



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2



1000

8.2; 10.1; 1.1; 2.1; 6.1



1010

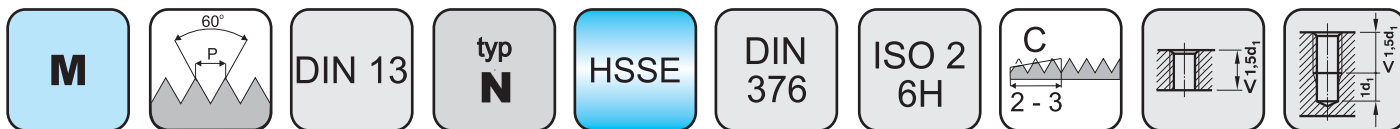
| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |     |   |     | 1000 | 1010       |
|--|------|----------------|----------------|----------------|-----|---|-----|------|------------|
|  |      |                |                |                |     |   |     |      | <b>TiN</b> |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | mm  |      |            |
| M 3                                    | 0,5  | 56             | 9              | 3,5            | 2,7 | 3 | 2,5 | ■    | ■          |
| M 3,5                                  | 0,6  | 56             | 11             | 4              | 3   | 3 | 2,9 | ■    | ■          |
| M 4                                    | 0,7  | 63             | 12             | 4,5            | 3,4 | 3 | 3,3 | ■    | ■          |
| M 4,5                                  | 0,75 | 70             | 13             | 6              | 4,9 | 3 | 3,7 |      |            |
| M 5                                    | 0,8  | 70             | 13             | 6              | 4,9 | 3 | 4,2 | ■    | ■          |
| M 6                                    | 1    | 80             | 15             | 6              | 4,9 | 3 | 5   | ■    | ■          |
| M 7                                    | 1    | 80             | 15             | 7              | 5,5 | 3 | 6   |      |            |
| M 8                                    | 1,25 | 90             | 18             | 8              | 6,2 | 3 | 6,8 | ■    | ■          |
| M 9                                    | 1,25 | 90             | 18             | 9              | 7   | 3 | 7,8 |      |            |
| M 10                                   | 1,5  | 100            | 20             | 10             | 8   | 3 | 8,5 | ■    | ■          |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2



**3000**

8.2; 10.1; 1.1; 2.1; 6.1



**3010**

| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |      |   |      | 3000       | 3010 |
|--|------|----------------|----------------|----------------|------|---|------|------------|------|
|  |      |                |                |                |      |   |      | <b>TiN</b> |      |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |            |      |
| M 3                                    | 0,5  | 56             | 9              | 2,2            | -    | 3 | 2,5  | ■          | ■    |
| M 3,5                                  | 0,6  | 56             | 11             | 2,5            | 2,1  | 3 | 2,9  |            |      |
| M 4                                    | 0,7  | 63             | 12             | 2,8            | 2,1  | 3 | 3,3  | ■          | ■    |
| M 4,5                                  | 0,75 | 70             | 13             | 3,5            | 2,7  | 3 | 3,7  |            |      |
| M 5                                    | 0,8  | 70             | 13             | 3,5            | 2,7  | 3 | 4,2  | ■          | ■    |
| M 6                                    | 1    | 80             | 15             | 4,5            | 3,4  | 3 | 5    | ■          | ■    |
| M 7                                    | 1    | 80             | 15             | 5,5            | 4,3  | 3 | 6    | ■          | ■    |
| M 8                                    | 1,25 | 90             | 18             | 6              | 4,9  | 3 | 6,8  | ■          | ■    |
| M 9                                    | 1,25 | 90             | 18             | 7              | 5,5  | 3 | 7,8  |            |      |
| M 10                                   | 1,5  | 100            | 20             | 7              | 5,5  | 3 | 8,5  | ■          | ■    |
| M 11                                   | 1,5  | 100            | 20             | 8              | 6,2  | 3 | 9,5  |            |      |
| M 12                                   | 1,75 | 110            | 23             | 9              | 7    | 3 | 10,2 | ■          | ■    |
| M 14                                   | 2    | 110            | 25             | 11             | 9    | 3 | 12   | ■          | ■    |
| M 16                                   | 2    | 110            | 25             | 12             | 9    | 3 | 14   | ■          | ■    |
| M 18                                   | 2,5  | 125            | 30             | 14             | 11   | 3 | 15,5 | ■          | ■    |
| M 20                                   | 2,5  | 140            | 30             | 16             | 12   | 3 | 17,5 | ■          | ■    |
| M 22                                   | 2,5  | 140            | 30             | 18             | 14,5 | 3 | 19,5 | ■          | ■    |
| M 24                                   | 3    | 160            | 36             | 18             | 14,5 | 4 | 21   | ■          | ■    |
| M 27                                   | 3    | 160            | 36             | 20             | 16   | 4 | 24   | ■          | ■    |
| M 30                                   | 3,5  | 180            | 40             | 22             | 18   | 4 | 26,5 | ■          | ■    |
| M 33                                   | 3,5  | 180            | 42             | 25             | 20   | 4 | 29,5 | ■          | ■    |
| M 36                                   | 4    | 200            | 50             | 28             | 22   | 4 | 32   | ■          | ■    |
| M 39                                   | 4    | 200            | 50             | 32             | 24   | 4 | 35   | ■          | ■    |
| M 42                                   | 4,5  | 200            | 56             | 32             | 24   | 4 | 37,5 | ■          | ■    |
| M 45                                   | 4,5  | 200            | 56             | 36             | 29   | 4 | 40,5 | ■          | ■    |
| M 48                                   | 5    | 250            | 63             | 36             | 29   | 4 | 43   | ■          | ■    |
| M 52                                   | 5    | 250            | 63             | 40             | 32   | 4 | 47   | ■          | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1



1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



1.2; 2.2; 8.1; 11.1; 2.3; 8.2



1.1; 1.2; 2.1; 2.2; 2.3; 8.1; 8.2



| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |     |   |      | 1500  | 1500 | 1510 | 1540 | 1750 |
|--|------|----------------|----------------|----------------|-----|---|------|---|------|------|------|------|
|  |      |                |                |                |     |   |      | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">TiN</div> <div style="border: 1px solid black; padding: 2px;">OX</div> </div> |      |      |      |      |
| ISO 3 6G                               |      |                |                |                |     |   |      |   |      |      |      |      |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |   |      |      |      |      |
| M 2                                    | 0,4  | 45             | 8              | 2,8            | 2,1 | 3 | 1,6  | ■   |      | ■    |      |      |
| M 2,5                                  | 0,45 | 50             | 9              | 2,8            | 2,1 | 3 | 2,05 | ■   |      | ■    |      |      |
| M 3                                    | 0,5  | 56             | 9              | 3,5            | 2,7 | 3 | 2,5  | ■   | ■    | ■    |      | ■    |
| M 3,5                                  | 0,6  | 56             | 11             | 4              | 3   | 3 | 2,9  | ■   | ■    | ■    |      |      |
| M 4                                    | 0,7  | 63             | 12             | 4,5            | 3,4 | 3 | 3,3  | ■   | ■    | ■    |      | ■    |
| M 4,5                                  | 0,75 | 70             | 13             | 6              | 4,9 | 3 | 3,7  | ■   |      | ■    |      |      |
| M 5                                    | 0,8  | 70             | 13             | 6              | 4,9 | 3 | 4,2  | ■   | ■    | ■    |      | ■    |
| M 6                                    | 1    | 80             | 15             | 6              | 4,9 | 3 | 5    | ■   | ■    | ■    |      | ■    |
| M 7                                    | 1    | 80             | 15             | 7              | 5,5 | 3 | 6    | ■   |      | ■    |      |      |
| M 8                                    | 1,25 | 90             | 18             | 8              | 6,2 | 3 | 6,8  | ■   | ■    | ■    |      | ■    |
| M 9                                    | 1,25 | 90             | 18             | 9              | 7   | 3 | 7,8  | ■   |      | ■    |      |      |
| M 10                                   | 1,5  | 100            | 20             | 10             | 8   | 3 | 8,5  | ■   | ■    | ■    |      | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1



**3500**

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



**3510**

1.2; 2.2; 8.1; 11.1; 2.3; 8.2



**3540**

| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |      |   |      | 3500 | 3500        | 3510       | 3540      |
|--|------|----------------|----------------|----------------|------|---|------|------|-------------|------------|-----------|
|  |      |                |                |                |      |   |      |      |             | <b>TiN</b> | <b>OX</b> |
|  |      |                |                |                |      |   |      |      | ISO 3<br>6G |            |           |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |      |             |            |           |
| M 3                                    | 0,5  | 56             | 9              | 2,2            | -    | 3 | 2,5  | ■    |             | ■          | ■         |
| M 3,5                                  | 0,6  | 56             | 11             | 2,5            | 2,1  | 3 | 2,9  |      |             |            |           |
| M 4                                    | 0,7  | 63             | 12             | 2,8            | 2,1  | 3 | 3,3  | ■    |             | ■          | ■         |
| M 4,5                                  | 0,75 | 70             | 13             | 3,5            | 2,7  | 3 | 3,7  |      |             |            |           |
| M 5                                    | 0,8  | 70             | 13             | 3,5            | 2,7  | 3 | 4,2  | ■    |             | ■          | ■         |
| M 6                                    | 1    | 80             | 15             | 4,5            | 3,4  | 3 | 5    | ■    |             | ■          | ■         |
| M 7                                    | 1    | 80             | 15             | 5,5            | 4,3  | 3 | 6    | ■    |             | ■          | ■         |
| M 8                                    | 1,25 | 90             | 18             | 6              | 4,9  | 3 | 6,8  | ■    |             | ■          | ■         |
| M 9                                    | 1,25 | 90             | 18             | 7              | 5,5  | 3 | 7,8  |      |             |            |           |
| M 10                                   | 1,5  | 100            | 20             | 7              | 5,5  | 3 | 8,5  | ■    |             | ■          | ■         |
| M 11                                   | 1,5  | 100            | 20             | 8              | 6,2  | 3 | 9,5  |      |             |            |           |
| M 12                                   | 1,75 | 110            | 23             | 9              | 7    | 3 | 10,2 | ■    | ■           | ■          | ■         |
| M 14                                   | 2    | 110            | 25             | 11             | 9    | 3 | 12   | ■    | ■           | ■          | ■         |
| M 16                                   | 2    | 110            | 25             | 12             | 9    | 3 | 14   | ■    | ■           | ■          | ■         |
| M 18                                   | 2,5  | 125            | 30             | 14             | 11   | 3 | 15,5 | ■    | ■           | ■          | ■         |
| M 20                                   | 2,5  | 140            | 30             | 16             | 12   | 3 | 17,5 | ■    |             | ■          | ■         |
| M 22                                   | 2,5  | 140            | 30             | 18             | 14,5 | 3 | 19,5 | ■    |             | ■          | ■         |
| M 24                                   | 3    | 160            | 36             | 18             | 14,5 | 4 | 21   | ■    |             | ■          | ■         |
| M 27                                   | 3    | 160            | 36             | 20             | 16   | 4 | 24   | ■    |             | ■          | ■         |
| M 30                                   | 3,5  | 180            | 40             | 22             | 18   | 4 | 26,5 | ■    |             | ■          | ■         |
| M 33                                   | 3,5  | 180            | 42             | 25             | 20   | 4 | 29,5 | ■    |             | ■          | ■         |
| M 36                                   | 4    | 200            | 50             | 28             | 22   | 4 | 32   | ■    |             | ■          | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



**2050**

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



**2060**

11.1; 2.2; 2.3; 8.1; 8.2



**2090**

| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |     |   |      | 2050        | 2050 | 2060       | 2090      |
|--|------|----------------|----------------|----------------|-----|---|------|-------------|------|------------|-----------|
|  |      |                |                |                |     |   |      |             |      | <b>TiN</b> | <b>OX</b> |
|  |      |                |                |                |     |   |      | ISO 3<br>6G |      |            |           |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z |      |             |      |            |           |
| M 2                                    | 0,4  | 45             | 6              | 2,8            | 2,1 | 3 | 1,6  | ■           |      | ■          | ■         |
| M 2,5                                  | 0,45 | 50             | 7,5            | 2,8            | 2,1 | 3 | 2,05 | ■           |      | ■          | ■         |
| M 3                                    | 0,5  | 56             | 5              | 3,5            | 2,7 | 3 | 2,5  | ■           | ■    | ■          | ■         |
| M 3,5                                  | 0,6  | 56             | 6              | 4              | 3   | 3 | 2,9  | ■           |      | ■          | ■         |
| M 4                                    | 0,7  | 63             | 7              | 4,5            | 3,4 | 3 | 3,3  | ■           | ■    | ■          | ■         |
| M 4,5                                  | 0,75 | 70             | 8              | 6              | 4,9 | 3 | 3,7  | ■           |      | ■          | ■         |
| M 5                                    | 0,8  | 70             | 8              | 6              | 4,9 | 3 | 4,2  | ■           | ■    | ■          | ■         |
| M 6                                    | 1    | 80             | 10             | 6              | 4,9 | 3 | 5    | ■           | ■    | ■          | ■         |
| M 7                                    | 1    | 80             | 10             | 7              | 5,5 | 3 | 6    | ■           |      | ■          | ■         |
| M 8                                    | 1,25 | 90             | 13             | 8              | 6,2 | 3 | 6,8  | ■           | ■    | ■          | ■         |
| M 9                                    | 1,25 | 90             | 13             | 9              | 7   | 3 | 7,8  | ■           |      | ■          | ■         |
| M 10                                   | 1,5  | 100            | 15             | 10             | 8   | 3 | 8,5  | ■           | ■    | ■          | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



**4050**

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



**4060**

11.1; 2.2; 2.3; 8.1; 8.2



**4090**

| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |      |   |      | 4050        | 4050 | 4060       | 4090      |
|--|------|----------------|----------------|----------------|------|---|------|-------------|------|------------|-----------|
|  |      |                |                |                |      |   |      |             |      | <b>TiN</b> | <b>OX</b> |
|  |      |                |                |                |      |   |      | ISO 3<br>6G |      |            |           |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |             |      |            |           |
| M 3                                    | 0,5  | 56             | 5              | 2,2            | -    | 3 | 2,5  | ■           |      | ■          | ■         |
| M 3,5                                  | 0,6  | 56             | 6              | 2,5            | 2,1  | 3 | 2,9  |             |      |            |           |
| M 4                                    | 0,7  | 63             | 7              | 2,8            | 2,1  | 3 | 3,3  | ■           |      | ■          | ■         |
| M 4,5                                  | 0,75 | 70             | 8              | 3,5            | 2,7  | 3 | 3,7  |             |      |            |           |
| M 5                                    | 0,8  | 70             | 8              | 3,5            | 2,7  | 3 | 4,2  | ■           |      | ■          | ■         |
| M 6                                    | 1    | 80             | 10             | 4,5            | 3,4  | 3 | 5    | ■           |      | ■          | ■         |
| M 7                                    | 1    | 80             | 10             | 5,5            | 4,3  | 3 | 6    | ■           |      | ■          | ■         |
| M 8                                    | 1,25 | 90             | 13             | 6              | 4,9  | 3 | 6,8  | ■           |      | ■          | ■         |
| M 9                                    | 1,25 | 90             | 13             | 7              | 5,5  | 3 | 7,8  |             |      |            |           |
| M 10                                   | 1,5  | 100            | 15             | 7              | 5,5  | 3 | 8,5  | ■           |      | ■          | ■         |
| M 11                                   | 1,5  | 100            | 15             | 8              | 6,2  | 3 | 9,5  |             |      |            |           |
| M 12                                   | 1,75 | 110            | 18             | 9              | 7    | 3 | 10,2 | ■           | ■    | ■          | ■         |
| M 14                                   | 2    | 110            | 20             | 11             | 9    | 3 | 12   | ■           | ■    | ■          | ■         |
| M 16                                   | 2    | 110            | 20             | 12             | 9    | 4 | 14   | ■           | ■    | ■          | ■         |
| M 18                                   | 2,5  | 125            | 25             | 14             | 11   | 4 | 15,5 | ■           | ■    | ■          | ■         |
| M 20                                   | 2,5  | 140            | 25             | 16             | 12   | 4 | 17,5 | ■           | ■    | ■          | ■         |
| M 22                                   | 2,5  | 140            | 25             | 18             | 14,5 | 4 | 19,5 | ■           | ■    | ■          | ■         |
| M 24                                   | 3    | 160            | 30             | 18             | 14,5 | 4 | 21   | ■           | ■    | ■          | ■         |
| M 27                                   | 3    | 160            | 30             | 20             | 16   | 4 | 24   | ■           | ■    | ■          | ■         |
| M 30                                   | 3,5  | 180            | 35             | 22             | 18   | 4 | 26,5 | ■           | ■    | ■          | ■         |
| M 33                                   | 3,5  | 180            | 35             | 25             | 20   | 4 | 29,5 | ■           | ■    | ■          | ■         |
| M 36                                   | 4    | 200            | 40             | 28             | 22   | 4 | 32   | ■           | ■    | ■          | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

|                              |  |             |
|------------------------------|--|-------------|
| 10.1; 2.2                    |  | <b>2400</b> |
| 2.2; 10.1; 6.2               |  | <b>2410</b> |
| 1.1; 1.2; 2.1; 2.2; 8.1; 9.1 |  | <b>2360</b> |
| 1.2; 1.1; 2.1; 2.2; 8.1      |  | <b>2390</b> |

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                |     |   |      | 2400 | 2410       | 2360       | 2390      |
|--|------|----------------|----------------|----------------|-----|---|------|------|------------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                |     |   |      |      | <b>TiN</b> | <b>TiN</b> | <b>OX</b> |
|  |      |                |                |                |     |   |      |      |            |            |           |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |      |            |            |           |
| <b>M 3</b>   | 0,5  | 56             | 5              | 3,5            | 2,7 | 3 | 2,5  | ■    | ■          | ■          | ■         |
| <b>M 3,5</b>   | 0,6  | 56             | 6              | 4              | 3   | 3 | 2,9  | ■    | ■          | ■          | ■         |
| <b>M 4</b>   | 0,7  | 63             | 7              | 4,5            | 3,4 | 3 | 3,3  | ■    | ■          | ■          | ■         |
| <b>M 4,5</b>   | 0,75 | 70             | 8              | 6              | 4,9 | 3 | 3,7  | ■    | ■          | ■          | ■         |
| <b>M 5</b>   | 0,8  | 70             | 8              | 6              | 4,9 | 3 | 4,2  | ■    | ■          | ■          | ■         |
| <b>M 6</b>   | 1    | 80             | 10             | 6              | 4,9 | 3 | 5    | ■    | ■          | ■          | ■         |
| <b>M 7</b>   | 1    | 80             | 10             | 7              | 5,5 | 3 | 6    | ■    | ■          | ■          | ■         |
| <b>M 8</b>   | 1,25 | 90             | 13             | 8              | 6,2 | 3 | 6,8  | ■    | ■          | ■          | ■         |
| <b>M 9</b>   | 1,25 | 90             | 13             | 9              | 7   | 3 | 7,8  | ■    | ■          | ■          | ■         |
| <b>M 10</b>  | 1,5  | 100            | 15             | 10             | 8   | 3 | 8,5  | ■    | ■          | ■          | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

|                              |  |             |
|------------------------------|--|-------------|
| 10.1; 2.2                    |  | <b>4400</b> |
| 2.2; 10.1; 6.2               |  | <b>4410</b> |
| 1.1; 1.2; 2.1; 2.2; 8.1; 9.1 |  | <b>4360</b> |
| 1.2; 1.1; 2.1; 8.1           |  | <b>4390</b> |

| Katalogové číslo / Cat. No. / Kat. Nr. |      |       |       |       |      |   |                | 4400       | 4410 | 4360       | 4390 |           |  |
|--|------|-------|-------|-------|------|---|----------------|------------|------|------------|------|-----------|--|
|  |      |       |       |       |      |   |                | <b>TiN</b> |      | <b>TiN</b> |      | <b>OX</b> |  |
|  |      |       |       |       |      |   |                |            |      |            |      |           |  |
| $d_1$                                  | P    | $l_1$ | $l_2$ | $d_2$ | a    | z | $\emptyset$ mm |            |      |            |      |           |  |
| M 3                                    | 0,5  | 56    | 5     | 2,2   | -    | 3 | 2,5            | ■          | ■    | ■          | ■    |           |  |
| M 3,5                                  | 0,6  | 56    | 6     | 2,5   | 2,1  | 3 | 2,9            | ■          | ■    | ■          | ■    |           |  |
| M 4                                    | 0,7  | 63    | 7     | 2,8   | 2,1  | 3 | 3,3            | ■          | ■    | ■          | ■    |           |  |
| M 4,5                                  | 0,75 | 70    | 8     | 3,5   | 2,7  | 3 | 3,7            | ■          | ■    | ■          | ■    |           |  |
| M 5                                    | 0,8  | 70    | 8     | 3,5   | 2,7  | 3 | 4,2            | ■          | ■    | ■          | ■    |           |  |
| M 6                                    | 1    | 80    | 10    | 4,5   | 3,4  | 3 | 5              | ■          | ■    | ■          | ■    |           |  |
| M 7                                    | 1    | 80    | 10    | 5,5   | 4,3  | 3 | 6              | ■          | ■    | ■          | ■    |           |  |
| M 8                                    | 1,25 | 90    | 13    | 6     | 4,9  | 3 | 6,8            | ■          | ■    | ■          | ■    |           |  |
| M 9                                    | 1,25 | 90    | 13    | 7     | 5,5  | 3 | 7,8            | ■          | ■    | ■          | ■    |           |  |
| M 10                                   | 1,5  | 100   | 15    | 7     | 5,5  | 3 | 8,5            | ■          | ■    | ■          | ■    |           |  |
| M 11                                   | 1,5  | 100   | 15    | 8     | 6,2  | 3 | 9,5            | ■          | ■    | ■          | ■    |           |  |
| M 12                                   | 1,75 | 110   | 18    | 9     | 7    | 3 | 10,2           | ■          | ■    | ■          | ■    |           |  |
| M 14                                   | 2    | 110   | 20    | 11    | 9    | 3 | 12             | ■          | ■    | ■          | ■    |           |  |
| M 16                                   | 2    | 110   | 20    | 12    | 9    | 4 | 14             | ■          | ■    | ■          | ■    |           |  |
| M 18                                   | 2,5  | 125   | 25    | 14    | 11   | 4 | 15,5           | ■          | ■    | ■          | ■    |           |  |
| M 20                                   | 2,5  | 140   | 25    | 16    | 12   | 4 | 17,5           | ■          | ■    | ■          | ■    |           |  |
| M 22                                   | 2,5  | 140   | 25    | 18    | 14,5 | 4 | 19,5           | ■          | ■    | ■          | ■    |           |  |
| M 24                                   | 3    | 160   | 30    | 18    | 14,5 | 4 | 21             | ■          | ■    | ■          | ■    |           |  |
| M 27                                   | 3    | 160   | 30    | 20    | 16   | 4 | 24             | ■          | ■    | ■          | ■    |           |  |
| M 30                                   | 3,5  | 180   | 35    | 22    | 18   | 4 | 26,5           | ■          | ■    | ■          | ■    |           |  |
| M 33                                   | 3,5  | 180   | 35    | 25    | 20   | 4 | 29,5           | ■          | ■    | ■          | ■    |           |  |
| M 36                                   | 4    | 200   | 40    | 28    | 22   | 4 | 32             | ■          | ■    | ■          | ■    |           |  |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



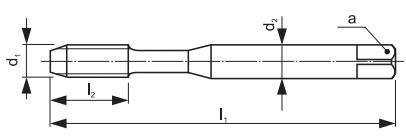
Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2  **1660**

3.1; 5.1; 5.2  **1690**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **1870**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **1870 IKZN**

| Katalogové číslo / Cat. No. / Kat. Nr.   |      |                |                |                |     |   |      | 1660       | 1690      | 1870      | 1870 IKZN           |
|--|------|----------------|----------------|----------------|-----|---|------|------------|-----------|-----------|---------------------|
|  <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                |     |   |      | <b>TiN</b> | <b>OX</b> | <b>HL</b> | <b>HL</b>           |
|  |      |                |                |                |     |   |      |            |           | HSSE PM   | HSSE PM <b>IKZN</b> |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |            |           |           |                     |
| M 3  | 0,5  | 56             | 9              | 3,5            | 2,7 | 3 | 2,5  | ■          | ■         | ■         |                     |
| M 3,5  | 0,6  | 56             | 11             | 4              | 3   | 3 | 2,9  |            |           |           |                     |
| M 4  | 0,7  | 63             | 12             | 4,5            | 3,4 | 3 | 3,3  | ■          | ■         | ■         |                     |
| M 4,5  | 0,75 | 70             | 13             | 6              | 4,9 | 3 | 3,7  |            |           |           |                     |
| M 5  | 0,8  | 70             | 13             | 6              | 4,9 | 3 | 4,2  | ■          | ■         | ■         |                     |
| M 6  | 1    | 80             | 15             | 6              | 4,9 | 3 | 5    | ■          | ■         | ■         | ■                   |
| M 7  | 1    | 80             | 15             | 7              | 5,5 | 3 | 6    |            |           |           |                     |
| M 8  | 1,25 | 90             | 18             | 8              | 6,2 | 3 | 6,8  | ■          | ■         | ■         | ■                   |
| M 9  | 1,25 | 90             | 18             | 9              | 7   | 3 | 7,8  |            |           |           |                     |
| M 10   | 1,5  | 100            | 20             | 10             | 8   | 3 | 8,5  | ■          | ■         | ■         | ■                   |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



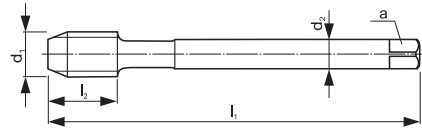
Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2  **3660**

3.1; 5.1; 5.2  **3690**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **3870**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **3870 IKZN**

| Katalogové číslo / Cat. No. / Kat. Nr.   |      |                |                |                |      |   |      | 3660       | 3690      | 3870           | 3870 IKZN                  |
|--|------|----------------|----------------|----------------|------|---|------|------------|-----------|----------------|----------------------------|
|  <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                |      |   |      | <b>TiN</b> | <b>OX</b> | <b>HL</b>      | <b>HL</b>                  |
|  |      |                |                |                |      |   |      |            |           | <b>HSSE PM</b> | <b>HSSE PM</b> <b>IKZN</b> |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |            |           |                |                            |
| M 3  | 0,5  | 56             | 9              | 2,2            | -    | 3 | 2,5  | ■          | ■         |                |                            |
| M 3,5  | 0,6  | 56             | 11             | 2,5            | 2,1  | 3 | 2,9  |            |           |                |                            |
| M 4  | 0,7  | 63             | 12             | 2,8            | 2,1  | 3 | 3,3  | ■          | ■         |                |                            |
| M 4,5  | 0,75 | 70             | 13             | 3,5            | 2,7  | 3 | 3,7  |            |           |                |                            |
| M 5  | 0,8  | 70             | 13             | 3,5            | 2,7  | 3 | 4,2  | ■          | ■         |                |                            |
| M 6  | 1    | 80             | 15             | 4,5            | 3,4  | 3 | 5    | ■          | ■         |                |                            |
| M 7  | 1    | 80             | 15             | 5,5            | 4,3  | 3 | 6    |            |           |                |                            |
| M 8  | 1,25 | 90             | 18             | 6              | 4,9  | 3 | 6,8  | ■          | ■         |                |                            |
| M 9  | 1,25 | 90             | 18             | 7              | 5,5  | 3 | 7,8  |            |           |                |                            |
| M 10   | 1,5  | 100            | 20             | 7              | 5,5  | 3 | 8,5  | ■          | ■         |                |                            |
| M 11   | 1,5  | 100            | 20             | 8              | 6,2  | 3 | 9,5  |            |           |                |                            |
| M 12   | 1,75 | 110            | 23             | 9              | 7    | 3 | 10,2 | ■          | ■         | ■              | ■                          |
| M 14   | 2    | 110            | 25             | 11             | 9    | 3 | 12   | ■          | ■         |                |                            |
| M 16   | 2    | 110            | 25             | 12             | 9    | 3 | 14   | ■          | ■         |                |                            |
| M 18   | 2,5  | 125            | 30             | 14             | 11   | 3 | 15,5 | ■          | ■         |                |                            |
| M 20   | 2,5  | 140            | 30             | 16             | 12   | 3 | 17,5 | ■          | ■         |                |                            |
| M 22   | 2,5  | 140            | 30             | 18             | 14,5 | 3 | 19,5 | ■          | ■         |                |                            |
| M 24   | 3    | 160            | 36             | 18             | 14,5 | 4 | 21   | ■          | ■         |                |                            |
| M 27   | 3    | 160            | 36             | 20             | 16   | 4 | 24   | ■          | ■         |                |                            |
| M 30   | 3,5  | 180            | 40             | 22             | 18   | 4 | 26,5 | ■          | ■         |                |                            |
| M 33   | 3,5  | 180            | 42             | 25             | 20   | 4 | 29,5 |            |           |                |                            |
| M 36   | 4    | 200            | 50             | 28             | 22   | 4 | 32   |            |           |                |                            |





■ dodáváme standardně / standard supplies / Standardlieferbar

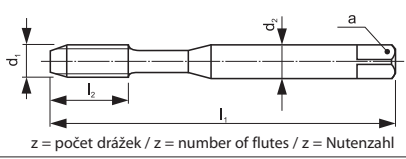
X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1  **2260**
- 3.1; 5.1; 5.2  **2290**
- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1  **2320**
- 3.1; 5.1; 5.2  **2320 IKZ**

| Katalogové číslo / Cat. No. / Kat. Nr.   |      |                |                |                |     |   |      | 2260       | 2290      | 2320      | 2320 IKZ           |
|--|------|----------------|----------------|----------------|-----|---|------|------------|-----------|-----------|--------------------|
|  |      |                |                |                |     |   |      | <b>TiN</b> | <b>OX</b> | <b>HL</b> | <b>HL</b>          |
|  |      |                |                |                |     |   |      |            |           | HSSE PM   | HSSE PM <b>IKZ</b> |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |            |           |           |                    |
| M 3  | 0,5  | 56             | 5              | 3,5            | 2,7 | 3 | 2,5  | ■          | ■         | ■         |                    |
| M 3,5  | 0,6  | 56             | 6              | 4              | 3   | 3 | 2,9  |            |           |           |                    |
| M 4  | 0,7  | 63             | 7              | 4,5            | 3,4 | 3 | 3,3  | ■          | ■         | ■         |                    |
| M 4,5  | 0,75 | 70             | 8              | 6              | 4,9 | 3 | 3,7  |            |           |           |                    |
| M 5  | 0,8  | 70             | 8              | 6              | 4,9 | 3 | 4,2  | ■          | ■         | ■         |                    |
| M 6  | 1    | 80             | 10             | 6              | 4,9 | 3 | 5    | ■          | ■         | ■         | ■                  |
| M 7  | 1    | 80             | 10             | 7              | 5,5 | 3 | 6    |            |           |           |                    |
| M 8  | 1,25 | 90             | 13             | 8              | 6,2 | 3 | 6,8  | ■          | ■         | ■         | ■                  |
| M 9  | 1,25 | 90             | 13             | 9              | 7   | 3 | 7,8  |            |           |           |                    |
| M 10   | 1,5  | 100            | 15             | 10             | 8   | 3 | 8,5  | ■          | ■         | ■         | ■                  |

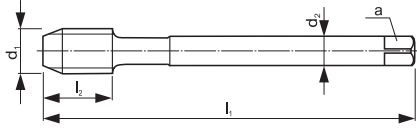
■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1  **4260**
- 3.1; 5.1; 5.2  **4290**
- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1  **4320**
- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1  **4320 IKZ**

| Katalogové číslo / Cat. No. / Kat. Nr.   |      |                |                |                |      |   |      | 4260       | 4290      | 4320           | 4320 IKZ                  |
|--|------|----------------|----------------|----------------|------|---|------|------------|-----------|----------------|---------------------------|
|  <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                |      |   |      | <b>TiN</b> | <b>OX</b> | <b>HL</b>      | <b>HL</b>                 |
|  |      |                |                |                |      |   |      |            |           | <b>HSSE PM</b> | <b>HSSE PM</b> <b>IKZ</b> |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |            |           |                |                           |
| M 3  | 0,5  | 56             | 5              | 2,2            | -    | 3 | 2,5  | ■          | ■         |                |                           |
| M 3,5  | 0,6  | 56             | 6              | 2,5            | 2,1  | 3 | 2,9  |            |           |                |                           |
| M 4  | 0,7  | 63             | 7              | 2,8            | 2,1  | 3 | 3,3  | ■          | ■         |                |                           |
| M 4,5  | 0,75 | 70             | 8              | 3,5            | 2,7  | 3 | 3,7  |            |           |                |                           |
| M 5  | 0,8  | 70             | 8              | 3,5            | 2,7  | 3 | 4,2  | ■          | ■         |                |                           |
| M 6  | 1    | 80             | 10             | 4,5            | 3,4  | 3 | 5    | ■          | ■         |                |                           |
| M 7  | 1    | 80             | 10             | 5,5            | 4,3  | 3 | 6    |            |           |                |                           |
| M 8  | 1,25 | 90             | 13             | 6              | 4,9  | 3 | 6,8  | ■          | ■         |                |                           |
| M 9  | 1,25 | 90             | 13             | 7              | 5,5  | 3 | 7,8  |            |           |                |                           |
| M 10   | 1,5  | 100            | 15             | 7              | 5,5  | 3 | 8,5  | ■          | ■         |                |                           |
| M 11   | 1,5  | 100            | 15             | 8              | 6,2  | 3 | 9,5  |            |           |                |                           |
| M 12   | 1,75 | 110            | 18             | 9              | 7    | 3 | 10,2 | ■          | ■         | ■              | ■                         |
| M 14   | 2    | 110            | 20             | 11             | 9    | 3 | 12   | ■          | ■         |                |                           |
| M 16   | 2    | 110            | 20             | 12             | 9    | 4 | 14   | ■          | ■         |                |                           |
| M 18   | 2,5  | 125            | 25             | 14             | 11   | 4 | 15,5 | ■          | ■         |                |                           |
| M 20   | 2,5  | 140            | 25             | 16             | 12   | 4 | 17,5 | ■          | ■         |                |                           |
| M 22   | 2,5  | 140            | 25             | 18             | 14,5 | 4 | 19,5 | ■          | ■         |                |                           |
| M 24   | 3    | 160            | 30             | 18             | 14,5 | 4 | 21   | ■          | ■         |                |                           |
| M 27   | 3    | 160            | 30             | 20             | 16   | 4 | 24   | ■          | ■         |                |                           |
| M 30   | 3,5  | 180            | 35             | 22             | 18   | 4 | 26,5 | ■          | ■         |                |                           |
| M 33   | 3,5  | 180            | 35             | 25             | 20   | 4 | 29,5 |            |           |                |                           |
| M 36   | 4    | 200            | 40             | 28             | 22   | 4 | 32   |            |           |                |                           |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 8.1; 6.2



**1580**

3.2; 8.2



**1590**

3.2; 8.2; 3.1; 3.3; 6.2



**2680**

3.2



**2690**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                    |                |     |   | 1580        | 1590      | 2680        | 2690      |   |
|--|------|----------------|----------------|--------------------|----------------|-----|---|-------------|-----------|-------------|-----------|---|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                    |                |     |   | <b>TiCN</b> | <b>OX</b> | <b>TiCN</b> | <b>OX</b> |   |
|  |      |                |                |                    |                |     |   |             |           |             |           |   |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a   | z | Ø mm        |           |             |           |   |
| M 3  | 0,5  | 56             | 9              | 5                  | 3,5            | 2,7 | 3 | 2,5         | ■         | ■           | ■         | ■ |
| M 3,5  | 0,6  | 56             | 11             | 6                  | 4              | 3   | 3 | 2,9         | ■         | ■           | ■         | ■ |
| M 4  | 0,7  | 63             | 12             | 7                  | 4,5            | 3,4 | 3 | 3,3         | ■         | ■           | ■         | ■ |
| M 4,5  | 0,75 | 70             | 13             | 8                  | 6              | 4,9 | 3 | 3,7         | ■         | ■           | ■         | ■ |
| M 5  | 0,8  | 70             | 13             | 8                  | 6              | 4,9 | 3 | 4,2         | ■         | ■           | ■         | ■ |
| M 6  | 1    | 80             | 15             | 10                 | 6              | 4,9 | 3 | 5           | ■         | ■           | ■         | ■ |
| M 7  | 1    | 80             | 15             | 10                 | 7              | 5,5 | 3 | 6           | ■         | ■           | ■         | ■ |
| M 8  | 1,25 | 90             | 18             | 13                 | 8              | 6,2 | 3 | 6,8         | ■         | ■           | ■         | ■ |
| M 9  | 1,25 | 90             | 18             | 13                 | 9              | 7   | 3 | 7,8         | ■         | ■           | ■         | ■ |
| M 10   | 1,5  | 100            | 20             | 15                 | 10             | 8   | 3 | 8,5         | ■         | ■           | ■         | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 8.1; 6.2



**3580**

3.2; 8.2



**3590**

3.2; 8.2 ; 3.1; 3.3; 6.2



**4680**

3.2



**4690**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                    |                |      |           |      | 3580        | 3590      | 4680        | 4690      |
|--|------|----------------|----------------|--------------------|----------------|------|-----------|------|-------------|-----------|-------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                    |                |      |           |      | <b>TiCN</b> | <b>OX</b> | <b>TiCN</b> | <b>OX</b> |
|  |      |                |                |                    |                |      |           |      |             |           |             |           |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a    | z / ZR40° | Ø mm |             |           |             |           |
| M 3  | 0,5  | 56             | 9              | 5                  | 2,2            | -    | 3/3       | 2,5  | ■           | ■         | ■           | ■         |
| M 3,5  | 0,6  | 56             | 11             | 6                  | 2,5            | 2,1  | 3/3       | 2,9  | ■           | ■         | ■           | ■         |
| M 4  | 0,7  | 63             | 12             | 7                  | 2,8            | 2,1  | 3/3       | 3,3  | ■           | ■         | ■           | ■         |
| M 4,5  | 0,75 | 70             | 13             | 8                  | 3,5            | 2,7  | 3/3       | 3,7  | ■           | ■         | ■           | ■         |
| M 5  | 0,8  | 70             | 13             | 8                  | 3,5            | 2,7  | 3/3       | 4,2  | ■           | ■         | ■           | ■         |
| M 6  | 1    | 80             | 15             | 10                 | 4,5            | 3,4  | 3/3       | 5    | ■           | ■         | ■           | ■         |
| M 7  | 1    | 80             | 15             | 10                 | 5,5            | 4,3  | 3/3       | 6    | ■           | ■         | ■           | ■         |
| M 8  | 1,25 | 90             | 18             | 13                 | 6              | 4,9  | 3/3       | 6,8  | ■           | ■         | ■           | ■         |
| M 9  | 1,25 | 90             | 18             | 13                 | 7              | 5,5  | 3/3       | 7,8  | ■           | ■         | ■           | ■         |
| M 10   | 1,5  | 100            | 20             | 15                 | 7              | 5,5  | 3/3       | 8,5  | ■           | ■         | ■           | ■         |
| M 11   | 1,5  | 100            | 20             | 15                 | 8              | 6,2  | 3/3       | 9,5  | ■           | ■         | ■           | ■         |
| M 12   | 1,75 | 110            | 23             | 18                 | 9              | 7    | 3/4       | 10,2 | ■           | ■         | ■           | ■         |
| M 14   | 2    | 110            | 25             | 20                 | 11             | 9    | 3/4       | 12   | ■           | ■         | ■           | ■         |
| M 16   | 2    | 110            | 25             | 20                 | 12             | 9    | 3/4       | 14   | ■           | ■         | ■           | ■         |
| M 18   | 2,5  | 125            | 30             | 25                 | 14             | 11   | 3/4       | 15,5 | ■           | ■         | ■           | ■         |
| M 20   | 2,5  | 140            | 30             | 25                 | 16             | 12   | 3/4       | 17,5 | ■           | ■         | ■           | ■         |
| M 22   | 2,5  | 140            | 30             | 25                 | 18             | 14,5 | 3/4       | 19,5 | ■           | ■         | ■           | ■         |
| M 24   | 3    | 160            | 36             | 30                 | 18             | 14,5 | 4/4       | 21   | ■           | ■         | ■           | ■         |
| M 27   | 3    | 160            | 36             | 30                 | 20             | 16   | 4/4       | 24   | ■           | ■         | ■           | ■         |
| M 30   | 3,5  | 180            | 40             | 35                 | 22             | 18   | 4/5       | 26,5 | ■           | ■         | ■           | ■         |
| M 33   | 3,5  | 180            | 42             | 35                 | 25             | 20   | 4/5       | 29,5 | ■           | ■         | ■           | ■         |
| M 36   | 4    | 200            | 50             | 40                 | 28             | 22   | 4/5       | 32   | ■           | ■         | ■           | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

|          |  |      |
|----------|--|------|
| 4.2; 4.1 |  | 1920 |
| 4.2; 4.1 |  | 3920 |
| 4.2; 4.1 |  | 2820 |
| 4.2; 4.1 |  | 4820 |
| 4.1; 4.2 |  | 2870 |
| 4.1; 4.2 |  | 4870 |

| Katalogové číslo / Cat. No. / Kat. Nr.   |      |                |                |                    |                |     |   |      | 1920           | 2820 | 2870           |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|--|------|----------------|----------------|--------------------|----------------|-----|---|------|----------------|------|----------------|----------------|--------------------|----------------|---|---|------|-----|-----|----|---|---|-----|-----|---|-----|-------|-----|----|----|---|---|---|---|-----|-----|-----|----|----|---|-----|-----|---|-----|-------|------|----|----|---|---|-----|---|-----|-----|-----|----|----|---|---|-----|---|-----|-----|---|----|----|----|---|-----|---|---|-----|---|----|----|----|---|-----|---|---|-----|------|----|----|----|---|-----|---|-----|-----|------|----|----|----|---|---|---|-----|------|-----|-----|----|----|----|---|---|-----|--|--|--|
| <p>DIN 371</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p>  |      |                |                |                    |                |     |   |      | FNT            | FNT  | FNT            |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| <table border="1"> <thead> <tr> <th>d<sub>1</sub></th> <th>P</th> <th>l<sub>1</sub></th> <th>l<sub>2</sub></th> <th>l<sub>2R40°</sub></th> <th>d<sub>2</sub></th> <th>a</th> <th>z</th> <th>Ø mm</th> </tr> </thead> <tbody> <tr><td>M 3</td><td>0,5</td><td>56</td><td>9</td><td>5</td><td>3,5</td><td>2,7</td><td>3</td><td>2,5</td></tr> <tr><td>M 3,5</td><td>0,6</td><td>56</td><td>11</td><td>6</td><td>4</td><td>3</td><td>3</td><td>2,9</td></tr> <tr><td>M 4</td><td>0,7</td><td>63</td><td>12</td><td>7</td><td>4,5</td><td>3,4</td><td>3</td><td>3,3</td></tr> <tr><td>M 4,5</td><td>0,75</td><td>70</td><td>13</td><td>8</td><td>6</td><td>4,9</td><td>3</td><td>3,7</td></tr> <tr><td>M 5</td><td>0,8</td><td>70</td><td>13</td><td>8</td><td>6</td><td>4,9</td><td>3</td><td>4,2</td></tr> <tr><td>M 6</td><td>1</td><td>80</td><td>15</td><td>10</td><td>6</td><td>4,9</td><td>3</td><td>5</td></tr> <tr><td>M 7</td><td>1</td><td>80</td><td>15</td><td>10</td><td>7</td><td>5,5</td><td>3</td><td>6</td></tr> <tr><td>M 8</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>8</td><td>6,2</td><td>3</td><td>6,8</td></tr> <tr><td>M 9</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>9</td><td>7</td><td>3</td><td>7,8</td></tr> <tr><td>M 10</td><td>1,5</td><td>100</td><td>20</td><td>15</td><td>10</td><td>8</td><td>3</td><td>8,5</td></tr> </tbody> </table> |      |                |                |                    |                |     |   |      | d <sub>1</sub> | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a | z | Ø mm | M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3 | 2,5 | M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3 | 2,9 | M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3 | 3,3 | M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3 | 3,7 | M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3 | 4,2 | M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3 | 5 | M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3 | 6 | M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3 | 6,8 | M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3 | 7,8 | M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3 | 8,5 |  |  |  |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a   | z | Ø mm |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 3  | 0,5  | 56             | 9              | 5                  | 3,5            | 2,7 | 3 | 2,5  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 3,5  | 0,6  | 56             | 11             | 6                  | 4              | 3   | 3 | 2,9  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 4  | 0,7  | 63             | 12             | 7                  | 4,5            | 3,4 | 3 | 3,3  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 4,5  | 0,75 | 70             | 13             | 8                  | 6              | 4,9 | 3 | 3,7  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 5  | 0,8  | 70             | 13             | 8                  | 6              | 4,9 | 3 | 4,2  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 6  | 1    | 80             | 15             | 10                 | 6              | 4,9 | 3 | 5    |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 7  | 1    | 80             | 15             | 10                 | 7              | 5,5 | 3 | 6    |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 8  | 1,25 | 90             | 18             | 13                 | 8              | 6,2 | 3 | 6,8  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 9  | 1,25 | 90             | 18             | 13                 | 9              | 7   | 3 | 7,8  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
| M 10   | 1,5  | 100            | 20             | 15                 | 10             | 8   | 3 | 8,5  |                |      |                |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |
|  |      |                |                |                    |                |     |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |     |     |    |   |   |     |     |   |     |       |     |    |    |   |   |   |   |     |     |     |    |    |   |     |     |   |     |       |      |    |    |   |   |     |   |     |     |     |    |    |   |   |     |   |     |     |   |    |    |    |   |     |   |   |     |   |    |    |    |   |     |   |   |     |      |    |    |    |   |     |   |     |     |      |    |    |    |   |   |   |     |      |     |     |    |    |    |   |   |     |  |  |  |

| Katalogové číslo / Cat. No. / Kat. Nr.  |      |                |                |                    |                |   |   |      | 3920           | 4870 | 4870           |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|---|------|----------------|----------------|--------------------|----------------|---|---|------|----------------|------|----------------|----------------|--------------------|----------------|---|---|------|------|------|-----|----|----|---|---|---|------|--|--|--|
| <p>DIN 376</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p>   |      |                |                |                    |                |   |   |      | FNT            | FNT  | FNT            |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
| <table border="1"> <thead> <tr> <th>d<sub>1</sub></th> <th>P</th> <th>l<sub>1</sub></th> <th>l<sub>2</sub></th> <th>l<sub>2R40°</sub></th> <th>d<sub>2</sub></th> <th>a</th> <th>z</th> <th>Ø mm</th> </tr> </thead> <tbody> <tr><td>M 12</td><td>1,75</td><td>110</td><td>23</td><td>18</td><td>9</td><td>7</td><td>3</td><td>10,2</td></tr> </tbody> </table> |      |                |                |                    |                |   |   |      | d <sub>1</sub> | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a | z | Ø mm | M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3 | 10,2 |  |  |  |
| d <sub>1</sub>  | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a | z | Ø mm |                |      |                |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
| M 12  | 1,75 | 110            | 23             | 18                 | 9              | 7 | 3 | 10,2 |                |      |                |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |
|   |      |                |                |                    |                |   |   |      | ■              | ■    | ■              |                |                    |                |   |   |      |      |      |     |    |    |   |   |   |      |  |  |  |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer

**M**

60°  
P

DIN 13

typ  
**AL**

HSSE

ISO 2  
6H

Skupina obráběného materiálu  
Material group / Werkstoffgruppe

|     |  |             |
|-----|--|-------------|
| 7.1 |  | <b>1610</b> |
| 7.1 |  | <b>3610</b> |
| 7.1 |  | <b>2710</b> |
| 7.1 |  | <b>4710</b> |

| Katalogové číslo / Cat. No. / Kat. Nr.   | 1610   | 2710   |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--|--|----------------|---------------------|---------------------|----------------|-----------|-----------|--|-----|-----|----|---|---|-----|-----|-----|-----|-------|-----|----|----|---|---|---|-----|-----|-----|-----|----|----|---|-----|-----|-----|-----|-------|------|----|----|---|---|-----|-----|-----|-----|-----|----|----|---|---|-----|-----|-----|-----|---|----|----|----|---|-----|-----|---|-----|---|----|----|----|---|-----|-----|---|-----|------|----|----|----|---|-----|-----|-----|-----|------|----|----|----|---|---|-----|-----|------|-----|-----|----|----|----|---|-----|-----|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">DIN 371</div> <p style="font-size: small;">z = počet drážek / z = number of flutes / z = Nutenzahl</p>   | <div style="background-color: yellow; border: 1px solid black; padding: 5px; margin-bottom: 5px;"><b>TiN</b></div> | <div style="background-color: yellow; border: 1px solid black; padding: 5px; margin-bottom: 5px;"><b>TiN</b></div> |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>d<sub>1</sub></th> <th>P</th> <th>l<sub>1</sub></th> <th>l<sub>2</sub></th> <th>l<sub>2</sub>R45°</th> <th>d<sub>2</sub></th> <th>a</th> <th>z / ZR45°</th> <th></th> </tr> </thead> <tbody> <tr><td>M 3</td><td>0,5</td><td>56</td><td>9</td><td>5</td><td>3,5</td><td>2,7</td><td>3/2</td><td>2,5</td></tr> <tr><td>M 3,5</td><td>0,6</td><td>56</td><td>11</td><td>6</td><td>4</td><td>3</td><td>3/2</td><td>2,9</td></tr> <tr><td>M 4</td><td>0,7</td><td>63</td><td>12</td><td>7</td><td>4,5</td><td>3,4</td><td>3/2</td><td>3,3</td></tr> <tr><td>M 4,5</td><td>0,75</td><td>70</td><td>13</td><td>8</td><td>6</td><td>4,9</td><td>3/2</td><td>3,7</td></tr> <tr><td>M 5</td><td>0,8</td><td>70</td><td>13</td><td>8</td><td>6</td><td>4,9</td><td>3/2</td><td>4,2</td></tr> <tr><td>M 6</td><td>1</td><td>80</td><td>15</td><td>10</td><td>6</td><td>4,9</td><td>3/2</td><td>5</td></tr> <tr><td>M 7</td><td>1</td><td>80</td><td>15</td><td>10</td><td>7</td><td>5,5</td><td>3/2</td><td>6</td></tr> <tr><td>M 8</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>8</td><td>6,2</td><td>3/2</td><td>6,8</td></tr> <tr><td>M 9</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>9</td><td>7</td><td>3/2</td><td>7,8</td></tr> <tr><td>M 10</td><td>1,5</td><td>100</td><td>20</td><td>15</td><td>10</td><td>8</td><td>3/2</td><td>8,5</td></tr> </tbody> </table> | d <sub>1</sub>   | P  | l <sub>1</sub> | l <sub>2</sub>      | l <sub>2</sub> R45° | d <sub>2</sub> | a         | z / ZR45° |  | M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3/2 | 2,5 | M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3/2 | 2,9 | M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3/2 | 3,3 | M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3/2 | 3,7 | M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3/2 | 4,2 | M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3/2 | 5 | M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3/2 | 6 | M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3/2 | 6,8 | M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3/2 | 7,8 | M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3/2 | 8,5 | <table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;">■</td> <td style="width: 50%;">■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> </table> | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| d <sub>1</sub>   | P  | l <sub>1</sub>   | l <sub>2</sub> | l <sub>2</sub> R45° | d <sub>2</sub>      | a              | z / ZR45° |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 3  | 0,5  | 56   | 9              | 5                   | 3,5                 | 2,7            | 3/2       | 2,5       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 3,5  | 0,6  | 56   | 11             | 6                   | 4                   | 3              | 3/2       | 2,9       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 4  | 0,7  | 63   | 12             | 7                   | 4,5                 | 3,4            | 3/2       | 3,3       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 4,5  | 0,75   | 70   | 13             | 8                   | 6                   | 4,9            | 3/2       | 3,7       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 5  | 0,8  | 70   | 13             | 8                   | 6                   | 4,9            | 3/2       | 4,2       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 6  | 1  | 80   | 15             | 10                  | 6                   | 4,9            | 3/2       | 5         |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 7  | 1  | 80   | 15             | 10                  | 7                   | 5,5            | 3/2       | 6         |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 8  | 1,25   | 90   | 18             | 13                  | 8                   | 6,2            | 3/2       | 6,8       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 9  | 1,25   | 90   | 18             | 13                  | 9                   | 7              | 3/2       | 7,8       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 10   | 1,5  | 100  | 20             | 15                  | 10                  | 8              | 3/2       | 8,5       |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■  | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |     |     |     |       |     |    |    |   |   |   |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |   |     |     |     |     |     |    |    |   |   |     |     |     |     |   |    |    |    |   |     |     |   |     |   |    |    |    |   |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |   |     |     |      |     |     |    |    |    |   |     |     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

| Katalogové číslo / Cat. No. / Kat. Nr.  | 3610   | 4710   |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|--|--|----------------|---------------------|---------------------|----------------|-----------|-----------|--|-----|-----|----|---|---|-----|---|-----|-----|-------|-----|----|----|---|-----|-----|-----|-----|-----|-----|----|----|---|-----|-----|-----|-----|-------|------|----|----|---|-----|-----|-----|-----|-----|-----|----|----|---|-----|-----|-----|-----|-----|---|----|----|----|-----|-----|-----|---|-----|---|----|----|----|-----|-----|-----|---|-----|------|----|----|----|---|-----|-----|-----|-----|------|----|----|----|---|-----|-----|-----|------|-----|-----|----|----|---|-----|-----|-----|------|-----|-----|----|----|---|-----|-----|-----|------|------|-----|----|----|---|---|-----|------|------|---|-----|----|----|----|---|-----|----|------|---|-----|----|----|----|---|-----|----|------|-----|-----|----|----|----|----|-----|------|------|-----|-----|----|----|----|----|-----|------|------|-----|-----|----|----|----|------|-----|------|------|---|-----|----|----|----|------|-----|----|------|---|-----|----|----|----|----|-----|----|------|-----|-----|----|----|----|----|-----|------|------|-----|-----|----|----|----|----|-----|------|------|---|-----|----|----|----|----|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">DIN 376</div> <p style="font-size: small;">z = počet drážek / z = number of flutes / z = Nutenzahl</p>  | <div style="background-color: yellow; border: 1px solid black; padding: 5px; margin-bottom: 5px;"><b>TiN</b></div> | <div style="background-color: yellow; border: 1px solid black; padding: 5px; margin-bottom: 5px;"><b>TiN</b></div> |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>d<sub>1</sub></th> <th>P</th> <th>l<sub>1</sub></th> <th>l<sub>2</sub></th> <th>l<sub>2</sub>R45°</th> <th>d<sub>2</sub></th> <th>a</th> <th>z / ZR45°</th> <th></th> </tr> </thead> <tbody> <tr><td>M 3</td><td>0,5</td><td>56</td><td>9</td><td>5</td><td>2,2</td><td>-</td><td>3/2</td><td>2,5</td></tr> <tr><td>M 3,5</td><td>0,6</td><td>56</td><td>11</td><td>6</td><td>2,5</td><td>2,1</td><td>3/2</td><td>2,9</td></tr> <tr><td>M 4</td><td>0,7</td><td>63</td><td>12</td><td>7</td><td>2,8</td><td>2,1</td><td>3/2</td><td>3,3</td></tr> <tr><td>M 4,5</td><td>0,75</td><td>70</td><td>13</td><td>8</td><td>3,5</td><td>2,7</td><td>3/2</td><td>3,7</td></tr> <tr><td>M 5</td><td>0,8</td><td>70</td><td>13</td><td>8</td><td>3,5</td><td>2,7</td><td>3/2</td><td>4,2</td></tr> <tr><td>M 6</td><td>1</td><td>80</td><td>15</td><td>10</td><td>4,5</td><td>3,4</td><td>3/2</td><td>5</td></tr> <tr><td>M 7</td><td>1</td><td>80</td><td>15</td><td>10</td><td>5,5</td><td>4,3</td><td>3/2</td><td>6</td></tr> <tr><td>M 8</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>6</td><td>4,9</td><td>3/2</td><td>6,8</td></tr> <tr><td>M 9</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>7</td><td>5,5</td><td>3/2</td><td>7,8</td></tr> <tr><td>M 10</td><td>1,5</td><td>100</td><td>20</td><td>15</td><td>7</td><td>5,5</td><td>3/2</td><td>8,5</td></tr> <tr><td>M 11</td><td>1,5</td><td>100</td><td>20</td><td>15</td><td>8</td><td>6,2</td><td>3/2</td><td>9,5</td></tr> <tr><td>M 12</td><td>1,75</td><td>110</td><td>23</td><td>18</td><td>9</td><td>7</td><td>3/2</td><td>10,2</td></tr> <tr><td>M 14</td><td>2</td><td>110</td><td>25</td><td>20</td><td>11</td><td>9</td><td>3/2</td><td>12</td></tr> <tr><td>M 16</td><td>2</td><td>110</td><td>25</td><td>20</td><td>12</td><td>9</td><td>3/2</td><td>14</td></tr> <tr><td>M 18</td><td>2,5</td><td>125</td><td>30</td><td>25</td><td>14</td><td>11</td><td>3/3</td><td>15,5</td></tr> <tr><td>M 20</td><td>2,5</td><td>140</td><td>30</td><td>25</td><td>16</td><td>12</td><td>3/3</td><td>17,5</td></tr> <tr><td>M 22</td><td>2,5</td><td>140</td><td>30</td><td>25</td><td>18</td><td>14,5</td><td>3/3</td><td>19,5</td></tr> <tr><td>M 24</td><td>3</td><td>160</td><td>36</td><td>30</td><td>18</td><td>14,5</td><td>4/3</td><td>21</td></tr> <tr><td>M 27</td><td>3</td><td>160</td><td>36</td><td>30</td><td>20</td><td>16</td><td>4/3</td><td>24</td></tr> <tr><td>M 30</td><td>3,5</td><td>180</td><td>40</td><td>35</td><td>22</td><td>18</td><td>4/3</td><td>26,5</td></tr> <tr><td>M 33</td><td>3,5</td><td>180</td><td>42</td><td>35</td><td>25</td><td>20</td><td>4/3</td><td>29,5</td></tr> <tr><td>M 36</td><td>4</td><td>200</td><td>50</td><td>40</td><td>28</td><td>22</td><td>4/3</td><td>32</td></tr> </tbody> </table> | d <sub>1</sub>   | P  | l <sub>1</sub> | l <sub>2</sub>      | l <sub>2</sub> R45° | d <sub>2</sub> | a         | z / ZR45° |  | M 3 | 0,5 | 56 | 9 | 5 | 2,2 | - | 3/2 | 2,5 | M 3,5 | 0,6 | 56 | 11 | 6 | 2,5 | 2,1 | 3/2 | 2,9 | M 4 | 0,7 | 63 | 12 | 7 | 2,8 | 2,1 | 3/2 | 3,3 | M 4,5 | 0,75 | 70 | 13 | 8 | 3,5 | 2,7 | 3/2 | 3,7 | M 5 | 0,8 | 70 | 13 | 8 | 3,5 | 2,7 | 3/2 | 4,2 | M 6 | 1 | 80 | 15 | 10 | 4,5 | 3,4 | 3/2 | 5 | M 7 | 1 | 80 | 15 | 10 | 5,5 | 4,3 | 3/2 | 6 | M 8 | 1,25 | 90 | 18 | 13 | 6 | 4,9 | 3/2 | 6,8 | M 9 | 1,25 | 90 | 18 | 13 | 7 | 5,5 | 3/2 | 7,8 | M 10 | 1,5 | 100 | 20 | 15 | 7 | 5,5 | 3/2 | 8,5 | M 11 | 1,5 | 100 | 20 | 15 | 8 | 6,2 | 3/2 | 9,5 | M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3/2 | 10,2 | M 14 | 2 | 110 | 25 | 20 | 11 | 9 | 3/2 | 12 | M 16 | 2 | 110 | 25 | 20 | 12 | 9 | 3/2 | 14 | M 18 | 2,5 | 125 | 30 | 25 | 14 | 11 | 3/3 | 15,5 | M 20 | 2,5 | 140 | 30 | 25 | 16 | 12 | 3/3 | 17,5 | M 22 | 2,5 | 140 | 30 | 25 | 18 | 14,5 | 3/3 | 19,5 | M 24 | 3 | 160 | 36 | 30 | 18 | 14,5 | 4/3 | 21 | M 27 | 3 | 160 | 36 | 30 | 20 | 16 | 4/3 | 24 | M 30 | 3,5 | 180 | 40 | 35 | 22 | 18 | 4/3 | 26,5 | M 33 | 3,5 | 180 | 42 | 35 | 25 | 20 | 4/3 | 29,5 | M 36 | 4 | 200 | 50 | 40 | 28 | 22 | 4/3 | 32 | <table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;">■</td> <td style="width: 50%;">■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> <tr> <td>■</td> <td>■</td> </tr> </table> | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| d <sub>1</sub>  | P  | l <sub>1</sub>   | l <sub>2</sub> | l <sub>2</sub> R45° | d <sub>2</sub>      | a              | z / ZR45° |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 3   | 0,5  | 56   | 9              | 5                   | 2,2                 | -              | 3/2       | 2,5       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 3,5   | 0,6  | 56   | 11             | 6                   | 2,5                 | 2,1            | 3/2       | 2,9       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 4   | 0,7  | 63   | 12             | 7                   | 2,8                 | 2,1            | 3/2       | 3,3       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 4,5   | 0,75   | 70   | 13             | 8                   | 3,5                 | 2,7            | 3/2       | 3,7       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 5   | 0,8  | 70   | 13             | 8                   | 3,5                 | 2,7            | 3/2       | 4,2       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 6   | 1  | 80   | 15             | 10                  | 4,5                 | 3,4            | 3/2       | 5         |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 7   | 1  | 80   | 15             | 10                  | 5,5                 | 4,3            | 3/2       | 6         |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 8   | 1,25   | 90   | 18             | 13                  | 6                   | 4,9            | 3/2       | 6,8       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 9   | 1,25   | 90   | 18             | 13                  | 7                   | 5,5            | 3/2       | 7,8       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 10  | 1,5  | 100  | 20             | 15                  | 7                   | 5,5            | 3/2       | 8,5       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 11  | 1,5  | 100  | 20             | 15                  | 8                   | 6,2            | 3/2       | 9,5       |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 12  | 1,75   | 110  | 23             | 18                  | 9                   | 7              | 3/2       | 10,2      |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 14  | 2  | 110  | 25             | 20                  | 11                  | 9              | 3/2       | 12        |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 16  | 2  | 110  | 25             | 20                  | 12                  | 9              | 3/2       | 14        |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 18  | 2,5  | 125  | 30             | 25                  | 14                  | 11             | 3/3       | 15,5      |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 20  | 2,5  | 140  | 30             | 25                  | 16                  | 12             | 3/3       | 17,5      |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 22  | 2,5  | 140  | 30             | 25                  | 18                  | 14,5           | 3/3       | 19,5      |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 24  | 3  | 160  | 36             | 30                  | 18                  | 14,5           | 4/3       | 21        |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 27  | 3  | 160  | 36             | 30                  | 20                  | 16             | 4/3       | 24        |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 30  | 3,5  | 180  | 40             | 35                  | 22                  | 18             | 4/3       | 26,5      |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 33  | 3,5  | 180  | 42             | 35                  | 25                  | 20             | 4/3       | 29,5      |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| M 36  | 4  | 200  | 50             | 40                  | 28                  | 22             | 4/3       | 32        |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| ■   | ■  |  |                |                     |                     |                |           |           |  |     |     |    |   |   |     |   |     |     |       |     |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |       |      |    |    |   |     |     |     |     |     |     |    |    |   |     |     |     |     |     |   |    |    |    |     |     |     |   |     |   |    |    |    |     |     |     |   |     |      |    |    |    |   |     |     |     |     |      |    |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |     |     |    |    |   |     |     |     |      |      |     |    |    |   |   |     |      |      |   |     |    |    |    |   |     |    |      |   |     |    |    |    |   |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |      |     |      |      |   |     |    |    |    |      |     |    |      |   |     |    |    |    |    |     |    |      |     |     |    |    |    |    |     |      |      |     |     |    |    |    |    |     |      |      |   |     |    |    |    |    |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |     |   |      | 1080     | 1080 IKZ        | 1130     | 1130 IKZ        |
|--|------|----------------|----------------|----------------|-----|---|------|----------|-----------------|----------|-----------------|
|  |      |                |                |                |     |   |      | TiCN     | TiCN            | TiCN     | TiCN            |
|  |      |                |                |                |     |   |      | C<br>2-3 | C<br>2-3<br>IKZ | E<br>1,5 | E<br>1,5<br>IKZ |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |          |                 |          |                 |
| M 3                                    | 0,5  | 56             | 9              | 3,5            | 2,7 | 3 | 2,5  | ■        |                 | ■        |                 |
| M 3,5                                  | 0,6  | 56             | 11             | 4              | 3   | 3 | 2,9  |          |                 |          |                 |
| M 4                                    | 0,7  | 63             | 12             | 4,5            | 3,4 | 3 | 3,3  | ■        |                 | ■        |                 |
| M 4,5                                  | 0,75 | 70             | 13             | 6              | 4,9 | 3 | 3,7  |          |                 |          |                 |
| M 5                                    | 0,8  | 70             | 13             | 6              | 4,9 | 3 | 4,2  | ■        | ■               | ■        | ■               |
| M 6                                    | 1    | 80             | 15             | 6              | 4,9 | 3 | 5    | ■        | ■               | ■        | ■               |
| M 7                                    | 1    | 80             | 15             | 7              | 5,5 | 3 | 6    |          |                 |          |                 |
| M 8                                    | 1,25 | 90             | 18             | 8              | 6,2 | 4 | 6,8  | ■        | ■               | ■        | ■               |
| M 9                                    | 1,25 | 90             | 18             | 9              | 7   | 4 | 7,8  |          |                 |          |                 |
| M 10                                   | 1,5  | 100            | 20             | 10             | 8   | 4 | 8,5  | ■        | ■               | ■        | ■               |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr.  |      |       |       |       |      |   |                | 3080        | 3080 IKZ    | 3130        | 3130 IKZ    |
|---|------|-------|-------|-------|------|---|----------------|-------------|-------------|-------------|-------------|
| <p><math>z = \text{počet drážek} / z = \text{number of flutes} / z = \text{Nutzanzahl}</math></p> |      |       |       |       |      |   |                | <b>TiCN</b> | <b>TiCN</b> | <b>TiCN</b> | <b>TiCN</b> |
|   |      |       |       |       |      |   |                |             | <b>IKZ</b>  |             | <b>IKZ</b>  |
| $d_1$   | P    | $l_1$ | $l_2$ | $d_2$ | a    | z | $\emptyset$ mm |             |             |             |             |
| M 3   | 0,5  | 56    | 9     | 2,2   | -    | 3 | 2,5            | ■           |             | ■           |             |
| M 3,5   | 0,6  | 56    | 11    | 2,5   | 2,1  | 3 | 2,9            |             |             |             |             |
| M 4   | 0,7  | 63    | 12    | 2,8   | 2,1  | 3 | 3,3            | ■           |             | ■           |             |
| M 4,5   | 0,75 | 70    | 13    | 3,5   | 2,7  | 3 | 3,7            |             |             |             |             |
| M 5   | 0,8  | 70    | 13    | 3,5   | 2,7  | 3 | 4,2            | ■           | ■           | ■           | ■           |
| M 6   | 1    | 80    | 15    | 4,5   | 3,4  | 3 | 5              | ■           | ■           | ■           | ■           |
| M 7   | 1    | 80    | 15    | 5,5   | 4,3  | 3 | 6              |             |             |             |             |
| M 8   | 1,25 | 90    | 18    | 6     | 4,9  | 4 | 6,8            | ■           | ■           | ■           | ■           |
| M 9   | 1,25 | 90    | 18    | 7     | 5,5  | 4 | 7,8            |             |             |             |             |
| M 10  | 1,5  | 100   | 20    | 7     | 5,5  | 4 | 8,5            | ■           | ■           | ■           | ■           |
| M 11  | 1,5  | 100   | 20    | 8     | 6,2  | 4 | 9,5            |             |             |             |             |
| M 12  | 1,75 | 110   | 23    | 9     | 7    | 4 | 10,2           | ■           | ■           | ■           | ■           |
| M 14  | 2    | 110   | 25    | 11    | 9    | 4 | 12             | ■           | ■           | ■           | ■           |
| M 16  | 2    | 110   | 25    | 12    | 9    | 4 | 14             | ■           |             | ■           |             |
| M 18  | 2,5  | 125   | 30    | 14    | 11   | 4 | 15,5           | ■           |             | ■           |             |
| M 20  | 2,5  | 140   | 30    | 16    | 12   | 4 | 17,5           | ■           |             | ■           |             |
| M 22  | 2,5  | 140   | 30    | 18    | 14,5 | 4 | 19,5           | ■           |             | ■           |             |
| M 24  | 3    | 160   | 36    | 18    | 14,5 | 4 | 21             | ■           |             | ■           |             |
| M 27  | 3    | 160   | 36    | 20    | 16   | 4 | 24             | ■           |             | ■           |             |
| M 30  | 3,5  | 180   | 40    | 22    | 18   | 4 | 26,5           | ■           |             | ■           |             |
| M 33  | 3,5  | 180   | 42    | 25    | 20   | 5 | 29,5           |             |             |             |             |
| M 36  | 4    | 200   | 50    | 28    | 22   | 5 | 32             |             |             |             |             |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;  
6.2; 8.2



**1710**

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;  
6.2; 8.2



**3710**

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;  
6.2; 8.2



**2210**

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;  
6.2; 8.2



**4210**

| Katalogové číslo / Cat. No. / Kat. Nr.  |      |                |                |                    |                |     |           |      | 1710 | 2210 |
|---|------|----------------|----------------|--------------------|----------------|-----|-----------|------|------|------|
| <p>DIN 371</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                    |                |     |           |      | TiN  | TiN  |
|   |      |                |                |                    |                |     |           |      |      |      |
| d <sub>1</sub>  | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R35°</sub> | d <sub>2</sub> | a   | z / ZR35° | Ø mm |      |      |
| M 3   | 0,5  | 56             | 9              | 5                  | 3,5            | 2,7 | 3         | 2,5  | ■    | ■    |
| M 3,5   | 0,6  | 56             | 11             | 6                  | 4              | 3   | 3         | 2,9  | ■    | ■    |
| M 4   | 0,7  | 63             | 12             | 7                  | 4,5            | 3,4 | 3         | 3,3  | ■    | ■    |
| M 4,5   | 0,75 | 70             | 13             | 8                  | 6              | 4,9 | 3         | 3,7  | ■    | ■    |
| M 5   | 0,8  | 70             | 13             | 8                  | 6              | 4,9 | 3         | 4,2  | ■    | ■    |
| M 6   | 1    | 80             | 15             | 10                 | 6              | 4,9 | 3         | 5    | ■    | ■    |
| M 7   | 1    | 80             | 15             | 10                 | 7              | 5,5 | 3         | 6    | ■    | ■    |
| M 8   | 1,25 | 90             | 18             | 13                 | 8              | 6,2 | 3         | 6,8  | ■    | ■    |
| M 9   | 1,25 | 90             | 18             | 13                 | 9              | 7   | 3         | 7,8  | ■    | ■    |
| M 10  | 1,5  | 100            | 20             | 15                 | 10             | 8   | 3         | 8,5  | ■    | ■    |

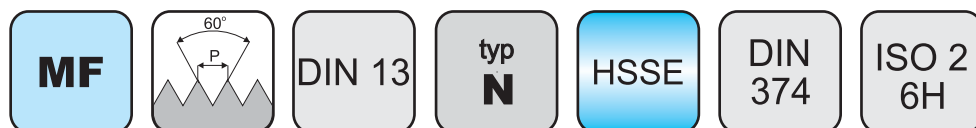
| Katalogové číslo / Cat. No. / Kat. Nr.  |      |                |                |                    |                |     |           |      | 3710 | 4210 |
|---|------|----------------|----------------|--------------------|----------------|-----|-----------|------|------|------|
| <p>DIN 376</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                    |                |     |           |      | TiN  | TiN  |
|   |      |                |                |                    |                |     |           |      |      |      |
| d <sub>1</sub>  | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R35°</sub> | d <sub>2</sub> | a   | z / ZR35° | Ø mm |      |      |
| M 3   | 0,5  | 56             | 9              | 5                  | 2,2            | -   | 3/3       | 2,5  |      |      |
| M 3,5   | 0,6  | 56             | 11             | 6                  | 2,5            | 2,1 | 3/3       | 2,9  |      |      |
| M 4   | 0,7  | 63             | 12             | 7                  | 2,8            | 2,1 | 3/3       | 3,3  |      |      |
| M 4,5   | 0,75 | 70             | 13             | 8                  | 3,5            | 2,7 | 3/3       | 3,7  |      |      |
| M 5   | 0,8  | 70             | 13             | 8                  | 3,5            | 2,7 | 3/3       | 4,2  |      |      |
| M 6   | 1    | 80             | 15             | 10                 | 4,5            | 3,4 | 3/3       | 5    |      |      |
| M 7   | 1    | 80             | 15             | 10                 | 5,5            | 4,3 | 3/3       | 6    |      |      |
| M 8   | 1,25 | 90             | 18             | 13                 | 6              | 4,9 | 3/3       | 6,8  |      |      |
| M 9   | 1,25 | 90             | 18             | 13                 | 7              | 5,5 | 3/3       | 7,8  |      |      |
| M 10  | 1,5  | 100            | 20             | 15                 | 7              | 5,5 | 3/3       | 8,5  |      |      |
| M 11  | 1,5  | 100            | 20             | 15                 | 8              | 6,2 | 3/3       | 9,5  |      |      |
| M 12  | 1,75 | 110            | 23             | 18                 | 9              | 7   | 3/3       | 10,2 | ■    | ■    |
| M 14  | 2    | 110            | 25             | 20                 | 11             | 9   | 3/3       | 12   | ■    | ■    |
| M 16  | 2    | 110            | 25             | 20                 | 12             | 9   | 3/4       | 14   | ■    | ■    |
| M 18  | 2,5  | 125            | 30             | 25                 | 14             | 11  | 3/4       | 15,5 | ■    | ■    |
| M 20  | 2,5  | 140            | 30             | 25                 | 16             | 12  | 3/4       | 17,5 | ■    | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1

1.2; 2.2; 8.1; 11.1; 2.3; 8.2



**3000**



**3010**



**3500**



**3510**



**3540**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                |      |   |      | 3000 | 3010 | 3500 | 3510 | 3540 |
|--|------|----------------|----------------|----------------|------|---|------|------|------|------|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                |      |   |      | TiN  |      | TiN  | OX   |      |
|  |      |                |                |                |      |   |      |      |      |      |      |      |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |      |      |      |      |      |
| M 3  | 0,35 | 56             | 8              | 2,2            | -    | 3 | 2,65 |      |      |      |      |      |
| M 3,5  | 0,35 | 56             | 8              | 2,5            | 2,1  | 3 | 3,15 |      |      |      |      |      |
| M 4  | 0,5  | 63             | 12             | 2,8            | 2,1  | 3 | 3,5  |      |      |      |      |      |
| M 4  | 0,35 | 63             | 12             | 2,8            | 2,1  | 3 | 3,65 |      |      |      |      |      |
| M 4,5  | 0,5  | 70             | 13             | 3,5            | 2,7  | 3 | 4    |      |      |      |      |      |
| M 5  | 0,5  | 70             | 13             | 3,5            | 2,7  | 3 | 4,5  |      |      |      |      |      |
| M 5,5  | 0,5  | 80             | 15             | 4              | 3    | 3 | 5    |      |      |      |      |      |
| M 6  | 0,75 | 80             | 15             | 4,5            | 3,4  | 3 | 5,2  |      |      |      |      |      |
| M 6  | 0,5  | 80             | 15             | 4,5            | 3,4  | 3 | 5,5  |      |      |      |      |      |
| M 7  | 0,75 | 80             | 15             | 5,5            | 4,3  | 3 | 6,2  |      |      |      |      |      |
| M 8  | 1    | 90             | 18             | 6              | 4,9  | 3 | 7    |      |      |      |      |      |
| M 8  | 0,75 | 80             | 15             | 6              | 4,9  | 3 | 7,2  |      |      |      |      |      |
| M 8  | 0,5  | 80             | 15             | 6              | 4,9  | 3 | 7,5  |      |      |      |      |      |
| M 9  | 1    | 90             | 18             | 7              | 5,5  | 3 | 8    |      |      |      |      |      |
| M 9  | 0,75 | 80             | 18             | 7              | 5,5  | 3 | 8,2  |      |      |      |      |      |
| M 10   | 1,25 | 100            | 20             | 7              | 5,5  | 3 | 8,8  |      |      |      |      |      |
| M 10   | 1    | 90             | 20             | 7              | 5,5  | 3 | 9    |      |      |      |      |      |
| M 10   | 0,75 | 90             | 20             | 7              | 5,5  | 3 | 9,2  |      |      |      |      |      |
| M 11   | 1    | 90             | 20             | 8              | 6,2  | 3 | 10   |      |      |      |      |      |
| M 11   | 0,75 | 90             | 20             | 8              | 6,2  | 3 | 10,2 |      |      |      |      |      |
| M 12   | 1,5  | 100            | 21             | 9              | 7    | 3 | 10,5 |      |      |      |      |      |
| M 12   | 1,25 | 100            | 21             | 9              | 7    | 3 | 10,8 |      |      |      |      |      |
| M 12   | 1    | 100            | 21             | 9              | 7    | 3 | 11   |      |      |      |      |      |
| M 13   | 1    | 100            | 21             | 11             | 9    | 3 | 12   |      |      |      |      |      |
| M 14   | 1,5  | 100            | 21             | 11             | 9    | 3 | 12,5 |      |      |      |      |      |
| M 14   | 1,25 | 100            | 21             | 11             | 9    | 3 | 12,8 |      |      |      |      |      |
| M 14   | 1    | 100            | 21             | 11             | 9    | 3 | 13   |      |      |      |      |      |
| M 15   | 1,5  | 100            | 21             | 12             | 9    | 3 | 13,5 |      |      |      |      |      |
| M 15   | 1    | 100            | 21             | 12             | 9    | 3 | 14   |      |      |      |      |      |
| M 16   | 1,5  | 100            | 21             | 12             | 9    | 3 | 14,5 |      |      |      |      |      |
| M 16   | 1    | 100            | 21             | 12             | 9    | 3 | 15   |      |      |      |      |      |
| M 17   | 1,5  | 100            | 21             | 12             | 9    | 3 | 15,5 |      |      |      |      |      |
| M 17   | 1    | 100            | 21             | 12             | 9    | 3 | 16   |      |      |      |      |      |
| M 18   | 2    | 125            | 24             | 14             | 11   | 3 | 16   |      |      |      |      |      |
| M 18   | 1,5  | 110            | 24             | 14             | 11   | 3 | 16,5 |      |      |      |      |      |
| M 18   | 1    | 110            | 24             | 14             | 11   | 3 | 17   |      |      |      |      |      |
| M 20   | 2    | 140            | 30             | 16             | 12   | 3 | 18   |      |      |      |      |      |
| M 20   | 1,5  | 125            | 24             | 16             | 12   | 3 | 18,5 |      |      |      |      |      |
| M 20   | 1    | 125            | 24             | 16             | 12   | 3 | 19   |      |      |      |      |      |
| M 22   | 2    | 140            | 30             | 18             | 14,5 | 3 | 20   |      |      |      |      |      |
| M 22   | 1,5  | 125            | 24             | 18             | 14,5 | 3 | 20,5 |      |      |      |      |      |
| M 22   | 1    | 125            | 24             | 18             | 14,5 | 3 | 21   |      |      |      |      |      |
| M 24   | 2    | 140            | 26             | 18             | 14,5 | 4 | 22   |      |      |      |      |      |
| M 24   | 1,5  | 140            | 26             | 18             | 14,5 | 4 | 22,5 |      |      |      |      |      |
| M 24   | 1    | 140            | 26             | 18             | 14,5 | 4 | 23   |      |      |      |      |      |
| M 25   | 2    | 140            | 26             | 18             | 14,5 | 4 | 23   |      |      |      |      |      |

■ dodáváme standardně / standard supplies / Standardlieferungbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1

1.2; 2.2; 8.1; 11.1; 2.3; 8.2



| Katalogové číslo / Cat. No. / Kat. Nr.                         |     |                |                |                |      |   |      | 3000 | 3010 | 3500 | 3510 | 3540 |
|--|-----|----------------|----------------|----------------|------|---|------|------|------|------|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |     |                |                |                |      |   |      | TiN  |      | TiN  | OX   |      |
| d <sub>1</sub>   | P   | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |      |      |      |      |      |
| M 25   | 1,5 | 140            | 26             | 18             | 14,5 | 4 | 23,5 | ■    | ■    | ■    | ■    | ■    |
| M 26   | 1,5 | 140            | 26             | 18             | 14,5 | 4 | 24,5 | ■    | ■    | ■    | ■    | ■    |
| M 27   | 2   | 140            | 26             | 20             | 16   | 4 | 25   | ■    | ■    | ■    | ■    | ■    |
| M 27   | 1,5 | 140            | 26             | 20             | 16   | 4 | 25,5 | ■    | ■    | ■    | ■    | ■    |
| M 27   | 1   | 140            | 26             | 20             | 16   | 4 | 26   | ■    | ■    | ■    | ■    | ■    |
| M 28   | 2   | 140            | 26             | 20             | 16   | 4 | 26   | ■    | ■    | ■    | ■    | ■    |
| M 28   | 1,5 | 140            | 26             | 20             | 16   | 4 | 26,5 | ■    | ■    | ■    | ■    | ■    |
| M 30   | 2   | 150            | 28             | 22             | 18   | 4 | 28   | ■    | ■    | ■    | ■    | ■    |
| M 30   | 1,5 | 150            | 28             | 22             | 18   | 4 | 28,5 | ■    | ■    | ■    | ■    | ■    |
| M 30   | 1   | 150            | 28             | 22             | 18   | 4 | 29   | ■    | ■    | ■    | ■    | ■    |
| M 32   | 1,5 | 150            | 28             | 22             | 18   | 4 | 30,5 | ■    | ■    | ■    | ■    | ■    |
| M 33   | 2   | 160            | 30             | 25             | 20   | 4 | 31   | ■    | ■    | ■    | ■    | ■    |
| M 33   | 1,5 | 160            | 30             | 25             | 20   | 4 | 31,5 | ■    | ■    | ■    | ■    | ■    |
| M 34   | 1,5 | 170            | 30             | 28             | 22   | 4 | 32,5 | ■    | ■    | ■    | ■    | ■    |
| M 35   | 1,5 | 170            | 30             | 28             | 22   | 4 | 33,5 | ■    | ■    | ■    | ■    | ■    |
| M 36   | 3   | 200            | 42             | 28             | 22   | 4 | 33   | ■    | ■    | ■    | ■    | ■    |
| M 36   | 2   | 170            | 30             | 28             | 22   | 4 | 34   | ■    | ■    | ■    | ■    | ■    |
| M 36   | 1,5 | 170            | 30             | 28             | 22   | 4 | 34,5 | ■    | ■    | ■    | ■    | ■    |
| M 38   | 1,5 | 170            | 30             | 28             | 22   | 4 | 36,5 | ■    | ■    | ■    | ■    | ■    |
| M 39   | 3   | 200            | 42             | 32             | 24   | 4 | 36   | ■    | ■    | ■    | ■    | ■    |
| M 39   | 2   | 170            | 30             | 32             | 24   | 4 | 37   | ■    | ■    | ■    | ■    | ■    |
| M 39   | 1,5 | 170            | 30             | 32             | 24   | 4 | 37,5 | ■    | ■    | ■    | ■    | ■    |
| M 40   | 3   | 200            | 42             | 32             | 24   | 4 | 37   | ■    | ■    | ■    | ■    | ■    |
| M 40   | 2   | 170            | 30             | 32             | 24   | 4 | 38   | ■    | ■    | ■    | ■    | ■    |
| M 40   | 1,5 | 170            | 30             | 32             | 24   | 4 | 38,5 | ■    | ■    | ■    | ■    | ■    |
| M 42   | 3   | 200            | 50             | 32             | 24   | 4 | 39   | ■    | ■    | ■    | ■    | ■    |
| M 42   | 2   | 170            | 30             | 32             | 24   | 4 | 40   | ■    | ■    | ■    | ■    | ■    |
| M 42   | 1,5 | 170            | 30             | 32             | 24   | 4 | 40,5 | ■    | ■    | ■    | ■    | ■    |
| M 45   | 3   | 200            | 50             | 36             | 29   | 4 | 42   | ■    | ■    | ■    | ■    | ■    |
| M 45   | 2   | 180            | 32             | 36             | 29   | 4 | 43   | ■    | ■    | ■    | ■    | ■    |
| M 45   | 1,5 | 180            | 32             | 36             | 29   | 4 | 43,5 | ■    | ■    | ■    | ■    | ■    |
| M 48   | 3   | 225            | 50             | 36             | 29   | 4 | 45   | ■    | ■    | ■    | ■    | ■    |
| M 48   | 2   | 190            | 32             | 36             | 29   | 4 | 46   | ■    | ■    | ■    | ■    | ■    |
| M 48   | 1,5 | 190            | 32             | 36             | 29   | 4 | 46,5 | ■    | ■    | ■    | ■    | ■    |
| M 50   | 3   | 225            | 50             | 36             | 29   | 4 | 47   | ■    | ■    | ■    | ■    | ■    |
| M 50   | 2   | 190            | 32             | 36             | 29   | 4 | 48   | ■    | ■    | ■    | ■    | ■    |
| M 50   | 1,5 | 190            | 32             | 36             | 29   | 4 | 48,5 | ■    | ■    | ■    | ■    | ■    |
| M 52   | 3   | 225            | 50             | 40             | 32   | 4 | 49   | ■    | ■    | ■    | ■    | ■    |
| M 52   | 2   | 190            | 32             | 40             | 32   | 4 | 50   | ■    | ■    | ■    | ■    | ■    |
| M 52   | 1,5 | 190            | 32             | 40             | 32   | 4 | 50,5 | ■    | ■    | ■    | ■    | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



**4050**

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



**4060**

11.1; 2.2; 2.3; 8.1; 8.2



**4090**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                |      |   |      | 4050 | 4060       | 4090      |
|--|------|----------------|----------------|----------------|------|---|------|------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                |      |   |      |      | <b>TiN</b> | <b>OX</b> |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |      |            |           |
| M 3  | 0,35 | 56             | 5              | 2,2            | -    | 3 | 2,65 |      |            |           |
| M 3,5  | 0,35 | 56             | 6              | 2,5            | 2,1  | 3 | 3,15 |      |            |           |
| M 4  | 0,5  | 63             | 7              | 2,8            | 2,1  | 3 | 3,5  | ■    | ■          | ■         |
| M 4  | 0,35 | 63             | 7              | 2,8            | 2,1  | 3 | 3,65 |      |            |           |
| M 4,5  | 0,5  | 70             | 8              | 3,5            | 2,7  | 3 | 4    |      |            |           |
| M 5  | 0,5  | 70             | 8              | 3,5            | 2,7  | 3 | 4,5  | ■    | ■          | ■         |
| M 5,5  | 0,5  | 80             | 7              | 4              | 3    | 3 | 5    |      |            |           |
| M 6  | 0,75 | 80             | 10             | 4,5            | 3,4  | 3 | 5,2  | ■    | ■          | ■         |
| M 6  | 0,5  | 80             | 10             | 4,5            | 3,4  | 3 | 5,5  | ■    | ■          | ■         |
| M 7  | 0,75 | 80             | 10             | 5,5            | 4,3  | 3 | 6,2  | ■    | ■          | ■         |
| M 8  | 1    | 90             | 13             | 6              | 4,9  | 3 | 7    | ■    | ■          | ■         |
| M 8  | 0,75 | 80             | 10             | 6              | 4,9  | 3 | 7,2  | ■    | ■          | ■         |
| M 8  | 0,5  | 80             | 10             | 6              | 4,9  | 3 | 7,5  |      |            |           |
| M 9  | 1    | 90             | 13             | 7              | 5,5  | 3 | 8    | ■    | ■          | ■         |
| M 9  | 0,75 | 80             | 10             | 7              | 5,5  | 3 | 8,2  |      |            |           |
| M 10   | 1,25 | 100            | 15             | 7              | 5,5  | 3 | 8,8  | ■    | ■          | ■         |
| M 10   | 1    | 90             | 12             | 7              | 5,5  | 3 | 9    | ■    | ■          | ■         |
| M 10   | 0,75 | 90             | 12             | 7              | 5,5  | 3 | 9,2  |      |            |           |
| M 11   | 1    | 90             | 12             | 8              | 6,2  | 3 | 10   | ■    | ■          | ■         |
| M 11   | 0,75 | 90             | 12             | 8              | 6,2  | 3 | 10,2 |      |            |           |
| M 12   | 1,5  | 100            | 14             | 9              | 7    | 3 | 10,5 | ■    | ■          | ■         |
| M 12   | 1,25 | 100            | 14             | 9              | 7    | 3 | 10,8 | ■    | ■          | ■         |
| M 12   | 1    | 100            | 14             | 9              | 7    | 3 | 11   | ■    | ■          | ■         |
| M 13   | 1    | 100            | 15             | 11             | 9    | 3 | 12   |      |            |           |
| M 14   | 1,5  | 100            | 16             | 11             | 9    | 3 | 12,5 | ■    | ■          | ■         |
| M 14   | 1,25 | 100            | 16             | 11             | 9    | 3 | 12,8 | ■    | ■          | ■         |
| M 14   | 1    | 100            | 16             | 11             | 9    | 3 | 13   | ■    | ■          | ■         |
| M 15   | 1,5  | 100            | 17             | 12             | 9    | 3 | 13,5 |      |            |           |
| M 15   | 1    | 100            | 16             | 12             | 9    | 3 | 14   | ■    | ■          | ■         |
| M 16   | 1,5  | 100            | 16             | 12             | 9    | 4 | 14,5 | ■    | ■          | ■         |
| M 16   | 1    | 100            | 16             | 12             | 9    | 4 | 15   | ■    | ■          | ■         |
| M 17   | 1,5  | 100            | 17             | 12             | 9    | 4 | 15,5 |      |            |           |
| M 17   | 1    | 100            | 16             | 12             | 9    | 4 | 16   |      |            |           |
| M 18   | 2    | 125            | 20             | 14             | 11   | 4 | 16   | ■    | ■          | ■         |
| M 18   | 1,5  | 110            | 20             | 14             | 11   | 4 | 16,5 | ■    | ■          | ■         |
| M 18   | 1    | 110            | 20             | 14             | 11   | 4 | 17   | ■    | ■          | ■         |
| M 20   | 2    | 140            | 20             | 16             | 12   | 4 | 18   | ■    | ■          | ■         |
| M 20   | 1,5  | 125            | 20             | 16             | 12   | 4 | 18,5 | ■    | ■          | ■         |
| M 20   | 1    | 125            | 20             | 16             | 12   | 4 | 19   | ■    | ■          | ■         |
| M 22   | 2    | 140            | 20             | 18             | 14,5 | 4 | 20   | ■    | ■          | ■         |
| M 22   | 1,5  | 125            | 20             | 18             | 14,5 | 4 | 20,5 | ■    | ■          | ■         |
| M 22   | 1    | 125            | 20             | 18             | 14,5 | 4 | 21   | ■    | ■          | ■         |
| M 24   | 2    | 140            | 22             | 18             | 14,5 | 4 | 22   | ■    | ■          | ■         |
| M 24   | 1,5  | 140            | 22             | 18             | 14,5 | 4 | 22,5 | ■    | ■          | ■         |
| M 24   | 1    | 140            | 22             | 18             | 14,5 | 4 | 23   | ■    | ■          | ■         |
| M 25   | 2    | 140            | 22             | 18             | 14,5 | 4 | 23   |      |            |           |
| M 25   | 1,5  | 140            | 22             | 18             | 14,5 | 4 | 23,5 | ■    | ■          | ■         |
| M 26   | 1,5  | 140            | 22             | 18             | 14,5 | 4 | 24,5 | ■    | ■          | ■         |
| M 27   | 2    | 140            | 22             | 20             | 16   | 4 | 25   | ■    | ■          | ■         |
| M 27   | 1,5  | 140            | 22             | 20             | 16   | 4 | 25,5 | ■    | ■          | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



**4050**

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



**4060**

11.1; 2.2; 2.3; 8.1; 8.2



**4090**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |     |                |                |                |    |   |      | 4050 | 4060       | 4090      |
|--|-----|----------------|----------------|----------------|----|---|------|------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |     |                |                |                |    |   |      |      | <b>TiN</b> | <b>OX</b> |
| d <sub>1</sub>   | P   | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a  | z |      |      |            |           |
| M 27   | 1   | 140            | 22             | 20             | 16 | 4 | 26   | ■    | ■          | ■         |
| M 28   | 2   | 140            | 22             | 20             | 16 | 4 | 26   | ■    | ■          | ■         |
| M 28   | 1,5 | 140            | 22             | 20             | 16 | 4 | 26,5 | ■    | ■          | ■         |
| M 30   | 2   | 150            | 26             | 22             | 18 | 4 | 28   | ■    | ■          | ■         |
| M 30   | 1,5 | 150            | 26             | 22             | 18 | 4 | 28,5 | ■    | ■          | ■         |
| M 30   | 1   | 150            | 26             | 22             | 18 | 4 | 29   | ■    | ■          | ■         |
| M 32   | 1,5 | 150            | 26             | 22             | 18 | 4 | 30,5 | ■    | ■          | ■         |
| M 33   | 2   | 160            | 28             | 25             | 20 | 4 | 31   | ■    | ■          | ■         |
| M 33   | 1,5 | 160            | 28             | 25             | 20 | 4 | 31,5 | ■    | ■          | ■         |
| M 34   | 1,5 | 170            | 28             | 28             | 22 | 4 | 32,5 | ■    | ■          | ■         |
| M 35   | 1,5 | 170            | 30             | 28             | 22 | 4 | 33,5 | ■    | ■          | ■         |
| M 36   | 3   | 200            | 36             | 28             | 22 | 4 | 33   | ■    | ■          | ■         |
| M 36   | 2   | 170            | 28             | 28             | 22 | 4 | 34   | ■    | ■          | ■         |
| M 36   | 1,5 | 170            | 28             | 28             | 22 | 4 | 34,5 | ■    | ■          | ■         |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2

3.1; 5.1; 5.2

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1

3.1; 5.1; 5.2



3660



3690



4260



4290

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                     |                |      |           |      | 3660       | 3690      | 4260       | 4290      |
|--|------|----------------|----------------|---------------------|----------------|------|-----------|------|------------|-----------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                     |                |      |           |      | <b>TiN</b> | <b>OX</b> | <b>TiN</b> | <b>OX</b> |
|  |      |                |                |                     |                |      |           |      |            |           |            |           |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R35</sub> * | d <sub>2</sub> | a    | z / ZR35* | Ø mm |            |           |            |           |
| M 3  | 0,35 | 56             | 8              | 5                   | 2,2            | -    | 3/3       | 2,65 |            |           |            |           |
| M 3,5  | 0,35 | 56             | 8              | 6                   | 2,5            | 2,1  | 3/3       | 3,15 |            |           |            |           |
| M 4  | 0,5  | 63             | 12             | 7                   | 2,8            | 2,1  | 3/3       | 3,5  |            |           |            |           |
| M 4  | 0,35 | 63             | 12             | 7                   | 2,8            | 2,1  | 3/3       | 3,65 |            |           |            |           |
| M 4,5  | 0,5  | 70             | 13             | 8                   | 3,5            | 2,7  | 3/3       | 4    |            |           |            |           |
| M 5  | 0,5  | 70             | 13             | 8                   | 3,5            | 2,7  | 3/3       | 4,5  |            |           |            |           |
| M 5,5  | 0,5  | 80             | 15             | 7                   | 4              | 3    | 3/3       | 5    |            |           |            |           |
| M 6  | 0,75 | 80             | 15             | 10                  | 4,5            | 3,4  | 3/3       | 5,2  | ■          | ■         | ■          | ■         |
| M 6  | 0,5  | 80             | 15             | 10                  | 4,5            | 3,4  | 3/3       | 5,5  |            |           |            |           |
| M 7  | 0,75 | 80             | 15             | 10                  | 5,5            | 4,3  | 3/3       | 6,2  |            |           |            |           |
| M 8  | 1    | 90             | 18             | 13                  | 6              | 4,9  | 3/3       | 7    | ■          | ■         | ■          | ■         |
| M 8  | 0,75 | 80             | 15             | 10                  | 6              | 4,9  | 3/3       | 7,2  | ■          | ■         | ■          | ■         |
| M 8  | 0,5  | 80             | 15             | 10                  | 6              | 4,9  | 3/3       | 7,5  |            |           |            |           |
| M 9  | 1    | 90             | 18             | 13                  | 7              | 5,5  | 3/3       | 8    |            |           |            |           |
| M 9  | 0,75 | 80             | 18             | 10                  | 7              | 5,5  | 3/3       | 8,2  |            |           |            |           |
| M 10   | 1,25 | 100            | 20             | 15                  | 7              | 5,5  | 3/3       | 8,8  |            |           |            |           |
| M 10   | 1    | 90             | 20             | 12                  | 7              | 5,5  | 3/3       | 9    | ■          | ■         | ■          | ■         |
| M 10   | 0,75 | 90             | 20             | 12                  | 7              | 5,5  | 3/3       | 9,2  |            |           |            |           |
| M 11   | 1    | 90             | 20             | 12                  | 8              | 6,2  | 3/3       | 10   |            |           |            |           |
| M 11   | 0,75 | 90             | 20             | 12                  | 8              | 6,2  | 3/3       | 10,2 |            |           |            |           |
| M 12   | 1,5  | 100            | 21             | 14                  | 9              | 7    | 3/3       | 10,5 | ■          | ■         | ■          | ■         |
| M 12   | 1,25 | 100            | 21             | 14                  | 9              | 7    | 3/3       | 10,8 |            |           |            |           |
| M 12   | 1    | 100            | 21             | 14                  | 9              | 7    | 3/3       | 11   | ■          | ■         | ■          | ■         |
| M 13   | 1    | 100            | 21             | 15                  | 11             | 9    | 3/3       | 12   |            |           |            |           |
| M 14   | 1,5  | 100            | 21             | 16                  | 11             | 9    | 3/3       | 12,5 | ■          | ■         | ■          | ■         |
| M 14   | 1,25 | 100            | 21             | 16                  | 11             | 9    | 3/3       | 12,8 |            |           |            |           |
| M 14   | 1    | 100            | 21             | 16                  | 11             | 9    | 3/3       | 13   |            |           |            |           |
| M 15   | 1,5  | 100            | 21             | 17                  | 12             | 9    | 3/3       | 13,5 |            |           |            |           |
| M 15   | 1    | 100            | 21             | 16                  | 12             | 9    | 3/3       | 14   |            |           |            |           |
| M 16   | 1,5  | 100            | 21             | 16                  | 12             | 9    | 3/4       | 14,5 | ■          | ■         | ■          | ■         |
| M 16   | 1    | 100            | 21             | 16                  | 12             | 9    | 3/4       | 15   |            |           |            |           |
| M 17   | 1,5  | 100            | 21             | 17                  | 12             | 9    | 3/4       | 15,5 |            |           |            |           |
| M 17   | 1    | 100            | 21             | 16                  | 12             | 9    | 3/4       | 16   |            |           |            |           |
| M 18   | 2    | 125            | 24             | 20                  | 14             | 11   | 3/4       | 16   |            |           |            |           |
| M 18   | 1,5  | 110            | 24             | 20                  | 14             | 11   | 3/4       | 16,5 | ■          | ■         | ■          | ■         |
| M 18   | 1    | 110            | 24             | 20                  | 14             | 11   | 3/4       | 17   |            |           |            |           |
| M 20   | 2    | 140            | 30             | 20                  | 16             | 12   | 3/4       | 18   |            |           |            |           |
| M 20   | 1,5  | 125            | 24             | 20                  | 16             | 12   | 3/4       | 18,5 | ■          | ■         | ■          | ■         |
| M 20   | 1    | 125            | 24             | 20                  | 16             | 12   | 3/4       | 19   |            |           |            |           |
| M 22   | 2    | 140            | 30             | 20                  | 18             | 14,5 | 3/4       | 20   |            |           |            |           |
| M 22   | 1,5  | 125            | 24             | 20                  | 18             | 14,5 | 3/4       | 20,5 |            |           |            |           |
| M 22   | 1    | 125            | 24             | 20                  | 18             | 14,5 | 3/4       | 21   |            |           |            |           |
| M 24   | 2    | 140            | 26             | 22                  | 18             | 14,5 | 4/4       | 22   |            |           |            |           |
| M 24   | 1,5  | 140            | 26             | 22                  | 18             | 14,5 | 4/4       | 22,5 |            |           |            |           |
| M 24   | 1    | 140            | 26             | 22                  | 18             | 14,5 | 4/4       | 23   |            |           |            |           |
| M 25   | 2    | 140            | 26             | 22                  | 18             | 14,5 | 4/4       | 23   |            |           |            |           |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možné použít / Possible use / Geeignet





Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2



**3660**

3.1; 5.1; 5.2



**3690**

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1



**4260**

3.1; 5.1; 5.2



**4290**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |     |                |                |                   |                |      |                      |      | 3660       | 3690      | 4260       | 4290      |
|--|-----|----------------|----------------|-------------------|----------------|------|----------------------|------|------------|-----------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |     |                |                |                   |                |      |                      |      | <b>TiN</b> | <b>OX</b> | <b>TiN</b> | <b>OX</b> |
|  |     |                |                |                   |                |      |                      |      |            |           |            |           |
| d <sub>1</sub>   | P   | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R35</sub> | d <sub>2</sub> | a    | z / Z <sub>R35</sub> | Ø mm |            |           |            |           |
| M 25   | 1,5 | 140            | 26             | 22                | 18             | 14,5 | 4/4                  | 23,5 |            |           |            |           |
| M 26   | 1,5 | 140            | 26             | 22                | 18             | 14,5 | 4/4                  | 24,5 |            |           |            |           |
| M 27   | 2   | 140            | 26             | 22                | 20             | 16   | 4/4                  | 25   |            |           |            |           |
| M 27   | 1,5 | 140            | 26             | 22                | 20             | 16   | 4/4                  | 25,5 |            |           |            |           |
| M 27   | 1   | 140            | 26             | 22                | 20             | 16   | 4/4                  | 26   |            |           |            |           |
| M 28   | 2   | 140            | 26             | 22                | 20             | 16   | 4/4                  | 26   |            |           |            |           |
| M 28   | 1,5 | 140            | 26             | 22                | 20             | 16   | 4/4                  | 26,5 |            |           |            |           |
| M 30   | 2   | 150            | 28             | 26                | 22             | 18   | 4/4                  | 28   |            |           |            |           |
| M 30   | 1,5 | 150            | 28             | 26                | 22             | 18   | 4/4                  | 28,5 |            |           |            |           |
| M 30   | 1   | 150            | 28             | 26                | 22             | 18   | 4/4                  | 29   |            |           |            |           |
| M 32   | 1,5 | 150            | 28             | 26                | 22             | 18   | 4/4                  | 30,5 |            |           |            |           |
| M 33   | 2   | 160            | 30             | 28                | 25             | 20   | 4/4                  | 31   |            |           |            |           |
| M 33   | 1,5 | 160            | 30             | 28                | 25             | 20   | 4/4                  | 31,5 |            |           |            |           |
| M 34   | 1,5 | 170            | 30             | 28                | 28             | 22   | 4/4                  | 32,5 |            |           |            |           |
| M 35   | 1,5 | 170            | 30             | 30                | 28             | 22   | 4/4                  | 33,5 |            |           |            |           |
| M 36   | 3   | 200            | 42             | 36                | 28             | 22   | 4/4                  | 33   |            |           |            |           |
| M 36   | 2   | 170            | 30             | 28                | 28             | 22   | 4/4                  | 34   |            |           |            |           |
| M 36   | 1,5 | 170            | 30             | 28                | 28             | 22   | 4/4                  | 34,5 |            |           |            |           |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 8.1; 6.2



**3580**

3.2; 8.2



**3590**

3.2; 8.2; 3.1; 3.3; 6.2



**4680**

3.2



**4690**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                    |                |      |           |      | 3580        | 3590      | 4680        | 4690      |
|--|------|----------------|----------------|--------------------|----------------|------|-----------|------|-------------|-----------|-------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                    |                |      |           |      | <b>TiCN</b> | <b>OX</b> | <b>TiCN</b> | <b>OX</b> |
|  |      |                |                |                    |                |      |           |      |             |           |             |           |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R40°</sub> | d <sub>2</sub> | a    | z / ZR40° | Ø mm |             |           |             |           |
| M 3  | 0,35 | 56             | 8              | 5                  | 2,2            | -    | 3/3       | 2,65 |             |           |             |           |
| M 3,5  | 0,35 | 56             | 8              | 6                  | 2,5            | 2,1  | 3/3       | 3,15 |             |           |             |           |
| M 4  | 0,5  | 63             | 12             | 7                  | 2,8            | 2,1  | 3/3       | 3,5  |             |           |             |           |
| M 4  | 0,35 | 63             | 12             | 7                  | 2,8            | 2,1  | 3/3       | 3,65 |             |           |             |           |
| M 4,5  | 0,5  | 70             | 13             | 8                  | 3,5            | 2,7  | 3/3       | 4    |             |           |             |           |
| M 5  | 0,5  | 70             | 13             | 8                  | 3,5            | 2,7  | 3/3       | 4,5  |             |           |             |           |
| M 5,5  | 0,5  | 80             | 15             | 7                  | 4              | 3    | 3/3       | 5    |             |           |             |           |
| M 6  | 0,75 | 80             | 15             | 10                 | 4,5            | 3,4  | 3/3       | 5,2  | ■           | ■         | ■           | ■         |
| M 6  | 0,5  | 80             | 15             | 10                 | 4,5            | 3,4  | 3/3       | 5,5  |             |           |             |           |
| M 7  | 0,75 | 80             | 15             | 10                 | 5,5            | 4,3  | 3/3       | 6,2  |             |           |             |           |
| M 8  | 1    | 90             | 18             | 13                 | 6              | 4,9  | 3/3       | 7    | ■           | ■         | ■           | ■         |
| M 8  | 0,75 | 80             | 15             | 10                 | 6              | 4,9  | 3/3       | 7,2  | ■           | ■         | ■           | ■         |
| M 8  | 0,5  | 80             | 15             | 10                 | 6              | 4,9  | 3/3       | 7,5  |             |           |             |           |
| M 9  | 1    | 90             | 18             | 13                 | 7              | 5,5  | 3/3       | 8    |             |           |             |           |
| M 9  | 0,75 | 80             | 18             | 10                 | 7              | 5,5  | 3/3       | 8,2  |             |           |             |           |
| M 10   | 1,25 | 100            | 20             | 15                 | 7              | 5,5  | 3/4       | 8,8  |             |           |             |           |
| M 10   | 1    | 90             | 20             | 12                 | 7              | 5,5  | 3/4       | 9    | ■           | ■         | ■           | ■         |
| M 10   | 0,75 | 90             | 20             | 12                 | 7              | 5,5  | 3/4       | 9,2  |             |           |             |           |
| M 11   | 1    | 90             | 20             | 12                 | 8              | 6,2  | 3/4       | 10   |             |           |             |           |
| M 11   | 0,75 | 90             | 20             | 12                 | 8              | 6,2  | 3/4       | 10,2 |             |           |             |           |
| M 12   | 1,5  | 100            | 21             | 14                 | 9              | 7    | 3/4       | 10,5 | ■           | ■         | ■           | ■         |
| M 12   | 1,25 | 100            | 21             | 14                 | 9              | 7    | 3/4       | 10,8 |             |           |             |           |
| M 12   | 1    | 100            | 21             | 14                 | 9              | 7    | 3/4       | 11   | ■           | ■         | ■           | ■         |
| M 13   | 1    | 100            | 21             | 15                 | 11             | 9    | 3/4       | 12   |             |           |             |           |
| M 14   | 1,5  | 100            | 21             | 16                 | 11             | 9    | 3/4       | 12,5 | ■           | ■         | ■           | ■         |
| M 14   | 1,25 | 100            | 21             | 16                 | 11             | 9    | 3/4       | 12,8 |             |           |             |           |
| M 14   | 1    | 100            | 21             | 16                 | 11             | 9    | 3/4       | 13   |             |           |             |           |
| M 15   | 1,5  | 100            | 21             | 17                 | 12             | 9    | 3/4       | 13,5 |             |           |             |           |
| M 15   | 1    | 100            | 21             | 16                 | 12             | 9    | 3/4       | 14   |             |           |             |           |
| M 16   | 1,5  | 100            | 21             | 16                 | 12             | 9    | 3/5       | 14,5 | ■           | ■         | ■           | ■         |
| M 16   | 1    | 100            | 21             | 16                 | 12             | 9    | 3/5       | 15   |             |           |             |           |
| M 17   | 1,5  | 100            | 21             | 17                 | 12             | 9    | 3/5       | 15,5 |             |           |             |           |
| M 17   | 1    | 100            | 21             | 16                 | 12             | 9    | 3/5       | 16   |             |           |             |           |
| M 18   | 2    | 125            | 24             | 20                 | 14             | 11   | 3/5       | 16   |             |           |             |           |
| M 18   | 1,5  | 110            | 24             | 20                 | 14             | 11   | 3/5       | 16,5 | ■           | ■         | ■           | ■         |
| M 18   | 1    | 110            | 24             | 20                 | 14             | 11   | 3/5       | 17   |             |           |             |           |
| M 20   | 2    | 140            | 30             | 20                 | 16             | 12   | 3/5       | 18   |             |           |             |           |
| M 20   | 1,5  | 125            | 24             | 20                 | 16             | 12   | 3/5       | 18,5 | ■           | ■         | ■           | ■         |
| M 20   | 1    | 125            | 24             | 20                 | 16             | 12   | 3/5       | 19   |             |           |             |           |
| M 22   | 2    | 140            | 30             | 20                 | 18             | 14,5 | 3/5       | 20   |             |           |             |           |
| M 22   | 1,5  | 125            | 24             | 20                 | 18             | 14,5 | 3/5       | 20,5 |             |           |             |           |
| M 22   | 1    | 125            | 24             | 20                 | 18             | 14,5 | 3/5       | 21   |             |           |             |           |
| M 24   | 2    | 140            | 26             | 22                 | 18             | 14,5 | 4/5       | 22   |             |           |             |           |
| M 24   | 1,5  | 140            | 26             | 22                 | 18             | 14,5 | 4/5       | 22,5 |             |           |             |           |
| M 24   | 1    | 140            | 26             | 22                 | 18             | 14,5 | 4/5       | 23   |             |           |             |           |
| M 25   | 2    | 140            | 26             | 22                 | 18             | 14,5 | 4/5       | 23   |             |           |             |           |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možné použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 8.1; 6.2



**3580**

3.2; 8.2



**3590**

3.2; 8.2; 3.1; 3.3; 6.2



**4680**

3.2



**4690**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |     |                |                |                     |                |      |           |      | 3580        | 3590      | 4680        | 4690      |
|--|-----|----------------|----------------|---------------------|----------------|------|-----------|------|-------------|-----------|-------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |     |                |                |                     |                |      |           |      | <b>TiCN</b> | <b>OX</b> | <b>TiCN</b> | <b>OX</b> |
|  |     |                |                |                     |                |      |           |      |             |           |             |           |
| d <sub>1</sub>   | P   | l <sub>1</sub> | l <sub>2</sub> | l <sub>3</sub> R40° | d <sub>2</sub> | a    | z / ZR40° | Ø mm |             |           |             |           |
| M 25   | 1,5 | 140            | 26             | 22                  | 18             | 14,5 | 4/5       | 23,5 |             |           |             |           |
| M 26   | 1,5 | 140            | 26             | 22                  | 18             | 14,5 | 4/5       | 24,5 |             |           |             |           |
| M 27   | 2   | 140            | 26             | 22                  | 20             | 16   | 4/5       | 25   |             |           |             |           |
| M 27   | 1,5 | 140            | 26             | 22                  | 20             | 16   | 4/5       | 25,5 |             |           |             |           |
| M 27   | 1   | 140            | 26             | 22                  | 20             | 16   | 4/5       | 26   |             |           |             |           |
| M 28   | 2   | 140            | 26             | 22                  | 20             | 16   | 4/5       | 26   |             |           |             |           |
| M 28   | 1,5 | 140            | 26             | 22                  | 20             | 16   | 4/5       | 26,5 |             |           |             |           |
| M 30   | 2   | 150            | 28             | 26                  | 22             | 18   | 4/5       | 28   |             |           |             |           |
| M 30   | 1,5 | 150            | 28             | 26                  | 22             | 18   | 4/5       | 28,5 |             |           |             |           |
| M 30   | 1   | 150            | 28             | 26                  | 22             | 18   | 4/5       | 29   |             |           |             |           |
| M 32   | 1,5 | 150            | 28             | 26                  | 22             | 18   | 4/5       | 30,5 |             |           |             |           |
| M 33   | 2   | 160            | 30             | 28                  | 25             | 20   | 4/5       | 31   |             |           |             |           |
| M 33   | 1,5 | 160            | 30             | 28                  | 25             | 20   | 4/5       | 31,5 |             |           |             |           |
| M 34   | 1,5 | 170            | 30             | 28                  | 28             | 22   | 4/5       | 32,5 |             |           |             |           |
| M 35   | 1,5 | 170            | 30             | 30                  | 28             | 22   | 4/5       | 33,5 |             |           |             |           |
| M 36   | 3   | 200            | 42             | 36                  | 28             | 22   | 4/5       | 33   |             |           |             |           |
| M 36   | 2   | 170            | 30             | 28                  | 28             | 22   | 4/5       | 34   |             |           |             |           |
| M 36   | 1,5 | 170            | 30             | 28                  | 28             | 22   | 4/5       | 34,5 |             |           |             |           |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. |      |                |                |                |      |   |      | 3080     | 3080 IKZ        | 3130     | 3130 IKZ        |
|--|------|----------------|----------------|----------------|------|---|------|----------|-----------------|----------|-----------------|
|  |      |                |                |                |      |   |      | TiCN     | TiCN            | TiCN     | TiCN            |
|  |      |                |                |                |      |   |      | C<br>2-3 | C<br>2-3<br>IKZ | E<br>1,5 | E<br>1,5<br>IKZ |
| d <sub>1</sub>                         | P    | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |          |                 |          |                 |
| M 3                                    | 0,35 | 56             | 8              | 2,2            | -    | 3 | 2,65 |          |                 |          |                 |
| M 3,5                                  | 0,35 | 56             | 8              | 2,5            | 2,1  | 3 | 3,15 |          |                 |          |                 |
| M 4                                    | 0,5  | 63             | 12             | 2,8            | 2,1  | 3 | 3,5  |          |                 |          |                 |
| M 4                                    | 0,35 | 63             | 12             | 2,8            | 2,1  | 3 | 3,65 |          |                 |          |                 |
| M 4,5                                  | 0,5  | 70             | 13             | 3,5            | 2,7  | 3 | 4    |          |                 |          |                 |
| M 5                                    | 0,5  | 70             | 13             | 3,5            | 2,7  | 3 | 4,5  |          |                 |          |                 |
| M 5,5                                  | 0,5  | 80             | 15             | 4              | 3    | 3 | 5    |          |                 |          |                 |
| M 6                                    | 0,75 | 80             | 15             | 4,5            | 3,4  | 3 | 5,2  | ■        | ■               | ■        | ■               |
| M 6                                    | 0,5  | 80             | 15             | 4,5            | 3,4  | 3 | 5,5  |          |                 |          |                 |
| M 7                                    | 0,75 | 80             | 15             | 5,5            | 4,3  | 3 | 6,2  |          |                 |          |                 |
| M 8                                    | 1    | 90             | 18             | 6              | 4,9  | 4 | 7    | ■        | ■               | ■        | ■               |
| M 8                                    | 0,75 | 80             | 15             | 6              | 4,9  | 4 | 7,2  |          |                 |          |                 |
| M 8                                    | 0,5  | 80             | 15             | 6              | 4,9  | 4 | 7,5  |          |                 |          |                 |
| M 9                                    | 1    | 90             | 18             | 7              | 5,5  | 4 | 8    |          |                 |          |                 |
| M 9                                    | 0,75 | 80             | 18             | 7              | 5,5  | 4 | 8,2  |          |                 |          |                 |
| M 10                                   | 1,25 | 100            | 20             | 7              | 5,5  | 4 | 8,8  | ■        | ■               | ■        | ■               |
| M 10                                   | 1    | 90             | 20             | 7              | 5,5  | 4 | 9    | ■        | ■               | ■        | ■               |
| M 10                                   | 0,75 | 90             | 20             | 7              | 5,5  | 4 | 9,2  |          |                 |          |                 |
| M 11                                   | 1    | 90             | 20             | 8              | 6,2  | 4 | 10   |          |                 |          |                 |
| M 11                                   | 0,75 | 90             | 20             | 8              | 6,2  | 4 | 10,2 |          |                 |          |                 |
| M 12                                   | 1,5  | 100            | 21             | 9              | 7    | 4 | 10,5 | ■        | ■               | ■        | ■               |
| M 12                                   | 1,25 | 100            | 21             | 9              | 7    | 4 | 10,8 | ■        | ■               | ■        | ■               |
| M 12                                   | 1    | 100            | 21             | 9              | 7    | 4 | 11   | ■        | ■               | ■        | ■               |
| M 13                                   | 1    | 100            | 21             | 11             | 9    | 4 | 12   |          |                 |          |                 |
| M 14                                   | 1,5  | 100            | 21             | 11             | 9    | 4 | 12,5 | ■        | ■               | ■        | ■               |
| M 14                                   | 1,25 | 100            | 21             | 11             | 9    | 4 | 12,8 |          |                 |          |                 |
| M 14                                   | 1    | 100            | 21             | 11             | 9    | 4 | 13   |          |                 |          |                 |
| M 15                                   | 1,5  | 100            | 21             | 12             | 9    | 4 | 13,5 |          |                 |          |                 |
| M 15                                   | 1    | 100            | 21             | 12             | 9    | 4 | 14   |          |                 |          |                 |
| M 16                                   | 1,5  | 100            | 21             | 12             | 9    | 4 | 14,5 | ■        |                 | ■        |                 |
| M 16                                   | 1    | 100            | 21             | 12             | 9    | 4 | 15   |          |                 |          |                 |
| M 17                                   | 1,5  | 100            | 21             | 12             | 9    | 4 | 15,5 |          |                 |          |                 |
| M 17                                   | 1    | 100            | 21             | 12             | 9    | 4 | 16   |          |                 |          |                 |
| M 18                                   | 2    | 125            | 24             | 14             | 11   | 4 | 16   |          |                 |          |                 |
| M 18                                   | 1,5  | 110            | 24             | 14             | 11   | 4 | 16,5 | ■        |                 | ■        |                 |
| M 18                                   | 1    | 110            | 24             | 14             | 11   | 4 | 17   |          |                 |          |                 |
| M 20                                   | 2    | 140            | 30             | 16             | 12   | 4 | 18   |          |                 |          |                 |
| M 20                                   | 1,5  | 125            | 24             | 16             | 12   | 4 | 18,5 |          |                 |          |                 |
| M 20                                   | 1    | 125            | 24             | 16             | 12   | 4 | 19   |          |                 |          |                 |
| M 22                                   | 2    | 140            | 30             | 18             | 14,5 | 4 | 20   |          |                 |          |                 |
| M 22                                   | 1,5  | 125            | 24             | 18             | 14,5 | 4 | 20,5 |          |                 |          |                 |
| M 22                                   | 1    | 125            | 24             | 18             | 14,5 | 4 | 21   |          |                 |          |                 |
| M 24                                   | 2    | 140            | 26             | 18             | 14,5 | 4 | 22   |          |                 |          |                 |
| M 24                                   | 1,5  | 140            | 26             | 18             | 14,5 | 4 | 22,5 |          |                 |          |                 |
| M 24                                   | 1    | 140            | 26             | 18             | 14,5 | 4 | 23   |          |                 |          |                 |
| M 25                                   | 2    | 140            | 26             | 18             | 14,5 | 4 | 23   |          |                 |          |                 |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. |     |                |                |                |      |   |      | 3080 | 3080 IKZ | 3130 | 3130 IKZ |
|--|-----|----------------|----------------|----------------|------|---|------|------|----------|------|----------|
|  |     |                |                |                |      |   |      | TiCN | TiCN     | TiCN | TiCN     |
|  |     |                |                |                |      |   |      |      | IKZ      |      | IKZ      |
| d <sub>1</sub>                         | P   | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm |      |          |      |          |
| M 25                                   | 1,5 | 140            | 26             | 18             | 14,5 | 4 | 23,5 |      |          |      |          |
| M 26                                   | 1,5 | 140            | 26             | 18             | 14,5 | 4 | 24,5 |      |          |      |          |
| M 27                                   | 2   | 140            | 26             | 20             | 16   | 4 | 25   |      |          |      |          |
| M 27                                   | 1,5 | 140            | 26             | 20             | 16   | 4 | 25,5 |      |          |      |          |
| M 27                                   | 1   | 140            | 26             | 20             | 16   | 4 | 26   |      |          |      |          |
| M 28                                   | 2   | 140            | 26             | 20             | 16   | 4 | 26   |      |          |      |          |
| M 28                                   | 1,5 | 140            | 26             | 20             | 16   | 4 | 26,5 |      |          |      |          |
| M 30                                   | 2   | 150            | 28             | 22             | 18   | 4 | 28   |      |          |      |          |
| M 30                                   | 1,5 | 150            | 28             | 22             | 18   | 4 | 28,5 |      |          |      |          |
| M 30                                   | 1   | 150            | 28             | 22             | 18   | 4 | 29   |      |          |      |          |
| M 32                                   | 1,5 | 150            | 28             | 22             | 18   | 5 | 30,5 |      |          |      |          |
| M 33                                   | 2   | 160            | 30             | 25             | 20   | 5 | 31   |      |          |      |          |
| M 33                                   | 1,5 | 160            | 30             | 25             | 20   | 5 | 31,5 |      |          |      |          |
| M 34                                   | 1,5 | 170            | 30             | 28             | 22   | 5 | 32,5 |      |          |      |          |
| M 35                                   | 1,5 | 170            | 30             | 28             | 22   | 5 | 33,5 |      |          |      |          |
| M 36                                   | 3   | 200            | 42             | 28             | 22   | 5 | 33   |      |          |      |          |
| M 36                                   | 2   | 170            | 30             | 28             | 22   | 5 | 34   |      |          |      |          |
| M 36                                   | 1,5 | 170            | 30             | 28             | 22   | 5 | 34,5 |      |          |      |          |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



**3002**



**3012**



**3502**



**3512**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |      |                    |       | 3002       | 3012 | 3502       | 3512 |
|--|----|----------------|----------------|----------------|------|--------------------|-------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |      |                    |       | <b>TiN</b> |      | <b>TiN</b> |      |
|  |    |                |                |                |      |                    |       |            |      |            |      |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z / z <sub>B</sub> | Ø mm  |            |      |            |      |
| G 1/16"  | 28 | 90             | 18             | 6              | 4,9  | 3/3                | 6,8   |            |      |            |      |
| G 1/8"   | 28 | 90             | 20             | 7              | 5,5  | 3/3                | 8,8   |            |      |            |      |
| G 1/4"   | 19 | 100            | 21             | 11             | 9    | 3/3                | 11,8  |            |      |            |      |
| G 3/8"   | 19 | 100            | 21             | 12             | 9    | 3/3                | 15,25 |            |      |            |      |
| G 1/2"   | 14 | 125            | 24             | 16             | 12   | 3/3                | 19    |            |      |            |      |
| G 5/8"   | 14 | 125            | 24             | 18             | 14,5 | 4/4                | 21    |            |      |            |      |
| G 3/4"   | 14 | 140            | 26             | 20             | 16   | 4/4                | 24,5  |            |      |            |      |
| G 7/8"   | 14 | 150            | 28             | 22             | 18   | 4/4                | 28,25 |            |      |            |      |
| G 1"   | 11 | 160            | 30             | 25             | 20   | 4/4                | 30,75 |            |      |            |      |
| G 1 1/8"   | 11 | 170            | 30             | 28             | 22   | 4/4                | 35,5  |            |      |            |      |
| G 1 1/4"   | 11 | 170            | 30             | 32             | 24   | 4/4                | 39,5  |            |      |            |      |
| G 1 3/8"   | 11 | 180            | 32             | 36             | 29   | 6/4                | 41,8  |            |      |            |      |
| G 1 1/2"   | 11 | 190            | 32             | 36             | 29   | 6/6                | 45,25 |            |      |            |      |
| G 1 3/4"   | 11 | 190            | 32             | 40             | 32   | 6/6                | 51,3  |            |      |            |      |
| G 2"   | 11 | 220            | 40             | 45             | 35   | 6/6                | 57,2  |            |      |            |      |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



**4052**

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



**4062**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |      |   |       | 4052 | 4062       |
|--|----|----------------|----------------|----------------|------|---|-------|------|------------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |      |   |       |      | <b>TiN</b> |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z |       |      |            |
| G 1/16"  | 28 | 90             | 13             | 6              | 4,9  | 3 | 6,8   |      |            |
| G 1/8"   | 28 | 90             | 12             | 7              | 5,5  | 3 | 8,8   | ■    | ■          |
| G 1/4"   | 19 | 100            | 16             | 11             | 9    | 3 | 11,8  | ■    | ■          |
| G 3/8"   | 19 | 100            | 16             | 12             | 9    | 3 | 15,25 | ■    | ■          |
| G 1/2"   | 14 | 125            | 20             | 16             | 12   | 4 | 19    | ■    | ■          |
| G 5/8"   | 14 | 125            | 20             | 18             | 14,5 | 4 | 21    | ■    | ■          |
| G 3/4"   | 14 | 140            | 22             | 20             | 16   | 4 | 24,5  | ■    | ■          |
| G 7/8"   | 14 | 150            | 26             | 22             | 18   | 4 | 28,25 | ■    | ■          |
| G 1"   | 11 | 160            | 30             | 25             | 20   | 4 | 30,75 | ■    | ■          |
| G 1 1/8"   | 11 | 170            | 30             | 28             | 22   | 5 | 35,5  | ■    | ■          |
| G 1 1/4"   | 11 | 170            | 30             | 32             | 24   | 5 | 39,5  | ■    | ■          |
| G 1 3/8"   | 11 | 180            | 32             | 36             | 29   | 5 | 41,8  | ■    | ■          |
| G 1 1/2"   | 11 | 190            | 32             | 36             | 29   | 5 | 45,25 | ■    | ■          |
| G 1 3/4"   | 11 | 190            | 32             | 40             | 32   | 5 | 51,3  |      |            |
| G 2"   | 11 | 220            | 40             | 45             | 35   | 5 | 57,2  |      |            |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2



**3662**

3.1; 5.1; 5.2



**3692**

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1



**4262**

3.1; 5.1; 5.2



**4292**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                   |                |      |                      |       | 3662       | 3692      | 4262       | 4292      |
|--|----|----------------|----------------|-------------------|----------------|------|----------------------|-------|------------|-----------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                   |                |      |                      |       | <b>TiN</b> | <b>OX</b> | <b>TiN</b> | <b>OX</b> |
|  |    |                |                |                   |                |      |                      |       |            |           |            |           |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | l <sub>2R35</sub> | d <sub>2</sub> | a    | z / Z <sub>R35</sub> | Ø mm  |            |           |            |           |
| G 1/16"  | 28 | 90             | 18             | 13                | 6              | 4,9  | 3/3                  | 6,8   |            |           |            |           |
| G 1/8"   | 28 | 90             | 20             | 12                | 7              | 5,5  | 3/3                  | 8,8   |            |           |            |           |
| G 1/4"   | 19 | 100            | 21             | 16                | 11             | 9    | 3/3                  | 11,8  |            |           |            |           |
| G 3/8"   | 19 | 100            | 21             | 16                | 12             | 9    | 3/3                  | 15,25 |            |           |            |           |
| G 1/2"   | 14 | 125            | 24             | 20                | 16             | 12   | 3/4                  | 19    |            |           |            |           |
| G 5/8"   | 14 | 125            | 24             | 20                | 18             | 14,5 | 4/4                  | 21    |            |           |            |           |
| G 3/4"   | 14 | 140            | 26             | 22                | 20             | 16   | 4/4                  | 24,5  |            |           |            |           |
| G 7/8"   | 14 | 150            | 28             | 26                | 22             | 18   | 4/4                  | 28,25 |            |           |            |           |
| G 1"   | 11 | 160            | 30             | 30                | 25             | 20   | 4/4                  | 30,75 |            |           |            |           |
| G 1 1/8"   | 11 | 170            | 30             | 30                | 28             | 22   | 4/5                  | 35,5  |            |           |            |           |
| G 1 1/4"   | 11 | 170            | 30             | 30                | 32             | 24   | 4/5                  | 39,5  |            |           |            |           |
| G 1 3/8"   | 11 | 180            | 32             | 32                | 36             | 29   | 4/5                  | 41,8  |            |           |            |           |
| G 1 1/2"   | 11 | 190            | 32             | 32                | 36             | 29   | 6/5                  | 45,25 |            |           |            |           |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2



**1004**

8.2; 10.1; 1.1; 2.1; 6.1



**1014**

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1



**1504**

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



**1514**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |     |   |      | 1004       | 1014 | 1504       | 1514 |
|--|----|----------------|----------------|----------------|-----|---|------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |     |   |      | <b>TiN</b> |      | <b>TiN</b> |      |
|  |    |                |                |                |     |   |      |            |      |            |      |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |            |      |            |      |
| <b>No. 5</b>   | 40 | 56             | 9              | 3,5            | 2,7 | 3 | 2,6  | ■          | ■    | ■          | ■    |
| <b>No. 6</b>   | 32 | 56             | 11             | 4              | 3   | 3 | 2,85 | ■          | ■    | ■          | ■    |
| <b>No. 8</b>   | 32 | 63             | 12             | 4,5            | 3,4 | 3 | 3,5  | ■          | ■    | ■          | ■    |
| <b>No. 10</b>  | 24 | 70             | 13             | 6              | 4,9 | 3 | 3,9  | ■          | ■    | ■          | ■    |
| <b>No. 12</b>  | 24 | 80             | 15             | 6              | 4,9 | 3 | 4,5  | ■          | ■    | ■          | ■    |
| 1/4  | 20 | 80             | 15             | 7              | 5,2 | 3 | 5,2  | ■          | ■    | ■          | ■    |
| 5/16   | 18 | 90             | 18             | 8              | 6,2 | 3 | 6,6  | ■          | ■    | ■          | ■    |
| 3/8  | 16 | 90             | 20             | 9              | 7   | 3 | 8    | ■          | ■    | ■          | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



**3004**



**3014**



**3504**



**3514**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |      |   |       | 3004       | 3014 | 3504       | 3514 |
|--|----|----------------|----------------|----------------|------|---|-------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |      |   |       | <b>TiN</b> |      | <b>TiN</b> |      |
|  |    |                |                |                |      |   |       |            |      |            |      |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm  |            |      |            |      |
| 7/16   | 14 | 100            | 20             | 8              | 6,2  | 3 | 9,4   | ■          | ■    | ■          | ■    |
| 1/2  | 13 | 110            | 23             | 9              | 7    | 3 | 10,75 | ■          | ■    | ■          | ■    |
| 9/16   | 12 | 110            | 25             | 11             | 9    | 3 | 12,25 | ■          | ■    | ■          | ■    |
| 5/8  | 11 | 110            | 25             | 12             | 9    | 3 | 13,5  | ■          | ■    | ■          | ■    |
| 3/4  | 10 | 125            | 30             | 14             | 11   | 3 | 16,5  | ■          | ■    | ■          | ■    |
| 7/8  | 9  | 140            | 30             | 18             | 14,5 | 3 | 19,5  | ■          | ■    | ■          | ■    |
| 1  | 8  | 160            | 36             | 18             | 14,5 | 3 | 22,25 | ■          | ■    | ■          | ■    |
| 1 1/8  | 7  | 180            | 40             | 22             | 18   | 4 | 25    | ■          | ■    | ■          | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



2054

2.2; 2.3; 8.1; 6.2; 10.2



4054

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



2064

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4064

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |     |   |      | 2054 | 2064       |
|--|----|----------------|----------------|----------------|-----|---|------|------|------------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |     |   |      |      | <b>TiN</b> |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a   | z | Ø mm |      |            |
| No. 5  | 40 | 56             | 5              | 3,5            | 2,7 | 3 | 2,6  | ■    | ■          |
| No. 6  | 32 | 56             | 7              | 4              | 3   | 3 | 2,85 | ■    | ■          |
| No. 8  | 32 | 63             | 7              | 4,5            | 3,4 | 3 | 3,5  | ■    | ■          |
| No. 10   | 24 | 70             | 8              | 6              | 4,9 | 3 | 3,9  | ■    | ■          |
| No. 12   | 24 | 80             | 10             | 6              | 4,9 | 3 | 4,5  | ■    | ■          |
| 1/4  | 20 | 80             | 10             | 7              | 5,2 | 3 | 5,2  | ■    | ■          |
| 5/16   | 18 | 90             | 13             | 8              | 6,2 | 3 | 6,6  | ■    | ■          |
| 3/8  | 16 | 90             | 15             | 9              | 7   | 3 | 8    | ■    | ■          |

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |      |   |       | 4054 | 4064       |
|--|----|----------------|----------------|----------------|------|---|-------|------|------------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |      |   |       |      | <b>TiN</b> |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm  |      |            |
| 7/16   | 14 | 100            | 18             | 8              | 6,2  | 3 | 9,4   | ■    | ■          |
| 1/2  | 13 | 110            | 20             | 9              | 7    | 3 | 10,75 | ■    | ■          |
| 9/16   | 12 | 110            | 20             | 11             | 9    | 3 | 12,25 | ■    | ■          |
| 5/8  | 11 | 110            | 20             | 12             | 9    | 3 | 13,5  | ■    | ■          |
| 3/4  | 10 | 125            | 25             | 14             | 11   | 4 | 16,5  | ■    | ■          |
| 7/8  | 9  | 140            | 25             | 18             | 14,5 | 4 | 19,5  | ■    | ■          |
| 1  | 8  | 160            | 30             | 18             | 14,5 | 4 | 22,25 | ■    | ■          |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ ZÁVITNÍKY

## Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



**3005**



**3015**



**3505**



**3515**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |      |   |       | 3005       | 3015 | 3505       | 3515 |
|--|----|----------------|----------------|----------------|------|---|-------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |      |   |       | <b>TiN</b> |      | <b>TiN</b> |      |
|  |    |                |                |                |      |   |       | <b>B</b>   |      |            |      |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm  |            |      |            |      |
| No. 5  | 44 | 56             | 9              | 2,2            | -    | 3 | 2,7   | ■          | ■    | ■          | ■    |
| No. 6  | 40 | 56             | 11             | 2,5            | 2,1  | 3 | 3     | ■          | ■    | ■          | ■    |
| No. 8  | 36 | 63             | 12             | 2,8            | 2,1  | 3 | 3,5   | ■          | ■    | ■          | ■    |
| No. 10   | 32 | 70             | 13             | 3,5            | 2,7  | 3 | 4,1   | ■          | ■    | ■          | ■    |
| No. 12   | 28 | 80             | 15             | 4              | 3    | 3 | 4,65  | ■          | ■    | ■          | ■    |
| 1/4  | 28 | 80             | 15             | 4,5            | 3,4  | 3 | 5,5   | ■          | ■    | ■          | ■    |
| 5/16   | 24 | 90             | 18             | 6              | 4,9  | 3 | 6,9   | ■          | ■    | ■          | ■    |
| 3/8  | 24 | 90             | 20             | 7              | 5,5  | 3 | 8,5   | ■          | ■    | ■          | ■    |
| 7/16   | 20 | 100            | 20             | 8              | 6,2  | 3 | 9,9   | ■          | ■    | ■          | ■    |
| 1/2  | 20 | 100            | 21             | 9              | 7    | 3 | 11,5  | ■          | ■    | ■          | ■    |
| 9/16   | 18 | 100            | 21             | 11             | 9    | 3 | 12,9  | ■          | ■    | ■          | ■    |
| 5/8  | 18 | 100            | 21             | 12             | 9    | 3 | 14,5  | ■          | ■    | ■          | ■    |
| 3/4  | 16 | 110            | 24             | 14             | 11   | 3 | 17,5  | ■          | ■    | ■          | ■    |
| 7/8  | 14 | 125            | 24             | 18             | 14,5 | 3 | 20,5  | ■          | ■    | ■          | ■    |
| 1  | 12 | 140            | 26             | 18             | 14,5 | 3 | 23,25 | ■          | ■    | ■          | ■    |
| 1 1/8  | 12 | 150            | 28             | 22             | 18   | 4 | 26,5  |            |      |            |      |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



**4055**

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



**4065**

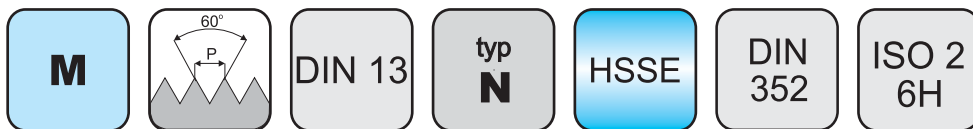
| Katalogové číslo / Cat. No. / Kat. Nr.                         |    |                |                |                |      |   |       | 4055 | 4065       |
|--|----|----------------|----------------|----------------|------|---|-------|------|------------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |    |                |                |                |      |   |       |      | <b>TiN</b> |
| d <sub>1</sub>   | N  | l <sub>1</sub> | l <sub>2</sub> | d <sub>2</sub> | a    | z | Ø mm  |      |            |
| No. 5  | 44 | 56             | 5              | 2,2            | -    | 3 | 2,7   | ■    | ■          |
| No. 6  | 40 | 56             | 7              | 2,5            | 2,1  | 3 | 3     | ■    | ■          |
| No. 8  | 36 | 63             | 7              | 2,8            | 2,1  | 3 | 3,5   | ■    | ■          |
| No. 10   | 32 | 70             | 8              | 3,5            | 2,7  | 3 | 4,1   | ■    | ■          |
| No. 12   | 28 | 80             | 10             | 4              | 3    | 3 | 4,65  | ■    | ■          |
| 1/4  | 28 | 80             | 10             | 4,5            | 3,4  | 3 | 5,5   | ■    | ■          |
| 5/16   | 24 | 90             | 13             | 6              | 4,9  | 3 | 6,9   | ■    | ■          |
| 3/8  | 24 | 90             | 15             | 7              | 5,5  | 3 | 8,5   | ■    | ■          |
| 7/16   | 20 | 100            | 15             | 8              | 6,2  | 3 | 9,9   | ■    | ■          |
| 1/2  | 20 | 100            | 14             | 9              | 7    | 3 | 11,5  | ■    | ■          |
| 9/16   | 18 | 100            | 16             | 11             | 9    | 3 | 12,9  | ■    | ■          |
| 5/8  | 18 | 100            | 16             | 12             | 9    | 3 | 14,5  | ■    | ■          |
| 3/4  | 16 | 110            | 20             | 14             | 11   | 4 | 17,5  | ■    | ■          |
| 7/8  | 14 | 125            | 20             | 18             | 14,5 | 4 | 20,5  | ■    | ■          |
| 1  | 12 | 140            | 22             | 18             | 14,5 | 4 | 23,25 | ■    | ■          |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal  
X.X Možno použít / Possible use / Geeignet

# STROJNÍ KRÁTKÉ ZÁVITNÍKY

## Short machine taps / Kurze Machinengewindebohrer



Skupina obráběného materiálu  
Material group / Werkstoffgruppe

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

2.2; 2.3; 8.1; 6.2; 10.2

10.1; 2.2



**0550**



**0600**



**0650**

| Katalogové číslo / Cat. No. / Kat. Nr.                         |      |                |                |                   |                |     |   |      | 0550 | 0600 | 0650 |
|--|------|----------------|----------------|-------------------|----------------|-----|---|------|------|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> |      |                |                |                   |                |     |   |      |      |      |      |
| d <sub>1</sub>   | P    | l <sub>1</sub> | l <sub>2</sub> | l <sub>2RSP</sub> | d <sub>2</sub> | a   | z | Ø mm |      |      |      |
| M 3  | 0,5  | 40             | 9              | 5                 | 3,5            | 2,7 | 3 | 2,5  | ■    |      | ■    |
| M 4  | 0,7  | 45             | 12             | 7                 | 4,5            | 3,4 | 3 | 3,3  |      |      | ■    |
| M 5  | 0,8  | 50             | 13             | 8                 | 6              | 4,9 | 3 | 4,2  | ■    |      | ■    |
| M 6  | 1    | 56             | 15             | 10                | 6              | 4,9 | 3 | 5    | ■    |      | ■    |
| M 8  | 1,25 | 63             | 18             | 13                | 6              | 4,9 | 3 | 6,8  | ■    |      | ■    |
| M 10   | 1,5  | 70             | 20             | 15                | 7              | 5,5 | 3 | 8,5  | ■    |      | ■    |
| M 12   | 1,75 | 75             | 23             | 18                | 9              | 7   | 3 | 10,2 | ■    |      | ■    |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet