



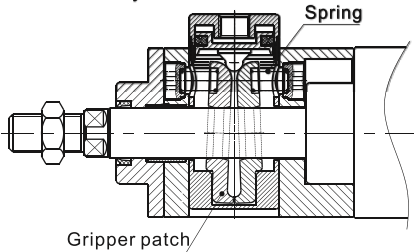
# Lock cylinder—BSC Series

—Tie-rod type

## Compendium of BSC Series

### Spring and gripper patch enclasp equipment

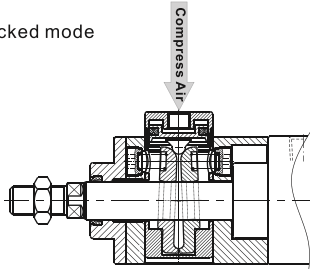
Simplicity structure  
Celerity and availability locked or unlocked  
State switch steadily



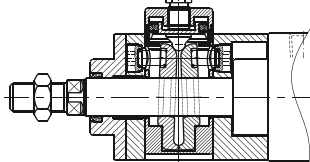
### Multi-kinds unlocked mode

Air pressure unlocked mode and manual unlocked mode are available

Air pressure unlocked mode



Manual unlocked screw



### Compact enclasp equipment

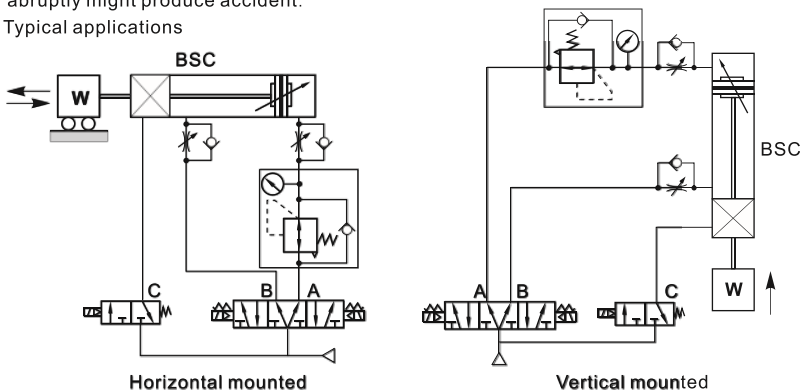
Compact enclasp equipment to save space

### Multi-type cylinder and bore size

BSC、BSCD type available  
Bore size: 32、40、50、63、80、100、125

## How to mount and use

1. The locker equipment only be locked after cylinder stopped, can't brake the piston rod while it is moving. If the lock cylinder be used for control system with safety demand, other safety measure is required.
2. The locker equipment only be unlocked when the air pressure on both sides of piston rod are equation or the cylinder stopped, otherwise piston rod moves abruptly might produce accident.
3. Typical applications



### Acting type

Yes or No inlet			State of acting
A Port	B Port	C Port	
Yes	No	Yes	Advance
Yes	Yes	No	Locked
Yes	Yes	Yes	unlocked
Yes	No	Yes	Advance to rod protruded completely
No	Yes	Yes	Back
Yes	Yes	No	Locked
Yes	Yes	Yes	unlocked
No	Yes	Yes	back to rod retracted completely

Over 0.5S

0~0.5S

Over 0.5S

0~0.5S



# Standard cylinder(Tir-rod)



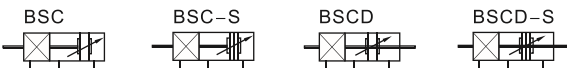
## BSC Series——Lock type



### Specification

Bore size(mm)	32	40	50	63	80	100	125
Acting type	Double acting						
Fluid	Air(to be filtered by 40 μm filter element)						
Mounting type	Basic FA FB CA CB CR LB TC TCM1						
	BSCD Basic FA LB TC TCM1						
Operating pressure	0.15~1.0MPa(22~145psi)(1.5~10.0bar)						
Proof pressure	1.5MPa(215psi)(15bar)						
Temperature °C	-20~70						
Speed range mm/s	30~800						30~500
Stroke tolerance	0~250 <sup>+1.0</sup> <sub>0</sub>		251~1000 <sup>+1.5</sup> <sub>0</sub>		1001~1500 <sup>+2.0</sup> <sub>0</sub>		
Cushion type	Variable cushion						
Adjustable cushion stroke	21			28		29	28
Port size	Cylinder	1/8"	1/4"	3/8"		1/2"	
[Note1]	Enclasp equipment	G1/8					
Unlocked Pressure	0.3~0.7MPa(45~100psi)(3~7bar)						
Static holding force (N)	600	900	1400	2200	3600	5500	8600

### Symbol



### Product feature

1. Belong to SC series standard cylinder add lock structure.
2. Can be locked at random positions in stroke scope.
3. Reasonable lock structure, the lock state no relation with the direction of piston moving.

### Stroke

Bore size (mm)	Standard stroke (mm)	Max.std stroke	Max. stroke
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	1000	2000
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	1200	2000
50	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	2000
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
80	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
100	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

[Note] Consult us for non-standard stroke.

### Ordering code

B SC 80 × 50 S <input type="checkbox"/> <input type="checkbox"/> B SCD80 × 50 S <input type="checkbox"/> <input type="checkbox"/>						
① Type	② Model	③ Bore size	④ Stroke	⑤ Magnet	⑥ Mounting type [Note1]	⑦ Thread type
B: Enclasp cylinder	SC: Double acting type	32 40 50 63 80 100 125	Refer to stroke table for details	Blank: Without magnet S: With magnet	Blank	Blank: PT G: G T: NPT
	SCD: Double rod type	Blank				
					LB	
					FA	
					FB	
					CA	
					CB	
					TC	
					Blank	
					LB	
					FA	
					FB	
					TC	

[Note1] Please refer to page 51~54 for accessory parts. TC is used with TCM1.

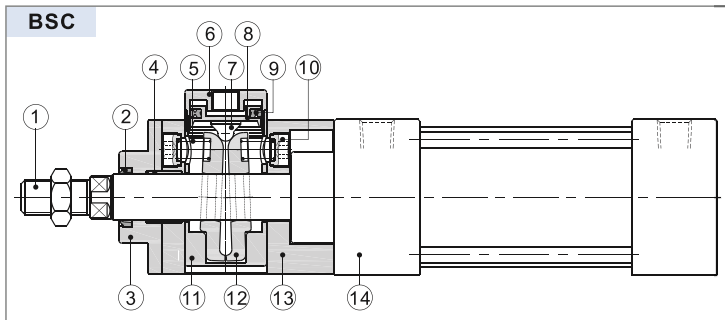


# Standard cylinder(Tir-rod)



## BSC Series——Lock type

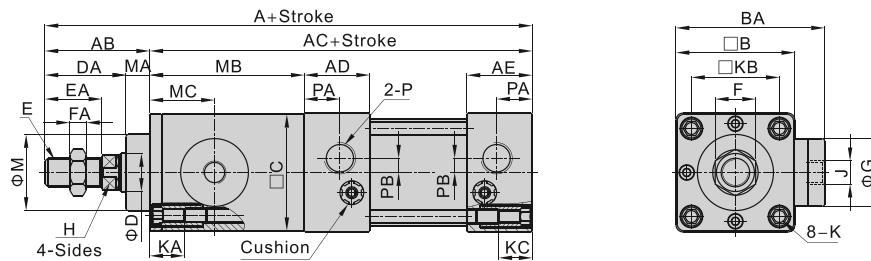
### Inner structure and material of major parts



NO.	Item	Material
1	Piston rod	Carbon steel with 20 μm chrome plated
2	Packing	Plastic
3	Packing holder	Aluminum alloy
4	Bearing	Carbon steel+Bronze sinter
5	Spring	Spring steel
6	Cover	Aluminum alloy
7	Unlocked header	Wear resistant material
8	Unlocked piston	Aluminum alloy
9	Piston O-ring	NBR
10	Screw	Carbon steel
11	Sleeve	Aluminum alloy
12	Clamp header	Aluminium bronze
13	Fixed holder	Aluminum alloy
14	SC series cylinder	-

### Dimensions

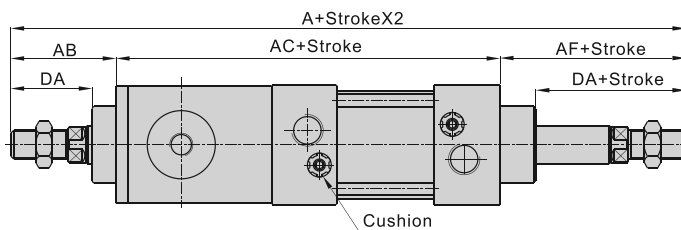
#### BSC



Bore size\Item	A	AB	AC	AD	AE	B	BA	C	D	DA	E	EA	F	FA	G	H	J	K	KA	KB	KC	M	MA	MB	MC	P	PA	PB
32	195	42	153	27.5	27.5	45	64	44	12	32	M10×1.25	22	17	6	30	10	G1/8	M6X1.0	14	33	14	28	10	60	25	1/8"	14	5.5
40	202	44	158	27.5	27.5	50	62.5	49	16	34	M12×1.25	24	17	7	28.5	13	G1/8	M6X1.0	14	37	14	32	10	65	27.5	1/4"	15	6
50	221	52	169	27.5	27.5	62	76.5	61	20	42	M16×1.5	32	23	8	35.5	17	G1/8	M6X1.0	14	47	14	38	10	76	33	1/4"	17	8.5
63	224	52	172	27.5	27.5	75	88	74	20	42	M16×1.5	32	23	8	44.5	17	G1/8	M8X1.25	14	56	14	38	10	76	33	3/8"	15	9.5
80	285	69	216	33	33	94	107	93	25	54	M20×1.5	40	26	10	55.5	22	G1/8	M10X1.5	16	70	16	47	15	109	47	3/8"	19.5	10
100	291	69	222	33	33	112	116	111	25	54	M20×1.5	40	26	10	55.5	22	G1/8	M10X1.5	16	84	16	47	15	109	47	1/2"	16.5	11
125	321	86	235	38	38	136	150	133	32	68	M27×2.0	54	41	13.5	70	27	G1/8	M12X1.75	21.5	104	21.5	52	18	120	63	1/2"	20	14

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

#### BSCD



Bore size\Item	A	AB	AC	AF	DA	E	FA
32	242	42	153	47	32	M10×1.25	6
40	251	44	158	49	34	M12×1.25	7
50	278	52	169	57	42	M16×1.5	8
63	281	52	172	57	42	M16×1.5	8
80	360	69	216	75	54	M20×1.5	10
100	366	69	222	75	54	M20×1.5	10
125	409	86	235	88	68	M27×2	13.5

Remark:

1. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
2. The unmarked dimension is the same as BSC standard type.

