

**FRÄSWERKZEUGE MIT  
BOHRUNG ODER SCHAFT  
SHELL CUTTER BODIES**  
ISO 11529-2, DIN ISO 11529-2

**2**  
Fräserart und Art und/oder Grösse der Werkzeugaufnahme  
Cutting type, designation and/or size of clamping

ISO 6462/A  
A DIN 8030/A  
ČSN 22 2301/A

ISO 6462/B  
B DIN 8030/B  
ČSN 22 2301/A

ISO 6462/C  
C DIN 8030/C  
ČSN 22 2301/C

C  $\phi d = 27$   
G  $\phi d = 32$   
H  $\phi d = 40$   
J  $\phi d = 50$   
K  $\phi d = 60$   
M  $\phi d = 80$

T

**6**  
Einstellwinkel  
Setting angle

$K_r$  90°  
 $K_r$  75°  
 $K_r$  60°  
 $K_r$  45°  
 $K_r$  MO

**10**  
Freiwinkel der Planschneide  
Clearance angle

$\alpha'_N$

N  $\alpha'_N = 0^\circ$  E  $\alpha'_N = 20^\circ$   
P  $\alpha'_N = 11^\circ$  F  $\alpha'_N = 25^\circ$   
D  $\alpha'_N = 15^\circ$

**11**  
Schneidenlänge (Breite)  
Cutting edge length (width)

B [mm]  
l<sub>i</sub> [mm]

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
160	H	16	N	S	90	S	N	12	N	12
<b>250</b>	<b>C</b>	<b>16</b>	<b>R</b>	-	<b>W</b>	<b>45</b>	<b>S</b>	<b>12</b>	<b>F</b>	

**1**  
Fräserdurchmesser [mm]  
Cutting diameter [mm]

**3**  
Wirksame Anzahl der Zähne  
No. of working edges

**4**  
Schneidrichtung  
Direction of cut

R  
L  
N

**5**  
Befestigungssystem  
Clamping designation

C  
S  
W  
F

**7**  
Plattenform  
Insert shape

S T R C W A

**8**  
Normal Freiwinkel  
Clearance angle

N  $\alpha'_N = 0^\circ$  D  $\alpha'_N = 15^\circ$   
C  $\alpha'_N = 7^\circ$  E  $\alpha'_N = 20^\circ$   
P  $\alpha'_N = 11^\circ$  F  $\alpha'_N = 25^\circ$

**9**  
Grösse der Platten (Schneidenlänge)  
Insert size or cutting edge length

	S	C	T	W	R	A
d [mm]						
6,35						9/11
7,94				05		
8,00					08	
9,525	09	09	16	06		12
10,00					10	
12,00					12	
12,70	12	12	22	08		15
15,875	15					
16,00					16	
25,00					25	
25,40	25					

<b>1</b>	<b>1a</b>	<b>3</b>	<b>4</b>	<b>2a</b>	<b>3a</b>	<b>4a</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>9(11)</b>	<b>10</b>
63	J	4	R	150	H	50	S	SA	P	95	
<b>32</b>	<b>A</b>	<b>4</b>	<b>R</b>	<b>042</b>	<b>B</b>	<b>32</b>	-	<b>S</b>	<b>A</b>	<b>D</b>	<b>11</b>
											<b>E</b>

**SCHAFTFRÄSER  
SHOULDER END MILLING CUTTERS**  
ISO 7848, DIN ISO 11529-2

**1a**  
Fräserart und Einstellwinkel  
Cutter type and setting angle

A N  
E H  
J K

**2a**  
Ausraglänge [mm]  
Overhang [mm]

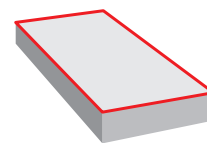
**3a**  
Schaftform  
Shank designation

A DIN 1835-1  
B ISO 3338-2  
DIN 1835-2  
ČSN ISO 3338-2  
E ISO 296  
DIN 228-1  
ČSN ISO 296  
G ISO 297  
DIN 208-1  
ČSN ISO 297  
X ČSN ISO 297  
H ISO/DIS 7388-1  
DIN 69871-1  
ČSN 22 0434

**4a**  
Schaftgrösse  
Shank size

$\phi D$	$\phi d$
08 - 32	10 - 32
10; 12; 16 20 25; 32; 40	16; 20 25; 32
10; 12; 16 20; 25; 32 40	MORSE No. 02 03 04
32; 40 (50; 63) 50; 63; 80	7:24 No. 40 50
32; 40 50; 63; 80	7:24 No. 40 50

PLANFRÄSEN  
MILLING FLAT SURFACES



PLANFRÄSER  
FACE MILLING CUTTERS

ECKFRÄSER  
SHOULDER END MILLING CUTTERS

WALZENSTRIFENFRÄSER/SCHLEIBENFRÄSER  
SQUARE SHOULDER SLOT MILLING CUTTERS

KOPIERFRÄSER  
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS

**S45HN06C**

45°  $a_{p\ max}$  [mm] 3,0  
 $\varnothing D$  [mm] 25 - 125

ECON HN

HN 0604	P	M	K
XN 0604	N		H

14 - 19

**S45HN09C**

45°  $a_{p\ max}$  [mm] 5,0  
 $\varnothing D$  [mm] 50 - 315

ECON HN

HN 0906	P	M	K
XN 0906	N		H

20 - 21

**S45OD05D**

45°  $a_{p\ max}$  [mm] 2,5 (7,3)  
 $\varnothing D$  [mm] 40 - 125

OD.. 0504	P	M	K
	N		H

22 - 23

**S45OD06D**

45°  $a_{p\ max}$  [mm] 3,1 (8,6)  
 $\varnothing D$  [mm] 63 - 160

OD.. 0605	P	M	K
RP.. 1505	N		H

24 - 25

**S45SE09F**

45°  $a_{p\ max}$  [mm] 4,5  
 $\varnothing D$  [mm] 20 - 160

SE 09T3	P	M	K
	N	S	H

26 - 29

**S45SN12Z**

45°  $a_{p\ max}$  [mm] 6,5  
 $\varnothing D$  [mm] 40 - 250

SN 1205	P	M	K
	N	S	H

30 - 31

**S57PN13**

57°  $a_{p\ max}$  [mm] 10,0  
 $\varnothing D$  [mm] 100 - 315

PENTA HD

PN 1308	P	M	K
	N	S	H

32 - 33

**C60HN09**

60°  $a_{p\ max}$  [mm] 6,0  
 $\varnothing D$  [mm] 80 - 250

ECON HN

HN 0905	P		K
			H

34 - 35

**F60SB22X**

60°  $a_{p\ max}$  [mm] 15,0  
 $\varnothing D$  [mm] 125 - 315

ROUGH SB

SB 2207	P	M	K
			H

36 - 37

**W60SP25P**

60°  $a_{p\ max}$  [mm] 18,0  
 $\varnothing D$  [mm] 125 - 315

SP 2506	P	M	K
		S	H

38 - 39

**C90SC09**

90°  $a_{p\ max}$  [mm] 0,5 (4,0)  
 $\varnothing D$  [mm] 32 - 63

MULTISIDE SC

SC 09T3	P	M	K
	N	S	

40 - 43

**C90SC12**

90°  $a_{p\ max}$  [mm] 0,5 (6,0)  
 $\varnothing D$  [mm] 32 - 80

MULTISIDE SC

SC 12T3	P	M	K
	N	S	

40 - 43

**SMORC12**

-  $a_{p\ max}$  [mm] 6,0  
 $\varnothing D$  [mm] 40 - 100

RC 1204	P	M	K
	N	S	H

116 - 117

**SMORC16**

-  $a_{p\ max}$  [mm] 8,0  
 $\varnothing D$  [mm] 63 - 100

RC 1606	P	M	K
	N	S	H

116 - 117

**SMORC20**

-  $a_{p\ max}$  [mm] 10,0  
 $\varnothing D$  [mm] 80 - 100

RC 2006	P	M	K
	N	S	H

116 - 117

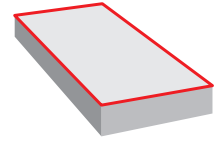
**SRD05**

-  $a_{p\ max}$  [mm] 1,5  
 $\varnothing D$  [mm] 10 - 15

RD 0501	P	M	K
	N		H

120 - 121

**PLANFRÄSEN  
MILLING FLAT SURFACES**



PLANFRÄSER  
FACE MILLING CUTTERS

ECKFRÄSER  
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER/SCHLEIFENFRÄSER  
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER  
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS

SRD07		
-	$a_{p\ max}$ [mm]	1,8
	$\varnothing D$ [mm]	15 - 25
	RD.. 07T1	<b>P</b> <b>M</b> <b>K</b>
	RD.. 0702	<b>N</b> <b>H</b>
118 - 121		

SRD10		
-	$a_{p\ max}$ [mm]	2,5
	$\varnothing D$ [mm]	20 - 35
	RD 1003	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>H</b>
118 - 121		

S(C)RD12		
-	$a_{p\ max}$ [mm]	3,0
	$\varnothing D$ [mm]	24 - 80
	RD 12T3	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>H</b>
120 - 123		

S(C)RD16		
-	$a_{p\ max}$ [mm]	4,0
	$\varnothing D$ [mm]	32 - 100
	RD 1604	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>H</b>
120 - 123		

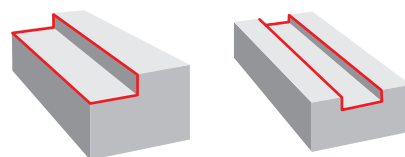
S19PD09		
<b>19°</b>	$a_{p\ max}$ [mm]	2
	$\varnothing D$ [mm]	32 - 100
	PD 0905	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
126 - 127		

SZD07		
-	$a_{p\ max}$ [mm]	1
	$\varnothing D$ [mm]	16 - 32
	ZD 0703	<b>P</b> <b>M</b> <b>K</b>
		<b>H</b>
128 - 131		

SZD09		
-	$a_{p\ max}$ [mm]	1
	$\varnothing D$ [mm]	25 - 40
	ZD 09T3	<b>P</b> <b>M</b> <b>K</b>
		<b>H</b>
128 - 133		

SZD12		
-	$a_{p\ max}$ [mm]	1,6
	$\varnothing D$ [mm]	32 - 80
	ZD 1204	<b>P</b> <b>M</b> <b>K</b>
		<b>H</b>
128 - 133		

SCHULTERFRÄSEN UND NUTFRÄSEN  
MILLING LOW SHOULDERS AND SLOTS



**S90AD11E**

90°	$a_{p\ max}$ [mm]	9,0
	$\varnothing D$ [mm]	16 - 125

FORCE AD

AD 11T3	P	M	K
	N	S	H

44 - 49

**S90AD16E**

90°	$a_{p\ max}$ [mm]	13,0
	$\varnothing D$ [mm]	25 - 160

FORCE AD

AD 1606	P	M	K
	N	S	H

50 - 55

**C90AD15**

90°	$a_{p\ max}$ [mm]	12,0
	$\varnothing D$ [mm]	40 - 80

MULTISIDE AD

AD 15T3	P	M	K
	S		

56 - 61

**S90AP10D**

90°	$a_{p\ max}$ [mm]	9,0
	$\varnothing D$ [mm]	10 - 63

AP 1003	P	M	K
	N	S	H

62 - 65

**S90AP16D**

90°	$a_{p\ max}$ [mm]	14,0
	$\varnothing D$ [mm]	25 - 160

AP 1604	P	M	K
	N	S	H

66 - 69

**S90LN12**

90°	$a_{p\ max}$ [mm]	9,0
	$\varnothing D$ [mm]	25 - 110

ECON LN

LN 1205	P	M	K
	N		H

70 - 75

**S90LN16**

90°	$a_{p\ max}$ [mm]	13,0
	$\varnothing D$ [mm]	63 - 175

ECON LN

LN 1607	P	M	K
	N		H

76 - 77

**S90SO09**

90°	$a_{p\ max}$ [mm]	8,0
	$\varnothing D$ [mm]	20 - 125

SO 09T3	P	M	K
	N	S	H

78 - 81

**S90SD12**

90°	$a_{p\ max}$ [mm]	10,0
	$\varnothing D$ [mm]	50 - 160

SD 1205	P	M	K
			H

82 - 83

**F90TB27X**

90°	$a_{p\ max}$ [mm]	18,0
	$\varnothing D$ [mm]	140 - 260

ROUGH TB

TB 2707	P	M	K
			H

84 - 85

**W90SP25P**

90°	$a_{p\ max}$ [mm]	22,0
	$\varnothing D$ [mm]	175 - 260

SP 2506	P	M	K
		S	

86 - 87

**W90XO12**

90°	$a_{p\ max}$ [mm]	10,0
	$\varnothing D$ [mm]	50 - 315

XO 12T3			
	N		

88 - 89

PLANFRÄSER  
FACE MILLING CUTTERS

ECKFRÄSER  
SHOULDER END MILLING CUTTERS

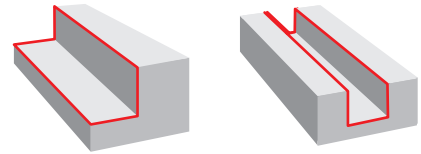
WALZSTIRNFRÄSER/SCHLEIFENFRÄSER  
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER  
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS

**FRÄSEN VON TIEFEN SCHULTERN UND NUTEN**  
**MILLING DEEP SHOULDERS AND SLOTS**



PLANFRÄSER  
FACE MILLING CUTTERS

ECKFRÄSER  
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER/SCHLEIFENFRÄSER  
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER  
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS

**J-SAD11E**

90°  $a_{p\ max}$  [mm] 37,0 - 56,0  
 $\varnothing$  D [mm] 25 - 50

**FORCE AD**

AD 11T3

P	M	K
N	S	H

90 - 93

**C90SD12X**

90°  $a_{p\ max}$  [mm] 44,0 - 87,0  
 $\varnothing$  D [mm] 40 - 80

**MULTISIDE SD**

SD 1205

P	M	K
N	S	H

94 - 97

**SLSN**

90°  $a_{p\ max}$  [mm] 104,0 - 134,0  
 $\varnothing$  D [mm] 63 - 80

**ROUGH SN**

SN 1305  
LN 1606

P	K
	H

98 - 99

**SSAP**

90°  $a_{p\ max}$  [mm] 58,0 - 95,0  
 $\varnothing$  D [mm] 50 - 63

SP 1204  
AP 1504

P	M	K
		H

100 - 101

**SSAP-A**

90°  $a_{p\ max}$  [mm] 58,0 - 95,0  
 $\varnothing$  D [mm] 50 - 80

SP 1204  
AP 1504

P	M	K
		H

102 - 103

**2416-E**

90°  $a_{p\ max}$  [mm] 40,0 - 63,0  
 $\varnothing$  D [mm] 20 - 40

-

P	K
---	---

104

**S90SN**

90°  $a_{p\ max}$  [mm] 4,0 - 14,0  
 $\varnothing$  D [mm] 80 - 200

SN 11  
SN 12

P	M	K
N	S	H

106 - 108

**S90SN-R**

90°  $a_{p\ max}$  [mm] 4,0 - 12,0  
 $\varnothing$  D [mm] 63 - 160

SN 11  
SN 12

P	M	K
N	S	H

110 - 111

**S90CN**

90°  $a_{p\ max}$  [mm] 14,0 - 18,5  
 $\varnothing$  D [mm] 125 - 315

CN 1005

P	M	K
N	S	H

112 - 113

**S90XN**

90°  $a_{p\ max}$  [mm] 19,0 - 30,5  
 $\varnothing$  D [mm] 160 - 315

XN 1205  
XN 1606

P	M	K
N	S	H

112 - 113

**S90CN(XN)-R**

90°  $a_{p\ max}$  [mm] 14,0 - 18,5  
 $\varnothing$  D [mm] 125 - 200

CN 1005

P	M	K
N	S	H

114 - 115

**S90CN(XN)-R**

90°  $a_{p\ max}$  [mm] 19,0 - 30,5  
 $\varnothing$  D [mm] 160 - 200

XN 1205  
XN 1606

P	M	K
N	S	H

114 - 115

**S19PD09**

19°  $a_{p\ max}$  [mm] 2,0  
 $\varnothing$  D [mm] 32 - 100

**PENTA HF**

PD 0905

P	M	K
N	S	H

124 - 127

**SZD07**

-  $a_{p\ max}$  [mm] 1,0  
 $\varnothing$  D [mm] 16 - 32

**FEED ZD**

ZD 0703

P	M	K
		H

128 - 131

**SZD09**

-  $a_{p\ max}$  [mm] 1,0  
 $\varnothing$  D [mm] 25 - 40

**FEED ZD**

ZD 09T3

P	M	K
		H

128 - 133

**SZD12**

-  $a_{p\ max}$  [mm] 1,6  
 $\varnothing$  D [mm] 32 - 80

**FEED ZD**

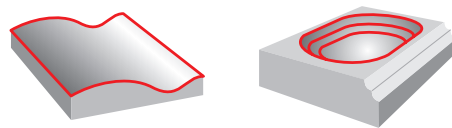
ZD 1204

P	M	K
		H

128 - 133


FRÄSEN VON GEFORMTEN OBERFLÄCHEN  
(KOPIERFRÄSEN)


MILLING SHAPED SURFACES  
(COPY MILLING)




**SMORC12**

-	$a_{p\ max}$ [mm]	6,0
	$\varnothing D$ [mm]	40 - 100





	RC 1204	P	M	K
		N	S	H


 116 - 117

**SMORC16**

-	$a_{p\ max}$ [mm]	8,0
	$\varnothing D$ [mm]	63 - 100





	RC 1606	P	M	K
		N	S	H


 116 - 117

**SMORC20**

-	$a_{p\ max}$ [mm]	10,0
	$\varnothing D$ [mm]	80 - 100





	RC 2006	P	M	K
		N	S	H


 116 - 117

**SRD05**

-	$a_{p\ max}$ [mm]	1,5
	$\varnothing D$ [mm]	10 - 15





	RD 0501	P	M	K
		N		H


 120 - 121

**SRD07**

-	$a_{p\ max}$ [mm]	1,8
	$\varnothing D$ [mm]	15 - 25





	RD.. 07T1 RD.. 0702	P	M	K
		N		H


 118 - 121

**SRD10**

-	$a_{p\ max}$ [mm]	2,5
	$\varnothing D$ [mm]	20 - 35





	RD 1003	P	M	K
		N		H


 118 - 121

**S(C)RD12**

-	$a_{p\ max}$ [mm]	3,0
	$\varnothing D$ [mm]	24 - 80





	RD 12T3	P	M	K
		N		H


 120 - 123

**S(C)RD16**

-	$a_{p\ max}$ [mm]	4,0
	$\varnothing D$ [mm]	32 - 100

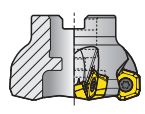


	RD 1604	P	M	K
		N		H


 120 - 123


**S19PD09**

19°	$a_{p\ max}$ [mm]	2,0
	$\varnothing D$ [mm]	32 - 100




PENTA HF

	PD 0905	P	M	K
		N	S	H


 124 - 127


**SZD07**

-	$a_{p\ max}$ [mm]	1,0
	$\varnothing D$ [mm]	16 - 32




FEED ZD

	ZD 0703	P	M	K
				H


 128 - 131


**SZD09**

-	$a_{p\ max}$ [mm]	1,0
	$\varnothing D$ [mm]	25 - 40



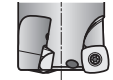
FEED ZD

	ZD 09T3	P	M	K
				H


 128 - 133


**SZD12**

-	$a_{p\ max}$ [mm]	1,6
	$\varnothing D$ [mm]	32 - 80




FEED ZD


	ZD 1204	P	M	K
				H


 128 - 133

**SZP10**

-	$a_{p\ max}$ [mm]	8,9
	$\varnothing D$ [mm]	10





	ZP 10	P	M	K
			S	H


 134 - 139

**SZP12**

-	$a_{p\ max}$ [mm]	10,7
	$\varnothing D$ [mm]	12





	ZP 12	P	M	K
		N	S	H


 134 - 139

**SZP16**

-	$a_{p\ max}$ [mm]	14,4
	$\varnothing D$ [mm]	16





	ZP 16	P	M	K
		N	S	H


 134 - 139

**SZP20**

-	$a_{p\ max}$ [mm]	17,9
	$\varnothing D$ [mm]	20

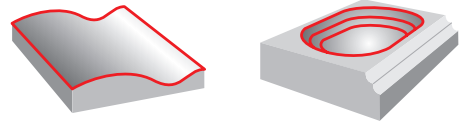


	ZP 20	P	M	K
		N	S	H

 134 - 139

**FRÄSEN VON GEFORMTEN OBERFLÄCHEN  
(KOPIERFRÄSEN)**

**MILLING SHAPED SURFACES  
(COPY MILLING)**



PLANFRÄSER  
FACE MILLING CUTTERS




ECKFRÄSER  
SHOULDER END MILLING CUTTERS




WALZENSTRIFENFRÄSER/SCHLEIFENFRÄSER  
SQUARE SHOULDER/SLOT MILLING CUTTERS




KOPIERFRÄSER  
COPY MILLING CUTTERS




FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION




WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS




SZP25								
-	$a_{p\ max}$ [mm]	22,3						
	$\varnothing D$ [mm]	25						
								
	ZP 25	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>N</td><td>S</td><td>H</td></tr> </table>	P	M	K	N	S	H
		P	M	K				
N	S	H						
 134 - 139								




SZP32								
-	$a_{p\ max}$ [mm]	28,6						
	$\varnothing D$ [mm]	32						
								
	ZP 32	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>N</td><td>S</td><td>H</td></tr> </table>	P	M	K	N	S	H
		P	M	K				
N	S	H						
 134 - 136								




SZP40								
-	$a_{p\ max}$ [mm]	35,7						
	$\varnothing D$ [mm]	40						
								
	ZP 40	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>N</td><td>S</td><td>H</td></tr> </table>	P	M	K	N	S	H
		P	M	K				
N	S	H						
 134 - 136								

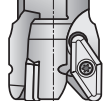


SZP50								
-	$a_{p\ max}$ [mm]	44,7						
	$\varnothing D$ [mm]	50						
								
	ZP 50	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>N</td><td>S</td><td>H</td></tr> </table>	P	M	K	N	S	H
		P	M	K				
N	S	H						
 134 - 136								

CXP16								
-	$a_{p\ max}$ [mm]	8,0						
	$\varnothing D$ [mm]	16						
MULTISIDE XP								
		XP 16	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>S</td><td>H</td><td></td></tr> </table>	P	M	K	S	H
P			M	K				
S	H							
 140 - 143								

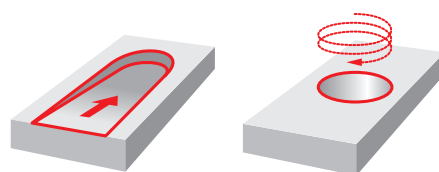
CXP20								
-	$a_{p\ max}$ [mm]	10,0						
	$\varnothing D$ [mm]	20						
MULTISIDE XP								
		XP 20	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>S</td><td>H</td><td></td></tr> </table>	P	M	K	S	H
P			M	K				
S	H							
 140 - 143								

CXP25								
-	$a_{p\ max}$ [mm]	12,5						
	$\varnothing D$ [mm]	25						
MULTISIDE XP								
		XP 25	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>S</td><td>H</td><td></td></tr> </table>	P	M	K	S	H
P			M	K				
S	H							
 140 - 143								

CXP32								
-	$a_{p\ max}$ [mm]	16,0						
	$\varnothing D$ [mm]	32						
MULTISIDE XP								
		XP 32	<table border="1"> <tr><td>P</td><td>M</td><td>K</td></tr> <tr><td>S</td><td>H</td><td></td></tr> </table>	P	M	K	S	H
P			M	K				
S	H							
 140 - 143								


S90VC22C					
90°	$a_{p\ max}$ [mm]	16,0			
	$\varnothing D$ [mm]	32 - 80			
					
	VC 220530	<table border="1"> <tr><td>N</td><td></td><td></td></tr> </table>	N		
		N			
 144 - 149					



**SCHRÄG EINTAUCHEN (RAMPE FRÄSEN) UND FRÄSEN  
MIT HELIKALER INTERPOLATION**  
**RAMPING AND HELICAL INTERPOLATION**



**SMORC12**


-	$a_{p\ max}$ [mm]	6,0
	$\varnothing D$ [mm]	40 - 100





	RC 1204	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 116 - 117

**SMORC16**


-	$a_{p\ max}$ [mm]	8,0
	$\varnothing D$ [mm]	63 - 100





	RC 1606	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 116 - 117

**SMORC20**


-	$a_{p\ max}$ [mm]	10,0
	$\varnothing D$ [mm]	80 - 100





	RC 2006	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 116 - 117

**SRD05**


-	$a_{p\ max}$ [mm]	1,5
	$\varnothing D$ [mm]	10 - 15





	RD 0501	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 120 - ~121

**SRD07**


-	$a_{p\ max}$ [mm]	1,8
	$\varnothing D$ [mm]	15 - 25





	RD.. 07T1	<b>P</b> <b>M</b> <b>K</b>
	RD.. 0702	<b>N</b> <b>S</b> <b>H</b>
		 118 - 121

**SRD10**


-	$a_{p\ max}$ [mm]	2,5
	$\varnothing D$ [mm]	20 - 35





	RD 1003	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 118 - 121

**S(C)RD12**


-	$a_{p\ max}$ [mm]	3,0
	$\varnothing D$ [mm]	24 - 80





	RD 12T3	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 120 - 123

**S(C)RD16**

-	$a_{p\ max}$ [mm]	4,0
	$\varnothing D$ [mm]	32 - 100

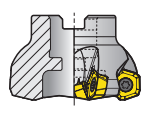




	RD 1604	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 120 - 123

**S19PD09**

19°	$a_{p\ max}$ [mm]	2,0
	$\varnothing D$ [mm]	32 - 100

PENTA HF






	PD 0905	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 124 - 127

**SZD07**

-	$a_{p\ max}$ [mm]	1,0
	$\varnothing D$ [mm]	16 - 32

FEED ZD






	ZD 0703	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 128 - 131

**SZD09**

-	$a_{p\ max}$ [mm]	1,0
	$\varnothing D$ [mm]	25 - 40

FEED ZD






	ZD 09T3	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 128 - 133

**SZD12**

-	$a_{p\ max}$ [mm]	1,6
	$\varnothing D$ [mm]	32 - 80

FEED ZD






	ZD 1204	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 128 - 133

**S90AD11E**

90°	$a_{p\ max}$ [mm]	9,0
	$\varnothing D$ [mm]	16 - 125

FORCE AD

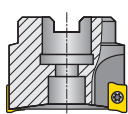




	AD 11T3	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 44 - 49

**S90AD16E**

90°	$a_{p\ max}$ [mm]	13,0
	$\varnothing D$ [mm]	25 - 160

FORCE AD

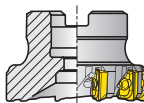




	AD 1606	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 50 - 55

**C90AD15**

90°	$a_{p\ max}$ [mm]	12,0
	$\varnothing D$ [mm]	40 - 80


MULTISIDE AD





	AD 15T3	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 56 - 61

**S90AP10D**

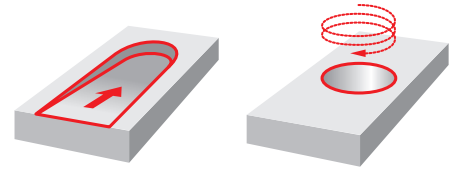
90°	$a_{p\ max}$ [mm]	9,0
	$\varnothing D$ [mm]	10 - 63



	AP 1003	<b>P</b> <b>M</b> <b>K</b>
		<b>N</b> <b>S</b> <b>H</b>
		 62 - 65

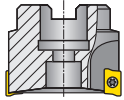


**SCHRÄG EINTAUCHEN (RAMPE FRÄSEN) UND FRÄSEN  
MIT HELIKALER INTERPOLATION**  
**RAMPING AND HELICAL INTERPOLATION**



**S90AP16D**

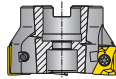
**90°**  $a_{p\ max}$  [mm] 14,0  
 $\varnothing D$  [mm] 25 - 160



	AP 1604	<b>P</b>	<b>M</b>	<b>K</b>
		<b>N</b>	<b>S</b>	<b>H</b>
📄 66 - 69				

**S90LN12**

**90°**  $a_{p\ max}$  [mm] 9,0  
 $\varnothing D$  [mm] 25 - 110

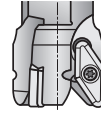


ECON LN

	LN 1205	<b>P</b>	<b>M</b>	<b>K</b>
		<b>N</b>		<b>H</b>
📄 70 - 75				

**S90VC22C**

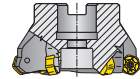
**90°**  $a_{p\ max}$  [mm] 16,0  
 $\varnothing D$  [mm] 32 - 80



	VC 220530			
		<b>N</b>		
📄 144 - 149				

**S45HN06C**

**45°**  $a_{p\ max}$  [mm] 3,0  
 $\varnothing D$  [mm] 25 - 125

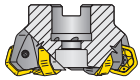


ECON HN

	HN 0604	<b>P</b>	<b>M</b>	<b>K</b>
		<b>N</b>		<b>H</b>
📄 14 - 19				

**S45HN09C**

**45°**  $a_{p\ max}$  [mm] 5,0  
 $\varnothing D$  [mm] 50 - 315



ECON HN

	HN 0906	<b>P</b>	<b>M</b>	<b>K</b>
		<b>N</b>		<b>H</b>
📄 20 - 21				

PLANFRÄSER  
FACE MILLING CUTTERS

ECKFRÄSER  
SHOULDER END MILLING CUTTERS

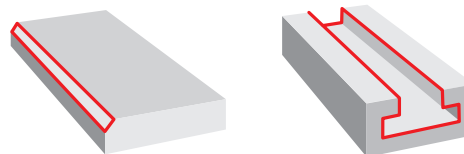
WALZENSTRIFRÄSER/SCHLEIFENFRÄSER  
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER  
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS

**ANFASEN UND T-NUTEN**  
**CHAMFER MILLING AND T SLOTS**



**SSD09**

**45°**

$a_{p\ max}$ [mm]	4,5
$\varnothing D$ [mm]	10 - 25

SD 0903	P	M	K
	N	S	H

150 - 151

**N-SSO09**

**45°**

$a_{p\ max}$ [mm]	4,5
$\varnothing D$ [mm]	8 - 25

SO 09T3	P	M	K
	N	S	H

152 - 153

**2516**

**45°**

$a_p$ [mm]	8,5
$\varnothing D$ [mm]	11 - 19

TC 16T3	P	M	K
	N	S	H

154 - 155

**2636**

**10-80°**

$a_{p\ max}$ [mm]	8,5
$\varnothing D$ [mm]	11 - 19

TC 16T3	P	M	K
	N	S	H

156 - 157

**SxxXP**

**15-75°**

$a_{p\ max}$ [mm]	7,0 - 28,0
$\varnothing D$ [mm]	35 - 45

XP 1604	P	M	K
	N	S	

158 - 159

**SCC06**

**90°**

$a_{p\ max}$ [mm]	11,0
$\varnothing D$ [mm]	25

CC 0603	P	M	K
		S	

160 - 161

**SSC08**

**90°**

$a_{p\ max}$ [mm]	14,0
$\varnothing D$ [mm]	32

CC 08T3	P	M	K
		S	

160 - 161

**SSC09**

**90°**

$a_{p\ max}$ [mm]	18,0
$\varnothing D$ [mm]	40

CC 09T3	P	M	K
		S	

160 - 161

PLANFRÄSER  
FACE MILLING CUTTERS

ECKFRÄSER  
SHOULDER END MILLING CUTTERS

WALZSTIRNFRÄSER/SCHLEIFENFRÄSER  
SQUARE SHOULDER SLOT MILLING CUTTERS

KOPIERFRÄSER  
COPY MILLING CUTTERS

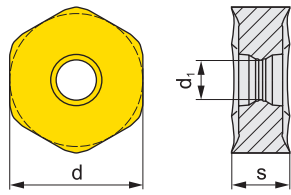
FRÄSER FÜR SPEZ. ANWENDUNGEN  
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN  
INDEXABLE INSERTS

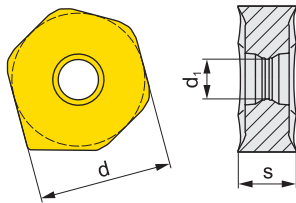


# SHN06

## NEGATIV - NEGATIVE PLANFRÄSER - SCHAFT INSERTS FOR NEGATIVE FACE MILLS



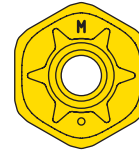
HNGX 06



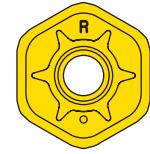
XNGX 06



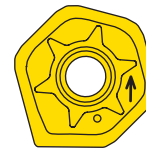
HNGX 06 -F



HNGX 06 -M



HNGX 06 -R



XNGX 06 ANSN

### WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	M5315	M9315	M9325	M9340	8215	8230	8240	d	s	d <sub>1</sub>			
HNGX 0604ANSN-F				●	●	●	●	10,500	5,260	3,7			
HNGX 0604ANSN-M	●	●	●	●	●	●	●	10,500	5,260	3,7			
HNGX 0604ANSN-R	●	●	●		●	●	●	10,500	5,260	3,7			
XNGX 0604ANSN					●			10,500	5,260	3,7			

### ERSATZTEILE / SPARE PARTS

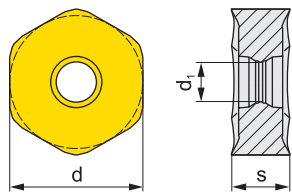
\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
SHN06	US 3007-T09P	Flag T09P

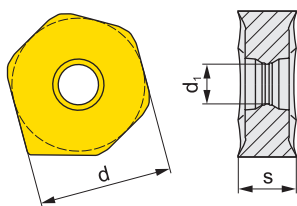


# SHN06

## NEGATIV - NEGATIVE PLANFRÄSER - MODULARES SYSTEM INSERTS FOR NEGATIVE FACE MILLS



HNGX 06



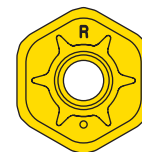
XNGX 06



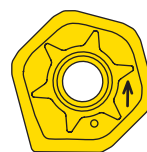
HNGX 06 -F



HNGX 06 -M



HNGX 06 -R



XNGX 06 ANSN

### WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	M5315	M9315	M9325	M9340	8215	8230	8240	d	s	d <sub>1</sub>			
HNGX 0604ANSN-F				●	●	●	●	10,500	5,260	3,7			
HNGX 0604ANSN-M	●	●	●	●	●	●	●	10,500	5,260	3,7			
HNGX 0604ANSN-R	●	●	●		●	●	●	10,500	5,260	3,7			
XNGX 0604ANSN					●			10,500	5,260	3,7			

### ERSATZTEILE / SPARE PARTS

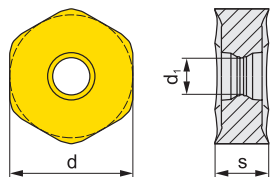
\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
SHN06	US 3007-T09P	Flag T09P

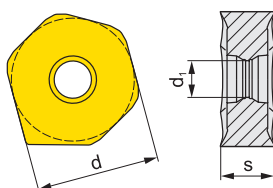


# S45HN06

## NEGATIVE - NEGATIVE PLANFRÄSER INSERTS FOR NEGATIVE FACE MILLS



HNGX 06



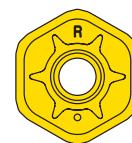
XNGX 06



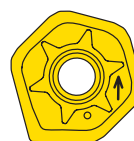
HNGX 06-F



HNGX 06-M



HNGX 06-R



XNGX 06 ANSN

### WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	M5315	M9315	M9325	M9340	8215	8230	8240	d	s	d <sub>1</sub>			
HNGX 0604ANSN-F				●	●	●	●	10,500	5,260	3,7			
HNGX 0604ANSN-M	●	●	●	●	●	●	●	10,500	5,260	3,7			
HNGX 0604ANSN-R	●	●	●		●	●	●	10,500	5,260	3,7			
XNGX 0604ANSN					●			10,500	5,260	3,7			

### ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraube für Messerkopf Screw for taper clamping
40	US 3007-T09P	D-T07P/T09P	FG-15	HS 0830C
50 - 63	US 3007-T09P	D-T07P/T09P	FG-15	HS 1030C
80 - 125	US 3007-T09P	D-T07P/T09P	FG-15	-

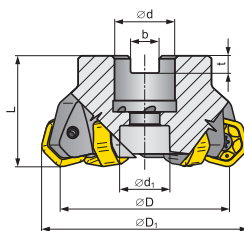


# S45HN09

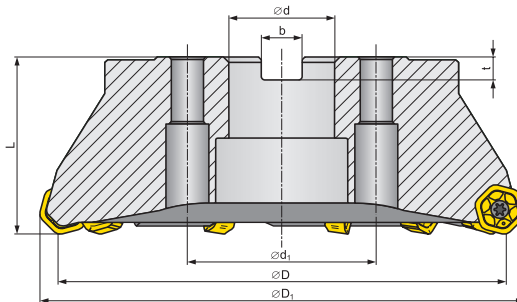
## NEGATIVE - NEGATIVE PLANFRÄSER NEGATIVE FACE MILLING CUTTERS



**ECON HN**



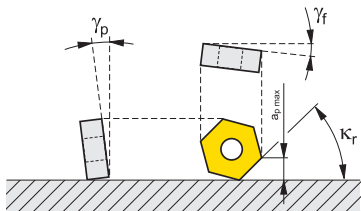
ø 50 - 125 mm



ø 160 - 315 mm

Z\* - Anzahl Zähne / Number of teeth

$\gamma_p$	-7°	$\kappa_r$	45°
$\gamma_f$	-7°	$a_{p\max}$	5 mm

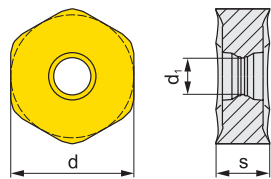


Abmessungen [mm]. / Dimensions [mm].

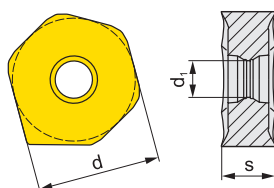
ISO	Sortiment / Assortment	Abmessungen / Dimensions									Kühlung / Cooling	[kg]
		D	d	d <sub>1</sub>	L	D <sub>1</sub>	b	t	Z*			
50A04R-S45HN09C-CF	■	50	22	18,0	40	61,7	10,4	6,3	4		+	0,35
63A06R-S45HN09C-CF	■	63	22	18,0	40	74,7	10,4	6,3	6		+	0,49
80A06R-S45HN09C-CF	■	80	27	38,0	50	91,7	12,4	7,0	6		+	1,06
80A08R-S45HN09C-CF	■	80	27	38,0	50	91,7	12,4	7,0	8		+	1,06
100A06R-S45HN09C-CF	■	100	32	45,0	50	111,7	14,4	8,0	6		+	1,74
100A08R-S45HN09C-CF	■	100	32	45,0	50	111,7	14,4	8,0	8		+	1,74
100A10R-S45HN09C-CF	■	100	32	45,0	50	111,7	14,4	8,0	10		+	1,74
125A06R-S45HN09C-CF	■	125	40	56,0	63	136,7	16,4	9,0	6		+	3,24
125A10R-S45HN09C-CF	■	125	40	56,0	63	136,7	16,4	9,0	10		+	3,24
125A12R-S45HN09C-CF	■	125	40	56,0	63	136,7	16,4	9,0	12		+	3,24
160C08R-S45HN09CF	■	160	40	66,7	63	171,7	16,4	9,0	8			5,70
160C12R-S45HN09CF	■	160	40	66,7	63	171,7	16,4	9,0	12			5,70
160C14R-S45HN09CF	■	160	40	66,7	63	171,7	16,4	9,0	14			5,70
200C10R-S45HN09CF	■	200	60	101,6	63	211,7	25,7	14,0	10			9,00
250C14R-S45HN09CF	■	250	60	101,6	63	261,7	25,7	14,0	14			12,80
315C16R-S45HN09CF	□	315	60	101,6	80	326,7	25,7	14,0	16			32,20

# S45HN09

## NEGATIVE - NEGATIVE PLANFRÄSER INSERTS FOR NEGATIVE FACE MILLS



HNGX 09



XNGX 09



HNGX 09-FF



HNGX 09-F



HNGX 09-M



HNGX 09-R



XNGX 09 ANSN

### WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	M5315	M9315	M9325	M9340	8215	8230	8240	d	s	d <sub>1</sub>			
HNGX 0906ANEN-FF				●	●	●		16,500	6,350	4,90			
HNGX 0906ANSN-F				●	●	●	●	16,500	6,350	4,90			
HNGX 0906ANSN-M	●	●	●	●	●	●	●	16,500	6,350	4,90			
HNGX 0906ANSN-R	●	●	●		●	●	●	16,500	6,350	4,90			
XNGX 0906ANSN					●	○		16,500	6,350	4,90			

### ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraube für Messerkopf Screw for taper clamping
50 - 63	US 54511-T15P	D-T08P/T15P	FG-15	HS 1030C
80 - 315	US 54511-T15P	D-T08P/T15P	FG-15	-

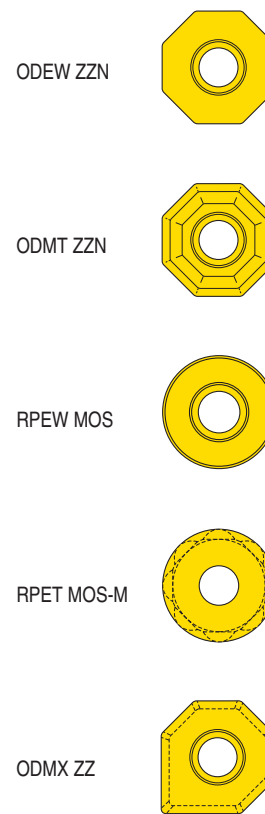
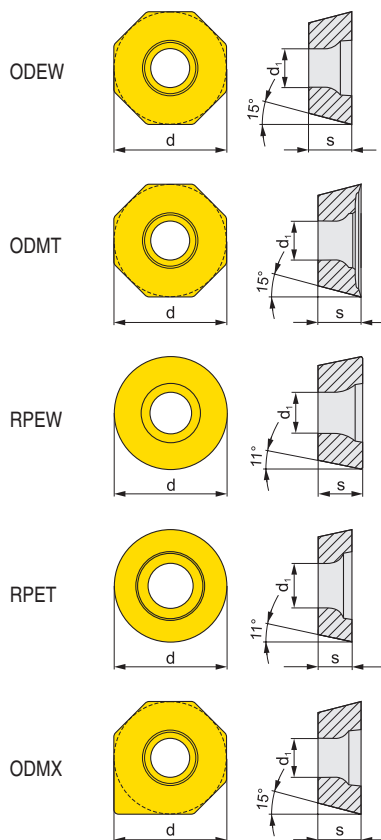






# S45OD06D

## PLANFRÄSER INSERTS FOR POSITIVE FACE MILLS



### WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	M5315	M9315	M9325	8215	8230	8240	7010	7040					d	s	d <sub>1</sub>
ODEW 0605ZZN					●								15,875	5,56	5,50
ODMT 0605ZZN	●	●	●		●	●							15,875	5,56	5,50
RPEW 1505MOS				●	●		○						15,875	5,56	5,50
RPET 1505MOS-M					●	●		○					15,875	5,56	5,50
ODMX 0605ZZ								○					15,875	5,56	5,50

### ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
63 - 160	US 4511-T20	SDR T20

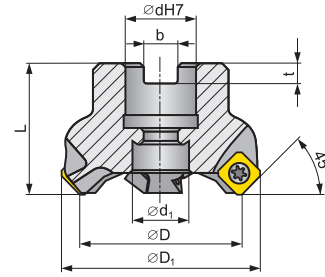




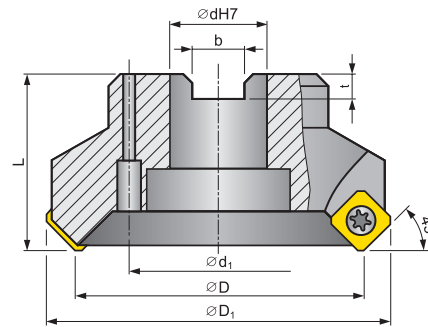


# S45SE09F

POSITIVE - PLANFRÄSER  
HIGH POSITIVE FACE MILLING CUTTERS



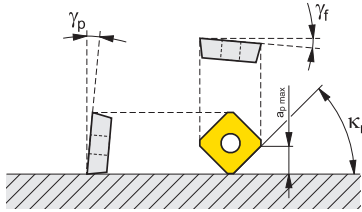
ø 32 - 125 mm



ø 160 mm

Z\* - Anzahl Zähne / Number of teeth

$\gamma_p$	+20°	$\kappa_r$	45°
$\gamma_f$	-5°	$a_{p\ max}$	4,5 mm

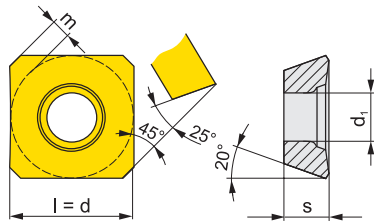


Abmessungen [mm]. / Dimensions [mm].

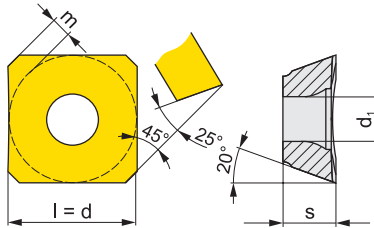
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]	
		D	dH7	d <sub>1</sub>	L	D <sub>1</sub>	b	t	Z*			
32A04R-S45SE09F-C	○	32	16	14	40	42,0	8,4	6,4	4		+	0,23
40A04R-S45SE09F-C	●	40	16	14	40	53,2	8,4	6,4	4		+	0,34
50A05R-S45SE09F-C	●	50	22	18	40	59,6	10,4	6,4	5		+	0,38
63A05R-S45SE09F-C	■	63	22	18	40	75,8	10,4	6,4	5		+	0,54
63A06R-S45SE09F-C	●	63	22	18	40	75,8	10,4	6,4	6		+	0,56
80A06R-S45SE09F-C	■	80	27	38	50	89,6	12,4	7,0	6		+	1,00
80A08R-S45SE09F-C	●	80	27	38	50	89,6	12,4	7,0	8		+	1,10
100A08R-S45SE09F-C	■	100	32	45	50	110,0	14,4	8,0	8		+	1,38
100A10R-S45SE09F-C	●	100	32	45	50	110,0	14,4	8,0	10		+	1,53
125A09R-S45SE09F-C	■	125	40	60	63	134,5	16,4	9,0	9		+	2,73
125A12R-S45SE09F-C	●	125	40	60	63	134,5	16,4	9,0	12		+	3,12
160C10R-S45SE09F	■	160	40	66,7	63	169,6	16,4	9,0	10			4,73
160C14R-S45SE09F	○	160	40	66,7	63	169,6	16,4	9,0	14			5,10

# S45SE09F

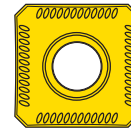
## POSITIVE - PLANFRÄSER INSERTS FOR HIGH POSITIVE FACE MILLS



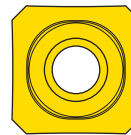
SEMT



SEET



SEMT AFSN



SEET AFEN

## WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades					Abmessungen / Dimensions				
	M9325	M9340	8215	8230	8240	l	d	s	d <sub>1</sub>	m
SEMT 09T3AFSN	●	●	●	●	●	9,525	9,525	3,97	3,50	1,212
SEET 09T3AFEN	■	■	■	■	■	9,525	9,525	3,97	3,50	1,212

## ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Schraube für Messerkopf Screw for taper clamping
32 - 40	US 3007-T09P	SDR T09P	HS 0830C
50 - 63	US 3007-T09P	SDR T09P	HS 1030C
80 - 160	US 3007-T09P	SDR T09P	-

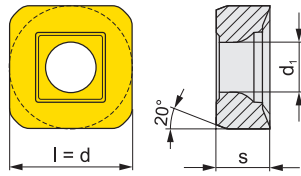


● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014  
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014  
 Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

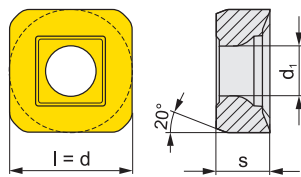


# S45SN12Z

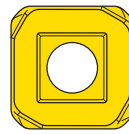
## NEGATIVE - POSITIVE PLANFRÄSER INSERTS FOR POSITIVE FACE MILLS



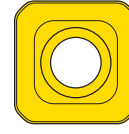
SNMT



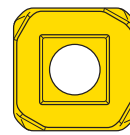
SNKT



SNMT-M



SNMT-R



SNKT-M

### WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions			
	M5315	M9315	M9325	M9340	8215	8230	8240	l	d	s	d <sub>1</sub>
SNMT 1205AZSR-M		●	●	●	●	●	●	12,700	12,700	5,56	5,2
SNMT 1205AZSR-R	●	●	●		●	●	●	12,700	12,700	5,56	5,2
SNKT 1205AZSR-M			●			●	○	12,700	12,700	5,56	5,2

### ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Schraube für Messerkopf Screw for taper clamping
40	US 4511-T20	SDR T20-T	HS 0830C
50 - 63	US 4511-T20	SDR T20-T	HS 1030C
80 - 250	US 4511-T20	SDR T20-T	-

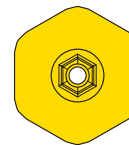
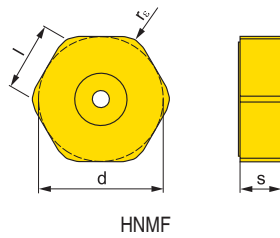
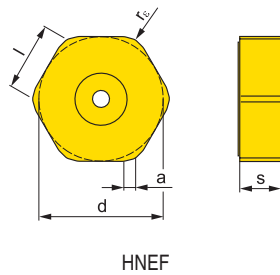






# C60HN09

## NEGATIVE - NEGATIVE PLANFRÄSER INSERTS FOR NEGATIVE FACE MILLS



## WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions					
	M5315	M9325	M8310	8215						l	d	s	a	r <sub>ε</sub>
HNEF 0905DNFN-F	■	□	■	■						9,400	16,200	5,64	1,6	0,4
HNEF 090508EN-M	■	□		■						9,400	16,200	5,64	-	0,8
HNMF 090516SN-R	■	■		■						9,400	16,200	5,64	-	1,6
HNEF 0905ZZL-W	□			□						3,380	16,260	5,64	5,00	0,8
HNEF 0905ZZR-W	■	□	■	■						3,380	16,260	5,64	5,00	0,8

## ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

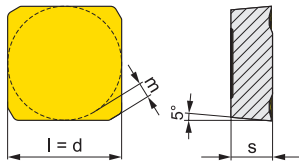
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraube für Messerkopf Screw for taper clamping
80	US 74016-T15P	D-T08P/T15P	FG-15	HS 1230C
100	US 74016-T15P	D-T08P/T15P	FG-15	HS 1635C
125	US 74016-T15P	D-T08P/T15P	FG-15	HS 2040C
160 - 250	US 74016-T15P	D-T08P/T15P	FG-15	-



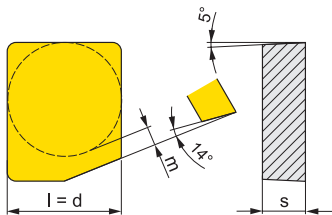


# F60SB22X

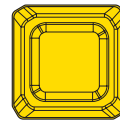
## PLANFRÄSER - FÜR DIE SCHWERZERSPANUNG INSERTS FOR HEAVY MACHINING FACE MILLS



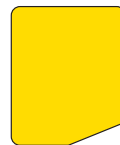
SBMR



SBKX



SBMR DZSR



SBKX DZER

Schlichtplatte  
Smoothing inserts

### WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions			
	8026T	8240									l	d	s	m
SBMR 2207DZSR	●	●									22,000	22,000	8,5	2,82
SBKX 2207DZER	●										22,000	22,000	8,5	3,22

### ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Unterlage Shim	Spannschraube* Clamping screw*	Schlüssel Key	Klemmkeil Clamping wedge	Diff. Schraube Differential screw	Schlüssel Key	Schraube für Messerkopf Screw for taper clamping
125	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	-
160	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1240
200 - 315	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1655

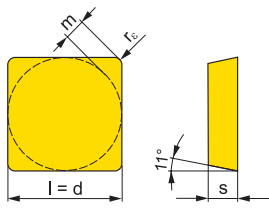


● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014  
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014  
 Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

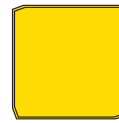


# W60SP25P

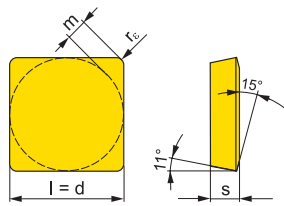
## PLANFRÄSER - FÜR DIE SCHWERZERSPANUNG INSERTS FOR HEAVY MACHINING FACE MILLS



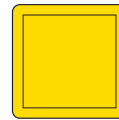
SPGN



SPGN DZSR



SPUN



SPUN S

### WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	8240	8026T	5040	S26							l	d	s	m	r <sub>e</sub>
SPGN 2506DZSR	●	●	○								25,000	25,000	6,35	3,54	-
SPUN 250616S		●									25,400	25,400	6,35	4,60	1,6
SPUN 250620S	●	●	●								25,400	25,400	6,35	4,43	2,0

### ERSATZTEILE / SPARE PARTS

\*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Klemmkeil Clamping wedge	Diff. Schraube Differential screw	Anschlag Stop	Schlüssel Key
125 - 315	 KU 22	 DS 02	 PS 04	 HXK 5







