

## SC SERIES PNEUMATIC ACTUATOR



CDG Actuator Manufacturer

Pneumatic Actuator

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# Sc





## COMPANY HISTORY

- 1963 : Founded CDG.
- 1985 : CDG brand creation.
- 1989 : Production of pneumatic actuators, and Italy FABIA to establish acooperation.
- 1992 : With the United States FAIRCHILD cooperation, Production of electric actuators.
- 2001 : Focus on the production and assembly of CDG.
- 2005 : Production of hydraulic actuators.
- 2006 : Production of valves.
- 2011 : Oil station development and use.
- 2016 : Set up a number of representative offices in China.

## ENTERPRISE PROFILE

The CDG is a famous actuator manufacturers, the company is headquartered in America's largest city, Detroit, Michigan is located in the northeastern United States, Canada, Detroit river north of Windsor an important port city. With strong industrial base and freight advantage.

CDG products have unique design, short delivery time, competitive price and excellent after-sales support. As a professional manufacturer of valves, it quickly became the industry leader.

CDG has more than 50 years experience in the valve industry. The r&d department USES these experiences to constantly design new products, improve existing products, and adapt to changing market demands and constantly improving international standards.

CDG can provide standard and non-standard solutions that can be customized according to customer needs.

CDG has created a wide range of reliable products. CDG is favored and admired by the world's leading EPC and oil and gas companies because of its high performance in extreme conditions. Its products are used in power plant, petrochemical, metallurgy, papermaking, automobile and

more Product certification based on customer requirements and government legislation is a guarantee of product quality. CDG USES advanced testing laboratories to ensure the durability of its products. Fire safety, high temperature and low temperature testing can be carried out under extreme conditions.

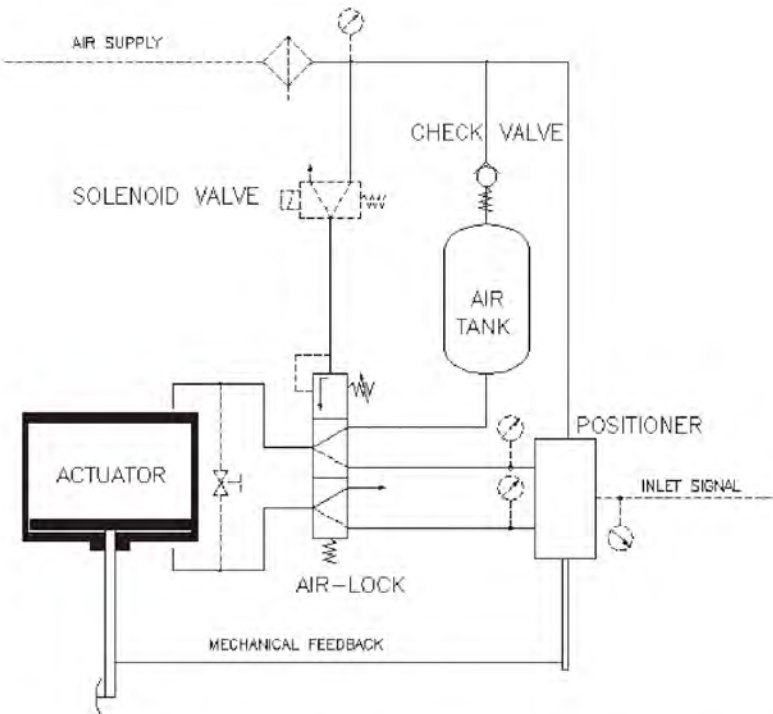
CDG good position, provide comprehensive after-sales support, fast, efficient, with unparalleled expertise. Our skilled engineers and technicians work 24 hours a day to respond to customer queries, solve problems, and provide reliable solutions. A comprehensive after-sales service creates a complete solution, customer support, covering all requirements.

CDG is a long-term, reliable, available and cost- effective partner for your existing and new business.

CDG brand is comprehensive, including valve and oil station, pneumatic actuator, electric actuator and hydraulic actuator and other related fields. To enable CDG to meet different needs it can be sold separately, and can be matched in a complete set, so that users can reduce their worries.



SC Pneumatic actuator



SC series straight stroke pneumatic actuators are specially designed for fluid control components(e.g. baffles, shutters, inserts, butterfly valves and ball valves) are designed and manufactured for operation. The product has been perfectly applied in power plants, refineries (refineries), steel mills and large ships.

SC series double-acting pneumatic actuators have various specifications, and the output thrust can reach 105,200 N.

All CDG executing agencies adopt a permanent lubrication system (CDG patented technology) to ensure that the device is lifelong maintenance-free and smooth.

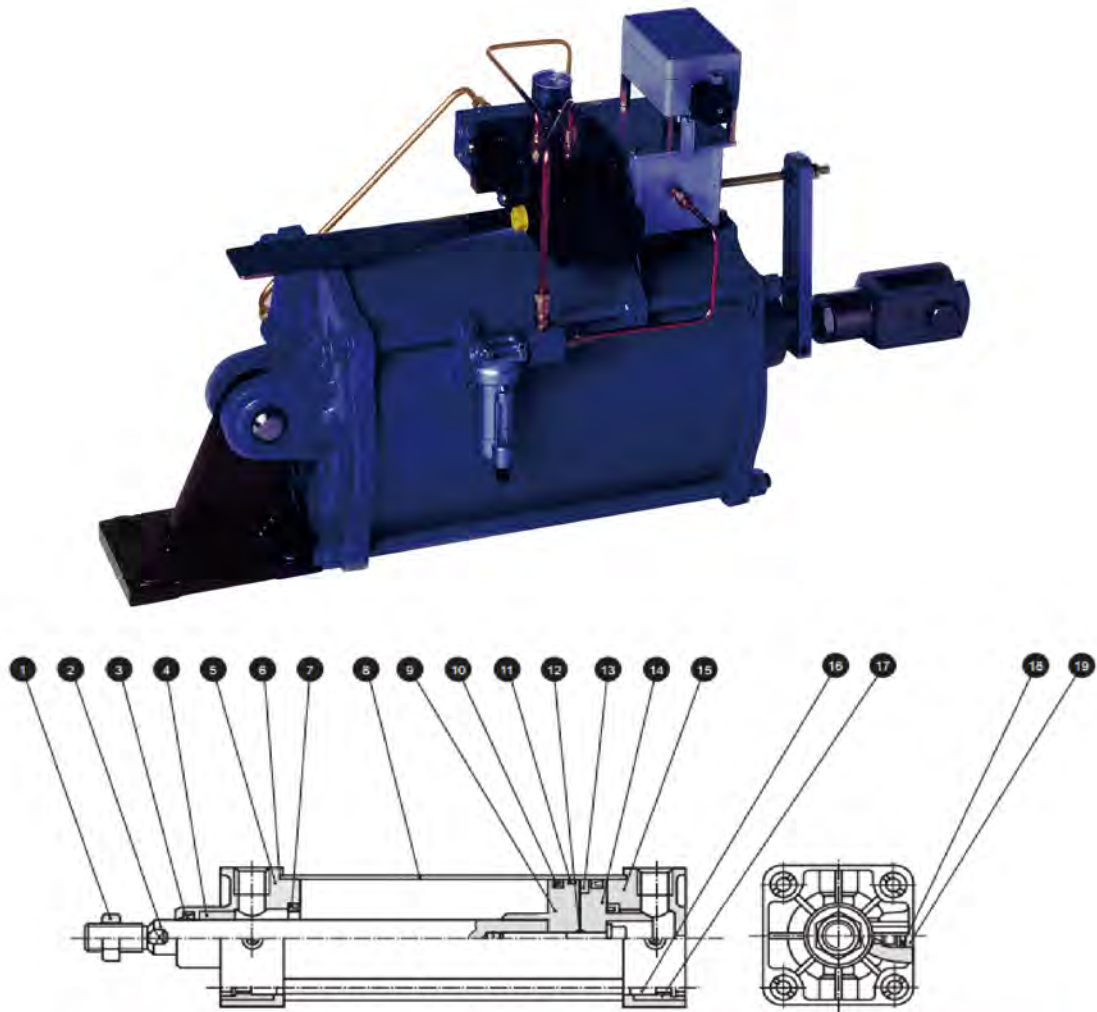
Conventional SC series actuators can achieve faster response without an accelerator, and for faster requirements, CDG also has a special design

SC series actuators can be integrated with positioners and other accessories to meet a variety of applications. It can also cooperate with handwheel mechanism to operate manually in case of failure or emergency.

According to the special requirements of users, various connection modes between actuator and control elements can be specially designed.

SC series actuators have a variety of specifications, with cylinder diameters ranging from Φ63 to Φ1000, so they can meet the needs of different thrust.

The structure diagram



Serial number	Name	Serial number	Name
1	Nut	11	Piston ring
2	Piston rod	12	O-ring
3	Air-dust sealing combination ring	13	Magnetic ring
4	Bearing	14	Rear piston
5	Front cover	15	Rear end cap
6	A seal	16	connecting rod
7	Retarding Seal Ring	17	Nuts
8	Cylinder	18	O-ring
9	Front piston	19	Valve needle
10	Type Y circle		



Theoretical output force F ( N ) The following formula is used to calculate: thrust  $F_1=\pi D^2P/4$   
pull  $F_2=\pi ( D_2-d_2 ) P/4$

- In style D——Cylinder bore diameter ( mm )  
d——Cylinder piston rod diameter ( mm )  
P——Working pressure ( MPa )

The advantages of SC series cylinders are not only lightweight, practical and easy to install, but also permanent lubrication system with lifetime maintenance-free.

All SC series cylinders provide both standard and non-standard special stroke. Special stroke cylinders can be formed by standard stroke cylinders with additional internal blocks, or can be manufactured directly according to the required stroke. The latter has no reactive power volume at all open or close positions, which minimizes the deviation.

SC series straight stroke actuators are composed of cylinders, pneumatic or electrical positioners and accessories to meet various application requirements.

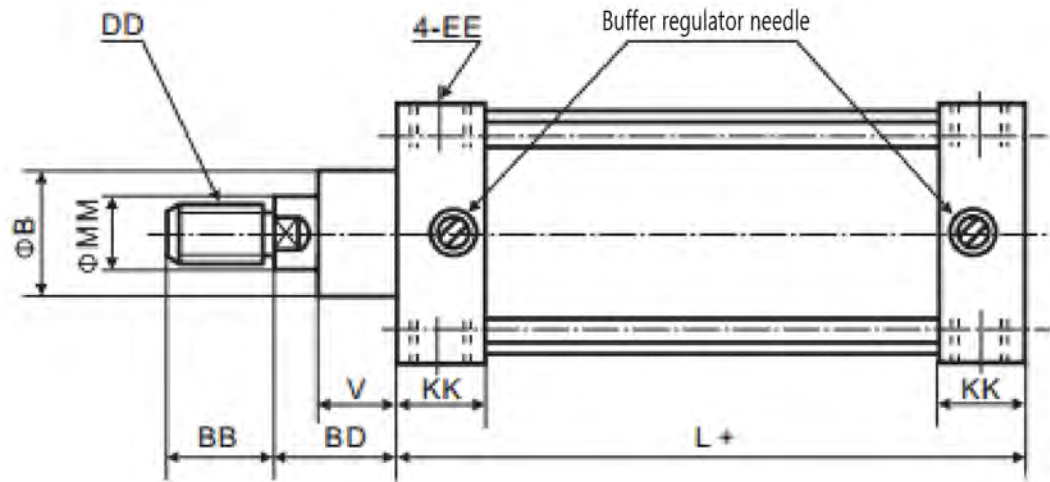
mode of action	Dual action
Use of media	Filtered compressed air
Maximum operating pressure	1.0MPa
Minimum working pressure	0.1MPa
Medium temperature	-10~+60℃
ambient temperature	5~60℃
Speed of use	50~500mm/s
Travel Error	0~250+1.0 251~1000+1.5 1001~2000+2.0(mm)

Standard trip

Cylinder diameter (mm)	Standard itinerary (mm)	Thrust N (0.5 Mpa working pressure)	Maximum travel (mm)	Buffer travel (mm)
63	25,50,80	1400	600	20
100	125,160	3700	1000	25
125	200,250	5750	1200	40
160	320,400	9650	1500	40
200	500,600	15000	2000	50
260	700,800	25500		
330	900,1000	41800		
390	1100, 1200	59000		
420	1500	68000		
520		105000		

★ Special cylinder diameter and stroke can be customized, the maximum cylinder diameter can reach 1000mm.

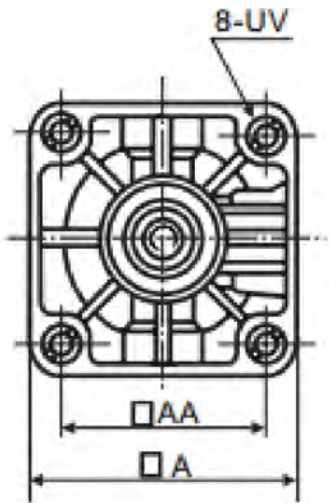
External dimension



SD Type Basic

Bore diameter mm	A	AA	B	BB	BD	DD
63	78	57	40.5	35	37	M18×1.5
100	114	89	51.5	45	64	M27×1.5
125	140	110	60	54	65	M27×2
160	180	140	65	72	80	M36×2
200	220	175	75	72	95	M36×2

Bore diameter mm	EE	KK	L	MM	UV	V
63	1/4NPT	27	101	20	M8	15
100	1/4NPT	36	132	30	M10	20
125	1/4NPT	46	160	32	M12	45
160	1/4NPT	50	180	40	M16	58
200	1/2NPT	50	180	40	M16	60

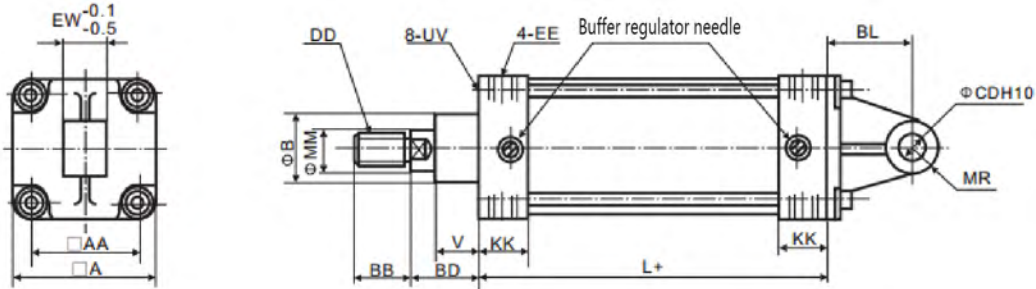






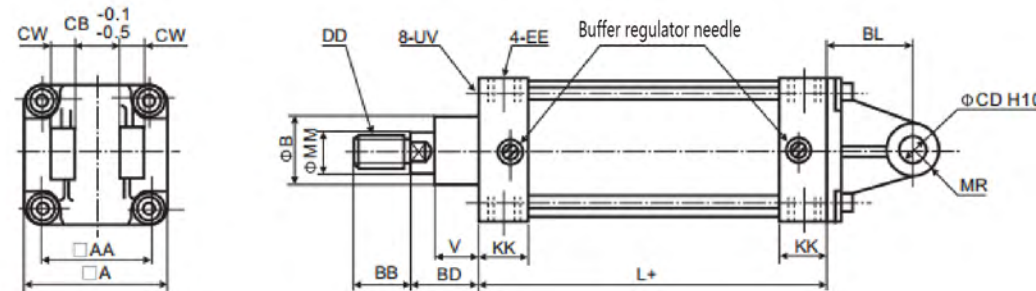
Mounting mode

Code name	Name
SD	Basic type
CA	Monauricular type
CB	Biaural type



CA Type Monauricular seat

Bore diameter mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	BL	CD	EW	MR
63	78	57	40.5	35	37	M18×1.5	1/4NPT	27	101	20	M8	15	47	16	25	14.5
100	114	89	51.5	45	64	M27×1.5	1/4NPT	36	132	30	M10	20	64	25	35.5	20.5
125	140	110	60	54	65	M27×2	1/4NPT	46	160	32	M12	45	50	25	70	25
160	180	140	65	72	80	M36×2	1/4NPT	50	180	40	M16	58	55	30	90	30
200	220	175	75	72	95	M36×2	1/2NPT	50	180	40	M16	60	60	30	90	30

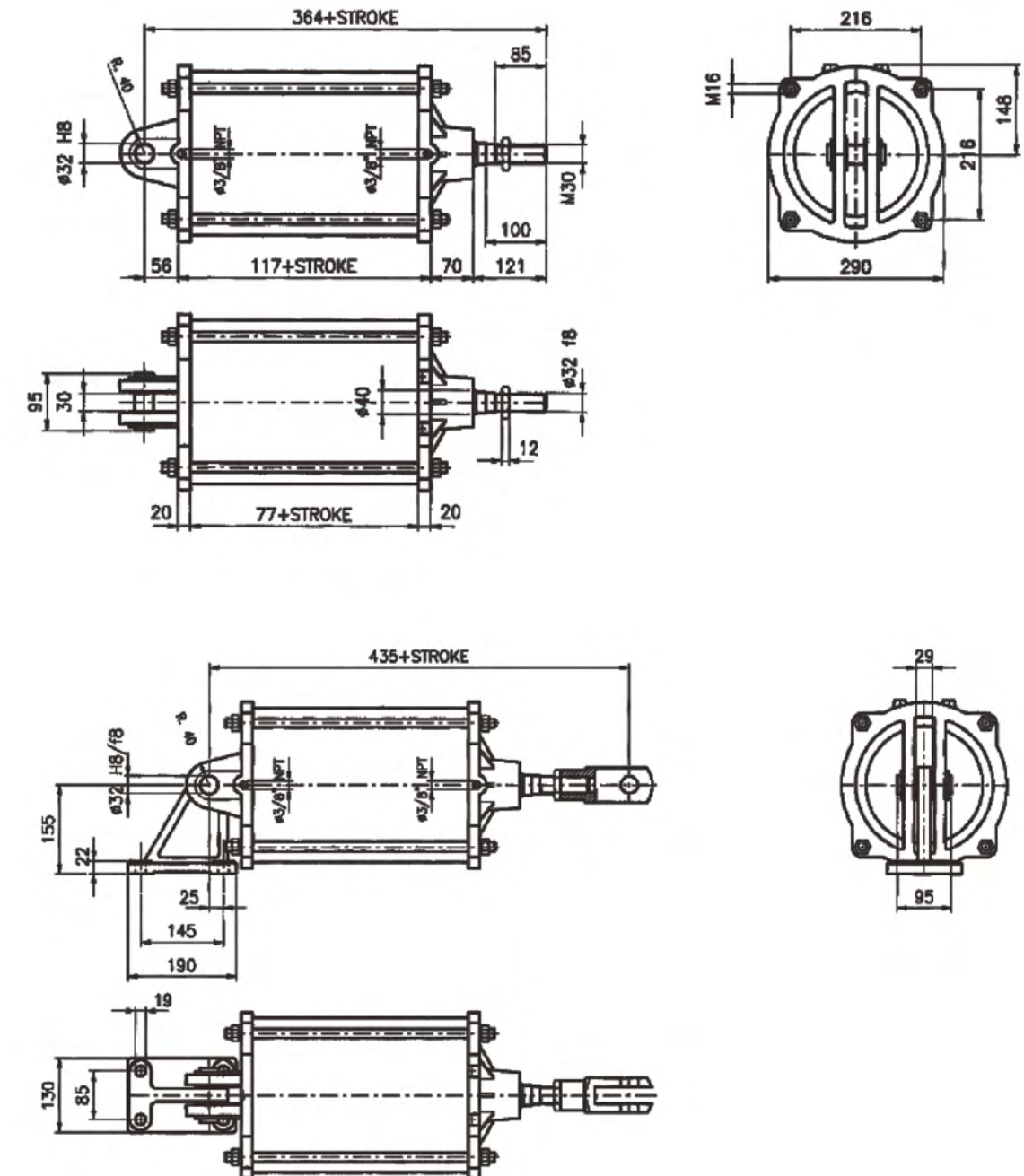


CB Type Biaural seat

Bore diameter mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	BL	CB	CD	CW	MR
63	78	57	40.5	35	37	M18×1.5	1/4NPT	27	101	20	M8	15	47	25	16	12.5	14.5
100	114	89	51.5	45	64	M27×1.5	1/4NPT	36	132	30	M10	20	64	35.5	25	18	20.5
125	140	110	60	54	65	M27×2	1/4NPT	46	160	32	M12	45	50	70	25	25	25
160	180	140	65	72	80	M36×2	1/4NPT	50	180	40	M16	58	55	90	30	35	30
200	220	175	75	72	95	M36×2	1/2NPT	50	180	40	M16	60	60	90	30	35	30

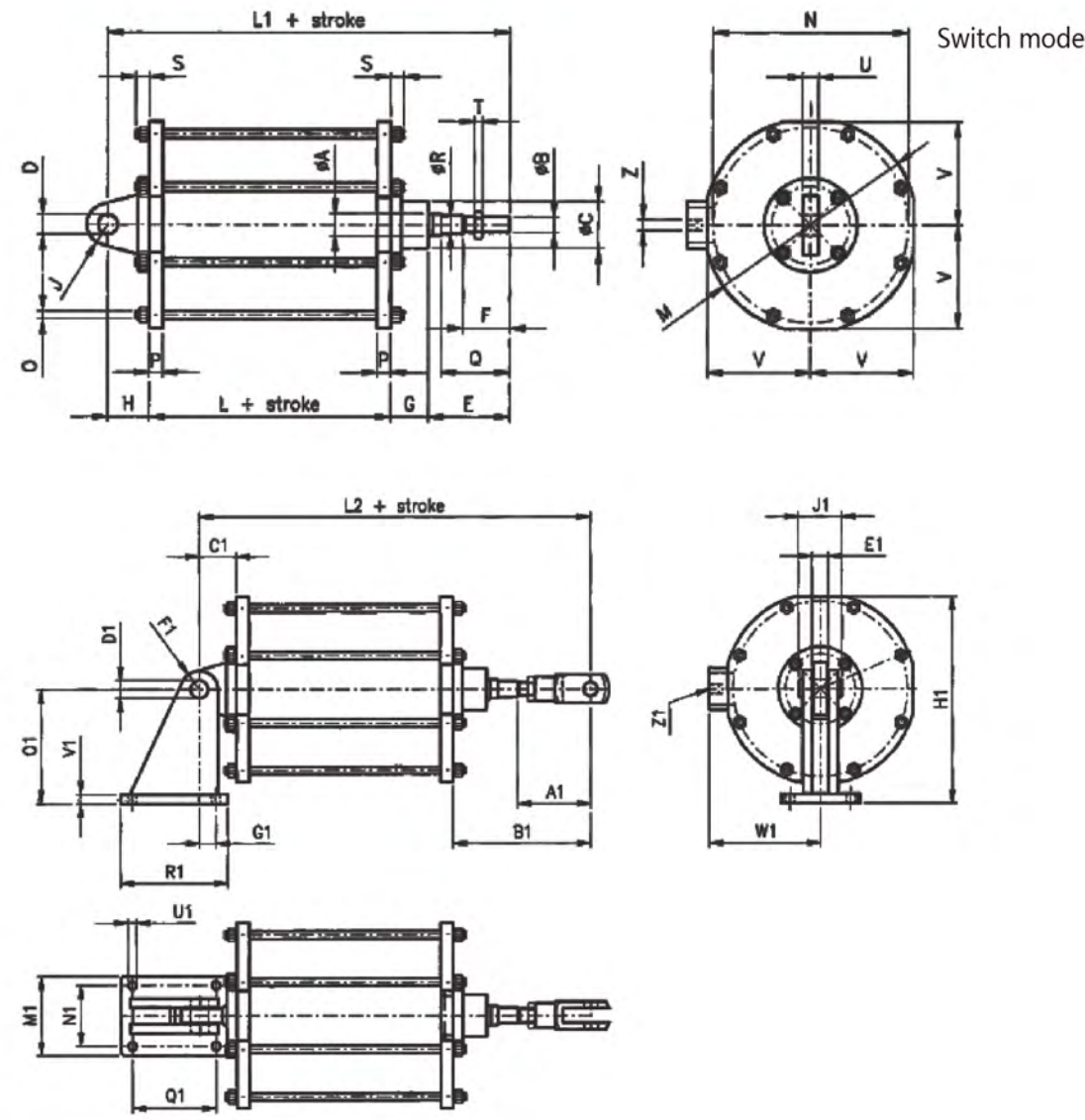
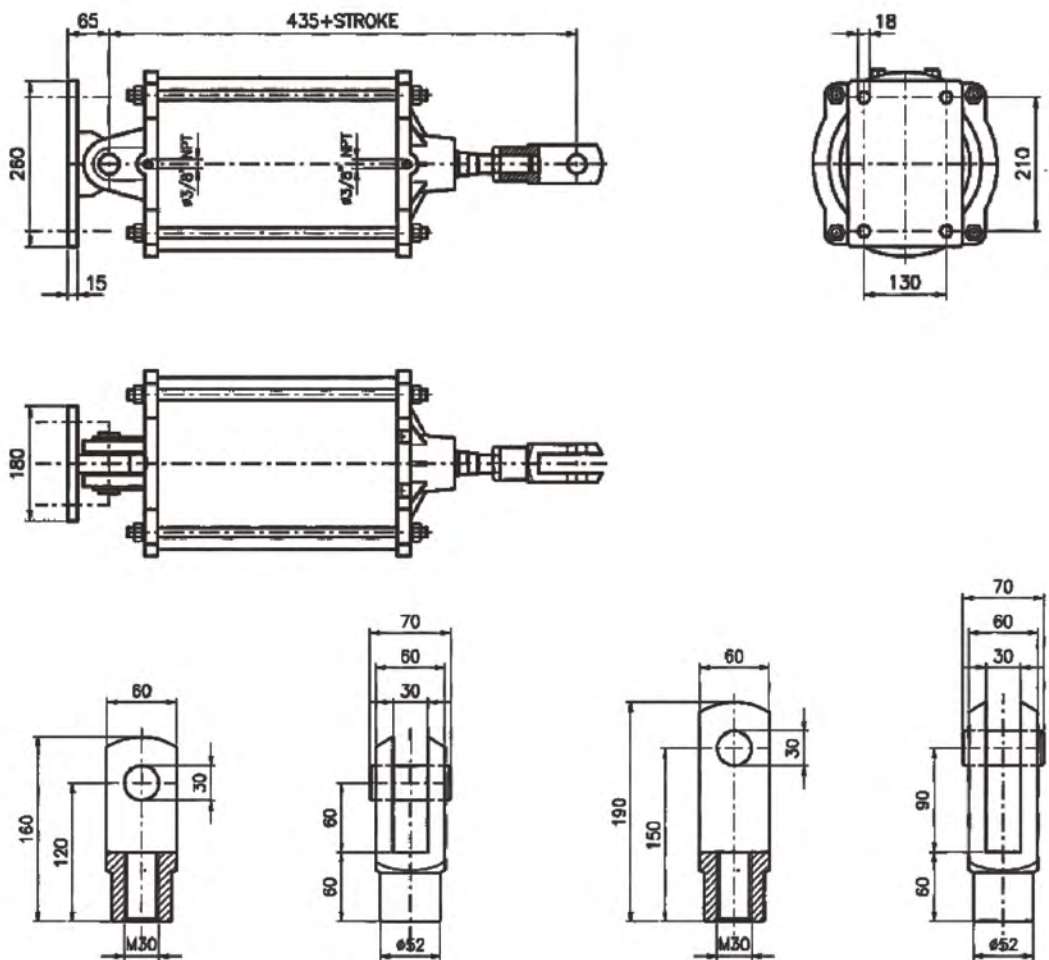


## SC260 Profile Size and Installation Method



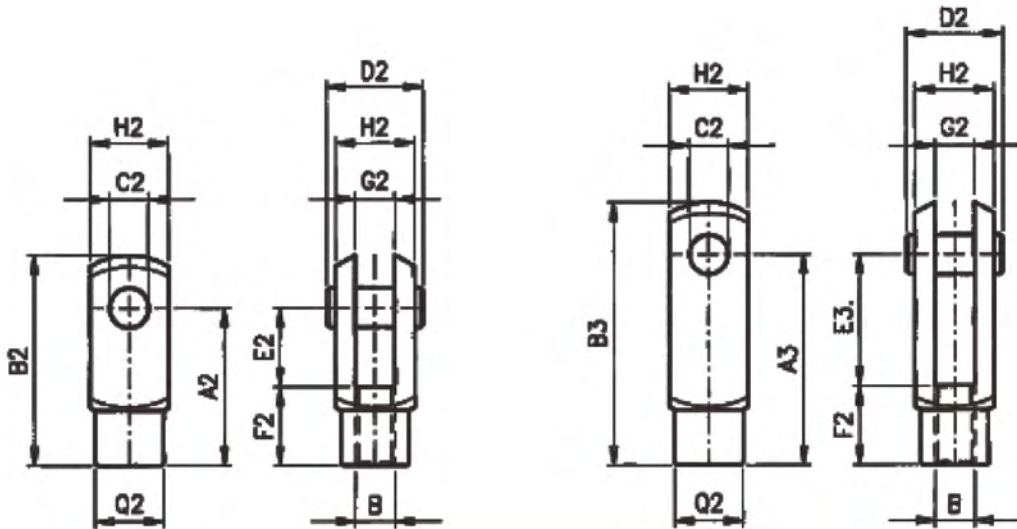
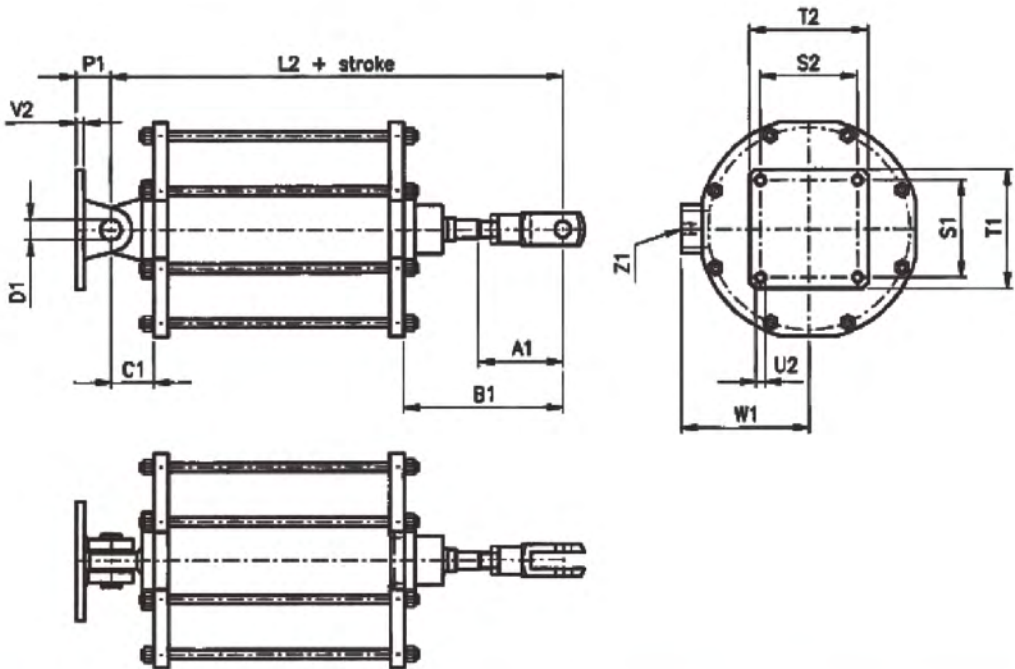


SC330-420 Shape Size and Installation Method



Φ	a	b	c	d	e	f	g	h	j	L	L1
330	Φ42	M30	Φ90	38H8	156.5	90	72.5	80	40	114	423
420	Φ48	M42X3	Φ90	50H8	156	100	88	120	55	111	475
Φ	m	n	o	P	q	r	s	t	u	v	z
330	Φ410	Φ375	M16	26	133	Φ34f8	25.5	12	30	198	1/2"NPT
420	Φ508	Φ474	M14	32/37	120	Φ43f8	22	16	50	245	1/2"NPT





Φ	330	420	Φ	330	420
A1	157	190	T2	220	220
B1	295	334	U1	4X18	4X25
C1	80	120	U2	4X18	4X25
D1	38	50	V1	20	25
E1	35	55	V2	15	25
F1	40	60	W1	238	295
G1	35	55	Z1	1/2"NPT	1/2"NPT
H1	443	535	A2	120	155
J1	93	128	B2	160	210
L2	490	565	C2	30	50
M1	170	220	D2	74	110
N1	130	170	E2	60	85
O1	245	290	F2	60	70
P1	65	120	G2	30	50
Q1	180	240	H2	60	90
R1	230	300	Q2	52	85
S1	180	240	A3	160	210
S2	180	170	B3	200	265
T1	220	300	E3	100	140

