Specifications: Double Acting, Single/Double Rod

Specifications

Bore size (inch)	044 (7/16")	056 (9/16")	075 (3/4")	088 (7/8")	106 (1 -1/16")	125 (1-1/4")	150 (1-1/2")	200 (2")
Fluid	Air							
Maximum operating pressure	250 PSI / 1.7 MPa							
Minimum operating pressure	8 PSI / 0.06 MPa							
Ambient and fluid temperature	40 to 140°F / 5 to 60 °C							
Piston speed	No bumper: 2 to 20 in/sec (50 to 500 mm/sec) Bumper: 2 to 30 in/sec (50 to 750 mm/sec)							
Bumper	Optional (No additional charge on 7/8" and 1-1/4" bore)							
Lubrication	Not required (Pre-lubricated at factory)							
Mounting	B, C, E, R (see Note)							

Note) R mount available on ø3/4", ø1-1/16", and ø1-1/2" only.

Standard Stroke

(inch)

Mounting	Standard stroke	Max. stroke as standard Note 2)	Long stroke -X142US Note 3)
Front nose mount (B)	1/2, 1, 2, 3, 4, 5, 6	12	40
Rear pivot mount (C)	1/2, 1, 2, 3, 4, 5, 6	32	40
Double end mount (E)	1/2, 1, 2, 3, 4, 5, 6	32	
Block mount (R) Note 3)	1/2, 1, 2, 3, 4, 5, 6	12	40
Double rod (W) Note 3)	1/2, 1, 2, 3, 4, 5, 6	12	20

Note 1) Minimum stroke for mounting auto switches: 0.6 inch for 2 switches, 0.4 inch for one switch.
Note 2) The production maximum stroke of ø7/16" and ø9/16" are up to 12 inches.
Note 3) Exclude ø7/16" and ø9/16".

Weight (Except Non-rotating Rod)

(lbs)

Bore size (inch)	Base weight by mounting style					Add'l weight per inch stroke		Add'l weight for magnet	Add'l weight for bumper
	B	C	E	R	W	B, C, E, R	W		
044 (7/16")	0.059	0.076	0.076	N/A	N/A	0.019	N/A	0.008	0.002
056 (9/16")	0.080	0.091	0.091	N/A	N/A	0.026	N/A	0.008	0.004
075 (3/4")	0.200	0.200	0.280	0.210	0.300	0.034	0.048	0.008	0.012
088 (7/8")	0.218	0.198	0.288	N/A	0.308	0.037	0.051	0.010	0.012
106 (1-1/16")	0.330	0.320	0.410	0.430	0.400	0.050	0.071	0.012	0.011
125 (1-1/4")	0.531	0.581	0.681	N/A	0.781	0.079	0.121	0.020	0.029
150 (1-1/2")	0.680	0.710	0.820	1.020	0.930	0.087	0.128	0.024	0.020
200 (2")	1.345	N/A	1.493	N/A	1.812	0.151	0.151	0.030	0.065

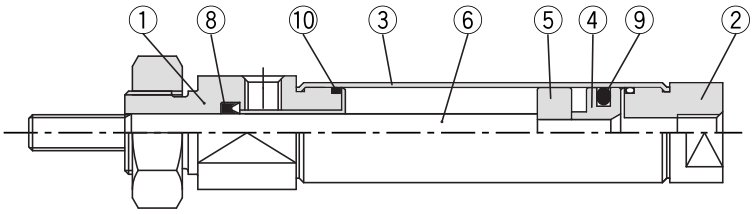
Theoretical Output: Double Acting Cylinder (Extend)

(lbf)

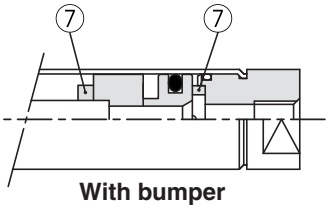
Bore size (in)	Rod size (in)	Operating direction	Piston area (in^2)	Operating pressure (PSI)					
				25	50	75	100	125	150
044 (7/16")	0.197	OUT	0.152	3.8	7.6	11.4	15.2	19	22.8
		IN	0.122	3.0	6.1	9.1	12.2	15.2	18.2
056 (9/16")	0.197	OUT	0.246	6.2	12.3	18.5	24.6	30.8	36.9
		IN	0.216	5.4	10.8	16.2	21.6	27	32.4
075 (3/4")	0.250	OUT	0.442	11.1	22.1	33.2	44.2	55.3	66.3
		IN	0.393	9.8	19.7	29.5	39.3	49.1	59
088 (7/8")	0.250	OUT	0.601	15	30.1	45.1	60.1	75.1	90.2
		IN	0.552	13.8	27.6	41.4	55.2	69	82.8
106 (1-1/16")	0.312	OUT	0.887	22.2	44.4	66.5	88.7	110.9	133.1
		IN	0.811	20.3	40.6	60.8	81.1	101.4	121.7
125 (1-1/4")	0.437	OUT	1.227	30.7	61.4	92	122.7	153.4	184.1
		IN	1.077	26.9	53.9	80.8	107.7	134.6	161.6
150 (1-1/2")	0.437	OUT	1.767	44.2	88.4	132.5	176.7	220.9	265.1
		IN	1.617	40.4	80.9	121.3	161.7	202.1	242.6
200 (2")	0.625	OUT	3.14	78.5	157	235.6	314	392.5	471
		IN	2.83	70.8	141.5	212.3	283	353.8	424.5

Construction: Double Acting, Single Rod

NCM044/056



NCMB044 shown as example

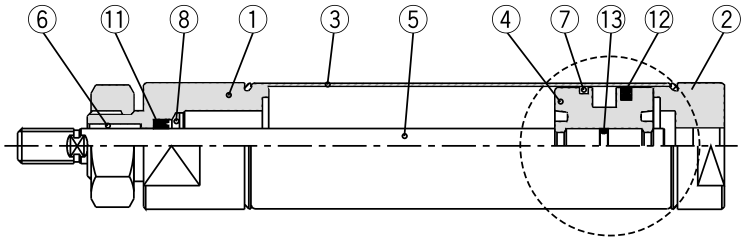


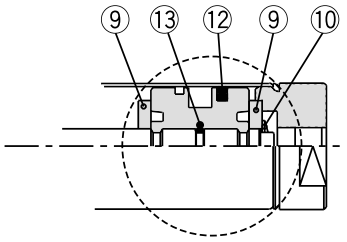
With bumper

Component Parts

No.	Description		Material	Note
1	Rod cover		Aluminum alloy	Anodized
2	Head cover		Aluminum alloy	Anodized
3	Cylinder tube		Stainless steel	
4	Piston A		Aluminum alloy	Chromated
5	Piston B		Aluminum alloy	Chromated
6	Piston rod	7/16", 9/16"	Stainless steel	
7	Bumper		Urethane	
8	Rod seal		NBR	
9	Piston seal		NBR	
10	Tube gasket		NBR	

NCM075 and above





With bumper

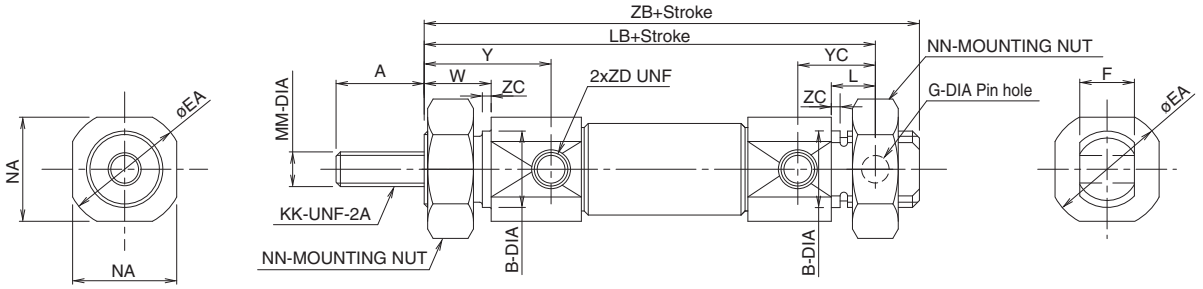
Component Parts

No.	Description		Material	Note
1	Rod cover		Aluminum alloy	Anodized
2	Head cover		Aluminum alloy	Anodized
3	Cylinder tube		Stainless steel	
4	Piston		Aluminum alloy	Chromated
5	Piston rod	3/4", 7/8"	Stainless steel	
		1-1/16", 1-1/4", 1-1/2", 2"	Carbon steel	Hard chrome plated
6	Bushing		Sintered bronze	
7	Wear ring		Phenolic resin	
8	Retaining ring		Spring steel	
9	Bumper		Urethane	
10	Retaining ring		Spring steel	
11	Rod seal		NBR	
12	Piston seal		NBR	
13	Piston gasket		NBR	

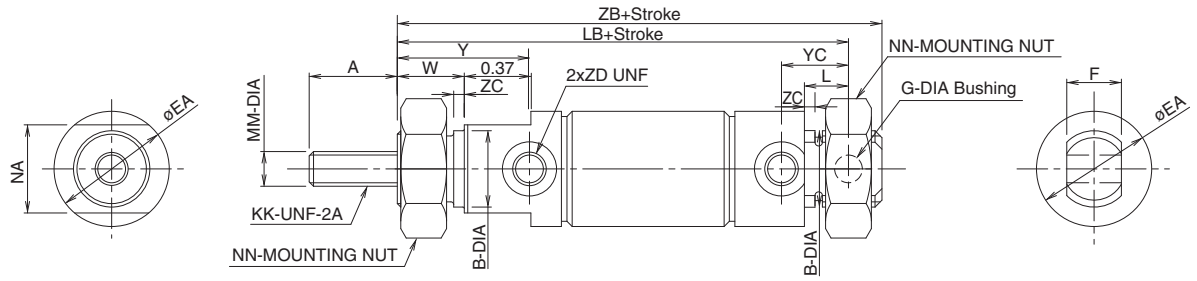
Dimensions: Double Acting, Single Rod

Double end mount: NC(D)ME

044 (7/16")



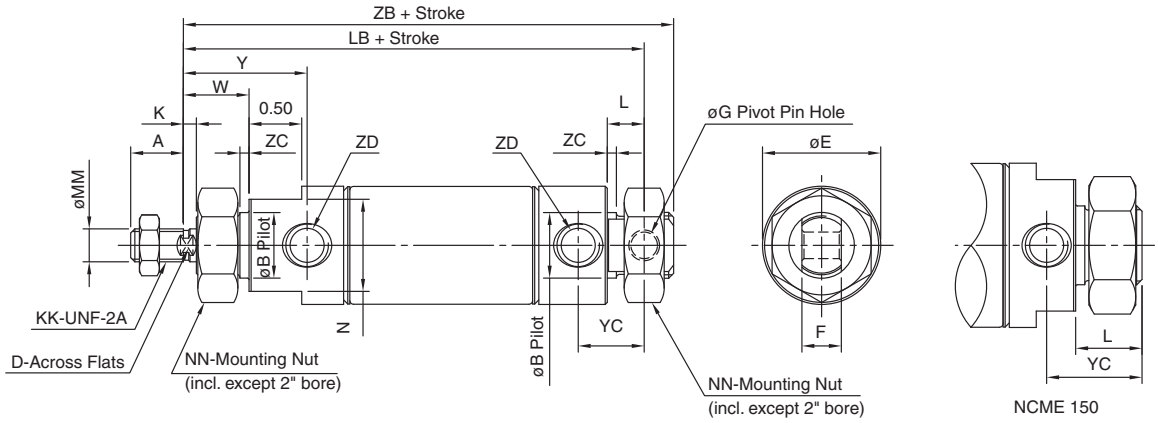
056 (9/16")



(inch)

Bore size (inch)	A	B	EA	F	G	KK	L	MM	NA	NN	W	Y	YC	ZC	ZD	LB No bumper, No magnet	LB With bumper, No magnet	LB No bumper, With magnet	LB With bumper, With magnet	ZB No bumper, No magnet	ZB With bumper, No magnet	ZB No bumper, With magnet	ZB With bumper, With magnet
044 (7/16")	0.50	$0.437^{0}_{-0.004}$	0.669	0.31	0.156	No.10-32	0.25	0.197	0.59	7/16-20	0.38	0.72	0.44	0.05	No.10-32	2.56	2.75	2.81	3.00	2.81	3.00	3.06	3.24
056 (9/16")	0.50	$0.437^{0}_{-0.004}$	0.654	0.31	0.157	No.10-32	0.25	0.197	0.50	7/16-20	0.38	0.75	0.38	0.06	No.10-32	2.56	2.69	2.56	2.69	2.75	2.88	2.75	2.88

075 (3/4"), 088 (7/8"), 106 (1-1/16"), 125 (1-1/4"), 150 (1-1/2"), 200 (2")



	No bumper		With bumper	
Bore size (inch)	**LB**	**ZB**	**LB**	**ZB**
075 (3/4")	3.75	4.03	3.75	4.03
088 (7/8")	3.31	3.59	3.56	3.84
106 (1-1/16")	3.84	4.12	3.97	4.25
125 (1-1/4")	4.47	4.87	4.72	5.12
150 (1-1/2")	–	4.5	–	4.63
200 (2")	5.62	6.06	5.88	6.32

(inch)

Bore size (inch)	MM	KK	A	B	D	E	F	G	K	L	N	NN	W	Y	YC	ZC	ZD
075 (3/4")	0.250	1/4-28	0.50	$0.624^{0}_{-0.003}$	–	0.86	0.38	0.251	–	0.34	0.75	5/8-18	0.50	0.95	0.62	0.09	1/8 NPT
088 (7/8")	0.250	1/4-28	0.50	$0.624^{0}_{-0.003}$	–	0.93	0.38	0.251	–	0.34	0.75	5/8-18	0.50	0.95	0.62	0.09	1/8 NPT
106 (1-1/16")	0.312	5/16-24	0.50	$0.624^{0}_{-0.003}$	0.25	1.12	0.38	0.251	0.12	0.34	0.88	5/8-18	0.62	1.17	0.62	0.09	1/8 NPT
125 (1-1/4")	0.437	7/16-20	0.75	$0.749^{0}_{-0.003}$	0.38	1.32	0.50	0.251	0.25	0.41	1.06	3/4-16	0.88	1.62	0.78	0.09	1/8 NPT
150 (1-1/2")	0.437	7/16-20	0.75	$0.749^{0}_{-0.003}$	0.38	1.56	–	–	0.25	0.63	1.25	3/4-16	0.88	1.50	0.91	0.09	1/8 NPT
200 (2")	0.625	1/2-20	0.88	$1.375^{0}_{-0.003}$	0.50	2.06	0.75	0.375	0.38	0.56	1.75	1-1/4-12	1.19	1.91	1.03	0.12	1/4 NPT