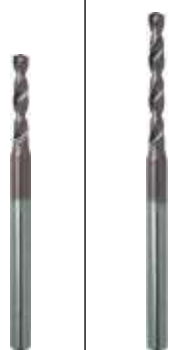
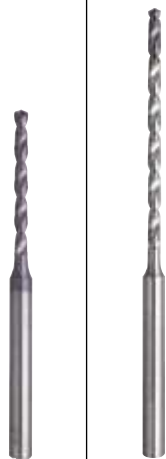


|                |               |         |
|----------------|---------------|---------|
| Tool material  | Solid carbide |         |
| Surface finish | Super A       |         |
| Cooling        | ☒             |         |
| Drilling depth | ~ 4 x D       | ~ 7 x D |
| Guhring no.    | 6400          | 6401    |



|                |               |          |
|----------------|---------------|----------|
| Tool material  | Solid carbide |          |
| Surface finish | Super A       |          |
| Cooling        | ☐             |          |
| Drilling depth | ~ 8 x D       | ~ 15 x D |
| Guhring no.    | 6408          | 6412     |

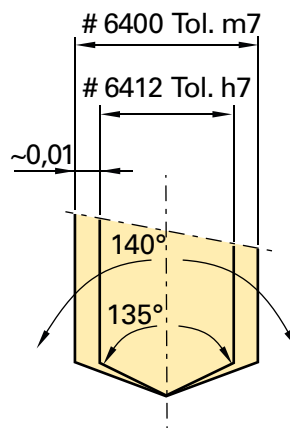


| V <sub>c</sub><br>m/min | Feed column no. |    |
|-------------------------|-----------------|----|
| 90-120                  | 64              | 62 |
| 90-110                  | 64              | 62 |
| 90-120                  | 64              | 62 |
| 80-100                  | 63              | 61 |
| 80-110                  | 64              | 62 |
| 80-110                  | 64              | 62 |
| 80-100                  | 63              | 61 |
| 80-100                  | 63              | 61 |
| 60-80                   | 62              | 60 |
| 90-110                  | 63              | 61 |
| 70-100                  | 63              | 61 |
| 60-80                   | 62              | 60 |
| 60-80                   | 62              | 60 |
| 50-70                   | 62              | 60 |
| 40-60                   | 62              | 60 |
| 40-60                   | 62              | 60 |
| 40-60                   | 57              | 57 |
| 40-60                   | 57              | 57 |
| 30                      | 57              | 57 |
| 15                      | 56              | 56 |
| 30                      | 57              | 57 |
| 10                      | 56              | 56 |
| <150                    | 68              | 66 |
| <140                    | 68              | 66 |
| <140                    | 68              | 66 |
| <130                    | 67              | 65 |
| 15                      | 56              | 56 |
| 15                      | 56              | 56 |
| 60-80                   | 68              | 68 |
| 60-80                   | 68              | 68 |
| 120-150                 | 59              | 59 |
| 120-150                 | 59              | 59 |

| V <sub>c</sub><br>m/min | Feed column no. |    |
|-------------------------|-----------------|----|
| 90-120                  | 58              | 58 |
| 90-110                  | 58              | 58 |
| 90-120                  | 59              | 59 |
| 80-100                  | 59              | 59 |
| 80-110                  | 58              | 58 |
| 80-110                  | 58              | 58 |
| 80-100                  | 58              | 58 |
| 80-100                  | 58              | 58 |
| 60-80                   | 58              | 58 |
| 60-80                   | 58              | 58 |
| 90-110                  | 57              | 57 |
| 70-100                  | 58              | 58 |
| 60-80                   | 58              | 58 |
| 60-80                   | 57              | 57 |
| 50-70                   | 57              | 57 |
| 40-60                   | 58              | 58 |
| 40-60                   | 58              | 58 |
| 40-60                   | 57              | 57 |
| 40-60                   | 57              | 57 |
| 60-80                   | 57              | 57 |
| 60                      | 56              | 56 |
| 60-80                   | 57              | 57 |
| 25                      | 56              | 56 |
| <150                    | 60              | 60 |
| <140                    | 60              | 60 |
| <140                    | 60              | 60 |
| <130                    | 60              | 60 |
| 35                      | 56              | 56 |
| 35                      | 56              | 56 |
| 60-80                   | 68              | 68 |
| 60-80                   | 68              | 68 |
| 120-150                 | 59              | 59 |
| 120-150                 | 59              | 59 |

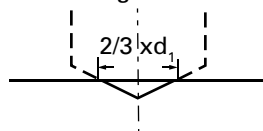
### Pilot drilling

For the application of solid carbide micro-precision drills 15xD we recommend a pilot hole 1xD up to 2xD depth. For this pilot hole, the solid carbide micro-precision drill 4xD is optimally suitable. Its point angle and its diameter tolerance are perfectly adapted.



### Centering

In order to achieve full performance with solid carbide micro-precision drills from 8xD drilling depth, we recommend centering. The ExclusiveLine solid carbide micro-precision drill up to 4xD, Guhring no. 6400, can be applied for this purpose. The centering diameter should be approximately 2/3xD.



### Filter quality

When applying solid carbide micro-precision drills we recommend constant monitoring of the lubricant's filter quality due to the extremely small coolant duct diameters, for example with our check instrument CC 3000.

