

# MBB Flexible Couplings - Bellows Type

WEB Selection Tool   WEB CAD Download   Zero Backlash   High torque   High Rigidity

## Structure

### Clamping Type

**MBB-C** Aluminum alloy hub

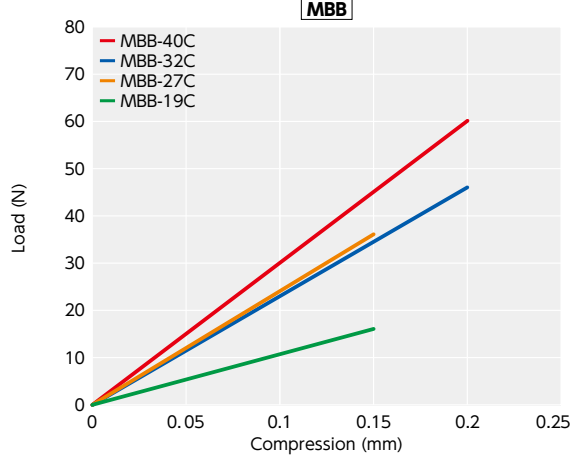


### Material/Finish

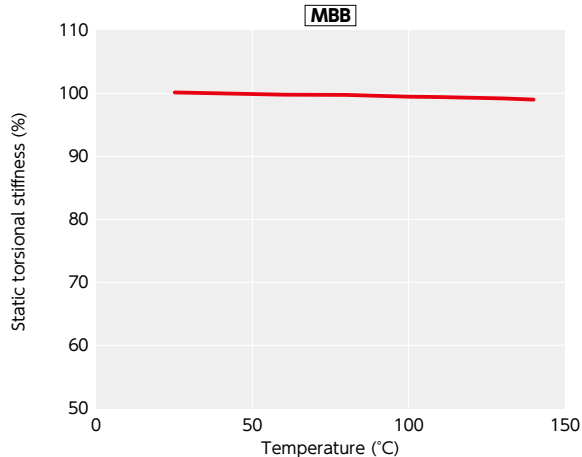
RoHS2 Compliant

	MBB
Hub	A2017 Alumite Treatment
Bellows	SUS304
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

### Eccentric Reaction Force



### Change in static torsional stiffness due to temperature



### Applicable motors

	MBB
Servomotor	⊙
Stepping Motor	⊙
General-purpose Motor	-

⊙: Excellent ○: Very good

### Property

	MBB
Zero Backlash	⊙
Allowable Misalignment	○

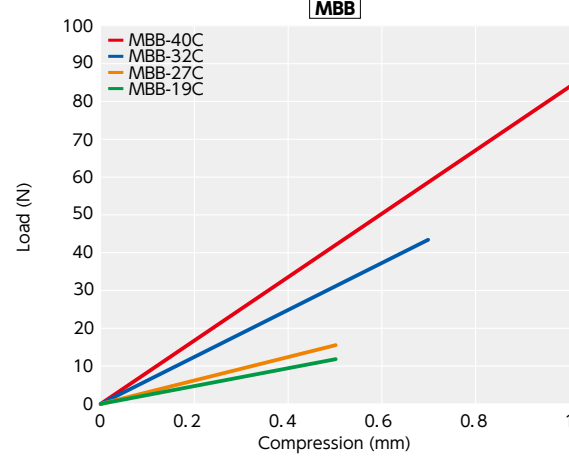
⊙: Excellent ○: Very good

- This is a bellows type flexible coupling.
- The bellows allows eccentricity, angular misalignment, and end-play.
- The bellows is stainless steel.

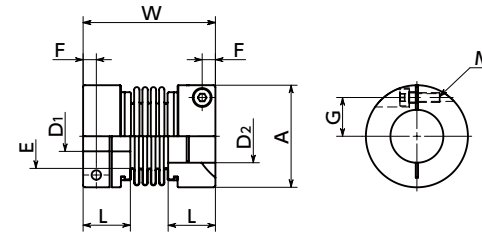
### Application

Actuator / High precision XY stage / Semiconductor devices / Encoder

### Thrust Reaction Force



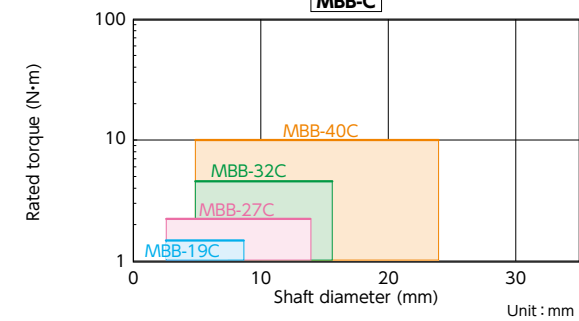
This is a value under the condition where the static torsional stiffness at 20°C is 100%. The change of **MBB** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



## Selection

### Selection Example

In case of selected parameters of shaft diameter of  $\phi$  10 and load torque of 2 N·m, the selected size for **MBB** is **MBB-27C**.



## Dimensions

Part Number	Bore Diameter	A	L	W	E	F	G	M	WrenchTorque(N·m)
<b>MBB-19C</b>	3 - 8	19	10.5	30	12	3	6.75	M2	0.5
<b>MBB-27C</b>	3 - 14	27	12.5	35	17	3.5	10.25	M2.5	0.9
<b>MBB-32C</b>	5 - 16	32	15.5	46	22	4.25	12	M3	1.5
<b>MBB-40C</b>	5 - 20	40	16	51	28	5	15	M4	3.5
	22 - 24							M3	1.5

Part Number	Standard Bore Diameter D1·D2															
	3	4	5	6	8	10	12	14	15	16	17	19	20	22	24	
<b>MBB-19C</b>	●	●	●	●	●											
<b>MBB-27C</b>	●	●	●	●	●	●	●	●								
<b>MBB-32C</b>			●	●	●	●	●	●	●	●						
<b>MBB-40C</b>			●	●	●	●	●	●	●	●	●	●	●	●	●	●

Part Number	Standard Bore Diameter D1·D2							
	1/8	3/16	1/4	3/8	1/2	5/8	3/4	7/8
<b>MBB-19C</b>	●	●	●					
<b>MBB-27C</b>	●	●	●	●	●	●		
<b>MBB-32C</b>			●	●	●	●	●	
<b>MBB-40C</b>			●	●	●	●	●	●

## Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 Torque (N·m)	Max. Rotational Frequency (min <sup>-1</sup> )	Moment*2 of Inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
<b>MBB-19C</b>	8	1.5	33000	8.6×10 <sup>-7</sup>	170	0.15	1.5	±0.5	16
<b>MBB-27C</b>	14	2.3	23000	3.6×10 <sup>-6</sup>	800	0.15	1.5	±0.5	32
<b>MBB-32C</b>	16	4.5	19000	1.1×10 <sup>-5</sup>	1600	0.2	1.5	±0.7	68
<b>MBB-40C</b>	24	10	15000	2.8×10 <sup>-5</sup>	2700	0.2	1.5	±1	110

\*1: Correction of rated torque due to load fluctuation is not required.  
\*2: These are values with max. bore diameter.

### Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of **MBB-C**.

Part Number	Bore Diameter (mm)		
	3	5	6
<b>MBB-19C</b>	0.8		
<b>MBB-32C</b>		2	4.2
<b>MBB-40C</b>		9.8	

These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MBB-C** dimensional table.

### Part number specification

**MBB-19C-6-1/4**

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