

# Made to Order Common Specifications: -XB22: Shock Absorber Soft Type RJ Series Type



## 13 Shock Absorber Soft Type RJ Series Type

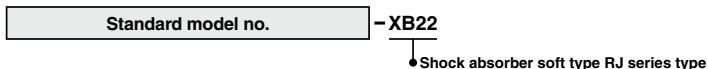
Symbol  
**-XB22**

- The standard cylinder has been equipped with shock absorber soft type RJ series type to enable soft stopping at the stroke end.
- Two different shock absorbers are available in accordance with the operating conditions.

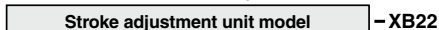
### Applicable Series

Series	Description	Model	Bearing type	Applicable bore size	Vol. no. (for std model)
MY	Mechanically jointed rodless cylinder	MY1B	Basic type	ø10, ø20 to ø40	Web Catalog
		MY1M	Slide bearing type	ø16 to ø40	
		MY1C	Cam follower type	ø16 to ø40	
		MY1H	Single-axis linear guide type	ø10 to ø40	
		MY1□W	With protective cover	ø16 to ø40	
		MY2C	Cam follower type	ø16, ø25, ø40	
		MY2H	Single-axis linear guide type	ø16, ø25, ø40	
		MY2HT	Double-axis linear guide type	ø16, ø25	
		MY3B	Basic type	ø16 to ø50	
		MY3M	Slide bearing type	ø16, ø25, ø40	
CY	Magnetically coupled rodless cylinder	CY1L	Ball bushing bearing type	ø6 to ø25	Web Catalog
		CY1H	Single-axis linear guide type	ø10 to ø25	
		CY1HT	Double-axis linear guide type	ø25	
MGP	Compact guide cylinder	MGP-Z	Slide bearing type, Ball bushing bearing type	ø12 to ø100	Web Catalog
MGG	Guide cylinder	MGG	Slide bearing type, Ball bushing bearing type	ø20 to ø32	
CX2	Slide unit	CX2N	Slide bearing type	ø10, ø15, ø25	
CXT	Platform cylinder	CXT	Slide bearing type, Ball bushing bearing type	ø12 to ø25	

### How to Order



### How to Order a Stroke Adjustment Unit for MY Itself



### Specifications

Absorbed energy	For the maximum impact weight graph, refer to page 1470.
Specifications other than above and external dimensions	Same as standard type

\* For dimensions of the MGP series, refer to page 1471.

- \* For details on shock absorber soft type RJ series, refer to the **Web Catalog**.
- \* The shock absorber service life is different from that of each cylinder. Refer to the “Specific Product Precautions” of the RJ series for the replacement period.

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### Cylinders

Note) Refer to the **Web Catalog** for the details of the shock absorber RB series.

#### Mechanically Jointed Rodless Cylinder

Model	Type	Stroke adjusting unit	Bore size						
			ø10	ø16	ø20	ø25	ø32	ø40	ø50
MY1B	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
		H			RJ1007H	RJ1412H	/		
	Standard	L			RB0806	RB1007	RB1412		
		H			RB0805	RB1412	RB2015		
MY1M MY1C	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
		H			RJ1007H	RJ1412H	/		
	Standard	L			RB0806	RB1007	RB1412		
		H			RB1007	RB1412	RB2015		
MY1H	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
		H			RJ1007H	RJ1412H	/		
	Standard	L			RB0806	RB1007	RB1412		
		H			RB0805	RB1412	RB2015		
MY1□W	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
	Standard	L			RB0806	RB1007	RB1412		
MY2C MY2H	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
		H			RJ1007H (Note)	RJ1412H	/		
	Standard	L			RB0806	RB1007	RB1412		
		H			RB1007 (Note)	RB1412	RB2015		
MY2HT	-XB22	L	/	/	RJ1007H	RJ1412H	/		
		H			RB1007	RB1412	RB2015		
	Standard	L			RB1412	RB2015	RB2725		
		H			RB1007	RB2015	/		
MY3B	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
		H			RJ1007H	RJ1412H	/		
	Standard	L			RB0806	RB1007	RB1412		
		H			RB1007	RB1412	RB2015		
MY3M	-XB22	L	/	/	RJ0806H	RJ1007H	RJ1412H		
		H			RJ1007H	RJ1412H	/		
	Standard	L			RB0806	RB1007	RB1412		
		H			RB1007	RB1412	RB2015		

Note) MY2C16 is not available with H unit.

#### Magnetically Coupled Rodless Cylinder

Model	Type	Bore size				
		ø6	ø10	ø15	ø20	ø25
CY1L	-XB22	RJ0805	RJ0806H		RJ1007H	RJ1412H
	Standard	RB0805			RB1006	RB1411
CY1H	-XB22	RJ0806H			RJ1007H	RJ1412H
	Standard	RB0805	RB0806	RB1006	RB1411	
CY1HT	-XB22	/			RB1006	RJ1412H
	Standard	/			RB1411	RB1411

#### Guide Cylinder

Model	Type	Bore size									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
MGP-Z	-XB22	RJ0806H		RJ1007H		RJ1412H		RJ2015H		RJ2725H	
	-XC69	/		/		/		RB2015		RB2725	
MGG	-XB22	/		RJ1007H	RJ1412H		/		/		
	Standard	/		RB1007	RB1412	/		RB2015		RB2725	

#### Platform Cylinder

Model	Type	Bore size			
		ø12	ø16	ø20	ø25
CXT	-XB22	RJ0806H		RJ1007H	RJ1412H
	Standard	RB0806		RB1007	RB1411

#### Slide Unit/Double Rod Type

Model	Type	Bore size		
		ø10	ø15	ø25
CX2N	-XB22	RJ0806H		RJ1007H
	Standard	RB0805		RB1006

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### Maximum Impact Weight Graph (Shock Absorber Performance Line Graph) \* Values in the maximum impact mass graph are at room temperature (20 to 25°C).

Ensure that the impact mass and the impact speed are within the absorbed energy graphs below.

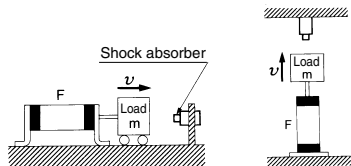
Refer to each cylinder selection calculation for load factors and guide load factors.

Please consult with SMC for the MY3 series since there are restrictions on collision speed resulting from the cylinder.

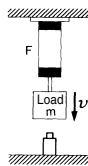
#### ■ Type of collision

##### Horizontally-applied impact

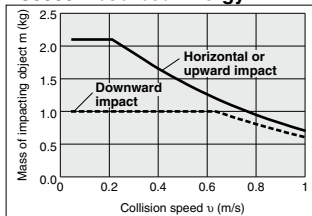
##### Air cylinder impact (horizontal/upward)



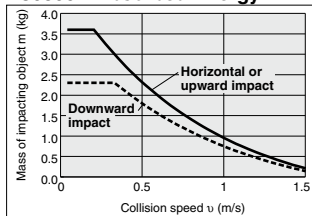
##### Air cylinder impact (downward)



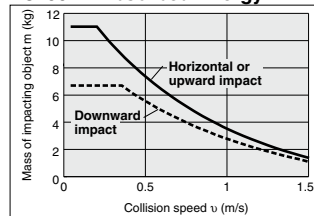
#### RJ0805 Absorbed Energy



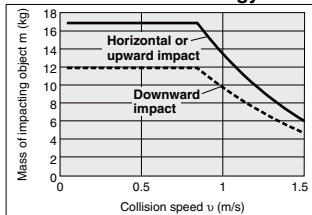
#### RJ0806H Absorbed Energy



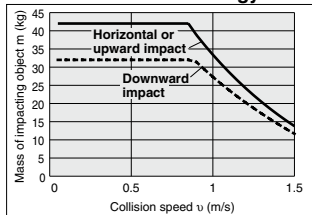
#### RJ1007H Absorbed Energy



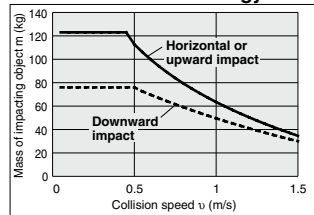
#### RJ1412H Absorbed Energy



#### RJ2015H Absorbed Energy



#### RJ2725H Absorbed Energy



\* Be sure to read "Handling Precautions for SMC Products" (Web Catalog) and "Shock Absorber Soft Type RJ Series" (Web Catalog) before using.

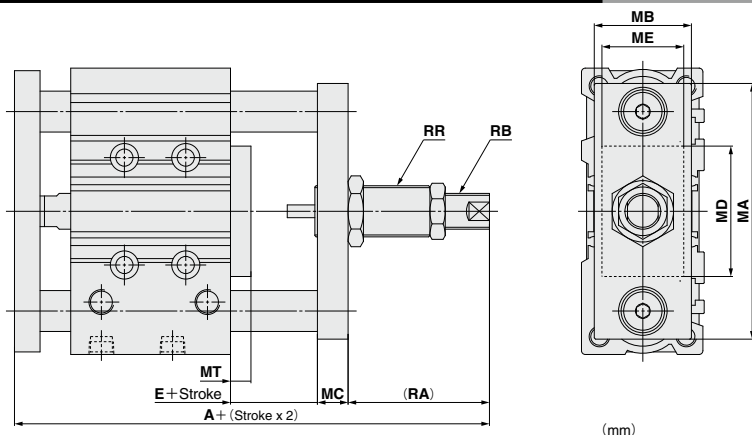
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Dimensions (Dimensions other than below are the same as standard type.)



Bore size	A	E	MA	MB	MC	MD	ME	MT	RA	RB	RR
12	90	7	51	19	8	27	13	6	33	RJ0806H	M12 x 1.5
16	94	7	58	19	8	28	16	6	33	RJ0806H	M12 x 1.5
20	109	9	68	30	10	33	22	8	37	RJ1007H	M14 x 1.5
25	109.5	9	82	30	10	41	25	8	37	RJ1007H	M14 x 1.5
32	135.5	9	100	38	12	51	32	8	55	RJ1412H	M20 x 1.5
40	142	9	108	38	12	60	32	8	55	RJ1412H	M20 x 1.5
50	155	10	139	60	16	71	38	9	57	RJ2015H	M27 x 1.5
63	160	10	153	60	16	84	50	9	57	RJ2015H	M27 x 1.5
80	212.5	17	190	75	22	114	50	16	77	RJ2725H	M36 x 1.5
100	232	17	228	75	25	140	65	16	74	RJ2725H	M36 x 1.5

### Specifications of Extension Adjusting Mechanism

Bore size (mm)	12, 16	20, 25	32, 40	50, 63	80, 100
Shock absorber model	RJ08006H	RJ1007H	RJ1412H	RJ2015H	RJ2725H
Stroke adjustment range [mm]	0 to -15		0 to -25		0 to -30

#### Mounting

**Do not allow hands or fingers near the cylinder during its operation.**

If finger, etc. were to get caught between shock absorber and body, it might damage on the human body and the peripheral equipment. Take protective measures by mounting a protective cover, etc. as necessary.

**Basically, avoid bottom-mounting a cylinder.**

Mounting space is limited owing to the guide rod and the end plate, etc. Mount a cylinder by the top mounting or side mounting.

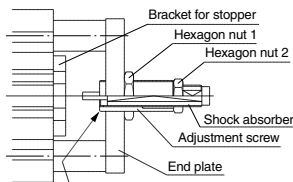
#### Adjustment

##### 1. How to adjust an adjustment screw (Stroke adjustment)

Loosen only the hexagon nut 1, then turn the adjustment screw to adjust the stroke. After adjusting, lock it with the hexagon nut 1. Fix it at the position ejected from the end plate, so that the end face of an adjustment screw could hit the bracket for stopper directly. (Refer to the figure right above.)

##### 2. How to replace shock absorbers

Loosen hexagon nut 2, and turn a shock absorber counterclockwise for removal. For installing a new shock absorber, fix it at the position that the end face of an adjustment screw sticks out by 0.5 mm from a shock absorber. (Refer to the figure on the right.) After adjusting the position of shock absorber, be sure to secure with hexagon nut 2.



\* Adjust it so that the end of an adjustment screw hit directly on the stopper bracket.

