


# Disc Couplings For Servo Motors

## Ultra High Torque Clamping (Single Disc)

**Points of comparison between similar products | Max. Rotational Speed: 3,500-6,000rpm**

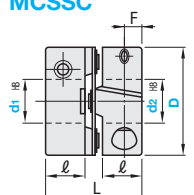


| Type             | Parts     | Material         | Surface Treatment          | Accessory                    |
|------------------|-----------|------------------|----------------------------|------------------------------|
| MCSSC<br>MCSSCWK | Main Body | Aluminum Diecast | Electroless Nickel Plating | Hex Socket Head<br>Cap Screw |
|                  | Disc      | Stainless Steel  | -                          |                              |
|                  | Screw     | SCM435           | Black Oxide                |                              |

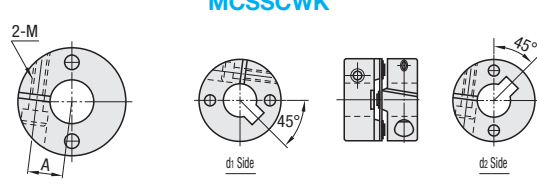
⚠ Tolerances for d1 and d2 are values before slit machining.

⚠ For keyway dimension, refer to the following.

Standard Bore  
**MCSSC**



Keywayed Bore (d1-d2 Both Sides)  
**MCSSCWK**



| Part Number                                | d1, d2 Selection (d1≤d2) |                             |   |  | L    | ℓ    | A    | F   | Clamp Screw |                         | Unit Price |         |
|--|--------------------------|-----------------------------|---|--|------|------|------|-----|-------------|-------------------------|------------|---------|
|  | Type                     | D                           | ⚠ Keywayed Bore Type is selectable for diameter 6 or larger |  |      |      |      |     | M           | Tightening Torque (N·m) | MCSSC      | MCSSCWK |
| Clamping<br><b>MCSSC</b><br><b>MCSSCWK</b> | 16                       | *4 5 6                      |   |  | 16.5 | 7    | 5    | 3   | M2.5        | 1                       |            |         |
|  | 20                       | *4 5 6 3.5 7 8              |   |  | 18.4 | 7.5  | 6.5  | 3.7 |             |                         |            |         |
|  | 25                       | *5 6 6.35 7 8 9.53 10       |   |  | 21.6 | 9    | 8.5  | 4   | M3          | 1.7                     |            |         |
|  | 32                       | 8 9.53 10 11 12 14          |   |  | 29   | 12.4 | 10   | 6   | M4          | 2.5                     |            |         |
|  | 40                       | 8 9.53 10 11 12 14 15 16 18 |   |  | 35   | 15.5 | 13.1 | 7.8 | M5          | 7                       |            |         |
|  | 50                       | 14 15 16 18 20 22 24        |   |  | 41   | 18   | 16.7 | 9   | M6          | 12                      |            |         |

⚠ When d1, d2 is \*4, \*5, use with load torque 50% or less than shown in the table to prevent slipping.

### Characteristic Values

| Part Number                    | Allowable Torque (N·m) | Angular Misalignment (°) | Lateral Misalignment (mm) | Static Torsional Spring Constant (N·m/rad) | Max. Rotational Speed (r/min) | Moment of Inertia (kg·m <sup>2</sup> ) | Allowable Axial Misalignment (mm) | Compensation Factor | Mass (g) |      |
|--------------------------------|------------------------|--------------------------|---------------------------|--|-------------------------------|--|-----------------------------------|---------------------|----------|------|
| <b>MCSSC</b><br><b>MCSSCWK</b> | 16                     | 0.9                      | 1                         | -  | 650                           | 6000                                   | 2.2x10 <sup>-7</sup>              | 5~10                | 8        |      |
|                                | 20                     | 1.3                      |                           |  | 950                           | 5500                                   | 7.0x10 <sup>-7</sup>              |                     | ±0.1     | 13   |
|                                | 25                     | 2.8                      |                           |  | 1300                          | 5000                                   | 2.2x10 <sup>-6</sup>              |                     | ±0.2     | 24   |
|                                | 32                     | 5                        |                           |  | 1400                          | 4000                                   | 5.6x10 <sup>-6</sup>              |                     |          | 53   |
|                                | 40                     | 9                        |                           |  | 3300                          | 3800                                   | 1.5x10 <sup>-5</sup>              |                     |          | 90   |
|                                | 50                     | 16                       |                           |  | 4000                          | 3500                                   | 3.9x10 <sup>-5</sup>              |                     |          | ±0.3 |

- ⚠ Single Disc Type cannot tolerate lateral misalignment.
- ⚠ The lateral, angular, and axial misalignment values shown are for each occurring individually. When multiple misalignments are occurring simultaneously, the allowable maximum value of each will be reduced to 1/2.
- ⚠ For the selection criteria and alignment procedures, see **P.1061, 1062**.

**Ordering Example**

Part Number - Shaft Bore Dia. d1 - Shaft Bore Dia. d2

**MCSSC40 - 10 - 15**

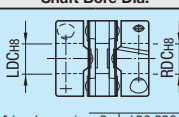

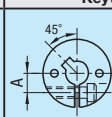
**MCSSCWK32 - 8 - 10**

**Alterations**

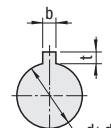
Part Number - Shaft Bore Dia. d1 (LDC) - Shaft Bore Dia. d2 (RDC)

**MCSSC40 - LDC9.5 - RDC10.5**

**MCSSCWK40 - 8 - 10 - KRH4**

| Alterations | Shaft Bore Dia.  | Keyway Width   | Keyway                           |              |   |           |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |
|-------------|--|--|----------------------------------|--------------|---|-----------|---|---|---------|-----|----|---|---------|-----|----|---|---------|-----|----|---|---------|-----|--|
| Spec.       | <br>LDC/RDC<br>0.1mm Increment<br>ORDERING CODE<br>LDC7.8<br>RDC9.3 | Keyway Width (b) is changed as the table below.<br>ORDERING CODE KLH4 KRH4<br><br><table border="1"> <thead> <tr> <th>Shaft Bore Dia. d1, d2</th> <th>KLH, KRH (b)</th> <th>t</th> <th>Tolerance</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>2</td> <td>±0.0125</td> <td>1.0</td> </tr> <tr> <td>10</td> <td>4</td> <td>±0.0150</td> <td>1.8</td> </tr> <tr> <td>12</td> <td>5</td> <td>±0.0150</td> <td>2.3</td> </tr> <tr> <td>22</td> <td>8</td> <td>±0.0180</td> <td>3.3</td> </tr> </tbody> </table> | Shaft Bore Dia. d1, d2           | KLH, KRH (b) | t | Tolerance | 8 | 2 | ±0.0125 | 1.0 | 10 | 4 | ±0.0150 | 1.8 | 12 | 5 | ±0.0150 | 2.3 | 22 | 8 | ±0.0180 | 3.3 | <br>45°<br>Shaft Dia. d1, d2<br>LK, RK<br>6-8 2<br>8-10 3<br>10-12 4<br>12-17 5<br>17-22 6<br>22-24 8<br>ORDERING CODE<br>LK3<br>RK4<br>⚠ Keyway machining is available for Ø6 ~ ..<br>⚠ For keyway dimensions, refer to the right table. |
|             |  |  | Shaft Bore Dia. d1, d2           | KLH, KRH (b) | t | Tolerance |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |
| 8           | 2  | ±0.0125  | 1.0                              |              |   |           |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |
| 10          | 4  | ±0.0150  | 1.8                              |              |   |           |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |
| 12          | 5  | ±0.0150  | 2.3                              |              |   |           |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |
| 22          | 8  | ±0.0180  | 3.3                              |              |   |           |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |
| Code        | LDC (Left Shaft) RDC (Right Shaft)   | KLH (Left Shaft) KRH (Right Shaft)   | LK (Left Shaft) RK (Right Shaft) |              |   |           |   |   |         |     |    |   |         |     |    |   |         |     |    |   |         |     |  |

**Keyway Dimension**



| Shaft Bore Dia. d1, d2 | b | t       | Key Nominal Dim. b x h |
|------------------------|---|---------|------------------------|
| 6~7.9                  | 2 | 1.0     | 2x2                    |
| 8~10                   | 3 | ±0.0125 | 3x3                    |
| 10.1~12                | 4 | 1.8     | 4x4                    |
| 12.1~17                | 5 | ±0.0150 | 5x5                    |
| 17.1~22                | 6 | 2.8     | 6x6                    |
| 22.1~24                | 8 | ±0.0180 | 8x7                    |