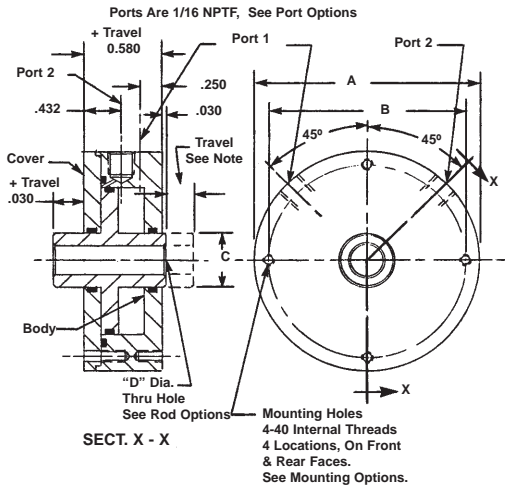


# SHORT STROKE PNEUMATIC CYLINDERS - LO-PROFILE® SERIES A-SP-FM

Double Acting-Double Ended Pistons With Thru Holes-Side Ported-Either Face Mounted



**SPECIFICATIONS:**  
SERVICE, PLANT AIR  
M.O.P., 300 PSI  
TEMPERATURE, -40°F to +250°F

**MATERIALS:**  
BODY & COVER, ALUMINUM ALLOY  
PISTON, ALUMINUM ALLOY  
SEALS, BUNA "N" O RINGS  
FASTENERS, ALLOY STEEL

**NOTES:**

Dimensions are nominal in U.S. CUSTOMARY specifications.

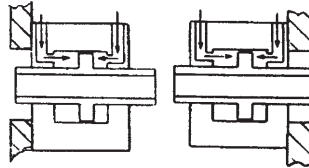
METRIC CYLINDERS are dimensionally equivalent with clearance holes, counterbores, threads & fasteners to metric specifications. See inside back cover for fastener conversion table. There is no added cost for METRIC CYLINDERS.

An air/oil mist unit is recommended for internal lubrication. Where such units are not practical, SERVICE KITS including seals & factory approved lube are available.

Cylinders may also be used in low pressure hydraulic and vacuum service.

Wrench flats may not be necessary if cylinders can be pressurized in the retracted or extended position while tightening the rod joint.

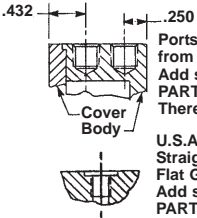
Inquiries regarding modifications to BASIC CYLINDERS are always welcome.



**Pictorial**

BASIC PART No.	O.D. A	BOLT CIRCLE B	ROD DIA. C	HOLE DIA. D	PISTON O.D. (IN.)	NET PISTON AREA (SQ. IN)
1019(-)	1.000	0.688	0.250	0.129	0.450	0.110
10195(-)	1.250	0.938	0.313	0.206	0.575	0.183
1020(-)	1.500	1.188	0.375	0.206	0.700	0.275
10205(-)	1.750	1.438	0.500	0.281	0.950	0.513
1021(-)	2.000	1.688	0.625	0.344	1.200	0.824
10215(-)	2.250	1.938	0.625	0.344	1.450	1.344
1022(-)	2.500	2.188	0.625	0.344	1.700	1.963

**PORT OPTIONS**



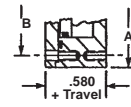
Ports may be IN-LINE for travels from -.5. Add suffix **-IL** to the BASIC PART NUMBER. There is no added cost.

U.S.A. 10-32 Threaded Ports. Straight Thread. Flat Gasket Sealing. Add suffix **-1032** to the BASIC PART NUMBER. There is no added cost.

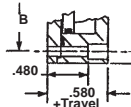
**ROD MODIFICATIONS**

Cylinders with THRU HOLE pistons are normally supplied without wrench flats. Please consult the Factory if wrench flats or other modification to the piston is required.

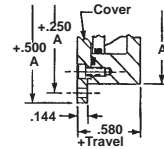
**OPTIONAL MOUNTING STYLES**



No. 4-40 internally threaded holes at 4 locations in both front and rear faces. This mounting style is supplied unless otherwise specified. NOTE: On 1" O.D. & 1-1/4" O.D. models, remove cover retaining screws & use these threaded holes when mounting to the cover side.



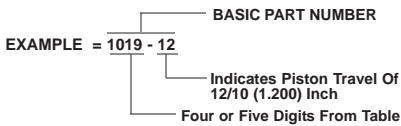
Thru clearance holes with C-bores in the body for No. 4-40 I.S.H.C.S. at 4 locations. Add suffix **-CBB** to the BASIC PART NO. There is no added cost. NOTE: On 1" O.D. & 1-1/4" O.D. models, the cover is a loose part and is retained with the mounting screws.



This cover is larger with flange mounting to either side. Clearance holes are for No. 4-40 screws at four locations. Add suffix **-FL** to the BASIC PART NUMBER. Add 10% to the BASE PRICE.

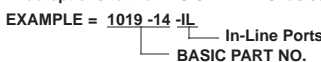
**HOW TO ORDER BASIC CYLINDERS**

A BASIC PART NUMBER consists of a four or five digit number followed by a dash number to indicate piston travel in increments of 1/10 (0.100) Inch.



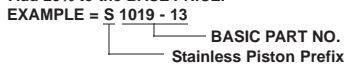
**HOW TO ORDER CYLINDERS WITH OPTIONS**

Add options to the BASIC PART NO. as suffixes in any order.



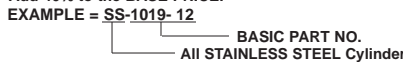
**HOW TO ORDER CYLINDERS WITH STAINLESS STEEL PISTONS**

Add the letter **-S** as a prefix to the BASIC PART NO. Add 25% to the BASE PRICE.



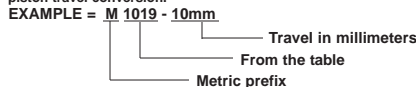
**HOW TO ORDER ALL STAINLESS STEEL CYLINDERS**

Add the letters **-SS** as a prefix to a BASIC PART NO. Add 40% to the BASE PRICE.



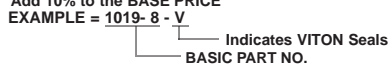
**HOW TO ORDER METRIC CYLINDERS**

A BASIC PART NO. FOR METRIC CYLINDERS consists of a four or five digit number from the table with a prefix "M" and a suffix to indicate travel in millimeters. See inside rear cover for piston travel conversion.



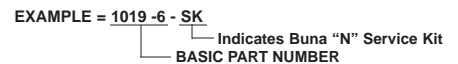
**HOW TO ORDER CYLINDERS WITH VITON SEALS**

Add suffix **-V** to the BASIC PART NO. Add 10% to the BASE PRICE.



**HOW TO ORDER BUNA "N" SERVICE KITS**

Specify the BASIC PART NO. followed by suffix **-SK**.



**HOW TO ORDER VITON SERVICE KITS**

Specify the BASIC PART NO. followed by the suffix **-VSK**

