

NFPA Interchangeable Cylinder: Standard Type Double Acting, Single Rod (Medium Duty)

Series *NCA1*

Inch size: $\varnothing 1.5''$, $\varnothing 2''$, $\varnothing 2.5''$, $\varnothing 3.25''$, $\varnothing 4''$

How to Order

NC D A1 [] B 150-04 00 [] [] -A54 [] -XB5

Built-in magnet

Nil	None
D	W/ auto switch (Magnetic piston)

Style

Nil	Standard cylinder
K	Non-rotating cylinder
W	Double rod
M	Male rod stud

Mounting style

B	MX0	Basic style
L	MS1	Foot style
F	MF1	Rod side flange style
G	MF2	Head side flange style
R	MS4	Side tapped style
D	MP2	Double detachable head side clevis style
T	MT4	Center trunnion style
C	MP4	Single detachable head side clevis style
X	MP1	Double head side clevis style
S	MS2	Side lug style
U	MT1	Rod side trunnion style
J	MT2	Head side trunnion style

Bore size

150	1.5"
200	2"
250	2.5"
325	3.25"
400	4"

For larger bore sizes up to 32" bore. Please consult CAT: N304-EX.

Standard stroke

Inches

Stroke

Hundredths of an inch

Option

-XB5	Oversized rod
-XB6	High temperature
-XB7	Low temperature
-XB9	Low speed
-XC6	Stainless steel piston rod
-XC8	Adjustable stroke/Extend
-XC9	Adjustable stroke/Return
-XC10	Dual operation/Double rod
-XC11	Dual operation/Single rod
-XC22	Fluoro rubber seals
-XC35	With coil scraper

For special rod end modifications, please see page 6-15-33.

Number of auto switches

Nil	2 pcs.
S	1 pcs.
3	3 pcs.
n	"n" pcs.

Rod boot

Nil	None
J	Nylon
K	Neoprene

Air cushion

Nil	Both ends
N	None
H	Head end
R	Rod end

Auto switch

Nil	Without auto switch
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* For the applicable auto switch model, refer to the table on page 6-15-7.
* Auto switches are shipped together, (but not assembled.)

Mounting Bracket Part No.

Mounting bracket / Bore size	Part no.				
	150 (1.5")	200 (2")	250 (2.5")	325 (3.25")	400 (4")
Foot *	NCA1-L150	NCA1-L200	NCA1-L250	NCA1-L325	NCA1-L400
Flange	NCA1-F150	NCA1-F200	NCA1-F250	NCA1-F325	NCA1-F400
Double clevis (MP2)	NCA1-D150	NCA1-D200	NCA1-D250	NCA1-D325	NCA1-D400
Single clevis	NCA1-C150	NCA1-C200	NCA1-C250	NCA1-C325	NCA1-C400
Side lug *	NCA1-S150	NCA1-S200	NCA1-S250	NCA1-S325	NCA1-S400
Double clevis (MP1)	NCA1-X150	NCA1-X200	NCA1-X250	NCA1-X325	NCA1-X400

* These kits are for standard single rod/double acting cylinders without options. For option kits, please contact your local SMC sales office. One kit required per cylinder.



The SMC NCA1 expanded Series NFPA Industrial Interchangeable Pneumatic Cylinders are now available in bore sizes ranging from 5"-8" Medium Duty, and 1.5"-14" Heavy Duty.

The NCA1 Expanded Series Cylinders offer:

- Replaceable Rod Gland
- A full range of NFPA interchangeable mounting configurations.
- Available in three construction types: Aluminum, Steel, and Stainless steel
- Composite fiber tube optional.
- Fully adjustable cushion

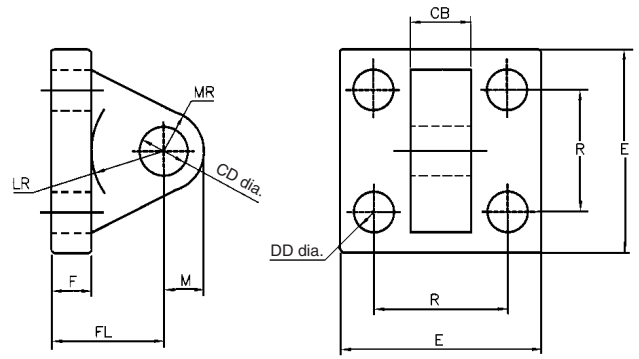
For further information, please consult CAT: N304-EX or contact your local SMC sales office.

Series NCA1

Accessory Bracket Dimensions

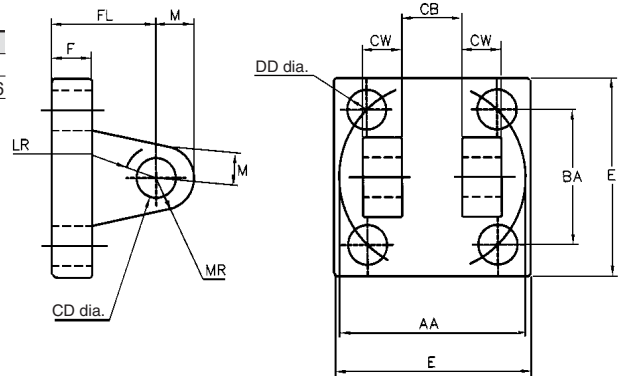
Eye Bracket

Part no.	CB	CD	DD	E	F	FL	LR	M	MR	R
NCA1-P150	3/4	1/2	13/32	2 1/2	3/8	1 1/8	3/4	1/2	9/16	1.63
NCA1-P325	1 1/4	3/4	17/32	3 1/2	5/8	1 7/8	1 1/4	3/4	7/8	2.56



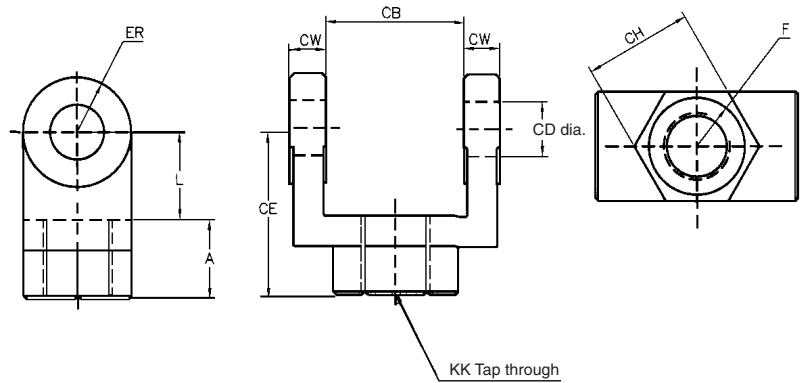
Clevis Bracket

Part no.	AA	BA	CB	CD	CW	DD	E	F	FL	LR	M	MR
NCA1-CB150	2.3	1 5/8	0.785	1/2	1/2	3/8 -24	2 1/2	3/8	1 1/8	1/2	1/2	9/16
NCA1-CB325	3.6	2 9/16	1.265	3/4	5/8	1/2 -20	3 1/2	5/8	1 7/8	1 1/16	3/4	1 1/16



Rod Clevis

Part no.	CB	CD	CE	CH	CW	F	L	A	KK	ER
NY-150	0.765	0.5	1 1/2	1	1/2	1	3/4	3/4	7/16-20	1/2
NY-325	1.265	0.75	2 3/8	1 3/8	5/8	1 1/4	1 1/4	1 1/8	3/4-16	3/4



Order to Match Rod Thread

Rod Eye

Part no.	A	CA	CB	CD	ER	KK
NI-150	3/4	1 1/2	3/4	1/2	5/8	7/16 20
NI-325	1 1/8	2 1/16	1 1/4	3/4	7/8	3/4 -16

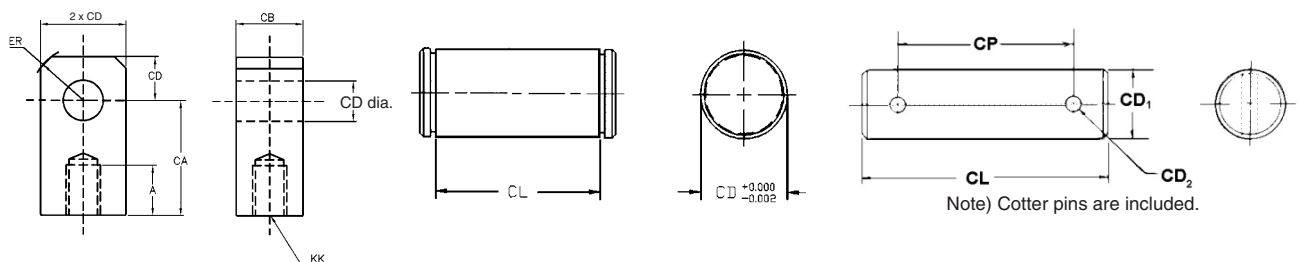
Pivot Pin

Part no.	CD	CL
NCA1-150	1/2	1 7/8
NCA1-325	3/4	2 5/8

Pivot Pin

Part no.	CD ₁	CD ₂	CL	CP
NCDP-150	.500 ⁰ _{-.002}	.106	2.28	1.94
NCDP-325	.750 ⁰ _{-.002}	.140	3.10	2.72

Note) Cotter pins are included.



Auto Switch Specifications

How to Order Auto Switches

Grommet type



For standard part number please refer to applicable auto switches on page 6-15-7.

Lead wire length	
-	0.5 (m) (1.64 ft)
L	3 (m) (9.84 ft)
Z	5 (m) (16.4 ft)

Connector type



For standard part number please refer to applicable auto switches on page 6-15-7.

Lead wire length	
S	0.5 (m) (1.64 ft)
M	1.0 (m) (3.28 ft)

Connector type	
A	M8-3 pins
B	M8-4 pins
D	M12-4 pins

Auto Switch Mounting Bracket Part No.

Bore size (in)	150 (1.5")	200 (2")	250 (2.5")	325 (3/25")	400 (4")
Model no.					
D-A5, D-F5	NBT-150	NBT-200	NBT-200	NBT-325	NBT-325
D-A6, D-J5					

Connector type	M8-3 pin	M8-4 pin	M12-4 pin
Pin arrangement			
Applicable standards	JIS C 4524, JIS C 4525, IEC 947-5-2, NECA 0402		
Impact resistant	300 m/s ²		
IP degree of protection	IP-67 (IEC529 standard)		
Insulation resistance	100 MΩ or more at 500 VDC meg.		
Withstand voltage	1500 VAC 1 minute (between contacts), Leakage current 1 mA or less		

Sensor type	Lead wire color				Meaning of contact no.			
	1 pin	2 pin	3 pin	4 pin	1 pin	2 pin	3 pin	4 pin
DC 2-wire	Brown	—	—	Blue	OUT (+)	—	—	OUT (-)
DC 2-wire non-polar	—	—	Brown	Blue	—	—	OUT (±)	OUT (∓)
DC 3-wire	Brown	—	Blue	Black	DC (+)	—	DC (-)	OUT
DC 4-wire	Brown	Orange	Blue	Black	DC (+)	Diagnostic output	DC (-)	OUT

- Connector
M8-3 pin/4 pin

Unit : mm
() : ft

