## Recommended Starting Speeds [m/min]

| Material Group | | GH2 | | | KC510M | | | KC522M | | | KC725M | | | KCK15 | | | KCPK30 | | | KCPM20 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | 1 | – | – | – | – | – | – | 395 | **340** | 325 | – | – | – | – | – | – | 545 | **475** | 445 | – | – | – |
| | 2 | – | – | – | – | – | – | 330 | **290** | 240 | – | – | – | – | – | – | 335 | **305** | 275 | – | – | – |
| | 3 | – | – | – | – | – | – | 305 | **260** | 210 | – | – | – | – | – | – | 305 | **275** | 245 | – | – | – |
| | 4 | – | – | – | – | – | – | 270 | **220** | 180 | – | – | – | – | – | – | 230 | **210** | 190 | – | – | – |
| | 5 | – | – | – | – | – | – | 220 | **205** | 180 | – | – | – | – | – | – | 310 | **275** | 250 | – | – | – |
| | 6 | – | – | – | – | – | – | 200 | **150** | 120 | – | – | – | – | – | – | 190 | **160** | – | – | – | – |
| M | 1 | – | – | – | – | – | – | 245 | **215** | 200 | – | – | – | – | – | – | 245 | **220** | 185 | – | – | – |
| | 2 | – | – | – | – | – | – | 220 | **190** | 155 | – | – | – | – | – | – | 220 | **190** | 170 | – | – | – |
| | 3 | – | – | – | – | – | – | 170 | **145** | 115 | – | – | – | – | – | – | 175 | **155** | 140 | – | – | – |
| K | 1 | 300 | **220** | 145 | – | – | – | 275 | **245** | 220 | – | – | – | – | – | – | 355 | **320** | 290 | – | – | – |
| | 2 | 260 | **190** | 125 | – | – | – | 215 | **190** | 180 | – | – | – | – | – | – | 280 | **250** | 230 | – | – | – |
| | 3 | 220 | **175** | 120 | – | – | – | 180 | **160** | 145 | – | – | – | – | – | – | 235 | **210** | 190 | – | – | – |
| N | 1 | 3295 | **1890** | 480 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 2 | 3295 | **1890** | 480 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 3 | 2560 | **1460** | 355 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| S | 1 | – | – | – | – | – | – | 50 | **40** | 30 | – | – | – | – | – | – | – | – | – | – | – | – |
| | 2 | – | – | – | – | – | – | 50 | **40** | 30 | – | – | – | – | – | – | – | – | – | – | – | – |
| | 3 | – | – | – | – | – | – | 60 | **50** | 30 | – | – | – | – | – | – | – | – | – | – | – | – |
| | 4 | – | – | – | – | – | – | 85 | **60** | 40 | – | – | – | – | – | – | 80 | **60** | 40 | – | – | – |
| H | 1 | – | – | – | – | – | – | 145 | **110** | 85 | – | – | – | – | – | – | – | – | – | – | – | – |
| | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

| Material Group | | KCPM40 | | | KCSM40 | | | SC3025 | | | SC6525 | | | SP6519 | | | X400 | | | X500 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | 1 | 355 | **310** | 295 | – | – | – | – | – | – | 445 | **305** | 170 | 355 | **260** | 155 | 310 | **230** | 145 | 325 | **240** | 155 |
| | 2 | 300 | **260** | 215 | – | – | – | – | – | – | 390 | **270** | 145 | 310 | **230** | 140 | 275 | **205** | 125 | 290 | **215** | 140 |
| | 3 | 275 | **235** | 190 | – | – | – | – | – | – | 350 | **240** | 125 | 275 | **200** | 120 | 240 | **180** | 115 | 250 | **185** | 120 |
| | 4 | 245 | **205** | 160 | – | – | – | – | – | – | 250 | **175** | 95 | 210 | **150** | 90 | 180 | **130** | 85 | 190 | **145** | 90 |
| | 5 | 205 | **185** | 160 | 165 | **120** | 85 | – | – | – | 190 | **145** | 95 | 170 | **125** | 85 | – | – | – | 155 | **120** | 85 |
| | 6 | 180 | **140** | 110 | 140 | **100** | 60 | – | – | – | 170 | **120** | 70 | 145 | **100** | 60 | – | – | – | 130 | **95** | 60 |
| M | 1 | 235 | **205** | 185 | 315 | **225** | 140 | – | – | – | 230 | **185** | 145 | 325 | **235** | 140 | – | – | – | 300 | **220** | 140 |
| | 2 | 210 | **180** | 150 | 280 | **205** | 130 | – | – | – | 310 | **220** | 130 | 280 | **205** | 125 | – | – | – | 265 | **190** | 120 |
| | 3 | 155 | **140** | 110 | 230 | **165** | 105 | – | – | – | 250 | **180** | 110 | 235 | **170** | 100 | – | – | – | 215 | **155** | 95 |
| K | 1 | – | – | – | – | – | – | 475 | **330** | 180 | 470 | **325** | 175 | 355 | **265** | 170 | – | – | – | 335 | **240** | 145 |
| | 2 | – | – | – | – | – | – | 400 | **275** | 145 | 365 | **250** | 140 | 290 | **210** | 130 | – | – | – | 245 | **185** | 125 |
| | 3 | – | – | – | – | – | – | 330 | **230** | 125 | – | – | – | 265 | **190** | 120 | – | – | – | 205 | **160** | 115 |
| N | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| S | 1 | 50 | **40** | 35 | 75 | **55** | 35 | – | – | – | – | – | – | 65 | **50** | 30 | – | – | – | 60 | **40** | 30 |
| | 2 | 50 | **40** | 35 | 70 | **50** | 35 | – | – | – | – | – | – | 60 | **40** | 25 | – | – | – | 55 | **40** | 25 |
| | 3 | 60 | **50** | 35 | 80 | **55** | 35 | – | – | – | – | – | – | 65 | **50** | 30 | – | – | – | 60 | **50** | 30 |
| | 4 | 80 | **60** | 40 | 110 | **80** | 50 | – | – | – | – | – | – | 95 | **70** | 45 | – | – | – | 90 | **65** | 40 |
| H | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 115 | **85** | 55 | – | – | – |
| | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 95 | **70** | 40 | – | – | – |
| | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

NOTE: FIRST choice starting speeds are in **bold** type.
As the average chip thickness increases, the speed should be decreased.

## Recommended Starting Feeds [mm] • High-Feed

| Light Machining | General Purpose | Heavy Machining |
|---|---|---|

### At 3,50 Axial Depth of Cut (ap)

| Insert Geometry | Programmed Feed per Tooth (fz) at % Radial Depth of Cut (ae) of Working Diameter (Dw) | | | | | | | | | | | | | | | Insert Geometry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5% | | | 10% | | | 20% | | | 30% | | | 40–100% | | | |
| ...D41 | – | – | – | 0,31 | **1,28** | 1,55 | 0,23 | **0,95** | 1,15 | 0,20 | **0,83** | 1,00 | 0,19 | **0,76** | 0,91 | ...D41 |
| ...D | – | – | – | 0,31 | **1,58** | 1,91 | 0,23 | **1,17** | 1,41 | 0,20 | **1,02** | 1,22 | 0,19 | **0,93** | 1,12 | ...D |

### At 2,50 Axial Depth of Cut (ap)

| Insert Geometry | Programmed Feed per Tooth (fz) at % Radial Depth of Cut (ae) of Working Diameter (Dw) | | | | | | | | | | | | | | | Insert Geometry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5% | | | 10% | | | 20% | | | 30% | | | 40–100% | | | |
| ...D41 | – | – | – | 0,37 | **1,50** | 1,82 | 0,27 | **1,11** | 1,35 | 0,24 | **0,97** | 1,17 | 0,22 | **0,89** | 1,07 | ...D41 |
| ...D | – | – | – | 0,37 | **1,86** | 2,24 | 0,27 | **1,37** | 1,65 | 0,24 | **1,19** | 1,43 | 0,22 | **1,09** | 1,31 | ...D |

### At 2,00 Axial Depth of Cut (ap)

| Insert Geometry | Programmed Feed per Tooth (fz) at % Radial Depth of Cut (ae) of Working Diameter (Dw) | | | | | | | | | | | | | | | Insert Geometry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5% | | | 10% | | | 20% | | | 30% | | | 40–100% | | | |
| ...D41 | – | – | – | 0,41 | **1,67** | 2,03 | 0,30 | **1,24** | 1,50 | 0,26 | **1,08** | 1,30 | 0,24 | **0,99** | 1,19 | ...D41 |
| ...D | – | – | – | 0,41 | **2,07** | 2,49 | 0,30 | **1,53** | 1,84 | 0,26 | **1,33** | 1,59 | 0,24 | **1,21** | 1,46 | ...D |

### At 1,50 Axial Depth of Cut (ap)

| Insert Geometry | Programmed Feed per Tooth (fz) at % Radial Depth of Cut (ae) of Working Diameter (Dw) | | | | | | | | | | | | | | | Insert Geometry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5% | | | 10% | | | 20% | | | 30% | | | 40–100% | | | |
| ...D41 | – | – | – | 0,47 | **1,92** | 2,33 | 0,35 | **1,42** | 1,72 | 0,30 | **1,24** | 1,49 | 0,28 | **1,13** | 1,36 | ...D41 |
| ...D | – | – | – | 0,47 | **2,38** | 2,88 | 0,35 | **1,75** | 2,11 | 0,30 | **1,52** | 1,83 | 0,28 | **1,39** | 1,67 | ...D |

## Feed Rate Guide • Plunging • IC 16 • fz [mm/tooth]

| Insert Geometry | Programmed Feed per Tooth (fz) Max 13mm insert engagement (ae radial engagement) | | | Insert Geometry |
|---|---|---|---|---|
| ...D41 | 0,08 | **0,20** | 0,25 | ...D41 |
| ...D | 010 | **0,25** | 0,35 | ...D |

NOTE: For further details about using the 7792VX series in plunging operations, please see page E95.
Use "Light Machining" values as starting feed rate.