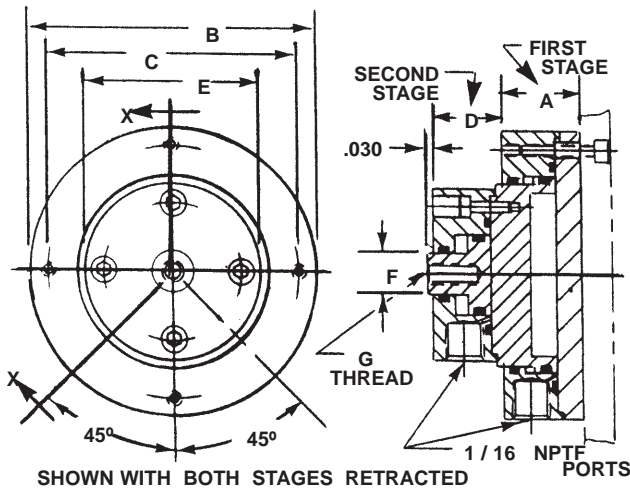
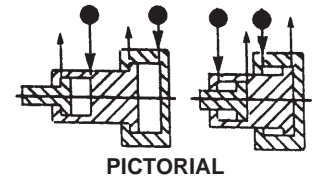


TWO STAGE PNEUMATIC CYLINDERS, LOPROfile® SERIES A-DA-SE-TS-SP-EM
 Double Acting-Single Ended Pistons-Two Stage-Side Ported-End Mounted

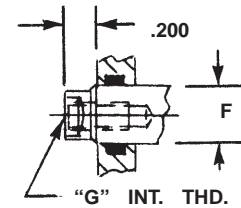


SPECIFICATIONS
 SERVICE: PLANT AIR
 M.O.P. 150 P.S.I.
MATERIALS:
 BODIES, ALUMINUM ALLOY
 COVERS, ALUMINUM ALLOY
 PISTONS, STAINLESS STEEL
 FASTENERS, ALLOY STEEL
 SEALS, "O" RINGS

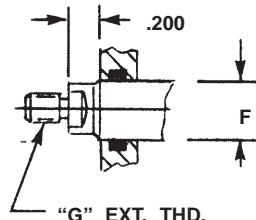


PICTORIAL

OPTIONAL ROD ENDS - SECOND STAGE



INTERNAL THREAD WITH WRENCH FLATS.
 ADD SUFFIX -ITW TO A BASIC PART NO.
 ADD 5% TO THE BASE PRICE.



EXTERNAL THREAD WITH WRENCH FLATS.
 ADD SUFFIX -ETW TO A BASIC PART NO.
 ADD 8% TO THE BASE PRICE.

FIRST STAGE DATA SECOND STAGE DATA

BASIC PART NUMBER	STROKE	EXT. RETR. AREA AREA			EXT. RETR. AREA AREA					
		A	B	C (sq.in.)	STROKE D	E	F	G (sq.in.)	(sq.in.)	
S1909-1-1	0.100	0.682			0.100	0.588				
S1909-1-5	0.100	0.682			0.500	0.988				
S1909-1-10	0.100	0.692			1.000	1.488				
S1909-5-1	0.500	1.082			0.100	0.588				
S1909-5-5	0.500	1.082	2.000	1.688	1.130	0.146	0.500	0.988	1.000	0.250 #4-40 0.159 0.110
S1909-5-10	0.500	1.082			1.000	1.488				
S1909-10-1	1.000	1.582			0.100	0.588				
S1909-10-5	1.000	1.582			0.500	0.988				
S1909-10-10	1.000	1.582			1.000	1.488				
S1910-1-1	0.100	0.682			0.100	0.682				
S1910-1-5	0.100	0.682			0.100	0.682				
S1910-1-10	0.100	0.582			0.100	0.582				
S1910-5-1	0.500	1.050			0.500	1.050				
S1910-5-5	0.500	1.082	2.500	2.188	2.270	0.230	0.500	1.082	1.500	0.375 #10-32 0.385 0.275
S1910-5-10	0.500	1.082			0.500	1.082				
S1910-10-1	1.000	1.582			1.000	1.582				
S1910-10-5	1.000	1.582			1.000	1.582				
S1910-10-10	1.000	1.582			1.000	1.582				

NOTE: FORCE (LB) = AREA (SQ. IN.) TIMES PRESSURE (PSI)

NOTE: "C" DIAMETER IS THE MOUNTING BOLT CIRCLE CONSISTING OF FOUR #4-40 INTERNALLY THREADED HOLES IN BOTH FRONT AND REAR SURFACES OF THE FIRST STAGE BODY FOR MOUNTING TO EITHER FACE. PLEASE SEE OPTIONAL MOUNTING.

HOW TO ORDER CYLINDERS WITH OPTIONS

ADD OPTIONS TO THE BASIC PART NUMBER AS SUFFIXES IN ANY ORDER.

EXAMPLE = S1909-1-1 - ETW
 ETW EXTERNAL ROD THD. OPTION
 S1909-1-1 BASIC PART NUMBER

HOW TO ORDER METRIC VERSIONS

SEE GENERAL NOTE FOR DESCRIPTION OF A METRIC VERSION. A BASIC PART NO. FOR A METRIC VERSION CONSISTS OF ADDING THE PREFIX "M" TO A PART NO. FROM THE TABLE AND A SUFFIX DEFINING BOTH STROKES IN MILLIMETERS. THE FIRST SUFFIX TO DEFINE THE STROKE FOR THE FIRST STAGE.

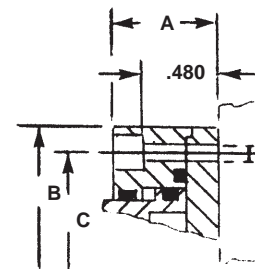
EXAMPLE = M S1909 - 2.5mm - 2.5mm
 M METRIC PREFIX
 S1909 PART NO. FROM THE TABLE
 2.5mm STROKES

HOW TO ORDER BUNA "N" SERVICE KITS

SPECIFY THE BASIC PART NO. FOLLOWED BY SUFFIX -SK

EXAMPLE = S1909-1-1-SK
 SK INDICATES SEAL KIT ONLY
 S1909-1-1 BASIC PART NUMBER

OPTIONAL MOUNTING STYLE - FIRST STAGE



CLEARANCE HOLES WITH C'BORES FOR #4-40 INT. SOCK.HD.CAP SCREWS AT 4 PLCS. ADD SUFFIX -CBB TO A BASIC PART NUMBER. THERE IS NO ADDED COST.

GENERAL NOTES

DIMENSIONS ARE NOMINAL IN U.S. CUSTOMARY UNITS. METRIC VERSIONS ARE DIMENSIONALLY EQUIVALENT EXCEPT FOR CONVERSION IN MOUNTING DETAILS WHERE FASTENERS, THREADS, CLEARANCE HOLES AND COUNTER-BORES ARE TO METRIC STANDARDS. PLEASE SEE INSIDE REAR COVER FOR A TABLE OF U.S. CUSTOMARY TO METRIC FASTENER CONVERSION. THERE IS NO ADDED COST FOR THIS METRIC VERSION. ALL INQUIRIES REGARDING OTHER MODIFICATIONS TO STANDARD CYLINDERS ARE WELCOME.

