Tension / Compression tap chucks for tapping cycles that are not synchronized

For tapping applications on CNC machines where the revolutions per minute and feed rate are not synchronized to the tap pitch, tap holders with tension / compression float are recommended. These tap chucks rely on the machine spindle for reversal, but by providing axial float, the tap is able to follow the correct pitch, producing gage perfect threads.

Tapmatic offers a complete program of tension / compression tap chucks with a wide range of sizes, and three different tap holding options. Rubberflex multi range collets, ER collets, or Quick Change.

SM
Rubberflex Collets
Tension / compression floating tap holders for gage perfect threads with releasable hard start for consistent tapping depth control.

For tap sizes M1.4-M30.

Only two collets needed to cover the capacity of each holder.

SM
ER Collets
All the same features as the rubberflex version but for use with ER square drive collets.

For tap sizes M1.4-M18.

ER GB square drive collets include an internal square drive for securely gripping the tap shank.

TA
Quick Change
In addition to tension/ compression and releasable hard start, the TA series includes front release. A safety feature that releases the quick change tap adapter when the extension float is exceeded.

For tap sizes M1-M49.

Quick Change for fast tap change without wrenches

NC
Quick Change
In addition to tension/ compression and releasable hard start, the NC series includes a unique release to neutral feature that allows you to control tapping depth independent of the machine spindle stopping point.

For tap sizes M2-M22.
Tension/Compression tap chucks with modular straight shank and RF collet

Tapping chuck with increased tension and compression to accommodate tapping cycles that are not synchronized.

**Features and Advantages**
- increased tension and compression
- releasable hard start for consistent depth control
- right hand and left hand tapping
- multi-range collets (RF), adjustable back jaw for driving tap square

**How to Order**
Please select the tap chuck (A) and CAT, SK or BT shank (C), to fit your application. Please order rubber flex collets separately.

### Model | Order code | Capacity (steel) | Shank | Collets Rubber Flex (Order Code (Shank Ø)) | Tension T | Compression H
--- | --- | --- | --- | --- | --- | ---
SM2 | 023216 | M1.4–M7 #0 - 1/4" | 16mm 5/8" | 21600 (2.5-4.5) 21700 (4.5-6.5) | 4.5 | 6
| 023262 | | | | | 7 | 7
| 023202 | | | | | 11 | 11
SM4 | 023420 | M3–M12 #6 - 1/2" | 20mm 3/4" | 22100 (3.5-6.5) 22200 (6.5-10.0) | 7 | 7
| 023475 | | | | | 11 | 11
| 023402 | | | | | 17 | 17
SM6 | 023625 | M5–M18 #10 - 3/4" | 25mm 1" | 24100 (4.5-10.0) 24500 (10.0-15.0) | 7 | 7
| 023610 | | | | | 11 | 11
| 023603 | | | | | 17 | 17
SM8 | 023832 | M10–M30 1/2" - 1 1/8" | 32mm 1 1/2" | 26100 (10.8-16.0) 26200 (16.8-23.0) | 17 | 17
| 023815 | | | | | 17 | 17
| 023803 | | | | | 17 | 17
| 023804 | | | | | 17 | 17

**Note:** Additional shanks available. When using roll form taps, the tool capacity must be reduced 25%.

---

**Tension/Compression tap chucks with modular straight shank and ER collet**

Tapping chuck with increased tension and compression to accommodate tapping cycles that are not synchronized.

**Features and Advantages**
- increased tension and compression
- releasable hard start for consistent depth control
- right hand and left hand tapping
- ER steel collet chuck

**How to Order**
Please select the tap chuck (A) and CAT, SK or BT shank (C), to fit your application. Please order ER steel collets separately.

### Model | Order code | Capacity (steel) | Shank | Collets | Tension T | Compression H
--- | --- | --- | --- | --- | --- | ---
SM2 | 023216ER | M1.4–M7 #0 - 1/4" | 16mm 5/8" | ER18 | 4.5 | 5
| 023262ER | | | | | 7 | 7
| 023202ER | | | | | 11 | 11
SM4 | 023420ER | M3–M12 #6 - 1/2" | 20mm 3/4" | ER20 | 7 | 7
| 023475ER | | | | | 11 | 11
| 023402ER | | | | | 17 | 17
SM6 | 023625ER | M5–M18 #10 - 3/4" | 25mm 1" | ER25 | 11 | 11
| 023610ER | | | | | 17 | 17
| 023603ER | | | | | 17 | 17
| 023604ER | | | | | 17 | 17
---

![Tension/Compression tap chucks with modular straight shank and RF collet](image1)

![Tension/Compression tap chucks with modular straight shank and ER collet](image2)
Tension/Compression tap chucks with modular straight shank and quick change

TAPMATIC

Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Order code</th>
<th>Capacity (steel)</th>
<th>Shank</th>
<th>Adapter</th>
<th>Tension T</th>
<th>Compression H</th>
<th>Front release Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA0-016</td>
<td>490016</td>
<td>M1–M10</td>
<td>16 mm</td>
<td>Nr. 0</td>
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<td>5</td>
<td>1.7</td>
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<tr>
<td>TA0-020</td>
<td>490020</td>
<td>#0 - 1/4”</td>
<td>20 mm</td>
<td>Nr. 0</td>
<td>7.5</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>TA1-016</td>
<td>491016</td>
<td>M3–M14</td>
<td>16 mm</td>
<td>Nr. 1</td>
<td>8</td>
<td>5</td>
<td>2.1</td>
</tr>
<tr>
<td>TA1-020</td>
<td>491020</td>
<td>#8 - 9/16”</td>
<td>20 mm</td>
<td>Nr. 1</td>
<td>8</td>
<td>5</td>
<td>2.1</td>
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<tr>
<td>TA1-025</td>
<td>491025</td>
<td>25 mm</td>
<td>Nr. 1</td>
<td>8</td>
<td>5</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>TA2-025</td>
<td>492025</td>
<td>M4.5–M24</td>
<td>25 mm</td>
<td>Nr. 2</td>
<td>15</td>
<td>8.5</td>
<td>2.8</td>
</tr>
<tr>
<td>TA2-032</td>
<td>492032</td>
<td>5/16” – 7/8”</td>
<td>32 mm</td>
<td>Nr. 2</td>
<td>15</td>
<td>8.5</td>
<td>2.8</td>
</tr>
<tr>
<td>TA3-032</td>
<td>493032</td>
<td>M14–M36, 13/16”–1 3/8”</td>
<td>32 mm</td>
<td>Nr. 3</td>
<td>23.5</td>
<td>15</td>
<td>4.1</td>
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<tr>
<td>TA4-040</td>
<td>494040</td>
<td>M22–M48, 7/8”–1 7/8”</td>
<td>40 mm</td>
<td>Nr. 4</td>
<td>25</td>
<td>16.5</td>
<td>5.7</td>
</tr>
</tbody>
</table>

How to Order
Please order the tap chuck (A) and CAT, SK or BT shank (C) to fit your application. Please order tap adapters separately.

Features and Advantages
- tension and compression
- releaseable hard start for consistent depth control
- front release protects against damage if over extended
- right hand and left hand tapping
- short projection

Note: When using Roll Form Taps the chuck’s tapping capacity must be reduced by 25 %.

Tension/Compression tap chucks with Morse taper and quick change

Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Order code</th>
<th>Capacity (steel)</th>
<th>Morse taper MT</th>
<th>Tap adapters</th>
<th>Tension T</th>
<th>Compression H</th>
<th>Front release Z</th>
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<tbody>
<tr>
<td>TA0-MT1</td>
<td>490MT1</td>
<td>M1–M10</td>
<td>1</td>
<td>Nr. 0</td>
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<td>1.7</td>
</tr>
<tr>
<td>TA0-MT2</td>
<td>490MT2</td>
<td>#0 - 1/4”</td>
<td>2</td>
<td>Nr. 0</td>
<td>7.5</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>TA1-MT2</td>
<td>491MT2</td>
<td>M3–M14</td>
<td>2</td>
<td>Nr. 1</td>
<td>8</td>
<td>5</td>
<td>2.1</td>
</tr>
<tr>
<td>TA1-MT3</td>
<td>491MT3</td>
<td>#8–9/16”</td>
<td>3</td>
<td>Nr. 1</td>
<td>8</td>
<td>5</td>
<td>2.1</td>
</tr>
<tr>
<td>TA2-MT3</td>
<td>492MT3</td>
<td>M4–M24</td>
<td>3</td>
<td>Nr. 2</td>
<td>15</td>
<td>8.5</td>
<td>2.8</td>
</tr>
<tr>
<td>TA2-MT4</td>
<td>492MT4</td>
<td>5/16”–7/8”</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA2-MT5</td>
<td>492MT5</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA3-MT4</td>
<td>493MT4</td>
<td>M14–M36</td>
<td>4</td>
<td>Nr. 3</td>
<td>23.5</td>
<td>15</td>
<td>4.1</td>
</tr>
<tr>
<td>TA3-MT5</td>
<td>493MT5</td>
<td>13/16”–1 3/8”</td>
<td>5</td>
<td>Nr. 4</td>
<td>25</td>
<td>16.5</td>
<td>5.7</td>
</tr>
<tr>
<td>TA4-MT5</td>
<td>494MT5</td>
<td>7/8”–1 7/8”</td>
<td>6</td>
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<td>TA4-MT6</td>
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<td>6</td>
<td></td>
<td></td>
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</tbody>
</table>

Note: When using Roll Form Taps the chuck’s tapping capacity must be reduced by 25 %.

All dimensions are shown in mm. 25.4mm = 1”
Tension/Compression tap chucks with modular straight shank, quick change and internal coolant

Tapping chuck with internal coolant system, tension, compression and quick-change spindle, where the tap can be changed in seconds.

**Features and Advantages**
- Tension and compression
- Releaseable hard start for consistent depth control
- Front release protects against damage if over extended
- Right hand and left hand tapping
- Internal coolant system (max. 50 bar)
- Short projection

**How to Order**
Please order the tap chuck (A) and CAT, SK or BT shank (C) to fit your application.
Please order tap adapters separately.

### Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Order code</th>
<th>Capacity (steel)</th>
<th>Shank</th>
<th>Adapter</th>
<th>Tension T</th>
<th>Compression H</th>
<th>Front release Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIC1-025</td>
<td>49C1025</td>
<td>M3–M14, #8 - 9/16”</td>
<td>25</td>
<td>Nr. 1</td>
<td>7.5</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>TIC2-025</td>
<td>49C2025</td>
<td>M4.5–M24, 5/16&quot; - 7/8&quot;</td>
<td>25</td>
<td>Nr. 2</td>
<td>10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>TIC3-032</td>
<td>49C3032</td>
<td>M14–M36, 13/16&quot; - 1 3/8&quot;</td>
<td>32</td>
<td>Nr. 3</td>
<td>20</td>
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<td>5</td>
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</tbody>
</table>

**Note:** When using Roll Form Taps the chuck’s tapping capacity must be reduced by 25%.

Tension/Compression tap chucks with HSK shank, quick change and internal coolant

How to Order
Please select the tap chuck (A) to fit your application. Please order quick change tap adapters separately.

### Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Order code</th>
<th>Capacity (steel)</th>
<th>Shank S</th>
<th>Adapter</th>
<th>Tension T</th>
<th>Compression H</th>
<th>Front release Z</th>
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<tbody>
<tr>
<td>TIC1-HSK50A</td>
<td>49C1H50</td>
<td>M3–M14</td>
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<td>Nr. 1</td>
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<td>2.5</td>
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<td>TIC1-HSK63A</td>
<td>49C1H63</td>
<td>#8 - 9/16”</td>
<td>63</td>
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<td></td>
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<td></td>
<td>80</td>
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<tr>
<td>TIC2-HSK50A</td>
<td>49C2H50</td>
<td>M4.5–M24</td>
<td>50</td>
<td>Nr. 2</td>
<td>10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>TIC2-HSK63A</td>
<td>49C2H63</td>
<td>5/16” - 7/8”</td>
<td>63</td>
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<td>TIC2-HSK80A</td>
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</table>

**Note:** When using Roll Form Taps the chuck’s tapping capacity must be reduced by 25%.
All dimensions are shown in mm, 25.4mm = 1"
Tension/Compression tap holders with self feed and release to neutral

The NC Series Tools include a unique feature which allows you to control the tapping depth independent of the stopping position of the machine spindle. When the feed is paused with the spindle of the machine still rotating, the tap will continue into the hole for a short "self feed" distance, extending the tension float of the tap holder. Once this position is reached the drive of the tap holder releases and the tap stops. The machine spindle can then be stopped, reversed and retracted. The release feature is an accurate way to control tapping depth in blind holes and can be used on both CNC controlled machines or even on conventional machines where the operator is controlling the feed.

Tension/Compression tap chucks with modular straight shank, quick change and release to neutral

(A) NC Tapping Chuck with Straight Shank, Quick-Change Adapter

<table>
<thead>
<tr>
<th>Model</th>
<th>Order code</th>
<th>Capacity (steel)</th>
<th>Shank</th>
<th>Adapter Size</th>
<th>Weight kg</th>
<th>D</th>
<th>L</th>
<th>Self-feed</th>
<th>Self-release</th>
<th>Compression</th>
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<tbody>
<tr>
<td>NC0</td>
<td>34002</td>
<td>M2–M6</td>
<td>20 mm</td>
<td>Nr. 0</td>
<td>0.4</td>
<td>38</td>
<td>60</td>
<td>5</td>
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<tr>
<td></td>
<td>34008</td>
<td>#4–1/4&quot;</td>
<td>3/4&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>NC1</td>
<td>34012</td>
<td>M3–M12</td>
<td>25 mm</td>
<td>Nr. 1</td>
<td>1.2</td>
<td>51</td>
<td>85</td>
<td>5</td>
<td>15</td>
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<tr>
<td></td>
<td>34010</td>
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<td>1&quot;</td>
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<tr>
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<td>34920S</td>
<td>5/16&quot;–7/8&quot;</td>
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</tr>
</tbody>
</table>

Features and Advantages
- tension compression
- releasable hard start for consistent depth control
- self-release for precise depth control independent of machine spindle stop
- quick-change version for fast tap changes without any wrenches

How to order
Please select the tapping chuck (A) and CAT, SK or BT shank (B), to fit your application. Standard adapters (C) shown in accessories section.