

Tapered Machine Keys with Gib Head

Tapered Machine Keys with Gib Head

**KTH**

6.3 / (3.2 / 1.6)

Gradient: 1/100

JIS B 1301-1996 (New JIS Standard)

| Type | Material                     | Tensile Strength              |
|------|------------------------------|-------------------------------|
| KTH  | 1045 Carbon Steel Equivalent | 600 N/mm <sup>2</sup> or More |

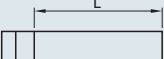
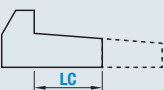
| Part Number |                 | h           |      | L   | h <sub>1</sub> | h <sub>2</sub> / f | (e) | C         |
|-------------|-----------------|-------------|------|-----|----------------|--------------------|-----|-----------|
| Type        | B <sub>10</sub> |             |      |     |                |                    |     |           |
| KTH         | 4               | 0<br>-0.030 | 4    | 30  | 7              | 4                  | 4   | 0.16-0.25 |
|             | 5               |             | 5    | 40  | 8              | 5                  | 5   |           |
|             | 6               |             | 6    | 45  | 10             | 6                  | 6   |           |
|             | 7               | 0<br>-0.036 | 7.2  | 50  |                | 7                  | 7   | 0.25-0.40 |
|             | 8               |             | 7    | 60  | 11             | 7                  | 8   |           |
|             | 10              |             | 8    | 75  | 12             | 8                  | 10  |           |
|             | 12              | 0<br>-0.043 | 8    | 90  |                | 8                  | 12  | 0.40-0.60 |
|             | 14              |             | 9    | 110 | 14             | 9                  | 14  |           |
|             | 15              |             | 10.2 | 110 | 15             | 10                 | 15  |           |
|             | 16              | 0<br>-0.090 | 10   | 120 | 16             | 10                 | 16  |           |
|             | 18              |             | 11   | 135 | 18             | 11                 | 18  |           |
|             | 20              |             | 12   | 150 | 20             | 12                 | 20  | 0.60-0.80 |
|             | 22              | 0<br>-0.110 | 14   | 170 | 22             | 14                 | 22  |           |
|             | 24              |             | 16.2 | 180 | 24             | 16                 | 24  |           |
|             | 25              | 0<br>-0.070 | 14   | 200 | 22             | 14                 | 25  | 1.00-1.20 |
|             | 28              |             | 16   | 210 | 25             | 16                 | 28  |           |
|             | 32              |             | 18   | 240 | 28             | 18                 | 32  |           |
|             | 35              | 0<br>-0.084 | 22.3 | 260 | 32             | 22                 | 35  |           |
|             | 36              |             | 20   | 280 |                | 20                 | 36  |           |
|             | 38              |             | 24.3 | 285 |                | 24                 | 38  |           |

Part Number Example

Part Number **KTH12**

Part Number Alterations

Part Number **KTH10** - **LC60**

| Alteration                                                                          | Code | Spec.                                                                                                                                                                                                                                                                                                                                                                   |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----------|-----|----|-------|----|-------|----|----------|----|-------|----|----------|----|----|----|----------|----|----|----|
| L Dimension Change                                                                  | LC   | LC=1 mm Increment<br>LC(Min.)≤LC≤L For LC(Min.), see below.                                                                                                                                                                                                                                                                                                             |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|  |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|  |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      | <table><tr><th>B</th><th>LC (Min.)</th></tr><tr><td>4 5</td><td>10</td></tr><tr><td>6 7 8</td><td>15</td></tr><tr><td>10 12</td><td>20</td></tr><tr><td>14 15 16</td><td>22</td></tr><tr><td>18 20</td><td>25</td></tr><tr><td>22 24 25</td><td>30</td></tr><tr><td>28</td><td>35</td></tr><tr><td>32 35 36</td><td>40</td></tr><tr><td>38</td><td>45</td></tr></table> | B | LC (Min.) | 4 5 | 10 | 6 7 8 | 15 | 10 12 | 20 | 14 15 16 | 22 | 18 20 | 25 | 22 24 25 | 30 | 28 | 35 | 32 35 36 | 40 | 38 | 45 |
| B                                                                                   |      | LC (Min.)                                                                                                                                                                                                                                                                                                                                                               |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 4 5                                                                                 |      | 10                                                                                                                                                                                                                                                                                                                                                                      |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 6 7 8                                                                               |      | 15                                                                                                                                                                                                                                                                                                                                                                      |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 10 12                                                                               |      | 20                                                                                                                                                                                                                                                                                                                                                                      |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 14 15 16                                                                            |      | 22                                                                                                                                                                                                                                                                                                                                                                      |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 18 20                                                                               |      | 25                                                                                                                                                                                                                                                                                                                                                                      |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 22 24 25                                                                            |      | 30                                                                                                                                                                                                                                                                                                                                                                      |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 28                                                                                  | 35   |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 32 35 36                                                                            | 40   |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
| 38                                                                                  | 45   |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |
|                                                                                     |      |                                                                                                                                                                                                                                                                                                                                                                         |   |           |     |    |       |    |       |    |          |    |       |    |          |    |    |    |          |    |    |    |

Dowel Pins

Oversized

MS  
MSC  
MSCSS

RoHS 10

15°

0.8

G

D

L

0.010

+0.005

0.000

**Straight**

| Type  | Material             | Hardness    |
|-------|----------------------|-------------|
| MS    | 52100 Bearing Steel  | 58 HRC min. |
| MSC   | 440C Stainless Steel | 58 HRC min. |
| MSCSS | 304 Stainless Steel  | —           |

| ℓ <sub>1</sub> | Part Number |     | L  |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|----------------|-------------|-----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
|                | Type        | D   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 0.4            | MS          | 1   | 6  | 8 | 10 |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 0.6            |             | 1.5 | 6  | 8 | 10 |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
| 1.0            |             | 2   | 6  | 8 | 10 | 15 | 20 |    |    |    |    |    |    |    |    |    |    |    |  |
|                |             | 2.5 | 6  | 8 | 10 | 15 | 20 | 25 | 30 |    |    |    |    |    |    |    |    |    |  |
|                |             | 3   | 6  | 8 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |    |    |    |    |    |    |    |  |
| 1.5            |             | 4   | 8  |   | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |    |    |    |    |    |  |
|                |             | 5   | 8  |   | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |    |    |    |    |    |  |
| 2.0            |             | 6   | 8  |   | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |    |    |    |  |
| 2.5            |             | 8   | 10 |   |    | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 80 |  |
| 3.0            |             | 10  | 15 |   |    |    | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 80 |  |
| 3.5            |             | 12  | 20 |   |    |    |    | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 70 | 80 |    |  |
|                |             | 13  | 30 |   |    |    |    |    |    | 40 | 45 | 50 | 55 | 60 | 70 | 80 |    |    |  |

| $\ell_1$ | Part Number |     | L |   |   |    |    |    |    |    |    |    |    |    |    |    |  |  |
|----------|-------------|-----|---|---|---|----|----|----|----|----|----|----|----|----|----|----|--|--|
|          | Type        | D   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |  |  |
| 0.4      | MSC         | 1   | 5 | 6 | 8 | 10 |    |    |    |    |    |    |    |    |    |    |  |  |
| 0.6      |             | 1.5 | 5 | 6 | 8 | 10 |    |    |    |    |    |    |    |    |    |    |  |  |
| 1.0      |             | 2   | 5 | 6 | 8 | 10 | 12 | 15 | 20 |    |    |    |    |    |    |    |  |  |
|          |             | 2.5 |   | 6 | 8 | 10 | 12 | 15 | 20 | 25 | 30 |    |    |    |    |    |  |  |
|          |             | 3   |   | 6 | 8 | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 40 |    |    |    |  |  |
| 1.5      |             | 4   |   |   | 8 | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |    |    |  |  |
|          |             | 5   |   |   | 8 | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |    |    |  |  |
| 2.0      |             | 6   |   |   | 8 | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 40 | 50 | 60 |    |  |  |
| 2.5      |             | 8   |   |   |   | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 40 | 50 | 60 |    |  |  |
| 3.0      |             | 10  |   |   |   |    | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 | 60 |    |  |  |
| 3.5      |             | 12  |   |   |   |    |    |    | 15 | 20 | 25 | 30 | 35 | 40 | 50 | 60 |  |  |

| $\ell_1$ | Part Number |     | L |   |   |    |    |    |    |    |  |  |  |  |  |  |  |  |
|----------|-------------|-----|---|---|---|----|----|----|----|----|--|--|--|--|--|--|--|--|
|          | Type        | D   |   |   |   |    |    |    |    |    |  |  |  |  |  |  |  |  |
| 0.3      | MSCSS       | 0.9 | 5 | 6 | 8 | 10 |    |    |    |    |  |  |  |  |  |  |  |  |
| 0.4      |             | 1   | 5 | 6 | 8 | 10 |    |    |    |    |  |  |  |  |  |  |  |  |
| 0.6      |             | 1.5 | 5 | 6 | 8 | 10 |    |    |    |    |  |  |  |  |  |  |  |  |
| 1.0      |             | 2   |   | 6 | 8 | 10 | 12 | 15 |    |    |  |  |  |  |  |  |  |  |
|          |             | 2.5 |   | 6 | 8 | 10 | 12 | 15 |    |    |  |  |  |  |  |  |  |  |
|          |             | 3   |   | 6 | 8 | 10 | 12 | 15 | 20 |    |  |  |  |  |  |  |  |  |
| 1.5      |             | 4   |   |   | 8 | 10 | 12 | 15 | 20 |    |  |  |  |  |  |  |  |  |
|          |             | 5   |   |   |   | 10 | 12 | 15 | 20 |    |  |  |  |  |  |  |  |  |
| 2.0      |             | 6   |   |   |   | 10 | 12 | 15 | 20 | 25 |  |  |  |  |  |  |  |  |

ℓ<sub>1</sub> dimension may become larger than the value shown in the catalog due to polishing process.

**MSCM**  
**MSCSM**

RoHS 10

2-C

0.8

G

D

L

0.010

+0.005

MSCM

(Identification Mark)

MSCSM

**Straight Chamfered**

| Type  | Material             | Hardness    |
|-------|----------------------|-------------|
| MSCM  | 440C Stainless Steel | 58 HRC min. |
| MSCSM | 304 Stainless Steel  | —           |

| C              | Part Number |   | L |   |    |    |    |    |    |    |  |  |
|----------------|-------------|---|---|---|----|----|----|----|----|----|--|--|
|                | Type        | D |   |   |    |    |    |    |    |    |  |  |
| 0.3<br>or Less | MSCM        | 2 | 6 | 8 | 10 | 12 | 15 |    |    |    |  |  |
|                |             | 3 |   |   | 10 | 12 | 15 | 20 |    |    |  |  |
|                |             | 4 |   |   |    | 10 | 12 | 15 | 20 |    |  |  |
| 0.5            |             | 5 |   |   |    | 10 | 12 | 15 | 20 |    |  |  |
|                |             | 6 |   |   |    | 10 | 12 | 15 | 20 | 25 |  |  |

| C              | Part Number |   | L |   |    |    |    |    |    |    |    |  |  |  |
|----------------|-------------|---|---|---|----|----|----|----|----|----|----|--|--|--|
|                | Type        | D |   |   |    |    |    |    |    |    |    |  |  |  |
| 0.3<br>or Less | MSCSM       | 2 | 6 | 8 | 10 | 12 | 15 |    |    |    |    |  |  |  |
|                |             | 3 |   |   |    |    | 10 | 12 | 15 | 20 |    |  |  |  |
|                |             | 4 |   |   |    |    | 10 | 12 | 15 | 20 |    |  |  |  |
| 0.5            |             | 5 |   |   |    |    | 10 | 12 | 15 | 20 |    |  |  |  |
|                |             | 6 |   |   |    |    | 10 | 12 | 15 | 20 | 25 |  |  |  |

Part Number Example

Part Number **MS2** - **10**

**MSCM4** - **12**