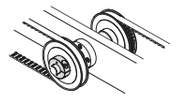
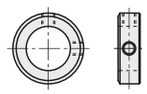
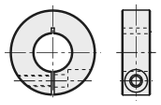
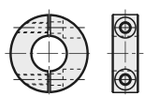
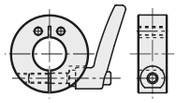
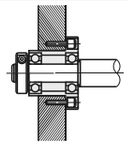
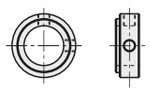
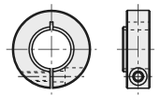
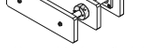
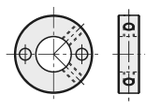
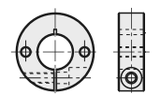
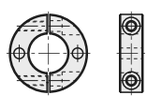
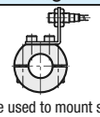
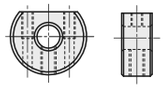
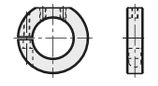
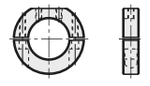
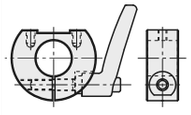
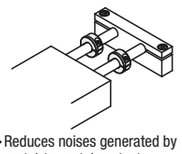
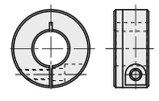
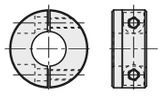
Shaft Collar - Overview

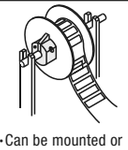
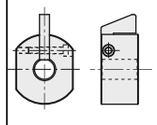
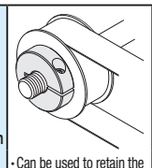
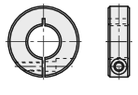
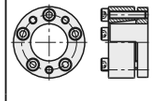
■Product Variations

Features •MISUMI offers a wide variety products by combining any of the 5 applications and 4 fastening methods.
[Application]: General Purpose, Bearing Mounting, Mounting other parts (general purpose), Mounting other parts (sensor brackets), Damper
[Fastening Method]: Set Screw, Clamp, Split, Lever

■Product Variation List

Applications \ Fastening Method		Set Screw (Set Screw x 2pcs.)	Clamp (Hex Socket Head Cap Screw x 1 pc.)	Split (Hex Socket Head Cap Screw x 2 pcs.)	Lever
		・Reasonably priced. ・More compact in thickness than Clamp Type.	・Stronger in clamping force than Set Screw Type. ・Shaft damage from tightening can be avoided.	・Post assembly installation and removal are possible, making for easy maintenance. ・Shaft damage from tightening can be avoided.	・Can be fastened without using any tool. ・Is suitable for portions where the collar position is changed frequently.
General Purpose	 ・Can be used as the stopper, locating component or pulley retainer.				
	Page	P.267, P.268	P.269, P.270	P.271, P.272	P.286, P.287, P.288
For Bearing Mounting	 ・Usable as the bearing inner ring retainer.			-	-
	Page	P.275, P.276	P.277, P.278	-	-
For mounting other parts (General Purpose)	 ・Provides a variety of mounting holes and thus, allows mounting of plates, etc. (Hole Type: Through Hole, Tapped Hole, Counterbore Hole)				-
	Page	P.279	P.280, P.281, P.282, P.291, P.292	P.283, P.291, P.292	-
For mounting other parts (Sensor Brackets)	 ・Can be used to mount sensor brackets. ・Has a mounting hole drilled in conformance with the hole pitch of sensor brackets.				
	Page	P.289	P.289, P.290, P.254	P.289, P.290	P.286, P.287, P.288
Damper	 ・Reduces noises generated by metal-to-metal contact.	-			-
	Page	-	P.273, P.293	P.273, P.293	-

■Product Variation List (Others)

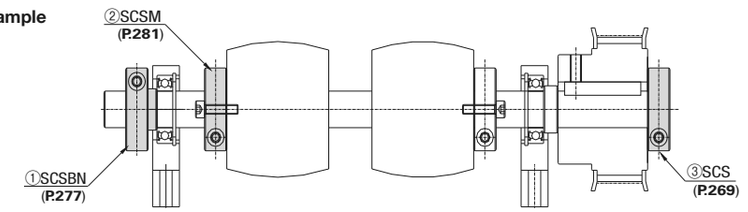
One-Touch Mount	 ・Can be mounted or removed easily and quickly.		For screw shaft retention	 ・Can be used to retain the ends of a screw shaft.		Surface Pressure		
	Page	P.294		Page	P.295		Page	Listed on the web

■Variation List for I.D. / Material / Surface Treatment

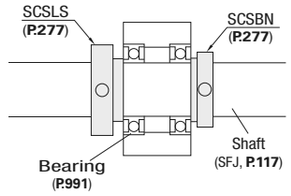
・A variety of I.D. configurations is available within the range of Ø3~100.
・Combination use of MISUMI Shaft Collars with O.D. Tolerance g6/h5/f8 Shafts, O.D. Tolerance g6/h7 Rotary Shafts, Circular Posts and Device Stands are recommended.

Applications		Fastening Method	Listed page	I.D. 3	4	5	6	8	10	12	13	14	15	16	17	18	20	22	24	25	27	30	35	40	50	60	80	100
General Purpose		Set Screw	P.267~	●	●	●	●	●	●	●	●		●	●		●	●			●		●	●	●			
		Clamp	P.269~				●	●	●	●	●		●	●		●	●			●		●	●	●	●	●	●
		Split	P.271~				●	●	●	●	●		●	●	●	●	●			●		●	●	●	●	●	●
		Lever	P.286~				●	●	●	●			●	●			●			●		●					
For Bearing Mounting		Set Screw	P.275~		●	●	●	●	●	●			●		●		●			●		●	●	●			
		Clamp	P.277~				●	●	●	●			●		●		●			●		●	●	●	●		
For mounting other parts (General Purpose)		Set Screw	P.279~	●	●	●	●	●	●	●	●		●	●		●	●			●		●	●	●	●		
		Clamp	P.280~				●	●	●	●	●		●	●		●	●			●		●	●	●	●		
		Split	P.283~						●	●	●		●	●		●	●			●		●	●	●	●		
For mounting other parts (Sensor Brackets)		Set Screw	P.289~				●	●	●	●			●				●			●		●					
		Clamp	P.289~					●	●	●	●		●	●		●	●			●		●	●	●	●		
		Split	P.289~					●	●	●	●		●	●		●	●			●		●	●	●	●		
		Lever	P.286~						●	●			●	●			●			●		●					
Damper		Clamp	P.273~				●	●	●	●	●		●	●			●			●		●	●	●	●		
		Split	P.273~				●	●	●	●	●		●	●			●			●		●					
Others	Threaded Bore	-	P.295~	●	●	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●					
	One-Touch Fixed Type	Clamp	P.294~						●	●				●			●	●		●		●					

■App. Example

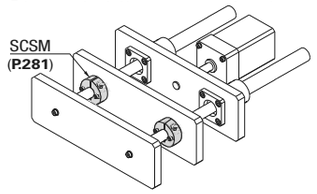


①Applications for bearing mounting



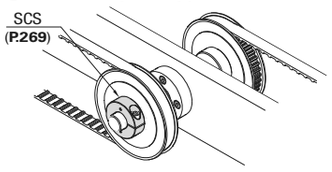
Can be used to retain bearing inner rings.

②(General Purpose) Applications for mounting other parts



Allows some other parts to be mounted onto the current part.

③General Purpose Applications



Allows shafts to be secured without damage.

■Tightening Torque of Clamp Type Shaft Collars

■Definition of Max. Thrust Load

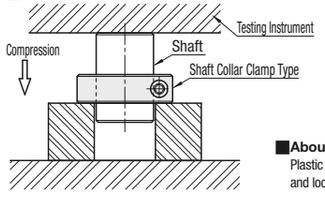
The shaft collar is tightened to torque value shown in the chart below, then compressive load is applied with the tester. The compressive load where the shaft begins to move is defined as the Max. Thrust Load.

Nominal	Tightening Torque (N·m)	
	EN 1.1191 Equiv. / EN 1.4301 Equiv.	EN AW-2017 Equiv.
M2.6	0.94	-
M3	1.61	1.61
M4	3.71	3.71
M5	7.54	7.54
M6	12.87	7.54
M8	31.2	12.87
M10	61.75	12.87
M16	267	-

■Testing Conditions

1. Shaft: MISUMI Hardened Shaft (SF-J)P.117
2. Testing Instrument: Universal Tester
3. Tightening Torque: Select Tightening Torque from the tables on the above depending on the conditions of use.
4. Condition of Antirust Oil: Wiped with a cloth as arrived.

■Testing Method



■About Screw Tightening

Plastic threads may be damaged by repetitive tightening and loosening of the screw.

■Clamp Type

Formula for Weight: Weight (g) = Volume (cm³) x Specific Gravity P.2219
Specific Gravity EN 1.1191 Equiv.: 7.9, EN 1.4301 Equiv.: 8.0

Dimensions D (I.D.)	B (Width)	M	Max. Thrust Load (kN) SCS, SCSJ (EN 1.1191 Equiv.)	SSCS (EN 1.4301 Equiv.)	Weight (g) SCS, SCSJ (EN 1.1191 Equiv.)
6	*6	2.6	0.7	0.4	10
	8	3	1.1	0.5	17
	10	4	1.8	1	21
8	*6	2.6	0.9	0.3	14
	8	3	0.6	0.6	26
	10	4	2.2	1.1	32
10	*6	2.6	0.7	0.3	17
	8	3	1.2	0.4	36
	10	4	2	1	45
	12	5	5.1	0.9	55
12	*6	2.6	0.7	0.3	16
	8	3	1.1	0.8	34
	10	4	2.8	0.8	43
	12	5	4	1.2	52
15	*8	3	1.5	0.6	31
	10	4	1.5	1.1	54
	12	5	5.1	1.8	69
	15	6	5.6	1.4	119

Dimensions D (I.D.)	B (Width)	M	Max. Thrust Load (kN) SCS, SCSJ (EN 1.1191 Equiv.)	SSCS (EN 1.4301 Equiv.)	Weight (g) SCS, SCSJ (EN 1.1191 Equiv.)
16	*8	3	2.1	1.1	29
	10	5	7.1	2.9	55
	12	5	5.4	2.3	67
	15	6	10.2	1.5	116
20	*8	3	2.2	0.8	38
	10	5	5.8	2.7	69
	12	5	6.4	1.7	84
	15	6	10.4	3	140
25	*10	4	3.6	1.8	66
	12	5	8.8	2.6	98
	15	6	8.8	3.6	164
30	*12	5	8.4	2.8	111
	15	6	8.9	2.2	185
	20	8	15	4	318
35	15	6	9.9	2.7	207
40	18	8	21.3	6	348
50	22	10	35.8	11.8	604

Note 1. * marked dimensions are for Compact Type only. (SCSJ, SSCSJ)
2. These values are merely test results, and not guaranteed by the manufacturer.
3. Use optimum tightening torques depending on the condition of use by users.