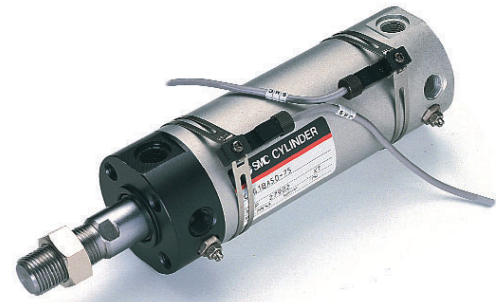




## AIR CYLINDER SERIES NCG BORE SIZES 3/4"~2 1/2"

- ✓ Double acting
- ✓ Clean line
- ✓ A substantial reduction in overall length compared to tie-rod designed cylinders
- ✓ High velocity
- ✓ Magnetic piston for auto switch sensing as an option
- ✓ Non-rotate option available



### HOW TO ORDER

#### AIR CYLINDER SERIES NCG

NC G — B73 S

**AUTO-SWITCH**  
 - Without Auto Switch  
 D - With Auto Switch  
 Capability /Built-in Magnet

**STYLE**  
 - .....Standard Cylinder  
 K .....Non Rotating Rod  
 W ..... Double Rod

**MOUNTING**  
 B .....Basic  
 C .....Single Clevis  
 L .....Foot  
 F .....Front Flange  
 G .....Rear Flange  
 U .....Front Trunnion  
 T .....Rear Trunnion  
 D .....Double Clevis  
 N .....Front Nose Mount

**CUSHION**  
 N ... Urethane Bumper (Std)  
 A ... Adjustable Air Cushion

**BORE SIZE**  
 20 ...3/4"  
 25 ...1"  
 32 ...1 1/4"  
 40 ...1 1/2"  
 50 ...2"  
 63 ...2 1/2"

**STROKE**  
 Stroke/inch

**STROKE**  
 Stroke/Hundredths of an inch

**AUTO SWITCH CAPABLE**  
 - ... W/O Auto Switch  
 \* For **Reed and Solid State Switch** details, refer to **Accessories ~ Auto Switches** on the following page.

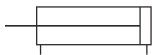
**NO OF SWITCHES**  
 - .....2 Pieces  
 S .....1 Piece  
 n .....n number of switches

**OPTIONS**  
 XC6 ...Stainless Steel Rod  
 XB6 ...High Temperature  
 XB7 ...Low Temperature  
 XB9 ...Low Speed  
 XC8 ...Stroke Adjustment/Extend  
 XC9 ...Stroke Adjustment/Retract  
 XC10 Dual Stroke  
 XC11 3 Position Tandem  
 XC37 Enlarged Orifice

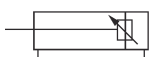
### CONSTRUCTION SPECIFICATIONS

Rod cover	Aluminum alloy (Black Anodizing)
Body	Aluminum alloy (Hard Alumite)
Piston rod	Carbon steel (Hard Chrome Plated)

### SYMBOLS RUBBER CUSHIONED



### AIR CUSHIONED



### STOCK STROKE LIST FOR ALL STYLES SERIES NCG

BORE SIZE	STANDARD STOCKED STROKE	MAXIMUM STANDARD STROKE
20	1, 2, 3, 4, 5, 6, 8	20
25	1, 2, 3, 4, 5, 6, 8, 10, 12	25
32	1, 2, 3, 4, 5, 6, 8, 10, 12	40
40	1, 2, 3, 4, 5, 6, 8, 10, 12	45
50	1, 2, 3, 4, 5, 6, 8, 10, 12	55
63	1, 2, 3, 4, 5, 6, 8, 10, 12	55

## ACCESSORIES MOUNTING BRACKET SERIES NCG

Bore Size Inches Mounting Accessory	3/4	1	1 1/4	1 1/2	2	2 1/2
Foot (2 pcs)	NCG-L020	NCG-L025	NCG-L032	NCG-L040	NCG-L050	NCG-L063
Flange	NCG-F020	NCG-F025	NCG-F032	NCG-F040	NCG-F050	NCG-F063
Trunnion	NCG-T020	CG-T025	CG-T032	NCG-T040	NCG-T050	NCG-T063
Double Clevis	NCG-D020	NCG-D025	NCG-D032	NCG-D040	NCG-D050	NCG-D063
Trunnion Bracket	NCG-P020	NCG-P025	NCG-P032	NCG-P040	NCG-P050	NCG-P063
Single Clevis	NCG-C020	NCG-C025	NCG-C032	NCG-C040	NCG-C050	NCG-C063

## ACCESSORIES AUTO SWITCHES

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

MODEL NUMBER	OPERATING VOLTAGE	MAXIMUM CURRENT OR OPERATING CURRENT RANGE (mA)	INDICATOR LIGHT/WIRE
D-B54	24VDC	5~50mA	Yes/2 Wire
	110VAC	5~25mA	
	220VAC	5~12.5mA	
D-B53	24VDC	5~50mA	Yes/2 Wire
	24VDC	50mA	
D-B64	110VAC	25mA	No/2 Wire
	220VAC	12.5mA	
D-B73	24VDC	5~40mA	Yes/2 Wire
D-C73	110VAC	5~20mA	
D-C73C			
D-B76	4~8VDC	20mA	Yes/2 Wire
D-C76			
D-B80	24V	50mA	No/2 Wire
D-C80	48V	40mA	
D-C80C	110V	20mA	

SOLID STATE SWITCHES MODEL NUMBER	OPERATING VOLTAGE	MAXIMUM CURRENT OR OPERATING CURRENT RANGE (mA)	INDICATOR LIGHT/WIRE
D-G59	24VDC (10~28VDC)	40mA	Yes/3 Wire (NPN)
D-G5P	-	80mA or less	Yes/3 Wire (PNP)
D-K59	24VDC (10~28VDC)	5~40mA	Yes/2 Wire
D-5NTL	24VDC (10~28VDC)	80mA or less	Yes/3 Wire (NPN)
D-H7A1	24VDC (10~28VDC)	40mA	Yes/3 Wire (NPN)
D-H7A2	-	80mA or less	Yes/3 Wire (PNP)
D-H7B	24VDC (10~28VDC)	5~40mA	Yes/2 Wire
D-H7C	24VDC (10~28VDC)	5~40mA	Yes/2 Wire
D-G59W	24VDC (10~28VDC)	40mA or less	Yes/3 Wire (NPN)
D-G5PW	-	80mA or less	Yes/3 Wire (PNP)
D-K59W	24VDC (10~28VDC)	5~40mA	Yes/2 Wire
D-G59F	-	40mA or less	Yes/4 Wire (NPN)
D-G79	24VDC (10~28VDC)	150mA or less	Yes/3 Wire (NPN)
D-H7PW	-	80mA or less	Yes/3 Wire (PNP)
D-H7BAL	24VDC (10~28VDC)	5~40mA or less	Yes/2 Wire
D-H7LF	26VDC or less	40mA or less	Yes/4 Wire (NPN)
D-H7NF	28VDC or less	40mA or less	Yes/4 Wire (NPN)
D-G5BAL	24VDC (10~28VDC)	5~40mA or less	Yes/2 Wire
D-H7PW	-	80mA or less	No/3 Wire (NPN)
D-H7BW	24VDC (10~28VDC)	5~40mA	Yes/2 Wire

## ACCESSORIES SWITCH BANDS FOR SWITCHES D-B7, D-B8, D-G7

BM1-01	.....3/4"
BM1-02	.....1"
BM1-32	.....1 1/4"
BM1-04	.....1 1/2"
BM1-05	.....2"
BM1-06	.....2 1/2"

## ACCESSORIES SWITCH BANDS FOR SWITCHES D-B5, D-B6, D-G5, D-K5

BA-01	.....3/4"
BA-02	.....1"
BA-32	.....1 1/4"
BA-04	.....1 1/2"
BA-05	.....2"
BA-06	.....2 1/2"

## ACCESSORIES SWITCH BANDS FOR SWITCHES D-C75, D-C8, D-H7

BMA1-020	.....3/4"
BMA2-025	.....1"
BMA2-032	.....1 1/4"
BMA2-040	.....1 1/2"
BMA2-050	.....2"
BMA2-063	.....2 1/2"

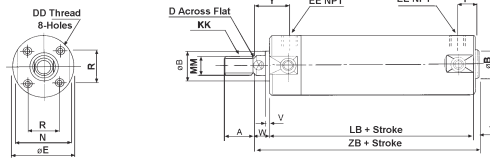
## TECHNICAL SPECIFICATIONS STANDARD SERIES NCG

Fluid	Air
Proof Pressure	1.5MPa / 215 PSI
Max Operating Pressure	1MPa / 145 PSI
Min Operating Pressure	0.05MPa / 7 PSI
Ambient and Fluid Temperature	10~60°C / 40~140°F
Piston Velocity	50~1000mm/s / 2 ~ 40 in/sec
Cushion	Urethane Bumper or Adjustable Air Cushion
Lubrication	Non-Lube
Mounting	Basic, Foot, Front & Rear Flange, Front & Rear Trunnion, Double & Single Clevis, Front Nose

## REPAIR KIT STANDARD SERIES NCG

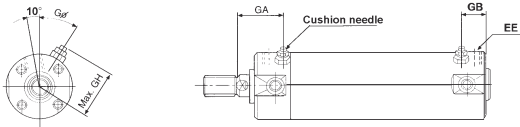
Bore Size	Bumper Design	Air Cushion Design
20	CG1N20-PS	CG1A20-PS
25	CG1N25-PS	CG1A25-PS
32	CG1N32-PS	CG1A32-PS
40	CG1N40-PS	CG1A40-PS
50	CG1N50-PS	CG1A50-PS
63	CG1N63-PS	CG1A63-PS

**DIMENSIONS**  
BASIC MODEL SERIES NCG  
RUBBER CUSHION TYPE NC(D)GBN



BORE SIZE	MAX STD STROKE	A	B	D	DD	E	EE	KK	LB	MM	N	P	R	V	W	Y	ZB
20	8	0.50	0.472 <sup>0</sup> <sub>-0.0011</sub>	0.24	8-32x0.28	1.02	1/8	1/4-28 UNF	2.70	0.315	0.94	0.47	0.55	0.08	0.50	0.97	3.28
25	12	0.50	0.551 <sup>0</sup> <sub>-0.0011</sub>	0.31	10-32x0.30	1.22	1/8	5/16-24 UNF	2.70	0.394	1.14	0.47	0.65	0.08	0.62	1.09	3.40
32	12	0.75	0.709 <sup>0</sup> <sub>-0.0011</sub>	0.39	10-32x0.30	1.50	1/8	7/16-20 UNF	2.78	0.472	1.42	0.43	0.79	0.08	0.88	1.35	3.74
40	12	0.75	0.984 <sup>0</sup> <sub>-0.0013</sub>	0.55	1/4-28x0.47	1.85	1/8	7/16-20 UNF	3.06	0.630	1.73	0.47	1.02	0.08	0.88	1.39	4.02
50	12	0.88	1.181 <sup>0</sup> <sub>-0.0013</sub>	0.71	5/16-24x0.63	2.28	1/4	1/2-20 UNF	3.53	0.787	2.17	0.51	1.26	0.08	1.19	1.74	4.80
63	12	0.88	1.260 <sup>0</sup> <sub>-0.0015</sub>	0.71	3/8-24x0.63	2.83	1/4	1/2-20 UNF	3.53	0.787	2.72	0.51	1.50	0.08	1.19	1.74	4.80

**DIMENSIONS**  
AIR CUSHION TYPE NC(D)GBA



ADJUSTABLE AIR CUSHION MODEL (INCH)

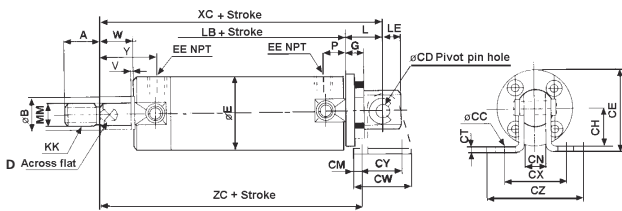
BORE SIZE	GA	GB	GH	Gø	EE
20	1.05	0.55	0.90	30°	10-32 UNF
25	1.17	0.55	0.98	30°	10-32 UNF
32	1.43	0.51	1.12	25°	1/8 NPT
40	1.47	0.55	1.30	20°	1/8 NPT
50	1.82	0.59	1.60	20°	1/4 NPT
63	1.82	0.59	1.87	20°	1/4 NPT

LONG STROKE (INCH)

BORE SIZE	STROKE RANGE	LB	ZB
20	8.01~20	3.02	3.60
25	12.01~25	3.02	3.72
32	12.01~40	3.09	4.05
40	12.01~45	3.41	4.37
50	12.01~55	4.00	5.27
63	12.01~55	4.00	5.27

Note: Long Stroke design is a three piece construction: Rod Cover, Head Cover and Tube Body

**DIMENSIONS**  
SINGLE CLEVIS TYPE NC(D)GCN\_- AND NC(D)GCA\_-



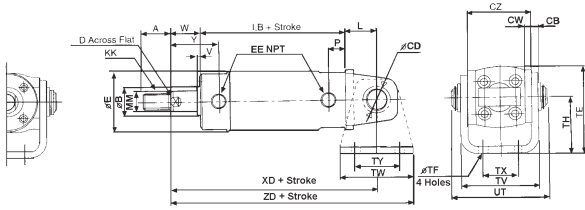
BORE SIZE	CC	SINGLE CLEVIS (INCH)								
		CE	CH	CM	CN	CT	CW	CX	CY	CZ
20	0.27	1.39	0.87	0.18	0.38	0.12	1.10	1.25	0.75	1.95
25	0.27	1.49	0.87	0.18	0.38	0.12	1.10	1.25	0.75	1.95
32	0.27	1.63	0.87	0.10	0.50	0.12	1.10	1.38	0.75	2.07
40	0.27	2.31	1.38	0.25	0.62	0.18	1.50	1.86	1.00	2.60
50	0.26	2.52	1.38	0.25	0.75	0.25	1.50	2.12	1.00	3.00
63	0.26	3.17	1.75	0.25	0.75	0.25	1.50	2.12	1.00	3.00

Note: Single Clevis Bracket must be ordered separately

BORE SIZE	MAX STD STROKE	A	øB	øCD	CN	D	øE	EE	G	KK	LB	LE	MM	P	V	W	Y	XC	ZC
20	8	0.50	0.472 <sup>0</sup> <sub>-0.0011</sub>	0.25	0.38	0.24	1.02	1/8	0.31	1/4-28 UNF	2.70	0.28	0.315	0.47	0.08	0.50	0.97	3.91	3.63
25	12	0.50	0.551 <sup>0</sup> <sub>-0.0011</sub>	0.25	0.38	0.31	1.22	1/8	0.33	5/16-24 UNF	2.70	0.28	0.394	0.47	0.08	0.62	1.09	4.00	3.72
32	12	0.75	0.709 <sup>0</sup> <sub>-0.0011</sub>	0.25	0.50	0.39	1.50	1/8	0.61	7/16-20 UNF	2.78	0.39	0.472	0.43	0.08	0.88	1.35	4.72	4.59
40	12	0.75	0.984 <sup>0</sup> <sub>-0.0013</sub>	0.375	0.62	0.55	1.85	1/8	0.39	7/16-20 UNF	3.06	0.38	0.630	0.47	0.08	0.88	1.39	4.81	4.25
50	12	0.88	1.181 <sup>0</sup> <sub>-0.0013</sub>	0.375	0.75	0.71	2.28	1/4	0.47	1/2-20 UNF	3.53	0.44	0.787	0.51	0.08	1.19	1.74	5.63	5.50
63	12	0.88	1.260 <sup>0</sup> <sub>-0.0015</sub>	0.375	0.75	0.71	2.83	1/4	0.47	1/2-20 UNF	3.53	0.44	0.787	0.51	0.08	1.19	1.74	5.63	5.50

## DIMENSIONS

### DOUBLE CLEVIS TYPE NC(D)GDN\_-\_- AND NC(D)GDA\_-\_-



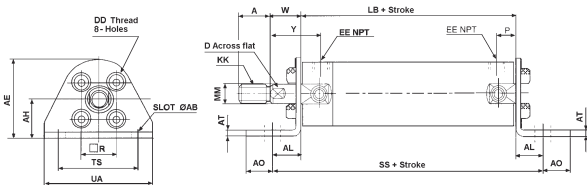
BORE SIZE	DOUBLE CLEVIS (INCH)							
	TY	TF	TV	TE	TH	TX	TW	UT
20	1.10	0.22	1.39	1.50	0.98	0.63	1.66	1.71
25	1.10	0.22	1.55	1.79	1.18	0.79	1.66	1.89
32	1.10	0.28	1.93	2.13	1.38	0.87	1.88	2.34
40	1.18	0.28	2.28	2.50	1.57	1.18	2.20	2.81
50	1.42	0.35	2.83	3.11	1.97	1.42	2.52	3.39
63	1.81	0.43	3.54	3.78	2.36	1.81	2.92	4.15

BORE SIZE	MAX STD STROKE	A	øB	CB	øCD	CW	CZ	D	øE	EE	KK	L	LB	MM	P	V	W	XD	Y	ZD
20	8	0.50	0.472 <sup>0</sup> <sub>-0.0011</sub>	0.12	0.31	0.12	1.14	0.24	1.02	1/8	1/4-28 UNF	0.55	2.70	0.315	0.47	0.08	0.50	3.75	0.97	4.58
25	12	0.50	0.551 <sup>0</sup> <sub>-0.0011</sub>	0.12	0.39	0.12	1.30	0.31	1.22	1/8	5/16-24 UNF	0.63	2.70	0.394	0.47	0.08	0.62	3.95	1.09	4.78
32	12	0.75	0.709 <sup>0</sup> <sub>-0.0011</sub>	0.18	0.47	0.18	1.57	0.39	1.50	1/8	7/16-20 UNF	0.79	2.78	0.472	0.43	0.08	0.88	4.45	1.35	5.39
40	12	0.75	0.984 <sup>0</sup> <sub>-0.0013</sub>	0.18	0.55	0.18	1.93	0.55	1.85	1/8	7/16-20 UNF	0.87	3.06	0.630	0.47	0.08	0.88	4.81	1.39	5.91
50	12	0.88	1.181 <sup>0</sup> <sub>-0.0013</sub>	0.24	0.63	0.24	2.36	0.71	2.28	1/4	1/2-20 UNF	0.98	3.53	0.787	0.51	0.08	1.19	5.70	1.74	6.96
63	12	0.88	1.260 <sup>0</sup> <sub>-0.0015</sub>	0.31	0.71	0.31	2.91	0.71	2.83	1/4	1/2-20 UNF	1.18	3.53	0.787	0.51	0.08	1.19	5.90	1.74	7.38

Note: Double Clevis Bracket and Double Bracket Pin must be ordered separately

## DIMENSIONS

### FOOT TYPE NC(D)GLN\_-\_- AND NC(D)GLA\_-\_-



#### LONG STROKE (INCH)

BORE SIZE	STROKE RANGE	LB	ZB
20	8.01~20	3.02	3.60
25	12.01~25	3.02	3.72
32	12.01~40	3.09	4.05
40	12.01~45	3.41	4.37
50	12.01~55	4.00	5.27
63	12.01~55	4.00	5.27

Note: Long Stroke design is a three piece construction: Rod Cover, Head Cover and Tube Body

BORE SIZE	MAX STD STROKE	A	AB	AE	AH	AL	AO	AT	D	DD	EE	KK	LB	MM	P	R	SS	TS	UA	W	Y
20	8	0.50	0.27	1.44	0.81	0.56	0.44	0.12	0.24	8-32x0.28	1/8	1/4-28 UNF	2.70	0.315	0.47	0.55	3.82	1.50	1.88	0.50	0.97
25	12	0.50	0.27	1.52	0.81	0.56	0.44	0.12	0.31	10-32x0.30	1/8	5/16-24 UNF	2.70	0.394	0.47	0.65	3.82	1.50	1.88	0.62	1.09
32	12	0.75	0.28	1.83	1.00	0.75	0.75	0.12	0.39	10-32x0.30	1/8	7/16-20 UNF	2.78	0.472	0.43	0.79	4.28	1.88	2.50	0.88	1.35
40	12	0.75	0.28	2.02	1.00	0.72	0.78	0.12	0.55	1/4-28x0.47	1/8	7/16-20 UNF	3.06	0.630	0.47	1.02	4.50	1.88	2.50	0.88	1.39
50	12	0.88	0.34	2.84	1.50	1.00	0.62	0.25	0.71	5/16-24x0.63	1/4	1/2-20 UNF	3.53	0.787	0.51	1.26	5.53	2.24	3.12	1.19	1.74
63	12	0.88	0.34	3.29	1.75	1.00	0.62	0.25	0.71	3/8-24x0.63	1/4	1/2-20 UNF	3.53	0.787	0.51	1.50	5.53	2.88	3.75	1.19	1.74