



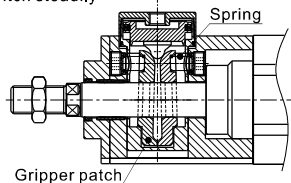
# Enclasp cylinder—BSAI Series

In accordance with ISO15552 standard

## Compendium of BSAI Series

### Spring and gripper patch enclasp equipment

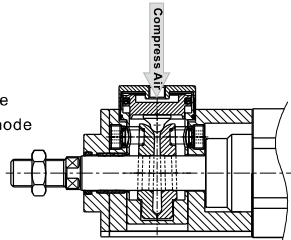
Simplicity in structure  
Celerity and availability locked or unlocked  
State switch steadily



### Multi-kinds unlocked mode

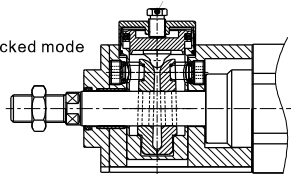
Air pressure unlocked mode and manual unlocked mode are available

Air pressure unlocked mode



Manual unlocked screw

Manual unlocked mode



### Multi-type cylinder and bore size

BSAI, BSAID type available  
Bore size: 32, 40, 50, 63, 80, 100, 125

### Bidirectional lock

Can be locked no matter piston shoot out or draw back

### Compact enclasp equipment

Compact enclasp equipment to save space

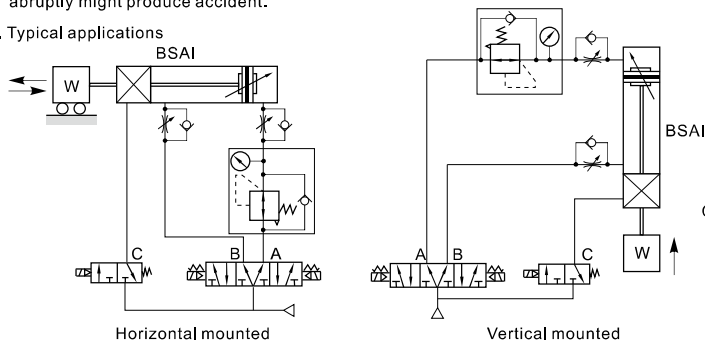
### The body is the same as SAI series

The body is SAI series standard cylinder's body for mounting expediently.  
The mounting accessories (Besides FTC) and the sensor switch are the same as SAI series cylinder.



## How to mount and use

- 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.
- 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 movies abruptly might produce accident.
- Typical applications



### Acting type

Air inlet			State of acting	
A Port	B Port	C Port		
Yes	No	Yes	Advance	
Yes	Yes	No	Locked	Over 0.5S
Yes	Yes	Yes	unlocked	0~0.5S
Yes	No	Yes	Advance to rod protruded completely	
No	Yes	Yes	Back	
Yes	Yes	No	Locked	Over 0.5S
Yes	Yes	Yes	unlocked	0~0.5S
No	Yes	Yes	back to rod retracted completely	

# ISO15552 Standard cylinder

## BSAI Series—Enclasp type

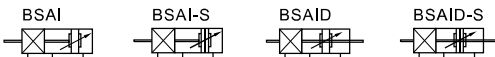


### Specification

<b>Bore size(mm)</b>	<b>32</b>	<b>40</b>	<b>50</b>	<b>63</b>	<b>80</b>	<b>100</b>	<b>125</b>
Acting type	Double acting						
Fluid	Air(to be filtered by 40µm filter element)						
Mounting type	BSAI	Basic FA FB CA CB CR LB TC TCM1 TCM2					
	BSAID	Basic FA LB TC TCM1 TCM2					
Operating pressure	0.15~0.7MPa(22~100psi)(1.5~7.0bar)						
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	27		30		36		40
Port size	Cylinder	1/8"	1/4"	3/8"		1/2"	
[Note1]	Enclasp equipment	G1/8					
Unlocked Pressure	0.15~0.7MPa(22~100psi)(1.5~7bar)						
Static holding force (N)	600	900	1400	2200	3600	5500	8600

[Note1] PT thread, G thread are available.  
Add) Refer to P362 for detail of sensor switch.

### Symbol



### Product feature

1. Belong to SAI 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
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	700
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	800
50	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1000
63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1000
80	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1000
100	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1000
125	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1000

[Note] Consult us for non-standard stroke.

### Ordering code

**B SAI 80X50 S** □ □  
**B SAID 80X50 S** □ □  
 ① ② ③ ④ ⑤ ⑥ ⑦

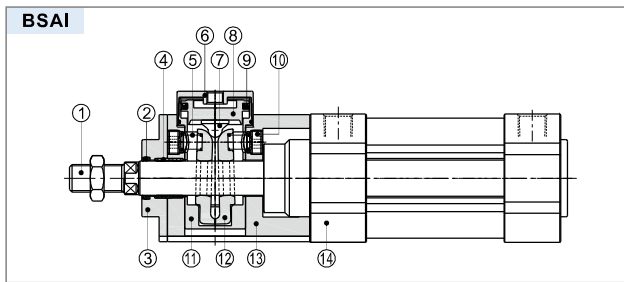
① <b>Type</b>	B: Enclasp cylinder			
② <b>Model</b>	SAI : Double acting type		SAID : Double rod type	
③ <b>Bore size</b>	32 40 50 63 80 100 125			
④ <b>Stroke</b>	Refer to stroke table for details			
⑤ <b>Magnet</b>	Blank: Without magnet		S: With magnet	
⑥ <b>Mounting type</b> [Note1]	Blank	LB	Blank	LB
	FA	FB	FA	TC
	CA	CB		
	CR	TC		
⑦ <b>Thread type</b>	Blank: PT		G: G	

[Note1] CR is used with CB ; TC are used with TCM1、TCM2, please refer to page 22~24 for details.

# ISO15552 Standard cylinder

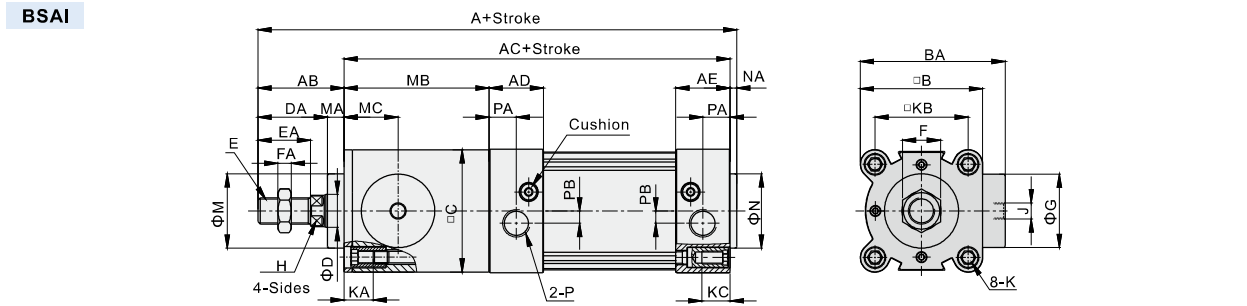
## BSAI Series—Enclasp type

### Inner structure and material of major parts



NO.	Item	Material
1	Piston rod	Carbon steel with 20μm 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 head	Aluminium bronze
13	Fixed holder	Aluminum alloy
14	SAI series cylinder	-

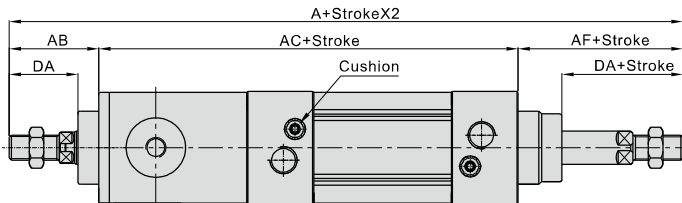
### Dimensions



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	N	NA
32	201	39	159	27.5	27.5	47	65	46.5	12	29	M10×1.25	22	17	6	30	10	G1/8	M6X1.0	14.5	32.5	16	20	10	65	25	1/8"	13.5	6	30	3
40	222.5	43	176	32	32	53	72	52.5	16	33	M12×1.25	24	17	7	36.5	13	G1/8	M6X1.0	14.5	38	17	35	10	71	27.5	1/4"	17.5	6	35	3.5
50	249.5	52	194	31	31	65	83	64	20	42	M16×1.5	32	23	8	44.5	17	G1/8	M8X1.25	17.5	46.5	17	40	10	88	33	1/4"	14	8	40	3.5
63	265	52	209	33	33	75	88	74	20	42	M16×1.5	32	23	8	44.5	17	G1/8	M8X1.25	17.5	56.5	17	45	10	88	33	3/8"	17	8	45	4
80	321	68	249	33	33	95	107	94	25	53	M20×1.5	40	26	10	55.5	22	G1/8	M10X1.5	17	72	19	45	15	121	47	3/8"	16.5	8	45	4
100	336	70	262	37	37	115	117.5	113.5	25	55	M20×1.5	40	26	10	55.5	22	G1/8	M10X1.5	17	89	19	55	15	124	47	1/2"	19.5	10	55	4
125	401	92	305	46	46	140	152	138	32	74	M27×2	54	41	13.5	70	27	G1/8	M12X1.75	21.5	110	22	60	18	145	63	1/2"	23	11	60	4

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

### BSAID



Bore size/Item	A	AB	AC	AF	DA	E	FA
32	246	39	159	48	29	M10×1.25	6
40	273	43	176	54	33	M12×1.25	7
50	315	52	194	69	42	M16×1.5	8
63	330	52	209	69	42	M16×1.5	8
80	403	68	249	86	53	M20×1.5	10
100	423	70	262	91	55	M20×1.5	10
125	516	92	305	119	74	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 BSAI standard type.