

Precision Rods (Tolerance h7, g6)

EN 1.1191 Equiv., EN 1.4305 Equiv., EN 1.4301 Equiv.

Mini Rods

| Type | D Tolerance | Material | Surface Treatment |
|-------|-------------|------------------|----------------------------|
| RGOC | h7 | EN 1.1191 Equiv. | - |
| ROGB | | | Black Oxide |
| RGOM | | | Electroless Nickel Plating |
| RGOF | g6 | EN 1.4305 Equiv. | - |
| RGOS | | | - |
| RGOCG | | | - |
| RGOFG | | | - |

C Dimension or More or Less

| D | D16 | C |
|-----|-----|-----|
| D 3 | D16 | 0.5 |
| D17 | D30 | 1.0 |

L Dimension Tolerance or More or Less

| D | 30 | ±0.2 |
|-----|------|------|
| 10 | 30 | ±0.2 |
| 31 | 120 | ±0.3 |
| 121 | 400 | ±0.5 |
| 401 | 1000 | ±0.8 |

RoHS 10

Precision Rods

| Part Number | D | L |
|-------------|----|---------------|
| Type | D | 1mm increment |
| 3 | 3 | 10-250 |
| 4 | 4 | |
| 5 | 5 | |
| 6 | 6 | |
| 7 | 7 | |
| 8 | 8 | 10-500 |
| 9 | 9 | |
| 10 | 10 | |
| 11 | 11 | |
| 12 | 12 | |
| 13 | 13 | 10-750 |
| 14 | 14 | |
| 15 | 15 | |
| 16 | 16 | |
| 17 | 17 | |
| 18 | 18 | 10-900 |
| 19 | 19 | |
| 20 | 20 | |
| 25 | 25 | |
| 30 | 30 | |

RGOC
ROGB
RGOM
RGOF
RGOS
RGOCG
RGOFG

Ordering Example: Part Number - L
RGOC15 - 700

| Part Number | Unit Price | | | | | |
|-------------|------------|--------------|---------|---------|---------|----------|
| | D | Min. L - 100 | 101-200 | 201-400 | 401-600 | 601-1000 |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

RGOC (h7, EN 1.1191 Equiv.)

| Part Number | Unit Price | | | | | |
|-------------|------------|--------------|---------|---------|---------|----------|
| | D | Min. L - 100 | 101-200 | 201-400 | 401-600 | 601-1000 |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

RGOF (h7, EN 1.4305 Equiv.)

| Part Number | Unit Price | | | | | |
|-------------|------------|--------------|---------|---------|---------|----------|
| | D | Min. L - 100 | 101-200 | 201-400 | 401-600 | 601-1000 |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

RGOCG (g6, EN 1.1191 Equiv.)

For materials EN 1.4301 Equiv. and EN 1.1191 Equiv. with tolerance g6 (black oxide and electroless nickel plating), refer to the Rotary Shaft Right Type on P. 823.

Alterations: Part Number - L - (MC, WMC, LKC)
 RGOC20 - 535 - MC8
 RGOM18 - 200 - LKC

| Alterations | One End Tapped | Both Ends Tapped | L Dimension Tolerance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|------|------|-------|---------|------------|------------|-------|---------------|--------|-----------------------|--------|---------------------------|--|---|-----------------------|---|---|------|------|-------|---------|------------|------------|-------|---------------|--------|-----------------------|--------|---------------------------|--|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | MC | WMC | LKC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spec. | Adds a tap on one end. Ordering Code MC8 6 ≤ D ≤ 30 When L ≤ Mx2, the tap goes through. | Adds taps on both ends. Ordering Code WMC12 6 ≤ D ≤ 30 When L ≤ Mx4, the tap goes through. | Changes L dimension tolerance within ±0.05 Ordering Code LKC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>D</th> <th>MC (Selection Range)</th> </tr> </thead> <tbody> <tr><td>6</td><td>3</td></tr> <tr><td>7, 8</td><td>3, 4</td></tr> <tr><td>9, 10</td><td>3, 4, 5</td></tr> <tr><td>11, 12, 13</td><td>3, 4, 5, 6</td></tr> <tr><td>14-18</td><td>3, 4, 5, 6, 8</td></tr> <tr><td>19, 20</td><td>3, 4, 5, 6, 8, 10, 12</td></tr> <tr><td>25, 30</td><td>3, 4, 5, 6, 8, 10, 12, 16</td></tr> </tbody> </table> | D | MC (Selection Range) | 6 | 3 | 7, 8 | 3, 4 | 9, 10 | 3, 4, 5 | 11, 12, 13 | 3, 4, 5, 6 | 14-18 | 3, 4, 5, 6, 8 | 19, 20 | 3, 4, 5, 6, 8, 10, 12 | 25, 30 | 3, 4, 5, 6, 8, 10, 12, 16 | <table border="1"> <thead> <tr> <th>D</th> <th>WMC (Selection Range)</th> </tr> </thead> <tbody> <tr><td>6</td><td>3</td></tr> <tr><td>7, 8</td><td>3, 4</td></tr> <tr><td>9, 10</td><td>3, 4, 5</td></tr> <tr><td>11, 12, 13</td><td>3, 4, 5, 6</td></tr> <tr><td>14-18</td><td>3, 4, 5, 6, 8</td></tr> <tr><td>19, 20</td><td>3, 4, 5, 6, 8, 10, 12</td></tr> <tr><td>25, 30</td><td>3, 4, 5, 6, 8, 10, 12, 16</td></tr> </tbody> </table> | D | WMC (Selection Range) | 6 | 3 | 7, 8 | 3, 4 | 9, 10 | 3, 4, 5 | 11, 12, 13 | 3, 4, 5, 6 | 14-18 | 3, 4, 5, 6, 8 | 19, 20 | 3, 4, 5, 6, 8, 10, 12 | 25, 30 | 3, 4, 5, 6, 8, 10, 12, 16 | |
| D | MC (Selection Range) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7, 8 | 3, 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9, 10 | 3, 4, 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11, 12, 13 | 3, 4, 5, 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14-18 | 3, 4, 5, 6, 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19, 20 | 3, 4, 5, 6, 8, 10, 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25, 30 | 3, 4, 5, 6, 8, 10, 12, 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | WMC (Selection Range) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7, 8 | 3, 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9, 10 | 3, 4, 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11, 12, 13 | 3, 4, 5, 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14-18 | 3, 4, 5, 6, 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19, 20 | 3, 4, 5, 6, 8, 10, 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25, 30 | 3, 4, 5, 6, 8, 10, 12, 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

When L ≤ Mx4, the pilot hole for tapping may go through.

| Type | D Tolerance | Material | Hardness | Surface Treatment |
|------|-------------|---|----------|----------------------------|
| MRS | 0 -0.005 | EN 1.3343 Equiv. | 58HRC~ | - |
| MRSB | | | | Black Oxide |
| MRSM | | EN 1.3505 Equiv. | - | Electroless Nickel Plating |
| MRSK | | EN 1.2379 Equiv. | 60HRC~ | - |
| MRSD | | EN 1.4125 Equiv. | 56HRC~ | - |
| MRSS | | EN 1.4301 Equiv. | - | - |
| MRSF | | P/M High-Speed Steel | 65-68HRC | - |
| MRSJ | | EN CW614N Equiv. (Brass with Low Cadmium) | - | - |
| MRSK | | - | - | - |
| MRSK | | - | - | - |

RoHS 10

Discoloration may occur on rod ends.

| Part Number | D | L | Unit Price | | | | | | | | | | | | | | | | | | | |
|-------------|-----|-----------|-----------------|-----|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|
| | | | 0.1mm Increment | MRS | MRSB | MRSM | MRSK | MRSJ | MRSD | MRSS | MRSF | MRSK | | | | | | | | | | |
| | 0.5 | 5.0-50.0 | | | | | | | | | | | | | | | | | | | | |
| | 0.6 | | | | | | | | | | | | | | | | | | | | | |
| | 0.7 | | | | | | | | | | | | | | | | | | | | | |
| | 0.8 | | | | | | | | | | | | | | | | | | | | | |
| | 0.9 | | | | | | | | | | | | | | | | | | | | | |
| | 1.0 | | | | | | | | | | | | | | | | | | | | | |
| | 1.1 | | | | | | | | | | | | | | | | | | | | | |
| | 1.2 | | 5.0-60.0 | | | | | | | | | | | | | | | | | | | |
| | 1.3 | | | | | | | | | | | | | | | | | | | | | |
| | 1.4 | | | | | | | | | | | | | | | | | | | | | |
| | 1.5 | | | | | | | | | | | | | | | | | | | | | |
| | 1.6 | | | | | | | | | | | | | | | | | | | | | |
| | 1.7 | 5.0-80.0 | | | | | | | | | | | | | | | | | | | | |
| | 1.8 | | | | | | | | | | | | | | | | | | | | | |
| | 1.9 | | | | | | | | | | | | | | | | | | | | | |
| | 2.0 | | | | | | | | | | | | | | | | | | | | | |
| | 2.1 | | | | | | | | | | | | | | | | | | | | | |
| | 2.2 | | 5.0-100.0 | | | | | | | | | | | | | | | | | | | |
| | 2.3 | | | | | | | | | | | | | | | | | | | | | |
| | 2.4 | | | | | | | | | | | | | | | | | | | | | |
| | 2.5 | | | | | | | | | | | | | | | | | | | | | |
| | 2.6 | | | | | | | | | | | | | | | | | | | | | |
| | 2.7 | 5.0-150.0 | | | | | | | | | | | | | | | | | | | | |
| | 2.8 | | | | | | | | | | | | | | | | | | | | | |
| | 2.9 | | | | | | | | | | | | | | | | | | | | | |
| | 3.0 | | | | | | | | | | | | | | | | | | | | | |
| | 3.1 | | | | | | | | | | | | | | | | | | | | | |
| | 3.2 | | | | | | | | | | | | | | | | | | | | | |
| | 3.3 | | | | | | | | | | | | | | | | | | | | | |
| | 3.4 | | | | | | | | | | | | | | | | | | | | | |
| | 3.5 | | | | | | | | | | | | | | | | | | | | | |
| | 3.6 | | | | | | | | | | | | | | | | | | | | | |
| | 3.7 | | | | | | | | | | | | | | | | | | | | | |
| | 3.8 | | | | | | | | | | | | | | | | | | | | | |
| | 3.9 | | | | | | | | | | | | | | | | | | | | | |
| | 4.0 | | | | | | | | | | | | | | | | | | | | | |
| | 4.1 | | | | | | | | | | | | | | | | | | | | | |
| | 4.2 | | | | | | | | | | | | | | | | | | | | | |
| | 4.3 | | | | | | | | | | | | | | | | | | | | | |
| | 4.4 | | | | | | | | | | | | | | | | | | | | | |
| | 4.5 | | | | | | | | | | | | | | | | | | | | | |
| | 4.6 | | | | | | | | | | | | | | | | | | | | | |
| | 4.7 | | | | | | | | | | | | | | | | | | | | | |
| | 4.8 | | | | | | | | | | | | | | | | | | | | | |
| | 4.9 | | | | | | | | | | | | | | | | | | | | | |
| | 5.0 | | | | | | | | | | | | | | | | | | | | | |

Ordering Example: Part Number - L
MRS1.2 - 60.0

Example:

Alterations: Part Number - L - (AC)
MRS1.2 - 60.0 - AC1.0

| Alteration | Code | Spec. |
|------------|------|--|
| | AC | Adds a 15° taper on the point. AC = 0.1mm Increment 0.5 ≤ AC ≤ 10 D - 2(AC tan 15°) ≥ 0.2 One end only is tapered. |