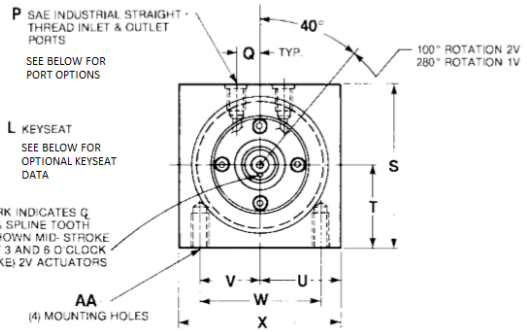
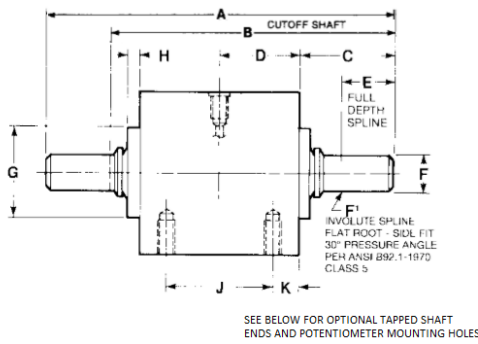


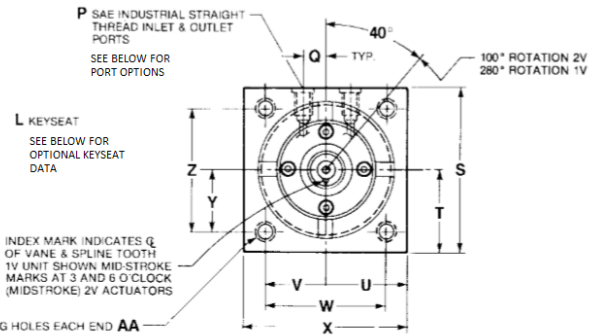
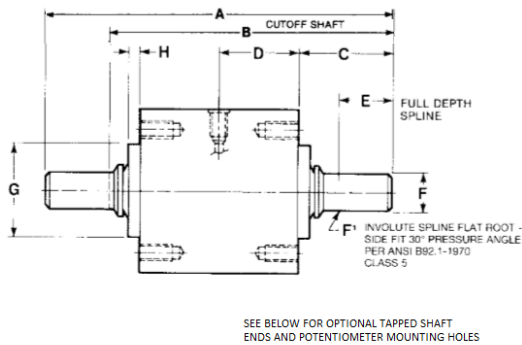
BASE MOUNTING SS-.2A & SS-.5A

For larger aluminum units, please consult factory.



END MOUNTING SS-.2A & SS-.5A

For larger aluminum units, please consult factory.



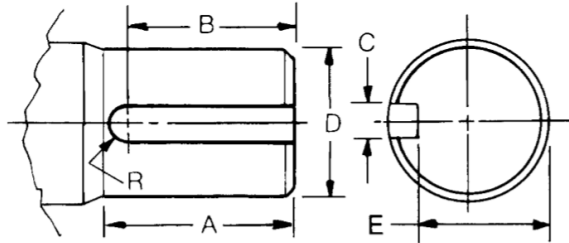
IMPORTANT NOTES TO AVOID ACTUATOR DAMAGE AND VOIDED WARRANTY:

1. 2,000 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 test applications beyond 2,000 psi. 3,000 psi can be used on intermittent shockless actuations.
2. Design considerations should be made to limit the axial and radial loading applied to the actuator. Contact factory if axial and/or radial loading must be applied to the actuator. Unapproved axial and/or radial loading will void the actuator's warranty.
3. External stops must be used to limit shaft rotation for most applications. Using the actuators internal components as rotational stops will cause damage and void the actuators warranty.
4. It is critical that the hydraulic system have pressure relief located in close proximity to the actuator to prevent pressure spikes from damaging the actuator. Micromatic offers Cross Port Relief (CPR) manifolds that can be used with the actuator if the customer's hydraulic system does not have pressure relief (contact factory for details). Hydraulic pressure spikes will rapidly cause damage and void the actuator's warranty.
5. It is recommended the hydraulic fluid be filtered to 5 microns or less (maximum of 10 microns).

| DIMENSION IN INCHES (MILLIMETERS) | | |
|--------------------------------------|------------------|------------------|
| | SS-.2A | SS-.5A |
| A | 5.00 (127.00) | 6.50 (165.10) |
| B | 3.89 (98.81) | 5.05 (128.27) |
| C | 1.38 (35.05) | 1.75 (44.45) |

| | | |
|----------------------|-----------------------------|-------------------------------|
| D | 1.13 (28.70) | 1.50 (38.10) |
| E | 0.90 (22.86) | 1.10 (27.94) |
| F₄ | ∅0.5935 (∅15.075) | ∅0.7145 (∅18.148) |
| F₁ | 18T 32/64P 0.5625PD | 22T 32/64P 0.6875PD |
| G | 1.44 (36.57) | 1.70 (43.18) |
| H | .27 (6.35) | .22 (5.58) |
| J | 1.75 (44.45) | 2.00 (50.80) |
| K | 0.25 (6.35) | 0.50 (12.70) |
| L₂ | 1/8 X 1/16 (3.17 X 1.58) | 3/16 X 3/32 (4.76 X 2.38) |
| P₃ | 0.75 - | 0.70 3/8-24 |
| Q | .375 (9.53) | 0.438 (11.12) |
| 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 | 0.88 (22.35) | 1.13 (28.70) |
| W | 1.75 (44.45) | 2.25 (57.15) |
| X | 2.25 (57.15) | 3.00 (76.2) |
| Y | 0.88 (22.35) | 1.13 (28.70) |
| Z | 1.75 (44.45) | 2.25 (57.15) |
| AA | 1/4-20 0.31 DP (7.87) | 5/16-18 0.62 DP (15.75) |

- 1 SEE NOTES ABOVE FOR SPLINE TYPE
- 2 SEE BELOW FOR OPTIONAL SHAFT FEATURES
- 3 SEE BELOW FOR OTHER PORT OPTIONS
- 4 TOLERANCE ± 0.0005 (0.013)



| OPTIONAL KEYWAY DATA FOR SS-.2A & SS-.5A | | | | | | | |
|--|-----------------------------|---|---|------------------------------|--------------------------------|--|-------------------------------------|
| MODEL | (A) SHAFT EXT (in) | (B) KEYWAY LENGTH ± 0.02 (in) | (C) KEYWAY WIDTH + 0.0005 -0.0015 (in) | (D) SHAFT DIA. (in) | (E) KEYWAY DEPTH (in) | MAX.* RECOMMENDED TORQUE (in-lbs) (ONE KEY) | MAX. SUPPLY PRESSURE (psi) |
| SS-.2A-1V | 1.11 | 0.750 | .1240 .1253 | 0.594 0.593 | 0.530 0.525 | 460 | 2,305 (1V) |
| SS-.5A-1V SS-.5A-2V | 1.46 | 0.700 | 0.1875 | 0.715 0.714 | 0.621 0.616 | 780 | 1,738 (1V) 868 (2V) |

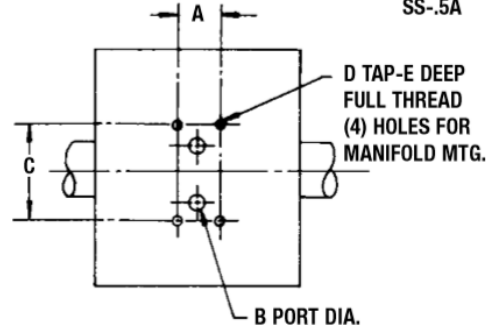
***NOTES:**

1. Keyway drives are recommended only for low pressure and low cycle applications. Note the maximum recommended torque for each model in the table below. Maximum recommended torque values are based on using a key with minimum yield strength of 65,000 psi and operating the unit within normal accepted application guidelines.
2. For double keyway use (1.75) times this value up to full torque capacity of the actuator.
3. Standard keyway is located at 12 o'clock when shaft is at mid-position of travel.

| OPTIONAL NPT AND BSPP PORTING | | | OPTIONAL SHAFT HOLES | |
|-------------------------------|-------------------------------|---|-------------------------------------|----------------------------------|
| MODEL | NATIONAL PIPE THREAD (NPT) | BRITISH STANDARD PIPE THREAD (BSPP) | POTENTIOMETER SHAFT HOLE (in) | SHAFT END TAPPED HOLE (in) |
| SS-.2A | - | - | $\frac{0.187}{0.186}$ X 0.38 DP | 10-32 UNF-2B X 0.38 DP |
| SS-.5A | 1/8-27 NPT | 1/8-28 BSPP | $\frac{0.187}{0.186}$ X 0.38 DP | 10-32 UNF-2B X 0.38 DP |

Solid Shaft Series

MODELS:
SS-.2A
SS-.5A



| OPTIONAL MANIFOLD PORTING | | | | | |
|---------------------------|--------|--------|--------|------------|--------|
| MODEL | A (in) | B (in) | C (in) | D (in) | E (in) |
| SS-.2A | 1.086 | 1/8 | 1-5/8 | #8-32 UNC | 1/4 |
| SS-.5A | 1.250 | 5/32 | 1-3/4 | #10-32 UNC | 3/8 |

NOTES:

1. Port locations are symmetrical to manifold mounting holes.
2. See above for port locations and spacing.

| SINGLE VANE 280° ROTATION (±5°) | | | | | | |
|---------------------------------|------------------------|-------------------------|-------------------------|--|----------------|---------------------------------|
| MODEL | TORQUE in-lbs (N-m) | | | VOLUMETRIC DISPLACEMENT in ³ (cm ³) | | APPROX. WEIGHT lb (kg) |
| | 1000 psi (69.0 bar) | 2000 psi (137.9 bar) | 3000 psi (206.9 bar) | PER 280° | PER Radian | |
| SS-.2A | 170 (19) | 340 (38) | 510 (58) | 0.95 (15.57) | 0.2 (3.27) | 1.6 (0.73) |
| SS-.5A | 380 (43) | 760 (86) | N/A | 2.18 (35.73) | 0.45 (7.37) | 3.0 (1.36) |

*2,000 psi maximum is recommended for severe duty applications, such as operating at maximum torque at high cycle rates for extended periods.

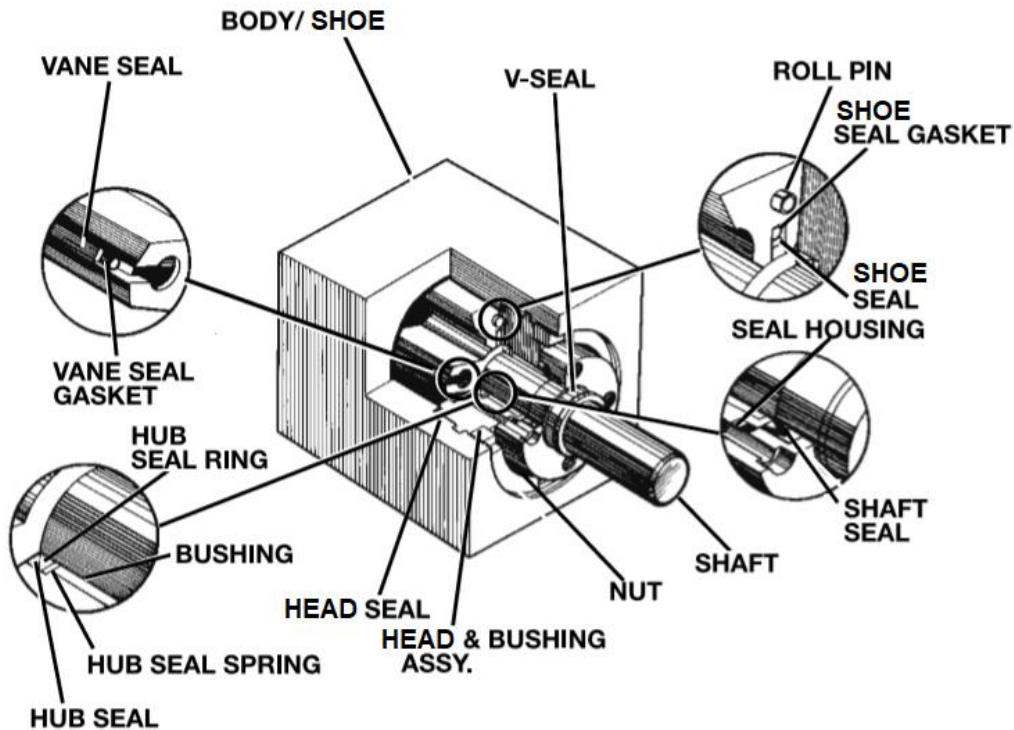
| DOUBLE VANE 100° ROTATION (±5°) | | | | | | |
|---------------------------------|------------------------|-------------------------|-------------------------|--|-----------------|---------------------------------|
| MODEL | TORQUE in-lbs (N-m) | | | VOLUMETRIC DISPLACEMENT in ³ (cm ³) | | APPROX. WEIGHT lb (kg) |
| | 1000 psi (69.0 bar) | 2000 psi (137.9 bar) | 3000 psi (206.9 bar) | PER 100° | PER Radian | |
| SS-.2A | N/A | N/A | N/A | N/A | N/A | N/A |
| SS-.5A | 810 (91) | 1620 (183) | N/A | 1.57 (25.73) | 0.90 (14.75) | 3.2 (1.45) |

*2,000 psi maximum is recommended for severe duty applications, such as operating at maximum torque at high cycle rates for extended periods.

| TEST PARAMETERS - OIL | | | |
|------------------------------|---|---|---|
| MODEL | MAX BREAK IN PSI (BAR) | BY-PASS LEAKAGE-MAX ALLOWABLE | |
| | | in³/min AT 3000 psi (206.9 bar) | cm³/min AT 3000 psi (206.9 bar) |
| SS-.2A | 125 (8.6) | 10 | 164 |
| *SS-.5A | 125 (8.6) | 12 | 197 |

*TESTED AT 2,250 psi

HOW TO ORDER SS-.2A and SS-.5A



HOW TO ORDER

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

EXAMPLE: - - - - - - -

- - - - - - -

BLOCK # 1 2 3 4 5 6 7 8

Block 1 (MODEL)

SS Solid Shaft

Block 2 (SIZE)

***.2A

***.5A

Block 3 (VANES)

1V Single Vane

2V Double Vane

Block 4 (MOUNTING)

E End

B Base

Z Special

Block 5 (SEALS)

X Two piece end – Viton shaft seals Buna seals

Y Two piece end – Viton shaft seals Viton seals

Block 6 (SHAFT CONFIGURATION)

A Standard (Involute spline & plain)

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 (No modifications)

B Drill, tap drive end of shaft

C Drill, tap both ends of shaft

*D Potentiometer shaft hole opposite drive end

E Drill & tap end opposite drive end

Z Special

Block 8 (PORTING)

**1 NPT

**2 SAE Straight Threads (Standard)

7 Manifold Ports (See Optional Porting for details)

**0 BSPP Straight Threads

Z Special

* See below for sizes

** "End Ports" for HS Series means on non-mounting end, parallel to shaft.

*** For aluminum units an A is added to the key

NOTE: All "Z" (non-standard feature request) requires a "Request a Quote" to be filled out for Micromatic to review requirements