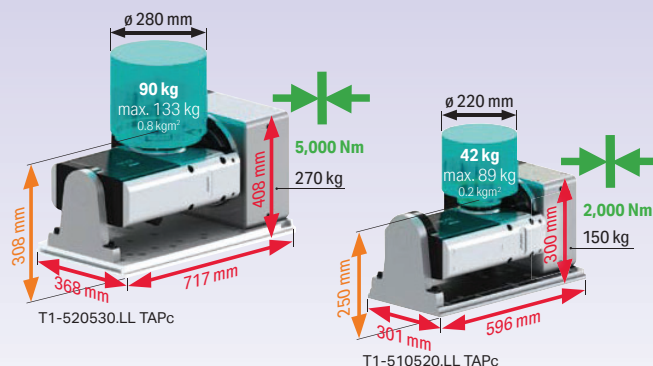


# T1-Type Rotary Tables TAP (unclamped supporting bearing)



\*optional



■ = Dividing axis for High Series (high speed, high resistance)

|                                                      |                                    |                                                                                     |                                                                                     | T1-507510<br>TAP1(c)                                                                | T1-508510<br>TAP1(c)s | T1-510520<br>TAP2(c)     | T1-511520<br>TAP2(c)s | T1-520530<br>TAP3(c) | T1-521530<br>TAP3(c)s |       |     |
|------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|--------------------------|-----------------------|----------------------|-----------------------|-------|-----|
| Dimensions                                           | Swivel ø                           |                                                                                     | mm                                                                                  | 180                                                                                 |                       | 220                      |                       | 195                  |                       |       |     |
|                                                      | Swiveling range                    |                                                                                     | degrees                                                                             | 90° +5°/-25° (optional 180° ±25°)                                                   |                       |                          |                       |                      |                       |       |     |
|                                                      | Center height                      |                                                                                     | mm                                                                                  | 180                                                                                 |                       | 210 (235 <sup>3)</sup> ) |                       | 268 / 308            |                       |       |     |
|                                                      | Total weight                       | with motor                                                                          | kg                                                                                  | 90 (85)                                                                             |                       | 160 (150)                |                       | 300 (270)            |                       |       |     |
|                                                      | Center bore                        | Standard / increased                                                                | mm                                                                                  | 30                                                                                  |                       | 34                       |                       | 46 / 64              |                       |       |     |
| Bearing / Clamping                                   | Max. clamping torque               | 4 <sup>th</sup> axis                                                                |    | Nm                                                                                  | 300                   | 250                      | 800                   | 600                  | 2,000                 | 1,800 |     |
|                                                      |                                    | 5 <sup>th</sup> axis                                                                |                                                                                     | Nm                                                                                  | 800                   |                          | 2,000                 |                      | 5,000                 |       |     |
|                                                      | Max. spindle load                  | 0°~30°                                                                              |    | kg                                                                                  | 79                    |                          | 133                   |                      | 200                   |       |     |
|                                                      |                                    | 30°~90°                                                                             |                                                                                     | kg                                                                                  | 53                    |                          | 89                    |                      | 133                   |       |     |
|                                                      |                                    | Standard load <sup>1)</sup>                                                         |                                                                                     | kg                                                                                  | 17                    | 12                       | 42                    | 21                   | 90                    | 61    |     |
|                                                      | Max. axial force                   | 4 <sup>th</sup> axis                                                                |    | kN                                                                                  | 6                     |                          | 10                    |                      | 40                    |       |     |
|                                                      | Max. pull-out torque               | 4 <sup>th</sup> axis                                                                |    | Nm                                                                                  | 1,200                 |                          | 2,000                 |                      | 3,900                 |       |     |
|                                                      |                                    | 5 <sup>th</sup> axis                                                                |                                                                                     | Nm                                                                                  | 2,000                 |                          | 3,900                 |                      | 10,400                |       |     |
|                                                      | Gear unit                          | Max. moment of inertia                                                              | Standard load <sup>1)</sup>                                                         |  | kgm <sup>2</sup>      | 0.05                     | 0.025                 | 0.2                  | 0.07                  | 0.8   | 0.4 |
|                                                      |                                    |                                                                                     | J max                                                                               |                                                                                     | kgm <sup>2</sup>      | 0.5                      | 0.25                  | 2                    | 0.7                   | 8     | 4   |
| Feed torque max <sup>4)</sup>                        |                                    | 4 <sup>th</sup> axis                                                                |  | Nm                                                                                  | 120                   | 70                       | 250                   | 150                  | 440                   | 220   |     |
|                                                      |                                    | 5 <sup>th</sup> axis                                                                |                                                                                     | Nm                                                                                  | 250                   |                          | 440                   |                      | 650                   |       |     |
| Limited torques due to eccentric loads <sup>6)</sup> |                                    |                                                                                     | Nm                                                                                  | 40                                                                                  |                       | 110                      |                       | 280                  |                       |       |     |
| Gear unit loading<br>5 <sup>th</sup> Axis            |                                    | without load                                                                        |                                                                                     | Nm                                                                                  | -12                   |                          | -22                   |                      | -44                   |       |     |
|                                                      |                                    | with standard load                                                                  |                                                                                     | Nm                                                                                  | 15                    | 10                       | 30                    | 5                    | 100                   | 45    |     |
| Indexing accuracy Pa                                 |                                    | M max                                                                               |                                                                                     | Nm                                                                                  | 250                   |                          | 440                   |                      | 650                   |       |     |
|                                                      |                                    | 4 <sup>th</sup> axis <sup>2)</sup>                                                  |  | ± arc sec                                                                           | 20/15                 |                          | 17/10                 |                      | 12/8                  |       |     |
| 5 <sup>th</sup> axis (90°) <sup>5)</sup>             |                                    | ± arc sec                                                                           |                                                                                     | 35/20                                                                               | 35/22                 | 21/22                    | 21/13                 | 11/38                | 11/20                 |       |     |
| Repeat accuracy Ps average                           | 4 <sup>th</sup> axis               |  | ± arc sec                                                                           | 2                                                                                   |                       |                          |                       |                      |                       |       |     |
|                                                      | 5 <sup>th</sup> axis               |                                                                                     | ± arc sec                                                                           | 2                                                                                   |                       |                          |                       |                      |                       |       |     |
| Max speed at standard load                           | 4 <sup>th</sup> axis <sup>1)</sup> |  | min <sup>-1</sup>                                                                   | 111                                                                                 | 210                   | 80                       | 160                   | 50                   | 100                   |       |     |
|                                                      | 5 <sup>th</sup> axis <sup>1)</sup> |                                                                                     | min <sup>-1</sup>                                                                   | 60                                                                                  |                       | 40                       |                       | 25                   |                       |       |     |
| Precision                                            | Radial run-out <sup>2)</sup>       | on spindle ø                                                                        | µm                                                                                  | 6 / 3                                                                               |                       |                          |                       |                      |                       |       |     |
|                                                      | Axial run-out <sup>2)</sup>        | at spindle end face                                                                 | µm                                                                                  | 6 / 3                                                                               |                       |                          |                       |                      |                       |       |     |
|                                                      | Parallelism <sup>2)</sup>          | Spindle to base                                                                     | µm/100 mm                                                                           | 10 / 5                                                                              |                       |                          |                       |                      |                       |       |     |

<sup>1)</sup> Mutually dependent; for individual drive motor data, see right side

<sup>2)</sup> Standard / increased; for measuring method and validity of the values, please refer to p. 80, for optional angular position measuring systems, please refer to p. 82/83

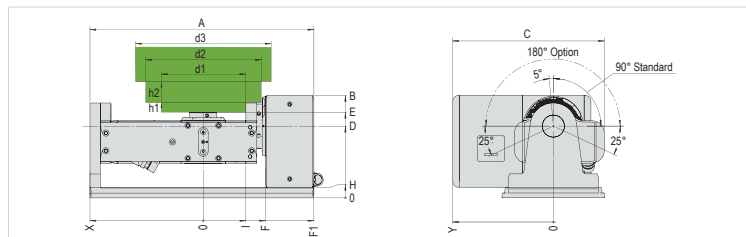
<sup>3)</sup> In relation to dividing axis when in the horizontal position

<sup>4)</sup> Limit value for gear unit, at 1 rpm

<sup>5)</sup> Without load / with standard load 0°-90°

<sup>6)</sup> For torque calculation, see p. 120

## Dimensions



|       | A   | B   | C   | C*  | D   | E   | F   | F1  | H  | I   | R   | X   | Y   | Y*  | d1  | d2  | d3  | h1 | h2  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| TAP1  | 567 | 245 | 382 | 404 | 180 | 226 | 151 | 277 | 30 | 102 | 149 | 290 | 248 | 270 | 280 | 350 |     | 55 |     |
| TAP1c | 520 | 245 | 382 | 404 | 180 | 226 | 104 | 230 | 30 | 55  | 149 | 290 | 248 | 270 | 186 | 350 |     | 55 |     |
| TAP2  | 656 | 300 | 444 | 469 | 210 | 250 | 182 | 324 | 30 | 125 | 173 | 332 | 295 | 320 | 248 | 340 | 400 | 30 | 95  |
| TAP2c | 596 | 300 | 444 | 469 | 210 | 250 | 122 | 264 | 30 | 65  | 173 | 332 | 295 | 320 | 128 | 220 | 400 | 30 | 95  |
| TAP3  | 804 | 408 | 554 |     | 268 | 308 | 242 | 422 | 38 | 177 | 195 | 382 | 390 |     | 352 | 456 | 500 | 66 | 166 |
| TAP3c | 717 | 408 | 554 |     | 268 | 308 | 155 | 335 | 38 | 90  | 195 | 382 | 390 |     | 178 | 182 | 500 | 66 | 166 |

Dimensions with 508, 511 or 521 identical to 507510, 510520 and 520530.

\*With large motor (option)

## Important information

### Center height increase (option)

Depending on the accessories involved (clamping cylinder, rotary union, angular position measuring system...), a center height increase (dimension D) is required. (See page for respective accessory)

