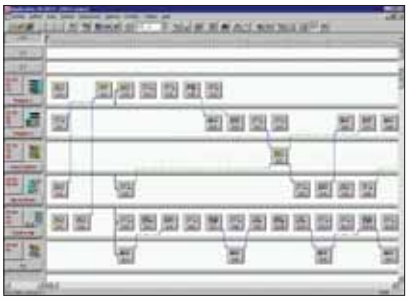
TORNOS
MEDICAL

Inclined implants : new milling possibilities on the DECO 13a.



The execution of inclined dental implants means that new milling possibilities have to be created in order to meet ever more stringent requirements. Tornos has come up with an original solution comprising two units and a software package to meet these new requirements.

Extended possibilities !

These two new options, which are connected to specific macros, mean that the company can now provide pertinent responses to trends in implantology (see also DECO Magazine 27). The complexity of geometric shapes to be executed by milling these particular types of parts, is mastered by combining two elements, i.e. :

1. Milling sub-programs to assist compound programming (calculating the cutter machining path by contouring and interpolating 3 axes (x, y, z)).
2. Inclinable millers to execute the inclined section from the bar (through the guide bush) or in hidden time, in back-operation mode (counter-spindle).

This principle allows all manufacturers involved in implant production to benefit both from the high production output of the DECO and from all the machining options for inclined implants.




Main benefits of the process developed by Tornos

- Machining implants without having to rework the part, including deburring.
- Facility to execute rough and finishing milling cycles on the inclined part, leading to superior surface qualities.
- Back-operation machining in hidden time to reduce the overall machining cycle times for the implant.
- High performance tool lubrication and chip removal by the additional 15 bar sprinkler pumps (option 5255) or the high pressure 120 bar sprinkler pumps (option 5013).
- Skilled team of engineers and computerized tools to define part feasibility with the client.

Specific macros for milling implants.

- Allow simplified programming of the contour undergoing milling in several “rough and finishing” cycles.
- Defines the number of milling points.
- Programmable feed rate (mm or inch / min).
- Automatic calculations based on the implant cone incline.

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Technical characteristics

Variable mechanical incline units based on the angle of implant incline.

Machining the inclined part from the bar

- Assembly positions : thread chasers 1 and 2
- Machine incline : 0-90 degrees
- Max. speed : 8000 rpm
- ESX12 clamp - capacity : 7 mm
- Supplied with specific support

Machining the inclined part in back-operation (hidden time)

- Assembly positions : T51-T53 max. 2 machines
- Machine incline : 0-90 degrees
- Max. speed : 6000 rpm
- ER 11 clamp : 0.5-7 mm

Macros

- Milling the inclined cone with joint perpendicular to the part axis (G954)
- Milling the inclined cone with joint perpendicular to the cone (G955)
- Elliptical milling by polar co-ordinates (joint G956)

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Technical data subject to alteration.

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