


# Clamping Screws

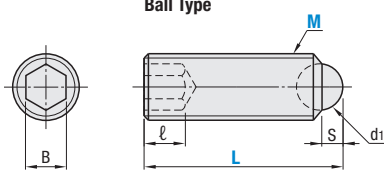
## Ball / Angle Type



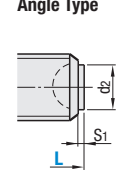
RoHS10

Ball Type	Type		Main Body			Ball	
	Angle Type		Material	Hardness	Surface Treatment	Material	Hardness
RSM	FSM		4137 Alloy Steel	38-43 HRC	Black Oxide	52100 Bearing Steel	55-60 HRC
RSU	FSU		302HQ Stainless Steel	—	—	440C Stainless Steel	55 HRC~

**Ball Type**



**Angle Type**



Ⓢ Screw grade is based on JIS6H equivalent.

### Ball Type

Part Number	Type	M	L				d <sub>1</sub>	B	ℓ	S	Withstand Load (kN)	Mass (g)	
			3	4	5	6							
RSM	RSU	3	5.2	10.2			1.5	1.5	1.2	0.5	0.5	0.2-0.4	
		4	6.5	10.5	16.5		2.5	2		0.8	1.3	0.4-1	
		5	8.6	12.6	20.6		3	2.5	2	1	1.4	0.8-2.3	
		6	10.8	16.8	20.8	25.8	4	3	3.5	1.3	3.3	1.5-4	
		8	*11.2	13.2	21.2	26.2	31.2	5.6	4	5 (2.5)	1.8	3.9	2.5-9
		10	*13.7	17.7	21.7	26.7	36.7	7.1	5	6 (3.5)	2.3	3.4	5-16
RSU	RSU	12	*18	22	32	42	8.7	6	8 (3)	2.8	4.8	10-28	
		16	*23.3	38.3	53.3		11.9	8	10 (3)	4.3	8.9	22-48	

Ⓢ ℓ dimension for \* marked L dimension is in ( ).

### Angle Type

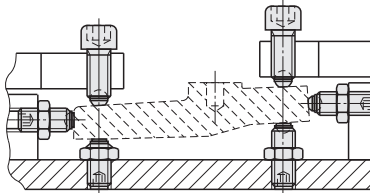
Part Number	Type	M	L				d <sub>2</sub>	B	ℓ	S <sub>1</sub>	Withstand Load (kN)	Mass (g)	Available Types		
			4	5	6	8							FSM	FSU	
FSM	FSU	4	6	10	16		2	2		0.3	1.3	0.4-1	•	•	
		5	8	12	20		2.5	2.5	2	0.4	1.4	0.8-2.3	•	•	
		6	10	16	20	25	3.2	3	3.5	0.6	3.3	1.5-4	•	•	
		8	*10	12	20	25	30	4.5	4	5 (2.5)	0.8	3.9	2.5-9	•	•
		10	*12	16	20	25	35	6	5	6 (3.5)	0.8	3.4	5-16	•	•
		12	*16	20	30	40	7.2	6	8 (3)	1	4.8	10-28	•	•	
FSM	FSM	16	*20	25	35	50	10.7	8	10 (3)	1.3	8.9	22-48	•	—	

Ⓢ ℓ dimension for \* marked L dimension is in ( ).

**Part Number Example**

Part Number: RSM4 - L: 10.5

**Application Example**




#### Notes on Clamping Screws

This product is used not to rotate face balls but to clamp works. (The face balls may or may not rotate when tightening the clamping screw.)

For Angle Type, the face ball is free to rotate 360° in all directions. Because of this, the flat portion may rotate inside of the clamp screw. If this needs to be avoided, use the Non-reverse Type.

# Clamping Screws / Long-Lock Screws

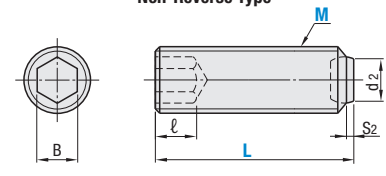
## Non-Reverse / Serrations



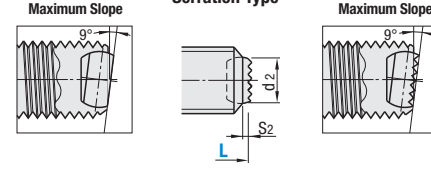
RoHS10

Type	Type		Main Body		Ball	
	Non-Reverse Type	Serration Type	Material	Surface Treatment	Material	Hardness
FSMB	FSMG		4137 Alloy Steel	Black Oxide	52100 Bearing Steel	55-60 HRC
FSUB	FSUG		304 Stainless Steel	—	440C Stainless Steel	55-60 HRC

**Non-Reverse Type**



**Serration Type**



Ⓢ Clamping Screws are to be used with commercially available nuts with JIS6g grade.


Part Number	Type	M	L				d <sub>2</sub>	B	ℓ	S <sub>2</sub>	Withstand Load (kN)	Mass (g)		
			6	8	10	12								
FSMB	FSUB	6	10	16	20	25	3.2	3	3.5	0.45	3.3	1.5-4		
		8	*10	12	20	25	30	4.5	4	5 (2.5)	0.5	3.9	2.5-9	
		10		*12	16	20	25	35	6	5	6 (3.5)	0.6	3.4	5-16
		12			*16	20	30	40	7.2	6	8 (3)	0.75	4.8	10-28
		16			*20	25	35	50	10.7	8	10 (3)	1	8.9	22.5-48

Ⓢ ℓ dimension for \* marked L dimension is in ( ).

kgf=Nx0.101972

**Part Number Example**

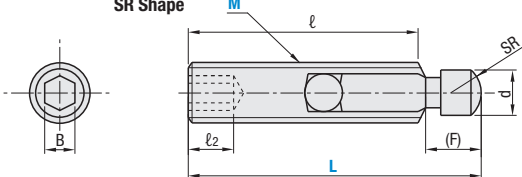
Part Number: FSMB6 - L: 16



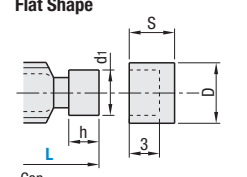
RoHS10

Type	Tip Shape	Main Body		Ball		Head		Accessories
		Material	Surface Treatment	Material	Hardness	Material	Hardness	
BALTAR	SR	1045 Carbon Steel or Equivalent	Black Oxide	440C Stainless Steel	58-63 HRC	440C Stainless Steel	55-60 HRC	—
SALTAR		304 Stainless Steel	—					
BALTAN	Flat							

**SR Shape**



**Flat Shape**



\*Included with BALTAN only.

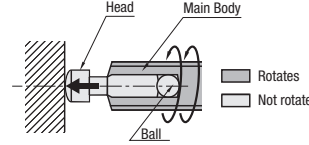
Part Number	Type	M	L	B	d	SR	d <sub>1</sub>	(F)	h	ℓ	ℓ <sub>2</sub>	Cap (1 pc)		Available Types				
												D	S	BALTAR	SALTAR	BALTAN		
BALTAR	SALTAR	6	20	3	4	4	4	4	—	12.8	2.5	—	—	•	•	•		
			30							22.8	3.5	4.7	6	•	•	•		
			50							42.8	—	—	—	•	•	•		
			8	4	5.5	5.5	5.5	5	4	4	16.5	3.5	—	—	•	•	•	
											40	31.5	5	6.5	8	•	•	•
											60	51.5	—	—	—	•	•	•
10	5	7	7	7	6	5	5	20.4	4.5	—	—	•	•	•				
								50	40.4	6	8	10	•	•	•			
								70	60.4	—	—	—	•	•	•			

Ⓢ BALTAR6 is not available for L=20.

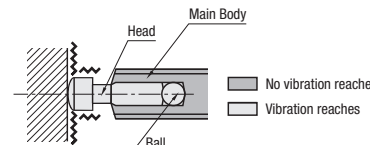
**Part Number Example**

Part Number: BALTAR6 - L: 30

**Application Example**



Rotates



No vibration reaches