

Drill Thread Milling Tool BGF



Drilling, chamfering and thread milling in a single pass

The BGF drill thread milling tool rear chamfer is a standard tool for defined thread lengths of $1.5 \times D$; $2.0 \times D$ and $2.5 \times D$.

The patented drill thread milling tool produces a complete thread, including drill hole and chamfer, in a single pass.

This offers the following main advantages compared to the conventional methods of tapping and roll form tapping:

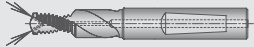






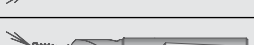
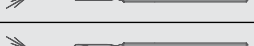
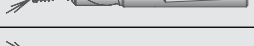
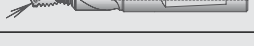


- Only one tool instead of 2 or 3
- Shorter cycle times

- One and the same tool for blind and through holes
- One and the same tool for different materials
- Exact and repeatable drill and thread depth from 1st to last thread
- No chip root remaining in the thread
- High speed cutting (HSC) possible

Drill Thread Milling Tool BGF with 2 cutting edges with coolant supply



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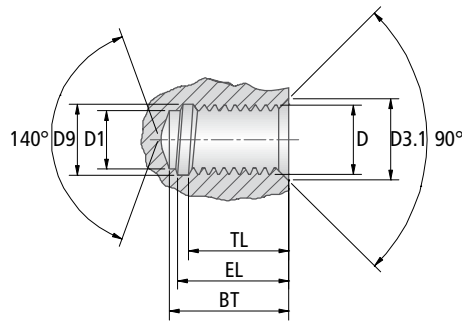


CNC programs can be configured on line at <http://tpt.kometgroup.com>
or can be obtained on request from tel.: +49 (0) 711 78891-0

Thread engagements for BGF

For metric ISO thread DIN 13, for EG metric ISO thread DIN 8140 for helical wire inserts and for metric fine ISO thread DIN 13

BT = Drill depth
 EL = Thread engagement
 TL = Full thread length



| M | 1,5xD | | | | | | 2,0xD | | | | | | 2,5xD | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL |
| M3 | 2,50 | 4,90 | 3,30 | 3,10 | 4,40 | 3,80 | 2,50 | 6,90 | 3,30 | 3,10 | 6,40 | 5,80 | | | | | | |
| M4 | 3,30 | 6,80 | 4,30 | 4,12 | 6,10 | 5,25 | 3,30 | 8,90 | 4,30 | 4,12 | 8,20 | 7,30 | 3,30 | 11,00 | 4,30 | 4,12 | 10,30 | 9,40 |
| M5 | 4,20 | 8,58 | 5,30 | 5,19 | 7,80 | 6,80 | 4,20 | 11,00 | 5,30 | 5,19 | 10,20 | 9,20 | 4,20 | 13,38 | 5,30 | 5,19 | 12,58 | 11,57 |
| M6 | 5,00 | 10,70 | 6,30 | 6,25 | 9,70 | 8,40 | 5,00 | 13,70 | 6,30 | 6,25 | 12,70 | 11,40 | 5,00 | 15,70 | 6,30 | 6,25 | 14,70 | 13,40 |
| M8 | 6,75 | 13,35 | 8,30 | 8,41 | 12,15 | 10,45 | 6,75 | 17,10 | 8,30 | 8,41 | 15,90 | 14,20 | 6,75 | 22,10 | 8,30 | 8,41 | 20,90 | 19,20 |
| M10 | 8,50 | 17,60 | 10,30 | 10,54 | 16,06 | 14,00 | 8,50 | 22,10 | 10,30 | 10,54 | 20,60 | 18,50 | 8,50 | 26,60 | 10,30 | 10,54 | 25,10 | 23,00 |
| M12 | 10,30 | 20,25 | 12,30 | 12,65 | 18,45 | 16,35 | 10,30 | 25,50 | 12,30 | 12,65 | 23,70 | 21,60 | 10,30 | 32,50 | 12,30 | 12,65 | 30,70 | 28,60 |
| M14 | 12,00 | 22,90 | 14,30 | 14,81 | 20,90 | 18,60 | 12,00 | 30,90 | 14,30 | 14,81 | 28,90 | 26,60 | 12,00 | 36,90 | 14,30 | 14,81 | 34,90 | 32,60 |
| M16 | 14,00 | 27,00 | 16,30 | 16,88 | 25,00 | 22,60 | 14,00 | 35,00 | 16,30 | 16,88 | 33,00 | 30,60 | 14,00 | 43,00 | 16,30 | 16,88 | 41,00 | 38,60 |

| EG | 1,5xD | | | | | | 2,0xD | | | | | | 2,5xD | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL |
| EG-M6 | 6,30 | 11,78 | 7,60 | 7,70 | 10,80 | 9,40 | 6,30 | 15,78 | 7,60 | 7,70 | 14,80 | 13,40 | 6,30 | 19,78 | 7,60 | 7,70 | 18,80 | 17,40 |
| EG-M8 | 8,37 | 15,99 | 9,92 | 10,21 | 14,70 | 12,90 | 8,37 | 20,99 | 9,92 | 10,21 | 19,70 | 17,90 | 8,37 | 25,99 | 9,92 | 10,21 | 24,70 | 22,90 |
| EG-M10 | 10,45 | 19,18 | 12,25 | 12,68 | 17,70 | 15,50 | 10,50 | 25,18 | 12,25 | 12,68 | 23,70 | 21,50 | 10,50 | 31,18 | 12,25 | 12,68 | 29,70 | 27,50 |
| EG-M12 | 12,52 | 23,85 | 14,57 | 15,14 | 22,10 | 19,80 | 12,50 | 30,85 | 14,57 | 15,14 | 29,10 | 26,80 | 12,50 | 37,85 | 14,57 | 15,14 | 36,10 | 33,80 |

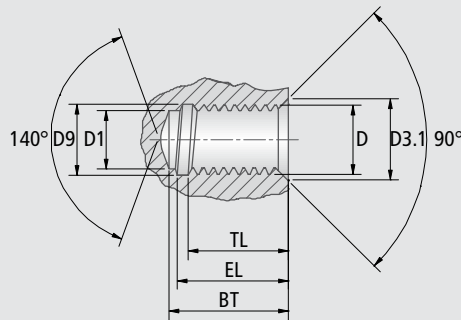
| MF | 1,5xD | | | | | | 2,0xD | | | | | | 2,5xD | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL |
| M6x0,75 | 5,25 | 10,30 | 6,30 | 6,18 | 9,60 | 8,60 | 5,25 | 14,05 | 6,30 | 6,18 | 13,30 | 12,30 | 5,25 | 16,30 | 6,30 | 6,18 | 15,60 | 14,60 |
| M8x1 | 7,00 | 13,70 | 8,30 | 8,31 | 12,70 | 11,40 | 7,00 | 17,70 | 8,30 | 8,31 | 16,70 | 15,40 | 7,00 | 21,70 | 8,30 | 8,31 | 20,70 | 19,40 |
| M10x1 | 9,00 | 16,80 | 10,30 | 10,35 | 15,80 | 14,40 | 9,00 | 21,80 | 10,30 | 10,35 | 20,80 | 19,40 | 9,00 | 25,80 | 10,30 | 10,35 | 24,80 | 23,40 |
| M12x1,5 | 10,50 | 20,60 | 12,30 | 12,35 | 19,08 | 17,01 | 10,50 | 26,60 | 12,30 | 12,35 | 25,08 | 23,01 | 10,50 | 32,60 | 12,30 | 12,35 | 31,08 | 29,01 |
| M12x1 | 11,00 | 19,75 | 12,30 | 12,35 | 18,80 | 17,40 | 11,00 | 24,75 | 12,30 | 12,35 | 23,80 | 22,40 | 11,00 | 31,75 | 12,30 | 12,35 | 30,80 | 29,40 |
| M14x1,5 | 12,50 | 23,61 | 14,30 | 14,61 | 22,11 | 19,98 | 12,50 | 29,60 | 14,30 | 14,61 | 28,10 | 26,00 | 12,50 | 37,11 | 14,30 | 14,61 | 35,60 | 33,50 |
| M16x1,5 | 14,50 | 26,62 | 16,30 | 16,64 | 25,12 | 22,97 | 14,50 | 34,10 | 16,30 | 16,64 | 32,60 | 30,50 | 14,50 | 41,62 | 16,30 | 16,64 | 40,10 | 38,00 |

We reserve the right to make technical alterations

Thread engagements for BGF

For UNC thread ANSI B1.1, for UNF thread ANSI B1.1 and for Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226 (previously DIN 2999)

BT = Drill depth
 EL = Thread engagement
 TL = Full thread length



| UNC | 1,5xD | | | | | | 2,0xD | | | | | | 2,5xD | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL |
| 1/4-20 UNC | 5,08 | 11,09 | 6,65 | 6,83 | 9,82 | 8,06 | 5,08 | 14,90 | 6,65 | 6,83 | 13,60 | 11,90 | 5,08 | 17,44 | 6,65 | 6,83 | 16,20 | 14,40 |
| 5/16-18 UNC | 6,53 | 13,77 | 8,24 | 8,56 | 12,36 | 10,34 | 6,53 | 18,00 | 8,24 | 8,56 | 16,60 | 14,60 | 6,53 | 22,24 | 8,24 | 8,56 | 20,83 | 18,80 |
| 3/8-16 UNC | 7,94 | 16,99 | 9,83 | 10,23 | 15,40 | 13,20 | 7,94 | 21,80 | 9,83 | 10,23 | 20,20 | 18,00 | 7,94 | 26,51 | 9,83 | 10,23 | 24,93 | 22,73 |
| 1/2-13 UNC | 10,75 | 22,56 | 13,00 | 13,72 | 20,60 | 18,10 | 10,80 | 28,40 | 13,00 | 13,72 | 26,50 | 24,00 | 10,80 | 34,28 | 13,00 | 13,72 | 32,33 | 29,86 |

| UNF | 1,5xD | | | | | | 2,0xD | | | | | | 2,5xD | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL |
| 1/4-28 UNF | 5,44 | 10,68 | 6,65 | 6,70 | 9,78 | 8,52 | 5,44 | 14,30 | 6,65 | 6,70 | 13,40 | 12,10 | 5,44 | 17,05 | 6,65 | 6,70 | 16,10 | 14,90 |
| 5/16-24 UNF | 6,88 | 13,54 | 8,24 | 8,40 | 12,50 | 11,00 | 6,88 | 17,80 | 8,24 | 8,40 | 16,70 | 15,20 | 6,88 | 20,95 | 8,24 | 8,40 | 19,90 | 18,40 |
| 3/8-24 UNF | 8,47 | 15,67 | 9,83 | 10,01 | 14,61 | 13,07 | 8,47 | 19,90 | 9,83 | 10,01 | 18,80 | 17,30 | 8,47 | 25,19 | 9,83 | 10,01 | 24,10 | 22,60 |
| 1/2-20 UNF | 11,43 | 20,08 | 13,00 | 13,35 | 18,80 | 16,90 | 11,40 | 26,40 | 13,00 | 13,35 | 25,20 | 23,30 | 11,40 | 32,78 | 13,00 | 13,35 | 31,50 | 29,60 |

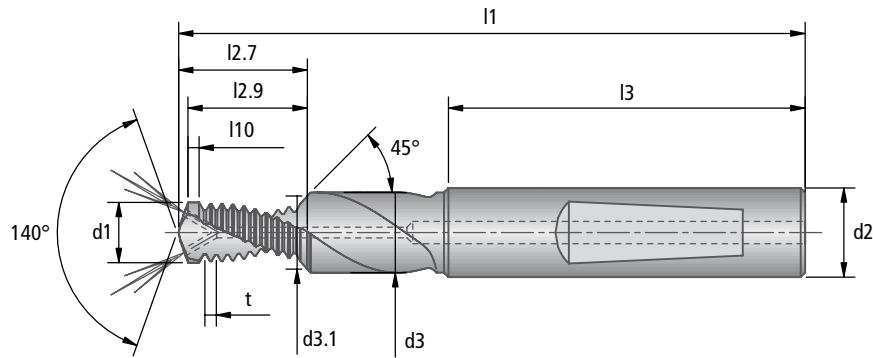
| G | 1,5xD | | | | | | 2,0xD | | | | | | 2,5xD | | | | | |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL | D1 | BT | D3.1 | D9 | EL | TL |
| G1/8-28 | 8,82 | 15,25 | 10,03 | 10,12 | 14,34 | 13,04 | 8,82 | 20,70 | 10,03 | 10,12 | 19,80 | 18,50 | 8,82 | 25,23 | 10,03 | 10,12 | 24,30 | 23,00 |
| G1/4-19 | 11,82 | 20,97 | 13,46 | 13,52 | 19,63 | 17,87 | 11,80 | 27,70 | 13,46 | 13,52 | 26,30 | 24,60 | 11,80 | 34,44 | 13,46 | 13,52 | 33,10 | 31,30 |





M Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 1.5×D

For metric ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| M-BGF 1,5×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|-------------|------|------|------|------|----|-----|------|----|------|------|------|---|---|--|---|---|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z |  |  |  |  |
| | | | | | | | | | | | | | Order No. | Order No. | Order No. | Order No. |
| M4 | 0,70 | 47,0 | 7,3 | 6,8 | 36 | 0,7 | 3,3 | 6 | 4,5 | 4,3 | 3,24 | 2 | 80945001000015 | 80934001000015 | 88945001000015 | 88934001000015 |
| M5 | 0,80 | 52,6 | 9,3 | 8,6 | 36 | 0,8 | 4,2 | 6 | 5,5 | 5,3 | 4,10 | 2 | 80945001000017 | 80934001000017 | 88945001000017 | 88934001000017 |
| M6 | 1,00 | 59,0 | 11,5 | 10,7 | 36 | 1,0 | 5,0 | 8 | 6,6 | 6,3 | 4,85 | 2 | 80945001000018 | 80934001000018 | 88945001000018 | 88934001000018 |
| M8 | 1,25 | 70,3 | 14,4 | 13,4 | 40 | 1,3 | 6,8 | 10 | 9,0 | 8,3 | 6,45 | 2 | 80945001000020 | 80934001000020 | 88945001000020 | 88934001000020 |
| M10 | 1,50 | 74,5 | 18,9 | 17,6 | 45 | 1,5 | 8,5 | 12 | 11,0 | 10,3 | 8,08 | 2 | 80945001000022 | 80934001000022 | 88945001000022 | 88934001000022 |
| M12 | 1,75 | 83,8 | 21,8 | 20,2 | 45 | 1,5 | 10,3 | 14 | 13,5 | 12,3 | 9,74 | 2 | 80945001000024 | 80934001000024 | 88945001000024 | 88934001000024 |

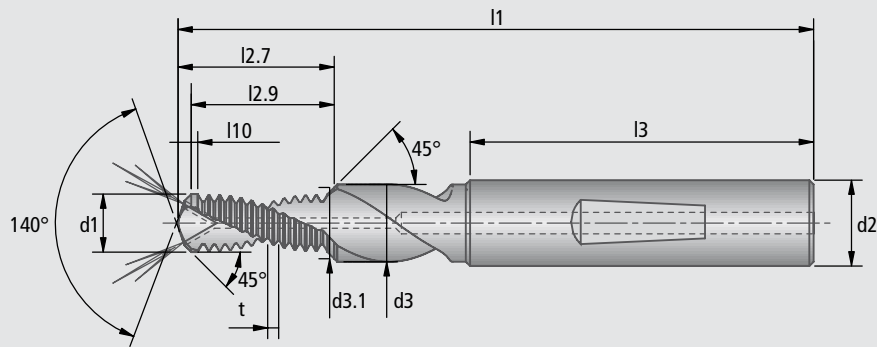
M Drill Thread Milling Tool BGF



with 2 cutting edges with rear chamfer 1.5×D for Nodular Grey Cast Iron

For metric ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| M-BGF 1,5×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|-------------|------|------|------|------|----|-----|------|----|------|------|------|---|---------------|----------------|---------------|----------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| M4 | 0,70 | 47,0 | 7,3 | 6,8 | 36 | 0,7 | 3,3 | 6 | 4,5 | 4,3 | 3,24 | 2 | | | | |
| M5 | 0,80 | 52,6 | 9,3 | 8,6 | 36 | 0,8 | 4,2 | 6 | 5,5 | 5,3 | 4,10 | 2 | | | | |
| M6 | 1,00 | 59,0 | 11,5 | 10,7 | 36 | 1,0 | 5,0 | 8 | 6,6 | 6,3 | 4,85 | 2 | | 80949001000018 | | 88949001000018 |
| M8 | 1,25 | 70,3 | 14,4 | 13,4 | 40 | 1,3 | 6,8 | 10 | 9,0 | 8,3 | 6,45 | 2 | | 80949001000020 | | 88949001000020 |
| M10 | 1,50 | 74,5 | 18,9 | 17,6 | 45 | 1,5 | 8,5 | 12 | 11,0 | 10,3 | 8,08 | 2 | | 80949001000022 | | 88949001000022 |
| M12 | 1,75 | 83,8 | 21,8 | 20,2 | 45 | 1,5 | 10,3 | 14 | 13,5 | 12,3 | 9,74 | 2 | | 80949001000024 | | 88949001000024 |

Thread engagements see page 51 in table thread engagements for BGF NZ4 and BGF for Nodular Grey Cast Iron

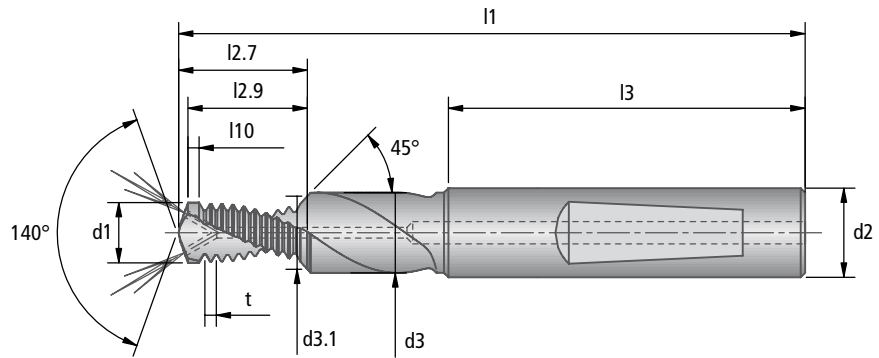


M Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 2.0×D

For metric ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



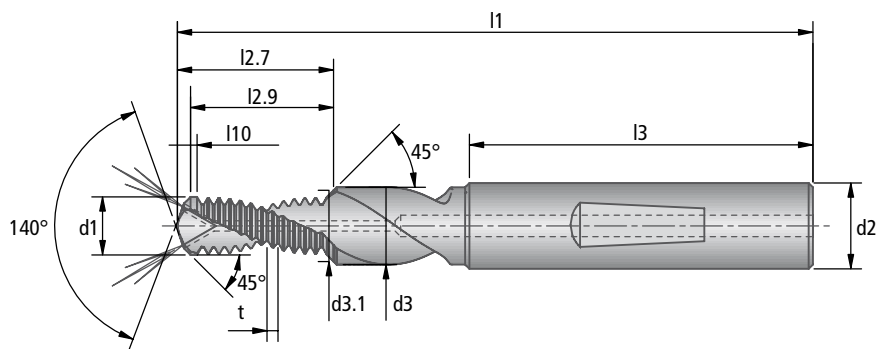
* Tools without internal coolant supply

| M-BGF 2,0×D | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA | |
|-------------|------|-------|------|------|----|-----|------|----|------|------|-------|---------------|----------------|----------------|----------------|----------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| *M3 | 0,50 | 49,0 | 6,8 | 7,3 | 36 | 0,5 | 2,5 | 6 | 4,5 | 3,3 | 2,45 | 2 | 80901001000013 | 80906001000013 | 88901001000013 | 88906001000013 |
| M4 | 0,70 | 49,0 | 9,4 | 8,9 | 36 | 0,7 | 3,3 | 6 | 4,5 | 4,3 | 3,24 | 2 | 80941001000015 | 80935001000015 | 88941001000015 | 88935001000015 |
| M5 | 0,80 | 55,0 | 11,7 | 11,0 | 36 | 0,8 | 4,2 | 6 | 5,5 | 5,3 | 4,10 | 2 | 80941001000017 | 80935001000017 | 88941001000017 | 88935001000017 |
| M6 | 1,00 | 62,0 | 14,5 | 13,7 | 36 | 1,0 | 5,0 | 8 | 6,6 | 6,3 | 4,85 | 2 | 80941001000018 | 80935001000018 | 88941001000018 | 88935001000018 |
| M8 | 1,25 | 74,0 | 18,2 | 17,1 | 40 | 1,3 | 6,8 | 10 | 9,0 | 8,3 | 6,45 | 2 | 80941001000020 | 80935001000020 | 88941001000020 | 88935001000020 |
| M10 | 1,50 | 79,0 | 23,4 | 22,1 | 45 | 1,5 | 8,5 | 12 | 11,0 | 10,3 | 8,08 | 2 | 80941001000022 | 80935001000022 | 88941001000022 | 88935001000022 |
| M12 | 1,75 | 89,0 | 27,1 | 25,5 | 45 | 1,5 | 10,3 | 14 | 13,5 | 12,3 | 9,74 | 2 | 80941001000024 | 80935001000024 | 88941001000024 | 88935001000024 |
| M14 | 2,00 | 102,0 | 32,8 | 30,9 | 48 | 1,5 | 12,0 | 16 | 15,5 | 14,3 | 11,35 | 2 | 80941001000025 | 80935001000025 | 88941001000025 | 88935001000025 |
| M16 | 2,00 | 102,0 | 37,1 | 35,0 | 48 | 1,5 | 14,0 | 18 | 17,5 | 16,3 | 13,28 | 2 | 80941001000026 | 80935001000026 | 88941001000026 | 88935001000026 |

with 2 cutting edges with rear chamfer 2.0×D for Nodular Grey Cast Iron

For metric ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| M-BGF 2,0×D | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA | |
|-------------|------|------|------|------|----|-----|------|----|------|------|------|---------------|------------|----------------|------------|----------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| M4 | 0,70 | 47,0 | 7,3 | 6,8 | 36 | 0,7 | 3,3 | 6 | 4,5 | 4,3 | 3,24 | 2 | | | | |
| M5 | 0,80 | 52,6 | 9,3 | 8,6 | 36 | 0,8 | 4,2 | 6 | 5,5 | 5,3 | 4,10 | 2 | | | | |
| M6 | 1,00 | 59,0 | 11,5 | 10,7 | 36 | 1,0 | 5,0 | 8 | 6,6 | 6,3 | 4,85 | 2 | | 80943001000018 | | 88943001000018 |
| M8 | 1,25 | 70,3 | 14,4 | 13,4 | 40 | 1,3 | 6,8 | 10 | 9,0 | 8,3 | 6,45 | 2 | | 80943001000020 | | 88943001000020 |
| M10 | 1,50 | 74,5 | 18,9 | 17,6 | 45 | 1,5 | 8,5 | 12 | 11,0 | 10,3 | 8,08 | 2 | | 80943001000022 | | 88943001000022 |
| M12 | 1,75 | 83,8 | 21,8 | 20,2 | 45 | 1,5 | 10,3 | 14 | 13,5 | 12,3 | 9,74 | 2 | | 80943001000024 | | 88943001000024 |

Thread engagements see page 51 in table thread engagements for BGF NZ4 and BGF for Nodular Grey Cast Iron

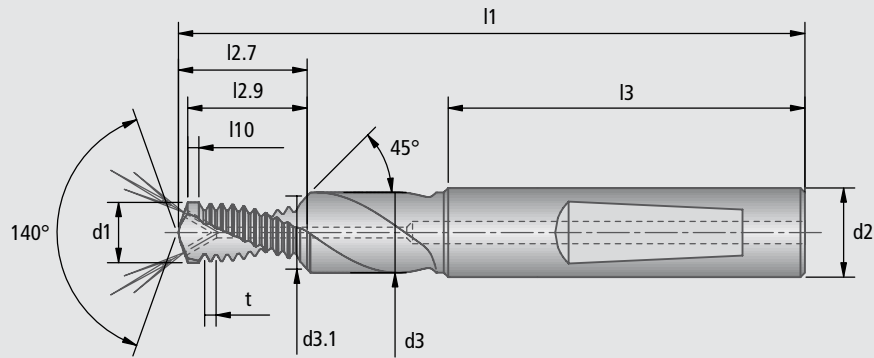
M Drill Thread Milling Tool BGF



with 2 cutting edges with rear chamfer 2.5×D

For metric ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| M-BGF 2,5xD | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA | |
|-------------|------|-------|------|------|----|-----|------|----|------|------|-------|---------------|----------------|----------------|----------------|----------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| M4 | 0,70 | 49,0 | 11,5 | 11,0 | 36 | 0,7 | 3,3 | 6 | 4,5 | 4,3 | 3,24 | 2 | | | | |
| M5 | 0,80 | 55,0 | 14,1 | 13,4 | 36 | 0,8 | 4,2 | 6 | 5,5 | 5,3 | 4,10 | 2 | 80961001000017 | | 88961001000017 | |
| M6 | 1,00 | 62,0 | 16,5 | 15,7 | 36 | 1,0 | 5,0 | 8 | 6,6 | 6,3 | 4,85 | 2 | 80961001000018 | 80956001000018 | 88961001000018 | 88956001000018 |
| M8 | 1,25 | 74,0 | 23,2 | 22,1 | 40 | 1,3 | 6,8 | 10 | 9,0 | 8,3 | 6,45 | 2 | 80961001000020 | 80956001000020 | 88961001000020 | 88956001000020 |
| M10 | 1,50 | 79,0 | 27,9 | 26,6 | 45 | 1,5 | 8,5 | 12 | 11,0 | 10,3 | 8,08 | 2 | 80961001000022 | 80956001000022 | 88961001000022 | 88956001000022 |
| M12 | 1,75 | 89,0 | 34,1 | 32,5 | 45 | 1,5 | 10,3 | 14 | 13,5 | 12,3 | 9,74 | 2 | 80961001000024 | 80956001000024 | 88961001000024 | 88956001000024 |
| M14 | 2,00 | 102,0 | 38,8 | 36,9 | 48 | 1,5 | 12,0 | 16 | 15,5 | 14,3 | 11,35 | 2 | | | | |
| M16 | 2,00 | 102,0 | 45,1 | 43,0 | 48 | 1,5 | 14,0 | 18 | 17,5 | 16,3 | 13,28 | 2 | 80961001000026 | | 88961001000026 | |

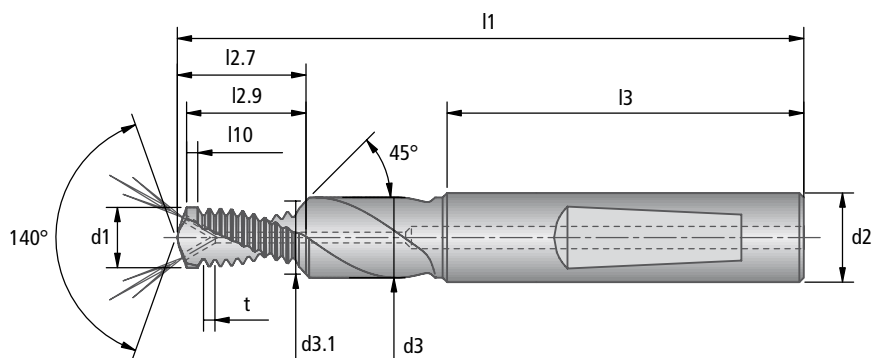


EG Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 2.0×D

For EG metric ISO thread DIN 8140
for helical wire inserts
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| EG-BGF 2,0×D | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA | |
|--------------|------|-------|------|------|----|-----|------|----|----|------|-------|---------------|----------------|----------------|----------------|----------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| EG-M6 | 1,00 | 74,0 | 16,8 | 15,8 | 40 | 1,0 | 6,3 | 10 | 9 | 7,6 | 5,98 | 2 | 80941051000018 | 80935051000018 | 88941051000018 | 88935051000018 |
| EG-M8 | 1,25 | 78,0 | 22,3 | 21,0 | 45 | 1,3 | 8,4 | 12 | 11 | 9,9 | 7,89 | 2 | 80941051000020 | 80935051000020 | 88941051000020 | 88935051000020 |
| EG-M10 | 1,50 | 87,5 | 26,8 | 25,2 | 45 | 1,5 | 10,5 | 14 | 14 | 12,3 | 9,83 | 2 | 80941051000022 | 80935051000022 | 88941051000022 | 88935051000022 |
| EG-M12 | 1,75 | 102,0 | 32,8 | 30,9 | 48 | 1,5 | 12,5 | 16 | 16 | 14,6 | 11,80 | 2 | 80941051000024 | 80935051000024 | 88941051000024 | 88935051000024 |

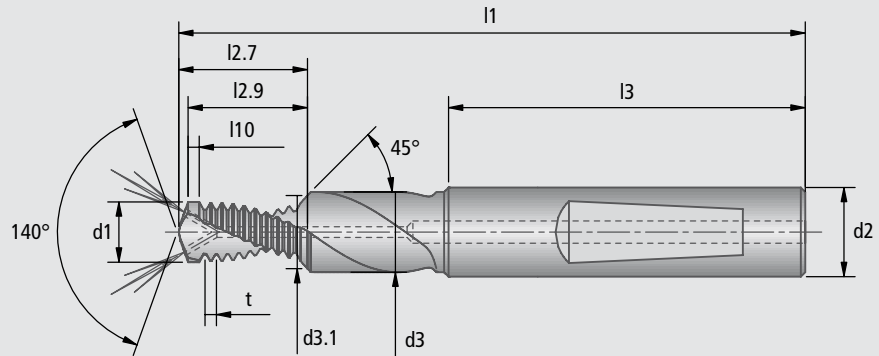
MF Drill Thread Milling Tool BGF



with 2 cutting edges with rear chamfer 1.5×D

For metric fine ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



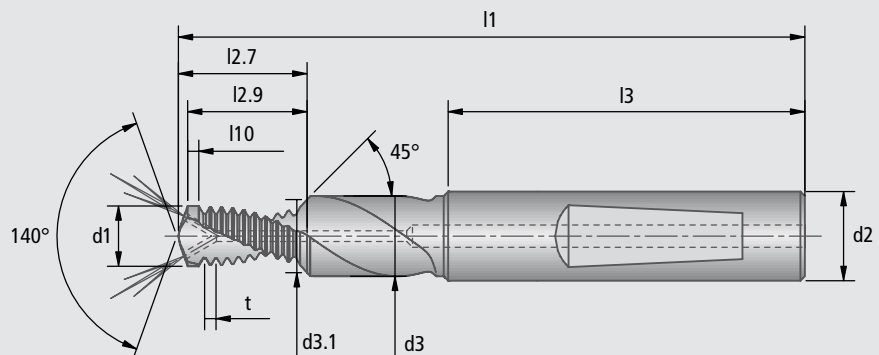
| MF-BGF 1,5×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|--------------|-----|------|------|------|----|-----|------|----|------|------|-------|---|----------------|------------|----------------|------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| M8×1 | 1,0 | 70,0 | 14,8 | 13,7 | 40 | 1,0 | 7,0 | 10 | 9,0 | 8,3 | 6,79 | 2 | 80945002000070 | | 88945002000070 | |
| M10×1 | 1,0 | 74,0 | 18,2 | 16,8 | 45 | 1,0 | 9,0 | 12 | 11,0 | 10,3 | 8,75 | 2 | 80945002000094 | | 88945002000094 | |
| M12×1,5 | 1,5 | 83,0 | 22,2 | 20,6 | 45 | 1,5 | 10,5 | 14 | 13,5 | 12,3 | 10,06 | 2 | 80945002000113 | | 88945002000113 | |

MF Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 2.0×D

For metric fine ISO thread DIN 13
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



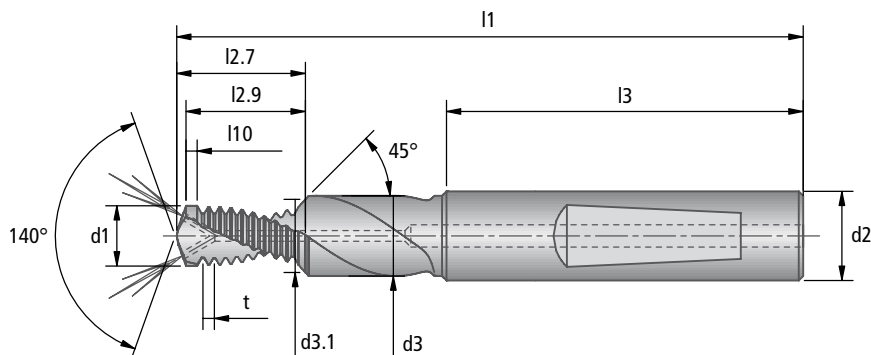
| MF-BGF 2,0×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|--------------|------|-------|------|------|----|-----|-------|----|------|------|-------|---|----------------|----------------|----------------|----------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| M6×0,75 | 0,75 | 62,0 | 14,9 | 13,3 | 36 | 0,8 | 5,25 | 8 | 6,6 | 6,3 | 5,14 | 2 | 80941002000048 | | 88941002000048 | |
| M8×1 | 1,00 | 74,0 | 18,8 | 17,7 | 40 | 1,0 | 7,00 | 10 | 9,0 | 8,3 | 6,79 | 2 | 80941002000070 | 80935002000070 | 88941002000070 | 88935002000070 |
| M10×1 | 1,00 | 79,0 | 23,2 | 21,8 | 45 | 1,0 | 9,00 | 12 | 11,0 | 10,3 | 8,75 | 2 | 80941002000094 | 80935002000094 | 88941002000094 | 88935002000094 |
| M12×1 | 1,00 | 89,0 | 26,4 | 24,8 | 45 | 1,0 | 11,00 | 14 | 13,5 | 12,3 | 10,74 | 2 | 80941002000111 | 80935002000111 | 88941002000111 | 88935002000111 |
| M12×1,5 | 1,50 | 89,0 | 28,2 | 26,6 | 45 | 1,5 | 10,50 | 14 | 13,5 | 12,3 | 10,06 | 2 | 80941002000113 | 80935002000113 | 88941002000113 | 88935002000113 |
| M14×1,5 | 1,50 | 102,0 | 31,5 | 29,6 | 48 | 1,5 | 12,50 | 16 | 15,5 | 14,3 | 12,01 | 2 | 80941002000131 | | 88941002000131 | |
| M16×1,5 | 1,5 | 102,0 | 36,3 | 34,1 | 48 | 1,5 | 14,50 | 18 | 17,5 | 16,3 | 13,95 | 2 | 80941002000147 | | 88941002000147 | |

UNC Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 1.5×D

For UNC thread ANSI B1.1
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



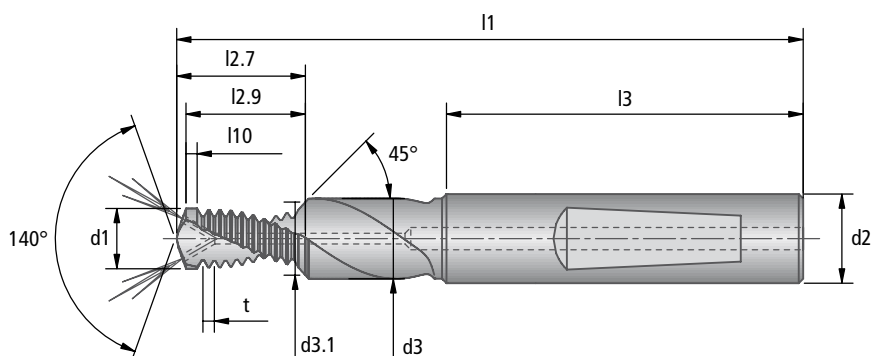
| UNC-BGF 1,5×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|---------------|-------|------|------|------|----|-----|------|----|------|------|------|---|----------------|------------|----------------|------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| 1/4-20 UNC | 1,270 | 58,2 | 11,9 | 11,1 | 36 | 1,3 | 5,1 | 8 | 7,8 | 6,7 | 4,70 | 2 | 80945010000011 | | 88945010000011 | |
| 5/16-18 UNC | 1,411 | 69,8 | 14,8 | 13,8 | 40 | 1,4 | 6,5 | 10 | 9,0 | 8,2 | 6,01 | 2 | 80945010000012 | | 88945010000012 | |
| 3/8-16 UNC | 1,588 | 74,2 | 18,2 | 17,0 | 45 | 1,5 | 7,9 | 12 | 11,0 | 9,8 | 7,36 | 2 | 80945010000013 | | 88945010000013 | |
| 1/2-13 UNC | 1,954 | 83,0 | 24,2 | 22,6 | 45 | 1,5 | 10,8 | 14 | 13,5 | 13,0 | 9,87 | 2 | 80945010000015 | | 88945010000015 | |

UNC Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 2.0×D

For UNC thread ANSI B1.1
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| UNC-BGF 2,0×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|---------------|-------|------|------|------|----|-----|------|----|------|------|------|---|----------------|------------|----------------|------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| 1/4-20 UNC | 1,270 | 62,0 | 15,7 | 14,9 | 36 | 1,3 | 5,1 | 8 | 7,8 | 6,7 | 4,70 | 2 | 80941010000011 | | 88941010000011 | |
| 5/16-18 UNC | 1,411 | 74,0 | 19,0 | 18,0 | 40 | 1,4 | 6,5 | 10 | 9,0 | 8,2 | 6,01 | 2 | 80941010000012 | | 88941010000012 | |
| 3/8-16 UNC | 1,588 | 79,0 | 23,0 | 21,8 | 45 | 1,5 | 7,9 | 12 | 11,0 | 9,8 | 7,36 | 2 | 80941010000013 | | 88941010000013 | |
| 1/2-13 UNC | 1,954 | 89,0 | 30,1 | 28,4 | 45 | 1,5 | 10,8 | 14 | 13,5 | 13,0 | 9,87 | 2 | 80941010000015 | | 88941010000015 | |

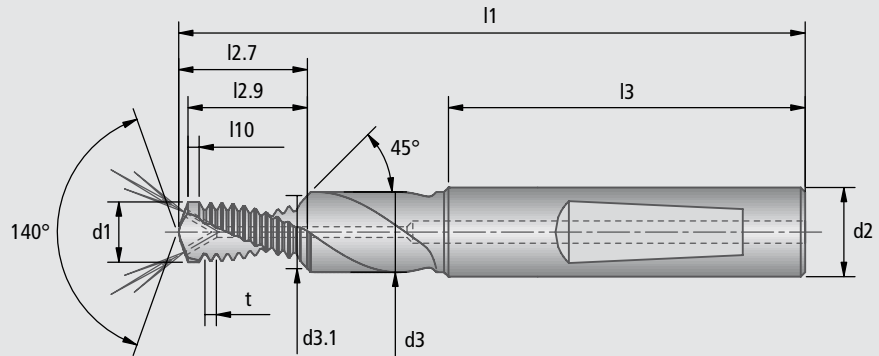
UNF Drill Thread Milling Tool BGF



with 2 cutting edges with rear chamfer 1.5×D

For UNF thread ANSI B1.1
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



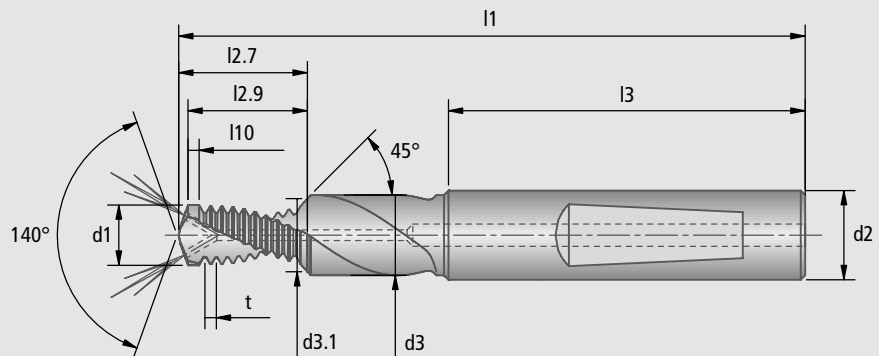
| UNF-BGF 1,5×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|---------------|-------|------|------|------|----|-----|------|----|------|------|-------|---|----------------|------------|----------------|------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| 1/4-28 UNF | 0,907 | 58,4 | 11,5 | 10,7 | 36 | 0,9 | 5,4 | 8 | 7,8 | 6,7 | 5,17 | 2 | 80945011000011 | | 88945011000011 | |
| 5/16-24 UNF | 1,058 | 70,0 | 14,6 | 13,5 | 40 | 1,1 | 6,9 | 10 | 9,0 | 8,2 | 6,51 | 2 | 80945011000012 | | 88945011000012 | |
| 3/8-24 UNF | 1,058 | 74,8 | 17,0 | 15,7 | 45 | 1,1 | 8,5 | 12 | 11,0 | 9,8 | 8,07 | 2 | 80945011000013 | | 88945011000013 | |
| 1/2-20 UNF | 1,270 | 82,7 | 21,8 | 20,1 | 45 | 1,3 | 11,4 | 14 | 13,5 | 13,0 | 10,88 | 2 | 80945011000015 | | 88945011000015 | |

UNF Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 2.0×D

For UNF thread ANSI B1.1
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



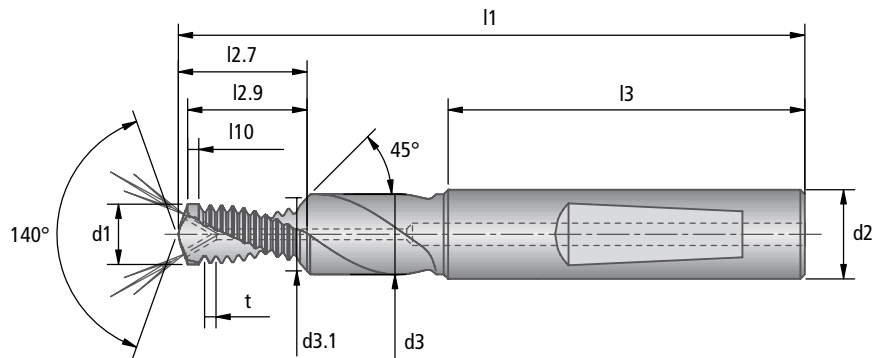
| UNF-BGF 2,0×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|---------------|-------|------|------|------|----|-----|------|----|------|------|-------|---|----------------|------------|----------------|------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| 1/4-28 UNF | 0,907 | 62,0 | 15,2 | 14,3 | 36 | 0,9 | 5,4 | 8 | 7,8 | 6,7 | 5,17 | 2 | 80941011000011 | | 88941011000011 | |
| 5/16-24 UNF | 1,058 | 74,0 | 18,8 | 17,8 | 40 | 1,1 | 6,9 | 10 | 9,0 | 8,2 | 6,51 | 2 | 80941011000012 | | 88941011000012 | |
| 3/8-24 UNF | 1,058 | 79,0 | 21,2 | 19,9 | 45 | 1,1 | 8,5 | 12 | 11,0 | 9,8 | 8,07 | 2 | 80941011000013 | | 88941011000013 | |
| 1/2-20 UNF | 1,270 | 89,0 | 28,2 | 26,4 | 45 | 1,3 | 11,4 | 14 | 13,5 | 13,0 | 10,88 | 2 | 80941011000015 | | 88941011000015 | |

G Drill Thread Milling Tool BGF

with 2 cutting edges with rear chamfer 2.0×D

For Whitworth pipe thread DIN EN ISO 228 and DIN EN 10226 (previously DIN 2999)
Shank Ø DIN 6535 Form HE/HA

Tools with internal coolant supply
Cutting material: solid carbide



| G-BGF 2,0×D | | | | | | | | | | | | | uncoated - HE | TiAlN - HE | uncoated - HA | TiAlN - HA |
|-------------|-------|-------|------|------|----|-----|------|----|------|------|-------|---|----------------|------------|----------------|------------|
| Nom. Ø | t | l1 | l2.7 | l2.9 | l3 | l10 | d1 | d2 | d3 | d3.1 | AD | Z | Order No. | Order No. | Order No. | Order No. |
| G1/8-28 | 0,907 | 79,0 | 22,1 | 20,7 | 45 | 0,9 | 8,8 | 12 | 11,0 | 10,0 | 8,40 | 2 | 80941025000001 | | 88941025000001 | |
| G1/4-19 | 1,337 | 102,0 | 29,5 | 27,7 | 48 | 1,3 | 11,8 | 16 | 13,5 | 13,5 | 11,44 | 2 | 80941025000002 | | 88941025000002 | |

Drill Thread Milling Tools

Drilling, chamfering and thread milling in a single pass

Drill Thread Milling Tool BGF

BGF with rear chamfer as a standard tool for defined thread lengths of 1.5×D; 2.0×D and 2.5×D.
UBGF with front and rear chamfer for different thread lengths.



Cross section of threads manufactured with drill thread milling tools – here M6 and M10. BGF with profile correction are generating a precise part threads.

BGF M12 2.0×D TiN

BGF M10 2.5×D TiAN

BGF, 3 fluted with spot face cutter

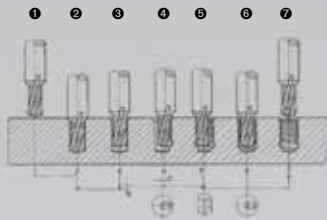
BGF with 3 flutes

Advantages compared to 2 flutes

- Pre-cast holes can be drilled with maximum cutting values without problems
- Increased tool stability
- For angled bore exits

Advantages

- More than 50% shorter cycle time and idle time reduction due to high cutting speeds and feed and saving on tool changing times and tool changes
- Excellent surface finish due to variation in cutting parameters
- Same tools for blind bores and through holes
- Can be used in cast iron, aluminium up to 2.5×D
- Nodular Grey Cast Iron up to 2.0×D



- 1 Approach
- 2 Drilling and chamfering
- 3 Withdraw
- 4 Radial setting to nominal thread diameter through entry loop
- 5 Forward feed by pitch with simultaneous interpolation of tool around the central thread axis-threading cycle
- 6 Radial movement back to the bore centre through exit loop
- 7 Exit bore

DBGF

DBGF Direct Circular Drill Thread Milling Tool

To complete our product range we are including the DBGF direct circular drill thread milling tool in the diameter range from 6 to 16 mm with an achievable thread depth of up to 3.0×D. Also suitable for steel materials up to a thread depth of 2.0×D

- 1 Approach
- 2 Circular milling of the chamfer
- 3 Circular drilling and thread milling. The bore and the thread are manufactured simultaneously in one pass
- 4 Exit bore
- 5 If necessary circular deburring of first thread

