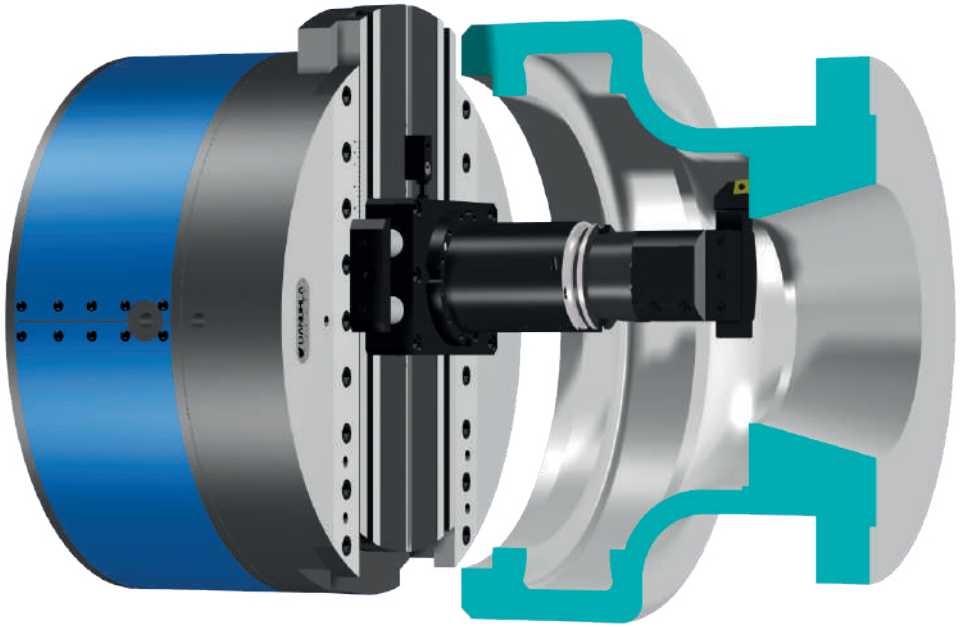
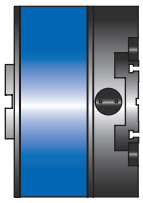
# U-TRONIC

**U-TRONIC** -Medium and large Numerical Control heads, applicable on boring machines, machining centers and special machines.
The slide movement is managed by an integrated servomotor and directly connected to the NC.
The application requires an interface flange that can be provided in manual, automatic, extended and angular versions.
In addition to the standard range, the version with integrated reduction gear is available and, upon request, the special versions with hole, with double slide and with counterweights for self-balancing.



## STANDARD

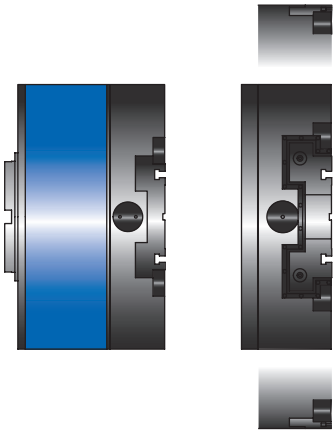
**UT 3-360**
Ø max 800



**UT 5-500**
Ø max 1000

**UT 5-630**
Ø max 1250

**UT 5-800**
Ø max 1600

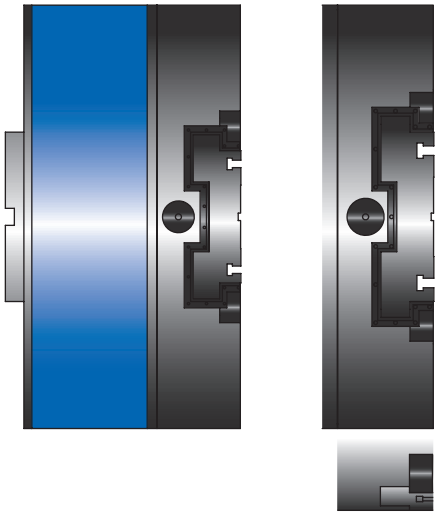


**UT 8-800**
Ø max 1600

**UT 8-1000**
Ø max 2000

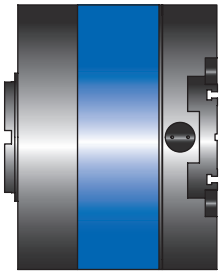
**UT 8-1250**
Ø max 2500

**UT 8-1600**
Ø max 3200

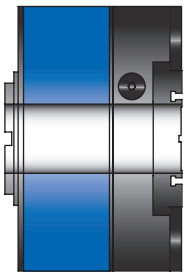


## SPECIALS

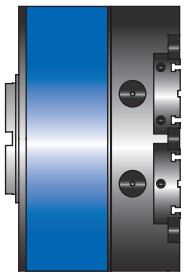
GEARBOX



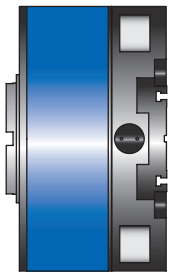
HOLE



DOUBLE SLIDE

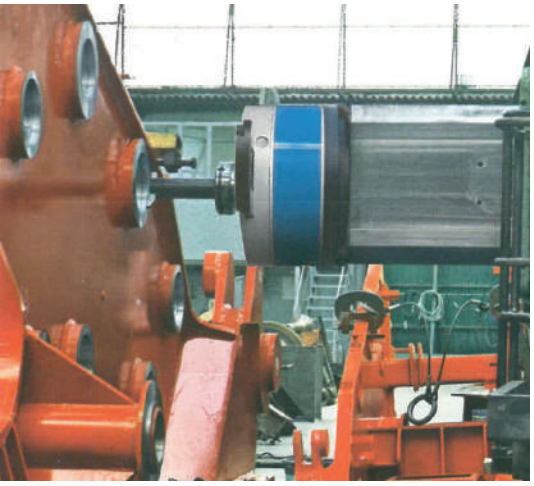
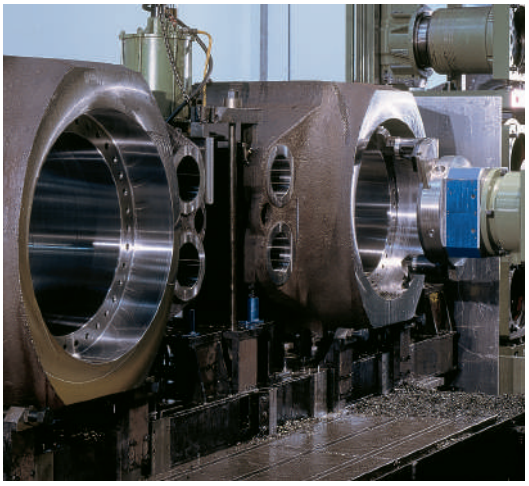
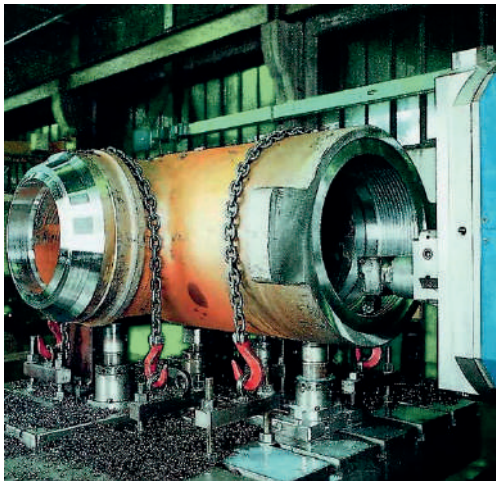
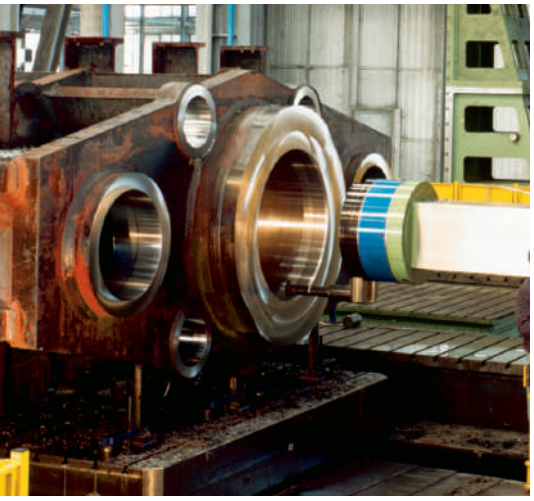
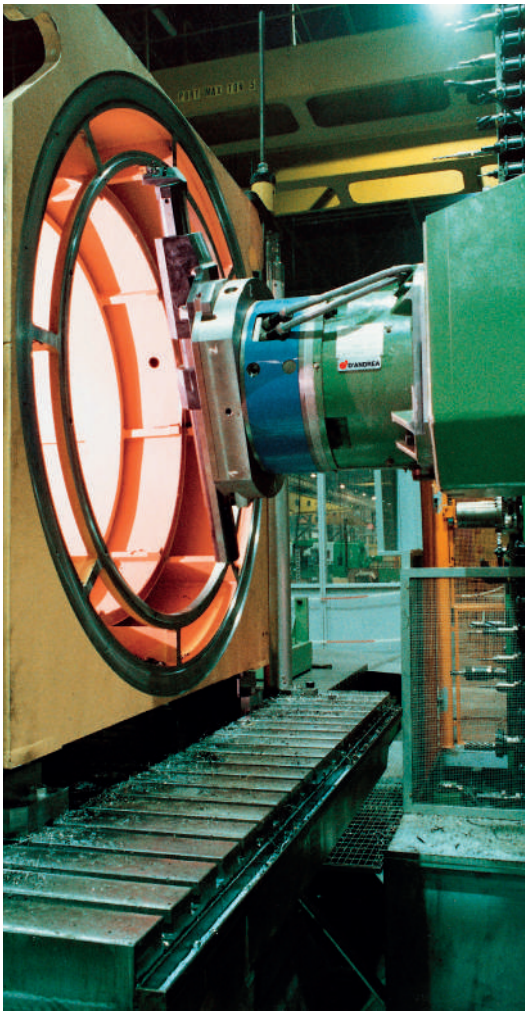
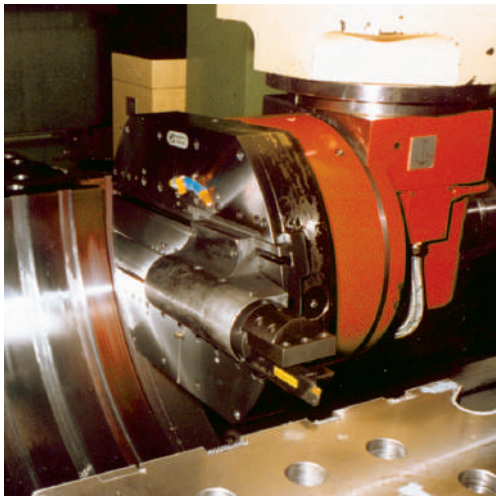


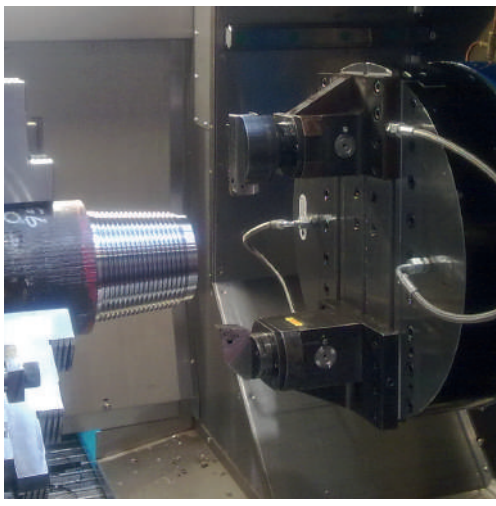
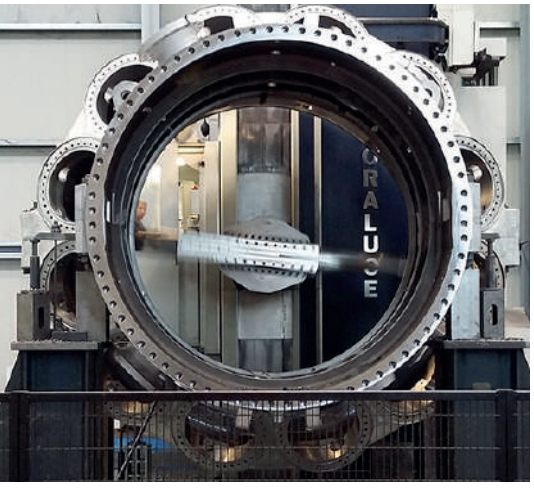
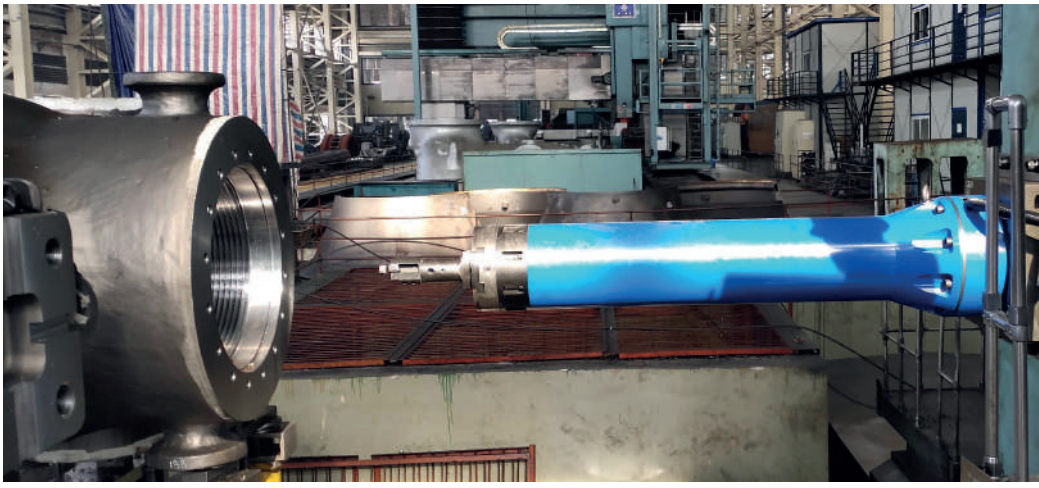
HIGH SPEED
( BALANCED )



ANGULAR HEADS

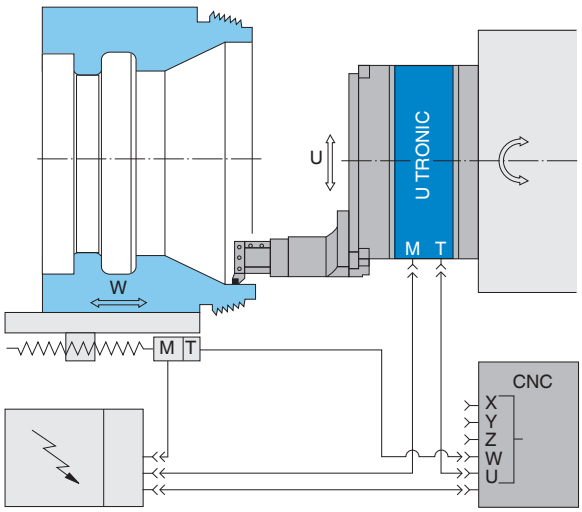
EXTENDED

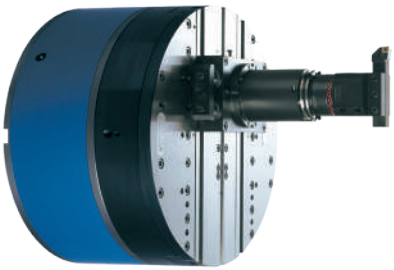









CRALUCE


# U-TRONIC

## COMMAND

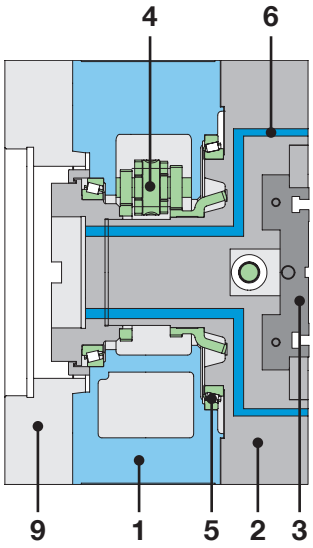


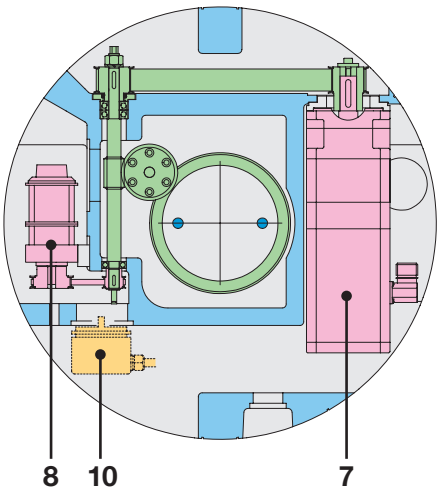



CNC

The control of the U-TRONIC HEADS takes place through the direct connection to the "U" axis of the machine numerical control. Through the interpolation of the axes, it allows to perform any type of turning, boring, radiusing and spherical operations.

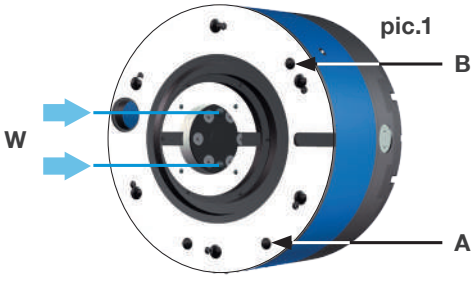
## COMPONENTS

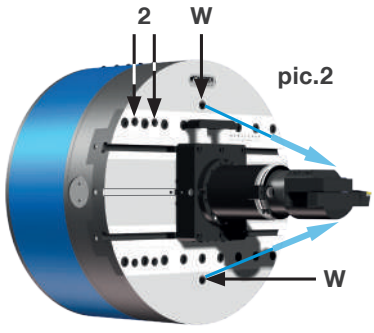


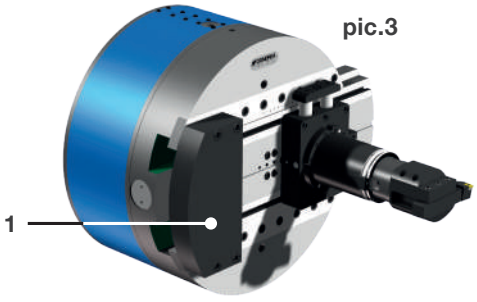




**1.** Stationary body
**2.** Rotating body
**3.** Tool slide
**4.** Gears
**5.** Bearings
**6.** Coolant way
**7.** Servomotor
**8.** Limit switches
**9.** Flange
**10.** Encoder on request

## PREARRANGEMENTS




**A-Internal pressurization pic.1**
To prevent liquid and dust from getting into the motor, transducer, and limit switch areas, an Ø 8,5 **(A)** hole is provided for internal pressurization of the fixed body with an air inlet at **0.5-1 BAR.**

**B-Automatic greaser pic.1**
A Ø 8,5 **(B)** hole is provided on the head so that grease can be automatically put in the U-TRONIC.

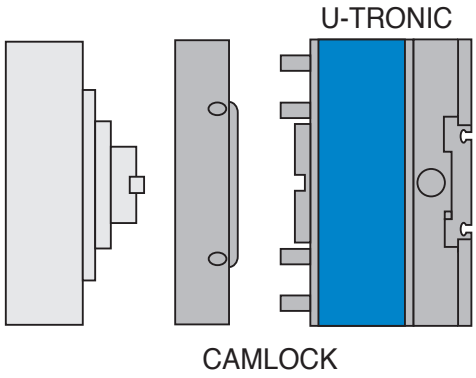
**Coolant supply pic.1-2**
Internal coolant channels **(W)** are provided inside the U-TRONIC head that allow coolants to pass through from the machine spindle until the two threaded holes located next to the slide **(W).** Hoses can be screwed on these holes to bring coolant directly to the tool. **Max pressure BAR 40.**

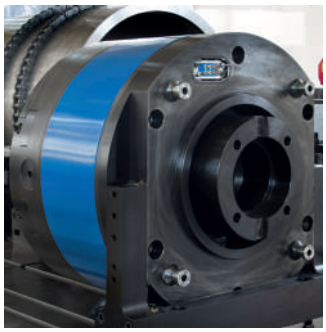
**Balancing pic.3**
To improve working conditions and balance the tool position when it appears shifted in relation to the U-TRONIC axis, counterweights **(1)** can be applied using the threaded holes **(2)** located on the rotating body.

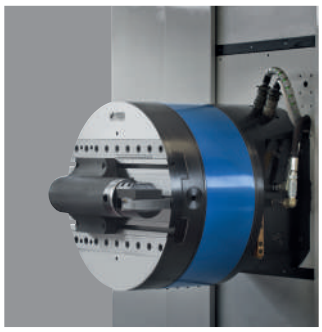
# APPLICATION

U-TRONIC is applied manually or automatically by using a flange for fastening to the machine tool and a driving plate for the rotary body rotation.

It is applied manually using a flange for fastening with a cam lock quick coupling, or automatically with a palletized system and special connectors.

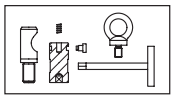


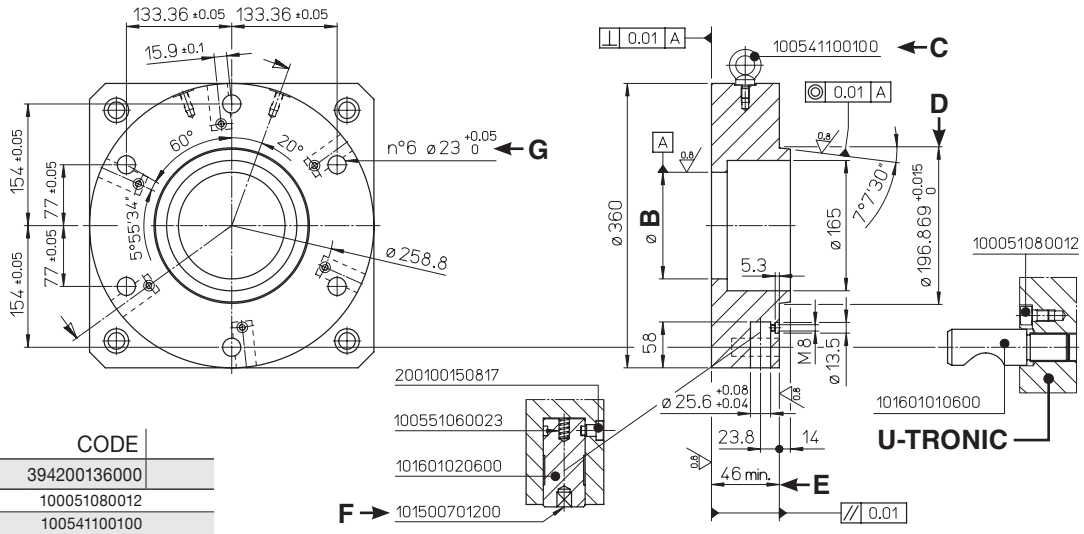





## U-TRONIC 3-360 S

The following layout shows the basic information for the flange manufacturing with cam lock rapid coupling.
**The U-TRONIC UT 8-800 S and UT 8-1000 S do not include the fastening with a cam lock quick coupling.**



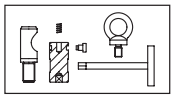


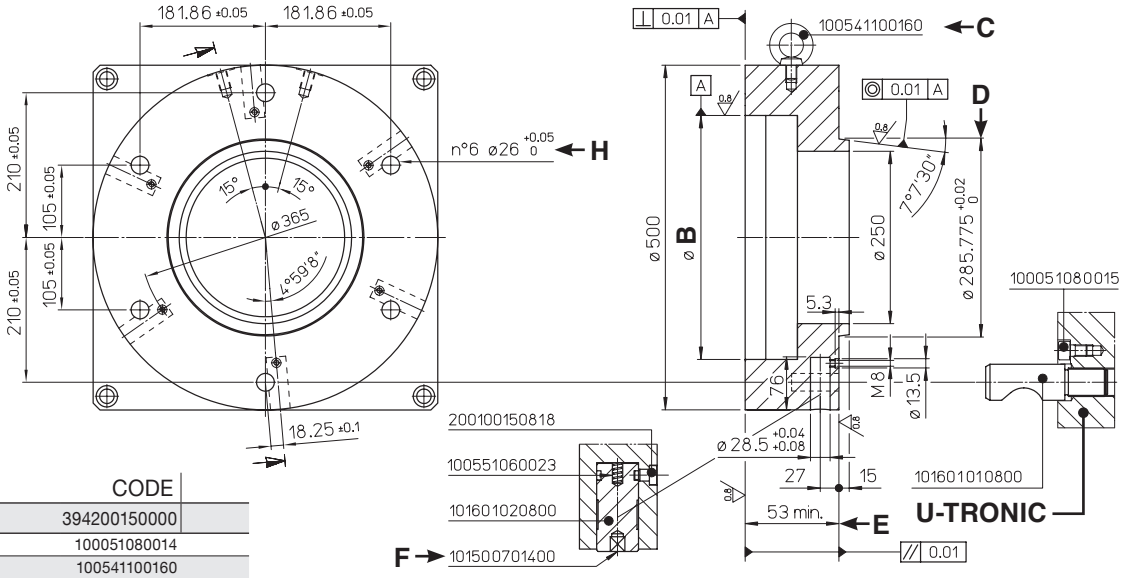

| REF | CODE |
|---|---|
| KIT CAMLOCK UT 360 | 394200136000 |
| n°6 VTC 8x12 | 100051080012 |
| n°1 EYEBOLT M10 UT BASE 3 | 100541100100 |
| n°6 SPRING UT BASE 3-5 | 100551060023 |
| n°1 KEY FOR CAM 6 UT BASE 3 | 101500701200 |
| n°6 CAMLOCK PIN 6 UT BASE 3 | 101601010600 |
| n°6 CAMLOCK CAM 6 UT BASE 3 | 101601020600 |
| n°6 PIN FOR CAM 6 UT BASE 3 | 200100150817 |

**B** Spindle centering **C** Eyebolt **D** Control with gauge **E** Measurement to control depending on spindle protrusion **F** Spanner **G** Bores min. depth 46

## U-TRONIC 5-500 / 5-630 / 5-800 S

The following layout shows the basic information for the flange manufacturing with cam lock rapid coupling.
**The U-TRONIC UT 8-800 S and UT 8-1000 S do not include the fastening with a cam lock quick coupling.**






| REF | CODE |
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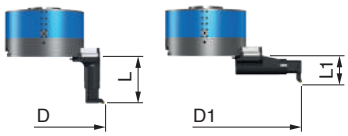
| n°6 VTC 8x14 | 100051080014 |
| n°1 EYEBOLT M16 UT BASE 5 | 100541100160 |
| n°6 SPRING UT BASE 3-5 | 100551060023 |
| n°1 KEY FOR CAM 8 UT BASE 5 | 101500701400 |
| n°6 CAMLOCK PIN 8 UT BASE 5 | 101601010800 |
| n°6 CAMLOCK CAM 8 UT BASE 5 | 101601020800 |
| n°6 PIN FOR CAM 8 UT BASE 5 | 200100150818 |

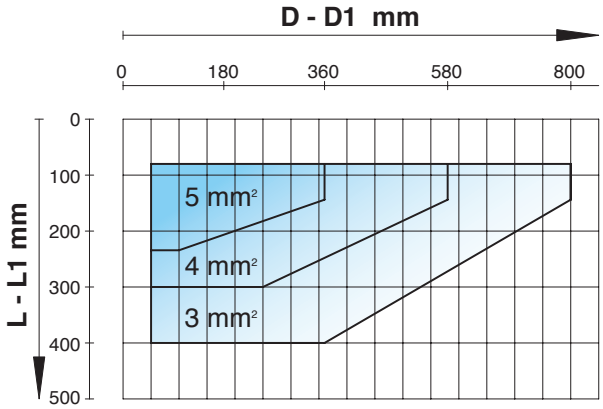
**B** Spindle centering **C** Eyebolt **D** Control with gauge **E** Measurement to control depending on spindle protrusion **F** Spanner **H** Bores min. depth 53

## CHIP REMOVAL CAPACITY

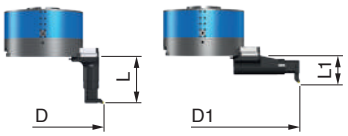
The chip removals are indicative for normal working conditions on steels with hardness 160-200 HB, (average Ks = 2000 N/mm2) recommended Vt 120/160 m/min. **The optimal values and working times must be determined with trials.**

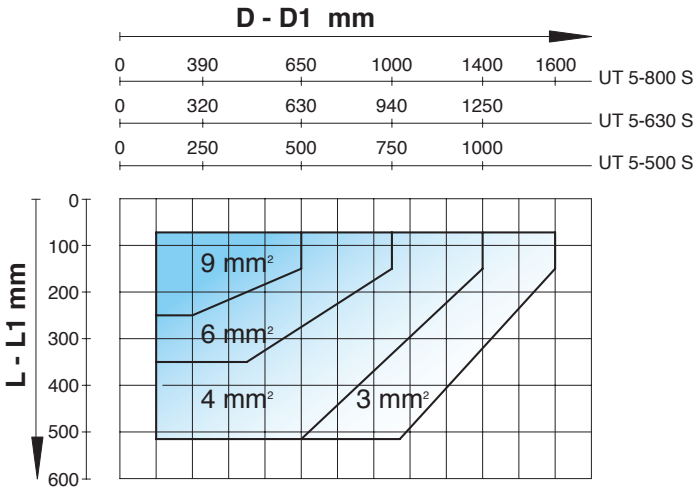
### U-TRONIC 3-360 S



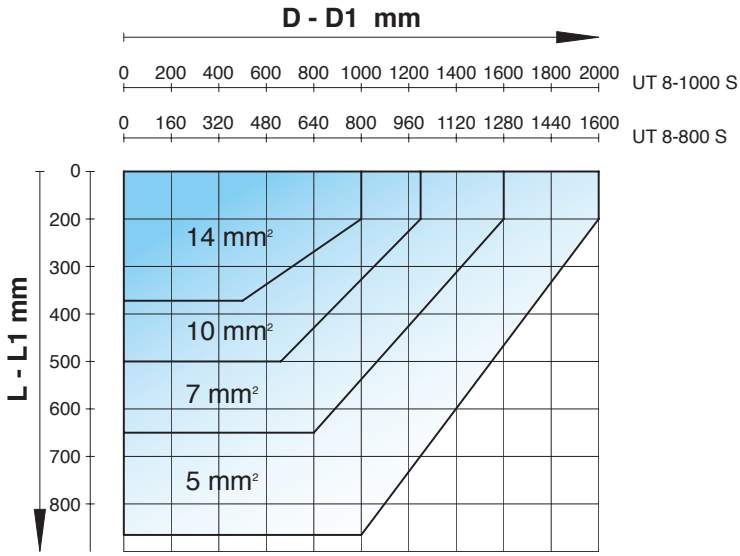



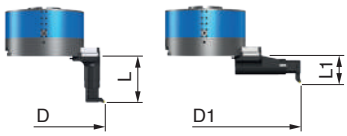

### U-TRONIC 5-500 S 5-630 S 5-800 S



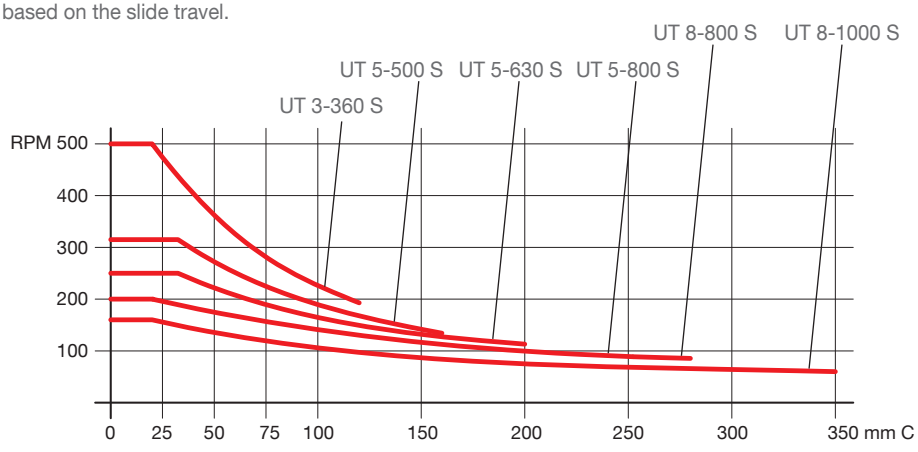

### U-TRONIC 8-800 S 8-1000 S



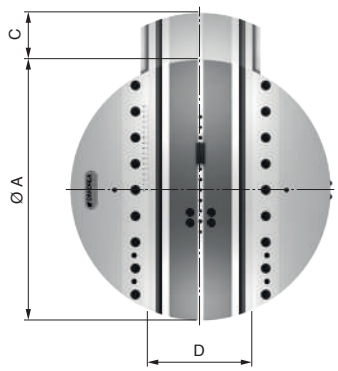



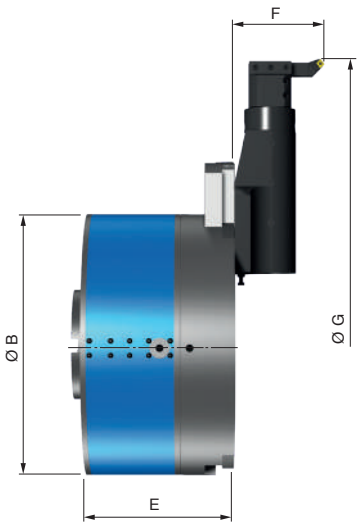

## MAX ROTATION SPEED

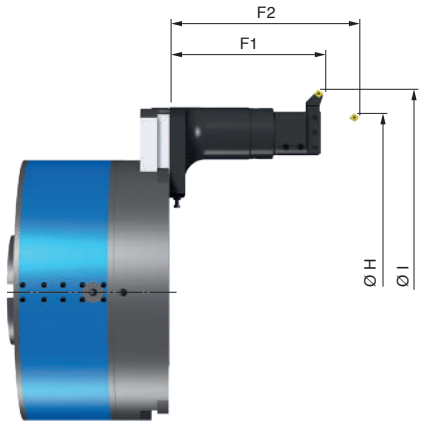
For optimal U-TRONIC head operations and to protect it from damages, it is advisable to follow the chart below that indicates the **maximum rpm,** based on the slide travel.



# TECHNICAL DATA



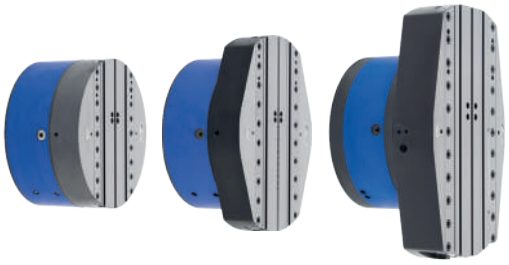




| TECHNICAL DATA | | UT 3-360 S | UT 5-500 S | UT 5-630 S | UT 5-800 S | UT 8-800 S | UT 8-1000 S |
|---|---|---|---|---|---|---|---|
| Ø A | mm | 360 | 500 | 630 | 800 | | 1000 |
| Ø B | mm | 360 | 500 | | | 800 | |
| C Radial traverse | mm | 120 | 160 | 200 | 250 | 280 | 350 |
| D | mm | 154.6 | 199.6 | | 230 | 250 | 260 |
| E | mm | 235 | 278.5 | 282 | 370 | 410 | 415 |
| Ø G x F | mm | 800 x 140 | 1000 x 150 | 1250 x 150 | 1600 x 150 | 1600 x 160 | 2500 x 160 |
| Ø H x F2 | mm | 400 x 400 | 560 x 540 | 700 x 540 | 830 x 540 | 850 x 860 | 1050 x 860 |
| Ø I x F1 | mm | 670 x 240 | 850 x 295 | 1050 x 295 | 1300 x 295 | 1250 x 370 | 1600 x 370 |
| Max. mm/min | mm/min | 1 ÷ 400 | | | | 1 ÷ 500 | |
| Max. ↻/min | RPM | 500 | 315 | 250 | 200 | | 160 |
| Weight | Kg | 130 | 230 | 310 | 530 | 1000 | 1200 |
| Radial force | daN | 400 | 500 | | | 1000 | |
| Torque | daNm | 400 | 800 | | | 1000 | |
| Boring accuracy | | H7 | | | | | |
| Max chip removal | $mm^2$ C40 | 5 | 9 | | | 14 | |
| Rapid trasverse | mm/min | 400 | | | | 500 | |
| Roughness | Ra | 0,8 ~ 1,2 | | | | | |

## K02

UT 3-360 S

| REF. | |
|---|---|
| K02 UT 3-360 S | |



UT 5-500 S UT 5-630 S UT 5-800 S

| REF. | |
|---|---|
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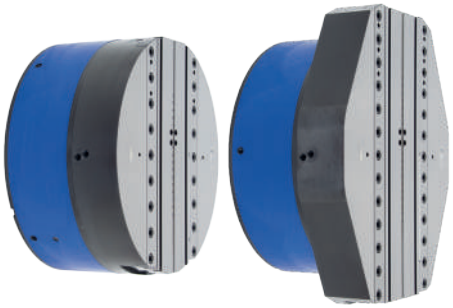
| K02 UT 5-630 S | |
| K02 UT 5-800 S | |



UT 8-800 S UT 8-1000 S

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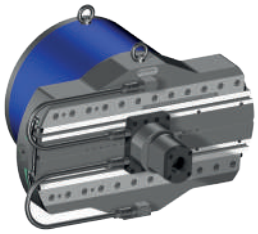
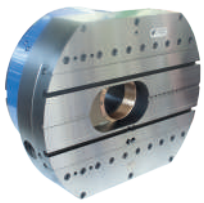
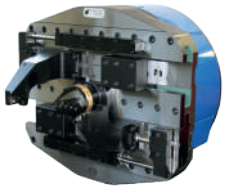
| K02 UT 8-1000 S | |



Gearbox



Hole



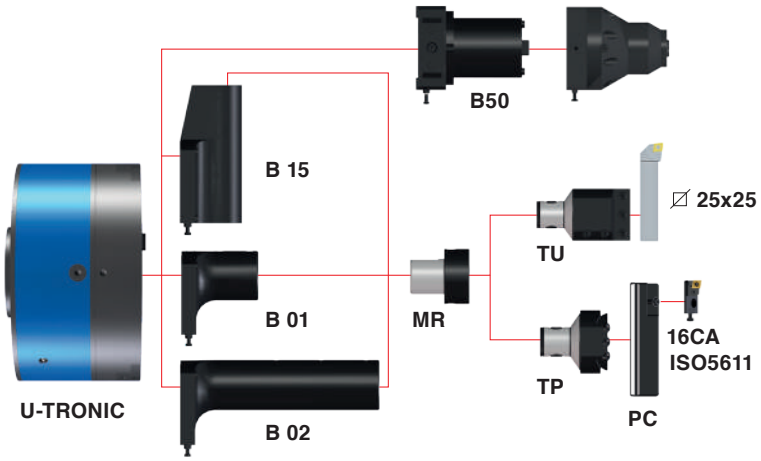
Double slide

High Speed

Angular Heads

Extended

## UT 3-360 / 5-500 / 5-630 / 5-800 / 8-800 / 8-1000 S



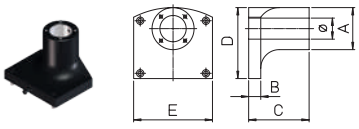

### K03

1 B 01
1 B 02
1 B 15
1 MR
1 TU

### FLANGE UT

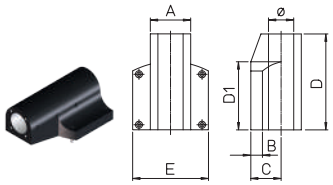
| REF. | CODE |
|---|---|
| KIT K03 UT 3-360 S | 501703259300 |
| KIT K03 UT 5-500/5-630/5-800 S | 501705009300 |
| KIT K03 UT 8-800/8-1000 S | 501708009300 |

### B01/B02



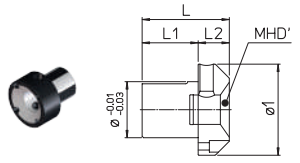

| U-TRONIC | REF. | CODE | ØH7 | A | B | C | D | E | kg |
|---|---|---|---|---|---|---|---|---|---|
| UT 3-360 S | B01 | 443005001150 | 50 | 80 | 23 | 100 | 135 | 150 | 5.5 |
| | B02 | 443005002750 | 50 | 80 | 23 | 260 | 135 | 150 | 8.5 |
| UT 5-500 / 5-630 / 5-800 S | B01 | 443006301550 | 63 | 100 | 30 | 155 | 170 | 200 | 11 |
| | B02 | 443006303650 | 63 | 100 | 30 | 400 | 170 | 200 | 19 |
| UT 8-800 / 8-1000 S | B01 | 443008002300 | 80 | 130 | 30 | 230 | 200 | 250 | 25 |
| | B02 | 443008007200 | 80 | 130 | 30 | 720 | 250 | 250 | 60 |

### B15



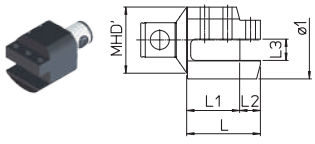

| U-TRONIC | REF. | CODE | ØH7 | A | B | C | D | D1 | E | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| UT 3-360 S | B15 | 445005001900 | 50 | 80 | 23 | 60 | 190 | 135 | 150 | 3.7 |
| UT 5-500 / 5-630 / 5-800 S | B15 | 445006302500 | 63 | 100 | 30 | 70 | 270 | 170 | 200 | 7.5 |
| UT 8-800 / 8-1000 S | B15 | 445008003001 | 80 | 130 | 30 | 85 | 300 | 200 | 250 | 34 |

### MR




| U-TRONIC | REF. | CODE | MHD' | ØH7 | Ø1 | L | L1 | L2 | kg |
|---|---|---|---|---|---|---|---|---|---|
| UT 3-360 S | MR 50/80.80 | 450208001060 | 80 | 50 | 80 | 95 | 50 | 45 | 1.6 |
| UT 5-500 / 5-630 / 5-800 S | MR 63/98.80 | 450209801060 | 80 | 63 | 98 | 105 | 60 | 45 | 3 |
| UT 8-800 / 8-1000 S | MR 80/130.80 | 450213001240 | 80 | 80 | 130 | 125 | 80 | 45 | 6 |
| | MR 80/130.110 | 450213001340 | 110 | 80 | 130 | 185 | 80 | 105 | 9 |

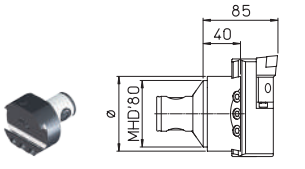
### TU




| U-TRONIC | REF. | CODE | MHD' | Ø1 | L | L1 | L2 | L3 | kg |
|---|---|---|---|---|---|---|---|---|---|
| UT 3 / 5 / 8 ... S ♦ | TU 50/60.16 | 460505016001 | 50 | 60 | 60 | 44 | 16 | 16 | 1.2 |
| UT 3 / 5 / 8 ... S ♦ | TU 63/75.20 | 460506320001 | 63 | 75 | 75 | 55 | 20 | 20 | 4 |
| UT 3 / 5 / 8 ... S | TU 80/95.25 | 460508025001 | 80 | 95 | 90 | 65 | 25 | 25 | 3.6 |

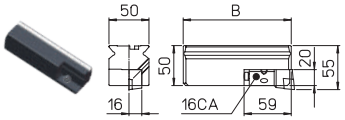
♦ Use with **RD 80/ ....**

### TP




| U-TRONIC | REF. | CODE | Ø | kg |
|---|---|---|---|---|
| UT 3-360 S | TP 80/90.50 | 460408050001 | 90 | 2.3 |
| UT 5-500 / 5-630 / 5-800 S | TP 80/90.50 | 460408050001 | 90 | 2.3 |
| UT 8-800 / 8-1000 S | TP 80/125.50 | 460408050002 | 125 | 3.2 |

### PC




| U-TRONIC | REF. | CODE | Ø | kg |
|---|---|---|---|---|
| UT 3-360 S | PC 11.50 | 433050160950 | 95 | 1.3 |
| UT 5-500 / 5-630 / 5-800 S | PC 12.50 | 433050161350 | 135 | 2 |
| | PC 13.50 | 433050162000 | 200 | 3.2 |
| UT 8-800 / 8-1000 S | PC 14.50 | 433050163000 | 300 | 5 |

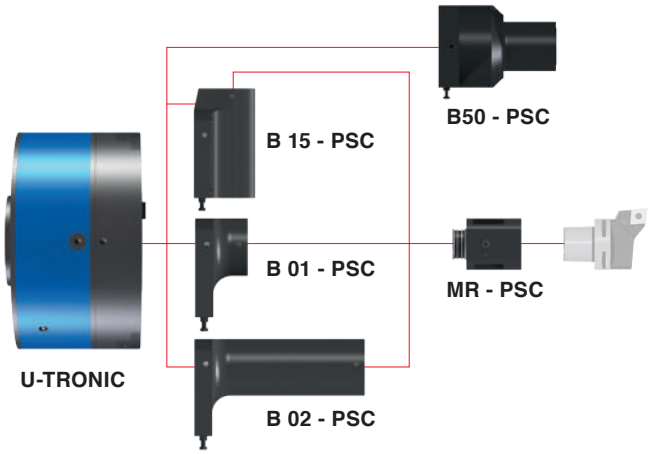
| PTGNL16CA-16 | |
|---|---|
| CODE | 483010161001 |
| △ | TNM1604 |

| PCLNL16CA-12 | |
|---|---|
| CODE | 483010161002 |
| ◇ | CNM1204 |

| PSSNL16CA-12 | |
|---|---|
| CODE | 483010161003 |
| ◇ | SNM1204 |

| PSRNL16CA-12 | |
|---|---|
| CODE | 483010161004 |
| ◇ | SNM1204 |

# UT 3-360 / 5-500 / 5-630 / 5-800 / 8-800 / 8-1000 S

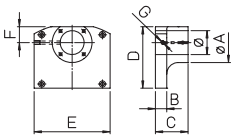



## K03 - PSC

1 B 01 - PSC
1 B 02 - PSC
1 B 15 - PSC
1 MR - PSC

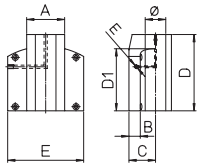
| REF. | CODE | |
|---|---|---|
| **KIT K03 PSC 63 UT 3-360 S** | 501703259304 | |
| **KIT K03 PSC 63 UT 5-500/5-630/5-800 S** | 501705009310 | |
| **KIT K03 PSC 80 UT 5-500/5-630/5-800 S** | 501705009302 | |
| **KIT K03 PSC 80 UT 8-800 / 8-1000 S** | 501708009301 | |

## B01 / B02 - PSC



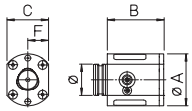

| U-TRONIC | REF. | CODE | ØH7 | A | B | C | D | E | F | G | kg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UT 3-360 S | **B01 - PSC 63** | 443005000310 | 63 | 105 | 23 | 31 | 137 | 150 | 42 | G1/8' | 3.5 | | |
| | **B02 - PSC 63** | 443005001610 | 63 | 105 | 23 | 161 | 137 | 150 | 42 | G1/8' | 10 | | |
| UT 5-500 / 5-630 / 5-800 S | **B01 - PSC 63** | 443006302002 | 63 | 105 | 30 | 86 | 162 | 200 | 42 | G1/8' | 11 | | |
| | **B02 - PSC 63** | 443006304452 | 63 | 105 | 30 | 331 | 162 | 200 | 42 | G1/8' | 20 | | |
| | **B01 - PSC 80** | 443006302001 | 75 | 130 | 30 | 71 | 185 | 180 | 50 | G1/8' | 10.5 | | |
| | **B02 - PSC 80** | 443006304451 | 75 | 130 | 30 | 316 | 235 | 180 | 50 | G1/8' | 30 | | |
| UT 8-800 / 8-1000 S | **B01 - PSC 80** | 443008001460 | 75 | 130 | 30 | 146 | 182 | 250 | 50 | G1/4' | 16 | | |
| | **B02 - PSC 80** | 443008006360 | 75 | 130 | 30 | 636 | 182 | 250 | 50 | G1/4' | 53 | | |

## B15 - PSC




| U-TRONIC | REF. | CODE | ØH7 | A | B | C | D | D1 | E | F | G | kg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UT 3-360 S | **B15 - PSC 63** | 445005001210 | 63 | 100 | 23 | 60 | 121 | | 150 | 42 | G1/8' | 8 | | |
| UT 5-500 / 5-630 / 5-800 S | **B15 - PSC 63** | 445006303152 | 63 | 100 | 30 | 70 | 201 | 170 | 200 | 42 | G1/8' | 6.5 | | |
| | **B15 - PSC 80** | 445006303911 | 75 | 130 | 39 | 85 | 262 | 200 | 180 | 50 | G1/8' | 27.5 | | |
| UT 8-800 / 8-1000 S | **B15 - PSC 80** | 445008003005 | 75 | 130 | 30 | | 300 | 200 | 250 | 50 | G1/4' | 33 | | |

## MR - PSC




| U-TRONIC | REF. | CODE | Øg6 | A | B | C | F | kg | | |
|---|---|---|---|---|---|---|---|---|---|---|
| UT 3-360 S | **MR - PSC 63** | 450206000630 | 63 | 105 | 114 | 84 | 42 | 6.5 | | |
| UT 5-500 / 5-630 / 5-800 S | **MR - PSC 63** | 450206000630 | 63 | 105 | 114 | 84 | 42 | 6.5 | | |
| UT 5-500 / 5-630 / 5-800 S | **MR - PSC 80** | 450208000800 | 75 | 130 | 129 | 100 | 50 | 11 | | |
| UT 8-800 / 8-1000 S | **MR - PSC 80** | 450208000800 | 75 | 130 | 129 | 100 | 50 | 11 | | |

## TOOLHOLDER WITH AUTOMATIC TOOL CHANGE

**B50 MECHANICAL**

**pic.1**

| U-TRONIC | REF. | |
|---|---|---|
| UT 3-360 S | **- HSK** | |
| UT 5-500 / UT 5-630 / 5-800 S | **B50 - DIN69871** | |
| UT 8-800 / 8-1000 S | **- MAS BT** | |

| U-TRONIC | REF. | |
|---|---|---|
| UT 3-360 S | **- PSC / HSK** | |
| UT 5-500 / UT 5-630 / 5-800 S | **B50 - DIN69871** | |
| UT 8-800 / 8-1000 S | **- MAS BT** | |

Special and HYDRAULICS B50 toolholders for automatic tool change, can be provided on request **(pic.1)**.