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ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ НА ОПЦИИ ДЛЯ СТАНКОВ ФРЕЗЫ



FRONT DRIVERS FACE DRIVERS



Built in two models **TR** And **TNC extension** and in three dimensions **12/120, 20/200, 40/300**, meet any turning requirement.

The guy **TR** is used on parallel lathes, on copying lathes, on turning machines with a single copying unit.

The guy **TNC extension** it is used on turning machines with two copiers and on numerically controlled lathes.

The dimension **12/120** it is supplied indifferently with Morse taper 4 or 5.

The dimension **20/200** comes only with Morse taper 5.

The dimension **40/300** comes only with Morse taper 6.

All types can be gripped on the outside diameter by means of a self-centering chuck or can be flanged by means of the rear holes.

The pieces are machined in a single operation with reduced clamping times and with perfect concentricity.

The pieces can be loaded with the spindle running or with an automatic loader.

The locking of the pieces is allowed by two concomitant factors:

- Centering of the pieces by means of the elastically loaded central point.

- The dragging by means of the teeth arranged in a circular on the front of the driver.

The tines are mechanically self-compensating and always support **everyone** against the piece to be dragged even if this is cut obliquely or irregularly.

The teeth have a constant mean distance from the face of the follower and guarantee the accuracy of the shoulders, accuracy which is in no way influenced by the size of the centres.

The elastic load on the central tip can be modified and adapted to the weight of the piece to be driven by means of a load screw located in the rear part of the driver.

The teeth are sharpened asymmetrically (sawtooth) ensuring excellent performance. They are used for left and right rotation.

The teeth that are used for right rotation in small diameters are used for left rotation in large diameters and vice versa.

A solid tooth type (type No. 4) is supplied as standard from which special tooth shapes can be made.

Are available in two types (**TR** and **TNC extension**) and three sizes (**12/120, 20/200, 40/300**) thereby covering any requirement in turning jobs.

Type **TR** is used on center lathes and copying lathes with one copying attachment.

Type **TNC extension** on copying lathes with two copying attachments and on NC lathes.

size **12/120** is supplied with MT 4 or 5, size **20/200** only with MT 5, size **40/300** only with MT 6.

All drivers can be clamped on their outside diameter by means of a self-centering chuck or flanged by means of holes provided at the rear.

Workpieces can be machined, free from axial runout, in a single operation, thus cutting down clamping time. Parts can be loaded manually or by an automatic loader with the spindle running.

Two simultaneous components provide for clamping and driving:

- The spring-loaded center clamps the part.
- The teeth arranged on the driver face around the centre, drive the part.

The teeth being mechanically compensated, they **all** grip the face of the workpiece even if the face is cut obliquely or has irregularities.

Average distance between faces of driver and work-piece is constant, thus precision of shoulders is ensured. This precision is unaffected by the size of the center holes.

The spring load on the center can be adapted to the workpiece weight by means of a grub-screw situated in the rear of the driver.

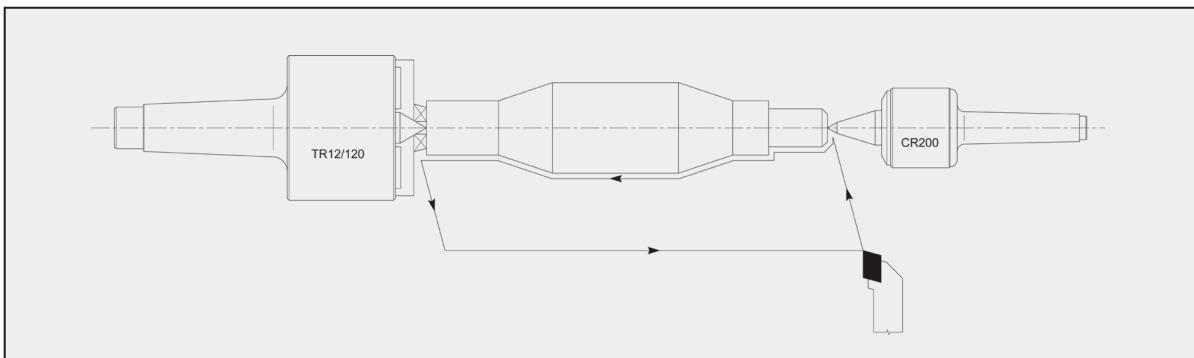
Teeth are asymmetrically ground to guarantee maximum efficiency. They can be used for both clockwise and counterclockwise rotation.

The used for clockwise rotation of small diameter parts are used for counterclockwise rotation of large diameter parts and vice versa.

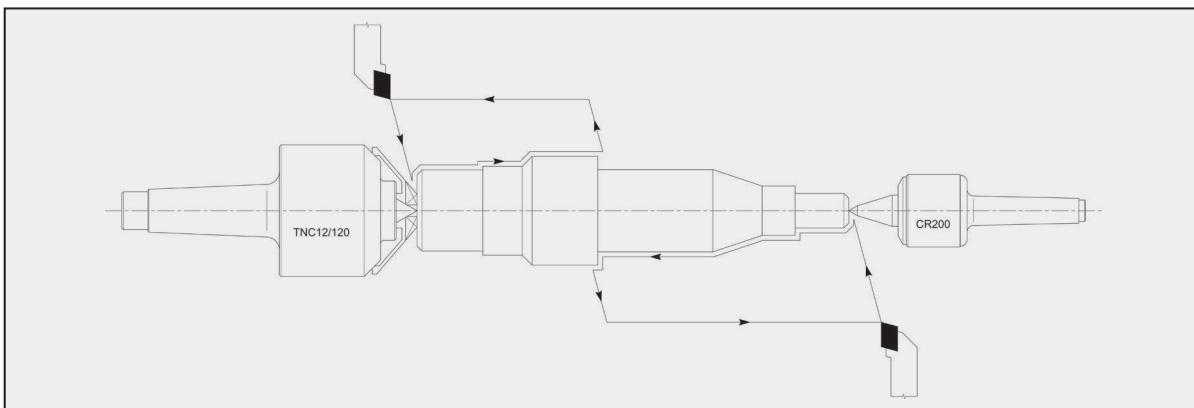
A type of unmachined driver tooth is supplied standard (type no. 4) which the user can give any shape required.



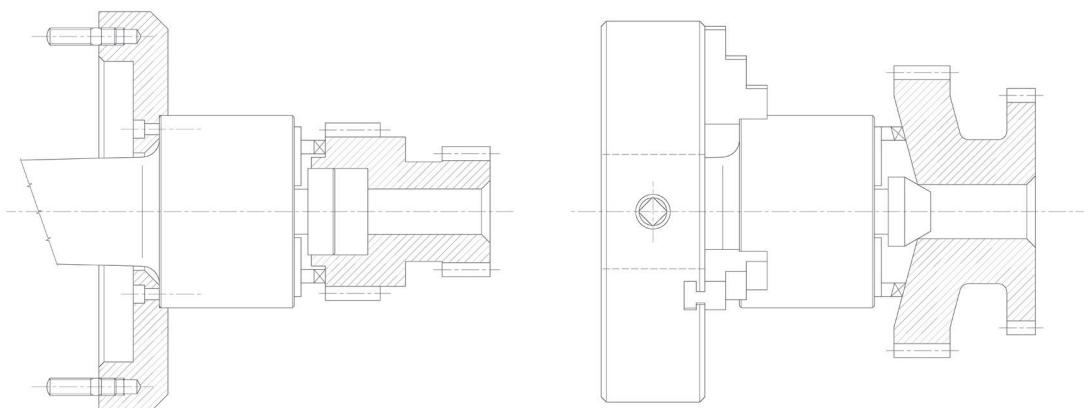
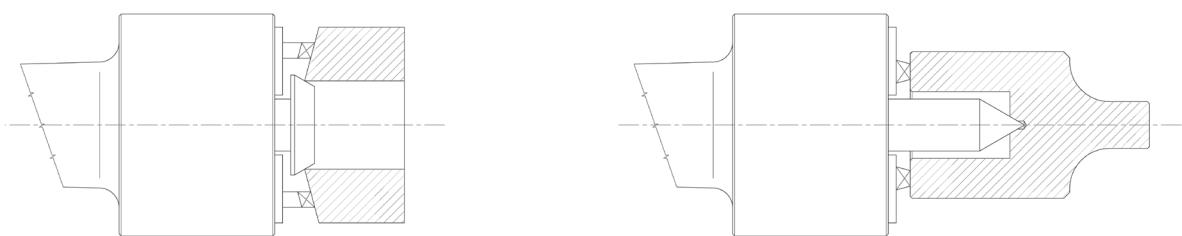
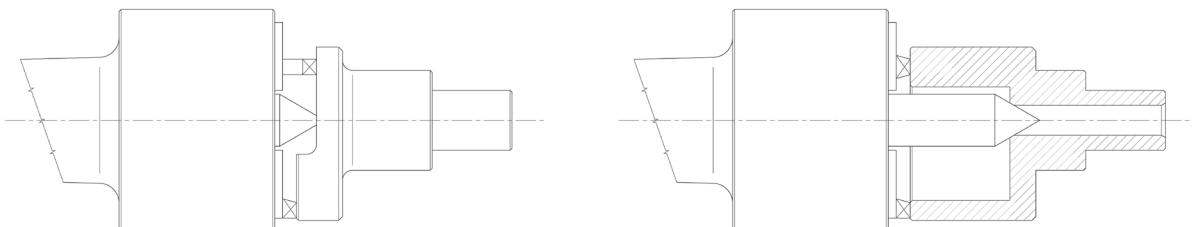
SOME EXAMPLES OF APPLICATIONS



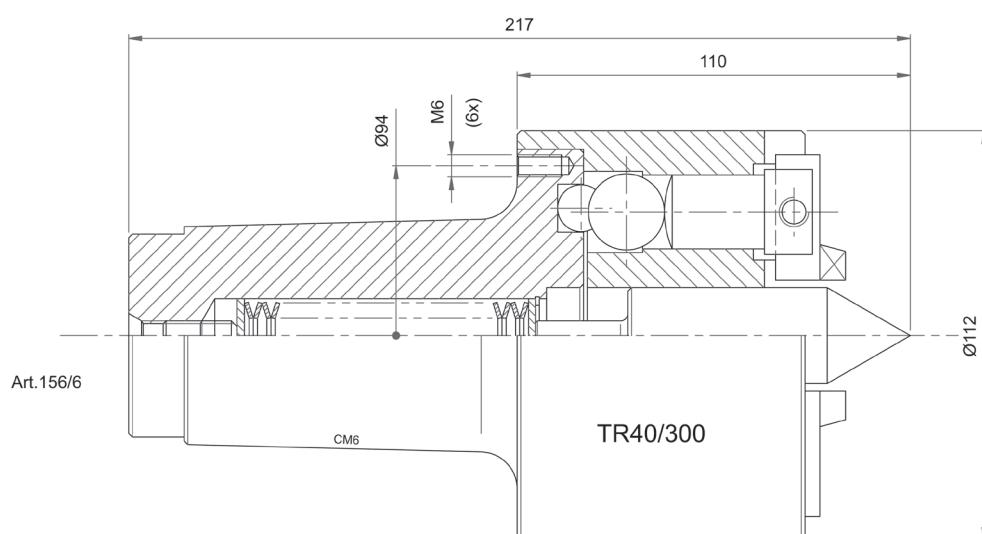
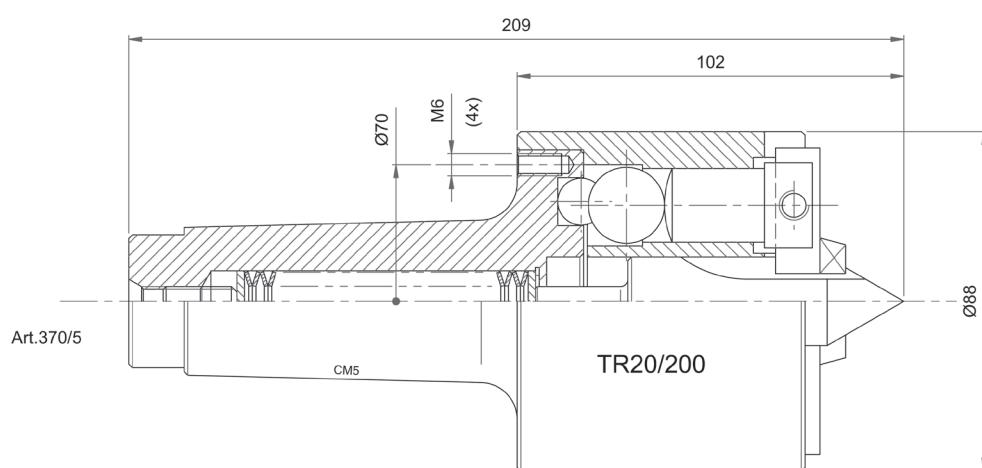
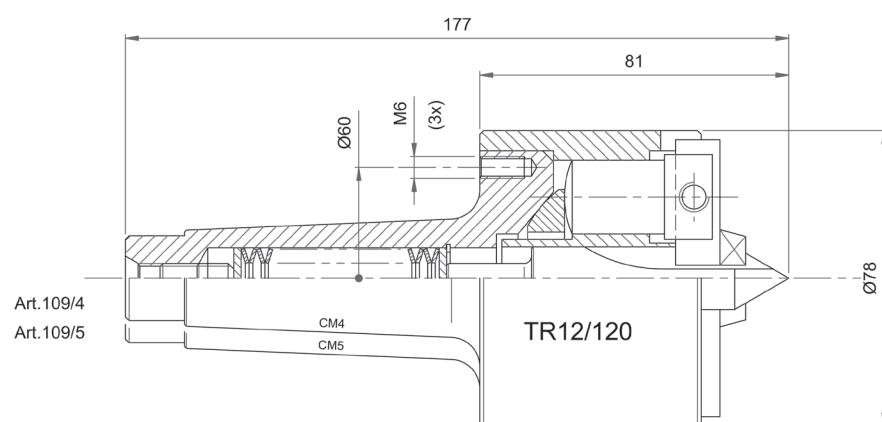
MOD. TR



MOD. TNC extension



FEW EXAMPLES OF APPLICATIONS



TAILSTOCK THRUST DIAGRAM TAILSTOCK PRESSURE DIAGRAM

Pressure in Kgs for feeding in spindle direction (double it for opposite direction)
 Spinta in Kg per avanzamento in direzione del mandrino (per avanzamento contrario raddoppiare)

1700
 1600
 1500
 1400
 1300
 1200
 1100
 1000
 900
 800
 700
 600
 500
 400
 300
 200

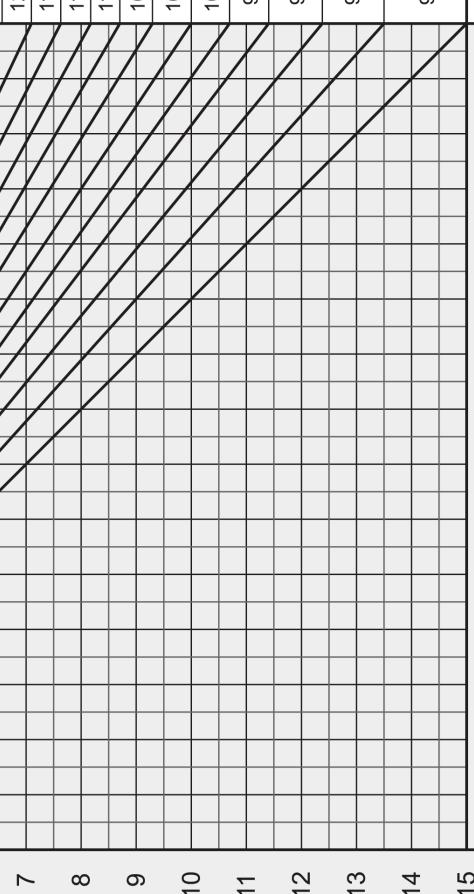
The diagram refers to Steel
 with $R=50 \text{ Kg/mm}^2$. In case of
 higher resistances, reduce (dopo
 il calcolo) the cutting section
 proportionally. Always use max
 dragging diameter. We recommend
 high speed with a moderate feeding.
 Il diagramma serve per acciaio
 con $R=50 \text{ Kg/mm}^2$. Per resistenze
 superiori procedere riducendo (dopo
 il calcolo) la sezione
 del truciolo. Usare sempre il diametro
 di trascinamento massimo possibile.
 Si consigliano alle velocità associate
 ad avanzamenti moderati.

\varnothing DI TORNITURA - TURNING Ø

TR12/120

TR20/200

TR40/300



CUTTING SECTION - mm² (Feeding x cut depth)
 SEZIONE DEL TRUCIOLO - mm² (Avanzamento x Profondità di taglio)

DRIVING TEETH DRAGGING TEETH



The driving teeth, identical for the Mod. **12/120, 20/200** and **40/300**, come in 4 types and 2 profiles. Types 1 - 2 - 3 are used to determine the various drive diameters (D).

Type 4 is supplied whole to allow the customer to obtain teeth with different shapes. It is also used to drag on soft materials, limiting penetration.

Types 1 and 2 are supplied with right profile or with left profile.

Types 3 and 4, being symmetrical, are supplied with a single profile which serves for right and left.

On each driver model, using 5 series of teeth and precisely: 1-D, 2-D, 3, 1-S, 2-S it is possible to cover the entire dragging range for both right and left rotation.

When ordering, the Article number, type and profile must always be indicated.

Example: Teeth type 2 with right profile - Art. 155/2/D.

The dragging teeth (identical for the **12/120, 20/200** and **40/300**) are supplied in 4 types and 2 profiles. The types 1 - 2 - 3 are used to determine the various diameters of grip on the pieces (D).

The type 4 is supplied without bevels to enable the customer to execute teeth with different shapes.

The types 1 and 2 are supplied for rotation right or left.

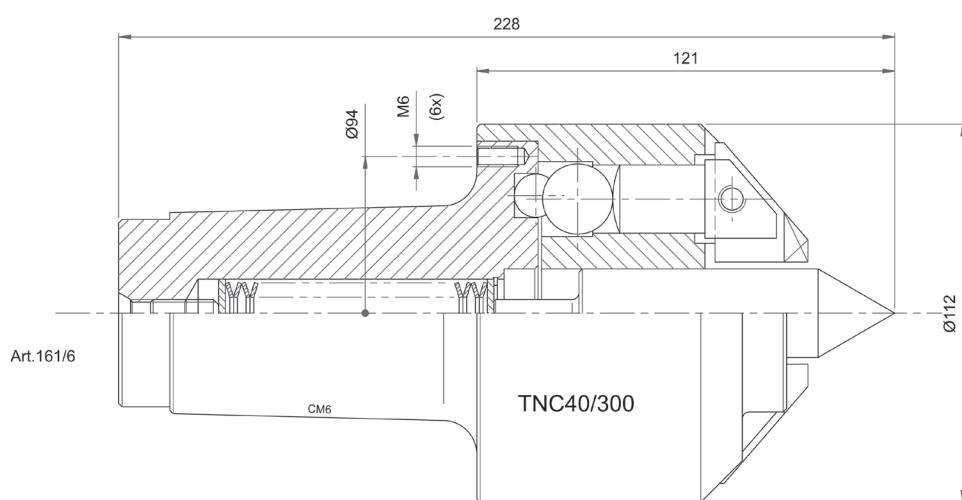
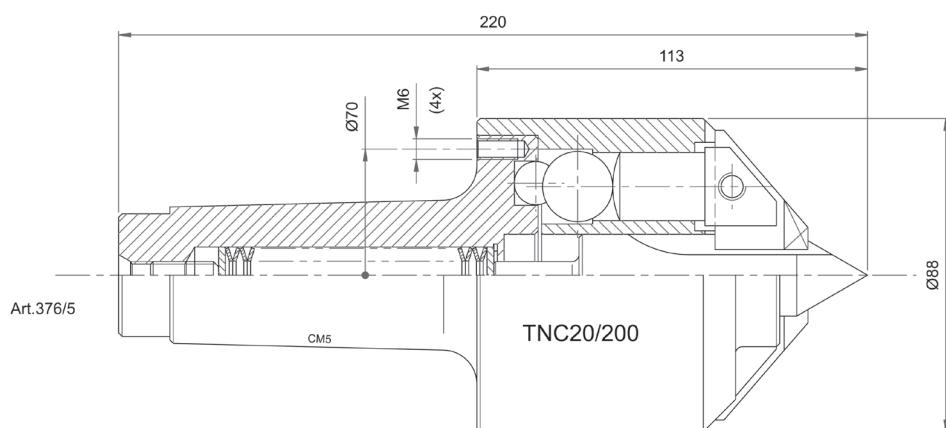
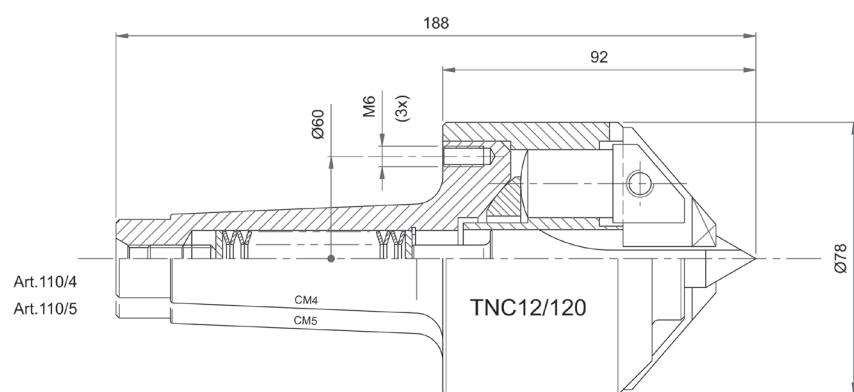
The types 3 and 4 (symmetrical) can be used for rotation right and left.

For each dragger and, by using 5 sets of teeth, ie: 1-D, 2-D, 3, 1-S, 2-S, it is possible to cover the whole dragging range either for right and left rotation.

In the order must always be stated the number of the article, the type and the profile.

Example: teeth type 2 with right profile - Art. 155/2/D.

Tipo Type	Rotazione destra Rightwards rotation	Rotazione sinistra Leftwards rotation	Articolo Order N°
1-D			155/1/D
2-D			155/2/D
3			155/3
2-S			155/2/S
1-S			155/1/S
4			155/4



TAILSTOCK THRUST DIAGRAM

TAILSTOCK PRESSURE DIAGRAM



Pressure in Kg for feeding in spindle direction (double it for opposite direction)
Spinta in Kg per avanzamento in direzione del mandrino (per avanzamento contrario raddoppiare)

170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20

The diagram refers to Steel
with R=50 Kg/mm². In case of
higher resistances, reduce (after
calculation) the cutting section
proportionally. Always use max
dragging diameter. We recommend
high speed with a moderate feeding.
Il diagramma serve per acciaio
con R=50 Kg/mm². Per resistenze
superiori procedere riducendo (dopo
il calcolo) proporzionalmente la sezione
del truciolo. Usare sempre il diametro
di trascinamento massimo possibile.
Si consigliano alte velocità associate
ad avanzamenti moderati.

\varnothing DI TORNITURA - TURNING Ø

TNC12/120

TNC20/200

TNC40/300

TNC60/300

TNC80/300

TNC100/300

TNC120/300

TNC140/300

TNC160/300

TNC180/300

TNC200/300

TNC220/300

TNC240/300

TNC260/300

TNC280/300

TNC300/300

TNC320/300

TNC340/300

TNC360/300

TNC380/300

TNC400/300

TNC420/300

TNC440/300

TNC460/300

TNC480/300

TNC500/300

TNC520/300

TNC540/300

TNC560/300

TNC580/300

TNC600/300

TNC620/300

TNC640/300

TNC660/300

TNC680/300

TNC700/300

TNC720/300

TNC740/300

TNC760/300

TNC780/300

TNC800/300

TNC820/300

TNC840/300

TNC860/300

TNC880/300

TNC900/300

TNC920/300

TNC940/300

TNC960/300

TNC980/300

TNC1000/300

TNC1020/300

TNC1040/300

TNC1060/300

TNC1080/300

TNC1100/300

TNC1120/300

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TNC4060/300

TNC4080/300

TNC4100/300

TNC4120/300

TNC4140/300

TNC4160/300

TNC4180/300

TNC4200/300

TNC4220/300

TNC4240/300

TNC4260/300

TNC4280/300

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DRIVING TEETH DRAGGING TEETH

The driving teeth, identical for the Mod. **12/120, 20/200** and **40/300**, come in 4 types and 2 profiles. Types 1 - 2 - 3 are used to determine the various drive diameters (D). Type 4 is supplied whole to allow the customer to obtain teeth with different shapes. It is also used to drag on soft materials, limiting penetration. Types 1 and 2 are supplied with right profile or with left profile. Types 3 and 4, being symmetrical, are supplied with a single profile which serves for right and left. On each driver model, using 5 series of teeth and precisely: 1-D, 2-D, 3, 1-S, 2-S it is possible to cover the entire dragging range for both right and left rotation.

When ordering, the Article number, type and profile must always be indicated.

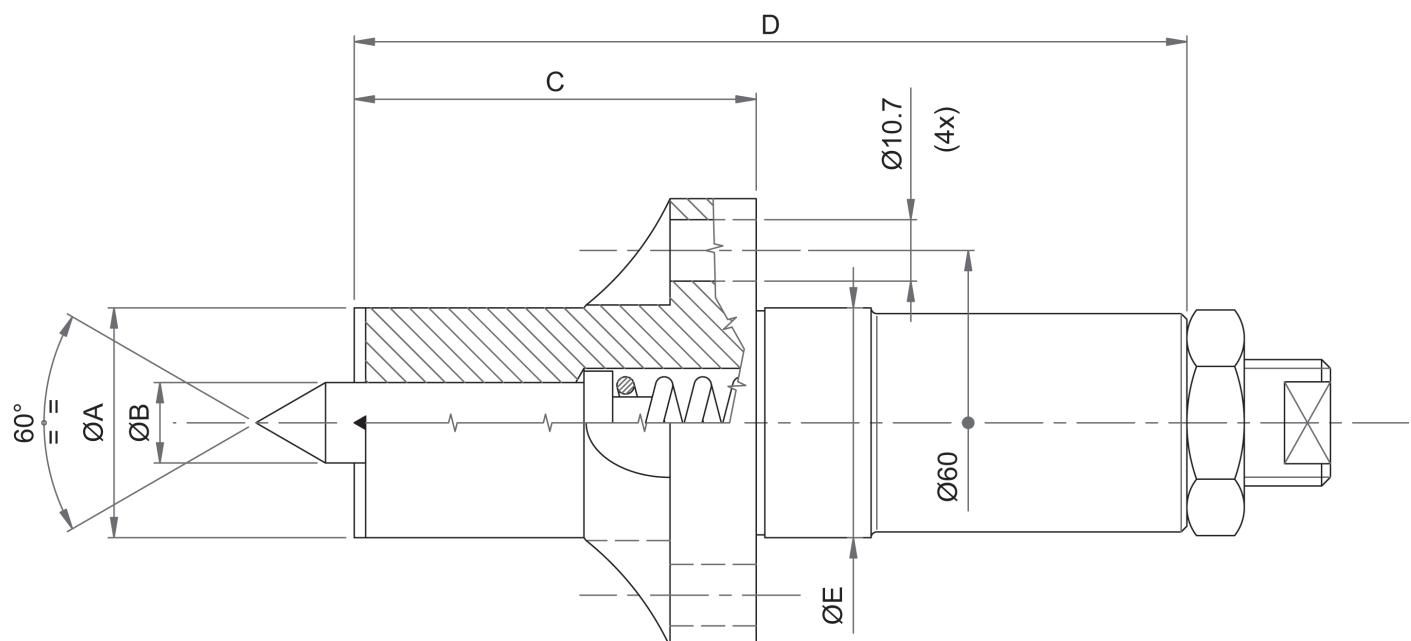
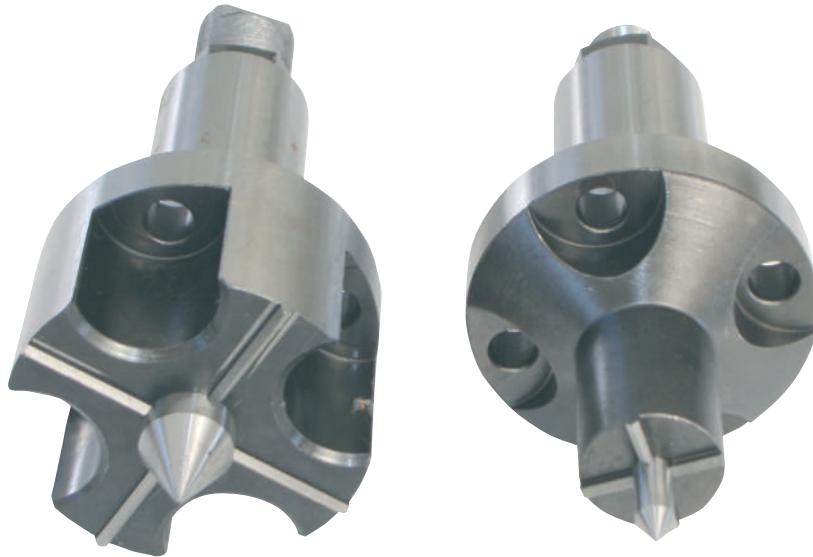
Example: Teeth type 2 with right profile - Art. 114/2/D.

The dragging teeth (identical for the **12/120, 20/200** and **40/300**) are supplied in 4 types and 2 profiles. The types 1 - 2 - 3 are used to determine the various diameters of grip on the pieces (D). The type 4 is supplied without bevels to enable the customer to execute teeth with different shapes. The types 1 and 2 are supplied for rotation right or left. The types 3 and 4 (symmetrical) can be used for rotation right and left. For each dragger and, by using 5 sets of teeth, ie: 1-D, 2-D, 3, 1-S, 2-S, it is possible to cover the whole dragging range either for right and left rotation. In the order must always be stated the number of the article, the type and the profile.

Example: teeth type 2 with right profile - Art. 114/2/D.

Tipo Type	Rotazione destra Rightwards rotation	Rotazione sinistra Leftwards rotation	Articolo Order N°
1-D			114/1/D
2-D			114/2/D
3-D			114/3/D
3-S			114/3/S
2-S			114/2/S
1-S			114/1/S
4			114/4

FIXED DRIVERS FOR GEARING MACHINES
FIXED FACE-DRIVERS FOR GEAR CUTTING MACHINES



ARTICOLO - ORDER CODE	260/30	260/40	260/78	
MODELLO - TYPE	TRD30	TRD40	TRD78	
MAX ECCENTRICITA' - MAX RUNOUT	mm	0,005	0,005	0,005
PESO MAX PEZZO - COMPONENT MAX WEIGHT	Kg	200	200	200
SPINTA ASSIALE MAX - MAX AXIAL WEIGHT	Kg	600	600	600
PESO CONTROPUNTA - LIVE CENTER WEIGHT	Kg	1,6	1,7	1,7
A	mm	30	40	78
B	mm	8	14	14
C	mm	70	70	50
D	mm	145	145	125
E	mm	40	40	40

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