DRILLING

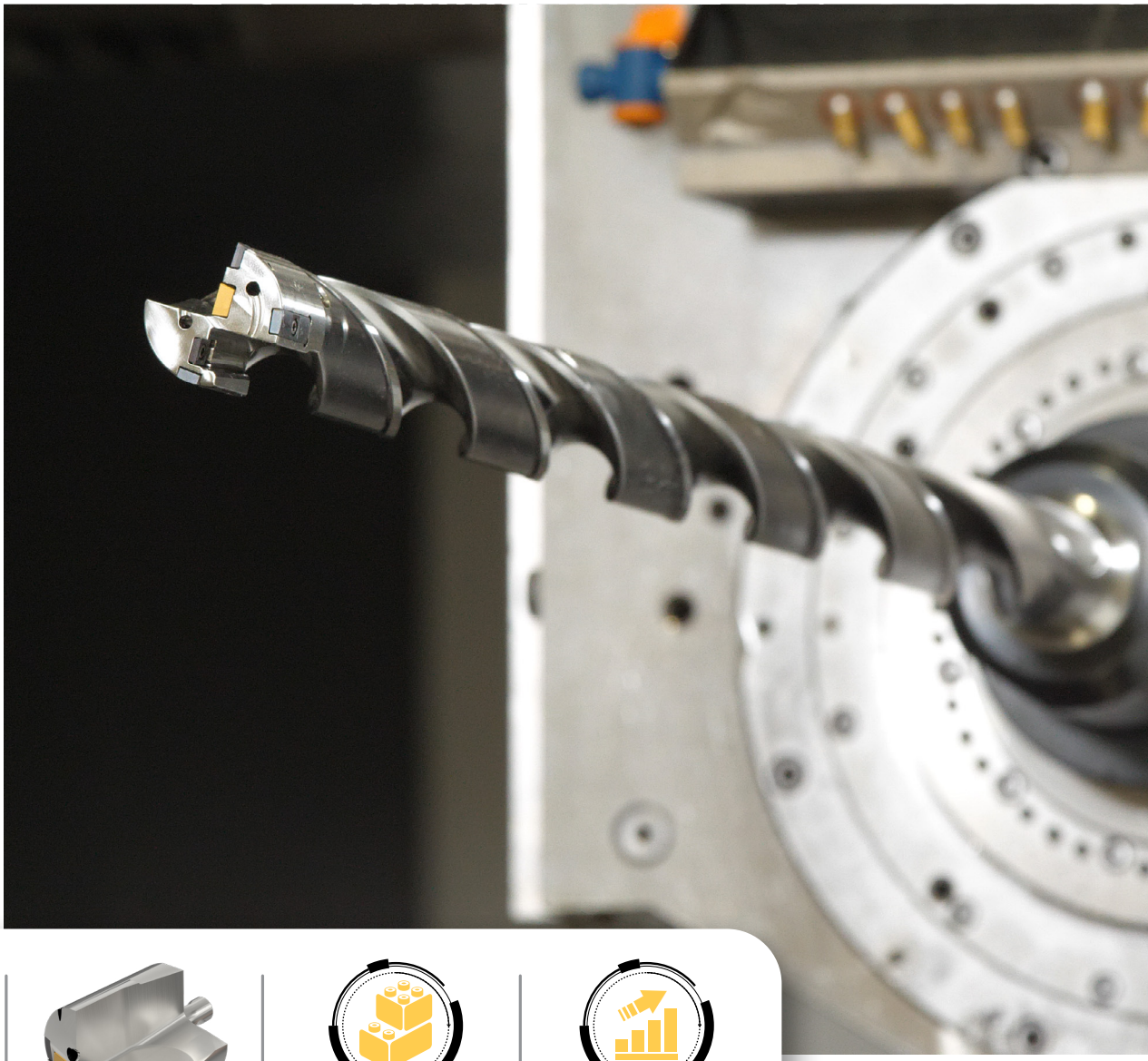
06-2022

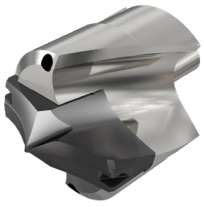
MARCH 2022

**METRIC**

# NPA

New Product Announcement









Easy to Use



High Productivity

Member IMC Group

ISCAR

**MODUDRILL**

*MODULAR HEADS*

# New Exchangeable Extension Holders for Modular Drilling System

Easy to Use

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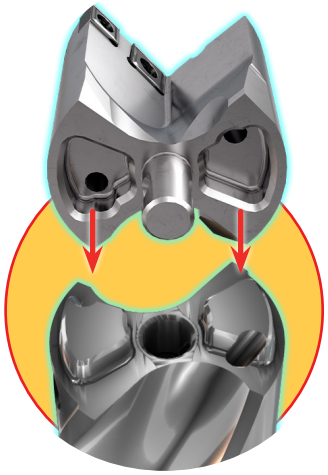
# Highlights

## ISCAR Introduces New Exchangeable MD-EXTENSION Holders That Can Increase the Drilling Depth by an Additional 200mm

The **MODUDRILL** family provides a significant increase in drilling depth by an additional 200 mm using only two bodies to cover the existing diameter range: one by 33-36 mm and the other by 37-40 mm, using either of the two available type of heads.

When using the MD-EXTENSION, a short pre-hole of at least 1XD deep (minimum) with H8 hole tolerance **MUST** be prepared to guide the long drill (an endmill can be used) for all drilling head types.



## Designations

MD-EXTENSION-##-##-###

- For head range
- Length

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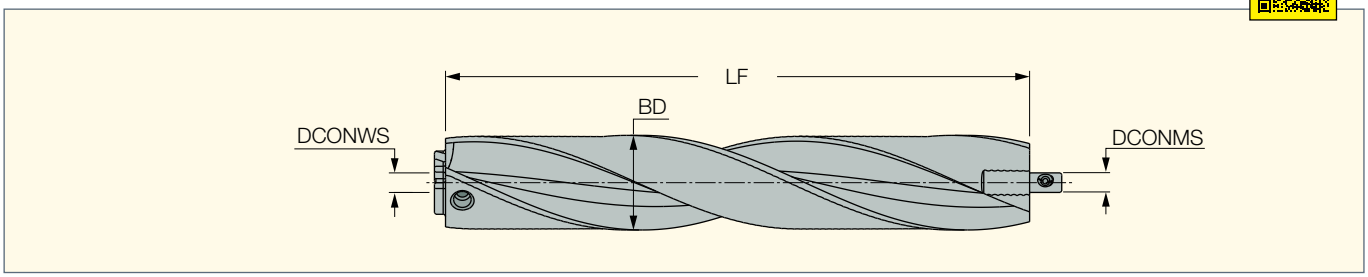
## MD-EXTENSION

Modular Extension Holder to Prolong The Overall Length by 200 mm




| Designation | BD | LF | DCONWS | DCONMS |
|---|---|---|---|---|
| MD-EXTENSION-33-36-200 | 32.40 | 200.00 | 6.70 | 6.70 |
| MD-EXTENSION-37-40-200 | 36.40 | 200.00 | 6.90 | 6.90 |

### Spare Parts

| Designation | Seat Screw | Screw | Torx Blade | T-Handle |
|---|---|---|---|---|
| MD-EXTENSION | SET SCREW M6-MODUDRILL | SR M5X4 DIN913 | BLD T15/S7 | SW6-T-SH |

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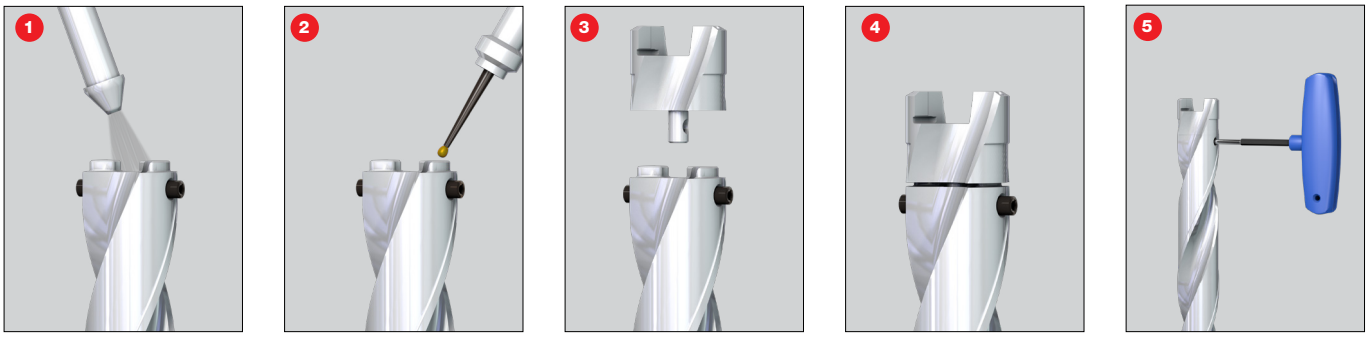
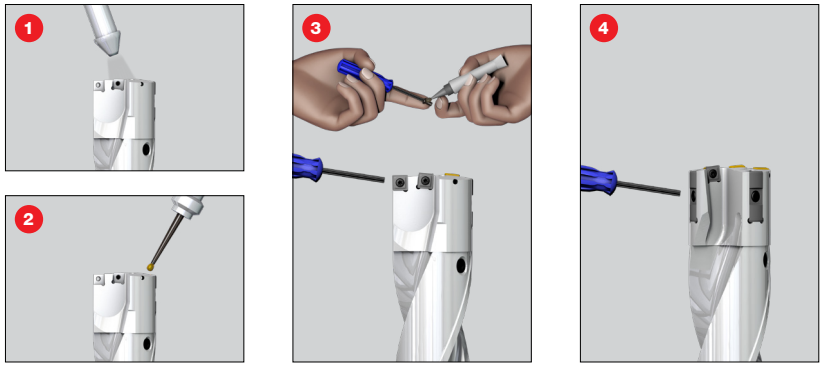
## MODUDRILL
MODULAR HEADS

### Head and Body Assembly




### MD-DR-DH Inserts Assembly



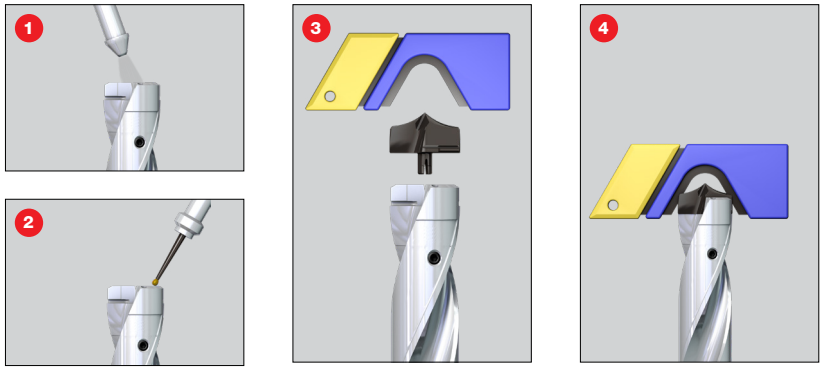

### Important:

- When using the MD-EXTENSION, a short pre-hole of at least 1XD deep (minimum) with H8 hole tolerance MUST be prepared to guide the long drill (an endmill can be used) for all drilling head types.

### For MD-DR-DH Head

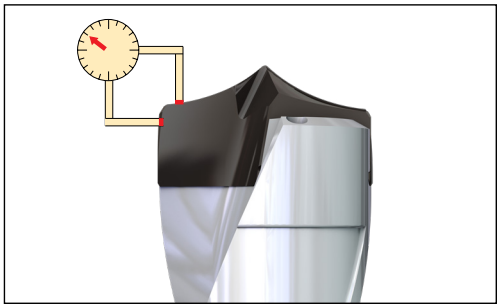
- Use HD chip breaker for internal insert

### MD-DFN Head Assembly




### For MD-DFN Head

- Max allowed Δ = 0.04 mm
  Axial runout & Radial runout



Click for Short Video

### Flow Rate vs. Pressure & Drill Diameter

| Drill Diameter (mm) | Pressure (bar) | Flow Rate (liter/min) |
|---|---|---|
| 33 | 20 | 60 |
| 34 | 20 | 60 |
| 35 | 20 | 60 |
| 36 | 20 | 60 |
| 37 | 20 | 60 |
| 38 | 20 | 70 |
| 39 | 20 | 70 |
| 40 | 20 | 70 |

• Internal coolant supply only

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MODUDRILL
MODULAR HEADS

## MD-DR-DH Cutting Parameters

| ISO | Material | | Condition | Tensile Strength Rm [N/mm²] | Hardness HB | Material No. | $V_c$ [m/min] | Feed Vs. Drill Diameter 33<ØD<40 (mm) f [mm/rev] | $V_c$ [SFM] | Feed Vs. Drill Diameter 1.299<ØD<1.575 (inch) f [ipr] |
|---|---|---|---|---|---|---|---|---|---|---|
| P | Non-alloy steel and cast steel, free cutting steel | < 0.25 %C | Annealed | 420 | 125 | 1 | 100-150 | 0.10-0.25 | 330-495 | .0039-.0098 |
| | | >= 0.25 %C | Annealed | 650 | 190 | 2 | | | | |
| | | < 0.55 %C | Quench and Tempered | 850 | 250 | 3 | 80-150 | 0.15-0.30 | 265-495 | .0059-.0117 |
| | | >= 0.55 %C | Annealed | 750 | 220 | 4 | | | | |
| | | | Quench and Tempered | 1000 | 300 | 5 | | | | |
| | Low alloy steel and cast steel (less than 5% all element) | | Annealed | 600 | 200 | 6 | | | | |
| | | | | 930 | 275 | 7 | 70-120 | 0.15-0.30 | 230-400 | .0059-.0117 |
| | | | Quench and Tempered | 1000 | 300 | 8 | | | | |
| | | | | 1200 | 350 | 9 | | | | |
| | High alloyed steel, cast steel and tool steel | | Annealed | 680 | 200 | 10 | 80-150 | 0.10-0.25 | 265-495 | .0039-.0098 |
| | | | Quench and Tempered | 1100 | 325 | 11 | 70-120 | 0.10-0.25 | 230-400 | .0039-.0098 |
| K | Cast iron nodular (GG) | | Ferritic/Pearlitic | | 180 | 15 | 180-300 | 0.18-0.35 | 600-990 | .007-.0136 |
| | | | Pearlitic | | 260 | 16 | | | | |
| | Grey cast iron (GGG) | | Ferritic | | 160 | 17 | 150-250 | 0.15-0.30 | 495-825 | .0059-.0117 |
| | | | Pearlitic | | 250 | 18 | | | | |
| | Malleable cast iron | | Ferritic | | 130 | 19 | | 0.15-0.35 | | .0059-.0136 |
| | | | Pearlitic | | 230 | 20 | | | | |

## MD-DFN Cutting Parameters

| ISO | Material | Condition | Hardness HB | Material No. | $V_c$ [m/min] | Feed Vs. Drill Diameter 33<ØD<40 (mm) f [mm/rev] | $V_c$ [SFM] | Feed Vs. Drill Diameter 1.299<ØD<1.575 (inch) f [ipr] |
|---|---|---|---|---|---|---|---|---|
| K | Cast iron nodular (GG) | Ferritic/Pearlitic | 180 | 15 | 90-125-160 | 0.40<br>0.50<br>0.60 | 300-410-530 | .0156<br>.0195<br>.0234 |
| | | Pearlitic | 260 | 16 | 80-110-140 | | 265-365-465 | |
| | Grey cast iron (GGG) | Ferritic | 160 | 17 | 90-135-180 | | 300-450-600 | |
| | | Pearlitic | 250 | 18 | 80-110-140 | | 265-365-465 | |
| | Malleable cast iron | Ferritic | 130 | 19 | 90-125-160 | | 300-410-530 | |
| | | Pearlitic | 230 | 20 | 80-110-140 | | 265-365-465 | |

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