

# 2-stage Speed Controller

2in1  
Product

2-stage exhaust flow control valve with shock absorbing function (Patent no. 5578502)

## Safety instructions for this product

Safety instructions, Common safety instructions for each product category and Detailed safety instructions for each product are in the end of this catalog and our website.

## Model Designation (Example)

**BJS**  
(1) **U**  
(2) **6**  
(3)

### (1) 2-stage Speed Controller

#### (2) Type

U : Union Straight

#### (3) Tube dia. (øD)

■ Standard type

Code	mm size (mm)				inch size (inch)			
	4	6	8	10	5/32	1/4	5/16	3/8
Tube O.D.	ø4	ø6	ø8	ø10	ø5/32	ø1/4	ø5/16	ø3/8

■ High-flow type

Code	mm size (mm)		
	4H	6H	8H
Tube O.D.	ø4	ø6	ø8

## Model Designation of Accessory (Example)

**BJSB**  
(1) **6**  
(2)

### (1) Bracket for 2-stage Speed Controller

### (2) Applicable model size

Code	4	6	8	10
Applicable model code	BJSU4 BJSU5/32	BJSU6 BJSU1/4 BJSU4H	BJSU8 BJSU5/16 BJSU6H	BJSU10 BJSU3/8 BJSU8H

Control-Air Prep.

## Characteristics

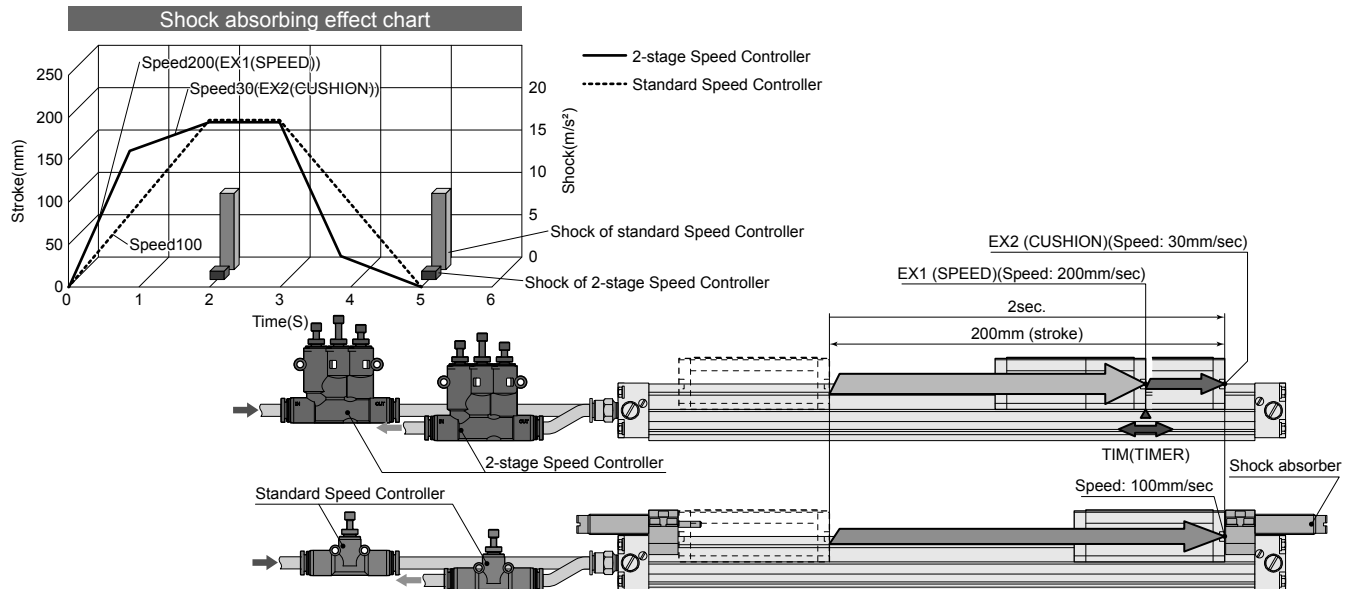
The function of a shock absorber is built in the Speed Controller for double-acting actuators.

Shock absorber is not required. With realized 2-stage exhaust flow adjustment, a similar control as a shock absorber becomes possible.

Adjustment of shock absorbing function is possible.

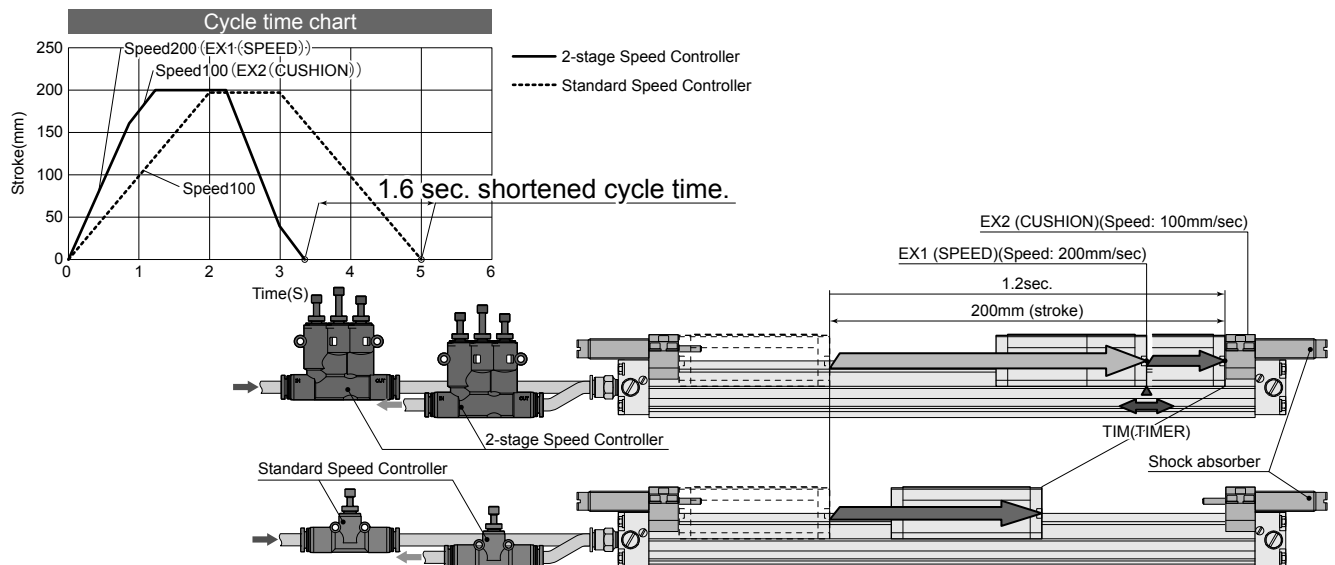
2-stage speeds and speed shift timing can be controlled by individual needs.

Example) In case of making impact 1/9 (Speed 1/3) with existing cycle time.



It is possible to shorten traveling (cycle) time as long as conventional shock absorbing (cushion) property is same.\*

\*Conventional shock absorbing property means shock absorbing by reducing the cylinder speed by a cylinder mounting type shock-absorber installed close to the stroke end.  
e.g. Actuate 80% of cylinder stroke at the speed of twice as fast as the regular speed of a conventional standard speed controller, then actuate the last 20% of the stroke at the regular speed.



# 2-stage Speed Controller

High-flow type is available for tube size:  $\varnothing 4$ ,  $\varnothing 6$ ,  $\varnothing 8$ mm.

Large flow type can be used for applicable cylinder tube bore of one size up.

Adjustable the stroke of shock absorbing (cushion) property.

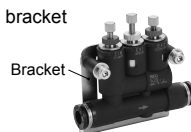
It is possible to apply the cushion property at the middle position of the cylinder that a shock absorber cannot reach.

Two fixing methods are selectable.

Direct mounting



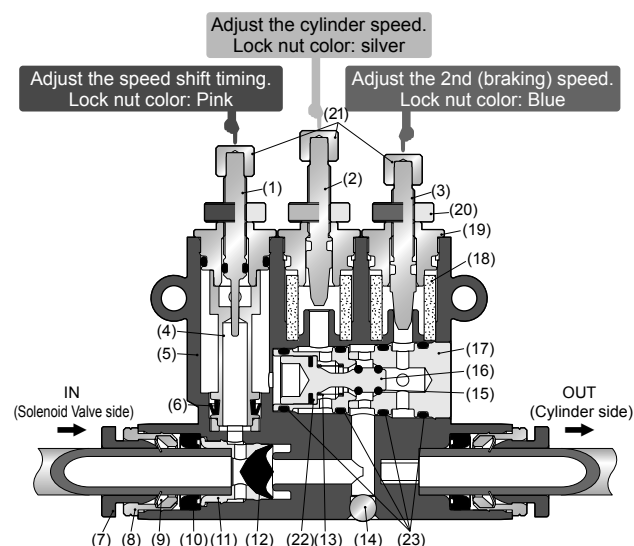
Fixing with a bracket



## Specifications

Fluid medium	Air
Operating pressure range	0.2 to 1.0 MPa
Operating temp. range	0 to 60°C(No freezing)

## Sectional drawing



No.	Parts	Material
(1)	Timer (TIM) needle	Special stainless steel
(2)	Speed (EX1) needle	Nickel-plated brass
(3)	Cushion(EX2) needle	Nickel-plated brass
(4)	Inner ring	Nickel-plated brass
(5)	Resin body	PBT
(6)	Diaphragm	HNBR
(7)	Release-ring	POM
(8)	Guide ring	Nickel-plated brass
(9)	Lock claws	Stainless steel
(10)	Elastic sleeve	NBR
(11)	Valve retainer	Aluminum
(12)	Valve element	HNBR
(13)	Spring	Stainless steel
(14)	Stopper ball	Stainless steel
(15)	Main spool O-ring	HNBR
(16)	Main valve spool	Aluminum
(17)	Main spool guide	Aluminum
(18)	Silencer	PVF
(19)	Needle guide	Nickel-plated brass
(20)	Lock nut	Aluminum
(21)	Knob	Nickel-plated brass
(22)	Spool seal packing	HNBR(*)
(23)	Fixed O-ring	NBR

\*NBR for BJSU6 and BJSU8.

RoHS2 (2011/65/EU+EU2015/863) compliant

Type	Model code BJSU $\varnothing$ D	Applicable cylinder tube I.D. (mm)	Type	Model code BJSU $\varnothing$ DH	Applicable cylinder tube I.D. (mm)
Union Straight <b>BJSU</b>	BJSU4	$\varnothing 20$	Union Straight High-flow type <b>BJSU</b>	BJSU4H	$\varnothing 25$
	BJSU6	$\varnothing 25$		BJSU6H	$\varnothing 32$
	BJSU8	$\varnothing 32$		BJSU8H	$\varnothing 50$
	BJSU10	$\varnothing 50$			
	BJSU $\frac{5}{32}$	$\varnothing 20$			
	BJSU $\frac{1}{4}$	$\varnothing 25$			
	BJSU $\frac{5}{16}$	$\varnothing 32$			
	BJSU $\frac{3}{8}$	$\varnothing 50$			

### Accessory

Type	Model code
Bracket <b>BJSB</b>	BJSB4
	BJSB6
	BJSB8
	BJSB10



#### Notes

\*1. Applicable max. cylinder tube bore is the max. bore when using with pressure supply: 0.5MPa and cylinder speed: 500mm/sec.

\*2. Release-ring color: White for inch type



CAD data is available at PISCO website.



Packaging specifications  
1 pc. /bag

