

# MJS Flexible Coupling - Jaw - Type (Short)

High torque Vibration absorption Electrical Insulation

## Structure

- Clamping Type → P.xxxx  
**MJS-\*\*-CS-\*\*-** Tight Fit  
**MJS-\*\*-CS-E\*\*-** Easy Fit



- Clamping + Key Type → P.xxxx  
**MJS-\*\*-CSK-\*\*-** Tight Fit  
**MJS-\*\*-CSK-E\*\*-** Easy Fit



- Sleeve  
Outside Diameter:  $\phi 20 - \phi 30$



Tight Fit



Easy Fit

Outside Diameter:  $\phi 40$



Tight Fit



Easy Fit

Outside Diameter:  $\phi 55 / \phi 65$



Tight Fit



Easy Fit

- Material/Finish



|                           | MJS-CS / MJS-CSK                           |
|---------------------------|--------------------------------------------|
| Hub                       | A2017<br>Anodized*1                        |
| Sleeve                    | Polyurethane                               |
| Hex Socket Head Cap Screw | SCM435<br>Ferrosoferric Oxide Film (Black) |

\*1: Due to manufacturing process requirements, couplings may have bores and keyways with or without surface treatment. This does not affect the performance of the couplings.

- Applicable motors

|                       | Tight Fit | Easy Fit |
|-----------------------|-----------|----------|
| Servomotor            | ○         | ●        |
| Stepping Motor        | ○         | ○        |
| General-Purpose Motor | ○         | ○        |

○: Excellent ○: Very good ●: Available

- Property

|                                 | Tight Fit     | Easy Fit      |
|---------------------------------|---------------|---------------|
| Zero Backlash                   | ○             | —             |
| High Torque                     | ○             | ○             |
| Allowable Misalignment          | ○             | ○             |
| Vibration Absorption            | ○             | ○             |
| Electrical Insulation           | ○             | ○             |
| Assembling                      | ○             | ○             |
| Allowable Operating Temperature | −20°C to 60°C | −20°C to 60°C |

○: Excellent ○: Very good

- This is a jaw type flexible coupling.
- It is a short type and more compact than **MJC**.
- Tight Fit enables transmission with zero backlash at low torque.
- Easy fit allows assembling and separation of hubs.
- Excellent flexibility allows eccentricity, angular misalignment and twisting vibration to be accepted.
- It has electrical insulation. Resistance value: Not less than 2 MΩ

- Sleeve Type

| Sleeve Type | Sleeve Hardness (JIS) |     |     |     |
|-------------|-----------------------|-----|-----|-----|
|             | A80                   | A92 | A98 | D64 |
| Tight Fit   | BL                    | WH  | RD  | GR  |
| Easy Fit    | EBL                   | EWH | ERD | EGR |

Small ← Rated Torque / Maximum Torque → Large  
Large ← Allowable Misalignment → Small

- Part number specification

**MJS-40CSK-ERD-10-11**

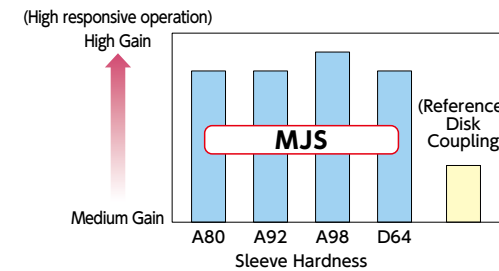
Product Code Size Sleeve Type bore diameter

Please refer to dimensional table for part number specification.

- Tight Fit

The hub and sleeve are press-fit and can be used under zero backlash\*1. Since the sleeve's vibration absorption can raise the gain of a servomotor, this unit can achieve high responsive operation exceeding the Disk coupling.

\*1: For the torque used under zero backlash, please refer to Performance table.



- Tight Fit Applications

XY stage / Index table / Machine tool / Injection molding machine

- Easy Fit

This unit allows you to easily assemble and partition the hub and sleeve. This allows you to reduce the time of assembling the unit and maintenance. It is possible to mount a hub on the shaft in advance and easily assemble the unit even in a location where the coupling is less-visible.

- Easy Fit Applications

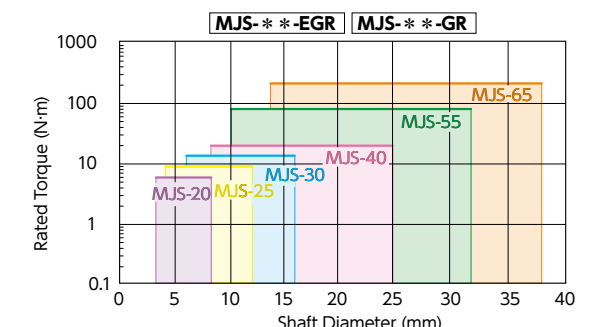
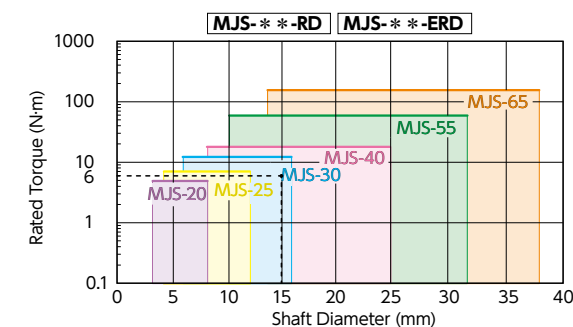
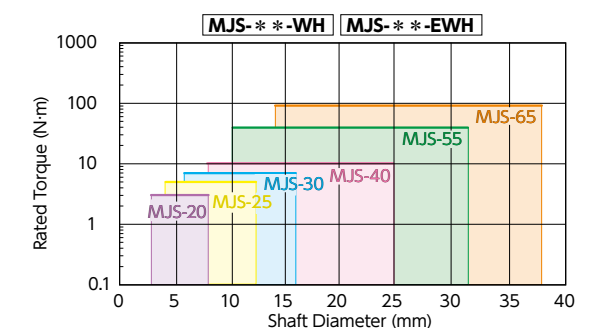
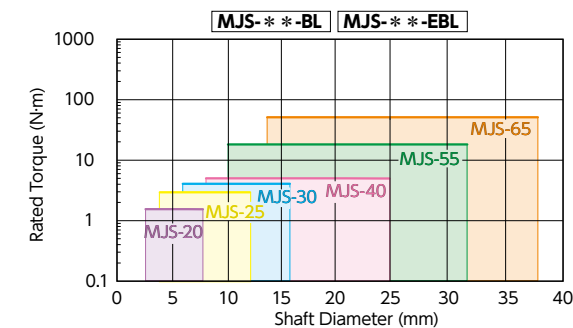
Transport device / Mixer / Ventilator / Pump / Dispenser



## Selection

- Selection based on shaft diameter and rated torque

The area bounded by the shaft diameter and rated torque indicates is the selection size.



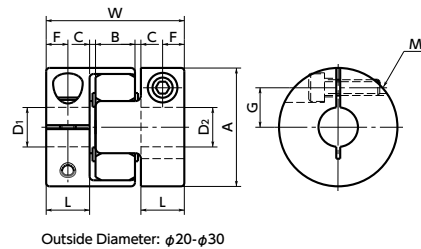
- Selection Example

In case of selected parameters of shaft diameter of  $\phi 15$  and load torque of 6 N·m, the selected size for

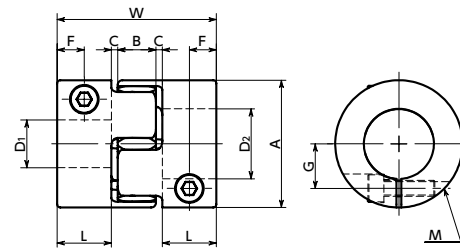
**MJS-\*\*-CS-RD**, **MJS-\*\*-CS-ERD** is **MJS-30CS-RD**, **MJS-30CS-ERD**.

# MJS-CS Flexible Coupling - Jaw - Type (Short) - Clamping Type

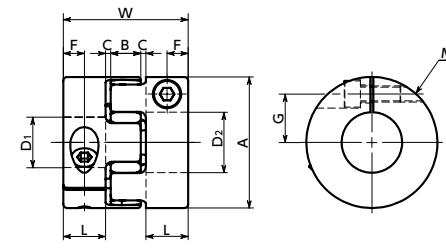
High torque Vibration absorption Electrical Insulation



Outside Diameter: φ20-φ30



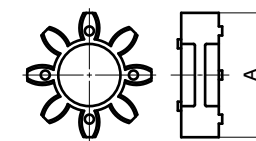
Outside Diameter: φ40



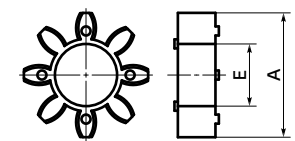
Outside Diameter: φ55 / φ65

## Sleeve Details

Tight Fit



Easy Fit



## Ambient Temperature / Temperature Correction Factor

| Ambient Temperature | Temperature Correction Factor |
|---------------------|-------------------------------|
| -20°C to 30°C       | 1.00                          |
| 30°C to 40°C        | 0.80                          |
| 40°C to 60°C        | 0.70                          |

## Dimensions

Unit : mm

| Part Number     | Bore Diameter | A  | L   | W  | B  | C*1 | Sleeve E | F    | G     | M    | Screw Tightening Torque (N·m) |
|-----------------|---------------|----|-----|----|----|-----|----------|------|-------|------|-------------------------------|
| <b>MJS-20CS</b> | 3 ≤ D ≤ 8     | 20 | 7   | 24 | 8  | 1   | 6        | 3.5  | 6.5   | M2.5 | 1                             |
| <b>MJS-25CS</b> | 4 ≤ D ≤ 10    | 25 | 8   | 26 | 8  | 1   | 8        | 4    | 9     | M3   | 1.5                           |
|                 | 10 < D ≤ 12   |    |     |    |    |     |          |      | 9.5   | M2.5 | 1                             |
| <b>MJS-30CS</b> | 6 ≤ D ≤ 12    | 30 | 9.5 | 32 | 10 | 1.5 | 10       | 4.75 | 10    | M4   | 3.5                           |
|                 | 12 < D ≤ 16   |    |     |    |    |     |          |      | 11    | M3   | 1.5                           |
| <b>MJS-40CS</b> | 8 ≤ D ≤ 20    | 40 | 17  | 50 | 12 | 2   | 17       | 8.5  | 14    | M5   | 8                             |
|                 | 20 < D ≤ 25   |    |     |    |    |     |          |      | 15.75 | M4   | 3.5                           |
| <b>MJS-55CS</b> | 10 ≤ D ≤ 28   | 55 | 18  | 54 | 14 | 2   | 26       | 9    | 20    | M6   | 13                            |
|                 | 28 < D ≤ 32   |    |     |    |    |     |          |      | 21    | M5   | 8                             |
| <b>MJS-65CS</b> | 14 ≤ D ≤ 32   | 65 | 21  | 62 | 15 | 2.5 | 29.5     | 10.5 | 24    | M8   | 28                            |
|                 | 32 < D ≤ 38   |    |     |    |    |     |          |      | 25    | M6   | 13                            |

\*1: Use with C Dimension

| Part Number     | Standard Bore Diameter<br>D1 · D2 3 |   |     |   |   |      |   |   |       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
|-----------------|-------------------------------------|---|-----|---|---|------|---|---|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|
|                 | 3                                   | 4 | 4.5 | 5 | 6 | 6.35 | 7 | 8 | 9.525 | 10 | 11 | 12 | 14 | 15 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 |   |   |
| <b>MJS-20CS</b> | ●                                   | ● | ●   | ● | ● | ●    | ● | ● |       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| <b>MJS-25CS</b> |                                     | ● | ●   | ● | ● | ●    | ● | ● | ●     | ●  | ●  | ●  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |
| <b>MJS-30CS</b> |                                     |   |     |   | ● | ●    | ● | ● | ●     | ●  | ●  | ●  | ●  | ●  | ●  |    |    |    |    |    |    |    |    |    |    |    |   |   |
| <b>MJS-40CS</b> |                                     |   |     |   |   |      | ● | ● | ●     | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ● | ● |
| <b>MJS-55CS</b> |                                     |   |     |   |   |      |   |   |       | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ● | ● |
| <b>MJS-65CS</b> |                                     |   |     |   |   |      |   |   |       |    |    | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ● | ● |

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping type for one side and clamping + key type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft.
- For the shaft insertion amount to the coupling, see Mounting/maintenance.

## Performance

| Part Number     | Sleeve | Tight Fit | Easy Fit | Max. Bore Diameter (mm) | Rated*1 torque (N·m) | Max.*1 torque (N·m) | Zero Backlash*3 Allowable Transmission 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) | Sleeve Hardness (JIS) |
|-----------------|--------|-----------|----------|-------------------------|----------------------|---------------------|-----------------------------------------------------|------------------------------------------------|------------------------------------------|----------------------------------------|--------------------------------|-------------------------------|------------------------------|------------|-----------------------|
| <b>MJS-20CS</b> | BL     | EBL       |          | 8                       | 1.8                  | 3.6                 | 0.2                                                 | 31000                                          | 8.4x 10 <sup>-7</sup>                    | 16                                     | 0.2                            | 1                             | +0.8<br>0                    | 15         | A80                   |
| <b>MJS-25CS</b> | BL     | EBL       |          | 12                      | 3                    | 6                   | 0.4                                                 | 25000                                          | 2.6 x 10 <sup>-6</sup>                   | 32                                     | 0.2                            | 1                             | +0.9<br>0                    | 26         |                       |
| <b>MJS-30CS</b> | BL     | EBL       |          | 16                      | 4                    | 8                   | 0.5                                                 | 21000                                          | 5.5 x 10 <sup>-6</sup>                   | 46                                     | 0.2                            | 1                             | +1.0<br>0                    | 39         |                       |
| <b>MJS-40CS</b> | BL     | EBL       |          | 25                      | 4.9                  | 9.8                 | 1.2                                                 | 15000                                          | 2.7 x 10 <sup>-5</sup>                   | 380                                    | 0.15                           | 1                             | +1.2<br>0                    | 100        |                       |
| <b>MJS-55CS</b> | BL     | EBL       |          | 32                      | 17                   | 34                  |                                                     | 11000                                          | 1.1 x 10 <sup>-4</sup>                   | 1400                                   | 0.2                            | 1                             | +1.4<br>0                    | 210        |                       |
| <b>MJS-65CS</b> | BL     | EBL       |          | 38                      | 46                   | 92                  |                                                     | 9000                                           | 2.4 x 10 <sup>-4</sup>                   | 2800                                   | 0.2                            | 1                             | +1.5<br>0                    | 340        | A92                   |
| <b>MJS-20CS</b> | WH     | EWL       |          | 8                       | 3                    | 6                   | 0.2                                                 | 31000                                          | 8.4x 10 <sup>-7</sup>                    | 29                                     | 0.15                           | 1                             | +0.8<br>0                    | 15         |                       |
| <b>MJS-25CS</b> | WH     | EWL       |          | 12                      | 5                    | 10                  | 0.4                                                 | 25000                                          | 2.6 x 10 <sup>-6</sup>                   | 60                                     | 0.15                           | 1                             | +0.9<br>0                    | 26         |                       |
| <b>MJS-30CS</b> | WH     | EWL       |          | 16                      | 7.5                  | 15                  | 0.5                                                 | 21000                                          | 5.5 x 10 <sup>-6</sup>                   | 73                                     | 0.15                           | 1                             | +1.0<br>0                    | 39         |                       |
| <b>MJS-40CS</b> | WH     | EWL       |          | 25                      | 10                   | 20                  | 1.2                                                 | 15000                                          | 2.7 x 10 <sup>-5</sup>                   | 570                                    | 0.1                            | 1                             | +1.2<br>0                    | 100        |                       |
| <b>MJS-55CS</b> | WH     | EWL       |          | 32                      | 35                   | 70                  |                                                     | 11000                                          | 1.1 x 10 <sup>-4</sup>                   | 1600                                   | 0.15                           | 1                             | +1.4<br>0                    | 210        | A98                   |
| <b>MJS-65CS</b> | WH     | EWL       |          | 38                      | 95                   | 190                 |                                                     | 9000                                           | 2.4 x 10 <sup>-4</sup>                   | 3000                                   | 0.15                           | 1                             | +1.5<br>0                    | 340        |                       |
| <b>MJS-20CS</b> | RD     | ERD       |          | 8                       | 5                    | 10                  | 0.2                                                 | 31000                                          | 8.4x 10 <sup>-7</sup>                    | 55                                     | 0.1                            | 1                             | +0.8<br>0                    | 15         | A98                   |
| <b>MJS-25CS</b> | RD     | ERD       |          | 12                      | 7.2                  | 14.4                | 0.4                                                 | 25000                                          | 2.6 x 10 <sup>-6</sup>                   | 120                                    | 0.1                            | 1                             | +0.9<br>0                    | 26         |                       |
| <b>MJS-30CS</b> | RD     | ERD       |          | 16                      | 12.5                 | 25                  | 0.5                                                 | 21000                                          | 5.5 x 10 <sup>-6</sup>                   | 130                                    | 0.1                            | 1                             | +1.0<br>0                    | 39         |                       |
| <b>MJS-40CS</b> | RD     | ERD       |          | 25                      | 17                   | 34                  | 1.2                                                 | 15000                                          | 2.7 x 10 <sup>-5</sup>                   | 1200                                   | 0.1                            | 1                             | +1.2<br>0                    | 100        |                       |
| <b>MJS-55CS</b> | RD     | ERD       |          | 32                      | 60                   | 120                 |                                                     | 11000                                          | 1.1 x 10 <sup>-4</sup>                   | 2600                                   | 0.1                            | 1                             | +1.4<br>0                    | 210        |                       |
| <b>MJS-65CS</b> | RD     | ERD       |          | 38                      | 160                  | 320                 |                                                     | 9000                                           | 2.4 x 10 <sup>-4</sup>                   | 4900                                   | 0.1                            | 1                             | +1.5<br>0                    | 340        | D64                   |
| <b>MJS-20CS</b> | GR     | EGR       |          | 8                       | 6                    | 12                  | 0.2                                                 | 31000                                          | 8.4x 10 <sup>-7</sup>                    | 87                                     | 0.08                           | 1                             | +0.8<br>0                    | 15         |                       |
| <b>MJS-25CS</b> | GR     | EGR       |          | 12                      | 9.6                  | 19.2                | 0.4                                                 | 25000                                          | 2.6 x 10 <sup>-6</sup>                   | 160                                    | 0.08                           | 1                             | +0.9<br>0                    | 26         |                       |
| <b>MJS-30CS</b> | GR     | EGR       |          | 16                      | 16                   | 32                  | 0.5                                                 | 21000                                          | 5.5 x 10 <sup>-6</sup>                   | 200                                    | 0.08                           | 1                             | +1.0<br>0                    | 39         |                       |
| <b>MJS-40CS</b> | GR     | EGR       |          | 25                      | 21                   | 42                  | 1.2                                                 | 15000                                          | 2.7 x 10 <sup>-5</sup>                   | 3000                                   | 0.08                           | 1                             | +1.2<br>0                    | 100        |                       |
| <b>MJS-55CS</b> | GR     | EGR       |          | 32                      | 75                   | 150                 |                                                     | 11000                                          | 1.1 x 10 <sup>-4</sup>                   | 9000                                   | 0.08                           | 1                             | +1.4<br>0                    | 210        | D64                   |
| <b>MJS-65CS</b> | GR     | EGR       |          | 38                      | 200                  | 400                 |                                                     | 9000                                           | 2.4 x 10 <sup>-4</sup>                   | 13000                                  | 0.08                           | 1                             | +1.5<br>0                    | 340        |                       |

\*1: Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30°C, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. **MJS-CS**'s allowable operating temperature is -20°C to 60°C.

\*2: These are values with max. bore diameter.

\*3: For transmission with Zero Backlash, please use a tight fit sleeve.

## Part number specification

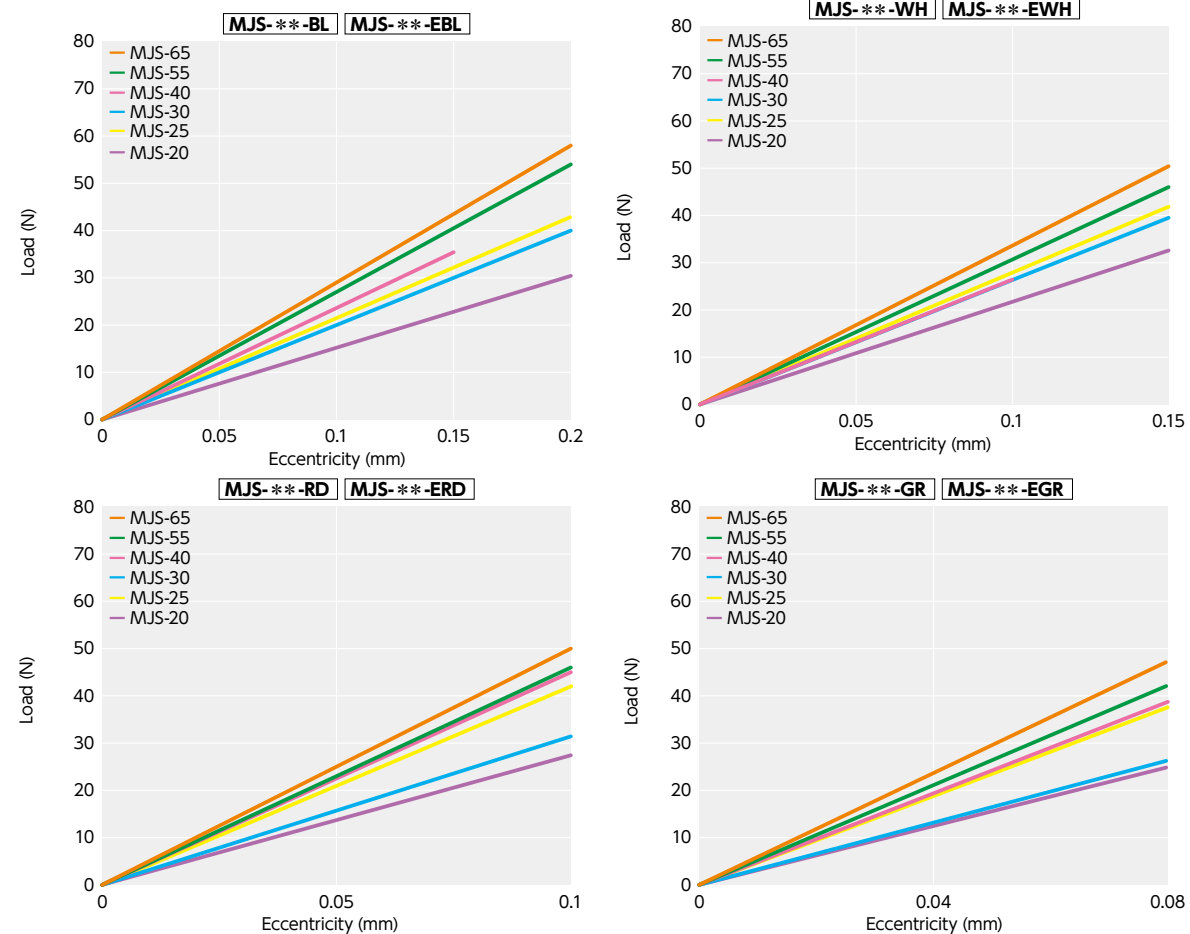
**MJS-55CS-EGR-14-16**

1 2 3

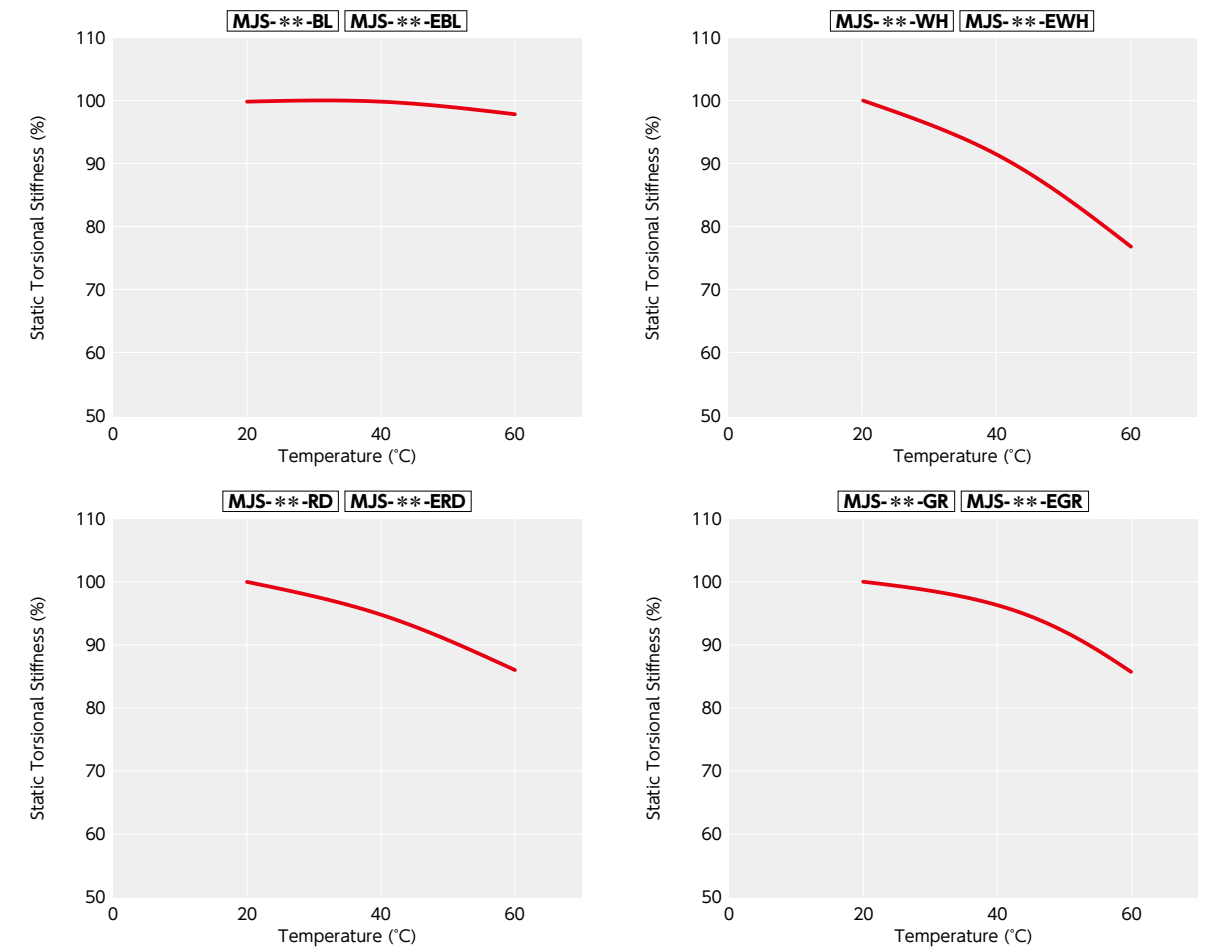
Additional Keyway at Shaft Hole → P.0000 Cleanroom Wash & Packaging → P.0000 Change to Stainless Steel Screw → P.0000  
Available / Add'l charge Please feel free to contact us Available / Add'l charge

## Technical Information

### • Eccentric Reaction Force



### • Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20°C is 100%.

The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph. Before using the unit, be aware of the deterioration of responsiveness.

### • Slip Torque

As in the table below, the clamping type **MJS-CS** has different slip torque according to the bore diameter.

Take care during selection.

| Take care during selection. |                    |     |     |     |     |      |     |     |       |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  | Unit: N·m |  |  |  |
|-----------------------------|--------------------|-----|-----|-----|-----|------|-----|-----|-------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----------|--|--|--|
| Part Number                 | Bore Diameter (mm) |     |     |     |     |      |     |     |       |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |           |  |  |  |
|                             | 3                  | 4   | 4.5 | 5   | 6   | 6.35 | 7   | 8   | 9.525 | 10 | 11  | 12  | 14  | 15  | 16  | 18  | 19  | 20  | 22  | 24  | 25  | 28  | 30  | 32  | 35  | 38  |  |           |  |  |  |
| MJS-20CS                    | 0.8                | 1.7 | 2.2 | 2.6 | 3.5 | 3.8  | 4.4 | 5.3 |       |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |           |  |  |  |
| MJS-25CS                    |                    | 1.9 | 2.6 | 3.4 | 4.9 | 5.4  | 6.4 | 7.9 | 10    | 11 | 8.6 | 8.9 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |           |  |  |  |
| MJS-30CS                    |                    |     |     |     | 7   | 7.6  | 8.7 | 10  | 13    | 14 | 16  | 17  | 14  | 16  | 17  |     |     |     |     |     |     |     |     |     |     |     |  |           |  |  |  |
| MJS-40CS                    |                    |     |     |     |     |      |     | 28  | 35    | 37 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |           |  |  |  |
| MJS-55CS                    |                    |     |     |     |     |      |     |     |       | 40 | 46  | 53  | 66  | 72  | 79  | 92  | 98  | 100 | 110 | 130 | 130 |     | 140 |     |     |     |  |           |  |  |  |
| MJS-65CS                    |                    |     |     |     |     |      |     |     |       |    |     |     | 110 | 120 | 130 | 150 | 160 | 170 | 190 | 210 | 220 | 260 | 280 | 300 | 300 | 300 |  |           |  |  |  |

• These are test values based on the conditions of shaft dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MJS-CS** dimension tables. They are not guaranteed values.

• Slip torque changes with usage conditions. Carry out tests under conditions similar to actual conditions in advance.