



AIR CYLINDER SERIES NCA1 HEAVY DUTY AIR CYLINDERS BORE SIZES 1.5" TO 14"



- ✓ Steel and Stainless Steel Construction
 - ✓ Replaceable Rod Gland
 - ✓ Auto Switch Sensing Option (Stainless Steel and Composite Tube Only)
 - ✓ Non-Rotating Piston Rod & Through Rod Types Available
 - Hydraulic Service / 250PSI Non Shock (H option)
 - ✓ Full Range of NFPA Interchangeable Mounting Configurations
- Mounting Dimensions are in accordance with ANSI/NFPA T3.6.7 R2-1996, Fluid Power Systems and Products - Square Head Industrial Cylinders - Mounting Dimensions.



How To ORDER

SERIES NCA1 AIR CYLINDER



AUTO SWITCH

-Standard
- Dw/Auto S (Stainless Steel Composite Tube Only)

STYLE

-Standard Cylinder
- WDouble Rod
- K Non-rotating Piston Rod (5 to 14ø)

MOUNTING / SINGLE ROD ONLY

- EAME3 - Head Square Mount (8 to 14"ø)
- EBME4 - Cap Square Mount (8 to 14"ø)
- FMF1 - Front Flange (1.5 to 6"ø)
- GMF2 - Rear Flange (1.5 to 6"ø)
- MMF5 - Front Flange (1.5 to 6"ø)
- NMF6 - Rear Flange (1.5 to 6"ø)
- XMP1 - Double Rear Clevis (1.5 to 14"ø)
- DMP2 - Double Detachable Rear Clevis/Female (1.5 to 14"ø)
- EMP3 - Cap Fixed Eye (1.5 to 14"ø)
- CMP4 - Single Detachable Rear Clevis/Male (1.5 to 14"ø)
- LMS1 - Foot Mount (1.5 to 14"ø)
- SMS2 - Side Lug (1.5 to 14"ø)
- OMS3 - Centerline Lug (1.5 to 14"ø)
- RMS4 - Side-Tapped (1.5 to 14"ø)
- PMS7 - Front Lug Mount (1.5 to 14"ø)
- JMT2 - Cap Trunnion (1.5 to 14"ø)
- UMT1 - Head Trunnion (1.5 to 14"ø)
- TMT4 - Center Trunnion (1.5 to 14"ø) *See below
- BMX0 - Basic/No Mount (1.5 to 14"ø)
- BAMX1 - Extended Tie-Rods; Head/Cap (1.5 to 14"ø)
- BBMX2 - Extended Tie-Rods; Cap (1.5 to 14"ø)
- BCMX3 - Extended Tie-Rods; Head (1.5 to 14"ø)

How To Order MT4 With Non Standard XI Dimension
NCA1 T ○ - ○ - XC14 (XI = 4.25) T ○

Specify XI Dimension in inches Construction Type

- STYLE
-Pneumatic
 - HHydraulic

CONSTRUCTION TYPE

- (PLEASE SEE PAGE 1 FOR CONSTRUCTION DETAILS)
- ST ... Steel Construction (1.5~14"ø)
 - SS ... All Stainless Steel (1.5~14"ø)
 - SCT ... Steel w/ Composite Tube (1.5 - 14"ø)
 - SSCT ... Stainless Steel w/ Composite Tube (1.5- 14"ø)

OPTIONS

- ASpecial Rod Thread
 - B5Oversized Rod (See Chart below)
 - B6High Temperature *
 - C3Port and Cushion Location
 - C6Stainless Steel Piston Rod
 - C8Adjustable Stroke Extended Piston Rod *
 - C9Adjustable Stroke Return Piston Rod *
 - C10 ...Dual Operation/Double Rod Piston Rod *
 - C11 ...Dual Operation/Single Rod Piston Rod *
 - C12 ...Tandem Cylinder
- * (Contact SMC Customer Service)

ROD BOOT

-Without Boot
- kNeoprene Boot

NO OF SWITCHES

-2 Pieces
- S1 Piece
- nNumber of Switches

AIR CUSHION

-Both Ends
- NNone
- HHead End
- RRod End

*Note: Non Adjustable Cushions are available on units above 4" Bore
Please Consult SMC Customer Service.
**Note: Cushions not recommended for Strokes below 3"

AUTO SWITCH

For further information, please consult SMC Customer Service.

OPTION

SERIES NCA1 AIR CYLINDER (1.5~6"ø BORE) OVERSIZED ROD - XB5 OPTION

When ordering an oversized rod, please order the following way to represent the rod size required.

XB5 - CDN

- E 1"
- G 1 3/8"
- H 1 3/4"
- J 2"
- K 2 1/2"
- L 3"
- M 3 1/2"
- Z Consult SMC Customer Service For larger Sizes

FOR MORE TECHNICAL INFORMATION ON THIS SERIES, PLEASE REFER TO CAT:N304-EX

BORE SIZE	ROD ø	ROD THREAD ø
1501.5"	5/8"	7/16-20
2002"	5/8"	7/16-20
2502.5"	5/8"	7/16-20
3253.25"	1"	3/4-16
4004"	1"	3/4-16
5005"	1"	3/4-16
6006"	1-3/8"	1-14
8006"	1-3/8"	1-14
1000.....10"	1-3/8"	1 1/4-12
1200.....12"	2"	1 1/2-12
1400.....14"	2-1/2"	1 7/8-12

STANDARD STROKE
Inches
Example: 04 = 4" Stroke

STROKE
Hundredths Of An Inch
Example: 25 = 0.25 (1/4) Inch Stroke

Up to 32" Bore available
Please contact SMC Customer Service

AIR CYLINDER SERIES NCA1 HEAVY DUTY LARGE BORE AIR CYLINDERS



AIR CYLINDER SERIES NCA1 MEDIUM DUTY LARGE BORE AIR CYLINDERS

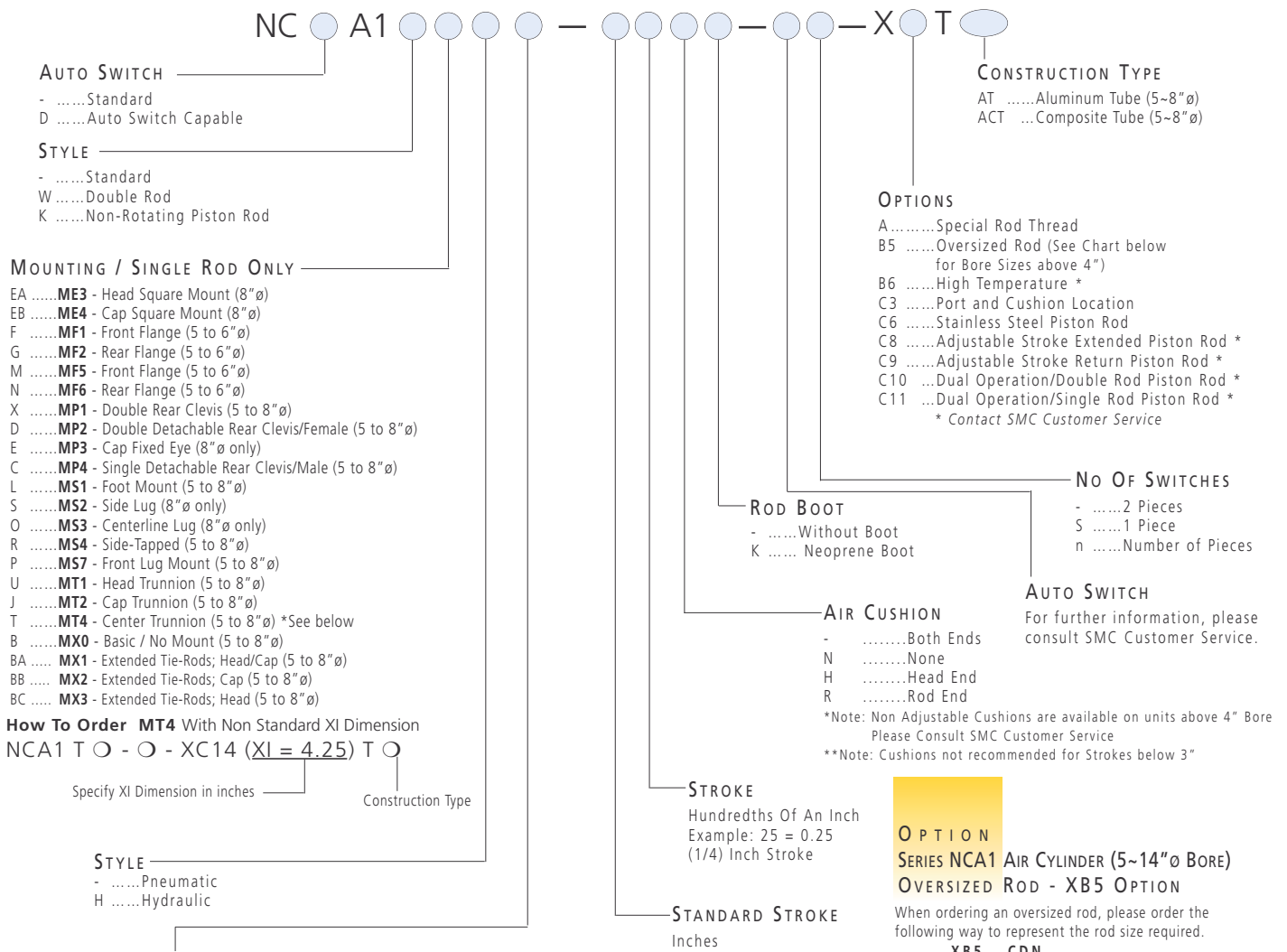
- ✓ Steel Construction
- ✓ Stainless Steel Version Available
- ✓ Available in Bore Sizes 8" to 14" and Up To 32" Available
- ✓ Replaceable Rod Gland Design

- ✓ Aluminum Construction (5" to 8" Bore)
- ✓ Replaceable Rod Gland Design
- ✓ Auto Switch Capable

- ✓ Full Range of NFPA Interchangeable Mounting Configurations
 - Mounting Dimensions are in accordance with ANSI(NFPA) T3.6.7 R2-1996, Fluid Power Systems and Products - Square Head Industrial Cylinders - Mounting Dimensions.

HOW TO ORDER

SERIES NCA1 AIR CYLINDER



BORE SIZE	ROD Ø	ROD THREAD Ø
5005"	1"	3/4-16
6006"	1-3/8"	1-14
8008"	1-3/8"	1-14

Up to 32" Bore available
Please contact SMC Customer Service

OPTION

SERIES NCA1 AIR CYLINDER (5~14"Ø BORE)

OVERSIZED ROD - XB5 OPTION

When ordering an oversized rod, please order the following way to represent the rod size required.

XB5	CDN
I	1 3/8"
G	1 3/4"
H	2"
J	2 1/2"
K	3"
L	3 1/2"
M	3 1/2"
Z	Please contact SMC Customer Service for Larger Sizes

FOR MORE TECHNICAL INFORMATION ON THIS SERIES, PLEASE REFER TO CAT:N304-EX



AIR CYLINDER SERIES NCA1

- ✓ Auto Switch Sensing Optional
- ✓ Bore Sizes 150, 200, 250, 325, 400
- ✓ Non-Rotating Piston Rod & Double Rod types available
- ✓ Long Life, High Efficiency
- ✓ Hard Anodized Barrel



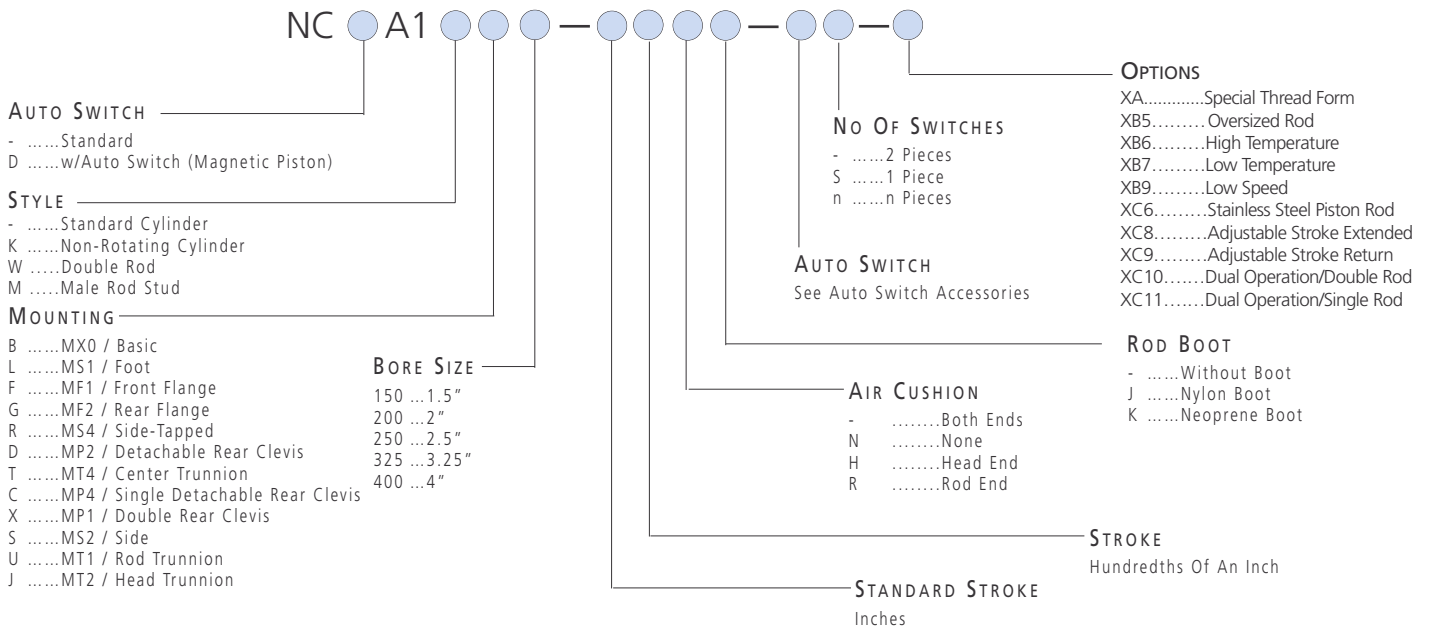
TECHNICAL SPECIFICATIONS



Type	Standard	Double Rod	Non Rotating Piston Rod
Fluid	Air	Air	Air
Lubrication	Non-lube	Non-lube	Non-lube
Max Operating Pressure	250PSI	250PSI	250PSI (1.75MPa)
Min Operating Pressure	7PSI(10.05MPa)	8PSI(10.06MPa)	15PSI(10.1MPa)
Ambient & Fluid Temperature	40~140°F	40~140°F	40~140°F (5~60°C)
Piston Speed	2~20in/s	2~20in/s	2~20in/s (50~500mm/s)
Mounting	Basic, foot, front flange, rear flange, clevis side tapped, center trunnion head trunnion, side lug rod trunnion	Basic, foot, flange, center trunnion side tapped	Basic, foot, front flange, rear flange, rear clevis, center trunnion side tapped side lug
Non-Rotating Accuracy	n/a	n/a	±0.50°

HOW TO ORDER

SERIES NCA1 AIR CYLINDER



STANDARD STROKES SERIES NCA1

BORE SIZE (INCHES)	STANDARD STROKE (INCHES)	MAXIMUM STROKE (INCHES)
1.5"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20	Consult SMC
2", 2.5"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24	
3.25", 4"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24, 28	

FOR MORE TECHNICAL INFORMATION ON THIS SERIES, PLEASE REFER TO CAT:N304 & CAT:N304-EX

MOUNTING BRACKET SERIES NCA1 AIR CYLINDER

Mounting Bracket	Bore	Part Number				
		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
Clevis		NCA1-D150	NCA1-D200	NCA1-D250	NCA1-D325	NCA1-D400
NCA1-C150-400		NCA1-C150	NCA1-C200	NCA1-C250	NCA1-C325	NCA1-C400
*NCA1-S150-400		NCA1-S150	NCA1-S200	NCA1-S250	NCA1-S325	NCA1-S400
NCA1-X150-400		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.

FOR MORE TECHNICAL INFORMATION ON THIS
SERIES, PLEASE REFER TO CAT:N304 & CAT:N304-EX

ACCESSORIES TRUNNION

A trunnion type must be ordered as part of the cylinder assembly by substituting 'T' for 'B' and specify position.

ACCESSORIES AUTO SWITCH MOUNTING BRACKETS D-A5, D-A6, D-F5, D-J5

NBT-150	150 (1.5")
NBT-200	200 (2")
NBT-250	250 (2.5")
NBT-325	325 (3.25")
NBT-400	400 (4")

ACCESSORIES AUTO SWITCHES - REED TYPE

Model Number	Operating Voltage	Max Current or Operating Current Range (mA)	Indicator Light/Wire Output
D-A53	24VDC	5~20mA	Yes
D-A54	24VDC 100VAC 200VAC	5~20mA 5~25mA 5~125mA	Yes
D-A56	4~8VDC	20mA	Yes
D-A59W	24VDC	5~40mA	Yes
D-A64	24VAC/DC 100VAC 200VAC	50mA 25mA 12.5mA	-
D-A67	24VDC	30mA	-

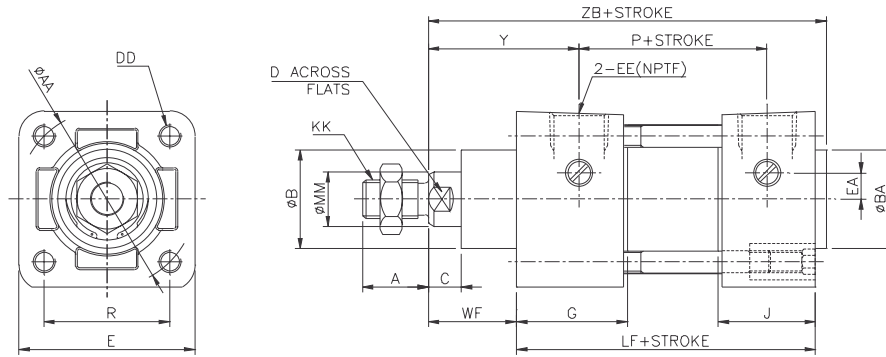
Note: Pre-wired Switches with 3/4 Pin Connectors available, please consult SMC Customer Service

ACCESSORIES AUTO SWITCHES - SOLID STATE TYPE

Model Number	Operating Voltage	Max Current or Operating Current Range (mA)	Indicator Light/Wire Output
D-F59	28VDC or less	150mA	3 Wire (NPN)
D-F5P	-	100mA	3 Wire (PNP)
D-J51	80~260VAC	5~80mA	2 Wire
D-J59	24VDC (10~28VDC)	5~150mA	2 Wire
D-F59W	28VDC	80mA	3 Wire (NPN)
D-F59PW	-	80mA	3 Wire (PNP)
D-J59W	24VDC (10~28VDC)	5~40mA	2 Wire
D-F58AL	24VDC (10~28VDC)	5~40mA	2 Wire (NPN)
D-F59F	28VDC	40mA	4 Wire (NPN)
D-F5NTL	28VDC	80mA	3 Wire (NPN)

Note: Pre-wired Switches with 3/4 Pin Connectors available. Please consult SMC Customer Service

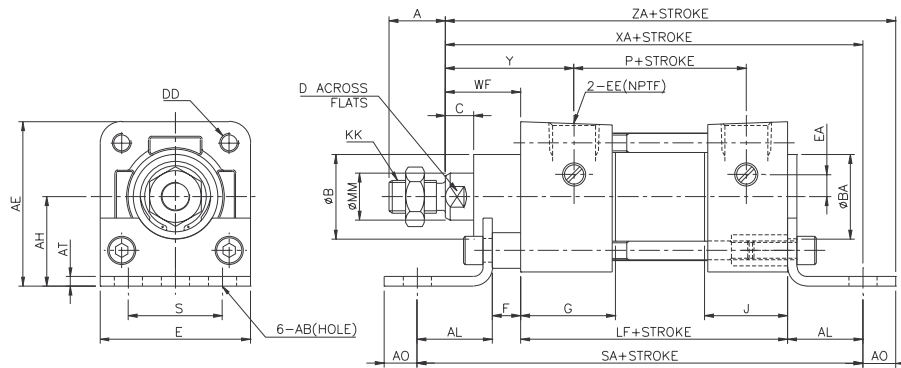
DIMENSIONS
BASIC TYPE NC□A1B



BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	R	WF	Y	LF	P	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	1.43	1	1.71	3 5/8	2.36	4 3/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	1.84	1	1.71	3 5/8	2.4	4 3/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	1.06	2.19	1	1.75	3 3/4	2.48	4 7/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	2.76	1 3/8	2.34	4 1/4	2.72	5 53/64
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	3.32	1 3/8	2.34	4 1/4	2.72	5 53/64

+ = Stroke addition

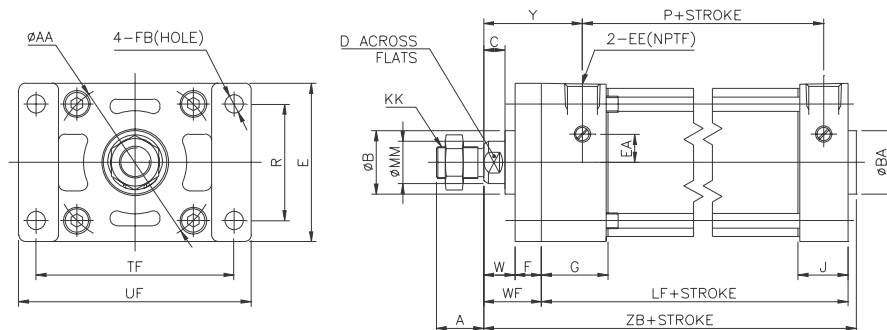
DIMENSIONS
FOOT MOUNTING
TYPE NC□A1L



+ = Stroke addition

BORE (INCH)	MM	KK	A	AA	AB	AE	AH	AL	AO	AT	B	BA	C	D	DD	E	EA	EE	F	G	J	S	WF	Y	P	LF	SA	XA	ZA
150 (1.5")	5/8	7/16-20	3/4	2.02	3/8	2 3/16	1 3/16	1	7/16	1/8	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	3/8	1.26	1.1	1 1/4	1	1.71	2.36	3 5/8	6	5 5/8	6 1/16
200 (2")	5/8	7/16-20	3/4	2.6	3/8	2 11/16	1 7/16	1	9/16	1/8	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	1 3/4	1	1.71	2.4	3 5/8	6	5 5/8	6 3/16
250 (2.5")	5/8	7/16-20	3/4	3.1	3/8	3 1/8	1 5/8	1	9/16	1/8	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	3/8	1.3	1.06	2 1/4	1	1.75	2.48	3 3/4	6 1/8	5 3/4	6 5/16
325 (3.25")	1	3/4-16	1 1/8	3.9	1/2	3 13/16	1 15/16	1 1/4	3/4	11/64	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	2 3/4	1 3/8	2.34	2.72	4 1/4	7 3/8	6 7/8	7 5/8
400 (4")	1	3/4-16	1 1/8	4.7	1/2	4 1/2	2 1/4	1 1/4	3/4	15/64	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	3 1/2	1 3/8	2.34	2.72	4 1/4	7 3/8	6 7/8	7 5/8

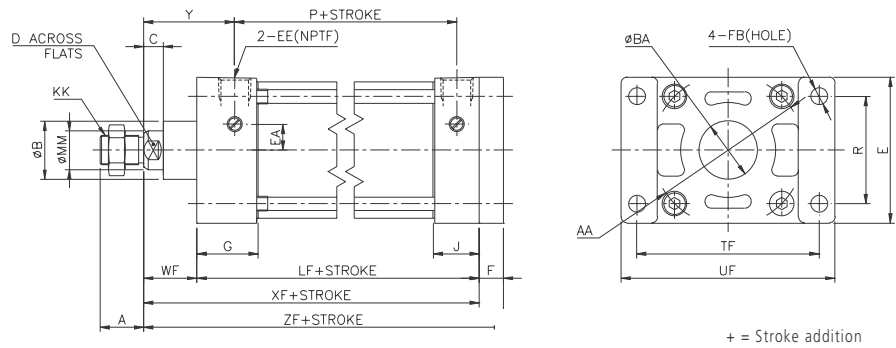
DIMENSIONS
FRONT FLANGE TYPE NC□A1F



+ = Stroke addition

BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	F	FB	G	J	R	TF	UF	W	WF	Y	LF	P	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	3/8	5/16	1.26	1.1	1.43	2 3/4	3 3/8	5/8	1	1.71	3 5/8	2.36	4 3/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	3/8	3/8	1.26	1.06	1.84	3 3/8	4 1/8	5/8	1	1.71	3 5/8	2.4	4 3/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	3/8	3/8	1.3	1.06	2.19	3 7/8	4 5/8	5/8	1	1.75	3 3/4	2.48	4 7/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1/2	7/16	1.57	1.18	2.76	4 11/16	5 1/2	3/4	1 3/8	2.34	4 1/4	2.72	5 53/64
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1/2	7/16	1.57	1.18	3.32	5 7/16	6 1/4	3/4	1 3/8	2.34	4 1/4	2.72	5 53/64

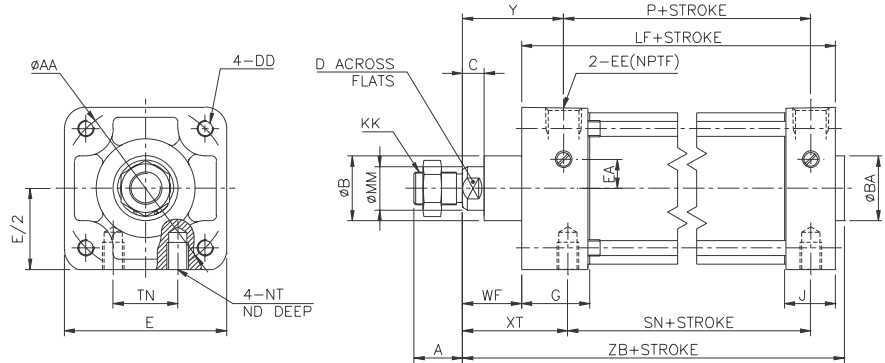
DIMENSIONS REAR FLANGE TYPE NC□A1G



+ = Stroke addition

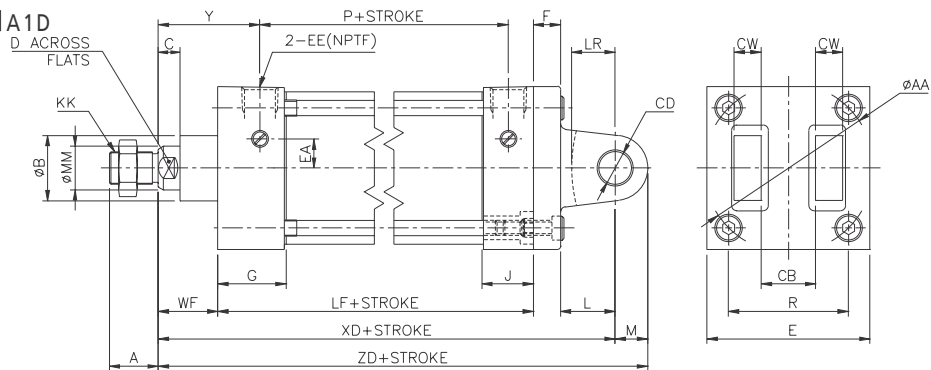
BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	F	FB	G	J	R	TF	UF	WF	Y	P	XF	ZF
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	3/8	5/16	1.26	1.1	1.43	2 3/4	3 3/8	1	1.71	2.36	4 5/8	5
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	3/8	3/8	1.26	1.06	1.84	3 3/8	4 1/8	1	1.71	2.4	4 5/8	5
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	3/8	3/8	1.3	1.06	2.19	3 7/8	4 5/8	1	1.75	2.48	4 3/4	5 1/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	5/8	7/16	1.57	1.18	2.76	4 11/16	5 1/2	1 3/8	2.34	2.72	5 5/8	6 1/4
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	5/8	7/16	1.57	1.18	3.32	5 7/16	6 1/4	1 3/8	2.34	2.72	5 5/8	6 1/4

DIMENSIONS SIDE-TAPPED TYPE NC□A1R



BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	E/2	EA	EE	G	J	ND	NT	TN	WF	XT	Y	LF	P	SN	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	1	0.3	3/8	1.26	1.1	9/32	1/4-20	5/8	1	1 15/16	1.71	3 5/8	2.36	2 1/4	4 3/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	1 1/4	0.3	3/8	1.26	1.06	7/16	5/16-18	7/8	1	1 15/16	1.71	3 5/8	2.4	2 1/4	4 3/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	1 1/2	0	3/8	1.3	1.06	19/32	3/8-16	1 1/4	1	1 15/16	1.75	3 3/4	2.48	2 3/8	4 7/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	1 7/8	0	1/2	1.57	1.18	5/8	1/2-13	1 1/2	1 3/8	2 7/16	2.34	4 1/4	2.72	2 5/8	5 53/64
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	2 1/4	0	1/2	1.57	1.18	5/8	1/2-13	2 1/16	1 3/8	2 7/16	2.34	4 1/4	2.72	2 5/8	5 53/64

DIMENSIONS DETACHABLE REAR CLEVIS TYPE - NC□A1D

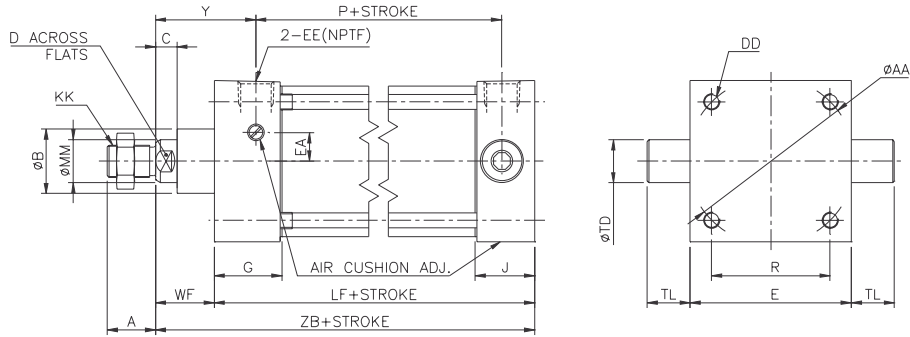


BORE (INCH)	MM	KK	A	AA	B	C	CB	CD	CW	D	DD	E	EA	EE	F	G	J	L	LR	M	WF	XD	Y	LF	P	ZD
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	3/4	1/2	1/2	9/16	1/4-28	2	0.3	3/8	3/8	1.26	1.1	3/4	5/8	1/2	1	5 3/4	1.71	3 5/8	2.36	6 1/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	3/4	1/2	1/2	9/16	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	3/4	5/8	1/2	1	5 3/4	1.71	3 5/8	2.4	6 1/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	3/4	1/2	1/2	9/16	5/16-24	3	0	3/8	3/8	1.3	1.06	3/4	5/8	1/2	1	5 7/8	1.75	3 3/4	2.48	6 3/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	1 1/4	3/4	5/8	7/8	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	1 1/4	1	3/4	1 3/8	7 1/2	2.34	4 1/4	2.72	8 1/4
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	1 1/4	3/4	5/8	7/8	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	1 1/4	1	3/4	1 3/8	7 1/2	2.34	4 1/4	2.72	8 1/4

MORE DIMENSIONS
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DIMENSIONS

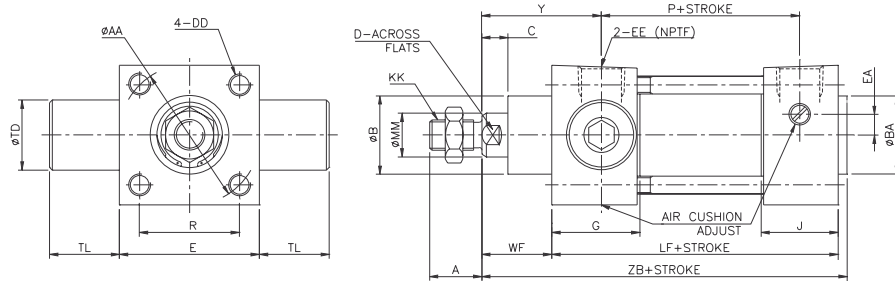
HEAD TRUNNION TYPE NC□A1J



BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	J	R	TD ^{0.001}	TL	WF	Y	LF	P	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	1.43	1	1	1	1.71	3 5/8	2.36	4 5/8
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	1.84	1	1	1	1.71	3 5/8	2.40	4 5/8
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	1.06	2.19	1	1	1	1.75	3 3/4	2.48	4 3/4
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	2.76	1	1	1 3/8	2.34	4 1/4	2.72	5 5/8
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	3.32	1	1	1 3/8	2.34	4 1/4	2.72	5 5/8

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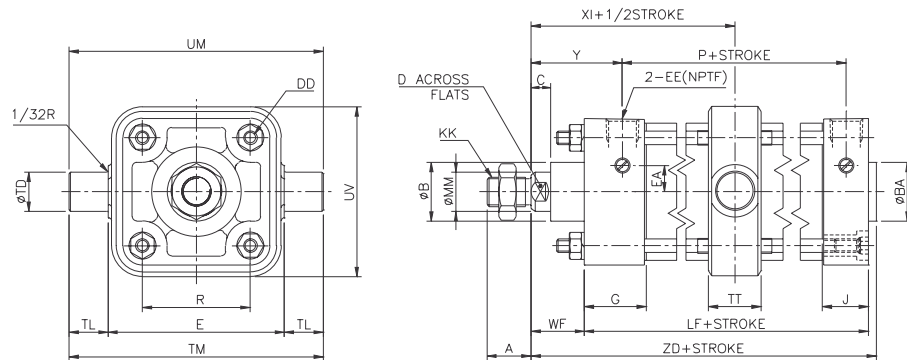
ROD TRUNNION TYPE NC□A1U



BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	R	TD ^{0.001}	TL	WF	Y	LF	P	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	1.43	1	1	1	1.71	3 5/8	2.36	4 3/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	1.84	1	1	1	1.71	3 5/8	2.40	4 3/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	1.06	2.19	1	1	1	1.75	3 3/4	2.48	4 7/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	2.76	1	1	1 3/8	2.34	4 1/4	2.72	5 53/64
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	3.32	1	1	1 3/8	2.34	4 1/4	2.72	5 53/64

DIMENSIONS

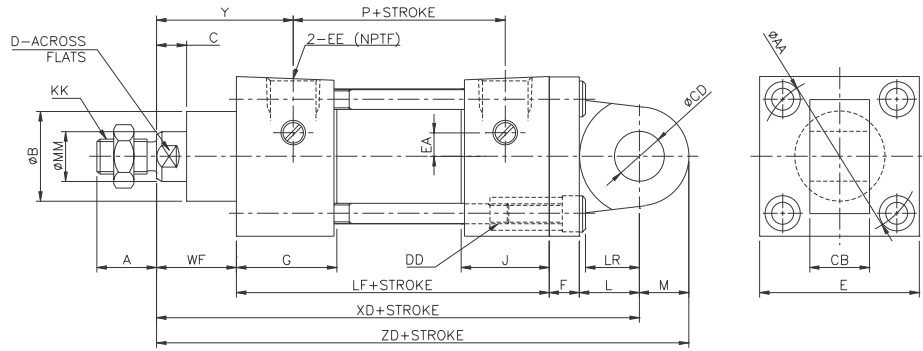
CENTER TRUNNION TYPE NC□A1T



BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	R	TD ^{0.001}	TL	TM	TT	UM	UV	WF	Y	LF	P	XI	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	1.43	1	1	2 1/2	1.18	4 1/2	2	1	1.71	3 5/8	2.36	2.89	4 3/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	1.84	1	1	3	1.18	5	2.56	1	1.71	3 5/8	2.40	2.91	4 3/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	1.06	2.19	1	1	3 1/2	1.18	5 1/2	3.39	1	1.75	3 3/4	2.48	2.99	4 7/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	2.76	1	1	4 1/2	1.34	6 1/2	4.33	1 3/8	2.34	4 1/4	2.72	3.7	5 53/64
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	3.32	1	1	5 1/4	1.57	7 1/4	5.12	1 3/8	2.34	4 1/4	2.72	3.74	5 53/64

DIMENSIONS

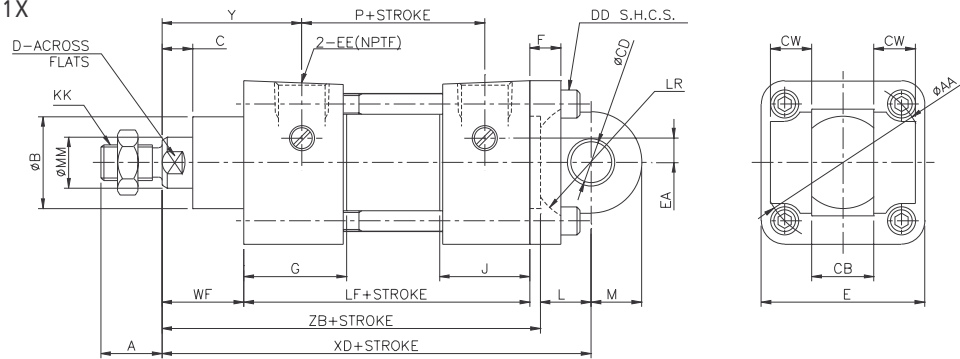
SINGLE REAR CLEVIS TYPE NC□A1C



BORE (INCH)	MM	KK	A	AA	B	C	CB	CD	D	DD	E	EA	EE	F	G	J	L	LR	M	WF	XD	Y	LF	P	ZD
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	3/4	1/2	9/16	1/4-28	2	0.3	3/8	3/8	1.26	1.1	3/4	5/8	1/2	1	5 3/4	1.71	3 5/8	2.36	6 1/4
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	3/4	1/2	9/16	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	3/4	5/8	1/2	1	5 3/4	1.71	3 5/8	2.4	6 1/4
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	3/4	1/2	9/16	5/16-24	3	0	3/8	3/8	1.3	1.06	3/4	5/8	1/2	1	5 7/8	1.75	3 3/4	2.48	6 3/8
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	1 1/4	3/4	7/8	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	1 1/4	1	3/4	1 3/8	7 1/2	2.34	4 1/4	2.72	8 1/4
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	1 1/4	3/4	7/8	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	1 1/4	1	3/4	1 3/8	7 1/2	2.34	4 1/4	2.72	8 1/4

DIMENSIONS

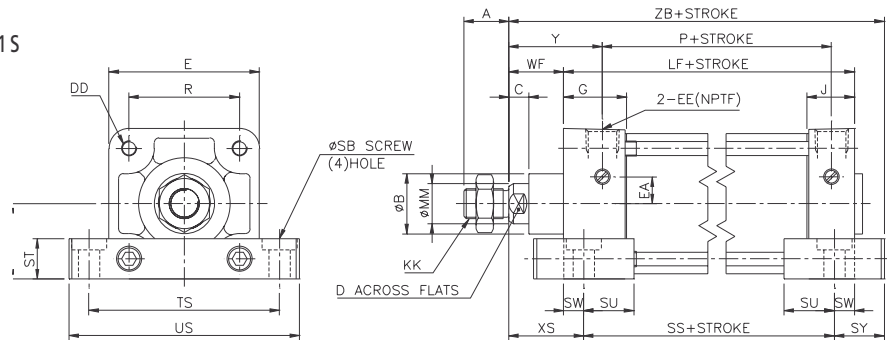
DOUBLE REAR CLEVIS TYPE NC□A1X



BORE (INCH)	MM	KK	A	AA	B	C	CB	CD	CW	D	DD	E	EA	EE	F	G	J	L	LR	M	WF	XD	Y	LF	P	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	3/4	1/2	1/2	9/16	1/4-28	2	0.3	3/8	3/8	1.26	1.1	0.62	0.75	0.62	1	5 3/8	1.71	3 5/8	2.36	4.75
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	3/4	1/2	1/2	9/16	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	0.62	0.75	0.62	1	5 3/8	1.71	3 5/8	2.40	4.75
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	3/4	1/2	1/2	9/16	5/16-24	3	0	3/8	3/8	1.30	1.06	0.62	0.75	0.62	1	5 1/2	1.75	3 3/4	2.48	4.88
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	1 1/4	3/4	5/8	7/8	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	1.05	1.25	0.87	1 3/8	6 7/8	2.34	4 1/4	2.72	5.83
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	1 1/4	3/4	5/8	7/8	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	1.05	1.25	0.87	1 3/8	6 7/8	2.34	4 1/4	2.72	5.83

DIMENSIONS

SIDE LUG MOUNTING TYPE NC□A1S

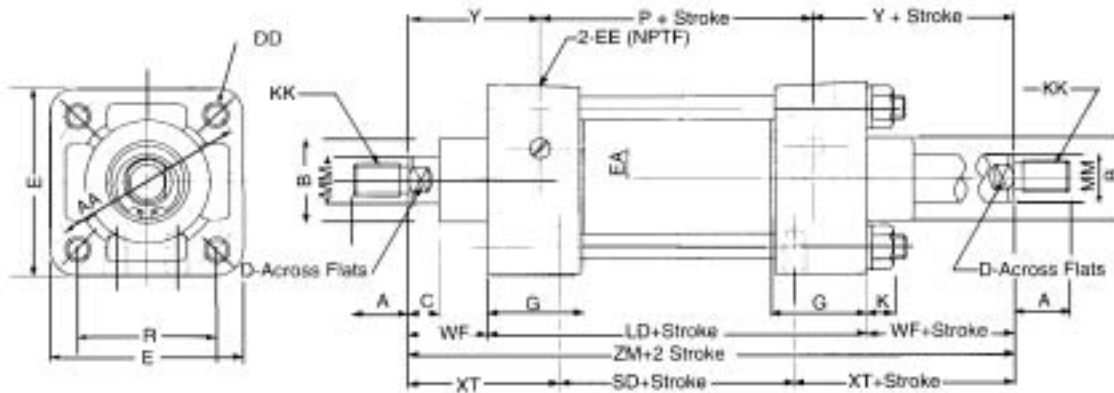


BORE (INCH)	MM	KK	A	B	C	D	DD	E	EA	EE	G	J	LF	P	R	SB	SS	ST	SU	SW	SY	TS	US	WF	XS	Y	ZB
150 (1.5")	5/8	7/16-20	3/4	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	3.63	2.36	1.43	3/8	2.88	5/8	0.94	3/8	0.94	2.75	3.50	1	1.38	1.71	5.19
200 (2")	5/8	7/16-20	3/4	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	3.63	2.4	1.84	3/8	2.88	5/8	0.94	3/8	0.94	3.25	4	1	1.38	1.71	5.19
250 (2.5")	5/8	7/16-20	3/4	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	1.06	3.75	2.48	2.19	3/8	3	3/4	0.94	3/8	0.94	3.75	4.50	1	1.38	1.75	5.31
325 (3.25")	1	3/4-16	1 1/8	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	4.25	2.72	2.76	1/2	3.25	1	1.25	1/2	1.25	4.75	5.75	1.38	1.88	2.34	6.38
400 (4")	1	3/4-16	1 1/8	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	4.25	2.72	3.32	1/2	3.25	1	1.25	1/2	1.25	5.50	6.50	1.38	1.88	2.34	6.38

SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE

DIMENSIONS

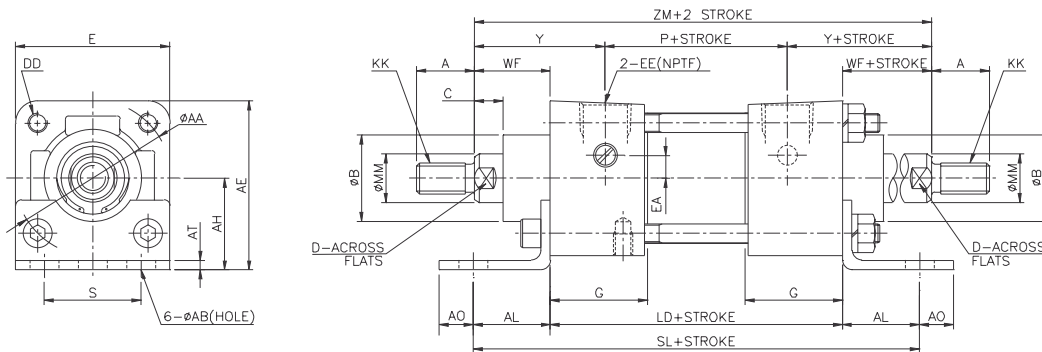
DOUBLE ROD BASIC TYPE NC□A1WB



BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	K	LD	P	R	WF	Y	ZM	XT	SD
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	0.281	3.78	2.36	1.43	1	1.71	5.78	1 15/16	1.9
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	0.343	3.82	2.4	1.84	1	1.71	5.82	1 15/16	1.94
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	0.343	3.98	2.48	2.19	1	1.75	5.98	1 15/16	2.1
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	0.421	4.64	2.72	2.76	1 3/8	2.34	7.4	2 7/16	2.52
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	0.421	4.64	2.72	3.32	1 3/8	2.34	7.4	2 7/16	2.52

DIMENSIONS

DOUBLE ROD FOOT MOUNTING TYPE NC□A1WL

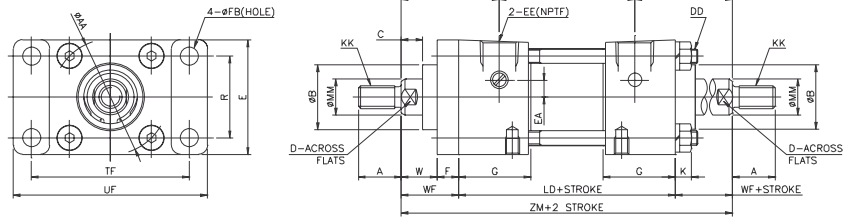


BORE (INCH)	MM	KK	A	AA	AB	AE	AH	AL	AO	AT	B	BA	C	D	DD	E	EA	EE	G	K	S	WF	Y	P	LD	SL	ZM
150 (1.5")	5/8	7/16-20	3/4	2.02	3/8	2 3/16	1 3/16	1	7/16	1/8	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	0.281	1 1/4	1	1.71	2.36	3.78	5.78	5.78
200 (2")	5/8	7/16-20	3/4	2.6	3/8	2 11/16	1 7/16	1	9/16	1/8	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	0.343	1 3/4	1	1.71	2.4	3.82	5.82	5.82
250 (2.5")	5/8	7/16-20	3/4	3.1	3/8	3 1/8	1 5/8	1	9/16	1/8	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	0.343	2 1/4	1	1.75	2.48	3.98	5.98	5.98
325 (3.25")	1	3/4-16	1 1/8	3.9	1/2	3 13/16	1 15/16	1 1/4	3/4	11/64	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	0.421	2 3/4	1 3/8	2.34	2.72	4.64	7.14	7.4
400 (4")	1	3/4-16	1 1/8	4.7	1/2	4 1/2	2 1/4	1 1/4	3/4	15/64	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	0.421	3 1/2	1 3/8	2.34	2.72	4.64	7.14	7.4

MORE DIMENSIONS
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DIMENSIONS

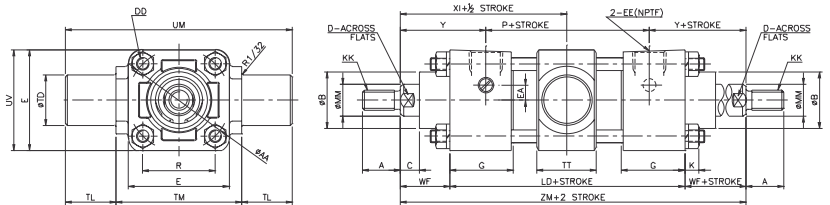
DOUBLE ROD FRONT FLANGE MOUNTING TYPE NC□A1WF



BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	F	FB	G	K	R	TF	UF	W	WF	Y	LD	P	ZM
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	0.375	0.312	1.26	0.281	1.43	2.75	3.375	0.625	1	1.71	3.78	2.36	5.78
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	0.375	0.375	1.26	0.343	1.84	3.375	4.125	0.625	1	1.71	3.82	2.4	5.82
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	0.375	0.375	1.3	0.343	2.19	3.875	4.625	0.625	1	1.75	3.98	2.48	5.98
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	0.625	0.437	1.57	0.421	2.76	4.687	5.5	0.75	1 3/8	2.34	4.64	2.72	7.4
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	0.625	0.437	1.57	0.421	3.32	5.437	6.25	0.75	1 3/8	2.34	4.64	2.72	7.4

DIMENSIONS

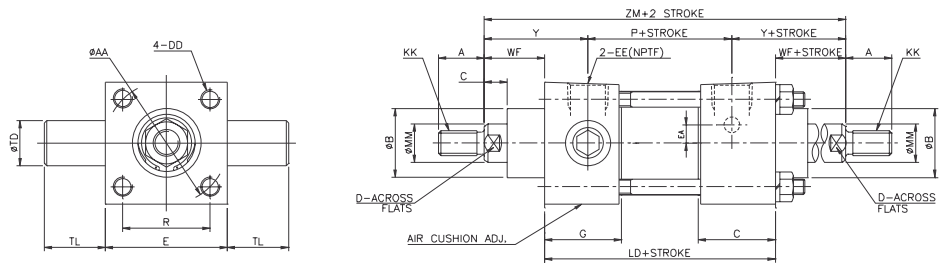
DOUBLE ROD CENTER TRUNNION MOUNTING TYPE NC□A1WT



BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	K	R	TD ^{0.0001}	TL	TM	TT	UM	UV	WF	Y	LD	P	XI	ZM
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	0.375	9/16	1/4-28	2	0.3	3/8	1.26	0.281	1.43	1	1	2.5	1.18	4.5	2	1	1.71	3.78	2.36	2.89	5.78
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	0.375	9/16	5/16-24	2 1/2	0.3	3/8	1.26	0.343	1.84	1	1	3	1.18	5	2.56	1	1.71	3.82	2.4	2.91	5.82
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	0.375	9/16	5/16-24	3	0	3/8	1.3	0.343	2.19	1	1	3.5	1.18	5.5	3.39	1	1.75	3.98	2.48	2.99	5.98
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	0.5	7/8	3/8-24	3 3/4	0	1/2	1.57	0.421	2.76	1	1	4.5	1.34	6.5	4.33	1 3/8	2.34	4.64	2.72	3.7	7.4
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	0.5	7/8	3/8-24	4 1/2	0	1/2	1.57	0.421	3.32	1	1	5.25	1.57	7.25	5.12	1 3/8	2.34	4.64	2.72	3.74	7.4

DIMENSIONS

DOUBLE ROD ROD TRUNNION TYPE NC□A1WU

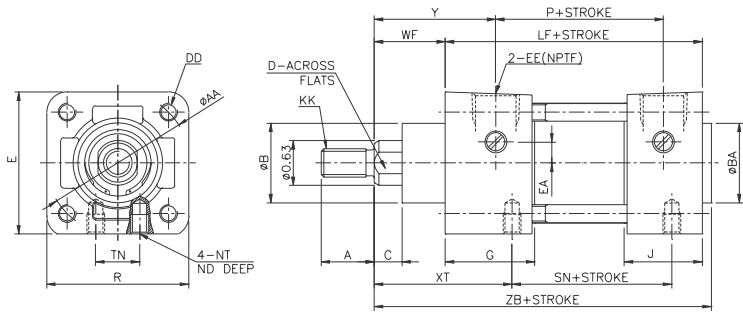


BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	K	LD	P	R	TD ^{0.0001}	TL	WF	Y	ZM
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	0.281	3.78	2.36	1.43	1	1	1	1.71	5.78
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	0.343	3.82	2.4	1.84	1	1	1	1.71	5.82
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.3	0.343	3.98	2.48	2.19	1	1	1	1.75	5.98
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	0.421	4.64	2.72	2.76	1	1	1 3/8	2.34	7.4
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	0.421	4.64	2.72	3.32	1	1	1 3/8	2.34	7.4

SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE

DIMENSIONS

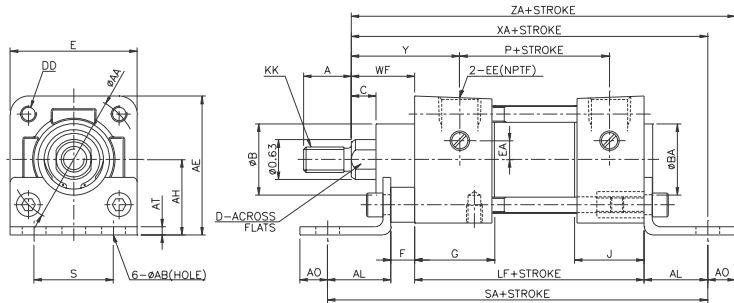
NON-ROTATING ROD BASIC TYPE - NC□A1KB



BORE (INCH)	KK	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	R	WF	Y	LF	P	ZB	TN	XT	SN
150 (1.5")	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	0.551	1/4-28	2	0.3	3/8	1.26	1.1	1.43	1	1.71	3 5/8	2.36	4 3/4	5/8	1 15/16	2 1/4
200 (2")	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	0.551	5/16-24	2 1/2	0.3	3/8	1.26	1.06	1.84	1	1.71	3 5/8	2.40	4 3/4	7/8	1 15/16	2 1/4
250 (2.5")	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	0.551	5/16-24	3	0	3/8	1.30	1.06	2.19	1	1.75	3 3/4	2.48	4 7/8	1 1/4	1 15/16	2 3/8

DIMENSIONS

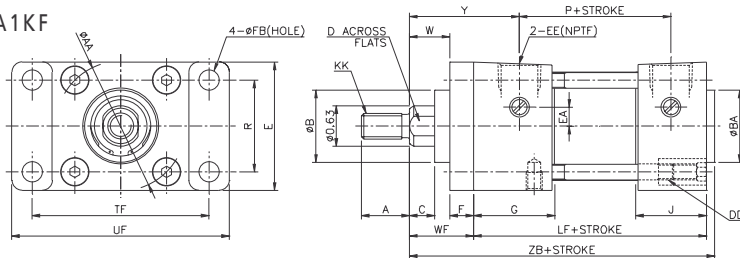
NON-ROTATING ROD FOOT MOUNTING TYPE NC□A1KL



BORE (INCH)	KK	A	AA	AB	AE	AH	AL	AO	AT	B	BA	C	D	DD	E	EA	EE	F	G	J	S	WF	Y	P	LF	SA	XA	ZA
150 (1.5")	7/16-20	3/4	2.02	0.375	2.187	1.187	1	0.437	0.125	1 1/8	1 1/8	3/8	0.551	1/4-28	2	0.3	3/8	0.375	1.26	1.1	1.25	1	1.71	2.36	3 5/8	6	5 5/8	6.062
200 (2")	7/16-20	3/4	2.60	0.375	2.687	1.437	1	0.562	0.125	1 1/8	1 1/8	3/8	0.551	5/16-24	2.5	0.3	3/8	0.375	1.26	1.06	1.75	1	1.71	2.40	3 5/8	6	5 5/8	6.187
250 (2.5")	7/16-20	3/4	3.10	0.375	3.125	1.625	1	0.562	0.125	1 1/8	1 1/8	3/8	0.551	5/16-24	3	0	3/8	0.375	1.30	1.06	2.25	1	1.75	2.48	3 3/4	6 1/4	5 3/4	6.312

DIMENSIONS

NON-ROTATING ROD FRONT FLANGE MOUNTING TYPE NC□A1KF

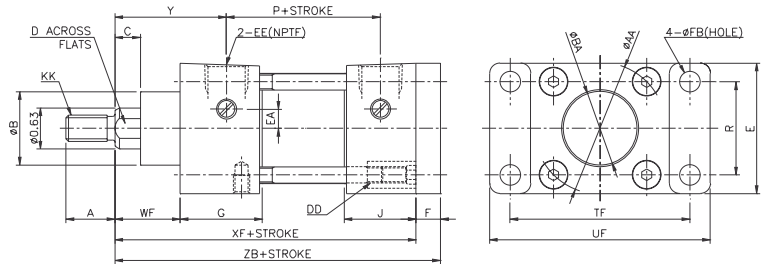


BORE (INCH)	KK	A	AA	B	BA	C	D	DD	E	EA	EE	F	FB	G	J	R	TF	UF	W	WF	Y	LF	P	ZB
150 (1.5")	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	0.551	1/4-28	2	0.3	3/8	0.375	0.312	1.26	1.1	1.43	2.75	3.375	5/8	1	1.71	3 5/8	2.36	4.75
200 (2")	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	0.551	5/16-24	2.5	0.3	3/8	0.375	0.375	1.26	1.06	1.84	3.375	4.125	5/8	1	1.71	3 5/8	2.40	4.75
250 (2.5")	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	0.551	5/16-24	2.5	0.3	3/8	0.375	0.375	1.30	1.06	2.19	3.875	4.625	5/8	1	1.75	3 3/4	2.48	4.875

MORE DIMENSIONS
SEE NEXT PAGE

DIMENSIONS

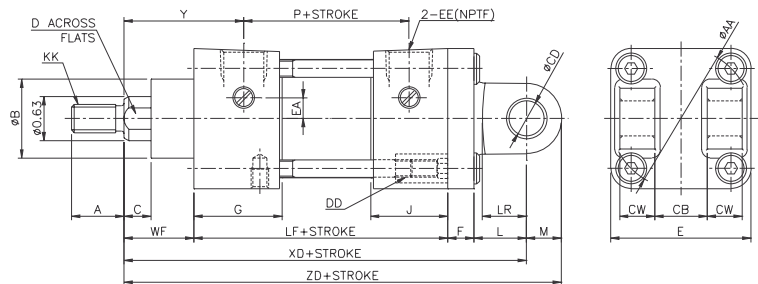
NON-ROTATING ROD REAR FLANGE MOUNTING TYPE NC□A1KG



BORE (INCH)	KK	A	AA	B	BA	C	D	DD	E	EA	EE	F	FB	G	J	R	TF	UF	WF	Y	P	XF	ZF
150 (1.5")	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	0.551	1/4-28	2	0.3	3/8	0.375	0.312	1.26	1.1	1.43	2.75	3.375	1	1.71	2.36	4.675	5
200 (2")	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	0.551	5/16-24	2.5	0.3	3/8	0.375	0.375	1.26	1.06	1.84	3.375	4.125	1	1.71	2.40	4.675	5
250 (2.5")	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	0.551	5/16-24	2.5	0	3/8	0.375	0.375	1.30	1.06	2.19	3.875	4.625	1	1.75	2.48	4.75	5.125

DIMENSIONS

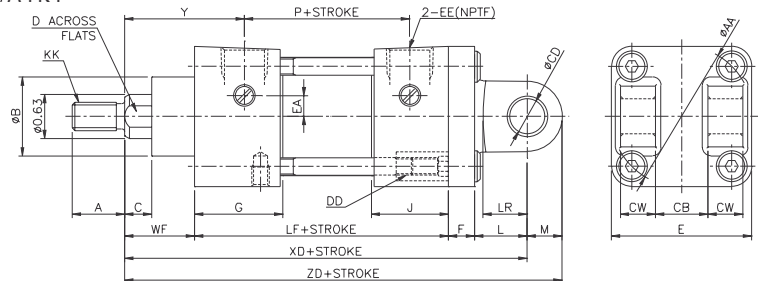
NON-ROTATING ROD DETACHABLE REAR CLEVIS MOUNTING TYPE NC□A1KD



BORE (INCH)	KK	A	AA	B	C	CB	CD	CW	D	DD	E	EA	EE	FF	G	J	L	LR	M	WF	XD	Y	LF	P	ZD
150 (1.5")	7/16-20	3/4	2.02	1 1/8	3/8	3/4	1/2	1/2	0.551	1/4-28	2	0.3	3/8	0.375	1.26	1.1	3/4	0.625	1/2	1	5.75	1.71	3 5/8	2.36	6.25
200 (2")	7/16-20	3/4	2.6	1 1/8	3/8	3/4	1/2	1/2	0.551	5/16-24	2.5	0.3	3/8	0.375	1.26	1.06	3/4	0.625	1/2	1	5.75	1.71	3 5/8	2.40	6.25
250 (2.5")	7/16-20	3/4	3.1	1 1/8	3/8	3/4	1/2	1/2	0.551	5/16-24	3	0	3/8	0.375	1.30	1.06	3/4	0.625	1/2	1	5.875	1.75	3 3/4	2.48	6.375

DIMENSIONS

NON-ROTATING ROD CENTER TRUNNION MOUNTING TYPE NC□A1KT



BORE (INCH)	KK	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	R	TD ⁰ _{0.001}	TL	TM	TT	UM	UV	WF	Y	LF	P	XI	ZB
150 (1.5")	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	0.551	1/4-28	2	0.3	3/8	1.26	1.1	1.43	1	1	2.5	1.18	4.5	2	1	1.71	3 5/8	2.36	2.89	4.75
200 (2")	7/16-20	3/4	2.60	1 1/8	1 1/8	3/8	0.551	5/16-24	2.5	0.3	3/8	1.26	1.06	1.84	1	1	3	1.18	5	2.56	1	1.71	3 5/8	2.4	2.91	4.75
250 (2.5")	7/16-20	3/4	3.10	1 1/8	1 1/8	3/8	0.551	5/16-24	3	0	3/8	1.30	1.06	2.19	1	1	3.5	1.18	5.5	3.39	1	1.75	3 3/4	2.48	2.99	4.875

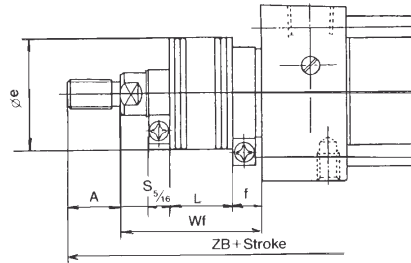
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DIMENSIONS

ROD BOOT TYPE NC□A1□□-□ J

BOOT MATERIAL

Suffix Code	Material	Maximum Temperature
J	Nylon	140OF (60°C)
K	Neoprene	230OF (110°C)

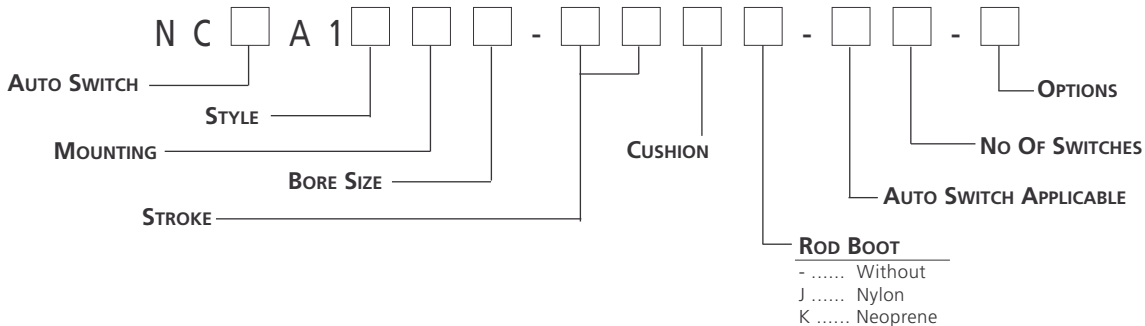


BORE (INCH)	A	øe	F	STROKE											
				0~2	2.1~4	4.1~6	6.1~8	8.1~10	10.1~12	12.1~14	14.1~16	16.1~20	20.1~24	24.1~28	
150 (1.5")	0.75	1.375	0.734											-	-
200 (2")	0.75	1.375	0.734											6	-
250 (2.5")	0.75	1.375	0.734	0.5	1	1.5	2	2.5	3	3.5	4	5	6	6	-
325 (3.25")	1.125	1.968	0.984											6	7
400 (4")	1.125	1.968	0.984											6	7

BORE (INCH)	Wf										
	0~2	2.1~4	4.1~6	6.1~8	8.1~10	10.1~12	12.1~14	14.1~16	16.1~20	20.1~24	24.1~28
150 (1.5")	1.937	2.437	2.937	3.437	3.937	4.437	4.937	5.437	6.437	-	-
200 (2")	1.937	2.437	2.937	3.437	3.937	4.437	4.937	5.437	6.437	7.437	-
250 (2.5")	1.937	2.437	2.937	3.437	3.937	4.437	4.937	5.437	6.437	7.437	-
325 (3.25")	2.312	2.812	3.312	3.812	4.312	4.812	5.312	5.812	6.812	7.812	8.812
400 (4")	2.312	2.812	3.312	3.812	4.312	4.812	5.312	5.812	6.812	7.812	8.812

BORE (INCH)	ZB										
	0~2	2.1~4	4.1~6	6.1~8	8.1~10	10.1~12	12.1~14	14.1~16	16.1~20	20.1~24	24.1~28
150 (1.5")	5.689	6.187	6.687	7.187	7.687	8.187	8.687	9.187	10.187	-	-
200 (2")	5.689	6.187	6.687	7.187	7.687	8.187	8.687	9.187	10.187	11.187	-
250 (2.5")	5.812	6.312	6.812	7.312	7.812	8.312	8.812	9.937	10.312	11.312	-
325 (3.25")	6.765	7.265	7.765	8.265	8.765	9.265	9.765	10.265	11.265	12.265	13.265
400 (4")	6.765	7.265	7.765	8.265	8.765	9.265	9.765	10.265	11.265	12.265	13.265

**HOW TO ORDER
 ROD BOOT TYPE**



HOW TO ORDER

SERIES NCA1 AIR CYLINDER OPTIONS SPECIAL ROD THREAD - XA OPTION

TO CHANGE ROD THREAD FROM STANDARD THREAD FORM, USE THE FOLLOWING FORMAT.

How To Order

The NCA1 series cylinders are available with a variety of special rod end modifications to suit your application through our simple special ordering process. The Simple Special System is a global effort to quickly and efficiently respond to our customer requests for a non standard catalog option. The chart below outlines the applicable types available. To order the correct rod end modification please contact your local SMC Sales Office or SMC Technical Sales Representative.

Rod End Shape

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
Symbol: A16 	Symbol: A17 	Symbol: A18 	Symbol: A19 	Symbol: A20
Symbol: A21 	Symbol: A22 	Symbol: A23 	Symbol: A24 	Symbol: A25
Symbol: A26 	Symbol: A27 	Symbol: A28 	Symbol: A29 	Symbol: A30

Note) Series CQ2 is not available.

Note) Series CQ2 is not available.



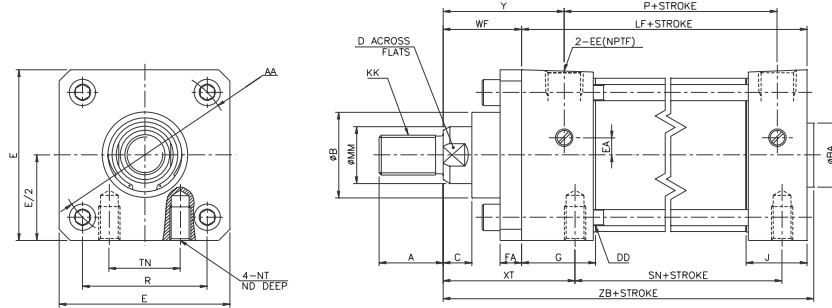
TECHNICAL SPECIFICATIONS

OVERSIZED ROD - XB5 OPTION

Bore Size	2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	2~20in/s (50~500mm/s)
Cushion	Air Cushion Standard
Mounting Types	Basic, foot, Flange Center Trunnion, Side-Tapped

DIMENSIONS

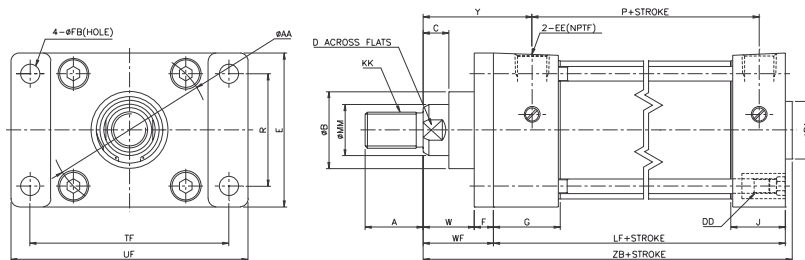
OVERSIZED ROD BASIC TYPE NC□A1B (XB5)



BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	FA	G	J	R	ND	NT	TN	WF	XT	Y	LF	P	SN	ZB
200 (2")	1	3/4-16	1 1/8	2.6	1.5	1 1/8	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	1.84	7/16	5/16-18	7/8	1 3/8	2 5/16	2.09	3 5/8	2.40	2 1/4	5 1/8
250 (2.5")	1	3/4-16	1 1/8	3.1	1.5	1 1/8	1/2	7/8	5/16-24	3	0	3/8	3/8	1.3	1.06	2.19	19/32	3/8-18	1 1/4	1 3/8	2 5/16	2.13	3 3/4	2.48	2 3/8	5 1/4
325 (3.25")	1 3/8	1-14	1 5/8	3.9	2	1 1/2	5/8	1 1/4	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	2.76	5/8	1/2-13	1 1/2	1 5/8	2 11/16	2.59	4 1/4	2.72	2 5/8	6 5/64
400 (4")	1 3/8	1-14	1 5/8	4.7	2	1 1/2	5/8	1 1/4	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	3.32	5/8	1/2-13	2 1/10	1 5/8	2 11/16	2.59	4 1/4	2.72	2 5/8	6 5/64

DIMENSIONS

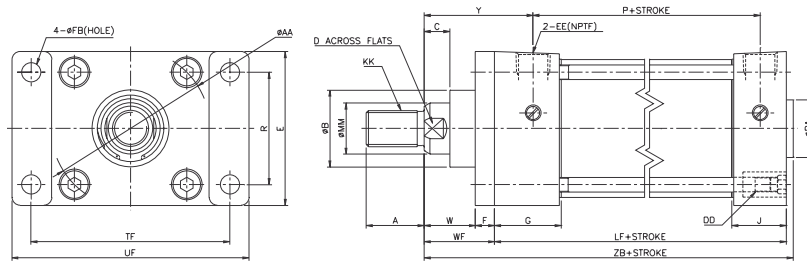
OVERSIZED ROD FOOT MOUNTING TYPE NC□A1L (XB5)



BORE (INCH)	MM	KK	A	AA	AB	AE	AH	AL	AO	AT	B	BA	C	D	DD	E	EA	EE	FA	G	J	S	WF	Y	P	LF	SA	XA	ZA
200 (2")	1	3/4-16	1 1/8	2.6	3/8	2 11/16	1 7/16	1	9/16	1/8	1.5	1 1/8	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	1 3/4	1 3/8	2.09	2.40	3 5/8	6	6	6 9/16
250 (2.5")	1	3/4-16	1 1/8	3.1	3/8	3 1/8	1 5/8	1	9/16	1/8	1.5	1 1/8	1/2	7/8	5/16-24	3	0	3/8	3/8	1.3	1.06	2 1/4	1 3/8	2.13	2.48	3 3/4	6 1/8	6 1/8	6 11/16
325 (3.25")	1 3/8	1-14	1 5/8	3.9	1/2	3 13/16	1 15/16	1 1/4	3/4	11/64	2	1 1/2	5/8	1 1/4	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	2 3/4	1 5/8	2.59	2.72	4 1/4	7 3/8	7 3/8	7 7/8
400 (4")	1 3/8	1-14	1 5/8	4.7	1/2	4 1/2	2 1/4	1 1/4	3/4	11/64	2	1 1/2	5/8	1 1/4	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	3 1/2	1 5/8	2.59	2.72	4 1/4	7 3/8	7 3/8	7 7/8

DIMENSIONS

OVERSIZED ROD FRONT FLANGE MOUNTING TYPE NC□A1F (XB5)

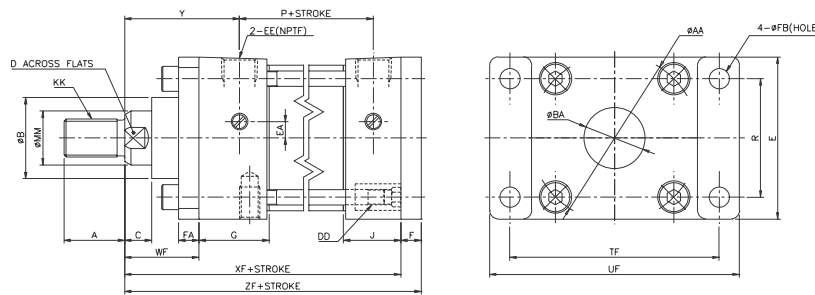


BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	F	FB	G	J	R	TF	UF	W	WF	Y	LF	P	ZB
200 (2")	1	3/4-16	1 1/8	2.6	1.5	1 1/8	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	3/8	1.26	1.06	1.84	3 3/8	4 1/8	1	1 3/8	2.09	3 5/8	2.40	5 1/8
250 (2.5")	1	3/4-16	1 1/8	3.1	1.5	1 1/8	1/2	7/8	5/16-24	3	0	3/8	3/8	3/8	1.30	1.06	2.19	3 7/8	4 5/8	1	1 3/8	2.13	3 3/4	2.48	5 1/4
325 (3.25")	1 3/8	1-14	1 5/8	3.9	2	1 1/2	5/8	1 1/4	3/8-24	3 3/4	0	1/2	5/8	7/16	1.57	1.18	2.76	4 11/16	5 1/2	1	1 5/8	2.59	4 1/4	2.72	6 5/64
400 (4")	1 3/8	1-14	1 5/8	4.7	2	1 1/2	5/8	1 1/4	3/8-24	4 1/2	0	1/2	5/8	7/16	1.57	1.18	3.32	5 7/16	6 1/4	1	1 5/8	2.59	4 1/4	2.72	6 5/64

DIMENSIONS

OVERSIZED ROD REAR FLANGE MOUNTING TYPE NC□A1G (XB5)

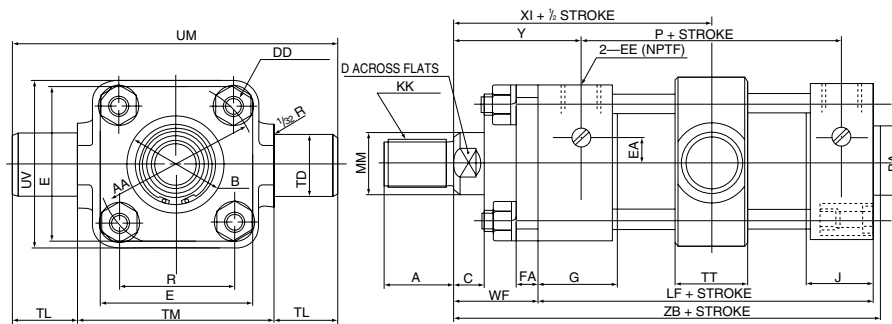
MORE DIMENSIONS
SEE NEXT PAGE



BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	F	FA	G	J	R	TF	UF	W	WF	Y	P	XF	ZF
200 (2")	1	3/4-16	1 1/8	2.6	1.5	1 1/8	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	3/8	1.26	1.06	1.84	3 3/8	4 1/8	1 3/8	2.09	2.40	5	5 3/8	
250 (2.5")	1	3/4-16	1 1/8	3.1	1.5	1 1/8	1/2	7/8	5/16-24	3	0	3/8	3/8	3/8	1.3	1.06	2.19	3 7/8	4 5/8	1 3/8	2.13	2.48	5 1/8	5 1/2	
325 (3.25")	1 3/8	1-14	1 5/8	3.9	2	1 1/2	5/8	1 1/4	3/8-24	3 3/4	0	1/2	5/8	5/8	1.57	1.18	2.76	4 11/16	5 1/2	1 5/8	2.59	2.72	5 7/8	6 1/2	
400 (4")	1 3/8	1-14	1 5/8	4.7	2	1 1/2	5/8	1 1/4	3/8-24	4 1/2	0	1/2	5/8	5/8	1.57	1.18	3.32	5 7/16	6 1/4	1 5/8	2.59	2.72	5 7/8	6 1/2	

DIMENSIONS

OVERSIZED ROD CENTER TRUNNION MOUNTING TYPE NC□A1T (XB5)

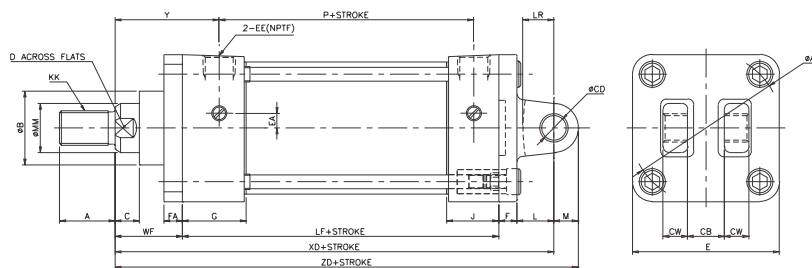


BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	FA	G	J	R	TD ⁰ _{0.001}	TL	TM	TT	UM	UV	WF	Y	LF	P	XI	ZB
200 (2")	1	3/4-16	1 1/8	2.6	1.5	1 1/8	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	1.26	1.06	1.84	1	1	3	1.18	5	2.56	1 3/8	2.09	3 5/8	2.40	3.29	5 1/8
250 (2.5")	1	3/4-16	1 1/8	3.1	1.5	1 1/8	1/2	7/8	5/16-24	3	0	3/8	3/8	1.3	1.06	2.19	1	1	3 1/2	1.18	5 1/2	3.39	1 3/8	2.13	3 3/4	2.48	3.37	5 1/4
325 (3.25")	1 3/8	1-14	1 5/8	3.9	2	1 1/2	5/8	1 1/4	3/8-24	3 3/4	0	1/2	5/8	1.57	1.18	2.76	1	1	4 1/2	1.34	6 1/2	4.33	1 5/8	2.59	4 1/4	2.72	3.95	6 5/64
400 (4")	1 3/8	1-14	1 5/8	4.7	2	1 1/2	5/8	1 1/4	3/8-24	4 1/2	0	1/2	5/8	1.57	1.18	3.32	1	1	5 1/4	1.57	7 1/4	5.12	1 5/8	2.59	4 1/4	2.72	3.99	6 5/64

SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE

DIMENSIONS

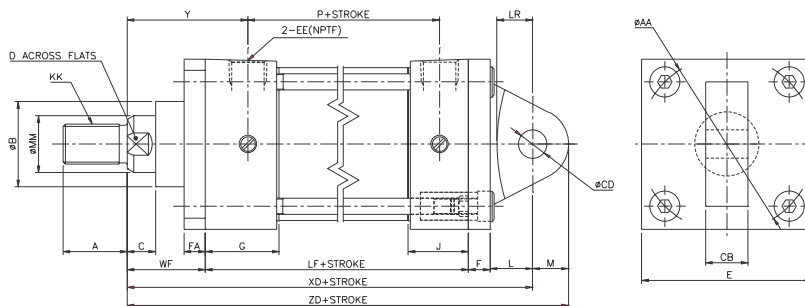
OVERSIZED ROD DETACHABLE REAR CLEVIS MOUNTING TYPE NC□A1D (XB5)



BORE (INCH)	MM	KK	A	AA	B	C	CB	CD	CW	D	DD	E	EA	EE	F	FA	G	J	L	LR	M	WF	XD	Y	LF	P	ZD
200 (2")	1	3/4-16	1 1/8	2.6	1.5	1/2	3/4	1/2	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	3/8	1.26	1.06	3/4	5/8	1/2	1 3/8	6 1/8	2.09	3 5/8	2.40	6 5/8
250 (2.5")	1	3/4-16	1 1/8	3.1	1.5	1/2	3/4	1/2	1/2	7/8	5/16-24	3	0	3/8	3/8	3/8	1.3	1.06	3/4	5/8	1/2	1 3/8	6 1/4	2.13	3 3/4	2.48	6 3/4
325 (3.25")	1 3/8	1-14	1 5/8	3.9	2	5/8	1 1/4	3/4	3/4	1 1/4	3/8-24	3 3/4	0	1/2	5/8	5/8	1.57	1.18	1 1/4	1	3/4	1 5/8	7 3/4	2.59	4 1/4	2.72	8 1/2
400 (4")	1 3/8	1-14	1 5/8	4.7	2	5/8	1 1/4	3/4	3/4	1 1/4	3/8-24	4 1/2	0	1/2	5/8	5/8	1.57	1.18	1 1/4	1	3/4	1 5/8	7 3/4	2.59	4 1/4	2.72	8 1/2

DIMENSIONS

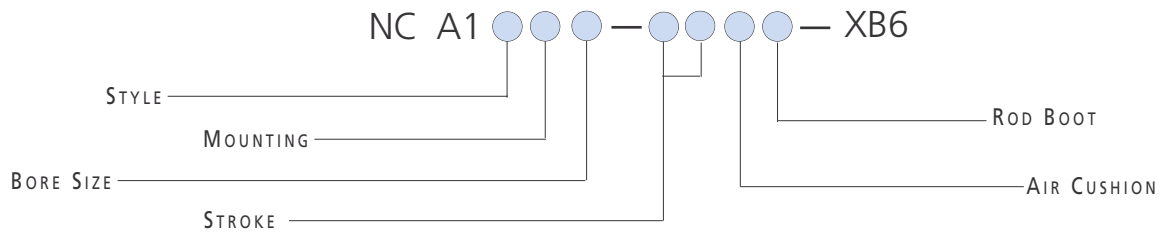
OVERSIZED ROD SINGLE DETACHABLE REAR CLEVIS MOUNTING TYPE NC□A1C (XB5)



BORE (INCH)	MM	KK	A	AA	B	C	CB	CD	CW	D	DD	E	EA	EE	F	FA	G	J	L	LR	M	WF	XD	Y	LF	P	ZD
200 (2")	1	3/4-16	1 1/8	2.6	1.5	1/2	3/4	1/2	1/2	7/8	5/16-24	2 1/2	0.3	3/8	3/8	3/8	1.26	1.06	3/4	5/8	1/2	1 3/8	6 1/8	2.09	3 5/8	2.40	6 5/8
250 (2.5")	1	3/4-16	1 1/8	3.1	1.5	1/2	3/4	1/2	1/2	7/8	5/16-24	3	0	3/8	3/8	3/8	1.3	1.06	3/4	5/8	1/2	1 3/8	6 1/4	2.13	3 3/4	2.48	6 3/4
325 (3.25")	1 3/8	1-14	1 5/8	3.9	2	5/8	1 1/4	3/4	3/4	1 1/4	3/8-24	3 3/4	0	1/2	5/8	5/8	1.57	1.18	1 1/4	1	3/4	1 5/8	7 3/4	2.59	4 1/4	2.72	8 1/2
400 (4")	1 3/8	1-14	1 5/8	4.7	2	5/8	1 1/4	3/4	3/4	1 1/4	3/8-24	4 1/2	0	1/2	5/8	5/8	1.57	1.18	1 1/4	1	3/4	1 5/8	7 3/4	2.59	4 1/4	2.72	8 1/2

HOW TO ORDER

SERIES NCA1 AIR CYLINDER OPTIONS HIGH TEMPERATURE - XB6 OPTION



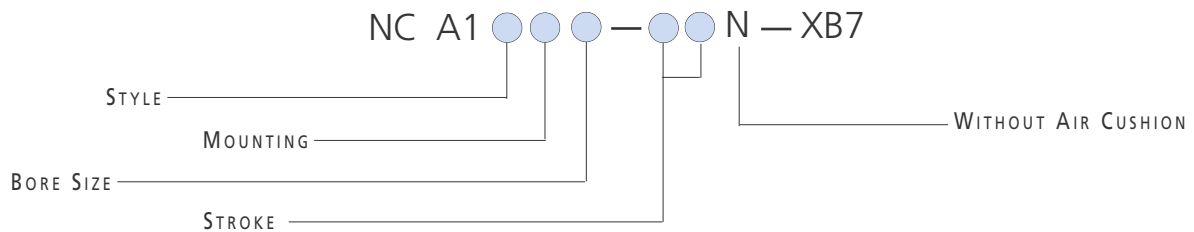
TECHNICAL SPECIFICATIONS

HIGH TEMPERATURE - XB6 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	-10~149°C / 14~300°F
Seal Material	FluoroRubber
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, foot, Flange Head Flange, Rear Clevis, Center Trunnion, Side-Tapped Rod Trunnion, Head Trunnion, Side Lug

HOW TO ORDER

SERIES NCA1 AIR CYLINDER OPTIONS LOW TEMPERATURE - XB7 OPTION



TECHNICAL SPECIFICATIONS

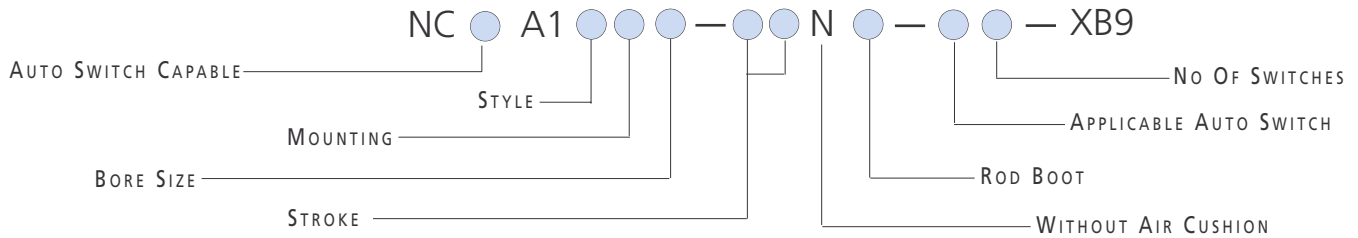
LOW TEMPERATURE - XB7 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	-30~60°C / -22~140°F
Seal Material	Low Durometer Nitrile Rubber
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, foot, Flange Head Flange, Rear Clevis, Center Trunnion, Side-Tapped Rod Trunnion, Head Trunnion, Side Lug



**How To
 ORDER**

SERIES NCA1 AIR CYLINDER OPTIONS
 LOW SPEED - XB9 OPTION



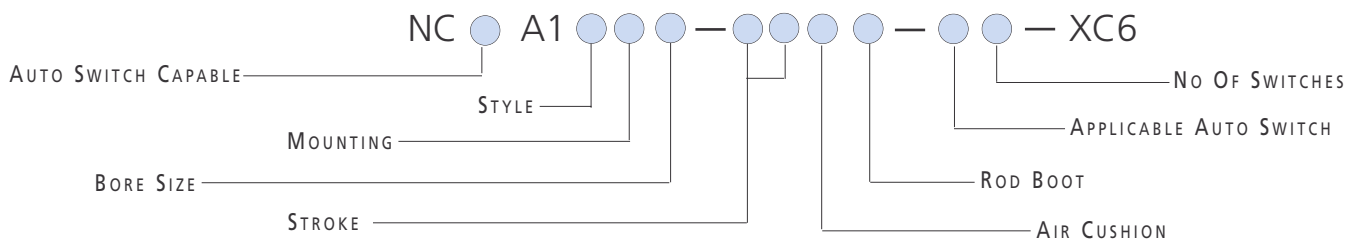
**TECHNICAL
 SPECIFICATIONS**

LOW SPEED - XB9 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	10~50mm/s / 0.4~2in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, Foot, Flange Head Flange, Rear Clevis, Center Trunnion, Side-Tapped. Head Trunnion, Rod Trunnion, Side Lug

**How To
 ORDER**

SERIES NCA1 AIR CYLINDER OPTIONS
 STAINLESS STEEL ROD - XC6 OPTION



**TECHNICAL
 SPECIFICATIONS**

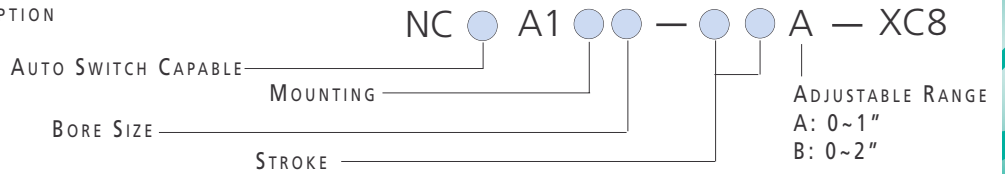
STAINLESS STEEL ROD - XC6 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Rod Material	SUS304
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, Foot, Flange Head Flange, Clevis, Center Trunnion, Side-Tapped. Head Trunnion, Rod Trunnion, Side Lug

How To Order

SERIES NCA1 AIR CYLINDER OPTIONS

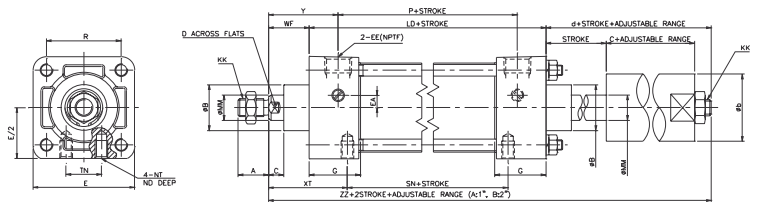
ADJUSTABLE STROKE - EXTEND - XC8 OPTION



TECHNICAL SPECIFICATIONS

ADJUSTABLE STROKE - EXTEND - XC8 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, Foot, Flange Center Trunnion, Side Tapped

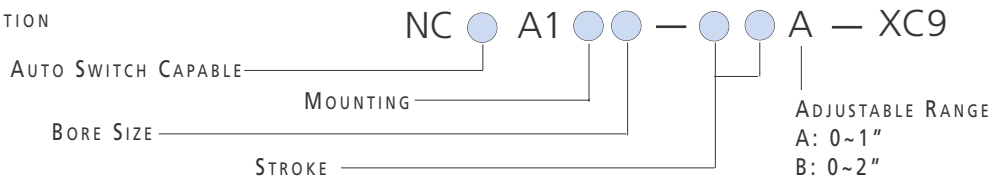


BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	K	R	WF	Y	LD	P	ZZ	b	c	d
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	9/32	1.43	1	1.71	3.78	2.36	6.58	1 1/2	1.25	1.80
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	11/32	1.84	1	1.71	3.82	2.40	7.01	1 21/32	1.64	2.19
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.30	11/32	2.19	1	1.75	3.98	2.48	7.17	1 21/32	1.64	2.19
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	27/64	2.76	1 3/8	2.34	4.64	2.72	9.38	2 9/32	2.48	3.37
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	27/64	3.32	1 3/8	2.34	4.64	2.72	9.38	2 9/32	2.48	3.37

How To Order

SERIES NCA1 AIR CYLINDER OPTIONS

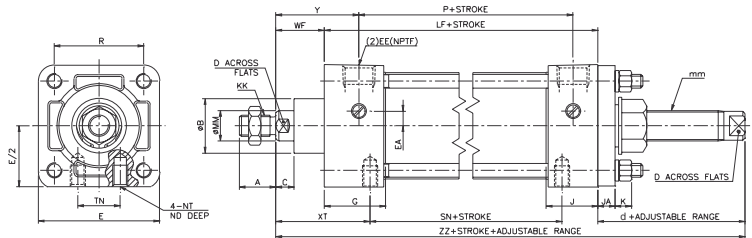
ADJUSTABLE STROKE - RETURN - XC9 OPTION



TECHNICAL SPECIFICATIONS

ADJUSTABLE STROKE - EXTEND - XC8 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, Foot, Flange Center Trunnion, Side Tapped

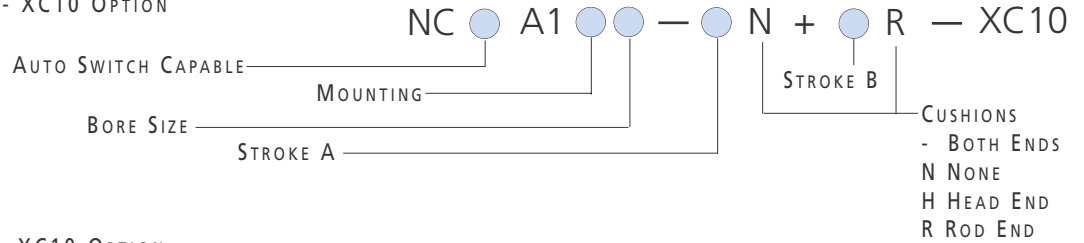


BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	J	JA	K	R	WF	Y	LF	P	ZZ	TN	XT	SN	d	mm
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	11/32	9/32	1.43	1	1.71	3 5/8	2.36	6.44	5/8	115/16	2 1/4	1.81	M16x1.5
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	11/32	11/32	1.84	1	1.71	3 5/8	2.40	6.44	7/8	115/16	2 1/4	1.81	M16x1.5
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.30	1.06	11/32	11/32	2.19	1	1.75	3 3/4	2.48	6.44	1 1/4	115/16	2 3/8	1.69	M16x1.5
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.10	5/8	27/64	2.76	1 3/8	2.34	4 1/4	2.72	8.02	1 1/2	2 7/16	2 5/8	2.40	M24x1.5
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.10	5/8	27/64	3.32	1 3/8	2.34	4 1/4	2.72	8.02	2 1/16	2 7/16	2 5/8	2.40	M24x1.5



How To Order

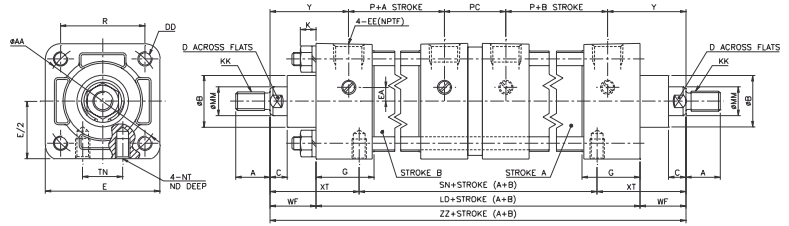
SERIES NCA1 AIR CYLINDER OPTIONS
 DUAL OPERATION - DOUBLE ROD - XC10 OPTION



TECHNICAL SPECIFICATIONS

DUAL OPERATION - DOUBLE ROD - XC10 OPTION

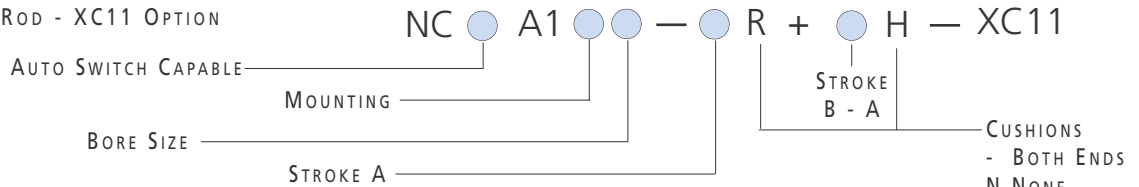
Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / 8PSI
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, Foot, Flange Side Tapped



BORE (INCH)	MM	KK	A	AA	B	C	D	DD	E	EA	EE	G	K	R	WF	Y	LD	P	PC	ZZ	SN	TN	XT
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	9/32	1.43	1	1.71	7.44	2.36	1.30	9.44	5.56	5/8	115/16
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	11/32	1.84	1	1.71	7.52	2.40	1.30	9.52	5.64	7/8	115/16
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.30	11/32	2.19	1	1.75	7.76	2.48	1.30	9.76	5.88	1 1/4	115/16
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	27/64	2.76	1 3/8	2.34	8.94	2.72	1.57	11.69	6.82	1 1/2	2 7/16
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	27/64	3.32	1 3/8	2.34	8.94	2.72	1.57	11.69	6.82	2 1/16	2 7/16

How To Order

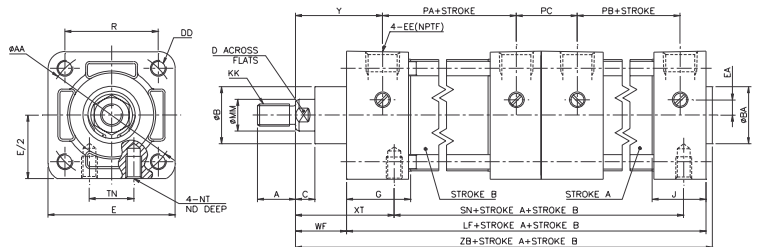
SERIES NCA1 AIR CYLINDER OPTIONS
 DUAL OPERATION - SINGLE ROD - XC11 OPTION



TECHNICAL SPECIFICATIONS

DUAL OPERATION - SINGLE ROD - XC11 OPTION

Bore Size	1.5 / 2 / 2.5 / 3.25 / 4
Fluid	Air
Max Operating Pressure	1.75MPa / 250PSI
Min Operating Pressure	0.06MPa / PSI
Ambient & Media Temperature	5~60°C / 40~140°F
Piston Speed	50~500mm/s / 2~20in/s
Cushion	Air Cushion Standard
Mounting Types	Basic, Foot, Flange Side Tapped, Clevis, Side Lug

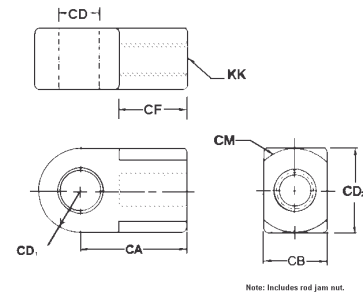


BORE (INCH)	MM	KK	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	NT	TN	WF	XT	Y	LF	PA	PB	PC	SN	ZB
150 (1.5")	5/8	7/16-20	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.3	3/8	1.26	1.1	1/4-20	5/8	1	1 15/16	1.71	7.26	2.36	2.40	1.24	5.89	8.39
200 (2")	5/8	7/16-20	3/4	2.6	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.3	3/8	1.26	1.06	5/16-18	7/8	1	1 15/16	1.71	7.26	2.40	2.44	1.20	5.89	8.39
250 (2.5")	5/8	7/16-20	3/4	3.1	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0	3/8	1.30	1.06	3/8-16	1 1/4	1	1 15/16	1.75	7.38	2.48	2.52	1.12	6.01	8.50
325 (3.25")	1	3/4-16	1 1/8	3.9	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	1/2-13	1 1/2	1 3/8	2 7/16	2.34	8.52	2.72	2.76	1.51	6.89	10.1
400 (4")	1	3/4-16	1 1/8	4.7	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	1/2-13	2 1/16	1 3/8	2 7/16	2.34	8.52	2.72	2.76	1.51	6.89	10.1

ACCESSORIES
SERIES NCA1 - PISTON ROD EYE

PART No	CA	CB	CF	CD	CD ₁	CD ₂	CM	KK	DEPTH
NI-150	1.50	.75 0 -0.1	0.937	0.50 +.004 +.002	.50	1.0	1.0	7/16-20 2B	0.75
NI-325	2.06	1.25 0 -0.1	1.937	0.75 +.004 +.002	.75	1.5	1.5	3/4-16 2B	1.12

NY-150=(1 1/2", 2", 2 1/2")
NI-325=(3 1/4", 4")

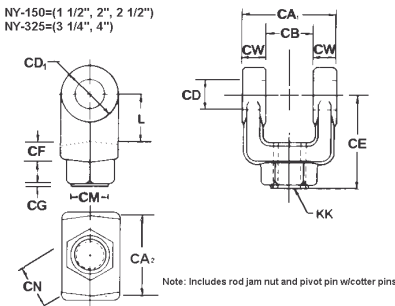


Note: Includes rod jam nut.

ACCESSORIES
SERIES NCA1 - PISTON ROD CLEVIS

PART No	CA ₁	CA ₂	CB	CD	CD ₁	CE	CF	CG	CM	CN	CW	KK-TAP	L
NY-150	1.765	1.65	.765 +.01 0	0.50 +.004 +.002	1.0	1.50	.38	.03	0.88	1.00	.50	7/16-20 2B	0.75
NY-325	2.515	2.40	1.265 +.01 0	0.75 +.004 +.002	1.5	2.38	.56	.03	1.12	1.25	.62	3/4-16 2B	1.25

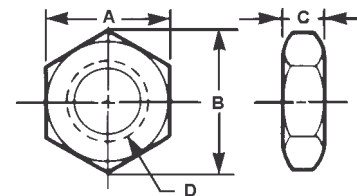
NY-150=(1 1/2", 2", 2 1/2")
NY-325=(3 1/4", 4")



Note: Includes rod jam nut and pivot pin w/cotter pins.

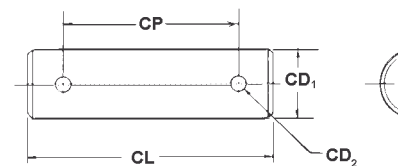
ACCESSORIES
SERIES NCA1 - ROD JAM NUT

PART No	APPLICABLE BORE	A	B	C	D
JM-045	1.5", 2", 2.25"	0.69	0.79	0.26	7/16-20 UNF
JM-10	3.25", 4"	1.12	1.30	0.42	3/4-16 UNF



ACCESSORIES
SERIES NCA1 - PIVOT PIN

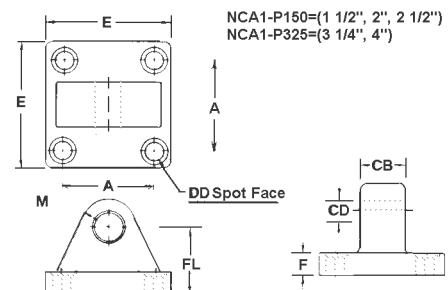
PART No	CD ₁	CD ₂	GL	CP
NCDP-150	0.50 0 -.002	.106	2.28	1.94
NCDP-325	0.75 0 -.002	.140	3.10	2.72



Note: Includes cotter pins

ACCESSORIES
SERIES NCA1 - EYE BRACKET

PART No	A	E	CB	CD	DD SPOT FACE	F	FL	M
NCA1-P150	1.62	2.50	0.75 0 -.01	0.50 +.004 +.002	.40 .59	.38	1.12	.50
NCA1-P325	2.56	3.50	1.25 0 -.01	0.75 +.004 +.002	.53 .78	.62	1.88	.75



NCA1-P150=(1 1/2", 2", 2 1/2")
NCA1-P325=(3 1/4", 4")

