

# NEW PRODUCT NEWS

## DRILL-RUSH



**8.0-19.5mm Diameter Range  
Double Margin Indexable Drill Heads**



TaeguTec has extended the application range of the successful DRILLRUSH line with the introduction of double margin indexable drill heads for steel drilling (ISO P material) that have a diameter range of 8.0 mm to 19.5 mm.

With two guiding areas (four in total) on two cutting edges, the new double margin indexable DRILLRUSH ensures high hole quality in relation to the cylindricity and straightness during machining.

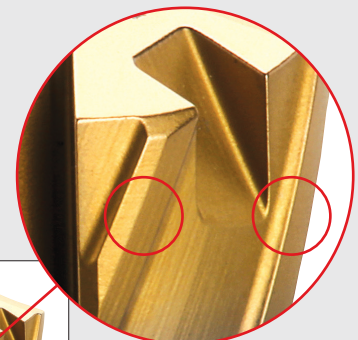
With this new double margin indexable drill head, the new DRILLRUSH line enables reliable high quality hole machining including close hole tolerance, premium surface roughness and production stability.

Additionally, the double margin type heads are available in the latest GOLDRUSH TT9080 grade and are interchangeable with standard DRILLRUSH bodies.

The new DRILLRUSH double margin indexable drills opens the door to high surface roughness and high precision drilling applications expanding TaeguTec's reach into the drilling market.

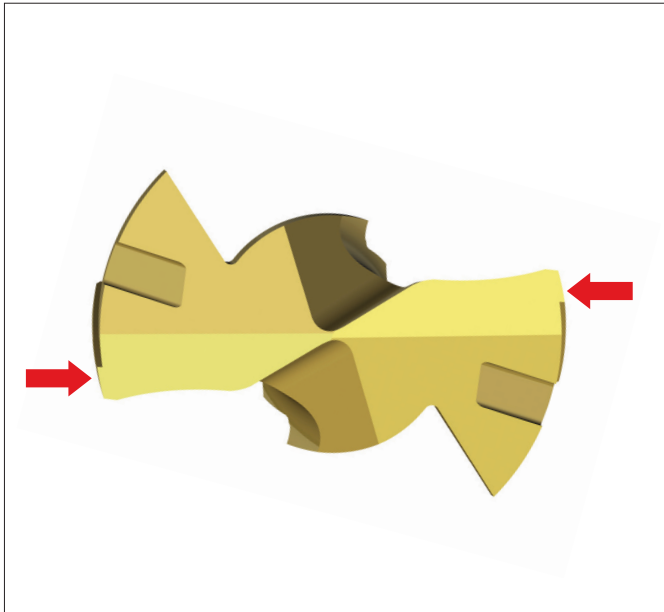
## FEATURES

- **Premium surface roughness, hole cylindricity and straightness.**
  - Ra under 1.6µm (Alloy steel applications)
  - Cylindricity and straightness under 0.05mm (Alloy steel applications)
- **Interchangeable with standard DRILLRUSH bodies.**
- **The latest GOLDRUSH TT9080 grade.**
- **Double margin indexable drill heads use the same recommended cutting conditions as the standard single margin heads.**
- **Range**  
: 8.0mm – 19.5mm (in 0.5mm increments)

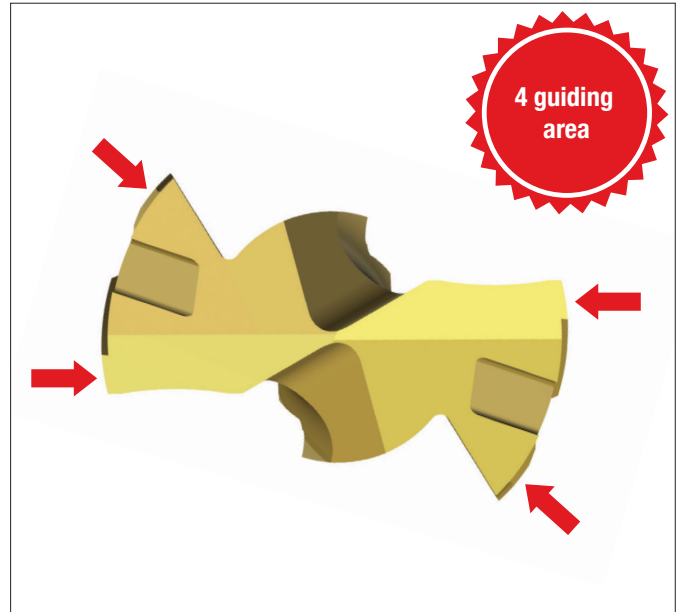


**Double margin**

Standard single margin head

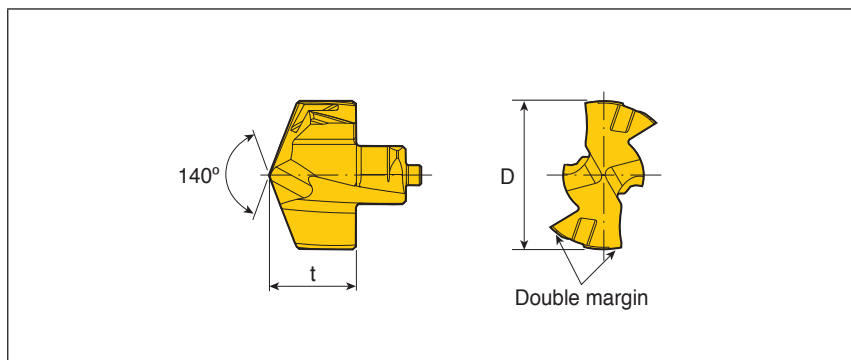


Double margin head **new**



## TCD...P2

### Double margin drill head



| Designation         | Dimension (mm) |       |             | Grade<br>TT9080 |
|---------------------|----------------|-------|-------------|-----------------|
|                     | D              | t     | Pocket size |                 |
| <b>TCD - 080-P2</b> | 8.0            | 5.40  | 8           | ●               |
| <b>085-P2</b>       | 8.5            | 5.40  | 8           | ●               |
| <b>090-P2</b>       | 9.0            | 5.80  | 9           | ●               |
| <b>095-P2</b>       | 9.5            | 5.80  | 9           | ●               |
| <b>100-P2</b>       | 10.0           | 6.20  | 10          | ●               |
| <b>105-P2</b>       | 10.5           | 6.20  | 10          | ●               |
| <b>110-P2</b>       | 11.0           | 6.60  | 11          | ●               |
| <b>115-P2</b>       | 11.5           | 6.60  | 11          | ●               |
| <b>120-P2</b>       | 12.0           | 7.00  | 12          | ●               |
| <b>125-P2</b>       | 12.5           | 7.00  | 12          | ●               |
| <b>130-P2</b>       | 13.0           | 7.60  | 13          | ●               |
| <b>135-P2</b>       | 13.5           | 7.60  | 13          | ●               |
| <b>140-P2</b>       | 14.0           | 8.15  | 14          | ●               |
| <b>145-P2</b>       | 14.5           | 8.15  | 14          | ●               |
| <b>150-P2</b>       | 15.0           | 8.73  | 15          | ●               |
| <b>155-P2</b>       | 15.5           | 8.73  | 15          | ●               |
| <b>160-P2</b>       | 16.0           | 9.30  | 16          | ●               |
| <b>165-P2</b>       | 16.5           | 9.30  | 16          | ●               |
| <b>170-P2</b>       | 17.0           | 9.90  | 17          | ●               |
| <b>175-P2</b>       | 17.5           | 9.90  | 17          | ●               |
| <b>180-P2</b>       | 18.0           | 10.50 | 18          | ●               |
| <b>185-P2</b>       | 18.5           | 10.50 | 18          | ●               |
| <b>190-P2</b>       | 19.0           | 11.00 | 19          | ●               |
| <b>195-P2</b>       | 19.5           | 11.00 | 19          | ●               |

● Other diameters available upon request.

● : Standard items

## Recommended cutting conditions

| ISO                   | Material   | Condition                     | Tensile strength (N/mm <sup>2</sup> ) | Hardness HB | Material No. | Cutting speed Vc (m/min) | Feed (mm/rev) vs. drill diameter |             |             |             |             |           |
|-----------------------|--|-------------------------------|---------------------------------------|-------------|--------------|--------------------------|----------------------------------|-------------|-------------|-------------|-------------|-----------|
|                       |  |                               |                                       |             |              |                          | - Ø10                            | Ø10 - Ø11.9 | Ø12 - Ø13.9 | Ø14 - Ø15.9 | Ø16 - Ø19.9 |           |
| P                     | Non-alloy steel, cast steel, free cutting steel                    | <0.25%C Annealed              | 420                                   | 125         | 1            | 80-140                   | 0.12-0.22                        | 0.15-0.28   | 0.18-0.30   | 0.20-0.35   | 0.25-0.45   |           |
|                       |  | >=0.25%C Annealed             | 650                                   | 190         | 2            | 80-130                   | 0.12-0.22                        | 0.15-0.28   | 0.18-0.30   | 0.20-0.35   | 0.25-0.45   |           |
|                       |  | <0.55%C Quenched and tempered | 850                                   | 250         | 3            | 80-120                   | 0.12-0.22                        | 0.15-0.28   | 0.18-0.30   | 0.20-0.35   | 0.25-0.45   |           |
|                       |  | >=0.55%C Annealed             | 750                                   | 220         | 4            | 70-110                   | 0.12-0.22                        | 0.15-0.28   | 0.18-0.30   | 0.20-0.35   | 0.25-0.45   |           |
|                       |  | Quenched and tempered         | 1000                                  | 300         | 5            | 50-90                    | 0.12-0.22                        | 0.15-0.28   | 0.18-0.30   | 0.20-0.35   | 0.25-0.45   |           |
|                       | Low alloy steel and cast steel (Less than 5% of alloying elements) | Annealed                      | 600                                   | 200         | 6            | 70-120                   | 0.12-0.25                        | 0.14-0.28   | 0.16-0.32   | 0.18-0.35   | 0.23-0.40   |           |
|                       |  |                               | 930                                   | 275         | 7            | 70-110                   | 0.12-0.25                        | 0.14-0.28   | 0.16-0.32   | 0.18-0.35   | 0.23-0.40   |           |
|                       |  | Quenched and tempered         | 1000                                  | 300         | 8            | 50-90                    | 0.12-0.25                        | 0.14-0.28   | 0.16-0.32   | 0.18-0.35   | 0.23-0.40   |           |
|                       |  |                               | 1200                                  | 350         | 9            | 40-70                    | 0.12-0.25                        | 0.14-0.28   | 0.16-0.32   | 0.18-0.35   | 0.23-0.40   |           |
|                       | High alloy steel, cast steel and tool steel                        | Annealed                      | 680                                   | 200         | 10           | 50-90                    | 0.12-0.20                        | 0.12-0.22   | 0.15-0.25   | 0.18-0.28   | 0.20-0.30   |           |
| Quenched and tempered |  | 1100                          | 325                                   | 11          | 40-80        | 0.12-0.20                | 0.12-0.22                        | 0.15-0.25   | 0.18-0.28   | 0.20-0.30   |             |           |
| M                     | Stainless steel and cast steel                                     | Ferritic / martensitic        | 680                                   | 200         | 12           | 40-70                    | 0.10-0.15                        | 0.12-0.18   | 0.14-0.20   | 0.16-0.24   | 0.16-0.26   |           |
|                       |  | Martensitic                   | 820                                   | 240         | 13           | 40-70                    | 0.10-0.15                        | 0.12-0.18   | 0.14-0.20   | 0.16-0.24   | 0.16-0.26   |           |
|                       |  | Austenitic                    | 600                                   | 180         | 14           | 30-70                    | 0.10-0.15                        | 0.12-0.18   | 0.14-0.20   | 0.16-0.24   | 0.16-0.26   |           |
| K                     | Gray cast iron (GG)  | Ferritic                      |                                       | 160         | 15           | 90-160                   | 0.15-0.30                        | 0.20-0.35   | 0.25-0.40   | 0.30-0.45   | 0.35-0.55   |           |
|                       |  | Pearlitic                     |                                       | 250         | 16           | 80-140                   | 0.15-0.30                        | 0.20-0.35   | 0.25-0.40   | 0.30-0.45   | 0.35-0.55   |           |
|                       | Cast iron nodular (GGG)  | Ferritic                      |                                       | 180         | 17           | 90-180                   | 0.15-0.30                        | 0.20-0.35   | 0.25-0.40   | 0.30-0.45   | 0.35-0.55   |           |
|                       |  | Pearlitic                     |                                       | 260         | 18           | 80-140                   | 0.15-0.30                        | 0.20-0.35   | 0.25-0.40   | 0.30-0.45   | 0.35-0.55   |           |
|                       | Malleable cast iron  | Ferritic                      |                                       | 130         | 19           | 90-160                   | 0.15-0.30                        | 0.20-0.35   | 0.25-0.40   | 0.30-0.45   | 0.35-0.55   |           |
| N                     | Aluminum - Wrought alloy   | Not cureable                  |                                       | 60          | 21           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       |  | Cured                         |                                       | 100         | 22           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       | Aluminum-cast, alloyed   | <=12% Si Not cureable         |                                       | 75          | 23           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       |  | Cured                         |                                       | 90          | 24           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       |  | >12% Si High temp.            |                                       | 130         | 25           | 80-160                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       | Copper alloys  | >1% Pb Free cutting           |                                       | 110         | 26           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       |  | Brass                         |                                       | 90          | 27           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       | Non-metallic   | Electrolitic copper           |                                       | 100         | 28           | 90-220                   | 0.20-0.35                        | 0.25-0.40   | 0.30-0.45   | 0.35-0.50   | 0.40-0.60   |           |
|                       |  | Duroplastics, fiber plastics  |                                       |             | 29           |                          |                                  |             |             |             |             |           |
|                       | S  | High temp. alloys             | Fe based                              | Annealed    |              | 200                      | 31                               | 30-60       | 0.06-0.11   | 0.08-0.13   | 0.10-0.15   | 0.12-0.18 |
| Cured                 |  |                               |                                       |             | 280          | 32                       | 20-50                            | 0.06-0.11   | 0.08-0.13   | 0.10-0.15   | 0.12-0.18   | 0.12-0.20 |
| Ni or Co based        |  |                               | Annealed                              |             | 250          | 33                       | 20-50                            | 0.06-0.11   | 0.08-0.13   | 0.10-0.15   | 0.12-0.18   | 0.12-0.20 |
|                       |  |                               | Cured                                 |             | 350          | 34                       | 20-50                            | 0.06-0.11   | 0.08-0.13   | 0.10-0.15   | 0.12-0.18   | 0.12-0.20 |
|                       |  |                               | Cast                                  |             | 320          | 35                       | 20-50                            | 0.06-0.11   | 0.08-0.13   | 0.10-0.15   | 0.12-0.18   | 0.12-0.20 |
| Titanium, Ti alloys   |  |                               | Rm 400                                |             | 36           | 20-50                    | 0.06-0.12                        | 0.08-0.15   | 0.10-0.18   | 0.12-0.20   | 0.14-0.22   |           |
|                       |  | Alpha-beta alloys cured       | Rm 1050                               |             | 37           | 20-50                    | 0.06-0.12                        | 0.08-0.15   | 0.10-0.18   | 0.12-0.20   | 0.14-0.22   |           |
| H                     | Hardened steel   | Hardened                      |                                       | 55HRC       | 38           | 20-50                    | 0.06-0.12                        | 0.08-0.15   | 0.10-0.18   | 0.12-0.20   | 0.14-0.22   |           |
|                       |  | Hardened                      |                                       | 60HRC       | 39           | 20-50                    | 0.06-0.12                        | 0.08-0.15   | 0.10-0.18   | 0.12-0.20   | 0.14-0.22   |           |
|                       | Chilled cast iron  | Cast                          |                                       | 400         | 40           |                          |                                  |             |             |             |             |           |
|                       | Cast iron nodular  | Hardened                      |                                       | 55HRC       | 41           |                          |                                  |             |             |             |             |           |

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel