

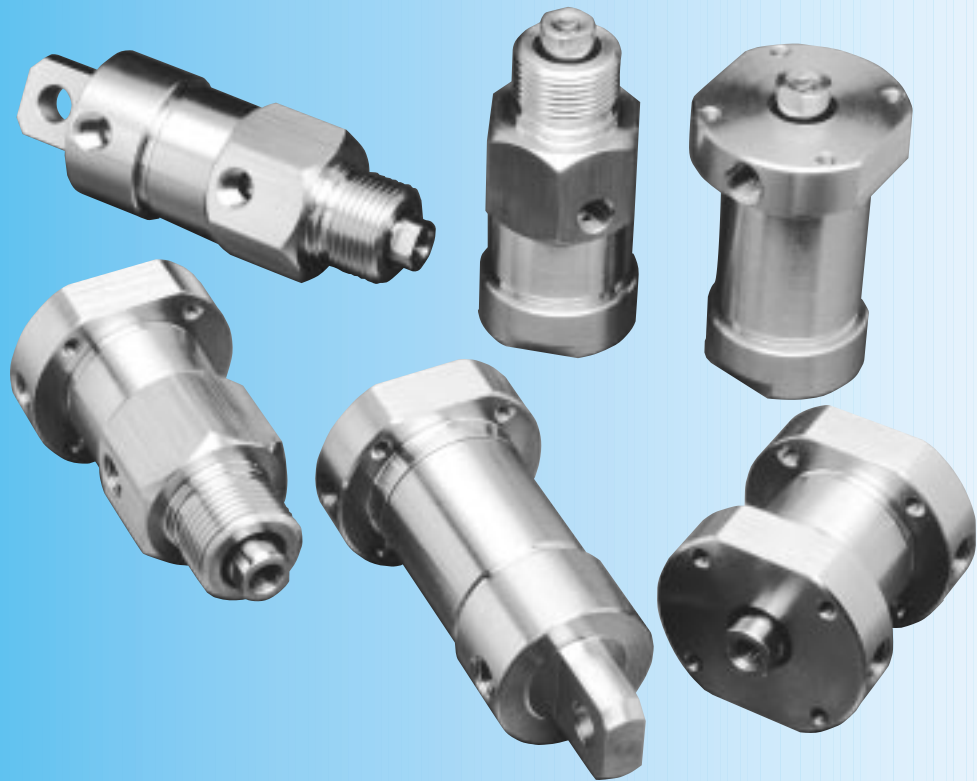
SMS Solid Stainless Cylinders

Space Saving and Conventional Lengths

Pneumatic to 200 PSI

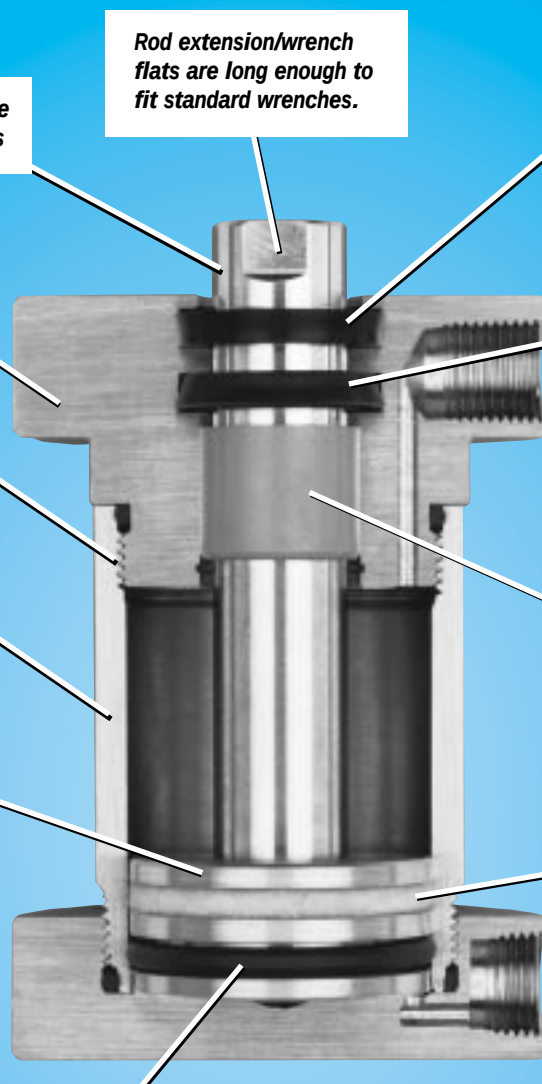
Hydraulic 400 to 500 PSI Non shock

1 1/8", 1 1/2", 2", 3" Bore



***300 Series Stainless Exterior Assures Aesthetics and Function
in Washdown Applications or other Harsh Environments***

SMS DESIGN FEATURES



Piston rod is hard chrome plated type 303 stainless

Rod extension/wrench flats are long enough to fit standard wrenches.

Special heavy duty wiper not only seals out solid contaminants but also effectively prevents liquids and gases from entering the cylinder interior.

End caps are type 303 stainless steel

Clean crevice free threaded construction assures maximum strength and allows easy wash down

Pneumatic rod seal is a "longlife" nitrile cup. Hydraulic rod seal is pressure energized and extra long wearing for improved sealability.

Heavy 1/8" wall type 304 stainless tube is precision honed

Composite rod bushing has high temperature capability and excellent chemical resistance. Solid lubricant fillers provide excellent wear characteristics for non-lube service. The bearing is inboard of the wiper and seal, away from the environment

Brass or aluminum piston is attached with a high strength threaded joint.

Optional wick provides teflon lube for non-lube service on O ring piston.

Reduce noise and fatigue problems such as rod breakage with urethane/nitrile shock pads. Add 1/4" to the cylinder length for each pad. Pneumatic use only to 180° F.

Standard piston seal is large cross section O ring. Compounds are carefully selected for maximum cycle life. Optional U cup piston seals with teflon wear strip stretch the limits of service even further. Reduce friction and operate without lube in the severest applications while extending or eliminating the service interval.

If space permits for applications involving side loads or long strokes, select SMS 1, 2, 3, 5, 7, 8, 9, which have extra long bearings with added space between support points.

Strokes longer than the maximum listed in the ordering procedure can be produced but careful consideration must be given to how the cylinder is applied — how well is the load supported or guided, is the cylinder used in push or tension, is the cylinder vertical or horizontal, etc. Consult factory on all strokes longer than standard. Stroke increments other than standard can also be made. Special lengths are generally available in a few days and are priced as "non-standard" strokes.



TM

1 1/8" BORE SMS STAINLESS

200 PSI MAX. AIR
500 PSI MAX. HYD. Non shock



SMS Options

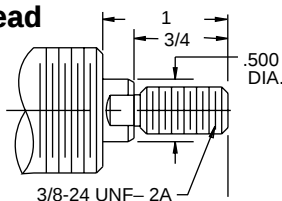
- Shock Pads
- Viton Seals
- Non-lube Service
- Magnetic Piston
- U Cup Piston
- 90° Rear Clevis

Spring Return Cylinders

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

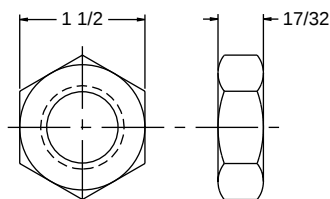
Spring force
Fully extended—8#
Fully compressed—22#
Spring material—Stainless steel

Optional Male Rod Thread



1-14SS Nut Nose Mounting Nut

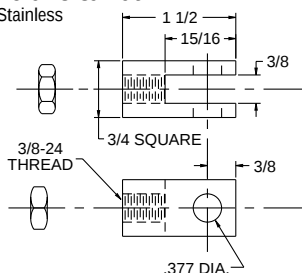
Not included with cylinder Order Separately



18-8 Stainless

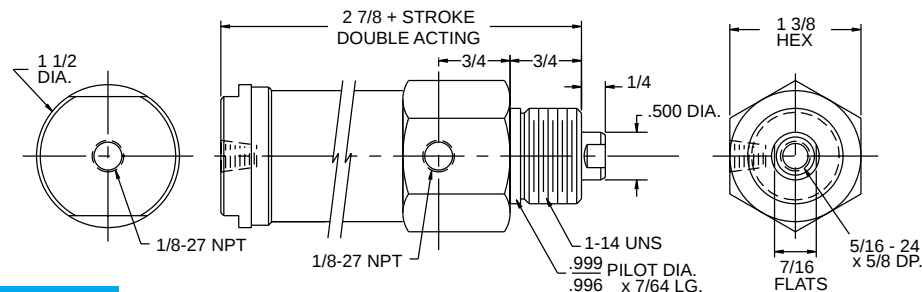
SS-375 Rod Clevis & Nut

303 Stainless

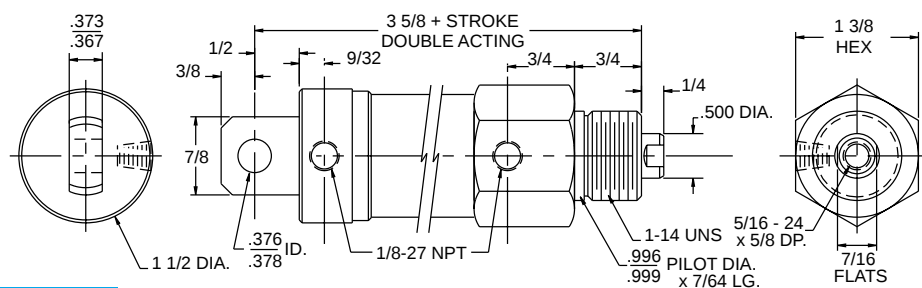


SS-301 Clevis Pin assembly

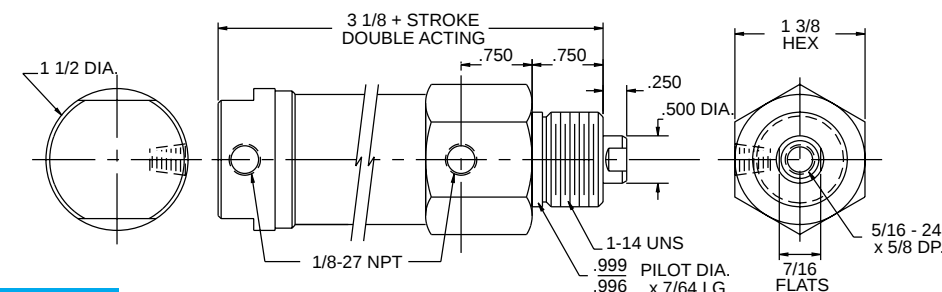
Used on SS-375
303 Stainless



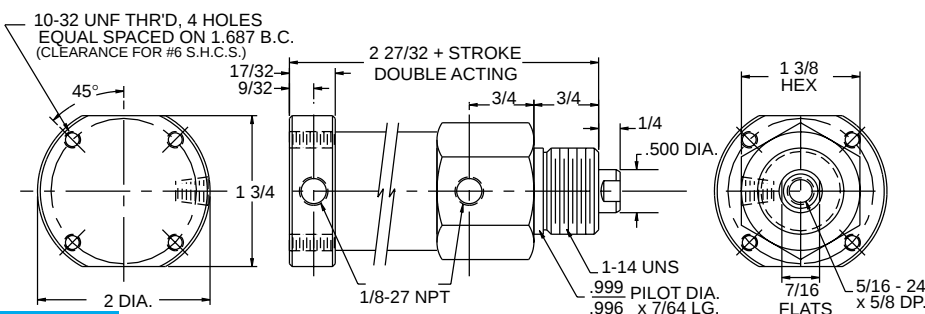
SMS1



SMS2



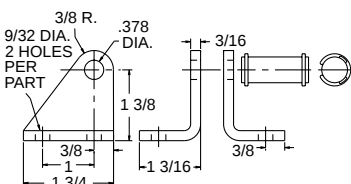
SMS3



SMS5

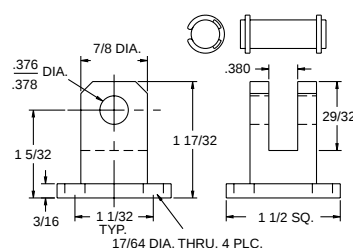
SS-90 St'd Clevis Brk't

Used on SMS 2
Series 300 Stainless



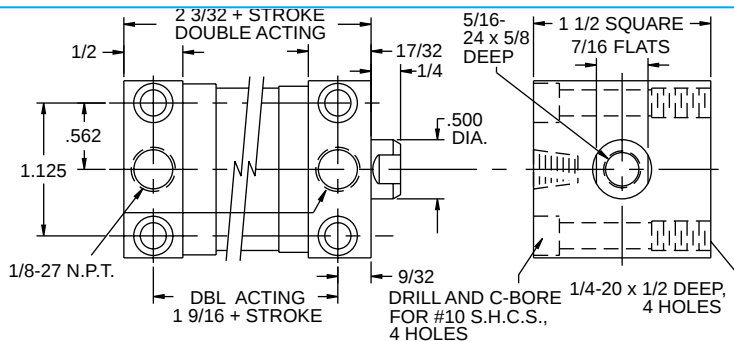
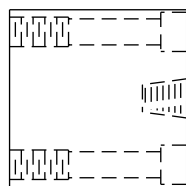
SSC-40 Low Profile Clevis Brk't

Used on SMS 2
303 Stainless

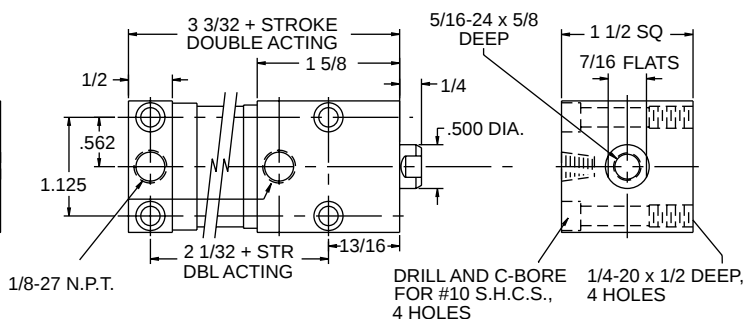
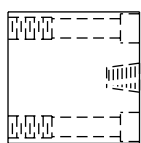


Series SMS Solid Stainless

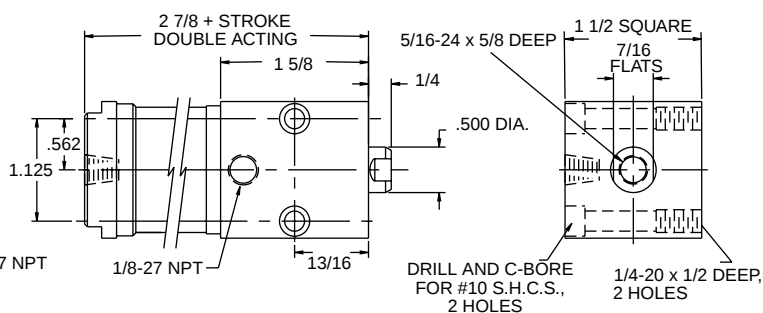
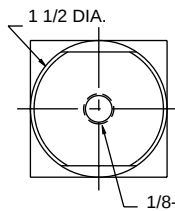
1 1/8" BORE SMS STAINLESS



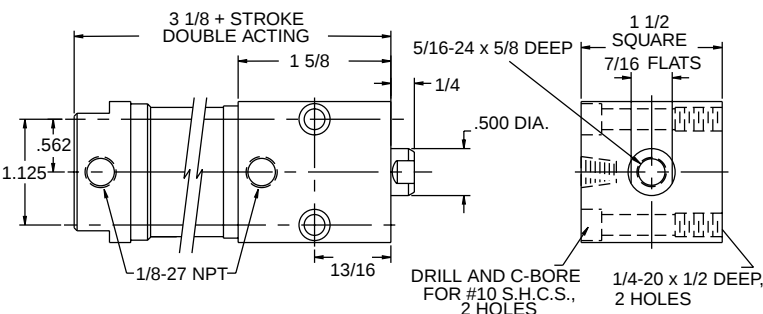
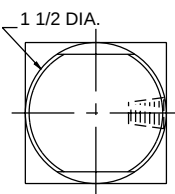
SMS6



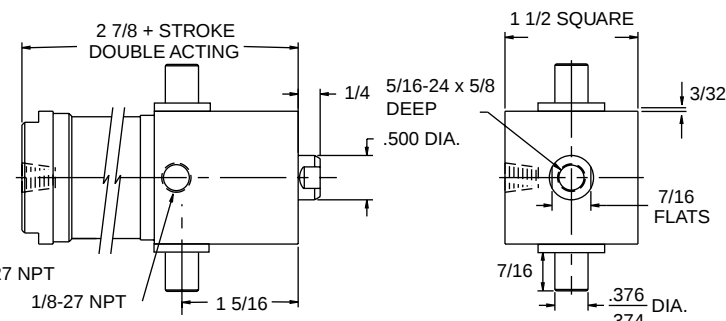
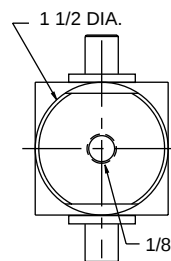
SMS7



SMS8



SMS9



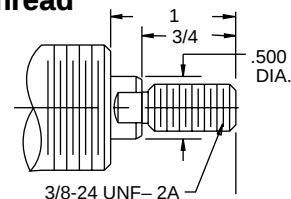
SMS10

Spring Return Cylinders

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

Spring force
Fully extended—8#
Fully compressed—22#
Spring material—Stainless steel

Optional Male Rod Thread

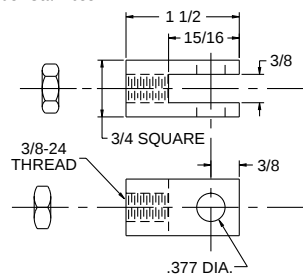


WHEN YOU'VE FINALLY
HAD IT WITH PLATED
CYLINDERS . . .



SS-375 Rod Clevis & Nut

303 Stainless



SS-301 Clevis Pin assembly

Used on SS-375
303 Stainless



24 HOUR DELIVERY

200 PSI MAX. AIR
500 PSI MAX. HYD. Non shock



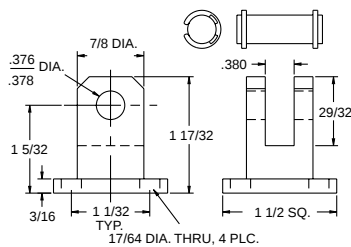
SMS Options

- Shock Pads
- Viton Seals
- Non-lube Service
- Magnetic Piston
- U Cup Piston
- Non-rotate
(SMA 7, 8, 9, 14, 15, 17)
- 90° Rear Clevis

SSC-40

Low Profile Clevis Brk't

Used on SMS16 303 Stainless

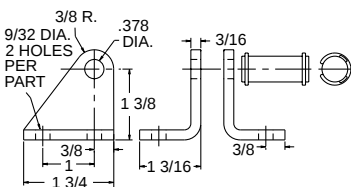


SS-90

St'd Clevis Brk't

Used on SMS 16

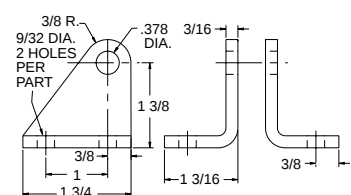
Series 300 Stainless steel



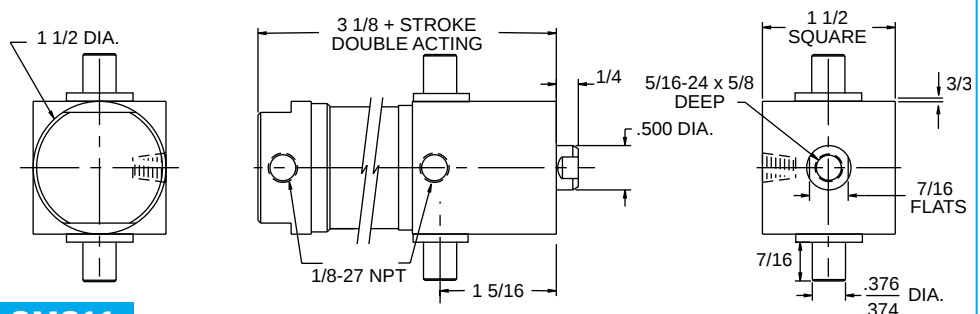
SS-90T

Trunnion Brk't

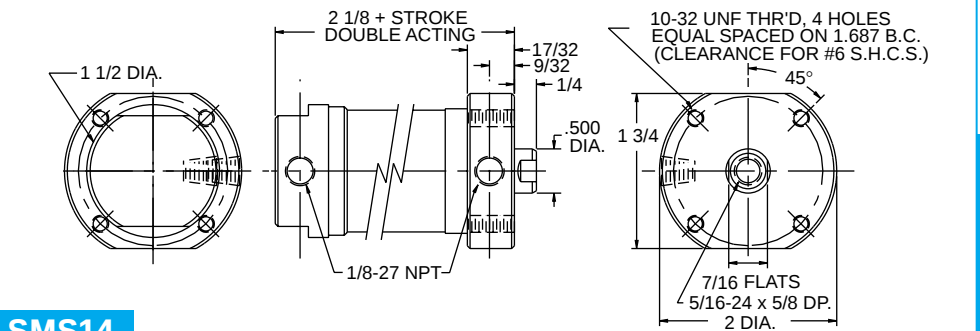
Used on SMS 10, 11 304 Stainless



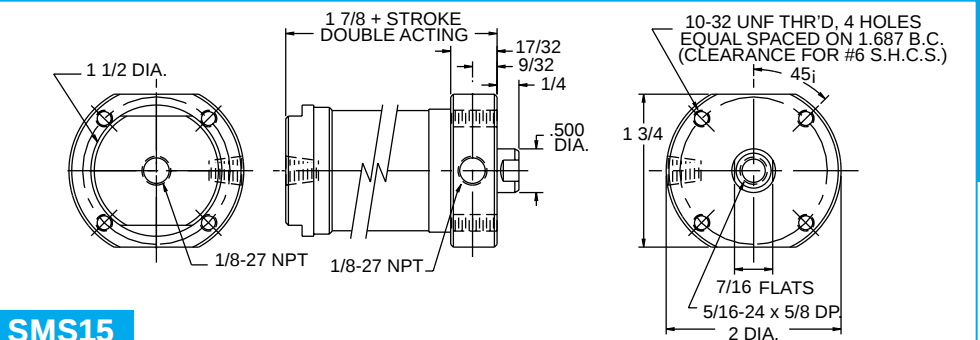
**RAISE THE BAR FOR
YOUR COMPETITORS
BY SELECTING
AURORA
SOLID STAINLESS
PRODUCTS**



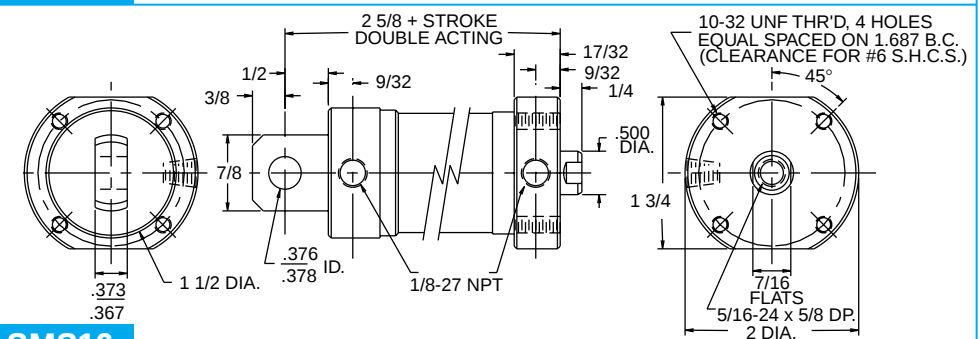
SMS11



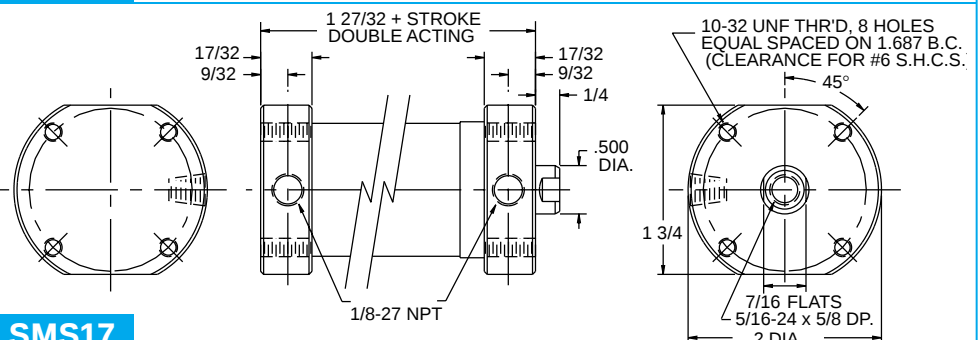
SMS14



SMS15



SMS16



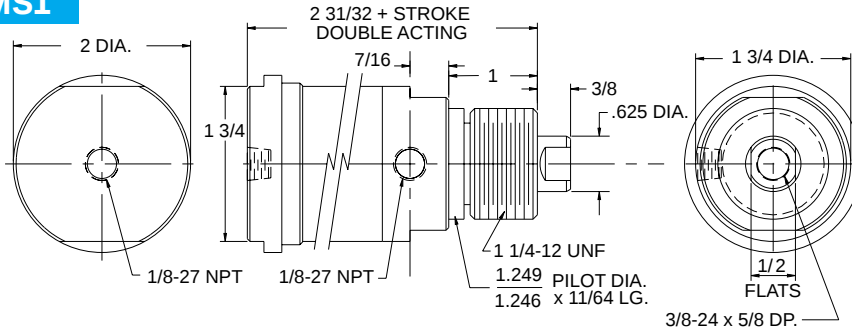
SMS17

Series SMS Solid Stainless

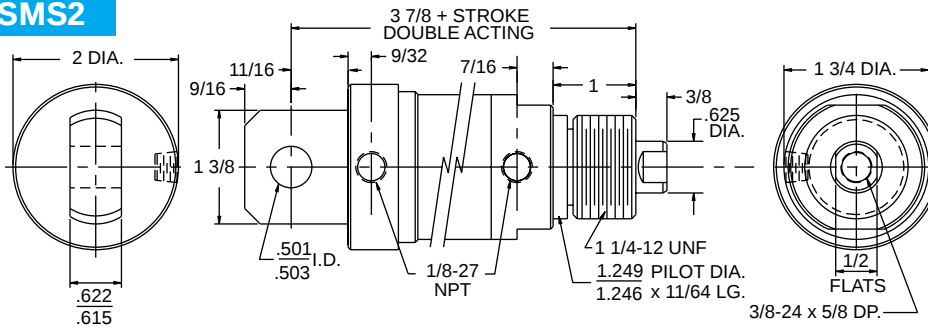
1 1/2" BORE SMS STAINLESS

200 PSI MAX. AIR
500 PSI MAX. HYD. Non shock

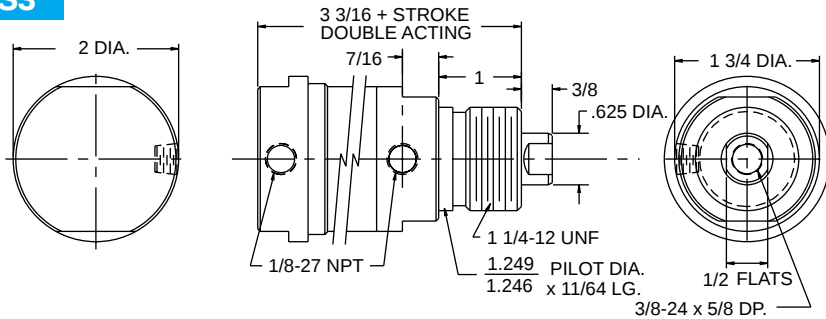
SMS1



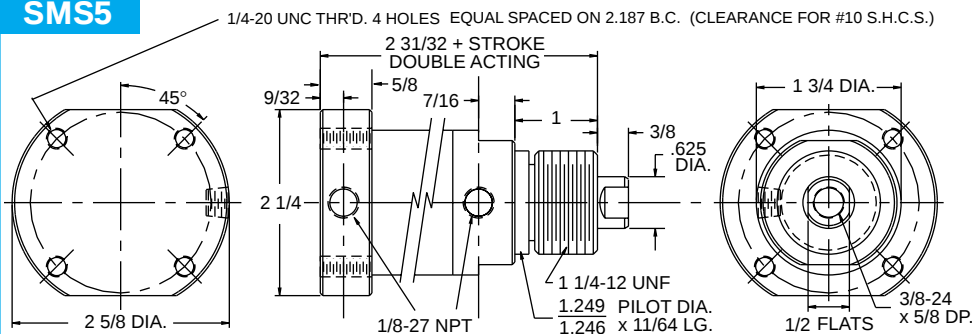
SMS2



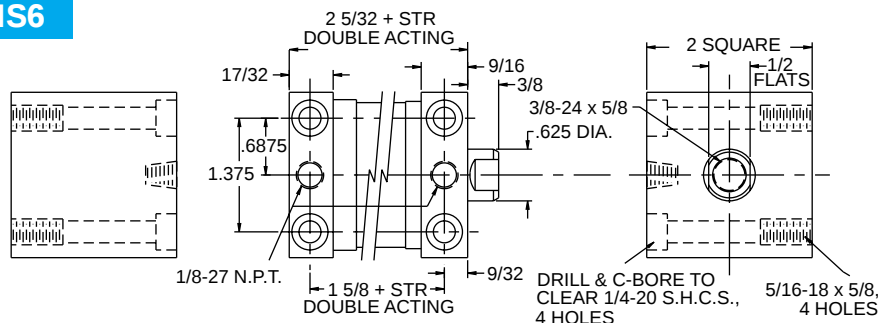
SMS3



SMS5



SMS6

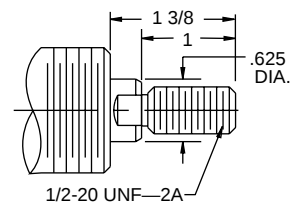


Spring Return Cylinders

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

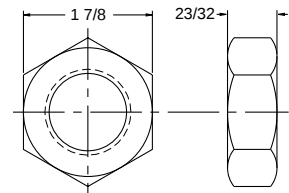
Spring force
Fully extended—15#
Fully compressed—50#
Spring material—Stainless steel

Optional Male Rod Thread

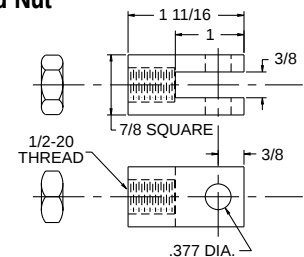


1 1/4 -12SS Nut Nose Mounting Nut

Not included with cylinder
Order Separately



SS-500 Rod Clevis and Nut



303 Stainless

SS-501 Clevis Pin Assembly

Used on SS-500 303 Stainless



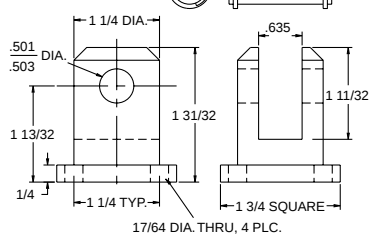
SMS Options

- Shock Pads
- Viton Seals
- Non-lube Service
- Magnetic Piston
- U Cup Piston
- Non-rotate (SMA 7,8,9)
- 90° Rear Clevis

SSC-90

Low Profile Clevis Brk't

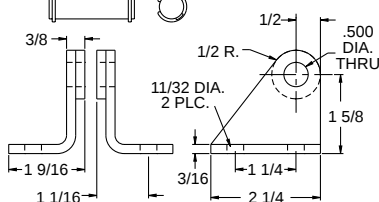
Used on SMS 2
Series 300 Stainless



SS-100

St'd Clevis Brk't

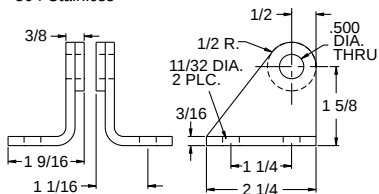
Used on SMS 2
Series 300 Stainless



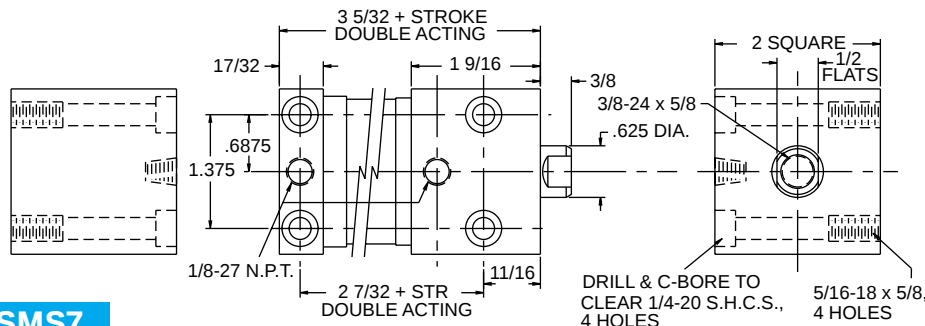
SS-100T

Trunnion Brk't

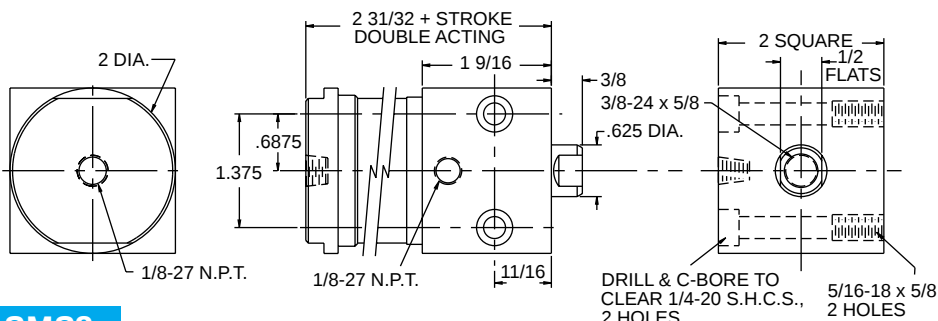
Used on SMS 10, 11
304 Stainless



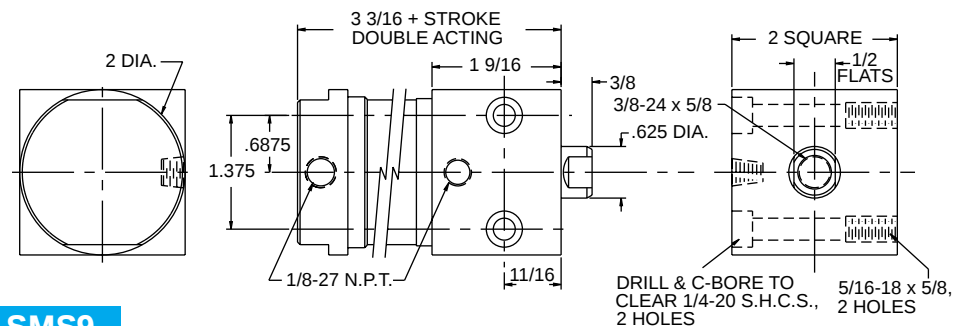
**All Aurora Cylinders
are 100% Factory
Tested to insure
Trouble Free
Performance**



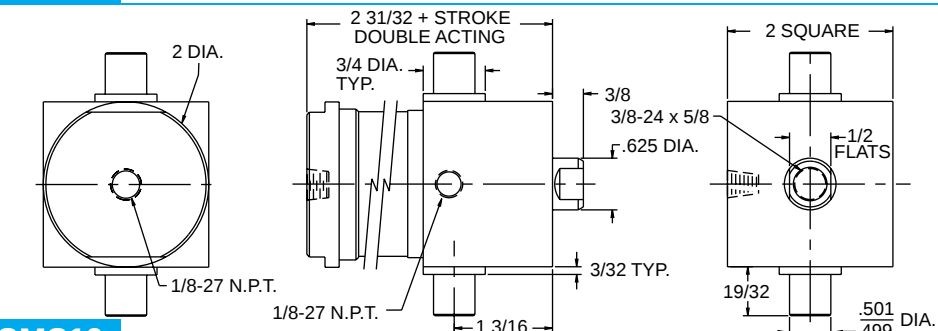
SMS7



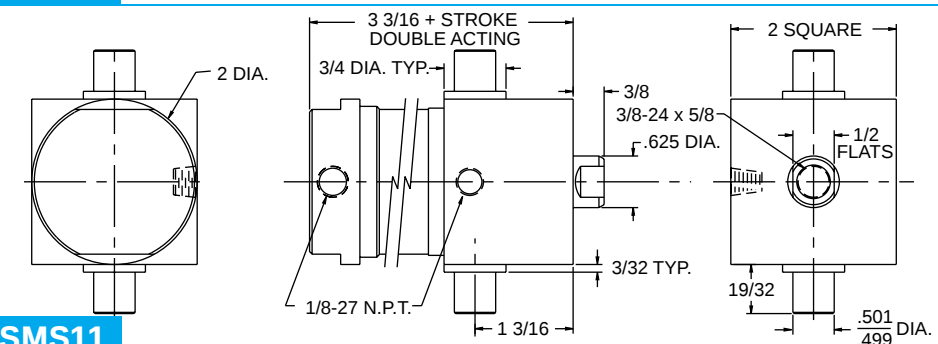
SMS8



SMS9



SMS10



SMS11

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

Technical drawing of the SMS15 hydraulic cylinder, showing three views: front, side, and end views.

Front View (Left): Shows a circular cylinder with a central port. Dimensions include a 2 DIA. port, 1/8-27 NPT threads, and a 1 3/4" diameter.

Side View (Middle): Shows the cylinder's profile. Dimensions include a 1 31/32 + STROKE DOUBLE ACTING stroke, 17/32" and 9/32" diameters, a 3/8" diameter, a 625 DIA. port, and 1/8-27 NPT threads.

End View (Right): Shows the cylinder's end face. Dimensions include a 1/4-20 UNC THR'D. 4 HOLES EQUAL SPACED ON 2.187 B.C. (CLEARANCE FOR #10 S.H.C.S.), a 45° angle, a 2 1/4" diameter, 1/2 FLATS, 3/8-24 x 5/8 DP. threads, and a 2 5/8 DIA. diameter.

Labels: SMS15

1 3/8

1

.625 DIA.

1/2-20 UNF-2A

1 11/16

1

7/8 SQUARE

3/8

1/2-20 THREAD

3/8

.377 DIA.

Stainless Steel

Technical drawing of the SMS16 hydraulic cylinder, showing three views: front, side, and end views.

Front View (Left):

- Outer diameter: 2 DIA.
- Inner diameter: .622 / .615
- Mounting holes: 4 holes, 2 DIA.

Side View (Middle):

- Stroke: 2 7/8" + STROKE
- Acting type: DOUBLE ACTING
- Mounting holes: 4 holes, 2 DIA.
- Port: 1/8-27 NPT
- Dimensions: 11/16, 9/16, 1 3/8, 9/32, 17/32, 9/32, 3/8, .625 DIA., .501 I.D., .503 I.D.

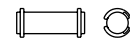
End View (Right):

- Outer diameter: 2 5/8 DIA.
- Inner diameter: 2 1/4
- Mounting holes: 4 holes, 2 DIA.
- Port: 1/2 FLATS 3/8-24 x 5/8 DP.
- Clearance: 1/4-20 UNC THR'D. 4 HOLES EQUAL SPACED ON 2.187 B.C. (CLEARANCE FOR #10 S.H.C.S.)
- Angle: 45°

Legend:

- 1: 1/8-27 NPT
- 2: 1/4-20 UNC THR'D. 4 HOLES EQUAL SPACED ON 2.187 B.C. (CLEARANCE FOR #10 S.H.C.S.)
- 3: 1/2 FLATS 3/8-24 x 5/8 DP.
- 4: 2 DIA.
- 5: 2 5/8 DIA.
- 6: 2 1/4
- 7: 11/16
- 8: 9/16
- 9: 1 3/8
- 10: 9/32
- 11: 17/32
- 12: 9/32
- 13: 3/8
- 14: .625 DIA.
- 15: .501 I.D.
- 16: .503 I.D.

Used on SS-500 303 Stainless



Technical drawing of the SMS17 hydraulic cylinder, showing front, side, and end views with dimensions and specifications.

Front View (Left): Shows the cylinder head with a diameter of 2 5/8 DIA. and four mounting holes.

Side View (Middle): Shows the cylinder body with a total length of 2 1/4. The rod diameter is 1/8-27 NPT. The rod end features a 3/8-24 x 5/8 DP. The cylinder is labeled "1 31/32 + STROKE DOUBLE ACTING". The rod end has a 17/32 diameter and a 9/32 diameter section. The rod end also has a 3/8 diameter section and a .625 DIA. section.

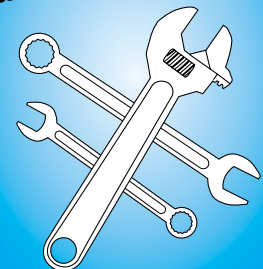
End View (Right): Shows the cylinder head with a diameter of 2 5/8 DIA. and four mounting holes. The mounting holes are 1/4-20 UNC THR'D. 8 HOLES, EQUAL SPACED ON 2.187 B.C. (CLEARANCE FOR #10 S.H.C.S.). The mounting holes are 45° angled. The mounting holes are 1/2 FLATS.

Dimensions and Specifications:

- 1 31/32 + STROKE DOUBLE ACTING
- 17/32
- 9/32
- 3/8
- .625 DIA.
- 2 1/4
- 1/8-27 NPT
- 3/8-24 x 5/8 DP.
- 2 5/8 DIA.
- 1/4-20 UNC THR'D. 8 HOLES, EQUAL SPACED ON 2.187 B.C. (CLEARANCE FOR #10 S.H.C.S.)
- 45°
- 1/2 FLATS

SMS17

**All Aurora Cylinders
are Fully Repairable**



2" BORE SMS STAINLESS

200 PSI MAX. AIR
500 PSI MAX. HYD. Non shock

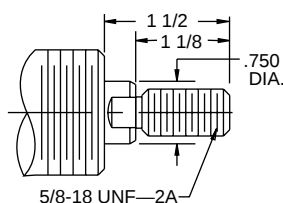


Spring Return Cylinders

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

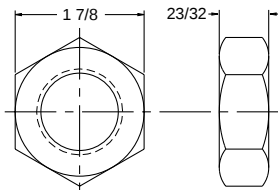
Spring force
Fully extended—20#
Fully compressed—75#
Spring material—Stainless steel

Optional Male Rod Thread



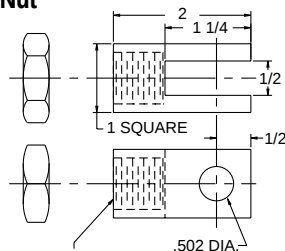
1 1/4 -12SS Nut Nose Mounting Nut

Not included with cylinder
Order Separately



18-8 Stainless

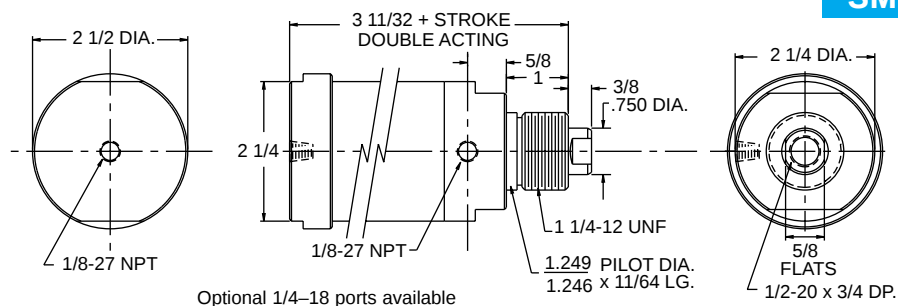
SS-625 Rod Clevis and Nut



303 Stainless

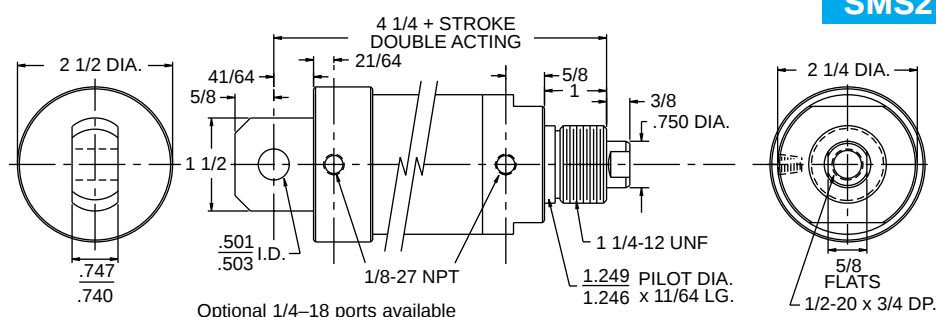
SS-601 Clevis Pin Assembly

Used on SS-625 303 Stainless



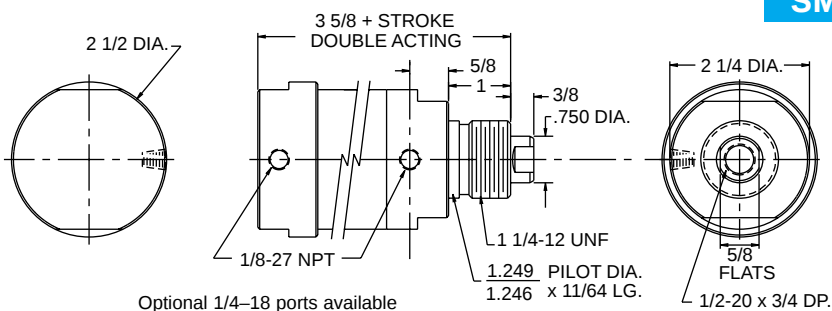
Optional 1/4-18 ports available

SMS1



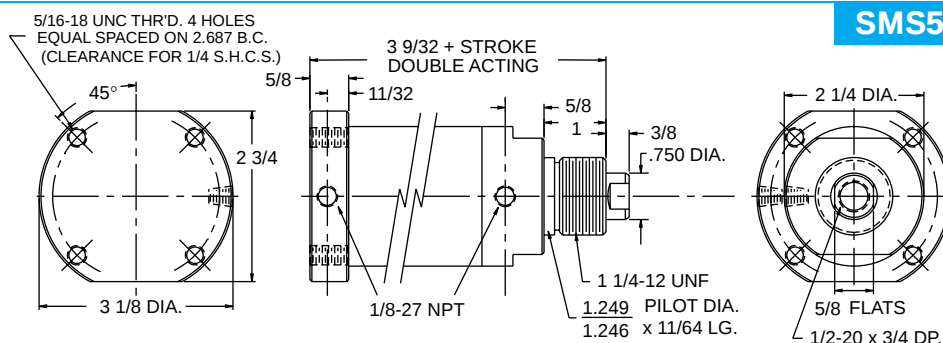
Optional 1/4-18 ports available

SMS2



Optional 1/4-18 ports available

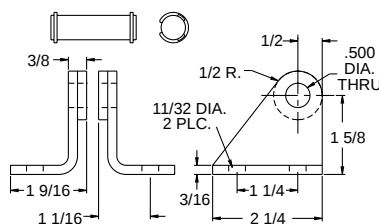
SMS3



SMS5

SS-100 St'd Clevis Brk't

Used on SMS 2
Series 300 Stainless



**Make the
Best Choice**

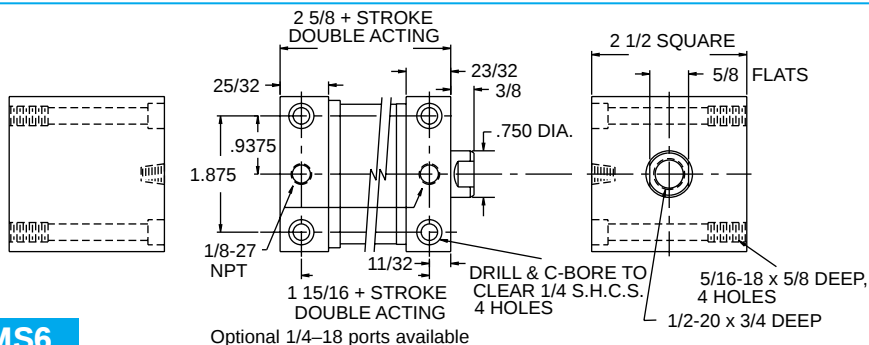
1 630 851 4515

**ask for
Technical Support**

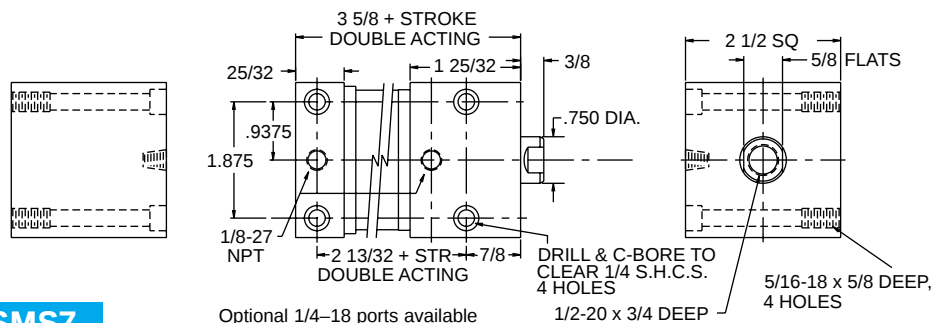
Series SMS Solid Stainless

2" BORE SMS STAINLESS

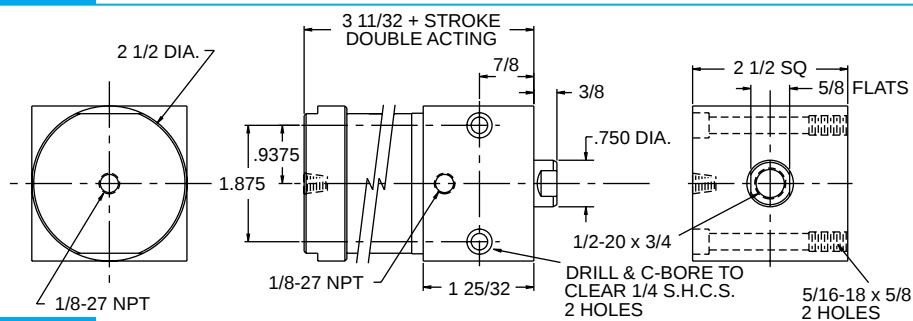
200 PSI MAX. AIR
500 PSI MAX. HYD. Non shock



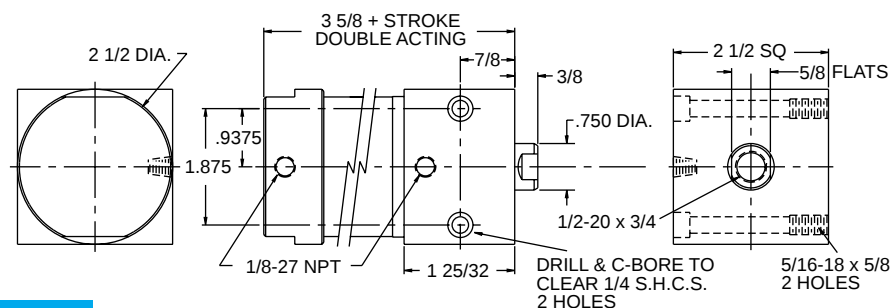
SMS6



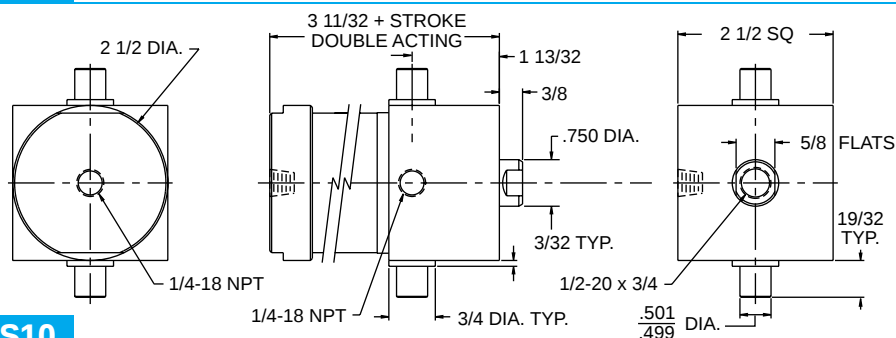
SMS7



SMS8



SMS9



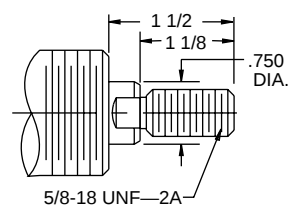
SMS10

Spring Return Cylinders

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

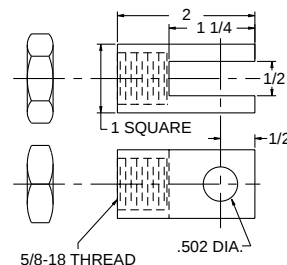
Spring force
Fully extended—20#
Fully compressed—75#
Spring material—Stainless steel

Optional Male Rod Thread



SS-625

Rod Clevis and Nut



303 Stainless

SS-601

Clevis Pin Assembly

Used on SS-625 303 Stainless



You CAN Buy
Peace of Mind

Aurora
stainless

SMS Options

- Shock Pads
- Viton Seals
- Non-lube Service
- Magnetic Piston
- U Cup Piston
- Non-rotate
(SMA 7, 8, 9, 14, 15, 17)
- 90° Rear Clevis

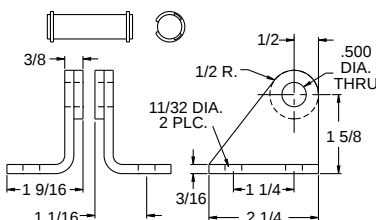
*Unique
Applications
Sometimes
Require
Unique
Cylinders*

*See our
custom design
capabilities on
page 87*

SS-100

St'd Clevis Brk't

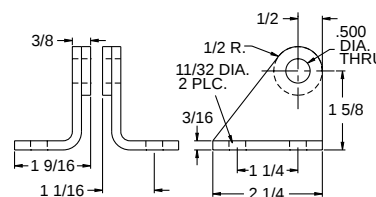
Used on SMS 16 Series 300 Stainless



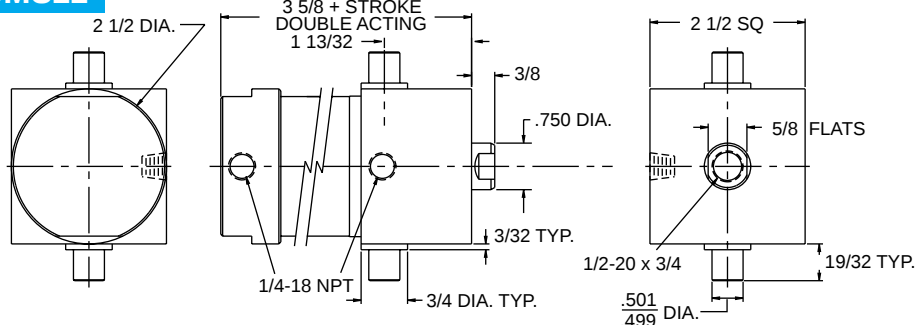
SS-100T

Trunnion Brk't

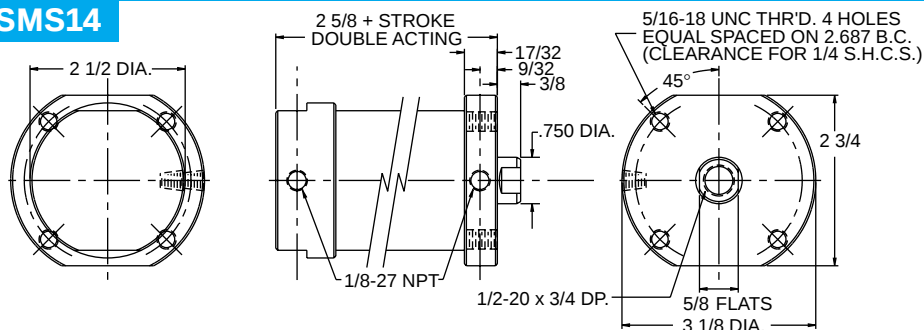
Used on SMS 10, 11 304 Stainless steel



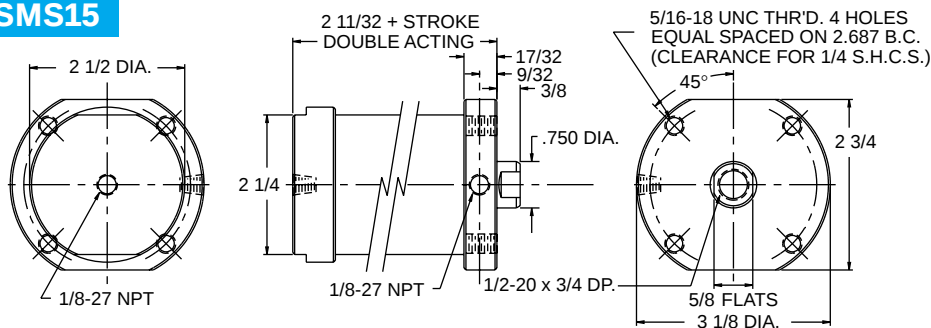
SMS11



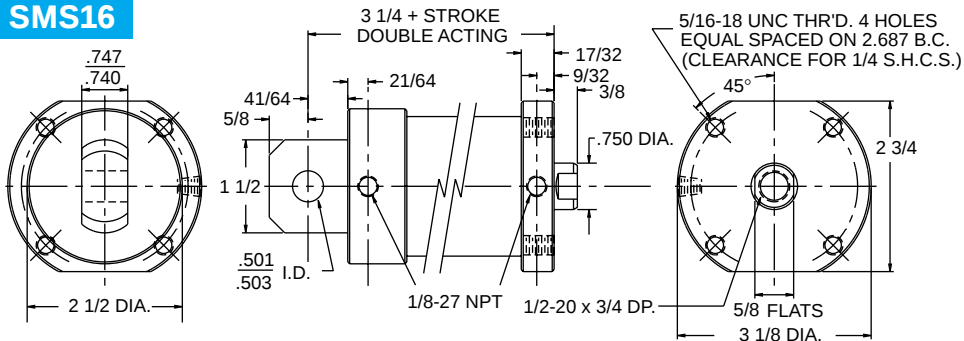
SMS14



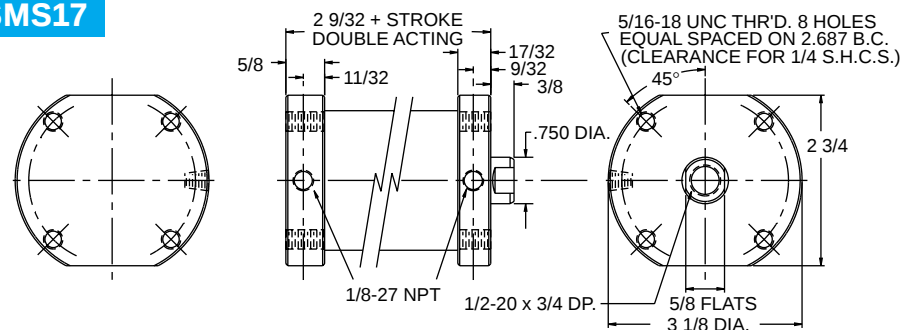
SMS15



SMS16

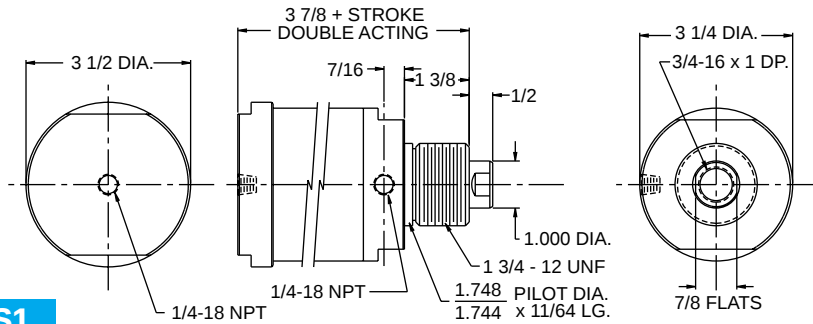


SMS17

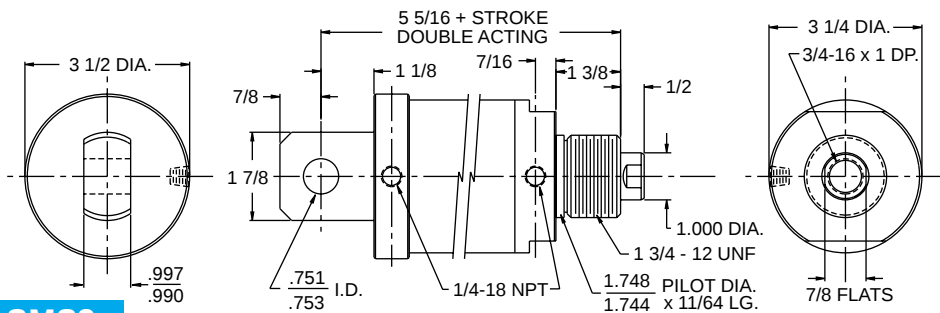


3" BORE SMS STAINLESS

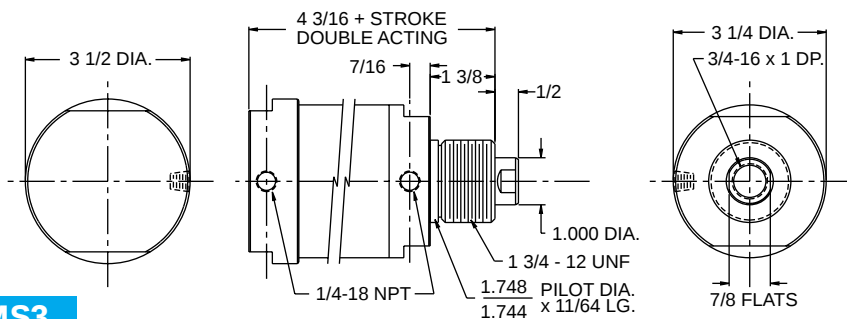
200 PSI MAX. AIR
400 PSI MAX. HYD. Non shock



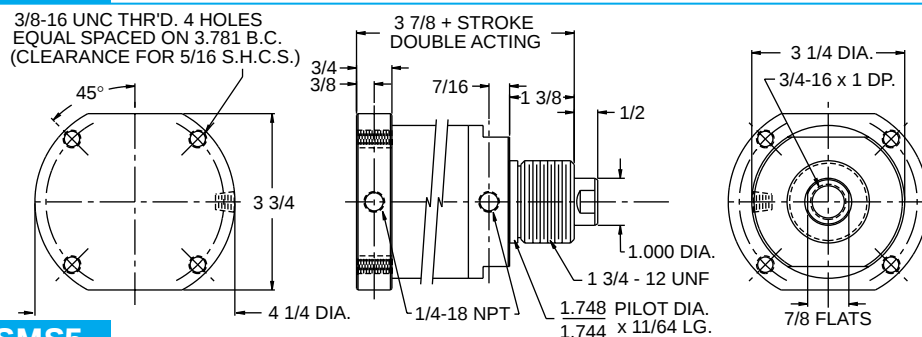
SMS1



SMS2



SMS3



SMS5

**STANDARD CYLINDERS + CORROSION =
LIABILITY**

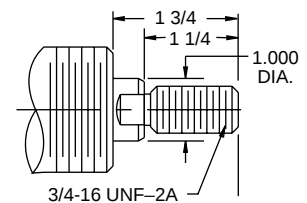
**AURORA STAINLESS + CORROSION =
PEACE OF MIND**

Spring Return Cylinders

Pneumatic only
Springs add to cyl. length
0-2" stroke add 1 1/2" extra
2 1/2-4" stroke add 3" extra
over 4" stroke not available

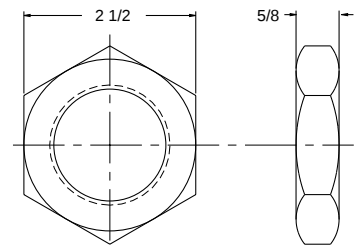
Spring force
Fully extended—20#
Fully compressed—75#
Spring material—Stainless steel

Optional Male Rod Thread



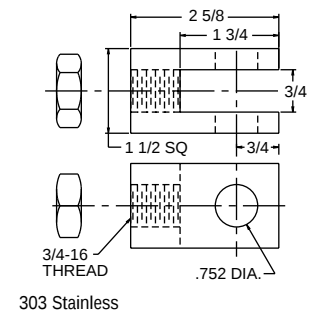
1 3/4 -12SS Nut Nose Mounting Nut

Not included with cylinder Order Separately



SMS-750

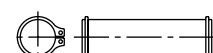
Rod Clevis and Nut



SS-701

Clevis Pin Assembly

Used on SMS-750 303 Stainless



ALL AURORA PRODUCTS AVAILABLE FOR 24 HOUR DELIVERY



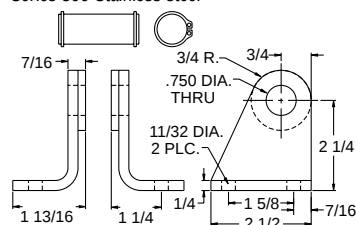
SMS Options

- Shock Pads
- Viton Seals
- Non-lube Service
- Magnetic Piston
- U Cup Piston
- 90° Rear Clevis

SSC-300

Clevis Brk't

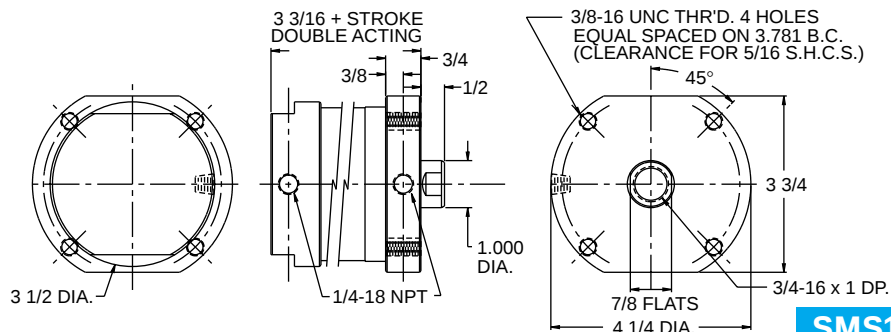
Used on SMS2, 16
Series 300 Stainless steel



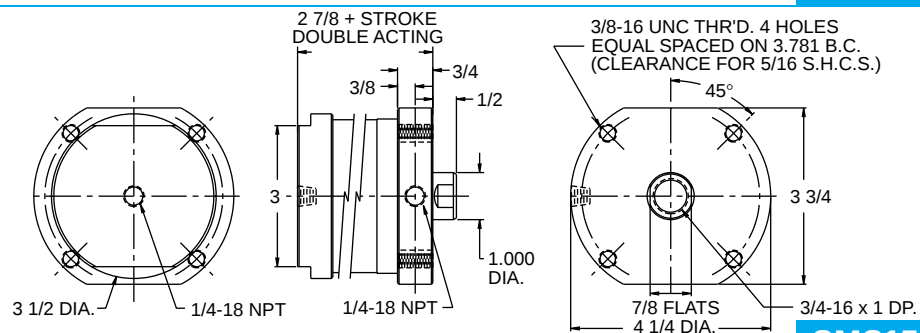
**STAINLESS
CYLINDERS**



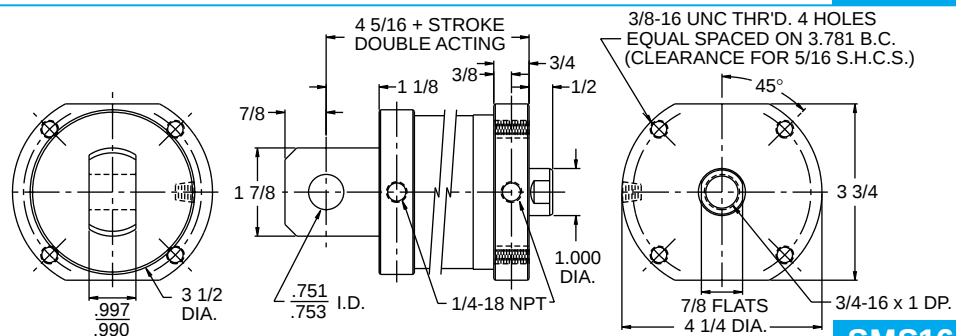
**STAINLESS
ACCESSORIES**



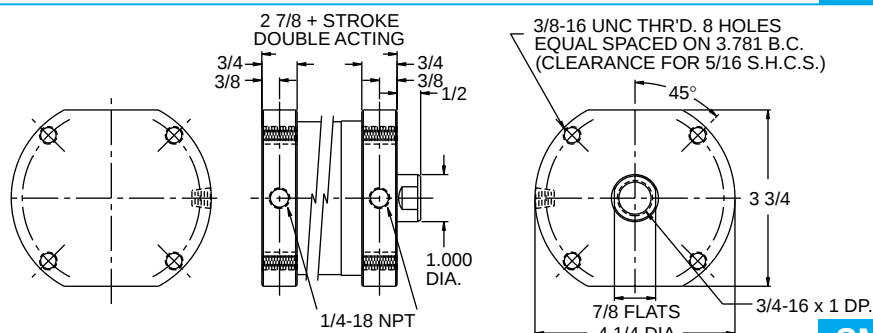
SMS14



SMS15



SMS16



SMS17

Help in Making the Best Choice

Technical Assistance @ 630 851 4515

Series SMS Solid Stainless

ORDERING PROCEDURE - SMS Stainless

Select code numbers/letters (**bold type**) from each of the six boxes below - then select options desired from the table below. List codes in the same sequence as shown.

Bore	Code
1 1/8"	11
1 1/2"	15
2"	20
3"	30

Type	Code
Double acting	C
Single acting spring return (Adds to cyl. length) Spring extend not available	A

Service	Code
Pneumatic	E
Hydraulic	G

Mounting Style/Code	
SMS 1	SMS 9
SMS 2	SMS 10
SMS 3	SMS 11
SMS 5	SMS 14
SMS 6	SMS 15
SMS 7	SMS 16
SMS 8	SMS 17

Stroke
Code is stroke in total 1/8" increments Example: 1" stroke = 8 2 1/4" stroke = 18
Stocked in the following strokes: 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 1 3/4, 2 and 1/2" increments to 10"
3" bore - Limited to 8" max. stroke

Piston Rod Codes			Code
Bore	Thread		
1.125	3/8-24 x 3/4	Male	M6
1.125	5/16-18 x 5/8	Female	F3
1.125	5/16-24 x 5/8	Female	F4
1.500	1/2-20 x 1	Male	M8
1.500	3/8-16 x 5/8	Female	F5
1.500	3/8-24 x 5/8	Female	F6
2.000	5/8-18 x 1 1/8	Male	M12
2.000	1/2-20x 3/4	Female	F8
3.000	3/4-16 x 1 1/4	Male	M10
3.000	3/4-16 x 1	Female	F10
With non-rotate option enter code			11

Option	Description	Code
Extra rod extension 1/4 " increments	Specify code letter J followed by extra length required as a two place decimal Example: J.50 = 1/2" extra J1.25 = 1 1/4"extra	J
Shock pads Pneu. only to 180° F Double acting only	Add to either or both ends in 1 1/8", 1 1/2", 2" bore up to 2" stroke. Over 2" stroke and on all 3" bore must be added to both ends Each pad adds 1/4" length	Rod end only L Cap end only M Both ends N
Non-lube service	Available on standard O ring Piston. Not available or necessary on U cup piston	P
Viton seals	Standard seals are nitrile and urethane +10 to +200° F For service -10 to +400° F specify viton	R
U cup piston	Extends cycle life and reduces friction Piston is aluminum and includes teflon wear strip — adds 1/2" to length	S
Clevis 90° to std	SMS 2, 16, only	T
Magnetic piston	Adds 1/2" to length	W
Non rotate	Available only on double acting SMS 7, 8, 9, 14, 15, 17	with male stud X without male stud Y
1/4" oversize ports	2" bore only — SMS 1, 2, 3, 6, 7, 8, 9, only Not available with option x,y	Z

Part No. Example:

1.500 bore

15

Mounting style SMS9

SMS9

Double acting

C

1.500 stroke

12

Pneumatic

E

1/2-20 x 1 male thread

M8

Viton seals

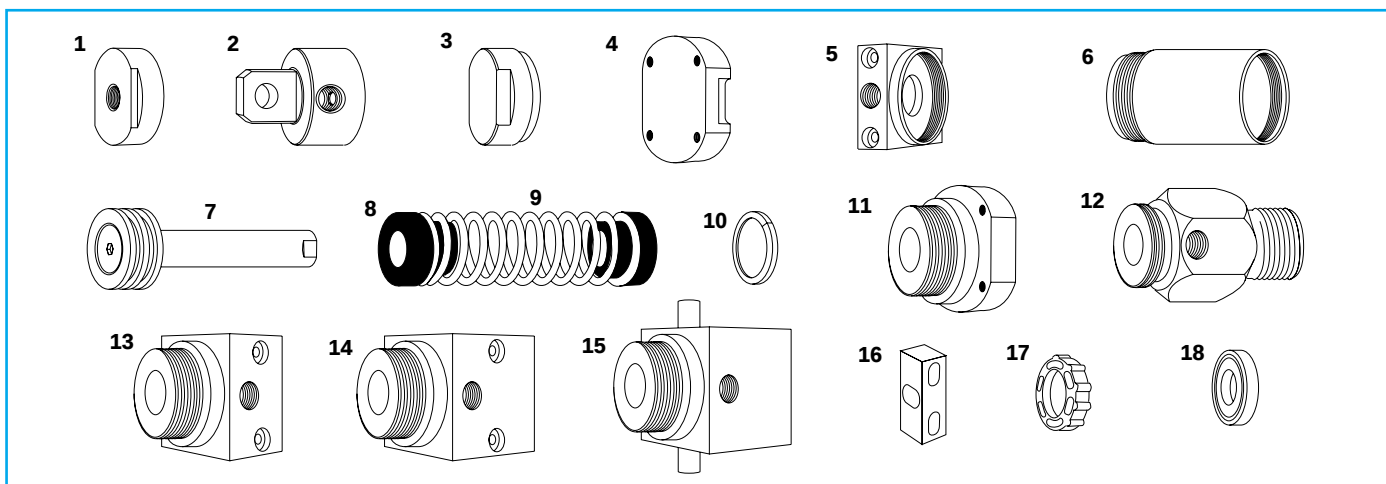
R

Magnetic piston

W

SMS Service Parts

When ordering any repair part please provide the part number and description shown below along with the serial number and part number of the cylinder being serviced.



Key	Description	1 1/8 Bore	1 1/2 Bore	2 Bore	3 Bore
Seal kits for cylinders with O ring piston					
	Pneumatic, Nitrile Add suffix NL for Non-Lube	SMS 3411	SMS 3415	SMS 3420	SMS 3430
	Pneumatic, Viton Add suffix NL for Non-Lube	SMS 3411V	SMS 3415V	SMS 3420V	SMS 3430V
	Hydraulic, Nitrile	SMS 3511	SMS 3515	SMS 3520	SMS 3530
	Hydraulic, Viton	SMS 3511V	SMS 3515V	SMS 3520V	SMS 3530V
Seal kits for cylinders with U cup piston – includes Teflon wear strip					
	Pneumatic, Nitrile	SMS 5411	SMS 5415	SMS 5420	SMS 5430
	Pneumatic, Viton	SMS 5411V	SMS 5415V	SMS 5420V	SMS 5430V
	Hydraulic, Nitrile	SMS 5511	SMS 5515	SMS 5520	SMS 5530
	Hydraulic, Viton	SMS 5511V	SMS 5515V	SMS 5520V	SMS 5530V
1	Rear port cap Add suffix 250 for 2" bore 1/4 NPT	SMS 1011	SMS 1015	SMS 1020	SMS 1030
2	Rear pivot cap Add suffix 250 for 2" bore 1/4 NPT	SMS 1111	SMS 1115	SMS 1120	SMS 1130
2	90° Rear pivot cap Add suffix 250 for 2" bore 1/4 NPT	SMS 111190	SMS 111590	SMS 112090	SMS 113090
3	Side port cap Add suffix 250 for 2" bore 1/4 NPT	SMS 4811	SMS 4815	SMS 4820	SMS 4830
4	Rear flange cap	SMS 1311	SMS 1315	SMS 1320	SMS 1330
5	Square cap Add suffix 250 for 2" bore 1/4 NPT	SMS 4611	SMS 4615	SMS 4620	
6	Tube	part No. is T followed by the complete cylinder part number			
7	Piston rod assembly	part No. is PR followed by the complete cylinder part number			
8	Spring guide Pair	SMS 1211	SMS 1215	SMS 1220	SMS 1230
9	Spring	SS 2111	SS 2115	SS 2120	SS 2120
10	Magnet SMS5911 and SS3215 supplied in pairs	SMS 5911	SS 3215	SS 3220	SS 3230
11	Flange head Add suffix NR for non-rotate	SMS 1411	SMS 1415	SMS 1420	SMS 1430
12	Nose Mount Head Add suffix 250 for 2" bore, 1/4 NPT	SMS 0111	SMS 0115	SMS 0120	SMS 0130
13	Short square Head Add suffix 250 for 2" bore, 1/4 NPT	SMS 4411	SMS 4415	SMS 4420	
14	Long square Head Add suffix 250 for 2" bore, 1/4 NPT	SMS 4511	SMS 4515	SMS 4520	
14	Square non rotate head	SMS 4511NR	SMS 4515NR	SMS 4520NR	
15	Trunnion head	SMS 4511T	SMS 4515T	SMS 4520T	
16	Non-rotate guide bushing Pair	SMS 5111	SMS 5111	SMS 5111	
17	Cap end shock pad		Consult factory		3MSP
18	Head end shock pad	11CSP	15CSP	2CSP	3MSP