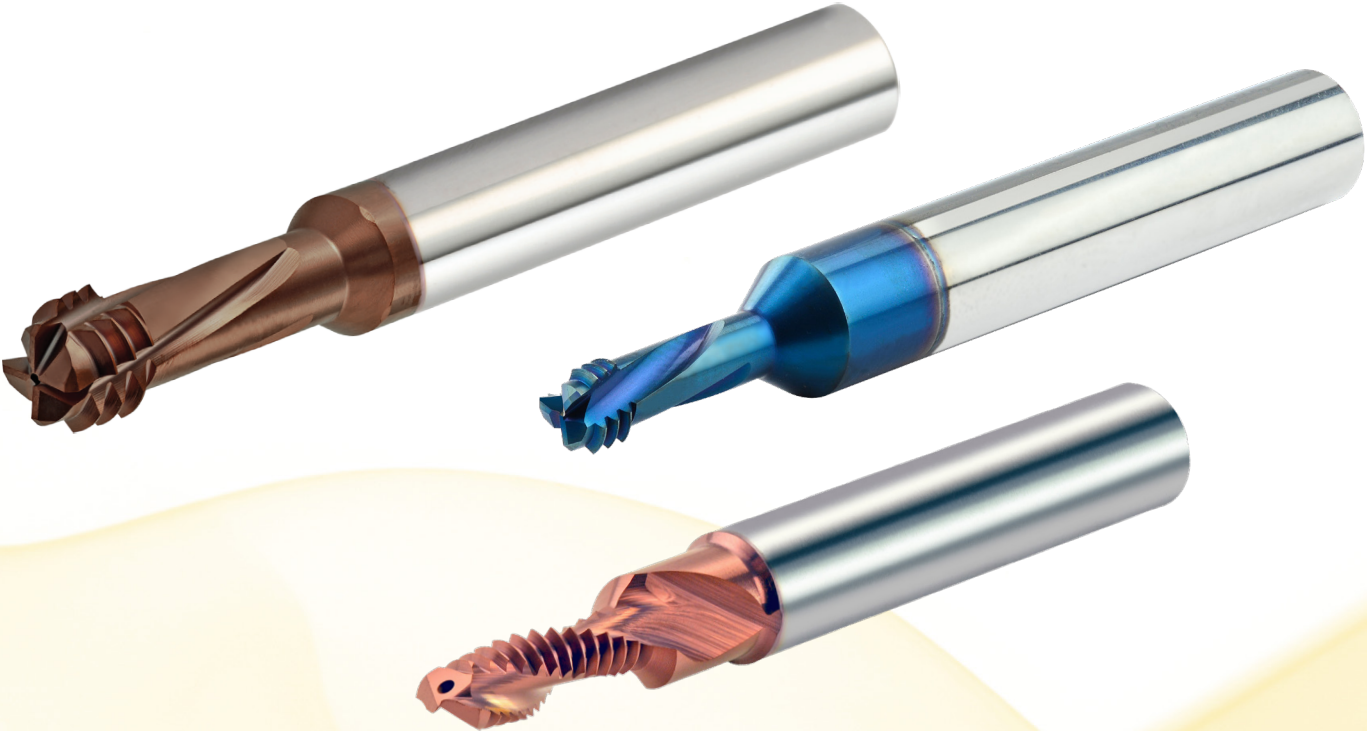


# Multi - Function Thread Mills

## 3 in 1 Operations

# B10



**High Performance tools with internal coolant supply for the production of internal threads.**

**Produces the thread hole, the thread and a chamfer in one work process.**

| Contents:                     | Page: | Contents:              | Page: |
|-------------------------------|-------|------------------------|-------|
| <b>DMT, DMTH Introduction</b> | 2     | <b>DMTH</b>            | 6-7   |
| Advantages                    | 2     | ISO                    | 6     |
| Product Identification        | 2     | UN                     | 6     |
| <b>DMT</b>                    | 3-5   | Case Studies           | 7     |
| ISO                           | 3     | <b>MT Drill - MTD</b>  | 8-9   |
| UN                            | 4     | Advantages             | 8     |
| G (BSP)                       | 5     | Product Identification | 8     |
| NPT                           | 5     | ISO                    | 9     |
|                               |       | UNC                    | 9     |
|                               |       | UNF                    | 9     |

## DMT and DMTH

### DMT

**High Performance tools with internal coolant supply for the production of internal threads. Circular movement produces the thread hole, the thread and a chamfer in one work process.**

Carbide grade: MT7 Sub-micron grade with Titanium Aluminum Nitride multi-layer coating (ISO K10-K20).

### DMTH

**The DMTH tools expand the range of the existing DMT line providing the ability to cut steels, hardened materials, stainless steels and super alloys.**

- Advance Carbide grade dedicated for hardened materials
- Triple blue coating for high wear and heat resistance

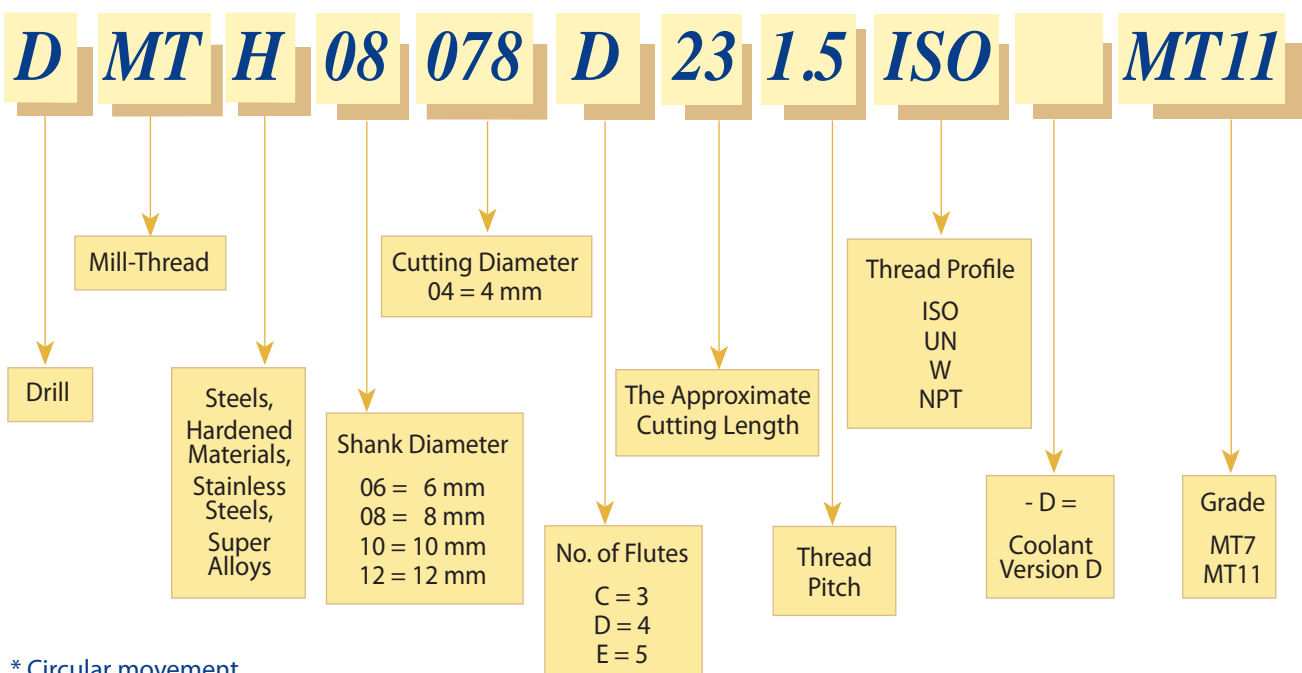
Carbide grade: MT11 Ultra-fine Sub-micron grade with advanced PVD triple blue coating (for DMTH).

### Advantages

- Cancels the need for drilling the hole.
- Short cycle time and high performance reduces machining costs.
- Suitable for blind and through holes.
- Full Profile thread.
- No time lost for tool change, since drilling, chamfering and thread milling are done with one tool.
- Same tool for right-hand or left-hand threads.
- Cuts a wide range of materials.

## Product Identification

### DMT 3 in 1 - \*Drill, Thread, Chamfer Ordering Codes



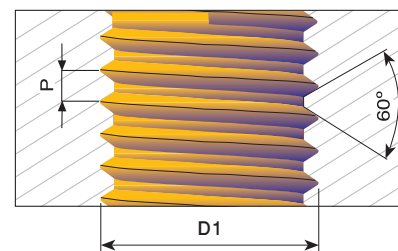
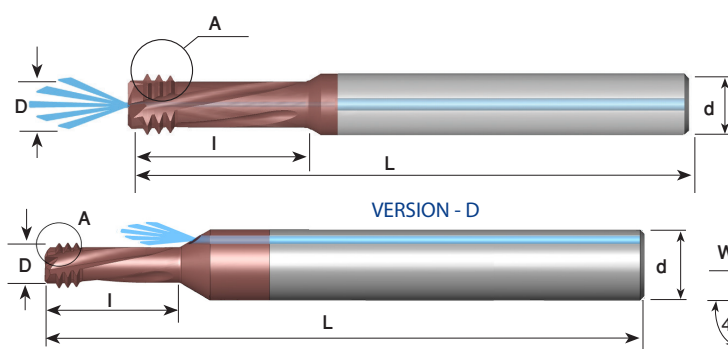
## DMT



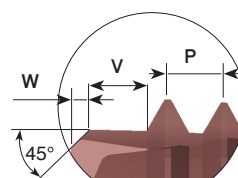
Demonstration

## ISO With internal coolant bore

### Tools for Internal Thread



Left hand cutting  
For CNC code use M04



Detail A



| Grade | P | M | K | N | S | H |
|-------|---|---|---|---|---|---|
| MT7   | ○ | ● | ● | ● | ○ |   |

| Pitch mm | M Coarse | M Fine   | Ordering Code                   | d  | D     | No. of Flutes | I    | W   | V    | L  | Thread depth |
|----------|----------|----------|---------------------------------|----|-------|---------------|------|-----|------|----|--------------|
| 0.5      | M3       | M3.5, M4 | <b>*DMT 06024 C7 0.5 ISO-D</b>  | 6  | 2.40  | 3             | 7.2  | 0.2 | 0.5  | 58 | 2xD1         |
| 0.7      | M4       |          | <b>*DMT 06032 C11 0.7 ISO-D</b> | 6  | 3.15  | 3             | 11.6 | 0.2 | 0.7  | 58 | 2.5xD1       |
| 0.8      | M5       |          | <b>*DMT 0604 C14 0.8 ISO-D</b>  | 6  | 4.00  | 3             | 14.4 | 0.3 | 0.8  | 58 | 2.5xD1       |
| 1.0      | M6, M7   | M8, M9   | <b>DMT 08047 C14 1.0 ISO</b>    | 8  | 4.70  | 3             | 14.0 | 0.4 | 1.0  | 64 | 2xD1         |
| 1.0      | M6, M7   | M8, M9   | <b>DMT 08047 C20 1.0 ISO</b>    | 8  | 4.70  | 3             | 20.4 | 0.4 | 1.0  | 64 | 3xD1         |
| 1.25     | M8, M9   | M10, M12 | <b>DMT 08061 D18 1.25 ISO</b>   | 8  | 6.10  | 4             | 18.0 | 0.5 | 1.25 | 64 | 2xD1         |
| 1.25     | M8, M9   | M10, M12 | <b>DMT 08061 D27 1.25 ISO</b>   | 8  | 6.10  | 4             | 27.0 | 0.5 | 1.25 | 64 | 3xD1         |
| 1.5      | M10      | M13-M15  | <b>DMT 08078 D23 1.5 ISO</b>    | 8  | 7.80  | 4             | 23.0 | 0.6 | 1.5  | 64 | 2xD1         |
| 1.75     | M12      |          | <b>DMT 1009 D26 1.75 ISO</b>    | 10 | 9.00  | 4             | 26.0 | 0.6 | 1.75 | 73 | 2xD1         |
| 2.0      | M16      | M17-M23  | <b>DMT 12118 D35 2.0 ISO</b>    | 12 | 11.80 | 4             | 35.0 | 0.6 | 2.0  | 84 | 2xD1         |

\* Tools version-D

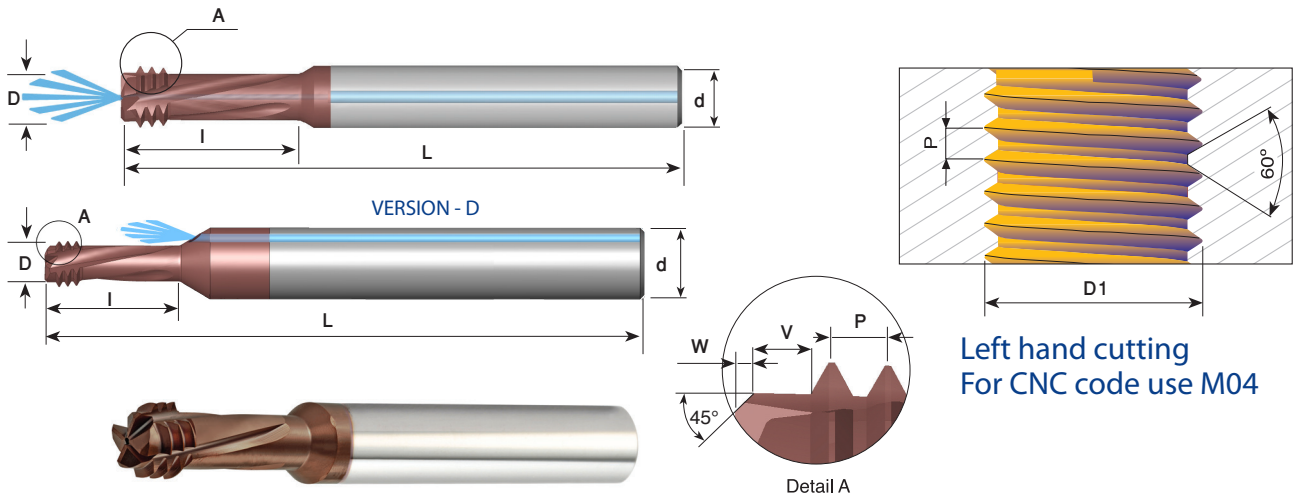
● First choice

○ Alternative

Order example: DMT 08047 C14 1.0 ISO MT7

## UN With internal coolant bore

### Tools for Internal Thread



### For thread depth up to 2 x D1

| Grade | P | M | K | N | S | H |
|-------|---|---|---|---|---|---|
| MT7   | ○ | ● | ● | ● | ○ |   |

| Pitch<br>TPI | UN, UNEF, UNF<br>UNC, UNS | Ordering Code                 | d  | D     | No. of<br>Flutes | I    | W   | V    | L  | Thread<br>length |
|--------------|---------------------------|-------------------------------|----|-------|------------------|------|-----|------|----|------------------|
| 40           | 4, 5, 6                   | <b>*DMT 06021 C7 40 UN-D</b>  | 6  | 2.10  | 3                | 7.0  | 0.1 | 0.6  | 58 | 2xD1             |
| 36           | 8                         | <b>*DMT 06033 C12 36 UN-D</b> | 6  | 3.30  | 3                | 12.0 | 0.2 | 0.7  | 58 | 2.5xD1           |
| 32           | 6                         | <b>*DMT 06026 C8 32 UN-D</b>  | 6  | 2.60  | 3                | 8.7  | 0.2 | 0.8  | 58 | 2xD1             |
| 32           | 8                         | <b>*DMT 06032 C12 32 UN-D</b> | 6  | 3.20  | 3                | 12.3 | 0.3 | 0.8  | 58 | 2.5xD1           |
| 32           | 10                        | <b>*DMT 06038 C14 32 UN-D</b> | 6  | 3.80  | 3                | 14.0 | 0.3 | 0.8  | 58 | 2.5xD1           |
| 28           | 1/4-3/8                   | <b>DMT 0805 C14 28 UN</b>     | 8  | 5.00  | 3                | 14.5 | 0.4 | 0.9  | 64 | 2xD1             |
| 24           | 10,12                     | <b>*DMT 06035 C12 24 UN-D</b> | 6  | 3.50  | 3                | 12.1 | 0.3 | 1.05 | 58 | 2xD1             |
| 24           | 5/16-1/2                  | <b>DMT 08065 D17 24 UN</b>    | 8  | 6.50  | 4                | 17.0 | 0.5 | 1.05 | 64 | 2xD1             |
| 20           | 1/4-3/8                   | <b>DMT 08048 C14 20 UN</b>    | 8  | 4.80  | 3                | 14.0 | 0.4 | 1.25 | 64 | 2xD1             |
| 18           | 5/16-7/16                 | <b>DMT 0806 D17 18 UN</b>     | 8  | 6.00  | 4                | 17.0 | 0.5 | 1.4  | 64 | 2xD1             |
| 16           | 3/8-1/2                   | <b>DMT 08067 C22 16 UN</b>    | 8  | 6.70  | 3                | 22.0 | 0.5 | 1.6  | 64 | 2xD1             |
| 14           | 7/16                      | <b>DMT 0808 D26 14 UN</b>     | 8  | 8.00  | 4                | 26.5 | 0.6 | 1.8  | 64 | 2xD1             |
| 13           | 1/2                       | <b>DMT 1010 D29 13 UN</b>     | 10 | 10.00 | 4                | 29.8 | 0.6 | 2.0  | 73 | 2xD1             |

\* Tools version-D

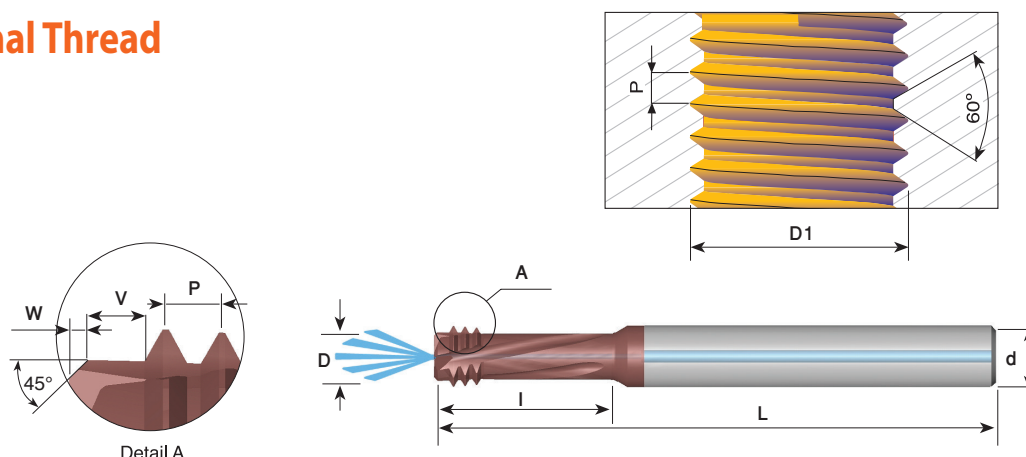
● First choice

○ Alternative

Order example: DMT 08067 C22 16 UN MT7

## G (BSP) With internal coolant bore

### Tools for Internal Thread



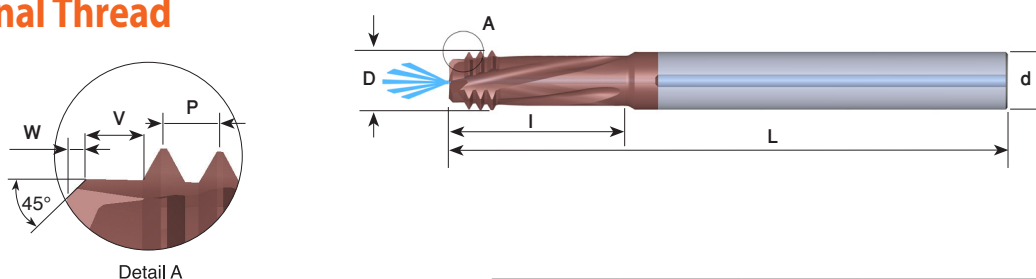
| Grade | P | M | K | N | S | H |
|-------|---|---|---|---|---|---|
| MT7   | ○ | ● | ● | ● | ○ |   |

| Pitch TPI | Standard | Ordering Code      | d  | D     | No. of Flutes | I    | W   | V   | L  | Thread length |
|-----------|----------|--------------------|----|-------|---------------|------|-----|-----|----|---------------|
| 28        | G1/16    | DMT 0806 D17 28 W  | 8  | 6.00  | 4             | 17.8 | 0.6 | 0.9 | 64 | 2xD1          |
| 28        | G1/8     | DMT 08078 D21 28 W | 8  | 7.80  | 4             | 21.8 | 0.6 | 0.9 | 64 | 2xD1          |
| 19        | G1/4     | DMT 12104 D29 19 W | 12 | 10.40 | 4             | 29.6 | 0.7 | 1.3 | 84 | 2xD1          |
| 19        | G3/8     | DMT 1414 D36 19 W  | 14 | 14.00 | 4             | 36.7 | 0.8 | 1.3 | 83 | 2xD1          |

Order example: DMT 08078 D21 28 W MT7

## NPT With internal coolant bore

### Tools for Internal Thread



| Grade | P | M | K | N | S | H |
|-------|---|---|---|---|---|---|
| MT7   | ○ | ● | ● | ● | ○ |   |

| Pitch TPI | Standard | Ordering Code        | d  | D     | No. of Flutes | I    | W   | V   | L  |
|-----------|----------|----------------------|----|-------|---------------|------|-----|-----|----|
| 27        | 1/16     | DMT 08057 D11 27 NPT | 8  | 5.70  | 4             | 11.2 | 0.4 | 0.9 | 64 |
| 27        | 1/8      | DMT 08076 D12 27 NPT | 8  | 7.60  | 4             | 12.1 | 0.4 | 0.9 | 64 |
| 18        | 1/4      | DMT 1010 D18 18 NPT  | 10 | 10.00 | 4             | 18.2 | 0.6 | 1.4 | 73 |
| 18        | 3/8      | DMT 1212 D19 18 NPT  | 12 | 12.00 | 4             | 19.6 | 0.6 | 1.4 | 84 |
| 14        | 1/2      | DMT 1616 E26 14 NPT  | 16 | 16.00 | 5             | 26.9 | 0.6 | 1.8 | 92 |

Order example: DMT 1010 D18 18 NPT MT7

● First choice

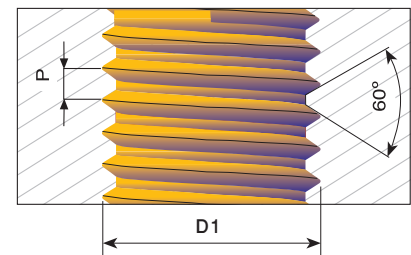
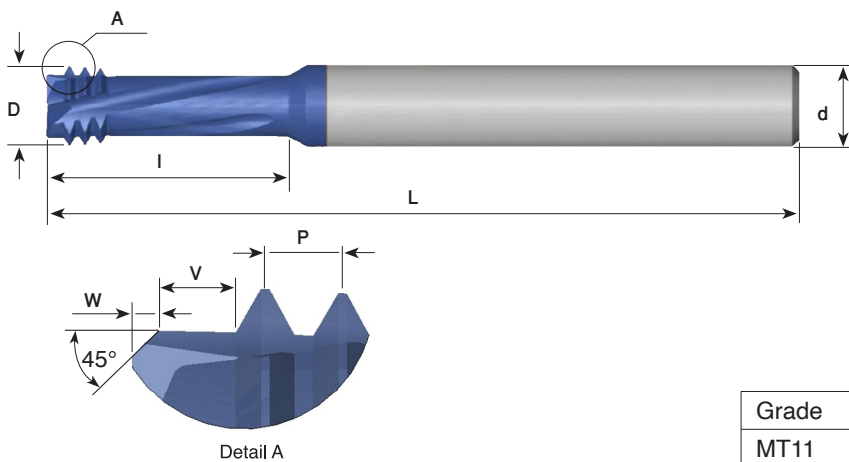
○ Alternative

## DMTH

For information see page B10-2

## ISO

### Tools for Internal Thread



Left hand cutting  
For CNC code use M04

| Grade | P | M | K | N | S | H       |
|-------|---|---|---|---|---|---------|
| MT11  | ● | ● | ○ | ○ | ● | ≤55 HRc |

| Pitch mm | M Coarse | M Fine  | Ordering Code           | d  | D     | No. of Flutes | I    | W   | V    | L  | Thread depth |
|----------|----------|---------|-------------------------|----|-------|---------------|------|-----|------|----|--------------|
| 0.7      | M4       |         | DMTH 06032 C11 0.7 ISO  | 6  | 3.15  | 3             | 11.6 | 0.2 | 0.7  | 58 | 2.5xD1       |
| 0.8      | M5       |         | DMTH 0604 C14 0.8 ISO   | 6  | 4.00  | 3             | 14.4 | 0.3 | 0.8  | 58 | 2.5xD1       |
| 1.0      | M6,M7    | M8,M9   | DMTH 08047 C14 1.0 ISO  | 8  | 4.70  | 3             | 14.4 | 0.4 | 1.0  | 64 | 2xD1         |
| 1.25     | M8,M9    | M10,M12 | DMTH 08061 D19 1.25 ISO | 8  | 6.10  | 4             | 19.0 | 0.5 | 1.25 | 64 | 2xD1         |
| 1.5      | M10      | M13-M15 | DMTH 08078 D23 1.5 ISO  | 8  | 7.80  | 4             | 23.6 | 0.6 | 1.5  | 64 | 2xD1         |
| 1.75     | M12      |         | DMTH 1009 D28 1.75 ISO  | 10 | 9.00  | 4             | 28.1 | 0.6 | 1.75 | 73 | 2xD1         |
| 2.0      | M16      | M17-M23 | DMTH 12118 D36 2.0 ISO  | 12 | 11.80 | 4             | 36.6 | 0.6 | 2.0  | 84 | 2xD1         |

Order example: DMTH 1009 D28 1.75 ISO MT11

## UN

### Tools for Internal Thread

| Grade | P | M | K | N | S | H       |
|-------|---|---|---|---|---|---------|
| MT11  | ● | ● | ○ | ○ | ● | ≤55 HRc |

| Pitch TPI | UN, UNEF, UNF UNC, UNS | Ordering Code        | d  | D     | No. of Flutes | I    | W   | V    | L  | Thread depth |
|-----------|------------------------|----------------------|----|-------|---------------|------|-----|------|----|--------------|
| 40        | 4, 5, 6                | DMTH 06021 C7 40 UN  | 6  | 2.10  | 3             | 7.0  | 0.1 | 0.6  | 58 | 2xD1         |
| 32        | 6                      | DMTH 06026 C8 32 UN  | 6  | 2.60  | 3             | 8.7  | 0.1 | 0.8  | 58 | 2xD1         |
| 28        | 1/4-3/8                | DMTH 0805 C14 28 UN  | 8  | 5.00  | 3             | 14.9 | 0.4 | 0.9  | 64 | 2xD1         |
| 24        | 5/16-1/2               | DMTH 08065 D18 24 UN | 8  | 6.50  | 4             | 18.5 | 0.5 | 1.05 | 64 | 2xD1         |
| 20        | 1/4-3/8                | DMTH 08048 C15 20 UN | 8  | 4.80  | 3             | 15.6 | 0.4 | 1.25 | 64 | 2xD1         |
| 18        | 5/16-7/16              | DMTH 0806 D19 18 UN  | 8  | 6.00  | 4             | 19.2 | 0.5 | 1.4  | 64 | 2xD1         |
| 16        | 3/8-1/2                | DMTH 08067 C22 16 UN | 8  | 6.70  | 3             | 22.8 | 0.5 | 1.6  | 64 | 2xD1         |
| 13        | 1/2                    | DMTH 10092 C30 13 UN | 10 | 9.20  | 3             | 30.0 | 0.6 | 2.0  | 73 | 2xD1         |
| 11        | 5/8                    | DMTH 12114 C37 11 UN | 12 | 11.40 | 3             | 37.0 | 0.6 | 2.3  | 84 | 2xD1         |

Order example: DMTH 08048 C15 20 UN MT11

● First choice ○ Alternative

## Case Studies

### Case Study no. 1

|                  |                                |
|------------------|--------------------------------|
| Tool Description | DMTH 08047 C14 1.0 ISO MT11    |
| Internal Thread  | M6x1.0                         |
| Thread Length    | 12 mm                          |
| Material         | Steel 12-15 HRc SAE 4340       |
| Cutting Data     | Vc= 90 m/min Fz= 0.03 mm/tooth |
| Cycle Time       | 28 seconds                     |
| Tool Life        | 776                            |

### Case Study no. 2

|                  |                                |
|------------------|--------------------------------|
| Tool Description | DMTH 08047 C14 1.0 ISO MT11    |
| Internal Thread  | M6x1.0                         |
| Thread Length    | 12 mm                          |
| Material         | Steel 44-45 HRc SAE 4340       |
| Cutting Data     | Vc= 71 m/min Fz= 0.02 mm/tooth |
| Cycle Time       | 53 seconds                     |
| Tool Life        | 196                            |



## MT Drill - MTD

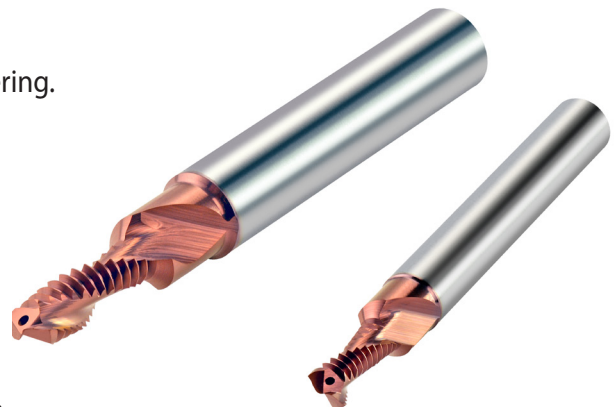
**Designed to drill, chamfer and thread mill the hole in one operation.**

**Carbide grade:** MT7: Sub-Micron carbide grade combines high hardness and toughness, with PVD triple coating for smooth cutting and high performance.

**K20:** Uncoated Sub-Micron carbide grade dedicated for machining Aluminum and Cast Iron.

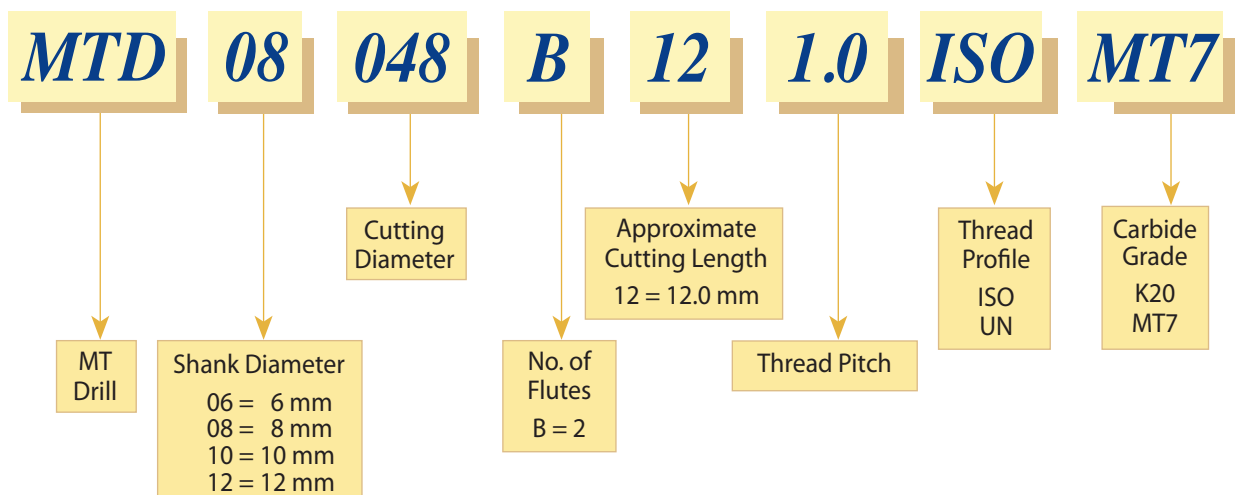
## Advantages

- Two fluted drill/thread milling cutter, with 45° chamfering. Ideal for mass production applications.
- Reduces cycle times by combining operations and eliminating tool changes.
- For both right and left hand internal threads.
- Same tool for blind or through hole.
- High thread surface quality.
- Internal coolant.
- Optimized carbide grade for Aluminum and Cast Iron.



## Product Identification

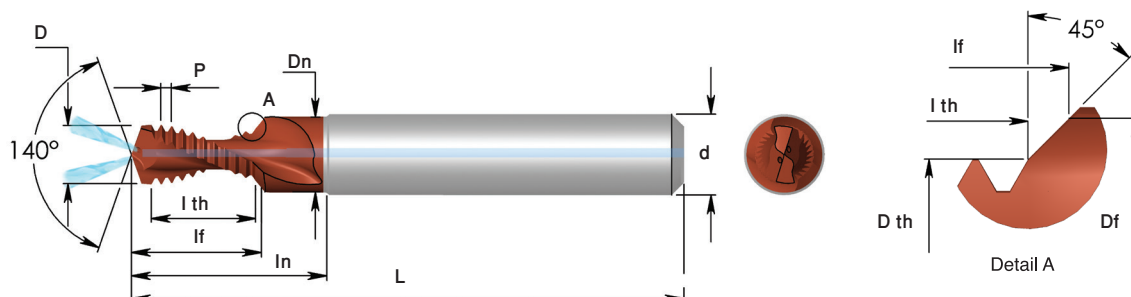
### Mill-Thread Drill Ordering Codes





## MT Drill - MTD

### Tools for Internal thread



Thread length: 2xD

| Grade | P | M | K | N | S | H |
|-------|---|---|---|---|---|---|
| K20   |   |   | ● | ● |   |   |
| MT7   |   |   | ● | ● |   |   |

## ISO

| Pitch mm | M Coarse | Ordering Code                 | d  | D    | Dth  | Df   | Dn   | In | Ith  | If   | L  |
|----------|----------|-------------------------------|----|------|------|------|------|----|------|------|----|
| 0.7      | M4       | <b>MTD 06032 B7 0.7 ISO</b>   | 6  | 3.30 | 3.20 | 4.7  | 4.9  | 15 | 7.7  | 9.8  | 54 |
| 0.8      | M5       | <b>MTD 0604 B9 0.8 ISO</b>    | 6  | 4.20 | 4.00 | 5.5  | 5.7  | 18 | 9.6  | 11.9 | 54 |
| 1.0      | M6       | <b>MTD 08048 B12 1.0 ISO</b>  | 8  | 5.00 | 4.80 | 6.5  | 6.8  | 26 | 12.0 | 14.8 | 62 |
| 1.25     | M8       | <b>MTD 10064 B15 1.25 ISO</b> | 10 | 6.75 | 6.40 | 8.6  | 8.9  | 34 | 15.1 | 18.7 | 74 |
| 1.5      | M10      | <b>MTD 1208 B19 1.5 ISO</b>   | 12 | 8.50 | 8.00 | 10.5 | 10.8 | 35 | 19.5 | 23.8 | 80 |

## UNC

| Pitch TPI | UNC  | Ordering Code              | d  | D    | Dth  | Df   | Dn   | In | Ith  | If   | L  |
|-----------|------|----------------------------|----|------|------|------|------|----|------|------|----|
| 20        | 1/4  | <b>MTD 08048 B12 20 UN</b> | 8  | 5.20 | 4.80 | 6.7  | 6.9  | 26 | 12.7 | 15.9 | 62 |
| 18        | 5/16 | <b>MTD 10061 B15 18 UN</b> | 10 | 6.60 | 6.10 | 8.3  | 8.6  | 34 | 15.5 | 19.2 | 74 |
| 16        | 3/8  | <b>MTD 12075 B19 16 UN</b> | 12 | 8.00 | 7.50 | 10.0 | 10.3 | 35 | 19.1 | 23.4 | 80 |
| 14        | 7/16 | <b>MTD 12088 B21 14 UN</b> | 12 | 9.40 | 8.80 | 11.4 | 11.6 | 35 | 21.8 | 26.6 | 80 |

## UNF

| Pitch TPI | UNF  | Ordering Code              | d  | D    | Dth  | Df   | Dn   | In | Ith  | If   | L  |
|-----------|------|----------------------------|----|------|------|------|------|----|------|------|----|
| 32        | 10   | <b>MTD 06038 B9 32 UN</b>  | 6  | 4.10 | 3.80 | 5.4  | 5.6  | 18 | 9.5  | 11.8 | 54 |
| 28        | 1/4  | <b>MTD 08052 B13 28 UN</b> | 8  | 5.50 | 5.20 | 6.7  | 6.9  | 26 | 13.0 | 15.7 | 62 |
| 24        | 5/16 | <b>MTD 10066 B15 24 UN</b> | 10 | 6.90 | 6.60 | 8.4  | 8.7  | 34 | 15.9 | 19.1 | 74 |
| 24        | 3/8  | <b>MTD 12082 B19 24 UN</b> | 12 | 8.50 | 8.20 | 10.0 | 10.3 | 35 | 19.0 | 22.5 | 80 |

- Tools without coolant available upon request.
- Cylindrical shank DIN6535-HA (Weldon shank, available upon request).

Order example: MTD 08048 B12 20 UN MT7

● First choice ○ Alternative