

# Pivot Pins

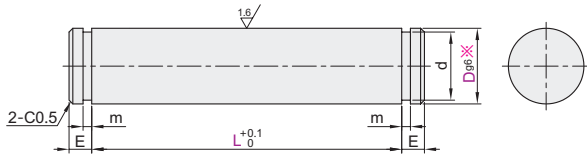
◀ with Retaining Ring Groove

◀ D-Cut

Straight Type

◻ with Retaining Ring Groove

| Code         |                | Material |         | Hardness                            | Surface Treatment                                | Accessory             |                 |
|--------------|----------------|----------|---------|-------------------------------------|--------------------------------------------------|-----------------------|-----------------|
| L Selectable | L Configurable | GB       | Equiv.  |                                     |                                                  | Kind                  | Material        |
| —            | MHC21          | 45       | S45C    | 40~45 HRC                           | Black Oxide                                      | Retaining Ring 2 Pcs. | Spring Steel    |
| MHC02        | MHC22          |          |         |                                     |                                                  |                       | Stainless Steel |
| —            | MHC24          |          |         |                                     | Electroless Nickel Plating                       |                       | Spring Steel    |
| —            | MHC25          | 0Cr18Ni9 | SUS304  | 40~45 HRC, Plating Hardness 850 HV~ | Hard Chrome Plating, Plating Thickness of 3~5 μm | —                     | Stainless Steel |
| —            | MHC31          |          |         | 40~45 HRC, Plating Hardness 850 HV~ | Hard Chrome Plating, Plating Thickness of 3~5 μm |                       | Stainless Steel |
| —            | MHC42          | 9Cr18    | SUS440C | 48~53 HRC, Plating Hardness 850 HV~ | Hard Chrome Plating, Plating Thickness of 3~5 μm | —                     | Stainless Steel |



※ Dg6 Tolerance is available for L dimensions only. Others are general tolerance.



Self-made



◻ L Selectable

| Part Number |                 | L                                   | m    | E          | d   | Attached Retaining Ring |            |
|-------------|-----------------|-------------------------------------|------|------------|-----|-------------------------|------------|
| Code        | D <sub>g6</sub> |                                     |      |            |     |                         |            |
| MHC02       | 3               | 0.002<br>-0.008                     | 0.5  | +0.05<br>0 | 2   | +0.06<br>0              | 2          |
|             | 4               | 10 12 14 15 16 18 20                |      |            | 3   |                         | 3          |
|             | 5               | -0.004<br>-0.012                    | 0.7  | +0.1<br>0  | 4   | +0.075<br>0             | 4          |
|             | 6               | 15 16 18 20 22 24 25 30             |      |            | 5   |                         | 5          |
|             | 8               | -0.005<br>-0.014                    | 0.9  | +0.14<br>0 | 3   | +0.09<br>0              | 7          |
|             | 10              | 15 16 18 20 22 24 25 30 35 40 45 50 |      |            | 9.6 |                         | 10         |
|             | 12              | -0.006<br>-0.017                    | 1.15 | +0.14<br>0 | 4   | 11.5                    | +0.11<br>0 |



| Code | Spec.                                  |       |
|------|----------------------------------------|-------|
| ED() | Retaining Ring Groove Position         |       |
|      | ED()                                   |       |
| ED() | Ordering Code ED3                      |       |
|      | ① 0.1 mm Inc.                          |       |
| ED() | D                                      | ED    |
|      | 2~4                                    | 1.5~3 |
| ED() | D                                      | ED    |
|      | 8                                      | 2.4~5 |
| ED() | D                                      | ED    |
|      | 10~18                                  | 2.7~5 |
| ED() | D                                      | ED    |
|      | 20~25                                  | 2.9~5 |
| ED() | ② Not Applicable to L Selectable Type. |       |

◻ L Configurable

| Part Number                               |     | 0.1 mm Inc. | m    | E          | d    | Attached Retaining Ring |
|-------------------------------------------|-----|-------------|------|------------|------|-------------------------|
| Code                                      | Dg6 | L           |      |            |      |                         |
| MHC21<br>MHC22<br>MHC25<br>MHC31<br>MHC42 | 2   | 5.0~40.0    | 0.5  | +0.05<br>0 | 1.5  | 1.5                     |
|                                           | 3   | 5.0~60.0    |      |            | 2    | 2                       |
|                                           | 4   |             |      |            | 3    | E Type 3                |
|                                           | 5   | 10.0~80.0   | 0.7  | +0.1<br>0  | 4    | 4                       |
|                                           | 6   | 10.0~110.0  |      |            | 5    | 5                       |
|                                           | 8   | 10.0~110.0  | 0.9  | 3          | 7    | 7                       |
|                                           | 10  | 15.0~120.0  |      |            | 9.6  | 10                      |
|                                           | 12  | 15.0~220.0  |      |            | 11.5 | 12                      |
|                                           | 13  |             |      | 12.4       | 13   |                         |
|                                           | 14  | 25.0~220.0  | 1.15 |            | 13.4 | 14                      |
|                                           | 15  |             |      |            | 14.3 | 15                      |
|                                           | 16  |             |      |            | 15.2 | C Type 16               |
|                                           | 17  |             |      | 16.2       | 17   |                         |
|                                           | 18  |             |      | 17         | 18   |                         |
|                                           | 20  |             | 1.35 |            | 19   | 20                      |
| 22                                        |     | 21          |      |            | 22   |                         |
| 25                                        |     | 23.9        |      |            | 25   |                         |



◻ L Selectable

| Part Number | D | L        |
|-------------|---|----------|
| MHC02       | 3 | 10 12 14 |
| MHC02       | 4 | 10 12 14 |

◻ L Configurable

| Part Number | D | L        |
|-------------|---|----------|
| MHC21       | 3 | 5.0~60.0 |
| MHC22       | 4 | 5.0~60.0 |

◻ Optional Processing

| Part Number | D | L        | Optional Processing Code |
|-------------|---|----------|--------------------------|
| MHC21       | 3 | 5.0~60.0 | ED1                      |
| MHC21       | 3 | 5.0~60.0 | ED1                      |

MHC02—D3—L12 MHC21—D3—L12 MHC21—D3—L12—ED1.5



| Discount price                  |
|---------------------------------|
| Per 1~19 20~                    |
| Price 100% Additional quotation |



| Delivery |
|----------|
| 6        |

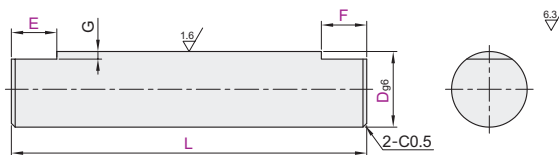


| Delivery |
|----------|
| 7        |

① No Surface Treatment ② Surface Treatment

◻ D-Cut

| Code  | Type  | Material |        | Hardness  | Surface Treatment |
|-------|-------|----------|--------|-----------|-------------------|
|       |       | GB       | Equiv. |           |                   |
| MHM02 | D-Cut | 45       | S45C   | 40~45 HRC | Black Oxide       |



Self-made



| Part Number | L   |            | 1 mm Inc. |        | G   |
|-------------|-----|------------|-----------|--------|-----|
| Code        | Dg6 |            | E         | F      |     |
| MHM02       | 4   | 10.0~60.0  | 2≤E≤20    | 2≤F≤20 | 0.5 |
|             | 5   | 10.0~80.0  | 2≤E≤20    | 2≤F≤20 | 0.5 |
|             | 6   | 10.0~110.0 | 2≤E≤30    | 2≤F≤30 | 0.5 |
|             | 8   | 10.0~110.0 | 2≤E≤30    | 2≤F≤30 | 0.5 |
|             | 10  | 15.0~110.0 | 2≤E≤30    | 2≤F≤30 | 0.5 |
|             | 12  | 15.0~220.0 | 2≤E≤30    | 2≤F≤30 | 1   |
|             | 13  | 15.0~220.0 | 2≤E≤30    | 2≤F≤30 | 1   |
|             | 14  | 25.0~220.0 | 2≤E≤30    | 2≤F≤30 | 1   |
|             | 15  | 25.0~220.0 | 5≤E≤30    | 5≤F≤30 | 1   |
|             | 16  | 25.0~220.0 | 5≤E≤30    | 5≤F≤30 | 1   |
|             | 20  | 30.0~220.0 | 5≤E≤30    | 5≤F≤30 | 2   |
|             | 25  | 30.0~220.0 | 5≤E≤30    | 5≤F≤30 | 2   |



| Part Number | D | L          | E      | F      |
|-------------|---|------------|--------|--------|
| MHM02       | 6 | 10.0~110.0 | 2≤E≤30 | 2≤F≤30 |
| MHM02       | 8 | 10.0~110.0 | 2≤E≤30 | 2≤F≤30 |

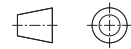
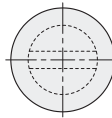
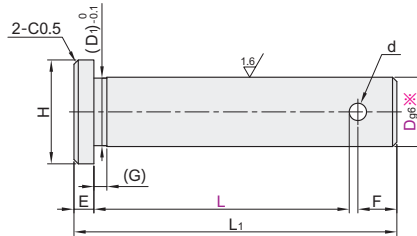


| Discount price                  |
|---------------------------------|
| Per 1~4 5~                      |
| Price 100% Additional quotation |



| Delivery |
|----------|
| 7        |

| Code  | Type           | Material |         | Hardness                           | Surface Treatment                              | Accessory        |                |
|-------|----------------|----------|---------|------------------------------------|------------------------------------------------|------------------|----------------|
|       |                | GB       | Equiv.  |                                    |                                                | Kind             | Material       |
| MIB01 | L Selectable   | 45       | S45C    | —                                  | Black Oxide                                    | Cotter Pin 1 pc. | SUS304 (BLK31) |
| MIB02 |                | 0Cr18Ni9 | SUS304  | 40~45HRC                           | —                                              |                  |                |
| MIB06 |                | —        | —       | —                                  | —                                              |                  |                |
| MIB11 | L Configurable | 45       | S45C    | 40~45HRC                           | Black Oxide                                    |                  |                |
| MIB12 |                | —        | —       | —                                  | Electroless Nickel Plating                     |                  |                |
| MIB14 |                | —        | —       | 40~45HRC, Plating Hardness: 850HV~ | Hard Chrome Plating Plating Thickness of 3~5µm |                  |                |
| MIB15 |                | 0Cr18Ni9 | SUS304  | —                                  | —                                              |                  |                |
| MIB21 |                | 9Cr18    | SUS440C | 48~53HRC                           | —                                              |                  |                |
| MIB31 |                |          |         |                                    |                                                |                  |                |



※ D<sub>g</sub> Tolerance is available for L dimensions only. Others are general tolerance.

## L Selectable

| Part Number             |                | L      |                                  |  |  | L <sub>1</sub> | F      | (D <sub>1</sub> ) | (G) | d   | E   | H   | Attached Cotter Pin |
|-------------------------|----------------|--------|----------------------------------|--|--|----------------|--------|-------------------|-----|-----|-----|-----|---------------------|
| Code                    | D <sub>g</sub> |        |                                  |  |  |                |        |                   |     |     |     |     |                     |
| MIB01<br>MIB02<br>MIB06 | 3              | -0.002 |                                  |  |  |                | L+4.4  | 2.9               |     | 0.8 |     | 5.5 | 0.8-L8              |
|                         | 4              | -0.008 | 10 12 14 15 16 18 20             |  |  |                | L+4.5  | 3.9               |     | 1   | 1.5 | 6.5 | 1-L10               |
|                         | 5              | -0.004 |                                  |  |  |                | L+5.6  | 4.9               |     | 1.2 |     | 8   | 1.2-L10             |
|                         | 6              | -0.012 | 12 15 16 18 20 22 24 25 30       |  |  |                | L+5.8  | 5.8               | 1.5 | 1.6 |     | 9   | 1.6-L10             |
|                         | 8              | -0.005 |                                  |  |  |                | L+7    | 7.8               |     | 2   |     | 12  | 2-L12               |
|                         | 10             | -0.014 | 16 18 20 22 24 25 30 35 40 45 50 |  |  |                | L+8.25 | 9.8               |     | 2.5 | 2   | 14  | 2.5-L15             |
|                         | 12             | -0.006 | 20 22 24 25 30 35 40 45 50       |  |  |                | L+10.6 | 11.8              |     | 3.2 | 3   | 17  | 3.2-L20             |

## L Configurable

| Part Number                                        |                | L           |            | L <sub>1</sub> | F   | (D <sub>1</sub> ) | (G) | d   | E   | H   | Attached Cotter Pin |
|----------------------------------------------------|----------------|-------------|------------|----------------|-----|-------------------|-----|-----|-----|-----|---------------------|
| Code                                               | D <sub>g</sub> | 0.1 mm Inc. |            |                |     |                   |     |     |     |     |                     |
| MIB11<br>MIB12<br>MIB14<br>MIB15<br>MIB21<br>MIB31 | 3              | -0.002      | 5.0~60.0   | L+4.4          | 2.5 | 2.9               |     | 0.8 |     | 5.5 | 0.8-L8              |
|                                                    | 4              | -0.008      |            | L+4.5          |     | 3.9               |     | 1   | 1.5 | 6.5 | 1-L10               |
|                                                    | 5              | -0.004      |            | L+5.6          |     | 4.9               |     | 1.2 |     | 8   | 1.2-L10             |
|                                                    | 6              | -0.012      | 10.0~110.0 | L+5.8          | 3.5 | 5.8               |     | 1.6 |     | 9   | 1.6-L10             |
|                                                    | 8              | -0.005      |            | L+7            | 4   | 7.8               |     | 2   |     | 12  | 2-L12               |
|                                                    | 10             | -0.014      |            | L+8.25         | 5   | 9.8               |     | 2.5 | 2   | 14  | 2.5-L15             |
|                                                    | 12             | -0.006      | 15.0~220.0 | L+10.6         | 6   | 11.8              |     | 3.2 |     | 17  | 3.2-L20             |
|                                                    | 13             | -0.017      |            |                |     | 12.8              | 1.5 |     |     | 18  |                     |
|                                                    | 14             | -0.006      |            |                |     | 13.8              |     |     |     | 19  | 4-L20               |
|                                                    | 15             | -0.017      |            |                |     | 14.8              |     |     | 3   | 20  |                     |
|                                                    | 16             | -0.007      | 20.0~220.0 | L+12           | 7   | 15.8              |     | 4   |     | 21  |                     |
|                                                    | 17             | -0.020      |            |                |     | 16.8              |     |     |     | 22  | 4-L25               |
|                                                    | 18             | -0.007      |            |                |     | 17.8              |     |     |     | 23  |                     |
|                                                    | 20             | -0.020      |            | L+14.5         | 8   | 19.8              |     |     |     | 26  |                     |
|                                                    | 22             | -0.020      |            |                |     | 21.8              |     | 5   | 4   | 27  | 5-L35               |
|                                                    | 25             | -0.020      |            | L+15.5         | 9   | 24.8              |     |     |     | 30  |                     |



| Code   | Spec.                                                                                            |
|--------|--------------------------------------------------------------------------------------------------|
| EE ( ) | <b>Change Shoulder Thickness</b><br><br>Ordering Code: EE3<br>□ 0.5 mm Inc.<br>□ EE=E~5          |
| HA     | <b>Shoulder Diameter Cut</b><br><br>Ordering Code: HA<br>□ D=3~10, HA=H/2-1<br>D=12~25, HA=H/2-2 |

| Code   | Spec.                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|---|-----|---|-------|---|-----------|-----|---------|----|---------|----|-------|-------|---------|-------|---------|
| EC ( ) | <b>Cotter Pin Hole Position</b><br><br>Ordering Code: EC1.5<br><table border="1"> <tr> <th>D</th><th>EC</th></tr> <tr> <td>3</td><td>1.5</td></tr> <tr> <td>4</td><td>1.5 2</td></tr> <tr> <td>5</td><td>1.5 2 2.5</td></tr> <tr> <td>6-8</td><td>2 2.5 3</td></tr> <tr> <td>10</td><td>2.5 3 4</td></tr> <tr> <td>12</td><td>3 4 5</td></tr> <tr> <td>13~18</td><td>3 4 5 6</td></tr> <tr> <td>20~25</td><td>4 5 6 7</td></tr> </table> | D | EC | 3 | 1.5 | 4 | 1.5 2 | 5 | 1.5 2 2.5 | 6-8 | 2 2.5 3 | 10 | 2.5 3 4 | 12 | 3 4 5 | 13~18 | 3 4 5 6 | 20~25 | 4 5 6 7 |
| D      | EC                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 3      | 1.5                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 4      | 1.5 2                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 5      | 1.5 2 2.5                                                                                                                                                                                                                                                                                                                                                                                                                                |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 6-8    | 2 2.5 3                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 10     | 2.5 3 4                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 12     | 3 4 5                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 13~18  | 3 4 5 6                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |
| 20~25  | 4 5 6 7                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |    |   |     |   |       |   |           |     |         |    |         |    |       |       |         |       |         |



| L Selectable        |  |
|---------------------|--|
| Part Number         |  |
| Code D L            |  |
| MIB01 3 10 12 14 15 |  |
| MIB02 4 16 18 20    |  |
| MIB06 5             |  |
| MIB02—D3—L14        |  |

| L Configurable    |  |
|-------------------|--|
| Part Number       |  |
| Code D L          |  |
| MIB11 3 5.0~60.0  |  |
| MIB12 4 10.0~60.0 |  |
| MIB12 5           |  |
| MIB12—D3—L30.1    |  |

| Optional Processing               |  |
|-----------------------------------|--|
| Part Number                       |  |
| Code D L Optional Processing Code |  |
| MIB11 3 5.0~60.0 EE EC HA         |  |
| MIB12 4 10.0~60.0                 |  |
| MIB12 5                           |  |
| MIB12—D3—L30.1—EC1.5              |  |



| Discount price                  |
|---------------------------------|
| Per 1~19 20~                    |
| Price 100% Additional quotation |



| Delivery |
|----------|
| 4        |



| Delivery |
|----------|
| 7        |

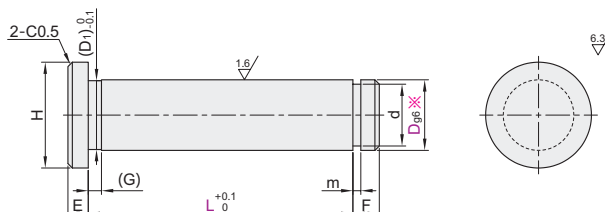
① MIB01/06/11/21

① The Remaining

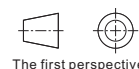
# Pivot Pins with Shoulder

## with Retaining Ring Groove

| Code  | Type                       | Material |         | Hardness                            | Surface Treatment          | Accessory                                       |                 |
|-------|----------------------------|----------|---------|-------------------------------------|----------------------------|-------------------------------------------------|-----------------|
|       |                            | GB       | Equiv.  |                                     |                            | Kind                                            | Material        |
| MIC01 | with Retaining Ring Groove | 45       | S45C    | 40~45HRC                            | Black Oxide                | Retaining Ring 1 Pc.                            | Spring Steel    |
| MIC02 |                            |          |         |                                     |                            |                                                 | Stainless Steel |
| MIC06 |                            |          |         |                                     |                            |                                                 | Spring Steel    |
| MIC11 | Configurable               | 45       | S45C    | 40~45HRC                            | Electroless Nickel Plating | Hard Chrome Plating, Plating Thickness of 3~5µm | Stainless Steel |
| MIC12 |                            |          |         |                                     |                            |                                                 | Spring Steel    |
| MIC14 |                            |          |         |                                     |                            |                                                 | Stainless Steel |
| MIC15 |                            | 0Cr18Ni9 | SUS304  | 40~45 HRC, Plating Hardness: 850 HV | —                          |                                                 | Stainless Steel |
| MIC21 |                            |          |         |                                     |                            |                                                 | Stainless Steel |
| MIC31 |                            | 9Cr18    | SUS440C | 48~53HRC                            | —                          |                                                 | Stainless Steel |



※ Dg6 Tolerance is available for L dimensions only. Others are general tolerance.



### L Selectable

| Part Number |     | L      |        | m    | F       | (D1) | (G) | d    | E             | H   | Attached Retaining Ring |     |
|-------------|-----|--------|--------|------|---------|------|-----|------|---------------|-----|-------------------------|-----|
| Code        | Dg6 |        |        |      |         |      |     |      |               |     | Shape                   | No. |
| MIC01       | 3   | -0.002 | -0.008 | 0.5  | +0.05/0 | 2.9  |     | 2    | +0.06/0       | 5.5 | E Type                  | 2   |
|             | 4   | -0.004 | -0.012 | 0.7  | +0.1/0  | 3.9  |     | 3    | +0.075/0      | 6.5 |                         | 3   |
|             | 5   | -0.005 | -0.014 | 0.9  |         | 4.9  |     | 4    | +0.09/0       | 8   |                         | 4   |
|             | 6   | -0.006 | -0.017 | 1.15 | +0.14/0 | 5.8  | 1.5 | 5    | 0/-0.09/-0.11 | 9   | C Type                  | 5   |
| MIC02       | 8   | -0.005 | -0.014 | 0.7  |         | 7.8  |     | 7    |               | 12  |                         | 7   |
| MIC06       | 10  | -0.006 | -0.017 | 1.15 |         | 9.8  |     | 9.6  |               | 14  |                         | 10  |
|             | 12  | -0.006 | -0.017 |      |         | 11.8 |     | 11.5 |               | 17  |                         | 12  |

### L Configurable

| Part Number |     | L           |        | m    | F       | (D1) | (G) | d    | E             | H   | Attached Retaining Ring |     |
|-------------|-----|-------------|--------|------|---------|------|-----|------|---------------|-----|-------------------------|-----|
| Code        | Dg6 | 0.1 mm Inc. |        |      |         |      |     |      |               |     | Shape                   | No. |
| MIC11       | 2   | -0.002      | -0.008 | 0.5  | +0.05/0 | 1.9  |     | 1.5  |               | 4.5 | E Type                  | 1.5 |
|             | 3   | -0.004      | -0.012 | 0.7  | +0.1/0  | 2.9  |     | 2    | +0.06/0       | 5.5 |                         | 2   |
|             | 4   | -0.005      | -0.014 | 0.9  |         | 3.9  |     | 3    |               | 6.5 |                         | 3   |
|             | 5   | -0.006      | -0.017 | 1.15 |         | 4.9  |     | 4    | +0.075/0      | 8   |                         | 4   |
|             | 6   | -0.006      | -0.017 | 1.15 |         | 5.8  |     | 5    |               | 9   |                         | 5   |
|             | 8   | -0.005      | -0.014 | 0.9  |         | 7.8  |     | 7    | +0.09/0       | 12  |                         | 7   |
| MIC12       | 10  | -0.006      | -0.017 | 1.15 |         | 9.8  |     | 9.6  | 0/-0.09/-0.11 | 14  | C Type                  | 10  |
| MIC14       | 12  | -0.006      | -0.017 | 1.15 |         | 11.8 |     | 11.5 |               | 17  |                         | 12  |
| MIC15       | 13  | -0.006      | -0.017 | 1.15 |         | 12.8 | 1.5 | 12.4 |               | 18  |                         | 13  |
| MIC21       | 14  | -0.006      | -0.017 | 1.15 |         | 13.8 |     | 13.4 |               | 19  |                         | 14  |
| MIC31       | 15  | -0.006      | -0.017 | 1.15 |         | 14.8 |     | 14.3 | 0/-0.11       | 20  |                         | 15  |
|             | 16  | -0.007      | -0.020 | 1.35 |         | 15.8 |     | 15.2 |               | 21  |                         | 16  |
|             | 17  | -0.007      | -0.020 | 1.35 |         | 16.8 |     | 16.2 |               | 22  |                         | 17  |
|             | 18  | -0.007      | -0.020 | 1.35 |         | 17.8 |     | 17   |               | 23  |                         | 18  |
|             | 20  | -0.007      | -0.020 | 1.35 |         | 19.8 |     | 19   |               | 26  |                         | 20  |
|             | 22  | -0.007      | -0.020 | 1.35 |         | 21.8 |     | 21   | 0/-0.21       | 27  |                         | 22  |
|             | 25  | -0.007      | -0.020 | 1.35 |         | 24.8 |     | 23.9 |               | 31  |                         | 25  |



| Code | Spec.                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------|
| EE() | <b>Change Shoulder Thickness</b><br><br>Ordering Code <b>EE3</b><br>① 0.5 mm Inc.<br>② EE=E~5          |
| HA   | <b>Shoulder Diameter Cut</b><br><br>Ordering Code <b>HA</b><br>① D=2~10, HA=H/2-1<br>D=12~25, HA=H/2-2 |

| Code  | Spec.                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|-----|-------|---|-------|---|-------|---|-------|-------|-------|-------|-------|
| ED()  | <b>Retaining Ring Groove Position</b><br><br>Ordering Code <b>ED3</b><br>① 0.1 mm Inc. <table border="1"> <tr> <th>D</th><th>ED</th></tr> <tr> <td>2~4</td><td>1.5~3</td></tr> <tr> <td>5</td><td>1.7~3</td></tr> <tr> <td>6</td><td>1.9~4</td></tr> <tr> <td>8</td><td>2.4~5</td></tr> <tr> <td>10~18</td><td>2.7~5</td></tr> <tr> <td>20~25</td><td>2.9~5</td></tr> </table> | D | ED | 2~4 | 1.5~3 | 5 | 1.7~3 | 6 | 1.9~4 | 8 | 2.4~5 | 10~18 | 2.7~5 | 20~25 | 2.9~5 |
| D     | ED                                                                                                                                                                                                                                                                                                                                                                             |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
| 2~4   | 1.5~3                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
| 5     | 1.7~3                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
| 6     | 1.9~4                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
| 8     | 2.4~5                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
| 10~18 | 2.7~5                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |
| 20~25 | 2.9~5                                                                                                                                                                                                                                                                                                                                                                          |   |    |     |       |   |       |   |       |   |       |       |       |       |       |



### L Selectable

| Part Number | D  | L           |
|-------------|----|-------------|
| MIC01       | 3  | 10 12 14 15 |
| MIC02       | 4  | 16 18 20    |
| MIC02       | D3 | L14         |

### L Configurable

| Part Number | D  | L         |
|-------------|----|-----------|
| MIC11       | 3  | 5.0~95.0  |
| MIC12       | 4  | 5.0~95.0  |
| MIC12       | 5  | 10.0~65.0 |
| MIC12       | D3 | L30       |

### Optional Processing

| Part Number | D  | L         | Optional Processing Code |
|-------------|----|-----------|--------------------------|
| MIC11       | 3  | 5.0~95.0  | EE ED HA                 |
| MIC12       | 4  | 5.0~95.0  |                          |
| MIC12       | 5  | 10.0~65.0 |                          |
| MIC12       | D3 | L30       | ED1.5                    |



| Discount price                  |
|---------------------------------|
| Per 1~19 20~                    |
| Price 100% Additional quotation |



① MIC01/06/11/21

① MIC02/12/14/15/31

# Lock Nut with Hex Socket Head Lock Nut with Extra Low Hex Socket Head

# Pivot Pins with Shoulder

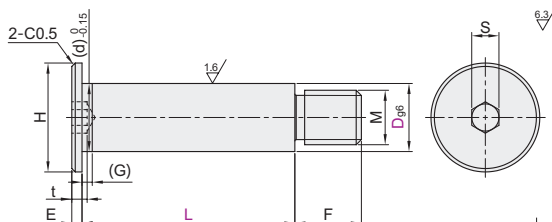
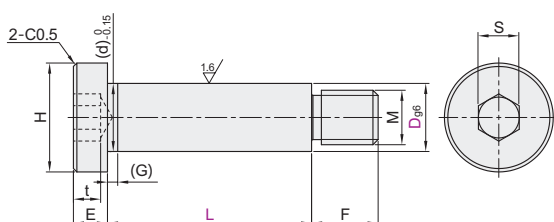
| Code                          |                                         | Material |         | Hardness                         | Surface Treatment                               | Accessory(1 Pc.)       |
|-------------------------------|-----------------------------------------|----------|---------|----------------------------------|-------------------------------------------------|------------------------|
| Lock Nut with Hex Socket Head | Lock Nut with Extra Low Hex Socket Head | GB       | Equiv.  |                                  |                                                 |                        |
| MIJ01                         | MIK01                                   |          |         | —                                | Black Oxide                                     | U Nut(Zinc-plated)     |
| MIJ02                         | MIK02                                   |          |         | 40~45HRC                         |                                                 |                        |
| MIJ03                         |                                         | 45       | S45C    | —                                | Electroless Nickel Plating                      | U Nut(Stainless Steel) |
| MIJ04                         | —                                       |          |         | 40~45HRC                         |                                                 |                        |
| MIJ05                         |                                         |          |         | 40~45HRC, Plating Hardness 850HV | Hard Chrome Plating, Plating Thickness of 3~5µm | U Nut(Zinc-plated)     |
| MIJ11                         | MIK11                                   | 0Cr18Ni9 | SUS304  | —                                |                                                 |                        |
| —                             | MIK21                                   | 9Cr18    | SUS440C | 48~53HRC                         |                                                 | U Nut(Stainless Steel) |



Cantilever Shafts  
Pivot Pins

Lock Nut with Hex Socket Head  
MIJ01/02/03/04/05/11

Lock Nut with Extra Low Hex Socket Head  
MIK01/02/11/21



① When D=4, M3 accessories are standard nuts.

① Diameter (d<sub>0.15</sub>) is the reference size.

The first perspective

Lock Nut with Hex Socket Head

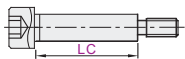
| Part Number                                        |     | L           |    | H | E | F  | S   | t | (d)  | (G) | M   | Included Nuts |
|----------------------------------------------------|-----|-------------|----|---|---|----|-----|---|------|-----|-----|---------------|
| Code                                               | Dg6 | 0.1 mm Inc. |    |   |   |    |     |   |      |     |     |               |
| MIJ01<br>MIJ02<br>MIJ03<br>MIJ04<br>MIJ05<br>MIJ11 | 4   | 10.0~55.0   | 7  |   |   | 6  | 2.5 |   | 3.9  |     | M3  | M3×0.5        |
|                                                    | 5   | 10.0~65.0   | 9  |   |   |    |     | 2 | 4.9  |     | M4  | M4×0.7        |
|                                                    | 6   | 10.0~110.0  | 10 |   |   | 9  | 3   |   | 5.8  |     | M5  | M5×0.8        |
|                                                    | 8   | 10.0~110.0  | 13 |   |   |    | 5   | 3 | 7.8  |     | M6  | M6×1.0        |
|                                                    | 10  |             | 16 |   |   | 12 |     |   | 9.8  |     | M8  | M8×1.25       |
|                                                    | 12  | 10.0~220.0  | 18 |   |   | 16 | 6   | 4 | 11.8 |     | M10 | M10×1.5       |
|                                                    | 13  |             |    |   |   |    |     |   | 12.8 |     |     |               |
|                                                    | 14  |             |    |   | 5 |    |     |   | 13.8 | 1.5 |     |               |
|                                                    | 15  |             |    |   |   | 18 |     |   | 14.8 |     |     |               |
|                                                    | 16  |             |    |   |   |    | 8   | 5 | 15.8 |     | M12 | M12×1.75      |
|                                                    | 17  | 20.0~220.0  |    |   |   |    |     |   | 16.8 |     |     |               |
|                                                    | 18  |             |    |   |   |    |     |   | 17.8 |     |     |               |
|                                                    | 20  |             |    |   |   | 24 | 10  | 6 | 19.8 |     |     |               |
|                                                    | 22  |             |    |   |   |    |     |   | 21.8 |     | M16 | M16×2.0       |
|                                                    | 25  |             | 30 |   |   |    | 12  | 8 | 24.8 |     |     |               |

Lock Nut with Extra Low Hex Socket Head

| Part Number                      |     | L           |    | H | E   | F  | S   | t | (d)  | (G) | M   |
|----------------------------------|-----|-------------|----|---|-----|----|-----|---|------|-----|-----|
| Code                             | Dg6 | 0.1 mm Inc. |    |   |     |    |     |   |      |     |     |
| MIK01<br>MIK02<br>MIK11<br>MIK21 | 4   | 10.0~55.0   | 7  |   |     | 6  | 2   |   | 3.9  |     | M3  |
|                                  | 5   | 10.0~65.0   | 9  |   |     |    | 2.5 | 2 | 4.9  |     | M4  |
|                                  | 6   | 10.0~110.0  | 10 |   | 1.5 | 9  | 3   |   | 5.8  |     | M5  |
|                                  | 8   | 10.0~110.0  | 13 |   |     |    |     |   | 7.8  |     | M6  |
|                                  | 10  | 15.0~110.0  | 16 |   |     | 12 |     |   | 9.8  |     | M8  |
|                                  | 12  | 15.0~220.0  | 18 |   |     | 16 | 4   |   | 11.8 |     | M10 |
|                                  | 13  |             |    |   |     |    |     |   | 12.8 |     |     |
|                                  | 14  | 25.0~220.0  |    |   |     |    |     | 3 | 13.8 |     |     |
|                                  | 15  |             | 24 |   | 2.5 | 18 | 5   |   | 14.8 |     | M12 |
|                                  | 16  |             |    |   |     |    |     |   | 15.8 |     |     |
|                                  | 20  | 30.0~220.0  | 27 |   |     | 24 | 6   | 4 | 19.8 |     | M16 |
|                                  | 25  |             | 30 |   |     |    | 8   | 5 | 24.8 |     |     |



Optional Processing

| Code | Spec.                                                                               |                                                               |
|------|-------------------------------------------------------------------------------------|---------------------------------------------------------------|
| LC   | L Dimension Tolerance                                                               |                                                               |
|      |  | Ordering Code YC<br>① Changes L dimension tolerance to ±0.04. |
| HA   | Shoulder Diameter Cut                                                               |                                                               |
|      |  | Ordering Code HA<br>① D=4~10, HA=H/2-1<br>D=12~25, HA=H/2-2   |

| Code  | Spec.                                                                               |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
|-------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|---|---|---|-----|---|-------|----|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|----|-------|-------|--------|----|---------|----|
| MC()  | Change Thread Diameter                                                              | Ordering Code                                                                                                                                                                | MC3 |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
|       |  | <table><tr><th>D</th><th>MC</th></tr><tr><td>5</td><td>3</td></tr><tr><td>6</td><td>3 4</td></tr><tr><td>8</td><td>3 4 5</td></tr><tr><td>10</td><td>4 5 6</td></tr></table> | D   | MC | 5 | 3 | 6 | 3 4 | 8 | 3 4 5 | 10 | 4 5 6 | <table><tr><th>D</th><th>MC</th></tr><tr><td>12</td><td>5 6 8</td></tr><tr><td>13~16</td><td>6 8 10</td></tr><tr><td>20</td><td>8 10 12</td></tr><tr><td>25</td><td>10 12</td></tr></table> | D | MC | 12 | 5 6 8 | 13~16 | 6 8 10 | 20 | 8 10 12 | 25 |
| D     | MC                                                                                  |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 5     | 3                                                                                   |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 6     | 3 4                                                                                 |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 8     | 3 4 5                                                                               |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 10    | 4 5 6                                                                               |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| D     | MC                                                                                  |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 12    | 5 6 8                                                                               |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 13~16 | 6 8 10                                                                              |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 20    | 8 10 12                                                                             |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| 25    | 10 12                                                                               |                                                                                                                                                                              |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
| FC()  | Thread Part Length                                                                  | Ordering Code                                                                                                                                                                | FC4 |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |
|       |  | ① 1 mm Inc.                                                                                                                                                                  |     |    |   |   |   |     |   |       |    |       |                                                                                                                                                                                             |   |    |    |       |       |        |    |         |    |

Lock Nut with Hex Socket Head

| Part Number  | Code | D         | L | H |
|--------------|------|-----------|---|---|
| MIJ01        | 4    | 10.0~55.0 | 7 |   |
| MIJ02        | 5    | 10.0~65.0 | 9 |   |
| MIJ02—D5—L14 |      |           |   |   |

Optional Processing

| Part Number      | Code | D         | L | H | Optional Processing Code |
|------------------|------|-----------|---|---|--------------------------|
| MIJ01            | 4    | 10.0~55.0 | 7 |   | LC HA                    |
| MIJ02            | 5    | 10.0~65.0 | 9 |   | FC() MC()                |
| MIJ02—D5—L14—MC3 |      |           |   |   |                          |



Please order as shown



| Discount price                  | Delivery |
|---------------------------------|----------|
| Per 1~4 5~                      | 4        |
| Price 100% Additional quotation |          |



① MIJ01/03/11  
① MIK01/11



① MIJ02/04/05  
① MIK02



① MIK21

# Pivot Pins with Shoulder

- ▶ Tapped
- ▶ Tapped, Hex Socket Head

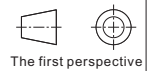
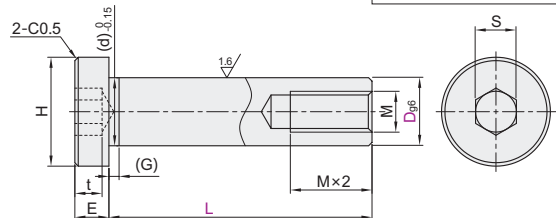
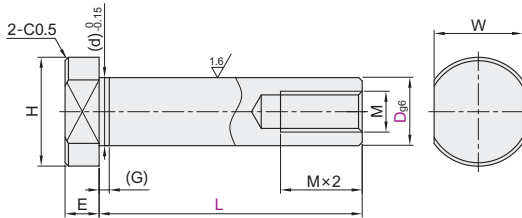
| Code  | Type                    | Material |         | Hardness                           | Surface Treatment                               |
|-------|-------------------------|----------|---------|------------------------------------|-------------------------------------------------|
|       |                         | GB       | Equiv.  |                                    |                                                 |
| MIM05 | Tapped                  | 45       | S45C    | 40~45HRC, Plating Hardness: 850HV- | Hard Chrome Plating, Plating Thickness of 3~5μm |
| MIM11 |                         | 0Cr18Ni9 | SUS304  | —                                  |                                                 |
| MIP21 | Tapped, Hex Socket Head | 9Cr18    | SUS440C | 48~53HRC                           | —                                               |



Self-made

Tapped  
MIM05  
MIM11

Tapped, Hex Socket Head  
MIP21



The first perspective

① Diameter ( $d \begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ ) is the reference size.

## ● Tapped

| Code           | Part Number |                  | L<br>0.1 mm Inc. | H  | W  | (d)  | (G) | E | M   |
|----------------|-------------|------------------|------------------|----|----|------|-----|---|-----|
|                | D           | Dg6              |                  |    |    |      |     |   |     |
| MIM05<br>MIM11 | 6           | -0.004<br>-0.012 | 15.0~110.0       | 10 | 8  | 5.8  |     |   | M3  |
|                | 8           | -0.005<br>-0.014 | 20.0~110.0       | 13 | 10 | 7.8  |     |   | M5  |
|                | 10          |                  | 20.0~110.0       | 16 | 13 | 9.8  |     |   | M6  |
|                | 12          |                  | 20.0~220.0       | 18 | 14 | 11.8 |     |   |     |
|                | 13          |                  |                  |    |    | 12.8 |     |   |     |
|                | 14          |                  | 25.0~220.0       |    |    | 13.8 |     |   | M8  |
|                | 15          | -0.006<br>-0.017 |                  |    |    | 14.8 | 1.5 | 5 |     |
|                | 16          |                  |                  | 24 | 21 | 15.8 |     |   | M10 |
|                | 17          |                  | 30.0~220.0       |    |    | 16.8 |     |   |     |
|                | 18          |                  |                  |    |    | 17.8 |     |   | M12 |
|                | 20          |                  |                  |    |    | 19.8 |     |   |     |
|                | 22          | -0.007<br>-0.020 | 35.0~220.0       | 27 | 23 | 21.8 |     |   | M16 |
|                | 25          |                  |                  | 30 | 27 | 24.8 |     |   |     |

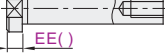
## ● Tapped, Hex Socket Head

| Code  | Part Number |                  | L<br>0.1 mm Inc. | H  | E | S  | t | (d)  | (G) | M   |
|-------|-------------|------------------|------------------|----|---|----|---|------|-----|-----|
|       | D           | Dg6              |                  |    |   |    |   |      |     |     |
| MIP21 | 6           | -0.004<br>-0.012 | 15.0~110.0       | 10 |   | 3  | 2 | 5.8  |     | M3  |
|       | 8           | -0.005<br>-0.014 | 20.0~110.0       | 13 |   | 5  | 3 | 7.8  |     | M5  |
|       | 10          |                  | 25.0~110.0       | 16 |   |    |   | 9.8  |     | M6  |
|       | 12          |                  | 25.0~220.0       | 18 |   | 6  | 4 | 11.8 |     |     |
|       | 13          |                  |                  |    |   |    |   | 12.8 |     |     |
|       | 14          |                  | 30.0~220.0       |    |   |    |   | 13.8 |     | M8  |
|       | 15          | -0.006<br>-0.017 |                  |    | 5 |    |   | 14.8 | 1.5 |     |
|       | 16          |                  |                  | 24 |   | 8  | 5 | 15.8 |     | M10 |
|       | 17          |                  | 35.0~220.0       |    |   |    |   | 16.8 |     |     |
|       | 18          |                  |                  |    |   |    |   | 17.8 |     | M12 |
|       | 20          |                  |                  |    |   |    |   | 19.8 |     |     |
|       | 22          | -0.007<br>-0.020 | 40.0~220.0       | 27 |   | 10 | 6 | 21.8 |     | M16 |
|       | 25          |                  | 55.0~220.0       | 30 |   | 12 | 8 | 24.8 |     |     |



Optional Processing

| Code | Spec.                            |                                                 |
|------|----------------------------------|-------------------------------------------------|
| LC   | <b>L Dimension Tolerance</b><br> | Ordering Code <b>LC</b>                         |
|      |                                  | ① Changes L dimension tolerance to $\pm 0.04$ . |
| HA   | <b>Shoulder Diameter Cut</b><br> | Ordering Code <b>HA</b>                         |
|      |                                  | ① D=6~8, HA=H/2-1<br>D=10~25, HA=H/2-2          |

| Code   | Spec.                                                                                                                             |                                                                                                                                                                                                                                                                                                        |       |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
|--------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|---|----|---|-----|-------|-----|---|-----|-------|------|-------|-----|----|-------|-------|-----|--|--|
| MC ( ) | <b>Change Thread Diameter</b><br><br>MC ( )    | Ordering Code                                                                                                                                                                                                                                                                                          | MC2.6 |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
|        |                                                                                                                                   | <table><tr><th>D</th><th>MC</th><th>D</th><th>MC</th></tr><tr><td>6</td><td>2.6</td><td>16~18</td><td>6 8</td></tr><tr><td>8</td><td>3 4</td><td>20~22</td><td>8 10</td></tr><tr><td>10~12</td><td>4 5</td><td>25</td><td>10 12</td></tr><tr><td>13~15</td><td>5 6</td><td></td><td></td></tr></table> | D     | MC | D | MC | 6 | 2.6 | 16~18 | 6 8 | 8 | 3 4 | 20~22 | 8 10 | 10~12 | 4 5 | 25 | 10 12 | 13~15 | 5 6 |  |  |
| D      | MC                                                                                                                                | D                                                                                                                                                                                                                                                                                                      | MC    |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
| 6      | 2.6                                                                                                                               | 16~18                                                                                                                                                                                                                                                                                                  | 6 8   |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
| 8      | 3 4                                                                                                                               | 20~22                                                                                                                                                                                                                                                                                                  | 8 10  |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
| 10~12  | 4 5                                                                                                                               | 25                                                                                                                                                                                                                                                                                                     | 10 12 |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
| 13~15  | 5 6                                                                                                                               |                                                                                                                                                                                                                                                                                                        |       |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
| EE ( ) | <b>Change shoulder thickness</b><br><br>EE ( ) | Ordering Code                                                                                                                                                                                                                                                                                          | EE3   |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |
|        |                                                                                                                                   | ① 0.5 mm Inc.<br>② EE=2~5<br>③ Not available for Tapped, Hex Socket Head Type.                                                                                                                                                                                                                         |       |    |   |    |   |     |       |     |   |     |       |      |       |     |    |       |       |     |  |  |



Please order as shown

## ● Tapped

| Code  | Part Number |                  | L<br>0.1 mm Inc. | H  |
|-------|-------------|------------------|------------------|----|
|       | D           | Dg6              |                  |    |
| MIM05 | 6           | -0.004<br>-0.012 | 15.0~110.0       | 10 |
| MIM11 | 8           | -0.005<br>-0.014 | 20.0~110.0       | 13 |
| MIM11 | 10          |                  | 20.0~110.0       | 16 |

MIM11—D6—L50

## ● Optional Processing

| Code  | Part Number |                  | L<br>0.1 mm Inc. | Optional Processing Code |
|-------|-------------|------------------|------------------|--------------------------|
|       | D           | Dg6              |                  |                          |
| MIM05 | 6           | -0.004<br>-0.012 | 15.0~110.0       | LC HA EE()               |
| MIM11 | 8           | -0.005<br>-0.014 | 20.0~110.0       | MC()                     |
| MIM11 | 10          |                  | 20.0~110.0       |                          |

MIM11—D6—L50—LC



Discount price  
Per 1~4 5~  
Price 100% Additional quotation.



① MIM11



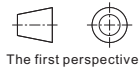
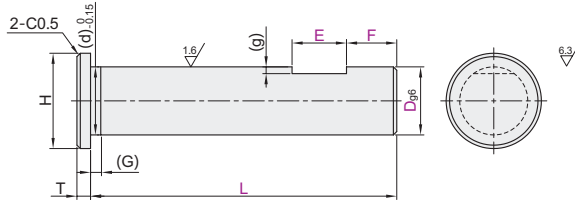
① MIP21



① MIM05

| Code  | Type           | Material |        | Hardness | Surface Treatment          |
|-------|----------------|----------|--------|----------|----------------------------|
|       |                | GB       | Equiv. |          |                            |
| MIR04 | Set Screw Flat | 45       | S45C   | 40~45HRC | Electroless Nickel Plating |

Self-made

① Diameter ( $d \begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ ) is the reference size.

| Code  | Part Number |                  | L<br>0.1 mm Inc. | 0.01 mm Inc. |                | H   | (d)  | T   | (G) | (g) |
|-------|-------------|------------------|------------------|--------------|----------------|-----|------|-----|-----|-----|
|       | Dg6         |                  |                  | E            | F              |     |      |     |     |     |
| MIR04 | 3           | -0.002<br>-0.008 | 5.0~55.0         |              |                | 5.5 | 2.9  | 1.5 |     | 0.5 |
|       | 4           |                  |                  |              |                | 6.5 | 3.9  |     |     |     |
|       | 5           | -0.004<br>-0.012 | 10.0~65.0        |              |                | 8   | 4.9  |     |     |     |
|       | 6           |                  | 10.0~110.0       |              |                | 9   | 5.8  | 2   |     | 1   |
|       | 8           | -0.005<br>-0.014 | 15.0~110.0       |              |                | 12  | 7.8  |     |     |     |
|       | 10          |                  | 15.0~220.0       |              |                | 14  | 9.8  |     |     |     |
|       | 12          |                  |                  |              |                | 17  | 11.8 | 3   | 1.5 |     |
|       | 13          |                  |                  | 1≤E≤55       | F=0 or 2≤F≤L/2 | 18  | 12.8 |     |     |     |
|       | 14          |                  |                  |              |                | 19  | 13.8 |     |     |     |
|       | 15          | -0.006<br>-0.017 |                  |              |                | 20  | 14.8 | 4   |     | 2   |
|       | 16          |                  | 20.0~220.0       |              |                | 21  | 15.8 |     |     |     |
|       | 17          |                  |                  |              |                | 22  | 16.8 |     |     |     |
|       | 18          |                  |                  |              |                | 23  | 17.8 |     |     |     |
|       | 20          |                  |                  |              |                | 26  | 19.8 |     |     |     |
|       | 22          | -0.007<br>-0.020 |                  |              |                | 27  | 21.8 |     |     |     |
|       | 25          |                  |                  |              |                | 30  | 24.8 |     |     |     |



Optional Processing

| Code | Spec.                 |                                                                      |
|------|-----------------------|----------------------------------------------------------------------|
| LC   | L Dimension Tolerance |                                                                      |
|      |                       | Ordering Code <b>LC</b><br>① Changes L dimension tolerance to ±0.04. |

| Code | Spec.                     |                                                       |
|------|---------------------------|-------------------------------------------------------|
| EE() | Change Shoulder Thickness |                                                       |
|      |                           | Ordering Code <b>EE3</b><br>① 0.5 mm Inc.<br>② EE=T~5 |



Please order as shown

| Part Number | Code | D   | L  | 0.1 mm Inc. | E | F |
|-------------|------|-----|----|-------------|---|---|
|             |      |     |    |             |   |   |
| MIR04       | ③    | ④   | ⑤  | ⑥           | ⑦ | ⑧ |
| MIR04       | D6   | L60 | E5 | F10         |   |   |

MIR04 — D6 — L60 — E5 — F10

## Optional Processing

| Part Number | Code | D   | L  | 0.1 mm Inc. | E  | F | Optional Processing Code |
|-------------|------|-----|----|-------------|----|---|--------------------------|
|             |      |     |    |             |    |   |                          |
| MIR04       | ③    | ④   | ⑤  | ⑥           | ⑦  | ⑧ | ⑨                        |
| MIR04       | D6   | L60 | E5 | F10         | LC |   |                          |

MIR04 — D6 — L60 — E5 — F10 — LC



Discount price

|       |      |                      |
|-------|------|----------------------|
| Per   | 1~4  | 5~                   |
| Price | 100% | Additional quotation |



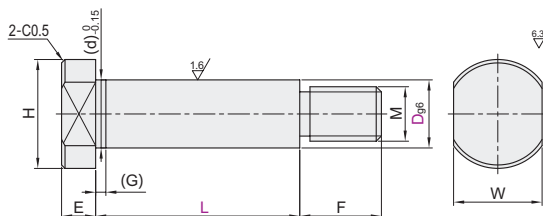
Delivery

7

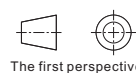
# Pivot Pins with Shoulder

## Lock Nut

| Code         |                | Material |         | Hardness                           | Surface Treatment                               | Accessory(1 Pc.)       |
|--------------|----------------|----------|---------|------------------------------------|-------------------------------------------------|------------------------|
| L Selectable | L Configurable | GB       | Equiv.  |                                    |                                                 |                        |
| MIE01        | —              | 45       | S45C    | 40~45HRC                           | Black Oxide                                     | U Nut(Zinc-plated)     |
| MIE02        | MIE12          |          |         |                                    | Electroless Nickel Plating                      | U Nut(Stainless Steel) |
| —            | MIE14          |          |         |                                    |                                                 | U Nut(Zinc-plated)     |
| —            | MIE15          | 9Cr18    | SUS440C | 40~45HRC(Plating Hardness: 850HV~) | Hard Chrome Plating(Plating Thickness of 3~5µm) | U Nut(Stainless Steel) |
| —            | MIE31          |          |         | 48~53HRC                           | —                                               | U Nut(Stainless Steel) |



① Diameter ( $d_{0.15}$ ) is the reference size. ② When D=4, M3 accessories are standard nuts.



### L Selectable

| Code           | Part Number | Dg6              | L                                | H  | W  | E | F  | (d)  | (G) | M   | Included Nut |
|----------------|-------------|------------------|----------------------------------|----|----|---|----|------|-----|-----|--------------|
| MIE01<br>MIE02 | 4           | —                | 10 12 14 15 16 18 20 22 24 25 30 | 7  | 5  | 3 | 6  | 3.9  | —   | M3  | M3×0.5       |
|                | 5           | -0.004<br>-0.012 | —                                | 9  | 7  | 4 | —  | 4.9  | —   | M4  | M4×0.7       |
|                | 6           | —                | 15 16 18 20 22 24 25 30          | 10 | 8  | — | 9  | 5.8  | 1.5 | M5  | M5×0.8       |
|                | 8           | -0.005<br>-0.014 | 15 16 18 20 22 24 25 30 40 45 50 | 13 | 10 | 5 | —  | 7.8  | —   | M6  | M6×1.0       |
|                | 10          | —                | 18 20 22 24 25 30 35 40 45 50    | 16 | 13 | — | 12 | 9.8  | —   | M8  | M8×1.25      |
|                | 12          | -0.006<br>-0.017 | 22 24 25 30 35 40 45 50          | 18 | 14 | — | 16 | 11.8 | —   | M10 | M10×1.5      |

### L Configurable

| Code                             | Part Number | Dg6              | L                       | H  | W  | E | F  | (d)  | (G) | M   | Included Nut |
|----------------------------------|-------------|------------------|-------------------------|----|----|---|----|------|-----|-----|--------------|
| MIE12<br>MIE14<br>MIE15<br>MIE31 | 4           | —                | 0.1 mm Inc.<br>5.0~55.0 | 7  | 5  | 3 | 6  | 3.9  | —   | M3  | M3×0.5       |
|                                  | 5           | -0.004<br>-0.012 | 5.0~65.0                | 9  | 7  | 4 | —  | 4.9  | —   | M4  | M4×0.7       |
|                                  | 6           | —                | —                       | 10 | 8  | — | 9  | 5.8  | —   | M5  | M5×0.8       |
|                                  | 8           | -0.005<br>-0.014 | 10.0~110.0              | 13 | 10 | — | —  | 7.8  | —   | M6  | M6×1.0       |
|                                  | 10          | —                | —                       | 16 | 13 | — | 12 | 9.8  | —   | M8  | M8×1.25      |
|                                  | 12          | —                | 15.0~220.0              | 18 | 14 | — | 16 | 11.8 | —   | M10 | M10×1.5      |
|                                  | 13          | —                | —                       | —  | —  | — | —  | 12.8 | 1.5 | —   | —            |
|                                  | 14          | —                | —                       | —  | —  | — | —  | 13.8 | —   | —   | —            |
|                                  | 15          | -0.006<br>-0.017 | —                       | —  | —  | — | 18 | 14.8 | —   | M12 | M12×1.75     |
|                                  | 16          | —                | —                       | —  | —  | — | —  | 15.8 | —   | —   | —            |
|                                  | 17          | —                | 20.0~220.0              | —  | —  | — | —  | 16.8 | —   | —   | —            |
|                                  | 18          | —                | —                       | —  | —  | — | —  | 17.8 | —   | —   | —            |
|                                  | 20          | —                | —                       | 27 | 23 | — | 24 | 19.8 | —   | —   | —            |
|                                  | 22          | -0.007<br>-0.020 | —                       | —  | —  | — | —  | 21.8 | —   | M16 | M16×2.0      |
|                                  | 25          | —                | —                       | 30 | 27 | — | —  | 24.8 | —   | —   | —            |
|                                  | 30          | —                | 40.0~220.0              | 35 | 30 | — | 30 | 29.0 | —   | —   | —            |



| Code | Spec.                                                                                  |
|------|----------------------------------------------------------------------------------------|
| LC   | L Dimension Tolerance<br>Ordering Code LC<br>① Changes L dimension tolerance to ±0.04. |
|      | Change Shoulder Thickness<br>Ordering Code EE3<br>① 0.5 mm Inc.<br>② EE=2~5            |

| Code | Spec.                                                                                                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------|
| FC() | Change Thread Part Length<br>Ordering Code FC4<br>① 1 mm Inc.                                                                              |
|      | Change Thread Diameter<br>Ordering Code MC3<br>D MC D MC<br>5 3 12 5 8<br>6 3 4 13~18 6 8 10<br>8 3 4 5 20 22 8 10 12<br>10 4 5 6 25 10 12 |



### L Selectable

| Part Number | D | L        |
|-------------|---|----------|
| MIE01       | 4 | 10 12 14 |
| MIE02       | 5 | —        |

MIE02 — D5 — L14

### L Configurable

| Part Number | D | L        |
|-------------|---|----------|
| MIE12       | 4 | 5.0~55.0 |
| MIE14       | 5 | 5.0~65.0 |

MIE14 — D5 — L50.1

### Optional Processing

| Part Number | D | L        | Optional Processing Code |
|-------------|---|----------|--------------------------|
| MIE12       | 4 | 5.0~55.0 | ① EE() FC() MC()         |
| MIE14       | 5 | 5.0~65.0 | —                        |

MIE14 — D5 — L50.1 — LC



| Per   | 1~4  | 5~                   |
|-------|------|----------------------|
| Price | 100% | Additional quotation |



|          |   |
|----------|---|
| Delivery | 4 |
|----------|---|

① MIE01



|          |   |
|----------|---|
| Delivery | 6 |
|----------|---|

① MIE31

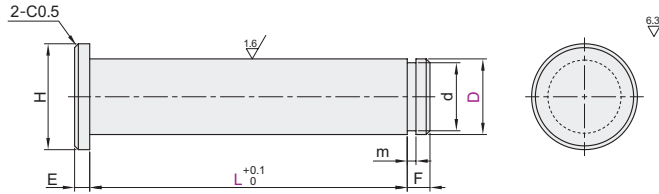


|          |   |
|----------|---|
| Delivery | 7 |
|----------|---|

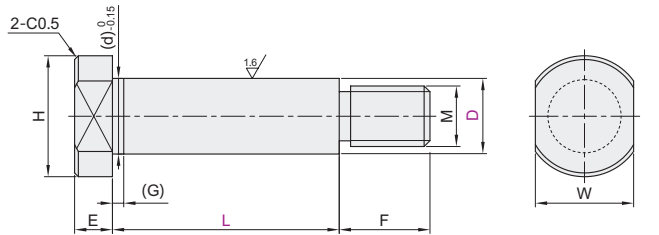
① MIE02/12/14/15

| Code           |          | Material |        | Hardness | Surface Treatment          | Accessory           |                 |            |                 |
|----------------|----------|----------|--------|----------|----------------------------|---------------------|-----------------|------------|-----------------|
| Retaining Ring | Lock Nut | GB       | Equiv. |          |                            | Retaining Ring      |                 | Lock Nut   |                 |
|                |          |          |        |          |                            | Name                | Material        | Name       | Material        |
| MIT01          | —        | —        | —      | —        | Black Oxide                | Retaining Ring 1Pc. | Spring Steel    | U Nut 1Pc. | Zinc-plated     |
| MIT02          | MIT22    | 45       | S45C   | 40~45HRC | Electroless Nickel Plating | Retaining Ring 1Pc. | Stainless Steel | U Nut 1Pc. | Stainless Steel |
| MIT04          | MIT24    | —        | —      | —        | —                          | Retaining Ring 1Pc. | Stainless Steel | U Nut 1Pc. | Stainless Steel |
| MIT11          | —        | 0Cr18Ni9 | SUS304 | —        | —                          | Retaining Ring 1Pc. | Stainless Steel | U Nut 1Pc. | Stainless Steel |

Retaining Ring

MIT01  
MIT02  
MIT04  
MIT11

Lock Nut

MIT22  
MIT24

The first perspective



Self-made

| D     | Tolerance Selection |                  |             |
|-------|---------------------|------------------|-------------|
|       | M                   | P                | H           |
|       | m6                  | p6               | h7          |
| 2-3   | +0.008<br>+0.002    | +0.012<br>+0.006 | 0<br>-0.010 |
| 4-5-6 | +0.012<br>+0.004    | +0.020<br>+0.012 | 0<br>-0.012 |
| 8-10  | +0.015<br>+0.006    | +0.024<br>+0.015 | 0<br>-0.015 |
| 12~18 | +0.018<br>+0.007    | +0.029<br>+0.018 | 0<br>-0.018 |
| 20~25 | +0.021<br>+0.008    | +0.035<br>+0.022 | 0<br>-0.021 |

| D     | Tolerance Selection |                  |                  |
|-------|---------------------|------------------|------------------|
|       | F                   | C                | T                |
|       | f8                  | c9               | —                |
| 2-3   | -0.006<br>-0.020    | -0.060<br>-0.085 | -0.025<br>-0.034 |
| 4-5-6 | -0.010<br>-0.028    | -0.070<br>-0.100 | -0.025<br>-0.037 |
| 8-10  | -0.013<br>-0.035    | -0.080<br>-0.116 | -0.025<br>-0.040 |
| 12~18 | -0.016<br>-0.043    | -0.095<br>-0.138 | -0.025<br>-0.043 |
| 20~25 | -0.020<br>-0.053    | -0.110<br>-0.162 | -0.025<br>-0.046 |

※Tolerances are recommended values for Multi-Layer Oil Free Bushings.

① Diameter (d<sub>0.15</sub>) is the reference size.

Retaining Ring

| Part Number                      |                  |            | L           |      | m          | F   | d    | E          | H   | Attached Retaining Ring |    |            |      |      |
|----------------------------------|------------------|------------|-------------|------|------------|-----|------|------------|-----|-------------------------|----|------------|------|------|
| Code                             | Tol.             | D          | 0.1 mm Inc. |      |            |     |      |            |     |                         |    |            |      |      |
| MIT01<br>MIT02<br>MIT04<br>MIT11 | M(m6)            | 2          | 5.0~32.0    | 0.5  | +0.05<br>0 | 1.5 | 2    | +0.06<br>0 | 4.5 | 1.5                     |    |            |      |      |
|                                  |                  | 3          | 5.0~55.0    |      |            |     |      |            |     |                         | 2  | 5.5        | 2    |      |
|                                  |                  | 4          | 5.0~55.0    | 0.7  | +0.1<br>0  | 4   | 5    | 0.075<br>0 | 1.5 | 6.5                     | E  | 3          |      |      |
|                                  |                  | 5          | 10.0~65.0   |      |            |     |      |            |     |                         |    |            | 8    | Type |
|                                  |                  | 6          | 10.0~110.0  | 0.9  | +0.09<br>0 | 7   | 9    | 2          | 12  | 9                       | 5  |            |      |      |
|                                  | 8                | 10.0~110.0 | 10          |      |            |     |      |            |     |                         |    | 15.0~110.0 | 14   | 10   |
|                                  | P(p6)            | 10         | 15.0~110.0  | 1.15 | +0.14<br>0 | 3   | 14.3 | 0.11<br>0  | 3   | 20                      | C  | 15         |      |      |
|                                  |                  | 12         | 15.0~220.0  |      |            |     |      |            |     |                         |    |            | 15.5 | 17   |
|                                  | H(h7)            | 13         | 15.0~220.0  | 1.35 | +0.21<br>0 | 4   | 21   | 0.21<br>0  | 7   | 27                      | 22 | 22         |      |      |
|                                  |                  | 14         | 25.0~220.0  |      |            |     |      |            |     |                         |    |            | 18   | 13   |
|                                  | F(f8)            | 15         | 25.0~220.0  | 1.35 | +0.14<br>0 | 3   | 14.3 | 0.11<br>0  | 3   | 20                      | C  | 15         |      |      |
|                                  |                  | 16         | 30.0~220.0  |      |            |     |      |            |     |                         |    |            | 16.2 | 22   |
|                                  | C(c9)            | 17         | 30.0~220.0  | 1.35 | +0.14<br>0 | 3   | 14.3 | 0.11<br>0  | 3   | 20                      | C  | 15         |      |      |
|                                  |                  | 18         | 30.0~220.0  |      |            |     |      |            |     |                         |    |            | 17   | 23   |
|                                  | T (for Bushings) | 20         | 30.0~220.0  | 1.35 | +0.21<br>0 | 4   | 21   | 0.21<br>0  | 7   | 27                      | 22 | 22         |      |      |
|                                  |                  | 22         | 30.0~220.0  |      |            |     |      |            |     |                         |    |            | 19   | 26   |
| 25                               |                  | 30.0~220.0 | 23.9        |      |            |     |      |            |     |                         |    |            | 31   | 25   |

Lock Nut

| Part Number    |                  |    | L           |    |    |   |    |      |     |     |     |          |              |
|----------------|------------------|----|-------------|----|----|---|----|------|-----|-----|-----|----------|--------------|
| Code           | Tol.             | D  | 0.1 mm Inc. |    |    | H | W  | E    | F   | (d) | (G) | M        | Included Nut |
| MIT22<br>MIT24 | M(m6)            | 4  | 5.0~55.0    | 7  | 5  | 3 | 6  | 3.9  |     |     |     | M3       | M3×0.5       |
|                |                  | 5  | 5.0~65.0    | 9  | 7  | 4 | 9  | 4.9  |     |     |     | M4       | M4×0.7       |
|                |                  | 6  |             | 10 | 8  |   | 9  | 5.8  |     |     |     | M5       | M5×0.8       |
|                |                  | 8  | 10.0~110.0  | 13 | 10 |   | 12 | 7.8  |     |     |     | M6       | M6×1.0       |
|                |                  | 10 |             | 16 | 13 |   | 12 | 9.8  |     |     |     | M8       | M8×1.25      |
|                | P(p6)            | 12 | 15.0~220.0  | 18 | 14 |   | 16 | 11.8 |     |     |     | M10      | M10×1.5      |
|                |                  | 13 |             |    |    |   |    | 12.8 |     |     |     |          |              |
|                | H(h7)            | 14 | 25.0~220.0  |    |    |   |    | 13.8 | 1.5 |     |     |          |              |
|                |                  | 15 |             |    |    |   |    | 14.8 |     |     |     |          |              |
|                | F(f8)            | 16 |             | 24 | 21 | 5 | 18 | 15.8 |     |     | M12 | M12×1.75 |              |
|                |                  | 17 |             |    |    |   |    | 16.8 |     |     |     |          |              |
|                | C(c9)            | 18 |             |    |    |   |    | 17.8 |     |     |     |          |              |
|                |                  | 20 | 30.0~220.0  |    |    |   |    | 19.8 |     |     |     |          |              |
|                | T (for Bushings) | 22 |             | 27 | 23 |   | 24 | 21.8 |     |     | M16 | M16×2.0  |              |
|                |                  | 25 |             | 30 | 27 |   |    | 24.8 |     |     |     |          |              |



Optional Processing

| Code | Spec.                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EF() | Change Shoulder Thickness<br>Ordering Code EF3<br>① 0.5 mm Inc.<br>② EF=2~5<br>③ Not applicable to Retaining Ring Type.                                                                           |
| EE() | Change Shoulder Thickness<br>Ordering Code EE3<br>① 0.5 mm Inc.<br>② EE=E-5<br>③ Not applicable to Lock Nut Type.                                                                                 |
| MC() | Change Thread Diameter<br>Ordering Code MC3<br>D MC<br>5 3<br>6 3 4<br>8 3 4 5<br>10 4 5 6<br>12 4 5 6 8<br>13~18 6 8 10<br>20~22 8 10 12<br>25 10 12<br>① Not applicable to Retaining Ring Type. |

| Code | Spec.                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EC() | Retaining Ring Groove Position<br>Ordering Code EC3<br>① 0.1 mm Inc.<br>D EC<br>2~4 1.5~3<br>5 1.7~3<br>6 1.9~4<br>8 2.4~5<br>10~18 2.7~5<br>20~25 2.9~5<br>① Overall Length is L+EC+E.<br>② Not applicable to Lock Nut Type. |
| FC() | Thread Part Length<br>Ordering Code FC4<br>① 1 mm Inc.                                                                                                                                                                        |



MIT01/11



MIT02/04/22/24



Please order as shown

Retaining Ring

| Part Number | Code  | Tol. | D        | L   | 0.1 mm Inc. | m |
|-------------|-------|------|----------|-----|-------------|---|
| MIT01       | M(m6) | 2    | 5.0~32.0 | 0.5 |             |   |
| MIT02       | P(p6) | 3    | 5.0~55.0 | 0.7 |             |   |
| MIT04       | K(k7) | 4    | 5.0~55.0 | 0.7 |             |   |

MIT02—H—D2—L14

Optional Processing (Retaining Ring)

| Part Number | Code  | Tol. | D        | L | 0.1 mm Inc. | Optional Processing Code |
|-------------|-------|------|----------|---|-------------|--------------------------|
| MIT01       | M(m6) | 2    | 5.0~32.0 |   |             | EE() EC()                |
| MIT02       | P(p6) | 3    | 5.0~55.0 |   |             |                          |
| MIT04       | K(k7) | 4    | 5.0~55.0 |   |             |                          |

MIT02—H—D2—L14—EE3

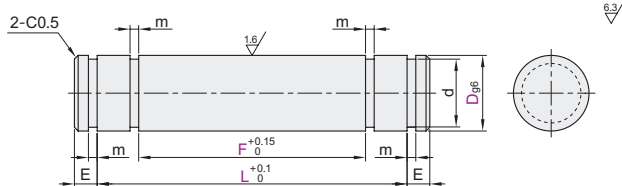


| Discount price | Per  | 1~4                  | 5~ |
|----------------|------|----------------------|----|
| Price          | 100% | Additional quotation |    |

# Pivot Pins

◀ with Double Retaining Ring Groove

| Code  | Type                              | Material |        | Surface Treatment | Accessory                 |                 |
|-------|-----------------------------------|----------|--------|-------------------|---------------------------|-----------------|
|       |                                   | GB       | Equiv. |                   | Name                      | Material        |
| MJD11 | with Double Retaining Ring Groove | 0Cr18Ni9 | SUS304 | —                 | Retaining Rings<br>4 Pcs. | Stainless Steel |



6.3/



Self-made



The first perspective

| Part Number |                 |                  | 1 mm Inc. |        | E | d    |             | m    |            |
|-------------|-----------------|------------------|-----------|--------|---|------|-------------|------|------------|
| Code        | D <sub>g6</sub> |                  | L         | F      |   |      |             |      |            |
| MJD11       | 3               | -0.002<br>-0.008 | 8~65      | 5~47   | 2 | 2    | +0.06<br>0  | 0.5  | +0.05<br>0 |
|             | 4               |                  | 9~65      | 5~48   |   | 3    |             |      |            |
|             | 5               | -0.004<br>-0.012 | 14~65     | 14~60  |   | 4    | +0.075<br>0 | 0.7  | +0.1<br>0  |
|             | 6               |                  | 14~110    | 10~96  | 3 | 5    |             |      |            |
|             | 8               | -0.005<br>-0.014 |           |        |   | 7    | +0.09<br>0  | 0.9  |            |
|             | 10              |                  | 20~110    | 15~95  |   | 9.6  | 0<br>-0.09  |      |            |
|             | 12              |                  | 20~220    | 15~195 | 4 | 11.5 |             |      |            |
|             | 13              |                  |           |        |   | 12.4 |             | 1.15 |            |
|             | 14              | -0.006<br>-0.017 | 30~220    | 25~195 |   | 13.4 | 0<br>-0.11  |      | +0.14<br>0 |
|             | 15              |                  |           |        |   | 14.3 |             |      |            |
|             | 16              |                  |           |        |   | 15.2 |             |      |            |
|             | 20              | -0.007<br>-0.020 | 35~220    | 30~195 |   | 19   | 0<br>-0.21  | 1.35 |            |
|             | 25              |                  |           |        |   | 23.9 |             |      |            |



Please order  
as shown

| Part Number |                 | 1 mm Inc. |        |
|-------------|-----------------|-----------|--------|
| Code        | D <sub>g6</sub> | L         | F      |
| MJD11       | 8               | 14~110    | 10~96  |
|             | 10              | 20~110    | 15~95  |
|             | 12              | 20~220    | 15~195 |

MJD11—D8—L80—F20



● Discount price

| Per   | 1~4  | 5~                   |
|-------|------|----------------------|
| Price | 100% | Additional quotation |



Delivery

4

| Code                               |                 |                                    |                 | Material |        | Hardness | Surface Treatment |
|------------------------------------|-----------------|------------------------------------|-----------------|----------|--------|----------|-------------------|
| Straight Slot Groove               |                 | Hex Hole                           |                 | GB       | Equiv. |          |                   |
| D <sup>0.01</sup> <sub>-0.05</sub> | D <sub>g6</sub> | D <sup>0.01</sup> <sub>-0.05</sub> | D <sub>g6</sub> |          |        |          |                   |
| MJK01                              | MJK05           | MJK11                              | MJK15           | 45       | S45C   | —        | Black Oxide       |
| —                                  | —               | MJK13                              | MJK12           |          |        | 40~45HRC |                   |
| MJK04                              | MJK06           | MJK14                              | MJK16           | 0Cr18Ni9 | SUS304 | —        | —                 |

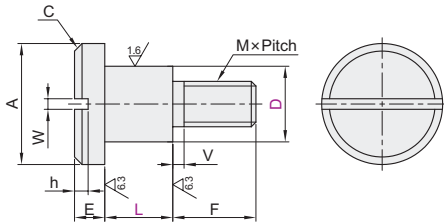
| D <sub>g6</sub> |                  |
|-----------------|------------------|
| 4~6             | -0.004<br>-0.012 |
| 8~10            | -0.005<br>-0.014 |
| 12~15           | -0.006<br>-0.017 |
| L Tolerance     |                  |
| Unhardened      | +0.15<br>+0.05   |
| Hardened        | +0.2<br>0        |



Self-made

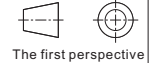
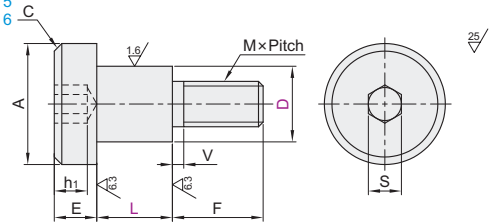
Straight Slot Groove

MJK01  
MJK04  
MJK05  
MJK06



Hex Hole

MJK11  
MJK13  
MJK14  
MJK12  
MJK15  
MJK16



The first perspective

## □ Straight Slot Groove

| Part Number                                                      |       | L<br>1 mm Inc. | A  | E   | M×Pitch  | F      | V   | W   | h   | C   |     |   |
|------------------------------------------------------------------|-------|----------------|----|-----|----------|--------|-----|-----|-----|-----|-----|---|
| Code                                                             | D     |                |    |     |          |        |     |     |     |     |     |   |
| (D Tol. $\begin{smallmatrix} -0.01 \\ -0.05 \end{smallmatrix}$ ) | 4     | 1~22           | 6  |     | 2.6×0.45 | 4      | 0.8 | 0.8 | 1   | 0.5 |     |   |
|                                                                  | 5     |                | 8  | 2   | 3×0.5    | 6      | 1   |     |     |     |     |   |
|                                                                  | 6     |                | 10 | 2.5 | 4×0.7    | 8      | 1.2 | 1.2 | 1.5 |     |     |   |
|                                                                  | MJK01 |                | 8  | 12  | 3        | 5×0.8  | 10  |     |     |     | 1.4 |   |
|                                                                  | MJK05 |                | 10 | 16  | 4        | 6×1.0  |     |     | 1.4 |     | 1.8 | 1 |
|                                                                  | MJK04 |                | 12 | 18  | 5        | 8×1.25 | 12  | 1.5 | 1.5 |     | 2   |   |
|                                                                  |       |                |    |     |          |        |     |     |     |     |     |   |

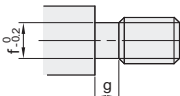
## □ Hex Hole

| Part Number                                             |       | L<br>1 mm Inc. | A     | E     | M×Pitch  | F      | V     | S   | h <sub>1</sub> | C   |     |   |
|---------------------------------------------------------|-------|----------------|-------|-------|----------|--------|-------|-----|----------------|-----|-----|---|
| Code                                                    | D     |                |       |       |          |        |       |     |                |     |     |   |
| (D Tol. <sup>-0.01</sup> <sub>-0.05</sub> ) (D Tol. g6) | 4     | 5~22           | 6     | 3.5   | 2.6×0.45 | 4      | 0.8   | 2   | 2              | 0.5 |     |   |
|                                                         | 5     |                | 8     | 4     | 3×0.5    | 6      | 1     | 2.5 | 2.5            |     |     |   |
|                                                         | 6     |                | 10    | 4×0.7 | 8        | 1.2    | 3     | 3   |                |     |     |   |
|                                                         | MJK11 |                | MJK15 | 8     | 12       | 4.5    | 5×0.8 | 10  | 1.4            | 4   | 3.5 | 1 |
|                                                         | MJK13 |                | MJK12 | 10    | 16       | 6×1.0  | 12    | 1.5 | 5              | 4   |     |   |
|                                                         | MJK14 |                | MJK16 | 12    | 18       | 8×1.25 |       |     |                |     |     |   |



Optional Processing

| Code | Spec.                                                                                                                                                                                                                      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LD() | <p>Change the L Dimension Increment</p> <p>Ordering Code <b>LD5.5</b></p> <p>① 0.1 mm Inc.</p> <p>② LD=1.1~19.9 (Straight Slot Groove)</p> <p>③ LD=5.1~19.9 (Hex Hole)</p> <p>④ In selection, L must be changed to LD.</p> |
| FC() | <p>Change the Length of Threaded Parts</p> <p>Ordering Code <b>FC8</b></p> <p>① 1 mm Inc.</p>                                                                                                                              |

| Code | Spec.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |     |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|---|---|---|----------|---|-----|---|-------|--|-----|---|-------|-----|-----|---|-------|-----|-----|----|-------|--|-----|----|--------|-----|
| PB   | <div>Adds a Relief to M</div> <div></div>                                                                                                                                                                                                                                                                                                                             |     |     |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
|      | <div>Ordering Code <b>PB</b></div> <table><tr><th>D</th><th>M×P</th><th>g</th><th>f</th></tr><tr><td>4</td><td>2.6×0.45</td><td>1</td><td>1.9</td></tr><tr><td>5</td><td>3×0.5</td><td></td><td>2.3</td></tr><tr><td>6</td><td>4×0.7</td><td>1.2</td><td>3.2</td></tr><tr><td>8</td><td>5×0.8</td><td>1.4</td><td>4.0</td></tr><tr><td>10</td><td>6×1.0</td><td></td><td>4.8</td></tr><tr><td>12</td><td>8×1.25</td><td>1.7</td><td>6.5</td></tr></table> | D   | M×P | g | f | 4 | 2.6×0.45 | 1 | 1.9 | 5 | 3×0.5 |  | 2.3 | 6 | 4×0.7 | 1.2 | 3.2 | 8 | 5×0.8 | 1.4 | 4.0 | 10 | 6×1.0 |  | 4.8 | 12 | 8×1.25 | 1.7 |
| D    | M×P                                                                                                                                                                                                                                                                                                                                                                                                                                                       | g   | f   |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
| 4    | 2.6×0.45                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1   | 1.9 |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
| 5    | 3×0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     | 2.3 |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
| 6    | 4×0.7                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.2 | 3.2 |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
| 8    | 5×0.8                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.4 | 4.0 |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
| 10   | 6×1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     | 4.8 |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |
| 12   | 8×1.25                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.7 | 6.5 |   |   |   |          |   |     |   |       |  |     |   |       |     |     |   |       |     |     |    |       |  |     |    |        |     |



Please order as shown

## □ Straight Slot Groove

| Part Number | D | L         | A  |
|-------------|---|-----------|----|
| Code        | D | 1 mm Inc. |    |
| MJK05       | 4 |           | 6  |
| MJK06       | 5 | 1~22      | 8  |
|             | 6 |           | 10 |

MJK06 — D4 — L14

## □ Optional Processing

| Part Number | D | L         | Optional Processing Code |
|-------------|---|-----------|--------------------------|
| Code        | D | 1 mm Inc. |                          |
| MJK05       | 4 |           | LD FC() PB               |
| MJK06       | 5 | 1~22      |                          |
|             | 6 |           |                          |

MJK06 — D4 — LD5.5



Discount price  
Per 1~9 10~  
Price 100% Additional quotation



① MJK01/05/11/12/13/15



② MJK04/06/14/16

# Fulcrum Pins

◀ Straight Slot Groove

◀ Hex Hole

Configurable Type

Cantilever Shafts  
Pivot Pins

| Code                     |                 |                          |                 | Material |        | Hardness | Surface Treatment |
|--------------------------|-----------------|--------------------------|-----------------|----------|--------|----------|-------------------|
| Straight Slot Groove     |                 | Hex Hole                 |                 | GB       | Equiv. |          |                   |
| D <sup>-0.01/-0.05</sup> | D <sub>g6</sub> | D <sup>-0.01/-0.05</sup> | D <sub>g6</sub> |          |        |          |                   |
| —                        | —               | MJR12                    | MJR15           | 45       | S45C   | —        | Black Oxide       |
| —                        | —               | MJR11                    | MJR13           | —        | —      | 40~45HRC | —                 |
| MJR04                    | MJR06           | MJR14                    | MJR16           | 0Cr18Ni9 | SUS304 | —        | —                 |

| D <sub>g6</sub> |                  |
|-----------------|------------------|
| 4~6             | -0.004<br>-0.012 |
| 8~10            | -0.005<br>-0.014 |
| 12~15           | -0.006<br>-0.017 |
| L Tolerance     |                  |
| Unhardened      | +0.1<br>0        |
| Hardened        | +0.2<br>0        |



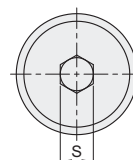
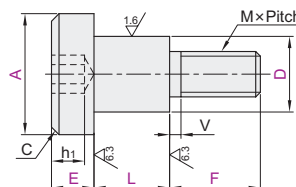
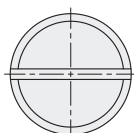
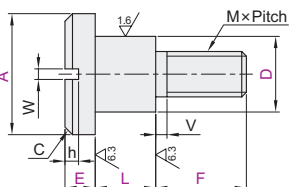
Self-made

Straight Slot Groove

MJR04  
MJR06

Hex Hole

MJR11 MJR14  
MJR12 MJR15  
MJR13 MJR16



25°



The first perspective

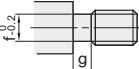
## □ Straight Slot Groove

| Part Number                      | D  | L           | A           | E           | F         | MxPitch  | V   | W   | h   | C   |
|----------------------------------|----|-------------|-------------|-------------|-----------|----------|-----|-----|-----|-----|
| Code                             |    | 0.1 mm Inc. |             | 0.1 mm Inc. | 1 mm Inc. |          |     |     |     |     |
| (D Tol. $-0.01/-0.05$ )<br>MJR04 | 4  | 1~22        | 6 8         | 2.0~6.0     | 3~4       | 2.6×0.45 | 0.8 | 0.8 | 1   | 0.5 |
|                                  | 5  |             | 8 10        |             | 3~8       | 3×0.5    | 1   |     |     |     |
|                                  | 6  |             | 10 12       | 2.5~6.0     | 4~10      | 4×0.7    | 1.2 | 1.2 | 1.5 | 1   |
|                                  | 8  |             | 12 16       |             | 5~12      | 5×0.8    | 1.4 |     |     |     |
|                                  | 10 |             | 16 18 20    |             | 6~15      | 6×1.0    | 1.5 |     |     |     |
|                                  | 12 |             | 18 20 22 24 |             | 8~15      | 8×1.25   | 1.5 |     |     |     |

## □ Hex Hole

| Part Number                                                          | D  | L           | A           | E           | F         | MxPitch  | V   | S   | h1  | C   |
|----------------------------------------------------------------------|----|-------------|-------------|-------------|-----------|----------|-----|-----|-----|-----|
| Code                                                                 |    | 0.1 mm Inc. |             | 0.1 mm Inc. | 1 mm Inc. |          |     |     |     |     |
| (D Tol. $-0.01/-0.05$ )<br>MJR11 MJR13<br>MJR12 MJR15<br>MJR14 MJR16 | 4  | 5~22        | 6 8         | 2.0~6.0     | 3~4       | 2.6×0.45 | 0.8 | 2   | 2   | 0.5 |
|                                                                      | 5  |             | 8 10        |             | 3~8       | 3×0.5    | 1   | 2.5 | 2.5 |     |
|                                                                      | 6  |             | 10 12       | 2.5~6.0     | 4~10      | 4×0.7    | 1.2 | 3   | 3   | 1   |
|                                                                      | 8  |             | 12 16       |             | 5~12      | 5×0.8    | 1.4 | 4   | 3.5 |     |
|                                                                      | 10 |             | 16 18 20    |             | 6~15      | 6×1.0    | 1.5 | 5   | 4   |     |
|                                                                      | 12 |             | 18 20 22 24 |             | 8~15      | 8×1.25   | 1.5 | 5   | 4   |     |
|                                                                      | 13 |             | 20 22 24    | 3.0~7.0     | 10~18     | 10×1.5   | 1.5 | 5   | 4   | 1   |
|                                                                      | 15 |             | 20 22 24    |             |           |          |     |     |     |     |



| Code  | Spec.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |     |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|---|---|---|----------|---|-----|---|-------|---|-----|---|-------|-----|-----|---|-------|-----|-----|----|-------|-----|-----|-------|--------|-----|-----|----|--------|---|
| PB    | <div><div>Adds a relief to M</div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                  |     |     |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
|       | <div><div>Ordering Code</div><div>PB</div></div> <table><tr><th>D</th><th>MxP</th><th>g</th><th>f</th></tr><tr><td>4</td><td>2.6x0.45</td><td>1</td><td>1.9</td></tr><tr><td>5</td><td>3x0.5</td><td>1</td><td>2.3</td></tr><tr><td>6</td><td>4x0.7</td><td>1.2</td><td>3.2</td></tr><tr><td>8</td><td>5x0.8</td><td>1.4</td><td>4.0</td></tr><tr><td>10</td><td>6x1.0</td><td>1.7</td><td>4.8</td></tr><tr><td>12-13</td><td>8x1.25</td><td>1.7</td><td>6.5</td></tr><tr><td>15</td><td>10x1.5</td><td>2</td><td>8.2</td></tr></table> | D   | MxP | g | f | 4 | 2.6x0.45 | 1 | 1.9 | 5 | 3x0.5 | 1 | 2.3 | 6 | 4x0.7 | 1.2 | 3.2 | 8 | 5x0.8 | 1.4 | 4.0 | 10 | 6x1.0 | 1.7 | 4.8 | 12-13 | 8x1.25 | 1.7 | 6.5 | 15 | 10x1.5 | 2 |
| D     | MxP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | g   | f   |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 4     | 2.6x0.45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1   | 1.9 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 5     | 3x0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1   | 2.3 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 6     | 4x0.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.2 | 3.2 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 8     | 5x0.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.4 | 4.0 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 10    | 6x1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.7 | 4.8 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 12-13 | 8x1.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.7 | 6.5 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |
| 15    | 10x1.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2   | 8.2 |   |   |   |          |   |     |   |       |   |     |   |       |     |     |   |       |     |     |    |       |     |     |       |        |     |     |    |        |   |



## □ Straight Slot Groove

| Part Number | L | A    | E       | F   |
|-------------|---|------|---------|-----|
| Code        |   |      |         |     |
| MJR04       | 4 | 6 8  | 2.0~6.0 | 3~4 |
| MJR06       | 6 | 8 10 | 2.5~6.0 | 3~8 |

MJR06—D5—L14—A10—E3—F5

## □ Optional Processing

| Part Number | L | A    | E       | F   | Optional Processing Code |
|-------------|---|------|---------|-----|--------------------------|
| Code        |   |      |         |     |                          |
| MJR04       | 4 | 6 8  | 2.0~6.0 | 3~4 | PB                       |
| MJR06       | 6 | 8 10 | 2.5~6.0 | 3~8 | PB                       |

MJR06—D5—L14—A10—E3—F5—PB



| Discount price                  |
|---------------------------------|
| Per 1~9 10~                     |
| Price 100% Additional quotation |



| Delivery |
|----------|
| 4        |

① MJR04/06/14/16



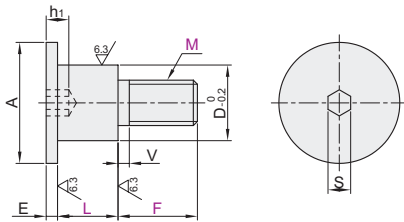
| Delivery |
|----------|
| 7        |

② MJR11/12/13/15

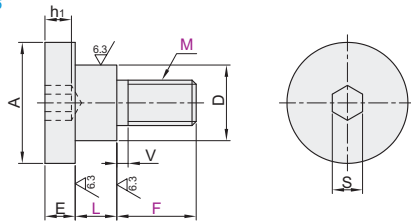
| Code             |                  |                 | Material |        | Surface Treatment |
|------------------|------------------|-----------------|----------|--------|-------------------|
| Extra Low Head   | Low Head         |                 | GB       | Equiv. |                   |
| D <sub>0.2</sub> | D <sub>0.2</sub> | D <sub>h7</sub> |          |        |                   |
| MJT01            | MJT21            | MJT31           | 45       | S45C   | Black Oxide       |
| MJT06            | MJT26            | MJT36           | 0Cr18Ni9 | SUS304 | —                 |



Extra Low Head  
MJT01  
MJT06



Low Head  
MJT21  
MJT26  
MJT31  
MJT36



① When the outer diameter tolerance of D is h7, the surface roughness of D outer diameter is  $1.6 \sqrt{}$ .



Extra Low Head

| Part Number    | Code | M    | L | F     | E   | D  | A  | S   | V   | h <sub>1</sub> |
|----------------|------|------|---|-------|-----|----|----|-----|-----|----------------|
| MJT01<br>MJT06 | 3    |      |   | 3~6   |     | 5  | 8  | 1.5 | 1   | 1.5            |
|                | 4    |      |   | 4~8   |     | 6  | 10 | 2   | 1.2 | 2              |
|                | 5    |      |   | 5~12  |     | 8  | 12 | 3   | 1.4 | 3              |
|                | 6    | 5~25 |   | 6~12  | 1.5 | 10 | 16 | 3   |     | 3              |
|                | 8    |      |   | 8~15  |     | 12 | 18 | 4   | 1.5 | 3.5            |
|                | 10   |      |   | 10~18 |     | 15 | 20 | 5   |     | 4              |

Low Head(D<sub>0.2</sub>)

| Part Number    | Code | M    | L | F     | E   | D  | A  | S   | V   | h <sub>1</sub> |
|----------------|------|------|---|-------|-----|----|----|-----|-----|----------------|
| MJT21<br>MJT26 | 3    |      |   | 3~6   | 2   | 5  | 8  | 2   | 1   | 2              |
|                | 4    |      |   | 4~8   | 2.8 | 6  | 10 | 2.5 | 1.2 | 2.5            |
|                | 5    |      |   | 5~12  | 3.5 | 8  | 12 | 3   | 1.4 | 3              |
|                | 6    | 3~25 |   | 6~12  | 4   | 10 | 16 | 4   |     | 3.5            |
|                | 8    |      |   | 8~15  | 5   | 12 | 18 | 5   | 1.5 | 4              |
|                | 10   |      |   | 10~15 | 6   | 15 | 20 | 6   |     | 4.5            |

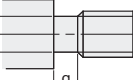
Low Head(D<sub>h7</sub>)

| Part Number    | Code | M | L           | F         | E   | D <sub>h7</sub> | A  | S   | V   | h <sub>1</sub> |
|----------------|------|---|-------------|-----------|-----|-----------------|----|-----|-----|----------------|
| MJT31<br>MJT36 | 3    |   | 3 4 5 6     | 3 4 5 6   | 2   | 5               | 8  | 2   | 1   | 2              |
|                | 4    |   | 4 5 6 7 8   | 4 5 6 8   | 2.8 | 6               | 10 | 2.5 | 1.2 | 2.5            |
|                | 5    |   | 5 6 7 8 10  | 5 6 8 10  | 3.5 | 8               | 12 | 3   | 1.4 | 3              |
|                | 6    |   | 6 7 8 10 12 | 6 8 10 12 | 4   | 10              | 16 | 4   | 1.5 | 3.5            |



Optional Processing

| Code | Spec.                                                                                                                                                                                                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LD() | <p><b>Change L Dimension Increment</b></p> <p>Ordering Code <b>LD5.5</b></p> <p>① 0.1 mm Inc.</p> <p>② LD=5.1~24.9 Applicable Extra Low Head Type.</p> <p>③ LD=3.1~24.9 Applicable Low Head (D<sub>0.2</sub>) Type.</p> <p>④ In selection, L must be changed to LD.</p> <p>⑤ The value of LD must be less than the L value of the selected model.</p> |

| Code | Spec.                                                                                                          |               |        |     |     |
|------|----------------------------------------------------------------------------------------------------------------|---------------|--------|-----|-----|
| PB   | <p>Adds a Relief on M</p>  | Ordering Code | PB     |     |     |
|      |                                                                                                                | D             | M×P    | g   | f   |
|      |                                                                                                                | 5             | 3×0.5  | 1   | 2.3 |
|      |                                                                                                                | 6             | 4×0.7  | 1.2 | 3.2 |
|      |                                                                                                                | 8             | 5×0.8  | 1.4 | 4.0 |
|      |                                                                                                                | 10            | 6×1.0  | 1.7 | 4.8 |
|      |                                                                                                                | 12            | 8×1.25 | 2   | 6.5 |
|      |                                                                                                                | 15            | 10×1.5 | 2   | 8.2 |



Please order as shown

Extra Low Head

| Part Number | Code | M    | L | F   |
|-------------|------|------|---|-----|
| MJT01       | 3    |      |   | 3~6 |
| MJT06       | 4    | 5~25 |   | 4~8 |

MJT06 — M4 — L6 — F4

Optional Processing

| Part Number | Code | M    | L | F   |
|-------------|------|------|---|-----|
| MJT01       | 3    |      |   | 3~6 |
| MJT06       | 4    | 5~25 |   | 4~8 |

MJT06 — M4 — L6 — F4 — PB



| Discount price                  |
|---------------------------------|
| Per 1~19 20~                    |
| Price 100% Additional quotation |



| Delivery |
|----------|
| 7        |