Air Cylinder: Standard/Non-rotating Rod
Double Acting/Single Acting, Single Rod/Double Rod

Series NCM

ø3/4", ø7/8", ø1 1/16", ø1 1/4", ø1 1/2", ø2"

Double Rod/Double End Mounting
Non-rotating Rod Option
Auto Switch Capable

Air Cylinder: Standard/Non-rotating Rod
Double Acting/Single Acting, Single Rod/Double Rod
Series NCM
Inch size: ø3/4", ø7/8", ø1 1/16", ø1 1/4", ø1 1/2", ø2"

How to Order

NC☐ M ☐ ☐ ☐ – ☐ ☐ ☐ ☐ ☐ – ☐ ☐ ☐

Built-in magnet (Note 1)

Nil	None
D	With auto switch

Style

Nil	Standard cylinder
K	Non-rotating rod (2)

Mounting style

B	Rod side nose mounting
C	Head side pivot
E	Double end
R	Block mounting (3)
W	Double rod (4)

Bore size

075	3/4"
088	7/8"
106	1 1/16"
125	1 1/4"
150	1 1/2"
200	2" (4, 5)

Standard stroke
Inches (6)

Stroke
Hundredths of an inch
(i.e. 06 = 0.06")

Cushion

Nil	Without rubber bumper
C(7)	Rubber bumper

Action

Nil	Double acting
S	Single acting, Spring return
T	Single acting, Spring extend

Rod boot

J	Nylon tarpaulin
K	Heat resistant tarpaulin

Auto switch

Nil	Without auto switch

* For the applicable auto switch model, refer to the table on page 6-14-6.

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Option
Note) Please refer to page 6-14-3 for additional options.

Note 1) Not available with block mount (R).
Note 2) Not available with spring extend (T), double rod (W), block mount (R), rod boot, or ø2".
Note 3) Not offered in ø7/8", ø1 1/4", or ø2" or with rod boot.
Note 4) Double acting only.
Note 5) Not available as standard with C, R mount, with rod boot.
Note 6) See specifications for standard and maximum stroke lengths.
Note 7) Rubber cushions are offered at no additional cost on ø7/8" and ø1 1/4". They are options on the other bore sizes. The "C" after the bore size must be included in either case. Cushion affects cylinder overall length of some models. Refer to dimensional data.

Auto Switch Specifications/Option Compatibility

Applicable Auto Switch/Refer to page 6-16-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC		Load voltage AC	Auto switch model	Lead wire length (m)* 0.5 (Nil)	3 (L)	5 (Z)	None (N)	Pre-wire connector	Applicable load	
Reed switch	—	Grommet	Yes	2-wire	24 V	12 V	100 V	C73	●	●	●	—	—	—	Relay, PLC
			No			5 V, 12 V	100 V or less	C80	●	●	—	—	—	IC circuit	
			Yes			12 V	—	B53	●	●	●	—	—	—	PLC
							100 V, 200 V	B54	●	●	●	—	—		Relay, PLC
			No				200 V or less	B64	●	●	—	—	—		
		Connector	Yes				—	C73C	●	●	●	●	—		
			No			5 V, 12 V	24 V or less	C80C	●	●	●	●	—	IC circuit	
	Diagnostic indication (2-color indication)	Grommet	Yes			—	—	B59W	●	●	—	—	—	—	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	H7A1	●	●	○	—	○	IC circuit	Relay, PLC
				3-wire (PNP)				H7A2	●	●	○	—	○		
				2-wire		12 V		H7B	●	●	○	—	○	—	
		Connector						H7C	●	●	●	●	—		
	Diagnostic indication (2-color indication)	Grommet		3-wire (NPN)		5 V, 12 V		H7NW	●	●	○	—	○	IC circuit	
				3-wire (PNP)				H7PW	●	●	○	—	○		
				2-wire		12 V		H7BW	●	●	○	—	○	—	
	Water resistant (2-color indication)							H7BA	—	●	○	—	○		
	With diagnostic output (2-color indication)			4-wire (NPN)		5 V, 12 V		H7NF	●	●	○	—	○	IC circuit	
	—			3-wire (NPN)				G59	●	●	○	—	○		
				2-wire		12 V		K59	●	●	○	—	○		

* Lead wire length symbols: 0.5 m ····· Nil (Example) C73C
3 m ····· L (Example) C73CL
5 m ····· Z (Example) C73CZ
None ····· N (Example) C73CN

* Solid state switches marked with "○" are produced upon receipt of order.

• For details about auto switches with pre-wire connector, refer to page 6-16-60.

Option Compatibility

	Description	Note	NCM – Standard	NCDM	NCMW	NCMK	NCM-*J	NCM-*K	S	T	C	XB6	XB7	XB9	XC6
NCM	Standard		–												
NCDM	Auto switch capable		O	–											
NCMW	Double rod		O	O	–										
NCMK	Non-rotating	1	O	O	S	–									
NCM-*J	Nylon rod boot	1	O	O	S	S	–								
NCM-*K	Neoprone rod boot	1	O	O	S	S	N	–							
S	Spring return	1	O	O	S	S	S	S	–						
T	Spring extend	1	O	O	S	S	S	S	N	–					
C	Rubber bumper	2	O	O	O	S	S	O	N	O	–				
XB6	Heat resistant	1	O	S	O	N	S	S	O	N	N	–			
XB7	Cold resistant	1	O	S	O	N	S	S	N	N	N	N	–		
XB9	Low speed	1	O	O	S	N	S	S	N	N	O	N	N	–	
XC6	Stainless steel rod	3, 4	O	O	O	O	O	O	N	O	O	O	O	O	–
B	Rod side nose mounting		O	O	O	O	O	O	O	O	O	O	O	O	O
C	Head side pivot mounting	1	O	O	N	O	O	O	O	O	O	O	O	O	O
E	Double end mounting		O	O	N	O	O	O	O	O	O	O	O	O	O
R	Block mounting	1, 5, 6	O	O	S	S	N	N	O	O	O	S	S	O	O

O ····· Combination available to order
S ····· Available with special request
N ····· Not available

Note 1) This table is not applicable for ø200.
Note 2) Rubber cushion no additional charge on ø088 and ø125.
Note 3) Stainless steel rod standard on ø075 and ø088. Use XC6 option to get stainless steel rod nut.
Note 4) Non-rotating rod is stainless steel. Use XC6 option to get stainless steel rod nut.
Note 5) Block mount not available in ø088 and ø125.
Note 6) Block, Auto switch capable, S and T only available as special.

Specifications: Double Acting, Single Rod/Double Rod

Specifications

Bore size (in)	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 °F					
Piston speed	No bumper: 2 to 20 in/sec (50 to 500 mm/sec) Rubber bumper: 2 to 30 in/sec (50 to 750 mm/sec)					
Rubber bumper	Option (No additional charge on 7/8" and 1 1/4" bore)					
Lubrication	Not required (Pre-lubricated at Factory)					
Mounting	B, C, E, R					

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

Standard Stroke

(in)

Mounting	Standard stroke	Max. stroke as standard	Long stroke
Rod side nose (B)	1/2, 1, 2, 3, 4, 5, 6	12	40
Double end (E)	1/2, 1, 2, 3, 4, 5, 6	32	40
Head side pivot (C)	7, 8, 10, 12		
Double rod (W)	1/2, 1, 2, 3, 4, 5, 6	12	20
Block mount (R)	1/2, 1, 1 1/2, 2, 3, 4, 5, 6	12	40

Note) Minimum stroke for mounting auto switches: 0.6 inch for 2 switches, 0.4 inch for one switch.

Specifications: Double Acting, Single Rod, Non-rotating Rod

Specifications

Bore size (in)	075 (3/4")	088 (7/8")	106 (1 1/16")	125 (1 1/4")	150 (1 1/2")
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 °F				
Piston speed	2 to 20 in/sec/50 to 500 mm/sec				
Rod material	Stainless steel 304 (JIS)				
Rubber bumper	Option (No additional charge on 7/8" and 1 1/4" bore)				
Non-rotating accuracy	±2.0°		± 1.4°		
Maximum allowable torque	0.04 ft·Lbf (0.06 N·m)		0.09 ft·Lbf (0.13 N·m)	0.12 ft·Lbf (0.16 N·m)	

Standard Stroke

(in)

Mounting	Standard stroke	Max. stroke as standard	Long stroke
Rod side nose (B)	1/2, 1, 2, 3, 4, 5, 6	12	40
Double end (E) Head side pivot (C)	1/2, 1, 2, 3, 4, 5, 6 7, 8, 10, 12	32	40

Note 1) Minimum stroke for mounting auto switches: 0.6 inch for 2 switches, 0.4 inch for one switch.
Note 2) Spring return up to 18" available as special request

Specifications: Single Acting, Spring Return, Spring Extend

Specifications

Bore size (in)	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	25 PSI/0.18 MPa					
Ambient and fluid temperature	40 to 140°F/5 to 60 °F					
Piston speed	2 to 20 in/sec/50 to 500 mm/s					
Rubber bumper	Option (No additional charge on 7/8" and 1 1/4" bore)					
Lubrication	Not required (Pre-lubricated at Factory)					
Mounting	B, C, E, R					

Note) R mount available on 3/4", 1 1/16", and 1 1/2" bore only.

Standard Stroke

(in)

Mounting	Standard stroke	Maximum Stroke
Rod side nose (B)	1/2, 1, 1 1/2, 2, 3, 4	6
Double end (E)		
Head side pivot (C)		
Block mount (R)		

Note) Up to 18" available as special request.

Specifications: Single Acting Spring Return, Non Rotating Rod

Specifications

Bore size (in)	075 (3/4")	088 (7/8")	106 (1 1/16")	125 (1 1/4")	150 (1 1/2")
Fluid	Air				
Maximum operating pressure	250 PSI/1.7 MPa				
Minimum operating pressure	25 PSI/0.18 MPa				
Ambient and fluid temperature	40 to 140°F/5 to 60 °F				
Piston speed	2 to 20 in/sec/50 to 500 mm/s				
Rod material	Stainless steeel 304				
Rubber bumper	Option (No additional charge on 7/8" and 1 1/4" bore)				
Non-rotating accuracy	± 2.0°		± 1.4°		
Maximum allowable torque	0.04 ft·Lbf (0.06 N·m)		0.09 ft·Lbf (0.13 N·m)	0.12 ft·Lbf (0.16 N·m)	

Standard Stroke Availability

(in)

Mounting	Standard stroke	Max. stroke
Rod side nose (B)	1/2, 1, 2, 3, 4, 5, 6	6
Double end mounting (E)	1/2, 1, 2, 3, 4, 5, 6	8
Head side pivot (C)	1/2, 1, 2, 3, 4, 5, 6	

Note 1) Minimum stroke for mounting auto switches: 0.6 inch for 2 switches, 0.4 inch for one switch.
Note 2) Spring Return up to 18" available as special request.

Specifications: Rod Boot

Rod Boot Material

Symbol	Material	Maximum ambient temperature
J	Nylon tarpaulin	140°F (60°C)
K	Heat resistant tarpaulin	230°F (110°C)*

* Maximum ambient temperature is for the rod boot only.

Maximum Stroke

Bore size (in)	Maximum stroke
3/4, 7/8, 1 1/16	12 STD.—16 Max.
1 1/4, 1 1/2, 2	12 STD.—26 Max.

Parts No. of Auto Switch Mounting Band

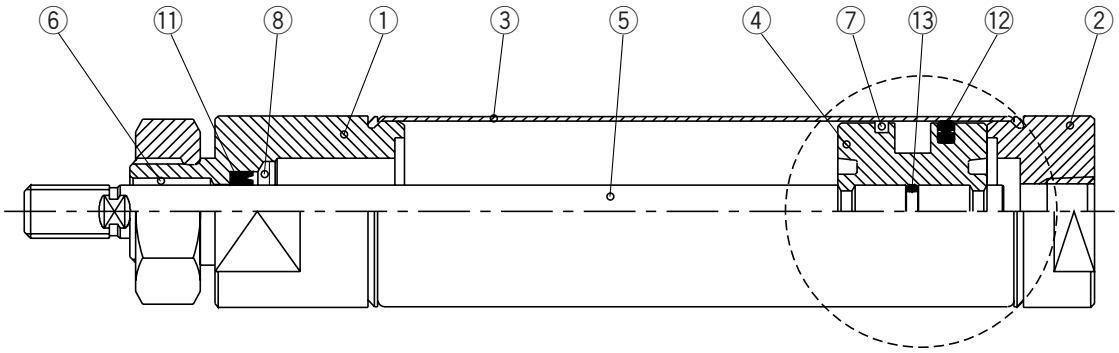
Auto switch part number	Bore size				
	075	**088**	**106**	**125**	**150**
D-G59, D-B54, D-B64, D-K59, D-B53	NBA-075	NBA-088	NBA-106	NBA-125	NBA-150
D-C73 D-H7A1	NBM2-075	NBM2-088	NBM2-106	NBM2-125	NBM2-150

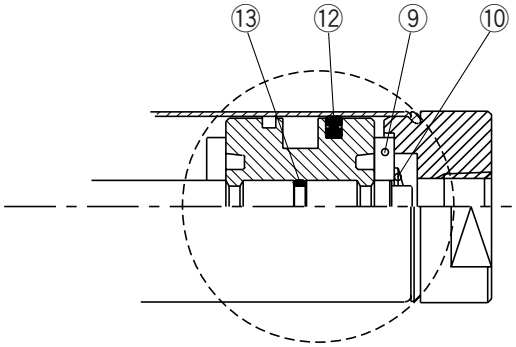
Minimum Stroke for Auto Switches Mounting (NCDM)

(in)

Auto switch model	Number of switches				
	2		n		1
	On different surfaces	On the same surfaces	On different surfaces	On the same surfaces	
D-C7 D-C8	0.6	2.3	$0.6 + 1.8(\frac{n-2}{2})$ (n = 2, 4, 6···)	2.3 + 1.8(n – 2)	0.4
D-H7□ D-H7□W D-H7BAL D-H7NF	0.6	2.3			0.4
D-C73C C-C80C D-H7C	0.6	3.1	$0.6 + 2(\frac{n-2}{2})$ (n = 2, 4, 6···)	3.1 + 2(n – 2)	0.4
D-H7LF	0.8	2.8	$0.8 + 2(\frac{n-2}{2})$ (n = 2, 4, 6···)	2.8 + 2(n – 2)	0.4
D-B5 D-B6	0.6	2.7	$0.6 + 2(\frac{n-2}{2})$ (n = 2, 4, 6···)	2.7 + 2.2(n – 2)	0.4
D-B59W	0.8	2.9	$0.8 + 2(\frac{n-2}{2})$ (n = 2, 4, 6···)	2.9 + 2.2(n – 2)	0.6
D-G59 D-K59	0.6	2.8	$0.6 + 2(\frac{n-2}{2})$ (n = 2, 4, 6···)	2.8 + 2(n – 2)	0.4

Construction: Double Acting, Single Rod



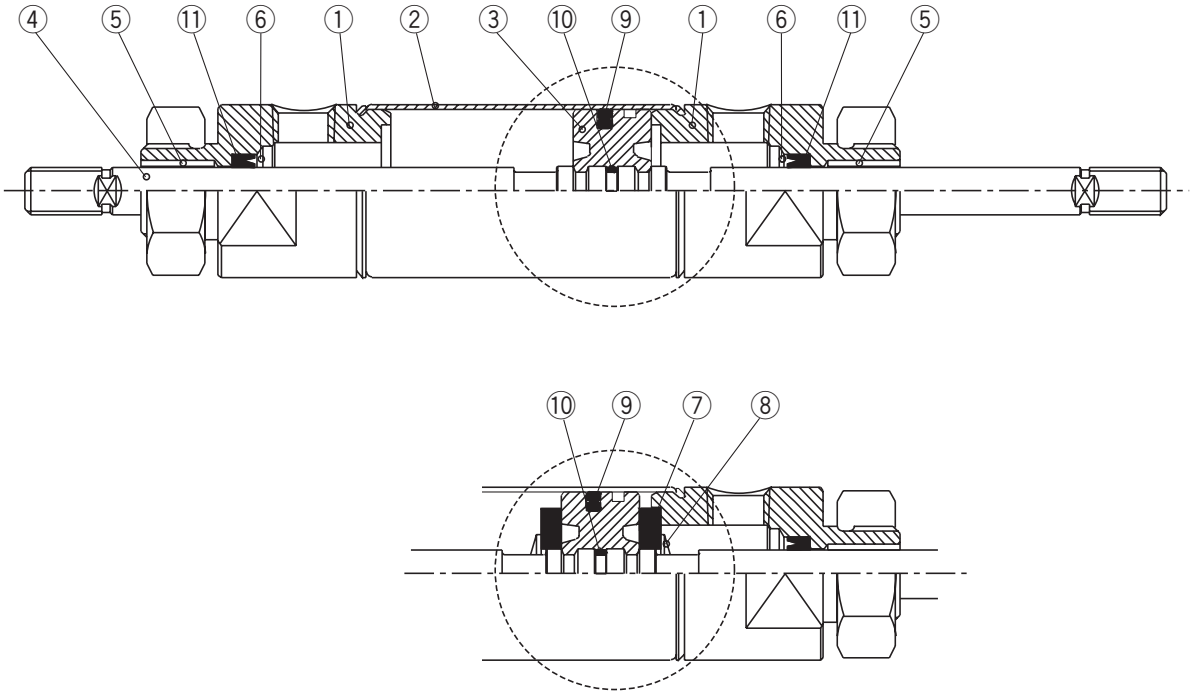


With rubber bumper

Component Parts

No.	Description		Material	Note
①	Rod cover		Aluminum alloy	Clear anodized
②	Head cover		Aluminum alloy	Clear anodized
③	Cylinder tube		Stainless steel	Stainless steel 304
④	Piston		Aluminum alloy	Chromated
⑤	Piston rod	3/4", 7/8"	Stainless steel	—
		1 1/16", 1 1/2", 1 1/4", 2"	Carbon steel	Hard chrome plated
⑥	Bushing		Sintered BR	—
⑦	Wear ring		Phenolic resin	—
⑧	Snap ring		Spring steel	—
⑨	Rubber bumper		Urethane	—
⑩	Snap ring		Spring steel	—
⑪	Rod seal		NBR	—
⑫	Piston seal		NBR	—
⑬	Piston gasket		NBR	—

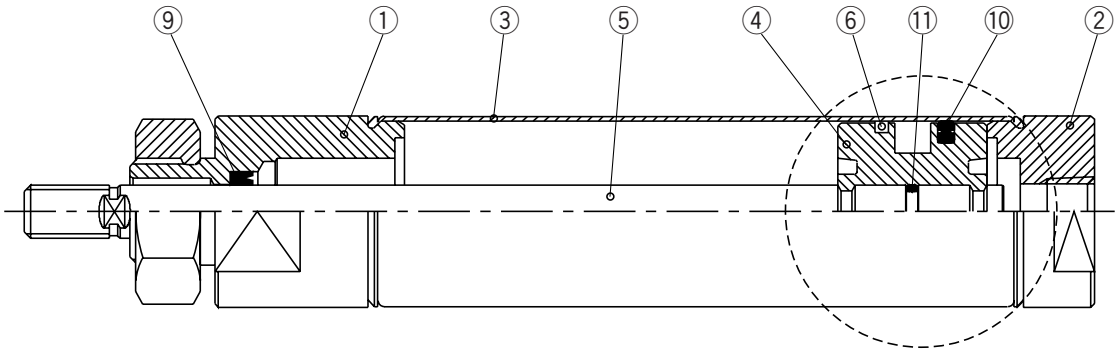
Construction: Double Acting, Double Rod

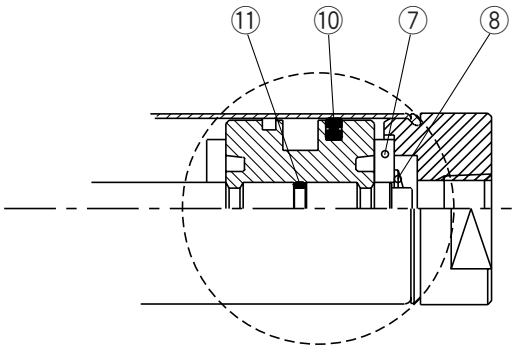


Component Parts

No.	Description		Material	Note
①	Rod cover		Aluminum alloy	Clear anodized
②	Cylinder tube		Stainless steel	Stainless steel 304
③	Piston		Aluminum alloy	Chromated
④	Piston rod	3/4", 7/8"	Stainless steel	—
		1 1/16", 1 1/2", 1 1/4", 2"	Carbon steel	Hard chrome plated
⑤	Bushing		Sintered BR	—
⑥	Snap ring		Spring steel	—
⑦	Rubber bumper		Urethane	—
⑧	Snap ring		Spring steel	—
⑨	Piston seal		NBR	—
⑩	Piston gasket		NBR	—
⑪	Rod seal		NBR	—

Construction: Double Acting, Single Rod, Non-rotating



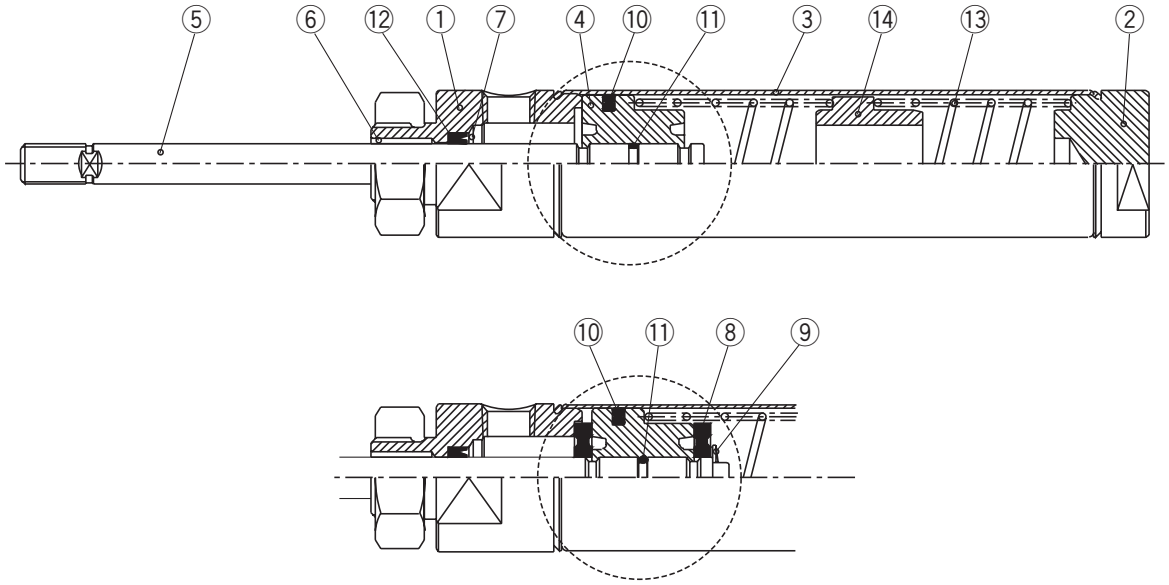


With rubber bumper

Component Parts

No.	Description	Material	Note
①	Rod cover	Aluminum alloy	Clear anodized
②	Head cover	Aluminum alloy	Clear anodized
③	Cylinder tube	Stainless steel	Stainless steel 304
④	Piston	Aluminum alloy	Chromated
⑤	Piston rod	Stainless steel	—
⑥	Wear ring	Phenolic resin	—
⑦	Rubber bumper	Urethane	—
⑧	Snap ring	Spring steel	—
⑨	Rod seal	NBR	—
⑩	Piston seal	NBR	—
⑪	Piston gasket	NBR	—

Construction: Single Acting, Spring Extend

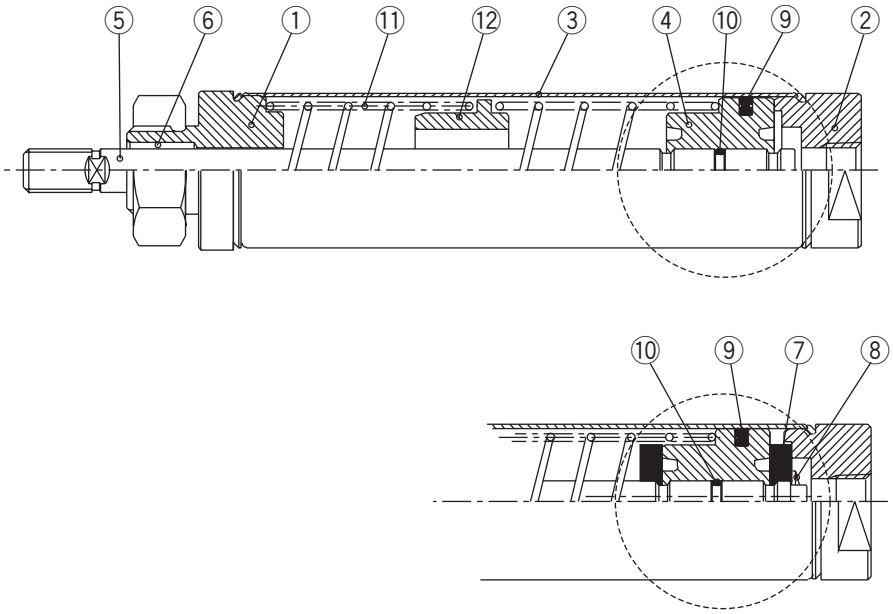


With rubber bumper

Component Parts

No.	Description		Material	Note
①	Rod cover		Aluminum alloy	Clear anodized
②	Head cover		Aluminum alloy	Clear anodized
③	Cylinder tube		Stainless steel	Stainless steel 304
④	Piston		Aluminum alloy	Chromated
⑤	Piston rod	3/4", 7/8"	Stainless steel	—
		1 1/16", 1 1/2", 1 1/4", 2"	Carbon steel	Hard chrome plated
⑥	Bushing		Sintered BR	—
⑦	Snap ring		Spring steel	—
⑧	Rubber bumper		Urethane	—
⑨	Snap ring		Spring steel	—
⑩	Piston seal		NBR	—
⑪	Piston gasket		NBR	—
⑫	Rod seal		NBR	—
⑬	Spring		Piano wire	Chromated
⑭	Spring guide		Aluminum alloy	Chromated

Construction: Single Acting, Spring Return



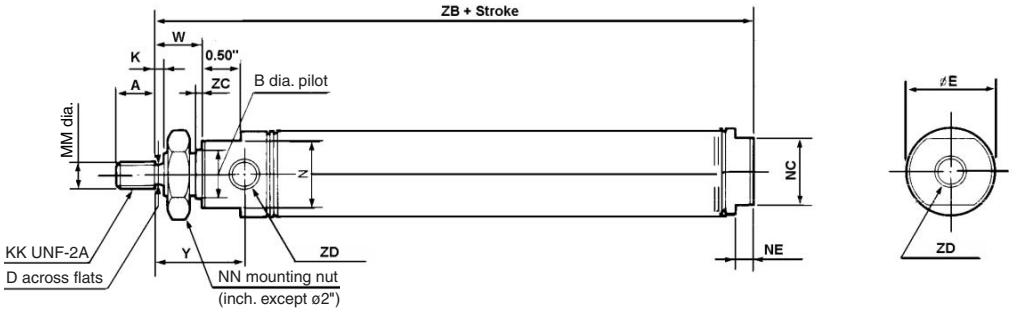
With rubber bumper

Component Parts

No.	Description		Material	Note
①	Rod cover		Aluminum alloy	Clear anodized
②	Head cover		Aluminum alloy	Clear anodized
③	Cylinder tube		Stainless steel	Stainless steel 304
④	Piston		Aluminum alloy	Chromated
⑤	Piston rod	3/4", 7/8"	Stainless steel	—
		1 1/16", 1 1/2", 1 1/4", 2"	Carbon steel	Hard chrome plated
⑥	Bushing		Sintered BR	—
⑦	Rubber bumper		Urethane	—
⑧	Snap ring		Spring steel	—
⑨	Piston seal		NBR	—
⑩	Piston gasket		NBR	—
⑪	Spring		Piano wire	Chromated
⑫	Spring guide		Aluminum alloy	Chromated

Dimensions: Double Acting, Single Rod

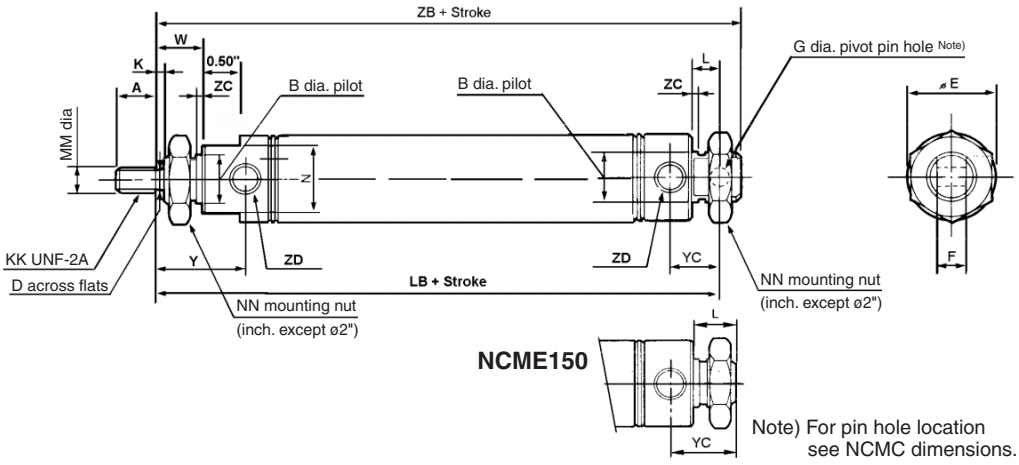
Double acting, single rod
Rod side nose mounting: NC(D)MB



(in)

Bore size (in)	MM	KK	A	B	D	E	K	N	NC	NE	NN	W	Y	ZC	ZD	ZB No bumper	ZB Bumper
075 (3/4")	0.250	1/4-28	0.50	0.624	—	0.86	—	0.75	0.62	0.12	5/8-18	0.50	0.95	0.09	1/8 NPTF	2.97	2.97
088 (7/8")	0.250	1/4-28	0.50	0.624	—	0.93	—	0.75	0.75	0.18	5/8-18	0.50	0.95	0.09	1/8 NPTF	2.69	2.94
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.25	1.12	0.12	0.88	0.88	0.24	5/8-18	0.62	1.17	0.09	1/8 NPTF	3.25	3.38
125 (1 1/4")	0.437	7/16-20	0.75	0.749	0.38	1.32	0.25	1.06	1.06	0.25	3/4-16	0.88	1.62	0.09	1/8 NPTF	3.75	4.00
150 (1 1/2")	0.437	7/16-20	0.75	0.749	0.38	1.56	0.25	1.25	1.25	0.25	3/4-16	0.88	1.50	0.09	1/8 NPTF	3.69	3.82
200 (2")	0.625	1/2-20	0.88	1.374	0.50	2.06	0.38	1.75	1.75	0.31	1 1/4-12	1.19	1.19	0.12	1/4 NPTF	4.69	4.95

Double acting, single rod
Double end mounting: NC(D)ME



Note) For pin hole location see NCMC dimensions.

(in)

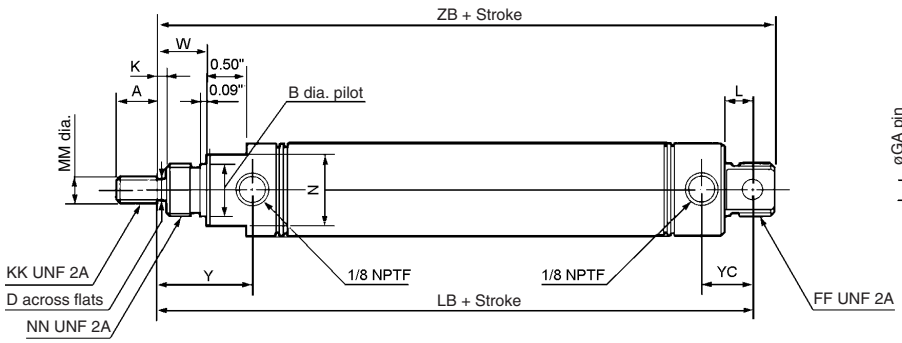
No bumper			Bumper	
Bore (in)	LB	ZB	LB	ZB
075 (3/4")	3.75	4.03	3.75	4.03
088 (7/8")	3.31	3.59	3.56	3.84
106 (1 1/16")	3.84	4.12	3.97	4.25
125 (1 1/4")	4.47	4.87	4.72	5.12
150 (1 1/2")	—	4.5	—	4.63
200 (2")	5.62	6.06	5.88	6.32

(in)

Bore size (in)	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	—	0.86	0.38	0.251	—	0.34	0.75	5/8-18	0.50	0.95	0.62	0.09	1/8 NPTF
088 (7/8")	0.250	1/4-28	0.50	0.624	—	0.93	0.38	0.251	—	0.34	0.75	5/8-18	0.50	0.95	0.62	0.09	1/8 NPTF
106 (1 1/16")	0.312	5/16-24	0.50	0.624	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 NPTF
125 (1 1/4")	0.437	7/16-20	0.75	0.749	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 NPTF
150 (1 1/2")	0.437	7/16-20	0.75	0.749	0.38	1.56	—	—	0.25	0.63	1.25	3/4-16	0.88	1.50	0.91	0.09	1/8 NPTF
200 (2")	0.625	1/2-20	0.88	1.374	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 NPTF

Dimensions: Double Acting, Single Rod

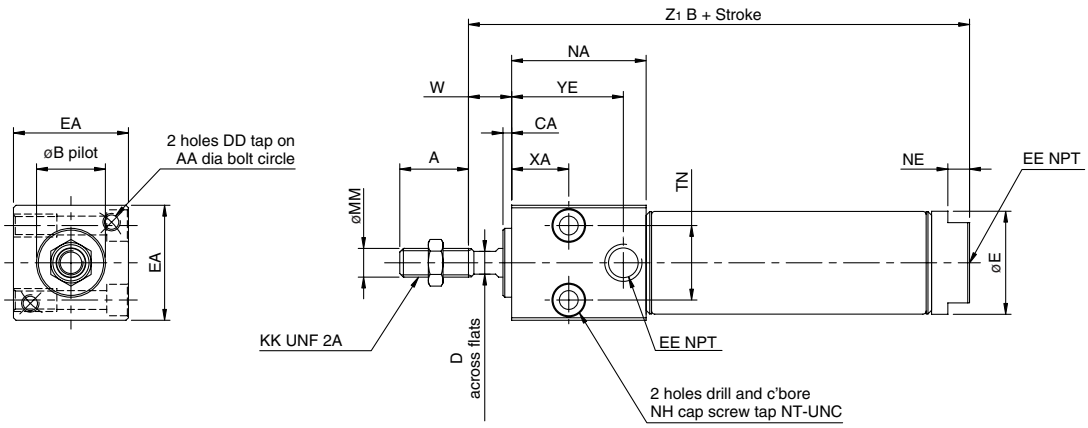
Double acting, single rod
Head side pivot mounting: NC(D)MC



(in)

Bore size (in)	MM	KK	A	B	D	E	F	FF	GA	GB	K	L	N	NN	W	Y	YC	No bumper		Bumber	
																		LB	ZB	LB	ZB
075 (3/4")	0.250	1/4-28	0.50	0.624	—	0.86	0.38	5/8-18	0.250	0.75	—	0.34	0.75	5/8-18	0.50	0.95	0.62	3.75	4.03	3.75	4.03
088 (7/8")	0.250	1/4-28	0.50	0.624	—	0.93	0.38	5/8-18	0.250	0.75	—	0.34	0.75	5/8-18	0.50	0.95	0.62	3.31	3.59	3.56	3.84
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.25	1.12	0.38	5/8-18	0.250	0.75	0.12	0.34	0.88	5/8-18	0.62	1.17	0.62	3.84	4.12	3.97	4.25
125 (1 1/4")	0.437	7/16-20	0.75	0.749	0.38	1.32	0.50	5/8-18	0.250	0.75	0.25	0.41	1.06	3/4-16	0.88	1.62	0.78	4.47	4.87	4.72	5.12
150 (1 1/2")	0.437	7/16-20	0.75	0.749	0.38	1.56	0.62	—	0.375	1.00	0.25	0.50	1.25	3/4-16	0.88	1.50	0.78	4.38	4.75	4.51	4.88

Double acting, single rod
Block mounting: NC(D)MR



(in)

Bore size (in)	MM	KK	A	AA	B	CA	D	DD	E	EA	EE	NA	NE	NH	NT	TN	WF	YE	XA
075 (3/4")	0.250	1/4-28	0.75	1.00	0.625	0.093	0.22	10-32 UNF	0.81	1.00	1/8	1.12	0.12	10-32 UNF	1/4-20	0.62	0.34	0.88	0.38
106 (1 1/16")	0.312	3/16-24	0.75	1.25	0.750	0.093	0.25	10-32 UNF	1.12	1.25	1/8	1.47	0.24	10-32 UNF	1/4-20	0.81	0.47	1.22	0.62
150 (1 1/2")	0.437	7/16-20	1.25	1.75	1.00	0.125	0.38	1/4-20 NUC	1.56	1.75	1/4	1.93	0.25	1/4-20 NUC	5/16-18	1.12	0.38	1.57	0.88

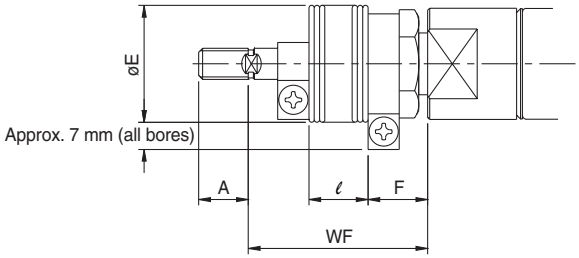
Block Mounting Type

(in)

Bore	ZB1		ZB2		ZB3		ZC1		ZC2	
	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper
075 (3/4")	3.22	3.22	2.66	2.66	2.35	2.35	1.69	1.69	2.69	2.69
106 (1 1/16")	3.75	3.88	3.38	3.51	2.93	3.06	1.81	1.94	2.81	2.94
150 (1 1/2")	4.19	4.32	3.69	3.82	3.69	3.82	2.00	2.13	3.00	3.13

Note) Length not affected by addition of magnet

Dimensions: Rod Boot



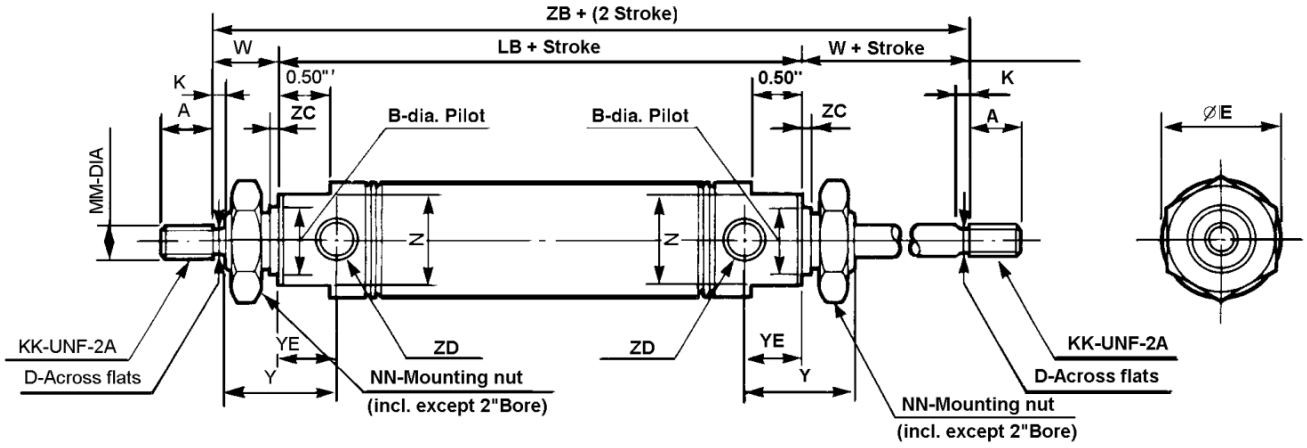
(in)

Bore size (in)	A	øe	f	Wf										
				0 to 2	2.1 to 4	4.1 to 6	6.1 to 8	8.1 to 10	8.1 to 10	12.1 to 14	14.1 to 16	16.1 to 20	20.1 to 24	24.1 to 28
075 (3/4")	0.50	1.18	0.51	1.81	2.31	2.81	3.31	3.81	4.31	4.81	5.31	—	—	—
088 (7/8")	0.50	1.18	0.51	1.81	2.31	2.81	3.31	3.81	4.31	4.81	5.31	—	—	—
106 (1 1/16")	0.50	1.18	0.51	1.81	2.31	2.81	3.31	3.81	4.31	4.81	5.31	—	—	—
125 (1 1/4")	0.75	1.38	0.55	1.94	2.44	2.94	3.44	3.94	4.44	4.94	5.44	6.44	7.44	8.44
150 (1 1/2")	0.75	1.38	0.55	1.94	2.44	2.94	3.44	3.94	4.44	4.94	5.44	6.44	7.44	8.44

(in)

Bore size (in)	ℓ										
	0 to 2	2.1 to 4	4.1 to 6	6.1 to 8	8.1 to 10	8.1 to 10	12.1 to 14	14.1 to 16	16.1 to 20	20.1 to 24	24.1 to 28
075 (3/4")	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	—	—	—
088 (7/8")	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	—	—	—
106 (1 1/16")	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	—	—	—
125 (1 1/4")	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00
150 (1 1/2")	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00

Dimensions: Double Acting, Double Rod



(in)

Bore size (in)	MM	KK	A	B	D	E	K	N	NN	W	Y	YE	ZC	ZD
075 (3/4")	0.250	1/4-28	0.50	0.624	—	0.86	—	0.75	5/8-18	0.50	0.95	0.45	0.09	1/8 NPTF
088 (7/8")	0.250	1/4-28	0.50	0.624	—	0.93	—	0.75	5/8-18	0.50	0.95	0.45	0.09	1/8 NPTF
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.25	1.12	0.12	0.88	5/8-18	0.62	1.05	0.55	0.09	1/8 NPTF
125 (1 1/4")	0.437	7/16-20	0.75	0.749	0.38	1.32	0.25	1.06	3/4-16	0.88	1.37	0.74	0.09	1/8 NPTF
150 (1 1/2")	0.437	7/16-20	0.75	0.749	0.38	1.56	0.25	1.25	3/4-16	0.88	1.25	0.62	0.09	1/8 NPTF
200 (2")	0.625	1/2-20	0.88	1.374	0.50	2.06	0.38	1.75	1 1/4-12	1.19	1.91	0.72	0.12	1/4 NPTF

Double Acting Double Rod

(in)

Bore	No bumper		Bumper	
	LB	**ZB**	**LB**	**ZB**
075 (3/4")	3.00	4.00	3.00	4.00
088 (7/8")	2.66	3.66	2.91	3.91
106 (1 1/16")	2.75	4.00	2.88	4.13
125 (1 1/4")	3.56	5.31	3.81	5.56
150 (1 1/2")	3.38	5.12	3.51	5.25
200 (2")	4.18	6.56	4.44	6.82

Note) Length not affected by addition of magnet except 106 bore.

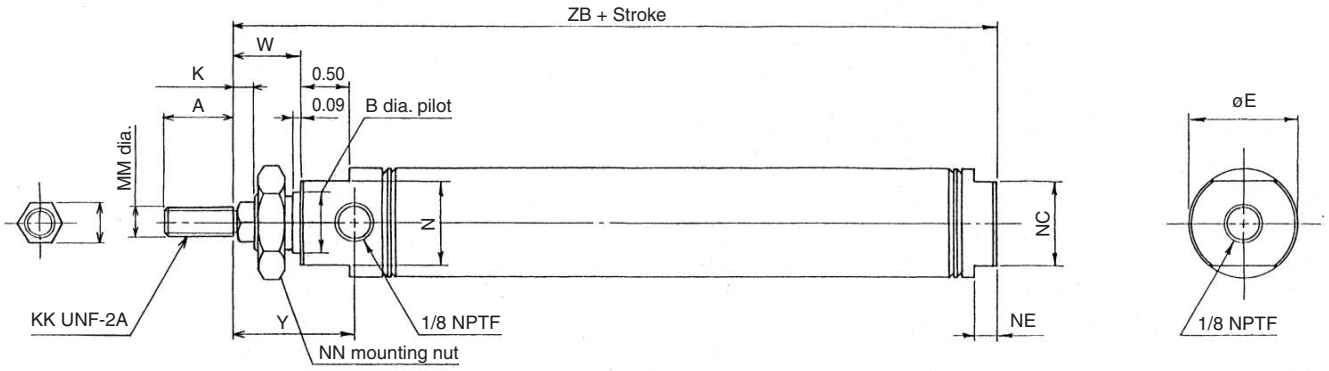
Double Acting Double Rod with Magnet (106 bore)

(in)

Bore	No bumper		Bumper	
	LB	**ZB**	**LB**	**ZB**
106 (1 1/16")	3.13	4.38	3.25	4.50

Dimensions: Non-rotating Rod, Double Acting, Single Rod

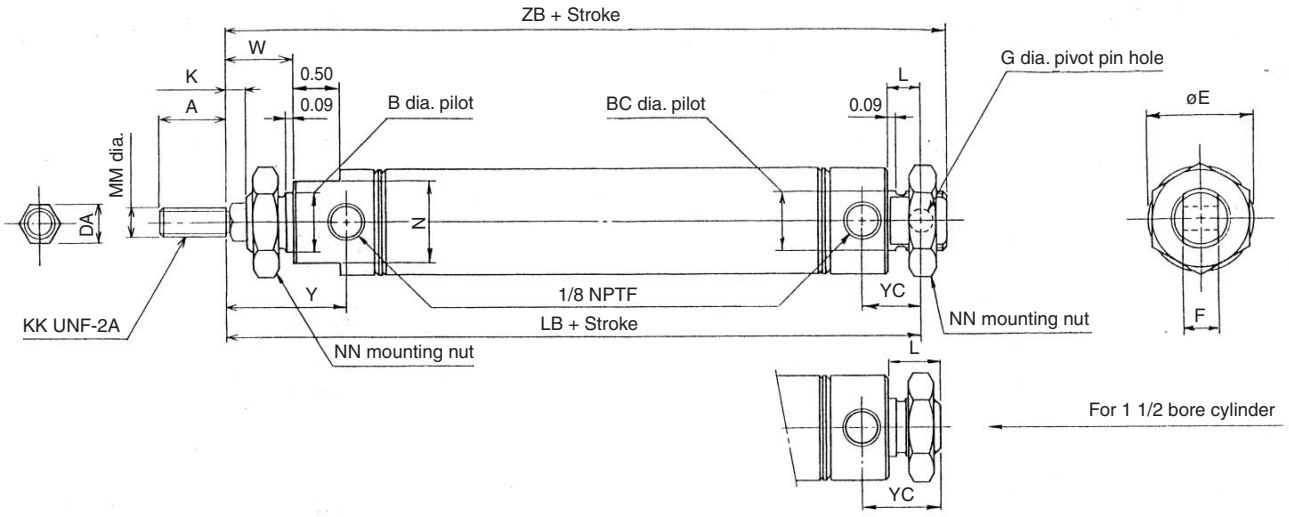
Non-rotating rod
Rod side nose mounting: NC(D)MKB



(in)

Bore size (in)	MM	KK	A	B	DA	E	K	N	NC	NE	NN	W	Y	ZB	
														No bumper	Bumper
075 (3/4")	0.250	1/4-28	0.50	0.624	0.25	0.86	0.25	0.75	0.62	0.12	5/8-18	0.75	1.20	3.22	3.32
088 (7/8")	0.250	1/4-28	0.50	0.624	0.25	0.93	0.25	0.75	0.75	0.18	5/8-18	0.75	1.20	2.94	3.19
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.38	1.12	0.25	0.88	0.88	0.24	5/8-18	0.75	1.30	3.38	3.52
125 (1 1/4")	0.375	3/8-24	0.88	0.749	0.44	1.32	0.25	1.06	1.06	0.25	3/4-16	0.88	1.62	3.75	4.00
150 (1 1/2")	0.375	3/8-24	0.88	0.874	0.44	1.56	0.38	1.25	1.25	0.25	7/8-14	1.12	1.81	4.00	4.13

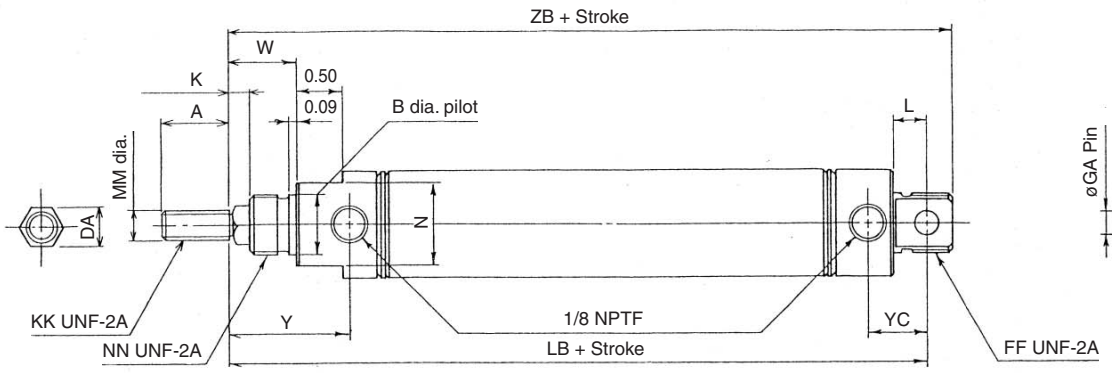
Non-rotating rod
Double end mounting: NC(D)MKE



Bore size (in)	MM	KK	A	B	BC	DA	E	F	G	K	L	N	NN	W	Y	YC	No bumper		Bumper	
																	LB	ZB	LB	ZB
075 (3/4")	0.250	1/4-28	0.50	0.624	0.624	0.25	0.86	0.38	0.251	0.25	0.34	0.75	5/8-18	0.75	1.20	0.62	4.00	4.28	4.00	4.28
088 (7/8")	0.250	1/4-28	0.50	0.624	0.624	0.25	0.93	0.38	0.251	0.25	0.34	0.75	5/8-18	0.75	1.20	0.62	3.55	3.83	3.81	4.09
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.624	0.38	1.12	0.38	0.251	0.25	0.34	0.88	5/8-18	0.75	1.30	0.62	3.97	4.25	4.11	4.39
125 (1 1/4")	0.375	3/8-24	0.88	0.749	0.749	0.44	1.32	0.50	0.251	0.25	0.41	1.06	3/4-16	0.88	1.62	0.78	4.46	4.86	4.72	5.12
150 (1 1/2")	0.375	3/8-24	0.88	0.874	0.749	0.44	1.56	—	—	0.38	0.63	1.25	7/8-14	1.12	1.81	0.91	—	4.81	—	4.94

Dimensions: Non-rotating Rod, Double Acting, Single Rod

Non-rotating rod
Head side pivot mounting: NC(D)MKC

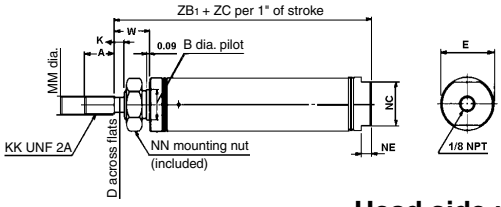


(in)

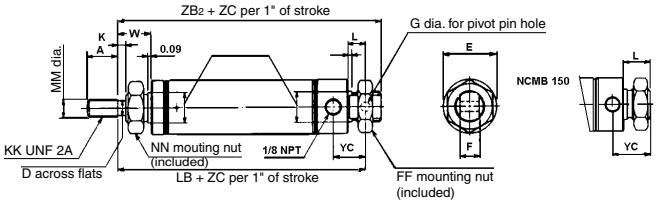
Bore size (in)	MM	KK	A	B	DA	E	F	FF	GA	GB	K	L	N	NN	W	Y	YC	No bumper		Bumper	
																		LB	ZB	LB	ZB
075 (3/4")	0.250	1/4-28	0.50	0.624	0.25	0.86	0.38	5/8-18	0.250	0.75	0.25	0.34	0.75	5/8-18	0.75	1.20	0.62	4.00	4.28	4.00	4.28
088 (7/8")	0.250	1/4-28	0.50	0.624	0.25	0.93	0.38	5/8-18	0.250	0.75	0.25	0.34	0.75	5/8-18	0.75	1.20	0.62	3.55	3.83	3.81	4.09
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.38	1.12	0.38	5/8-18	0.250	0.75	0.25	0.34	0.88	5/8-18	0.75	1.30	0.62	3.97	4.25	4.11	4.39
125 (1 1/4")	0.375	3/8-24	0.88	0.749	0.44	1.32	0.50	5/8-18	0.250	0.75	0.25	0.41	1.06	3/4-16	0.88	1.62	0.78	4.46	4.86	4.72	5.12
150 (1 1/2")	0.375	3/8-24	0.88	0.874	0.44	1.56	0.62	—	0.375	1.00	0.38	0.50	1.25	7/8-14	1.12	1.81	0.78	4.68	5.06	4.82	5.20

Dimensions: Single Acting, Single Return

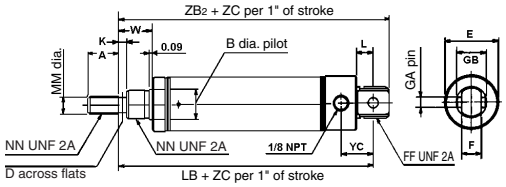
Rod side nose mounting
Spring return: NCMB□-□S



Double end mounting
Spring return: NCME□-□S



Head side pivot mounting
Spring return: NCMC□-□S



(in)

Bore size (in)	MM	KK	A	B	D	E	F	FF	G	GA	GB	K	NC	NE	NN	W	YC	ZC
075 (3/4")	0.250	1/4-28	0.50	0.496	—	0.86	0.38	5/8-18	0.251	0.250	0.75	—	0.62	0.12	1/2-20	0.44	0.62	1.69
088 (7/8")	0.250	1/4-28	0.50	0.624	—	0.93	0.38	5/8-18	0.251	0.250	0.75	—	0.75	0.18	5/8-18	0.50	0.62	1.56
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.25	1.12	0.38	5/8-18	0.251	0.250	0.75	0.12	0.88	0.24	5/8-18	0.62	0.62	1.56
125 (1 1/4")	0.437	7/16-20	0.75	0.749	0.38	1.32	0.50	3/4-16	0.251	0.250	0.75	0.25	1.06	0.25	3/4-16	0.88	0.78	1.81
150 (1 1/2")	0.437	7/16-20	0.75	0.749	0.38	1.56	0.62	3/4-16	0.376	0.375	1.00	0.25	1.25	0.25	3/4-16	0.88	0.78	1.69

Single Acting, Spring Return
B, C, E Mounting without Magnet

(in)

Bore (in)	LB		ZB1		ZB2	
	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper
075 (3/4")	2.28	2.28	1.50	1.50	2.56	2.56
088 (7/8")	2.22	2.47	1.59	1.84	2.50	2.75
106 (1 1/16")	2.66	2.79	2.06	2.19	2.94	3.07
125 (1 1/4")	3.13	3.38	2.41	2.66	3.53	3.78
150 (1 1/2")	3.12	3.25	2.44	2.57	3.50	3.63

Single Acting, Spring Return
B, C Mounting with Magnet

(in)

Bore (in)	LB		ZB1		ZB2	
	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper
075 (3/4")	2.41	1.53	1.63	1.75	2.69	2.81
088 (7/8")	2.47	2.59	1.84	1.97	2.75	2.88
106 (1 1/16")	2.79	2.91	2.19	2.32	3.06	3.19
125 (1 1/4")	3.38	3.50	2.66	2.78	3.79	3.91
150 (1 1/2")	3.25	3.38	2.56	2.68	3.63	3.75

Single Acting, Spring Return
E Mounting with Magnet

(in)

Bore (in)	LB		ZB2	
	No bumper	With bumper	No bumper	With bumper
075 (3/4")	2.41	2.53	2.69	2.81
088 (7/8")	2.47	2.59	2.75	2.88
106 (1 1/16")	2.79	2.91	3.06	3.19
125 (1 1/4")	3.38	3.50	3.79	3.91
150 (1 1/2")	—	—	3.38	3.50

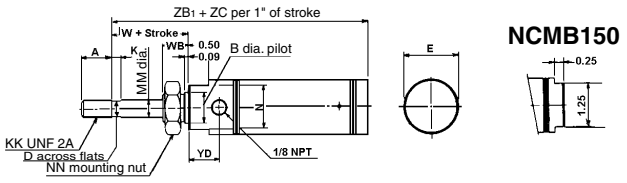
Single Acting, Spring Return
Non-rotating B, C, E Mounting without Magnet

(in)

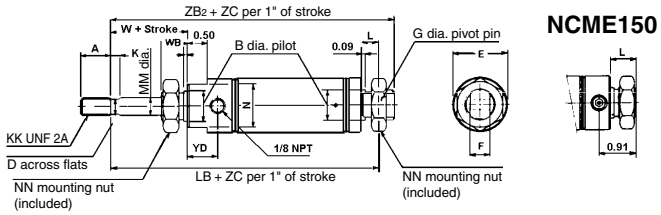
Bore (in)	LB		ZB1		ZB2		KK	MM
	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper		
075 (3/4")	2.53	2.53	1.75	1.75	2.81	2.81	1/4-28	0.250
088 (7/8")	2.47	2.72	1.84	2.09	2.75	3.00	1/4-28	0.250
106 (1 1/16")	2.78	2.91	2.18	2.31	3.06	3.19	5/16-24	0.312
125 (1 1/4")	3.13	3.38	2.41	2.66	3.53	3.78	3/8-24	0.375
150 (1 1/2")	3.25	3.37	2.57	2.69	3.63	3.75	3/8-24	0.375

Dimensions: Single Acting, Spring Extend

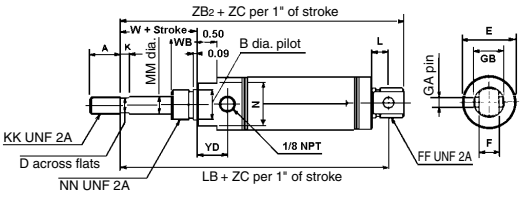
Rod side nose mounting
Spring extend: NCMB□-□T



Double end mounting
Spring extend: NCME□-□T



Head side pivot mounting
Spring extend: NCMC□-□T



(in)

Bore size (in)	MM	KK	A	B	D	E	F	FF	G	GA	GB	K	LB	N	NN	W	WB	YD	ZC
075 (3/4")	0.250	1/4-28	0.50	0.624	—	0.86	0.38	5/8-18	0.251	0.250	0.75	—	2.44	0.75	5/8-18	0.50	0.50	0.45	2.69
088 (7/8")	0.250	1/4-28	0.50	0.624	—	0.93	0.38	5/8-18	0.251	0.250	0.75	—	2.62	0.75	5/8-18	0.50	0.50	0.45	2.56
106 (1 1/16")	0.312	5/16-24	0.50	0.624	0.25	1.12	0.38	5/8-18	0.251	0.250	0.75	0.12	2.78	0.88	5/8-18	0.62	0.50	0.55	2.81
125 (1 1/4")	0.437	7/16-20	0.75	0.749	0.38	1.32	0.50	3/4-16	0.251	0.250	0.75	0.25	3.76	1.06	3/4-16	0.88	0.62	0.75	2.81
150 (1 1/2")	0.437	7/16-20	0.75	0.749	0.38	1.56	0.62	—	—	0.375	1.00	0.25	3.88	1.25	3/4-16	0.88	0.62	0.63	3.00

Single Acting, Spring Extend
B, C, E Mounting without Magnet

(in)

Bore (in)	LB		ZB1		ZB2	
	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper
075 (3/4")	2.44	2.44	2.10	2.10	2.72	2.72
088 (7/8")	2.37	2.62	2.02	2.27	2.66	2.91
106 (11/16")	2.78	2.91	2.42	2.55	3.06	3.19
125 (1 1/4")	3.51	3.76	3.09	3.34	3.91	4.16
150 (1 1/2")	3.88	4.01	3.16	3.29	4.26	4.39

Single Acting, Spring Extend
B, C, E Mounting with Magnet

(in)

Bore (in)	LB		ZB1		ZB2	
	No bumper	With bumper	No bumper	With bumper	No bumper	With bumper
075 (3/4")	2.56	2.69	2.23	2.36	2.85	2.97
088 (7/8")	2.62	2.75	2.27	2.40	2.91	3.03
106 (1 1/16")	2.91	3.03	2.55	2.68	3.19	3.31
125 (1 1/4")	3.76	3.88	3.34	3.47	4.19	4.29
150 (1 1/2")	4.00	4.12	3.29	3.41	4.38	4.50

Single Acting, Spring Extend
E Mounting with Magnet

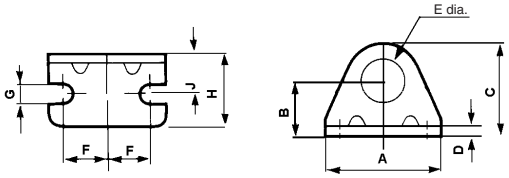
(in)

Bore (in)	LB		ZB2	
	No bumper	With bumper	No bumper	With bumper
075 (3/4")	2.56	2.69	2.85	2.97
088 (7/8")	2.62	2.75	2.91	3.03
106 (1 1/16")	2.91	3.03	3.19	3.31
125 (1 1/4")	3.76	3.88	4.16	4.21
150 (1 1/2")	—	—	4.12	4.25

Mounting Bracket Accessory

Foot bracket

Material: Rolled steel



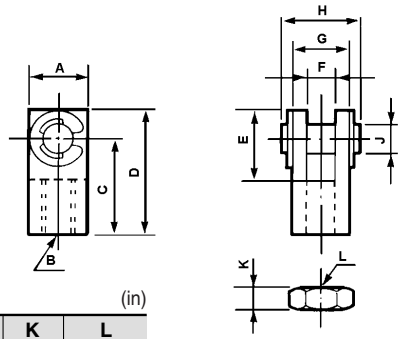
(in)

Part no.	Applicable bore	A	B	C	D	E	F	G	H	J
NCM-L075*	3/4", 7/8", 1 1/16"	1.89	0.81	1.36	0.12	0.63	0.75	0.27	0.98	0.56
NCM-L150	1 1/4", 1 1/2"	2.52	1.00	1.75	0.12	0.75	0.94	0.27	1.50	0.75
NCMK-L150	1 1/4", 1 1/2"	2.52	1.00	1.75	0.12	0.88	0.94	0.27	1.50	0.75
NCM-L200	2"	3.126	1.5	2.5	0.25	1.38	1.13	0.34	1.63	1.00

Note) NCM-L075 will not fit NCM*075*S (Single Acting). For this option use: NCM075-19-51046. (F dimension=0.51")

Rod clevis

Material: Carbon steel

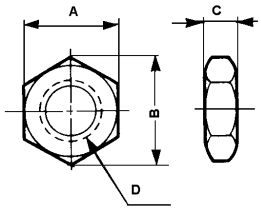


(in)

Part no.	Applicable bore	A	B	C	D	E	F	G	H	J	K	L
NY-075	3/4", 7/8"	0.51	1/4-28	0.94	1.18	0.69	0.25	0.51	0.71	0.25	0.16	1/4-28
NY-106	1 1/16"	0.51	5/16-24	0.94	1.18	0.69	0.25	0.51	0.71	0.25	0.19	5/16-24
NY-125	1 1/4", 1 1/2"	0.75	7/16-20	1.31	1.69	0.94	0.38	0.75	1.02	0.38	0.25	7/16-20
NY-G050	2"	0.75	1/2-20	1.32	1.69	0.94	0.38	0.75	1.02	0.38	0.31	1/2- 20

Jam nut (Rod thread)

Material: Carbon steel



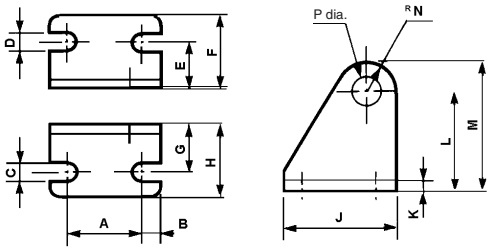
(in)

Part no.	Applicable bore	A	B	C	D
JM-025	3/4", 7/8"	0.44	0.51	0.16	1/4-28 UNF
JM-03	1 1/16"	0.50	0.50	0.19	5/16-24 UNF
JM-045	1 1/4", 1 1/2"	0.69	0.79	0.26	7/16-20 UNF
JM-04	1 1/4", 1 1/2" (Non-rotating)	0.56	0.65	0.23	3/8-24 UNF
JM-05	2"	0.75	0.87	0.32	1/2-20 UNF

Mounting Bracket Accessory

Material: Rolled steel

Pivot bracket (Head side pivot): NCMC

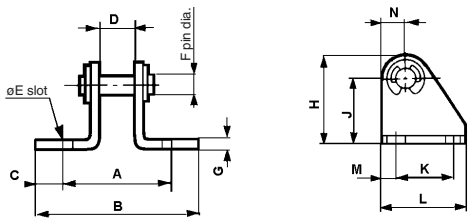


(in)

Part no.	Applicable bore	A	B	C	D	E	F	G	H	J	K	L	M	N	øP
NCM-PC075	3/4", 7/8", 1 1/16", 1 1/4"	0.75	0.18	0.27	0.27	0.44	0.79	0.44	0.79	1.101	0.12	0.88	1.18	0.31	0.255
NCM-PC150	1 1/2"	1	0.25	0.27	0.27	0.62	0.98	0.62	0.98	0.50	0.12	1.38	1.75	0.38	0.38

Material: Rolled steel

Pivot bracket (End mount): NCME

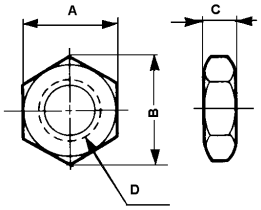


(in)

Part no.	Applicable bore	A	B	C	D	øE	F	G	H	J	K	L	M	N
NCM-PE075	3/4", 7/8" 1 1/16"	1.25	1.95	0.35	0.38	0.27	0.25	0.12	1.18	0.88	0.75	1.10	0.18	0.31
NCM-PE125	1 1/4", 1 1/2"	1.38	2.08	0.35	0.50	0.27	0.25	0.12	1.18	0.88	0.75	1.10	0.18	0.31
NCG-PC050	2"	2.12	3.00	0.44	0.75	0.27	0.38	0.24	1.75	1.38	1.00	1.50	0.25	0.37

Material: Carbon steel

Mounting nut (Nose mount thread)

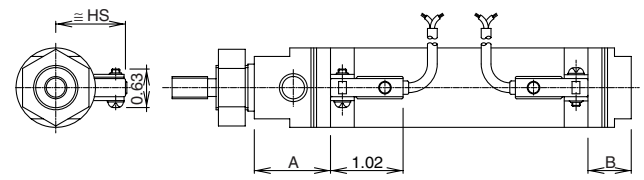


(in)

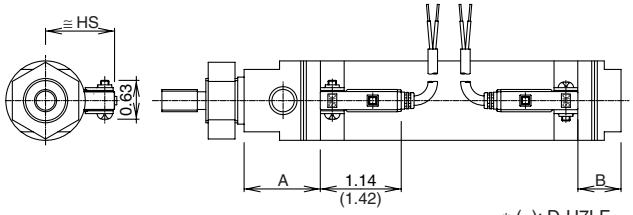
Part no.	Applicable bore	A	B	C	D
JM-08	3/4", 7/8" 1 1/16"	0.94	1.08	0.38	5/8-18 UNF
JM-10	1 1/4", 1 1/2"	1.12	1.30	0.42	3/4-16 UNF
JM-14	2"	1.61	1.86	0.43	1 1/4 -12 UNF

Double Acting/Single Rod/Band Mounting Auto Switch Mounting Position and Mounting Height

D-C7/C8

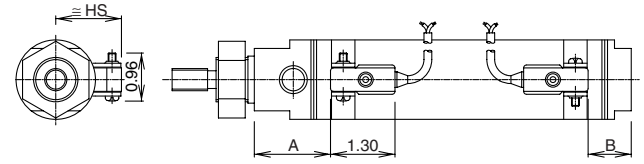


D-H7□/H7□W/H7□F/H7BAL□

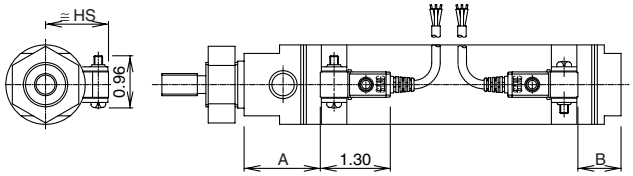


∗ ( ): D-H7LF

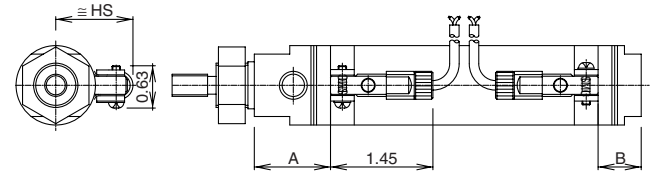
D-B5/B6/B59W



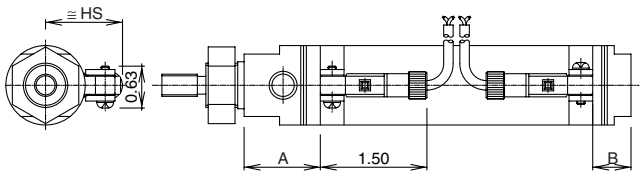
D-G59/K59

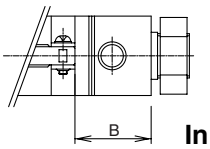


D-C73C/C80C



D-H7C





In case of NCDMC, NCDME

Auto Switch Mounting Position (NCDMB) (in)

Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	0.88	0.37	1.12	0.60	1.00	0.48	1.08	0.56	1.02	0.50	0.94	0.42
088 (7/8")	0.72	0.25	0.96	0.49	0.84	0.37	0.92	0.45	0.86	0.39	0.78	0.31
106 (1 1/16")	0.94	0.46	1.18	0.70	1.06	0.58	1.14	0.66	1.08	0.60	1.00	0.52
125 (1 1/4")	1.17	0.46	1.41	0.69	1.29	0.57	1.37	0.65	1.31	0.59	1.23	0.51
150 (1 1/2")	1.07	0.50	1.31	0.74	1.19	0.61	1.27	0.70	1.21	0.64	1.13	0.56
200 (2")	1.52	0.77	1.75	1.01	1.63	0.88	1.72	0.97	1.66	0.91	1.58	0.83

Auto Switch Mounting Position (NCDMC, NCDME) (in)

Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	0.88	0.80	1.12	1.03	1.00	0.91	1.08	1.00	1.02	0.94	0.94	0.86
088 (7/8")	0.72	0.53	0.96	0.76	0.84	0.64	0.92	0.72	0.86	0.66	0.78	0.59
106 (1 1/16")	0.94	0.70	1.18	0.94	1.06	0.81	1.14	0.90	1.08	0.84	1.00	0.76
125 (1 1/4")	1.17	0.79	1.41	1.02	1.29	0.90	1.37	0.98	1.31	0.92	1.23	0.85
150 (1 1/2")	1.07	0.70	1.31	0.93	1.19	0.81	1.27	0.89	1.21	0.83	1.13	0.75
200 (2")	1.52	1.14	1.75	1.38	1.63	1.25	1.72	1.34	1.66	1.28	1.58	1.20

Auto Switch Mounting Position (NCDMB-∗C) (in)

Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	0.92	0.35	1.16	0.58	1.03	0.46	1.12	0.54	1.06	0.48	0.98	0.40
088 (7/8")	0.85	0.38	1.09	0.62	0.97	0.50	1.05	0.58	0.99	0.52	0.91	0.44
106 (1 1/16")	1.07	0.59	1.31	0.83	1.19	0.71	1.27	0.79	1.21	0.73	1.13	0.65
125 (1 1/4")	1.30	0.59	1.54	0.82	1.42	0.70	1.50	0.78	1.44	0.72	1.36	0.64
150 (1 1/2")	1.20	0.63	1.44	0.87	1.32	0.74	1.40	0.83	1.34	0.77	1.26	0.69
200 (2")	1.65	0.90	1.88	1.14	1.76	1.01	1.85	1.10	1.79	1.04	1.71	0.96

Auto Switch Mounting Position (NCDMC-∗C, NCDME-∗C) (in)

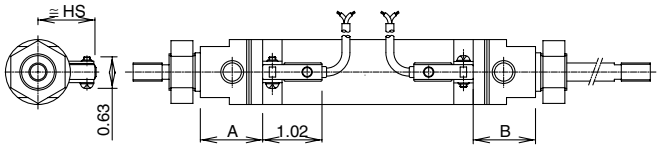
Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	0.92	0.78	1.16	1.01	1.03	0.89	1.12	0.98	1.06	0.92	0.98	0.84
088 (7/8")	0.85	0.66	1.09	0.89	0.97	0.77	1.05	0.85	0.99	0.79	0.91	0.72
106 (1 1/16")	1.07	0.83	1.31	1.07	1.19	0.94	1.27	1.03	1.21	0.97	1.13	0.89
125 (1 1/4")	1.30	0.92	1.54	1.15	1.42	1.03	1.50	1.11	1.44	1.05	1.36	0.98
150 (1 1/2")	1.20	0.83	1.44	1.06	1.32	0.94	1.40	1.02	1.34	0.96	1.26	0.88
200 (2")	1.65	1.27	1.88	1.51	1.76	1.38	1.85	1.47	1.79	1.41	1.71	1.33

Mounting Height (NCDM) (in)

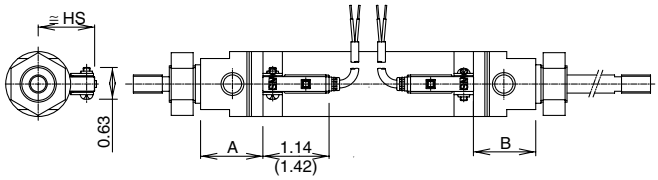
Auto switch model / Bore	D-B5 D-B6 D-B59W D-H7C D-G59 D-K59	D-C7□ D-C80 D-H7□ D-H7□W D-H7BAL D-H7□F	C-C73C D-C80C
	≅ HS	≅ HS	≅ HS
075 (3/4")	0.98	0.87	0.96
088 (7/8")	1.04	0.93	1.02
106 (1 1/16")	1.14	0.98	1.12
125 (1 1/4")	1.24	1.08	1.22
150 (1 1/2")	1.36	1.20	1.34
200 (2")	1.61	1.46	1.59

Double Acting/Single Rod/Band Mounting Auto Switch Mounting Position and Mounting Height

D-C7/C8

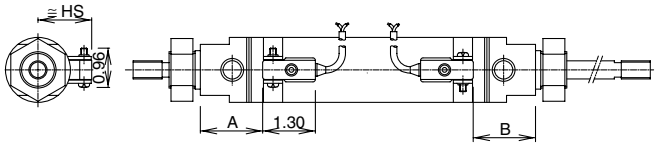


D-H7□/H7□W/H7□F/H7BAL□

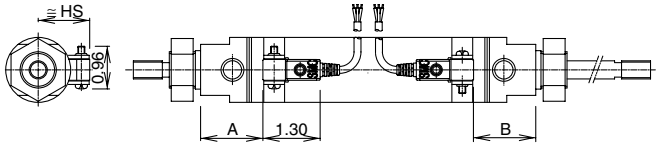


∗ ( ): D-H7LF

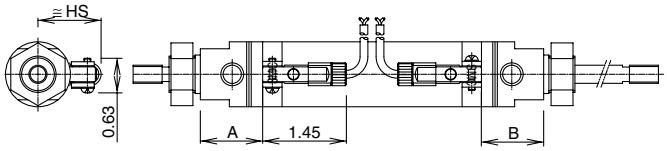
D-B5/B6/B59W



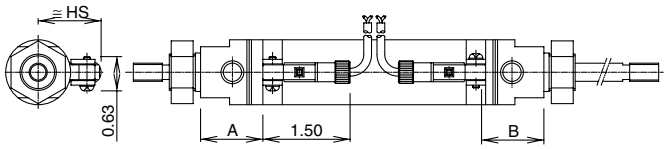
D-G59/K59



D-C73C/C80C



D-H7C



Auto Switch Mounting Position (NCDMW) (in)

Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	0.88	0.89	1.12	1.13	1.00	1.00	1.08	1.09	1.02	1.03	0.94	0.95
088 (7/8")	0.72	0.72	0.96	0.95	0.84	0.83	0.92	0.91	0.86	0.85	0.78	0.77
106 (1 1/16")	0.94	0.95	1.18	1.18	1.06	1.06	1.14	1.14	1.08	1.09	1.00	1.01
125 (1 1/4")	1.17	1.14	1.41	1.38	1.29	1.26	1.37	1.34	1.31	1.28	1.23	1.20
150 (1 1/2")	1.07	1.07	1.31	1.31	1.19	1.18	1.27	1.27	1.21	1.21	1.13	1.13
200 (2")	1.52	1.45	1.75	1.69	1.63	1.57	1.72	1.65	1.66	1.59	1.58	1.51

Auto Switch Mounting Position (NCDMW-∗C) (in)

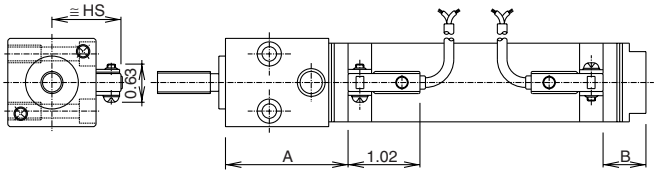
Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	0.92	0.87	1.16	1.11	1.03	0.98	1.12	1.07	1.06	1.01	0.98	0.93
088 (7/8")	0.85	0.85	1.09	1.08	0.97	0.96	1.05	1.04	0.99	0.98	0.91	0.90
106 (1 1/16")	1.07	1.08	1.31	1.31	1.19	1.19	1.27	1.27	1.21	1.22	1.13	1.14
125 (1 1/4")	1.30	1.27	1.54	1.51	1.42	1.39	1.50	1.47	1.44	1.41	1.36	1.33
150 (1 1/2")	1.20	1.20	1.44	1.44	1.32	1.31	1.40	1.40	1.34	1.34	1.26	1.26
200 (2")	1.65	1.58	1.88	1.82	1.76	1.70	1.85	1.78	1.79	1.72	1.71	1.64

Mounting Height (NCDM) (in)

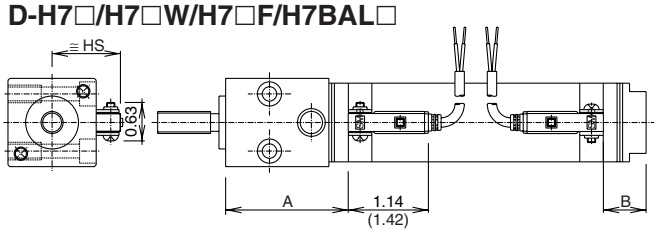
Auto switch model / Bore	D-B5 D-B6 D-B59W D-H7C D-G59 D-K59	D-C7□ D-C80 D-H7□ D-H7□W D-H7BAL D-H7□F	C-C73C D-C80C
	≅ HS	≅ HS	≅ HS
075 (3/4")	0.98	0.87	0.96
088 (7/8")	1.04	0.93	1.02
106 (1 1/16")	1.14	0.98	1.12
125 (1 1/4")	1.24	1.08	1.22
150 (1 1/2")	1.36	1.20	1.34
200 (2")	1.61	1.46	1.59

Double Acting/Single Rod/Band Mounting Auto Switch Mounting Position and Mounting Height

D-C7/C8

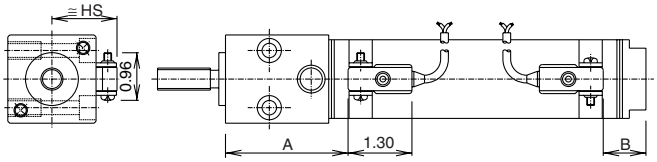


D-H7□/H7□W/H7□F/H7BAL□

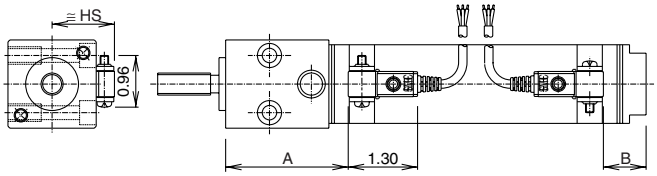


∗ ( ): D-H7LF

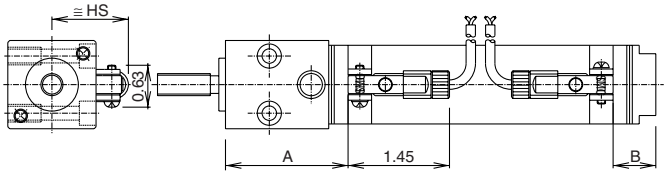
D-B5/B6/B59W



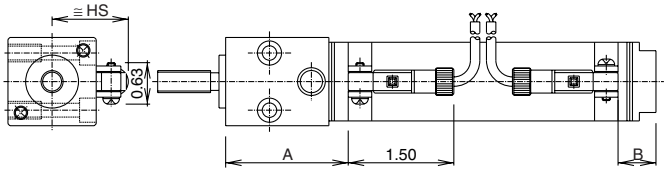
D-G59/K59



D-C73C/C80C



D-H7C



Auto Switch Mounting Position (NCDMR) (in)

Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	1.30	0.37	1.54	0.60	1.42	0.48	1.50	0.56	1.44	0.50	1.36	0.42
106 (1 1/16")	1.61	0.46	1.85	0.70	1.72	0.58	1.81	0.66	1.75	0.60	1.67	0.52
150 (1 1/2")	2.10	0.50	2.33	0.74	2.21	0.61	2.29	0.70	2.24	0.64	2.16	0.56

Auto Switch Mounting Position (NCDMR-∗C) (in)

Auto switch model / Bore	D-B5 D-B6		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-H7LF		D-G59 D-K59	
	A	B	A	B	A	B	A	B	A	B	A	B
075 (3/4")	1.30	0.37	1.54	0.60	1.42	0.48	1.50	0.56	1.44	0.50	1.36	0.42
106 (1 1/16")	1.61	0.46	1.85	0.70	1.72	0.58	1.81	0.66	1.75	0.60	1.67	0.52
150 (1 1/2")	2.10	0.50	2.33	0.74	2.21	0.61	2.29	0.70	2.24	0.64	2.16	0.56

Mounting Height (NCDM) (in)

Auto switch model / Bore	D-B5 D-B6 D-B59W D-H7C D-G59 D-K59	D-C7□ D-C80 D-H7□ D-H7□W D-H7BAL D-H7□F	C-C73C D-C80C
	≅ HS	≅ HS	≅ HS
075 (3/4")	0.98	0.87	0.96
088 (7/8")	1.04	0.93	1.02
106 (1 1/16")	1.14	0.98	1.12
125 (1 1/4")	1.24	1.08	1.22
150 (1 1/2")	1.36	1.20	1.34
200 (2")	1.61	1.46	1.59

Series			Action	Symbol for change of rod end shape	Note
C85	Standard type	C85	Double acting, Single rod	XA0/1/10/11	ø8 to ø16
			Single acting(Spring return/extended)	XA0/1/10/11	ø8 to ø16
		C85W	Double acting, Double rod	XA0/1/10/11	ø8 to ø16
	Non-rotating rod type	C85K	Double acting, Single rod	XA0/1/10/11	ø8 to ø16
			Single acting(Spring return/extended)	XA0/1/10/11	ø8 to ø16
	Non-rotating rod, Direct mount type	C85R	Double acting, Single rod	XA0/1/10/11	ø8 to ø16
	Standard type	C85	Double acting, Single rod	XA0 to 30	ø20, ø25
			Single acting(Spring return/extended)	XA0 to 30	ø20, ø25
		C85W	Double acting, Double rod	XA0 to 30	ø20, ø25
	Non-rotating rod type	C85K	Double acting, Single rod	XA0/1/6/10/11/13/14/17/19/21	ø20, ø25
			Single acting(Spring return/extended)		ø20, ø25
	Non-rotating rod, Direct mount type	C85R	Double acting, Single rod	XA0 to 30	ø20, ø25
C76	Standard type	C76	Double acting, Single rod	XA0 to 30	
			Single acting(Spring return/extended)	XA0 to 30	
		C76W	Double acting, Double rod	XA0 to 30	
	Non-rotating rod type	C76K	Double acting, Single rod	XA0/1/6/10/11/13/14/17/19/21	
	Non-rotating rod, Direct mount type	C76R	Double acting, Single rod	XA0 to 30	
C95	Standard type	C95S	Double acting, Single rod	XA0 to 30	
		C95W	Double acting, Double rod	XA0 to 30	ø32 to ø100
	Non-rotating rod type	C95K	Double acting, Single rod	XA0/1/6/10/11/13/14/17/19/21	ø32 to ø100
	Cylinder with lock	C95N	Double acting, Single rod	XA0 to 30	ø32 to ø100
CP95	Standard type	CP95S	Double acting, Single rod	XA0 to 30	
		CP95W	Double acting, Double rod	XA0 to 30	
	Non-rotating rod type	CP95K	Double acting, Single rod	XA0/1/6/10/11/13/14/17/19/21	
NCM	Standard type	NCM	Double acting, Single rod	XA0 to 30	
			Single acting(Spring return/extended)	XA0 to 30	
		NCMW	Double acting, Double rod	XA0 to 30	
	Non-rotating rod type	NCMK	Double acting, Single rod	XA0/1/6/10/11/13/14/17/19/21	
	Non-rotating rod, Direct mount type	NCMR	Double acting, Single rod	XA0 to 30	
			Single acting(Spring return/extended)	XA0 to 30	

Simple Specials:
-XA0 to XA30: Change of Rod End Shape

These changes are dealt with Simple Specials System.

⚠ Precautions

1. SMC will make appropriate arrangements if no dimension, tolerance, or finish instructions are given in the diagram.

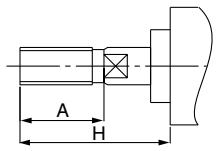
2. Standard dimensions marked with "∗" will be as follows to the rod diameter (D). Enter any special dimension you desire.

mm : D ≤ 6 → D – 1 mm, 6 < D ≤ 25 → D – 2 mm, D > 25 → D – 4 mm
inch : D ≤ 0.23 → D – 0.04 inch, 0.23 < D ≤ 0.98 → D – 0.08 inch,
D > 0.98 → D – 0.16 inch

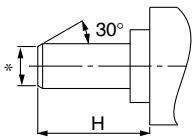
3. In the case of double rod type and single acting retraction type, enter the dimensions when the rod is retracted.

4. Only the single side of a double rod is able to manufacture.

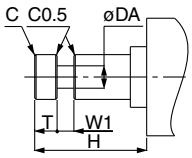
Symbol: **A0**



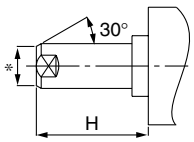
Symbol: **A1**



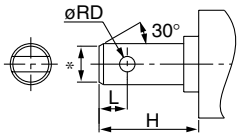
Symbol: **A2**



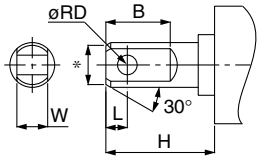
Symbol: **A3**



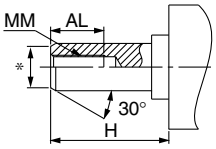
Symbol: **A4**



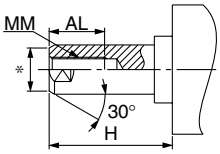
Symbol: **A5**



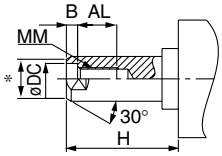
Symbol: **A6**



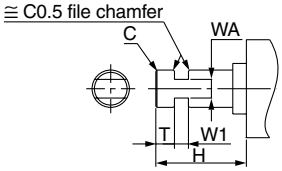
Symbol: **A7**



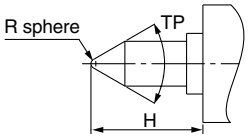
Symbol: **A8**



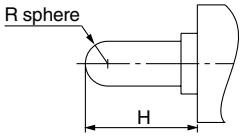
Symbol: **A9**



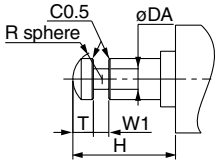
Symbol: **A10**



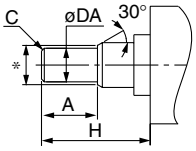
Symbol: **A11**



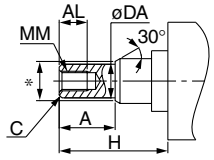
Symbol: **A12**



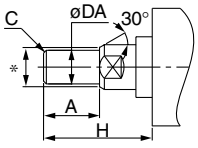
Symbol: **A13**



Symbol: **A14**



Symbol: **A15**



Simple Specials:
-XA0 to XA30: Change of Rod End Shape

These changes are dealt with Simple Specials System.

⚠ Precautions

1. SMC will make appropriate arrangements if no dimension, tolerance, or finish instructions are given in the diagram.

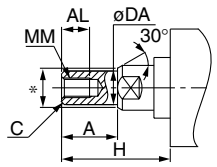
2. Standard dimensions marked with "∗" will be as follows to the rod diameter (D). Enter any special dimension you desire.

mm : D ≤ 6 → D – 1 mm, 6 < D ≤ 25 → D – 2 mm, D > 25 → D – 4 mm
inch : D ≤ 0.23 → D – 0.04 inch, 0.23 < D ≤ 0.98 → D – 0.08 inch,
D > 0.98 → D – 0.16 inch

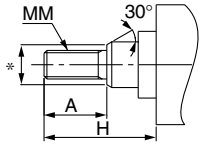
3. In the case of double rod type and single acting retraction type, enter the dimensions when the rod is retracted.

4. Only the single side of a double rod is able to manufacture.

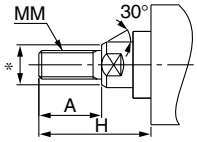
Symbol: **A16**



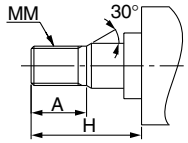
Symbol: **A17**



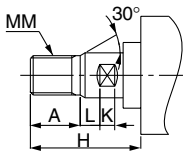
Symbol: **A18**



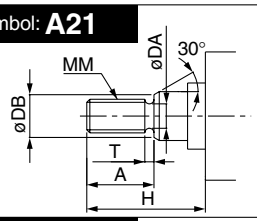
Symbol: **A19**



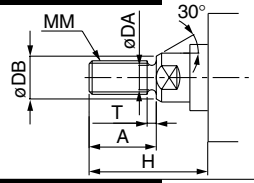
Symbol: **A20**



Symbol: **A21**



Symbol: **A22**



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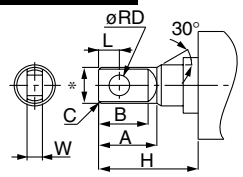
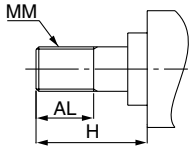
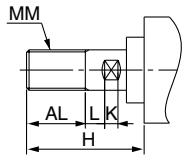


Symbol: **A24**



Symbol: **A25**



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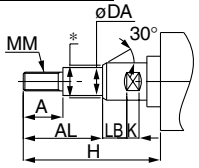
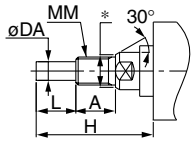
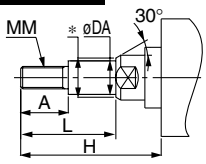


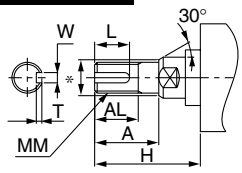
Symbol: **A27**



Symbol: **A28**



Symbol: **A29**



Symbol: **A30**