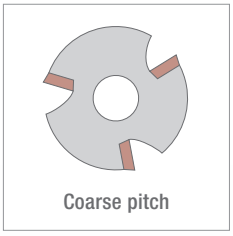
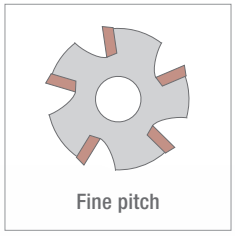
# HF4PLUS ACTION

## per fresatura ad alto avanzamento



**Acquista 30 inserti e ottieni il corpo fresa allo sconto speciale del 60%**

Inserti: SDMT10
Corpi fresa: NT-SD10HF

Inserti: SDMT15
Corpi fresa: NT-SD15HF

Inserti: SDMT112
Corpi fresa: NT-SD12HF

Inserti: SPMT07
Corpi fresa: NT-SP07HF

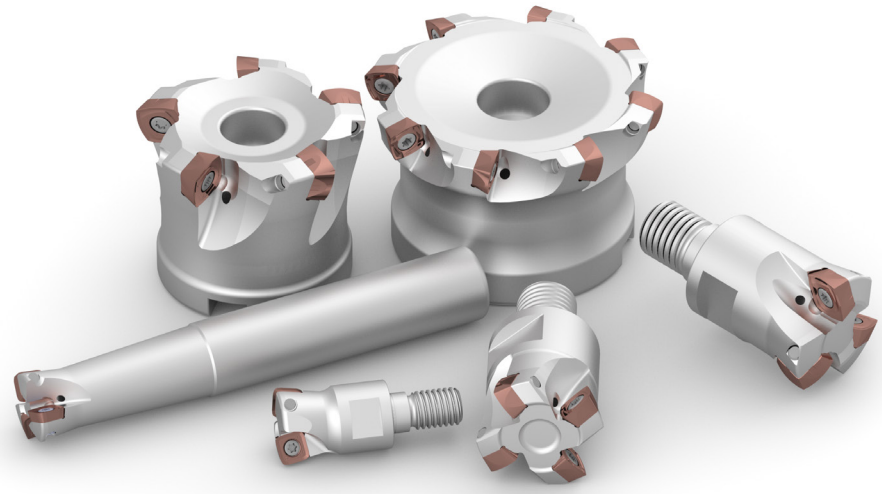
nikkoTOOLS

uemme TOOLS and EQUIPMENT

VALIDITA': 31/12/2024

# HF4PLUS

High productivity high feed milling system available from big to small diameters



## APPLICATION

· Semi-finishing or roughing of surfaces
· Profiling and contouring
· Linear or trochoidal ramping
· Pocketing

## ISO APPLICATION FIELDS

P M K S

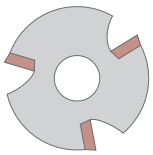
## ADVANTAGES AND CHARACTERISTICS

· High feed machining that effectively reduces cycle time and improves efficiency
· Versatile in operations and simplify the process (can do face milling, ramping, helical pocketing, counterbore and countersink, combines roughing and semi finishing)
· Multiple-curve edge design improves robustness and reliability
· Available from mini size 07 to cost-effective 10, frequent 12 and large size 15

## Cutter bodies

· Arbor type
· Cylindrical type
· Screw-in type
· Extension sleeves (steel/carbide 10xD)
· From D20 to D125

Extension arbors



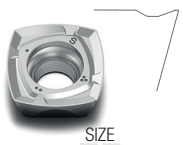
Coarse pitch

Fine pitch

## Inserts

· 4 edges
· Edge length 07, 10, 12 and 15
· Cemented carbide grades with PVD and CVD coatings
· Geometries: SC, GP, SS, TE

SC P M S



SIZE
07 10

GP P M K

SIZE
07 10 12 15

SS M S

SIZE
12

TE P K

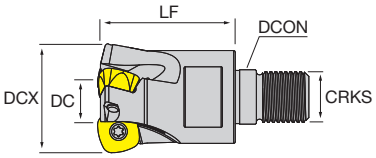
SIZE
10 12 15

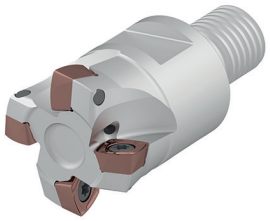
# NT-SD

## HF4Plus SD

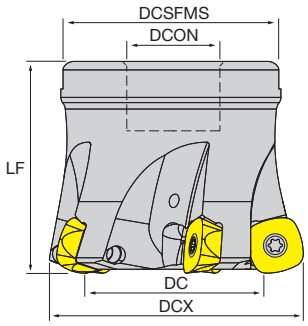
- High feed milling system with positive square inserts, with coolant through
- Diverse combination of diameters and pitches, available with different insert sizes
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders

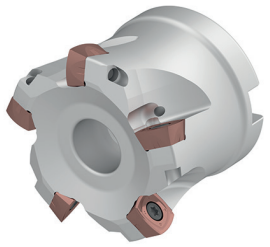
Screw-in



Arbor



| Designation | Stock | DCX | CICT | DC | DCON | LF | LU | DCSFMS | CRKS | WT | MIID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SCREW-IN | | | | | | | | | | | |
| **NT-SD10HF D035-M16-Z04** | ● | 35 | 4 | 20 | 17 | 40 | - | - | M16 | 0.18 Kg | SDMT1004 |
| **NT-SD10HF D042-M16-Z05** | ● | 42 | 5 | 27 | 17 | 40 | - | - | M16 | 0.23 Kg | SDMT1004 |
| **NT-SD12HF D032-M16-Z02** | ● | 32 | 2 | 12.5 | 17 | 43 | - | - | M16 | 0.18 Kg | SDMT1205 |
| **NT-SD12HF D035-M16-Z03** | ● | 35 | 3 | 15.5 | 17 | 43 | - | - | M16 | 0.19 Kg | SDMT1205 |
| **NT-SD12HF D040-M16-Z04** | ● | 40 | 4 | 20.5 | 17 | 43 | - | - | M16 | 0.20 Kg | SDMT1205 |
| **NT-SD12HF D042-M16-Z04** | ● | 42 | 4 | 22.5 | 17 | 43 | - | - | M16 | 0.22 Kg | SDMT1205 |
| ARBOR | | | | | | | | | | | |
| **NT-SD10HF D050-F22-Z06** | ● | 50 | 6 | 35 | 22 | 50 | - | 47 | - | 0.38 Kg | SDMT1004 |
| **NT-SD10HF D052-F22-Z06** | ● | 52 | 6 | 37 | 22 | 50 | - | 47 | - | 0.39 Kg | SDMT1004 |
| **NT-SD10HF D063-F27-Z07** | ● | 63 | 7 | 48 | 27 | 50 | - | 58 | - | 0.65 Kg | SDMT1004 |
| **NT-SD10HF D066-F27-Z07** | ● | 66 | 7 | 51 | 27 | 50 | - | 60 | - | 0.72 Kg | SDMT1004 |
| **NT-SD10HF D080-F27-Z08** | ● | 80 | 8 | 65 | 27 | 50 | - | 65 | - | 1.00 Kg | SDMT1004 |
| **NT-SD12HF D042-F16-Z04** | ● | 42 | 4 | 22.5 | 16 | 40 | - | 35 | - | 0.19 Kg | SDMT1205 |
| **NT-SD12HF D050-F22-Z04** | ● | 50 | 4 | 30.5 | 22 | 50 | - | 47 | - | 0.37 Kg | SDMT1205 |
| **NT-SD12HF D050-F22-Z05** | ● | 50 | 5 | 30.5 | 22 | 50 | - | 47 | - | 0.35 Kg | SDMT1205 |
| **NT-SD12HF D052-F22-Z04** | ● | 52 | 4 | 32.5 | 22 | 50 | - | 47 | - | 0.39 Kg | SDMT1205 |
| **NT-SD12HF D052-F22-Z05** | ● | 52 | 5 | 32.5 | 22 | 50 | - | 47 | - | 0.37 Kg | SDMT1205 |
| **NT-SD12HF D063-F22-Z04** | ● | 63 | 4 | 43.5 | 22 | 50 | - | 52 | - | 0.56 Kg | SDMT1205 |
| **NT-SD12HF D063-F22-Z05** | ● | 63 | 5 | 43.5 | 22 | 50 | - | 52 | - | 0.54 Kg | SDMT1205 |
| **NT-SD12HF D063-F27-Z04** | ● | 63 | 4 | 43.5 | 27 | 50 | - | 52 | - | 0.58 Kg | SDMT1205 |
| **NT-SD12HF D063-F27-Z05** | ● | 63 | 5 | 43.5 | 27 | 50 | - | 52 | - | 0.56 Kg | SDMT1205 |
| **NT-SD12HF D066-F27-Z06** | ● | 66 | 6 | 46.5 | 27 | 50 | - | 60 | - | 0.68 Kg | SDMT1205 |
| **NT-SD12HF D080-F27-Z06** | ● | 80 | 6 | 60.5 | 27 | 50 | - | 65 | - | 0.94 Kg | SDMT1205 |
| **NT-SD12HF D080-F27-Z07** | ● | 80 | 7 | 60.5 | 27 | 50 | - | 65 | - | 0.99 Kg | SDMT1205 |
| **NT-SD12HF D100-F32-Z07** | ● | 100 | 7 | 80.5 | 32 | 50 | - | 70 | - | 1.60 Kg | SDMT1205 |
| **NT-SD15HF D080-F27-Z05** | ● | 80 | 5 | 61 | 27 | 50 | - | 58 | - | 0.80 Kg | SDMT1505 |
| **NT-SD15HF D080-F27-Z06** | ● | 80 | 6 | 61 | 27 | 50 | - | 58 | - | 0.60 Kg | SDMT1505 |
| **NT-SD15HF D100-F32-Z06** | ● | 100 | 6 | 81 | 32 | 50 | - | 70 | - | 1.20 Kg | SDMT1505 |
| **NT-SD15HF D125-F40-Z07** | ● | 125 | 7 | 106 | 40 | 63 | - | 90 | - | 2.28 Kg | SDMT1505 |

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

| Spare parts | Insert screws | Flag wrenches |
|---|---|---|
| **NT-SD10HF Dooo-ooo-Zoo** | NT-ST35095T15HQ | NT-FTB15 |
| **NT-SD12HF Dooo-ooo-Zoo** | NT-ST40110T15HQ | NT-FTB15 |
| **NT-SD15HF Dooo-ooo-Zoo** | NT-ST50110T20 | NT-FTB20 |

# SDMT

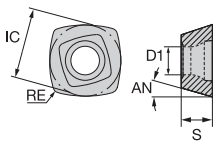
## HF4Plus SD

- GP geometry is for general purpose use
- SC and SS geometries are sharper, for M and S materials
- TE edge is reinforced and stronger
- Available with diverse carbide grades covering PMKS applications
- For the program radius and various other parameters for CNC program please go to the technical instruction page, it differs with sizes and geometries

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

| | HC CVD | HC CVD | HF PVD | HF PVD | HF PVD | HF PVD | HF PVD |
|---|---|---|---|---|---|---|---|
| | **JC8520** | **JC9540** | **JP5530** | **JP7525** | **JP8725** | **JP9535** | **JP9545** |
| Stable machining, light cut (● 1st choice ○ suitable) | ● | | | | ○ | | |
| General machining, medium cut (● 1st choice ○ suitable) | ○ | ● | ● | ● | ● | ● | ○ |
| Unstable machining, heavy cut (● 1st choice ○ suitable) | | ● | ○ | ● | | ● | ● |

**Dimensions**

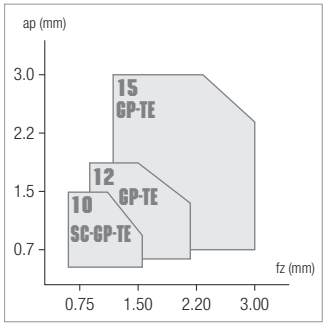


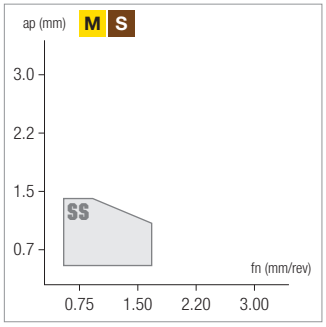

4 edges

| ISO | Vc(m/min) - suggested cutting speed range (bold: 1st choice) | | | | | | |
|---|---|---|---|---|---|---|---|
| P | **130**<br>**300** | | **100**<br>**260** | | **100**<br>**280** | | |
| M | | **90**<br>**210** | 60<br>180 | | | **80**<br>**200** | **60**<br>**180** |
| K | 160<br>320 | | | **140**<br>**300** | | | |
| N | | | | | | | |
| S | | **30**<br>**70** | | | | **20**<br>**60** | **20**<br>**50** |
| H | | | | | | | |

| | Designation | | RE | IC | S | D1 | AN | Stock | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GENERAL | GP P M K | SDMT100410R-GP | 10 | 10 | 4.76 | 4 | 15° | ● | ● | ● | ● | ● | ● | ● |
| | | SDMT120512R-GP | 12 | 12.7 | 5.56 | 4.4 | 15° | ● | ● | ● | ● | ● | ● | |
| | | SDMT150512R-GP | 12 | 15.875 | 5.56 | 5.5 | 15° | ● | ● | | | ● | ● | |
| LOW FORCE | SC P M S | SDMT100410R-SC | 10 | 10 | 4.76 | 4 | 15° | | | ● | | | ● | |
| SUPER SHARP | SS M S | SDMT120512R-SS | 12 | 12.7 | 5.56 | 4.4 | 15° | | ● | | | | ● | |
| REINFORCED | TE P K | SDMT100410R-TE | 10 | 10 | 4.76 | 4 | 15° | | | ● | | ● | ● | |
| | | SDMT120512R-TE | 12 | 12.7 | 5.56 | 4.4 | 15° | ● | | ● | | ● | | |
| | | SDMT150512R-TE | 12 | 15.875 | 5.56 | 5.5 | 15° | ● | | | | ● | | |

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion




**Rp SUGGESTED PROGRAMMING RADIUS**

| | |
|---|---|
| SDMT 10 | 2.5 |
| SDMT 12 | 3.5 |
| SDMT 15 | 5.0 |

more details at page D83

**SDMT12-SS**

SS geometry generates a bigger milling cutter diameter compared to GP and TE types.

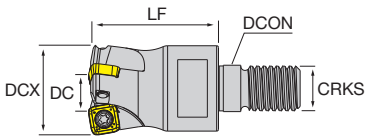
Please add **0.85 mm** to DCX values and **0.40 mm** to LF values, shown on page D78.

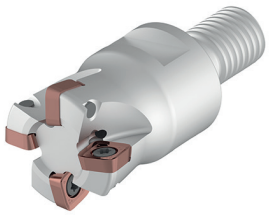
# NT-SP

## HF4Plus SP

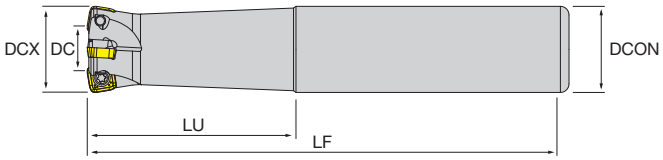
- High feed milling system with positive square inserts, with coolant through
- Diverse combination of diameters and pitches available, focus on small diameters
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders

Screw-in

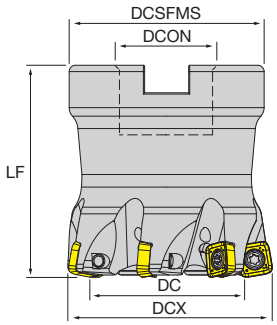


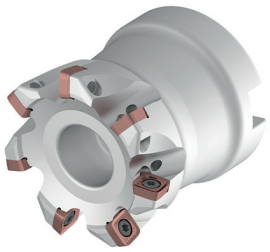



Cylindrical




Arbor



| Designation | Stock | DCX | CICT | DC | DCON | LF | LU | DCSFMS | CRKS | WT | MIID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SCREW-IN | | | | | | | | | | | |
| **NT-SP07HF D020-M10-Z02** | ● | 20 | 2 | 7.3 | 10.5 | 30 | - | - | M10 | 0.05 Kg | SPMT07T2 |
| **NT-SP07HF D020-M10-Z03** | ● | 20 | 3 | 7.3 | 10.5 | 30 | - | - | M10 | 0.04 Kg | SPMT07T2 |
| **NT-SP07HF D025-M12-Z03** | ● | 25 | 3 | 12.3 | 12.5 | 35 | - | - | M12 | 0.10 Kg | SPMT07T2 |
| **NT-SP07HF D025-M12-Z04** | ● | 25 | 4 | 12.3 | 12.5 | 35 | - | - | M12 | 0.10 Kg | SPMT07T2 |
| **NT-SP07HF D032-M16-Z04** | ● | 32 | 4 | 19.3 | 17 | 40 | - | - | M16 | 0.19 Kg | SPMT07T2 |
| **NT-SP07HF D032-M16-Z05** | ● | 32 | 5 | 19.3 | 17 | 40 | - | - | M16 | 0.17 Kg | SPMT07T2 |
| **NT-SP07HF D035-M16-Z05** | ● | 35 | 5 | 22.3 | 17 | 40 | - | - | M16 | 0.20 Kg | SPMT07T2 |
| **NT-SP07HF D042-M16-Z06** | ● | 42 | 6 | 29.3 | 17 | 40 | - | - | M16 | 0.24 Kg | SPMT07T2 |
| CYLINDRICAL | | | | | | | | | | | |
| **NT-SP07HF D020-S20-Z03** | ● | 20 | 3 | 7.3 | 20 | 130 | 50 | - | - | 0.26 Kg | SPMT07T2 |
| **NT-SP07HF D025-S25-Z03** | ● | 25 | 3 | 12.3 | 25 | 140 | 60 | - | - | 0.44 Kg | SPMT07T2 |
| **NT-SP07HF D025-S25-Z04** | ● | 25 | 4 | 12.3 | 25 | 140 | 60 | - | - | 0.40 Kg | SPMT07T2 |
| **NT-SP07HF D032-S32-Z05** | ● | 32 | 5 | 19.3 | 32 | 150 | 70 | - | - | 0.79 Kg | SPMT07T2 |
| ARBOR | | | | | | | | | | | |
| **NT-SP07HF D040-F16-Z05** | ● | 40 | 5 | 27.3 | 16 | 40 | - | 35 | - | 0.21 Kg | SPMT07T2 |
| **NT-SP07HF D040-F16-Z06** | ● | 40 | 6 | 27.3 | 16 | 40 | - | 35 | - | 0.20 Kg | SPMT07T2 |
| **NT-SP07HF D042-F16-Z05** | ● | 42 | 5 | 29.3 | 16 | 40 | - | 35 | - | 0.22 Kg | SPMT07T2 |
| **NT-SP07HF D042-F16-Z06** | ● | 42 | 6 | 29.3 | 16 | 40 | - | 35 | - | 0.21 Kg | SPMT07T2 |
| **NT-SP07HF D050-F22-Z07** | ● | 50 | 7 | 37.3 | 22 | 50 | - | 46 | - | 0.41 Kg | SPMT07T2 |
| **NT-SP07HF D052-F22-Z07** | ● | 52 | 7 | 39.3 | 22 | 50 | - | 46 | - | 0.44 Kg | SPMT07T2 |

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

| Spare parts | Insert screws | Flag wrenches |
|---|---|---|
| |  |  |
| **NT-SP07HF Dooo-ooo-Zoo** | NT-ST30070T10HQ | NT-FTB10 |

# SPMT

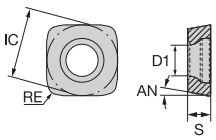
## HF4Plus SP

- GP geometry is for general purpose use
- SC is sharper for M and S materials
- Available with diverse carbide grades covering PMKS applications
- For the program radius and various other parameters for CNC program please go to the technical instruction page

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

| | HC CVD | HC CVD | HF PVD | HF PVD | HF PVD | HF PVD | HF PVD |
|---|---|---|---|---|---|---|---|
| | **JC8520** | **JC9540** | **JP5530** | **JP7525** | **JP8725** | **JP9535** | **JP9545** |
| Stable machining, light cut (● 1st choice ○ suitable) | ● | | | | ○ | | |
| General machining, medium cut | ◔ | ● | ● | ● | ● | ● | ◔ |
| Unstable machining, heavy cut | | ✱ | ✱ | ✱ | | ✱ | ✱ |

**Dimensions**

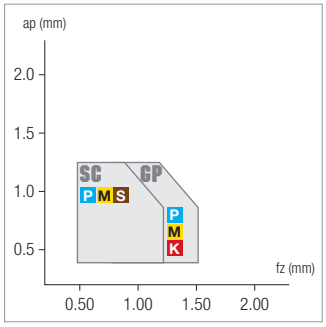



4 edges

| ISO | Vc(m/min) - suggested cutting speed range (bold: 1st choice) | | | | | | |
|---|---|---|---|---|---|---|---|
| P | **130 300** | | **100 260** | | **100 280** | | |
| M | | **90 210** | 60 180 | | | **80 200** | **60 180** |
| K | 160 320 | | | **140 300** | | | |
| N | | | | | | | |
| S | | **30 70** | | | | **20 60** | **20 50** |
| H | | | | | | | |

| | Designation | | RE | IC | S | D1 | AN | Stock | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GENERAL | GP P M K | **SPMT07T210R-GP** | 1 | 7.8 | 2.8 | 3.5 | 11° | ● | ● | ● | ● | ● | ● | ● |
| LOW FORCE | SC P M S | **SPMT07T210R-SC** | 1 | 7.8 | 2.8 | 3.5 | 11° | | | ● | | | ● | |

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion




**Rp SUGGESTED PROGRAMMING RADIUS**

| | |
|---|---|
| SPMT 07 | 2.0 |

more details at page D83

| ISO 513 | MATERIAL | HARDNESS HB | ae/DC | JC8520 min | JC8520 start | JC8520 max | JP5530 min | JP5530 start | JP5530 max | JP8725 min | JP8725 start | JP8725 max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P1 - P2 | Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45) | ≤ 200 | 100% | 130 | **180** | 230 | 100 | **140** | 180 | 100 | **150** | 200 |
| | | | 30% | 200 | **240** | 280 | 160 | **200** | 240 | 160 | **210** | 260 |
| | | | 10% | 260 | **280** | 300 | 220 | **240** | 260 | 220 | **250** | 280 |
| P3 - P4 | Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6) | 200 ÷ 300 | 100% | 100 | **140** | 180 | 80 | **120** | 160 | 90 | **130** | 170 |
| | | | 30% | 160 | **200** | 240 | 120 | **160** | 200 | 130 | **170** | 210 |
| | | | 10% | 220 | **240** | 260 | 180 | **200** | 220 | 190 | **210** | 230 |
| P5 - P6 | High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®) | 300 ÷ 400 | 100% | 70 | **100** | 130 | 60 | **90** | 120 | 80 | **110** | 140 |
| | | | 30% | 120 | **160** | 200 | 100 | **130** | 160 | 120 | **150** | 180 |
| | | | 10% | 200 | **220** | 240 | 140 | **170** | 200 | 160 | **190** | 220 |
| ISO 513 | MATERIAL | HARDNESS HB | ae/DC | JC9540 min | JC9540 start | JC9540 max | JP9535 min | JP9535 start | JP9535 max | JP9545 min | JP9545 start | JP9545 max |
| P7 | Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420) | ≤ 200 | 100% | 90 | **130** | 170 | 80 | **120** | 160 | 60 | **100** | 140 |
| | | | 30% | 110 | **160** | 210 | 100 | **150** | 200 | 80 | **130** | 180 |
| | | | 10% | 130 | **190** | 250 | 120 | **180** | 240 | 100 | **160** | 220 |
| P8 | Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH) | ≤ 450 | 100% | 70 | **100** | 130 | 60 | **90** | 120 | 50 | **80** | 110 |
| | | | 30% | 80 | **110** | 140 | 70 | **100** | 130 | 60 | **90** | 120 |
| | | | 10% | 90 | **120** | 150 | 80 | **110** | 140 | 70 | **100** | 130 |
| M1 | Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303) | > 200 | 100% | 90 | **120** | 150 | 80 | **110** | 140 | 60 | **90** | 120 |
| | | | 30% | 110 | **150** | 190 | 100 | **140** | 180 | 80 | **120** | 160 |
| | | | 10% | 130 | **170** | 210 | 120 | **160** | 200 | 100 | **140** | 180 |
| M2 - M3 | Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316) | | 100% | 80 | **110** | 140 | 70 | **100** | 130 | 60 | **90** | 120 |
| | | | 30% | 90 | **120** | 150 | 80 | **110** | 140 | 70 | **100** | 130 |
| | | | | 100 | **130** | 160 | 90 | **120** | 150 | 80 | **110** | 140 |
| ISO 513 | MATERIAL | HARDNESS HB | ae/DC | JC8520 min | JC8520 start | JC8520 max | JP7525 min | JP7525 start | JP7525 max | | | |
| K1 | Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250) | 150 ÷ 250 | 100% | 160 | **200** | 240 | 140 | **180** | 220 | | | |
| | | | 30% | 180 | **230** | 280 | 160 | **210** | 260 | | | |
| | | | 10% | 200 | **260** | 320 | 180 | **240** | 300 | | | |
| K2 | Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7) | 150 ÷ 350 | 100% | 120 | **160** | 200 | 100 | **140** | 180 | | | |
| | | | 30% | 140 | **190** | 240 | 120 | **170** | 220 | | | |
| | | | 10% | 160 | **220** | 280 | 140 | **200** | 260 | | | |
| K3 - K4 | Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000) | 250 ÷ 500 | 100% | 100 | **130** | 160 | 90 | **120** | 150 | | | |
| | | | 30% | 120 | **160** | 200 | 120 | **150** | 180 | | | |
| | | | 10% | 140 | **190** | 240 | 150 | **180** | 210 | | | |
| ISO 513 | MATERIAL | HARDNESS HB | ae/DC | JC9540 min | JC9540 start | JC9540 max | JP9535 min | JP9535 start | JP9535 max | JP9545 min | JP9545 start | JP9545 max |
| S1 - S2 - S3 | Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718) | | 100% | 30 | **40** | 50 | 20 | **30** | 40 | 20 | **25** | 30 |
| | | | 30% | 40 | **50** | 60 | 30 | **40** | 50 | 30 | **35** | 40 |
| | | | 10% | 50 | **60** | 70 | 40 | **50** | 60 | 40 | **45** | 50 |
| S4 - S5 | Titanium alloys (ex. TiAl2Sn4Zr2MoSi) | | 100% | | | | 40 | **50** | 60 | 30 | **40** | 50 |
| | | | 30% | | | | 50 | **60** | 70 | 40 | **50** | 60 |
| | | | 10% | | | | 60 | **70** | 80 | 50 | **60** | 70 |

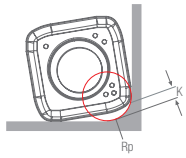
ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

| DESIGNATION | ae/DCX | DEPTH OF CUT ap (mm) min | start | max | FEED RATE fz (mm) min | start | max |
|---|---|---|---|---|---|---|---|
| SPMT07T210R-GP | 100% | 0.20 | **0.60** | 1.00 | 0.40 | **0.70** | 1.00 |
| | 30% | 0.20 | **0.60** | 1.00 | 0.50 | **0.90** | 1.30 |
| | 10% | 0.20 | **0.60** | 1.00 | 0.60 | **1.10** | 1.60 |
| SDMT100410R-GP | 100% | 0.30 | **0.90** | 1.50 | 0.40 | **0.75** | 1.10 |
| | 30% | 0.30 | **0.90** | 1.50 | 0.50 | **1.00** | 1.50 |
| | 10% | 0.30 | **0.90** | 1.50 | 0.60 | **1.20** | 1.60 |
| SDMT120512R-GP | 100% | 0.40 | **1.20** | 2.00 | 0.60 | **0.90** | 1.20 |
| | 30% | 0.40 | **1.20** | 2.00 | 0.70 | **1.10** | 1.50 |
| | 10% | 0.40 | **1.20** | 2.00 | 0.80 | **1.30** | 1.80 |
| SDMT150512R-GP | 100% | 0.60 | **1.80** | 3.00 | 0.60 | **1.00** | 1.40 |
| | 30% | 0.60 | **1.80** | 3.00 | 0.80 | **1.30** | 1.80 |
| | 10% | 0.60 | **1.80** | 3.00 | 0.90 | **1.50** | 2.10 |
| SPMT07T210R-SC | 100% | 0.20 | **0.60** | 1.00 | 0.30 | **0.60** | 0.90 |
| | 30% | 0.20 | **0.60** | 1.00 | 0.40 | **0.80** | 1.20 |
| | 10% | 0.20 | **0.60** | 1.00 | 0.50 | **0.90** | 1.40 |
| SDMT100410R-SC | 100% | 0.30 | **0.90** | 1.50 | 0.30 | **0.70** | 1.10 |
| | 30% | 0.30 | **0.90** | 1.50 | 0.40 | **0.90** | 1.40 |
| | 10% | 0.30 | **0.90** | 1.50 | 0.50 | **1.00** | 1.50 |

| DESIGNATION | ae/DCX | DEPTH OF CUT ap (mm) min | start | max | FEED RATE fz (mm) min | start | max |
|---|---|---|---|---|---|---|---|
| SDMT100410R-TE | 100% | 0.30 | **0.90** | 1.50 | 0.60 | **0.90** | 1.20 |
| | 30% | 0.30 | **0.90** | 1.50 | 0.70 | **1.20** | 1.60 |
| | 10% | 0.30 | **0.90** | 1.50 | 0.80 | **1.40** | 1.60 |
| SDMT120512R-TE | 100% | 0.40 | **1.20** | 2.00 | 0.70 | **1.00** | 1.30 |
| | 30% | 0.40 | **1.20** | 2.00 | 0.90 | **1.30** | 1.70 |
| | 10% | 0.40 | **1.20** | 2.00 | 1.00 | **1.50** | 2.00 |
| SDMT150512R-TE | 100% | 0.60 | **1.80** | 3.00 | 0.80 | **1.20** | 1.60 |
| | 30% | 0.60 | **1.80** | 3.00 | 1.00 | **1.50** | 2.00 |
| | 10% | 0.60 | **1.80** | 3.00 | 1.20 | **1.80** | 2.40 |
| SDMT120512R-SS | 100% | 0.40 | **0.70** | 1.00 | 0.50 | **0.80** | 1.10 |
| | 30% | 0.40 | **0.70** | 1.00 | 0.60 | **1.00** | 1.40 |
| | 10% | 0.40 | **0.70** | 1.00 | 0.70 | **1.20** | 1.70 |

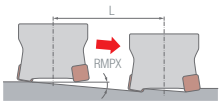
## Approximate programming radius adjustment (Rp)




| SPMT07 Rp | undercut K | overcut r | SDMT10 Rp | undercut K | overcut r | SDMT12 * Rp | undercut K | overcut r | SDMT15 Rp | undercut K | overcut r |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 0.69 | 0 | 2 | 1.18 | 0 | 3 | 1.28 | 0 | 4.5 | 1.15 | 0 |
| **2** | **0.61** | **0** | **2.5** | **1.02** | **0** | **3.5** | **1.11** | **0** | **5** | **0.99** | **0** |
| 2.5 | 0.54 | 0.08 | 3 | 0.86 | 0.02 | 4 | 0.95 | 0.02 | 5.5 | 0.82 | 0.14 |
| 3 | 0.46 | 0.24 | 3.5 | 0.70 | 0.13 | 4.5 | 0.79 | 0.14 | 6 | 0.67 | 0.03 |

*for SDMT12-SS programming radius adjustment please see next page. Green background are suggested values.

## Parameters for ramping

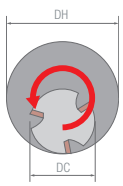



| SPMT07 DCX | RMPX | L | SDMT10 DCX | RMPX | L | SDMT12 * DCX | RMPX | L | SDMT15 DCX | RMPX | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 3.5° | 2.5 | 35 | 1.6° | 2 | 32 | 4.0° | 4.5 | 80 | | |
| 25 | 3.0° | 1.6 | 42 | 1.5° | 1.7 | 40 | 2.4° | 3.4 | 100 | | |
| 32 | 1.2° | 1.4 | 50 | 0.8° | 1.5 | 42 | 2.1° | 3.2 | 125 | | |
| 35 | 1.2° | 1.5 | 52 | 1.0° | 2 | 50 | 1.5° | 2.9 | | | |
| 40 | 1.0° | 1.3 | 63 | 0.6° | 1.8 | 52 | 1.0° | 2 | | | |
| 42 | 0.9° | 1.3 | 66 | 0.6° | 1.8 | 63 | 1.0° | 2.5 | | | |
| 52 | 0.6° | 1.2 | 80 | 0.4° | 1.6 | 66 | 0.9° | 2.5 | | | |
| | | | | | | 80 | 0.7° | 2.2 | | | |
| | | | | | | 100 | | | | | |

*for SDMT12-SS guide for ramping please see next page.

RMPX: max. ramping angle; L: max. ramping path

## Parameters for helical milling

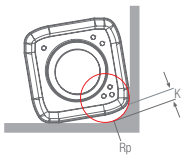



| SPMT07 DCX | DH min. | DH max. | SDMT10 DCX | DH min. | DH max. | SDMT12 * DCX | DH min. | DH max. | SDMT15 DCX | DH min. | DH max. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 28 | 40 | 35 | 54 | 70 | 32 | 46 | 64 | 80 | | |
| 25 | 38 | 50 | 42 | 68 | 84 | 40 | 62 | 80 | 100 | | |
| 32 | 52 | 64 | 50 | 84 | 100 | 42 | 66 | 84 | 125 | | |
| 35 | 58 | 70 | 52 | 88 | 104 | 50 | 82 | 100 | | | |
| 40 | 68 | 80 | 63 | 110 | 126 | 52 | 86 | 104 | | | |
| 42 | 72 | 84 | 66 | 116 | 132 | 63 | 108 | 126 | | | |
| 52 | 92 | 104 | 80 | 144 | 160 | 66 | 114 | 132 | | | |
| | | | | | | 80 | 142 | 160 | | | |
| | | | | | | 100 | | | | | |

*for SDMT12-SS guide for helical milling please see next page.

DH min.: min. cutting dia.; DH max.: max. cutting dia.

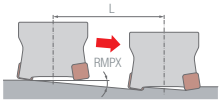
## Approximate programming radius adjustment (Rp)




| SDMT12-SS | | | | | |
|---|---|---|---|---|---|
| Rp | undercut K | overcut r | | | |
| 3 | 1.52 | 0 | | | |
| **3.5** | **1.45** | **0** | | | |
| 4 | 1.28 | 0.07 | | | |
| | | | | | |

Green background are suggested values.

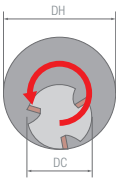
## Parameters for ramping




| SDMT12-SS | | | | | |
|---|---|---|---|---|---|
| DCX | RMPX | L | | | |
| 32 | 5.5° | 6 | | | |
| 40 | 3.7° | 5.2 | | | |
| 42 | 3.3° | 5 | | | |
| 50 | 2.4° | 4.4 | | | |
| 52 | 2.2° | 4.2 | | | |
| 63 | 1.5° | 3.7 | | | |
| 66 | 1.4° | 3.5 | | | |
| 80 | 1.0° | 3.3 | | | |

RMPX: max. ramping angle; L: max. ramping path

## Parameters for helical milling




| SDMT12-SS | | | | | |
|---|---|---|---|---|---|
| DCX | DH min. | DH max. | | | |
| 32 | 42 | 64 | | | |
| 40 | 58 | 80 | | | |
| 42 | 62 | 84 | | | |
| 50 | 78 | 100 | | | |
| 52 | 82 | 104 | | | |
| 63 | 104 | 126 | | | |
| 66 | 110 | 132 | | | |
| 80 | 138 | 160 | | | |

DH min.: min. cutting dia.; DH max.: max. cutting dia.

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