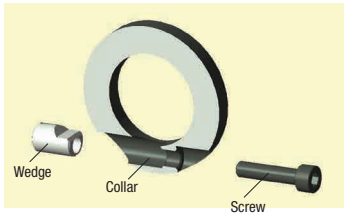
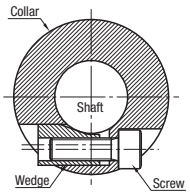
Shaft Collar Wedge Type

Mechanism and Clamping Force Data / Wedge Type Lineup and Advantages

■Wedge Mechanism Features

- The screws pull a wedge and the shaft is clamped; this structure requires less force for tightening.
- Good work efficiency; suitable for use in frequent positioning adjustments like width guide applications. The wedge for "Clamp Lever Type" (**P.286**) is made of brass and does not damage shafts.





■About Tightening Torque of Wedge Type Shaft Collars

■Definition of Max. Thrust Load

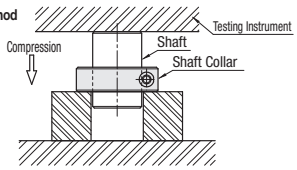
The shaft collar is tightened to the torque value shown in the chart below, then compressive load is applied with the tester. The compressive load where the shaft begins to move is defined as the Max. Thrust Load.

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 (SFJ) **P.117**
2. Testing Instrument : Universal Tester
3. Tightening Torque : Select Tightening Torque from the tables on the left depending on the conditions of use.
4. Condition of Antirust Oil : Wiped with a cloth as arrived.

■Testing Method



■Wedge Type

Dimensions			Max. Thrust Load (kN)		Weight (g)
D (I.D.)	B (Width)	M	SCWM (EN 1.1191 Equiv.) (Black Oxide Coating)	SSCWM (EN 1.4301 Equiv.)	SCWM (EN 1.1191 Equiv.)
10	10	4	1.6	1.2	29
12	10	4	2.2	1.4	35
15	10	4	1.8	1.5	37
16	12	5	3.0	2.3	57
20	12	5	3.5	3.0	69
25	12	5	3.5	3.2	88
30	12	5	3.2	3.2	94
35	15	6	-	3.1	154
40	15	8	-	3.1	243
50	15	8	-	3.1	299

■Wedge Type Lineup

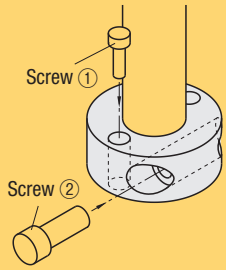
- 24 types are offered including 6 shapes, 2 kinds of levers and 3 materials in combination.

Wedge Type		Wedge Type with Clamp Lever	
2-Hole / 2-Tapped	3-Hole / 3-Tapped	Cut Surface Mounting Holes	Side Mounting Holes
			

■Advantages of 2-Hole / 2-Tapped / 3-Hole / 3-Tapped Type

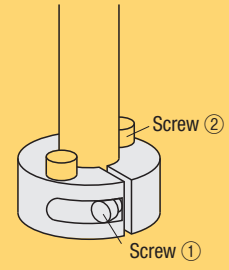
- Unlike the Clamp Type, less limitations in assembly steps.

Wedge Type



Tightening can be facilitated from both screw ① and screw ② sides!

Clamp Type

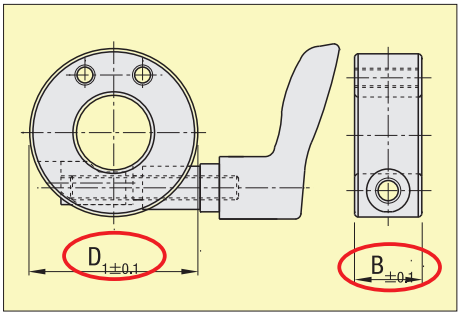


Tightening the Screw ① first , then finally tighten the Screw ②.
Secure clamping of the shaft will become difficult if the screw ② is tightend first.

■Advantages of Compact Clamp Lever Type

- Smaller by up to 30% in O.D. and 22% in the width than the Clamp Type with Lever.

Ex. Comparison with Side Slit Type



I.D.(D)	O.D.(D1 DIM.)		O.D. Comparison	Width (B Dim.)		Width Comparison
	Wedge	Standard, Clamp		Wedge	Standard, Clamp	
10	28	35	▲20%	14	18	▲22%
12	28	40	▲30%	14	18	
15	32	44	▲27%	14	18	
16	34	44	▲23%	14	18	
20	40	48	▲17%	14	18	
25	45	60	▲25%	14	18	
30	52	70	▲26%	14	18	