



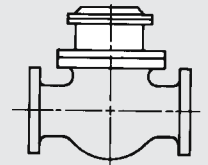
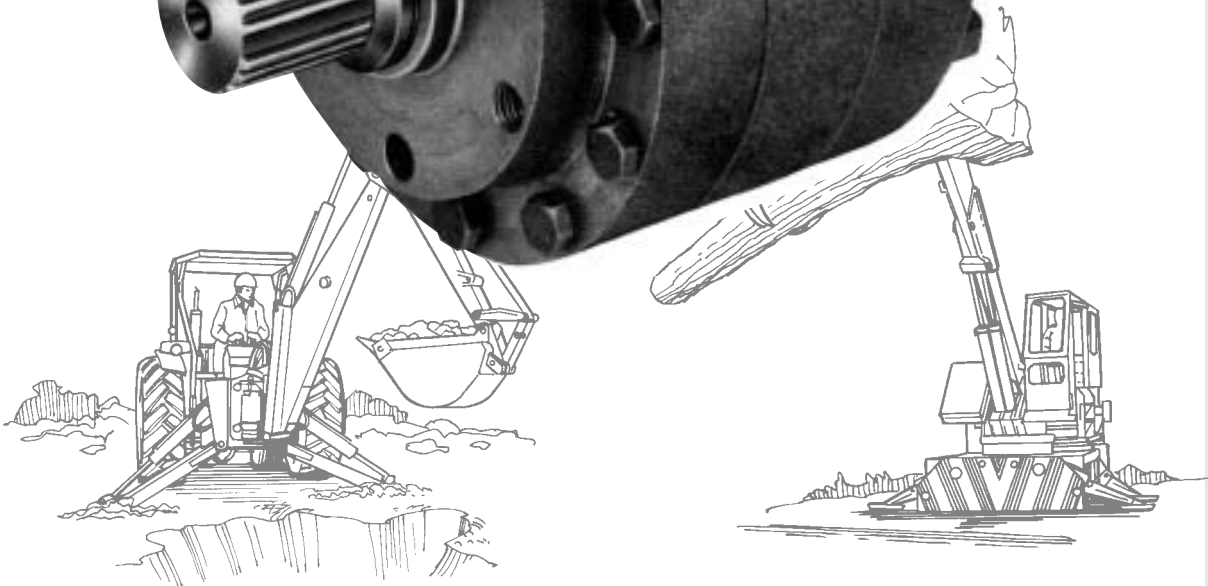
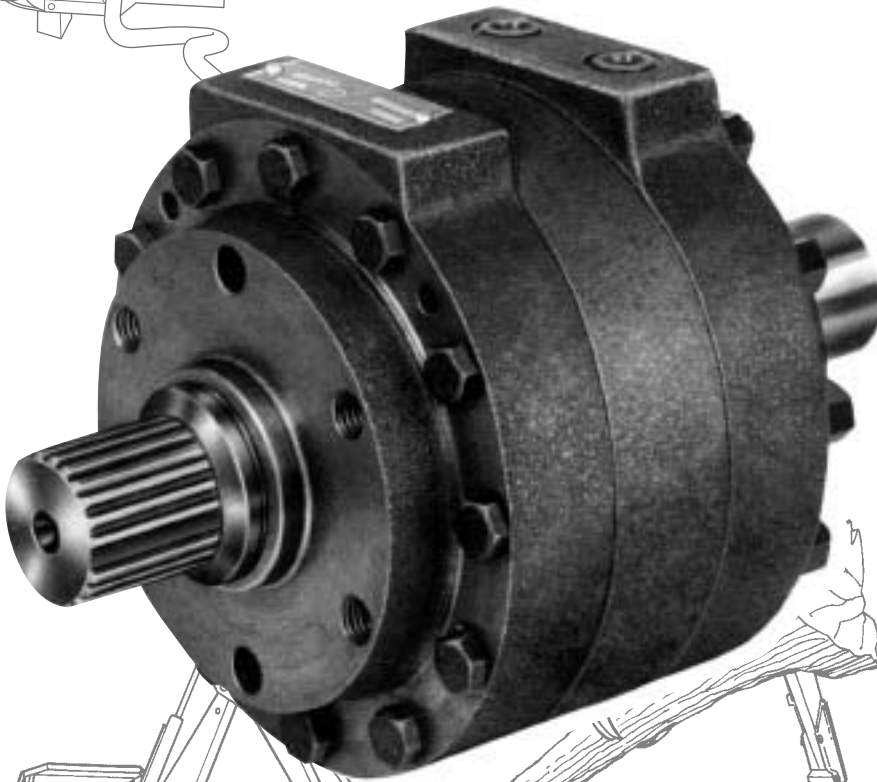
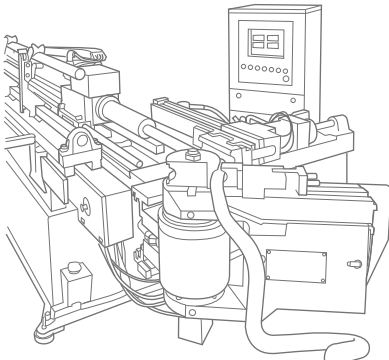
Micromatic

HIGH PRESSURE

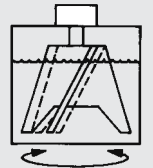
10 Standard Sizes

3,000 PSI

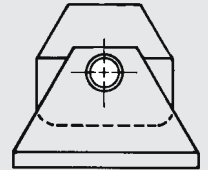
Up to 741,000 in/lbs of Torque



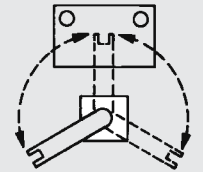
VALVE OPEN—CLOSE



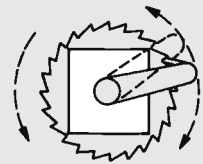
MIX—STIR



TURNOVER—DUMP



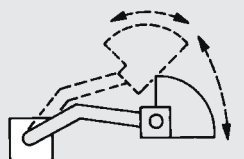
LOAD—POSITION—UNLOAD



CONTINUOUS ROTATION



TURN—OSCILLATE



MATERIAL HANDLING

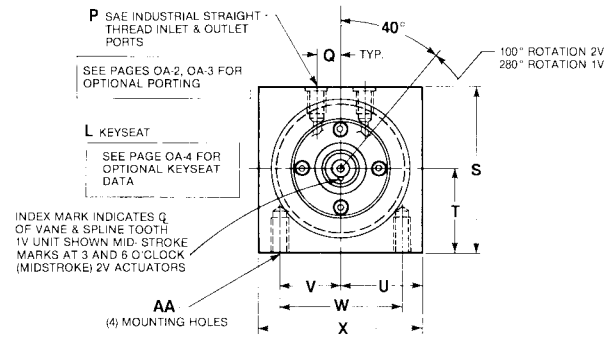
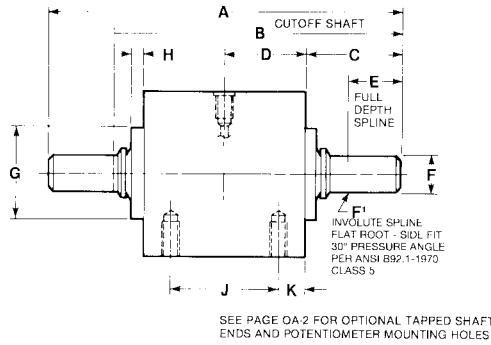
PROVIDING the “MUSCLE” for your lifting, turning, indexing, opening, closing, clamping, mixing, bending, testing, steering. . . **applications.**

SS MODELS

**HIGH PRESSURE *1
3000 PSI MAX**

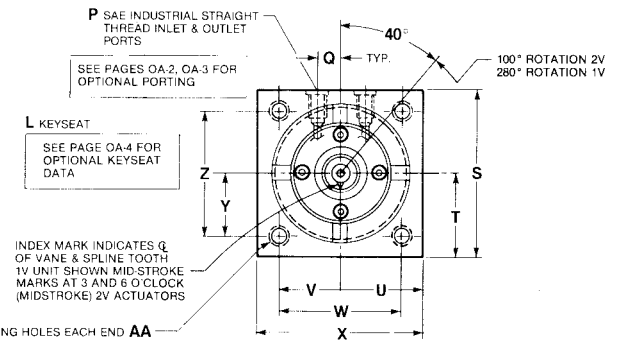
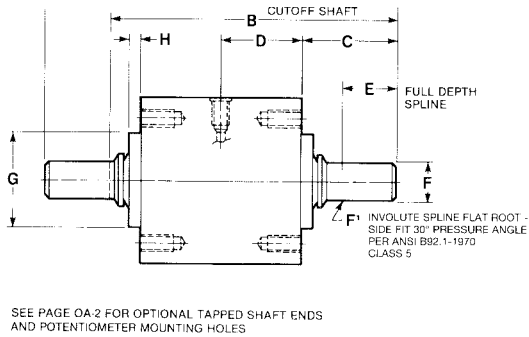
BASE MOUNTING SS-2A & SS-5A

For larger aluminum units, please consult factory.

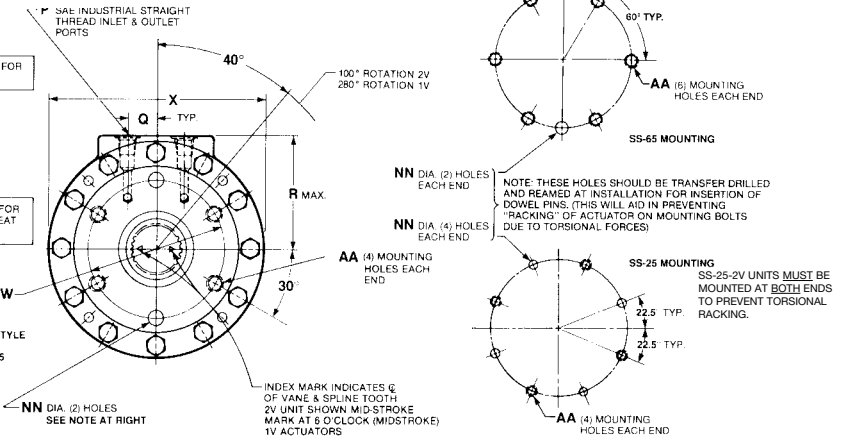
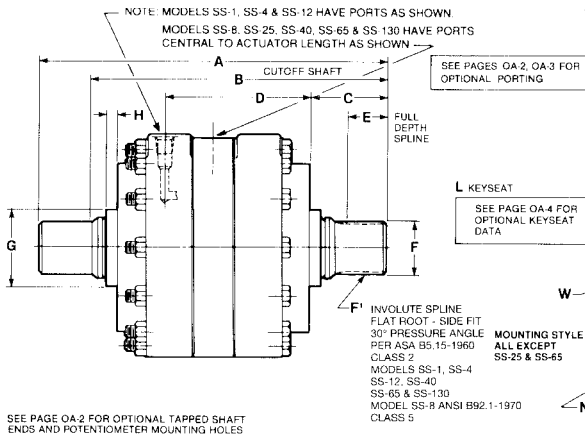


END MOUNTING SS-2A & SS-5A

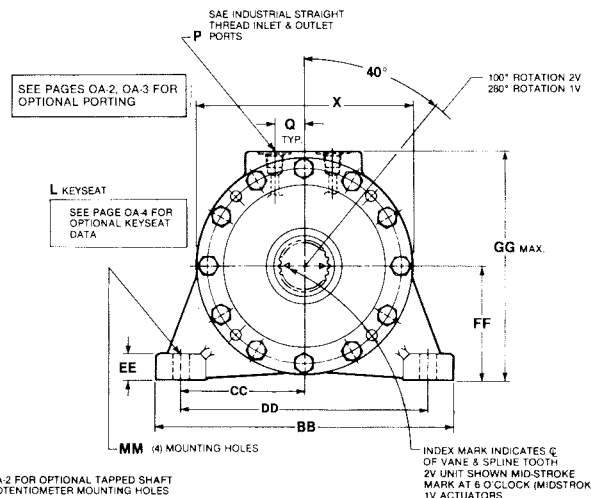
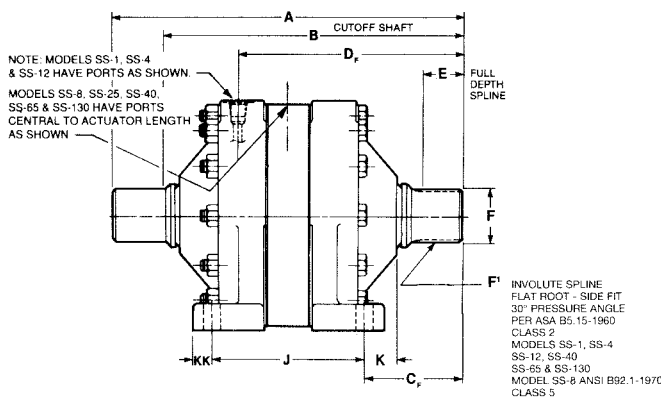
For larger aluminum units, please consult factory.



END MOUNTING SS-1 THRU SS-130



FOOT MOUNTING SS-1 THRU SS-130



NOTE: See cut away view on page 17
NOTE: See pages 30 and 31 for optional manifolds and shaft couplings.

SEE PAGE OA-2 FOR OPTIONAL TAPPED SHAFT ENDS AND POTENTIOMETER MOUNTING HOLES

APPLICATION DATA

DIMENSIONS IN INCHES (METRIC)

	SS-2A	SS-5A	SS-1	SS-4	SS-8	SS-12	SS-25	SS-40	SS-65	SS-130
A	5.00 (127.0)	6.50 (165.10)	7.66 (194.56)	10.50 (266.70)	11.69 (296.92)	14.12 (358.90)	21.28 (540.51)	20.06 (509.52)	23.75 (603.25)	29.75 (755.65)
B	3.89 (98.81)	5.05 (128.27)	6.91 (175.51)	9.05 (229.87)	9.85 (250.19)	11.94 (303.28)	17.06 (433.32)	16.35 (415.29)	19.75 (501.65)	23.50 (596.9)
C	1.38 (35.05)	1.75 (44.45)	1.38 (35.05)	2.34 (59.43)	3.28 (83.31)	3.31 (84.07)	5.81 (147.57)	5.06 (128.52)	6.26 (159.00)	8.12 (206.25)
C _F	—	—	2.19 (55.63)	2.94 (74.68)	3.28 (83.31)	4.00 (101.60)	5.52 (140.21)	5.38 (136.65)	6.26 (159.00)	8.75 (222.25)
D	1.13 (28.70)	1.50 (38.10)	3.35 (85.09)	4.40 (111.76)	3.00 (76.2)	5.75 (146.05)	4.81 (122.17)	4.96 (125.98)	6.38 (162.05)	6.75 (171.45)
D _F	—	—	4.69 (119.13)	6.75 (171.45)	5.64 (148.34)	9.06 (230.12)	10.64 (270.26)	10.03 (254.76)	11.95 (303.53)	14.87 (377.70)
E	.90 (22.86)	1.10 (27.94)	.59 (14.98)	1.22 (30.98)	1.75 (44.45)	1.89 (48.00)	3.27 (83.05)	3.27 (83.06)	3.88 (98.55)	5.50 (139.70)
E [*]	.5935 (15.075)	.7145 (18.148)	1.0355 (26.302)	1.5452 (39.249)	1.9362 (49.181)	2.1962 (55.785)	3.3445 (84.950)	3.3445 (84.950)	3.8435 (97.625)	5.2935 (134.455)
F	18T 32/64P 5.625PD	22T 32/64P 5.875PD	20T 20/40P 1.000PD	24T 16/32P 1.500PD	30T 16/32P 1.875PD	26T 12/24P 2.1667PD	26T 8/16P 3.2500PD	26T 8/16P 3.2500PD	30T 8/16P 3.7500PD	31T 8/12P 5.1667PD
G	1.44 (36.57)	1.70 (43.18)	1.63 (41.40)	2.25 (57.15)	3.25 (82.55)	3.25 (82.55)	6.00 (152.40)	4.75 (120.65)	6.50 (165.10)	10.25 (260.35)
H	.27 (6.86)	.22 (5.58)	.13 (3.30)	.34 (8.64)	.44 (11.18)	.56 (14.22)	1.38 (35.05)	.69 (17.53)	.75 (19.05)	1.13 (28.70)
J	1.75 (44.45)	2.00 (50.80)	3.27 (83.06)	4.62 (117.35)	5.12 (130.05)	6.12 (155.45)	10.25 (260.35)	9.3 (236.22)	11.38 (289.05)	12.25 (311.15)
K	.25 (6.35)	.50 (12.70)	.94 (23.88)	.94 (23.88)	.87 (22.10)	1.25 (31.75)	1.07 (27.18)	1.00 (25.4)	1.44 (36.58)	1.75 (44.45)
L	1/8 x 1/16 (3.17 x 1.58)	3/16 x 3/32 (4.76 x 2.38)	1/4 x 1/8 (6.35 x 3.17)	3/8 x 3/16 (9.52 x 4.76)	1/2 x 1/4 (12.70 x 6.35)	5/16 x 3/8 (12.70 x 9.52)	3/4 x 3/8 (19.05 x 9.52)	1 x 1/2 (25.4 x 12.70)	1 1/4 x 3/8 (31.75 x 15.87)	
P	.75 (19.05)	.70 (17.78)	.75 (19.05)	1.25 (31.75)	1.88 (47.53)	2.00 (50.80)	3.25 (82.55)	3.25 (82.55)	3.88 (98.55)	5.50 (139.70)
Q	.375 (9.53)	.438 (11.12)	.50 (12.70)	.88 (22.35)	1.12 (28.45)	1.25 (31.75)	1.78 (45.21)	1.88 (47.75)	2.13 (54.10)	2.75 (69.85)
R	—	—	2.62 (66.55)	3.53 (89.66)	4.25 (107.95)	4.81 (122.17)	5.53 (140.46)	7.00 (177.80)	7.75 (196.85)	10.12 (257.05)
S	2.25 (57.15)	3.00 (76.20)	—	—	—	—	—	—	—	—
T	1.13 (28.70)	1.50 (38.10)	—	—	—	—	—	—	—	—
U	1.13 (28.70)	1.50 (38.10)	—	—	—	—	—	—	—	—
V	.88 (22.35)	1.13 (28.70)	—	—	—	—	—	—	—	—
W	1.75 (44.45)	2.25 (57.15)	2.63 (66.80)	4.13 (104.90)	5.00 (127.00)	5.63 (143.00)	9.00 (228.60)	8.75 (222.25)	9.00 (228.60)	13.50 (342.90)
X	2.25 (57.15)	3.00 (76.2)	4.88 (123.95)	6.65 (168.91)	8.41 (213.61)	9.15 (232.41)	10.44 (265.18)	13.50 (342.90)	15.00 (381.00)	20.00 (508.00)
Y	.88 (22.35)	1.13 (28.70)	—	—	—	—	—	—	—	—
Z	1.75 (44.45)	2.25 (57.15)	—	—	—	—	—	—	—	—
AA	1/4-20 31DP (7.87)	3/8-18 .62DP (15.75)	3/8-16 .75DP (19.05)	1/2-13 1.0DP (25.40)	1/2-13 1.0DP (25.40)	3/8-11 1.25DP (31.75)	3/8-11 1.25DP (31.75)	3/4-10 1.50DP (38.10)	3/4-10 1.25DP (31.75)	1-8 2.0DP (50.80)
BB	—	—	6.50 (165.10)	9.00 (228.60)	11.00 (279.40)	11.88 (301.75)	13.00 (330.20)	15.25 (387.35)	19.00 (482.60)	25.25 (641.35)
CC	—	—	2.75 (69.85)	3.75 (95.25)	4.75 (120.65)	5.06 (128.52)	5.00 (127.00)	6.50 (165.10)	8.00 (203.20)	11.00 (279.40)
DD	—	—	5.50 (139.70)	7.50 (190.50)	9.50 (241.30)	10.13 (257.30)	10.00 (254.00)	13.00 (330.20)	16.00 (405.40)	22.00 (558.80)
EE	—	—	.63 (16.00)	.75 (19.05)	.94 (23.88)	.94 (23.88)	1.25 (31.75)	1.13 (28.70)	1.69 (42.93)	1.50 (38.10)
FF**	—	—	2.50 (63.50)	3.38 (85.85)	4.375 (111.13)	4.63 (117.60)	5.38 (136.65)	6.88 (174.75)	7.875 (200.03)	10.13 (257.30)
GG	—	—	5.13 (130.30)	6.91 (175.51)	8.63 (219.20)	9.44 (239.78)	10.75 (273.05)	13.75 (349.25)	15.63 (397.00)	20.25 (514.35)
KK	—	—	.50 (12.70)	.63 (16.00)	.91 (23.11)	.88 (22.35)	1.07 (27.18)	1.00 (25.40)	1.44 (36.58)	1.62 (41.11)
MM	—	—	.41 (10.41)	.53 (13.46)	.69 (17.53)	.78 (19.81)	.97 (23.88)	1.06 (26.92)	1.31 (33.27)	1.56 (39.62)
NN***	—	—	.41 (10.41)	.47 (11.94)	.78 (19.94)	.69 (17.53)	.84 (21.3)	.84 (21.3)	1.22 (30.99)	1.56 (39.99)

* ± .0005 in. (0.013 mm) SS-2A, SS-5A, SS-1 ± .00075 in. (0.019 mm) SS-4, SS-8, SS-12 ± .0015 in. (0.038 mm) SS-25, SS-40
 ** ± .005 in. (0.064 mm) SS-65, SS-130
 *** ± .005 in. (0.13 mm)

** Model SS-25 has (4) holes on a 90° pattern rotated 22 1/2° counter-clockwise

* 1200 PSI maximum is recommended for severe duty applications, such as operating at maximum torque at high cycle rates for extended periods. Please consult factory for applications beyond 2000 PSI.

NOTE: See how to order on page 17.

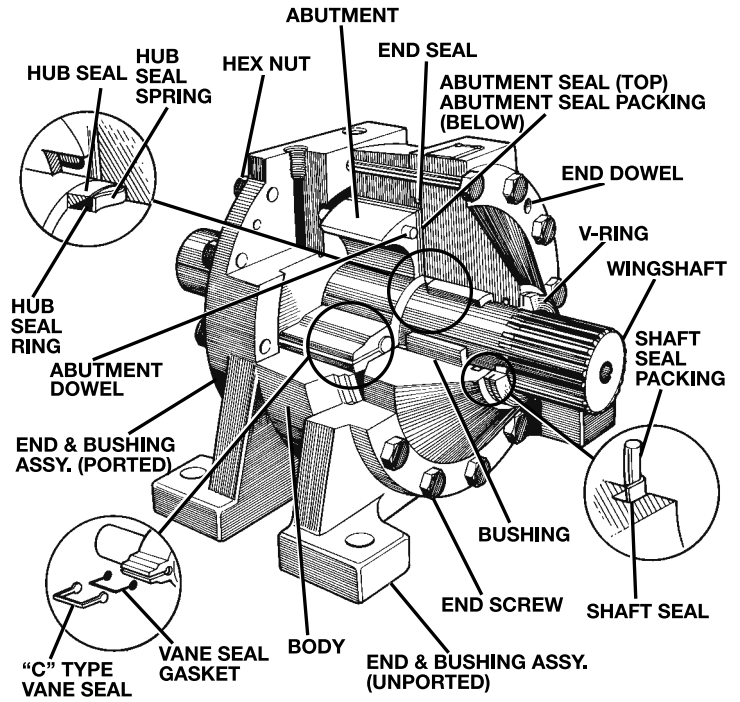
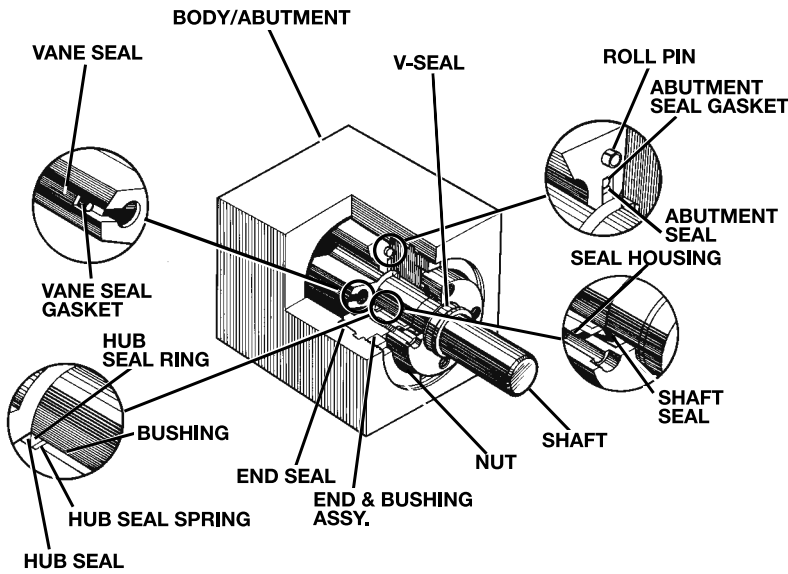
PERFORMANCE

MODEL	TORQUE			VOLUMETRIC		APPROX. WEIGHT LB (Kg)
	IN-LBS (N*m)			DISPLACEMENT		
	1000 PSI (69.0 BAR)	2000 PSI (137.9 BAR)	3000 PSI (206.9 BAR)	PER 280°	PER RAD	
SS-2A	170 (19)	340 (38)	510 (58)	.95 (15.57)	.2 (3.27)	1.6 (.73)
SS-5A	380 (43)	760 (86)	—	2.18 (35.73)	.45 (7.37)	3.0 (1.36)
SS-1	1080 (122)	2160 (244)	3240 (366)	5.85 (95.88)	1.20 (19.66)	21.5 (9.75)
SS-4	3430 (388)	6860 (775)	10300 (1164)	18.59 (304.69)	3.81 (62.44)	48.5 (23)
SS-8	7200 (814)	14400 (1627)	21600 (2440)	39.04 (639.86)	8.00 (131.12)	78 (35)
SS-12	11210 (1266)	22420 (2533)	33615 (3798)	60.75 (995.69)	12.45 (204.05)	121.5 (55)
SS-25	22410 (2532)	44820 (5065)	67230 (7597)	121.51 (1991.54)	24.90 (408.11)	220 (100)
SS-40	36000 (4068)	72000 (8136)	108000 (12204)	195.20 (3199.32)	40.00 (655.60)	355 (161)
SS-65	58500 (6611)	117000 (13221)	175500 (19831)	317.20 (5198.90)	65.00 (1065.35)	560 (254)
SS-130	117000 (13221)	234000 (26442)	351000 (39663)	634.40 (10397.81)	130 (2130.70)	975 (442)

MODEL	TORQUE			VOLUMETRIC		APPROX. WEIGHT LB (Kg)
	IN-LBS (N*m)			DISPLACEMENT		
	1000 PSI (69.0 BAR)	2000 PSI (137.9 BAR)	3000 PSI (206.9 BAR)	PER 100°	PER RAD	
SS-2A	—	—	—	—	—	—
SS-5A	810 (91)	1620 (183)	—	1.57 (25.73)	.90 (14.75)	3.2 (1.45)
SS-1	2280 (257)	4560 (515)	6840 (773)	4.18 (68.51)	2.40 (39.33)	22 (10)
SS-4	7230 (817)	14460 (1634)	21700 (2452)	13.29 (217.82)	7.62 (124.89)	50 (23)
SS-8	15200 (1718)	30400 (3435)	45600 (5153)	27.92 (457.60)	16 (262.24)	80 (36.29)
SS-12	23660 (2673)	47320 (5347)	70965 (8019)	43.45 (712.14)	24.90 (408.11)	125 (57)
SS-25	47310 (5346)	94620 (10692)	141930 (16038)	86.41 (1416.31)	49.80 (816.22)	230 (104)
SS-40	76000 (8588)	152000 (17176)	228000 (25764)	139.61 (2288)	80.00 (1311)	370 (168)
SS-65	123500 (13955)	247000 (27911)	370500 (41866)	226.87 (3718)	130 (2130)	582 (264)
SS-130	247000 (27911)	494000 (55822)	741000 (83733)	453.75 (7436)	260 (4261)	1035 (469)

MODEL	MAX BREAK IN PSI (BAR)	TEST PARAMETERS — OIL		
		BY-PASS LEAKAGE—MAX ALLOWABLE		
		CUBIC IN. PER MIN. AT 3000 PSI (206.9 BAR)	CUBIC CM. PER MIN. AT 3000 PSI (206.9 BAR)	
		1V	1V	2V
SS-2A	125 (8.6)	10	200	N/A
†SS-5A	125 (8.6)	12	180	200
SS-1	100 (6.90)	14	229	295
SS-4	50 (3.44)	16	262	370
SS-8	50 (3.44)	18	295	N/A
SS-12	50 (3.44)	20	328	470
SS-25	50 (3.44)	22	360	N/A
SS-40	50 (3.44)	25	410	1080
SS-65	50 (3.44)	28	459	1370
SS-130	50 (3.44)	43	704	1550

† TESTED AT 2250 PSI.



HOW TO ORDER

Please fill in ALL blocks in accordance with the KEY numbers and letters shown below.

Block #
1 2 3 4 5 6 7 8

Block 1 (STYLE)

SS Solid Shaft
 PP Special

Block 2 (SIZE)

*0.2A
 *0.5A
 1
 4
 8
 12
 25
 40
 65
 130

Block 3 (NO. OF VANES)

1V Single vane
 2V Double vane

Block 4 (MOUNTING)

E End
 F Foot
 B Base
 Z Special

Block 5 (SEALS)

B Buna "N" Standard shaft seal
 V Viton Standard shaft seal
 E Ethylene propylene
 X Two piece end—Viton shaft seal buna seals
 Y Two piece end—Viton shaft seal viton seals
 Z Special

Block 6 (SHAFT CONFIGURATION)

A Standard (Involute spline & plain for SS)
 B Plain end cut off
 C Plain both ends
 D Plain one end—Single key other end
 E Plain one end—Double key other end
 F Plain end cut off—Single key other end
 G Plain end cut off—Double key other end
 H Single key both ends
 J Double key both ends
 K Spline one end—Single key other end
 L Spline one end—Double key other end
 N Splined both ends
 Z Special

Block 7 (SHAFT MODIFICATION)

A Standard (None)
 B Drill, tap drive end of shaft
 C Drill, tap both ends of shaft
 ***D Potentiometer shaft hole opp drive end
 E Drill & tap end opposite drive end
 Z Special

Block 8 (PORTING)

1 N.P.T.
 2 SAE Straight threads standard
 3 Double N.P.T. ports
 4 Double SAE ports
 ** 5 Front ports—N.P.T.
 ** 6 Front ports—SAE
 7 Manifold ports (See manifold porting data for explanation)
 8 Body ports—N.P.T.
 9 Double manifold ports
 0 BSPP straight threads
 Z Special

* For Aluminum units an A is added to the key
 Example: SS-.05A-1V is an Aluminum Actuator
 SS-4-1V is a Cast Iron Actuator

** "Front ports" for end ported SS Series means adjacent to keyed or spline shaft end.

*** See Page 27 for size.