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Title: Stainless Steel Cylinders Double Acting

ISO Date: April 10, 2006

Don't Take Chances

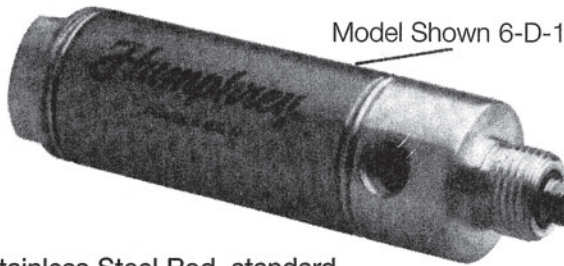
Compressed air is an extremely powerful medium. Always take maximum precautions when handling any component of a compressed air system. **Never** attempt to construct, replace, operate or service any component of a compressed air system unless you have been specifically and properly trained to do so. **Always** disconnect the supply air, and exhaust the air system before attempting to remove or service a component of that system. Failure to heed these warnings could result in SERIOUS, EVEN FATAL, PERSONAL INJURY.

Design And Specifications

The design and specifications and other product information contained in this catalog is for general reference purposes based upon customary and usual manufacturing standards and product applications. However, it is difficult to predict or to anticipate the functioning or suitability of the product for any particular application or use. Therefore, nothing herein shall be deemed a representation or warranty of the product design or specifications and Buyer shall have the responsibility for investigating and testing the product in any particular application or use and all risks attendant in such use.

Humphrey Products Company
1-800-477-8707
Kalamazoo, MI 49003
www.humphrey-products.com

HUMPHREY AIR CYLINDERS



Model Shown 6-D-1

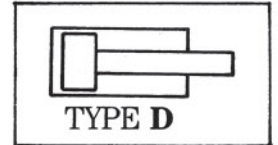
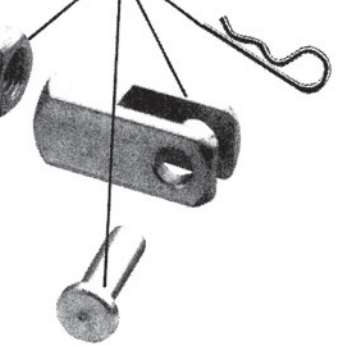
Foot Mount (F-*)



Mounting Nut (JN-*)



Rod Clevis (CT-*)

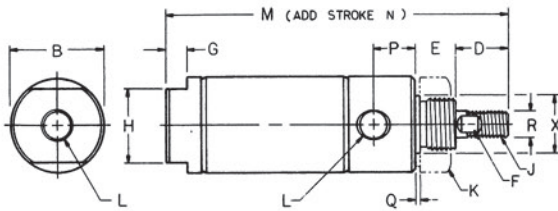


TYPE D

- Stainless Steel Rod, standard
- Simple, reliable design
- Requires air pressure to extend *and* retract rod
- *Extend* force exceeds *retract* force (smaller effective are on rod side of piston)
- Exclusive Humphrey Reversible Piston
- Specify Option M (Internal Magnet) to operate sensors
- Wearstrip standard: 5 inches or more of stroke (optional, shorter strokes N/A on model 8)
- Options: A, B, E, F, J, K, L, M, N, P, W

Mounting Nut included, except Model 4 & 3; order separately.

*See Accessories section.



• No rod bushing, Model 8... front hard anodized

Medium.....Compressed Air
Pressure range0-200 PSIG
Temperature range-40°F to
.....160°F Ambient*
w/Fluoroelastomer.....-20°F to 400°F
Ambient*
Recommended maximum stroke12"

*Additional heat may be generated by
seal friction (high speed cycling)

Piston Area SQ. IN.†
Volume CU. IN.
(per inch of stroke)

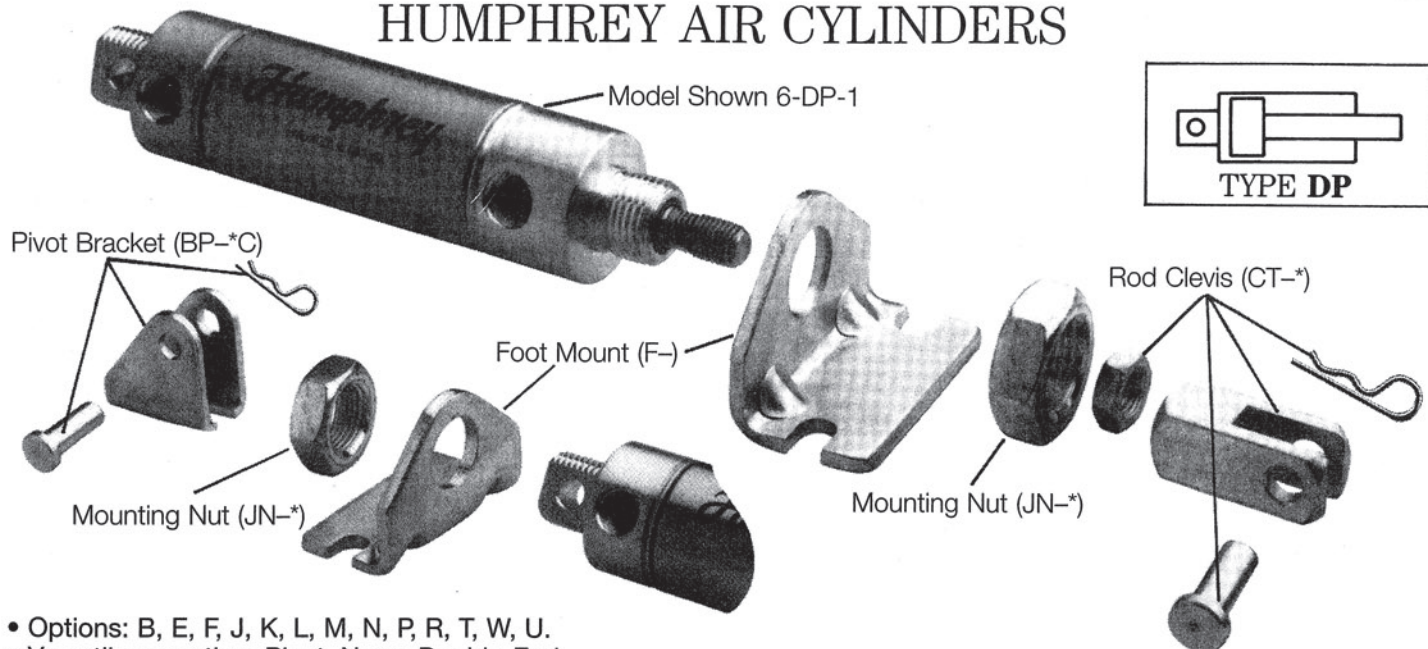
BASIC MODEL NO.	Plain Side	Rod Side
8	.20	.17
7	.44	.39
6	.89	.81
25	1.23	1.08
5	1.77	1.62
75	2.41	2.21
4	3.14	2.84
3	4.91	4.60

†Area x PSIG = Approximate Force

MODEL & TYPE (Stroke)	BORE	B Dia.	D Rod Exten.	E Nose Length	F Wrench Flat	G Flat	H Flat	J Rod Thread x Length	K Nose Thread	L Port (NPSF)	M Length	N		P	Q Pilot	R Rod Dia.	X Pilot Dia. -.001 -.006
												For each stroke increment of:	Add to M				
8-D-□	1/2	.62	.50	.41	None	.12	.37	10-32 x .50	7/16-20	10-32 UNF	2.62*	1/2"	.50	.37	.04	.187	.437
7-D-□	3/4	.88	.50	.50	None	.16	.62	1/4-28 x .50	5/8-18	1/8	3.47	1"	1.00	.48	.07	.250	.625
6-D-□	1 1/16	1.12	.62	.50	.25	.25	.87	5/16-24 x .50	5/8-18	1/8	3.75	1"	1.00	.52	.07	.312	.625
25-D-□	1 1/4	1.31	1.00	.62	.38	.18	.87	7/16-20 x .75	3/4-16	1/8	4.75	1"	1.00	.63	.07	.437	.750
5-D-□	1 1/2	1.55	1.00	.62	.38	.25	.87	7/16-20 x .75	3/4-16	1/8	4.44	1"	1.00	.62	.07	.437	.750
75-D-□	1 3/4	1.81	1.19	.75	.44	.25	1.25	1/2-20 x .88	1-14	1/4	5.57	1"	1.00	.72	.09	.500	1.030
4-D-□	2	2.07	1.25	.81	.50	.31	1.25	1/2-20 x .88	1 1/4-12	1/4	5.56	1"	1.00	.69	.12	.625	1.375
3-D-□	2 1/2	2.62	1.25	.81	.50	.31	1.75	1/2-20 x .88	1 3/8-12	1/4	5.56	1"	1.00	.69	.12	.625	1.500

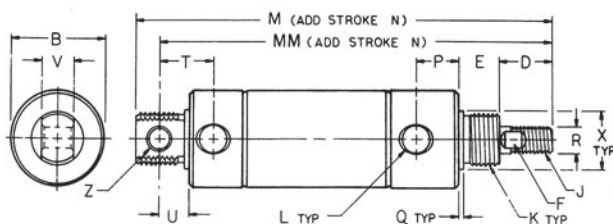
*Add 0.399 for Option M.

HUMPHREY AIR CYLINDERS



- Options: B, E, F, J, K, L, M, N, P, R, T, W, U.
- Versatile mounting, Pivot, Nose, Double-End

*See Accessories section.



Medium..... Compressed Air
 Pressure range 0-200 PSIG
 Temperature range -40°F to 160°F Ambient*
 w/Fluoroelastomer..... -20°F to 400°F Ambient*
 Recommended maximum stroke 12"

*Additional heat may be generated by seal friction (high speed cycling)

BASIC MODEL NO.	Piston Area SQ. IN.† Volume CU. IN. (per inch of stroke)	
	Plain Side	Rod Side
8	.20	.17
7	.44	.39
6	.89	.81
25	1.23	1.08
5	1.77	1.62
75	2.41	2.21
4	3.14	2.84
3	4.91	4.60

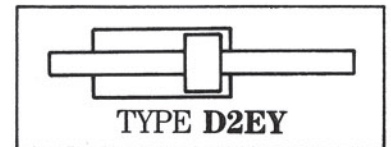
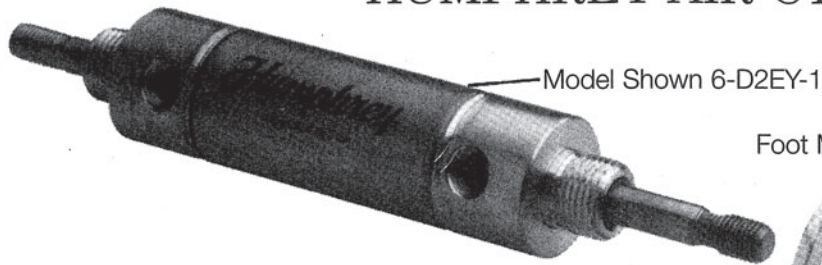
†Area x PSIG = Approximate Force

* No rod bushing, Model 8... front head is hard anodized. Models 3 & 4 have rear pivot bushing.

MODEL & TYPE (Stroke)	BORE	B Dia.	D Rod Exten.	E Nose Length	F Wrench Flat	J Rod Thread x Length	K Nose & Pivot Thread	L Port (NPSF)	M Length	MM Length	N		P	Q Pilot	R Rod Dia.	T	U	V	X Pilot Dia. -.001 -.006	Z Pivot Hole Dia.
											For each stroke increment of:	Add to MM								
8-DP-□	1/2	.62	.50	.41	None	10-32 x .50	7/16-20	10-32 UNF	3.31*	3.06*	1/2"	.50	.37	.04	.187	.42	.25	.31	.437	.16
7-DP-□	3/4	.88	.50	.50	None	1/4-28 x .50	5/8-18	1/8	4.54	4.25	1"	1.0	.48	.07	.250	.66	.34	.38	.625	.25
6-DP-□	1 1/16	1.12	.62	.50	.25	5/16-24 x .50	5/8-18	1/8	4.62	4.34	1"	1.0	.52	.07	.312	.62	.34	.38	.625	.25
25-DP-□	1 1/4	1.31	1.00	.62	.38	7/16-20 x .75	3/4-16	1/8	5.83	5.47	1"	1.0	.63	.07	.437	.91	.41	.50	.750	.25
5-DP-□	1 1/2	1.55	1.00	.62	.38	7/16-20 x .75	3/4-16	1/8	5.50	5.12	1"	1.0	.62	.07	.437	.81	.50	.62	.750	.38
75-DP-□	1 3/4	1.81	1.19	.75	.44	1/2-20 x .88	1-14	1/4	7.13	6.63	1"	1.0	.72	.09	.500	.98	.50	.62	1.030	.38
4-DP-□	2	2.07	1.25	.81	.50	1/2-20 x .88	1 1/4-12	1/4	6.93	6.50	1"	1.0	.69	.12	.625	1.0	.57	.75	1.375	.38
3-DP-□	2 1/2	2.62	1.25	.81	.50	1/2-20 x .88	1 3/8-12	1/4	6.93	6.50	1"	1.0	.69	.12	.625	1.0	.57	.75	1.500	.38

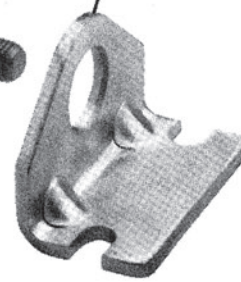
*Model 8 only — add 0.399 for Option M.

HUMPHREY AIR CYLINDERS

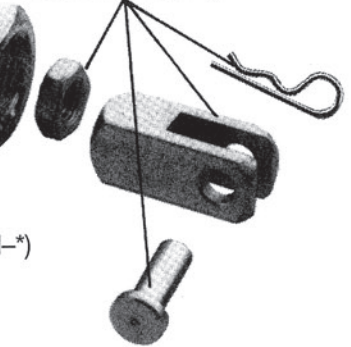


- Air pressure produces equal force in both directions due to equal piston area; permits "locking" in mid-stroke
- One rod can be used to perform a work function, second rod to operate limit switches, provide support or guide
- Fixed mounting of both rod ends allows movement of barrel only
- Bumpers and Stainless Steel Rod, standard
- Options: E, F, J, K, L, M, P, W
- Two mounting nuts included, except Model 3 & 4; order separately.

Foot Mount (F-*)

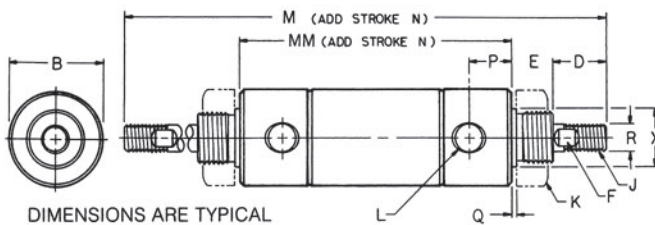


Rod Clevis (CT-*)



Mounting Nut (JN-*)

*See Accessories section.



• No rod bushing, Model 8...heads hard anodized.

Medium Compressed Air
 Air Pressure range 0-200 PSIG
 Temperature range -40°F to 160°F Ambient*
 w/Fluoroelastomer -20°F to 400°F Ambient*
 Recommended maximum stroke 12"

*Additional heat may be generated by seal friction (high speed cycling)

BASIC MODEL NO.	Piston Area SQ. IN.†	
	Volume CU. IN.	(per inch of stroke)
8	.17	
7	.39	
6	.81	
25	1.08	
5	1.62	
75	2.21	
4	2.84	
3	4.60	

†Area x PSIG = Approximate Force

MODEL & TYPE (Stroke)	BORE	B Dia.	D Rod Ext.	E Nose Length	F Wrench Flat	J Rod Thread x Length	K Nose Thread	L Port (NPSF)	M Length	MM Length	N	Add to		P (Typical)	Q Pilot	R Rod Dia.	X Pilot Dia. -.001 -.006
												For each stroke increment of:	M	MM			
8-D2EY-□	1/2	.62	.50	.41	None	10-32 x .50	7/16-20	10-32 UNF	3.88	2.07	1/2"	1.00	.50	.37	.04	.187	.437
7-D2EY-□	3/4	.88	.50	.50	None	1/4-28 x .50	5/8-18	1/8	5.03	3.03	1"	2.00	1.00	.48	.07	.250	.625
6-D2EY-□	1 1/16	1.12	.62	.50	.25	5/16-24 x .50	5/8-18	1/8	5.32	3.07	1"	2.00	1.00	.52	.07	.312	.625
25-D2EY-□	1 1/4	1.31	1.00	.62	.38	7/16-20 x .75	3/4-16	1/8	6.83	3.58	1"	2.00	1.00	.63	.07	.437	.750
5-D2EY-□	1 1/2	1.55	1.00	.62	.38	7/16-20 x .75	3/4-16	1/8	6.63	3.39	1"	2.00	1.00	.62	.07	.437	.750
75-D2EY-□	1 3/4	1.81	1.19	.75	.44	1/2-20 x .88	1-14	1/4	8.57	4.69	1"	2.00	1.00	.72	.09	.500	1.030
4-D2EY-□	2	2.07	1.25	.81	.50	1/2-20 x .88	1 1/4-12	1/4	8.31	4.19	1"	2.00	1.00	.69	.12	.625	1.375
3-D2EY-□	2 1/2	2.62	1.25	.81	.50	1/2-20 x .88	1 3/8-12	1/4	8.31	4.19	1"	2.00	1.00	.69	.12	.625	1.500