

# MDW-C Flexible Couplings - Disk Type

Zero Backlash

## Structure

### Clamping Type



### Recommended Applicable Motor

|                       | MDW-C |
|-----------------------|-------|
| Servomotor            | ○     |
| Stepping Motor        | ○     |
| General-purpose Motor | ●     |

○: Excellent ○: Very good ●: Available

### Property

|                        | MDW-C |
|------------------------|-------|
| Zero Backlash          | ○     |
| Allowable Misalignment | ○     |

○: Excellent ○: Very good

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

### Application

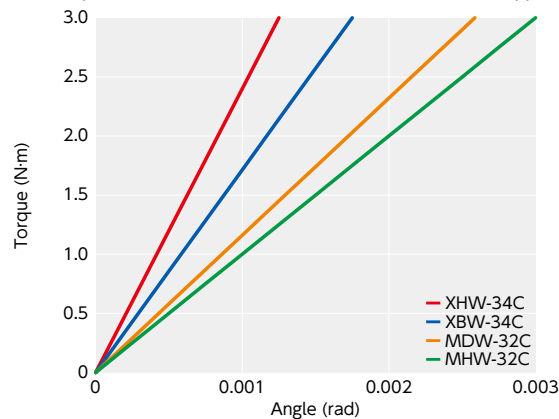
Actuator / XY stage

### Material/Finish

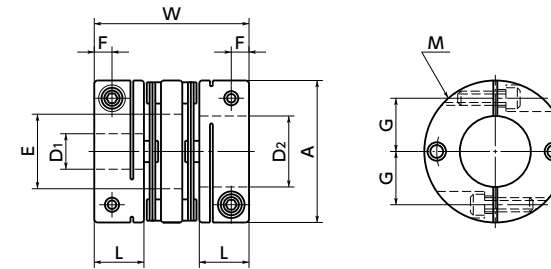


|                           | MDW-C                                    |
|---------------------------|--|
| Hub                       | A2017<br>Anodized                        |
| Spacer                    | A2017<br>Anodized                        |
| Disk                      | SUS304                                   |
| Pin                       | SUS303                                   |
| Collar                    | SUS303                                   |
| Hex Socket Head Cap Screw | SCM435<br>Ferrosferic Oxide Film (Black) |

### Comparison of static torsional stiffness (Disk Type)



## MDW-C



## Dimensions

Unit : mm

| Part Number | A  | L  | W  | E    | F   | G   | M    | Screw Tightening Torque (N·m) |
|-------------|----|----|----|------|-----|-----|------|-------------------------------|
| MDW-19C     | 19 | 8  | 27 | 8.5  | 2.5 | 6.5 | M2   | 0.5                           |
| MDW-25C     | 25 | 10 | 31 | 12.5 | 3.5 | 9   | M2.5 | 1                             |
| MDW-32C     | 32 | 12 | 40 | 16   | 4   | 11  | M3   | 1.5                           |
| MDW-40C     | 40 | 14 | 44 | 21   | 5   | 15  | M4   | 2.5                           |
| MDW-50C     | 50 | 18 | 57 | 26   | 6   | 18  | M5   | 7                             |
| MDW-63C     | 63 | 20 | 61 | 35   | 7   | 24  | M6   | 12                            |

| Part Number | Standard Bore Diameter |   |   |   |   |      |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------|------------------------|---|---|---|---|------|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|             | D1/D2                  |   | 4 | 5 | 6 | 6.35 | 7 | 8 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 |
| MDW-19C     | ●                      | ● | ● |   | ● | ●    |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| MDW-25C     |                        |   | ● | ● |   | ●    | ● |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| MDW-32C     |                        |   |   |   |   | ●    | ● |   |   | ●  | ●  | ●  | ●  |    |    |    |    |    |    |    |    |    |    |    |
| MDW-40C     |                        |   |   |   |   |      | ● |   |   | ●  | ●  | ●  | ●  | ●  |    |    |    |    |    |    |    |    |    |    |
| MDW-50C     |                        |   |   |   |   |      |   |   |   |    |    | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  |
| MDW-63C     |                        |   |   |   |   |      |   |   |   |    |    |    | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  |

- All products are provided with hex socket head cap screw.
- Recommended tolerance for shaft diameters is h6 and h7.
- 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 | 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) |
|-------------|-------------------------|-----------------------|--|---|--------------------------------------|--------------------------------|-------------------------------|------------------------------|-------------|
| MDW-19C     | 8                       | 0.7                   | 33000  | 8.7×10 <sup>-7</sup>                      | 200                                  | 0.12                           | 1.5                           | ±0.5                         | 18          |
| MDW-25C     | 12                      | 1                     | 25000  | 2.7×10 <sup>-6</sup>                      | 450                                  | 0.12                           | 1.5                           | ±0.5                         | 25          |
| MDW-32C     | 15                      | 2.5                   | 19000  | 9.6×10 <sup>-6</sup>                      | 1100                                 | 0.15                           | 1.5                           | ±0.5                         | 60          |
| MDW-40C     | 20                      | 3.5                   | 15000  | 1.9×10 <sup>-5</sup>                      | 1400                                 | 0.15                           | 1.5                           | ±0.5                         | 100         |
| MDW-50C     | 25                      | 9                     | 12000  | 8.1×10 <sup>-5</sup>                      | 2200                                 | 0.15                           | 1.5                           | ±0.5                         | 210         |
| MDW-63C     | 30                      | 12.5                  | 10000  | 2.1×10 <sup>-4</sup>                      | 3000                                 | 0.15                           | 1.5                           | ±0.5                         | 340         |

\*1: Correction of rated torque due to load fluctuation is not required.

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

### Related Products

The Double-Disk type Flexible Coupling [XHW-C] is compatible with the servomotor with 350% instantaneous max. torque is available.



### Part number specification

**MDW-25C-6-8**

1

2

Additional Keyway at Shaft Hole → P. xxxx    Cleanroom Wash & Packaging → P. xxxx    Change to Stainless Steel Screw → P. xxxx  
 Available / Add'l charge    Please combine with Stainless Steel Screw Alteration Service    Available / Add'l charge