

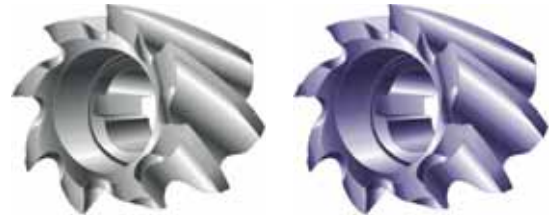
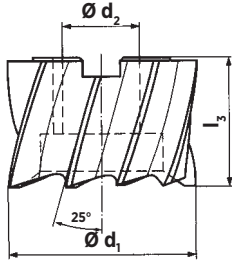
# FRESE A MANICOTTO

- WALZENSTIRNFRÄSER
- SHELL END MILLS
- FRAISES EN BOUT
- FRESAS HUECA



# HSS-Co5

DIN 1880



$\varnothing d_1 k_{10}$   $l_3$   $\varnothing d_2 h_6$  Z

40	32	16	8
50	36	22	8
63	40	27	8
80	45	27	10
100	50	32	12
125	56	40	14

**9561** **9561C**



HSS-Co5



HSS-Co5  
TICN

€ 132,50

€ 166,00

€ 168,00

€ 207,50

€ 212,00

€ 259,00

€ 299,00

€ 356,00

€ 486,00

€ 575,00

€ 756,00

€ 831,00



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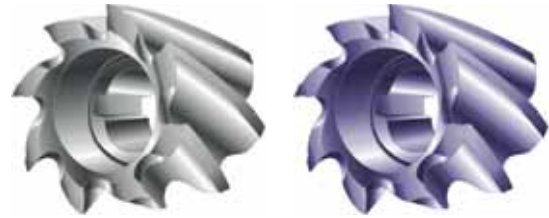
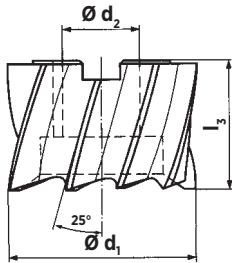
p. 120

P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1880



$\varnothing d_1$   $k_{10}$   $l_3$   $\varnothing d_2$   $h_6$  Z

50	36	22	8
80	45	27	10
100	50	32	12
125	56	40	14
160	63	50	16

**9564** **9564C**



HSS-Co8



HSS-Co8  
TiCN

€ 155,50 ■	€ 213,03 ■
€ 276,00 ■	€ 379,00 ■
€ 430,00 ■	€ 616,00 ■
€ 659,00 ■	€ 867,00 ■
€ 1.080,00 ■	€ 1.385,00 ■



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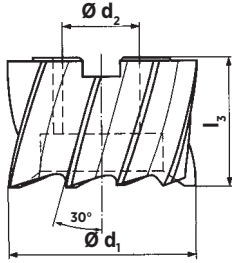
p. 120

P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 1880



$\varnothing d_1$   $k_{10}$   $l_3$   $\varnothing d_2$   $h_6$  Z

40	32	16	6
50	36	22	6
63	40	27	6
80	45	27	6
100	50	32	6
125	56	40	8
160	63	50	10

9563



HSS-Co5

€ 158,00
€ 188,00
€ 229,50
€ 323,00
€ 503,00
€ 578,00 ■
€ 947,00 ■



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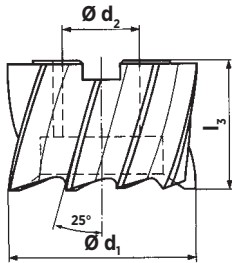
p. 121

P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 1880



$\varnothing d_1$  JS<sub>14</sub>    $l_3$     $\varnothing d_2$  h<sub>6</sub>   Z

**9565**



HSS-Co8

40	32	16	7
50	36	22	8
63	40	27	8
80	45	27	10
100	50	32	12
125	56	40	12
160	63	50	14

€ 169,50
€ 203,50
€ 263,00
€ 364,00
€ 559,00
€ 659,00 ■
€ 1.042,00 ■



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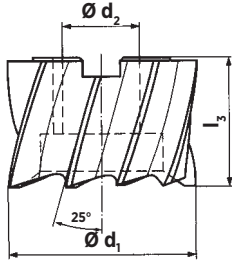
p. 122

P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1880



$\varnothing d_1$  JS<sub>14</sub>    $l_3$     $\varnothing d_2$  h<sub>6</sub>   Z

$\varnothing d_1$	$l_3$	$\varnothing d_2$	Z
63	40	27	8
100	50	32	12
125	56	40	12
160	63	50	14

9567

9567C



HSS-Co8



HSS-Co8  
TICN

Material	Price
-	€ 280,05 ■
HSS-Co8	€ 592,00 ■
HSS-Co8	€ 902,00 ■
HSS-Co8	€ 1.467,00 ■
HSS-Co8 TICN	€ 756,00 ■
HSS-Co8 TICN	€ 1.084,00 ■
HSS-Co8 TICN	€ 1.760,40 ■

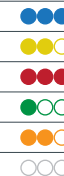


p. 220



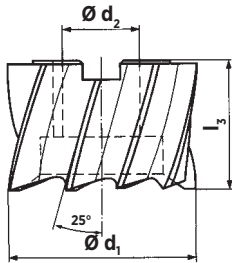
p. 122

P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 1880



$\varnothing d_1$  JS<sub>14</sub>    $l_3$     $\varnothing d_2$  h<sub>6</sub>   Z

9571

HSS-Co5

40	32	16	7
50	36	22	8
63	40	27	8
80	45	27	10
100	50	32	12
125	56	40	12

€ 181,50
€ 218,00
€ 270,00
€ 374,00
€ 573,00
€ 854,00



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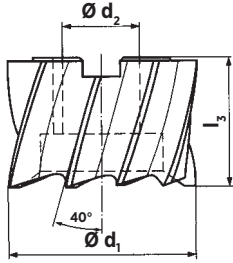
p. 122

P  
M  
K  
N  
S  
H



# ASP-60

## DIN 1880



$\varnothing d_1$   $K_{12}$   $l_3$   $\varnothing d_2$   $h_6$  Z

50	50	22	8
63	63	27	8
80	80	27	10

**9570** **9570C**



ASP-60



ASP-60  
TICN

€ 425,00

€ 522,00

€ 751,00

€ 383,00

€ 495,00

€ 684,00



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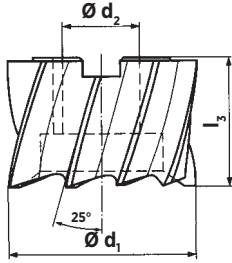
P  
M  
K  
N  
S  
H





# ASP-60

## DIN 1880



$\varnothing d_1$   $K_{12}$   $l_3$   $\varnothing d_2$   $h_6$   $Z$

40	32	16	6
50	36	22	8
63	40	27	8
100	50	32	10

**9585** **9585C**



ASP-60



ASP-60  
TICN

€ 222,00	€ 253,50
€ 308,00	€ 339,00
€ 442,00	€ 546,00
€ 1.030,00	€ 1.135,00



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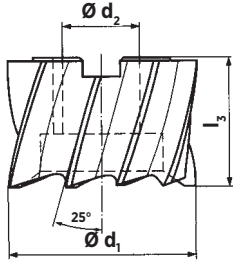
p. 122

P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 841



$\varnothing d_1$   $K_{12}$   $l_3$   $\varnothing d_2$   $h_6$   $Z$

50	50	22	6
75	35	27	8
75	75	27	8

**9574** **9574C**



HSS-Co8



HSS-Co8  
TICN

€ 299,00

€ 508,00

€ 807,00

€ 265,00

€ 471,00

€ 753,00



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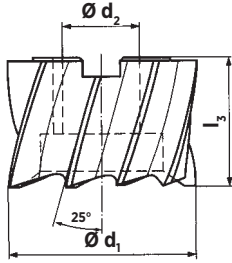
p. 122

P  
M  
K  
N  
S  
H



# ASP-60

## DIN 1880



$\varnothing d_1$   $K_{12}$   $l_3$   $\varnothing d_2$   $h_6$   $Z$

40	32	16	6
50	36	22	8
63	40	27	10
80	45	27	10
100	50	32	12

**9586** **9586C**



ASP-60



ASP-60  
TICN

€ 343,00

€ 335,00

-

€ 394,00 ■

€ 519,00

€ 523,00

€ 737,00

€ 715,00

€ 1.165,00

€ 1.135,00



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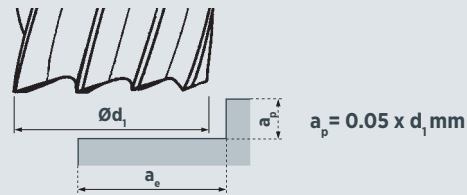
p. 122

P  
M  
K  
N  
S  
H



## TIPO N-HS | TYPE N-HS

$f_z$  [mm] AVANZAMENTO AL DENTE |  $f_z$  [mm] TOOTH FOR FEED



Ø	SPIANATURA $f_z$ FACE MILLING $f_z$	$a_e = 0.75 \times d_1$ mm
40	0,060	30,00
50	0,075	37,50
63	0,063	47,25
80	0,080	60,00
100	0,070	75,00
125	0,088	93,75
160	0,112	120,00

$V_c$  [m/min] VELOCITÀ DI TAGLIO |  $V_c$  [m/min] CUTTING SPEED

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	7	20	15	-	30	10	-	-
	Max	35	30	25	20	15	30	25	-	60	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	-	7	-	15	7	-	20	5	-	-
	Max	30	25	-	15	-	20	15	-	40	7	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

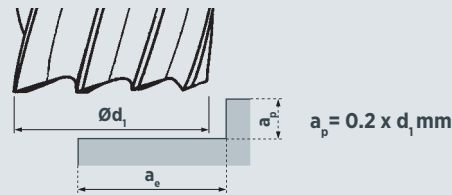
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 40 (spianatura) "f<sub>z</sub>" 0,06 materiale gruppo P<sub>1</sub> - 0,06x1 = 0,06 "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 40 (face milling) "f<sub>z</sub>" 0,06 material group P<sub>1</sub> - 0,06x1 = 0,06 "f<sub>z</sub>"



## TIPO W | TYPE W

$f_z$  [mm] AVANZAMENTO AL DENTE |  $f_z$  [mm] TOOTH FOR FEED



Ø	SPIANATURA $f_z$ FACE MILLING $f_z$	$a_e = 0.75 \times d_1 \text{ mm}$
40	0,072	30,00
50	0,090	37,50
63	0,082	47,25
80	0,104	60,00
100	0,090	75,00
125	0,113	93,75
160	0,144	120,00

$V_c$  [m/min] VELOCITÀ DI TAGLIO |  $V_c$  [m/min] CUTTING SPEED

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	-	-	-	-	-	-	-	-	-	-	-	-
	Max	-	-	-	-	-	-	-	-	-	-	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	-	-	-	-	-	-	-	70	50	-	-	-
	Max	-	-	-	-	-	-	-	160	70	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

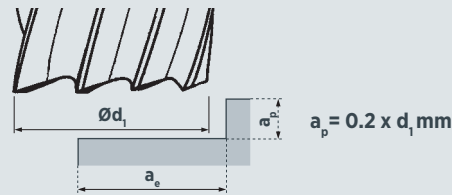
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 12 (spianatura) " $f_z$ " 0,072 materiale gruppo N<sub>1</sub> -  $0,072 \times 1,8 = 0,13$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 12 (face milling) " $f_z$ " 0,072 material group N<sub>1</sub> -  $0,072 \times 1,8 = 0,13$  " $f_z$ "



## TIPO HFS-NR-HRS-NF | TYPE HFS-NR-HRS-NF

$f_z$  [mm] AVANZAMENTO AL DENTE |  $f_z$  [mm] TOOTH FOR FEED



Ø	SPIANATURA $f_z$ FACE MILLING $f_z$	$a_e = 0.75 \times d_1$ mm
40	0,072	30,00
50	0,090	37,50
63	0,076	47,25
80	0,096	60,00
100	0,084	75,00
125	0,105	93,75
160	0,134	120,00

$V_c$  [m/min] VELOCITÀ DI TAGLIO |  $V_c$  [m/min] CUTTING SPEED

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	7	20	15	-	30	10	-	-
	Max	35	30	25	20	15	30	25	-	60	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	-	7	-	15	7	-	20	5	-	-
	Max	30	25	-	15	-	20	15	-	40	7	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

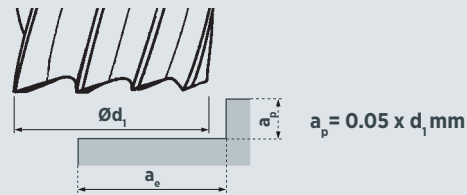
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 40 (spianatura) "f<sub>z</sub>" 0,072 materiale gruppo P<sub>1</sub> - 0,072x1 = 0,072 "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 40 (face milling) "f<sub>z</sub>" 0,072 material group P<sub>1</sub> - 0,072x1 = 0,072 "f<sub>z</sub>"



## TIPO VA | TYPE VA

$f_z$  [mm] AVANZAMENTO AL DENTE |  $f_z$  [mm] TOOTH FOR FEED



$\varnothing$	SPIANATURA $f_z$ FACE MILLING $f_z$	$a_e = 0.75 \times d_1 \text{ mm}$
50	0,075	37,50
63	0,063	47,25
80	0,080	60,00

$V_c$  [m/min] VELOCITÀ DI TAGLIO |  $V_c$  [m/min] CUTTING SPEED

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	-	-	20	15	-	-	-	-	10	5	-
	Max	50	-	-	30	20	-	-	-	-	15	7	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	-	-	15	7	-	-	-	-	5	4	-
	Max	35	-	-	20	15	-	-	-	-	10	5	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\varnothing$  50 (spianatura) " $f_z$ " 0,075 materiale gruppo P<sub>1</sub> -  $0,075 \times 1 = 0,075$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\varnothing$  50 (face milling) " $f_z$ " 0,075 material group P<sub>1</sub> -  $0,075 \times 1 = 0,075$  " $f_z$ "

