

MILLING



## Milling

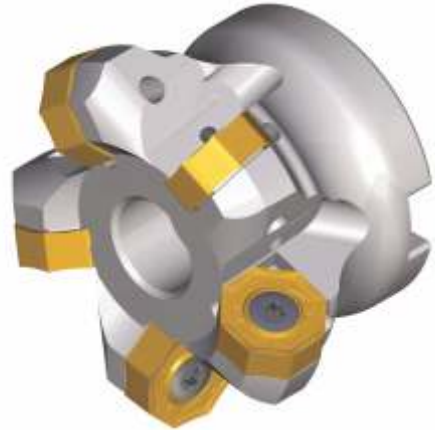
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# Milling 45°

## HexadecCut 45N

Ø 50 - 250  
Face Milling Cutter  
Insert size 05 and 08  
Page124

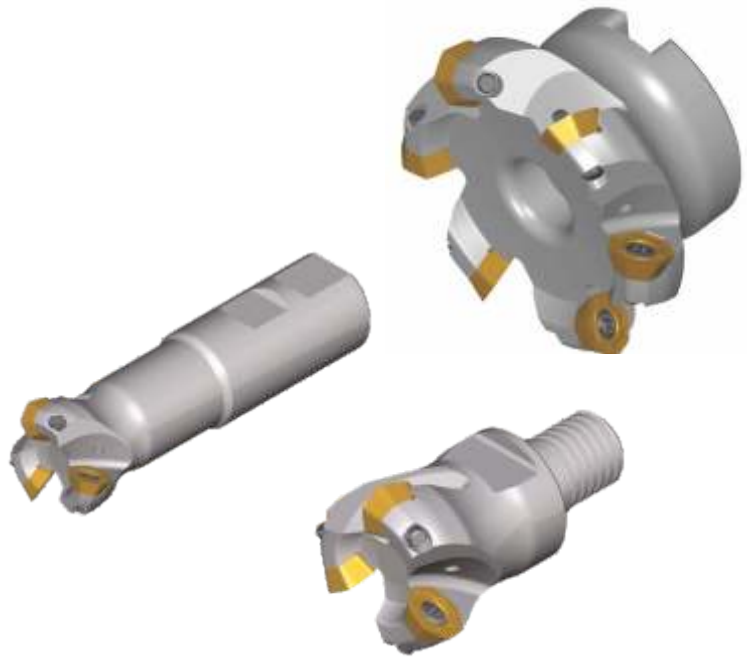


## HeptaCut 45P Multi Functional

Ø 50 - 200  
Face Milling Cutter  
Insert size 04 and (13)

Ø 25 - 40  
End Milling Cutter  
Insert size 04 and (13)

Ø 25 - 40  
Screw on type  
Insert size 04 and (13)  
Page 127



## OctaCut 45N

Ø 50 - 250  
Face Milling Cutter  
Insert size 12  
Page 130



## Milling 45°

### ISO 45P

Ø 40 - 160  
Face Milling Cutter  
Insert size 12  
Page 132



## Milling 90°

### DiCut 90P Feed Multi Functional

Ø 40 - 160  
Face Milling Cutter  
Insert size 10 and 18

Ø 16 - 40  
End Milling Cutter  
Insert size 10 und 18

Ø 16 - 40  
Screw on type  
Insert size 10  
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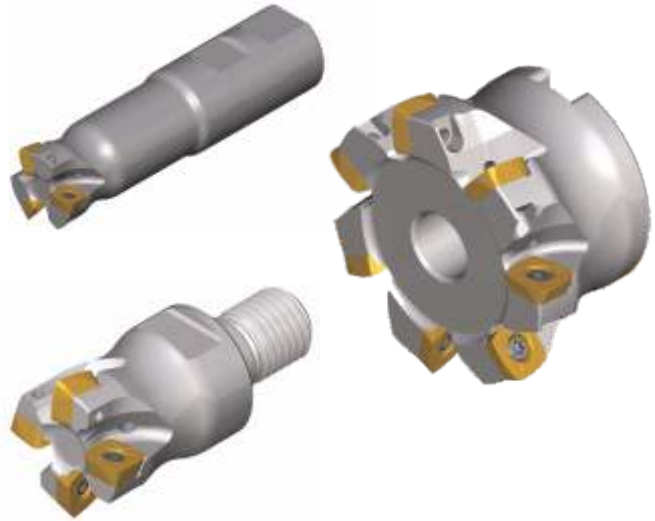
# Milling 90°

## TetraCut 90P Feed Multi Functional

Ø 40 - 200  
Face Milling Cutter  
Insert size 10, 14 and 18

Ø 25 - 30  
End Milling Cutter  
Insert size 10

Ø 25 - 30  
Screw on type  
Insert size 10  
Page 142



## TetraCut 90N

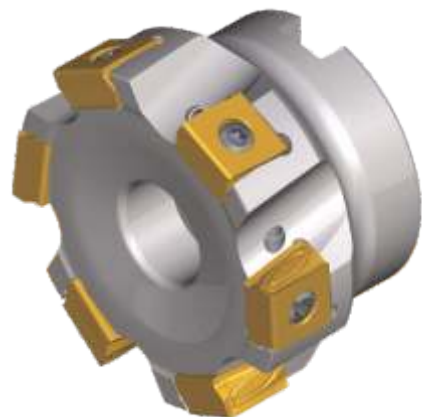
Ø 40 - 160  
Face Milling Cutter  
Insert size 10 and 15

Ø 20 - 40  
End Milling Cutter  
Insert size 10  
End Milling Cutter  
Insert size 10 and 15  
Page 149



## TetraTan 90N

Ø 50 - 315  
Face Milling Cutter  
Insert size 13  
Page 153



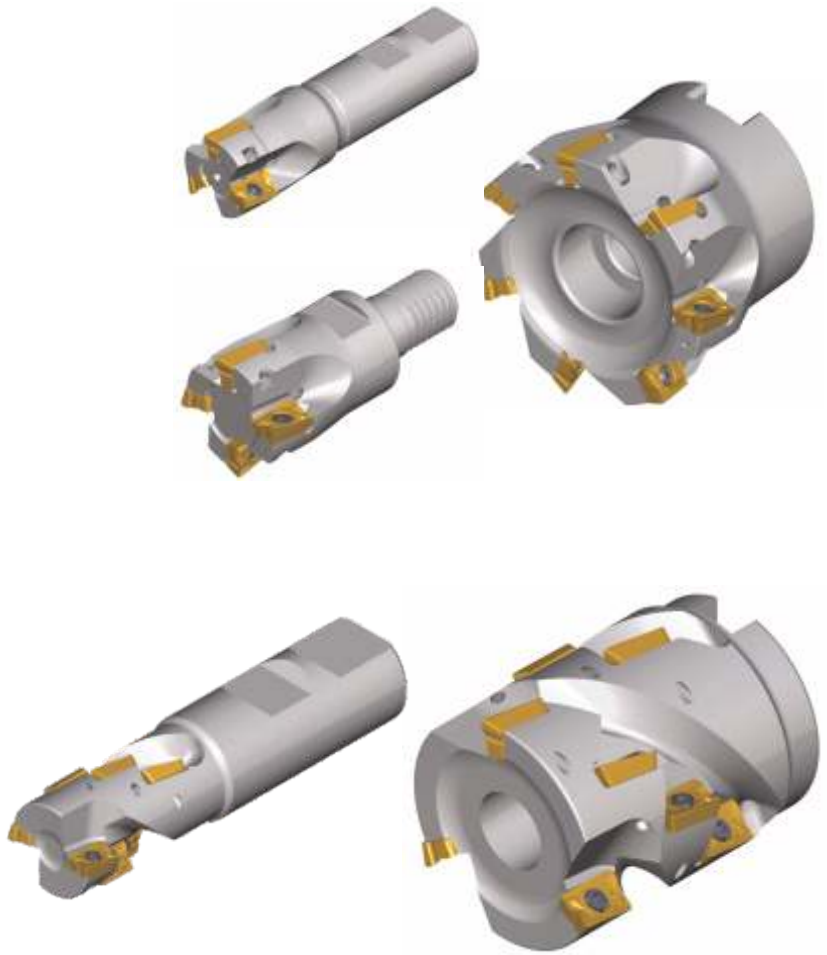
# Milling 90°

## ISO 90P

Ø 40 - 125  
Face Milling Cutter  
Insert size 10 and 16

Ø 12 - 40  
End Milling Cutter  
Insert size 10 and 16

Ø 16 - 32  
Screw on type  
Insert size 10  
Page 155



## OctaCut 88N

Ø 50 - 250  
Face Milling Cutter  
Insert size 12  
Page 160

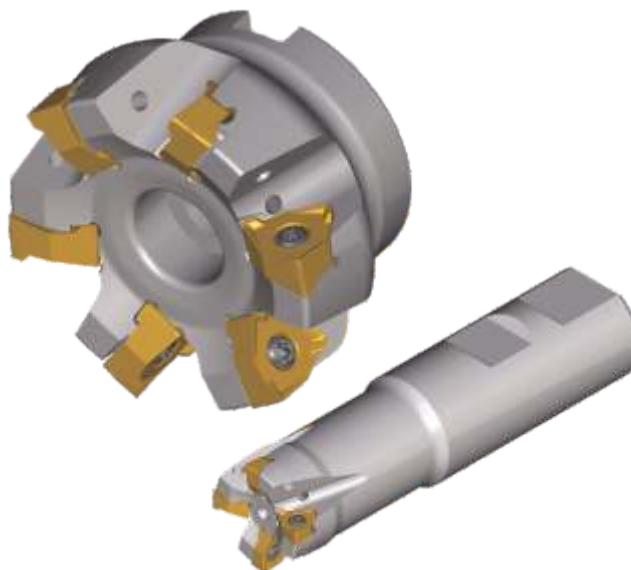


# Milling 90°

## HexaCut 90N

Ø 32 - 160  
Face Milling Cutter  
Insert size 04 and 08

Ø 20 - 32  
End Milling Cutter  
Insert size 04  
Page162



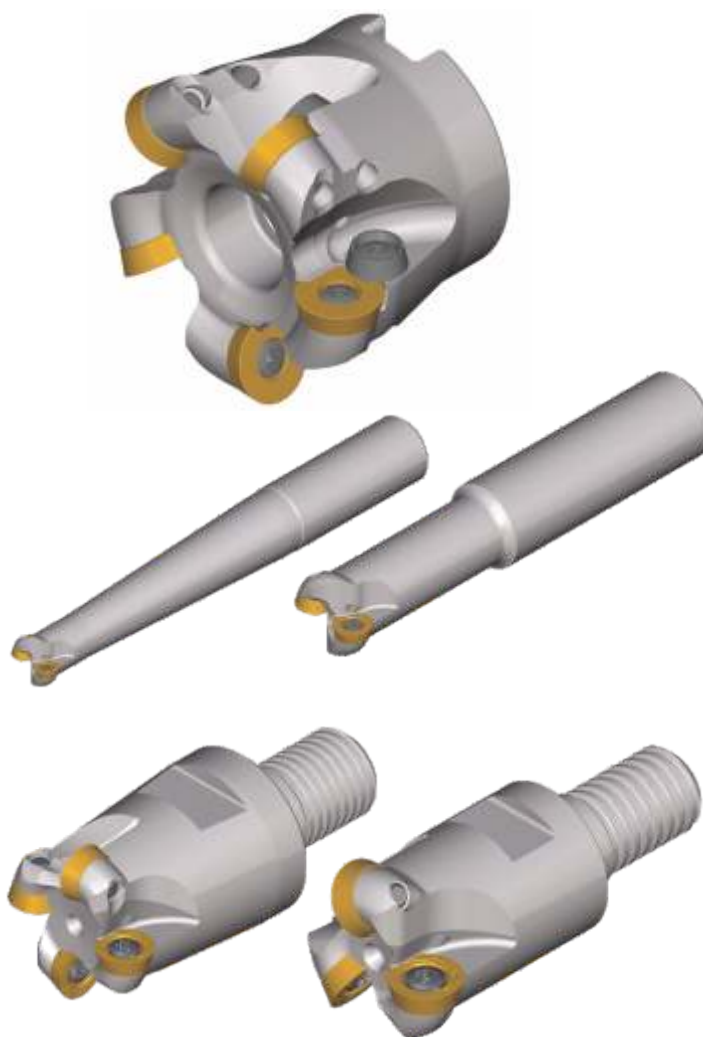
# 3D Milling

## Rcut 360 P

Ø 40 - 160  
Face Milling Cutter  
Insert size 10, 12 and 16

Ø 15 - 20  
End Milling Cutter  
Insert size 07 and 10

Ø 10 - 42 Screw on type  
Insert size 05, 07, 10, 12 and 16  
Page 169



# 3D Milling

## RhombiCut 95P

Ø 16 - 42  
Face Milling Cutter  
Insert size 06  
Page 176



## BallCut

Ø 8 - 25  
End Milling Cutter Steel Shank  
Insert size 08 to 25

Ø 8 - 32  
End Milling Cutter Solid Carbide Shank  
Insert size 08 to 32

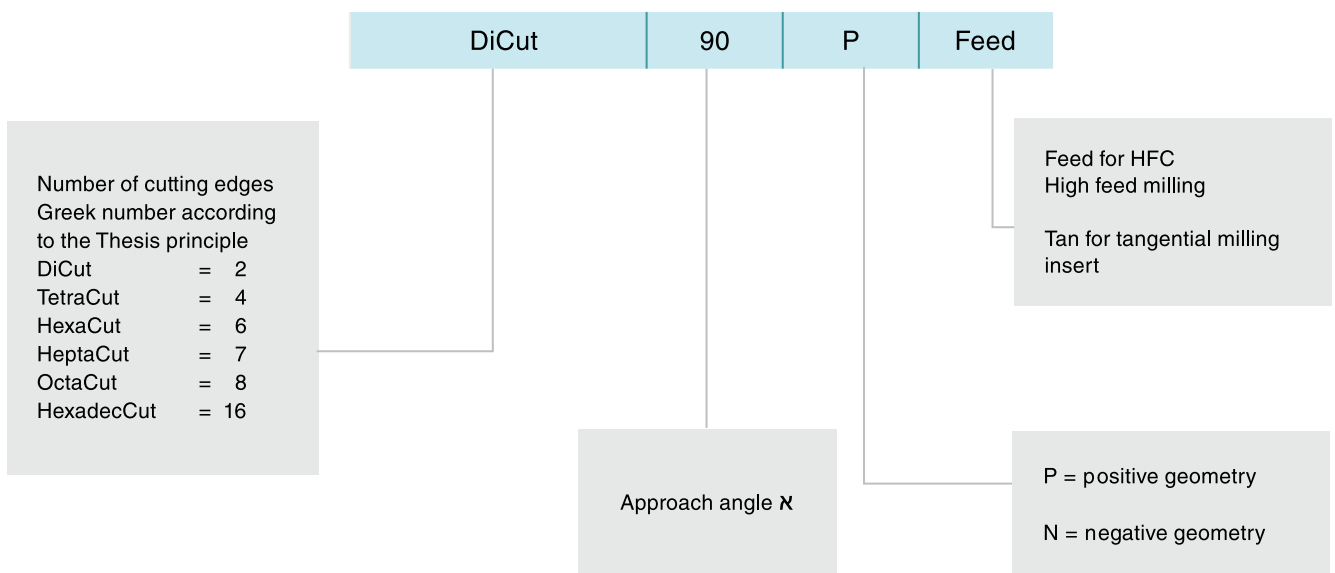
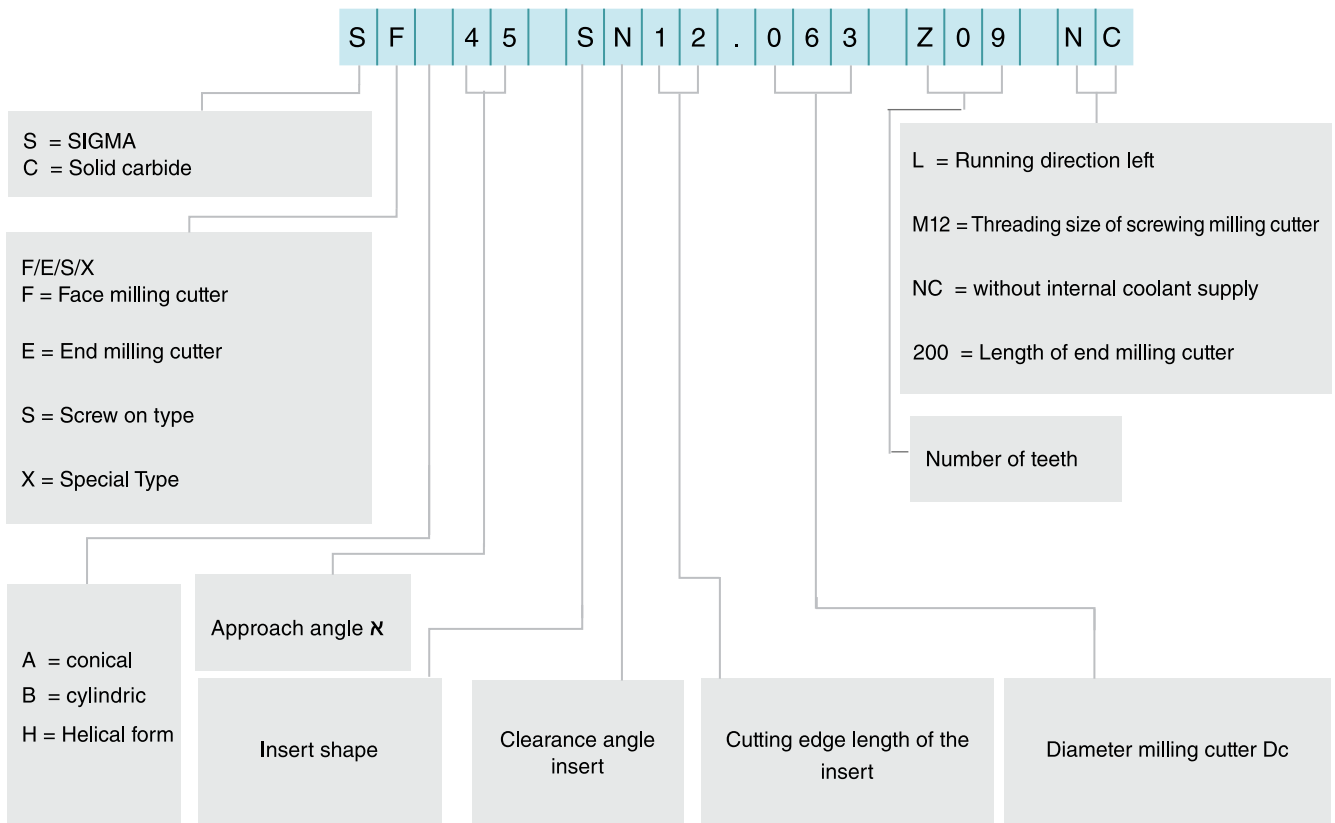
Ø 8 - 32  
Screw on type Steel Shank  
Insert size 08 to 32  
Page 178



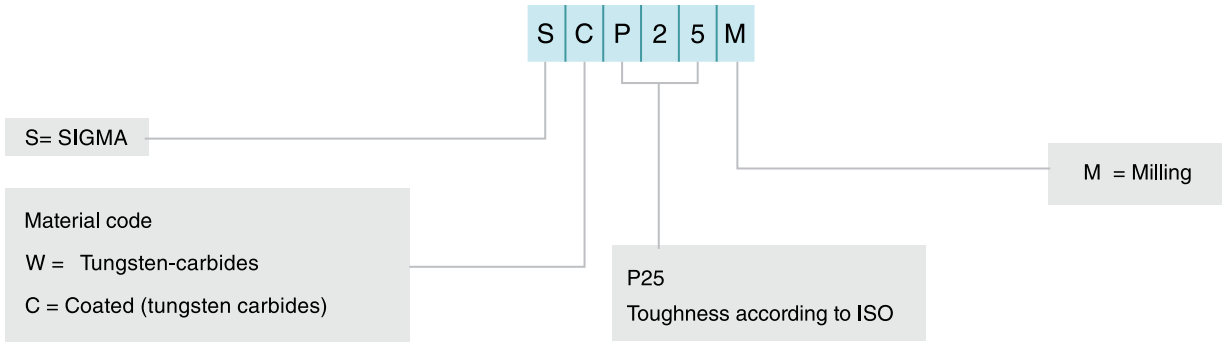


# Designation System

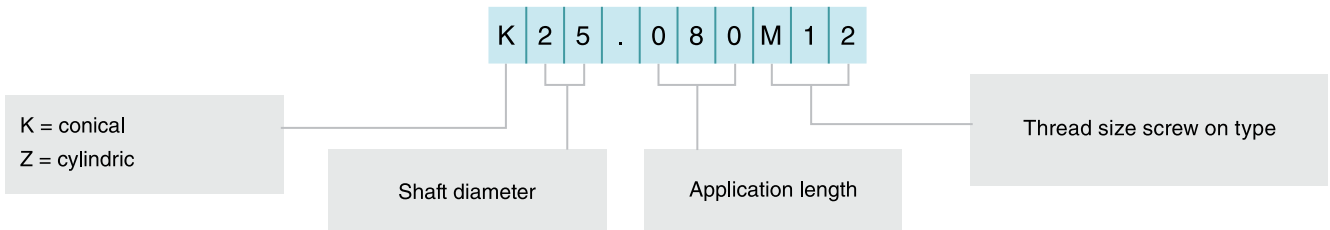
## Cutter designation system



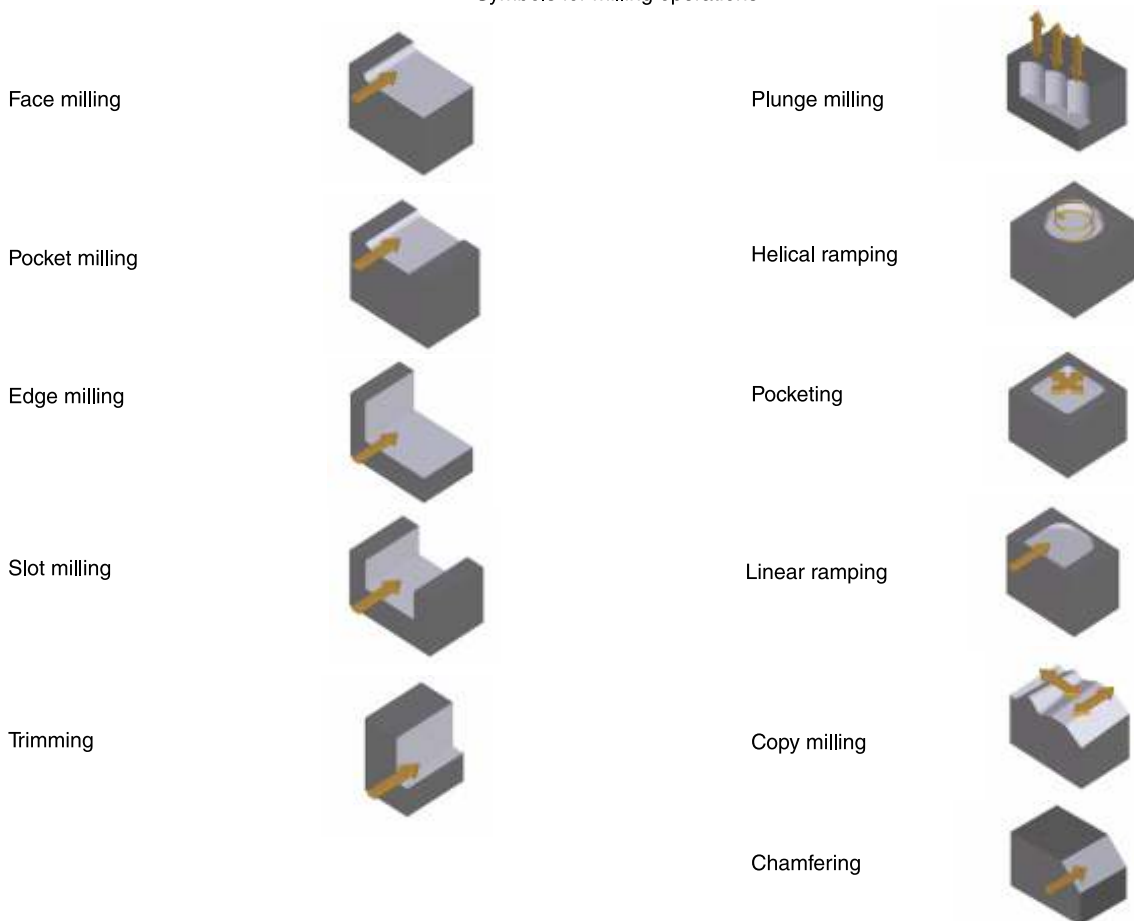
Cutting materials, designation system




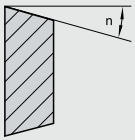
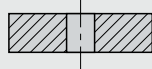
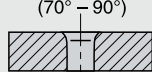
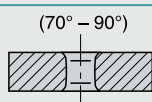
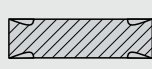
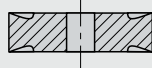
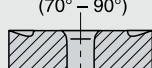
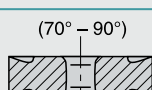
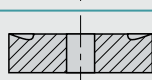
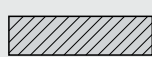
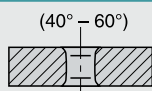
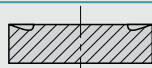
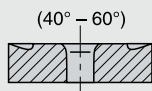
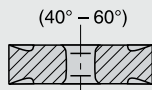
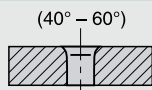





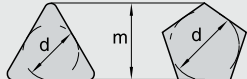


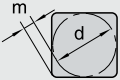


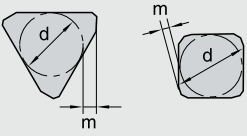

















Solid carbide extension, designation system



Symbols for milling operations

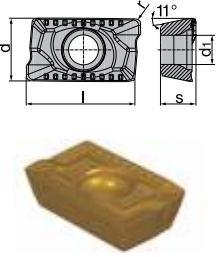
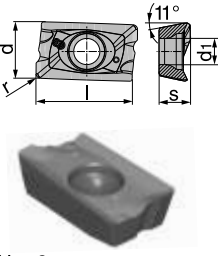
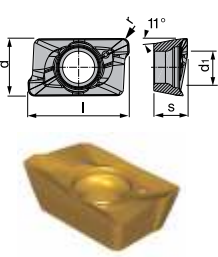
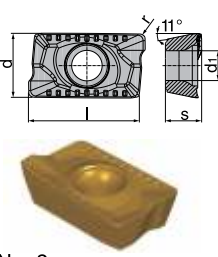
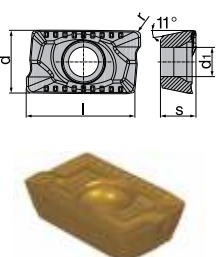


# ISO Indexable Insert Designation

S	N	M	X	12																																																																														
Insert shape	Clearance angle	Tolerances	Chip breaker, fixation	Cutting edge length																																																																														
A  85°		<table border="1"> <thead> <tr> <th></th> <th>m</th> <th>s</th> <th>d</th> </tr> </thead> <tbody> <tr><td>A</td><td>±0,005</td><td>±0,025</td><td>±0,025</td></tr> <tr><td>C</td><td>±0,013</td><td>±0,025</td><td>±0,025</td></tr> <tr><td>E</td><td>±0,025</td><td>±0,025</td><td>±0,025</td></tr> <tr><td>F</td><td>±0,005</td><td>±0,025</td><td>±0,013</td></tr> <tr><td>G</td><td>±0,025</td><td>±0,13</td><td>±0,025</td></tr> <tr><td>H</td><td>±0,013</td><td>±0,025</td><td>±0,013</td></tr> <tr><td>J</td><td>±0,005</td><td>±0,025</td><td>see Tab. 4</td></tr> <tr><td>K</td><td>±0,013</td><td>±0,025</td><td>see Tab. 4</td></tr> <tr><td>L</td><td>±0,025</td><td>±0,025</td><td>see Tab. 4</td></tr> <tr><td>M</td><td>see Tab. 5</td><td>±0,13</td><td>see Tab. 4</td></tr> <tr><td>N</td><td>see Tab. 5</td><td>±0,025</td><td>see Tab. 4</td></tr> <tr><td>U</td><td>see Tab. 5</td><td>±0,13</td><td>see Tab. 4</td></tr> </tbody> </table>		m	s	d	A	±0,005	±0,025	±0,025	C	±0,013	±0,025	±0,025	E	±0,025	±0,025	±0,025	F	±0,005	±0,025	±0,013	G	±0,025	±0,13	±0,025	H	±0,013	±0,025	±0,013	J	±0,005	±0,025	see Tab. 4	K	±0,013	±0,025	see Tab. 4	L	±0,025	±0,025	see Tab. 4	M	see Tab. 5	±0,13	see Tab. 4	N	see Tab. 5	±0,025	see Tab. 4	U	see Tab. 5	±0,13	see Tab. 4	<p>A </p> <p>B (70° - 90°) </p> <p>C (70° - 90°) </p> <p>F </p> <p>G </p> <p>H (70° - 90°) </p> <p>J (70° - 90°) </p> <p>M </p> <p>N </p> <p>Q (40° - 60°) </p> <p>R </p> <p>T (40° - 60°) </p> <p>U (40° - 60°) </p> <p>W (40° - 60°) </p> <p>X with special feature according to drawing</p>	<table border="1"> <thead> <tr> <th></th> <th>l</th> </tr> </thead> <tbody> <tr><td>06</td><td>6,350</td></tr> <tr><td>07</td><td>7,938</td></tr> <tr><td>09</td><td>9,525</td></tr> <tr><td>11</td><td>11,000</td></tr> <tr><td>12</td><td>12,700</td></tr> <tr><td>15</td><td>15,875</td></tr> <tr><td>16</td><td>16,500</td></tr> <tr><td>19</td><td>19,050</td></tr> <tr><td>22</td><td>22,000</td></tr> <tr><td>25</td><td>25,400</td></tr> <tr><td>31</td><td>31,750</td></tr> <tr><td>38</td><td>38,100</td></tr> </tbody> </table>		l	06	6,350	07	7,938	09	9,525	11	11,000	12	12,700	15	15,875	16	16,500	19	19,050	22	22,000	25	25,400	31	31,750	38	38,100
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B  82°	n	<table border="1"> <thead> <tr> <th>Tab. 4</th> <th>d</th> <th>J, K, L, M</th> <th>d</th> <th>U</th> </tr> </thead> <tbody> <tr> <td>over</td> <td>up to</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3,9</td> <td>10,0</td> <td>±0,05</td> <td></td> <td>±0,08</td> </tr> <tr> <td>10,0</td> <td>15,0</td> <td>±0,08</td> <td></td> <td>±0,13</td> </tr> <tr> <td>15,0</td> <td>20,0</td> <td>±0,10</td> <td></td> <td>±0,18</td> </tr> <tr> <td>20,0</td> <td>26,0</td> <td>±0,13</td> <td></td> <td>±0,25</td> </tr> <tr> <td>26,0</td> <td>32,0</td> <td>±0,15</td> <td></td> <td>±0,25</td> </tr> </tbody> </table>	Tab. 4	d	J, K, L, M	d	U	over	up to				3,9	10,0	±0,05		±0,08	10,0	15,0	±0,08		±0,13	15,0	20,0	±0,10		±0,18	20,0	26,0	±0,13		±0,25	26,0	32,0	±0,15		±0,25																																													
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C  80°		3°	<table border="1"> <thead> <tr> <th>Tab. 5</th> <th>d</th> <th>M, N</th> <th>m</th> <th>U</th> </tr> </thead> <tbody> <tr> <td>over</td> <td>up to</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3,9</td> <td>10,0</td> <td>±0,08</td> <td></td> <td>±0,13</td> </tr> <tr> <td>10,0</td> <td>15,0</td> <td>±0,13</td> <td></td> <td>±0,20</td> </tr> <tr> <td>15,0</td> <td>20,0</td> <td>±0,15</td> <td></td> <td>±0,27</td> </tr> <tr> <td>20,0</td> <td>26,0</td> <td>±0,18</td> <td></td> <td>±0,38</td> </tr> <tr> <td>26,0</td> <td>32,0</td> <td>±0,20</td> <td></td> <td>±0,38</td> </tr> </tbody> </table>	Tab. 5	d	M, N	m	U	over	up to				3,9	10,0	±0,08		±0,13	10,0	15,0	±0,13		±0,20	15,0	20,0	±0,15		±0,27	20,0	26,0	±0,18		±0,38	26,0	32,0	±0,20		±0,38																																												
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over	up to																																																																																	
3,9	10,0		±0,08		±0,13																																																																													
10,0	15,0		±0,13		±0,20																																																																													
15,0	20,0		±0,15		±0,27																																																																													
20,0	26,0		±0,18		±0,38																																																																													
26,0	32,0		±0,20		±0,38																																																																													
D  55°	5°																																																																																	
E  75°			7°																																																																															
H  120°		15°																																																																																
K  55°				20°	<p>Corner rounding uneven number of sides</p>																																																																													
L  90°					25°	<p>Corner rounding, even number of sides</p>																																																																												
M  86°						30°	<p>Chamfered inserts</p>																																																																											
O  135°							0°																																																																											
P  108°								11°																																																																										
R  -									0°																																																																									
S  90°										11°																																																																								
T  60°	0°																																																																																	
V  35°			0°																																																																															
W  80°		0°																																																																																
<p>The corner angle is in the case of not equiangular basic forms always the smaller angle.</p>																																																																																		

06		AN		S		N		- MP																																					
Thickness		Cutting edge corner		Cutting edge type		Direction of cut		Sigma-Standard																																					
		For radius inserts 				R 		Geometry code																																					
<table border="1"> <thead> <tr> <th></th> <th>S</th> </tr> </thead> <tbody> <tr><td>02</td><td>2,38</td></tr> <tr><td>03</td><td>3,18</td></tr> <tr><td>T3</td><td>3,97</td></tr> <tr><td>04</td><td>4,76</td></tr> <tr><td>05</td><td>5,56</td></tr> <tr><td><b>06</b></td><td><b>6,35</b></td></tr> <tr><td>07</td><td>7,94</td></tr> <tr><td>08</td><td>8,00</td></tr> <tr><td>09</td><td>9,52</td></tr> </tbody> </table>			S	02	2,38	03	3,18			T3	3,97	04	4,76	05	5,56	<b>06</b>	<b>6,35</b>	07	7,94	08	8,00	09	9,52	<table border="1"> <thead> <tr> <th></th> <th>Corner radius-r</th> </tr> </thead> <tbody> <tr><td>00</td><td>Sharp-edged</td></tr> <tr><td>02</td><td>0,2</td></tr> <tr><td>04</td><td>0,4</td></tr> <tr><td>08</td><td>0,8</td></tr> <tr><td>12</td><td>1,2</td></tr> <tr><td>16</td><td>1,6</td></tr> <tr><td>20</td><td>2,0</td></tr> <tr><td></td><td>etc.</td></tr> </tbody> </table>			Corner radius-r	00	Sharp-edged	02	0,2	04	0,4	08	0,8	12	1,2	16	1,6	20	2,0		etc.	sharp-edged 	
	S																																												
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	etc.																																												
Dimensions in mm		For chamfered inserts face milling 				N 		Example: <table border="1"> <tbody> <tr><td>1</td><td>Basic form</td><td>square</td></tr> <tr><td>2</td><td>Clearance angle</td><td>0°</td></tr> <tr><td>3</td><td>Tolerances</td><td>m ± 0.013 s ± 0.025 d ± 0.13</td></tr> <tr><td>4</td><td>Fixing cutting face</td><td>with special feature according to drawing</td></tr> <tr><td>5</td><td>Length of cutting edge</td><td>12.7</td></tr> <tr><td>6</td><td>Thickness</td><td>6.35</td></tr> <tr><td>7</td><td>Cutting edge corner</td><td>45° chamfer/clearance angle</td></tr> <tr><td>8</td><td>Cutting edge</td><td>*</td></tr> <tr><td>9</td><td>Direction of cut</td><td>right- and lefthand</td></tr> <tr><td>10</td><td>Internal designation</td><td>MP = Geometry</td></tr> </tbody> </table>		1	Basic form	square	2	Clearance angle	0°	3	Tolerances	m ± 0.013 s ± 0.025 d ± 0.13	4	Fixing cutting face	with special feature according to drawing	5	Length of cutting edge	12.7	6	Thickness	6.35	7	Cutting edge corner	45° chamfer/clearance angle	8	Cutting edge	*	9	Direction of cut	right- and lefthand	10	Internal designation	MP = Geometry						
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		<table border="1"> <thead> <tr> <th></th> <th>Approach angle</th> </tr> </thead> <tbody> <tr><td>A</td><td>Xr 45°</td></tr> <tr><td>D</td><td>60°</td></tr> <tr><td>E</td><td>75°</td></tr> <tr><td>F</td><td>85°</td></tr> <tr><td>P</td><td>90°</td></tr> <tr><td>Z</td><td>Special</td></tr> </tbody> </table>			Approach angle	A	Xr 45°	D	60°	E	75°	F	85°	P	90°	Z	Special	chamfered 		right and left hand cut 1) The use of these reference letters is optional																									
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A	Xr 45°																																												
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		<table border="1"> <thead> <tr> <th></th> <th>Clearance angle of face milling edge <math>\alpha_n</math></th> </tr> </thead> <tbody> <tr><td>A</td><td>3°</td></tr> <tr><td>B</td><td>5°</td></tr> <tr><td>C</td><td>7°</td></tr> <tr><td>D</td><td>15°</td></tr> <tr><td>E</td><td>20°</td></tr> <tr><td>F</td><td>25°</td></tr> <tr><td>G</td><td>30°</td></tr> <tr><td>N</td><td>0°</td></tr> <tr><td>P</td><td>11°</td></tr> <tr><td>Z</td><td>Special</td></tr> </tbody> </table>			Clearance angle of face milling edge $\alpha_n$	A	3°	B	5°	C	7°	D	15°	E	20°	F	25°	G	30°	N	0°	P	11°	Z	Special	chamfered and rounded * 																			
	Clearance angle of face milling edge $\alpha_n$																																												
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		<table border="1"> <tbody> <tr><td>MO</td><td>Round insert metric</td></tr> <tr><td>OO</td><td>Round insert Inch</td></tr> </tbody> </table>		MO	Round insert metric	OO	Round insert Inch	double chamfered 																																					
MO	Round insert metric																																												
OO	Round insert Inch																																												
				double chamfered and rounded																																									

# Indexable Inserts

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools				
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M		SWN10M			
 N = 2	ADKX 110308 SRTR	11,9	7,9	3,47	3,4	0,8					●										
 N = 2	APHT 100304 FR-MN	10	6,7	3,5	2,8	0,4															
	APHT 160408 FR-MN	16	9,52	5,26	4,5	0,8															
	APHT 100304 FR-MN2	10	6,7	3,5	2,8	0,4															
	APHT 160408 FR-MN2	16	9,52	5,26	4,5	0,8															
 N = 2	APKT 060204-PDTR	6	3,65	2,15	2,05	0,4		●		●		●									
 N = 2	APKT 1003 PDSR-BP	10	6,7	3,5	2,8	0,5		●	●	●											
	APKT 1003 PDSR-BM	10	6,7	3,5	2,8	0,5							●								
	APKT 1604 PDSR-BP	16	9,52	5,26	4,5	0,8		●	●	●					●						
	APKT 1604 PDSR-BM	16	9,52	5,26	4,5	0,8								●							
	APKT 160416 SR-BP	16	9,55	5,26	4,5	1,6				●											
	APKT 160424 SR-BP	16	9,55	5,26	4,5	2,4				●											
 N = 2	APKT 15T3 PDTR-BP	15	9,73	4,36	4,5	0,8				●	●										

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Order example 10 pieces ADKX 110308 SRTR SCP35M

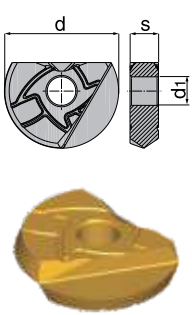
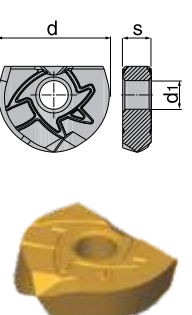
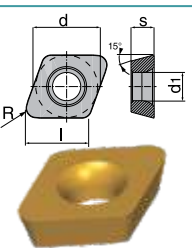
Colours of the original indexable inserts may deviate from the illustration!

							Cutting materials								Assignment tools			
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M		SCK20M	SCN10M	SWN10M
	APKT 100304 SR-MP2	10	6,7	3,5	2,8	0,4		●		●								Page 155
	APKT 100304 SR-MM2	10	6,7	3,5	2,8	0,4							●					
	APKT 100304 SR-RP2	10	6,7	3,5	2,8	0,4			●	●	●							
	APKT 100304 SR-RK2	10	6,7	3,5	2,8	0,4								●	●			
	APKT 160408 SR-MP2	16	9,60	5,26	4,5	0,8		●		●								
	APKT 160408 SR-MM2	16	9,60	5,26	4,5	0,8							●					
	APKT 160408 SR-RP2	16	9,60	5,26	4,5	0,8			●	●	●							
	APKT 160408 SR-RK2	16	9,60	5,26	4,5	0,8								●	●			

							Cutting materials				Assignment tools	
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCH03M	SCH10M	SCH23M	SCH30M		
	BE12-FHF		12	2,99	3,5		●					Page 178
	BE12-SHF		12	2,99	3,5			●	●			
	BE12-MHF		12	2,99	3,5					●		
	BE16-FHF		16	3,99	4		●					
	BE16-SHF		16	3,99	4			●	●			
	BE16-MHF		16	3,99	4					●		
	BE20-FHF		20	4,99	5		●					
	BE20-SHF		20	4,99	5			●	●			
	BE20-MHF		20	4,99	5					●		
	BE25-SHF		25	5,99	6				●	●		
	BE25-MHF		25	5,99	6						●	
	BE32-SHF		32	6,99	8				●	●		
	BE32-MHF		32	6,99	8						●	

Order example 10 pieces APKT 100304 SR-MP2 SCP25M

# Indexable Inserts

							Cutting materials				Assignment tools
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCH03M	SCH10M	SCH23M	SCH30M	
	BE08-MHN		8	2,39	2,5			●	●	●	
	BE10-MHN		10	2,59	3			●	●	●	
	BE12-SHN		12	2,99	3,5			●			
	BE12-MHN		12	2,99	3,5				●	●	
	BE16-SHN		16	3,99	4			●			
	BE16-MHN		16	3,99	4				●	●	
	BE20-SHN		20	4,99	5			●			
	BE20-MHN		20	4,99	5				●	●	
	BE25-MHN		25	5,99	6				●	●	
	BE32-MHN		32	6,99	8				●	●	
	BE08-MHN2		8	2,39	2,5				●	●	
	BE08-SHN2		8	2,39	2,5				●		
	BE10-MHN2		10	2,59	3				●	●	
	BE10-SHN2		10	2,59	3					●	
	BE12-FHN2		12	2,99	3,5			●			
	BE12-MHN2		12	2,99	3,5				●	●	
	BE12-SHN2		12	2,99	3,5					●	
	BE16-FHN2		16	3,99	4			●			
	BE16-MHN2		16	3,99	4				●	●	
	BE16-SHN2		16	3,99	4					●	
	BE20-FHN2		20	4,99	5			●			
	BE20-MHN2		20	4,99	5				●	●	
	BE20-SHN2		20	4,99	5					●	
	BE25-MHN2		25	5,99	6				●	●	
BE25-SHN2		25	5,99	6					●		
	CDGX 060210 SR-FH	5,8	6,5	2,38	2,9	1	●	●	●	●	
	CDGX 060210 SR-FW	1,72	6,5	2,38	2,9	1	●	●			

Order example 10 pieces BE08-MHN SCH10M

Colours and execution of the original indexable inserts, may deviate from the illustration!

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools					
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCS35M		SCN10M	SCN15M	SWN10M		
	LDMX 100408 SR-MP	10	6,6	4,76	2,8	0,8	●	●	●													
	LDMX 100408 SR-MM	10	6,6	4,76	2,8	0,8					●	●										
	LDMX 100408 SR-MK	10	6,6	4,76	2,8	0,8								●								
	LDMX 100408 SR-MT	10	6,6	4,76	2,8	0,8									△							
	LDMX 100408 FR-MN	10	6,6	4,76	2,8	0,8															●	
	LDMX 100420 SR-MP	10	6,6	4,76	2,8	2,0		●		●												
	LDMX 100430 SR-MP	10	6,6	4,76	2,8	3,0		●		●												
	LDGX 180508 FR-MN	18	9,65	5	4,15	0,8															●	●
	LDMX 180508 SR-MP	18	9,65	5	4,15	0,8		●		●	●											
	LDMX 180508 SR-MM	18	9,65	5	4,15	0,8						●	●									
	LDMX 180508 SR-MK	18	9,65	5	4,15	0,8									●							
	LDMX 180512 SR-RP	18	9,65	5	4,15	1,2		●		●	●											
LDMX 180512 SR-RK	18	9,65	5	4,15	1,2									●								
Page 137																						
N = 2																						
	LDMX 100415 SR-MPH	1,5	6,6	4,76	2,8	1,5	●	●	●	●												
	LDMX 100415 SR-MMH	1,5	6,6	4,76	2,8	1,5					●	●										
	LDMX 100415 SR-MKH	1,5	6,6	4,76	2,8	1,5								●	●							
Page 137																						
N = 4																						
	LNMX 100605 SR-RP	10	6,6	6,35	2,8	0,5	●		●	●												
	LNMX 100605 SR-RK	10	6,6	6,35	2,8	0,5							●	●								
	LNMX 100605 SR-RM	10	6,6	6,35	2,8	0,5						●										
	LNMX 151008 SR-RP	15	9,52	10,0	4,5	0,8	●		●	●												
	LNMX 151008 SR-RK	15	9,52	10,0	4,5	0,8								●	●							
	LNMX 151008 SR-RM	15	9,52	10,0	4,5	0,8						●										
Page 137																						
N = 4																						
	LNMX 131308 SR-RP	13	7	13	4,6	0,8			●	●	●											
	LNMX 131308 SR-RK	13	7	13	4,6	0,8								●	●							
	LNMX 131308 SR-MP	13	7	13	4,6	0,8	●		●													
	LNMX 131308 SR-MM	13	7	13	4,6	0,8						●										
Page 153																						
N=8																						

Order example 10 pieces LDMX 100408 SR-MP SCP25M



# Indexable Inserts

							Cutting materials										Assignment tools					
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCH03M		SCH05M	SCH10M	SCH23M	SCH30M	
	OFER 070405 SN-BP	7	18,1	4,76	-	0,5	●															
	OFEX 05T305 SN-BP	5	12,7	3,97	4,6	0,5	●	●	●													
	ONMU050608 SN-MP	5,24	12,7	5,8	5,45	0,8	●		●													
	ONMU050608 SN-MM	5,24	12,7	5,8	5,45	0,8					●	●										
	ONMU050608 SN-MH	5,24	12,7	5,8	5,45	0,8														●		
	ONMU050608 SN-MK	5,24	12,7	5,8	5,45	0,8									●							
	ONMU 080608 SN-MP	8	19	6,95	6,75	0,8	●	●	●	●												
	ONMU 080608 SN-MM	8	19	6,95	6,75	0,8					●	●										
	ONMU 080608 SN-MK	8	19	6,95	6,75	0,8								●	●							
	ONMQ 0806-FW	8	19,1	6,95	6,75	-						●								○		
	RDHT 12T3MO-MM	-	12	3,97	4,4	-						●	●									
	RDHW 0501 MOS-FH	-	5	1,5	2,2	-										●						
	RDHW 0702 MOS-FH	-	7	2,38	2,7	-											●					
	RDHW 1003 MOS-FH	-	10	3,18	3,9	-											●					

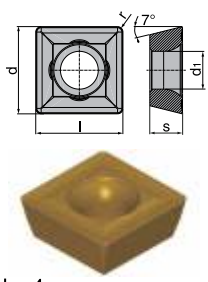
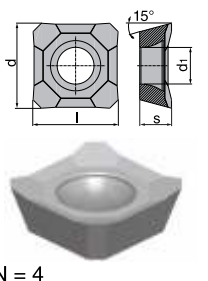
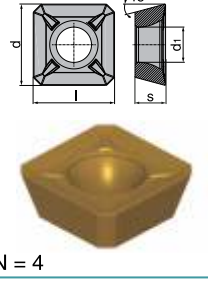
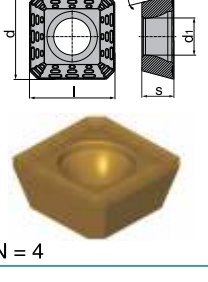
Order example 10 pieces OFFER 070405 SN-BP SCP25M

Colours of the original indexable inserts may deviate from the illustration!

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	Cutting materials											Assignment tools			
						SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCH03M	SCH05M		SCH10M	SCH23M	SCH30M
	RDKT 12T3 MOS-MP		12	3,97	3,9	●	●	●	●											
	RDKT 12T3 MOS-MM		12	3,97	3,9						●	●								
	RDKT 1604 MOS-MP		16	4,76	5,2	●	●	●	●											
	RDKT 1604 MOS-MM		16	4,76	5,2						●	●								
	RDKW 0501 MOS-MH		5	1,5	2,2													●	●	
	RDKW 0501 MOS-MP		5	1,5	2,2	●	●													
	RDKW 0501 MOS-MM		5	1,5	2,2						●	●								
	RDKW 0501 MOS-MK		5	1,5	2,2								●	●						
	RDKW 0501 MOS-RH		5	1,5	2,2															●
	RDKW 0702 MOS-MH		7	2,38	2,7														●	●
	RDKW 0702 MOS-MP		7	2,38	2,7	●	●	●	●											
	RDKW 0702 MOS-MM		7	2,38	2,7						●	●								
	RDKW 0702 MOS-MK		7	2,38	2,7								●	●						
	RDKW 0702 MOS-RH		7	2,38	2,7															●
	RDKW 1003 MOS-MH		10	3,18	3,9														●	●
	RDKW 1003 MOS-MP		10	3,18	3,9	●	●	●	●											
	RDKW 1003 MOS-MM		10	3,18	3,9						●	●								
	RDKW 1003 MOS-MK		10	3,18	3,9								●	●						
	RDKW 1003 MOS-RH		10	3,18	3,9															●
	RDKW 12T3 MOS-MH		12	3,97	3,9														●	●
RDKW 12T3 MOS-MP		12	3,97	3,9	●	●	●	●												
RDKW 12T3 MOS-MK		12	3,97	3,9								●	●							
RDKW 12T3 MOS-RH		12	3,97	3,9															●	
RDKW 1604 MOS-MH		16	4,76	5,2														●	●	
RDKW 1604 MOS-MP		16	4,76	5,2	●	●	●	●												
RDKW 1604 MOS-MK		16	4,76	5,2								●	●							
RDKW 1604 MOS-RH		16	4,76	5,2															●	
	REMW 1304MO-MP	-	13,2	4,76	4,6	●	●	●	●											
	REMW 1304MO-MM	-	13,2	4,76	4,6							●								
	REMW 1304MO-MK	-	13,2	4,76	4,6								●	●						
	REMW 1304MO-MH	-	13,2	4,76	4,6										●	●			●	

Order example 10 pieces RDKT 12T3 MOS-MP SCP20M

# Indexable Inserts

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools							
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCS35M		SCN10M	SWN10M					
 <p>N = 4</p>	SCMX 120512	12,70	12,70	5,56	5,5	1,2			●															
 <p>N = 4</p>	SDHT 1204 AEFN-ALC	12,70	12,70	4,76	5,5	-																		
	SDHT 1504 AEFN-ALC	15,88	15,88	4,76	5,5	-																	●	●
 <p>N = 4</p>	SDHT 1204 AESN	12,70	12,70	4,76	5,5	-	●	●	●					●										
	SDHT 1504 AESN	15,88	15,88	4,76	5,5	-		●																
 <p>N = 4</p>	SDHT 1204 AESN-BM	12,70	12,70	4,76	5,5	-								●										
N = 4																								

Order example 10 pieces SCMX 120512 SCP30M

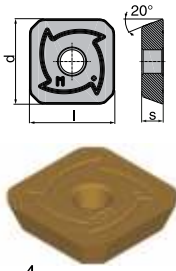
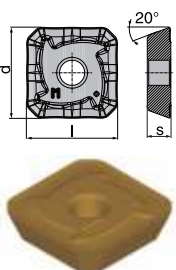
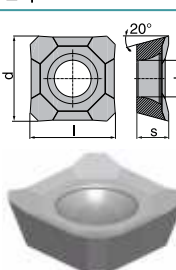
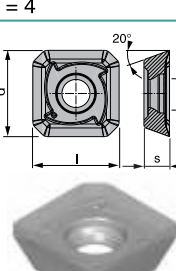
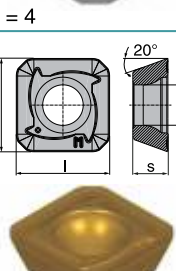
Colours of the original indexable inserts may deviate from the illustration!

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools									
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SKK15M	SKK20M	SCS35M		SCN15M	SCH05M	SCH10M	SCH30M					
	SDMT 090308	9,52	9,52	3,18	4	0,8	●																			
	SDMT 120408-SN	12,70	12,70	4,76	5,5	0,8		●																		
	SDMT 1205 PDSR-BP	12,70	12,70	5,56	5,5	-			●	●																
	SDMT 100408 SR-MP	10,4	10,4	4,86	3,5	0,8	●		●	●																
	SDMT 100408 ER-MM	10,4	10,4	4,86	3,5	0,8					●	●														
	SDMT 100408 SR-MK	10,4	10,4	4,86	3,5	0,8							●													
	SDMT 100408 FR-MN	10,4	10,4	4,86	3,5	0,8															●					
	SDMT 140512 SR-MP	14,8	14,8	5,2	5,5	1,2	●		●	●																
	SDMT 140512 ER-MM	14,8	14,8	5,2	5,5	1,2					●	●														
	SDMT 140512 SR-MK	14,8	14,8	5,2	5,5	1,2							●													
	SDMT 140512 FR-MN	14,8	14,8	5,2	5,5	1,2															●					
	SDMT 100415 SR-MPH	1,1	10,2	4,76	3,5	1,5	●	●	●	●																
	SDMT 100415 ER-MMH	1,1	10,2	4,76	3,5	1,5					●	●														
	SDMT 100415 SR-MHH	1,1	10,2	4,76	3,5	1,5																		●		
	SDGT 100415 SR-MTH	1,1	10,2	4,76	3,5	1,5																			△	
	SDMT 140520 SR-MPH	2,2	14,7	5	5,5	2	●	●	●	●																
	SDMT 140520 ER-MMH	2,2	14,7	5	5,5	2					●	●														
	SDMT 140520 SR-MHH	2,2	14,7	5	5,5	2																			●	
	SDMT 180630 SR-MPH	3	18,7	6	6,5	3,0	●		●																	
	SDMT 180630 SR-MMH	3	18,7	6	6,5	3,0					●	●														
	SDMW 100415 SR-RPH	1,1	10,2	4,76	3,5	1,5	●	●	●	●																
	SDMW 100415 SR-RKH	1,1	10,2	4,76	3,5	1,5							●	●												
	SDMW 100415 SR-RHH	1,1	10,2	4,76	3,5	1,5																●	●	●		
	SDMW 140520 SR-RPH	2,2	14,7	5	5,5	2	●	●	●	●																
	SDMW 140520 SR-RKH	2,2	14,7	5	5,5	2							●	●												
	SDMW 140520 SR-RHH	2,2	14,7	5	5,5	2																	●	●	●	
	SDMW 180630 SR-RPH	3	18,7	6	6,5	3,0			●	●																
	SDMW 180630 SR-RKH	3	18,7	6	6,5	3,0							●	●												
	SDMW 180630 SR-RHH	3	18,7	6	6,5	3,0																		●	●	●

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Order example 10 pieces SDMT 090308 SCP25M

# Indexable Inserts

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools		
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M		SWN10M	
 <p>N = 4</p>	SEKN 1203 AFSN-MP	12,70	12,70	3,18	-	-		●	●	●									
	SEKN 1203 AFEN-MM	12,70	12,70	3,18	-	-						●							
	SEKN 1203 AFSN-MK	12,70	12,70	3,18	-	-							●	●					
	SEKN 1504 AFSN-MP	15,88	15,88	4,76	-	-	●	●	●	●	●								
	SEKN 1504 AFEN-MM	15,88	15,88	4,76	-	-						●	●						
	SEKN 1504 AFSN-MK	15,88	15,88	4,76	-	-								●					
 <p>N = 4</p>	SEKR 1203 AFSN-MP	12,70	12,70	3,18	-	-		●	●	●									
	SEKR 1203 AFEN-MM	12,70	12,70	3,18	-	-						●							
 <p>N = 4</p>	SEHT 1204 AFFN-ALC	12,70	12,70	4,76	5,5	-											●	●	
 <p>N = 4</p>	SEHT 13T3 AZFN-MN	13,4	13,4	3,97	4,2													●	●
 <p>N = 4</p>	SEKT 1204 AFSN-MP	12,70	12,70	4,76	5,5	-	●	●	●	●									
	SEKT 1204 AFEN-MM	12,70	12,70	4,76	5,5	-					●	●							
	SEKT 13T3 AFSN-MP	13,4	13,4	3,97	4,2	-	●	●	●	●									
	SEKT 13T3 AFEN-MM	13,4	13,4	3,97	4,2	-					●	●							

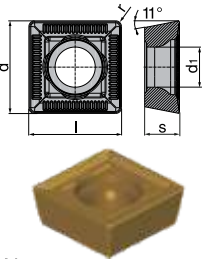
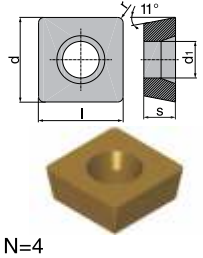
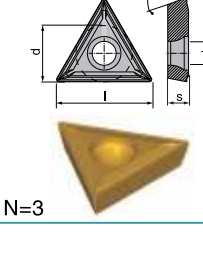
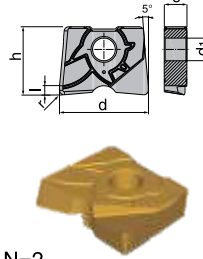
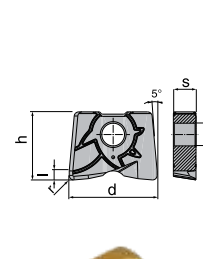
Order example 10 pieces SEKN 1203 AFSN-MP SCP25M

Colours of the original indexable inserts may deviate from the illustration!

N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools	
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M		SWN10M
  N = 4	SEKW 1204 AFSN-MP	12,70	12,70	4,76	5,5	-	●	●	●	●								Page 132
	SEKW 1204 AFEN-MM	12,70	12,70	4,76	5,5	-					●							
	SEKW 1204 AFSN-MK	12,70	12,70	4,76	5,5	-							●	●				
	SEKW 13T3 AFSN-MP	13,4	13,4	3,97	4,2	-	●	●	●	●								
	SEKW 13T3 AFEN-MM	13,4	13,4	3,97	4,2	-					●							
	SEKW 13T3 AFSN-MK	13,4	13,4	3,97	4,2	-							●	●				
  N = 4	SNMX 1206 ANSN-MP	12,70	12,70	6,35	5,2	-	●	●	●	●							Page 130	
	SNMX 1206 ANSN-MM	12,70	12,70	6,35	5,2	-					●	●						
	SNMX 1206 ANSN-MK	12,70	12,70	6,35	5,2	-							●	●				
	SNEX 1206-FW	12,70	12,70	6,35	5,2	-					●							
  N = 8	SNMX 120608 SN-MP	12,70	12,70	6,35	5,2	0,8			●	●							Page 160	
	SNMX 120608 SN-MM	12,70	12,70	6,35	5,2	0,8					●							
	SNMX 120608 SN-MK	12,70	12,70	6,35	5,2	0,8							●	●				
	SNMX 120612 SN-MP	12,70	12,70	6,35	5,2	1,2								●	●			
	SNMX 120612 SN-MM	12,70	12,70	6,35	5,2	1,2												
	SNMX 120612 SN-MK	12,70	12,70	6,35	5,2	1,2								●	●			
  N = 4	SPKN 1203 EDSR-MP	12,70	12,70	3,18	-	-	●	●	●	●								
	SPKN 1203 EDSR-MK	12,70	12,70	3,18	-	-							●	●				
	SPKN 1504 EDSR-MP	15,88	15,88	4,76	-	-	●	●	●	●								
	SPKN 1504 EDSR-MK	15,88	15,88	4,76	-	-								●	●			
	SPKN 2506 DZSR-MP	25,4	25,4	6,35	-	-			●	●								
  N = 4	SPKR 1203 EDSR	12,70	12,70	3,18	-	-		●										

Order example 10 pieces SEKW 1204 AFSN-MP SCP25M

Indexable Inserts

N = Number of cutting edges	Ordering code	h	l	d	s	d <sub>1</sub>	r	Cutting materials								Assignment tools				
								SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M		SCK20M	SCN10M	SCH10M	
 <p>N=4</p>	SPMT 060304		6,35	6,35	3,18	3,4	0,4			●										
	SPMT 120408-SN		12,70	12,70	4,76	5,2	0,8			●	●									
 <p>N=4</p>	SPMW 120408		12,70	12,70	4,76	5,2	0,8							●						
	 <p>N=3</p>	TCMT 110202 EN		10,4	6,35	2,38	2,8	0,2			●									
TCMT 16T304 EN			15,5	9,52	3,97	4,4	0,4			●										
 <p>N=2</p>	TE0810-SHF	7	2	8	2,4	2,5	1,0											●		
	TE1010-SHF	8,5	2	10	2,6	3	1,0												●	
	TE1210-SHF	10	2	12	3	3,5	1,0												●	
	TE1220-SHF	10	3	12	3	3,5	2,0												○	
	TE1610-SHF	12	2	16	4	4	1,0												●	
	TE1630-SHF	12	4	16	4	4	3,0												○	
	TE2010-SHF	15	2	20	5	5	1,0												●	
	TE2040-SHF	15	5	20	5	5	4,0												○	
	TE2510-SHF	18,5	2	25	6	6	1,0												●	
	TE2550-SHF	18,5	6	25	6	6	5,0												○	
 <p>N=2</p>	TE0806-MHN	7	1,6	8	2,4	2,5	0,6												●	
	TE0810-MHN	7	2	8	2,4	2,5	1,0													●
	TE1005-MHN	8,5	1,5	10	2,6	3	0,5													○
	TE1008-MHN	8,5	1,8	10	2,6	3	0,8													●
	TE1010-MHN	8,5	2	10	2,6	3	1,0													●
	TE1205-MHN	10	1,5	12	3	3,5	0,5													○
	TE1210-MHN	10	2	12	3	3,5	1,0													●
	TE1220-MHN	10	3	12	3	3,5	2,0													●
	TE1610-MHN	12	2	16	4	4	1,0													●
	TE1630-MHN	12	4	16	4	4	3,0													●
	TE2010-MHN	15	2	20	5	5	1,0													●
	TE2040-MHN	15	5	20	5	5	4,0													●
	TE2510-MHN	18,5	2	25	6	6	1,0													●
	TE2550-MHN	18,5	6	25	6	6	5,0													●

Order example 10 pieces SPMT 060304 SCP30M

Colours of the original indexable inserts may deviate from the illustration!

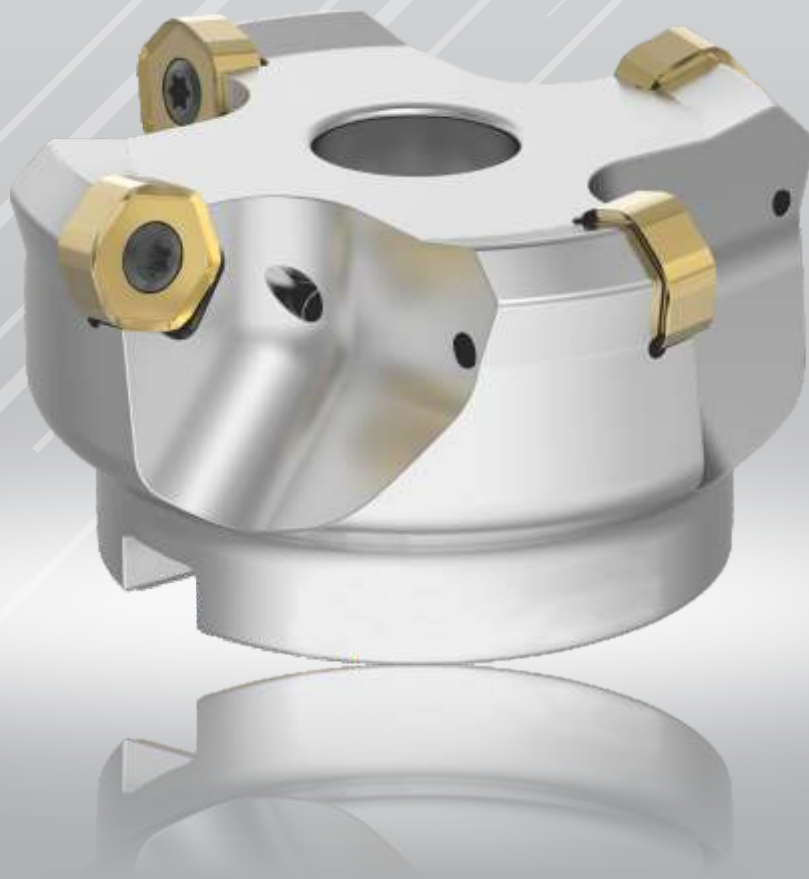
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	Cutting materials										Assignment tools						
							SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M		SCN15M	SWN10M	SCS35M	SCH05M	SCH10M	
<p>N=6</p>	TNHF 1204 ANSN-BK	12	12,70	2,38	-	-																	
	<p>N=3</p>	TPKN 1603 PDSR-MP	16	9,52	3,18	-	-	●	●	●	●												
TPKN 1603 PDSR-MK		16	9,52	3,18	-	-							●	●									
TPKN 2204 PDSR-MP		22	12,70	4,76	-	-	●	●	●	●													
TPKN 2204 PDSR-MK		22	12,70	4,76	-	-							●	●									
<p>N=6</p>	WNEX 040304-MP	4	6,7	3,97	3,2	0,4		●		●												Page 162	
	WNEX 040304-MM	4	6,7	3,97	3,2	0,4					●												
	WNEX 040304-MK	4	6,7	3,97	3,2	0,4							●										
	WNEX 080608-RP	8	12,7	6,55	4,6	0,8		●		●													
	WNEX 080608-RM	8	12,7	6,55	4,6	0,8					●	●											
	WNEX 080608-RK	8	12,7	6,55	4,6	0,8							●										
WNEX 080608-MN	8	12,7	6,55	4,6	0,8								●		●								
<p>N=7</p>	XEMT 040408-MP	4	12,7	4,76	4,6	0,8	●	●	●	●												Page 127	
	XEMT 040408-MM	4	12,7	4,76	4,6	0,8					●	●											
	XEMT 040408-MN	4	12,7	4,76	4,6	0,8								●									
	XEGT 040408-MT	4	12,7	4,76	4,6	0,8														●			
<p>N=7</p>	XEMW 040408-MP	4	12,7	4,76	4,6	0,8	●	●	●	●												Page 127	
	XEMW 040408-MM	4	12,7	4,76	4,6	0,8					●												
	XEMW 040408-MK	4	12,7	4,76	4,6	0,8							●										
	XEMW 040408-MH	4	12,7	4,76	4,6	0,8														●	●		

Order example 10 pieces TNHF 1204 ANSN-BK SCK20M



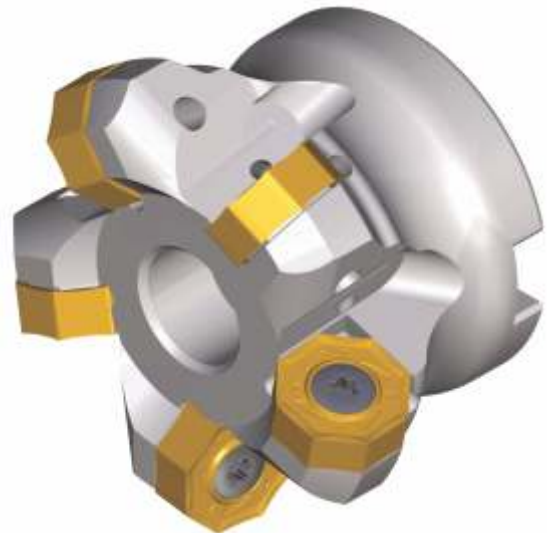
**SIGMA** **TIZ**

FACE MILLING 45°



# HexadecCut 45N

Ø 50 - 250  
 Face Milling Cutter  
 Insert size 05 and 08



Special features:

- 16 cutting edges for increase of productivity
- Negativ basic geometry, thus extremely stable
- Effective positive cutting edge geometry, thus smooth cut
- Numbering of cutting edges for exact true running
- WIPER – geometry for qualitativ high-class surface. Best results if increasing cutting speed (approximately double  $v_c$ , small cutting depth, approximately  $a_p$  0.7 mm, tooth feed approximately  $f_z$  0.25 mm with milling cutter diameter 63 mm)
- Big metal removal due to close division of the tools
- Uneven spacing leads to reduced vibration and extremely smooth running
- Cutting material diversity for optimal cutting results on a wide material range

ON.. 05..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max ONM. 05	Feed [ mm ] $f_z$ ONM. 05
MP	0,40 2 3,00	0,16 0,22 0,30
MM	0,40 2 3,00	0,12 0,18 0,25
MK	0,40 2 3,00	0,20 0,25 0,35
FW	0,40 1,50 2,50	0,10 0,16 0,26

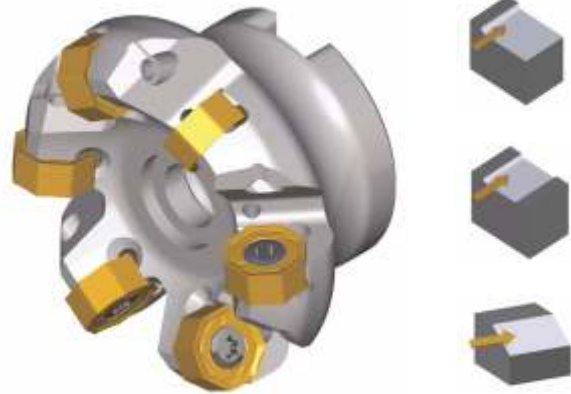
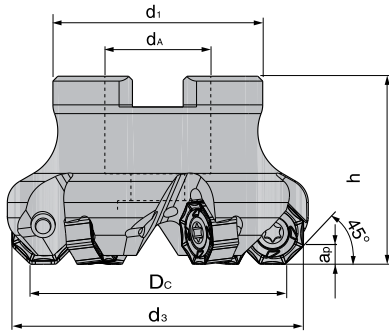
ON.. 08..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max ONM. 08	Feed [ mm ] $f_z$ ONM. 08
MP	1 3 5	0,2 0,27 0,45
MM	1 3 5	0,2 0,25 0,35
MK	1 3 5	0,2 0,35 0,60
FW	0.5 0.7 0.9	0,2 0,25 0,30

Cutting speed page 134-135

# HexadecCut 45N

Face milling cutter 45° for ONMU 05..



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	d3	d1	h	dA	ap	zR			Fixation screw AP06-40115 5131917	Torque wrench IP20 5088521
50	57,5	50	40	22	3	4	SF45 ON05.050 Z04	●		
50	57,5	50	40	22	3	6	SF45 ON05.050 Z06	●		
63	70,5	50	40	22	3	6	SF45 ON05.063 Z06	●		
63	70,5	50	40	22	3	8	SF45 ON05.063 Z08	●		
80	87,5	60	50	27	3	7	SF45 ON05.080 Z07	●		
80	87,5	60	50	27	3	10	SF45 ON05.080 Z10	●		
100	107,5	80	50	32	3	8	SF45 ON05.100 Z08	●		
100	107,5	80	50	32	3	12	SF45 ON05.100 Z12	●		
125	132,5	95	63	40	3	10	SF45 ON05.125 Z10	●		
125	132,5	95	63	40	3	16	SF45 ON05.125 Z16	●		

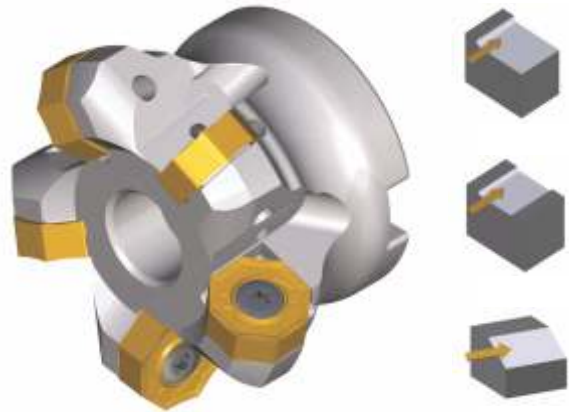
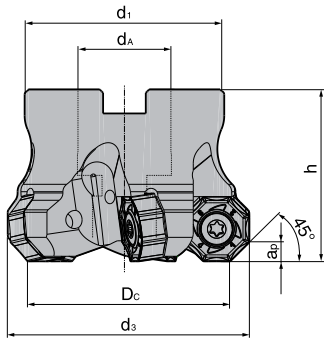
Order example 10 pieces SF45 ON05.050 Z04

WSP Insert Size 05							Cutting materials Ident No.										
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCH10M	SCH30M
							<p>N = 16</p>	ONMU 050608 SN-MP	5,24	12,7	5,8	5,45	0,8	●	●		
ONMU 050608 SN-MM	5,24	12,7	5,8	5,45	0,8						●	●					
ONMU 050608 SN-MK	5,24	12,7	5,8	5,45	0,8									●			
ONMU 050608 SN-MH	5,24	12,7	5,8	5,45	0,8											●	

Order example 10 pieces ONMU 050608 SN-MP SCP25M

# HexadecCut 40N

Face milling cutter 45° for ONMU08..



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	d <sub>3</sub>	d <sub>1</sub>	h	d <sub>A</sub>	a <sub>p</sub>	zR				
50	60	46	50	22	5	4	SF45 ON08.050 Z04	●	 Fixation screw A02-60160 6401270  Torque wrench T25 5088518  M <sub>A</sub> = 6Nm	
63	73	58	50	27	5	5	SF45 ON08.063 Z05	●		
66	73	58	50	27	5	5	SF45 ON08.066 Z05	○		
80	90	78	50	32	5	6	SF45 ON08.080 Z06	●		
80	90	78	50	32	5	7	SF45 ON08.080 Z07	●		
100	110	78	50	32	5	7	SF45 ON08.100 Z07	●		
100	110	78	50	32	5	9	SF45 ON08.100 Z09	●		
125	135	90	63	40	5	9	SF45 ON08.125 Z09	●		
125	135	90	63	40	5	11	SF45 ON08.125 Z11	●		
160	170	90	63	40	5	11	SF45 ON08.160 Z11	●		
200	210	130	65	60	5	16	SF45 ON08.200 Z16 NC	●		
250	260	190	75	60	5	18	SF45 ON08.250 Z18 NC	●		

Order example 1 piece SF45 ON08.050 Z04

WSP Insert Size 08							Cutting materials Ident No.										
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCH10M	SCH30M
							 N = 16	ONMU 080608 SN-MP	8	19	6,95	6,75	0,8	●	●	●	●
ONMU 080608 SN-MM	8	19	6,95	6,75	0,8							●	●				
ONMU 080608 SN-MK	8	19	6,95	6,75	0,8									●	●		
ONMQ 0806-FW	8	19,1	6,95	6,75	0,8							●					○

Order example 10 pieces ONMU 080608 SN-MP SCP20M

Cutting speed page 134-135

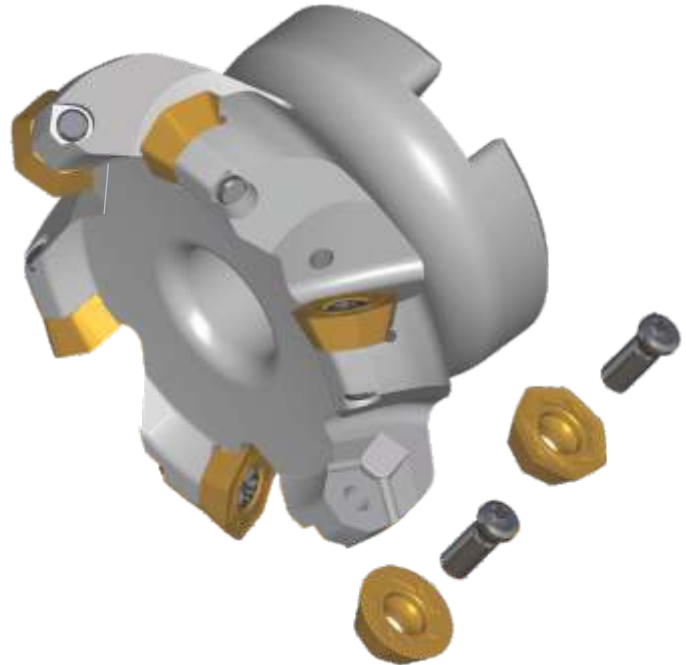
# HeptaCut 45P

Multi Functional

Ø 50 - 200  
Face Milling Cutter  
Insert size 04 (13)

Ø 25 - 40  
End Milling Cutter  
Insert size 04 (13)

Ø 25 - 40  
Screw on type  
Insert size 04 (13)



## Special features:

- Multifunctional tool system for highest productivity
- 1 basic body for 2 machining processes = multifunctional
- Saving of tool holders due to multifunctional tool system
- Positive basic geometry, therefore easy cutting
- 7 cutting edges for increase of productivity on face milling
- Round insert with 7 cutting edges through defined geometrical design
- Marking of the cutting edges for exact concentricity
- High metal removal also on inefficient old machines due to small power consumption
- Uneven spacing leads to reduced vibration and extremely smooth running
- Diversity of cutting materials for optimal cutting results on a wide material range

# HeptaCut 45P

Multi Functional



XEM. 04..

REM. 13..

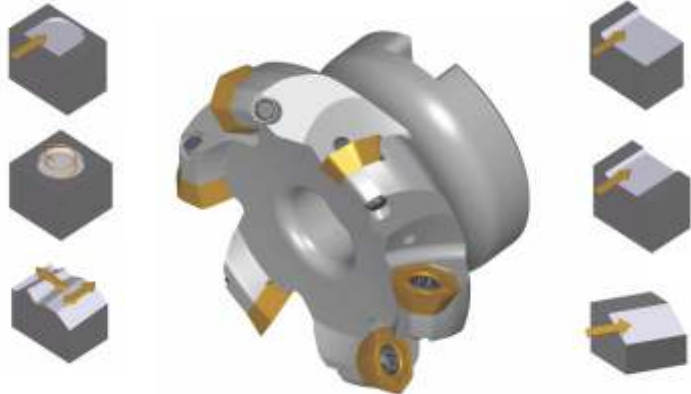
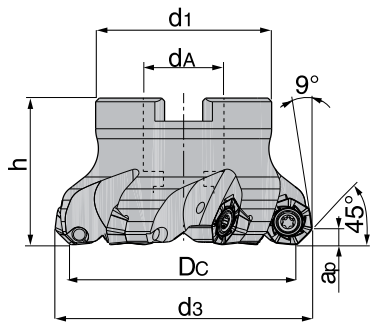
Ramping angle





"WSP" Insert geometry	Cutting depth [ mm ] ap max XEM..."	Feed [ mm ] fz XEM..."	Cutting depth [ mm ] ap max REM..."	Feed [ mm ] fz REM..."
MP	1,00 2,50 4,00	0,15 0,20 0,30	1,00 1,50 3,20	0,20 0,45 0,85
MM	1,00 2,50 4,00	0,12 0,18 0,25	1,00 1,50 3,20	0,20 0,35 0,75
MK	1,00 2,50 4,00	0,20 0,23 0,30	1,00 1,50 3,20	0,25 0,55 1,00
MN	1,00 3,00 4,00	0,12 0,20 0,30	---	---
MT	1,00 2,00 3,00	0,10 0,13 0,20	---	---
MH	0,60 1,00 2,00	0,10 0,16 0,25	0,50 1,00 3,00	0,20 0,35 0,70

Diameter Milling cutter	Ramping angle milling cutter $\alpha$ max.
Ø 25	6,84°
Ø 32	5,36°
Ø 36	4,76°
Ø 40	4,29°
Ø 50	3,43°
Ø 52	3,30°
Ø 63	2,73°
Ø 66	2,60°
Ø 80	2,15°
Ø 100	1,72°
Ø 125	1,37°
Ø 160	1,07°
Ø 200	0,86°

Face milling cutter 45° for XE.. & RE..



Dimensions in mm							Ordering code	Availability	pare parts	
Dc	d3	dA	d1	h	ap	z <sup>*</sup>				
50	57,5	22	43	40	4	5	SF45 XE04.050 Z05	●	 Fixation screw AP02-40054 5085714 MA = 3Nm	 Torque wrench IP15 5088520
52	59,5	22	43	40	4	5	SF45 XE04.052 Z05	●		
63	70,5	22	48	40	4	5	SF45 XE04.063 Z05	●		
63	70,5	22	48	40	4	6	SF45 XE04.063 Z06	●		
66	73,5	22	48	40	4	6	SF45 XE04.066 Z06	●		
80	87,5	27	60	50	4	6	SF45 XE04.080 Z06	●		
80	87,5	27	60	50	4	8	SF45 XE04.080 Z08	●		
100	107,5	32	78	50	4	8	SF45 XE04.100 Z08	●		
100	107,5	32	78	50	4	10	SF45 XE04.100 Z10	●		
125	132,5	40	90	60	4	10	SF45 XE04.125 Z10	●		
125	132,5	40	90	60	4	12	SF45 XE04.125 Z12	●		
160	167,5	40	115	65	4	10	SF45 XE04.160 Z10 NC	●		
160	167,5	40	115	65	4	14	SF45 XE04.160 Z14 NC	●		
200	207,5	60	140	65	4	16	SF45 XE04.200 Z16 NC	●		



Order example 1 piece SF45 XE04.050 Z05

Cutting speed page134-135  
no coolant

# HeptaCut 45P



Multi Functional

End milling cutter 45° / XE.. & RE..

Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	d3	dA	h	L	ap	z <sup>z</sup>				
25	32,5	25	106	50	4	2	SE 45 XE04.025 Z02	●	 Fixation screw AP02-40082 5122796 MA = 3Nm	
32	39,5	32	124	64	4	3	SE 45 XE04.032 Z03	●		
36	43,5	32	124	64	4	3	SE 45 XE04.036 Z03	●	Fixation screw AP02-40054 5085714 MA = 3Nm	Torque wrench IP15 5088520
40	47,5	32	130	65	4	4	SE 45 XE04.040 Z04	●		

Order example 1 piece SE 45 XE04.025 Z02

Screw on type 45° / XE.. & RE..

Dimensions in mm								Ordering code	Availability	Spare parts	
Dc	d3	d1	L	h	ap	M	z <sup>z</sup>				
25	32,5	21	32	54	4	12	2	SS 45 XE04.025 Z02 M12	●	 Fixation screw AP02-40082 5122796 MA = 3Nm	
32	39,5	29	42	65	4	16	3	SS 45 XE04.032 Z03 M16	●		
40	47,5	29	43	66	4	16	4	SS 45 XE04.040 Z04 M16	●	Fixationscrew AP02-40054 5085714 MA = 3Nm	Torque wrench IP15 5088520

Order example 1 piece SS 45 XE04.025 Z02 M12

Cutting speed page 134-135

# HeptaCut 45P

Multi Functional



WSP Insert Size 04 / 13							Cutting materials Ident No.													
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN15M	SCS35M	SCH05M	SCH10M	SCH30M
							<p>N = 7</p>	XEMT 040408-MP	4	12,7	4,76	4,6	0,8	●	●	●	●			
XEMT 040408-MM	4	12,7	4,76	4,6	0,8						●	●								
XEMT 040408-MN	4	12,7	4,76	4,6	0,8											●				
XEGT 040408-MT	4	12,7	4,76	4,6	0,8												●			
XEMW 040408-MP	4	12,7	4,76	4,6	0,8			●	●	●	●									
XEMW 040408-MM	4	12,7	4,76	4,6	0,8							●	●							
XEMW 040408-MK	4	12,7	4,76	4,6	0,8									●	●					
XEMW 040408-MH	4	12,7	4,76	4,6	0,8													●	●	
<p>N = 7</p>	REMW 1304MO-MP	-	13,2	4,76	4,6	-	●	●	●	●										
	REMW 1304MO-MM	-	13,2	4,76	4,6	-						●	●							
	REMW 1304MO-MK	-	13,2	4,76	4,6	-								●	●					
	REMW 1304MO-MH	-	13,2	4,76	4,6	-												●	●	●

Order example 10 pieces XEMT 040408-MP SCP20M

Description of grades page 134-135

# OctaCut 45N

Face Milling Cutter  
Ø 50 - 250  
Insert size 12



Special features:

- 8 cutting edges for increase of productivity at big cutting depths
- Negative basic geometry, therefore extremely stable
- Effective positive cutting edge geometry, therefore smooth cut
- Marking of the cutting edges for exact concentricity
- WIPER geometry for qualitativ high-class surface
- High metal removal, due to narrow and very narrow division of the tools
- Uneven spacing leads to reduced vibration and extremely smooth running
- Diversity of cutting materials for optimal cutting results on a wide material range

SN.. 12..

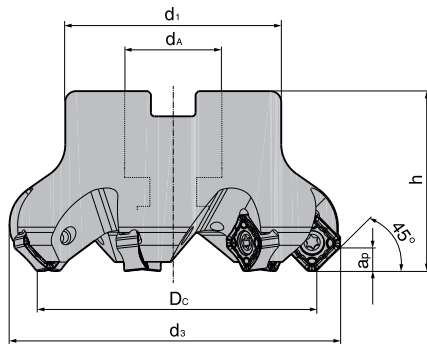
WSP Insert geometry	Cutting depth [ mm ] a <sub>p</sub> max	Feed [ mm ] f <sub>z</sub>
MP	1 4 6,5	0,18 0,26 0,35
MM	1 4 6,5	0,15 0,23 0,28
MK	1 4 6,5	0,20 0,3 0,40
FW	0,2 0,5 0,7	0,15 0,27 0,40



Cutting speed page 134-135



# OctaCut 45N

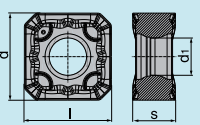
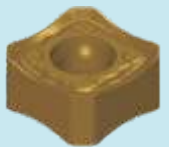
Face milling cutter 45° for SN.. 12



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	ds	d1	h	dA	ap	z				
50	63,4	50	40	22	6,5	4	SF45 SN12.050 Z04	●	  Fixation screw AP06-40115 5131917 MA= 5Nm Torque wrench IP20 5088521	
50	63,4	50	40	22	6,5	6	SF45 SN12.050 Z06	●		
63	76,4	50	40	22	6,5	5	SF45 SN12.063 Z05	○		
63	76,4	50	40	22	6,5	6	SF45 SN12.063 Z06	○		
63	76,4	50	40	22	6,5	8	SF45 SN12.063 Z08	●		
80	93,4	60	50	27	6,5	6	SF45 SN12.080 Z06	○		
80	93,4	60	50	27	6,5	7	SF45 SN12.080 Z07	●		
80	93,4	60	50	27	6,5	10	SF45 SN12.080 Z10	●		
100	113,4	80	50	32	6,5	8	SF45 SN12.100 Z08	●		
100	113,4	80	50	32	6,5	12	SF45 SN12.100 Z12	●		
125	138,4	95	63	40	6,5	8	SF45 SN12.125 Z08	○		
125	138,4	95	63	40	6,5	10	SF45 SN12.125 Z10	●		
125	138,4	95	63	40	6,5	16	SF45 SN12.125 Z16	●		
160	173,4	115	63	40	6,5	10	SF45 SN12.160 Z10 NC	○		
160	173,4	115	63	40	6,5	12	SF45 SN12.160 Z12	○		
160	173,4	115	63	40	6,5	12	SF45 SN12.160 Z12 NC	●		
160	173,4	115	63	40	6,5	20	SF45 SN12.160 Z20 NC	○		
200	213,4	164	63	60	6,5	18	SF45 SN12.200 Z18 NC	●		
200	213,4	164	63	60	6,5	26	SF45 SN12.200 Z26 NC	○		
250	263,4	184	63	60	6,5	20	SF45 SN12.250 Z20 NC	●		
250	263,4	184	63	60	6,5	30	SF45 SN12.250 Z30 NC	○		

Order example 1 piece SF45 SN12.050 Z04

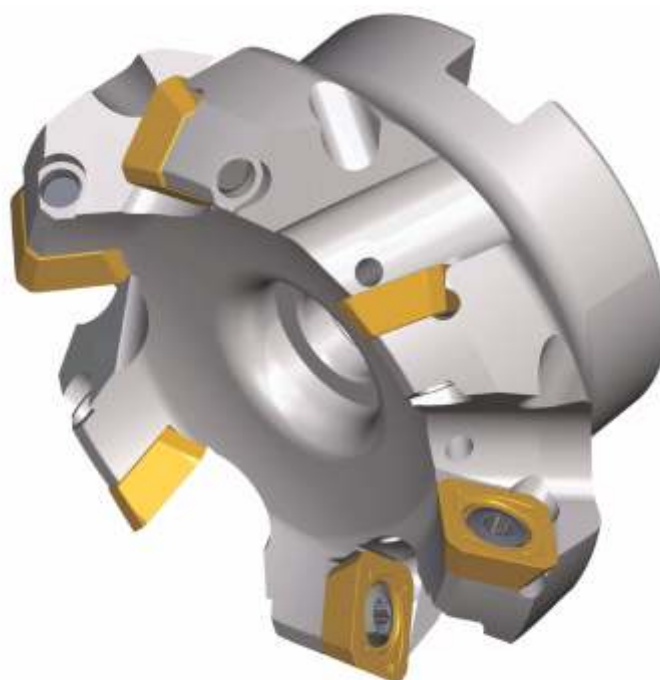
NC = No coolant

WSP Insert Size 12							Cutting materials Ident No.										
N = Number of cutting edges	Ordering code	l	d	s	d1	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M
							  N = 8	SNMX 1206 ANSN-MP	12,70	12,70	6,35	5,2	-	●	●	●	●
SNMX 1206 ANSN-MM	12,70	12,70	6,35	5,2	-						●	●					
SNMX 1206 ANSN-MK	12,70	12,70	6,35	5,2	-									●	●		
SNEX 1206-FW	12,70	12,70	6,35	5,2							●						

Order example 10 pieces SNMX 1206 ANSN-MP SCP20M

Description of grades page 134-135

Ø 40 - 160  
 Face Milling Cutter  
 Insert size 12



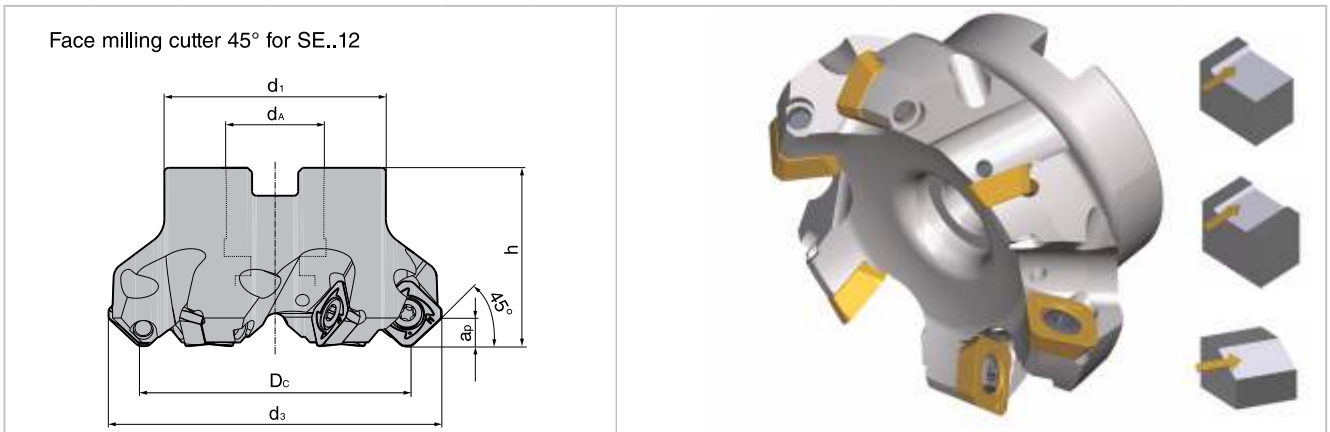
Special features:



- Positive basic geometry, therefore easy cutting
- 4 cutting edges for increase of productivity
- Marking of the cutting edges for exact concentricity
- High metal removal also on inefficient old machines due to small power consumption
- Uneven spacing leads to reduced vibration and extremely smooth running
- Diversity of cutting materials for optimal cutting results on a wide material range

SE.. 12..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max	Feed [ mm ] $f_z$
MP	1 4 6	0,16 0,25 0,35
MM	1 4 6	0,10 0,2 0,30
MK	1 4 6	0,18 0,3 0,40
ALC	0,7 4 5	0,08 0,18 0,28

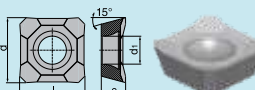


# ISO 45P



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	d <sub>3</sub>	d <sub>1</sub>	h	d <sub>A</sub>	a <sub>p</sub>	zR				
40	53	32	40	16	6	4	SF45 SE12.040 Z04	●	 Fixation screw AP13-45108 5085713 M <sub>A</sub> = 5Nm	 Torque wrench IP20 5088521
50	63	50	40	22	6	5	SF45 SE12.050 Z05	●		
63	76	50	40	22	6	5	SF45 SE12.063 Z05	●		
63	76	50	40	22	6	6	SF45 SE12.063 Z06	●		
63	76	50	40	22	6	7	SF45 SE12.063 Z07	●		
80	93	52	50	27	6	6	SF45 SE12.080 Z06	●		
80	93	52	50	27	6	7	SF45 SE12.080 Z07	●		
100	113	78	50	32	6	6	SF45 SE12.100 Z06	●		
100	113	78	50	32	6	8	SF45 SE12.100 Z08	●		
125	138	90	63	40	6	10	SF45 SE12.125 Z10	●		
160	173	114	63	40	6	12	SF45 SE12.160 Z12 NC	●		

Order Example 1 piece SF45 SE12.040 Z04

NC = No coolant

WSP Insert Size 12							Cutting materials Ident No.										
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M
							 N = 4	SEHT 1204 AFFN-ALC	12,70	12,70	4,76	5,5	-				
 N = 4	SEKT 1204 AFSN-MP SEKT 1204 AFEN-MM	12,70	12,70	4,76	5,5	-	●	●	●	●		●	●				
 N = 4	SEKW 1204 AFSN-MP SEKW 1204 AFEN-MM SEKW 1204 AFSN-MK	12,70	12,70	4,76	5,5	-	●	●	●	●		●		●	●		

Order example 10 pieces SEHT 1204 AFFN-ALC SCN10M

Description of grades page 136-137

Cutting speed page 134-135

Material group	WSP -Insert grade				Vc m/min				
	ISO Code		Dry machining	Wet machining	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M
	Material				P20	P25	P30	P35	P40
P	Structural steel		●	○	190-290	190-290	160-240	150-230	100-220
	Heat treated steel		●	○	160-230	160-230	140-190	130-180	145-215
	Tool steel		●	○	145-210	145-210	120-175	110-160	130-190
	Heat treated steel	high strength	●	○	110-170	110-170	100-160		
M	Stainless steel	austenitic	●	○		90-150		80-140	70-130
		austenitic hardened	●	○		60-110			
K	Grey cast iron		●	○		140-300			
	Nodular graphite cast iron		●	○		100-160			
N	Aluminium		●	○					
	Copper and copper alloys		●	○					
S	Heat resistant alloys		○	●					
	Titanium alloys		○	●					
H	Chilled cast iron	Hardness 300-600 HB	●	○					
	Hardened steel	45-52 HRC	●	○	100-150	100-150			
	Hardened steel	53-58 HRC	●	○	100-150	100-150			
	Hardened steel	59-63 HRC	●	○	100-150	100-150			

- Recommended Application
- alternative application reduced by 30 - 50 %

Vc m/min												
SCM35M M35	SCM40M M40	SCK15M K15	SCK20M K20	SCN10M N10	SCN15M N15	SWN10M N10	SCS35M S35	SCH03M	SCH05M	SCH10M	SCH23M	SCH30M
			200-300							200-350		
			180-250							180-300		
			160-220							180-250		
			120-180							150-250		
110-180	100-160						100-150					
80-130	70-120						80-120					
		180-360	150-320							180-400		
		140-250	110-180							150-250		
				500-3000	500-3000	400-2500						
				160-500	160-500	120-400						
	30-60						30-80					
	30-60						30-80					
								70-100	65-95		60-90	
		80-120	80-120					100-150	95-145		80-120	
								70-80	65-75		-	
								-	-		-	

**SIGMA TIZ**

MILLING 90°



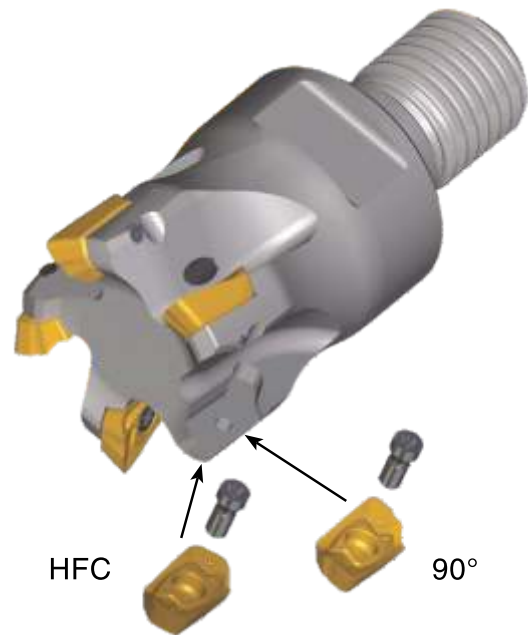
# DiCut 90P Feed

Multi Functional

Ø 40 - 160  
Face Milling Cutter  
Insert size 10 and 18

Ø 16 - 40  
End Milling Cutter  
Insert size 10 and 18

Ø 16 - 40  
Screw on type  
Insert size 10



Special features: Milling 90°

- Multifunctional tool system for highest productivity
- 1 basic body for 2 machining methods = multi functional
- Facilitation of storage and tool procurement through less articles
- Exact 90° shoulder up to ½ cutting edge length on all diameters
- Helix cutting edge for small cutting forces
- Vibration damping concept for big blade overhang in combination with solid carbide extensions
- Reduction of machining costs due to stepless shoulder milling
- High cutting rates also on inefficient machines

Special features: Milling HFC

- High cutting rates with good process security
- Smooth cut also in slot milling
- Functionality of both cutting edges guaranteed to 100 % also on machining in the „chip tank“
- Optimal distribution of cutting forces due to special cutting edge geometry

# DiCut 90P Feed

## Multi Functional

### HFC Ramping angle



Diameter Milling cutter	Angle of dip HFC milling cutter LDMX10....
Ø 16	8,8°
Ø 20	6,1°
Ø 25	4,4°
Ø 32	3,2°
Ø 40	2,4°
Ø 50	1,9°
Ø 63	1,4°
Ø 80	1,1°

### 90° Ramping angle



Diameter Milling cutter	Angle of dip 90° milling cutter LDMX10....	Angle of dip 90° milling cutter LDMX18....
Ø 16	18,0°	-
Ø 20	12,2°	-
Ø 25	8,7°	-
Ø 32	6,2°	-
Ø 40	4,6°	5,00°
Ø 50	3,5°	4,00°
Ø 63	2,7°	3,18°
Ø 80	2,1°	2,51°
Ø 100	-	2,00°
Ø 125	-	1,60°
Ø 160	-	1,25°

### HFC High Feed cutting parameter

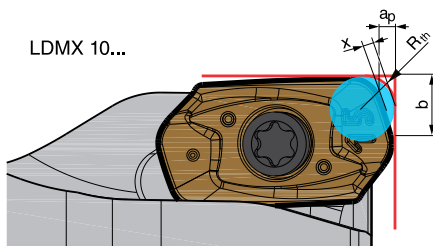
LD.. 10..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max LD..10	Feed [ mm ] $f_z$ LD..10
MPH	0,4 0,9 1,4	0,6 1 1,5
MMH	0,4 0,9 1,4	0,5 0,9 1,3
MKH	0,4 0,9 1,4	0,6 1,2 1,5

### 90° Milling parameter

LD.. 10..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max LD..10	Feed [ mm ] $f_z$ LD..10
MP	1 3 9	0,1 0,18 0,25
MM	1 3 9	0,1 0,15 0,20
MK	1 3 9	0,15 0,20 0,27
MN	1 3 9	0,1 0,14 0,26
MT	1 3 9	0,1 0,15 0,20



LDM..	$R_{th}$	$a_p$	x	b
10	2,2	1,5	0,4	3,52

Cutting data recommendations page 169-170

### 90° Milling parameter



LD.. 18..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max LD..18	Feed [ mm ] $f_z$ LD..18
MP	1 6 17	0,1 0,19 0,25
MM	1 6 17	0,1 0,15 0,22
MK	1 6 17	0,15 0,21 0,26
RP	1 6 17	0,15 0,22 0,8
RK	1 6 17	0,15 0,24 0,30





# DiCut 90P Feed

Face milling cutter 90° / LDMX 10

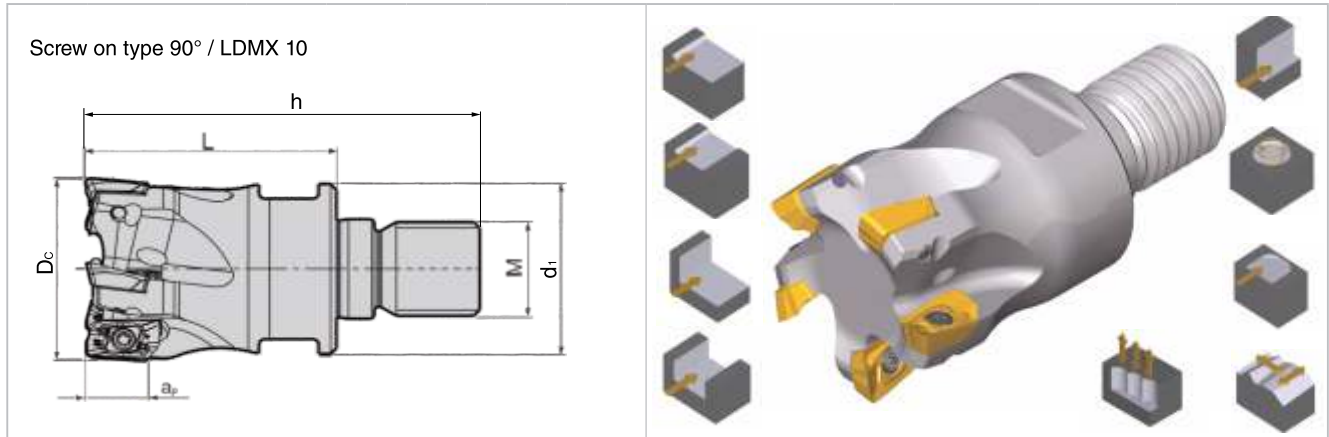
Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap/90	ap/HFC	z $\odot$				
40	16	35	40	9	1,4	4	SF90 LD10.040 Z04	●	 Fixation screw AP02-25068 5085706 MA= 2Nm	 Torque wrench IP8 5088519
40	16	35	40	9	1,4	6	SF90 LD10.040 Z06	●		
50	22	43	40	9	1,4	5	SF90 LD10.050 Z05	●		
50	22	43	40	9	1,4	7	SF90 LD10.050 Z07	●		
63	22	48	40	9	1,4	6	SF90 LD10.063 Z06	●		
63	22	48	40	9	1,4	8	SF90 LD10.063 Z08	●		
80	27	60	50	9	1,4	10	SF90 LD10.080 Z10	●		

End milling cutter 90° / LDMX 10

Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	L	h	ap/90	ap/HFC	z $\odot$				
16	16	37	85	9	1,4	2	SE90 LD10.016 Z02	●	AP02-25051 5091691 MA= 2Nm	 Torque wrench IP8 5088519
18	20	38	90	9	1,4	2	SE90 LD10.018 Z02	○		
20	20	40	90	9	1,4	2	SE90 LD10.020 Z02	●		
20	20	90	140	9	1,4	2	SE90 LD10.020 Z02 140	○	 Fixation screw AP02-25068 5085706 MA= 2Nm	Torque wrench IP8 5088519
20	20	40	90	9	1,4	3	SE90 LD10.020 Z03	●		
20	20	125	175	9	1,4	3	SE90 LD10.020 Z03 175	○		
25	25	50	106	9	1,4	3	SE90 LD10.025 Z03	●		
25	25	50	106	9	1,4	4	SE90 LD10.025 Z04	●		
32	32	64	124	9	1,4	3	SE90 LD10.032 Z03	●		
32	32	64	124	9	1,4	5	SE90 LD10.032 Z05	●		

Order example 1 piece SE90 LD10.016 Z02

# DiCut 90P Feed



Dimensions in mm								Ordering code	Availability	Spare parts	
Dc	dA	h	L	ap/90	ap/HFC	M	z <sup>o</sup>				
16	13,8	49	29	9	1,4	M8	2	SS90 LD10.016 Z02 M08	●	AP02-25051 5091691 M <sub>A</sub> = 2Nm	
20	18	49	29	9	1,4	M10	3	SS90 LD10.020 Z03 M10	●		
25	21	54	32	9	1,4	M12	3	SS90 LD10.025 Z03 M12	●		
25	21	54	32	9	1,4	M12	4	SS90 LD10.025 Z04 M12	●		Torque wrench IP8 5088519
32	29	66	43	9	1,4	M16	3	SS90 LD10.032 Z03 M16	●		
32	29	66	43	9	1,4	M16	5	SS90 LD10.032 Z05 M16	●		
40	29	66	43	9	1,4	M16	6	SS90 LD10.040 Z06 M16	○		
										Fixation screw AP02-25068 5085706 M <sub>A</sub> = 2Nm	

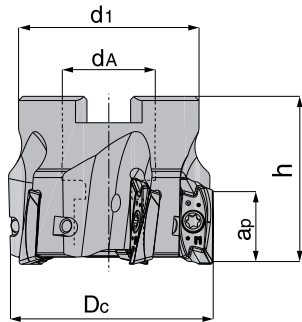
Order example 1 piece SS90 LD10.016 Z02 M08



WSP Insert Size 10							Cutting materials Ident No.												
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN15M	SCS35M		
							90° inserts												
 N = 2	LDMX 100408 SR-MP	10	6,6	4,76	2,8	0,8		●		●	●								
	LDMX 100408 SR-MM	10	6,6	4,76	2,8	0,8						●	●						
	LDMX 100408 SR-MK	10	6,6	4,76	2,8	0,8									●				
	LDMX 100408 FR-MN	10	6,6	4,76	2,8	0,8											●		
	LDMX 100408 SR-MT	10	6,6	4,76	2,8	0,8												△	
	LDMX 100420 SR-MP	10	6,6	4,76	2,8	2,0		●			●								
	LDMX 100430 SR-MP	10	6,6	4,76	2,8	3,0		●			●								
HFC insert																			
 N = 2	LDMX 100415 SR-MPH	1,5	6,6	4,76	2,8	1,5	●	●	●	●									
	LDMX 100415 SR-MMH	1,5	6,6	4,76	2,8	1,5						●	●						
	LDMX 100415 SR-MKH	1,5	6,6	4,76	2,8	1,5									●	●			

Order example 10 pieces LDMX 100408 SR-MP SCP25M

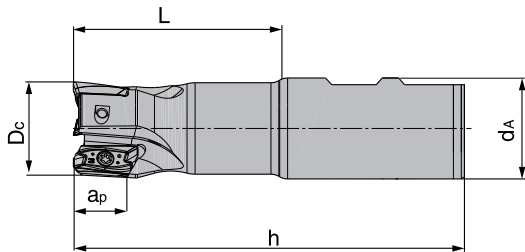
# DiCut 90P Feed



Face milling cutter 90° / LDMX 18



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap/90	z <sup>☆</sup>				
40	16	35	40	17	4	SF90 LD18.040 Z04	●	 Fixation screw AP02-35100 5092669 MA = 3Nm	 Torque wrench IP15 5088520
50	22	43	40	17	5	SF90 LD18.050 Z05	●		
52	22	43	40	17	5	SF90 LD18.052 Z05	○		
63	22	48	40	17	5	SF90 LD18.063 Z05	●		
63	22	48	40	17	6	SF90 LD18.063 Z06	○		
66	22	48	40	17	6	SF90 LD18.066 Z06	○		
80	27	60	50	17	7	SF90 LD18.080 Z07	●		
100	32	78	50	17	8	SF90 LD18.100 Z08	●		
125	40	90	60	17	9	SF90 LD18.125 Z09	●		
160	40	115	60	17	10	SF90 LD18.160 Z10 NC	●		

End milling cutter 90° / LDMX 18



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	L	h	ap	z <sup>☆</sup>				
25	25	50	106	17	2	SE90 LD18.025 Z02	●	 Spannschraube Fixation screw AP02-35100 5092669 MA = 3Nm	 Torque wrench IP15 5088520
32	32	64	124	17	3	SE90 LD18.032 Z03	●		
40	32	65	130	17	4	SE90 LD18.040 Z04	●		

Order example 1 piece SE90 LD18.025 Z02

Cutting data recommendations page166-167  
 NC = No coolant

# DiCut 90P Feed

WSP Insert Size 18							Cutting materials Ident No.											
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M	
							90° inserts											
	LDMX 180508 SR-MP	18	9,65	5	4,15	0,8	●			●	●							
	LDMX 180508 SR-MM	18	9,65	5	4,15	0,8						●	●					
	LDMX 180508 SR-MK	18	9,65	5	4,15	0,8									●			
	LDGX 180508 FR-MN	18	9,65	5	4,15	0,8											●	●
	LDMX 180512 SR-RP	18	9,65	5	4,15	1,2	●			●	●							
	LDMX 180512 SR-RK	18	9,65	5	4,15	1,2									●			

Order example 10 pieces LDMX 180508 SR-MP SCP25M

Description of grades page 134-135

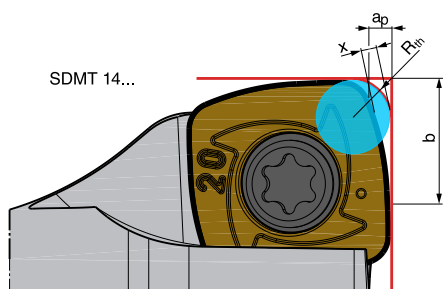
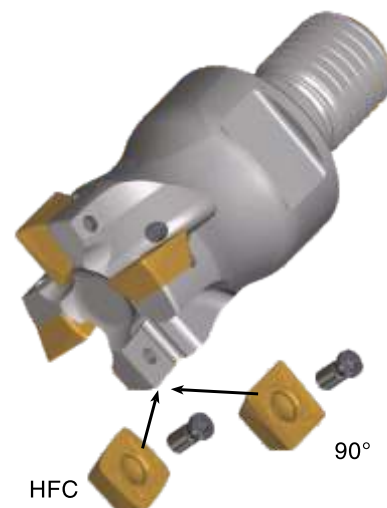
# TetraCut 90P Feed

Multi Functional

Ø 40 - 200  
Face Milling Cutter  
Insert size 10, 14 and 18

Ø 25 - 32  
End Milling Cutter  
Insert size 10

Ø 25 - 40  
Screw on type 90°  
Insert size 10



SDM..	R <sub>th</sub>	a <sub>p</sub>	x	b
10	2,25	1,1	0,62	8,033
14	3,45	2,2	0,93	10,868
18	4,82	3,5	1,24	13,77

### Special features: Milling HFC

- Multifunctional tool system for highest productivity
- 1 basic body for 2 machining operations = multifunctional
- Facilitation of storage and tool procurement through less articles
- 4 real usable cutting edges
- Smooth cut also on full groove due to perfect coordinated milling geometry
- Optimal consumption of the axial cutting forces due to special layout of the radii on the cutting edge
- Highest tooth feed ( up to  $f_z = 3,0$  mm with SDMT 18)
- Screw on type milling cutter in combination with solid carbide extensions minimize vibrations on overhangs up to 300 mm

### Special features: Milling 90°

- Exactly 90° on 4 cutting edges up to 1/2 cutting edge length on all diameter
- Smooth cut due to positive basic geometry
- Unequal division leads to reduction of vibration and extremely smooth running
- Maximum productivity increase due to high metal removal per cutting edge
- Process security due to non problematic wear behaviour and stabilisation of the cutting edge through special insert geometry

# TetraCut 90P Feed

Multi Functional

## HFC Ramping angle



Diameter Milling cutter	Ramping angle HFC milling cutter $\alpha$ max. SDM 10....	Ramping angle HFC milling cutter $\alpha$ max. SDM 14....	Ramping angle HFC milling cutter $\alpha$ max. SDM 18....
Ø 25	4,4°	-	-
Ø 32	2,9°	-	-
Ø 40	2,0°	-	-
Ø 50	1,5°	2,4°	-
Ø 63	1,1°	1,7°	-
Ø 80	0,8°	1,3°	2,5°
Ø 100	0,7°	1,0°	2,0°
Ø 125	0,5°	0,7°	1,6°
Ø 160	-	-	1,3°
Ø 200	-	-	1,0°

## 90° Ramping angle



Diameter Milling cutter	Ramping angle 90° milling cutter $\alpha$ max. SDM 10....	Ramping angle 90° milling cutter $\alpha$ max. SDM 14....
Ø 25	7,0°	-
Ø 32	4,6°	-
Ø 40	3,3°	-
Ø 50	2,4°	5,5°
Ø 63	1,8°	3,7°
Ø 80	1,3°	2,6°
Ø 100	1,0°	1,9°
Ø 125	0,8°	1,5°
Ø 160	0,5°	-

## HFC High Feed cutting parameter

### SDM. 10..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max SDM..10...	Feed [ mm ] $f_z$ SDM..10...
MPH	0,5 0,8 1,3	0,6 1 1,4
MMH	0,5 0,8 1,3	0,5 0,9 1,4
RPH	0,5 1 1,5	0,7 1,1 1,6
RKH	0,5 1 1,5	0,7 1,2 1,6
MTH	0,5 0,7 1,2	0,5 0,7 1,2
RHH	0,4 0,8 1,2	0,4 1,1 1,6

### SDM. 14..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max SDM..14...	Feed [ mm ] $f_z$ SDM..14...
MPH	0,6 1,2 2,2	0,7 1,4 2,2
MMH	0,6 1,2 2,2	0,8 1,2 2,2
RPH	0,7 1,5 2,4	0,8 1,6 2,4
RKH	0,70 1,6 2,4	0,8 1,7 2,4
MHH	0,4 1,2 2,2	0,4 1,2 2,2
RHH	0,5 1,5 2,4	0,5 1,6 2,4

### SDM. 18..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max SD..18	Feed [ mm ] $f_z$ SD..18
MPH	1,0 2,2 3,2	1,2 1,8 2,8
MMH	1,0 2,0 3,0	1,0 1,6 2,5
RPH	1,0 2,5 3,5	1,4 2,2 3
RKH	1,0 2,8 3,5	1,4 2,5 3
RHH	1,0 2,2 3,5	0,8 1,8 2,8

## 90° Milling parameter

### SDM. 10..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max SDM..10...	Feed [ mm ] $f_z$ SDM..10...
MP	0,8 3 9,0	0,10 0,18 0,23
MM	0,8 3 9,0	0,08 0,14 0,2
MK	0,8 3 9,0	0,10 0,2 0,26
MN	0,8 5 9,0	0,05 0,12 0,20

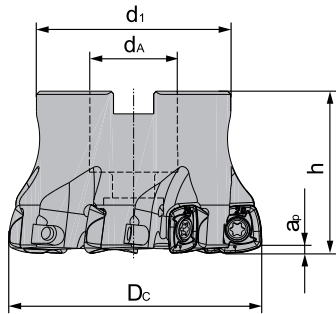
### SDM. 14..



WSP Insert geometry	Cutting depth [ mm ] $a_p$ max SDM..14...	Feed [ mm ] $f_z$ SDM..14...
MP	1,2 6 12,5	0,1 0,2 0,25
MM	1,2 6 12,5	0,1 0,15 0,22
MK	1,2 6 12,5	0,1 0,22 0,28
MN	1,2 8 12,5	0,06 0,14 0,22

Cutting data recommendations page166-167

# TetraCut 90P Feed

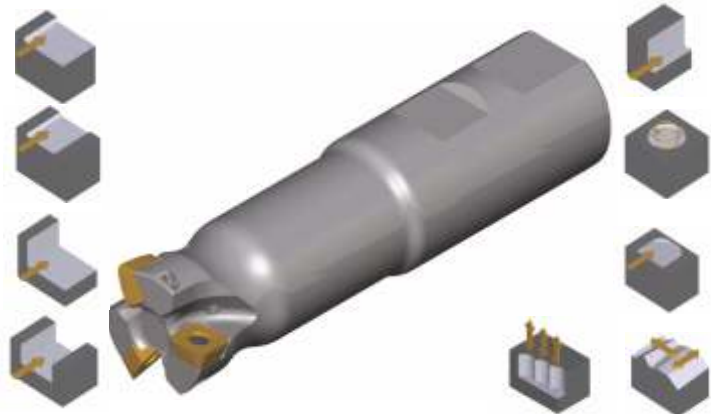
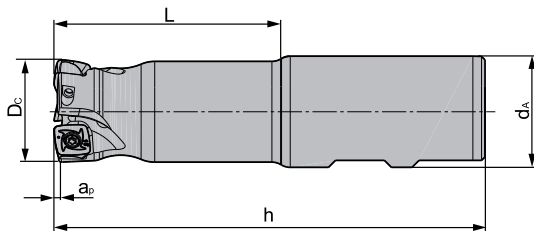
Face milling cutter 90° / SDM. 10





Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap/90	ap/HFC	z ⚙				
40	16	35	40	9	1,5	4	SF90 SD10.040 Z04	●	 Fixation screw AP02-30083 5112357 MA = 2Nm	 Torque wrench IP9 5118124
40	16	35	40	9	1,5	6	SF90 SD10.040 Z06	●		
42	16	35	40	9	1,5	5	SF90 SD10.042 Z05	●		
50	22	43	40	9	1,5	5	SF90 SD10.050 Z05	●		
50	22	43	40	9	1,5	7	SF90 SD10.050 Z07	●		
52	22	43	40	9	1,5	5	SF90 SD10.052 Z05	●		
63	22	48	40	9	1,5	6	SF90 SD10.063 Z06	●		
63	22	48	40	9	1,5	8	SF90 SD10.063 Z08	●		
66	22	48	40	9	1,5	5	SF90 SD10.066 Z05	○		
80	27	60	50	9	1,5	8	SF90 SD10.080 Z08	●		

Order example 1 piece SF90 SD10.040 Z04

End milling cutter 90° / SDM. 10



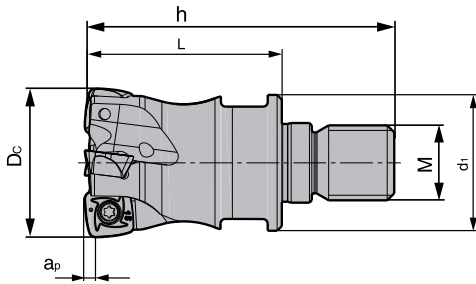
Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	L	h	ap/90	ap/HFC	z ⚙				
25	25	50	106	9	1,5	2	SE90 SD10.025 Z02	●	 Fixation screw AP02-30083 5112357 MA = 2Nm	 Torque wrench IP9 5118124
25	25	50	106	9	1,5	3	SE90 SD10.025 Z03	●		
32	32	64	124	9	1,5	3	SE90 SD10.032 Z03	●		


Order example 1 piece SE80 SD10.025 Z02

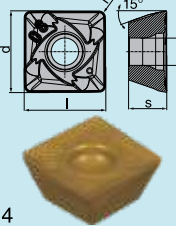
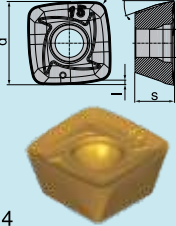

Cutting data recommendations page 166-167

# TetraCut 90P Feed

Screw on type 90° / SDM. 10



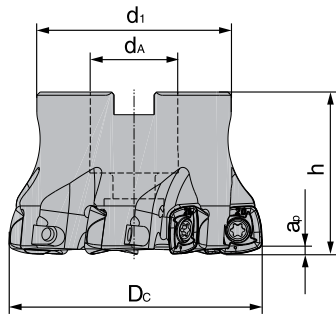
Dimensions in mm								Ordering code	Availability	Spare parts	
Dc	d1	L	h	ap/90	ap/HFC	M	z				
25	24	32	54	9	1,5	M12	2	SS90 SD10.025 Z02 M12	●	 Fixation screw AP02-30083 5112357 $M_A = 2Nm$	Torque wrench IP9 5118124
25	24	32	54	9	1,5	M12	3	SS90 SD10.025 Z03 M12	●		
32	29	42	66	9	1,5	M16	3	SS90 SD10.032 Z03 M16	●		
32	29	42	66	9	1,5	M16	4	SS90 SD10.032 Z04 M16	●		
40	29	42	66	9	1,5	M16	4	SS90 SD10.040 Z04 M16	●		



WSP Insert Size 10							Cutting materials Ident No.													
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN15M	SCS35M	SCH05M	SCH10M	SCH30M
							90° inserts													
 N = 4	SDMT 100408 SR-MP	10,4	10,4	4,86	3,5	0,8	●	●	●											
	SDMT 100408 ER-MM	10,4	10,4	4,86	3,5	0,8					●	●								
	SDMT 100408 SR-MK	10,4	10,4	4,86	3,5	0,8									●					
	SDMT 100408 FR-MN	10,4	10,4	4,86	3,5	0,8										●				
HFC inserts																				
 N = 4	SDMT 100415 SR-MPH	1,1	10,2	4,76	3,5	1,5	●	●	●	●										
	SDMT 100415 SR-MHH	1,1	10,2	4,76	3,5	1,5														●
	SDMT 100415 ER-MMH	1,1	10,2	4,76	3,5	1,5						●	●							
	SDGT 100415 SR-MTH	1,1	10,2	4,76	3,5	1,5														△
HFC inserts																				
 N = 4	SDMW 100415 SR-RPH	1,1	10,2	4,76	3,5	1,5	●	●	●	●										
	SDMW 100415 SR-RKH	1,1	10,2	4,76	3,5	1,5									●	●				
	SDMW 100415 SR-RHH	1,1	10,2	4,76	3,5	1,5													●	●

Order example 10 Pieces SDMT 100408 SR-MP SCP35M

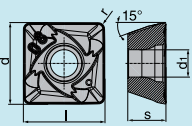
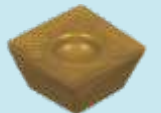
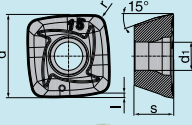

# TetraCut 90P Feed

Face milling cutter 90°/ SDM.. 14



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap/90	ap/HFC	zR				
50	22	43	40	12	2,5	4	SF90 SD14.050 Z04	○	 Fixation screw AP02-50108 5112356 MA= 5 Nm	 Torque wrench IP20 5088521
50	22	43	40	12	2,5	5	SF90 SD14.050 Z05	●		
52	22	43	40	12	2,5	4	SF90 SD14.052 Z04	○		
52	22	43	40	12	2,5	5	SF90 SD14.052 Z05	●		
63	22	48	40	12	2,5	6	SF90 SD14.063 Z06	●		
66	22	48	40	12	2,5	6	SF90 SD14.066 Z06	●		
80	27	60	50	12	2,5	7	SF90 SD14.080 Z07	●		
100	32	78	50	12	2,5	7	SF90 SD14.100 Z07	●		
100	32	78	50	12	2,5	9	SF90 SD14.100 Z09	●		
125	40	90	60	12	2,5	11	SF90 SD14.125 Z11	●		
160	40	90	60	12	2,5	10	SF90 SD14.160 Z10	○		

Order example 1 piece SF90 SD14.050 Z04



WSP Insert Size 14							Cutting materials Ident No.												
N = Number of cutting edges	Ordering code	l	d	s	d1	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN15M	SCH05M	SCH10M	SCH30M
							90° inserts  							●	●	●			
N = 4	SDMT 140512 SR-MP	14,8	14,8	5,2	5,5	1,2	●												
	SDMT 140512 ER-MM	14,8	14,8	5,2	5,5	1,2					●	●							
	SDMT 140512 SR-MK	14,8	14,8	5,2	5,5	1,2								●					
	SDMT 140512 FR-MN	14,8	14,8	5,2	3,5	1,2									●				
HFC inserts  							●	●	●	●									
N = 4	SDMT 140520 SR-MPH	2,2	14,7	5	5,5	2	●	●	●	●									
	SDMT 140520 SR-MHH	2,2	14,7	5	5,5	2						●	●					●	
	SDMT 140520 ER-MMH	2,2	14,7	5	5,5	2						●	●						
	SDMW 140520 SR-RPH	2,2	14,7	5	5,5	2	●	●	●	●									
	SDMW 140520 SR-RKH	2,2	14,7	5	5,5	2								●	●				
	SDMW 140520 SR-RHH	2,2	14,7	5	5,5	2											●	●	●

Order example 10 pieces SDMT 140512 SR-MP SCP25M

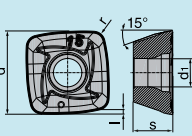
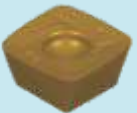


# TetraCut 90P Feed

Face milling cutter 90°/ SDM.. 18..

Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap/HFC	z <sup>☆</sup>				
80	27	60	50	3,5	5	SF90 SD18.080 Z05	●	 Fixation screw A02-60160 6401270 MA = 6Nm	 Torque wrench T25 5088518
100	32	78	50	3,5	6	SF90 SD18.100 Z06	●		
125	40	90	60	3,5	7	SF90 SD18.125 Z07	●		
160	40	115	60	3,5	9	SF90 SD18.160 Z09	●		
200	60	140	65	3,5	11	SF90 SD18.200 Z11	●		

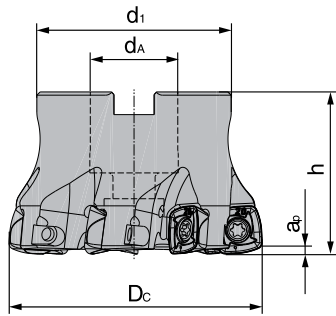
Order example 1 piece SF90 SD18.080 Z05



WSP Insert Size 18							Cutting materials Ident No.																			
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN15M	SCH05M	SCH10M	SCH30M							
							HFC inserts  SDMT 180630 SR-MPH SDMT 180630 SR-MMH SDMW 180630 SR-RPH SDMW 180630 SR-RKH SDMW 180630 SR-RHH N = 4 							●	●				●	●						

Order example 10 pieces SDMT 180630 SR-MPH SCP25M

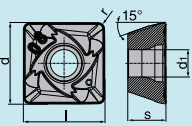
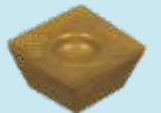
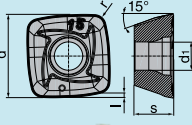

# TetraCut 90P Feed

Face milling cutter 90°/ SDM.. 14



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap/90	ap/HFC	zR				
50	22	43	40	12	2,5	4	SF90 SD14.050 Z04	○	 Fixation screw AP02-50108 5112356 MA= 5 Nm	 Torque wrench IP20 5088521
50	22	43	40	12	2,5	5	SF90 SD14.050 Z05	●		
52	22	43	40	12	2,5	4	SF90 SD14.052 Z04	○		
52	22	43	40	12	2,5	5	SF90 SD14.052 Z05	●		
63	22	48	40	12	2,5	6	SF90 SD14.063 Z06	●		
66	22	48	40	12	2,5	6	SF90 SD14.066 Z06	●		
80	27	60	50	12	2,5	7	SF90 SD14.080 Z07	●		
100	32	78	50	12	2,5	7	SF90 SD14.100 Z07	●		
100	32	78	50	12	2,5	9	SF90 SD14.100 Z09	●		
125	40	90	60	12	2,5	11	SF90 SD14.125 Z11	●		
160	40	90	60	12	2,5	10	SF90 SD14.160 Z10	○		

Order example 1 piece SF90 SD14.050 Z04

WSP Insert Size 14							Cutting materials Ident No.																	
N = Number of cutting edges	Ordering code	l	d	s	d1	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN15M	SCH05M	SCH10M	SCH30M					
							90° inserts  																	
N = 4	SDMT 140512 SR-MP	14,8	14,8	5,2	5,5	1,2	●		●	●														
	SDMT 140512 ER-MM	14,8	14,8	5,2	5,5	1,2					●	●												
	SDMT 140512 SR-MK	14,8	14,8	5,2	5,5	1,2								●										
	SDMT 140512 FR-MN	14,8	14,8	5,2	3,5	1,2										●								
HFC inserts  																								
N = 4	SDMT 140520 SR-MPH	2,2	14,7	5	5,5	2	●	●	●	●														
	SDMT 140520 SR-MHH	2,2	14,7	5	5,5	2												●						
	SDMT 140520 ER-MMH	2,2	14,7	5	5,5	2					●	●												
	SDMW 140520 SR-RPH	2,2	14,7	5	5,5	2	●	●	●	●														
	SDMW 140520 SR-RKH	2,2	14,7	5	5,5	2								●	●									
SDMW 140520 SR-RHH	2,2	14,7	5	5,5	2											●	●	●						

Order example 10 pieces SDMT 140512 SR-MP SCP25M

Cutting data recommendations page 166-167

# TetraCut 90N

Ø 40 - 160  
Face Milling Cutter  
Insert size 10 and 15

Ø 20 - 40  
End Milling Cutter  
Insert size 10 und 15



## Special features:

- Stable tool system through negative geometry basic design
- Effective positive chip angle for smooth cut
- Productivity guaranteed through 4 cutting edges
- Available in 2 insert sizes
- End milling cutter in excess length available
- Article with status "On request" are deliverable in five working days

LNMX 10..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max LNMX 10...	Feed [ mm ] $f_z$ LNMX 10...
RP	1 4 9	0,15 0,25 0,35
RM	1 4 9	0.15 0.2 0.30
RK	1 4 9	0.15 0.2 0.30

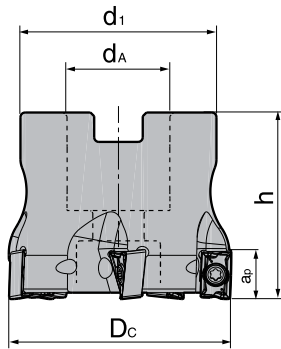
LNMX 15..



WSP Insert geometry	Cutting depth [ mm ] $a_p$ max LNMX 15...	Feed [ mm ] $f_z$ LNMX 15...
RP	1 6,5 14	0,15 0,25 0,35
RM	1 6.5 12	0.15 0.20 0.3
RK	1 6.5 14	0.15 0.25 0.35

Cutting data recommendations page 166-167

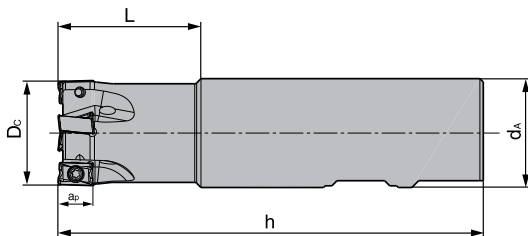
# TetraCut 90N



Face milling cutter 90° / LNMX 10..



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	d1	ap	h	zR				
40	16	35	9	40	4	SF90 LN10.040 Z04	●	 Fixation screw A02-30076 5084082 $M_A = 2Nm$	 Torque wrench T9 5088515
40	16	35	9	40	5	SF90 LN10.040 Z05	●		
50	22	42	9	40	5	SF90 LN10.050 Z05	●		
50	22	42	9	40	7	SF90 LN10.050 Z07	●		
63	22	49	9	40	6	SF90 LN10.063 Z06	●		
63	22	49	9	40	8	SF90 LN10.063 Z08	●		

End milling cutter 90° / LNMX 10..



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	h	ap	L	zR				
20	20	100	9	30	2	SE90 LN10.020 Z02	●	 Fixation screw A02-30076 5084082 $M_A = 2Nm$	 Torque wrench T9 5088515
20	20	150	9	30	2	SE90 LN10.020 Z02 150	●		
20	20	100	9	30	3	SE90 LN10.020 Z03	●		
25	25	115	9	35	2	SE90 LN10.025 Z02	●		
25	25	150	9	35	2	SE90 LN10.025 Z02 150	●		
25	25	115	9	35	3	SE90 LN10.025 Z03	●		
32	32	125	9	42	3	SE90 LN10.032 Z03	●		
32	32	180	9	42	3	SE90 LN10.032 Z03 180	●		
32	32	125	9	42	4	SE90 LN10.032 Z04	●		
40	32	130	9	42	4	SE90 LN10.040 Z04	●		
40	32	130	9	42	5	SE90 LN10.040 Z05	●		

Order example 1 piece SE90 LN10.020 Z02

# TetraCut 90N

WSP Insert Size 10							Cutting materials Ident No.										
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWNT0M
	LNMX 100605 SR-RP	10	6,6	6,35	2,8	0,5		●			●	●					
	LNMX 100605 SR-RK	10	6,6	6,35	2,8	0,5								●	●		
	LNMX 100605 SR-RM	10	6,6	6,35	2,8	0,5							●				
N = 4																	

Order example 10 pieces LNMX 100605 SR-RP SCP25M

Description of grades page 134-135

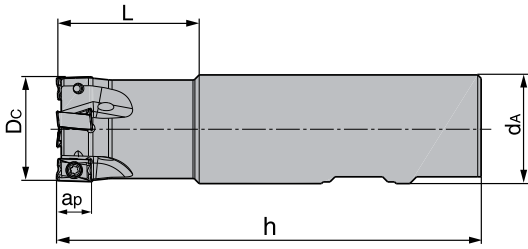
Dimensions in mm						Ordering code	Availability	Spare parts	
D <sub>c</sub>	d <sub>A</sub>	d <sub>1</sub>	a <sub>p</sub>	h	z <sub>♻</sub>			 Fixation screw AP13-40110 5084084 M <sub>A</sub> = 3Nm	 Torque wrench IP15 5088520
50	22	42	14	40	3	SF90 LN15.050 Z03	●		
50	22	42	14	40	4	SF90 LN15.050 Z04	●		
63	22	49	14	40	4	SF90 LN15.063 Z04	●		
63	22	49	14	40	6	SF90 LN15.063 Z06	●		
80	27	60	14	50	5	SF90 LN15.080 Z05	●		
80	27	60	14	50	7	SF90 LN15.080 Z07	●		
100	32	60	14	50	8	SF90 LN15.100 Z08	●		
125	40	90	14	63	10	SF90 LN15.125 Z10	●		
160	40	115	14	63	11	SF90 LN15.160 Z11	●		



Order example 1 piece SF90 LN15.050 Z03

Cutting data recommendations page 166-167

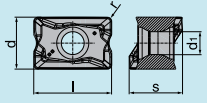
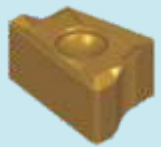
# TetraCut 90N

End milling cutter 90° / LNMX ..15..



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	h	ap	L	z <sup>☆</sup>				
32	32	125	14	40	3	SE90 LN15.032 Z03	●	 Fixation screw AP13-40110 5084084 M <sub>A</sub> = 3Nm	 Torque wrench IP15 5088520
40	32	130	14	40	3	SE90 LN15.040 Z03	●		
40	32	130	14	40	4	SE90 LN15.040 Z04	●		

Order example 1 piece SE90 LN15.032 Z03

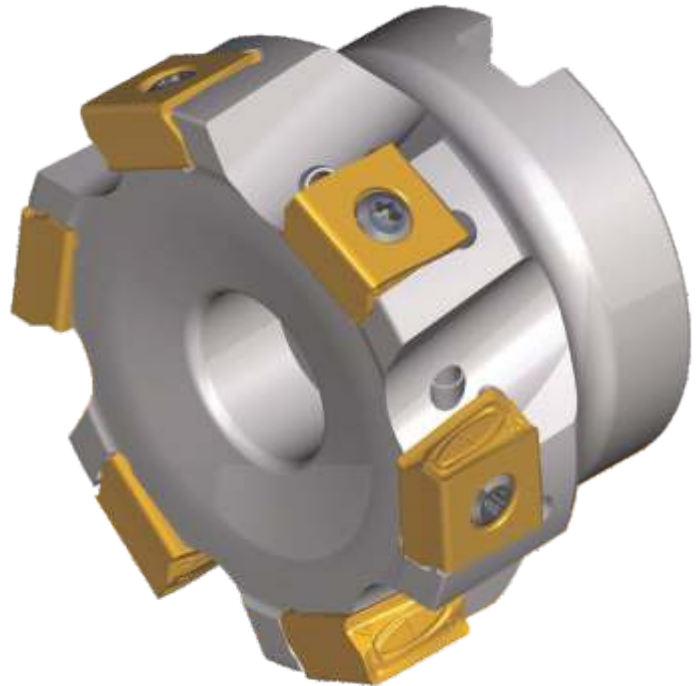
WSP Insert Size 15							Cutting materials Ident No.										
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M
							 	LNMX 151008 SR-RP	15	9,52	10,0	4,5	0,8	●	●	●	
LNMX 151008 SR-RK	15	9,52	10,0	4,5	0,8									●	●		
LNMX 151008 SR-RM	15	9,52	10,0	4,5	0,8								●				

N = 4

Order example 10 pieces LNMX 151008 SR-RP SCP25M

# TetraTan 90N

Ø 50 - 315  
Face Milling Cutter  
Insert size 13



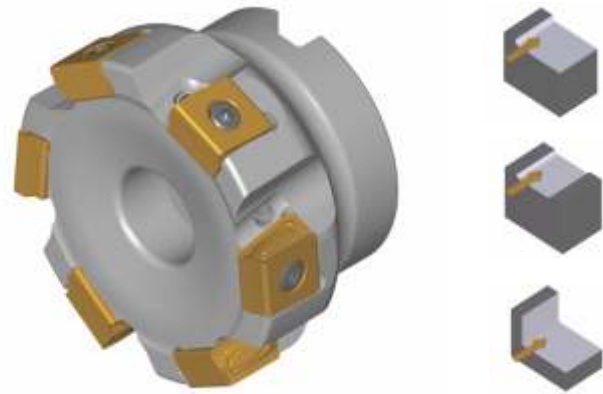
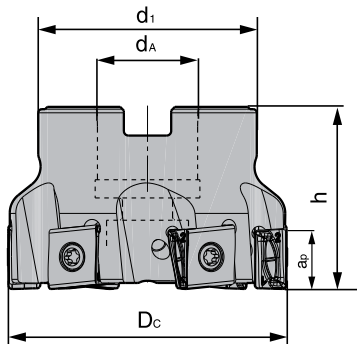
## Special features:



- Due to tangential clamping of the inserts a very stable tool system result
- Productivity guaranteed through 4 cutting edges
- High machining security through thick tangential milling insert
- Smooth cut through helix geometry on the cutting edges

## LNMX 13..

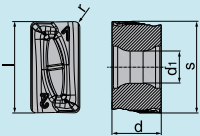

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max	Feed [ mm ] $f_z$
RP	1 6,5 12	0,2 0,3 0,45
RK	1 6,5 12	0,25 0,35 0,55
MP	1 6,5 12	0,15 0,22 0,35
MM	1 6,5 12	0,15 0,22 0,35

Face milling cutter 45° for LNMX 13



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap	z <sup>☆</sup>			 Fixation screw AP02-40054 5085714 M <sub>A</sub> = 3Nm	 Torque wrench IP15 5088520
50	22	40	40	12	4	SF90 LN13.050 Z04	●		
50	22	40	40	12	5	SF90 LN13.050 Z05	○		
63	22	48	40	12	4	SF90 LN13.063 Z04	●		
63	22	48	40	12	6	SF90 LN13.063 Z06	●		
63	22	48	40	12	8	SF90 LN13.063 Z08	●		
80	27	48	40	12	5	SF90 LN13.080 Z05	○		
80	27	58	50	12	7	SF90 LN13.080 Z07	●		
80	27	58	50	12	10	SF90 LN13.080 Z10	○		
100	32	78	50	12	8	SF90 LN13.100 Z08	●		
100	32	78	50	12	13	SF90 LN13.100 Z13	○		
125	40	90	63	12	9	SF90 LN13.125 Z09	●		
125	40	90	63	12	9	SF90 LN13.125 Z11	○		
160	40	90	75	12	10	SF90 LN13.160 Z10 NC	●		
200	60	140	75	12	14	SF90 LN13.200 Z14 NC	○		
250	60	190	75	12	16	SF90 LN13.250 Z16 NC	○		
315	60	255	75	12	18	SF90 LN13.315 Z18 NC	○		

Order example 1 piece SF90 LN13.050 Z04

WSP Insert Size 13							Cutting materials Ident No.											
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M	
							  N = 4	LNMX 131308 SR-RP	13	7	13	4,6	0,8			●	●	●
	LNMX 131308 SR-RK	13	7	13	4,6	0,8								●	●			
	LNMX 131308 SR-MP	13	7	13	4,6	0,8	●		●									
	LNMX 131308 SR-MM	13	7	13	4,6	0,8							●					

Order example 10 pieces LNMX 131308 SR-RP SCP30M

NC = No coolant

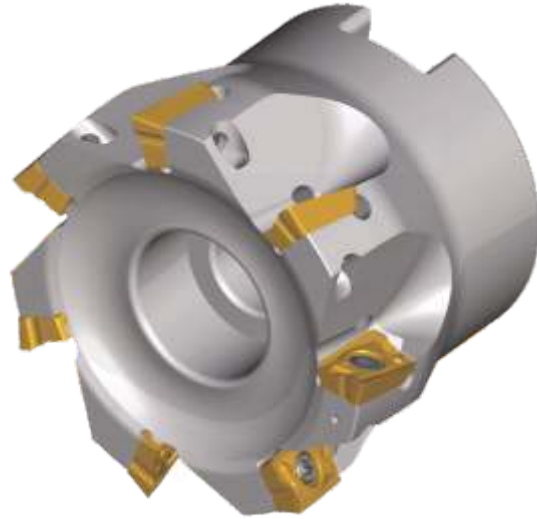


# ISO 90P

Ø 32 - 125  
Face Milling Cutter  
Insert size 06, 10 and 16

Ø 10 - 40  
End Milling Cutter  
Insert size 06, 10 and 16

Ø 16 - 32  
Screw on type  
Insert size 10



## Special features:

- Hybrid geometry
- ISO insert with helix cutting edge and accurate cutting
- Varied geometry offer
- Varied grade offer
- Best cutting results only in combination with inserts + tools achievable
- BP and BM geometry only applicable in roughing version
- Screw on type tools in combination with vibration damping solid carbide extensions
- Special geometry for medium machining MP2 and for roughing RP2 of steel

## Ramping angle



Diameter Milling cutter	Ramping angle Milling cutter $\alpha$ max. APT 10....	Ramping angle Milling cutter $\alpha$ max. APT 16....
Ø 16	4,5°	-
Ø 20	3,8°	-
Ø 25	2,5°	5,2°
Ø 32	1,7°	3,4°
Ø 40	1,3°	2,5°
Ø 50	0,9°	1,8°
Ø 63	0,7°	1,3°
Ø 80	0,5°	1,0°
Ø 100	-	0,7°
Ø 125	-	0,6°

## 90° Milling parameter

### APT 10..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max APKT 10...	Feed [ mm ] $f_z$ APKT 10...
MP2	0,5 3 9	0,1 0,15 0,2
MM2	0,5 3 9	0,1 0,15 0,2
RP2	0,5 3 9	0,2 0,22 0,28
RK2	0,5 3 9	0,2 0,25 0,3
MN2	0,5 5 9	0,1 0,16 0,24

### APT 16..

WSP Insert geometry	Cutting depth [ mm ] $a_p$ max APKT 16...	Feed [ mm ] $f_z$ APKT 16...
MP2	1 8 15	0,1 0,15 0,2
MM2	1 8 15	0,1 0,15 0,2
RP2	1 8 15	0,2 0,25 0,3
RK2	1 8 15	0,2 0,27 0,35
MN2	1 9 15	

## Helical cutter

### APT 10..

WSP Insert geometry	Cutting width [ D x % ] $a_e$ max APKT 10...	Feed [ mm ] $f_z$ APKT 10...
MP2	5 - 70%	0,1 0,15 0,2
MM2	5 - 70%	0,1 0,15 0,2
RP2	5 - 70%	0,2 0,22 0,28
RK2	5 - 70%	0,2 0,25 0,3
MN2	5 - 80%	0,1 0,16 0,24

### APT 16..

WSP Insert geometry	Cutting width [ D x % ] $a_e$ max APKT 16...	Feed [ mm ] $f_z$ APKT 16...
MP2	5 - 70%	0,1 0,15 0,2
MM2	5 - 70%	0,1 0,15 0,2
RP2	5 - 70%	0,2 0,25 0,3
RK2	5 - 70%	0,2 0,27 0,35
MN2	5 - 80%	0,1 0,16 0,26

# ISO 90P

Face milling cutter 90° / APT 10..

Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	d1	ap	h	z <sup>☆</sup>			Fixation screw AP17-25055 5085710 M <sub>A</sub> = 2Nm	Torque wrench IP8 5088519
40	16	32	9	40	6	SF90 AP10.040 Z06	●		
50	22	40	9	40	6	SF90 AP10.050 Z06	●		
50	22	40	9	40	7	SF90 AP10.050 Z07	●		
63	22	46	9	40	8	SF90 AP10.063 Z08	●		
80	27	54	9	50	10	SF90 AP10.080 Z10	●		

Order example 1 piece SF90 AP10.040 Z06

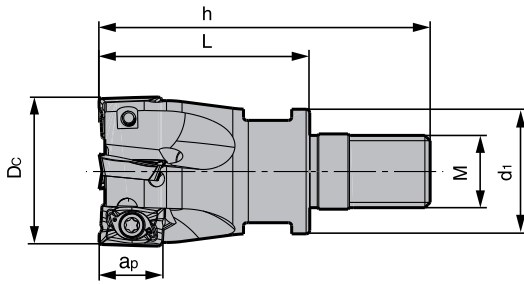
End milling cutter 90° / APT 10..

Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	h	ap	L	z <sup>☆</sup>			Fixation screw AP17-25055 5085710 M <sub>A</sub> = 2Nm	Torque wrench IP8 5088519
12	16	80	9	32	1	SE90 AP10.012 Z01	●		
12	16	120	9	32	1	SE90 AP10.012 Z01 120	○		
16	16	85	9	37	2	SE90 AP10.016 Z02	●		
16	16	130	9	37	2	SE90 AP10.016 Z02 130	○		
20	20	90	9	40	3	SE90 AP10.020 Z03	●		
20	20	150	9	40	3	SE90 AP10.020 Z03 150	○		
25	25	105	9	49	4	SE90 AP10.025 Z04	●		
25	25	170	9	49	4	SE90 AP10.025 Z04 170	○		
32	25	110	9	54	5	SE90 AP10.032 Z05	●		
32	25	195	9	54	5	SE90 AP10.032 Z05 195	○		

Order example 1 piece SE90 AP10.012 Z01

# ISO 90P

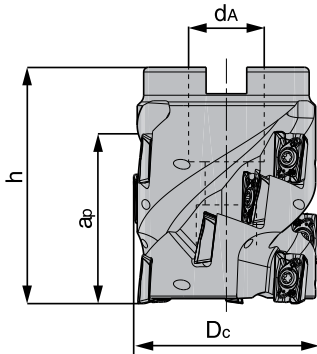
Screw on type 90° / APT 10..



Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	d1	L	h	ap	M	z				
16	12,7	23	41	9	M8	2	SS90 AP10.016 Z02 M08	●	 Fixation screw AP17-25055 5085710 $M_A = 2Nm$	 Torque wrench IP8 5088519
20	17,7	30	50	9	M10	3	SS90 AP10.020 Z03 M10	●		
25	20,7	35	57	9	M12	4	SS90 AP10.025 Z04 M12	●		
32	28,7	43	67	9	M16	5	SS90 AP10.032 Z05 M16	●		

Order example 1 piece SS90 AP10.016 Z02 M08

Face milling cutter 90° / APT 10..



Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	da	h	ap/90°	z	Pieces Insert				
40	16	50	37	3	12	SFH90 AP10.040 Z03 037	●	 Fixation screw AP17-25055 5085710 $M_A = 2Nm$	 Torque wrench IP8 5088519
40	16	50	37	5	20	SFH90 AP10.040 Z05 037	●		
50	22	60	46	3	15	SFH90 AP10.050 Z03 046	●		
50	22	60	46	5	25	SFH90 AP10.050 Z05 046	●		
63	27	60	46	4	20	SFH90 AP10.063 Z04 046	●		
63	27	60	46	7	35	SFH90 AP10.063 Z07 046	●		

Order example 1 piece SFH90 AP10.040 Z03 037

# ISO 90P

End milling cutter 90° / APT 10

Dimensions in mm							Ordering code	Availability	Spare parts	
Dc	dA	L	h	ap/90°	Z	Pieces Insert				
20	20	37	87	28	2	6	SEH90 AP10.020 Z02 028	●	 Fixation screw AP17-25055 5085710 MA = 2Nm	 Torque wrench IP8 5088519
25	25	49	105	37	2	8	SEH90 AP10.025 Z02 037	●		
32	32	55	115	46	2	10	SEH90 AP10.032 Z02 046	●		
32	32	55	115	46	3	15	SEH90 AP10.032 Z03 046	●		
40	32	70	130	55	3	18	SEH90 AP10.040 Z03 055	●		

Order example 1 piece SEH90 AP10.020 Z02 028

WSP Insert Size 06 and 10							Cutting materials Ident No.											
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M	
							 N = 2	APHT 100304 FR-MN2	10	6,7	3,5	2,8	0,4					
APKT 100304 SR-MP2	10	6,7	3,5	2,8	0,4	●				●								
APKT 100304 SR-MM2	10	6,7	3,5	2,8	0,4								●					
APKT 100304 SR-RP2	10	6,7	3,5	2,8	0,4				●	●	●							
APKT 100304 SR-RK2	10	6,7	3,5	2,8	0,4									●	●			

Order 1 example piece APHT 100304 FR-MN2 SCN10M

WSP Insert Size 16							Cutting materials Ident No.											
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M	
								APHT 160408 FR-MN2	16	9,52	5,26	4,5	0,8					
APKT 160408 SR-MP2	16	9,52	5,26	4,5	0,8	●			●									
APKT 160408 SR-MM2	16	9,52	5,26	4,5	0,8								●					
APKT 160408 SR-RP2	16	9,52	5,26	4,5	0,8				●	●	●							
APKT 160408 SR-RK2	16	9,52	5,26	4,5	0,8										●	●		
N = 2																		

Order example 10 pieces APHT 160408 FR-MN2 SCN10M

## OctaCut 88N

Ø 50 - 250  
Face Milling Cutter  
Insert size 12



Special features:

- Stable edge milling (roughing)
- Approach angle 88° with 8 cutting edges
- 0,8 or 1,2 corner radius available
- Narrow and very narrow division of the tools
- From diameter 160 no internal coolant supply
- Article with status "On request" are deliverable in five working days




SN.. 12..

WSP Insert geometry	Cutting depth [ mm ] a <sub>p</sub> max	Feed [ mm ] f <sub>z</sub>
MP	1 5 10	0,1 0,2 0,25
MM	1 5 10	0,1 0,18 0,22
MK	1 5 10	0,1 0,2 0,25

Cutting data recommendations page 166-167

# OctaCut 88N

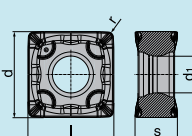
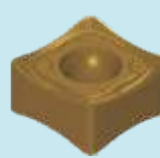
Face milling cutter 88° for SNMX...

Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	d1	h	ap	zR				
50	22	42	40	10	4	SF88 SN12.050 Z04	○	  Fixation screw AP06-40115 5131917 MA = 5Nm	 Torque wrench IP20 5088521
63	22	49	40	10	6	SF88 SN12.063 Z06	○		
80	27	60	50	10	7	SF88 SN12.080 Z07	○		
80	27	60	50	10	9	SF88 SN12.080 Z09	○		
100	32	80	50	10	8	SF88 SN12.100 Z08	○		
100	32	80	50	10	11	SF88 SN12.100 Z11	○		
125	40	95	63	10	10	SF88 SN12.125 Z10	○		
125	40	95	63	10	14	SF88 SN12.125 Z14	○		
160	40	115	63	10	12	SF88 SN12.160 Z12 NC	○		
160	40	115	63	10	18	SF88 SN12.160 Z18 NC	○		
200	60	164	63	10	14	SF88 SN12.200 Z14 NC	○		
200	60	164	63	10	22	SF88 SN12.200 Z22 NC	○		
250	60	184	63	10	16	SF88 SN12.250 Z16 NC	○		
250	60	184	63	10	24	SF88 SN12.250 Z24 NC	○		

Order example piece SF88 SN12.050 Z04

WSP Insert Size 10

Cutting materials Ident No.

N = Number of cutting edges	Ordering code	l	d	s	d1	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M
  N = 8	SNMX 120608 SN-MP	12,70	12,70	6,35	5,2	0,8			●	●							
	SNMX 120608 SN-MM	12,70	12,70	6,35	5,2	0,8							●				
	SNMX 120608 SN-MK	12,70	12,70	6,35	5,2	0,8									●	●	
	SNMX 120612 SN-MP	12,70	12,70	6,35	5,2	1,2			●	●							
	SNMX 120612 SN-MK	12,70	12,70	6,35	5,2	1,2									●	●	

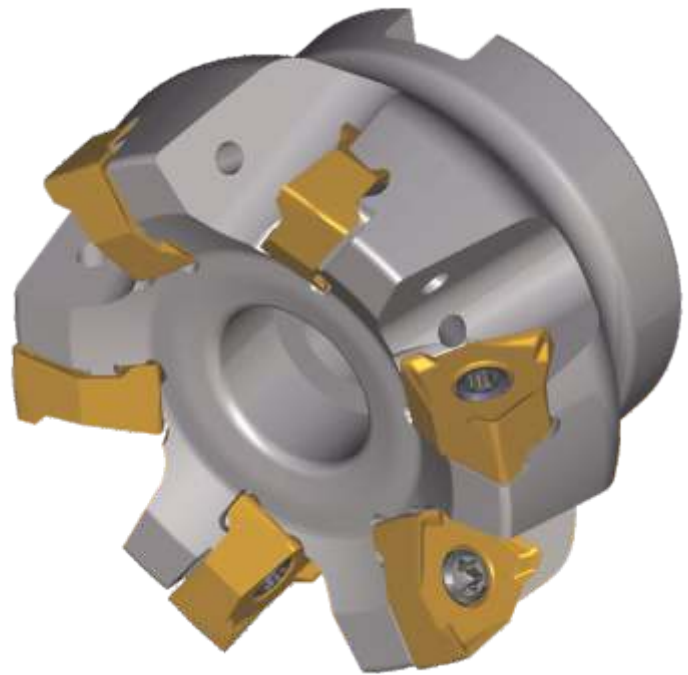
Order example 10 pieces SNMX 120608 SN-MP SCP30M

NC = No coolant

# HexaCut 90N

Ø 32 - 160  
Face Milling Cutter  
Insert size 04 and 08

Ø 20 - 32  
End Milling Cutter  
Insert size 04



Special features:

- Stable tool system through negative geometry basic design therefore process security on roughing
- 6 cutting edges for increase of productivity on 90° face milling
- Effective positive chip angle for smooth cut
- Productivity guaranteed through 6 cutting edges

### WNEX 04..

WSP Insert geometry	Cutting depth [ mm ] a <sub>p</sub> max WNEX 04	Feed [ mm ] f <sub>z</sub> WNEX 04
MP	0,4 2 4	0,12 0,18 0,25
MM	0,4 2 4	0,10 0,15 0,20
MK	0,4 2 4	0,14 0,20 0,26

### WNEX 08..

WSP Insert geometry	Cutting depth [ mm ] a <sub>p</sub> max WNEX 08	Feed [ mm ] f <sub>z</sub> WNEX 08
RP	1 4 7	0,15 0,22 0,3
RK	1 4 7	0,18 0,25 0,35
RM	1 4 7	0,15 0,2 0,28
MN	1 4 7	0,2 0,3 0,4

### 90° Ramping angle

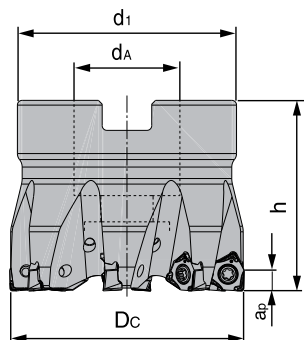




Diameter Milling cutter	Ramping angle 90° milling cutter α max WNEX 08
Ø 40	0,50°
Ø 50	0,46°
Ø 63	0,36°
Ø 80	0,23°
Ø 100	0,17°
Ø 125	0,12°
Ø 160	0,07°



# HexaCut 90N

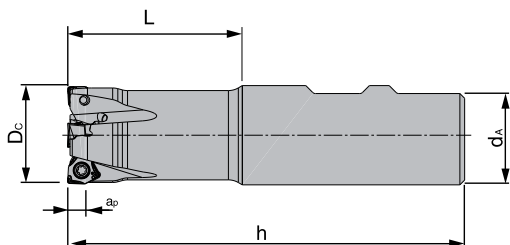
Face milling cutter 90° for WNEX 04..





Dimensions in mm						Ordering code	Availability	Spare parts	
D	dA	d1	h	ap	z <sup>✱</sup>				
32	16	30	40	4	6	SF90 WN04.032 Z06	○	 Fixation screw AP02-25064 5127961 M <sub>A</sub> = 1,5Nm	 Torque wrench IP7 5118123
40	16	36	40	4	6	SF90 WN04.040 Z06	○		
50	22	46	40	4	8	SF90 WN04.050 Z08	○		
63	22	48	40	4	9	SF90 WN04.063 Z09	○		

Order example 1 piece SF90 WN04.032 Z06

End milling cutter 90° for WNEX 04..



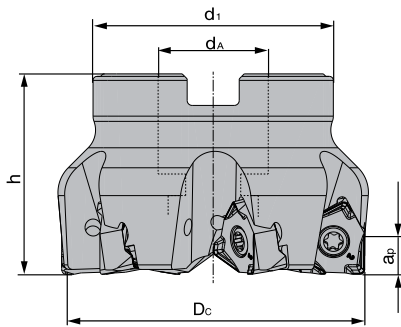
Dimensions in mm						Ordering code	Availability	Spare parts	
Dc	dA	L	h	ap	z <sup>✱</sup>				
20	20	40	90	4	3	SE90 WN04.020 Z03	○	 Fixation screw AP02-25064 5127961 M <sub>A</sub> = 1,5Nm	 Torque wrench IP7 5118123
25	25	44	100	4	4	SE90 WN04.025 Z04	○		
32	32	50	110	4	5	SE90 WN04.032 Z05	○		

Order example 1 piece SE90 WN04.020 Z03



# HexaCut 90N

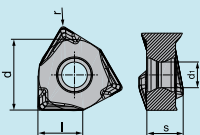

Face milling cutter 90° for WNEX 08..



Dimensions in mm						Ordering code	Availability	Spare parts	
D	dA	d1	h	ap	z <sup>✱</sup>			Fixation screw AP02-40054 5085714 M <sub>A</sub> = 3Nm	Torque wrench IP15 5088520
40	16	36	40	7	3	SF90 WN08.040 Z03	○		
50	22	46	40	7	4	SF90 WN08.050 Z04	○		
50	22	46	40	7	5	SF90 WN08.050 Z05	●		
63	22	47	40	7	6	SF90 WN08.063 Z06	●		
63	22	47	40	7	7	SF90 WN08.063 Z07	○		
80	27	62	50	7	7	SF90 WN08.080 Z07	●		
80	27	62	50	7	9	SF90 WN08.080 Z09	○		
100	32	78	50	7	8	SF90 WN08.100 Z08	●		
100	32	78	50	7	10	SF90 WN08.100 Z10	○		
125	40	90	63	7	10	SF90 WN08.125 Z10	●		
125	40	90	63	7	11	SF90 WN08.125 Z11	○		
160	40	90	63	7	11	SF90 WN08.160 Z11	●		
160	40	90	63	7	12	SF90 WN08.160 Z12	○		

Order example 1 piece SF90 WN08.040 Z03

Cutting data recommendations page 166-167

WSP Insert Size 08							Cutting materials Ident No.											
N = Number of cutting edges	Ordering code	l	d	s	d <sub>1</sub>	r	SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCN10M	SWN10M	
							  N = 6	WNEX 080608-RP	8	12,7	6,55	4,6	0,8		●		●	
WNEX 080608-RK	8	12,7	6,55	4,6	0,8										●			
WNEX 080608-RM	8	12,7	6,55	4,6	0,8							●	●					
WNEX 080608-MN	8	12,7	6,55	4,6	0,8											●	●	

Order example 10 pieces WNEX 080608-RP SCP25M

# Cutting Speed Recommendations for Milling Cutter 90°

Material group	WSP				Vc m/min				
	Insert grade								
	ISO Code		Dry machining	Wet machining	SCP20M P20	SCP25M P25	SCP30M P30	SCP35M P35	SCP40M P40
	Material								
P	Structural steel		●	○	190-290	190-290	160-240	150-230	100-220
	Heat treated steel		●	○	160-230	160-230	140-190	130-180	145-215
	Tool steel		●	○	145-210	145-210	120-175	110-160	130-190
	Heat treated steel	high strength	●	○	110-170	110-170	100-160		
M	Stainless steel	austenitic	●	○		90-150		80-140	70-130
		austenitic hardened	●	○		60-110			
K	Grey cast iron		●	○		140-300			
	Nodular graphite cast iron		●	○		100-160			
N	Aluminium		●	○					
	Copper and copper alloys		●	○					
S	Heat resistant alloys		○	●					
	Titanium alloys		○	●					
H	Chilled cast iron	Hardness 300-600 HB	●	○					
	Hardened steel	45-52 HRC	●	○	100-150	100-150			
	Hardened steel	53-58 HRC	●	○	100-150	100-150			
	Hardened steel	59-63 HRC	●	○	100-150	100-150			

- recommended application
- alternative application reduced by 30 - 50 %

Vc m/min												
SCM35M M35	SCM40M M40	SCK15M K15	SCK20M K20	SCN10M N10	SCN15M N15	SWN10M N10	SCS35M S35	SCH03M	SCH05M	SCH10M	SCH23M	SCH30M
		200-350	200-300						250-350	220-300		180-250
		200-300	180-250						200-300	180-250		150-220
		180-250	160-220						180-250	160-220		140-200
		150-200	120-180						150-200	120-200		100-180
110-180	100-160						100-150					100-160
80-130	70-120						80-120			80-150		60-100
		180-360	150-320						200-380	180-320		
		140-250	110-180						160-280	180-300		
				500-3000	500-3000	400-2500						
				160-500	160-500	120-400						
30-65	30-60						30-80					
30-65	30-60						30-80					
								70-100	65-95			60-90
		80-120	80-120					100-150	95-145			80-120
								70-80	65-75			-
								-	-			-

# 3D-MILLING



# Rcut 360P

Ø 40 - 160  
Face Milling Cutter  
Insert size 10, 12 and 16

Ø 15 - 20  
End Milling Cutter  
Insert size 07 and 10

Ø 10 - 42  
Screw on type  
Insert size 05, 07, 10, 12 and 16



## Special features:

- Universal applicable tool system for general machining and mould construction
- Neutral mounting position of the insert in the tool for an optimal contour precision
- Special protection against chip impact on the insert seat of the insert's cutting edge
- Big assortment depth of inserts and tools
- Smooth cutting behaviour due to special geometry of inserts, despite neutral mounting position

RD.. 0501..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" RD.. 0501	Feed [ mm ] fz" RD.. 0501
MP	0,25 0,70 1,20	0,14 0,26 0,50
MM	0,25 0,70 1,20	0,13 0,23 0,45
MK	0,25 0,70 1,20	0,15 0,27 0,53
MH	0,10 0,18 0,45	0,10 0,20 0,36
RH	0,12 0,24 0,60	0,10 0,22 0,40

RD.. 0702..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" RD.. 0701	Feed [ mm ] fz" RD.. 0701
MP	0,25 1,00 1,70	0,14 0,27 0,60
MM	0,25 1,00 1,70	0,13 0,24 0,52
MK	0,25 1,00 1,70	0,15 0,28 0,63
MH	0,10 0,20 0,65	0,11 0,22 0,42
RH	0,12 0,25 0,85	0,11 0,25 0,46

RD.. 1003..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" RD.. 1003	Feed [ mm ] fz" RD.. 1003
MP	0,28 1,50 2,50	0,15 0,28 0,64
MM	0,26 1,50 2,50	0,14 0,25 0,55
MK	0,28 1,50 2,50	0,16 0,30 0,67
MH	0,12 0,22 0,90	0,12 0,28 0,45
RH	0,14 0,28 1,20	0,12 0,30 0,50

RD.. 12T3..

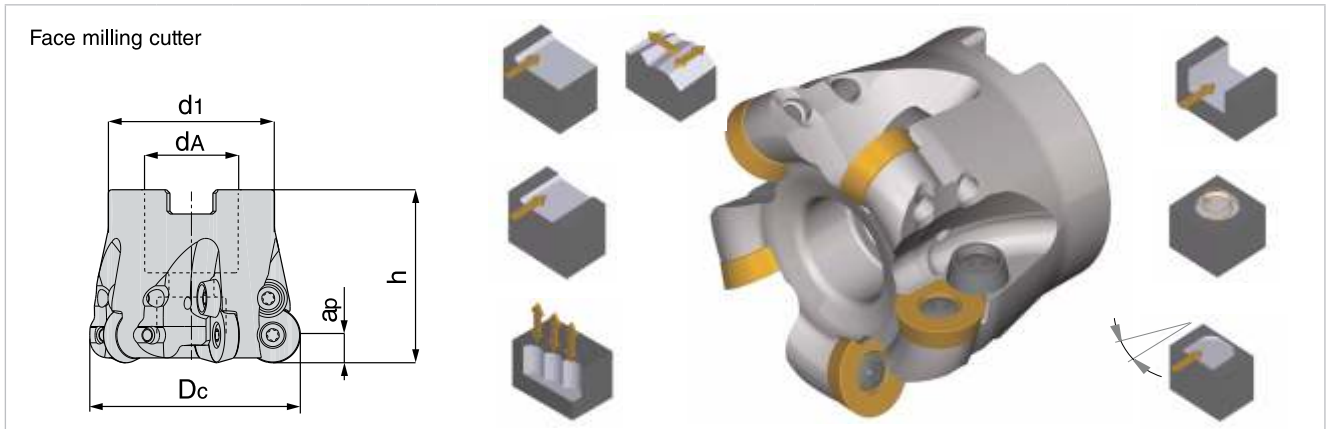
"WSP Insert geometry"	Cutting depth [ mm ] ap max" RD.. 12T3	Feed [ mm ] fz" RD.. 12T3
MP	0,30 1,80 3,00	0,16 0,29 0,70
MM	0,27 1,80 3,00	0,15 0,25 0,60
MK	0,30 1,80 3,00	0,18 0,32 0,75
MH	0,12 0,25 1,10	0,13 0,28 0,50
RH	0,14 0,30 1,50	0,13 0,30 0,56






RD.. 1604..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" RD.. 1604	Feed [ mm ] fz" RD.. 1604
MP	0,30 2,40 4,00	0,18 0,30 0,75
MM	0,27 2,40 4,00	0,16 0,25 0,64
MK	0,30 2,40 4,00	0,18 0,33 0,80
MH	0,12 0,28 1,60	0,14 0,28 0,50
RH	0,15 0,35 2,00	0,14 0,30 0,56



# Rcut 360P



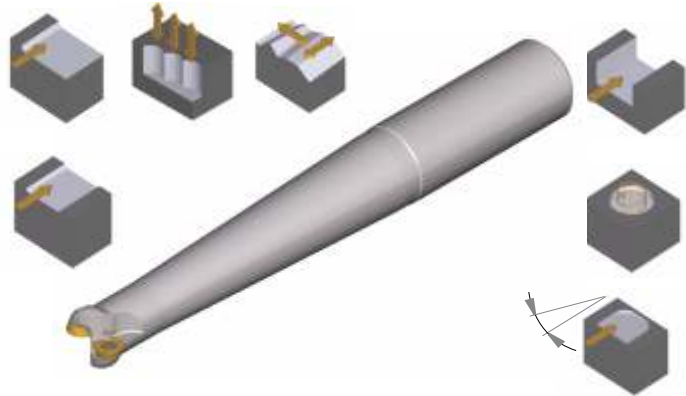
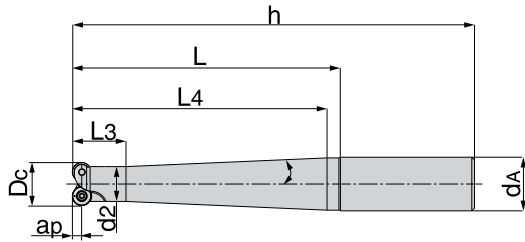
Dimension in mm						Ordering code	Availability		Spare parts		
Dc	dA	d1	h	ap	z						
40	16	32	40	5	5	SF00 RD10.040 Z05	●	RD.. 10	AP13-35072 5118118 M <sub>A</sub> = 3,5Nm	IP15 5088520	-
42	16	32	40	5	5	SF00 RD10.042 Z05	●	RD.. 10			
52	22	40	50	5	5	SF00 RD10.052 Z05	●	RD.. 10			
52	22	40	50	5	7	SF00 RD10.052 Z07	●	RD.. 10			
42	16	32	40	6	4	SF00 RD12.042 Z04	●	RD.. 12	AP13-35086 5118120 M <sub>A</sub> = 3,5Nm	IP15 5088520	 Clamping screw RD12 5125841
48	22	40	50	6	4	SF00 RD12.048 Z04	●	RD.. 12			
50	22	40	50	6	5	SF00 RD12.050 Z05	●	RD.. 12			
52	22	40	50	6	5	SF00 RD12.052 Z05	●	RD.. 12			
63	27	48	50	6	6	SF00 RD12.063 Z06	●	RD.. 12			
66	27	48	50	6	6	SF00 RD12.066 Z06	●	RD.. 12			
80	27	60	52	6	7	SF00 RD12.080 Z07	●	RD.. 12	AP13-45105 5118121 M <sub>A</sub> = 5Nm	IP20 5088521	 Clamping system Clamp 5125842  Clamping screw 5118121
50	22	40	50	8	4	SF00 RD16.050 Z04	●	RD.. 16			
52	22	40	50	8	4	SF00 RD16.052 Z04	●	RD.. 16			
63	27	48	50	8	5	SF00 RD16.063 Z05	●	RD.. 16			
66	27	48	50	8	5	SF00 RD16.066 Z05	●	RD.. 16			
66	27	48	50	8	6	SF00 RD16.066 Z06	●	RD.. 16			
80	27	60	52	8	6	SF00 RD16.080 Z06	●	RD.. 16			
80	27	60	52	8	7	SF00 RD16.080 Z07	●	RD.. 16			
100	32	75	52	8	7	SF00 RD16.100 Z07	●	RD.. 16			
125	40	90	63	8	8	SF00 RD16.125 Z08	●	RD.. 16			
160	40	120	63	8	9	SF00 RD16.160 Z09	●	RD.. 16			

Order example 10 pieces SF00 RD10.040 Z05

Cutting data recommendations page 187-188

# Rcut 360P

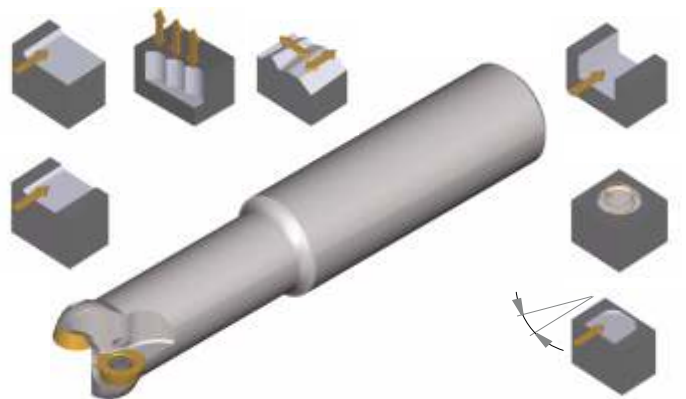
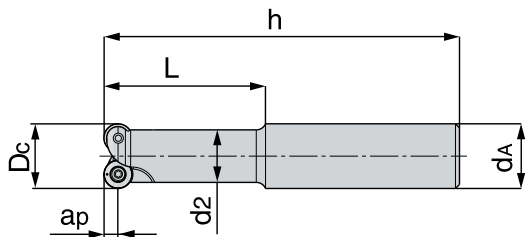
End milling cutter form A



Dimension in mm										Ordering code	Availability		Spare parts	
Dc	dA	d2	L	h	ap	z	$\alpha$	L3	L4					
15	16	13	60	108	3,5	2	2,0°	20	55	SEA00 RD07.015 Z02 108	●	RD.. 07	AP13-25055 5118117 M <sub>A</sub> = 2Nm	IP7 5118123
15	20	13	80	130	3,5	2	3,4°	20	75	SEA00 RD07.015 Z02 130	●	RD.. 07		
15	20	13	100	150	3,5	2	2,5°	20	95	SEA00 RD07.015 Z02 150	●	RD.. 07		
15	25	13	120	176	3,5	2	3,5°	20	115	SEA00 RD07.015 Z02 176	●	RD.. 07		
16	16	13	60	108	3,5	2	2,0°	20	55	SEA00 RD07.016 Z02 108	●	RD.. 07		
16	20	13	80	130	3	2	3,4°	20	75	SEA00 RD07.016 Z02 130	●	RD.. 07		
16	20	13	100	150	3,5	2	2,5°	20	95	SEA00 RD07.016 Z02 150	●	RD.. 07		
16	25	13	120	176	3,5	2	3,5°	20	115	SEA00 RD07.016 Z02 176	●	RD.. 07		
20	20	18	40	90	5	2	2,9°	20	35	SEA00 RD10.020 Z02 090	●	RD.. 10	AP13-35072 5118118 M <sub>A</sub> = 3,5Nm	IP15 5088520
20	20	18	60	110	5	2	1,3°	20	55	SEA00 RD10.020 Z02 110	●	RD.. 10		
20	25	18	80	136	5	2	3,4°	20	75	SEA00 RD10.020 Z02 136	●	RD.. 10		
20	25	18	100	156	5	2	2,5°	20	95	SEA00 RD10.020 Z02 156	●	RD.. 10		
20	25	18	120	176	5	2	2,0°	20	115	SEA00 RD10.020 Z02 176	●	RD.. 10		

Order example 1 piece SEA00 RD07.015 Z02 108

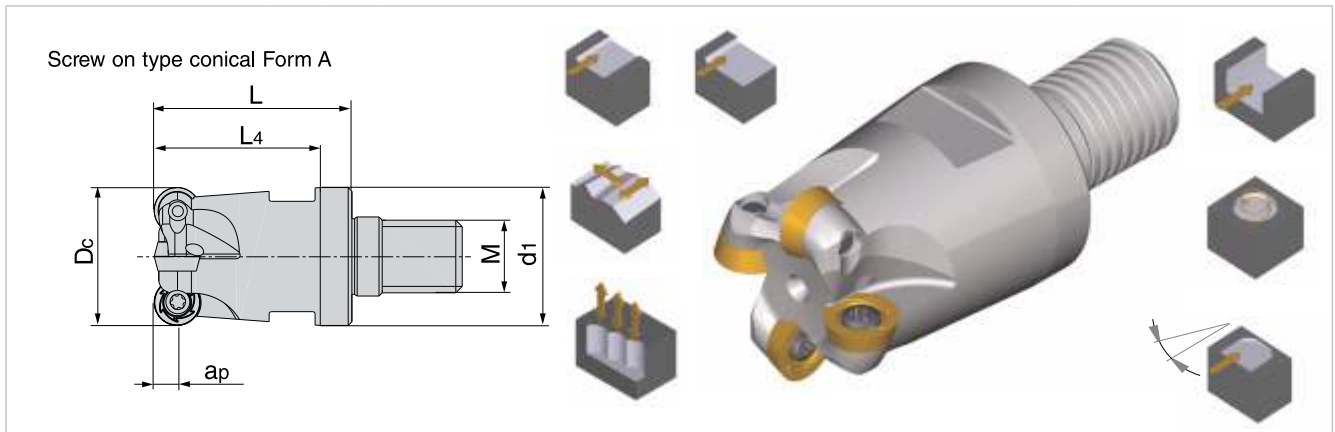
End milling cutter form B








Dimension in mm							Ordering code	Availability		Spare parts	
Dc	dA	d2	L	h	ap	z					
15	16	13	40	88	3,5	2	SEB00 RD07.015 Z02 088	●	RD.. 07	AP13-25055 5118117 M <sub>A</sub> = 2Nm	IP7 5118123
16	16	13	40	88	3,5	2	SEB00 RD07.016 Z02 088	●	RD.. 07		

Order example 1 piece SEB00 RD07.015 Z02 088

# Rcut 360P



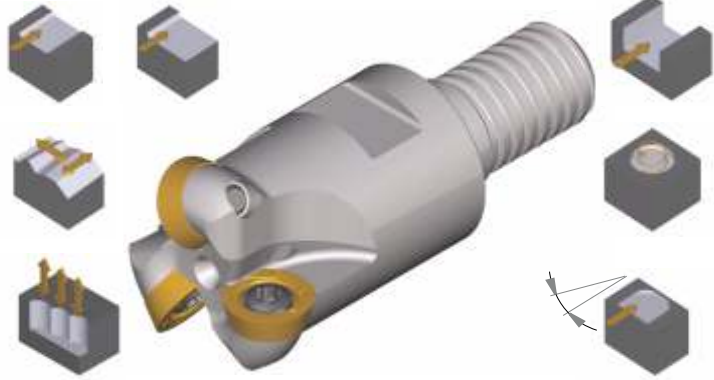
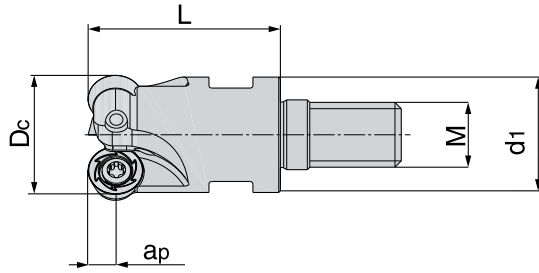
Dimension in mm								Ordering code	Availability		Spare parts		
Dc	d1	L	L4	ap	z	M							
10	13	23	17	2,5	2	8	SSA00 RD05.010 Z02 M8	●	RD.. 05..	AP13-18037 5118116 M <sub>A</sub> = 0,5Nm	IP6 5126412	-	
12	13	23	17	2,5	3	8	SSA00 RD05.012 Z03 M8	●					
30	29	43	38	3,5	5	16	SSA00 RD07.030 Z05 M16	●	RD.. 07..	AP13-25055 5118117 M <sub>A</sub> = 2Nm	IP7 5118123	-	
30	29	43	38	5	4	16	SSA00 RD10.030 Z04 M16	●	RD.. 10..	AP13-35072 5118118 M <sub>A</sub> = 3,5Nm	IP15 5088520	-	
32	29	43	38	5	4	16	SSA00 RD10.032 Z04 M16	●					
32	29	43	38	6	3	16	SSA00 RD12.032 Z03 M16	●	RD.. 12..	A13-35086 5118120 M <sub>A</sub> = 3,5Nm	IP15 5088520	 Clamping screw RD12 5125841	
32	29	43	38	8	2	16	SSA00 RD16.032 Z02 M16	●	RD.. 16..	AP13-45105 5118121 M <sub>A</sub> = 5Nm	IP20 5088521	 Clamping system Clamp 5125842 Clamping screw 5118121	

Order example 1 piece SSA00 RD05.010 Z02 M8

Cutting data recommendations page 187-188

# Rcut 360P

Screw on type cylindrical Form B



Dimension in mm						Ordering code	Availability		Spare parts		
Dc	d1	L	ap	z	M						
15	13	23	2,5	4	8	SSB00 RD05.015 Z04 M8	●	RD.. 05..	AP13-18037 5118116 M <sub>A</sub> = 0,5Nm	IP6 5126412	-
16	13	23	2,5	4	8	SSB00 RD05.016 Z04 M8	●				
20	18	30	2,5	5	10	SSB00 RD05.020 Z05 M10	●				
25	21	35	2,5	6	12	SSB00 RD05.025 Z06 M12	●				
15	13	23	3,5	2	8	SSB00 RD07.015 Z02 M8	●	RD.. 07..	AP13-25055 5118117 M <sub>A</sub> = 2Nm	IP7 5118123	-
15	13	23	3,5	3	8	SSB00 RD07.015 Z03 M8	●				
16	13	23	3,5	2	8	SSB00 RD07.016 Z02 M8	●				
16	13	23	3,5	3	8	SSB00 RD07.016 Z03 M8	●				
20	18	30	3,5	4	10	SSB00 RD07.020 Z04 M10	●				
25	21	35	3,5	5	12	SSB00 RD07.025 Z05 M12	●				
32	29	43	3,5	6	16	SSB00 RD07.032 Z06 M16	●				
35	29	43	3,5	6	16	SSB00 RD07.035 Z06 M16	●				
20	18	30	5	2	10	SSB00 RD10.020 Z02 M10	●	RD.. 10..	AP13-35072 5118118 M <sub>A</sub> = 3,5Nm	IP15 5088520	-
25	21	35	5	3	12	SSB00 RD10.025 Z03 M12	●				
35	29	43	5	4	16	SSB00 RD10.035 Z04 M16	●				
35	29	43	5	5	16	SSB00 RD10.035 Z05 M16	●				
40	29	43	5	5	16	SSB00 RD10.040 Z05 M16	●				
42	29	43	5	5	16	SSB00 RD10.042 Z05 M16	●				
42	29	43	5	6	16	SSB00 RD10.042 Z06 M16	●				
25	21	35	6	2	12	SSB00 RD12.025 Z02 M12	●	RD.. 12..	AP13-35086 5118120 M <sub>A</sub> = 3,5Nm	IP15 5088520	 Clamping screw RD12 5125841
35	29	43	6	3	16	SSB00 RD12.035 Z03 M16	●				
40	29	43	6	2	16	SSB00 RD12.040 Z04 M16	●				
42	29	43	6	4	16	SSB00 RD12.042 Z04 M16	●				
40	29	43	8	2	16	SSB00 RD16.040 Z02 M16	●	RD.. 16	AP13-45105 5118121 M <sub>A</sub> = 5Nm	IP20 5088521	 Clamping system Clamp 5125842 Clamping screw 5118121

Order example 1 piece SSB00 RD05.015 Z04 M8

Cutting data recommendations page 187-188

# Rcut 360P

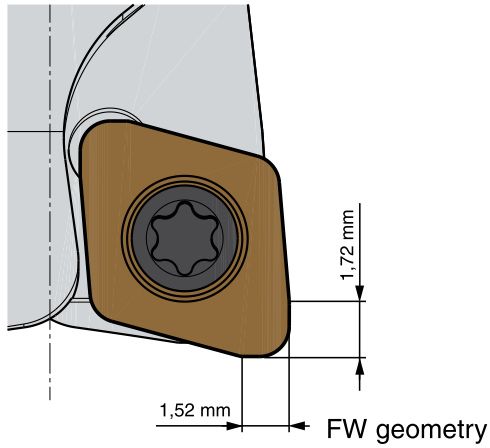
## Inserts

N = Number of cutting edges	Ordering code	d	s	d <sub>1</sub>	Cutting materials Ident No.																
					SCP20M	SCP25M	SCP30M	SCP35M	SCP40M	SCM35M	SCM40M	SCK15M	SCK20M	SCH03M	SCH05M	SCH10M	SCH30M				
	RDHT 12T3 MO-MM	12	3,97	4,40							●	●									
	RDKT 12T3 MOS-MP	12	3,97	3,90	●	●	●	●													
	RDKT 12T3 MOS-MM	12	3,97	3,90							●	●									
	RDKT 1604 MOS-MP	16	4,76	5,2	●	●	●	●													
	RDKT 1604 MOS-MM	16	4,76	5,2							●	●									
	RDHW 0501 MOS-FH	5	1,50	2,2													●				
	RDKW 0501 MOS-MH	5	1,50	2,2															●	●	
	RDKW 0501 MOS-MP	5	1,50	2,2	●	●															
	RDKW 0501 MOS-MM	5	1,50	2,2							●	●									
	RDKW 0501 MOS-MK	5	1,50	2,2									●	●							
	RDKW 0501 MOS-RH	5	1,50	2,2																	●
	RDHW 0702 MOS-FH	7	2,38	2,7														●			
	RDKW 0702 MOS-MH	7	2,38	2,7															●	●	
	RDKW 0702 MOS-MP	7	2,38	2,7	●	●	●	●													
	RDKW 0702 MOS-MM	7	2,38	2,7							●	●									
	RDKW 0702 MOS-MK	7	2,38	2,7									●	●							
	RDKW 0702 MOS-RH	7	2,38	2,7																	●
	RDHW 1003 MOS-FH	10	3,18	3,9														●			
	RDKW 1003 MOS-MH	10	3,18	3,9															●	●	
	RDKW 1003 MOS-MP	10	3,18	3,9	●	●	●	●													
	RDKW 1003 MOS-MM	10	3,18	3,9							●	●									
	RDKW 1003 MOS-MK	10	3,18	3,9									●	●							
	RDKW 1003 MOS-RH	10	3,18	3,9																	●
	RDKW 12T3 MOS-MH	12	3,97	3,9															●	●	
	RDKW 12T3 MOS-MP	12	3,97	3,9	●	●	●	●													
	RDKW 12T3 MOS-MK	12	3,97	3,9									●	●							
	RDKW 12T3 MOS-RH	12	3,97	3,9																	●
	RDKW 1604 MOS-MH	16	4,76	5,2															●	●	
	RDKW 1604 MOS-MP	16	4,76	5,2	●	●	●	●													
	RDKW 1604 MOS-MK	16	4,76	5,2									●	●							
	RDKW 1604 MOS-RH	16	4,76	5,2																	●

Order example 10 pieces RDHT 12T3 MO-MM SCM35M

# RhombiCut 95P

Ø 16 - 42  
Screw on type  
Insert size 06



### Special features:

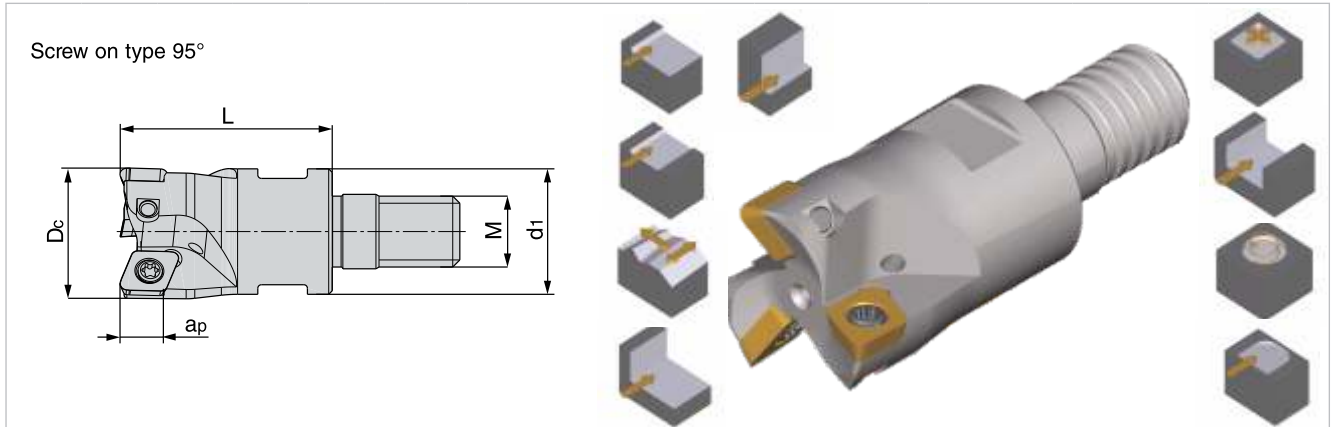
- Universal applicable finishing tool for all current materials and applications
- Especially wear resistant and exact produced inserts
- Axial & radial wiper geometry FW for high productivity (bigger ap & fz possible)
- Vibration free finishing, also with big depths.




CD.. 06..

"WSP Insert geometry"	Cutting depth [ mm ] ap max"	Feed [ mm ] fz"
FH	0,10 0,25 1,00	0,08 0,22 0,33
FW	0,12 0,25 1,80	0,10 0,25 0,40

Cutting data recommendations page 187-188

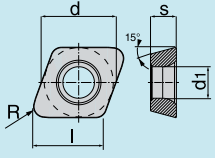
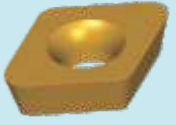
# RhombiCut 95P



Dimension in mm						Ordering code	Availability		Spare parts	
Dc	d1	L	ap	z	M					
16	12,7	23	6	2	M08	SS95 CD06.016 Z02 M08	●	CDGX 06..	AP17-25055 5085710 M <sub>A</sub> = 2Nm	IP7 5118123
16	12,7	23	6	2	M10	SS95 CD06.016 Z02 M10	●			
20	17,7	30	6	3	M10	SS95 CD06.020 Z03 M10	●			
25	20,7	35	6	3	M12	SS95 CD06.025 Z03 M12	●			
25	20,7	35	6	4	M12	SS95 CD06.025 Z04 M12	●			
35	28,7	43	6	5	M16	SS95 CD06.035 Z05 M16	●			
42	28,7	43	6	6	M16	SS95 CD06.042 Z06 M16	●			

Order example 1 piece SS95 CD06.016 Z02 M08

## Inserts

N = Number of cutting edges	Ordering code	l	d	s	d1	R	SCM35M	SCM40M	SCK15M	SCK20M	SCH03M	SCH05M	SCH10M	SCH23M	SCH30M
 	CDGX 060210-SR-FH	5,8	6,5	2,38	2,9	1					●		●	●	●
	CDGX 060210-SR-FW	1,72	6,5	2,38	2,9	1					●		●		

Order example 10 pieces CDGX 060210 SR-FH SCH03M

Cutting data recommendations page 187-188

# BallCut

Multi Functional

Ø 8 - 25

End Milling Cutter Steel Shank

Insert size 08 to 25

Ø 8 - 32

End Milling Cutter Solid Carbide Shank

Insert size 08 to 32

Ø 8 - 32

Screw on type Steel Shank

Insert size 08 to 32



## Special features:

- Multifunctional tool system for highest productivity
- 1 basic body for 2 machining processes = multifunctional
- Saving of tool holders due to multifunctional tool system
- Ball nose copying tool for semi finishing and finishing
- Wide variety of inserts and tools
- Vibrations reducing, soldered solid carbide tools for finishing of high quality surfaces
- Specific rotation tolerances
- Application of ultrafine grain carbides for high wear resistance and at the same time high fracture resistance – for more process security
- Internal coolant supply with each insert / cutter body guaranteed
- Higher thickness on inserts for more stability and vibration resistance



# BallCut

## Cutting data

BE 08..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 08	Feed [ mm ] fz" BE 08
MHN	0,10 0,15 0,20	0,10 0,15 0,20
MHN2	0,10 0,15 0,20	0,10 0,15 0,20
SHN2	0,10 0,12 0,15	0,08 0,12 0,15

BE 10..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 10	Feed [ mm ] fz" BE 10
MHN	0,12 0,20 0,24	0,15 0,20 0,25
MHN2	0,12 0,20 0,24	0,15 0,20 0,25
SHN2	0,10 0,15 0,20	0,10 0,15 0,20

BE 12

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 12	Feed [ mm ] fz" BE 12
FHF	0,06 0,12 0,18	0,08 0,14 0,20
MHF	0,10 0,15 0,24	0,15 0,22 0,30
SHF	0,15 0,25 0,30	0,15 0,25 0,30
FHN2	0,06 0,12 0,18	0,08 0,14 0,20
MHN	0,15 0,30 0,40	0,15 0,25 0,35
MHN2	0,15 0,30 0,40	0,15 0,25 0,35
SHN	0,10 0,16 0,22	0,10 0,16 0,22
SHN2	0,10 0,16 0,22	0,10 0,16 0,22

BE 16..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 16	Feed [ mm ] fz" BE 16
FHF	0,08 0,15 0,22	0,12 0,18 0,24
MHF	0,13 0,20 0,32	0,18 0,25 0,30
SHF	0,20 0,30 0,35	0,20 0,30 0,35
FHN2	0,08 0,15 0,22	0,12 0,18 0,24
MHN	0,20 0,35 0,45	0,20 0,30 0,35
MHN2	0,20 0,35 0,45	0,20 0,30 0,35
SHN	0,12 0,18 0,24	0,14 0,20 0,26
SHN2	0,12 0,18 0,24	0,14 0,20 0,26

BE 20..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 20	Feed [ mm ] fz" BE 20
FHF	0,12 0,20 0,28	0,18 0,24 0,30
MHF	0,20 0,25 0,40	0,22 0,30 0,38
SHF	0,20 0,35 0,45	0,30 0,40 0,45
FHN2	0,12 0,20 0,28	0,18 0,24 0,30
MHN	0,25 0,40 0,50	0,30 0,40 0,45
MHN2	0,25 0,40 0,50	0,30 0,40 0,45
SHN	0,16 0,24 0,32	0,20 0,28 0,36
SHN2	0,16 0,24 0,32	0,20 0,28 0,36

BE 25..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 25	Feed [ mm ] fz" BE 25
MHF	0,25 0,31 0,50	0,22 0,32 0,42
SHF	0,25 0,40 0,50	0,30 0,40 0,45
MHN	0,30 0,45 0,55	0,30 0,40 0,45
MHN2	0,30 0,45 0,55	0,30 0,40 0,45
SHN2	0,22 0,30 0,38	0,20 0,30 0,40

BE 32..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" BE 32	Feed [ mm ] fz" BE 32
MHF	0,32 0,40 0,64	0,25 0,35 0,45
SHF	0,30 0,45 0,55	0,40 0,50 0,55
MHN	0,35 0,50 0,60	0,40 0,50 0,55

# BallCut

Cutting data

TE 08..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" TE 08	Feed [ mm ] fz" TE 08
SHF	0,10 0,20*	0,05 0,15 0,25
MHN	0,10 0,25*	0,10 0,20 0,3

TE 10..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" TE 10	Feed [ mm ] fz" TE 10
SHF	0,10 0,25*	0,08 0,17 0,25
MHN	0,10 0,30*	0,10 0,20 0,30

TE 12..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" TE 12	Feed [ mm ] fz" TE 12
SHF	0,10 0,30*	0,10 0,20 0,30
MHN	0,10 0,30*	0,10 0,20 0,35

TE 16..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" TE 16	Feed [ mm ] fz" TE 16
SHF	0,15 0,30*	0,10 0,22 0,35
MHN	0,15 0,35*	0,10 0,25 0,40

TE 20..

"WSP Insert geometry"	Cutting depth [ mm ] ap max" TE 20	Feed [ mm ] fz" TE 20
SHF	0,20 0,35*	0,12 0,26 0,40
MHN	0,20 0,40*	0,20 0,27 0,45

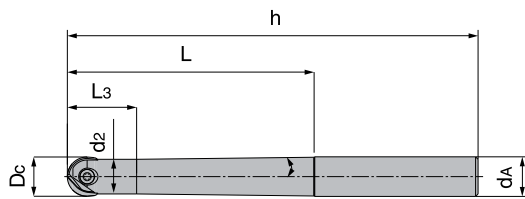
TE 25..




"WSP Insert geometry"	Cutting depth [ mm ] ap max" TE 25	Feed [ mm ] fz" TE 25
SHF	0,20 0,4*	0,20 0,30 0,45
MHN	0,20 0,45*	0,20 0,35 0,50

# BallCut

## Cutting data

End milling conical cutter Form A



Dimension in mm								Ordering code	Availability		Spare parts	
Dc	dA	d2	h	$\alpha$	L	L <sub>3</sub>	z					
8	12	6,5	110	3°30'	53	18,5	2	SEA00 BE08.008.Z02 110 NC	●	BE08.. TE08..	AP12-25063 5118702 M <sub>A</sub> = 1,4Nm	IP7 5118123
8	12	6,5	132	2°	75	18,5	2	SEA00 BE08.008.Z02 132 NC	●			
10	12	8	110	2°20'	53	21	2	SEA00 BE10.010 Z02 110 NC	●	BE10.. TE10..	AP12-30077 5118703 M <sub>A</sub> = 2,5Nm	IP8 5088519
10	12	8	132	1°15'	75	21	2	SEA00 BE10.010 Z02 132 NC	●			
12	12	10	110	1°20'	53	22	2	SEA00 BE12.012 Z02 110 NC	●	BE12.. TE12..	AP12-35095 5118704 M <sub>A</sub> = 3,5Nm	IP10 5118726
12	12	10	145	0°40'	85	22	2	SEA00 BE12.012 Z02 145 NC	●			
16	16	14	123	1°15'	63	28	2	SEA00 BE16.016 Z02 123 NC	●	BE16.. TE16..	AP12-40133 5118705 M <sub>A</sub> = 5Nm	IP15 5088520
16	16	14	166	0°40'	100	28	2	SEA00 BE16.016 Z02 166 NC	●			
20	20	17	141	2°	75	34	2	SEA00 BE20.020 Z02 141 NC	●	BE20.. TE20..	AP12-50162 5118706 M <sub>A</sub> = 7Nm	IP20 5088521
20	20	17	191	1°	115	34	2	SEA00 BE20.020 Z02 191 NC	●			
25	25	21	166	2°	90	41	2	SEA00 BE25.025 Z02 166 NC	●	BE25.. TE25..	AP12-60200 5118707 M <sub>A</sub> = 8Nm	IP25 5118727
25	25	21	215	3°	135	41	2	SEA00 BE25.025 Z02 215 NC	●			

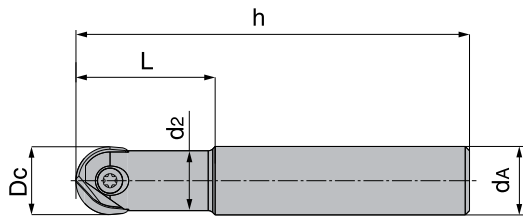
Order example 1 piece SEA00 BE08.008.Z02 110 NC




Cutting data recommendations page 187-188

# BallCut

## Cutting data

End milling cutter cylindrical Form B



Dimension in mm						Ordering code	Availability		Spare parts	
Dc	dA	d2	h	L	z					
8	12	7	92	32	2	SEB00 BE08.008 Z02 092	●	BE08.. TE08..	AP12-25063 5118702 M <sub>A</sub> = 1,4Nm	IP7 5118123
10	12	9	92	32	2	SEB00 BE10.010 Z02 092	●	BE10.. TE10..	AP12-30077 5118703 M <sub>A</sub> = 2,5Nm	IP8 5088519
12	12	11	92	32	2	SEB00 BE12.012 Z02 092	●	BE12.. TE12..	AP12-35095 5118704 M <sub>A</sub> = 3,5Nm	IP10 5118726
12	12	11	145	45	2	SEB00 BE12.012 Z02 145 NC	●			
16	16	14,5	92	32	2	SEB00 BE16.016 Z02 092	●	BE16.. TE16..	AP12-40133 5118705 M <sub>A</sub> = 5Nm	IP15 5088520
16	16	14,5	160	55	2	SEB00 BE16.016 Z02 160 NC	●			
20	20	18	104	38	2	SEB00 BE20.020 Z02 104	●	BE20.. TE20..	AP12-50162 5118706 M <sub>A</sub> = 7Nm	IP20 5088521
20	20	18	190	65	2	SEB00 BE20.020 Z02 190 NC	●			
25	25	22,5	121	45	2	SEB00 BE25.025 Z02 121	●	BE25.. TE25..	AP12-60200 5118707 M <sub>A</sub> = 8Nm	IP25 5118727
25	25	22,5	210	75	2	SEB00 BE25.025 Z02 210 NC	●			

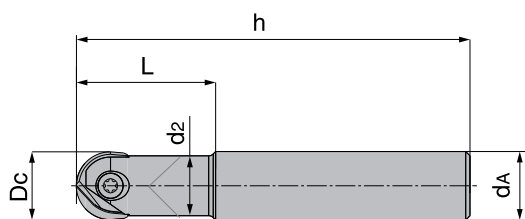
Order example 1 piece SEB00 BE08.008 Z02 092




Cutting data recommendations page 187-188

# BallCut

Solid carbide shank

End milling cutter cylindrical Form B Solid carbide shank



Dimension in mm						Ordering code	Availability		Spare parts	
Dc	dA	d2	h	L	z					
8	8	7	80	25	2	SEB00 BE08.008 Z02 80	●	BE08.. TE08..	AP12-25063 5118702 M <sub>A</sub> = 1,4Nm	IP7 5118123
8	8	7	100	25	2	SEB00 BE08.008 Z02 100	●			
8	8	7	150	40	2	SEB00 BE08.008 Z02 150	○			
10	10	8,8	80	35	2	SEB00 BE10.010 Z02 80	○	BE10.. TE10..	AP12-30077 5118703 M <sub>A</sub> = 2,5Nm	IP8 5088519
10	10	8,8	120	35	2	SEB00 BE10.010 Z02 120	●			
10	10	8,8	150	50	2	SEB00 BE10.010 Z02 150	●			
12	12	10,5	80	35	2	SEB00 BE12.012 Z02 80	●	BE12.. TE12..	AP12-35095 5118704 M <sub>A</sub> = 3,5Nm	IP10 5118726
12	12	10,5	120	35	2	SEB00 BE12.012 Z02 120	●			
12	12	10,5	160	50	2	SEB00 BE12.012 Z02 160	●			
16	16	14	100	40	2	SEB00 BE16.016 Z02 100	●	BE16.. TE16..	AP12-40133 5118705 M <sub>A</sub> = 5Nm	IP15 5088520
16	16	14	140	40	2	SEB00 BE16.016 Z02 140	●			
16	16	14	140	55	2	SEB00 BE16.016 Z02 140 55	○			
16	16	14	175	55	2	SEB00 BE16.016 Z02 175	●			
20	20	18	100	50	2	SEB00 BE20.020 Z02 100	○	BE20.. TE20..	AP12-50162 5118706 M <sub>A</sub> = 7Nm	IP20 5088521
20	20	18	140	50	2	SEB00 BE20.020 Z02 140	●			
20	20	18	190	75	2	SEB00 BE20.020 Z02 190	●			
25	25	22,4	160	60	2	SEB00 BE25.025 Z02 160	○	BE25.. TE25..	AP12-60200 5118707 M <sub>A</sub> = 8Nm	IP25 5118727
25	25	22,4	210	90	2	SEB00 BE25.025 Z02 210	●			
32	32	28,6	190	65	2	SEB00 BE32.032 Z02 190	○	BE32.. TE32..	AP12-80250 5118709 M <sub>A</sub> = 20Nm	IP40 5118728
32	32	28,6	240	105	2	SEB00 BE32.032 Z02 240	○			

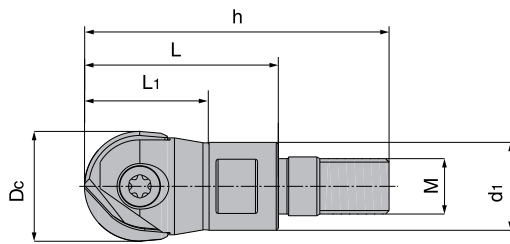
Order example 1 piece SEB00 BE08.008 Z02 80




Cutting data recommendations page 187-188

# BallCut

Steel shank

Screw on type




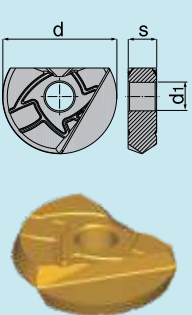
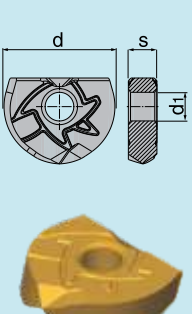
Dimension in mm							Ordering code	Availability		Spare parts	
Dc	d1	h	L	L1	M	z					
8	9,7	36,5	23	16	6	2	SS00 BE08.008 Z02 M06	●	BE08.. TE08..	AP12-25063 5118702 M <sub>A</sub> = 1,4Nm	IP7 5118123
10	9,7	36,5	23	23	6	2	SS00 BE10.010 Z02 M06	●	BE10.. TE10..	AP12-30077 5118703 M <sub>A</sub> = 2,5Nm	IP8 5088519
12	9,7	36,5	23	23	6	2	SS00 BE12.012 Z02 M06	●	BE12.. TE12..	AP12-35095 5118704 M <sub>A</sub> = 3,5Nm	IP10 5118726
12	12,7	44,0	28	19	8	2	SS00 BE12.012 Z02 M08	●			
16	12,7	44,0	28	28	8	2	SS00 BE16.016 Z02 M08	●	BE16.. TE16..	AP12-40133 5118705 M <sub>A</sub> = 5Nm	IP15 5088520
16	15,4	46,0	28	28	10	2	SS00 BE16.016 Z02 M10	●			
20	17,7	46,0	28	28	10	2	SS00 BE20.020 Z02 M10	●	BE20.. TE20..	AP12-50162 5118706 M <sub>A</sub> = 7Nm	IP20 5088521
25	20,7	55,0	35	35	12	2	SS00 BE25.025 Z02 M12	●	BE25.. TE25..	AP12-60200 5118707 M <sub>A</sub> = 8Nm	IP25 5118727
32	28,7	65,0	43	35	16	2	SS00 BE32.032 Z02 M16	●	BE32.. TE32..	AP12-80250 5118709 M <sub>A</sub> = 20Nm	IP40 5118728

Order example 1 piece SS00 BE08.008 Z02 M06

Cutting data recommendations page 187-188

# BallCut

Inserts

					Schneidstoffsorten Cutting materials			
N = Number of cutting edges	Ordering code	d	s	d <sub>1</sub>	SCH03M	SCH10M	SCH23M	SCH30M
	SE12-FHF	12	2,99	3,5	●			
	SE12-SHF	12	2,99	3,5		●	●	
	SE12-MHF	12	2,99	3,5				●
	SE16-FHF	16	3,99	4	●			
	SE16-SHF	16	3,99	4		●	●	
	SE16-MHF	16	3,99	4				●
	SE20-FHF	20	4,99	5	●			
	SE20-SHF	20	4,99	5		●	●	
	SE20-MHF	20	4,99	5				●
	SE25-SHF	25	5,99	6			●	●
	SE25-MHF	25	5,99	6				●
	SE32-SHF	32	6,99	8			●	●
SE32-MHF	32	6,99	8				●	
N = 2								
	SE08-MHN	8	2,39	2,5		●	●	●
	SE10-MHN	10	2,59	3			●	●
	SE12-SHN	12	2,99	3,5	●			
	SE12-MHN	12	2,99	3,5		●	●	●
	SE16-SHN	16	3,99	4	●			
	SE16-MHN	16	3,99	4		●	●	●
	SE20-SHN	20	4,99	5	●			
	SE20-MHN	20	4,99	5		●	●	●
	SE25-MHN	25	5,99	6			●	●
SE32-MHN	32	6,99	8			●	●	
N = 2								
	SE08-MHN2	8	2,39	2,5		●		●
	SE08-SHN2	8	2,39	2,5			●	
	SE10-MHN2	10	2,59	3		●		●
	SE10-SHN2	10	2,59	3			●	
	SE12-FHN2	12	2,99	3,5	●			
	SE12-MHN2	12	2,99	3,5		●		●
	SE12-SHN2	12	2,99	3,5			●	
	SE16-FHN2	16	3,99	4	●			
	SE16-MHN2	16	3,99	4		●		●
	SE16-SHN2	16	3,99	4			●	
	SE20-FHN2	20	4,99	5	●			
	SE20-MHN2	20	4,99	5		●		●
	SE20-SHN2	20	4,99	5			●	
	SE25-MHN2	25	5,99	6		●		●
	SE25-SHN2	25	5,99	6			●	

# TorroCut 95P

Inserts

								Cutting materials
N = Number of cutting edges	Ordering code	h	l	d	s	d <sub>1</sub>	r	BCH10M
	TE0810-SHF	7	2	8	2,4	2,5	1,0	●
	TE1010-SHF	8,5	2	10	2,6	3	1,0	●
	TE1210-SHF	10	2	12	3	3,5	1,0	●
	TE1220-SHF	10	3	12	3	3,5	2,0	○
	TE1610-SHF	12	2	16	4	4	1,0	●
	TE1630-SHF	12	4	16	4	4	3,0	○
	TE2010-SHF	15	2	20	5	5	1,0	●
	TE2040-SHF	15	5	20	5	5	4,0	○
	TE2510-SHF	18,5	2	25	6	6	1,0	●
	TE2550-SHF	18,5	6	25	6	6	5,0	○
	TE0806-MHN	7	1,6	8	2,4	2,5	0,6	●
	TE0810-MHN	7	2	8	2,4	2,5	1,0	●
	TE1005-MHN	8,5	1,5	10	2,6	3	0,5	○
	TE1008-MHN	8,5	1,8	10	2,6	3	0,8	●
	TE1010-MHN	8,5	2	10	2,6	3	1,0	●
	TE1205-MHN	10	1,5	12	3	3,5	0,5	○
	TE1210-MHN	10	2	12	3	3,5	1,0	●
	TE1220-MHN	10	3	12	3	3,5	2,0	●
	TE1610-MHN	12	2	16	4	4	1,0	●
	TE1630-MHN	12	4	16	4	4	3,0	●
TE2010-MHN	15	2	20	5	5	1,0	●	
TE2040-MHN	15	5	20	5	5	4,0	●	
TE2510-MHN	18,5	2	25	6	6	1,0	●	
TE2550-MHN	18,5	6	25	6	6	5,0	●	

Order example 10 pieces TE0810-SHF SCH10M

### Description Insert BallCut / TorooCut

FHF = Finishing Hard Fine

MHF = Medium Hard Fine

SHF = Semifinishing Hard Fine

FHN2 = Finishing Hard Neutral 2

MHN = Medium Hard Neutral

MHN2 = Medium Hard Neutral 2



SHN = Semifinishing Hard Neutral

SHN2 = Semifinishing Hard Neutral 2

Optical design and colours of the original indexable inserts may deviate from the illustration!



## Cutting Speed Recommendations for 3D Milling

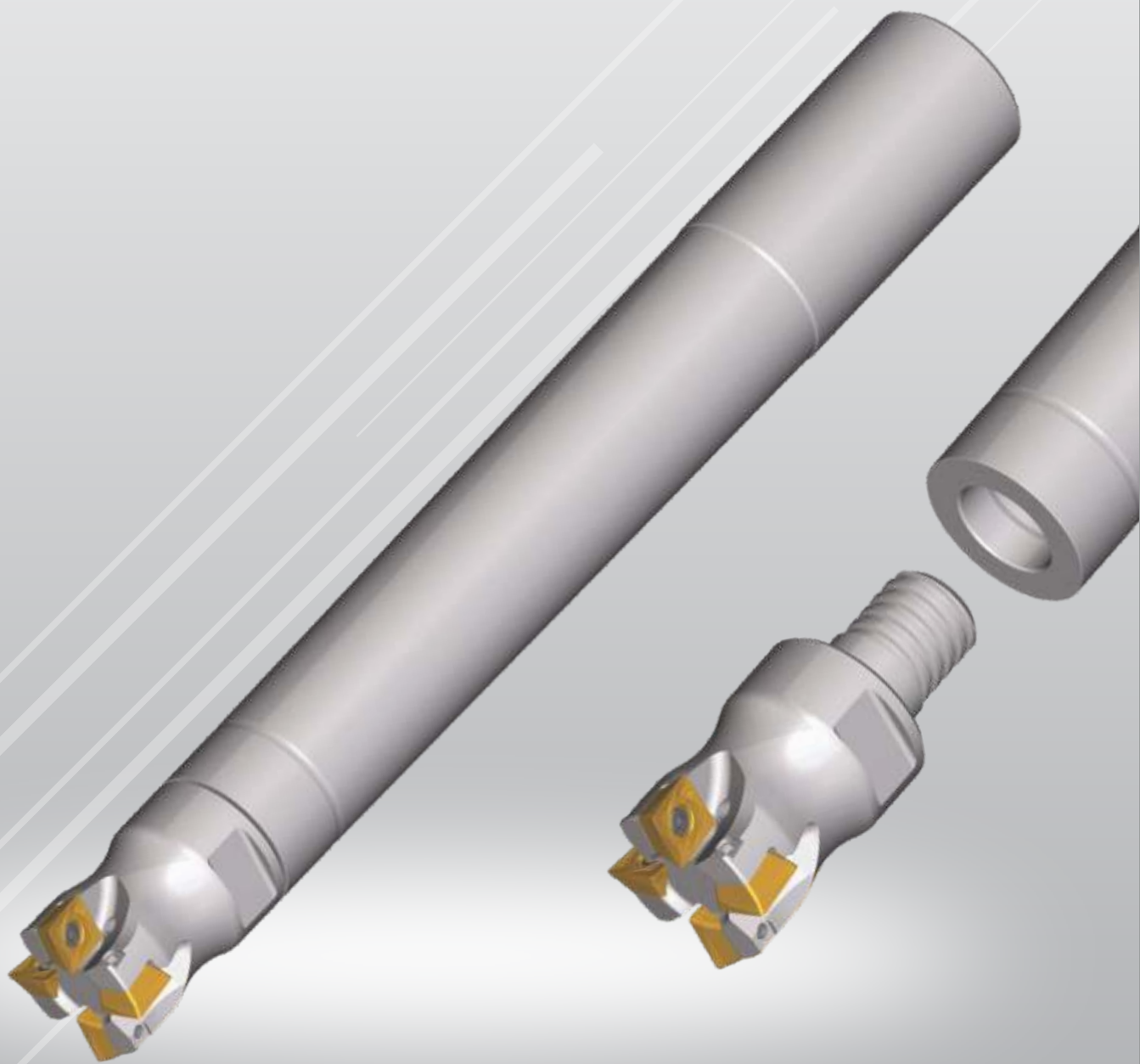
Material group	WSP -Sorte				Vc m/min				
	Insert grade								
	ISO Code		Dry machining	Wet machining	SCP20M P20	SCP25M P25	SCP30M P30	SCP35M P35	SCP40M P40
	Material								
P	Structural steel		●	○	200-320	200-300	170-280	170-260	
	Heat treated steel		●	○	180-290	180-280	160-260	150-240	
	Tool steel		●	○	160-260	160-250	140-230	140-220	
	Heat treated steel	1400N/mm2 high strength	●	○	130-200	130-180	120-180		
M	Stainless steel	austenitic	●	○		120-200		100-170	
		austenitic hardened	●	○		80-150			
K	Grey cast iron		●	○		180-360			
	Nodular graphite cast iron		●	○		140-220			
N	Aluminium		●	○					
	Copper and copper alloys		●	○					
S	Heat resistant alloys		○	●					
	Titanium alloys		○	●					
H	Chilled cast iron	Hardness 300-600 HB	●	○					
	Hardened steel	45-52 HRC	●	○					
	Hardened steel	53-58 HRC	●	○					
	Hardened steel	59-63 HRC	●	○					

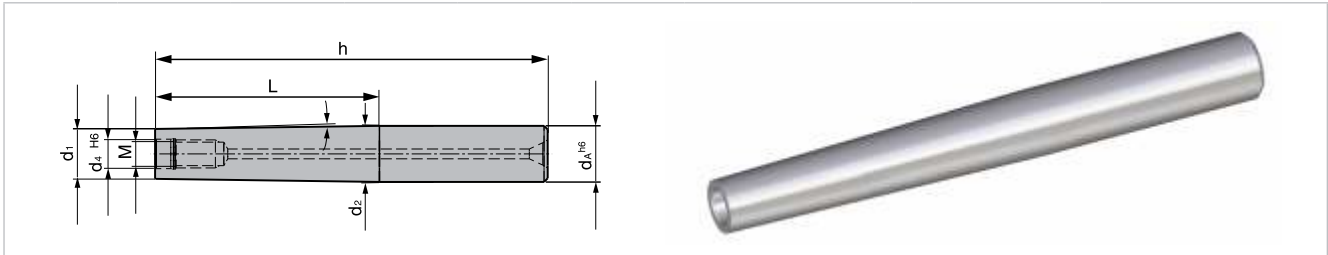
- recommended application
- alternative application reduced by 30 - 50 % reduced

Vc m/min													
SCM35M M35	SCM40M M40	SCK15M K15	SCK20M K20	SCN10M N10	SCN15M N15	SWN10M N10	SCS35M S35	SCH03M	SCH05M	SCH10M	SCH23M	SCH30M	
								250-400	200-320	200-320		180-280	
								200-350	180-290	180-290		160-250	
								180-300	160-260	160-260		140-220	
								150-250	130-200	130-200		110-170	
150-220	130-180							150-200				120-180	
120-170	100-150							120-180				100-160	
		220-400	200-360										
		180-230	170-220										
30-90													
30-90													
								60-140	50-120	50-120	60-140		
								90-260	80-240	80-240	90-260	90-180	
								70-220	60-200	60-200	70-220	70-160	
								60-140	50-120	50-120	50-140	-	

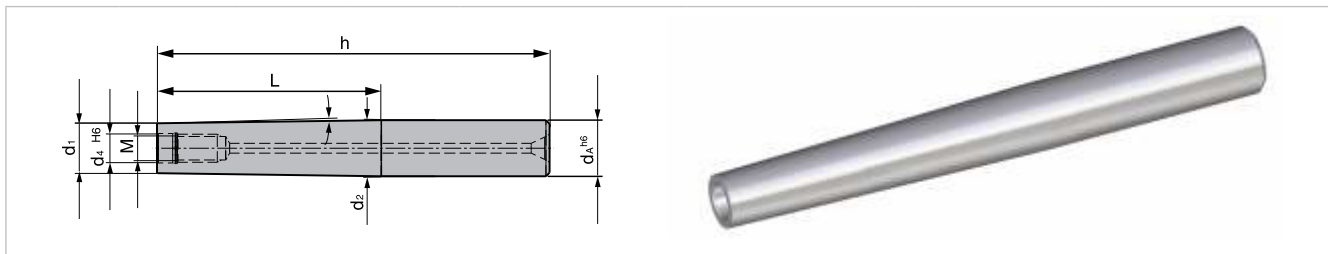


# EXTENSIONS CHUCKS

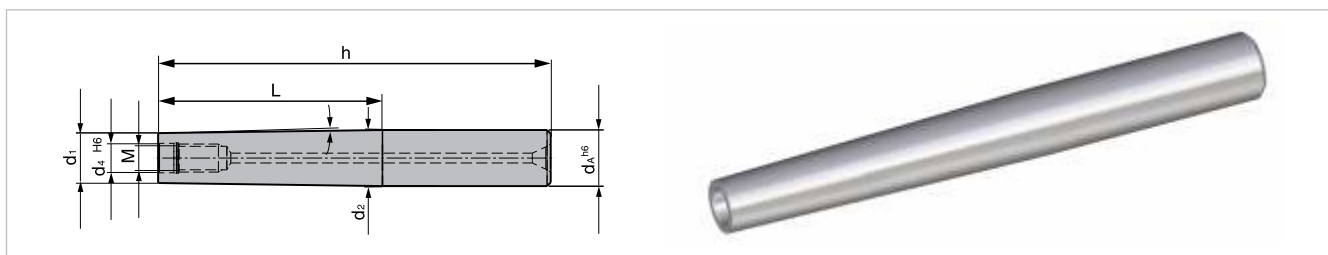




M	d <sub>4</sub> <sup>H6</sup>	d <sub>1</sub>	d <sub>2</sub>	d <sub>A</sub> <sup>H6</sup>	α	L	h	Material-No.	Ordering code
6	6,5	9,5	10	10	0,72°	20	60	5127650	Z 10.060 M6
6	6,5	9,5	10	10	0,36°	40	80	5127652	Z 10.080 M6
6	6,5	9,5	10	10	0,24°	60	100	5127653	Z 10.100 M6
6	6,5	9,5	10	10	0,18°	80	120	5127655	Z 10.120 M6



M	d <sub>4</sub> <sup>H6</sup>	d <sub>1</sub>	d <sub>2</sub>	d <sub>A</sub> <sup>H6</sup>	α	L	h	Material-No.	Ordering code
8	8,5	12,8	16	16	2,29°	40	95	5087764	K 16.040 M8
8	8,5	12,8	16	16	1,53°	60	115	5088441	K 16.060 M8
8	8,5	12,8	16	16	1,15°	80	135	5088442	K 16.080 M8
8	8,5	12,8	16	16	0,92°	100	155	5088459	K 16.100 M8
8	8,5	12,8	16	16	0,76°	120	175	5088462	K 16.120 M8



M	d <sub>4</sub> <sup>H6</sup>	d <sub>1</sub>	d <sub>2</sub>	d <sub>A</sub> <sup>H6</sup>	α	L	h	Material-No.	Ordering code
10	10,5	17,8	20	20	1,58°	40	100	5088552	K 20.040 M10
10	10,5	17,8	20	20	1,05°	60	120	5088553	K 20.060 M10
10	10,5	17,8	20	20	0,79°	80	140	5088661	K 20.080 M10
10	10,5	17,8	20	20	0,63°	100	160	5088662	K 20.100 M10
10	10,5	17,8	20	20	0,53°	120	180	5088768	K 20.120 M10

## Solid Carbide Extensions for Screw on type Milling Cutter

