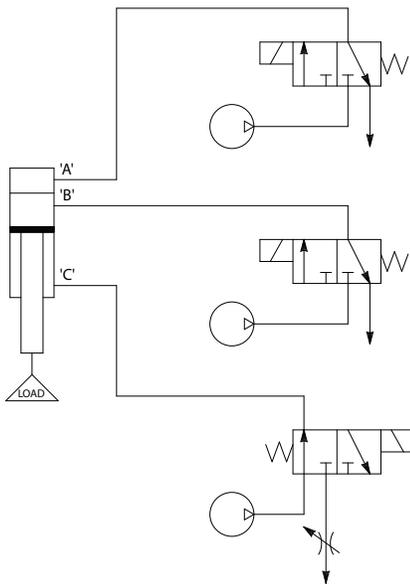


DIMENSIONAL INFORMATION

(All Dimensions nominal and in inches)



NOTE: Application sketches are offered as suggestions only. Feasibility, testing and usage of the product is the responsibility of the user. The product may be used to increase safety, but should not replace positive stop safety mechanisms. No liability is expressed or intended on the part of PFA, Inc., it's employees or agents.

SIMPLIFIED CIRCUIT/SEQUENCE - VERTICAL MOVEMENT

To support the vertical load and remove force on the brake prior to unbraking and lowering or raising the load. NOTE: BRAKE is ON when ZERO PRESSURE at Brake Port. Applying pressure disengages brake.

1. Very careful control of the pneumatics is needed in vertical applications to prevent uncontrolled dropping or movement of the load due to gravity when brake is disengaged.
2. ENSURE LOAD IS GUIDED INDEPENDENTLY from the cylinder rod in vertical applications.
3. With solenoid (C) in the normal position the load is supported and the braking mechanism holds position. SUPPLIED PRESSURE SHOULD BE REGULATED AND SET TO EXCEED THE WEIGHT OF THE LOAD SO THE LOAD LIFTS AT ALL TIMES.
4. Energize (A) to pressurize the brake ports and disengage the brake (load may lift).
5. Maintain (A) energized and Energize(C) or energize (B) to retract the load at the speed set at flow control or energize (B) to power load downward at a higher pressure (preferred).

SIMPLIFIED CIRCUIT/SEQUENCE - HORIZONTAL MOVEMENT

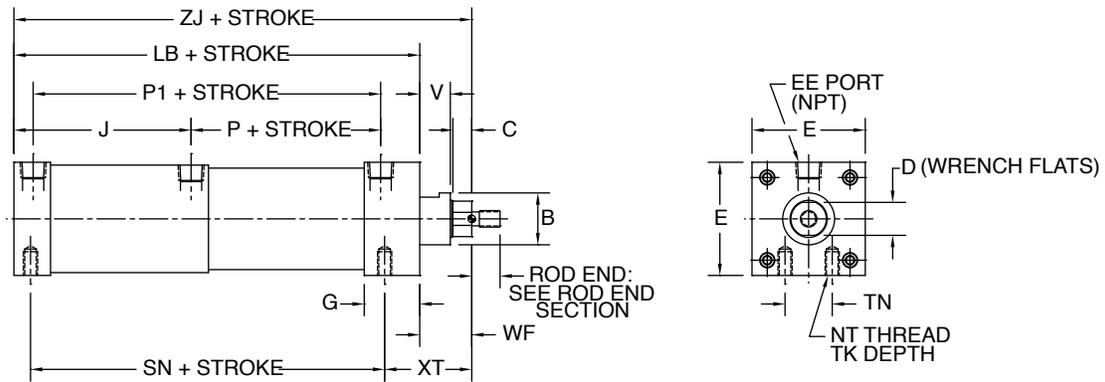
To allow for more simple horizontal cylinder operation.

1. Valve (B) would be setup in the same arrangement as (C) so air is constantly supplied to both sides of the piston at pressures determined to balance the piston areas and have nearly no movement.
2. ENSURE LOAD IS SUPPORTED INDEPENDENTLY from the cylinder rod in a horizontal application.
3. With no load on the brake (balanced), Energize A to disengage the brake.
4. Maintain (A) energized and Energize(C) to extend the load at speed set a Flow Control on valve C (meter out), or energize (B) to retract the load at the speed set at Flow Control on valve B.

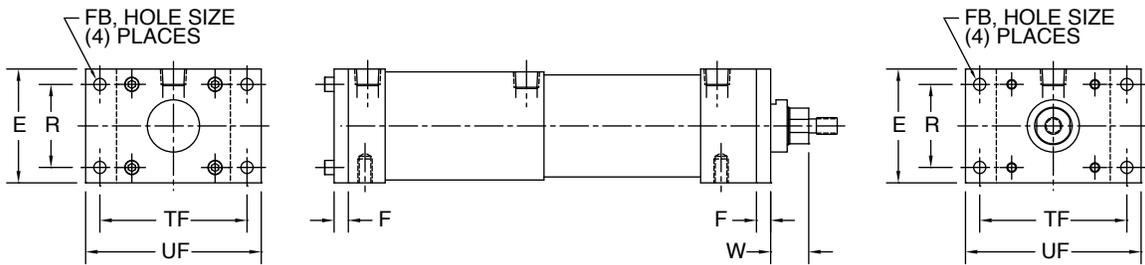
BRAKING CYLINDERS THEORETICAL PERFORMANCE DATA

Cylinder Bore Diameter	Extend Force at 90psi	Retract Force at 90psi	Holding Force* at 90psi
2.00	240	210	290
2.50	400	365	450
3.25	650	560	800
4.00	1,000	940	1,100
6.00	2,400	2,300	3,200

* Holding forces are approximate and based on factory settings using clean, dry air. Customer can vary the holding force by following adjustment procedures provided with the product.

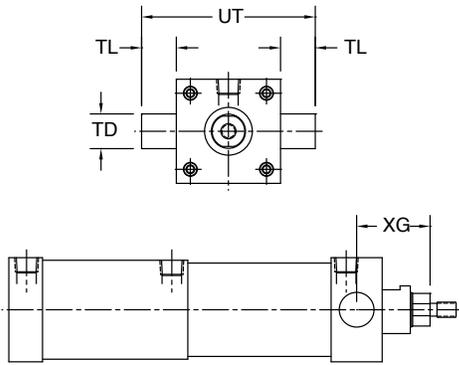


Bore / Rod ϕ	LB	P1	P	EE	B	C	D	E	G	J	V	NT	SN	TK	TN	WF	XT	ZJ
2.00 / 0.985	8.63	7.07	2.98	3/8	1.38	0.50	0.88	2.50	1.47	5.03	0.81	5/16-18	7.25	0.44	0.88	1.38	2.31	10.01
2.50 / 0.985	8.75	7.26	3.02	3/8	1.38	0.50	0.88	3.00	1.47	5.15	0.81	3/8-16	7.38	0.63	1.25	1.38	2.31	10.13
3.25 / 1.575	10.50	8.75	2.50	1/2	2.13	0.75	1.25	3.75	1.75	7.50	1.00	1/2-13	8.88	0.75	1.50	1.94	2.94	12.44
4.00 / 1.575	10.75	9.00	2.50	1/2	2.13	0.75	1.25	4.50	1.75	7.75	0.88	1/2-13	9.13	1.00	2.06	1.81	2.94	12.56
6.00 / 1.575	11.53	9.30	2.90	1/2	2.38	0.75	1.25	6.50	1.98	7.91	0.88	3/4-10	9.65	1.13	3.25	1.88	3.06	13.41

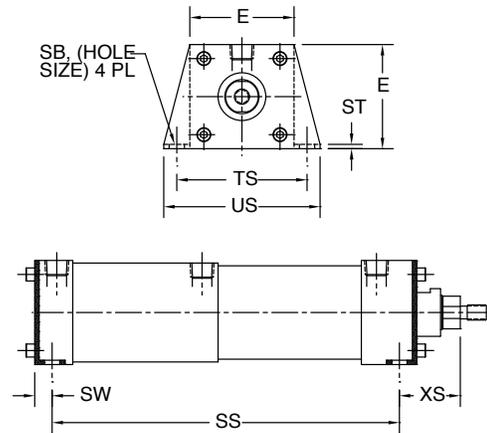


MF1 - Front Flange Mount

Bore	R	FB	F	TF	UF	E	W
2.00	1.84	0.34	0.38	3.38	4.13	2.50	1.00
2.50	2.19	0.32	0.38	3.88	4.63	3.00	1.00
3.25	2.76	0.40	0.63	4.69	5.50	3.75	1.43
4.00	3.32	0.38	0.63	5.44	6.25	4.50	1.43
6.00	4.88	0.53	0.75	7.63	8.63	6.50	1.13



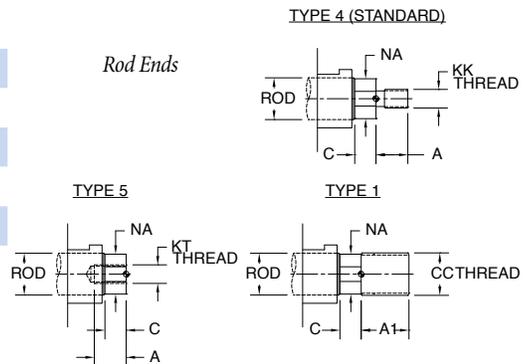
MT1 – Front Trunion Mount



MS2 – Foot Mount

Bore	MT1 – FRONT TRUNION MOUNT				MS2 – FOOT MOUNT							
	TD	TL	UT	XG	SB	SS	ST	SW	TS	US	XS	
2.00	1.00 ± .002	1.00	4.50	2.11	0.44	7.88	0.13	0.50	3.25	4.00	1.75	
2.50	1.00 ± .002	1.00	5.00	2.11	0.44	8.00	0.13	0.50	3.75	4.50	1.75	
3.25	1.00 ± .002	1.00	5.75	2.88	0.54	9.50	0.19	0.69	4.75	5.75	2.44	
4.00	1.00 ± .002	1.00	6.50	2.81	0.54	9.75	0.25	0.75	5.50	6.50	2.31	
6.00	1.38 ± .002	1.38	9.25	2.87	0.80	10.15	0.25	0.94	7.88	9.25	2.56	

Bore	Rod ø	A	AI	C	CC	KK	KT
2.00	.985	0.75	1.13	0.50	1-14	7/16-20	7/16-20
2.50	.985	0.75	1.13	0.50	1-14	7/16-20	7/16-20
3.25	1.575	1.13	1.63	0.75	1 3/8-12	3/4-16	3/4-16
4.00	1.575	1.13	1.63	0.75	1 3/8-12	3/4-16	3/4-16
6.00	1.575	1.63	1.63	0.75	1 3/8-12	1-14	3/4-16



Note: Other mounting options and mating accessories are available. Please contact PFA for details on your specific application.

Example:

Brake Cylinder Style	Bore Size	Stroke Length	Mounting Style	Rod End Style	Option
KPS	See Chart	See Chart	MF1, MF2, MP1, MS2, MS4	1, 4, 5	Magnetic Piston = MP
KPS	2.5	14	MF1	4	MP

Part No: **KPS-2.5-14-MF1-4-MP**