



Micromatic

MEDIUM PRESSURE

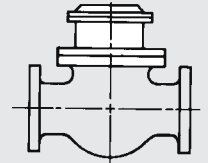
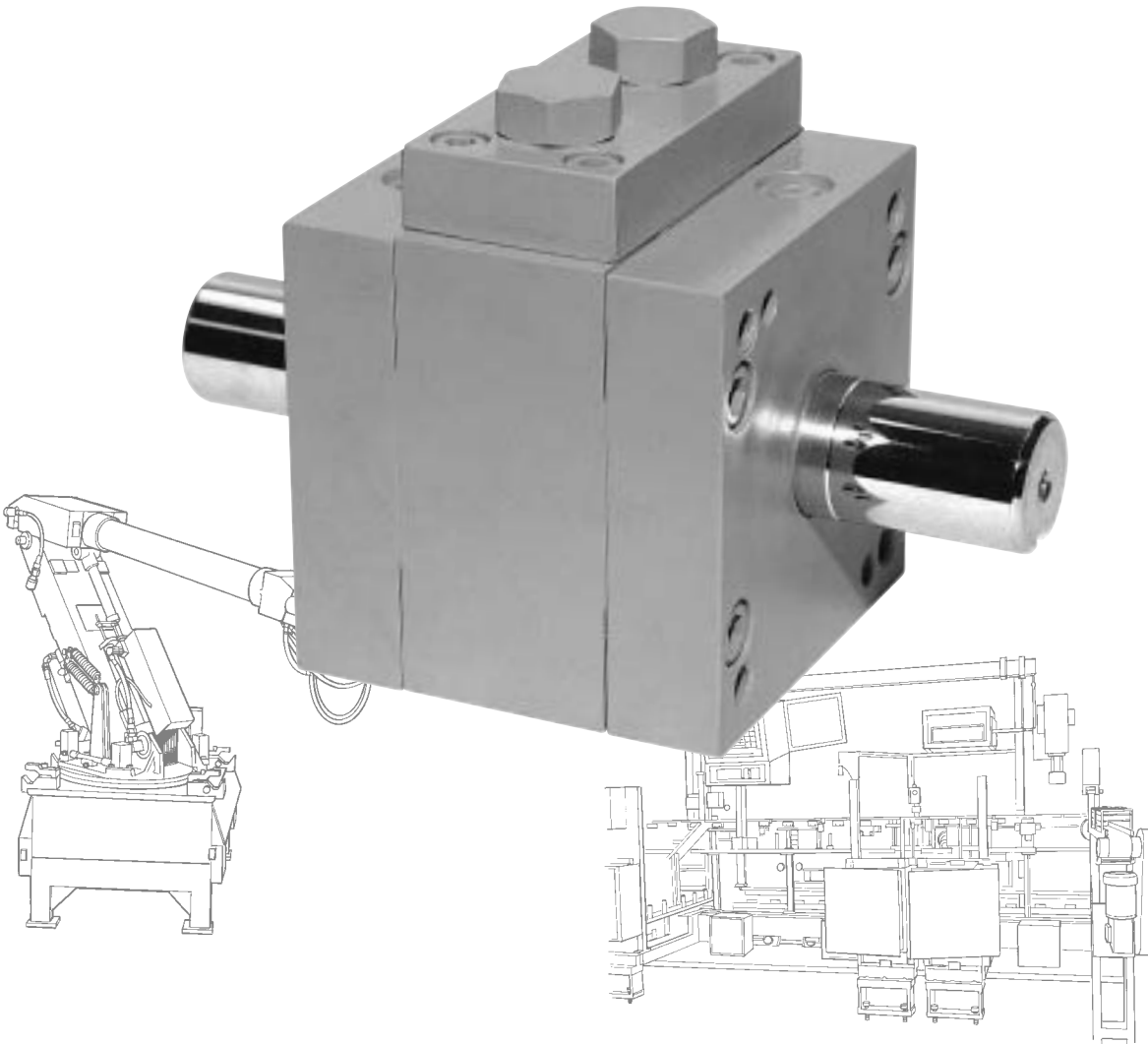
11 Standard Sizes

1,000 PSI

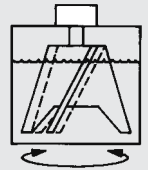
Up to 216,730 in/lbs of Torque

Higher Pressures Available

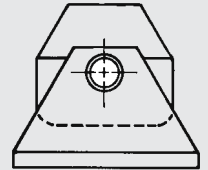
As Light As 4 oz.



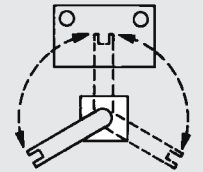
VALVE OPEN—CLOSE



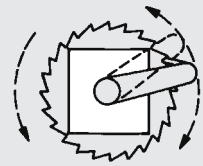
MIX—STIR



TURNOVER—DUMP



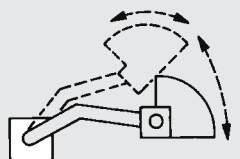
LOAD—POSITION—UNLOAD



CONTINUOUS ROTATION



TURN—OSCILLATE



MATERIAL HANDLING

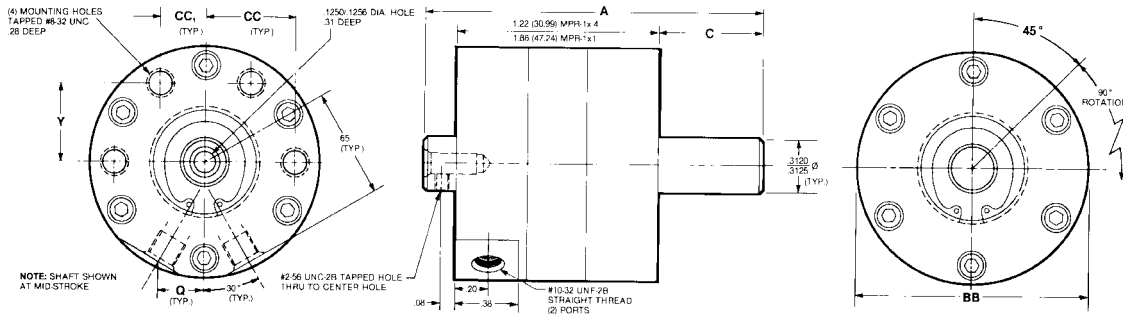
PROVIDING the “MUSCLE” for your lifting, turning, indexing, opening, closing, clamping, mixing, bending, testing, steering... **applications.**

MP MODELS

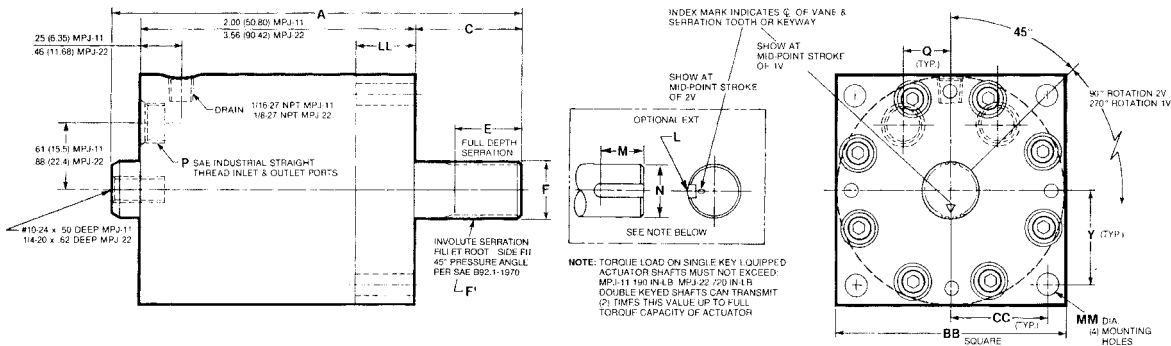
**MEDIUM PRESSURE
1000 P.S.I. STD.**

**(For Higher Operating Pressures
or High Water Base Configurations
Contact Plant)**

MINI MPR-1x.4 & MPR-1x1 Medium Pressure 750 PSI Max.

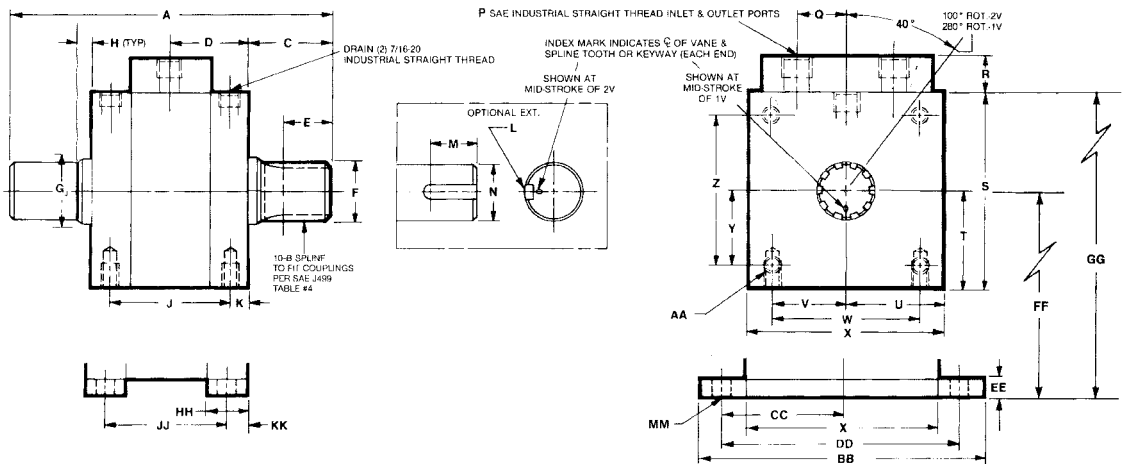


MPJ-11 & MPJ-22



MP-32 THRU MP-128

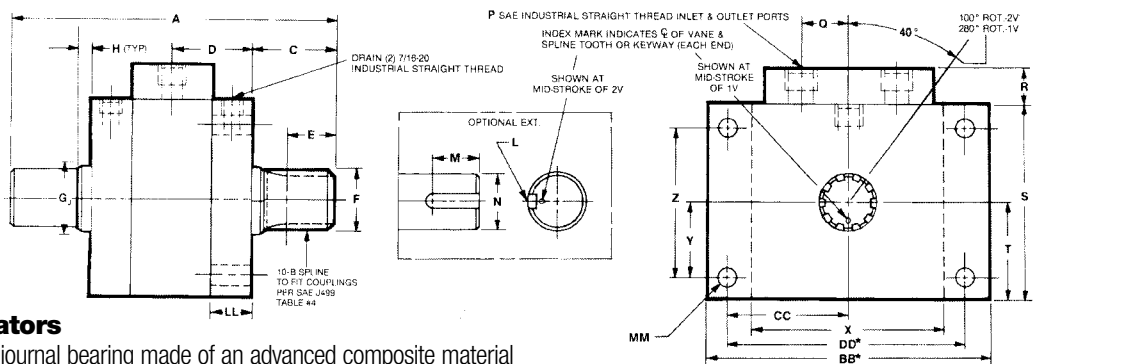
END BASE MOUNTING



FOOT MOUNTING



FLANGE MOUNTING



Journal Bearing Actuators

Standard MP actuators utilize a journal bearing made of an advanced composite material that is filament wound and PTFE lined. Additional precision engineered components include high performance seals for shaft, shoulder, vane and shoe.

*NOTE: ON MPJ-116 & MPJ-128 USE END MOUNT DIMENSIONS

NOTES: Connection of drains will add significant life to shaft seals. This is highly recommended. See cut away view on page 9, page 27 for optional porting, pages 30 and 31 for optional manifolds and shaft couplings.

APPLICATION DATA

DIMENSIONS IN INCHES (METRIC)

	MPR-1x.4	MPR-1x1	MPJ-11	MPJ-22	MPJ-32	MPJ-34	MPJ-63	MPJ-84	MPJ-105	MPJ-116	MPJ-128
A	2.03 (51.6)	2.67 (67.8)	3.18 (81)	5.25 (133.4)	8.25 (210)	10.25 (260)	13.88 (352)	16.88 (429)	18.88 (480)	22.38 (568)	25.38 (645)
C	.63 (16)	.63 (16)	1.00 (25.40)	1.42 (36)	2.05 (52)	2.05 (52)	3.49 (88.6)	4.49 (114)	4.49 (114)	5.02 (127.5)	5.50 (140)
D	—	—	—	—	2.08 (52.8)	3.08 (78)	3.45 (87.6)	3.95 (100.3)	4.95 (125.7)	6.17 (156.7)	7.19 (182.6)
E	—	—	.54 (13.7)	.90 (22.9)	1.12 (28.5)	1.12 (28.5)	1.75 (44.5)	2.50 (63.5)	2.75 (69.8)	3.25 (82.6)	4.00 (101.6)
F*	—	—	.4997 (12.692)	.7497 (19.042)	1.2455 (31.636)	1.2455 (31.636)	1.9935 (50.635)	2.4935 (63.335)	2.9935 (76.035)	3.4935 (88.735)	3.9935 (101.435)
F¹	—	—	19T 40/80P .4750PD	29T 40/80P .7250PD	—	—	—	—	—	—	—
G	—	—	—	—	1.27 (32.26)	1.27 (32.26)	2.02 (51.3)	3.00 (76.2)	3.02 (76.7)	3.74 (95)	—
H	—	—	—	—	.30 (7.6)	.30 (7.6)	.49 (12)	.49 (12)	.50 (12)	.09 (2.3)	—
J	—	—	—	—	3.25 (82.5)	5.25 (133.4)	5.50 (139.7)	6.00 (152.4)	7.00 (177.8)	9.50 (241.3)	11.25 (285.75)
K	—	—	—	—	.45 (11.4)	.45 (11.4)	.70 (17.8)	.95 (24)	1.45 (36.8)	1.44 (36.6)	1.56 (39.6)
L	—	—	1/8 x 1/16 (3 x 1.6)	3/16 x 3/32 (4.8 x 2.4)	3/16 x 3/32 (4.8 x 2.4)	3/16 x 3/32 (4.8 x 2.4)	1/2 x 1/4 (12.7 x 6.4)	5/8 x 1/16 (15.9 x 7.9)	3/4 x 3/8 (19 x 19.5)	1 x 1/2 (25.4 x 12.7)	1 x 1/2 (25.4 x 12.7)
M	—	—	.60 (15.2)	1.00 (25.4)	1.00 (25.4)	1.00 (25.5)	1.75 (44.5)	2.50 (63.5)	2.75 (69.8)	3.75 (95.25)	4.00 (101.6)
N*	—	—	.4985 (12.662)	.7485 (19.012)	1.2485 (31.712)	1.2485 (31.712)	1.9985 (50.762)	2.4985 (63.462)	2.9985 (76.162)	3.4985 (88.862)	3.9985 (101.562)
P	—	—	3/8-24 SAE	1/2-20 SAE	7/8-14	7/8-14	1 1/8-12	1 1/8-12	1 3/8-12	1 7/8-12	1 7/8-12
Q	.26 (6.60)	.26 (6.60)	.42 (10.67)	.65 (16.51)	.94 (24)	.94 (24)	1.25 (31.75)	1.63 (41.4)	2.00 (50.8)	2.50 (63.5)	2.50 (63.5)
R	—	—	—	—	.75 (19)	.75 (19)	1.88 (47.5)	1.00 (25.4)	1.00 (25.4)	1.25 (31.75)	1.25 (31.75)
S	—	—	—	—	4.25 (108)	4.25 (108)	8.00 (203)	10.50 (267)	12.50 (317.5)	14.25 (362)	16.00 (406.4)
T**	—	—	—	—	2.125 (53.98)	2.125 (53.98)	4.00 (101.6)	5.25 (133.35)	6.25 (158.75)	7.125 (180.98)	8.00 (203.2)
U	—	—	—	—	2.12 (53.85)	2.12 (53.85)	4.00 (101.6)	5.25 (133.4)	6.25 (158.75)	7.12 (180.8)	8.00 (203.2)
V	—	—	—	—	1.63 (41.4)	1.63 (41.4)	3.00 (76.2)	4.25 (108)	5.00 (127)	6.00 (152.4)	6.75 (171.5)
W	—	—	—	—	3.25 (82.55)	3.25 (82.55)	6.00 (152.4)	8.50 (216)	10.00 (254)	12.00 (304.8)	13.50 (343)
X	—	—	—	—	4.25 (108)	4.25 (108)	8.00 (203)	10.50 (267)	12.50 (317.5)	14.25 (362)	16.00 (406.4)
Y	.470 (11.93)	.470 (11.93)	.84 (21.34)	1.25 (31.75)	1.63 (41.4)	1.63 (41.4)	3.00 (76.2)	4.25 (108)	5.00 (127)	6.00 (152.4)	6.75 (171.5)
Z	—	—	—	—	3.25 (82.55)	3.25 (82.55)	6.00 (152.4)	8.50 (216)	10.00 (254)	12.00 (304.8)	13.50 (343)
AA	—	—	—	—	3/8-16 .56 DP	3/8-16 .56 DP	1/2-10 1.12 DP	3/4-10 1.12 DP	1-8 1.75 DP	1-8 1.75 DP	1 1/4-7 2.00 DP
BB	1.38 (35.05)	1.38 (35.05)	2" SQ. (50.8 SQ.)	3" SQ. (76.2 SQ.)	6.25 (159)	6.25 (159)	11.00 (279)	13.50 (343)	16.50 (419)	18.25 (464)	20.50 (521)
CC	.543 (13.79)	.543 (13.79)	.84 (21.34)	1.25 (31.75)	2.63 (66.8)	2.63 (66.8)	4.75 (120.7)	6.00 (152.4)	7.25 (184.15)	8.12 (206.2)	9.12 (231.6)
CC¹	.271 (6.88)	.271 (6.88)	—	—	—	—	—	—	—	—	—
DD	—	—	—	—	5.25 (133.4)	5.25 (133.4)	9.50 (241.3)	12.00 (304.8)	14.50 (368.3)	16.25 (412.75)	18.25 (463.6)
EE	—	—	—	—	.38 (10)	.38 (10)	1.00 (25.4)	1.50 (38)	1.75 (44.5)	1.75 (44.5)	2.00 (51)
FF**	—	—	—	—	2.50 (63.5)	2.50 (63.5)	5.00 (127)	6.75 (171.45)	8.00 (203.2)	8.75 (225.43)	10.00 (254)
GG	—	—	—	—	4.63 (117.6)	4.63 (117.6)	9.00 (229)	12.00 (305)	14.25 (362)	16.00 (406.4)	18.00 (457)
HH	—	—	—	—	1.12 (28.5)	1.12 (28.5)	2.00 (50.8)	2.00 (51)	2.50 (64)	3.00 (76)	3.00 (76)
JJ	—	—	—	—	3.06 (77.7)	5.06 (128.5)	5.00 (127)	6.00 (152.4)	7.50 (190.5)	9.50 (241.3)	11.25 (285.75)
KK	—	—	—	—	.55 (14)	.55 (14)	.95 (24)	.95 (24)	1.20 (30.5)	1.44 (36.6)	1.56 (40)
LL	—	—	.50 (12.70)	.74 (18.80)	1.08 (27.4)	1.08 (27.4)	1.95 (49.5)	1.95 (49.5)	2.45 (62)	2.91 (73.9)	3.19 (81)
MM	—	—	.22 (5.59)	.28 (7.11)	.41 (10.4)	.41 (10.4)	.78 (19.8)	.78 (19.8)	1.03 (26.2)	1.03 (26.2)	1.32 (33.5)

*± .0005 in. (0.01 mm) **±.005 in. (0.13 mm)

NOTES:
*PER 270° MP-11 & MP-22
**PER 90°, MPR-1x.4, MPR-1x1, MP-11 & MP-22
750 PSI MAX. MPR-1x.4 & MPR-1x1

PERFORMANCE

SINGLE VANE 280° ROTATION (±5°) *						
MODEL	TORQUE IN-LBS (N•m)			VOLUMETRIC DISPLACEMENT **IN ³ (cm ³)		APPROX. WEIGHT LB (kg)
	100 PSI (6.9 BAR)	500 PSI (34.5 BAR)	1000 PSI (69.0 BAR)	PER 280°	PER RAD	
	MPJ-11	8 (.90)	56 (6.33)	117 (13.22)	.835 (13.69)	
MPJ-22	56 (6.33)	333 (37.63)	679 (76.73)	3.82 (62.61)	.815 (13.36)	3 (1.36)
MPJ-32	103 (11.64)	705 (79.67)	1595 (180.24)	9.2 (150.79)	1.88 (30.81)	19 (8.6)
MPJ-34	206 (23.28)	1410 (159.33)	3190 (360.47)	18.4 (301.58)	3.76 (61.31)	26 (11.8)
MPJ-63	600 (67.80)	4090 (462.17)	9280 (1048.64)	53.30 (873.59)	10.90 (179)	122 (55.2)
MPJ-84	1430 (161.59)	9750 (1101.75)	22100 (2497.30)	127.40 (2088.09)	26.07 (428)	203 (92.1)
MPJ-105	2850 (322.05)	19400 (2192.20)	44000 (4972)	253.3 (4151.59)	51.83 (850)	348 (157.9)
MPJ-116	4650 (525.45)	31700 (3582)	71800 (8113)	412.9 (6767.43)	84.50 (1386)	552 (250.4)
MPJ-128	6625 (748.63)	45151 (5102)	102345 (11565)	588.4 (9643.88)	120.41 (1975)	835 (378.8)

FOR 1500 PSI (103.4 BAR) CONTACT PLANT.

DOUBLE VANE 100° ROTATION (±5°) **						
MODEL	TORQUE IN-LBS (N•m)			VOLUMETRIC DISPLACEMENT **IN ³ (cm ³)		APPROX. WEIGHT LB (kg)
	100 PSI (6.9 BAR)	500 PSI (34.5 BAR)	1000 PSI (69.0 BAR)	PER 100°	PER RAD	
	MPR-1x.4	2 (.23)	20 (2.26)	31 (3.50)	.093 (1.52)	
MPR-1x1	5 (.57)	54 (6.10)	85 (9.60)	.258 (4.23)	.164 (2.69)	.32 (.14)
MPJ-11	23 (2.60)	156 (17.63)	322 (36.39)	.557 (9.13)	.357 (5.85)	.84 (.38)
MPJ-22	121 (13.67)	728 (82.26)	1487 (168.03)	2.56 (41.96)	1.63 (26.72)	3.2 (1.45)
MPJ-32	225 (25.43)	1540 (174)	3380 (381.94)	6.60 (108.17)	3.78 (62)	20 (9.1)
MPJ-34	450 (50.85)	3080 (348.04)	6750 (762.75)	13.00 (213.07)	7.44 (122)	27 (12.2)
MPJ-63	1310 (148.03)	8950 (1011.35)	19600 (2214.80)	38.0 (622.82)	21.77 (357)	126 (57.2)
MPJ-84	3120 (352.56)	21350 (2412.55)	46700 (5277.00)	91.0 (1491.49)	52.14 (855)	212 (96.2)
MPJ-105	6220 (702.86)	42500 (4802.50)	93300 (10542.90)	181.0 (2966.59)	103.7 (1700)	364 (165.1)
MPJ-116	10100 (1141.30)	69300 (7831)	152100 (17187)	295.0 (4835.05)	169.0 (2772)	581 (263.5)
MPJ-128	14450 (1633)	98735 (11157)	216730 (24490)	420.3 (6888.72)	240.8 (3950)	875 (396.9)

FOR 1500 PSI (103.4 BAR) CONTACT PLANT.

TEST PARAMETERS — OIL			
MODEL	MAX BREAK IN PSI (BAR) OIL	BY-PASS LEAKAGE MAX ALLOWABLE	
		CUBIC IN. PER MIN. AT 1000 PSI (69.0 BAR) OIL	
		1V	2V
MPR-1x.4	50 (3.4)	—	3.5
MPR-1x1	50 (3.4)	—	3.5
MPJ-11	60 (4.14)	9	9
MPJ-22	60 (4.14)	11	11
MPJ-32	50 (3.45)	12	12
MPJ-34	50 (3.45)	12	12
MPJ-63	50 (3.45)	13	13
MPJ-84	40 (2.8)	14	14
MPJ-105	40 (2.8)	15	15
MPJ-116	40 (2.8)	16	16
MPJ-128	40 (2.8)	17	17

WHEN REFERENCING SHADED AREAS SEE
NOTES ON BOTTOM OF THIS PAGE.

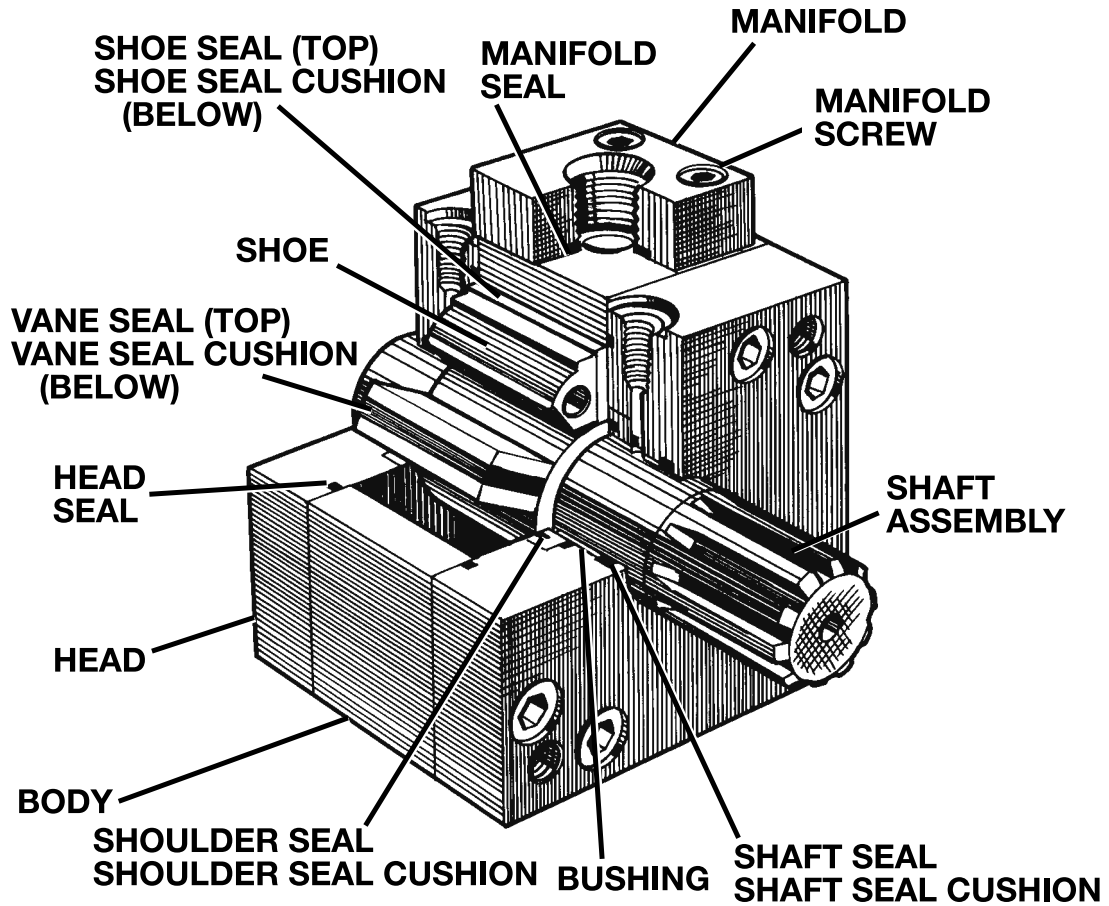
MPR-1 x .4
FOR SERVICE DETAILS CONSULT FACTORY

MPR-1 x 1
FOR SERVICE DETAILS CONSULT FACTORY

MPJ-11
FOR SERVICE DETAILS CONSULT FACTORY

MPJ-22
FOR SERVICE DETAILS CONSULT FACTORY

MPJ



HOW TO ORDER

Sample: MPJ 128 2V DE K BASE OIL

<p>Model _____ MPJ</p> <p>Size _____</p> <p>Number of Vanes _____ 1V—Single Vane 2V—Double Vane</p> <p>Shaft Extension _____ SE—Single Extension DE—Double Extension</p>	<p>_____ Fluid Medium Oil, Air, Other</p> <p>_____ Mounting End-Base, Foot, Flange, Special</p> <p>_____ Shaft Type SS—10-B Spline ISER—45° Involute Serration (MPJ-11 & MPJ-22 only) K—Keyed Z—Special</p>
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If you require a special shaft extension, special mounting, air bleeds, special rotation control, or other special requirements, please enclose a drawing showing these requirements.