

## GREENRING UNI Plus Grulo UNIVERSAL THREADING TAP

Grulo UNI Plus is an upgrade of our proven universal threading tap Grulo UNI (Greenring). By means of geometric adaptation, a special flute design and a 50° helical pitch, we have succeeded in optimising chip evacuation and, thus, increasing procedural safety and tool life. Chip-based issues occasioned by thread depth (3xd) and long chipping materials (e.g. 1.0116 or 1.0570) are a thing of the past.

High-grade PM steel, used as a core material for optimal coverage of all materials and a multi-layer sliding coat (TIALN-GLT) round off UNI Plus as a premium tool, ensure significant enhancement of tool life and also make deployment in dry machining and minimal lubrication settings feasible.

## GREENRING UNI Plus Rapid UNIVERSAL THREADING TAP

The new straight fluted tap– an ideal add-on that is model-consistent (material and surface): PM steel and TIALN-GLT / multi-layer coating. Ideally suited for inner threads in through holes.

### GRULO UNI-Plus

DIN 371 item no. 4343/69  
DIN 376 item no. 6343/69

### RAPID UNI-Plus

DIN 371 item no. 7263/69  
DIN 376 item no. 7273/69

### Advantages:

- for the machining of unalloyed steels up to 1200 N/mm<sup>2</sup>
- with multi-layer sliding coat (TIALN-GLT)
- suitable for grey cast iron, nodular graphite cast iron, stainless steels, aluminium and aluminium alloys

### Neoboss product range:

- metric ISO standard thread
- metric ISO fine thread
- UNC thread/UNF thread compliant with ANSI B 1.1
- pipe thread DIN ISO 228



**Neoboss Greenring UNI Plus – for optimal chip evacuation**

## A SELECTION OF THE MOST IMPORTANT MATERIALS:

UNI PLUS is a universal tap for steels of up to 1200 N/mm<sup>2</sup> tensile strength, nodular graphite cast iron, grey cast iron, stainless steels and aluminium and aluminium alloys.

|                      | Standard designation | DIN no. | Tensile strength in N/mm <sup>2</sup> | Hardness HB | AISI/SAE/ASTM |
|----------------------|----------------------|---------|---------------------------------------|-------------|---------------|
| Structural steel     | St37-3               | 1.0116  | 370-450                               | 110-130     | A262          |
| Structural steel     | St52-3               | 1.0570  | 450-680                               | 140-210     |               |
| Heat treatable steel | C45                  | 1.0503  | 650-850                               | 190-250     | 1045          |
| Heat treatable steel | 42CrMo4              | 1.7225  | 800-1.000                             | 240-300     | 4140          |
| Cementation steel    | 16MnCr5              | 1.7131  | 500-700                               | 160-210     | 5115          |
| Free-cutting steel   | 95Mn28               | 1.0715  | 390-580                               | 110-170     | 1213          |
| Fine-grained steel   | StE500               | 1.8907  | 560-800                               | 166-238     |               |
| Stainless steel      | X12CrS13             | 1.4005  |                                       |             | 416           |
| Stainless steel      | X5CrNi189            | 1.4301  | 500-700                               | 160-210     | 304           |
| Nodular cast iron    | GGG50                | 0.7050  | 500                                   | 160         | EN-GJS-500-7  |
| Aluminium alloy      | G-AlSi6Cu            | 3.2151  | 160-200                               | 50-60       |               |

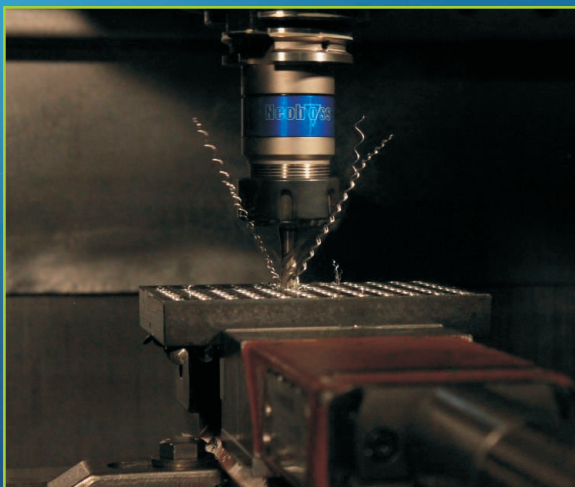
## COMPARISON OF 'BEFORE AND AFTER' PERFORMANCE SCENARIOS:



### --- The 'before' scenario:

Performance exemplified by a simple commercial product. After just a few threaded hole operations, chips accumulate around the tool. The operative must interrupt the process and actively intervene. If the process continues unchecked, tool failure may result and the piece being worked may even be damaged.

**Result:** No procedural safety, a high risk posed to the piece being worked (in terms of quality and deployment), time wastage, additional set-up time and tool costs and, ultimately, no calculable costs per unit/piece (cpp)



### --- The 'after' scenario:

Outstanding performance using the new UNI Plus/Grulo TiAlN-GLT. The combination of 50-degree helical pitch and the special groove design enables chips to be evacuated laterally and at a higher angle.

**Result:** No chip shavings, no procedural disruption, calculable service life (target/actual), predictable and shorter fabrication times and, thus, improved competitiveness.