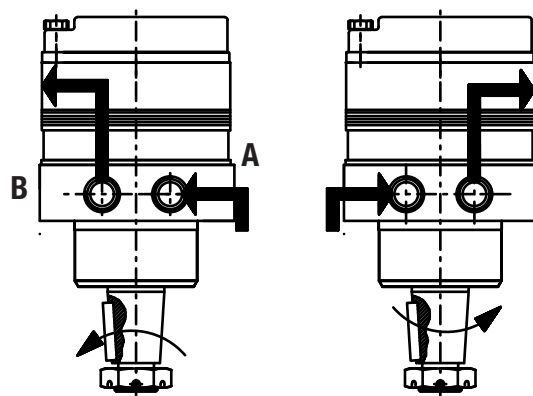
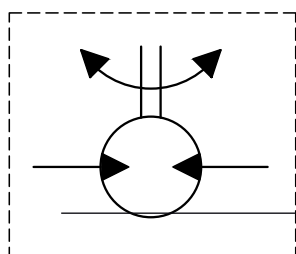
EBMER-4 can be configured  $\varnothing 1-1/2"$  (38.1mm) shaft seal. Please consult the sales manager.

## EBMER-4 - DIRECTION OF SHAFT ROTATION : REVERSE TIMED

When facing shaft end of motor, shaft is rotating:

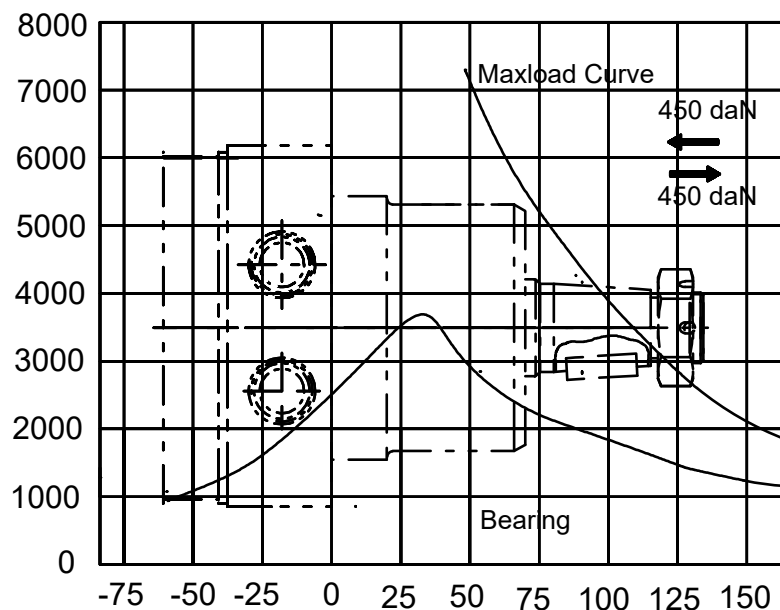
Clockwise when port "B" is pressurized.

Counter-Clockwise when port "A" is pressurized.



## EBMER-4 - FOR w# MOUNTING

Side Load-(daN)



The bearing curve represents allowable bearing loads for an  $L_{10}$  bearing life at  $12 \times 10^6$  revolutions. The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock load



## NON-TRANSFERABLE LIMITED WARRANTY

This document outlines the warranty associated with Eagle Hydraulic Components' products. If you have any questions regarding this warranty, please contact our service department by phone at 1-877-382-2850 or by e-mail at [service@eagle-hydraulic.com](mailto:service@eagle-hydraulic.com).

**Eagle Hydraulic Components, Inc., formerly HWF Hydraulique International Inc. ("EAGLE"), warrants to you, the original purchaser, that all of its products are free from defects in material or workmanship under normal use and service for the following periods:**

EAGLE's warranty is limited to the Original Equipment Manufacturer ("OEM") and/or distributor to whom EAGLE's products are originally sold. EAGLE's warranty is non-transferable to any subsequent purchaser and limited to original purchaser from EAGLE.

EAGLE's 2 year warranty period is calculated from the date of manufacture, which is engraved on the body of every cylinder.

### **MAINTENANCE:**

Inspections and maintenance should be performed on all EAGLE products at regular intervals. While necessary maintenance or repairs on your EAGLE product can be performed by any company, we recommend that you use only authorized EAGLE dealers.

**WARNING: IMPROPER OR INCORRECTLY PERFORMED MAINTENANCE OR REPAIR VOIDS THIS WARRANTY.**

### **How to Obtain Service From EAGLE Under This Limited Warranty:**

To obtain service under this warranty, contact our service department by phone at 1-877-382-2850 or by e-mail at [service@eagle-hydraulic.com](mailto:service@eagle-hydraulic.com).

Please note, EAGLE's obligation to repair or replace your EAGLE product is subject to confirmation by EAGLE's service technicians that the part contains a defect in material or workmanship.

EAGLE's obligations under this warranty are limited to the repair or replacement of the subject EAGLE part or product. The decision to repair or replace any defective EAGLE part or product is solely at the discretion of EAGLE. Please further note, EAGLE reserves the right to direct any and all repairs performed under this warranty to a local approved service location.

### **What This Warranty Does Not Cover:**

EAGLE shall have no responsibility for the following:

- Troubleshooting, diagnostic, removal, or reinstallation labor charges of any EAGLE part or product unless prior written approval is obtained from EAGLE;
- Freight charges for either defective parts, new parts, or repaired; \*\*\*
- Claims for loss of time, inconvenience, loss of use, profits or any other incidental or consequential damages arising from any product defect;
- Conditions arising from or caused by alteration of the product, product misuse or neglect, lack of proper maintenance, fire, theft, loss, or damage to the product (including, but not limited to, intentional damage, weather related damage, or any other type of physical damage);
- Corrosion, unless the material is found to be out of specification;
- Failure caused by foreign contamination introduced to the cylinder;
- Paint, unless out of specification;
- Normal wear of internal components.

\*\*\* Please note, in certain circumstances, EAGLE may decide to reimburse a customer for freight charges associated with a warranty claim. However, the decision to provide reimbursement for freight changes remains within the sole discretion of EAGLE.

Products which experience color change due to normal weathering are also excluded from this warranty (including non-uniform fading and color changes resulting from unequal exposure of panels to the sun and elements). For purposes this warranty, the term "normal weathering" means exposure to ultraviolet (sun) light, and extremes of temperature and atmosphere which will cause any colored or painted surface to fade, darken, chalk, crack, or acquire surface accumulation of dirt or stains. The severity of these conditions depends on air quality, the geographic location of the property at which the products are installed, and other local conditions over which EAGLE has no control.

EAGLE shall not be liable for and this warranty does not apply or extend to any failure, defects, or damages arising from or connected with, without limitation, misuse, abuse, neglect, faulty or improper installation.

### **Warranty Void – Use Authorized Representative for Inspections:**

***This warranty is null & void should the product be dismantled, opened, or serviced by anyone other than an approved representative of EAGLE.***

If you believe that your EAGLE product suffers from a defect covered by this warranty, contact our service department to report the problem and obtain information regarding where to bring your product for inspection.



### **Warranty procedure:**

In order to validate each claim and administer our warranty, EAGLE requires each customer who is making a warranty claim to fill out a “Warranty Claim Form.” This form includes basic information, such as the Part Number, the Date Code, and a simple description of how the product failed. If possible, please describe the defect. EAGLE also requests that you provide a photograph of the product and any potentially defective conditions, to assist us in confirming your warranty claim.

Below please find a checklist of items to provide EAGLE to assist us process your warranty claim:

1. Warranty Claim Form
2. Part Number & Date Code
3. Invoice Number and Date
4. Photo that best portrays the defect

**FAILURE TO SUBMIT A COMPLETED “WARRANTY CLAIM FORM” MAY RESULT IN THE DENIAL OF YOUR WARRANTY CLAIM.**

If requested for inspection by EAGLE, defective parts must be shipped to EAGLE’s chosen shipping address. When returning a product, we recommend that you utilize an insured method of delivery, which includes a signature for acceptance of delivery.

### **Warranty Processing:**

*Through EAGLE’s Authorized Dealer:* Upon arrival of your EAGLE product and Warranty Claim Form to EAGLE’s authorized dealer, EAGLE and the dealer will assess and investigate your warranty claim within five (5) working days to provide a preliminary assessment of any claims. If, based on this preliminary assessment, EAGLE believes that the product may contain a defect which falls within this warranty, EAGLE’s authorized dealer will make arrangements to return the product to EAGLE’s service headquarters in Montreal, Canada for final assessment. At that time, EAGLE will assign an RGA number (return goods authorization) to track the product. Please allow 2-3 weeks for assessment by EAGLE’s service headquarters.

*Through EAGLE’s Headquarters:* You may ship your EAGLE product and Warranty Claim Form directly to EAGLE’s service headquarters in Montreal, Canada to expedite processing of your claim.

### ***If your EAGLE product contains a condition which falls within EAGLE’s warranty:***

1. EAGLE will process the claim within 15-days after the product arrives in Montreal, Canada.
2. EAGLE will either repair or replace the defective product, at our discretion..

### **NOTICE TO OEM DEALERS AND DISTRIBUTORS:**

With respect to warranty claims presented by EAGLE’s product dealers and distributors, EAGLE will consolidate all valid warranty claims, review them, and take action on a quarterly basis.

### **WARRANTY LIMITATIONS**

#### **THIS WARRANTY IS NOT APPLICABLE OUTSIDE OF NORTH AMERICA.**

EAGLE reserves the right to discontinue or change any of its products, including colors, without providing notice to its dealers, distributors, or purchasers. Should a product covered by this warranty become unavailable for any reason, EAGLE reserves the right, at EAGLE’s sole discretion, to substitute a product that is of equal quality or refund the purchase price.

If the product is not returned to EAGLE’s headquarters for inspection, you the customer, must maintain and preserve the product as evidence. If EAGLE does not request the defective product to be returned, the customer may discard the product appropriately after 60 days.

THE WARRANTY PROVIDED ABOVE CONTAINS THE EXTENT OF ALL EXPRESS WARRANTIES. EAGLE MAKES NO WARRANTIES REGARDING ANY PRODUCT’S FITNESS FOR ANY PARTICULAR PURPOSE. EAGLE’S WARRANTY DOES NOT COVER ANY PROPERTY DAMAGE, PERSONAL INJURY, INCIDENTAL DAMAGE OR CONSEQUENTIAL DAMAGE ALLEGEDLY ASSOCIATED WITH ITS PRODUCTS. EAGLE shall not be liable for inconvenience, labor, loss of time, maintenance, removal or reinstallation of the products or other incidental, special or consequential damages arising in relation to the purchase or use of the product.

**BY PURCHASE OF EAGLE’S PRODUCT(S), INCLUDING THIS WARRANTY, BUYER ACCEPTS THIS WARRANTY IN LIEU OF ALL OTHER WARRANTIES, LIABILITIES OR OBLIGATIONS OF EAGLE, EITHER EXPRESSED OR IMPLIED, EXCEPT THAT THE DURATION OF ANY IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED IN TIME TO THE DURATION OF THIS WARRANTY. EAGLE SHALL IN NO EVENT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL OR SPECIAL DAMAGES OF ANY KIND FOR BREACH OF ANY EXPRESS WRITTEN OR ORAL OR IMPLIED WARRANTY ON PRODUCTS. YOUR EXCLUSIVE REMEDY SHALL BE ENFORCEMENT OF THIS WARRANTY UPON THE TERMS AND CONDITIONS STATED HEREIN. NO REPRESENTATIVE OF EAGLE OR ITS DISTRIBUTORS OR DEALERS IS AUTHORIZED TO MAKE ANY CHANGE OR MODIFICATION TO THIS WARRANTY.**

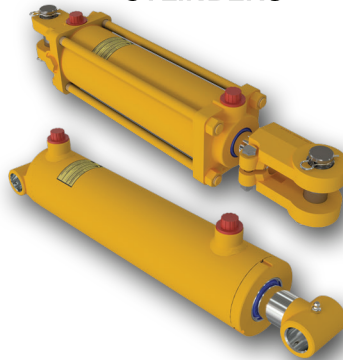
Some jurisdictions do not allow various limitations on implied warranties. Some jurisdictions do not allow the exclusion or limitation on consequential or special damage. As such, the limitations contained herein are subject to the limits of the applicable law. This warranty gives you specific legal rights, and you may also have other rights, all of which vary from jurisdiction to jurisdiction. If any provision of this warranty is declared to be illegal, unenforceable, or void, the remainder of this warranty shall be enforced to the extent permitted by law and the illegal, unenforceable or void provision shall be replaced with a mutually acceptable provision which comes closest to the intention of the underlying original provision, to the extent possible.

# HYDRAULIC PRODUCT SAFETY

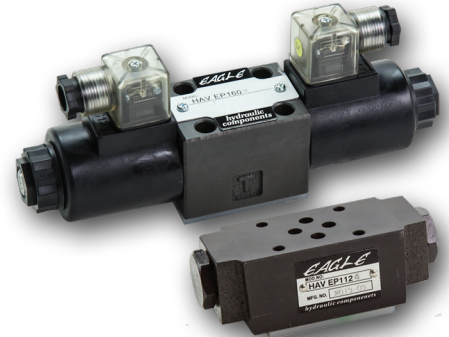
## POWER UNITS



## CYLINDERS



## ACCESSORIES



### WARNING

Hydraulic system parts and connections can contain high pressures which, if suddenly and unexpectedly released, can cause serious injury or death.



### WARNING (AVISO) (AVERTISSEMENT)

TO PREVENT SERIOUS INJURY OR DEATH FROM MOVING PARTS:  
 \*KEEP HANDS, FEET AND CLOTHING AWAY FROM MOVING PARTS.  
 \*CLOSE ALL GUARDS AND SHIELDS BEFORE OPERATING MACHINERY.  
 PARA EVITAR LA LESION O LA MUERTE:  
 \*MANTENGANSE A DISTANCIA LAS MANOS, LOS PIES Y LA ROPA DE LAS PARTES MOVIENTOS DE LA MAQUINA.  
 \*CIERRAN TODAS LAS PROTECTORAS QUE HAY ANTES QUE HEGAN FUNCIONAR.  
 AFIN D'ÉVITER TOUTE BLESSURE GRAVE OU LA MORT:  
 \*NE PAS RAPPROCHER LES MAINS, LES PIEDS OU LES VÊTEMENTS DES PIÈCES MOBILES.  
 \*D'ASSURE QUE TOUTES LES PIÈCES DE PROTECTION SONT EN PLACE AVANT DE METTRE EN MARCHÉ LA MACHINERIE.



### WARNING

**HIGH PRESSURE OIL can cause severe injury.**

Disconnect power and drain accumulator before servicing hydraulic system.

- Always wear eye protection and protective clothing when working on and around hydraulic systems.
- Never exhaust hydraulic fluid under pressure to atmosphere.
- Hydraulic fluid can reach high temperatures under normal operating conditions and can burn exposed skin.
- Fluid pressure can penetrate skin and cause death or serious injury, Wear proper protective clothing when working on hydraulics.
- Hydraulic devices should be properly “Locked-Out” or “Tagged-Out” before being worked on, including the release of any stored energy or pressure. Ensure a mechanical locking device is in place to prevent injury or death.
- Eagle Hydraulic Components is not responsible for misuse or misapplication of product.
- Do not use any heat-producing equipment such as oxyacetylene/gas torches and angle grinders on sealed hydraulic cylinders.
- Remove hydraulic oil from the cylinder before heating the cylinder.
- Never operate a cylinder(or power unit) above recommended pressures.
- Always use properly rated hoses and fittings.
- Do not weld, add welded items, drill holes or otherwise modify the cylinder from its original design.
- The hydraulic power unit may heat up during operation. The solenoids in the hydraulic power unit become so hot during operation that you may sustain burns. You should wear heat-proof gloves or protective clothing.

## CYLINDERS MAINTENANCE

- Installation and maintenance should be performed by qualified personnel.
- Ensure that the bearing surfaces are properly lubricated (e.g. joint bearing, swivel bearing) when operated.
- Check leak-tightness and functional safety at frequent intervals.
- Maximum permissible level of contamination by particles in accordance with ISO 4406.

## CYLINDERS STORAGE

- Always store indoors fully retracted in a clean dry area.
- chromeplated rod protruding from the cylinder must be protected against potential corrosive damage. Treat the entire surface with a preservative agent such as grease.
- Smear the internal surfaces of eye/clevis bushes or bearings with grease.
- We recommend that single-acting cylinders be protected against corrosion by directly adding anti-corrosive oil to the unpressurized chamber.
- Hydraulic cylinders must be filled with the same fluid the hydraulic system will operate with. Assurances must be taken to assure complete filling of the cylinders with oil.
- A relief valve shall be installed in the cylinder ports to allow FOR fluid expansion as the result of increases in ambient temperatures.
- Under these conditions, cylinders can be stored up to 12 months provided that they have not yet been extended and retracted.
- After 12 months, cylinders must be inspected and commercially available preservative agents reapplied.

## POWER UNITS, MOTORS AND PUMPS STORAGE

- Pump and motor drive shafts should be protected with a preservative agent such as grease. All ports should be capped if disconnected from the system.
- Steel Power Unit reservoir should be filled to prevent corrosion since ambient temperature change can results in moisture forming on the inside of the tank causing spot rusting and pitting of the tank surface.
- All Power Unit electrical connections (terminations) must be coated with corrosion inehbitors.
- Power Supply should be disconnected from the power unit.
- Single acting power unit should have the manual override valve open.

# CHROME ROD PROTECTION EXPLAINED

Chrome plated rod and bar products normally contain from 0.0005” minimum to 0.001” minimum hard chrome plate depending upon product specifications. This hard chrome coating is applied primarily for wear resistance though it does provide considerable corrosion resistance as well. Hard chrome plate deposits with a “micro-cracked” structure. Although hard chrome plate cannot corrode, The metal substrate it adheres to can corrode if moisture and oxygen penetrate the chrome layer. The result is a blistering and flaking of the chrome plate deposit from the metal substrate. Once the shaft is assembled into a cylinder and put into service, the hydraulic fluid on the surface provides additional corrosion resistance which is normally sufficient to protect the shaft during its entire life. However, there are occasions when the shaft is not being worked and when the surface is exposed to a corrosive environment. For example, brand new equipment may be stored outside for a considerable period of time at a manufacturer’s plant, or an equipment dealer may hold inventory before it is sold. In these instances it is best to provide some additional corrosion protection. An inexpensive application of a rust preventative mixture can be applied to prevent corrosion and thereby preserve the quality of the hard chrome coating and the life of the cylinder.

## PROTECTION OF NEW EQUIPMENT

The steps summarized below should be followed when protecting chrome plated shafting on new equipment:

1. Position the equipment as it will be stored, and identify all the exposed portions of the chrome plated shafts.
2. Clean dirt and dust from the exposed portions of the shafting using a dry cloth or a cloth which has been dampened with an appropriate solvent.
3. Prepare a mixture of 60% oil-based rust inhibitor and 40% Kerosene. Apply a thin coating of this mixture to the exposed surfaces of the chrome plated shafting. No. 1 fuel oil may be substituted for Kerosene. A cloth dipped in the mixture can be used to apply the coating.
4. Inspect the shaft surfaces after six months and apply additional corrosion preventative mixture.
5. If the equipment is to be moved and then stored again for an extended period of time, the steps above should be repeated for all shafts that were stroked during the move.

## PROTECTION OF OLDER EQUIPMENT

Occasionally it may be necessary to store equipment that has seen some service. The procedure described above can be used for older equipment, but more careful cleaning of the shaft surfaces would be necessary. Also, there may be damage on some of the shaft surfaces which will require additional protection.

Under no circumstances should sandpaper or other abrasives be used to clean the surfaces. Plastic or copper wool in combination with an appropriate solvent will remove most of the dirt. After the surface is clean it should be inspected for damage to the chrome plate. If damage is detected, more frequent application of the corrosion preventative will be necessary to prevent corrosion during storage

# FLUID POWER FORMULAS

## PRESSURE

$$P = F / A \quad F = P \times A$$

P = Pressure (PSI)      F = Force (Lb.)  
A = Area (sq. in.)

## CYLINDER VOLUME

$$V = A \times S$$

V = Volume (cu. in.)      A = Area (sq. in.)  
S = Stroke (in.)

## CYLINDER PISTON AREA

$$A_p = 0.7854 (D_p)^2$$

A<sub>p</sub> = Piston Area      D<sub>p</sub> = Piston Diameter

## CYLINDER ROD AREA

$$A_r = 0.7854 (D_r)^2$$

A<sub>r</sub> = Rod Area      D<sub>r</sub> = Rod Diameter

## CYLINDER EFFECTIVE AREA

$$A_e = A_p - A_r$$

A<sub>e</sub> = Effective Area      A<sub>p</sub> = Piston Area  
A<sub>r</sub> = Rod Area

## CYLINDER PISTON SPEED

$$V = Q \times 231 / A$$

V = Piston Speed (min.)      Q = Flow (GPM)  
A = Cylinder Area (sq. in.)

## CYLINDER FLOW @ X SPEED

$$Q = (V \times A) / 231$$

Q = Flow (GPM)      V = Rod Speed (In./Min.)  
A = Cylinder Area (sq. in.)

## HYDRAULIC HORSEPOWER

$$HP = P \times Q \times 0.000583$$

HP = Hydraulic HP      Q = Flow (GPM)  
P = Pressure (PSI)

## MOTOR HP REQUIRED TO DRIVE A PUMP

$$(GPM \times PSI) / (1714 \times Eff)$$

Efficiency is in most cases not higher than 85%  
1714 x 0.85 = 1457

## HYDRAULIC MOTOR HORSEPOWER

$$HP = (S \times T) / 63.025$$

HP = Hydraulic Motor Horsepower  
S = Speed (RPM)      T = Torque (Lb/in.)

## HYDRAULIC TANK COOLING

$$HP = 0.001 \times A_w \times \Delta T$$

HP = Horsepower      A<sub>w</sub> = Wetted Area (sq.ft)      ΔT = Oil Temp - Amb. Air Temp

## HYDRAULIC MOTOR SPEED

$$RPM = (Q \times 231) / Disp.$$

RPM = (Motor Shaft Speed)      Q = Flow (GPM)  
Disp = Motor Disp (Cu / In / Rev)

## HYDRAULIC MOTOR TORQUE

$$T = (p \times Disp.) / 2 \pi$$

T = Motor Torque (Lb-in)      p = Pressure (PSI)  
Disp = Motor Disp (Cu / In / Rev)

## TORQUE

$$T = F \times d$$

T = Torque (Lb-in)      F = Force (Lb)  
d = Distance (in.)





# COMPARISON TABLE

<b>EAGLE HYDRAULIC VERSUS COMPETITION</b>					
<b>Model</b>	<b>Danfoss</b>	<b>Eaton Char-Lynn</b>	<b>M+S</b>	<b>Parker</b>	<b>White</b>
<b>EBMM</b>	OMM	12	MM		
<b>EBMP, EBMPH</b>	OMP-DH	H	MP	TC	WP/WD
<b>EBMPW</b>	OMPW		PW		
<b>EBMR, EBMRS</b>	OMR, DS	S	MR	TC	WR/RS
<b>EBMH</b>	OMH		MH		
<b>EBMSY</b>	OMS	2000	MS/MSY	TF/TG	WS/RE/DR
<b>EBMT</b>	OMT	4000, 6000	MT		
<b>EBMV</b>	OMV	6000, 10000	MV		
<b>EBMK2</b>		2000			
<b>EBMK6</b>		6000			
<b>EBME2</b>				TE, TC, TB	WG
<b>EBMJ</b>	OMEW	W	RW	TJ	
<b>EBMER</b>		W	HW	TF/TG	RE/RC
<b>EBMEC</b>	OMEW				CE
<b>ESYHB</b>					HB

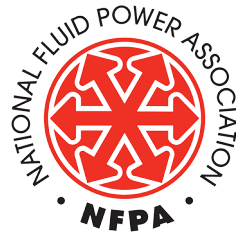


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**NATDA**

## OTHER CATALOGS

