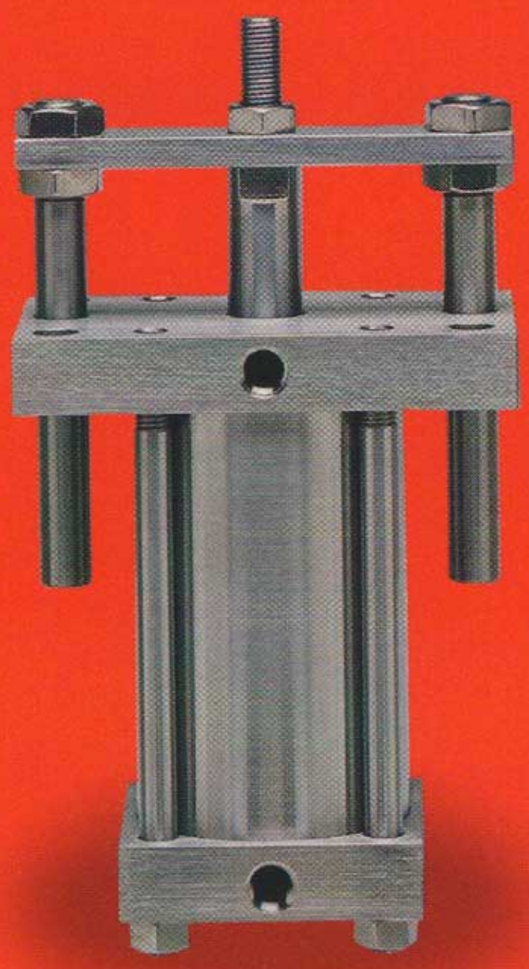
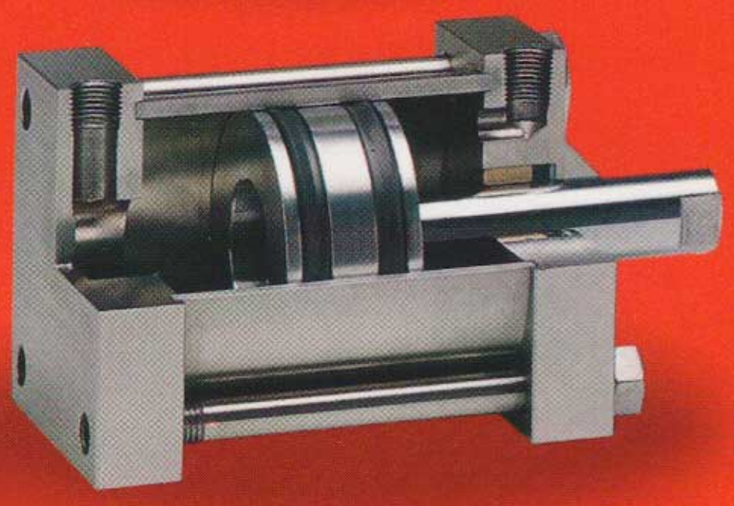
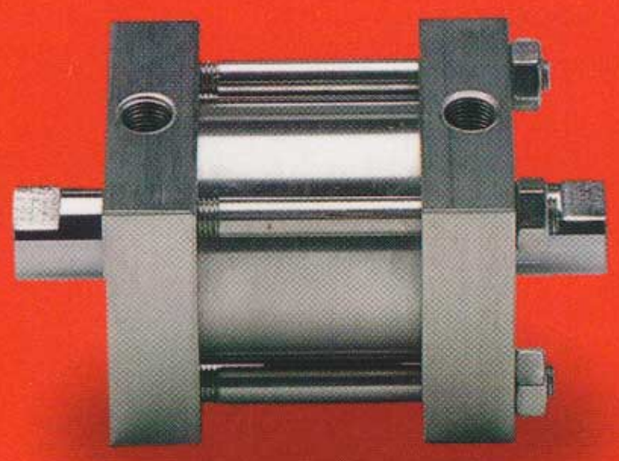
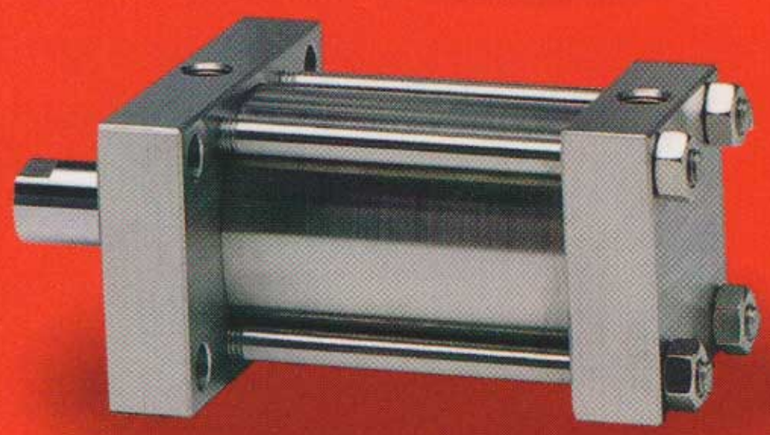
Rockford Air Devices Inc.

STAINLESS STEEL CYLINDERS





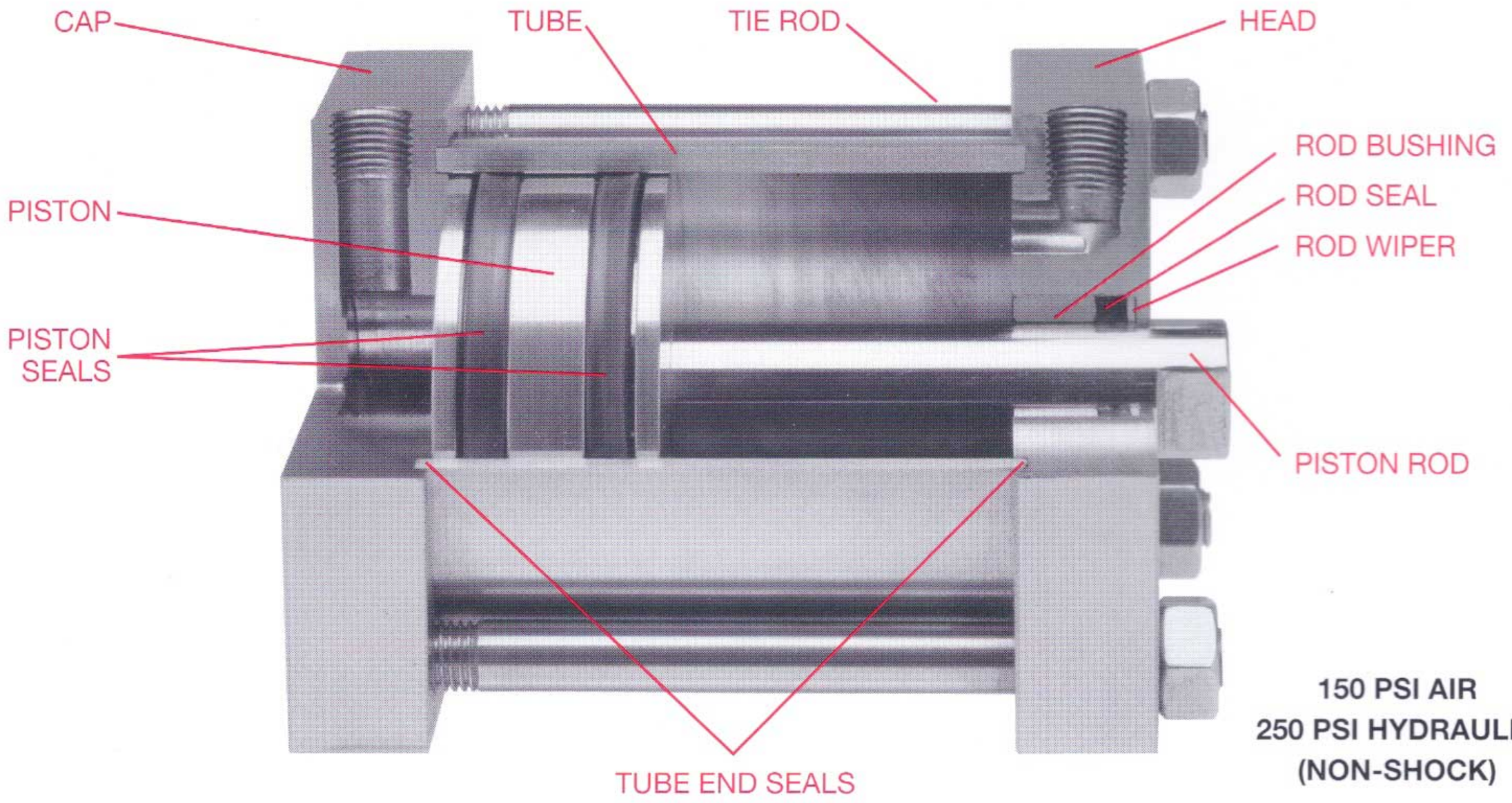




Stock Orders Ready To Ship Within 24 Hours

SL-SERIES CYLINDER

WITH LIP TYPE PISTON SEALS



150 PSI AIR
250 PSI HYDRAULIC
(NON-SHOCK)

CONSTRUCTION FEATURES OF "SL" SERIES CYLINDERS

1. Solid 303 stainless steel is used for heads and caps on 1-1/2" through 5" bore.
2. 304 stainless steel tube.
3. Aluminum alloy piston for light weight and excellent friction characteristics.
4. Bronze bushing that is compatible with hard chrome plated 303 stainless steel piston rod. Composite bearing also available.
5. Hard chrome plated 303 stainless steel piston rod.
6. Tie rods of 303 stainless steel to maintain compression on tube end seals.
7. Lip type piston seals are of Buna "N". They are pressure sensitive and wear compensating to give low friction and long life. These seals should be used in high cycle applications and long stroke applications.
8. Rod seal is of quad ring design. It requires lower squeeze than an o-ring for positive sealing. This four lobed seal provides low friction in dynamic applications and longer life.
9. Tube end seals of fiber and nitrile base elastomer as a binder.
10. All sliding surfaces are lubricated with a teflon base, low friction long-lasting grease.
11. Teflon back-up washer for rod seal helps wipe piston rod clean on return stroke.

ORDERING INFORMATION FOR SL-SERIES

1. Specify quantity.
2. Specify model.
3. Specify bore and stroke.
4. Specify accessories (if needed).
5. Specify operating pressure and medium.

EXAMPLE:

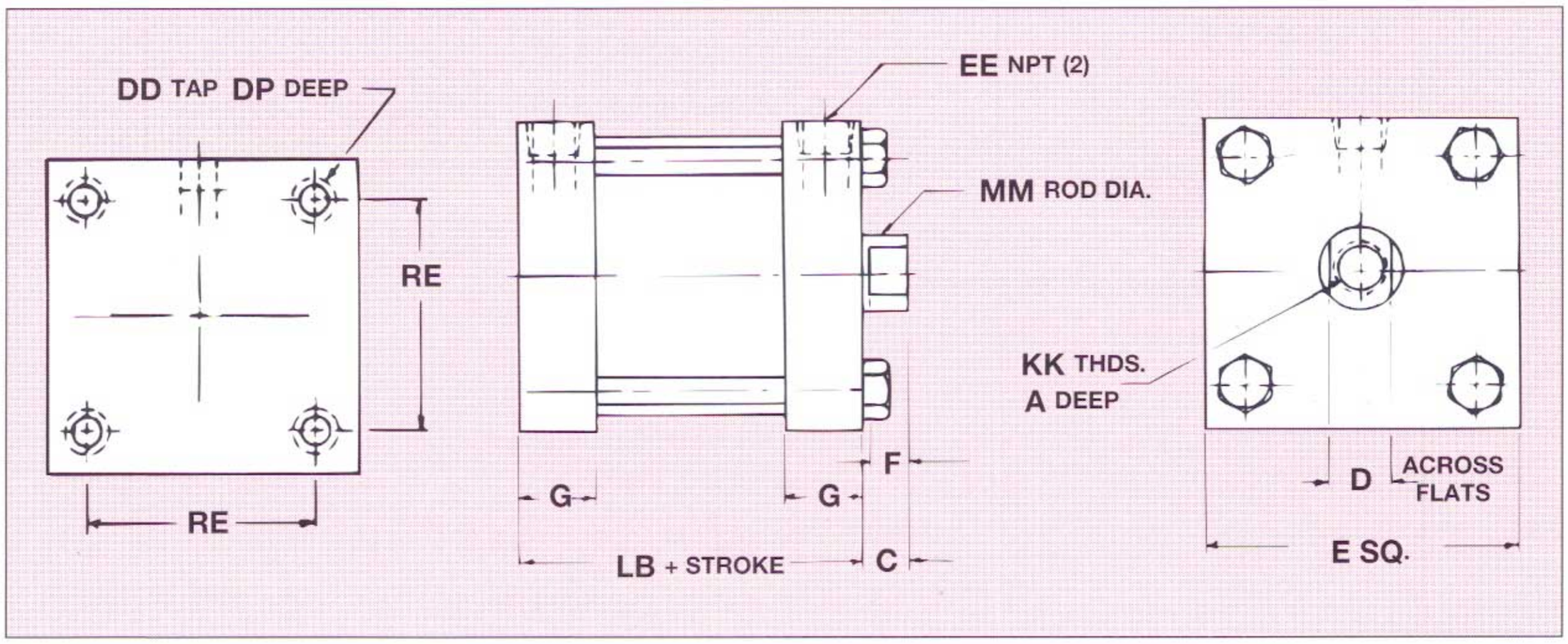
(3) Model SLF 2" Bore x 1/2" Stroke
100 PSI AIR

AVAILABLE OPTIONS:

Altered rod extension
Viton seals
Magnetic pistons and reed switches
Port location

Stock stroke lengths are 1/2, 1, 1-1/2, 2, 2-1/2, 3, 3-1/2, 4, 4-1/2, 5, 5-1/2, 6 on 1-1/2" through 5" bores.
Other stroke lengths are considered Non-Stock and subject to price additions.

SL-SERIES CYLINDER

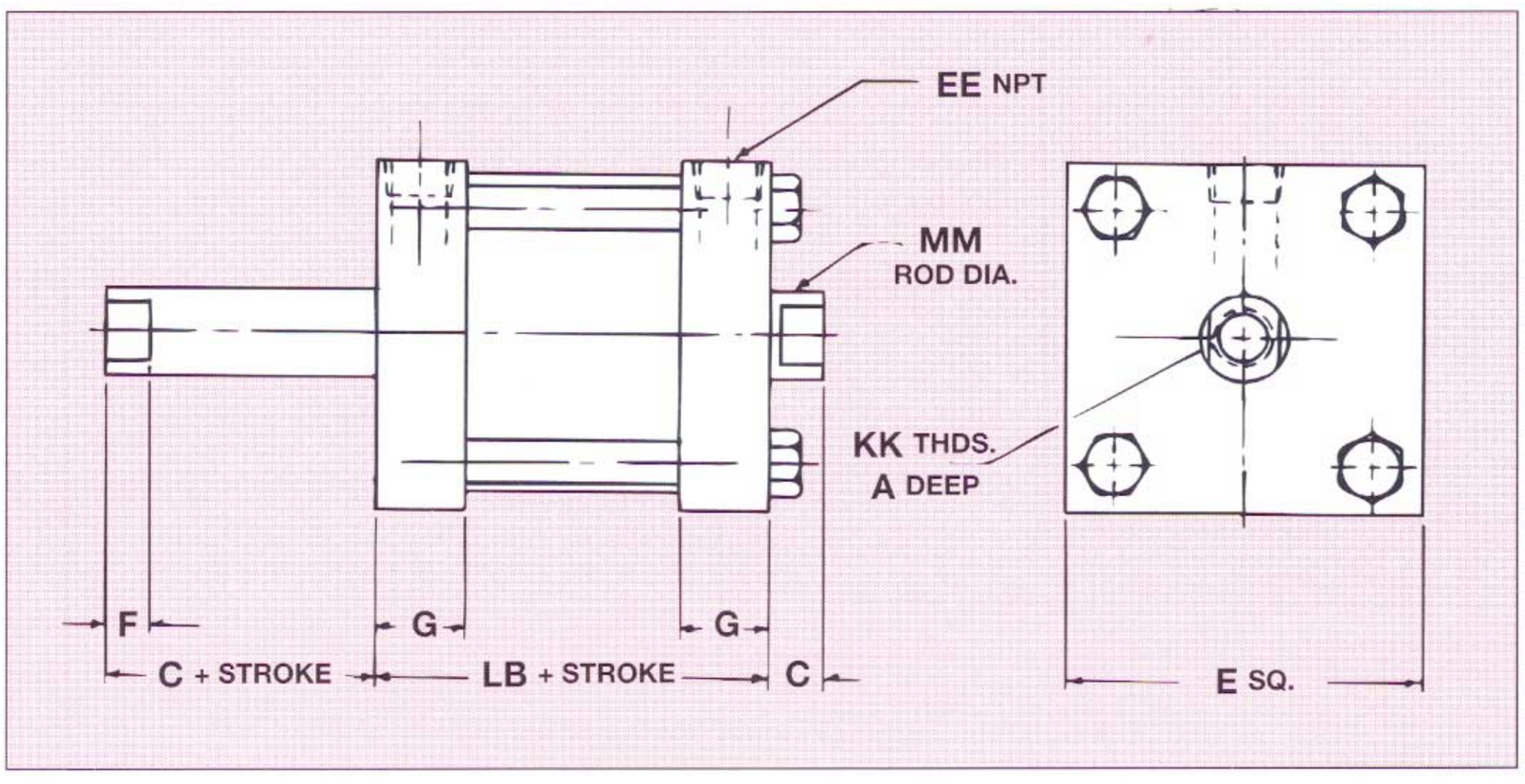


MODEL SL

Basic cylinder has nuts at HEAD END.

Nuts at CAP END are also available.

SINGLE ROD END CYLINDER



MODEL SLD

Double Rod End Cylinder

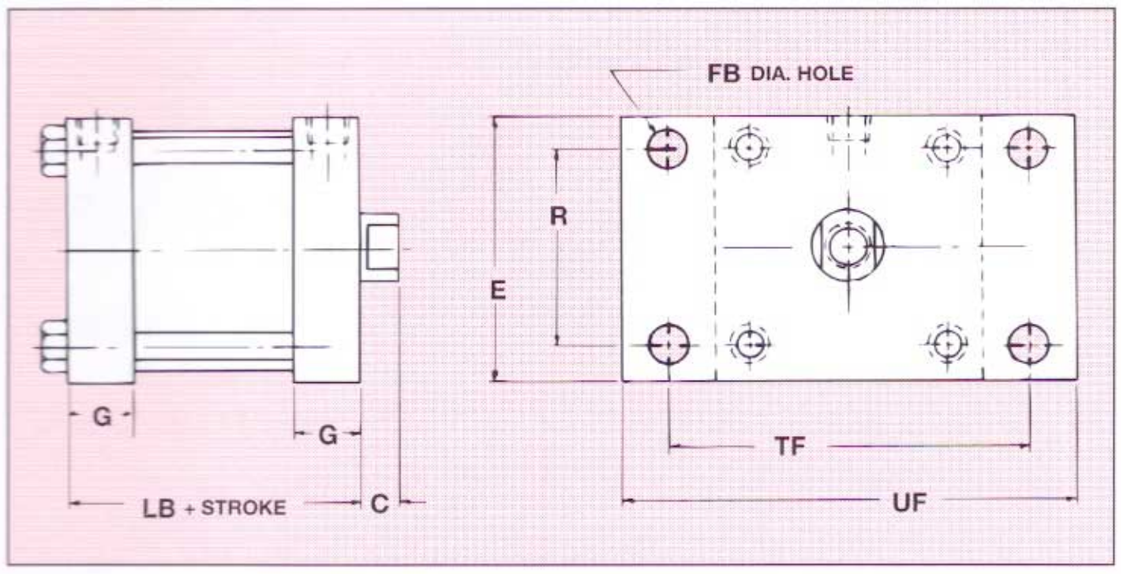
DOUBLE ROD END CYLINDER

Double rod end cylinders are designated by adding letter "D" (i.e. SLFD, SLTD, etc.)
Available in all models except models SLC and SLE.

BASIC AND DOUBLE ROD END CYLINDER DIMENSIONS

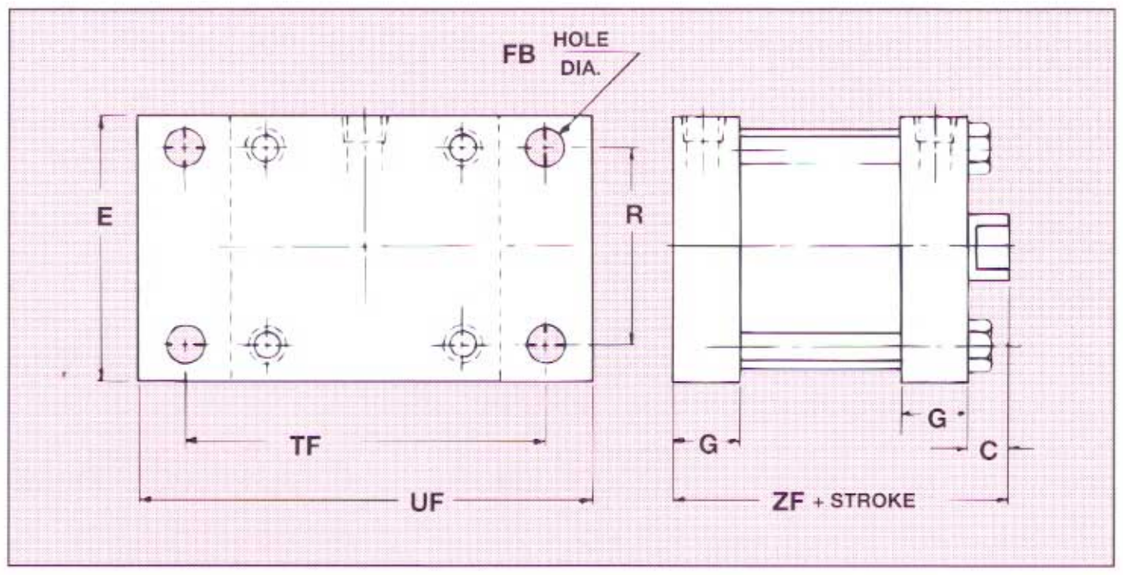
BORE	A	C	D	E	F	G	DD	DP	EE	KK	LB	MM	RE
1-1/2	5/8	3/8	1/2	2	5/16	5/8	1/4-28	5/16	1/8	3/8-24	2-1/4	5/8	1.43
2	5/8	3/8	1/2	2-1/2	5/16	5/8	5/16-24	5/16	1/8	3/8-24	2-1/4	5/8	1.84
2-1/2	5/8	3/8	1/2	3	5/16	5/8	5/16-24	5/16	1/8	3/8-24	2-1/4	5/8	2.19
3-1/4	7/8	1/2	13/16	3-3/4	7/16	1	7/16-20	1/2	1/4	5/8-18	3-1/4	1	2.94
4	7/8	1/2	13/16	4-1/2	7/16	1	7/16-20	1/2	1/4	5/8-18	3-1/4	1	3.56
5	7/8	1/2	13/16	5-1/2	7/16	1	1/2-20	1/2	3/8	5/8-18	3-1/4	1	4.10

FLANGE MOUNTS



MODEL SLF

FRONT FLANGE – Ideal for Pull Applications



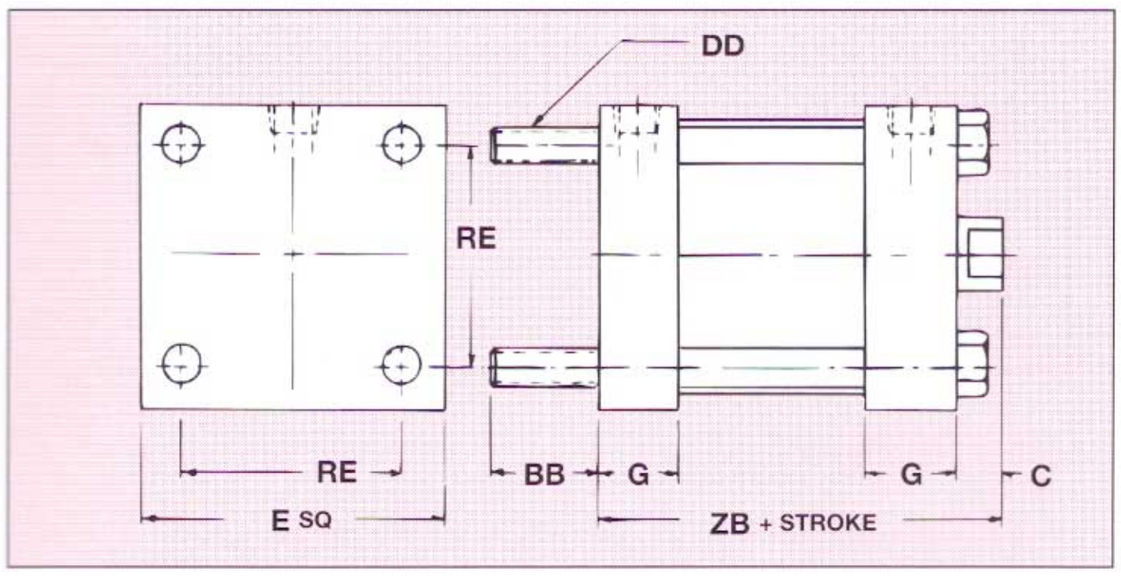
MODEL SLR

REAR FLANGE – Ideal for Push Applications

DIMENSIONS

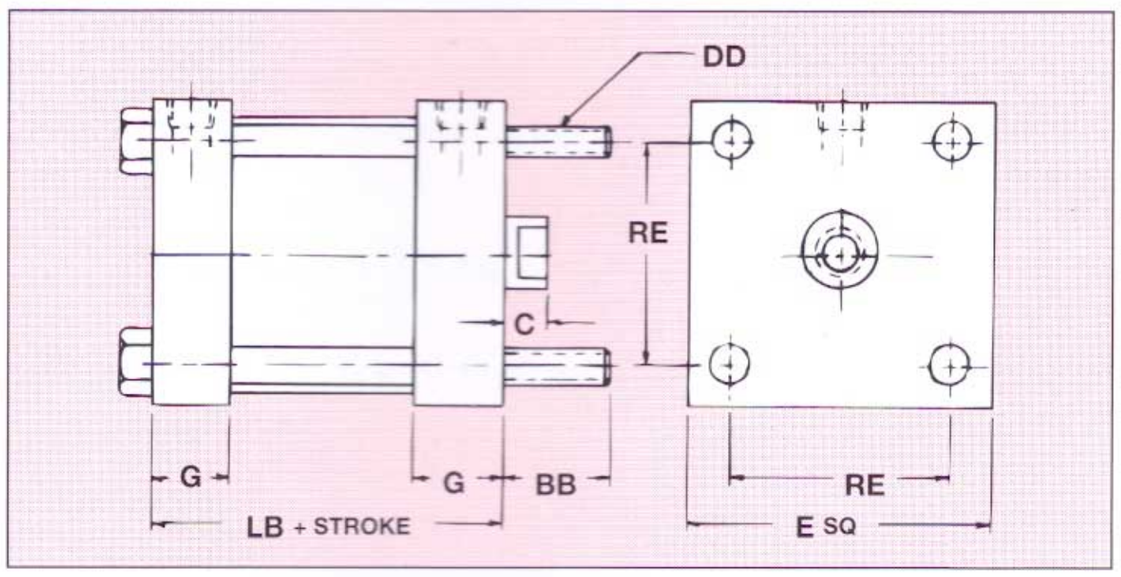
BORE	ROD DIA.	C	E	G	R	FB	LB	TF	UF	ZF
1-1/2	5/8	3/8	2	5/8	1.43	5/16	2-1/4	2-3/4	3-3/8	2-5/8
2	5/8	3/8	2-1/2	5/8	1.84	3/8	2-1/4	3-3/8	4-1/8	2-5/8
2-1/2	5/8	3/8	3	5/8	2.19	3/8	2-1/4	3-7/8	4-5/8	2-5/8
3-1/4	1	1/2	3-3/4	1	2.76	7/16	3-1/4	4-11/16	5-1/2	3-3/4
4	1	1/2	4-1/2	1	3.32	7/16	3-1/4	5-7/16	6-1/4	3-3/4
5	1	1/2	5-1/2	1	4.10	9/16	3-1/4	6-5/8	7-5/8	3-3/4

EXTENDED TIE ROD



MODEL SLEC

EXTENDED TIE ROD CAP END



MODEL SLEH

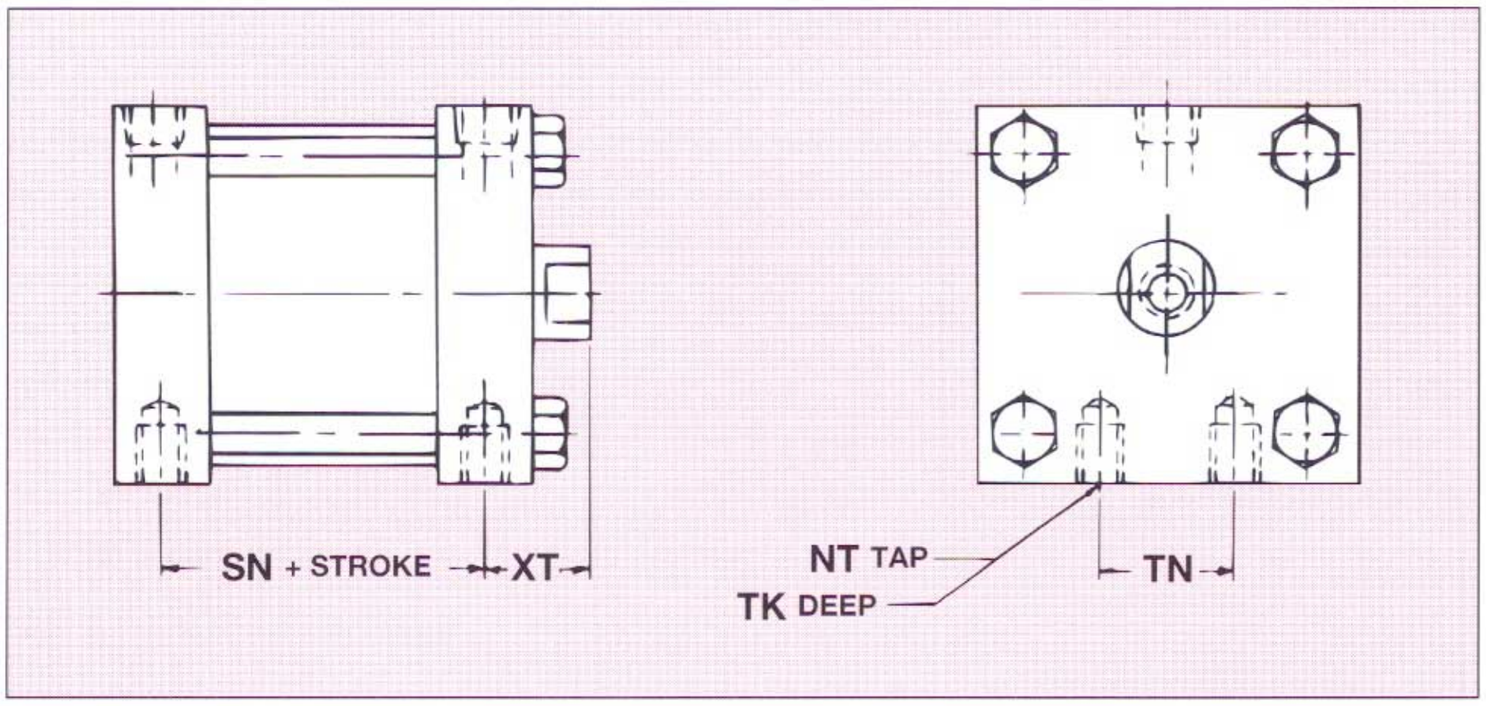
EXTENDED TIE ROD HEAD END

DIMENSIONS

BORE	ROD DIA.	C	E	G	BB	DD	LB	RE	ZB
1-1/2	5/8	3/8	2	5/8	7/8	1/4-28	2-1/4	1.43	2-5/8
2	5/8	3/8	2-1/2	5/8	1	5/16-24	2-1/4	1.84	2-5/8
2-1/2	5/8	3/8	3	5/8	1	5/16-24	2-1/4	2.19	2-5/8
3-1/4	1	1/2	3-3/4	1	1-1/4	*7/16-20	3-1/4	*2.94	3-3/4
4	1	1/2	4-1/2	1	1-1/4	*7/16-20	3-1/4	*3.56	3-3/4
5	1	1/2	5-1/2	1	1-1/2	1/2-20	3-1/4	4.10	3-3/4

* Larger than other NFPA style cylinders.

BOTTOM TAP MOUNT



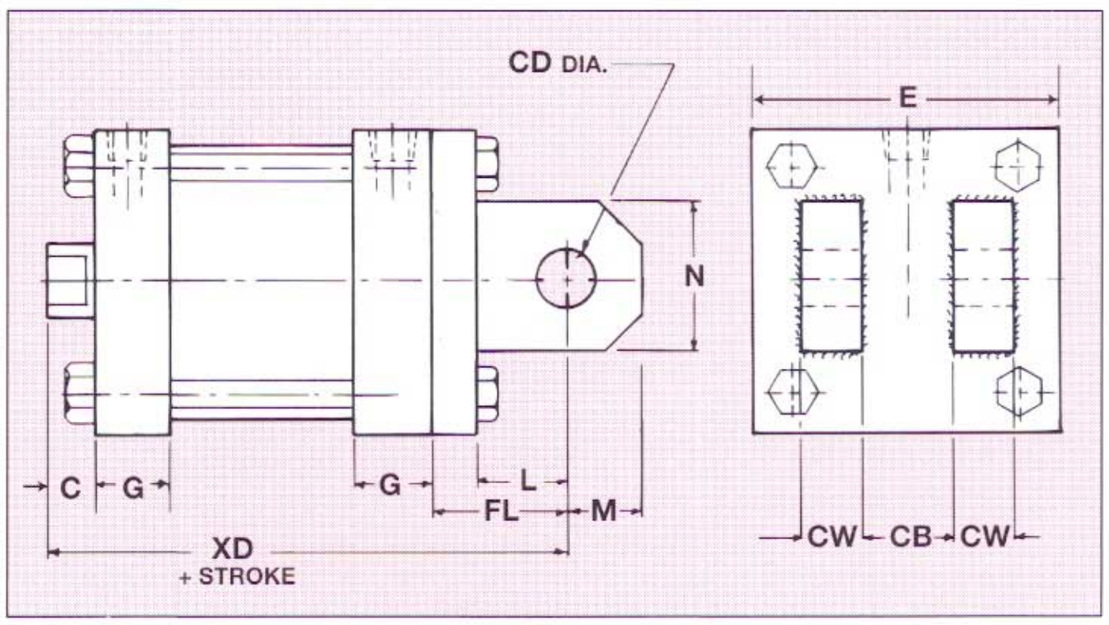
MODEL SLT

BOTTOM TAP for mounting from under cylinder.

DIMENSIONS

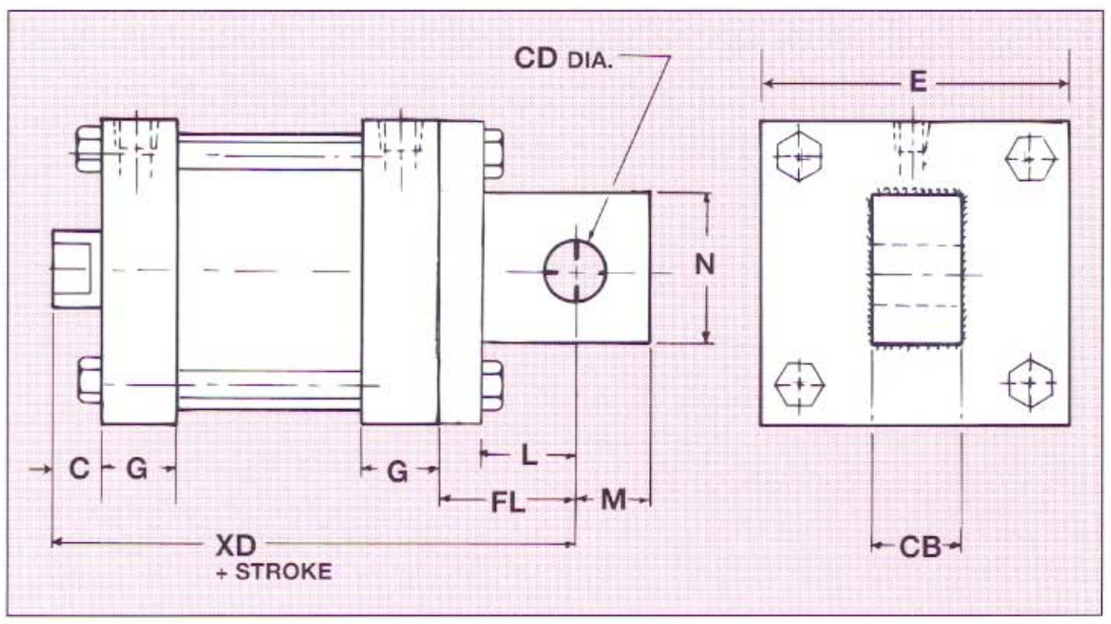
BORE	ROD DIA.	NT	SN	TK	TN	XT
1-1/2	5/8	1/4-20	1-5/8	3/8	5/8	11/16
2	5/8	1/4-20	1-5/8	3/8	7/8	11/16
2-1/2	5/8	5/16-18	1-9/16	1/2	1-1/4	23/32
3-1/4	1	3/8-16	2-1/4	5/8	1-1/2	1
4	1	3/8-16	2-1/4	5/8	2-1/16	1
5	1	1/2-13	2-1/4	3/4	2-11/16	1

CLEVIS MOUNT



MODEL SLC

EYE MOUNT



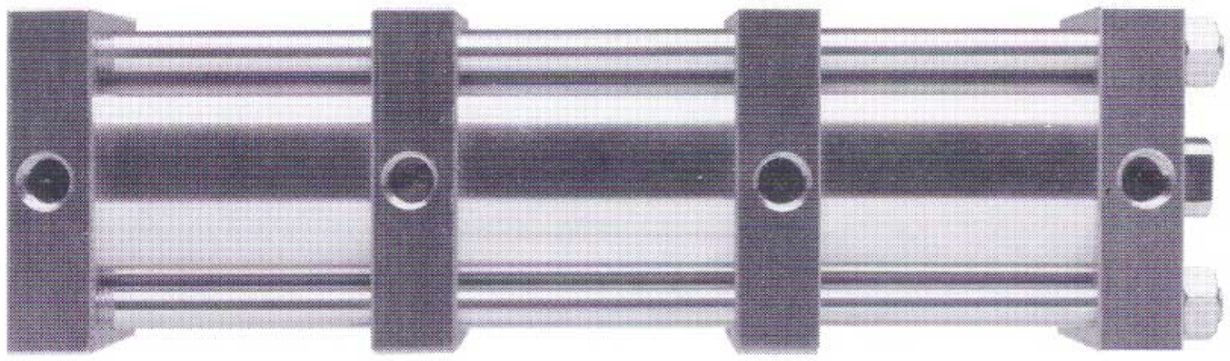
MODEL SLE

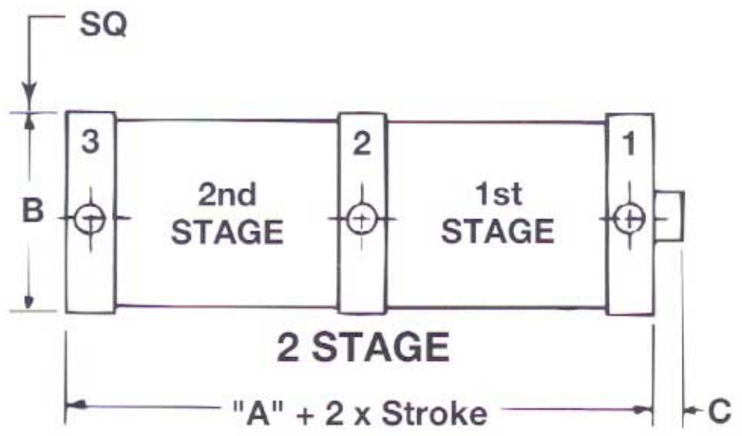
DIMENSIONS

BORE	ROD DIA.	C	E	G	L	M	N	CB	CD	CW	FL	XD
1-1/2	5/8	3/8	2	5/8	3/4	1/2	1	3/4	1/2	1/2	1-1/8	3-3/4
2	5/8	3/8	2-1/2	5/8	3/4	1/2	1	3/4	1/2	1/2	1-1/8	3-3/4
2-1/2	5/8	3/8	3	5/8	3/4	1/2	1	3/4	1/2	1/2	1-1/8	3-3/4
3-1/4	1	1/2	3-3/4	1	1-1/4	3/4	1-1/2	1	3/4	5/8	1-3/4	5-1/2
4	1	1/2	4-1/2	1	1-1/4	3/4	1-1/2	1	3/4	5/8	1-3/4	5-1/2
5	1	1/2	5-1/2	1	1-1/4	3/4	1-1/2	1	3/4	5/8	1-3/4	5-1/2

POWER MULTIPLIERS

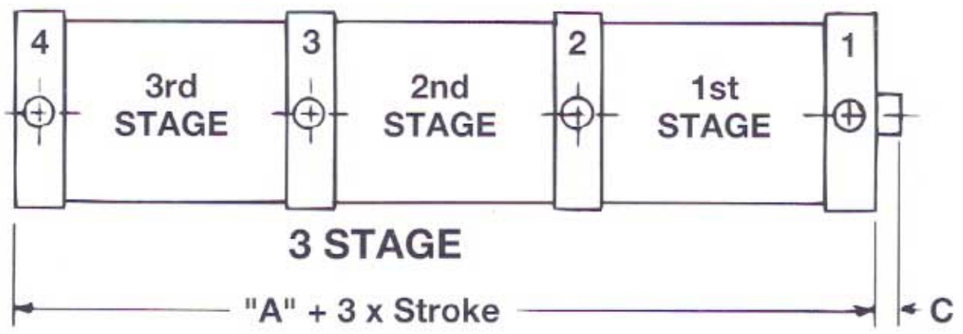
More force in a smaller mounting space

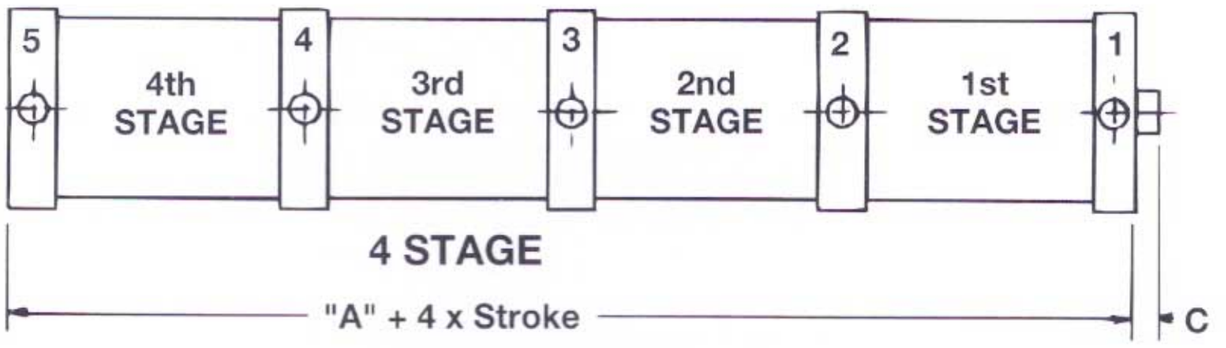




100 PSI MAX - AIR OR HYDRAULIC
Multiply line pressure by effective area to find total force.

BORE	STAGES			EFF. AREA	A	B	C
1 1/2	2			3.22	3 7/8	2	3/8
		3		4.68	5 1/2		
			4	6.15	7 1/8		
2	2			5.97	3 7/8	2 1/2	3/8
		3		8.81	5 1/2		
			4	11.64	7 1/8		
2 1/2	2			9.51	3 7/8	3	3/8
		3		14.11	5 1/2		
			4	18.71	7 1/8		
3 1/4	2			15.80	5 1/2	3 3/4	1/2
		3		23.31	7 3/4		
			4	30.82	10		
4	2			24.34	5 1/2	4 1/2	1/2
		3		36.12	7 3/4		
			4	47.90	10		
5	2			38.48	5 1/2	5 1/2	1/2
		3		57.33	7 3/4		
			4	76.18	10		





ORDERING INFORMATION

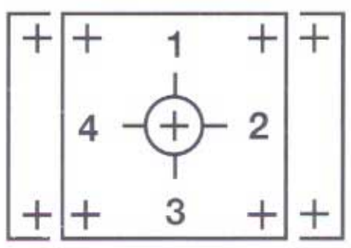
1. Number of stages required.
2. Specify series.
3. Mount required (see standard catalog).
4. State bore and stroke.
5. Specify push or pull.
6. Line pressure being used.

EXAMPLE

* Power multipliers will be assembled for push applications unless otherwise specified.

MODELS AVAILABLE:
(SERIES + MOUNT)

S L R	Rear flange
S L F	Front flange
S L C	Clevis
S L T	Bottom tapped
S L EC	Tie rods ext. cap end
S L EH	Tie rods ext. head end
S L E	Eye mount

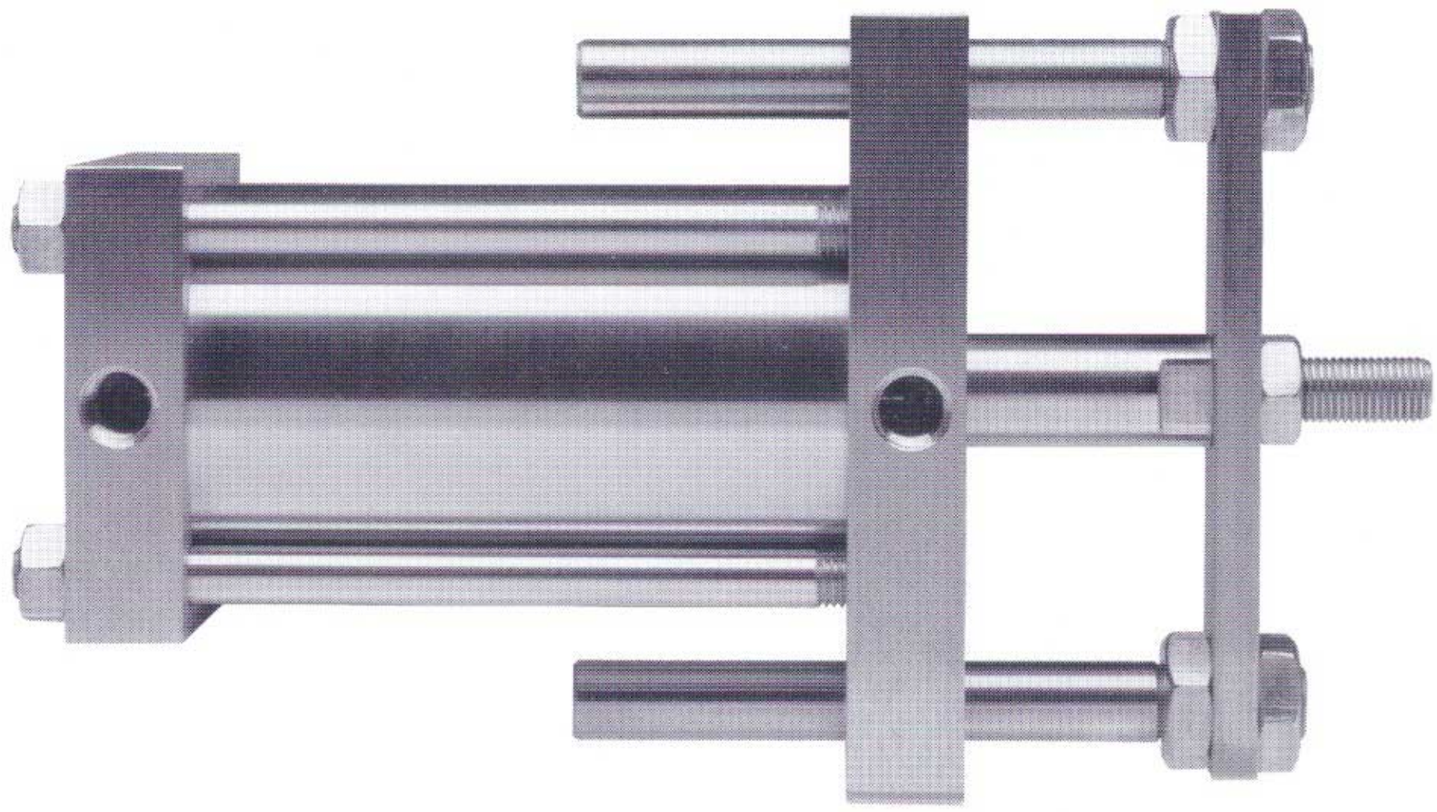


PORT POSITIONS:

1. All mounts will have operational ports in position #1.
2. **T mounts** will have vents in position #2.
3. All other mounts will have vents in position #3.

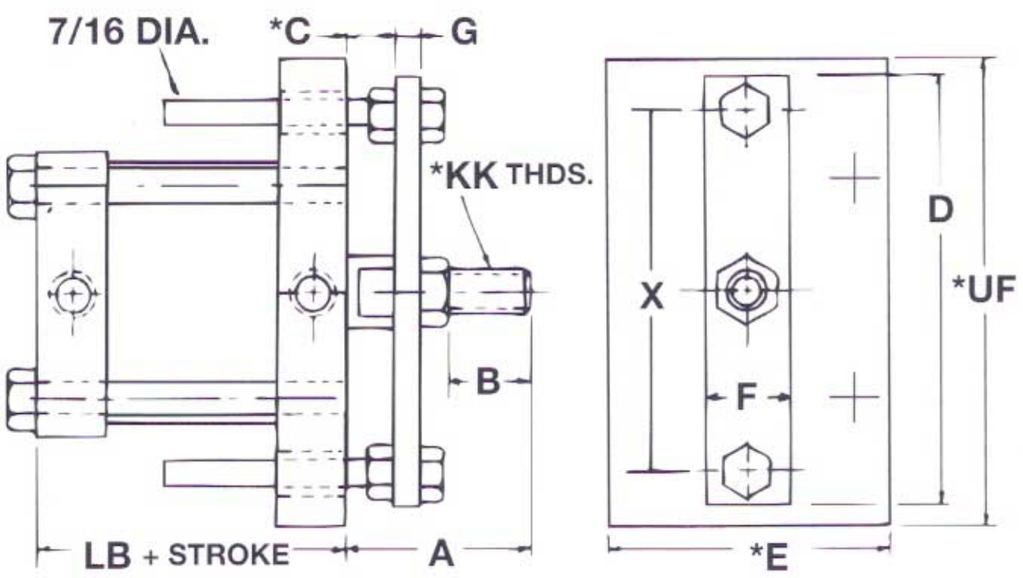
NON-ROTATING PISTON ROD

Resist rotation and torque inherent to reciprocating cylinder motion.
When repeated positioning is required.



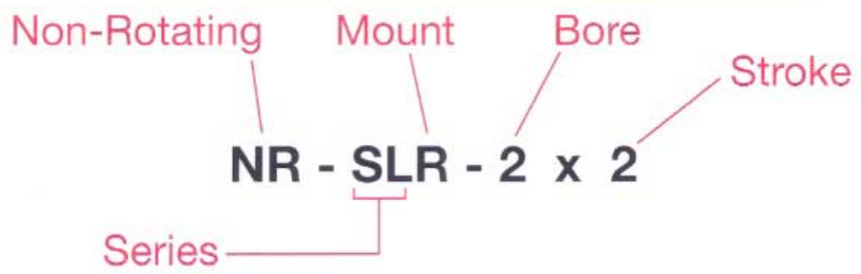
DESIGN FEATURES

1. Simple centerline design allows easy attachment to cylinder function.
2. Uses standard piston, piston rods, bushings and bushing seals.
3. Exceptionally wide positioned guide rods to resist maximum torque, gives more accurate repeatability.
4. Cost less than other non-rotating devices.



* THESE ARE STANDARD CATALOG DIMENSIONS.

ORDERING INFORMATION



MODELS AVAILABLE:

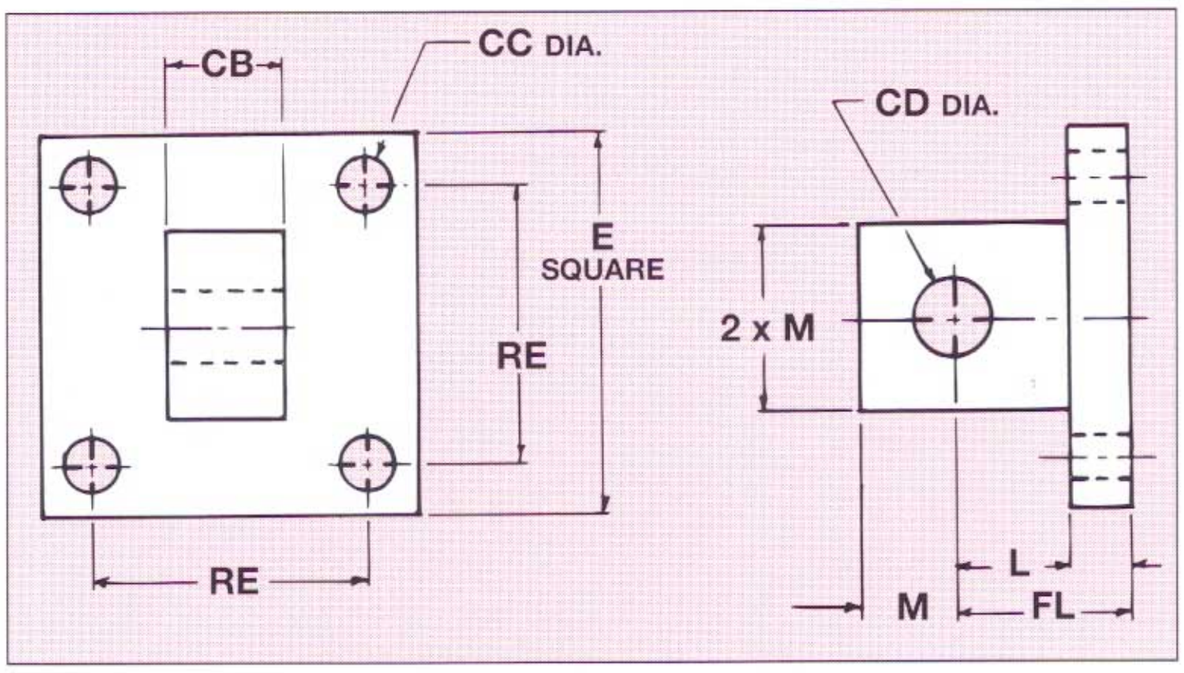
SLR	Rear Flange	SLE	Eye Mount
SLF	Front Flange*	SLEC	Tie Rods Ext. Cap End
SLC	Clevis	SLEH	Tie Rods Ext. Head End*
SLT	Bottom Tap		

* Mounting surface must be cut out to allow space for guide bar and guide rods.

BORE	A	B	C	D	E	F	G	KK	LB	UF	X
1 1/2	1 5/8	3/4	3/8	3 3/8	2	3/4	1/4	3/8-24	2 1/4	3 3/8	2 3/4
2	1 5/8	3/4	3/8	4 1/8	2 1/2	3/4	1/4	3/8-24	2 1/4	4 1/8	3 3/8
2 1/2	1 5/8	3/4	3/8	4 5/8	3	3/4	1/4	3/8-24	2 1/4	4 5/8	3 7/8
3 1/4	2 3/8	1 1/8	1/2	5 1/2	3 3/4	1	3/8	5/8-18	3 1/4	5 1/2	4 5/8
4	2 3/8	1 1/8	1/2	6 1/4	4 1/2	1	3/8	5/8-18	3 1/4	6 1/4	5 3/8
5	2 3/8	1 1/8	1/2	7 5/8	5 1/2	1	3/8	5/8-18	3 1/4	7 5/8	6 5/8

NOTE: Internal non-rotating construction available in 3-1/4" bore through 5" bore.

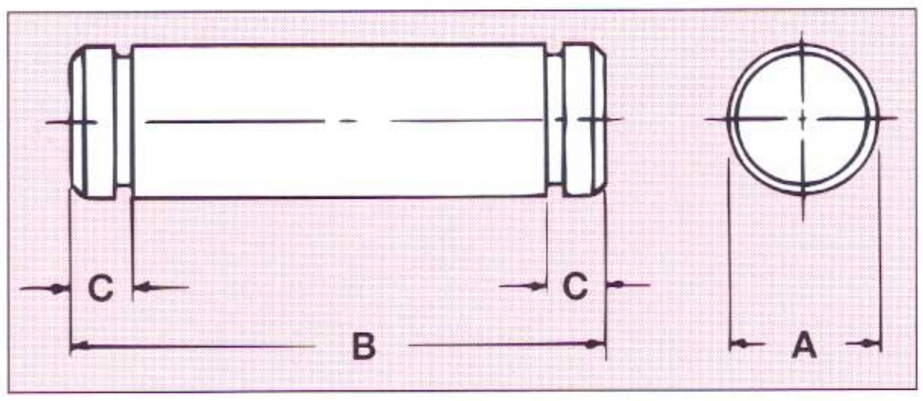
STAINLESS STEEL ACCESSORIES



EYE MOUNTING BRACKET

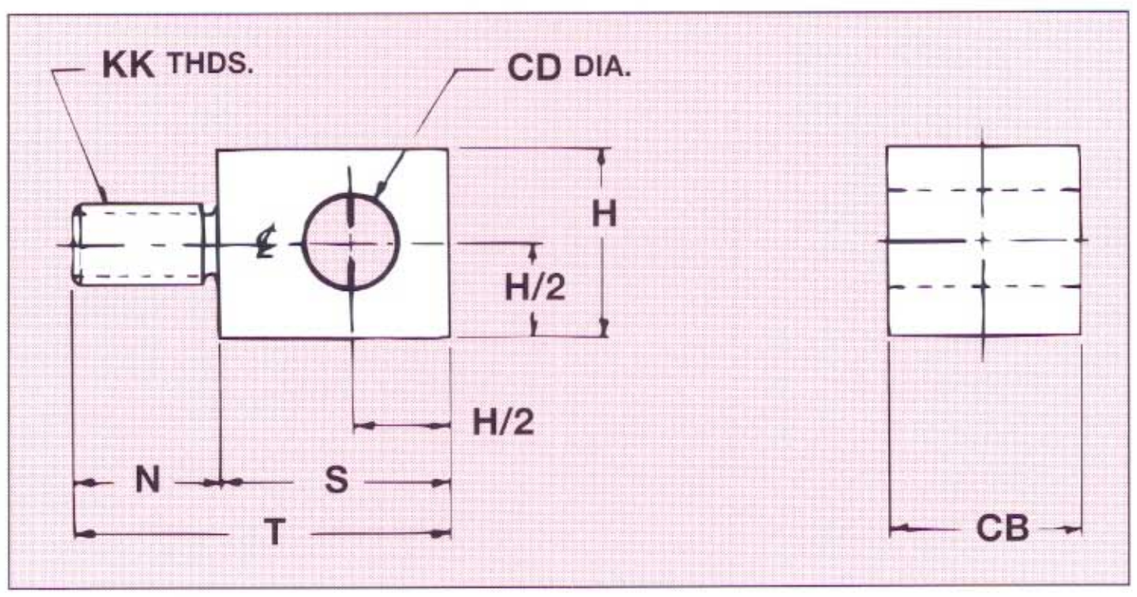
PART NUMBER	E	L	M	CB	CC	CD	FL	RE
SA-89-03	2-1/2	3/4	1/2	3/4	11/32	1/2	1-1/8	1.84
SA-89-065	3-3/4	1-1/4	3/4	1	15/32	3/4	1-3/4	2.94

USE WITH BORE
1-1/2, 2, 2-1/2
3-1/4, 4, 5



CLEVIS PIN – CHROME PLATED

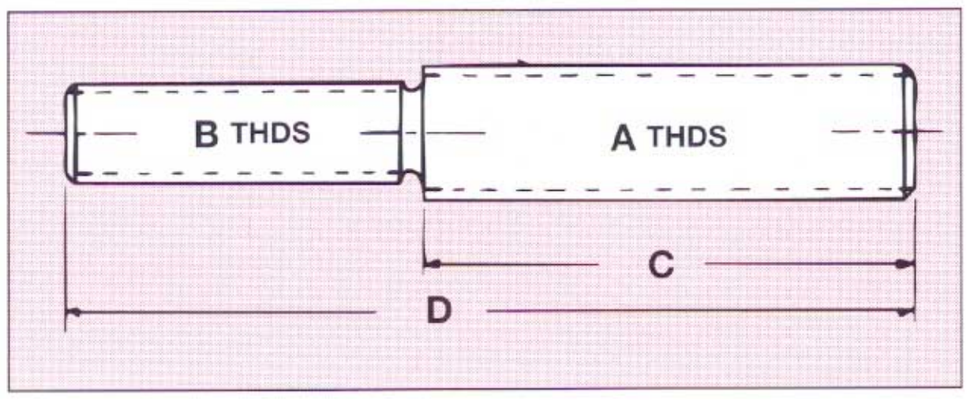
PART NO.	A	B	C
SA-98-03	.500	2-1/4	3/16
SA-98-065	.750	2-3/4	3/16



MALE ROD EYE

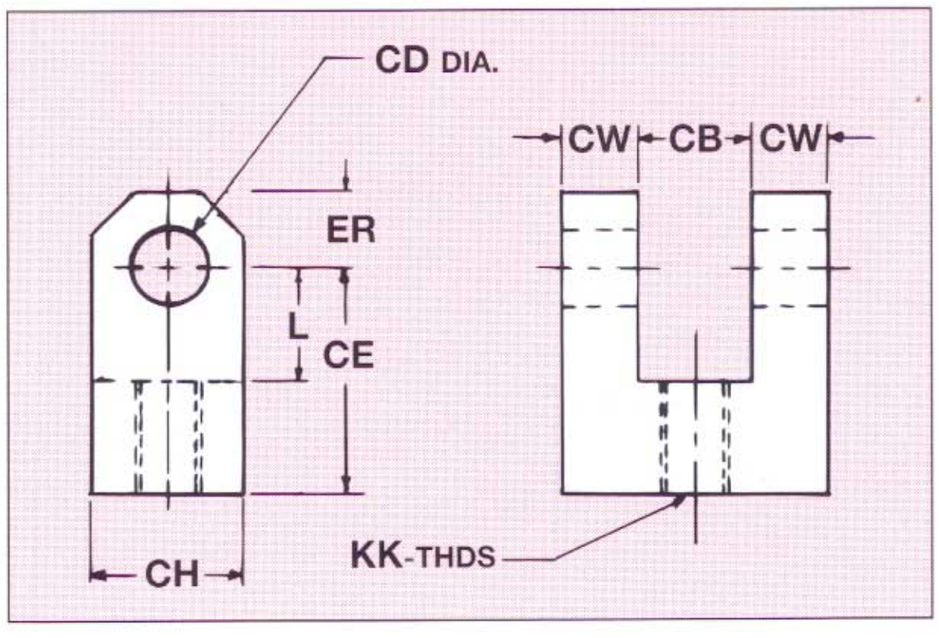
PART NUMBER	H	N	S	T	CB	CD	KK
SA-93-03	1	9/16	1-3/8	1-15/16	3/4	1/2	3/8-24
SA-93-065	1-1/2	13/16	1-11/16	2-1/2	1	3/4	5/8-18

USE WITH BORE
1-1/2, 2, 2-1/2
3-1/4, 4, 5



MALE ROD END STUD

PART NO.	A	B	C	D
SA-95-03	7/16-20	3/8-24	3/4	1-5/16
SA-95-065	3/4-16	5/8-18	1-1/8	1-15/16



ROD CLEVIS

PART NUMBER	CB	CD	CE	CH	CW	ER	KK	L
SA-92-03	3/4	1/2	1-1/2	1	1/2	1/2	7/16-20	3/4
SA-92-065	1	3/4	2-3/8	1-1/2	1/2	3/4	3/4-16	1-1/4

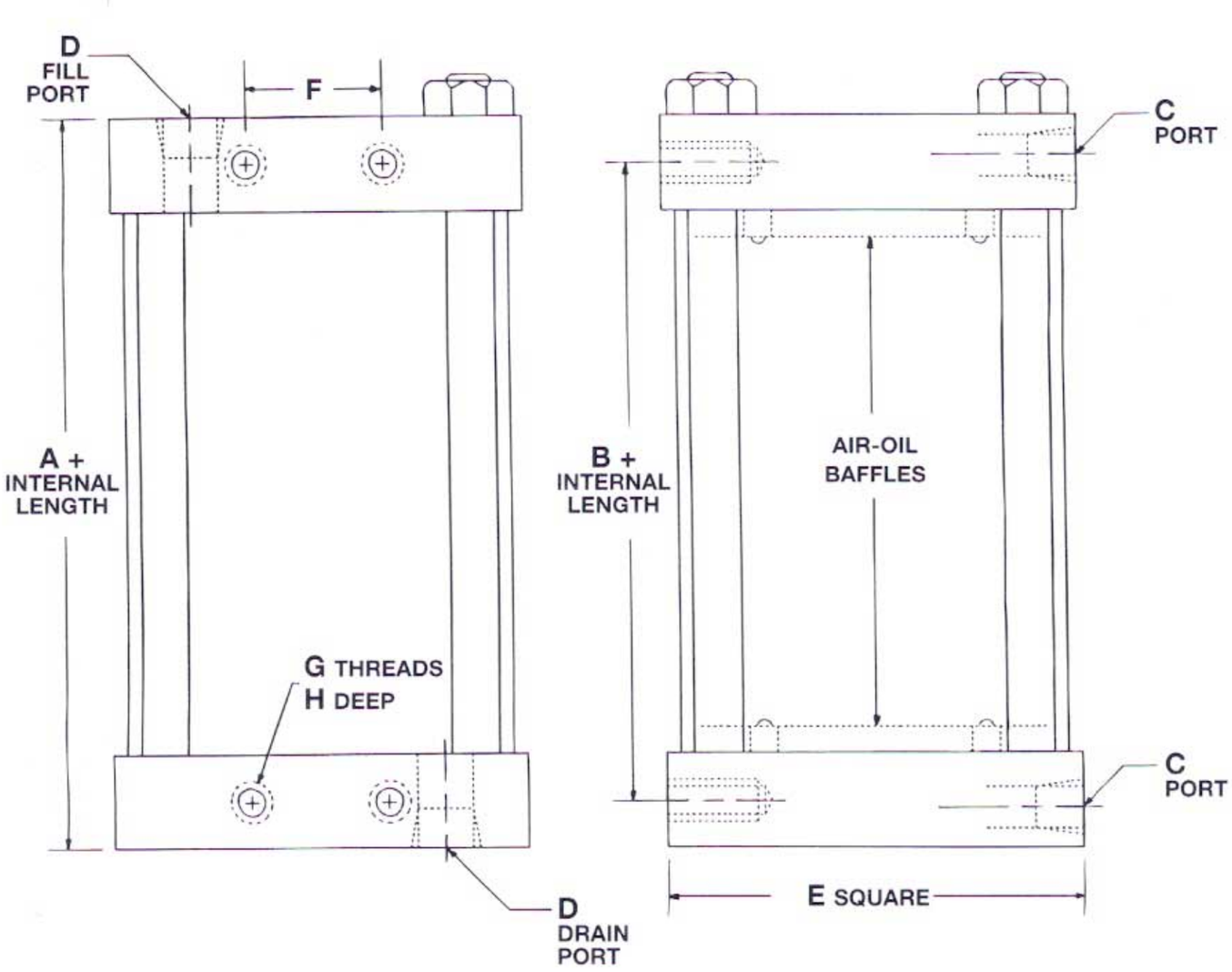
AIR - OIL TANKS

150 PSI Air
Stainless steel end caps, translucent fiberglass tube allows easy viewing of oil height from any position.

ORDERING INFORMATION

AIR-OIL TANK — DIAMETER — LENGTH IN INCHES

SAOT – 3-1/4" x 6"



DIMENSIONS OF AIR-OIL TANKS

PART	DIA.	A	B	C	D	E	F	G	H
SAOT	2-1/2	1 1/4	9/16	1/8	1/4	3	1 1/4	5/16-18	1/2
SAOT	3-1/4	2	1	1/4	3/8	3 3/4	1 1/2	3/8-16	5/8
SAOT	4	2	1	1/4	3/8	4 1/2	2 1/16	3/8-16	5/8
SAOT	5	2	1	3/8	1/2	5 1/2	2 11/16	1/2-13	3/4

MAXIMUM USEABLE VOLUME

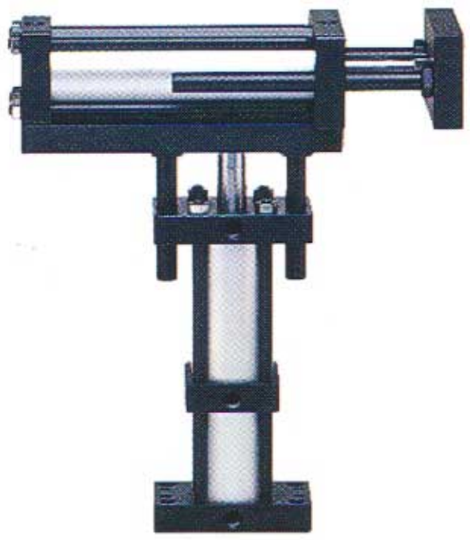
		INTERNAL LENGTH OF TANK							
DIA.	AREA	6	8	10	12	14	16	18	20
2 1/2	4.9	15	24	33	42	51	60	69	78
3 1/4	8.30	26	41	56	71	86	101	116	131
4	12.56	38	62	84	108	130	153	174	198
5	19.64	57	92	128	163	199	234	269	305

NOTE: OTHER INTERNAL LENGTHS ARE AVAILABLE. PLEASE CONTACT FACTORY.

OTHER PRODUCTS MADE BY ROCKFORD AIR DEVICES

BOOSTER CYLINDERS

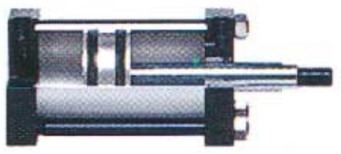
POWER MULTIPLIERS



2-AXIS MODULE

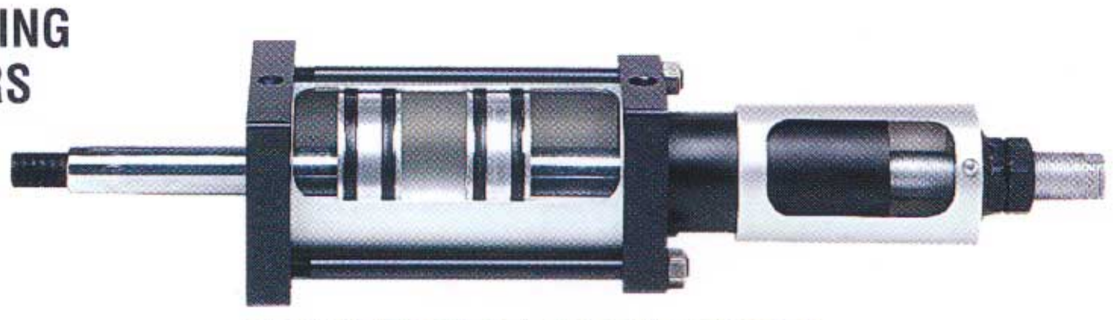
AIR-OIL TANK

NON-ROTATING CYLINDERS



L-SERIES CYLINDERS

S-SERIES CYLINDERS



ADJUSTABLE-RETRACTABLE

PRECAUTIONS

Rockford Air Devices products are manufactured exclusively for use in industrial applications by trained personnel who possess the experience necessary to provide adequate safeguards to prevent injury or damage in the event there is a failure of any component in the system.

WARRANTY

Rockford Air Devices, Inc. warrants to customers who purchase products for resale that such products are free from defects in material and workmanship. The company will repair or replace, at its option, any product found to be defective after inspection. Rockford Air Devices, Inc. shall not be liable for any incidental or consequential damages, including downtime, for breach of any express or implied warranty, and shall not be liable or responsible for injuries or damage to persons or property arising out of the use or operation of Rockford Air Devices, Inc. products.

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