ILLI•CO HIGH QUALITY

PRODUCTIONPROGRAMME

Legenda - Caption
Légende - Legende

Numero di taglienti - Anzahle der Schneiden
Flute number - Nombre de coupants

Tipo di lavorazione - Bearbeitungsart
Machine work type - Type de usinage

Lunghezza fresa - Bohrerlänge
Drill lenght - Longueur du foret

Tipologia di taglio - Schneidetyp
Cutting type - Typologie de coupe

Articolo presente anche con attacco filettato fino ad esaurimento scorte
Auch Schaftgewinde solange der Vorrat reicht
Tool available with threaded shank until sold out
Outil disponible même avec queue fitetée jusqu'à épuisement du stock

Attacco Weldon - Weldonschaft
Weldon shank - Queue avec méplant

Attacco filettato - Schaft mit Gewinde
Threaded shank - Queue filetée

Attacco cilindrico - Zylinderschaft
Straight shank - Queue cylindrique

Attacco conico - Kegelschaft
Morse taper shank - Queue conique

Attacco ISO DIN 2080 - ISO DIN 2080 Schaft
ISO DIN 2080 shank - Queue ISO DIN 2080

Attacco ISO DIN 6987/1 - ISO DIN 6987/1 Schaft
ISO DIN 6987/1 shank - Queue ISO DIN 6987/1

Serie extra corta

Serie lunga

Serie corta

Serie extra lunga

HSS/HSS-Co5/HSS-Co8

HSS/HSS-Co5/HSS-Co8
Con rivestimento TiN - Mit TiN Beschichtung
TiN coated - Avec revêtement TiN

HSS/HSS-Co5/HSS-Co8
Con rivestimento TiCN - Mit TiCN Beschichtung
TiCN coated - Avec revêtement TiCN

HSS/HSS-Co5/HSS-Co8
Con rivestimento TiALN FUTURA® - Mit TiALN FUTURA® Beschichtung
TiALN FUTURA® coated - Avec revêtement TiALN FUTURA®

ASP-30/ASP60

ASP-30/ASP60
Con rivestimento TiN - Mit TiN Beschichtung
TiN coated - Avec revêtement TiN

ASP-30/ASP60
Con rivestimento TiCN - Mit TiCN Beschichtung
TiCN coated - Avec revêtement TiCN

ASP-30/ASP60
Con rivestimento TiALN FUTURA® - Mit TiALN FUTURA® Beschichtung
TiALN FUTURA® coated - Avec revêtement TiALN FUTURA®

● **Utensile disponibile a magazzino** - Werkzeug vorratig ab lager
Tool in stock - Outil disponible à stock

■ **Fino ad esaurimento scorte** - Solange der Vorrat reicht
Discontinued available until sold out - Jusqu'à épuisement de stock

* **Tolleranza h 10** - Toleranz h 10
Tolerance h 10 - Tolérance h 10

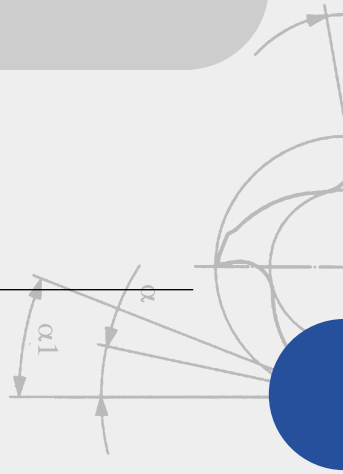
▲ ILLICO NORM

§ **Misura disponibile solo con attacco a chiavetta standard**
Diese Abmessung wird nur mit Längsnut geliefert
This dimensions is available only with standard keyway
Ce diamètre est disponible avec attache à clavette standard.

	Tipo - Typ Type - Type	**Profilo** - Profil Profile - Profil	
	W		**Lavorazione di leghe leggere** Bearbeitung von leichtmetall Light alloys workings Usinages de alliage légers
	WF		
	NS-BNS-BN-N-NJC		**Lavorazioni generiche** Allgemeine bearbeitung General workings Usinages généraux
	NF		
	NR-RS-BRS-BNR		
	HS		**Lavorazioni difficoltose di materiali difficili** Schwere Bearbeitungen von harte Materialen Difficult machine work of hard materials Usinage difficile de mattères dure
	HFS		
	HRS-HW		
	Aero AH		**Lavorazioni di materiali aeronautici** Bearbeitung von aeronautischen Materialen Aeronautical materials machine work Usinage de matières aéronautiques
	Aero AHR		
	Inox VA		**Lavorazione di materiali inossidabili** Bearbeitung von rostfreier Materialen Stainless materials machine work Usinage de matières inoxydables

Programma di Produzione
Herstellungsprogramm

Production Programme
Programme de Production



Frese a 2 taglienti per cave
Langlochfräser mit 2 Schneiden
Slot drills with 2 flutes
Fraises à rainurer avec 2 dents

Frese frontali a 3 taglienti
Schaftfräser mit 3 Schneiden
End mills with 3 flutes
Fraises deux tailles avec 3 dents

Frese frontali a 4 e più taglienti
Schaftfräser mit 4 und mehr Schneiden
End mills with 4 and more flutes
Fraises deux tailles avec 4 ou plus de dents

Frese frontali con attacco conico DIN 2080 e DIN-ISO 69871/1
Schaftfräser mit Steilkegelschaft nach DIN 2080 und DIN ISO 69871/1
End mills with taper shank DIN 2080 and DIN-ISO 69871/1
Fraises deux tailles avec queue conique DIN 2080 et DIN ISO 69871/1

Frese a manicotto DIN 1880
Walzenstirnfräser nach DIN 1880
Shell end mills DIN 1880
Fraises en bout DIN 1880

Frese coniche per stampi
Gesenkkegelfräser
Die sinking taper cutters
Fraises coniques pour matrices

Frese a testa semisferica
Radiusschaftfräser
Ball nose cutters
Fraises à bout hémisphérique

Frese per scanalature prismatiche e a disco
T-Nuten-, Prismen-und Scheibenfräser
T-slot, double angle and side cutters
Fraises pour rainures à T, isocèles et à 3 tailles

Informazioni Tecniche
Technische Hinweise
Technical Instruction
Instructions techniques

Identificazione codice frese
Identification der Artikelnummer

End mills code identification
Identification du code des fraises

Tipo N, ≈ 30° elica,
10° angolo di spoglia,
con codolo cilindrico
secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel,
10° Spanwinkel,
mit Zylindershaft nach
DIN 1835/1

Slot drills 2-fluted,
extra short series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents,
série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

DIN 327
ASP-60

ASP-60
TiN
TiCN
TiALN FUTURA

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							3220	3220T	3220C	3220F
Ød1 fg	l_2	l_1	Ød2	z						
2	4	48	6	2			●	●	●	●
2,5	5	49	6	2			●	●	●	●
3	5	49	6	2			●	●	●	●
3,5*	6	50	6	2			●	●	●	●
4	7	51	6	2			●	●	●	●
5*	7	51	6				●	●	●	●
	8	52	6				●	●	●	●

3220T

3 = Per cave
Langlochfräser
Slot drills
Fraises à rainurer
4 = Per finitura
Schlichtfräser
Finishing mills
Fraises de finition
5 = Per semifinitura
Schrupp-Schlichtfräser
Semifinishing mill
Fraises de semifinition
7 = Per sgrossatura
Schruppfräser
Roughing mills
Fraises d'ébauche
8 = Per stampi coniche
Gesenkkegelfräser
Die sinking taper cutters
Fraises coniques pour matrices
9 = Miscellanea
Verschiedenes
Miscellany
Melange

2 = 2 Taglienti
2 Schneiden
2 Flutes
2 Dents
3 = 3 Taglienti
3 Schneiden
3 Flutes
3 Dents
4 = 4 Taglienti
4 Schneiden
4 Flutes
4 Dents
5 = Miscellanea
Verschiedenes
Miscellany
Melange

Numero progressivo
Fortlanfende Nummer
Progressive number
Nombre progressif

T = TiN
C = TiCN
F = TiALN FUTURA®

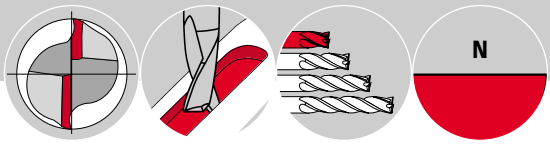
Frese a 2 taglienti per cave
Langlochfräser mit 2 Schneiden

Slot drills with 2 flutes
Fraises à rainurer avec 2 dents

DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®				Pag.
327	N		HSS-Co8				●	●	●	4
327	N		ASP-60				●			6
IN	N		HSS-Co8				●	●		8
IN	N		ASP-60				●			10

IN = Illico Norm

Frese a 2 taglienti per cave, serie extra corta
Langlochfräser 2-Schneiden extra kurz



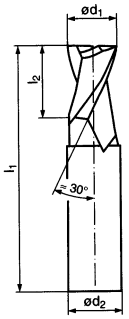
3202

Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 2-fluted, extra short series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents, série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



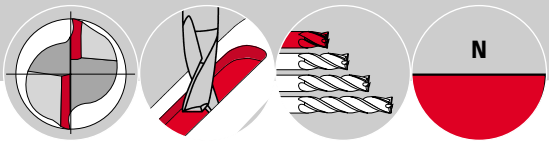
DIN 327
HSS-Co8

- HSS-Co8
- HSS-Co8 TiN
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

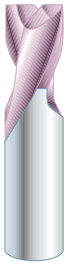
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					3200	3201	3200T	3201C	3200C	3200F
Ød1 e_8	l_2	l_1	$Ød_2$	z						
1▲*	2,5	36	6	2	●	●	●	●	●	●
1,5▲*	3	36	6	2	●	●	●	●	●	●
1,8*	4	48	6	2	●	●	●	●	●	●
2	4	48	6	2	●	●	●	●	●	●
2,5	5	49	6	2	●	●	●	●	●	●
2,8*	5	49	6	2	●	●	●	●	●	●
3	5	49	6	2	●	●	●	●	●	●
3,5*	6	50	6	2	●	●	●	●	●	●
3,8*	7	51	6	2	●	●	●	●	●	●
4	7	51	6	2	●	●	●	●	●	●
4,5*	7	51	6	2	●	●	●	●	●	●
4,8*	8	52	6	2	●	●	●	●	●	●
5	8	52	6	2	●	●	●	●	●	●
5,5*	8	52	6	2	●	●	●	●	●	●
5,75*	8	52	6	2	●	●	●	●	●	●
6	8	52	6	2	●	●	●	●	●	●
6,5*	10	60	10	2	●	●	●	●	●	●
6,75*	10	60	10	2	●	●	●	●	●	●
7	10	60	10	2	●	●	●	●	●	●
7,5*	10	60	10	2	●	●	●	●	●	●
7,75*	11	61	10	2	●	●	●	●	●	●
8	11	61	10	2	●	●	●	●	●	●
8,5*	11	61	10	2	●	●	●	●	●	●
8,7*	11	61	10	2	●	●	●	●	●	●
9*	11	61	10	2	●	●	●	●	●	●
9,5*	11	61	10	2	●	●	●	●	●	●
9,7*	13	63	10	2	●	●	●	●	●	●
10	13	63	10	2	●	●	●	●	●	●
10,5*	13	70	12	2	●	●	●	●	●	●
10,7*	13	70	12	2	●	●	●	●	●	●
11*	13	70	12	2	●	●	●	●	●	●
11,5*	13	70	12	2	●	●	●	●	●	●
11,7*	16	73	12	2	●	●	●	●	●	●
12	16	73	12	2	●	●	●	●	●	●
12,7*	16	73	12	2	●	●	●	●	●	●
13*	16	73	12	2	●	●	●	●	●	●
13,7*	16	73	12	2	●	●	●	●	●	●
14	16	73	12	2	●	●	●	●	●	●
14,7*	16	73	12	2	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese a 2 taglienti per cave, serie extra corta
Langlochfräser 2-Schneiden extra kurz



3202

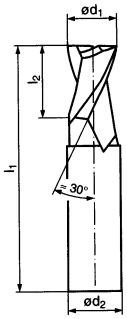


Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 2-fluted, extra short series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents, série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



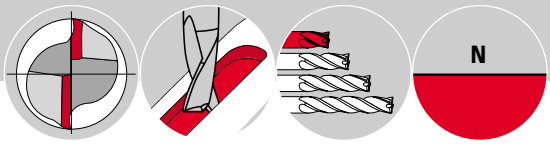
DIN 327
HSS-Co8

- HSS-Co8
- HSS-Co8 TiN
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					3200	3201	3200T	3201C	3200C	3200F
Ød1 e_8	l_2	l_1	Ød$_2$	Z						
15*	16	73	12	2	●	●	●	●	●	●
15,7*	19	79	16	2	●	●	●	●	●	●
16	19	79	16	2	●	●	●	●	●	●
16,7*	19	79	16	2	●	●	●	●	●	●
17	19	79	16	2	●	●	●	●	●	●
17,7*	19	79	16	2	●	●	●	●	●	●
18	19	79	16	2	●	●	●	●	●	●
18▲	19	85	20	2		●		●		
19*	19	79	16	2	●	●	●	●	●	●
19,7*	22	88	20	2	●	●	●	●	●	●
20	22	88	20	2	●	●	●	●	●	●
21,7*	22	88	20	2	●	●	●	●	●	●
22	22	88	20	2	●	●	●	●	●	●
23,7*	26	102	25	2	●	●	●	●	●	●
24	26	102	25	2	●	●	●	●	●	●
24,7*	26	102	25	2	●	●	●	●	●	●
25	26	102	25	2	●	●	●	●	●	●
26	26	102	25	2	●	●	●	●	●	●
27,7*	26	102	25	2	●	●	●	●	●	●
28	26	102	25	2	●	●	●	●	●	●
29,7*	26	102	25	2	●	●	●	●	●	●
30	26	102	25	2	●	●	●	●	●	●
32	32	112	32	2	●	●	●	●	●	●
34*	32	112	32	2	●	●	●	●	●	●
35*	32	112	32	2	●	●	●	●	●	●
36	32	112	32	2	●	●	●	●	●	●
38▲*	38	118	32	2		●		●		
40▲	38	118	32	2		●		●		
40	38	130	40	2	●		●	●	●	●
42▲*	38	118	32	2		●		●		
44▲*	38	118	32	2		●		●		
45▲	38	118	32	2		●		●		
48▲*	45	125	32	2		●		●		
50▲	45	125	32	2		●		●		

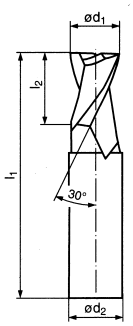
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese a 2 taglienti per cave, serie extra corta
Langlochfräser 2-Schneiden extra kurz



Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 327
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN
ASP-60 TiALN FUTURA®

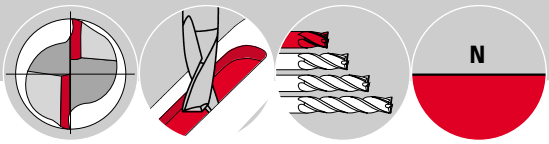
Slot drills 2-fluted, extra short series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

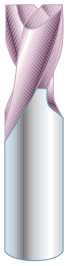
Fraises à rainurer 2 dents, série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							3220	3220T	3220C	3220F
Ød1 e_8	l_2	l_1	$Ød_2$	z						
2	4	48	6	2			●	●	●	●
2,5	5	49	6	2			●	●	●	●
3	5	49	6	2			●	●	●	●
3,5*	6	50	6	2			●	●	●	●
4	7	51	6	2			●	●	●	●
4,5*	7	51	6	2			●	●	●	●
5	8	52	6	2			●	●	●	●
5,5*	8	52	6	2			●	●	●	●
6	8	52	6	2			●	●	●	●
6,5*	10	60	10	2			●	●	●	●
7	10	60	10	2			●	●	●	●
7,5*	10	60	10	2			●	●	●	●
8	11	61	10	2			●	●	●	●
8,5*	11	61	10	2			●	●	●	●
9	11	61	10	2			●	●	●	●
9,5*	11	61	10	2			●	●	●	●
10	13	63	10	2			●	●	●	●
10,5*	13	70	12	2			●	●	●	●
11	13	70	12	2			●	●	●	●
11,5*	13	70	12	2			●	●	●	●
12	16	73	12	2			●	●	●	●
13*	16	73	12	2			●	●	●	●
14	16	73	12	2			●	●	●	●
15	16	73	12	2			●	●	●	●
16	19	79	16	2			●	●	●	●
17	19	79	16	2			●	●	●	●
18	19	79	16	2			●	●	●	●
19	19	79	16	2			●	●	●	●
20	22	88	20	2			●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese a 2 taglienti per cave, serie extra corta
Langlochfräser 2-Schneiden extra kurz



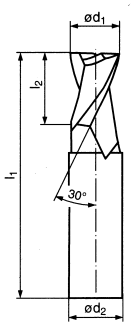


Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 2-fluted, extra short series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents, série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



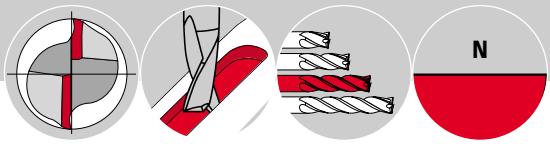
DIN 327
ASP-60

- **ASP-60**
- ASP-60 **TiN**
- ASP-60 **TiCN**
- ASP-60 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							3220	3220T	3220C	3220F
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
22	22	88	20	2			●	●	●	●
24	26	102	25	2			●	●	●	●
25	26	102	25	2			●	●	●	●

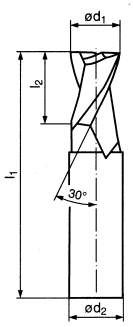
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese a 2 taglienti per cave, serie lunga
Langlochfräser 2-Schneiden lang



Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

- HSS-Co8
- HSS-Co8 TiN
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

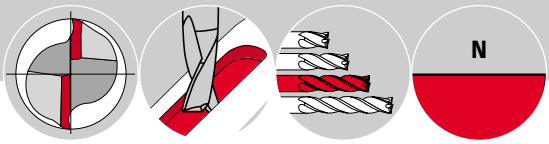
Slot drills 2-fluted, long series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						3204	3206	3204T	3204C	3204F
Ød1 e_8	l_2	l_1	$Ød_2$	z						
3	8	56	6	2		●	●	●	●	●
3,5*	10	59	6	2		●	●	●	●	●
4	11	63	6	2		●	●	●	●	●
4,5*	11	63	6	2		●	●	●	●	●
5	13	68	6	2		●	●	●	●	●
5,5*	13	68	6	2		●	●	●	●	●
6	13	68	6	2		●	●	●	●	●
6,5*	16	80	10	2		●	●	●	●	●
7	16	80	10	2		●	●	●	●	●
7,5*	16	80	10	2		●	●	●	●	●
8	19	88	10	2		●	●	●	●	●
8,5*	19	88	10	2		●	●	●	●	●
9*	19	88	10	2		●	●	●	●	●
9,5*	19	88	10	2		●	●	●	●	●
10	22	95	10	2		●	●	●	●	●
10,5*	22	102	12	2		●	■	●	●	●
11	22	102	12	2		●	●	●	●	●
11,5*	22	102	12	2		■	■	■	■	■
12	22	102	12	2		●	●	●	●	●
13*	22	102	12	2		●	●	●	●	●
14	22	102	12	2		●	●	●	●	●
15*	26	110	12	2		●	●	●	●	●
16	32	123	16	2		●	●	●	●	●
17*	32	123	16	2		●	●	●	●	●
18	32	123	16	2		●	●	●	●	●
19*	32	123	16	2		●	●	●	●	●
20	38	141	20	2		●	●	●	●	●
22	38	141	20	2		●	●	●	●	●
24	45	166	25	2		●	●	●	●	●
25	45	166	25	2		●	●	●	●	●
26*	45	166	25	2		●	●	●	●	●
28	45	166	25	2		●	●	●	●	●
30*	45	166	25	2		●	●	●	●	●
32	53	186	32	2		●	●	●	●	●
34*	53	186	32	2		●	●	●	●	●
35*	53	186	32	2		■	■	■	■	■
36	53	186	32	2		●	●	●	●	●
40	63	196	40	2			●			

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese a 2 taglienti per cave, serie lunga
Langlochfräser 2-Schneiden lang

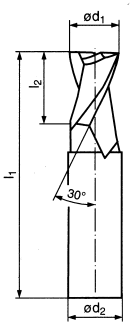


Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 2-fluted, long series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



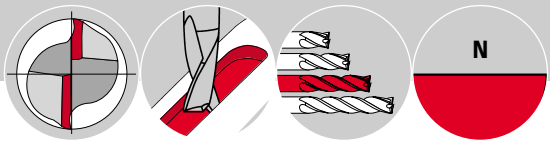
ILLICO NORM
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						3204	3206	3204T	3204C	3204F
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
45	63	203	32	2			■			
48	75	203	32	2			■			
50	75	203	32	2			●			

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese a 2 taglienti per cave, serie lunga
Langlochfräser 2-Schneiden lang

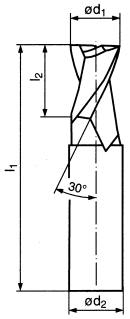


Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 2-fluted, long series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises à rainurer 2 dents, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



ILLICO NORM ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								3224	3224T	3224C
Ød1 e_8	l_2	l_1	$Ød_2$	z						
3	8	56	6	2				●	●	●
3,5*	10	59	6	2				●	●	●
4	11	63	6	2				●	●	●
4,5*	11	63	6	2				●	●	●
5	13	68	6	2				●	●	●
5,5*	13	68	6	2				●	●	●
6	13	68	6	2				●	●	●
6,5*	16	80	10	2				●	●	●
7	16	80	10	2				●	●	●
7,5*	16	80	10	2				●	●	●
8	19	88	10	2				●	●	●
8,5*	19	88	10	2				●	●	●
9	19	88	10	2				●	●	●
9,5*	19	88	10	2				●	●	●
10	22	95	10	2				●	●	●
10,5*	22	95	12	2				●	●	●
11	22	95	12	2				●	●	●
11,5*	22	95	12	2				●	●	●
12	26	110	12	2				●	●	●
13*	26	110	12	2				●	●	●
14	26	110	12	2				●	●	●
15	26	110	12	2				●	●	●
16	32	123	16	2				●	●	●
17	32	123	16	2				●	●	●
18	32	123	16	2				●	●	●
19	32	123	16	2				●	●	●
20	38	141	20	2				●	●	●
22	38	141	20	2				●	●	●
24	45	166	25	2				●	●	●
25	45	166	25	2				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Un impegno di Qualità

Il programma di frese ILLI-CO High Quality è nato per offrire ai nostri clienti utensili di elevata precisione. L'affidabilità in fase di lavorazione delle frese ILLI-CO è frutto della sua esperienza pluri-decennale nel settore della meccanica: ILLI-CO è distribuito in Italia attraverso una presenza capillare sul territorio e dopo un'attività nazionale crescente sin dagli anni novanta. ILLI-CO ha realizzato il nuovo catalogo di frese High Quality in risposta alle ultime esigenze produttive del mercato.
ILLI-CO opera un costante investimento in controlli qualità per garantire sempre un attenta selezione dei prodotti. Solo i migliori utensili High Quality escono dagli stabilimenti ILLI-CO e sono offerti agli utilizzatori. I nuovi rivestimenti tuttora in fase di studio, uniti alla costante ricerca ILLI-CO nel campo dei materiali di costruzione, permettono di raggiungere con i macchinari di ultima generazione elevate prestazioni unite alla riduzione dei tempi di lavorazione.

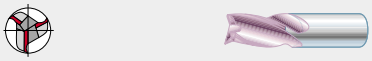
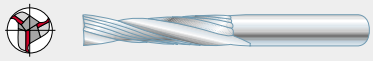
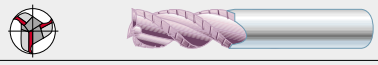
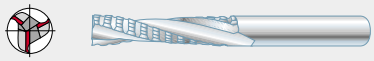
L' azienda

Angelo Ghezzi & C SpA

Migliorare la qualità, in un'ottica di sfida costante e di innovazione. Questa è la scelta della Angelo Ghezzi Spa che dal 1939 è riconosciuta in Europa come sinonimo di competenza e affidabilià. Da oltre sessant'anni l'azienda offre utensili di comprovata qualità e precisione provenienti dalle migliori case internazionali, come in questo caso i prestigiosi stabilimenti ILLI-CO.
L'attenzione al cliente è presente in tutte le direttrici seguite dall'azienda al fine di proporre, sempre, un servizio completo a 360°, dal momento dell'acquisto, alla messa in macchina dell'utensile, al postvendita.
Con la sua rete di tecnici e il suo personale qualificato, l'Angelo Ghezzi Spa mette a disposizione degli utilizzatori gli strumenti giusti per offrire le migliori soluzioni aumentando la produzione e l'efficienza delle lavorazioni.

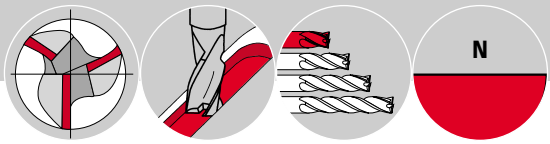
Frese frontali a 3 taglienti
Schaftfräser mit 3 Schneiden

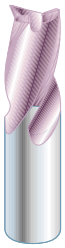
End mills with 3 flutes
Fraises deux tailles avec 3 dents

DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®					Pag.
327	N		HSS-Co8	●	●	●	●	●			14
844K	N		HSS-Co8	●	●	●	●	●			16
844K	N		ASP-60	●	●	●	●				18
IN	N		HSS-Co8	●	●		●				20
IN	N		ASP-60	●	●		●				22
844K	N		ASP-60	●	●	●	●				24
844K	W		HSS-Co8	●	●	●	●	●			25
844K	W		ASP-60	●	●		●				26
844L	W		HSS-Co8	●	●		●				27
844L	W		ASP-60	●	●		●				28
844L Aero	AH		ASP-60				●				29
845K	W		HSS-Co5	●	●					●	30
844K	WF		HSS-Co5	●	●		●				31
844K	WF		ASP-60	●	●		●				32
844L	WF		HSS-Co5	●	●		●				33
844L	WF		ASP-60	●	●		●				34
844L Aero	AHR		ASP-60				●				35
844K New	NR		ASP-60		●	●	●		●		36
844K New	NR		ASP-60		●	●	●				37

IN = Illico Norm

Frese a 3 taglienti per cave, serie extra corta
Langlochfräser 3-Schneiden extra kurz



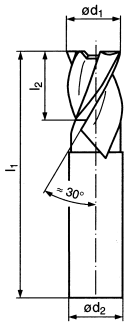


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 3-fluted, extra short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



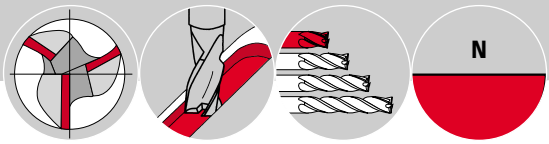
DIN 327
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						3308	3310	3308T	3308C	3308F
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
1,8*	4	48	6	3		●	●	●	●	●
2	4	48	6	3		●	●	●	●	●
2,5	5	49	6	3		●	●	●	●	●
2,8*	5	49	6	3		●	●	●	●	●
3	5	49	6	3		●	●	●	●	●
3,5*	6	50	6	3		●	●	●	●	●
3,8*	7	51	6	3		●	●	●	●	●
4	7	51	6	3		●	●	●	●	●
4,5*	7	51	6	3		●	●	●	●	●
4,8*	8	52	6	3		●	●	●	●	●
5	8	52	6	3		●	●	●	●	●
5,5*	8	52	6	3		●	●	●	●	●
5,75*	8	52	6	3		●	●	●	●	●
6	8	52	6	3		●	●	●	●	●
6,5*	10	60	10	3		●	●	●	●	●
6,75*	10	60	10	3		●	●	●	●	●
7	10	60	10	3		●	●	●	●	●
7,5*	10	60	10	3		●	●	●	●	●
7,75*	11	61	10	3		●	●	●	●	●
8	11	61	10	3		●	●	●	●	●
8,5*	11	61	10	3		●	●	●	●	●
8,7*	11	61	10	3		●	●	●	●	●
9*	11	61	10	3		●	●	●	●	●
9,5*	11	61	10	3		●	●	●	●	●
9,7*	13	63	10	3		●	●	●	●	●
10*	13	63	10	3		●	●	●	●	●
10,5*	13	70	12	3		●	●	●	●	●
10,7*	13	70	12	3		●	●	●	●	●
11*	13	70	12	3		●	●	●	●	●
11,5*	13	70	12	3		●	●	●	●	●
11,7*	16	73	12	3		●	●	●	●	●
12	16	73	12	3		●	●	●	●	●
12,7*	16	73	12	3		●	●	●	●	●
13*	16	73	12	3		●	●	●	●	●
13,7*	16	73	12	3		●	●	●	●	●
14	16	73	12	3		●	●	●	●	●
14,7*	16	73	12	3		●	●	●	●	●
15*	16	73	12	3		●	●	●	●	●
15,7*	19	79	16	3		●	●	●	●	●

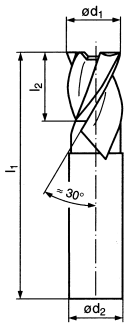
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese a 3 taglienti per cave, serie extra corta
Langlochfräser 3-Schneiden extra kurz



Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 327
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

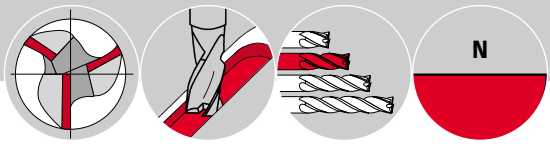
Slot drills 3-fluted, extra short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série extra courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						3308	3310	3308T	3308C	3308F
Ød1 e_8	l_2	l_1	Ød$_2$	Z						
16	19	79	16	3		●	●	●	●	●
16,7*	19	79	16	3		●	●	●	●	●
17*	19	79	16	3		●	●	●	●	●
17,7*	19	79	16	3		●	●	●	●	●
18	19	79	16	3		●	●	●	●	●
19*	19	79	16	3		●	●	●	●	●
19,7▲	22	88	20	3		●	●	●	●	●
20	22	88	20	3		●	●	●	●	●
21,7*	22	88	20	3		●	●	●	●	●
22	22	88	20	3		●	●	●	●	●
23,7	26	102	25	3		●	●	●	●	●
24	26	102	25	3		●	●	●	●	●
24,7*	26	102	25	3		●	●	●	●	●
25	26	102	25	3		●	●	●	●	●
26*	26	102	25	3		●	●	●	●	●
27,7*	26	102	25	3		●	●	●	●	●
28	26	102	25	3		●	●	●	●	●
29,7*	26	102	25	3		●	●	●	●	●
30*	26	102	25	3		●	●	●	●	●
32	32	112	32	3		●	●	●	●	●
34*	32	112	32	3		●	●	●	●	●
35*	32	112	32	3		●	●	●	●	●
36	32	112	32	3		●	●	●	●	●
40▲	38	118	32	3			●			
45▲	38	118	32	3			●			
50▲	45	125	32	3			●			

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese a 3 taglienti per cave, serie corta
Langlochfräser 3-Schneiden kurz

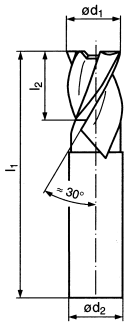


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 3-fluted, short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



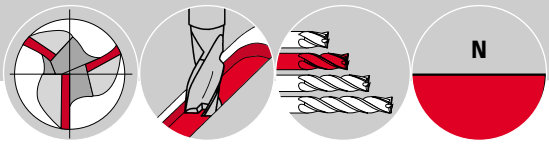
DIN 844K
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						3300	3302	3300T	3300C	3300F
Ød1 e_8	l_2	l_1	$Ød_2$	z						
1,8*	7	51	6	3		●	●	●	●	●
2	7	51	6	3		●	●	●	●	●
2,5	8	52	6	3		●	●	●	●	●
2,8*	8	52	6	3		●	●	●	●	●
3	8	52	6	3		●	●	●	●	●
3,5*	10	54	6	3		●	●	●	●	●
3,8*	11	55	6	3		●	●	●	●	●
4	11	55	6	3		●	●	●	●	●
4,5*	11	55	6	3		●	●	●	●	●
4,8*	13	57	6	3		●	●	●	●	●
5	13	57	6	3		●	●	●	●	●
5,5*	13	57	6	3		●	●	●	●	●
5,75*	13	57	6	3		●	●	●	●	●
6	13	57	6	3		●	●	●	●	●
6,5*	16	66	10	3		●	●	●	●	●
6,75*	16	66	10	3		●	●	●	●	●
7	16	66	10	3		●	●	●	●	●
7,5*	16	66	10	3		●	●	●	●	●
7,75*	19	69	10	3		●	●	●	●	●
8	19	69	10	3		●	●	●	●	●
8,5*	19	69	10	3		●	●	●	●	●
8,7*	19	69	10	3		●	●	●	●	●
9*	19	69	10	3		●	●	●	●	●
9,5*	19	69	10	3		●	●	●	●	●
9,7*	22	72	10	3		●	●	●	●	●
10*	22	72	10	3		●	●	●	●	●
10,5*	22	79	12	3		●	●	●	●	●
10,7*	22	79	12	3		●	●	●	●	●
11*	22	79	12	3		●	●	●	●	●
11,5*	22	79	12	3		●	●	●	●	●
11,7*	26	83	12	3		●	●	●	●	●
12	26	83	12	3		●	●	●	●	●
12,7*	26	83	12	3		●	●	●	●	●
13*	26	83	12	3		●	●	●	●	●
13,7*	26	83	12	3		●	●	●	●	●
14	26	83	12	3		●	●	●	●	●
14,7*	26	83	12	3		●	●	●	●	●
15*	26	83	12	3		●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese a 3 taglienti per cave, serie corta
Langlochfräser 3-Schneiden kurz

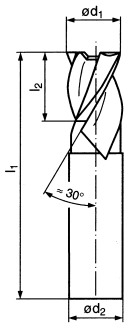


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 3-fluted, short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



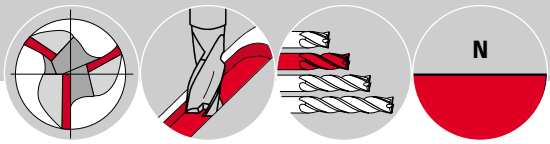
DIN 844K
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**
HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						3300	3302	3300T	3300C	3300F
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
15,7*	32	92	16	3		●	●	●	●	●
16	32	92	16	3		●	●	●	●	●
16,7*	32	92	16	3		●	●	●	●	●
17*	32	92	16	3		●	●	●	●	●
17,7*	32	92	16	3		●	●	●	●	●
18	32	92	16	3		●	●	●	●	●
19*	32	92	16	3		●	●	●	●	●
19,7▲	38	104	20	3		●	●	●	●	●
20	38	104	20	3		●	●	●	●	●
21,7*	38	104	20	3		●	●	●	●	●
22	38	104	20	3		●	●	●	●	●
23,7	45	121	25	3		●	●	●	●	●
24	45	121	25	3		●	●	●	●	●
24,7*	45	121	25	3		●	●	●	●	●
25	45	121	25	3		●	●	●	●	●
26*	45	121	25	3		●	●	●	●	●
27,7*	45	121	25	3		●		●	●	●
28	45	121	25	3		●	●	●	●	●
29,7*	45	121	25	3		■				
30*	45	133	32	3		●	●	●	●	●
32	53	133	32	3		●	●	●	●	●
34*	53	133	32	3		●	●	●	●	●
35*	53	133	32	3		●	●	●	●	●
36	53	133	32	3		●	●	●	●	●
38*▲	63	155	32	3			●			
40▲	63	155	32	3			●			
45▲	63	155	32	3			●			
50▲	75	177	32	3			●			

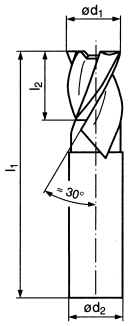
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese a 3 taglienti per cave, serie corta
Langlochfräser 3-Schneiden kurz



Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 844K
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Slot drills 3-fluted, short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1

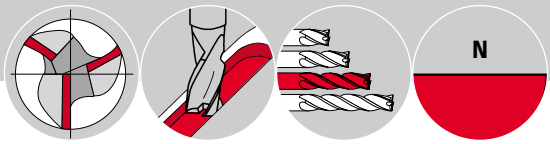
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							3320	3320T	3320C	3320F
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
2	7	51	6	3			●	●	●	●
2,5	8	52	6	3			●	●	●	●
3	8	52	6	3			●	●	●	●
3,5*	10	54	6	3			●	●	●	●
4	11	55	6	3			●	●	●	●
4,5*	11	55	6	3			●	●	●	●
5	13	57	6	3			●	●	●	●
5,5*	13	57	6	3			●	●	●	●
6	13	57	6	3			●	●	●	●
6,5*	16	66	10	3			●	●	●	●
7	16	66	10	3			●	●	●	●
7,5*	16	66	10	3			●	●	●	●
8	19	69	10	3			●	●	●	●
8,5*	19	69	10	3			●	●	●	●
9	19	69	10	3			●	●	●	●
9,5*	19	69	10	3			●	●	●	●
10	22	72	10	3			●	●	●	●
10,5*	22	72	12	3			●	●	●	●
11	22	79	12	3			●	●	●	●
11,5*	26	79	12	3			●	●	●	●
12	26	83	12	3			●	●	●	●
13*	26	83	12	3			●	●	●	●
14	26	83	12	3			●	●	●	●
15	26	83	12	3			●	●	●	●
16	32	92	16	3			●	●	●	●
17	32	92	16	3			●	●	●	●
18	32	92	16	3			●	●	●	●
19	32	92	16	3			●	●	●	●
20	38	104	20	3			●	●	●	●
22	38	104	20	3			●	●	●	●
24	45	121	25	3			●	●	●	●
25	45	121	25	3			●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Uno sguardo al futuro

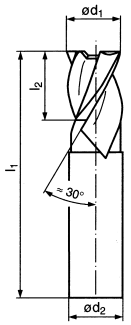
In un mercato dove si succedono sempre più assestamenti a livello internazionale, l'unico modo per migliorare la qualità del proprio servizio è avere grande attenzione agli utilizzatori e alle loro problematiche.
Angelo Ghezzi Spa, attraverso la partnership con gli stabilimenti ILLI-CO, ha come obiettivo un dialogo ancora più aperto con il cliente.
Riuscire a soddisfare le richieste dei consumatori significa distribuire prodotti di qualità con tempistiche adeguate.
L'incremento della sua presenza sul territorio nazionale, l'aumento della rete di tecnici e la tempestività d'intervento sono solo alcuni dei canali che l'Angelo Ghezzi Spa migliora costantemente.

Frese a 3 taglienti per cave, serie lunga
Langlochfräser 3-Schneiden lang



Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**

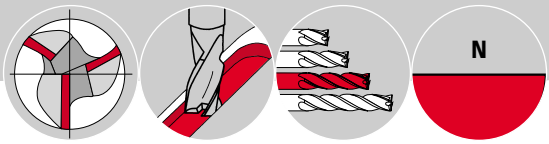
Slot drills 3-fluted, long series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								3304	3304T	3304C
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
2,8*	8	56	6	3				●	●	●
3	8	56	6	3				●	●	●
3,5*	10	59	6	3				●	●	●
3,8*	11	63	6	3				●	●	●
4	11	63	6	3				●	●	●
4,5*	11	63	6	3				●	●	●
4,8*	13	68	6	3				●	●	●
5	13	68	6	3				●	●	●
5,5*	13	68	6	3				●	●	●
5,75*	13	68	6	3				●	●	●
6	13	68	6	3				●	●	●
6,5*	16	80	10	3				●	●	●
6,75*	16	80	10	3				●	●	●
7	16	80	10	3				●	●	●
7,75*	19	88	10	3				●	●	●
8	19	88	10	3				●	●	●
8,7*	19	88	10	3				●	●	●
9*	19	88	10	3				●	●	●
9,7*	22	95	10	3				●	●	●
10*	22	95	10	3				●	●	●
10,7*	22	102	12	3				●	●	●
11*	22	102	12	3				●	●	●
11,7*	26	110	12	3				●	●	●
12	26	110	12	3				●	●	●
12,7*	26	110	12	3				●	●	●
13*	26	110	12	3				●	●	●
13,7*	26	110	12	3				●	●	●
14	26	110	12	3				●	●	●
14,7*	26	110	12	3				●	●	●
15*	26	110	12	3				●	●	●
15,7*	32	123	16	3				●	●	●
16	32	123	16	3				●	●	●
16,7*	32	123	16	3				●	●	●
17*	32	123	16	3				●	●	●
17,7*	32	123	16	3				●	●	●
18	32	123	16	3				●	●	●
18,7*	32	123	16	3				●	●	●
19*	32	123	16	3				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese a 3 taglienti per cave, serie lunga
Langlochfräser 3-Schneiden lang

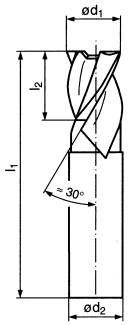


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 3-fluted, long series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



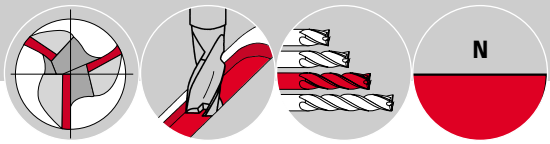
ILLICO NORM
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								3304	3304T	3304C
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
20	38	141	20	3				●	●	●
21,7*	38	141	20	3				■		
22	38	141	20	3				■		
24	45	166	25	3				■		■
25	45	166	25	3				■		
28	45	166	25	3					■	
30*	45	166	25	3				■	■	

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese a 3 taglienti per cave, serie lunga
Langlochfräser 3-Schneiden lang

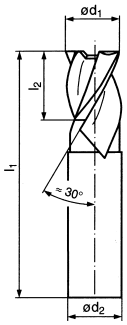


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Slot drills 3-fluted, long series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises à rainurer 3 dents, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



ILLICO NORM ASP-60

ASP-60

ASP-60 TiN

ASP-60 TiCN

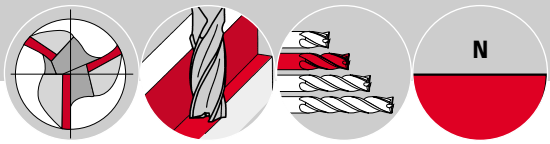
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								3324	3324T	3324C
Ød1 e_8	l_2	l_1	$Ød_2$	Z						
3	8	56	6	3				■	■	■
3,5*	10	59	6	3				■		■
4	11	63	6	3						■
4,5*	11	63	6	3					■	■
5	13	68	6	3				■		■
5,5*	13	68	6	3				■		■
6	13	68	6	3					■	■
6,5*	16	80	10	3				■		■
7	16	80	10	3				■	■	■
7,5*	16	80	10	3				■		■
8	19	88	10	3				■		■
8,5*	19	88	10	3				■		■
9	19	88	10	3				■		■
9,5*	19	88	10	3				■		■
10	22	95	10	3				■		■
10,5*	22	95	12	3				■		■
11	22	95	12	3				■		■
11,5*	22	95	12	3				■		■
12	26	110	12	3				■		■
13*	26	110	12	3				■		■
14	26	110	12	3				■		■
15	26	110	12	3				■		■
16	32	123	16	3					■	■
17	32	123	16	3				■		■
18	32	123	16	3				■		■
19	32	123	16	3				■		■
20	38	141	20	3				■		■
22	38	141	20	3				■		■
24	45	166	25	3				■		■
25	45	166	25	3				■		■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Numero Verde

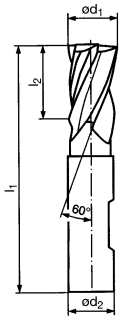
Durante le delicate fasi del montaggio in macchina di un utensile può essere talvolta necessaria una consultazione per una visione più chiara delle caratteristiche del prodotto. Al Numero Verde **800-018130** è collegato un servizio di consulenza in linea per risolvere in tempo reale i problemi legati a parametri di lavorazione, tolleranze o quant'altro fosse necessario.

Frese frontali a 3 taglienti, serie corta
Schaftfräser kurz, 3-Schneiden lang



Tipo N, ≈ 60° elica, 13° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 60° Drallwinkel, 13° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 844K
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN
ASP-60 TiALN FUTURA®

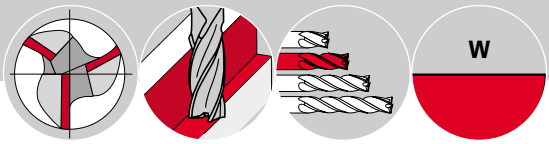
End mills 3-fluted, short series
Type N, helix angle ≈ 60° rake angle 13°, with straight shank acc. DIN 1835/1

Fraises deux tailles avec 3 dents, série courte
Type N, angle d'hèlice ≈ 60°, angle de coupe 13°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							4330	4330T	4330C	4330F
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	3			■	■	■	■
8	19	69	10	3			■	■	■	■
10	22	72	10	3			■	■	■	■
12	26	83	12	3			■	■	■	■
16	32	92	16	3			■	■	■	■
20	38	104	20	3			■	■	■	■
25	45	121	25	4			■	■	■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali per leghe leggere serie corta
Schaftfräser kurz, 3-Schneiden

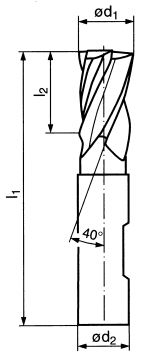


Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ W, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Endmills, 3-fluted, short series
Type W, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série courte
Type W, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



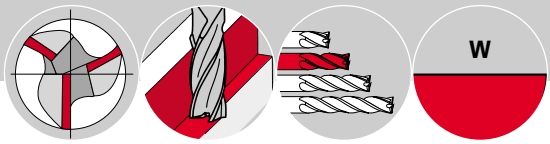
DIN 844K
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						4300	4302	4300T	4300C	4300F
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
2	7	51	6	3		●	●	●	●	●
2,5	8	52	6	3		■	■	■	■	■
3	8	52	6	3		●	●	●	●	●
3,5	10	54	6	3		■	■	■	■	■
4	11	55	6	3		●	●	●	●	●
4,5	11	55	6	3		■	■	■	■	■
5	13	57	6	3		●	●	●	●	●
6	13	57	6	3		●	●	●	●	●
7	16	66	10	3		●	●	●	●	●
8	19	69	10	3		●	●	●	●	●
9	19	69	10	3		●	●	●	●	●
10	22	72	10	3		●	●	●	●	●
11	22	79	12	3		■	■	■	■	■
12	26	83	12	3		●	●	●	●	●
13	26	83	12	3		■	■	■	●	■
14	26	83	12	3		●	●	●	●	●
15	26	83	12	3		■	■	■	■	■
16	32	92	16	3		●	●	●	●	●
17	32	92	16	3		■	■	■	■	■
18	32	92	16	3		●	●	●	●	●
19	32	92	16	3			■	■	■	■
20	38	104	20	3		●	●	●	●	●
22	38	104	20	3		●	●	●	●	●
24	45	121	25	3		●	●	●	●	●
25	45	121	25	4		●	●	●	●	●
26	45	121	25	4		●	●	●	●	●
28	45	121	25	4		●	●	●	●	●
30	45	121	25	4		●	●	●	●	●
32	53	133	32	4		●	●	●	●	●
34	53	133	32	4			■			
35	53	133	32	4			■			
36	53	133	32	4		●	■	●	●	●
40*	63	143	32	4			■			
40	63	155	40	4		●		●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali per leghe leggere, serie corta
Schaftfräser kurz, 3-Schneiden

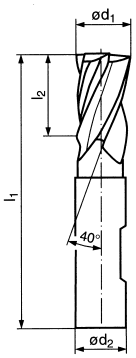


Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ W, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills 3-fluted, short series
Type W, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles 3 dents, série courte
Type W, angle d'hélice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



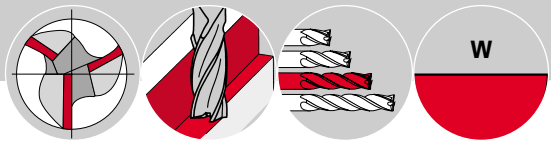
DIN 844K
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4320	4320T	4320C
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
2	7	51	6	3				●	●	●
2,5	8	52	6	3				●	●	●
3	8	52	6	3				●	●	●
3,5	10	54	6	3				●	●	●
4	11	55	6	3				●	●	●
4,5	11	55	6	3				●	●	●
5	13	57	6	3				●	●	●
6	13	57	6	3				●	●	●
7	16	66	10	3				●	●	●
8	19	69	10	3				●	●	●
9	19	69	10	3				●	●	●
10	22	72	10	3				●	●	●
11	22	79	12	3				●	●	●
12	26	83	12	3				●	●	●
13	26	83	12	3				●	●	●
14	26	83	12	3				●	●	●
15	26	83	12	3				●	●	●
16	32	92	16	3				●	●	●
17	32	92	16	3				●	●	●
18	32	92	16	3				●	●	●
19	32	92	16	3				●	●	●
20	38	104	20	3				●	●	●
22	38	104	20	3				●	●	●
24	45	121	25	3				●	●	●
25	45	121	25	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali per leghe leggere, serie lunga
Schaftfräser lang, 3-Schneiden

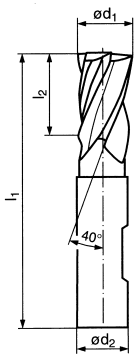


Tipo W, ≈40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ W, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills 3-fluted, long series
Type W, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles 3 dents, série longue
Type W, angle d'èlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



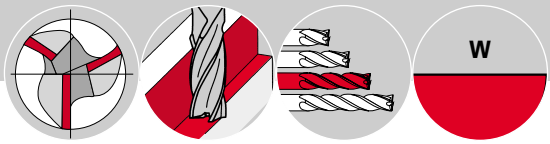
DIN 844L
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4304	4304T	4304C
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
3	12	56	6	3				●	●	●
3,5	15	59	6	3				■	■	■
4	19	63	6	3				●	●	●
4,5	19	63	6	3				■	■	■
5	24	68	6	3				●	●	●
6	24	68	6	3				●	●	●
7	30	80	10	3				●	●	●
8	38	88	10	3				●	●	●
9	38	88	10	3				●	●	●
10	45	95	10	3				●	●	●
11	45	102	12	3				■	■	●
12	53	110	12	3				●	●	●
13	53	110	12	3				■	■	■
14	53	110	12	3				●	●	●
15	53	110	12	3				■	■	●
16	63	123	16	3				●	●	●
18	63	123	16	3				●	●	●
20	75	141	20	3				●	●	●
22	75	141	20	3				●	●	●
24	90	166	25	3				●	●	●
25	90	166	25	4				●	●	●
26	90	166	25	4				■	■	■
28	90	166	25	4				●	●	●
30	90	166	25	4				●	●	●
32	106	186	32	4				●	●	●
36	106	186	32	4				●	●	●
40	125	217	40	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali per leghe leggere, serie lunga
Schaftfräser lang, 3-Schneiden

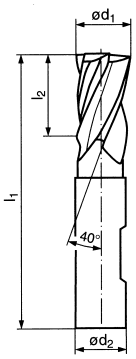


Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ W, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, 3-fluted, long series
Type W, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série longue
Type W, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



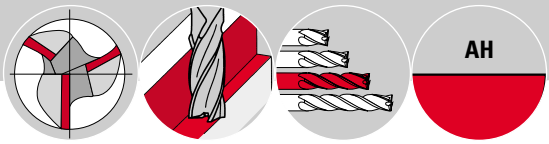
DIN 844L
ASP-60

ASP-60
ASP-60 **TiN**
ASP-60 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4324	4324T	4324C
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
3	12	56	6	3				●	●	●
4	19	63	6	3				●	●	●
5	24	68	6	3				●	●	●
6	24	68	6	3				●	●	●
7	30	80	10	3				●	●	●
8	38	88	10	3				●	●	●
9	38	88	10	3				●	●	●
10	45	95	10	3				●	●	●
11	45	102	12	3				●	●	●
12	53	110	12	3				●	●	●
13	53	110	12	3				●	●	●
14	53	110	12	3				●	●	●
15	53	110	12	3				●	●	●
16	63	123	16	3				●	●	●
18	63	123	16	3				●	●	●
20	75	141	20	3				●	●	●
22	75	141	20	3				●	●	●
24	90	166	25	3				●	●	●
25	90	166	25	4				●	●	●

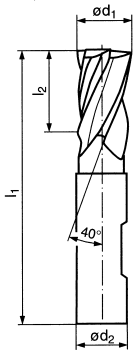
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lang, 3-Schneiden



Tipo AH, 20° elica, ≈ 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ AH, ≈ 20° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 844L
ASP-60

ASP-60

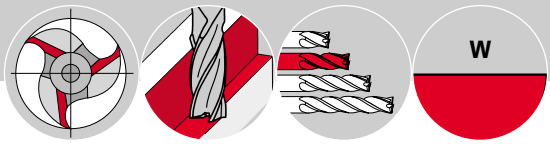
End mills, 3-fluted, long series
Type AH, helix angle ≈ 20° rake angle 16°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série longue
Type AH, angle d'hèlice ≈ 20°, angle de coupe 16°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										4337
Ød1 K_{10}	l_2	l_1	d_2	Z						
8	38	88	10	2						●
10	45	95	10	2						●
12	53	110	12	3						●
14	53	110	12	3						●
16	63	123	16	3						●
18	63	123	16	3						●
20	75	141	20	3						●
25	90	166	25	3						●
30	90	166	25	3						●
32	106	186	32	3						●

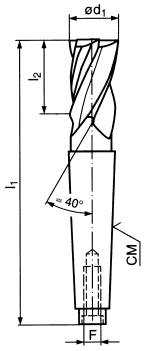
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali per leghe leggere, serie corta
Schaftfräser kurz, 3-Schneiden



Tipo W, ≈ 40° elica,
24° angolo di spoglia,
con codolo conico morse
secondo DIN 228/1

Typ W, ≈ 40° Drallwinkel,
24° Spanwinkel,
mit morsekegelshaft nach
DIN 228/1



DIN 845K
HSS-Co5

HSS-Co5
HSS-Co5 **TiN**
HSS-Co5 **TiCN**

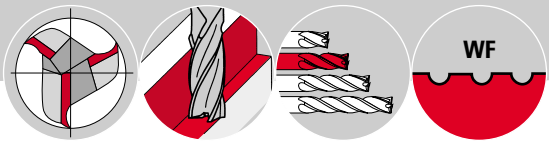
End mills, 3-fluted, short series
Type W, helix angle ≈ 40° rake angle 24°, with morse taper shank acc. DIN 228/1

Fraises deux tailles, 3 dents, série courte
Type W, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cône morse DIN 228/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4308	4308T	4308C
Ød1 K_{10}	l_2	l_1	CM	F	Z						
10	22	92	1	M 6	3				●	●	●
11	22	92	1	M 6	3				●	●	●
12	26	96	1	M 6	3				●	●	●
13	26	96	1	M 6	3				●	●	●
14	26	111	2	M 10	3				●	●	●
15	26	111	2	M 10	3				●	●	●
16	32	117	2	M 10	3				●	●	●
17	32	117	2	M 10	3				●	●	●
18	32	117	2	M 10	3				●	●	●
19	32	117	2	M 10	3				●	●	●
20	38	123	2	M 10	3				●	●	●
21	38	123	2	M 10	3				●	●	●
22	38	123	2	M 10	3				●	●	●
23	38	123	2	M 10	3				●	●	●
24	45	147	3	M 12	3				●	●	●
25	45	147	3	M 12	4				●	●	●
26	45	147	3	M 12	4				●	●	●
27	45	147	3	M 12	4				●	●	●
28	45	147	3	M 12	4				●	●	●
29	45	147	3	M 12	4				●	●	●
30	45	147	3	M 12	4				●	●	●
32*	53	201	4	M 16	4				●	●	●
34*	53	201	4	M 16	4				●	●	●
35*	53	201	4	M 16	4				●	●	●
36*	53	201	4	M 16	4				●	●	●
38*	63	211	4	M 16	4				●	●	●
40*	63	211	4	M 16	4				●	●	●
46*	63	211	4	M 16	5				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali per leghe leggere, serie corta
Schaftfräser kurz, 3-Schneiden

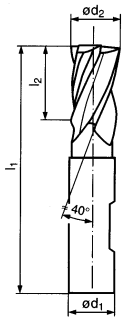


Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ WF, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, 3-fluted, short series
Type WF, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série courte
Type WF, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



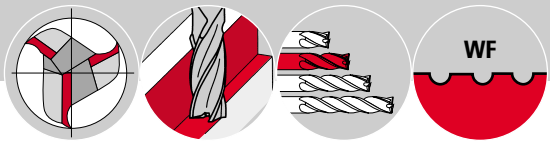
DIN 844K
HSS-Co5

HSS-Co5
HSS-Co5 TiN
HSS-Co5 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								5300	5300T	5300C
Ød1 K_{10}	l_2	l_1	Ød$_2$	Z						
6	13	57	6	3				●	●	●
8	19	69	10	3				●	●	●
10	22	72	10	3				●	●	●
12	26	83	12	3				●	●	●
14	26	83	12	3				●	●	●
16	32	92	16	3				●	●	●
18	32	92	16	3				●	●	●
20	38	104	20	3				●	●	●
25	45	121	25	3				●	●	●
28	45	121	25	3				■	■	■
30	45	121	25	3				■		
32	53	133	32	3				■	■	■
36	53	133	32	3				■	■	■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali per leghe leggere, serie corta
Schaftfräser kurz, 3-Schneiden

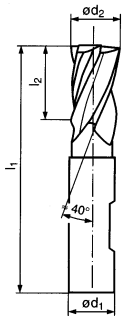


Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ WF, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, 3-fluted, short series
Type WF, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série courte
Type WF, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



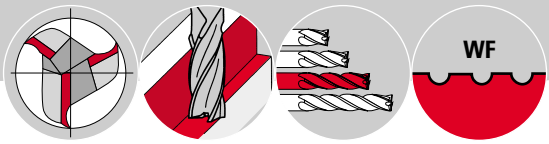
DIN 844K
ASP-60

ASP-60
ASP-60 **TiN**
ASP-60 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**5320**	**5320T**	**5320C**
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	3				●	●	●
8	19	69	10	3				●	●	●
10	22	72	10	3				●	●	●
12	26	83	12	3				●	●	●
14	26	83	12	3				●	●	●
16	32	92	16	3				●	●	●
18	32	92	16	3				●	●	●
20	38	101	20	3				●	●	●
25	45	121	25	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali per leghe leggere, serie lunga
Schaftfräser lang, 3-Schneiden

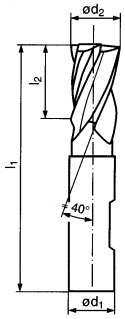


Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ WF, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, 3-fluted, long series
Type WF, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série longue
Type WF, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1



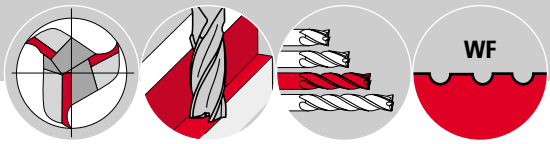
DIN 844L
HSS-Co5

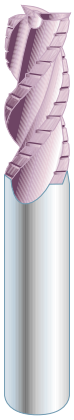
HSS-Co5
HSS-Co5 **TiN**
HSS-Co5 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**5304**	**5304T**	**5304C**
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
8	38	88	10	3				●	●	●
10	45	95	10	3				●	●	●
12	53	110	12	3				●	●	●
14	53	110	12	3				●	●	●
16	63	123	16	3				●	●	●
18	63	123	16	3				●	●	●
20	75	141	20	3				●	●	●
25	90	166	25	4				●	●	●
28	90	166	25	4				■	■	■
30	90	166	25	4					■	■
32	106	186	32	4						■
36	106	186	32	4				■	■	■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

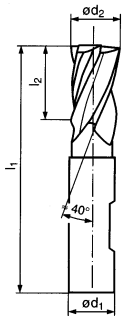
Frese frontali per leghe leggere, serie lunga
Schaftfräser lang, 3-Schneiden





Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ WF, ≈ 40° Drallwinkel, 24° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 844L
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

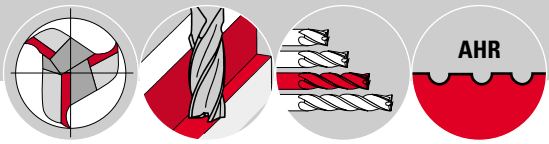
End mills, 3-fluted, long series
Type WF, helix angle ≈ 40° rake angle 24°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série longue
Type WF, angle d'hèlice ≈ 40°, angle de coupe 24°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								5324	5324T	5324C
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
8	38	88	10	3				●	●	●
10	45	95	10	3				●	●	●
12	53	110	12	3				●	●	●
14	53	110	12	3				●	●	●
16	63	123	16	3				●	●	●
18	63	123	16	3				●	●	●
20	75	141	20	3				●	●	●
25	90	166	25	4				●	●	●

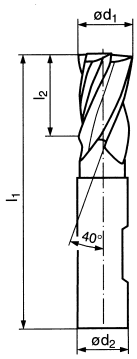
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lang, 3-Schneiden



Tipo AHR, 20° elica, ≈ 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ AHR, ≈ 20° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 844L
ASP-60

ASP-60

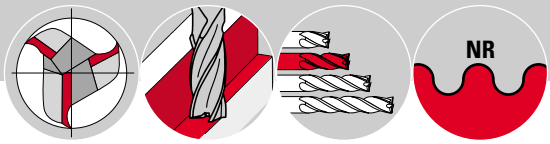
End mills, 3-fluted, long series
Type AHR, helix angle ≈ 20° rake angle 16°, with straight shank acc. DIN 1835/1

Fraises deux tailles, 3 dents, série longue
Type AHR, angle d'hèlice ≈ 20°, angle de coupe 16°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**7302**
Ød1 K_{10}	l_2	l_1	d_2	Z					
8	38	88	10	2					●
10	45	95	10	2					●
12	53	110	12	3					●
14	53	110	12	3					●
16	63	123	16	3					●
18	63	123	16	3					●
20	75	141	20	3					●
25	90	166	25	3					●
30	90	166	25	3					●
32	106	186	32	3					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali per leghe leggere, serie corta
Schaftfräser kurz, 3-Schneiden

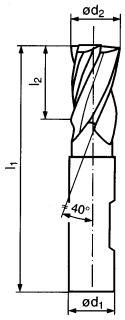


Tipo NR, ≈ 30° elica, 11° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ NR, ≈ 30° Drallwinkel, 11° Spanwinkle, mit Zylindershaft nach DIN 1835A/B

End mills, 3-fluted, short series
Type NR, helix angle ≈ 30° rake angle 11°, with straight shank acc. DIN 1835A/B

Fraises 3 dents, série courte
Type NR, angle d'hèlice ≈ 30°, angle de coupe 11°, avec queue cylindrique selon DIN 1835A/B



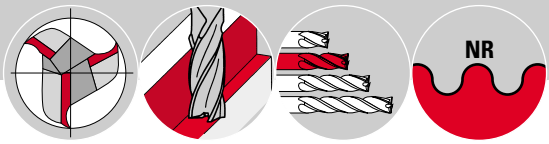
DIN 844K
ASP-60

ASP-60
ASP-60 **TiCN**
ASP-60 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7300	7300C	7300F
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	3				●	●	●
8	19	69	10	3				●	●	●
10	22	72	10	3				●	●	●
12	26	83	12	3				●	●	●
14	26	83	12	3				●	●	●
16	32	92	16	3				●	●	●
18	32	92	16	3				●	●	●
20	38	104	20	3				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali per leghe leggere, serie corta
Schaftfräser kurz, 3-Schneiden

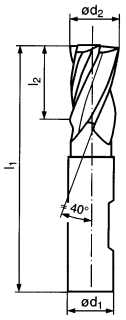


Tipo NR, ≈ 30° elica, 11° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ NR, ≈ 30° Drallwinkel, 11° Spanwinkle, mit Zylindershaft nach DIN 1835A/B

End mills, 3-fluted, short series
Type NR, helix angle ≈ 30° rake angle 11°, with straight shank acc. DIN 1835A/B

Fraises 3 dents, série courte
Type NR, angle d'hèlice ≈ 30°, angle de coupe 11°, avec queue cylindrique selon DIN 1835A/B



DIN 844K
ASP-60

- ASP-60
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7301	7301C	7301F
		New								
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	3				●	●	●
8	19	69	10	3				●	●	●
10	22	72	10	3				●	●	●
12	26	83	12	3				●	●	●
14	26	83	12	3				●	●	●
16	32	92	16	3				●	●	●
18	32	92	16	3				●	●	●
20	38	104	20	3				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Call Center

È possibile ordinare i prodotti ILLI-CO direttamente dal posto di lavoro via fax o telefono.

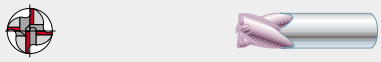
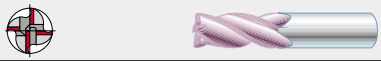
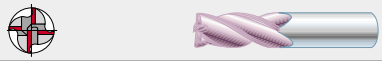
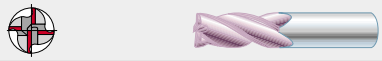
- **Telefono**
  Chiamando al numero **02.9189314** l'operatore inserirà in tempo reale la richiesta del cliente nella lista degli ordini in uscita.

- **Fax**
  Per attivare la stessa procedura basta inviare un fax in carta intestata contenente la descrizione della merce al numero **02.99041403**.
  L'ordine sarà inserito nella lista nel più breve tempo possibile.

Frese frontali a 4 e più taglienti, per finitura

Schaftfräser mit 4 und mehr Schneiden

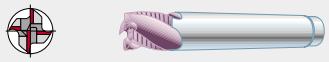
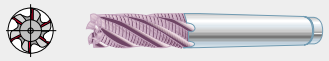
Finishing end mills with 4 and more flutes
Fraises 2 tailles de finition avec 4 ou plus de dents

DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®					Pag.
IN	N		HSS-Co8	●	●		●				42
844K	N		HSS-Co8	●	●	●	●	●			43
844K	HS		HSS-Co8		●	●	●				45
844K	HS		ASP-60		●	●	●				46
844K	NJC		HSS-Co8		●	●	●	●			47
844K	N		HSS-Co8	●	●	●	●				48
844K	N		ASP-60		●	●	●				49
844L	N		HSS-Co8	●	●	●	●				50
844K New	W		HSS-Co8		●	●	●		●		51
844K New	VA		HSS-Co8		●	●	●		●		52
844K New	W		ASP-60		●	●	●		●		53
844L New	VA		HSS-Co8		●	●	●		●		54
844K New	VA		ASP-60		●	●	●		●		55
844L New	VA		ASP-60		●	●	●		●		56
844L	HS		HSS-Co8		●		●				58
844L	HS		ASP-60		●		●				59
IN	N		HSS-Co8	●	●		●				60
845K	N		HSS-Co5							●	62
845K	HS		HSS-Co8	●	●					●	63
845L	N		HSS-Co5							●	64

IN = Illico Norm

Frese frontali a 4 e più taglienti, per semifinitura
Halbfeinschlichtfräser mit 4 und mehr Schneiden

Semifinishing end mills with 4 and more flutes
Fraises 2 tailles de semi-finition avec 4 et plus de dents

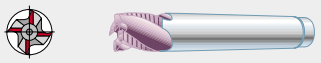
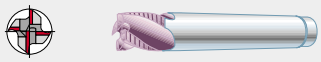
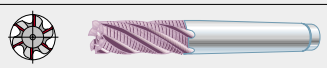
DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®					Pag.
844K	NF		HSS-Co8	●	●	●	●				65
844K	HFS		HSS-Co8		●		●				66
844K	HFS		ASP-60		●		●				67
844L	NF		HSS-Co8	●	●		●				68
844L	HFS		HSS-Co8		●		●				70
844L	HFS		ASP-60		●		●				71
844K	HW		ASP-60				●				72
844L	HW		ASP-60				●				73
845K	NF		HSS-Co5							●	74
845K	HFS		HSS-Co8	●	●					●	75
845L	NF		HSS-Co5							●	76

IN = Illico Norm

Frese frontali a 4 e più taglienti, per sgrossatura

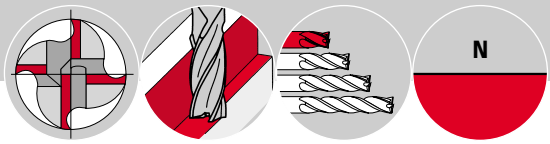
Schrupp-Schaftfräser mit 4 und mehr Schneiden

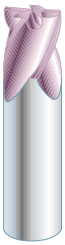
Roughing end mills with 4 and more flutes
Fraises 2 tailles d'ébauche avec 4 et plus de dents

DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®					Pag.
IN	HRS		HSS-Co8		●	●	●				78
IN	HRS		ASP-60		●	●	●				79
844K	NR		HSS-Co8	●	●	●	●	●			80
844K	NR		ASP-60	●	●	●	●				81
844K	HRS		HSS-Co8		●	●	●				82
844K	HRS		ASP-60		●	●	●				83
844K	HJC		HSS-Co8				●		●		84
844K	HJC		HSS-Co8		●	●	●		●		85
844L	NR		HSS-Co8	●	●	●	●	●			86
844L	NR		ASP-60	●	●		●				87
844L	HRS		HSS-Co8		●	●	●				88
844L	HRS		ASP-30		●	●	●				89
844L	HRS		ASP-60		●	●	●		●		90
845K	NR		HSS-Co5							●	91
845K	HRS		HSS-Co8	●	●					●	92
845L	NR		HSS-Co5							●	93

IN = Illico Norm

Frese frontali serie extra corta
Schaftfräser extra kurze Ausfürung



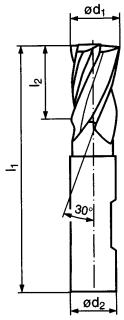


Tipo N, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 40° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, extra short series
Type N, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série extra courte
Type N, angle d'hèlice ≈ 40°, angle de coupe 16°, avec queue cône Morse DIN 1835/1



ILLICO NORM
(similare a DIN 327)

HSS-Co8

HSS-Co8

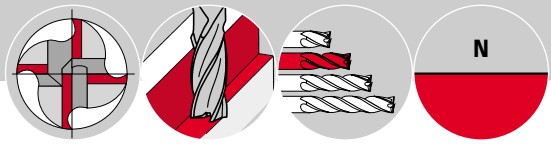
HSS-Co8 **TiN**

HSS-Co8 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4400	4400T	4400C
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
6	8	52	6	4				●	●	●
8	11	61	10	4				●	●	●
10	13	63	10	4				●	●	●
12	16	73	12	4				●	●	●
14	16	73	12	4				●	●	●
16	19	79	16	4				●	●	●
18	19	79	16	4				●	●	●
20	22	88	20	4				●	●	●
22	22	88	20	5						■
25	26	102	25	5				■	■	■
28	26	102	25	5						■
32	32	112	32	6						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali serie corta
Schaftfräser kurze Ausführung

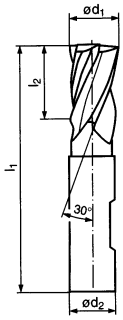


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



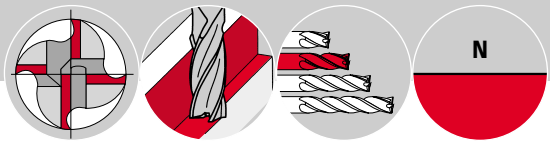
DIN 844K
HSS-Co8

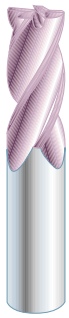
- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSSCo8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						4404	4406	4404T	4404C	4404F
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
2	7	51	6	4		●	●	●	●	●
2,5	8	52	6	4		●	●	●	●	●
3	8	52	6	4		●	●	●	●	●
3,5	10	54	6	4		●	●	●	●	●
4	11	55	6	4		●	●	●	●	●
4,5	11	55	6	4		●	●	●	●	●
5	13	57	6	4		●	●	●	●	●
5,5	13	57	6	4		●	●	●	●	●
6	13	57	6	4		●	●	●	●	●
6,5	16	66	10	4		●	●	●	●	●
7	16	66	10	4		●	●	●	●	●
7,5	16	66	10	4		●	●	●	●	●
8	19	69	10	4		●	●	●	●	●
8,5	19	69	10	4		●	●	●	●	●
9	19	69	10	4		●	●	●	●	●
9,5	19	69	10	4		●	●	●	●	●
10	22	72	10	4		●	●	●	●	●
10,5	22	79	12	4		●	●	●	●	●
11	22	79	12	4		●	●	●	●	●
11,5	22	79	12	4		●	●	●	●	●
12	26	83	12	4		●	●	●	●	●
13	26	83	12	4		●	●	●	●	●
14	26	83	12	4		●	●	●	●	●
15	26	83	12	4		●	●	●	●	●
16	32	92	16	4		●	●	●	●	●
17	32	92	16	4		●	●	●	●	●
18	32	92	16	4		●	●	●	●	●
19	32	92	16	4		●	●	●	●	●
20	38	104	20	4		●	●	●	●	●
21*	38	104	20	5		●	●	●	●	●
22*	38	104	20	5		●	●	●	●	●
23*	38	104	20	5		●	●	●	●	●
24*	45	121	25	5		●	●	●	●	●
25*	45	121	25	5		●	●	●	●	●
26*	45	121	25	5		●	●	●	●	●
28	45	121	25	5		●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali serie corta
Schaftfräser kurze Ausführung



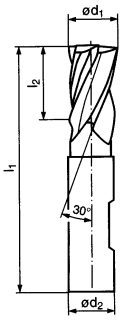


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



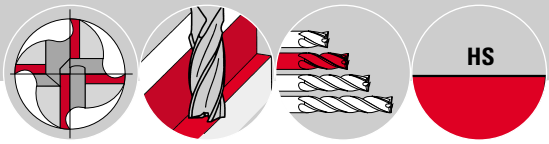
DIN 844K
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**
HSSCo8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						4404	4406	4404T	4404C	4404F
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
30*	45	121	25	5		●	●	●	●	●
32*	53	133	32	6		●	●	●	●	●
34*	53	133	32	6		■	■			
35*	53	133	32	6		■	●	■		
36*	53	133	32	6		●	●	●	●	●
40▲*	63	143	32	6						●
40*	63	155	40	6		●		●	●	●
45*	63	155	40	8		●		●	●	●
50▲*	63	143	32	8			■			
50*	75	177	50	8		●		●	●	

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese frontali, serie corta
Schaftfräser kurze Ausführung

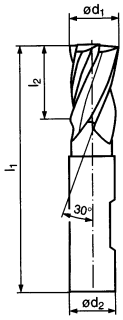


Tipo HS ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Type HS, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HS, helix angle ≈ 30° rake angle 6°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HS, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1



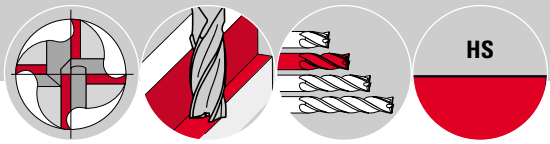
DIN 844K
HSS-Co8

HSS-Co8
HSS-Co8 TiCN
HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4408	4408C	4408F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
2	7	51	6	4				●	●	●
2,5	8	52	6	4				●	●	●
3	8	52	6	4				●	●	●
3,5	10	54	6	4				●	●	●
4	11	55	6	4				●	●	●
4,5	11	55	6	4				●	●	●
5	13	57	6	4				●	●	●
6	13	57	6	4				●	●	●
7	16	66	10	4				●	●	●
8	19	69	10	4				●	●	●
9	19	69	10	4				●	●	●
10	22	72	10	4				●	●	●
11	22	79	12	4				●	●	●
12	26	83	12	4				●	●	●
13	26	83	12	4				●	●	●
14	26	83	12	4				●	●	●
15	26	83	12	4				●	●	●
16	32	92	16	4				●	●	●
17	32	92	16	4				●	●	●
18	32	92	16	4				●	●	●
19	32	92	16	4				●	●	●
20	38	104	20	4				●	●	●
22	38	104	20	4				●	●	●
24	45	121	25	5				●	●	●
25	45	121	25	5				●	●	●
28	45	121	25	5				●	●	●
30	45	121	25	5				■	■	

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie corta
Schaftfräser kurze Ausführung

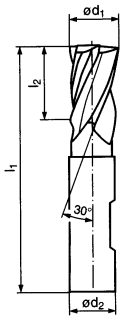


Tipo HS, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Type HS, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HS, helix angle ≈ 30° rake angle 6°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HS, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1



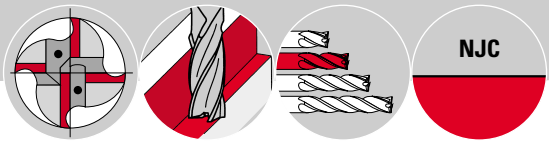
DIN 844K
ASP-60

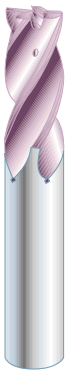
ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4458	4458C	4458F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
2	7	51	6	4				●	●	●
2,5	8	52	6	4				●	●	●
3	8	52	6	4				●	●	●
3,5	10	54	6	4				●	●	●
4	11	55	6	4				●	●	●
4,5	11	57	6	4				●	●	●
5	13	57	6	4				●	●	●
6	13	57	6	4				●	●	●
7	16	66	10	4				●	●	●
8	19	69	10	4				●	●	●
9	19	69	10	4				●	●	●
10	22	72	10	4				●	●	●
11	22	79	12	4				●	●	●
12	26	83	12	4				●	●	●
13	26	83	12	4					■	
14	26	83	12	4				●	●	●
15	26	83	12	4				●	●	●
16	32	92	16	4				●	●	●
17	32	92	16	4				■	■	■
18	32	92	16	4				●	●	●
19	32	92	16	4				■		■
20	38	104	20	4				●	●	●
22	38	104	20	5				●	●	●
24	45	121	25	5				■	■	■
25	45	121	25	5				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

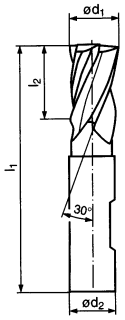
Frese frontali, jet-cut, serie corta con fori di lubrificazione
Schaftfräser mit innerer Kühlmittelzufuhr kurz





Tipo NJC, ≈ 30°elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NJC ≈ 30° Drallwinkel, 10° Spanwinkel mit Zylindershaft nach DIN 1835/1



DIN 844K
HSS-Co8

- HSS-Co8
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

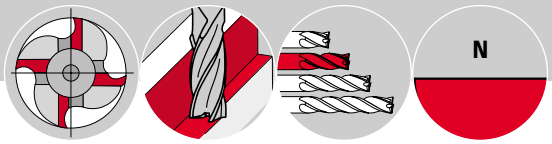
End mills, with oil holes, short series
Type NJC, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

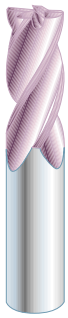
Fraises deux tailles avec trous l'huile, série courte
Type NJC, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						4412	4414	4412C	4414C	4412F
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
16	32	92	16	4		●	●	●	●	●
20	38	104	20	4		●	●	●	●	●
25	45	121	25	5		●	●	●	●	●
32	53	133	32	6		●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali serie corta
Schaftfräser kurze Ausfürung



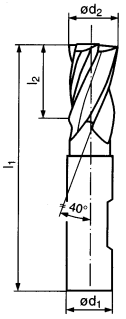


Tipo N, ≈ 40°elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N ≈ 40° Drallwinkel, 16° Spanwinkel mit Zylindershaft nach DIN 1835/1

End mills, with oil holes, short series
Type N, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835/1

Fraises deux tailles série courte,
Type N, angle d'hèlice ≈ 40°, angle de coupe 16° avec queue cylindrique selon DIN 1835/1



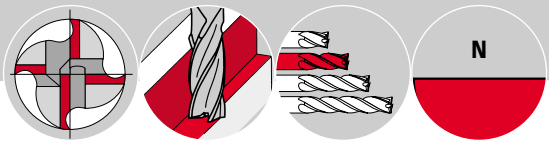
DIN 844K
HSS-Co8

- **HSS-Co8**
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							4416	4416T	4416C	4416F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
3	8	52	6	4			■			
4	11	55	6	4			■			
5	13	57	6	4			■			
6	13	57	6	4			■	■	■	■
7	16	66	10	4			■			
8	19	69	10	4			■	■	■	■
9	19	69	10	4			■			
10	22	72	10	4			■	■	■	■
12	26	83	12	4			■	■	■	■
14	26	83	12	4			■			
15	26	83	12	4			■			
16	32	92	16	4			■	■	■	■
18	32	92	16	4			■			
20	38	104	20	4			■	■		
22	38	104	20	4			■			
25	45	121	25	5			■	■	■	

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali a serie corta
Schaftfräser kurze Ausführung

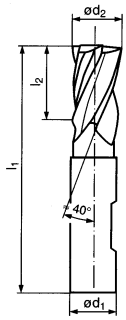


Tipo N, ≈ 40°elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N ≈ 40° Drallwinkel, 16° Spanwinkel mit Zylindershaft nach DIN 1835/1

End mills, short series
Type N, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type N, angle d'hèlice ≈ 40°, angle de coupe 16° avec queue cylindrique selon DIN 1835/1



DIN 844K
ASP-60

ASP-60

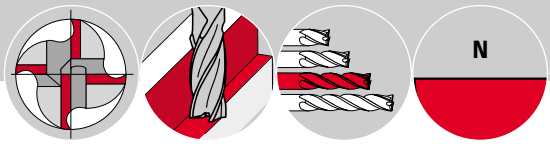
ASP-60 TiCN

ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4466	4466C	4466F
Ød1 k_{10}	l_2	l_1	Ød$_2$	Z						
3	8	52	6	4				■		
5	13	57	6	4				■		
6	13	57	6	4					■	■
7	16	66	10	4				■		
8	19	69	10	4				■	■	■
9	19	69	10	4				■		
10	22	72	10	4					■	■
12	26	83	12	4					■	■
15	26	83	12	4				■		
16	32	92	16	4				■	■	
18	32	92	16	4				■		
20	38	104	20	4						■
22	38	104	20	4				■		
25	45	121	25	5				■	■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

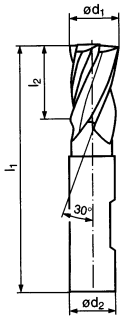


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type N, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type N, angle d'kèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



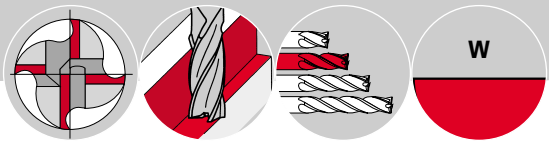
DIN 844L
HSS-Co8

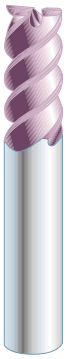
- HSS-Co8
- HSS-Co8 TiN
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							4420	4420T	4420C	4420F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
3	12	56	6	4			●	●	●	●
3,5	15	59	6	4			●	●	●	●
4	19	63	6	4			●	●	●	●
4,5	19	63	6	4			●	●	●	●
5	24	68	6	4			●	●	●	●
6	24	68	6	4			●	●	●	●
7	30	80	10	4			●	●	●	●
8	38	88	10	4			●	●	●	●
9	38	88	10	4			●	●	●	●
10	45	95	10	4			●	●	●	●
11	45	102	12	4			●	●	●	●
12	53	110	12	4			●	●	●	●
13*	53	110	12	4			●	●	●	●
14*	53	110	12	4			●	●	●	●
15*	53	110	12	4			●	●	●	●
16*	63	123	16	4			●	●	●	●
17*	63	123	16	4			●	●	●	●
18*	63	123	16	4			●	●	●	●
20*	75	141	20	4			●	●	●	●
22*	75	141	20	5			●	●	●	●
24*	90	166	25	5			●	●	●	●
25*	90	166	25	5			●	●	●	●
26*	90	166	25	5			●	●	●	●
28*	90	166	25	5			●	●	●	●
30*	90	166	25	5			●	●	●	●
32*	106	186	32	6			●	●	●	●
34*	106	186	32	6			■			
35*	106	186	32	6				■		■
36*	106	186	32	6			●	●	●	●
40*	125	217	40	6			●	●	●	●
45*	125	217	40	8			●	●	●	●
50*	150	252	50	8			●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie corta
Schaftfräser kurz



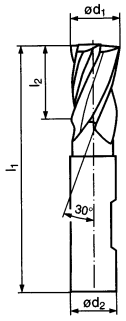


Tipo W, ≈ 50° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ W, ≈ 50° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills, short series
Type W, helix angle ≈ 50° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles, série courte
Type W, angle d'hèlice ≈ 50°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



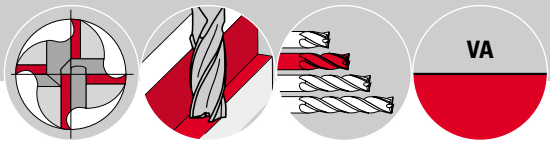
DIN 844K
HSS-Co8

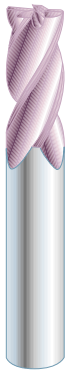
- HSS-Co8
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					4333	4333C	4333F	4334	4334C	4334F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	3	●	●	●	●	●	●
8	19	69	10	3	●	●	●	●	●	●
10	22	72	10	3	●	●	●	●	●	●
12	26	83	12	4	●	●	●	●	●	●
16	32	92	16	4	●	●	●	●	●	●
20	38	104	20	4	●	●	●	●	●	●
25	45	121	25	4	●	●	●	●	●	●
32	53	133	32	6	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie corta
Schaftfräser kurz



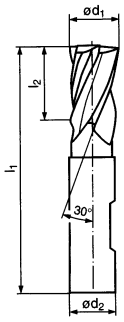


Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ VA, ≈ 40° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills, short series
Type VA, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles, série courte
Type VA, angle d'hèlice ≈ 40°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



DIN 844K
HSS-Co8

HSS-Co8

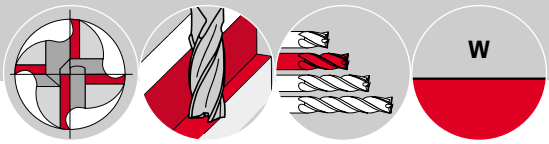
HSS-Co8 **TiCN**

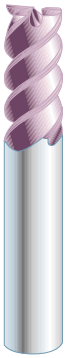
HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					4401	4401C	4401F	4403	4403C	4403F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
2	7	51	6	4	●	●	●	●	●	●
3	8	52	6	4	●	●	●	●	●	●
4	11	55	6	4	●	●	●	●	●	●
5	13	57	6	4	●	●	●	●	●	●
6	13	57	6	4	●	●	●	●	●	●
7	16	66	10	4	●	●	●	●	●	●
8	19	69	10	4	●	●	●	●	●	●
10	22	72	10	4	●	●	●	●	●	●
12	26	83	12	4	●	●	●	●	●	●
14	26	83	12	4	●	●	●	●	●	●
16	32	92	16	4	●	●	●	●	●	●
18	32	92	16	4	●	●	●	●	●	●
20	38	104	20	4	●	●	●	●	●	●
22	38	104	20	6	●	●	●	●	●	●
24	45	121	25	6	●	●	●	●	●	●
25	45	121	25	6	●	●	●	●	●	●
28	45	121	25	6	●	●	●	●	●	●
30	45	121	25	6	●	●	●	●	●	●
32	53	133	32	6	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie corta
Schaftfräser kurz



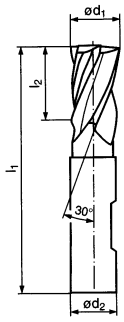


Tipo W, ≈ 50° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ W, ≈ 50° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills, short series
Type W, helix angle ≈ 50° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles, série courte
Type W, angle d'hèlice ≈ 50°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



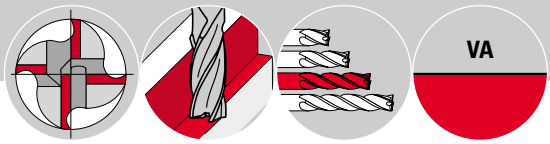
DIN 844K
ASP-60

- ASP-60
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					4335	4335C	4335F	4336	4336C	4336F
Ød1 k_{10}	l_2	l_1	Ød$_2$	Z						
6	13	57	6	3	●	●	●	●	●	●
8	19	69	10	3	●	●	●	●	●	●
10	22	72	10	3	●	●	●	●	●	●
12	26	83	12	4	●	●	●	●	●	●
16	32	92	16	4	●	●	●	●	●	●
20	38	104	20	4	●	●	●	●	●	●
25	45	121	25	4	●	●	●	●	●	●
30	45	121	25	6	●	●	●	●	●	●
32	53	133	32	6	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lang

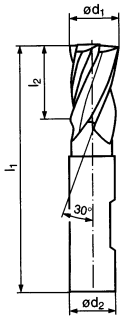


Tipo VA ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ VA, ≈ 40° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills, long series
Type VA, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles, série longue
Type VA, angle d'hèlice ≈ 40°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



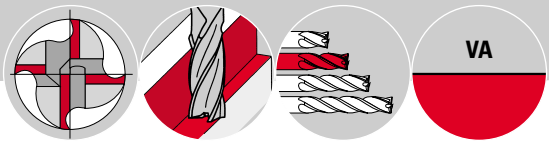
DIN 844L
HSS-Co8

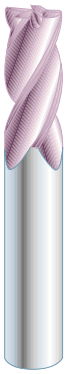
HSS-Co8
HSS-Co8 TiCN
HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					4421	4421C	4421F	4423	4423C	4423F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
3	12	56	6	4	●	●	●	●	●	●
4	19	63	6	4	●	●	●	●	●	●
5	24	68	6	4	●	●	●	●	●	●
6	24	68	6	4	●	●	●	●	●	●
7	30	80	10	4	●	●	●	●	●	●
8	38	88	10	4	●	●	●	●	●	●
10	45	95	10	4	●	●	●	●	●	●
12	53	110	12	4	●	●	●	●	●	●
14	53	110	12	4	●	●	●	●	●	●
15	53	110	12	4	●	●	●	●	●	●
16	63	123	16	4	●	●	●	●	●	●
18	63	123	16	4	●	●	●	●	●	●
20	75	141	20	4	●	●	●	●	●	●
22	75	141	20	4	●	●	●	●	●	●
24	90	166	25	6	●	●	●	●	●	●
25	90	166	25	6	●	●	●	●	●	●
28	90	166	25	6	●	●	●	●	●	●
30	90	166	25	6	●	●	●	●	●	●
32	106	186	32	6	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie corta
Schaftfräser kurz



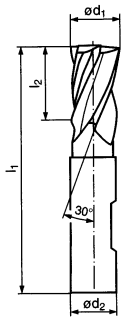


Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ VA, ≈ 40° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills, short series
Type VA, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles, série courte
Type VA, angle d'hèlice ≈ 40°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



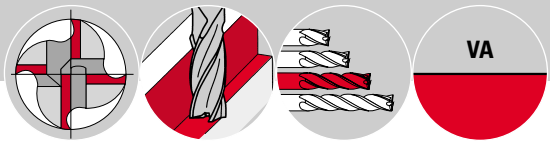
DIN 844K
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					4405	4405C	4405F	4407	4407C	4407F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
4	11	55	6	4	●	●	●	●	●	●
5	13	57	6	4	●	●	●	●	●	●
6	13	57	6	4	●	●	●	●	●	●
7	16	66	10	4	●	●	●	●	●	●
8	19	69	10	4	●	●	●	●	●	●
10	22	72	10	4	●	●	●	●	●	●
12	26	83	12	4	●	●	●	●	●	●
14	26	83	12	4	●	●	●	●	●	●
16	32	92	16	4	●	●	●	●	●	●
18	32	92	16	4	●	●	●	●	●	●
20	38	104	20	4	●	●	●	●	●	●
22	38	104	20	4	●	●	●	●	●	●
25	45	121	25	6	●	●	●	●	●	●
28	45	121	25	6	●	●	●	●	●	●
30	45	121	25	6	●	●	●	●	●	●
32	53	133	32	6	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lang

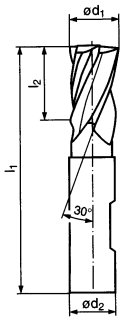


Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Type VA, ≈ 40° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills with oil holes, short series
Type VA, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles série longue
Type VA, angle d'hèlice ≈ 40°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



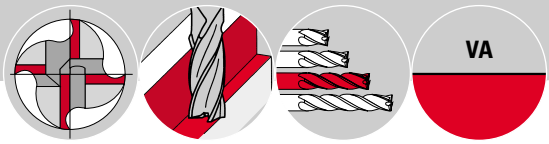
DIN 844L
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4425	4425C	4425F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
4	19	63	6	4				●	●	●
5	24	68	6	4				●	●	●
6	24	68	6	4				●	●	●
7	30	80	10	4				●	●	●
8	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
12	53	110	12	4				●	●	●
14	53	110	12	4				●	●	●
16	63	123	16	4				●	●	●
18	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
22	75	141	20	4				●	●	●
25	90	166	25	6				●	●	●
28	90	166	25	6				●	●	●
30	90	166	25	6				●	●	●
32	106	186	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lang

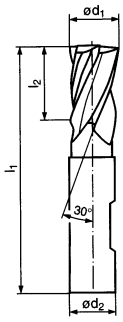


Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Type VA, ≈ 40° Drallwinkel, 16° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills with oil holes, short series
Type VA, helix angle ≈ 40° rake angle 16°, with straight shank acc. DIN 1835A/B

Fraises deux tailles série longue
Type VA, angle d'hèlice ≈ 40°, angle de coupe 16°, avec queue cylindrique selon DIN 1835A/B



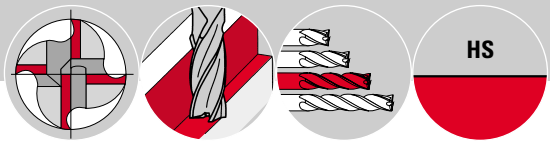
DIN 844L
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4427	4427C	4427F
Ød1 k_{10}	l_2	l_1	Ød$_2$	Z						
4	19	63	6	4				●	●	●
5	24	68	6	4				●	●	●
6	24	68	6	4				●	●	●
7	30	80	10	4				●	●	●
8	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
12	53	110	12	4				●	●	●
14	53	110	12	4				●	●	●
16	63	123	16	4				●	●	●
18	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
22	75	141	20	4				●	●	●
25	90	166	25	6				●	●	●
28	90	166	25	6				●	●	●
30	90	166	25	6				●	●	●
32	106	186	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

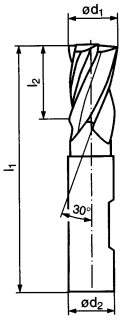


Tipo HS, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HS, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills long series
Type HS, helix angle ≈ 30° rake angle 6°, with straight shank acc. DIN 1835/1

Fraises deux tailles série longue
Type HS, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1



DIN 844L
HSS-Co8

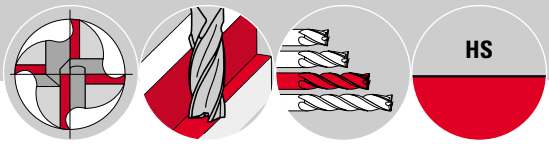
HSS-Co8

HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4424	4424C
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z					
4	19	63	6	4				●	●
5	24	68	6	4				●	●
6	24	68	6	4				●	●
8	38	88	10	4				●	●
10	45	95	10	4				●	●
12	53	110	12	4				●	●
14	53	110	12	4				●	●
16	63	123	16	4				●	●
18	63	123	16	4				●	●
20	75	141	20	4				●	●
22	75	141	20	5				●	●
25	90	166	25	5				●	●
26	90	166	25	5				■	■
28	90	166	25	5				●	●
30	90	166	25	5				■	■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

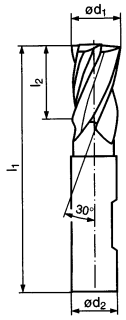


Tipo HS, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Type HS, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HS, helix angle ≈ 30° rake angle 6°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HS, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1



DIN 844L
ASP-60

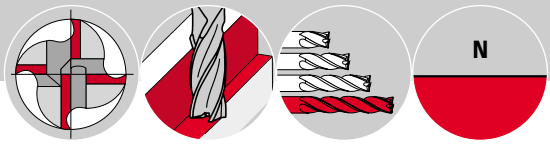
ASP-60

ASP-60 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**4474**	**4474C**
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
4	19	63	6	4					●	●
5	24	68	6	4					●	●
6	24	68	6	4					●	●
8	38	88	10	4					●	●
10	45	95	10	4					●	●
12	53	110	12	4					●	●
14	53	110	12	4					●	●
16	63	123	16	4					●	●
18	63	123	16	4					●	●
20	75	141	20	4					●	●
22	75	141	20	5					●	●
25	90	166	25	5					●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie extra lunga
Schaftfräser extra lange

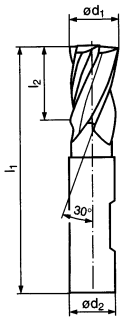


Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type N, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série extra longue
Type N, angle d 'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

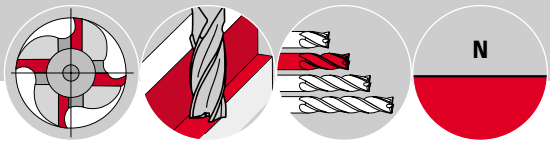
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**4428**	**4428T**	**4428C**
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
16	95	155	16	4				●	●	●
20	120	186	20	4				●	●	●
25	150	226	25	5				●	●	●
32	180	260	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Ordini & Consegna

La merce viene evasa quotidianamente e consegnata al cliente in qualunque punto d'Italia attraverso il mezzo di spedizione richiesto.
Al massimo entro le 24 ore successive gli utensili sono recapitati e pronti per l'uso.
La consegna avviene sia di mattina che di pomeriggio. Al momento dell'ordine Il cliente può in alternativa segnalare un corriere di sua fiducia oppure utilizzare un proprio vettore per il trasporto.

Frese frontali, serie corta
Schaftfräser kurze Ausführung

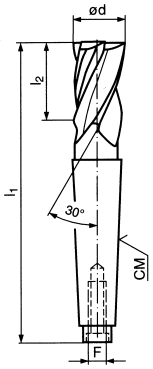


Tipo N, ≈ 30° elica,
12° angolo di spoglia,
con codolo conico Morse
DIN 228/1

Typ N, ≈ 30° Drallwinkel,
12° Spanwinkel,
mit Morsekegelschaft nach
DIN 228/1

End mills, short series
Type N, helix angle ≈ 30° rake angle 12°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cône Morse selon DIN 228/1



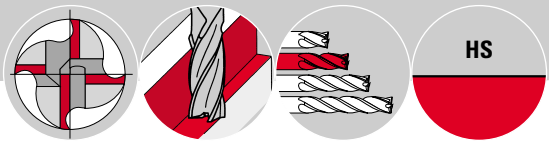
DIN 845K
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											4432
Ød1 K_{10}	l_2	l_1	CM	F	Z						
6▲	13	80	1	M 6	4						●
8▲	19	89	1	M 6	4						●
10	22	92	1	M 6	4						●
11	22	92	1	M 6	4						●
12	26	96	1	M 6	4						●
13	26	96	1	M 6	4						●
14	26	111	2	M 10	4						●
15	26	111	2	M 10	4						●
16	32	117	2	M 10	4						●
17	32	117	2	M 10	4						●
18	32	117	2	M 10	4						●
19	32	117	2	M 10	4						●
20	38	123	2	M 10	4						●
21	38	123	2	M 10	5						●
22	38	123	2	M 10	5						●
23	38	123	2	M 10	5						●
24	45	147	3	M 12	5						●
25	45	147	3	M 12	5						●
26	45	147	3	M 12	5						●
27	45	147	3	M 12	5						●
28	45	147	3	M 12	5						●
29	45	147	3	M 12	5						●
30	45	147	3	M 12	5						●
32*	53	201	4	M 16	6						●
34*	53	201	4	M 16	6						●
35*	53	201	4	M 16	6						●
36*	53	201	4	M 16	6						●
38*	63	211	4	M 16	6						●
40*	63	211	4	M 16	6						●
45*	63	211	4	M 16	8						●
50*	75	261	5	M 20	8						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie corta
Schaftfräser kurze Ausführung

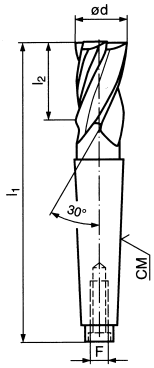


Tipo HS, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ HS, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Morsekegelshaft nach DIN 228/1

End mills, short series
Type HS, helix angle ≈ 30° rake angle 12°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série courte
Type HS, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cône Morse selon DIN 228/1



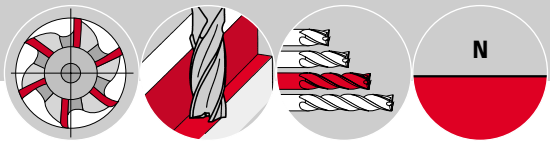
DIN 845K
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**4434**	**4434T**	**4434C**
Ød1 k_{10}	l_2	l_1	CM	F	Z						
12	26	96	1	M 6	4				●	●	●
16	32	117	2	M 10	4				●	●	●
20	38	123	2	M 10	4				●	●	●
25	45	147	3	M 12	5				●	●	●
28	45	147	3	M 12	5				●	●	●
32*	53	201	4	M 16	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie lunga
Schaftfräser lange Ausführung

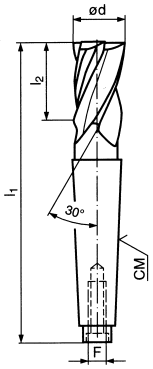


Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Morsekegelshaft nach DIN 228/1

End mills, long series
Type N, helix angle ≈ 30° rake angle 12°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série longue
Type N, angle ≈ 30°, angle de coupe 12°, avec queue cône Morse selon DIN 228/1



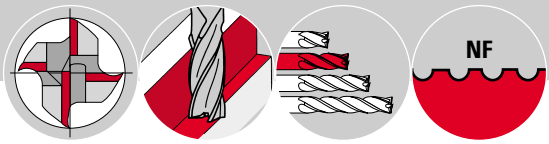
DIN 845L
HSS-Co5

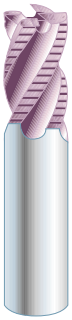
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											4436
Ød1 K_{10}	l_2	l_1	CM	F	Z						
10	45	115	1	M 6	4						●
12	53	123	1	M 10	4						●
14	53	138	2	M 10	4						●
15	53	138	2	M 10	4						●
16	63	148	2	M 10	4						●
18	63	148	2	M 10	4						●
20	75	160	2	M 10	4						●
22	75	160	2	M 12	5						●
25	90	192	3	M 12	5						●
28	90	192	3	M 12	5						●
30	90	192	3	M 12	5						●
32*	106	254	4	M 16	6						●
36*	106	254	4	M 16	6						●
40*	125	273	4	M 16	6						●
45*	125	273	4	M 16	8						●
50*	150	336	5	M 20	8						●
56	150	336	5	M 20	8						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie corta
Schaftfräser kurze Ausführung



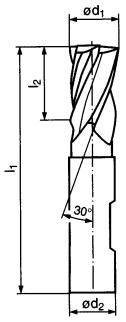


Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NF, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type NF, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type NF, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique selon DIN 1835/1



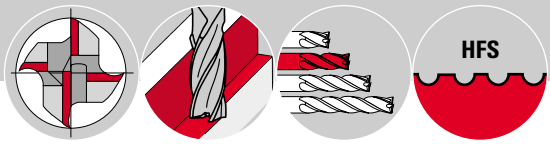
DIN 844K
HSS-Co8

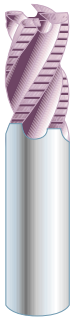
- HSS-Co8
- HSS-Co8 TiN
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							5400	5400T	5400C	5400F
Ød1 K_{10}	l_2	l_1	Ød$_2$	Z						
6	13	57	6	4			●	●	●	●
7	16	66	10	4			●	●	●	●
8	19	69	10	4			●	●	●	●
9	19	69	10	4			●	●	●	●
10	22	72	10	4			●	●	●	●
11	22	79	12	4			●	●	●	●
12	26	83	12	4			●	●	●	●
13	26	83	12	4			●	●	●	●
14	26	83	12	4			●	●	●	●
15	26	83	12	4			●	●	●	●
16	32	92	16	4			●	●	●	●
17	32	92	16	4						■
18	32	92	16	4			●	●	●	●
19	32	92	16	4			■	■	■	■
20	38	104	20	4			●	●	●	●
22*	38	104	20	4			●	●	●	●
24*	45	121	25	4			●	●	●	●
25*	45	121	25	4			●	●	●	●
26*	45	121	25	5			●	●	●	●
28*	45	121	25	5			●	●	●	●
30*	45	121	25	5			●	●	●	●
32*	53	133	32	6			●	●	●	●
34*	53	133	32	6			■			
35*	53	133	32	6			■	■		■
36*	53	133	32	6			■	■	■	■
40*	63	155	40	6			■		■	

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie corta
Schaftfräser kurze Ausführung



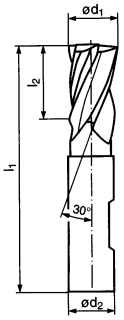


Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HFS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HFS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HFS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



DIN 844K
HSS-Co8

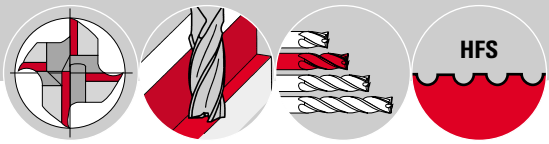
HSS-Co8

HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									5404	5404C
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	4					■	■
8	19	69	10	4					■	■
10	22	72	10	4					■	■
12	26	83	12	4					■	■
14	26	83	12	4					■	■
16	32	92	16	4					■	■
18	32	92	16	4					■	■
20	38	104	20	4					■	■
22	38	104	20	4					■	■
25	45	121	25	4					■	■
28	45	121	25	5					■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie corta
Schaftfräser kurze Ausführung

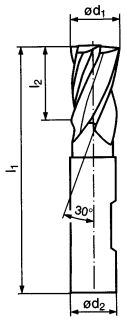


Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HFS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HFS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HFS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



DIN 844K
ASP-60

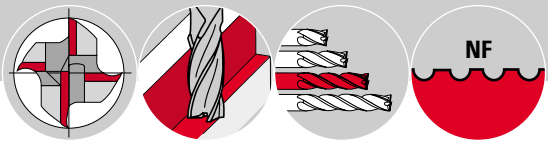
ASP-60

ASP-60 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								5434	5434C
Ød1 K_{12}	l_2	l_1	Ød$_2$	Z					
6	13	57	6	4				■	■
8	19	69	10	4				■	■
10	22	72	10	4				■	■
12	26	83	12	4				■	■
14	26	83	12	4				■	■
16	32	92	16	4				■	■
18	32	92	16	4				■	■
20	38	104	20	4				■	■
22	38	104	20	4				■	■
25	45	121	25	4				■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

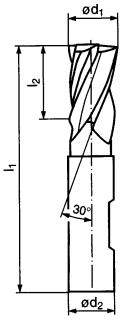


Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NF, ≈ 30° Drallwinkel, 12° Spanwinkel, mit zylindershaft nach DIN 1835/1

End mills, long series
Type NF, helix angle ≈ 30° rake angle 12°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type NF, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cylindrique Morse selon DIN 1835/1

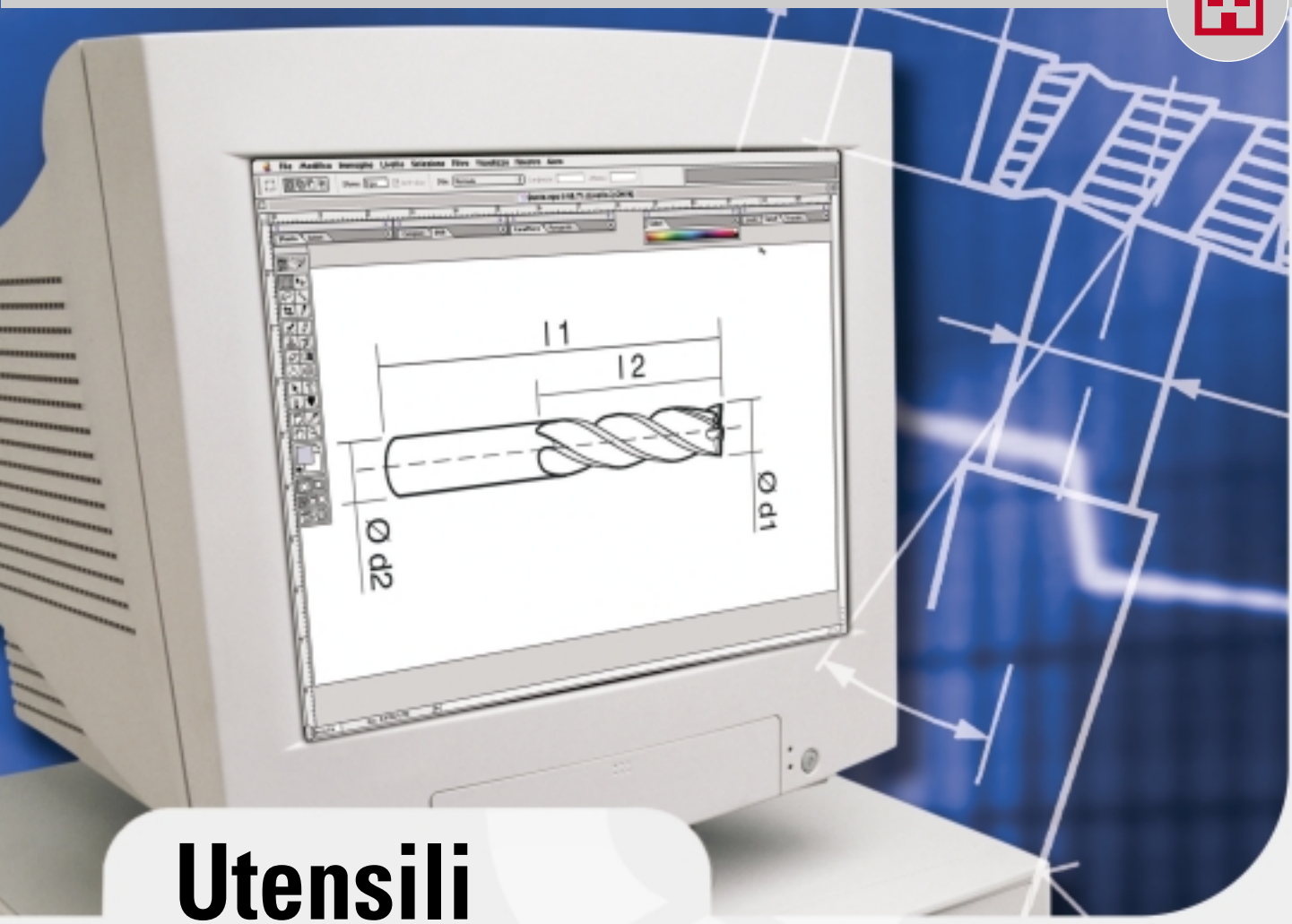


DIN 844L
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**5408**	**5408T**	**5408C**
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z						
6	24	68	6	4				●	●	●
8	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
11	45	102	12	4				●	●	●
12	53	110	12	4				●	●	●
13*	53	110	12	4				●	●	●
14*	53	110	12	4				●	●	●
15*	53	110	12	4				●	●	●
16*	63	123	16	4				●	●	●
18*	63	123	16	4				●	●	●
20*	75	141	20	4				●	●	●
22*	75	141	20	4				●	●	●
24*	90	166	25	4				●	●	●
25*	90	166	25	4				●	●	●
26*	90	166	25	5				●	●	●
28*	90	166	25	5				●	●	●
30*	90	166	25	5				●	●	●
32*	106	186	32	6				●	●	●
34*	106	186	32	6				■		
35*	106	186	32	6				■	■	■
36*	106	186	32	6				■	■	■
40*	125	217	40	6				■		

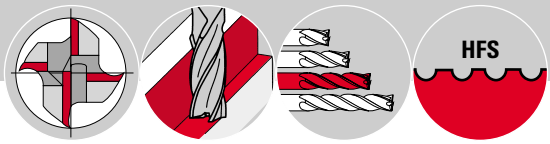
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



Utensili speciali

Presso la sede dell'Angelo Ghezzi Spa è stato creato l'Ufficio Richieste Utensili Speciali che offre un servizio di realizzazione di frese speciali non a catalogo.
Una volta vagliato il progetto, l'ufficio invia immediatamente l'ordine ai tecnici ILLI-CO per la sua realizzazione.
L'utensile speciale è prodotto e controllato dagli stabilimenti ILLI-CO utilizzando i migliori materiali di produzione.

Frese frontali, serie lunga
Schaftfräser lange Ausführung

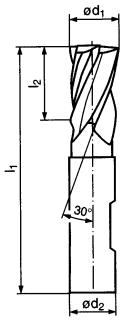


Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HFS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type HFS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type HFS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



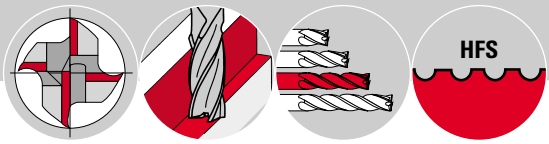
DIN 844L
HSS-Co8

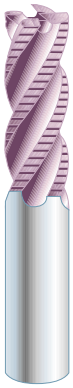
HSS-Co8
HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								5412	5412C
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z					
10	45	95	10	4				■	■
12	53	110	12	4					■
14	53	110	12	4				■	■
16	63	123	16	4				■	■
18	63	123	16	4				■	
20	75	141	20	4					■
22	75	141	20	4				■	■
25	90	166	25	4				■	■
28	90	166	25	5				■	■
30	90	166	25	5				■	

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung



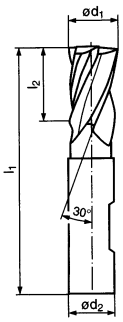


Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HFS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type HFS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type HFS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



DIN 844L
ASP-60

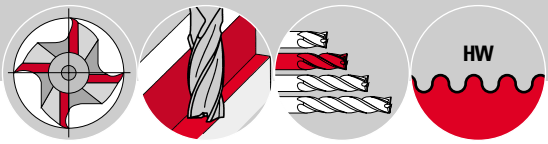
ASP-60

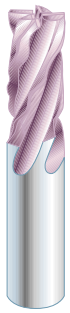
ASP-60 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								5442	5442C
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z					
10	45	95	10	4				■	■
12	53	110	12	4				■	■
14	53	110	12	4				■	■
16	63	123	16	4				■	■
18	63	123	16	4				■	■
20	75	141	20	4				■	■
22	75	141	20	4				■	■
25	90	166	25	4				■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, HARD-WAVE, serie corta
Schaftfräser kurz HARD-WAVE



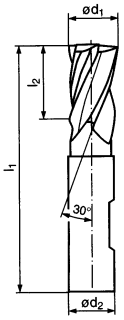


≈ 30° elica,
10° angolo di spoglia,
con codolo cilindrico
secondo DIN 1835/1

≈ 30° Drallwinkel,
10° Spanwinkel,
mit Zylindershaft nach
DIN 1835/1

End mills HARD-WAVE, short series
helix angle ≈ 30° rake angle 10°,
with straight shank acc. DIN 1835/1

Fraises deux tailles HARD-WAVE, série courte
angle d'hèlice ≈ 30°, angle de coupe 10°,
avec queue cylindrique selon DIN 1835/1



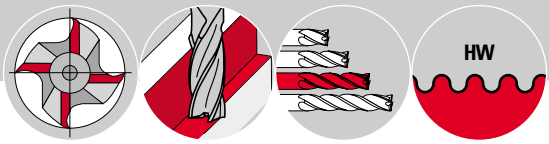
DIN 844K
ASP-60

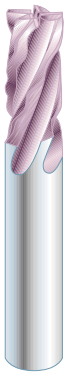
ASP-60

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										**5450**
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
12	26	83	12	4						●
14	26	83	12	4						●
16	32	92	16	4						●
18	32	92	16	4						●
20	38	104	20	4						●
22	38	104	20	4						●
25	45	121	25	4						●
30	45	121	25	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, HARD-WAVE, serie lunga
Schaftfräser lang HARD-WAVE



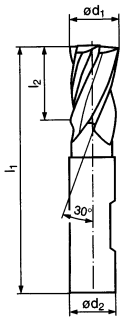


≈ 30° elica,
10° angolo di spoglia,
con codolo cilindrico
secondo DIN 1835/1

≈ 30° Drallwinkel,
10° Spanwinkel,
mit Zylindershaft nach
DIN 1835/1

End mills, long series
helix angle ≈ 30° rake angle 10°,
with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
angle d'hèlice ≈ 30°, angle de coupe 10°,
avec queue cylindrique selon DIN 1835/1



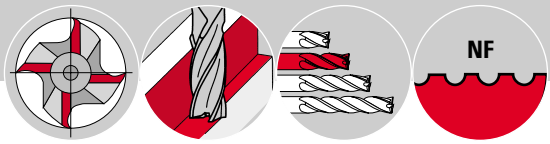
DIN 844L
ASP-60

ASP-60

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										5460
Ød1 K_{10}	l_2	l_1	$Ød_2$	Z						
12	53	110	12	4						●
14	53	110	12	4						●
16	63	123	16	4						●
18	63	123	16	4						●
20	75	141	20	4						●
22	75	141	20	4						●
25	90	166	25	4						●
28	90	166	25	4						●
30	90	166	25	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie corta
Schaftfräser kurze Ausführung

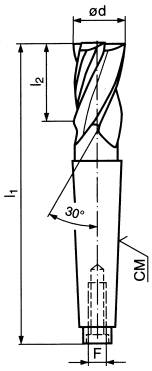


Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ NF, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Morsekegelschaft nach DIN 228/1

End mills, short series
Type NF, helix angle ≈ 30° rake angle 12°, with Morse tapel shank acc. DIN 228/1

Fraises deux tailles, série courte
Type NF, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cône Morse selon DIN 228/1



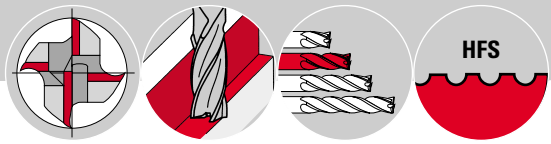
DIN 845K
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**5416**
Ød1 K_{12}	l_2	l_1	CM	F	Z						
10	22	92	1	M 6	4						●
11	22	92	1	M 6	4						■
12	26	96	1	M 6	4						●
13	26	96	1	M 6	4						■
14	26	111	2	M 10	4						●
15	26	111	2	M 10	4						●
16	32	117	2	M 10	4						●
18	32	117	2	M 10	4						●
19	32	117	2	M 10	4						●
20	38	123	2	M 10	4						■
22	38	123	2	M 10	4						●
24	45	147	3	M 12	4						●
25	45	147	3	M 12	4						●
26	45	147	3	M 12	5						●
27	45	147	3	M 12	5						●
28	45	147	3	M 12	5						●
30	45	147	3	M 12	5						●
32*	53	201	4	M 16	6						●
34*	53	201	4	M 16	6						●
35*	53	201	4	M 16	6						■
36*	53	201	4	M 16	6						●
38*	63	211	4	M 16	6						●
40*	63	211	4	M 16	6						■
42*	63	211	4	M 16	6						●
45*	63	211	4	M 16	6						■
50*	75	261	5	M 20	8						●
											●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie corta
Schaftfräser kurze Ausführung

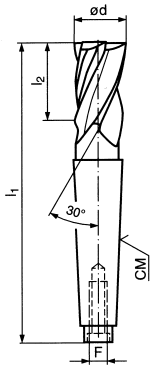


Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ HFS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Morsekegelschaft nach DIN 228/1

End mills, short series
Type HFS, helix angle ≈ 30° rake angle 10°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série courte
Type HFS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cône Morse selon DIN 228/1



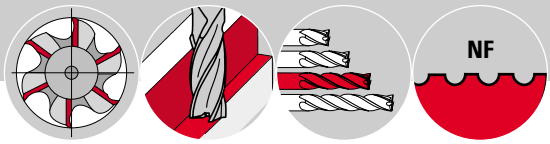
DIN 845K
HSS-Co8

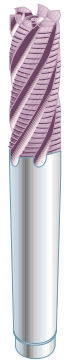
HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									5418	5418T	5418C
Ød1 K_{12}	l_2	l_1	CM	F	Z						
12	26	96	1	M 6	4				■	■	■
16	32	117	2	M 10	4				■	■	■
20	38	123	2	M 10	4				■	■	■
25	45	147	3	M 12	4				■	■	■
28	45	147	3	M 12	5				■		■
32*	53	201	4	M 16	6				■	■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie lunga
Schaftfräser lange Ausführung



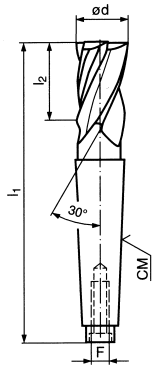


Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse DIN 228/1

Typ NF, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Morsekegelschaft nach DIN 228/1

End mills, long series
Type NF, helix angle ≈ 30° rake angle 12°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série longue
Type NF, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cône Morse selon DIN 228/1



DIN 845L
HSS-Co5

HSS-Co5

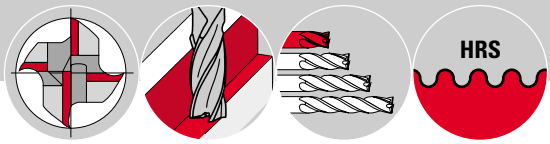
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											5420
Ød1 K_{10}	l_2	l_1	CM	F	Z						
10	45	115	1	M 6	4						●
12	53	123	1	M 6	4						●
14	53	138	2	M 10	4						●
15	53	138	2	M 10	4						●
16	63	148	2	M 10	4						●
18	63	148	2	M 10	4						●
20	75	160	2	M 10	4						●
22	75	160	2	M 10	5						●
25	90	192	3	M 12	5						●
28	90	192	3	M 12	5						●
32*	106	254	4	M 16	6						●
36*	106	254	4	M 16	6						●
40*	125	273	4	M 16	6						●
45*	125	273	4	M 16	6						●
50*	150	336	5	M 20	8						●

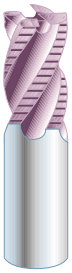
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Acquisti on line

E' in elaborazione il nuovo sito Internet della Angelo Ghezzi Spa.
Collegandovi all'indirizzo **www.angeloghezzi.it** potremo eseguire direttamente numerose operazioni, tra cui per esempio la possibilità di verificare direttamente la giacenza dei prodotti in magazzino e prenotare l'ordine della merce in qualunque momento della giornata.
Questa funzione sarà accompagnata dal rafforzamento della struttura di dialogo con l'Ufficio Tecnico.
E' previsto anche uno spazio informativo sulle ultime soluzioni proposte dal mercato attraverso le offerte delle case produttrici che collaborano con l'Angelo Ghezzi Spa.

Frese frontali, serie extra corta
Schaftfräser extra kurze Ausführung



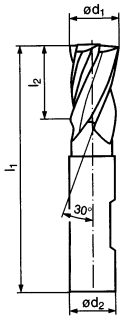


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, extra short series
Type HRS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série extra courte
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



ILLICO NORM
(similare a DIN 327)

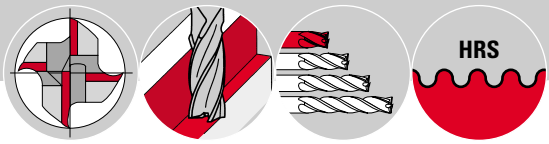
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**7400**	**7400C**	**7400F**
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	8	52	6	4				●	●	●
8	11	61	10	4				●	●	●
10	13	63	10	4				●	●	●
12	16	73	12	4				●	●	●
14	16	73	12	4				●	●	●
16	19	79	16	4				●	●	●
18	19	79	16	4				●	●	●
20	22	88	20	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie extra corta
Schaftfräser extra kurze Ausführung

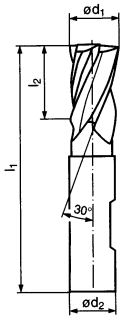


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, extra short series
Type HRS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série extra courte
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



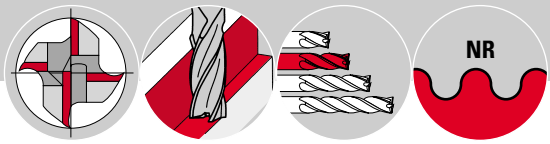
ILLICO NORM
(similare a DIN 327)
ASP-60

- ASP-60
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7450	7450C	7450F
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
8	11	61	10	4				●	●	●
10	13	63	10	4				●	●	●
12	16	73	12	4				●	●	●
14	16	73	12	4				●	●	●
16	19	79	16	4				●	●	●
18	19	79	16	4				●	●	●
20	22	88	20	4				●	●	●
22	22	88	20	4				●	●	●
25	26	102	25	4				●	●	●
28	26	102	25	5				●	●	●
32	32	112	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie corta
Schaftfräser kurze Ausführung

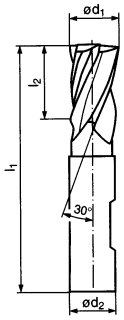


Tipo NR ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NR ≈ 30° Drallwinkel, 14° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Type NR End mills, short series helix angle ≈ 30° rake angle 14°, with straight shank acc. DIN 1835/1

Type NR Fraises deux tailles, série courte angle d'hèlice ≈ 30°, angle de coupe 14°, avec queue cylindrique selon DIN 1835/1



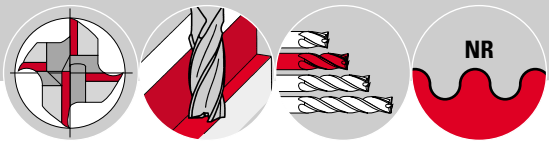
DIN 844K
HSS-Co8

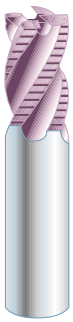
- HSS-Co8
- HSS-Co8 TiN
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						7404	7406	7404T	7404C	7404F
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	4		●	●	●	●	●
7	16	66	10	4		●	●	●	●	●
8	19	69	10	4		●	●	●	●	●
9	19	69	10	4		●	●	●	●	●
10	22	72	10	4		●	●	●	●	●
11	22	79	12	4		●	●	●	●	●
12	26	83	12	4		●	●	●	●	●
13	26	83	12	4		●	●	●	●	●
14	26	83	12	4		●	●	●	●	●
15	26	83	12	4		●	●	●	●	●
16	32	92	16	4		●	●	●	●	●
17	32	92	16	4		●	●	●	●	●
18	32	92	16	4		●	●	●	●	●
19	32	92	16	4		●	●	●	●	●
20	38	104	20	4		●	●	●	●	●
22*	38	104	20	4		●	●	●	●	●
24*	45	121	25	4		●	●	●	●	●
25*	45	121	25	4		●	●	●	●	●
26*	45	121	25	5		●	●	●	●	●
28*	45	121	25	5		●	●	●	●	●
30*	45	121	25	5		●	●	●	●	●
32*	53	133	32	6		●	●	●	●	●
34*	53	133	32	6			■			
35*	53	133	32	6		●	●	●	●	●
36*	53	133	32	6		●	●	●	●	●
40▲*	63	143	32	6			■			●
40*	63	155	40	6		●		●	●	
45▲*	63	143	32	6			■			
45*	63	155	40	6		■			■	
50▲*	63	143	32	8			■			
50*	75	177	50	8		■		■	■	

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese frontali, serie corta
Schaftfräser kurze Ausführung



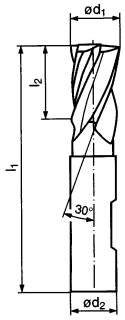


Tipo NR ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NR ≈ 30° Drallwinkel, 14° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type NR, helix angle ≈ 30° rake angle 14°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type NR, angle d'hèlice ≈ 30°, angle de coupe 14°, avec queue cylindrique selon DIN 1835/1



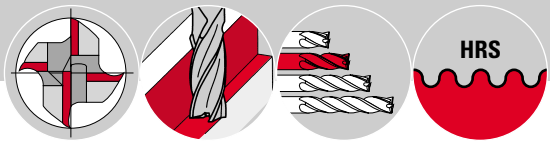
DIN 844K
ASP-60

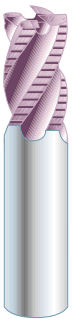
- ASP-60
- ASP-60 TiN
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							7454	7454T	7454C	7454F
Ød1 K_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	4			●	●	●	●
8	19	69	10	4			●	●	●	●
9	19	69	10	4			■	■		
10	22	72	10	4			●	●	●	●
11	22	79	12	4			■			
12	26	83	12	4			●	●	●	●
13	26	83	12	4			■	■		
14	26	83	12	4			●	●	●	●
15	26	83	12	4			●	●	●	●
16	32	92	16	4			●	●	●	●
17	32	92	16	4			■	■		■
18	32	92	16	4			●	●	●	●
19	32	92	16	4			■	■	■	■
20	38	104	20	4			●	●	●	●
22	38	104	20	4			■	■	■	■
24	45	121	25	4			■	■	■	■
25	45	121	25	4			●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie corta
Schaftfräser kurze Ausführung



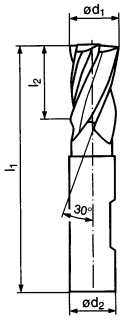


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HRS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



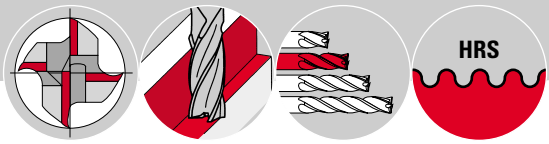
DIN 844K
HSS-Co8

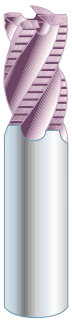
HSS-Co8
HSS-Co8 TiCN
HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7408	7408C	7408F
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
4	11	55	6	3				●	●	●
5	13	57	6	3				●	●	●
6	13	57	6	4				●	●	●
8	19	69	10	4				●	●	●
10	22	72	10	4				●	●	●
12	26	83	12	4				●	●	●
14	26	83	12	4				●	●	●
16	32	92	16	4				●	●	●
18	32	92	16	4				●	●	●
20	38	104	20	4				●	●	●
22	38	104	20	4				●	●	●
24	45	121	25	4				●	●	●
25	45	121	25	4				●	●	●
28	45	121	25	5				●	●	●
30	45	121	25	5				●	●	●
32	53	133	32	6				●	●	●
36	53	133	32	6				●	●	●
40▲	63	143	32	6				●	●	●
45▲	63	143	32	6				●	●	●
50▲	63	143	32	8				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese frontali, serie corta
Schaftfräser kurze Ausführung



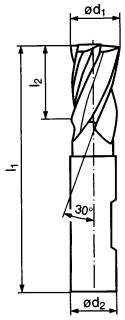


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, short series
Type HRS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série courte
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



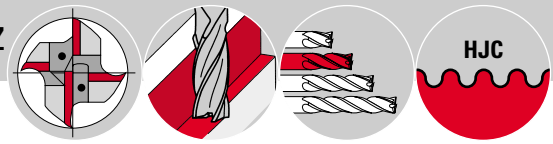
DIN 844K
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**7458**	**7458C**	**7458F**
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	4				●	●	●
8	19	69	10	4				●	●	●
10	22	72	10	4				●	●	●
12	26	83	12	4				●	●	●
14	26	83	12	4				●	●	●
16	32	92	16	4				●	●	●
18	32	92	16	4				●	●	●
20	38	104	20	4				●	●	●
22	38	104	20	4				●	●	●
24	45	121	25	4				●	●	●
25	45	121	25	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, jet-cut, serie corta con fori di lubrificazione
Schaftfräser mit innerer Kühlmittelzufuhr kurz

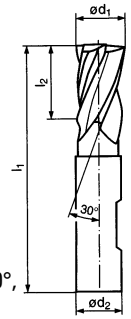


Tipo HJC, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HJC, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, with oil holes, short series
Type HJC, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles avec trous d'huile, série courte
Type HJC, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cyllindrique selon DIN 1835/1



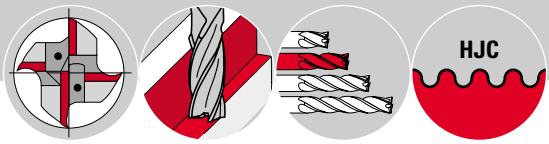
DIN 844K
HSS-Co8

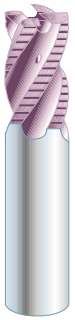
HSS-Co8
HSS-Co8 **TiCN**
HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**7484**	**7484C**	**7484F**
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
16	32	92	16	4				●	●	●
20	38	104	20	4				●	●	●
25	45	121	25	5				●	●	●
32	53	133	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

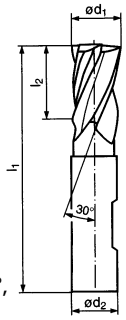
Frese frontali, jet-cut serie corta con fori di lubrificazione
Schaftfräser mit innerer Kühlmittelzufuhr kurz





Tipo HJC, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HJC, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 844K
HSS-Co8

HSS-Co8
HSS-Co8 TiCN
HSS-Co8 TiALN FUTURA®

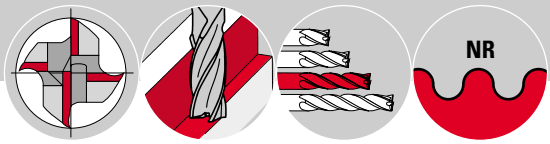
End mills, with oil holes short series
Type HJC, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, avec trous l'huile, série courte
Type HJC, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7486	7486C	7486F
Ød1 k_{10}	l_2	l_1	$Ød_2$	Z						
16	32	92	16	4				●	●	●
20	38	104	20	4				●	●	●
25	45	121	25	5				●	●	●
32	53	133	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

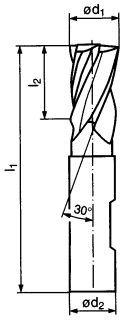


Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NR, ≈ 30° Drallwinkel, 14° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type NR, helix angle ≈ 30° rake angle 14°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type NR, angle d'hèlice ≈ 30°, angle de coupe 14°, avec queue cylindrique selon DIN 1835/1



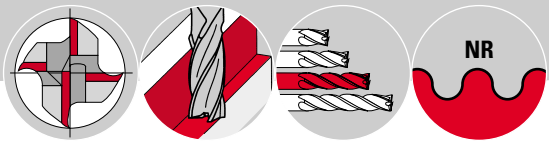
DIN 844L
HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						7412	7414	7412T	7412C	7412F
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	24	68	6	4		●	●	●	●	●
8	38	88	10	4		●	●	●	●	●
9	38	88	10	4		●	●	●	●	●
10	45	95	10	4		●	●	●	●	●
11	45	102	12	4		●	●	●	●	●
12	53	110	12	4		●	●	●	●	●
13*	53	110	12	4		●	●	●	●	●
14	53	110	12	4		●	●	●	●	●
15	53	110	12	4		●	●	●	●	●
16	63	123	16	4		●	●	●	●	●
18	63	123	16	4		●	●	●	●	●
20	75	141	20	4		●	●	●	●	●
22	75	141	20	4		●	●	●	●	●
24	90	166	25	4		●	●	●	●	●
25	90	166	25	4		●	●	●	●	●
26	90	166	25	5		●	●	●	●	●
28	90	166	25	5		●	●	●	●	●
30	90	166	25	5		●	●	●	●	●
32	106	186	32	6		●	●	●	●	●
34	106	186	32	6		■	■	■	■	
35	106	186	32	6		■	■	■		■
36	106	186	32	6		●	●	●	●	●
40▲	125	205	32	6						●
40	125	217	40	6		●		●	●	
45	125	217	40	6		■				

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

Frese frontali, serie lunga
Schaftfräser lange Ausführung

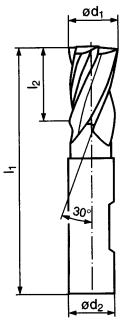


Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ NR, ≈ 30° Drallwinkel, 14° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type NR, helix angle ≈ 30° rake angle 14°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type NR, angle d'hèlice ≈ 30°, angle de coupe 14°, avec queue cylindrique selon DIN 1835/1



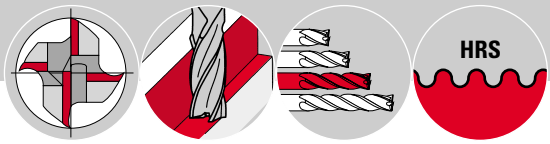
DIN 844L
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7462	7462T	7462C
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	24	68	6	4				●	●	●
8	38	88	10	4				●	●	●
9	38	88	10	4				■		■
10	45	95	10	4				●	●	●
11	45	102	12	4				■	■	■
12	53	110	12	4				●	●	●
13	53	110	12	4				■		■
14	53	110	12	4				●	●	●
15	53	110	12	4				■		■
16	63	123	16	4				●	●	●
18	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
22	75	141	20	4				●	●	●
24	90	166	25	4				■		
25	90	166	25	4				●	●	●
30	90	166	25	4				■		■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

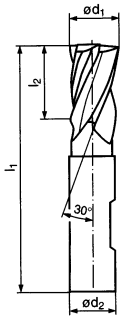


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type HRS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



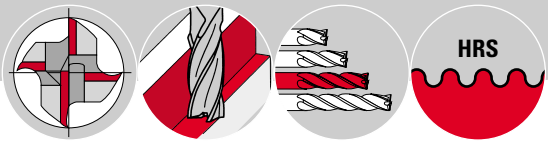
DIN 844L
HSS-Co8

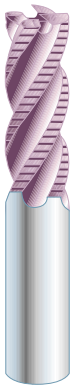
- HSS-Co8
- HSS-Co8 TiCN
- HSS-Co8 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**7416**	**7416C**	**7416F**
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	24	68	6	4				●	●	●
8	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
12	53	110	12	4				●	●	●
14	53	110	12	4				●	●	●
16	63	123	16	4				●	●	●
18	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
22	75	141	20	4				●	●	●
25	90	166	25	4				●	●	●
26	90	166	25	5				●	●	●
28	90	166	25	5				●	●	●
30	90	166	25	5				●	●	●
32	106	186	32	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung



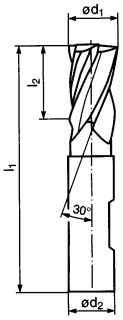


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1

End mills, long series
Type HRS, helix angle ≈ 30° rake angle 10°, with straight shank acc. DIN 1835/1

Fraises deux tailles, série longue
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1



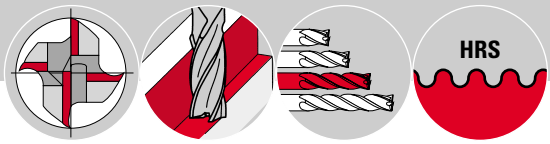
DIN 844L
ASP-30

ASP-30
ASP-30 TiCN
ASP-30 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**7466**	**7466C**	**7466F**
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	24	68	6	4				●	●	●
8	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
12	53	110	12	4				●	●	●
14	53	110	12	4				●	●	●
16	63	123	16	4				●	●	●
18	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
22	75	141	20	4				●	●	●
25	90	166	25	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie lunga
Schaftfräser lange Ausführung

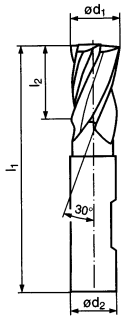


Tipo HRS, ≈ 30° elica, 7° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B

Typ HRS, ≈ 30° Drallwinkel, 7° Spanwinkel, mit Zylindershaft nach DIN 1835A/B

End mills, long series
Type HRS, helix angle ≈ 30° rake angle 7°, with straight shank acc. DIN 1835A/B

Fraises deux tailles série longue
Type HRS, angle d'hèlice ≈ 30°, angle de coupe 7°, avec queue cylindrique selon DIN 1835A/B



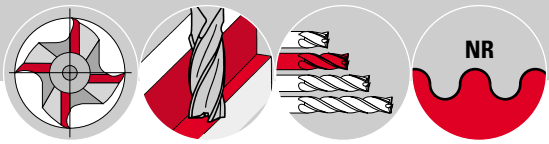
DIN 844L
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					7467	7467C	7467F	7469	7469C	7469F
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	24	68	6	4	●	●	●	●	●	●
8	38	88	10	4	●	●	●	●	●	●
10	45	35	10	4	●	●	●	●	●	●
12	53	110	12	4	●	●	●	●	●	●
14	53	110	12	4	●	●	●	●	●	●
16	63	123	16	4	●	●	●	●	●	●
18	63	123	16	4	●	●	●	●	●	●
20	75	141	20	5	●	●	●	●	●	●
25	90	166	25	5	●	●	●	●	●	●
30	90	166	25	6	●	●	●	●	●	●
32	106	186	32	6	●	●	●	●	●	●
36	106	186	32	6	●	●	●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali, serie corta
Schaftfräser kurze Ausführung

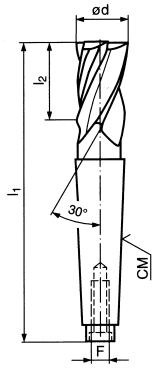


Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ NR, ≈ 30° Drallwinkel, 14° Spanwinkel, mit Morsekegelschaft nach DIN 228/1

End mills, short series
Type NR, helix angle ≈ 30° rake angle 14°, with straight shank acc. DIN 228/1

Fraises deux tailles série courte
Type NR, angle d'hèlice ≈ 30°, angle de coupe 14°, avec queue cône Morse selon DIN 228/1



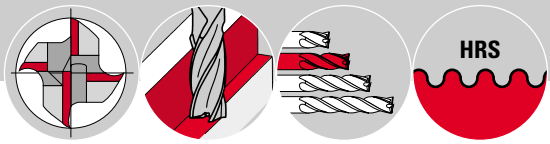
DIN 845K
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**7420**
Ød1 K_{12}	l_2	l_1	CM	F	Z						
6▲	13	80	1	M 6	4						■
8▲	19	89	1	M 6	4						■
10	22	92	1	M 6	4						●
11	22	92	1	M 6	4						■
12	26	96	1	M 6	4						●
13	26	96	1	M 6	4						■
14	26	111	2	M 10	4						●
15	26	111	2	M 10	4						●
16	32	117	2	M 10	4						●
17	32	117	2	M 10	4						■
18	32	117	2	M 10	4						●
19	32	117	2	M 10	4						■
20	38	123	2	M 10	4						●
21	38	123	2	M 10	4						■
22	38	123	2	M 10	4						●
24	45	147	3	M 12	4						●
25	45	147	3	M 12	4						●
26	45	147	3	M 12	5						●
28	45	147	3	M 12	5						●
30	45	147	3	M 12	5						●
32*	53	201	4	M 16	6						●
34*	53	201	4	M 16	6						■
35*	53	201	4	M 16	6						■
36*	53	201	4	M 16	6						●
38*	63	211	4	M 16	6						■
40*	63	211	4	M 16	6						●
42*	63	211	4	M 16	6						■
45*	63	211	4	M 16	6						●
48*	75	261	5	M 20	8						■
50*	75	261	5	M 20	8						●
56*	75	261	5	M 20	8						■
60*	75	261	5	M 20	8						■
63*	90	276	5	M 20	8						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie corta
Schaftfräser kurze Ausführung

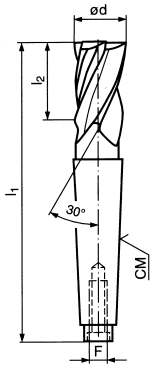


Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ HRS, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Morsekegelschaft nach DIN 228/1

End mills, short series
Type HRS, helix angle ≈ 30° rake angle 10°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série courte
Type NR, angle ≈ 30°, angle de coupe 10°, avec queue cône Morse selon DIN 228/1



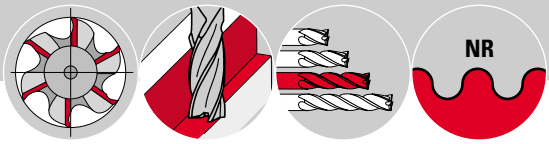
DIN 845K
HSS-Co8

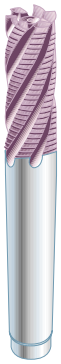
HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**7422**	**7422T**	**7422C**
Ød1 K_{12}	l_2	l_1	CM	F	Z						
12	26	96	1	M 6	4				●	●	●
16	32	117	2	M 10	4				●	●	●
20	38	123	2	M 10	4				●	●	●
25	45	147	3	M 12	4				●	●	●
28	45	147	3	M 12	5				●	●	●
32*	53	201	4	M 16	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese frontali, serie lunga
Schaftfräser lange Ausführung



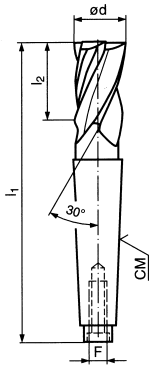


Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo conico Morse secondo DIN 228/1

Typ NR, ≈ 30° Drallwinkel, 14° Spanwinkel, mit Morsekegelschaft nach DIN 228/1

End mills, long series
Type NR, helix angle ≈ 30° rake angle 14°, with Morse taper shank acc. DIN 228/1

Fraises deux tailles, série longue
Type NR, angle d'hèlice ≈ 30°, angle de coupe 14°, avec queue cône Morse selon DIN 228/1



DIN 845L
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**7424**
Ød1 K_{12}	l_2	l_1	CM	F	Z						
10	45	115	1	M 6	4						●
12	53	123	1	M 10	4						●
14	53	138	2	M 10	4						●
15	53	138	2	M 10	4						●
16	63	148	2	M 10	4						●
18	63	148	2	M 10	4						●
20	75	160	2	M 10	4						●
22	75	160	2	M 10	4						●
25	90	192	3	M 12	4						●
28	90	192	3	M 12	5						●
30	90	192	3	M 12	5						●
32*	106	254	4	M 16	6						●
36*	106	254	4	M 16	6						●
40*	125	273	4	M 16	6						●
45*	125	273	4	M 16	6						●
50*	150	336	5	M 20	8						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

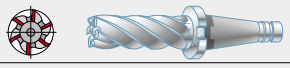
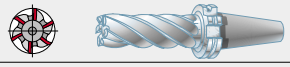
Un magazzino da record

Nella sua sede di Paderno Dugnano, Angelo Ghezzi Spa mette a disposizione della sua clientela un magazzino con oltre sessantamila articoli. Questo permette di evadere le richieste tempestivamente e anche quelle dell'ultimo minuto con la medesima efficienza. Gli ordini provenienti dal Call Center e dagli agenti vengono registrati a video dall'operatore e quindi smistati in tempo reale. In poche ore i prodotti sono pronti per l'uscita. L'intera organizzazione del magazzino viene supervisionata giornalmente da uno staff specializzato per offrire **un livello di servizio del 97%**, un primato che mette a disposizione della clientela un affidabile servizio di consegna durante tutto l'arco dell'anno.

Frese con attacco conico, DIN 2080 e DIN-ISO 69871/1

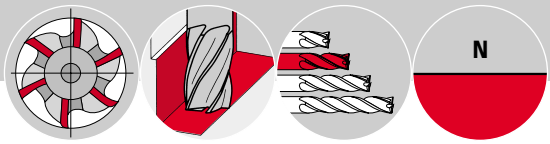
Schaftfräser mit Zylindershaft nach DIN 2080 und DIN-ISO 69871/1

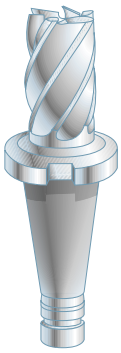
End mills with taper shank DIN 2080 and DIN-ISO 69871/1
Fraises deux tailles avec queue conique DIN 2080 et DIN-ISO 69871/1

DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®				Pag.
2328K	N		HSS-Co5				●			96
2328L	N		HSS-Co5				●			97
IN	N		HSS-Co5					●		98
IN	N		HSS-Co5					●		99
2328K	NF		HSS-Co5				●			100
2328L	NF		HSS-Co5				●			101
2328K	NR		HSS-Co5				●			102
2328L	NR		HSS-Co5				●			103
IN	NR		HSS-Co5					●		104
IN	NR		HSS-Co5					●		105

IN = Illico Norm

Frese frontali, serie corta
Schaftfräser kurze Ausführung



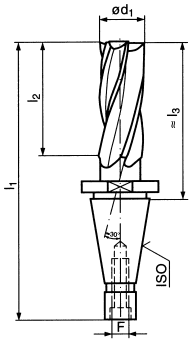


Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 2080

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Steikegelschaft nach DIN 2080

End mills, short series
Type N, helix angle ≈ 30° rake angle 10°, with step ISO taper shank acc. DIN 2080

Fraises deux tailles, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cône SA DIN 2080



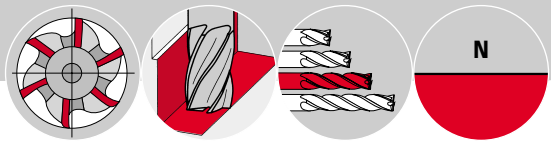
DIN 2328K
HSS-Co5

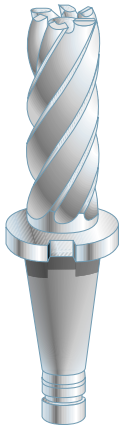
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9501**
Ød1 K_{10}	l_2	l_1	ISO	F	l_3	Z						
32	53	188	40	M 16	95	6						●
36	53	188	40	M 16	95	6						■
40	63	198	40	M 16	105	6						●
40	63	240	50	M 24	113	6						●
45	63	198	40	M 16	105	8						●
45	63	240	50	M 24	113	8						■
50	75	210	40	M 16	117	8						●
50	75	252	50	M 24	125	8						●
56	75	252	50	M 24	125	8						■
63	90	267	50	M 24	140	8						●
80	106	283	50	M 24	156	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

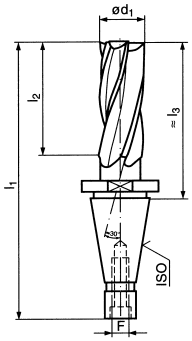
Frese frontali, serie lunga
Schaftfräser lange Ausführung





Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 2080

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Steikegelschaft nach DIN 2080



DIN 2328L
HSS-Co5

HSS-Co5

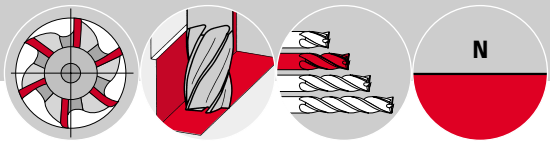
End mills, long series
Type HRS, helix angle ≈ 30° rake angle 10°, with step ISO taper shank acc. DIN 2080

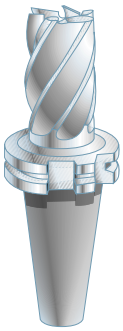
Fraises deux tailles, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cône SA DIN 2080

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9502**
Ød1 K_{10}	l_2	l_1	ISO	F	l_3	Z						
32	106	241	40	M 16	148	6						●
36	106	241	40	M 16	148	6						■
40	125	260	40	M 16	167	6						●
40▲	100	277	50	M 24	150	6						■
40	125	302	50	M 24	175	6						●
40▲	160	337	50	M 24	210	6						●
45	125	260	40	M 16	167	8						■
45▲	100	277	50	M 24	150	8						■
45	125	302	50	M 24	175	8						■
45▲	160	337	50	M 24	210	8						■
50	150	285	40	M 16	192	8						●
50▲	112	289	50	M 24	162	8						■
50	150	327	50	M 24	200	8						●
50▲	200	377	50	M 24	250	8						●
56	150	285	40	M 16	192	8						■
56▲	112	289	50	M 24	162	8						■
56	150	327	50	M 24	200	8						■
56▲	200	377	50	M 24	250	8						■
63▲	140	317	50	M 24	190	8						■
63	180	357	50	M 24	230	8						●
63▲	250	427	50	M 24	300	10						●
75▲	110	287	50	M 24	160	10						■
75▲	150	327	50	M 24	200	10						■
75▲	300	411	50	M 24	350	10						●
80▲	160	337	50	M 24	210	10						■
80	212	389	50	M 24	262	10						■
80▲	250	427	50	M 24	300	10						■
80▲	300	477	50	M 24	350	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

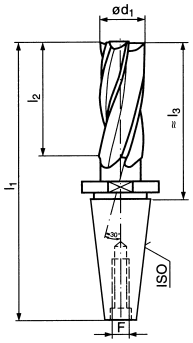
Frese frontali, serie corta
Schaftfräser kurz Ausführung





Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 69871/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Steikegelschaft nach DIN 69871/1



ILLICO NORM
HSS-Co5

HSS-Co5

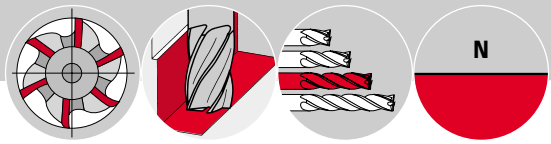
End mills, short series
Type N, helix angle ≈ 30° rake angle 10°, with step ISO taper shank acc. DIN 69871/1

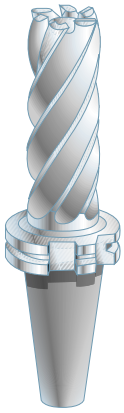
Fraises deux tailles, série courte
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cône SA DIN 69871/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												9503
Ød1 K_{10}	l_2	l_1	ISO	F	l_3	Z						
32	53	171	40	M 16	103	6						●
36	53	171	40	M 16	103	6						■
40	63	181	40	M 16	113	6						●
40	63	219	50	M 24	117	6						●
40	100	256	50	M 24	154	6						■
45	63	181	40	M 16	113	8						■
45	63	219	50	M 24	117	8						■
45	100	256	50	M 24	154	8						■
50	75	193	40	M 16	125	8						●
50	75	231	50	M 24	129	8						●
56	150	306	50	M 24	204	8						■
63	90	246	50	M 24	144	8						●
63	140	296	50	M 24	194	8						■
80	106	262	50	M 24	160	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

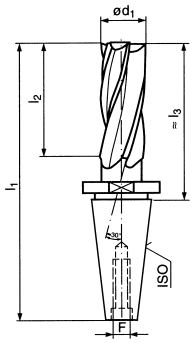
Frese frontali, serie lunga
Schaftfräser lange Ausführung





Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 69871/1

Typ N, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Steikegelschaft nach DIN 69871/1



ILLICO NORM
HSS-Co5

HSS-Co5

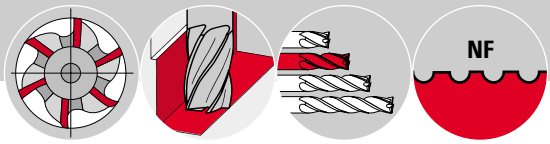
End mills, long series
Type N, helix angle ≈ 30° rake angle 10°, with step ISO taper shank acc. DIN 69871/1

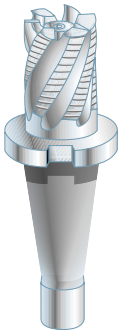
Fraises deux tailles, série longue
Type N, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cône SA DIN 69871/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9504**
Ød1 K_{10}	l_2	l_1	ISO	F	l_3	Z						
32	106	224	40	M 16	156	6						●
40	125	243	40	M 16	175	6						●
40	125	281	50	M 24	179	6						●
40	160	316	50	M 24	214	6						●
45	125	281	50	M 24	179	8						■
45	160	316	50	M 24	214	8						■
50	150	268	40	M 16	200	8						●
50	150	306	50	M 24	204	8						●
63	180	336	50	M 16	234	8						●
83	212	368	50	M 24	266	10						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

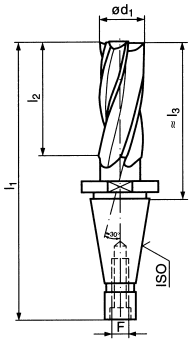
Frese frontali, serie corta
Schaftfräser kurze Ausführung





Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 2080

Typ NF, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Steilkegelschaft nach DIN 2080



2328K
HSS-Co5

HSS-Co5

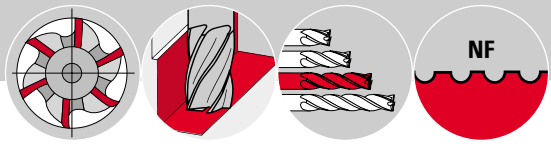
End mills, long series
Type NF, helix angle ≈ 30° rake angle 12°, with step ISO taper shank acc. DIN 2080

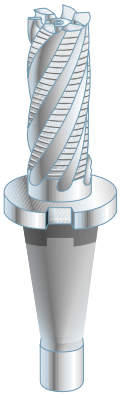
Fraises deux tailles, série courte
Type NF, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cône SA DIN 2080

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9505**
Ød1 K_{12}	l_2	l_1	ISO	F	l_3	Z						
36	53	188	40	M 16	95	6						■
40	63	240	50	M 24	113	6						■
45	63	198	40	M 16	105	6						■
45	63	240	50	M 24	113	8						■
56	75	210	40	M 16	117	8						■
56	75	252	50	M 24	125	8						■
63	90	267	50	M 24	140	8						■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

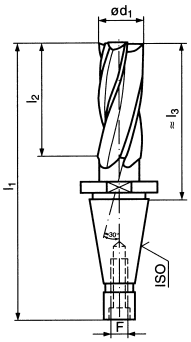
Frese frontali, serie lunga
Schaftfräser lange Ausführung





Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 2080

Typ HF, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Steilkegelschaft nach DIN 2080



DIN 2328L
HSS-Co5

HSS-Co5

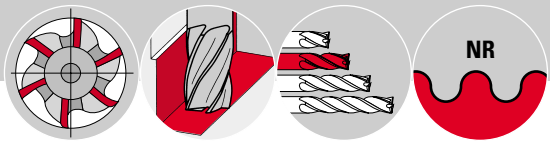
End mills, long series
Type NF, helix angle ≈ 30° rake angle 12°, with step ISO taper shank acc. DIN 2080

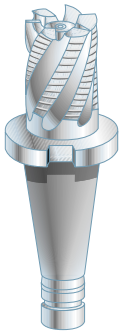
Fraises deux tailles, série longue
Type NF, angle d'hélice ≈ 30°, angle de coupe 12°, avec queue cône SA DIN 2080

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9506**
Ød1 K_{12}	l_2	l_1	ISO	F	l_3	Z						
36	106	241	40	M 16	148	6						■
40	125	260	40	M 16	167	6						■
40▲	100	277	50	M 24	150	6						■
40	125	302	50	M 24	175	6						■
40▲	160	337	50	M 24	210	6						■
45	125	260	40	M 24	167	8						■
45▲	100	277	50	M 16	150	8						■
45	125	302	50	M 24	175	8						■
45▲	160	337	50	M 24	210	8						■
50	150	285	40	M 16	192	8						■
50▲	112	289	50	M 24	162	8						■
50▲	200	377	50	M 24	250	8						■
56	150	285	40	M 16	192	8						■
56▲	112	289	50	M 24	162	8						■
56	150	327	50	M 24	200	8						■
56▲	200	377	50	M 24	250	8						■
63▲	140	317	50	M 24	190	8						■
63	180	357	50	M 24	230	8						■
63▲	250	427	50	M 24	300	8						■
75▲	110	287	50	M 24	160	10						■
75▲	150	327	50	M 24	200	10						■
75▲	200	377	50	M 24	250	10						■
75▲	250	427	50	M 24	300	10						■
75▲	300	477	50	M 24	350	10						■
80▲	160	337	50	M 24	210	10						■
80	212	389	50	M 24	262	10						■
80▲	250	427	50	M 24	300	10						■
80▲	300	477	50	M 24	350	10						■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

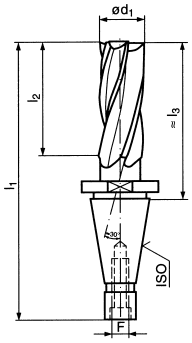
Frese frontali, serie corta
Schaftfräser kurze Ausführung





Tipo NR, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 2080

Typ NR, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Steilkegelschaft nach DIN 2080



DIN 2328K
HSS-Co5

HSS-Co5

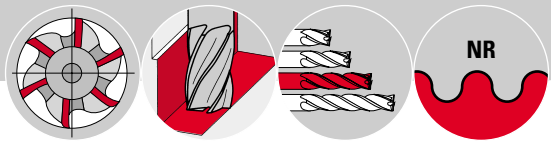
End mills, short series
Type NR, helix angle ≈ 30° rake angle 10°, with step ISO taper shank acc. DIN 2080

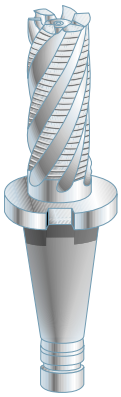
Fraises deux tailles, série courte
Type NR, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cône SA DIN 2080

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9507**
Ød1 K_{12}	l_2	l_1	ISO	F	l_3	Z						
32	53	188	40	M 16	95	6						●
36	53	188	40	M 16	95	6						■
40	63	198	40	M 16	105	6						●
40	63	240	50	M 24	113	6						●
45	63	198	40	M 16	105	6						■
45	63	240	50	M 24	113	6						■
50	75	210	40	M 16	117	8						●
50	75	252	50	M 24	125	8						●
56	75	210	40	M 16	117	8						■
56	75	252	50	M 24	125	8						■
63	90	267	50	M 24	140	8						●
80	106	283	50	M 24	156	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

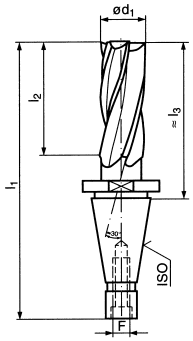
Frese frontali, serie lunga
Schaftfräser lange Ausführung





Tipo NR, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 2080

Typ NR, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Steilkegelschaft nach DIN 2080



DIN 2328L
HSS-Co5

HSS-Co5

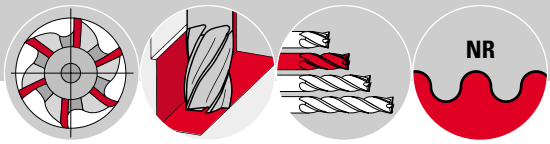
End mills, long series
Type NR, helix angle ≈ 30° rake angle 12°, with step ISO taper shank acc. DIN 2080

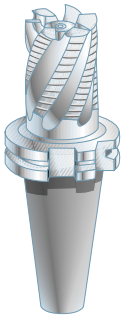
Fraises deux tailles, série longue
Type NR, angle d'hèlice ≈ 30°, angle de coupe 12°, avec queue cöne SA DIN 2080

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9508**
Ød1 K_{12}	l_2	l_1	ISO	F	l_3	Z						
32	106	241	40	M 16	148	6						
36	106	241	40	M 16	148	6						●
40	125	260	40	M 16	167	6						■
40▲	100	277	50	M 24	150	6						●
40	125	302	50	M 24	175	6						■
40▲	160	337	50	M 24	210	6						●
45	125	260	40	M 24	167	8						●
45▲	100	277	50	M 16	150	8						■
45	125	302	50	M 24	175	8						■
45▲	160	337	50	M 24	210	8						■
50	150	285	40	M 16	192	8						■
50▲	112	289	50	M 24	162	8						●
50	150	327	50	M 24	200	8						■
56	150	327	40	M 16	192	8						●
56▲	112	289	50	M 16	162	8						■
56▲	200	377	50	M 24	250	8						■
63▲	140	317	50	M 24	190	8						■
63	180	357	50	M 24	230	8						●
63▲	250	427	50	M 24	300	8						■
75▲	150	327	50	M 24	200	10						■
75▲	200	377	50	M 24	250	10						■
75▲	250	427	50	M 24	300	10						■
75▲	250	477	50	M 24	350	10						■
80▲	160	337	50	M 24	210	10						■
80	212	389	50	M 24	262	10						■
80▲	250	427	50	M 24	300	10						■
80▲	300	477	50	M 24	350	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

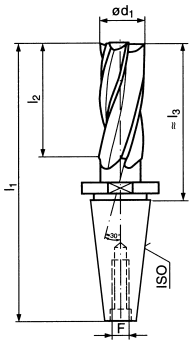
Frese frontali, serie corta
Schaftfräser kurze Ausführung





Tipo NR, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 69871/1

Typ NR, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Steilkegelschaft nach DIN 69871/1



ILLICO NORM
HSS-Co5

HSS-Co5

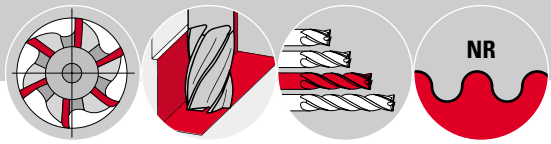
End mills, short series
Type NR, helix angle ≈ 30° rake angle 12°, with step ISO taper shank acc. DIN 69871/1

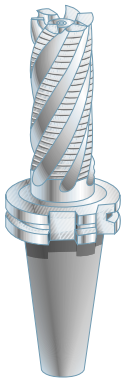
Fraises deux tailles, série courte
Type NR, angle d'hèlice≈ 30°, angle de coupe 12°, avec queue cöne SA DIN 69871/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9509**
Ød1 K_{12}	l_2	l_1	ISO	F	l_3	Z						
32	53	171	40	M 16	103	6						●
36	53	171	40	M 16	103	6						■
40	63	181	40	M 16	113	6						●
40	63	219	50	M 24	117	6						●
40	100	256	50	M 24	154	6						■
45	63	181	40	M 16	113	6						■
45	63	219	50	M 24	117	6						■
45	100	256	50	M 24	154	6						■
50	75	193	40	M 16	125	8						●
50	75	231	50	M 24	129	8						●
50	112	268	50	M 24	166	8						■
63	90	246	50	M 24	144	8						●
63	140	296	50	M 24	194	8						■
80	106	262	50	M 24	160	10						■
80	160	316	50	M 24	214	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

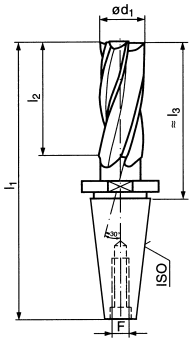
Frese frontali, serie lunga
Schaftfräser lange Ausführung





Tipo NR, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 69871/1

Typ NR, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Steilkegelschaft nach DIN 69871/1



ILLICO NORM
HSS-Co5

HSS-Co5

End mills, long series
Type NR, helix angle ≈ 30° rake angle 12°, with step ISO taper shank acc. DIN 69871/1

Fraises deux tailles, série longue
Type NR, angle d'dèlice ≈ 30°, angle de coupe 12°, avec queue cöne SA DIN 69871/1

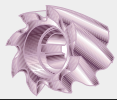
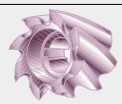
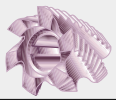
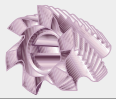
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9510**
Ød1 K_{12}	l_2	l_1	ISO	F	l_3	Z						
32	106	224	40	M 16	156	6						●
36	106	224	40	M 16	156	6						■
40	125	243	40	M 16	175	6						●
40	125	281	50	M 24	179	6						●
40	160	316	50	M 24	214	6						●
45	125	243	40	M 16	175	6						■
45	125	281	50	M 24	179	6						■
45	160	316	50	M 24	214	6						■
50	150	268	40	M 16	200	8						●
50	150	306	50	M 24	204	8						●
56	200	356	50	M 24	254	8						■
63	180	336	50	M 24	234	8						●
63	250	406	50	M 24	304	8						●
80	212	368	50	M 24	266	10						●
80	300	456	50	M 24	354	10						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Assistenza Commerciale

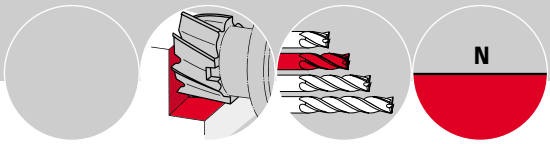
Angelo Ghezzi Spa offre un supporto commerciale per aiutare la propria clientela durante l'acquisto. Dietro richiesta del cliente, gli operatori Angelo Ghezzi sono pronti a dare tutte le informazioni necessarie sui servizi post vendita e le particolari caratteristiche dei prodotti ordinati. Se un cliente ha bisogno di ulteriori nozioni specialistiche riguardo al corretto utilizzo dell'utensile in macchina, viene messo direttamente in comunicazione con l'Ufficio Tecnico interno all'azienda per i dettagli.

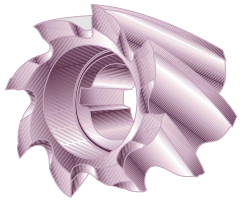
Frese a manicotto DIN 1880
Walzenstirnfräser nach DIN 1880
Shell end mills DIN 1880
Fraises en bout DIN 1880

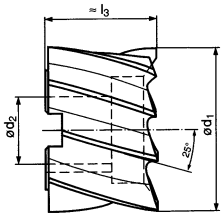
DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®					Pag.
1880	N		HSS-Co5		●						108
New 841	N		HSS-Co8		●	●					109
1880	HS		HSS-Co8	●	●						110
New 1880	HS		ASP-60		●	●					111
1880	W		HSS-Co5								112
1880	NF		HSS-Co5								113
1880	HFS		HSS-Co8	●	●						114
1880	NR		HSS-Co5								115
New 1880	VA		ASP-60		●	●					116
New 1880	NR		ASP-60		●	●					117
New 841	NR		HSS-Co8		●	●					118
New 1880	HRS		HSS-Co8	●	●						119
New 1880	HRS		ASP-60		●	●					120

IN = Illico Norm

Frese cilindriche
Walzenstirnfräser







Tipo N, taglio destro ≈ 25° elica destra, 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Typ N, ≈ rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel, mit längs- und Quernut nach DIN 138

DIN 1880
HSS-Co5

HSS-Co5

HSS-Co5 **TiCN**

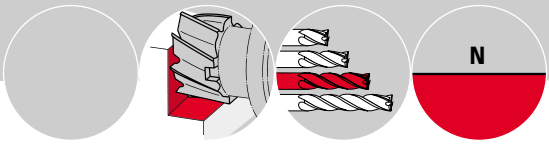
Shell end mills
Type N, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

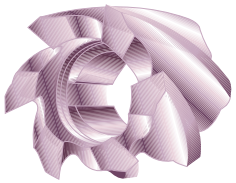
Fraises 2 tailles cylindriques
Type N, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10°, avec entraînement par tenon et par clavette selon DIN 138

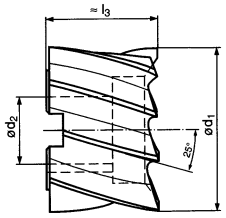
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							9561	9561C
							HSS-Co5	HSS-Co5 TiCN
Ød1 K_{10}	l_3	$Ød_2$	Z					
40	32	16	8				●	●
50	36	22	8				●	●
63	40	27	8				●	●
80	45	27	10				●	●
100	50	32	12				●	●
125	56	40	14				●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese cilindriche frontali, serie lunga
Walzenstirnfäser lang







Tipo N, taglio destro ≈ 25° elica destra, 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Typ N, ≈ rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel, mit längs-und Quernut nacht DIN 138

Shell end mills
Type N, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

Fraises 2 tailles cylindriques
Type N, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10°, avec entraînement par tenon et par clavette selon DIN 138

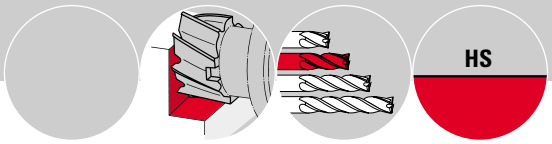
DIN 841
HSS-Co5

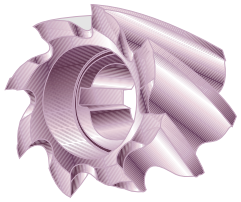
HSS-Co5
HSS-Co5 TiCN
HSS-Co5 TiALN FUTURA®

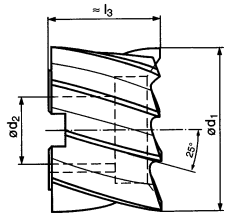
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						**9568**	**9568C**	**9568F**
Ød1 K_{12}	l_3	$Ød_2$	Z					
30§	30	13	6			●	●	●
35§	35	16	6			●	●	●
40	40	16	8			●	●	●
50	50	22	8			●	●	●
60	60	27	8			●	●	●
75	35	27	10			●	●	●
75	75	27	10			●	●	●
90	35	27	10			●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
§ Questa misura è disponibile solo con attacco a chiavetta standard - Diese Abmessung wird nur mit Längsnut geliefert
This dimensions is available only with standard keyway - Ce diamètre est disponible avec attache à clavette standard.

Frese cilindriche frontali
Schaftfräser kurz







Tipo HS, taglio destro≈ 25° elica destra , 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Typ HS, rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel mit längs-und Quernut nach DIN 138

DIN 1880
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

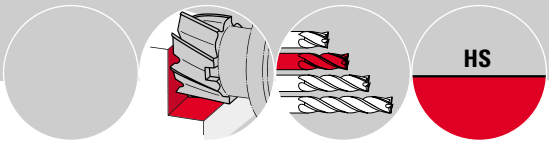
Shell end mills
Type HS, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

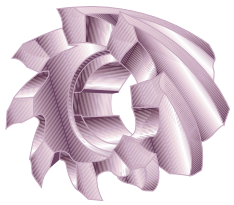
Fraises 2 tailles
Type HS, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10°, avec entraînement par tenon et par clavette selon DIN 138

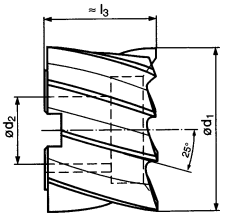
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							9564	9564T	9564C
Ød1 K_{10}	l_3	$Ød_2$	Z						
40	32	16	8				●	●	●
50	36	22	8				●	●	●
63	40	27	8				●	●	●
80	45	27	10				●	●	●
100	50	32	12				●	●	●
125	56	40	14				■	■	■
160	63	50	16				■	■	■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese cilindriche frontali
Walzenstirfräser







Tipo HS, taglio destro, ≈ 25° elica destra, 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Shell end mills
Type HS, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

Walzenstirnfräser, Typ HS, rechtsschneidend, ≈ 25° Rechtsspirale,10° Spanwinkel, mit längs - und Quernut nach DIN 138

Fraises 2 tailles cylindriques
Type HS, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10° avec entraînement par tenon et par clavette selon DIN 138

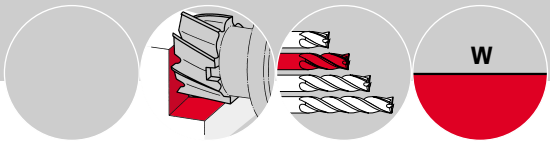
DIN 1880
ASP-60

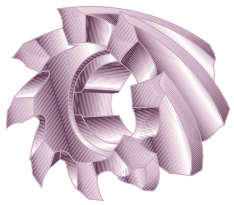
ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						9569	9569C	9569F
	New							
Ød1 K_{12}	l_3	$Ød_2$	Z					
40	32	16	8			●	●	●
50	36	22	8			●	●	●
63	40	27	8			●	●	●
80	45	27	10			●	●	●
100	50	32	10			●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese cilindriche frontali, per leghe leggere
Walzenstirnfräser



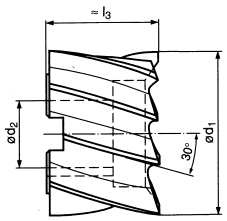


Tipo W, taglio destro,
≈ 30° elica destra,
24° angolo di spoglia, con taglio di chiavetta longidutinale e trasversale secondo DIN 138

Typ W, rechtsschneidend,
≈ 30° Rechtsspirale,
24° Spanwinkel, mit längs-und Quernut nach DIN 138

DIN 1880
HSS-Co5

HSS-Co5



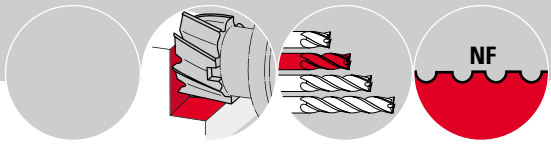
Shell end mills
Type W, right-hand cutting,
≈ 30° right-hand spiral,
rake angle 24°, with driving slot and standard keyway acc. DIN 138

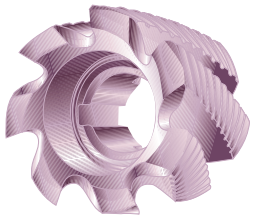
Fraises 2 tailles
Type W, coupe à droite ≈ 30°,
angle de coupe 24°,
avec entraînement par tenon et par clavette selon DIN 138

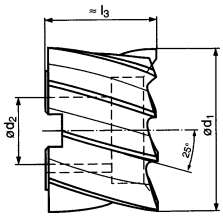
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9563**
Ød1 K_{10}	l_3	$Ød_2$	Z					
40	32	16	6					●
50	36	22	6					●
63	40	27	6					●
80	45	27	6					●
100	50	32	6					●
125	56	40	8					●
160	63	50	10					■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo NF, taglio destro,
≈ 25° elica destra,
12° angolo di spoglia,
con taglio di chiavetta
longitudinale e trasversale
secondo DIN 138

Shell end mills
Type NF, right-hand cutting,
≈ 25° right-hand spiral,
rake angle 12°, with driving slot
and standard keyway acc. DIN 138

Typ NF, rechtsschneidend,
≈ 25° Rechtsspirale,
12° Spanwinkel,
mit längs-und Quernut
nach DIN 138

Fraises 2 tailles cylindriques
Type NF, coupe à droite,
dèlice à droite ≈ 25°, angle de coupe 12°,
avec entraînement par tenon et par
clavette selon DIN 138

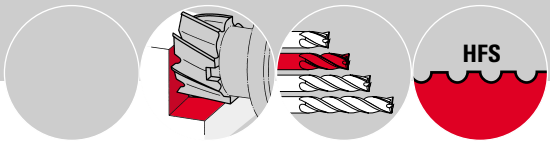
DIN 1880
HSS-Co5

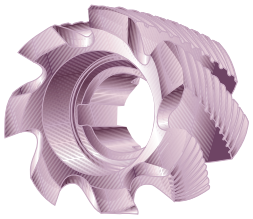
HSS-Co5

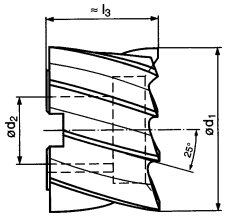
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9565**
Ød1 Js_{14}	l_3	$Ød_2$	Z					
40	32	16	7					●
50	36	22	8					●
63	40	27	8					●
80	45	27	10					●
100	50	32	12					●
125	56	40	12					●
160	63	50	14					■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo HFS, taglio destro, ≈ 25° elica destra, 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Shell end mills
Type HFS, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

Typ HFS, rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel, mit längs - und Quernut nach DIN 138

Fraises 2 tailles cylindriques
Type HFS, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10°, avec entraînement par tenon et par clavette selon DIN 138

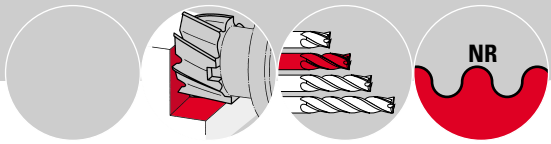
DIN 1880
HSS-Co8

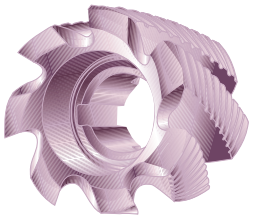
HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

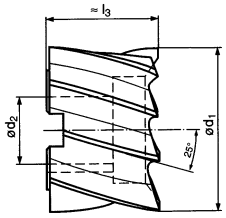
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							**9567**	**9567T**	**9567C**
Ød1 Js_{14}	l_3	$Ød_2$	Z						
40	32	16	7				■	■	
50	36	22	8				■	■	
63	40	27	8				■	■	■
80	45	27	10				■	■	
100	50	32	12				■	■	
125	56	40	12				■	■	
160	63	50	14				■		

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo NR, taglio destro, ≈ 25° elica destra, 14° angolo di spoglia con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Typ NR, rechtsschneidend, ≈ 25° Rechtsspirale, 14° Spanwinkel, mit längs-und Quernut nach DIN 138

DIN 1880
HSS-Co5

HSS-Co5

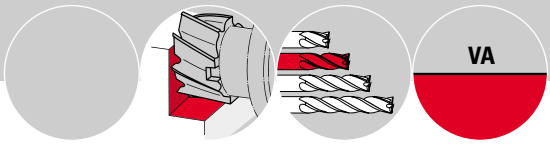
Shell end mills
Type NR, right-hand cutting, ≈ 25° right-hand spiral, rake angle 14°, with driving slot and standard keyway acc. DIN 138

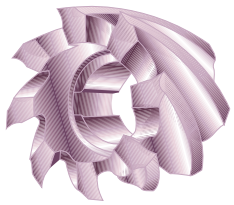
Fraises 2 tailles cylindriques
Type NR, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 14°, avec entraînement par tenon et par clavette selon DIN 138

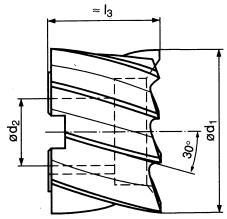
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9571**
Ød1 Js_{14}	l_3	$Ød_2$	Z					
40	32	16	7					●
50	36	22	8					●
63	40	27	8					●
80	45	27	10					●
100	50	32	12					●
125	56	40	12					●
160	63	50	14					■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo VA taglio destro,
≈ 40° elica destra,
16° angolo di spoglia,
con taglio di chiavetta
secondo DIN 138

Shell end mills
Type VA, right-hand cutting,
≈ 40° right-hand spiral,
rake angle 16°, with driving slot and
standard keyway acc. DIN 138

Tye VA, rechtsschneidend,
≈ 40° Rechtsspirale,
16° Spanwinkel, mit längs-und
Quernut nach DIN 138

Fraises 2 tailles
Type VA, coupe à droite,
hèlice à droite ≈ 40°, angle de coupe 16°
avec entraînement par tenon
et par clavette selon DIN 138

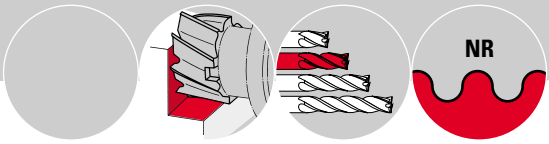
DIN 1880
ASP-60

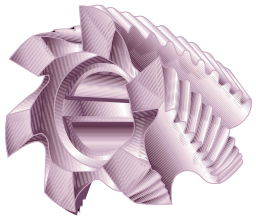
ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

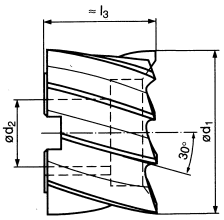
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							9570	9570C	9570F
Ød1 K_{12}	l_3	$Ød_2$	Z						
40	32	16	8				●	●	●
50	36	22	8				●	●	●
63	40	27	8				●	●	●
80	45	27	10				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo NR, taglio destro, ≈ 25° elica destra, 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Shell end mills
Type NR, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

Type NR, rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel, mit längs- und Quernut nach DIN 138

Fraises 2 tailles cylindriques
Type NR, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10°, avec entraînement par tenon et par clavette selon DIN 138

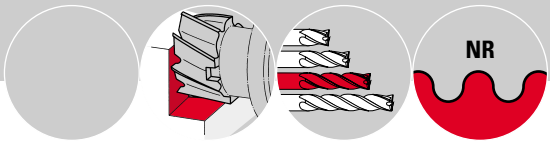
DIN 1880
ASP-60

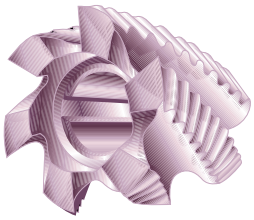
ASP-60
ASP-60 **TiCN**
ASP-60 **TiALN FUTURA®**

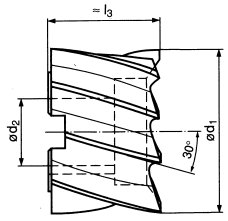
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							9585	9585C	9585F
Ød1 K_{12}	l_3	$Ød_2$	z						
40	32	16	6				●	●	●
50	36	22	8				●	●	●
63	40	27	8				●	●	●
80	45	27	10				●	●	●
100	50	32	10				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo NR, ≈ 25° elica, 14° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Shell end mills
Type NR, right-hand cutting, ≈ 25° right-hand spiral, with driving slot and standard keyway acc. DIN 138

Typ NR, rechtsschneidend, ≈ 25° Rechtsspirale, 14° Spanwinkel, mit längs- und Quernut nach DIN 138

Fraises 2 tailles cylindriques
Type NR, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 14°, avec entraînement par tenon et par clavette selon DIN 138

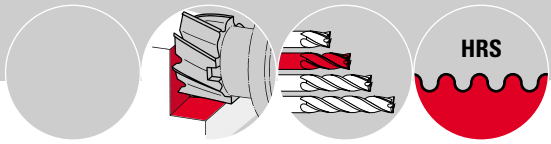
DIN 841
HSS-Co8

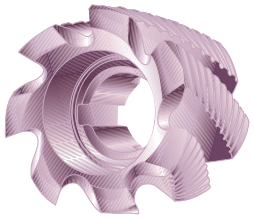
HSS-Co8
HSS-Co8 **TiCN**
HSS-Co8 **TiALN FUTURA®**

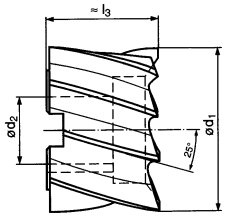
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							**9574**	**9574C**	**9574F**
Ød1 K_{12}	l_3	$Ød_2$	Z						
40	40	16	6				●	●	●
50	50	22	6				●	●	●
60	60	27	8				●	●	●
75	35	27	8				●	●	●
75	75	27	8				●	●	●
90	35	27	8				●	●	●
							●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo HRS, taglio destro, ≈ 25° elica destra, 10° angolo di spoglia, con taglio di chiavetta longitudinale e trasversale secondo DIN 138

Shell end mills
Type HRS, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. DIN 138

Typ HRS, rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel, mit längs-und Quernut nach DIN 138

Fraises 2 tailles cylindriques
Type HRS, coupe à droite, hèlice à droite ≈ 25°, angle de coupe 10°, avec entraînement par tenon et par clavette selon DIN 138

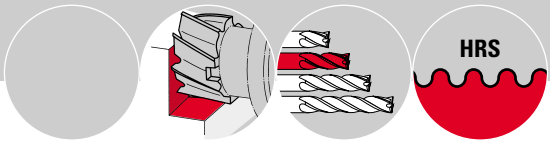
DIN 1880
HSS-Co8

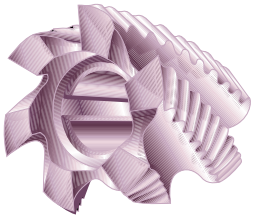
HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

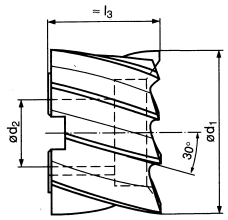
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						**9573**	**9573T**	**9573C**
						HSS-Co8	HSS-Co8 TiN	HSS-Co8 TiCN
Ød1 Js_{14}	l_3	$Ød_2$	Z					
40	32	16	7			■	■	■
50	36	22	8			■	■	■
63	40	27	8			■	■	■
80	45	27	10				■	■
100	50	32	12			■	■	■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese cilindriche frontali
Walzenstirnfräser







Tipo HRS, taglio destro,
≈ 25° elica destra,
10° angolo di spoglia,
con taglio di chiavetta
longitudinale e trasversale
secondo DIN 138

Shell end mills
Type HRS, right-hand cutting,
≈ 25° right-hand spiral, rake angle 10°,
with driving slot and standard keyway
acc. DIN 138

Typ HRS, rechtsschneidend,
≈ 25° Rechtsspirale,
10° Spanwinkel, mit längs-
und Quernut nach DIN 138

Fraises 2 tailles cylindriques
Type HRS, coupe à droite, hèlice à
droite ≈ 25°, angle de coupe 10°,
avec entraînement par tenon
et par clavette selon DIN 138

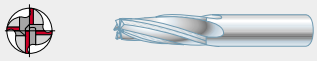
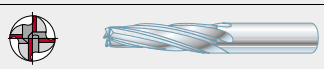
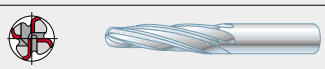
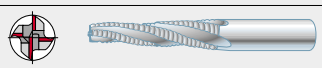
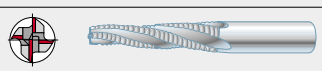
DIN 1880
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						9586	9586C	9586F
Ød1 K_{12}	l_3	$Ød_2$	Z					
40	32	16	6			●	●	●
50	36	22	8			●	●	●
63	40	27	10			●	●	●
80	45	27	10			●	●	●
100	50	32	12			●	●	●

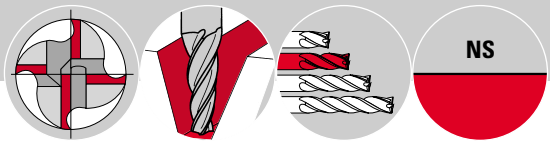
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

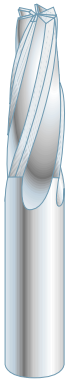
Frese coniche per stampi
Gesenkkegelfräser
Die sinking taper cutters
Fraises coniques pour matrices

DIN	Tipo		Materiale	Conicità				Pag.
IN	NS		HSS-Co8	0.5°	●			122
IN	NS		HSS-Co8	1°	●			123
IN	NS		HSS-Co8	1,5°	●			124
IN	NS		HSS-Co8	2°	●			125
IN	NS		HSS-Co8	3°	●			126
IN	NS		HSS-Co8	4°	●			127
IN	NS		HSS-Co8	5°	●			128
IN	NS		HSS-Co8	6°	●			129
1889	NS		HSS-Co8	1:6 (9°28')	●			130
1889	NS		HSS-Co8	1:10 (5°43')	●			131
1889	NS		HSS-Co8	1:20 (2°52')	●			132
1889	BNS		HSS-Co8	1:10 (5°43')	●			133
1889	BNS		HSS-Co8	1:20 (2°52')	●			134
1889	RS		HSS-Co8	1:6 (9°28')	●			135
1880	RS		HSS-Co8	1:10 (5°43')	●			136
1889	RS		HSS-Co8	1:20 (2°52')	●			137
1889	BRS		HSS-Co8	1:6 (9°28')	●			138
1889	BRS		HSS-Co8	1:10 (5°43')	●			139
1889	BRS		HSS-Co8	1:20 (2°52')	●			140

IN = Illico Norm

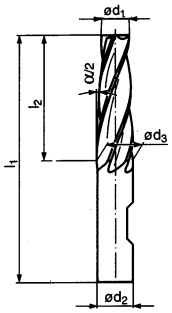
Frese coniche per stampi
Gesenkfräser kegelig





Tipo NS, con testa piatta, con conicità α/2 = 0,5°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 0,5°, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8

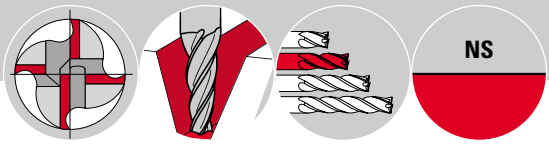
Die-Sinking cutters tapered
Type NS with plane face, with inclination 0,5° with straight shank acc. DIN 1835/1

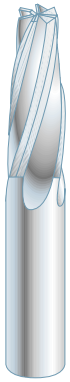
Fraises pour matrices, coniques
Type NS, à bout plan avec inclinaison 0,5°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8501**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
4	4,52	30	75	6	4						●
6	6,70	40	100	8	4						●
8	8,79	45	100	10	4						●
10	10,79	45	100	12	4						●
12	12,79	45	100	12	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

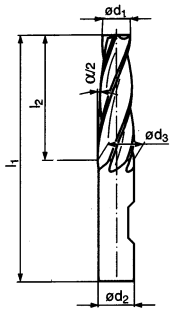
Frese coniche per stampi
Gesenkfräser kegelig





Tipo NS, con testa piatta, con conicità α/2 =1°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 1°, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8

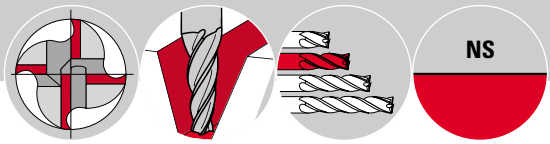
Die-Sinking cutters tapered
Type NS with plane face, with inclination 1° with straight shank acc. DIN 1835/1

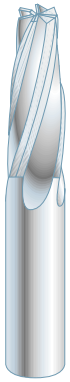
Fraises pour matrices, coniques
Type NS, à bout plan avec inclinaison 1°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8500**
Ød1	$Ød_3$	l_2	l_1	$Ød_2$	Z						
4	5,05	30	75	6	4						●
6	7,4	40	90	8	4						●
6	7,8	50	100	8	4						■
6	8,1	60	110	8	4						●
8	9,4	40	95	10	4						●
8	9,8	50	105	10	4						■
8	10,5	70	125	10	4						●
10	11,4	40	100	12	4						●
10	12,1	60	120	12	4						■
10	12,6	80	140	12	4						●
12	14,1	60	120	12	4						●
12	14,8	80	140	12	4						●
16	18,1	60	125	16	4						●
16	19,5	100	165	20	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese coniche per stampi
Gesenkfräser kegelig



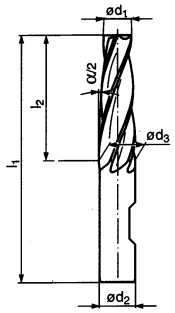


Tipo NS, con testa piatta, con conicità α/2 = 1,5°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 1,5°, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, tapered
Type NS, with plane face, with inclination 1,5°, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 1,5°, avec queue cylindrique selon DIN 1835/1



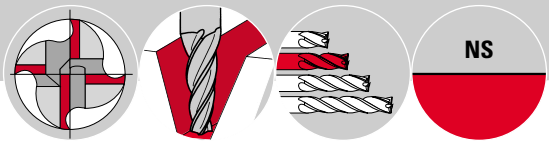
ILLICO NORM
HSS-Co8

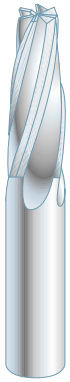
HSS-Co8

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8503**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
6	7,98	35	100	8	4						●
8	10,36	45	100	12	4						●
10	12,88	55	120	12	4						●
12	15,14	60	120	16	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

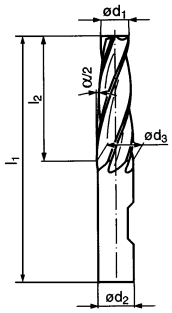
Frese coniche per stampi
Gesenkfräser kegelig





Tipo NS, con testa piatta, con conicità α/2 = 2°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 2°, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8

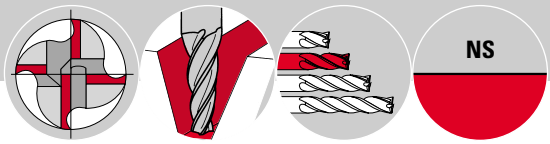
Die-sinking cutters, tapered
Type NS, with plane face, with inclination 2°, with straight shank acc. DIN 1835/1

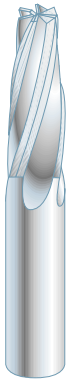
Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 2°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8504**
Ød1	$Ød_3$	l_2	l_1	$Ød_2$	Z						
6	8,8	40	90	8	4						●
6	9,5	50	100	8	4						■
6	10,2	60	115	10	4						●
8	10,8	40	95	10	4						●
8	12,9	70	130	12	4						●
10	12,8	40	100	12	4						●
10	15,7	80	145	16	4						●
12	16,2	60	125	16	4						●
12	17,7	80	145	16	4						●
16	20,2	60	125	20	4						●
16	23,0	100	165	20	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese coniche per stampi
Gesenkfräser kegelig



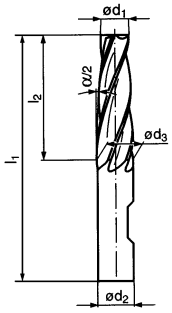


Tipo NS, con testa piatta, con conicità α/2 = 3°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 3°, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, tapered
Type NS, with plane face, with inclination 3°, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 3°,avec queue cylindrique selon DIN 1835/1



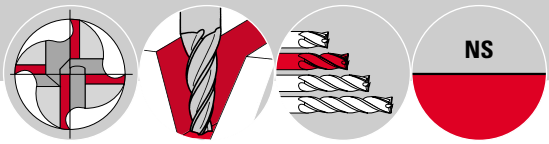
ILLICO NORM
HSS-Co8

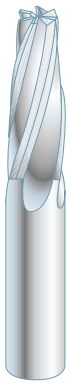
HSS-Co8

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8508**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
6	10,2	40	95	10	4						●
6	11,2	50	105	10	4						■
6	12,3	60	120	12	4						●
8	12,2	40	100	12	4						●
8	15,3	70	135	16	4						●
10	14,2	40	100	12	4						●
10	18,4	80	145	16	4						■
12	18,3	60	125	16	4						●
12	20,4	80	145	20	4						●
16	22,3	60	125	20	4						●
16	26,5	100	170	25	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese coniche per stampi
Gesenkfräser kegelig



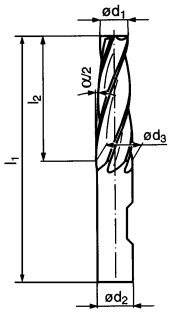


Tipo NS, con testa piatta, con conicità α/2 = 4°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 4°, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, tapered
Type NS, with plane face, with inclination 4°, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 4°, avec queue cylindrique selon DIN 1835/1



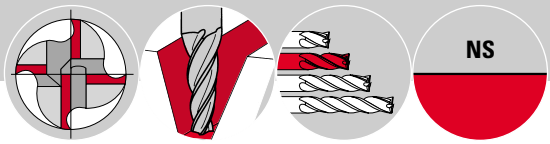
ILLICO NORM
HSS-Co8

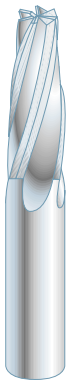
HSS-Co8

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8512**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
6	11,6	40	100	12	4						●
6	13,0	50	110	12	4						■
6	14,4	60	120	12	4						●
8	13,6	40	100	12	4						●
8	15,0	50	115	16	4						■
8	17,8	70	135	16	4						●
10	15,6	40	105	16	4						●
10	18,4	60	125	16	4						■
10	21,2	80	145	20	4						●
12	20,4	60	125	20	4						●
12	23,2	80	145	20	4						●
16	24,4	60	130	25	6						●
16	30,0	100	170	25	6						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

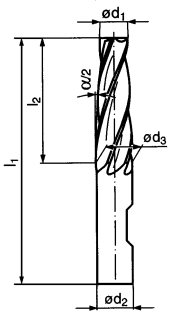
Frese coniche per stampi
Gesenkfräser kegelig





Tipo NS, con testa piatta, con conicità α/2 = 5°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 5°, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8

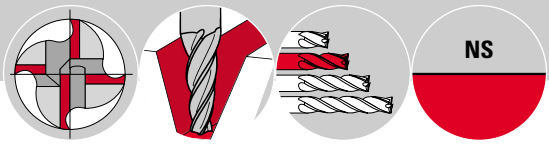
Die-sinking cutters, tapered
Type NS, with plane face, with inclination 5°, with straight shank acc. DIN 1835/1

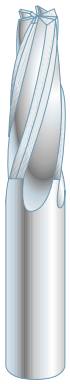
Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 5°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8516**
Ød1	Ød3	l2	l1	Ød2	Z						
6	13,0	40	100	12	4						●
6	14,8	50	110	12	4						■
6	16,5	60	125	16	4						●
8	15,0	40	105	16	4						●
8	20,3	70	135	20	4						●
10	17,0	40	105	16	4						●
10	20,5	60	125	20	4						■
10	24,0	80	150	25	4						●
12	22,5	60	125	20	4						●
12	26,0	80	150	25	6						●
16	26,5	60	130	25	6						●
16	33,5	100	175	32	6						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

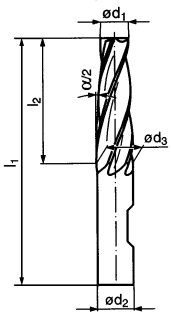
Frese coniche per stampi
Gesenkfräser kegelig





Tipo NS, con testa piatta, con conicità α/2 = 6°, con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 6°, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8

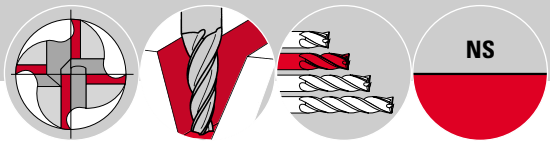
Die-sinking cutters, tapered
Type NS, with plane face,
with inclination 6°,
with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type NS, à bout plat,
avec inclinaison 6°, avec queue
cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8520**
Ød1	$Ød_3$	l_2	l_1	$Ød_2$	Z						
6	16,5	50	115	16	4						●
6	18,6	60	125	16	4						■
8	16,4	40	105	16	4						■
8	18,5	50	115	16	4						●
8	22,7	70	135	20	4						■
10	18,4	40	105	16	4						●
10	22,6	60	125	20	4						●
10	26,8	80	150	25	4						●
12	24,6	60	130	25	4						●
12	28,8	80	150	25	4						●
16	28,5	60	130	25	6						■
16	37,0	100	175	32	6						●

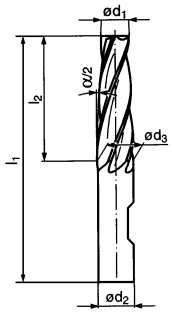
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese coniche per stampi
Gesenkfräser kegelig



Tipo NS, con testa piatta, con conicità α/2 = 1:6 (9°28'), con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 1:6, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

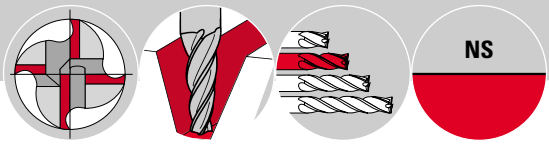
Die-sinking cutters, tapered
Type NS, with plane face, with inclination 1:6, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 1:6, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8524**
Ød1	$Ød_3$	l_2	l_1	$Ød_2$	z						
2,5	13	31,5	85	12	3						●
4	16	36	93	16	4						●
6	20	42	106	20	4						●
8	25	50	120	25	4						●
12	33	63	135	32	4						●

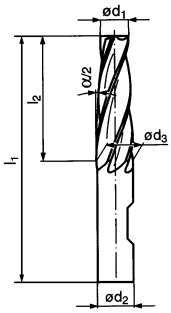
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese coniche per stampi
Gesenkfräser kegelig



Tipo NS, con testa piatta, con conicità α/2 = 1:10 (5°43'), con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 1:10, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

Hss-Co8

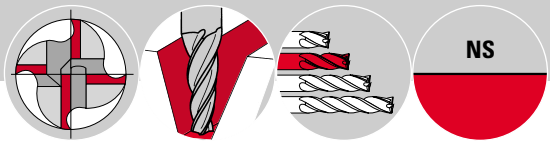
Die-sinking cutters, tapered
Type NS, with plane face, with inclination 1:10, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type NS, à bout plat, avec inclinaison 1:10, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8528**
Ød1	$Ød_3$	l_2	l_1	$Ød_2$	Z						
2,5	10	37,5	85	10	3						●
4▲	12	40	90	12	4						●
4	16,6	63	125	16	4						●
6	14	40	95	12	4						●
6	18,6	63	125	16	4						●
8	17	45	103	16	4						●
8	22,2	71	135	20	4						●
12	21	45	106	20	4						●
12	26,2	71	140	25	4						●
16	26	50	120	25	4						●

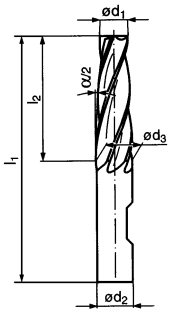
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese coniche per stampi
Gesenkfräser kegelig



Tipo NS, con testa piatta, con conicità α/2 = 1: 20 (2°52'), con codolo cilindrico secondo DIN 1835/1

Typ NS, mit flacher Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

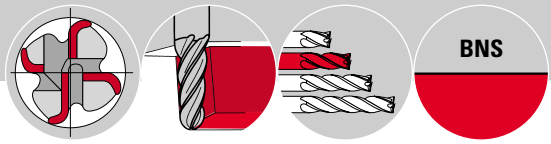
Die-sinking cutters, tapered
Type NS, with plane face,
with inclination 1:20,
with straight shank acc. DIN 1835/1

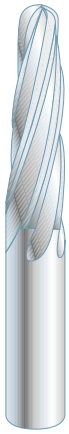
Fraises pour matrices, coniques
Type NS, à bout plat,
avec inclinaison 1: 20, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											8532
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
4	8	40	90	8	3						●
6	10	40	95	10	4						●
6	12,3	63	115	10	4						●
8	12,5	45	105	12	4						●
8	16	80	138	16	4						■
12	17	50	109	16	4						●
12	20	80	140	20	4						●
16	21,6	56	120	20	4						●
16	25	90	160	25	6						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

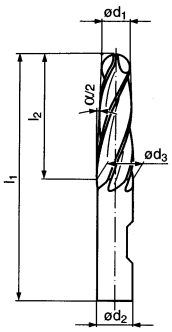
Frese coniche per stampi
Gesenkfräser kegelig





Tipo BNS, con testa raggiata, con conicità α/2 = 1: 10 (5°43'), con codolo cilindrico secondo DIN 1835/1

Typ BNS, mit runder Stirn, mit Neigung 1:10, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

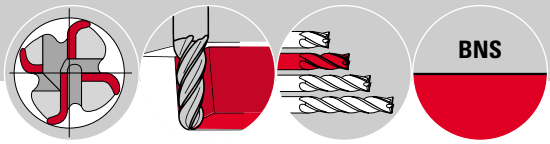
Die-sinking cutters, tapered
Type BNS, with ball nose, with inclination 1:10, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type BNS, à bout hèmisphèrique, avec inclinaison 1:10, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8540**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
6	18,6	63	125	16	4						■
8	17	45	103	16	4						■
8	22,2	71	135	20	4						■
12	21	45	106	20	4						■
12	26,2	71	140	25	4						■
16	26	50	120	25	6						■

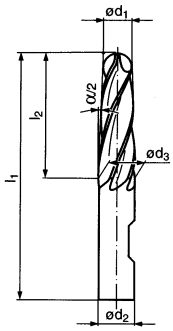
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese coniche per stampi
Gesenkfräser kegelig



Tipo BNS, con testa raggiata, con conicità α/2 = 1: 20 (2°52'), con codolo cilindrico secondo DIN 1835/1

Typ BNS, mit runder Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

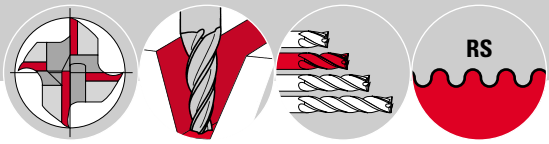
Die-sinking cutters, tapered
Type BNS, with ball nose, with inclination 1:20, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type BNS, à bout hémisphérique, avec inclinaison 1:20, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8544**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
6	12,3	63	115	10	4						■
8	12,5	45	105	12	4						■
8	16	80	138	16	4						■
12	17	50	109	16	4						■
12	20	80	140	20	4						■
16	21,6	56	120	20	4						■
16	25	90	160	25	6						■
20	26,3	63	135	25	6						■
20	30	100	170	25	6						■

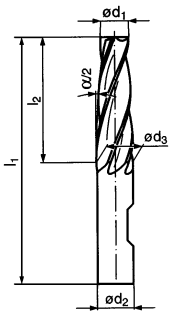
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese coniche per stampi
Gesenkfräser kegelig



Tipo RS, con testa piatta, con conicità α/2 = 1:6 (9°28'), con codolo cilindrico secondo DIN 1835/1

Typ RS, mit flacher Stirn, mit Neigung 1:6, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

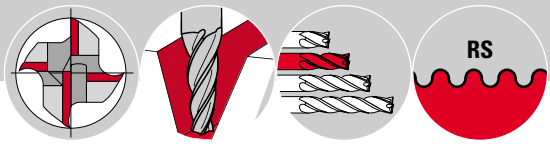
Die-sinking cutters, tapered
Type RS, with plane face, with inclination 1:6, with straight shank acc. DIN 1835/1

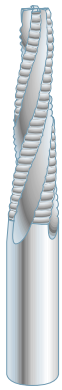
Fraises pour matrices, coniques
Type RS, à bout plat, avec inclinaison 1:6, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8548**
Ød1	$Ød_3$	l_2	l_1	$Ød_2$	Z						
8	25	50	120	25	4						●
12	33	63	135	32	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

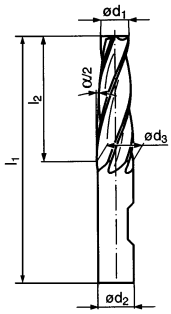
Frese coniche per stampi
Gesenkfräser kegelig





Tipo RS, con testa piatta, con conicità α/2 = 1:10 (5°43'), con codolo cilindrico secondo DIN 1835/1

Typ RS, mit flacher Stirn, mit Neigung 1:10, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

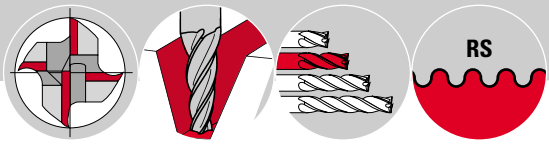
Die-sinking cutters, tapered
Type RS, with plane face, with inclination 1:10, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type RS, à bout plat, avec inclinaison 1:10, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											8552
Ød1	Ød3	l2	l1	Ød2	Z						
8	17	45	103	16	4						●
8	22,2	71	135	20	4						●
12	21	45	106	20	4						●
12	26,2	71	140	25	4						●
16	26	50	120	25	6						●

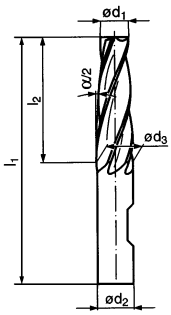
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese coniche per stampi
Gesenkfräser kegelig



Tipo RS, con testa piatta, con conicità α/2 = 1:20 (2°52'), con codolo cilindrico secondo DIN 1835/1

Typ RS, mit flacher Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

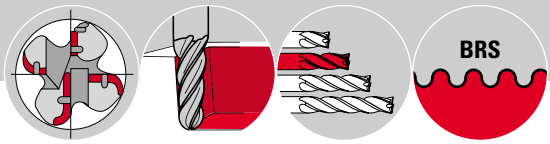
Die-sinking cutters, tapered
Type RS, with plane face, with inclination 1:20, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type RS, à bout plat, avec inclinaison 1:20, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8556**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
8	12,5	45	105	12	4						●
8	16	80	138	16	4						●
12	17	50	109	16	4						●
12	20	80	140	20	4						●
16	21,6	56	120	20	4						●
16	25	90	160	25	4						●
20	26,3	63	135	25	5						●
20	30	100	170	25	5						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese coniche per stampi
Gesenkfräser kegelig

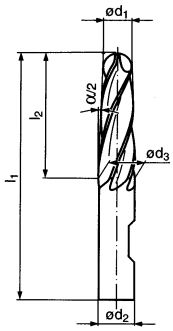


Tipo BRS, con testa raggiata, con conicità α/2 = 1:6 (9°28'), con codolo cilindrico secondo DIN 1835/1

Typ BRS, mit flacher Stirn, mit Neigung 1:6, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, tapered
Type BRS, with ball nose, with inclination 1:6, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type BRS, à bout hemispherique, avec inclinaison 1:6, avec queue cylindrique selon DIN 1835/1



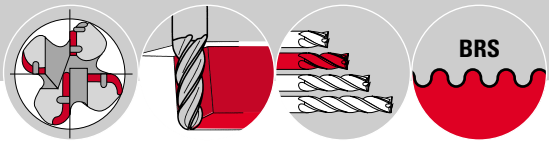
DIN 1889
HSS-Co8

Hss-Co8

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8560**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
8	25	50	120	25	4						●
12	33	63	135	32	4						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese coniche per stampi
Gesenkfräser kegelig

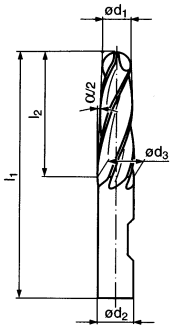


Tipo BRS, con testa raggiata, con conicità α/2 = 1:10 (5°43'), con codolo cilindrico secondo DIN 1835/1

Typ BRS, mit runder Stirn, mit Neigung 1:10, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, tapered
Type BRS, with ball nose, with inclination 1:10, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type BRS, à bout hèmisphèrique, avec inclinaison 1:10, avec queue cylindrique selon DIN 1835/1



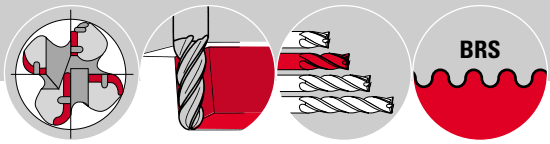
DIN 1889
HSS-Co8

HSS-Co8

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8564**
Ød1	Ød3	l2	l1	Ød2	Z						
8	17	45	103	16	4						●
8	22,2	71	135	20	4						●
12	21	45	106	20	4						●
12	26,2	71	140	25	4						●
16	26	50	120	25	4						●

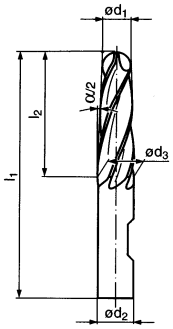
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese coniche per stampi
Gesenkfräser kegelig



Tipo BRS, con testa raggiata, con conicità α/2 = 1:20 (2°52'), con codolo cilindrico secondo DIN 1835/1

Typ BRS, mit runder Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8

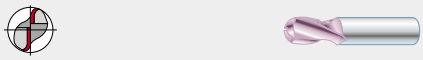
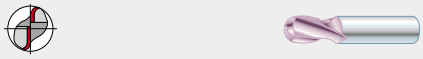
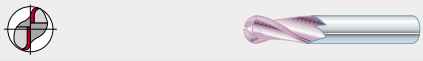
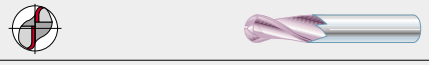
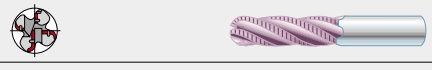
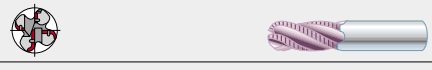
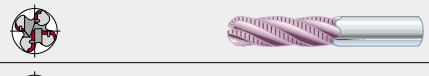
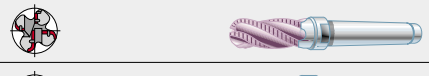
Die-sinking cutters, tapered
Type BRS, with ball nose, with inclination 1:20, with straight shank acc. DIN 1835/1

Fraises pour matrices, coniques
Type BRS, à bout hémisphérique, avec inclinaison 1:20, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**8568**
Ød1	Ød$_3$	l$_2$	l$_1$	Ød$_2$	Z						
8	12,5	45	105	12	4						●
8	16	80	138	16	4						●
12	17	50	109	16	4						●
12	20	80	140	20	4						●
16	21,6	56	120	20	4						●
16	25	90	160	25	5						●
20	26,3	63	135	25	5						●
20	30	100	170	25	5						●

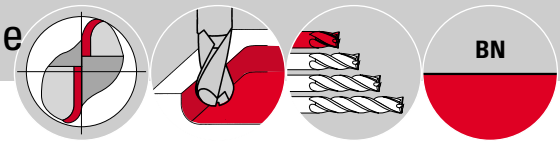
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese a testa semisferica
Radiusschaftfräser
Ball nose cutters
Fraises à bout hémisphérique

DIN	Tipo		Materiale	Rivestimento TiN	TiCN	TiALN FUTURA®					Pag.
IN	BN		HSS-Co8	●			●	●	●		142
IN	BN		ASP-60	●			●				143
IN	BN		HSS-Co8	●			●	●			144
IN	BN		ASP-60	●			●				145
IN New	BN		ASP-60			●			●		146
IN New	BN		ASP-60			●			●		147
1889	BN		HSS-Co8	●			●				148
1889	BN		ASP-60	●			●				149
1889	BN		HSS-Co8	●			●				150
1889 New	BN		ASP-60			●			●		151
1889	BN		ASP-60	●			●				152
1889D	BN		HSS-Co8	●						●	153
1889D	BN		HSS-Co8	●						●	154
1889	BNR		HSS-Co8	●			●				155
1889	BNR		ASP-60	●			●				156
1889	BNR		HSS-Co8	●			●				157
1889 New	BNR		ASP-60			●	●		●		158
1889	BNR		ASP-60	●			●				159
1889D	BNR		HSS-Co8	●						●	160
1889D	BNR		HSS-Co8	●						●	161

IN = Illico Norm

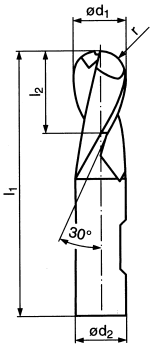
Frese semisferiche a 2 taglienti, serie extra corta
Radiusschaftfräser 2 - Schneiden extra kurze



4202

Tipo BN, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
(similare a DIN 327)

HSS-Co8

- HSS-Co8
- HSS-Co8 **TiN**
- HSS-Co8 **TiCN**
- HSS-Co8 **TiALN FUTURA®**

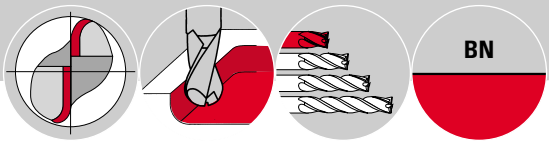
Ball nose cutters, 2-fluted, extra short series
Type BN, helix angle ≈ 30°, rake angle 10°, witht straight shank acc. DIN 1835/1

Fraises à bout hèmisphèrique 2 dents, sèrie extra courte
Type BN, angle d'hèlice 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.						4200	4200T	4200C	4200F	4201	4201C
Ød1 h_{10}	r	l_2	l_1	$Ød_2$	Z						
2	1	4	48	6	2	●	●	●	●	●	●
3	1,5	5	49	6	2	●	●	●	●	●	●
4	2	7	51	6	2	●	●	●	●	●	●
5	2,5	8	52	6	2	●	●	●	●	●	●
6	3	8	52	6	2	●	●	●	●	●	●
7	3,5	10	60	10	2	●	●	●	●	●	●
8	4	11	61	10	2	●	●	●	●	●	●
9	4,5	11	61	10	2	●	●	●	●	●	●
10	5	13	63	10	2	●	●	●	●	●	●
11	5,5	13	70	12	2	●	●	●	●	●	●
12	6	16	73	12	2	●	●	●	●	●	●
13	6,5	16	73	12	2	●	●	●	●	●	●
14	7	16	73	12	2	●	●	●	●	●	●
15	7,5	16	73	12	2	●	●	●	●	●	●
16	8	19	79	16	2	●	●	●	●	●	●
18	9	19	79	16	2	●	●	●	●	●	●
20	10	22	88	20	2	●	●	●	●	●	●
22	11	22	88	20	2	●	●	●	●	●	●
24	12	26	102	25	2	●	●	●	●	●	●
25	12,5	26	102	25	2	●	●	●	●	●	●
26	13	26	102	25	2	●	●	●	●	●	●
28	14	26	102	25	2	●	●	●	●	●	●
30	15	26	102	25	2	●	●	●	●	●	●

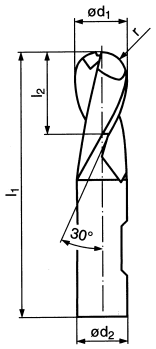
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese semisferiche a 2 taglienti, serie extra corta
Radiusschaftfräser 2 - Schneiden extra kurz



Tipo BN, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
(similare a DIN 327)
ASP-60

- ASP-60
- ASP-60 TiN
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

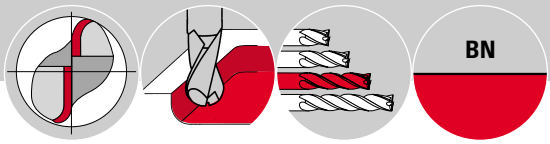
Ball nose cutters, 2 fluted, extra short series
Type BN, helix angle ≈ 30°, rake angle 10°, with straight shank acc. DIN 1835/1

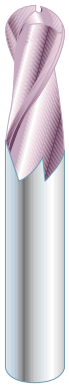
Fraises à bout hèmisphèrique 2 dents, sèrie extra courte
Type BN, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4220	4220T	4220C	4220F
Ød1 h_{10}	r	l_2	l_1	$Ød_2$	Z						
2	1	4	48	6	2			●	●	●	●
3	1,5	5	49	6	2			●	●	●	●
4	2	7	51	6	2			●	●	●	●
5	2,5	8	52	6	2			●	●	●	●
6	3	8	52	6	2			●	●	●	●
7	3,5	10	60	10	2			●	●	●	●
8	4	11	61	10	2			●	●	●	●
9	4,5	11	61	10	2			●	●	●	●
10	5	13	63	12	2			●	●	●	●
11	5,5	13	70	12	2			●	●	●	●
12	6	16	73	12	2			●	●	●	●
13	6,5	16	73	12	2			●	●	●	●
14	7	16	73	12	2			●	●	●	●
15	7,5	16	73	12	2			●	●	●	●
16	8	19	79	16	2			●	●	●	●
18	9	19	79	16	2			●	●	●	●
20	10	22	88	20	2			●	●	●	●
22	11	22	88	20	2			●	●	●	●
24	12	26	102	25	2			●	●	●	●
25	12,5	26	102	25	2			●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

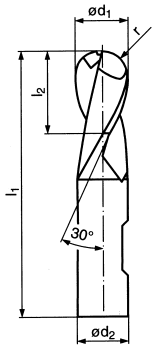
Frese semisferiche a 2 taglienti, serie lunga
Radiusschaftfräser 2 - Schneiden lang





Tipo BN, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



ILLICO NORM
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

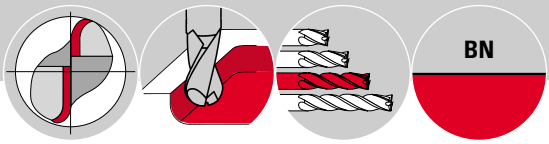
Ball nose cutters, 2-fluted, long series
Type BN, helix angle ≈ 30°, rake angle 10°, with straight shank acc. DIN 1835/1

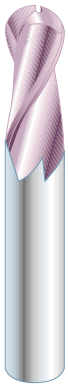
Fraises à bout hèmisphèrique 2 dents, sèrie longue
Type BN, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								4204	4204T	4204C	4206
Ød1 h_{10}	r	l_2	l_1	Ød$_2$	z						
3	1,5	8	56	6	2			●	●	●	●
4	2	11	63	6	2			●	●	●	●
5	2,5	13	68	6	2			●	●	●	●
5	3	13	68	6	2			●	●	●	●
7	3,5	16	80	10	2			●	●	●	●
8	4	19	88	10	2			●	●	●	●
9	4,5	22	88	10	2			●	●	●	●
10	5	22	95	10	2			●	●	●	●
11	5,5	26	102	12	2			●	●	●	●
12	6	26	110	12	2			●	●	●	●
13	6,5	26	110	12	2			●	●	●	●
14	7	26	110	12	2			●	●	●	●
15	7,5	26	110	12	2			●	●	●	●
16	8	32	123	16	2			●	●	●	●
18	9	32	123	16	2			●	●	●	●
20	10	38	141	20	2			●	●	●	●
22	11	38	141	20	2			●	●	●	●
24	12	45	166	25	2			●	●	●	●
25	12,5	45	166	25	2			●	●	●	●
30	15	45	166	25	2			●	●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese semisferiche a 2 taglienti, serie lunga
Radiusschaftfräser 2-Schneiden lang



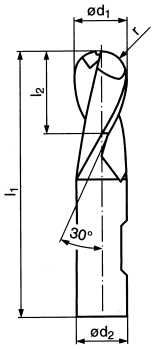


Tipo BN, ≈ 30° elica, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, mit Zylindereshaft nach DIN 1835/1

Ball nose cutter 2-fluted, long series
Type BN, helix angle ≈ 30°,
with straight shank acc. DIN 1835/1

Fraises à bout hémisphérique, 2 dents, série longue
Type BN, angle d'hèlice ≈ 30°,
avec queue cylindrique selon DIN 1835/1



ILLICO NORM ASP-60

ASP-60

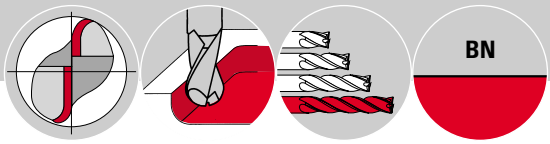
ASP-60 TiN

ASP-60 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4224	4224T	4224C
Ød1 h_{10}	r	l_2	l_1	$Ød_2$	Z						
3	1,5	8	56	6	2				●	●	●
4	2	11	63	6	2				●	●	●
5	2,5	13	68	6	2				●	●	●
6	3	13	68	6	2				●	●	●
7	3,5	16	80	10	2				●	●	●
8	4	19	88	10	2				●	●	●
9	4,5	19	88	10	2				●	●	●
10	5	22	95	10	2				●	●	●
11	5,5	22	102	12	2				●	●	●
12	6	26	110	12	2				●	●	●
13	6,5	26	110	12	2				●	●	●
14	7	26	110	12	2				●	●	●
15	7,5	26	110	12	2				●	●	●
16	8	32	123	16	2				●	●	●
18	9	32	123	16	2				●	●	●
20	10	38	141	20	2				●	●	●
22	11	38	141	20	2				●	●	●
24	12	45	166	25	2				●	●	●
25	12,5	45	166	25	2				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese semisferiche a 2 taglienti, serie extra lunga
Radiusschaftfräser 2-Schneiden extra lang

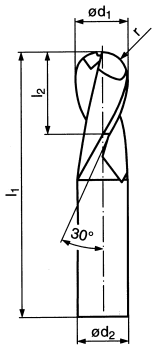


Tipo BN, ≈ 30° elica, con codolo cilindrico secondo DIN 1835A

Typ BN, ≈ 30° Drallwinkel, mit Zylindershaft nach DIN 1835A

Ball nose end mills 2-fluted, long top series
Type BN, helix angle ≈ 30°, with straight shank acc. DIN 1835A

Fraises à bout hémisphérique, 2 dents, série longue top
Type BN, angle d'hèlice ≈ 30°, avec queue cylindrique selon DIN 1835A



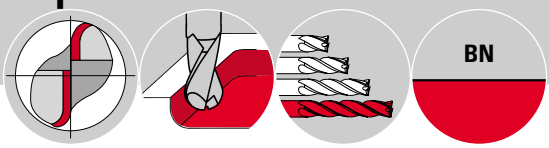
ILLICO NORM ASP-60

- ASP-60
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4439	4439C	4439F
Ød1	r	l_2	l_1	$Ød_2$ h6	Z						
4	2	30	80	8	2				●	●	●
5	2,5	30	80	8	2				●	●	●
6	3	50	100	8	2				●	●	●
8	4	50	100	8	2				●	●	●
10	5	50	100	10	2				●	●	●
16	8	50	100	16	2				●	●	●
20	10	50	100	20	2				●	●	●
30	15	50	100	20	2				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese semisferiche a 2 taglienti, serie extra lunga top
Radiusschaftfräser 2-Schneiden top extra lang

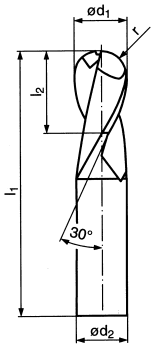


Tipo BN, ≈ 30° elica, con codolo cilindrico secondo DIN 1835A

Typ BN, ≈ 30° Drallwinkel, mit Zylindershaft nach DIN 1835A

Ball nose end mills 2-fluted, extra long series
Type BN, helix angle ≈ 30°, with straight shank acc. DIN 1835A

Fraises à bout hémisphérique, 2 dents, série extra longue
Type BN, angle d'hèlice ≈ 30°, avec queue cylindrique selon DIN 1835A



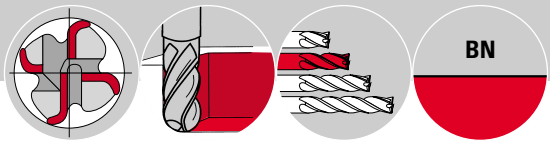
ILLICO NORM
ASP-60

- ASP-60
- ASP-60 TiCN
- ASP-60 TiALN FUTURA®

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4493	4493C	4493F
Ød1	r	l_2	l_1	$Ød_2$ h6	Z						
4	2	30	130	8	2				●	●	●
5	2,5	30	130	8	2				●	●	●
6	3	50	150	8	2				●	●	●
8	4	50	150	8	2				●	●	●
10	5	50	150	10	2				●	●	●
16	8	100	200	16	2				●	●	●
20	10	100	200	20	2				●	●	●
30	15	100	200	20	2				●	●	●

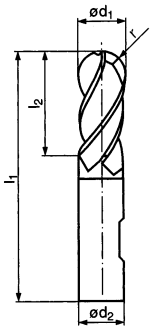
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



Tipo BN, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

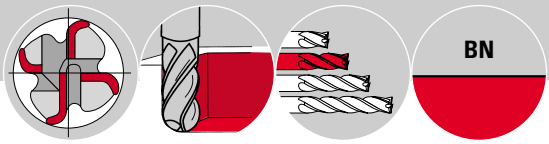
Die-sinking cutters, short series, cylindrical
Type BN, helix angle ≈ 30°, rake angle 6°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série courte
Type BN, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4438	4438T	4438C
Ød1	r	l_2	l_1	$Ød_2$	Z						
6	3	13	57	6	4				●	●	●
8	4	19	69	10	4				●	●	●
10	5	22	72	10	4				●	●	●
12	6	26	83	12	4				●	●	●
16	8	32	92	16	4				●	●	●
20	10	38	104	20	4				●	●	●
25	12,5	45	121	25	5				●	●	●
32	16	53	133	32	6				●	●	●
40	20	63	155	40	6				●	●	●

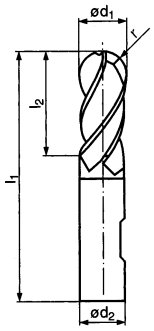
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



Tipo BN ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 1889
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

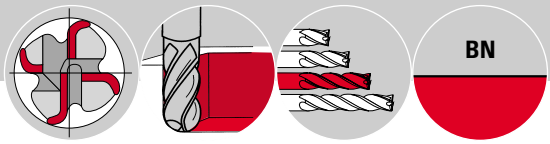
Die-sinking cutters, short series, cylindrical,
Type BN, helix angle ≈ 30°, rake angle 6°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série courte
Type BN, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**4488**	**4488T**	**4488C**
Ød1	r	l_2	l_1	$Ød_2$	Z						
6	3	13	57	6	4				●	●	●
8	4	19	69	10	4				●	●	●
10	5	22	72	10	4				●	●	●
12	6	26	83	12	4				●	●	●
16	8	32	92	16	4				●	●	●
20	10	38	104	20	4				●	●	●
25	12,5	45	121	25	5				●	●	●
32	16	53	133	32	6				●	●	●
40	20	63	155	40	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie lunga
Gesenkfräser lang zylindrisch

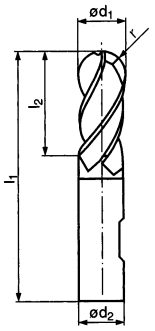


tipo BN ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, long series, cylindrical,
Type BN, helix angle 30°, rake angle 6°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série longue,
Type BN, angle d'dèlice ≈ 30°, angle de coope 6°, avec queue cylindrique selon DIN 1835/1



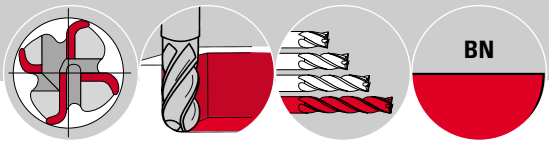
DIN 1889
HSS-Co8

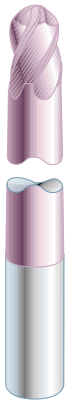
HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4442	4442T	4442C
Ød1	r	l_2	l_1	$Ød_2$	Z						
6▲	3	24	68	6	4				●	●	●
8▲	4	38	88	10	4				●	●	●
10	5	45	95	10	4				●	●	●
12	6	53	110	12	4				●	●	●
16	8	63	123	16	4				●	●	●
20	10	75	141	20	4				●	●	●
25	12,5	90	166	25	5				●	●	●
32	16	106	186	32	6				●	●	●
40	20	125	217	40	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

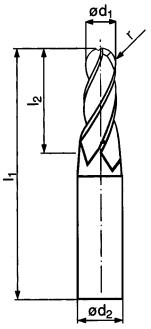
Frese per stampi a più taglienti, serie extra lunga
Gesenkfräser extra lang zylindrisch





Tipo BN ≈ 30° elica, con codolo cilindrico secondo DIN 1835A

Typ BN, ≈ 30° Drallwinkel, mit Zylindershaft nach DIN 1835A



DIN 1889
ASP-60

ASP-60

ASP-60 TiCN

ASP-60 TiALN FUTURA®

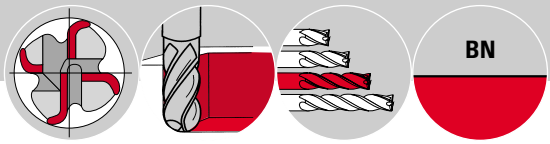
Die-sinking cutters, extra long series, cylindrical
Type BN, helix angle 30°, with straight shank acc. DIN 1835A

Fraises pour matrices, série extra longue
Type BN, angle d'helice ≈ 30°, avec queue cylindrique selon DIN 1835A

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										4495	4495C	4495F
Ød1 ±0,02	r	l_2	l_3	l_1	$Ød_2$ h6	Z						
4	2	4,8	124	160	8	4				●	●	●
6	3	7,2	120	160	10	4				●	●	●
8	4	9,6	115	160	12	4				●	●	●
10	5	12	115	160	12	4				●	●	●
12	6	14,4	152	200	16	4				●	●	●
16	8	19,2	150	200	20	4				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie lunga
Gesenkfräser lang zylindrisch

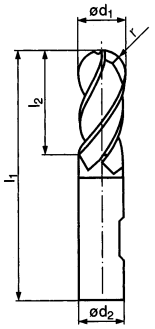


Tipo BN ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BN, ≈ 30° Drallwinkel, 6° Spanwinkel, mit Zylindershaft nach DIN 1835/1

Die-sinking cutters, long series, cylindrical
Type BN, helix angle 30°, rake angle 6°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série longue
Type BN, angle d'hèlice ≈ 30°, angle de coupe 6°, avec queue cylindrique selon DIN 1835/1



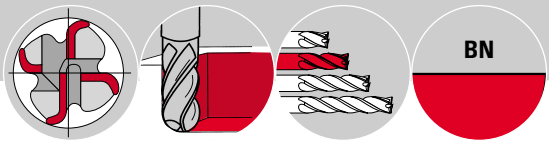
DIN 1889
ASP-60

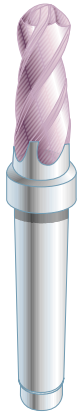
ASP-60
ASP-60 **TiN**
ASP-60 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									4492	4492T	4492C
Ød1	r	l_2	l_1	$Ød_2$	Z						
6▲	3	24	68	6	4				●	●	●
8▲	4	38	88	10	4				●	●	●
10	5	45	95	10	4				●	●	●
12	6	53	110	12	4				●	●	●
16	8	63	123	16	4				●	●	●
20	10	75	141	20	4				●	●	●
25	12,5	90	166	25	5				●	●	●
32	16	106	186	32	6				●	●	●
40	20	125	217	40	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



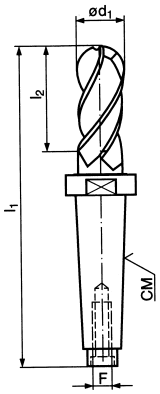


Tipo BN,
con codolo conico Morse
secondo DIN 228/1

Typ BN,
mit Morsekegelschaft
nach DIN 228/1

Die-sinking cutters, short series, cylindrical,
Type BN, with Morse taper shank
acc. DIN 228/1

Fraises pour matrices, série courte, cylindriques,
Type BN, avec queue cône Morse
selon DIN 228/1



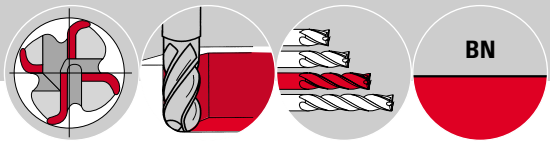
DIN 1889D
HSS-Co8

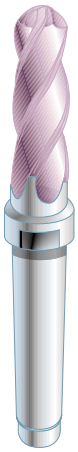
HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**4446**	**4446T**	**4446C**
Ød1	l_2	l_1	CM	F	Z						
10	22	92	1	M 6	4				●	●	●
12	26	96	1	M 6	4				●	●	●
16	32	117	2	M 10	4				●	●	●
20	38	123	2	M 10	4				●	●	●
25	45	147	3	M 12	6				●	●	●
32*	53	201	4	M 16	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese per stampi a più taglienti, serie lunga
Gesenkfräser lang zylindrisch



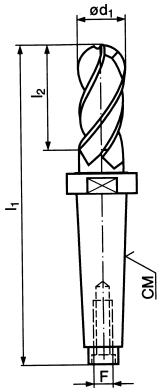


Tipo BN,
con codolo conico Morse
secondo DIN 228/1

Typ BN,
mit Morsekegelschaft
nach DIN 228/1

Die-sinking cutters, long series, cylindrical
Type BN, with Morse taper shank
acc. DIN 228/1

Fraises pour matrices, série longue, cylindriques
Type BN, avec queue cône Morse
selon DIN 228/1



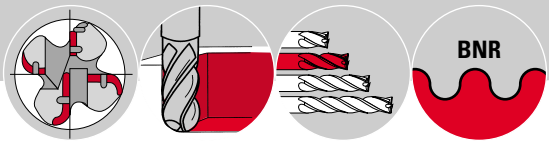
DIN 1889D
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**4448**	**4448T**	**4448C**
Ød1	l_2	l_1	CM	F	Z						
10	45	115	1	M 6	4				●	●	●
12	53	123	1	M 6	4				●	●	●
16	63	148	2	M10	4				●	●	●
20	75	160	2	M10	4				●	●	●
25	90	192	3	M12	6				●	●	●

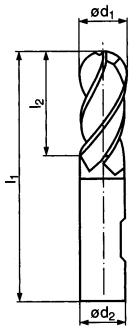
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



Tipo BNR ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BNR, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**
HSS-Co8 **TiALN FUTURA®**

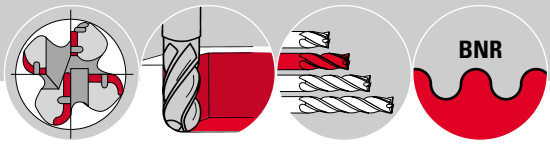
Die-sinking cutters, short series, cylindrical,
Type BNR, helix angle ≈ 30°, rake angle 10°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série courte, cylindriques,
Type BNR, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							7426	7426T	7426C	7426F
Ød1	l_2	l_1	$Ød_2$	Z						
6	13	57	6	4			●	●	●	●
8	19	69	10	4			●	●	●	●
10	22	72	10	4			●	●	●	●
12	26	83	12	4			●	●	●	●
16	32	92	16	4			●	●	●	●
20	38	104	20	4			●	●	●	●
25	45	121	25	4			●	●	●	●
32	53	133	32	6			●	●	●	●
40	63	155	40	6			●	●	●	

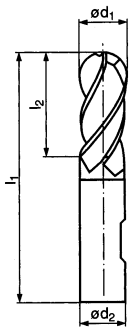
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



Tipo BNR ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BNR, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 1889
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

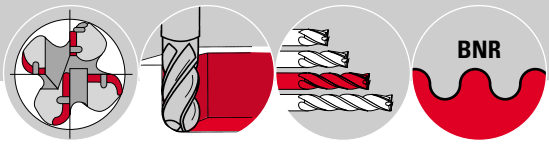
Die-sinking cutters, short series, cylindrical,
Type BNR, helix angle ≈ 30°, rake angle 10°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série courte, cylindriques,
Type BNR, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7476	7476T	7476C
Ød1	L_2	L_1	$Ød_2$	Z						
6	13	57	6	4				●	●	●
8	19	69	10	4				●	●	●
10	22	72	10	4				●	●	●
12	26	83	12	4				●	●	●
16	32	92	16	4				●	●	●
20	38	104	20	4				●	●	●
25	45	121	25	4				●	●	●
32	53	133	32	6				●	●	●
40	63	155	40	6				●	●	●

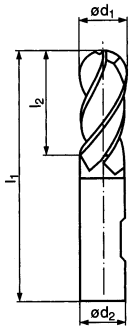
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie lunga
Gesenkfräser lang zylindrisch



Tipo BNR ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1

Typ BNR, ≈ 30° Drallwinkel, 10° Spanwinkel, mit Zylindershaft nach DIN 1835/1



DIN 1889
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

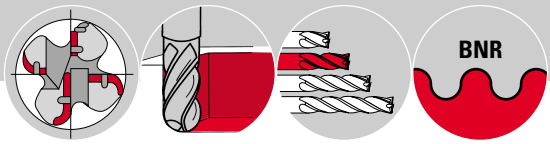
Die-sinking cutters, long series, cylindrical,
Type BNR, helix angle ≈ 30°, rake angle 10°, with straight shank acc. DIN 1835/1

Fraises pour matrices, série longue, cylindriques,
Type BNR, angle d'hèlice ≈ 30°, angle de coupe 10°, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**7430**	**7430T**	**7430C**
Ød1	L_2	L_1	$Ød_2$	Z						
6▲	24	68	6	4				●	●	●
8▲	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
12	53	110	12	4				●	●	●
16	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
25	90	166	25	4				●	●	●
32	106	186	32	6				●	●	●
40	125	217	40	6				●	●	●

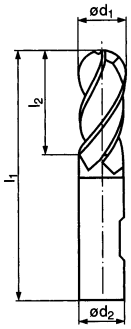
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



Tipo BNR ≈ 30° elica con codolo conico morse secondo DIN 1835A/B

Typ BNR, ≈ 30° Drallwinkel, mit Zylindershaft nach DIN 1835A/B



DIN 1889
ASP-60

ASP-60
ASP-60 TiCN
ASP-60 TiALN FUTURA®

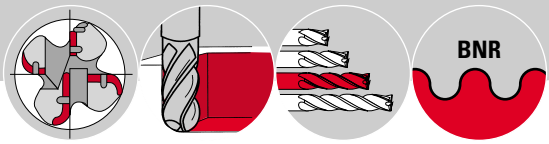
Die-sinking cutters, short series, cylindrical
Type BNR, helix angle ≈ 30°, with straight shank acc. DIN 1835A/B

Fraises pour matrices, série courte, cylindriques,
Type BNR, angle d'hèlice ≈ 30°, avec queue cylindrique selon DIN 1835A/B

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.					7427	7427C	7427F	7429	7429C	7429F
Ød1 k_{12}	l_2	l_1	$Ød_2$	Z						
6	13	57	6	4	●	●	●	●	●	●
8	19	69	10	4	●	●	●	●	●	●
10	22	72	10	4	●	●	●	●	●	●
12	26	83	12	4	●	●	●	●	●	●
16	32	92	16	4	●	●	●	●	●	●
20	38	104	20	5	●	●	●	●	●	●
25	45	121	25	5	●	●	●	●	●	●
32	53	133	32	6	●	●	●	●	●	●

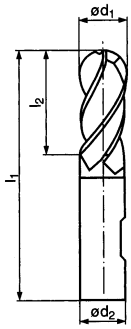
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese per stampi a più taglienti, serie lunga
Gesenkfräser lang zylindrisch



Tipo BNR,
con codolo cilindrico
secondo DIN 1835/1

Typ BNR,
mit Zylindershaft nach DIN 1835/1



DIN 1889
ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

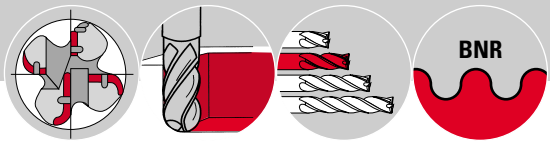
Die-sinking cutters, short series, cylindrical
Type BNR, with straight shank acc. DIN 1835/1

Fraises pour matrices, série longue, cylindriques
Type BNR, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								7480	7480T	7480C
Ød1	L_2	L_1	$Ød_2$	Z						
6▲	24	68	6	4				●	●	●
8▲	38	88	10	4				●	●	●
10	45	95	10	4				●	●	●
12	53	110	12	4				●	●	●
16	63	123	16	4				●	●	●
20	75	141	20	4				●	●	●
25	90	166	25	5				●	●	●
32	106	186	32	6				●	●	●
40	125	217	40	6				●	●	●

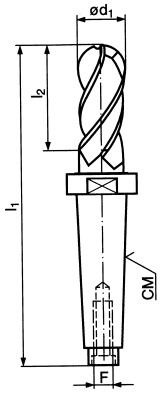
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese per stampi a più taglienti, serie corta
Gesenkfräser kurz zylindrisch



tipo BNR,
con codolo conico Morse
secondo DIN 228/1

Typ BNR, mit Morsekegelschaft
nach DIN 228/1



DIN 1889D
HSS-Co8

HSS-Co8
HSS-Co8 **TiN**
HSS-Co8 **TiCN**

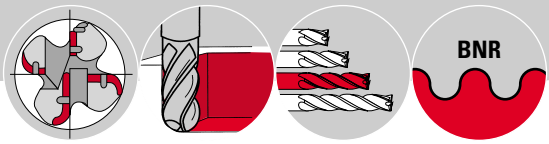
Die-sinking cutters, short series, cylindrical
Type BNR, with morse taper shank acc. DIN 228/1

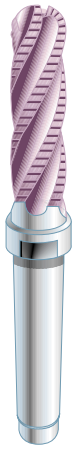
Fraises pour matrices, série courte, cylindriques
Type BNR, avec queue cône Morse selon DIN 228/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**7434**	**7434T**	**7434C**
Ød1	l_2	l_1	CM	F	Z						
10	22	92	1	M 6	4				●	●	●
12	26	96	1	M 6	4				●	●	●
16	32	117	2	M10	4				●	●	●
20	38	123	2	M10	4				●	●	●
25	45	147	3	M12	5				●	●	●
32*	53	201	4	M16	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

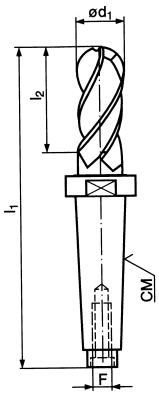
Frese per stampi a più taglienti, serie lunga
Gesenkfräser lang zylindrisch





Tipo BNR,
con codolo conico Morse
secondo DIN 228/1

Typ BNR, mit Morsekegelschaft
nach DIN 228/1



DIN 1889D
HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

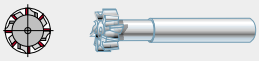
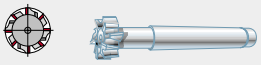
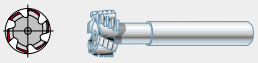
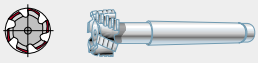
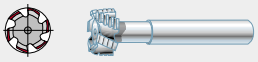
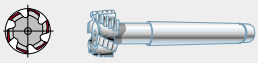
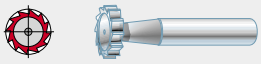
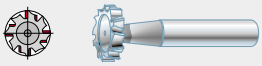
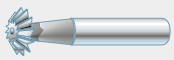
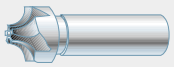
Die-sinking cutters, long series, cylindrical,
Type BNR, with morse taper shank acc. DIN 228/1

Fraises pour matrices, série longue, cylindriques,
Type BNR, avec queue cône Morse selon DIN 228/1

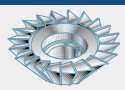
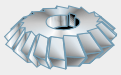
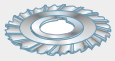
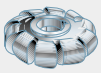
Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									**7436**	**7436T**	**7436C**
Ød1	l_2	l_1	CM	F	Z						
10	45	115	1	M 6	4				●	●	●
12	53	123	1	M 6	4				●	●	●
16	63	148	2	M10	4				●	●	●
20	75	160	2	M10	4				●	●	●
25	90	192	3	M12	5				●	●	●
32*	106	254	4	M16	6				●	●	●
40*	125	273	4	M16	6				●	●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

Frese per scanalature, Prismatiche e a Disco
T-Nuten-, Prismen - und Scheibenfräser
T-slot, double angle and side cutters
Fraises pour rainures à T, isocèles et à 3 tailles

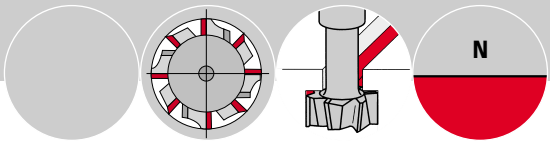
DIN	Tipo		Materiale	Uncoated					Pag.
851	N		HSS-Co5	⬭	●	●			164
851	N		HSS-Co5	⬭				●	165
851	NF		HSS-Co5	⬭	●				166
851	NF		HSS-Co5	⬭				●	167
851	NR		HSS-Co5	⬭	●				168
851	NR		HSS-Co5	⬭				●	169
850	N		HSS-Co5	⬭	●	●			170
850	N		HSS-Co5	⬭	●	●			171
1833	N		HSS-Co5	⬭	●	●			172
1833	N		HSS-Co5	⬭	●	●			173
6518	N		HSS-Co5	⬭	●	●			174

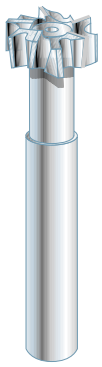
IN = Illico Norm

DIN	Tipo		Materiale	Uncoated					Pag.
842	N		HSS	⬭					175
842 New	NF		HSS-Co5	⬭					176
847	N		HSS	⬭					177
885	N		HSS-Co5	⬭					178
885	HS		HSS-Co5	⬭					180
885	H		HSS-Co5	⬭					182
885	W		HSS	⬭					183
1834	N		HSS-Co5	⬭					185
1834	N		HSS-Co5	⬭					186
IN	N		HSS-Co5	⬭					187
IN	N		HSS-Co5	⬭					189
856	N		HSS	⬭					190
855A	N		HSS	⬭					191
6513R	N		HSS	⬭					192

IN = Illico Norm

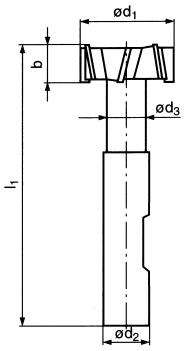
Frese per scanalature, a T, dentatura incrociata
T-Nutenfräser kreuzverzahnt





Tipo N, per scanalature secondo DIN 650, con codolo cilindrico secondo DIN 1835/1

Typ N, für Nuten nach DIN 650, mit Zylindershaft nach DIN 1835/1



DIN 851
HSS-Co5

HSS-Co5

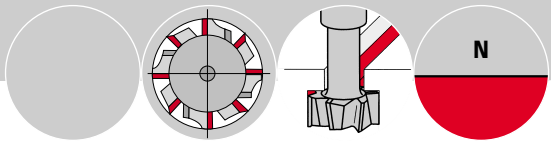
T-Slot cutters, staggered teeth
Type N, for keyways acc. DIN 650, with straight shank acc. DIN 1835/1

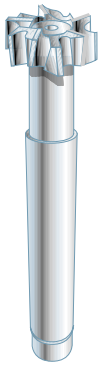
Fraises pour rainures à T, denture double dèlice
Type N, pour rainures selon DIN 650, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										9520	9522
Ød1 d11	b	$Ød_3$ h12	l_1	$Ød_2$	Z						
11	4	4	53,5	10	6					●	●
12,5	6	5	57	10	6					●	●
16	8	7	62	10	6					●	●
18	8	8	70	12	6					●	●
19▲	9	8	71	12	6					●	●
21	9	10	74	12	6					●	●
22▲	10	10	75	12	6					●	●
25	11	12	82	16	8					●	●
28▲	12	13	85	16	8					●	●
32	14	15	90	16	8					●	●
36▲	16	17	103	25	8					●	●
40	18	19	108	25	10					●	●
45▲	20	21	113	25	10					●	●
50	22	25	124	32	10					●	●
60	28	30	139	32	10					●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

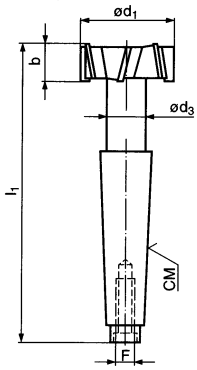
Frese per scanalature a T, dentatura incrociata
T-Nutenfräser kreuzverzahnt





Tipo N, per scanalature secondo DIN 650, con codolo conico morse secondo DIN 228/1

Typ N, für Nuten nach DIN 650, mit Morsekegelschaft nach DIN 228/1



DIN 851
HSS-Co5

HSS-Co5

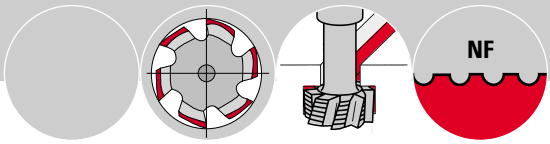
T-Slot cutters, staggered teeth
Type N, for keyways acc. DIN 650, with morse taper shank acc. DIN 228/1

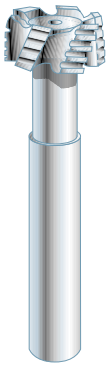
Fraises pour rainures à T, denture double dèlice
Type N, pour rainures selon DIN 650, avec queue cône morse selon DIN 228/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9524**
Ød1 d_{11}	b	$Ød_3$ h12	l_1	CM	F	Z						
18	8	8	82	1	M 6	6						●
21	9	10	102	2	M10	6						●
25	11	12	104	2	M10	8						●
28▲	12	13	106	2	M10	8						●
32	14	15	111	2	M10	8						●
36▲	16	17	133	3	M12	8						●
40	18	19	140	3	M12	10						●
45▲	20	21	143	3	M12	10						●
50	22	25	187	4	M16	10						●
56▲	24	28	192	4	M16	10						●
60	28	30	201	4	M16	10						●
72	35	36	248	5	M20	12						■
95	44	44	264	5	M20	14						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese per scanalature a T, dentatura incrociata
T-Nutenfräser



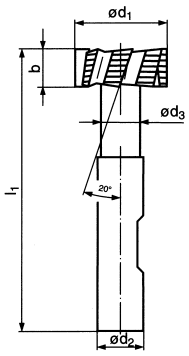


Tipo NF, ≈ 20° elica per scanalature secondo DIN 650, con codolo cilindrico secondo DIN 1835/1

Typ NF, ≈ 20° Drallwinkel für Nuten nach DIN 650, mit Zylindershaft nach DIN 1835/1

T-slot cutters,
Type NF, helix angle ≈ 20° for keyways acc. DIN 650, with straight shank acc. DIN 1835/1

Fraises pour rainures à T,
Type NF angle d'hèlice ≈ 20° , pour rainures selon DIN 650, avec queue cylindrique selon DIN 1835/1



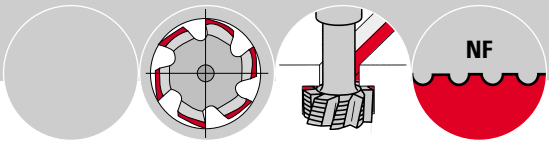
DIN 851
HSS-Co5

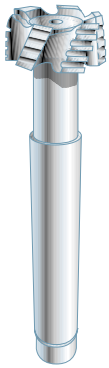
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9526**
Ød1 d_{11}	b	Ød$_3$ h12	l_1	Ød$_2$	Z						
21	9	10	74	12	6						●
22▲	10	10	75	12	6						●
25	11	12	82	16	6						●
28▲	12	13	85	16	6						●
32	14	15	90	16	6						●
36▲	16	17	103	25	6						●
40	18	19	108	25	8						●
45▲	20	21	113	25	8						●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese per scanalature a T
T-Nutenfräser



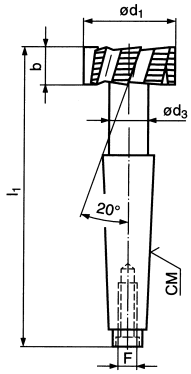


Tipo NF, ≈ 20° elica, per scanalature secondo DIN 650, con codolo conico Morse secondo DIN 228/1

Typ NF, ≈ 20° Drallwinkel, für Nuten nach DIN 650, mit Morsekegelschaft nach DIN 228/1

T-slot cutters
Type NF, helix angle ≈ 20°, for keyways acc. DIN 650, with morse taper shank acc. DIN 228/1

Fraises pour rainures à T
Type NF, angle d'dèlice ≈ 20°, pour rainures selon DIN 650, avec queue cylindrique selon DIN 228/1



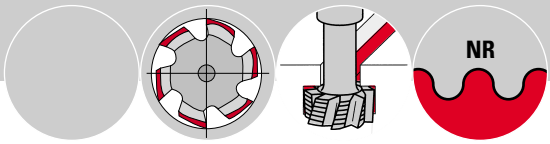
DIN 851
HSS-Co5

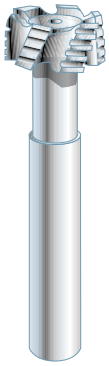
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9530**
Ød1 d_{11}	b	Ød3 h12	l_1	CM	F	Z						
36▲	16	17	133	3	M12	6						●
40	18	19	140	3	M12	8						●
45▲	20	21	143	3	M12	8						●
50	22	25	187	4	M16	10						●
56▲	24	28	192	4	M16	10						●
60	28	30	201	4	M16	10						●
72	35	36	248	5	M20	10						■
85	40	42	255	5	M20	10						■
95	44	44	264	5	M20	10						■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese per scanalature a T
T-Nutenfräser



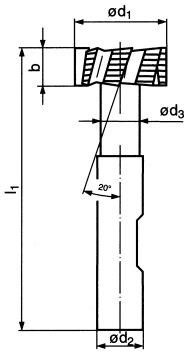


Tipo NR, ≈ 20° elica, per scanalature secondo DIN 650, con codolo cilindrico secondo DIN 1835/1

Typ NR, ≈ 20° Drallwinkel, für Nuten nach DIN 650, mit Zylindershaft nach DIN 1835/1

T-slot cutters
Type NR, helix angle ≈ 20°, for keyways acc. DIN 650, with straight shank acc. DIN 1835/1

Fraises pour rainures à T
Type NR, angle d'hèlice ≈ 20°, pour rainures selon DIN 650, avec queue cylindrique selon DIN 1835/1



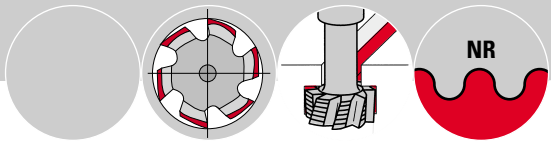
DIN 851
HSS-Co5

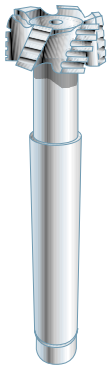
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9532**
Ød1 d_{11}	b	Ød$_3$ h12	l_1	Ød$_2$	z						
16	8	7	62	10	4						■
18	8	8	70	12	5						■
19▲	9	8	71	12	5						■
25	11	12	82	16	6						■
28▲	12	13	85	16	6						■
32	14	15	90	16	6						■
36▲	16	17	103	25	6						■
40	18	19	108	25	8						■
50	22	25	124	32	10						■
60	28	30	139	32	10						■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese per scanalature a T
T-Nutenfräser



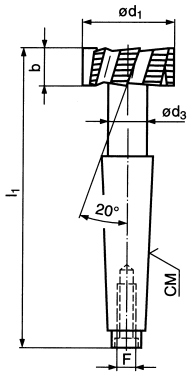


Tipo NR, ≈ 20° elica, per scanalature secondo DIN 650, con codolo conico Morse secondo DIN 228/1

Typ NR, ≈ 20° Drallwinkel, für Nuten nach DIN 650, mit Morsekegelschaft nach DIN 228/1

T-slot cutters
Type NR, helix angle ≈ 20°, for keyways acc. DIN 650, with Morse taper shank acc. DIN 228/1

Fraises pour rainures à T
Type NR, angle d'hèlice ≈ 20°, pour rainures selon DIN 650, avec queue cône Morse selon DIN 228/1



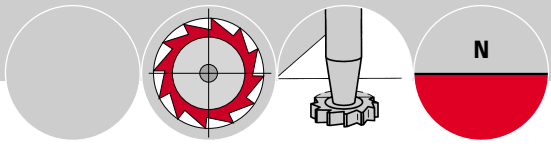
DIN 851
HSS-Co5

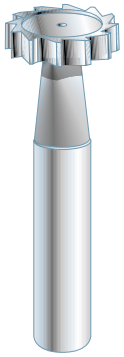
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.												**9536**
Ød1 d_{11}	b	Ød$_3$ h12	l_1	CM	F	Z						
36▲	16	17	133	3	M12	6						■
45▲	20	21	143	3	M12	8						■
50	22	25	187	4	M16	10						■
56▲	24	28	192	4	M16	10						■
60	28	30	201	4	M16	10						■
95	44	44	264	5	M20	10						■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

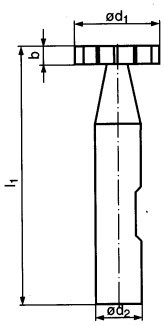
Frese per sedi di linguette americane
Schlitzfräser geradeverzahnt





(Woodruff), denti diritti, per scanalature secondo DIN 6888, con codolo cilindrico secondo DIN 1835/1

(Woodruff) für Nuten nach DIN 6888, mit Zylindershaft nach DIN 1835/1



DIN 850
HSS-Co5

HSS-Co5

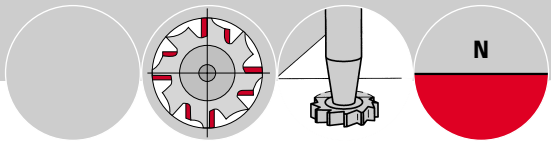
Woodruff cutters, straght teeth for keyways acc. DIN 6888, with straight shank acc. DIN 1835/1

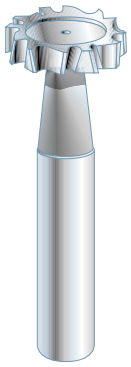
Fraises pour longement de clavettes-disques (Woodruff) denture droite, pour rainures selon DIN 6888, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9538**
Ød1 h_{10}	b e_8	l_1	$Ød_2$	Z							
4,5	1	50	6	6							■
7,5	1,5	50	6	6							■
7,5	2	50	6	6							■
10,5	2	50	6	8							■
10,5	2,5	50	6	8							■
10,5	3	50	6	8							■
13,5▲	2	56	10	8							■
13,5	4	56	10	8							■
16,5	3	56	10	10							■
16,5	5	56	10	10							■
19,5	4	63	10	10							■
19,5	5	63	10	10							■
19,5	6	63	10	10							■
22,5▲	4	63	10	12							■
22,5	5	63	10	12							■
22,5	6	63	10	12							■
25,5▲	5	63	10	14							■
28,5	6	63	10	14							■
28,5	8	63	10	14							■
28,5	10	71	12	14							■
32,5▲	6	71	12	16							■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

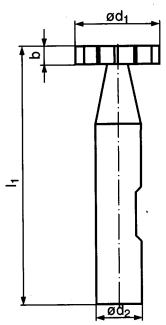
Frese per sedi di linguette americane
Schlitzfräser kreuzverzahnt





(Woodruff) dentatura incrociata, per scanalature secondo DIN 6888, con codolo cilindrico secondo DIN 1835/1

(Woodruff) für Nuten nach DIN 6888, mit Zylindershaft nach DIN 1835/1



DIN 850
HSS-Co5

HSS-Co5

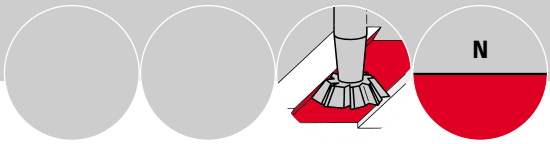
Woodruff cutters, staggered teeth
for keyways acc. DIN 6888,
with straight shank acc. DIN 1835/1

Fraises pour logement de clavettes-disques (Woodruff), denture double hèlice
pour rainures selon DIN 6888, avec queue cylindrique selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									9542	9544
Ød1 h_{10}	b e_8	l_1	Ød$_2$	Z						
10,5	2	50	6	6					●	●
10,5	2,5	50	6	6					●	●
10,5	3	50	6	6					●	●
13,5▲	2	56	10	6					●	●
13,5	3	56	10	6					●	●
13,5	4	56	10	6					●	●
16,5	3	56	10	6					●	●
16,5	4	56	10	6					●	●
16,5	5	56	10	6					●	●
19,5▲	3	63	10	8					●	●
19,5	4	63	10	8					●	●
19,5	5	63	10	8					●	●
19,5	6	63	10	8					●	●
22,5▲	4	63	10	8					●	●
22,5	5	63	10	8					●	●
22,5	6	63	10	8					●	●
22,5	8	63	10	8					●	●
25,5▲	5	63	10	10					●	●
25,5	6	63	10	10					●	●
28,5	6	63	10	10					●	●
28,5	8	63	10	10					●	●
28,5	10	71	12	10					●	●
32,5▲	6	71	12	10					●	●
32,5	8	71	12	10					●	●
32,5	10	71	12	10					●	●
38,5▲	8	71	12	10					●	●
45,5▲	8	71	12	12					●	●
45,5	10	71	12	12					●	●

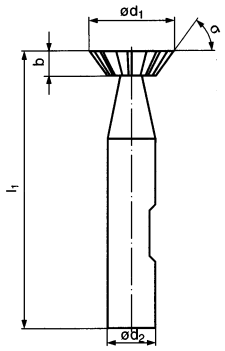
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese ad angolo
Winkelfräser



Con codolo cilindrico secondo DIN 1835/1

Mit Zylindershaft nach DIN 1835/1



DIN 1833
HSS-Co5

HSS-Co5

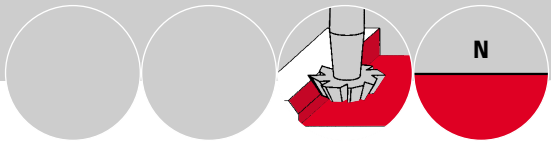
Dovetail cutters
with straight shank acc. DIN 1835/1

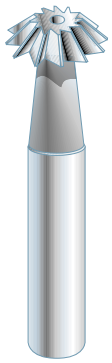
Fraises conique cône reversé,
avec queue selon DIN 1835/1

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										9546	9548
Ød1	σ	b	l_1	$Ød_2$	Z						
16	45°	4	60	12	8					●	●
20	45°	5	63	12	10					●	●
25	45°	6,3	67	12	10					●	●
16	50°	5	60	12	8					●	●
20	50°	6,3	63	12	10					●	●
25	50°	8	67	12	10					●	●
16	55°	5,6	60	12	8					●	●
20	55°	7,1	63	12	10					●	●
25	55°	9	67	12	10					●	●
16	60°	6,3	60	12	8					●	●
20	60°	8	63	12	10					●	●
25	60°	10	67	12	10					●	●
16▲	70°	7	60	12	8					●	●
20▲	70°	9	63	12	10					●	●
25▲	70°	11	67	12	10					●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese ad angolo
Winkelfräser



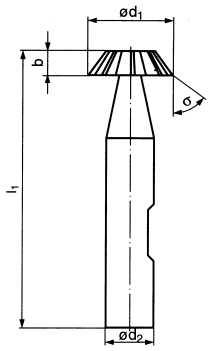


Con codolo cilindrico secondo DIN 1835/1

Mit Zylindershaft nach DIN 1835/1

Dovetail cutters with straight shank acc. DIN 1835/1

Fraises conique cône direct avec queue cylindrique selon DIN 1835/1



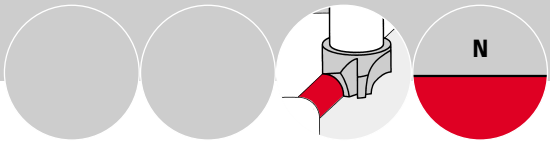
DIN 1833
HSS-Co5

HSS-Co8

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										9550	9552
Ød1	σ	b	l_1	Ød$_2$	Z						
16	45°	4	60	12	8					●	●
20	45°	5	63	12	10					●	●
25	45°	6,3	67	12	10					●	●
16	60°	5	60	12	8					●	●
20	60°	6,3	63	12	10					●	●
25	60°	8	67	12	10					●	●
16▲	70°	5,6	60	12	8					●	●
20▲	70°	7,1	63	12	10					●	●
25▲	70°	9	67	12	10					●	●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese a profilo, concave
Viertelrund - Profilfräser konkav

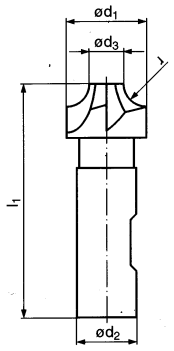


1/4 circolare con codolo cilindrico secondo DIN 1835/1

mit Zylindershaft nach DIN 1835/1

Corner-rounding cutters
Concave, with straight shank acc. DIN 1835/1

Fraises 1/4 de cercle
Concave, avec queue cylindrique selon DIN 1835/1



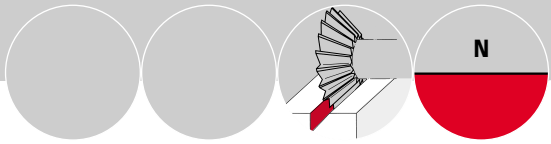
DIN 6518
HSS-Co5

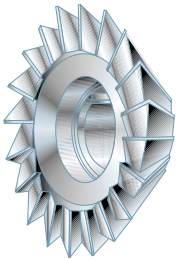
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.										9554	9556
Ød1	r H_{11}	$Ød_3$	l_1	$Ød_2$	Z						
8	1	6	60	10	4					●	●
8,5	1,25	6	60	10	4					●	●
9	1,5	6	60	10	4					●	●
9,2	1,6	6	60	10	4					■	■
10	2	6	60	10	4					●	●
11	2,5	6	60	10	4					●	●
12	3	6	60	12	4					●	●
12,3	3,15	6	60	12	4					■	■
13	3,5	6	60	12	4					●	●
14	4	6	60	12	4					●	●
15	4,5	6	60	12	4					●	●
16	5	6	60	12	4					●	●
19	5,5	8	67	16	4					●	●
20	6	8	67	16	4					●	●
20,6	6,3	8	71	16	4						■
21	6,5	8	71	16	4					●	●
22	7	8	71	16	4					●	●
23	7,5	8	71	16	4					●	●
24	8	8	71	16	4					●	●
25	8,5	8	85	25	4					●	●
26	9	8	85	25	4					●	●
27	9,5	8	85	25	4					●	●
28	10	8	85	25	4					●	●
32	11	10	90	25	4					●	●
34	12	10	90	25	4					●	●
41	12,5	16	100	25	6					●	●
42	13	16	100	25	6					●	●
44	14	16	100	25	6					●	●
46	15	16	100	25	6					●	●
48	16	16	100	25	6						
52	18	16	112	32	6						
56	20	16	112	32	6						

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

Frese frontali ad angolo a manicotto
Aufsteckwinkelstirnfräser



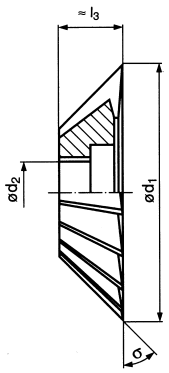


Tipo N, con taglio di chiavetta longitudinale secondo DIN 138

Typ N, mit Längsnut nach DIN 138

Single angle shell end mills with standard keyway DIN 138

Fraises à queue d'aronde à trou lisse selon DIN 138



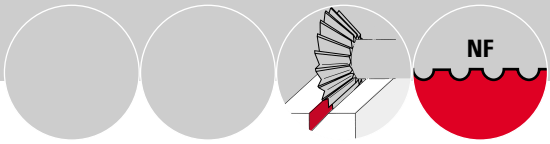
DIN 842
HSS

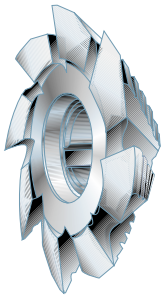
HSS

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9575**
Ød1	σ	l_3	$Ød_2$	Z							
40	45°	10	10	16							●
50	45°	13	13	18							●
63	45°	18	16	20							●
80	45°	22	22	22							●
100	45°	28	27	26							●
40	50°	13	10	16							●
50	50°	16	13	18							●
63	50°	20	16	20							●
80	50°	25	22	22							●
100	50°	32	27	26							●
125	50°	40	32	28							●
40	55°	13	10	14							●
50	55°	16	13	16							●
63	55°	20	16	18							●
80	55°	25	22	20							●
100	55°	32	27	22							●
125	55°	40	32	24							●
40	60°	13	10	14							●
50	60°	16	13	16							●
63	60°	20	16	18							●
80	60°	25	22	20							●
100	60°	32	27	22							●
125	60°	40	32	24							●
160	60°	50	40	28							●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese frontali ad angolo a manicotto
Aufsteckwinkelstirnfräser



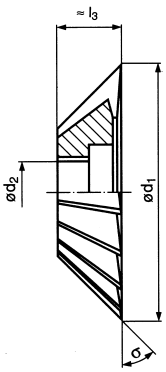


Tipo NF, con taglio di chiavetta longitudinale secondo DIN 842

Typ NF, mit Längsnut nach DIN 842

Single angle shell end mills
Type NF, with standard keyway acc. DIN 842

Fraises à queue d'aronde
Type NF, avec entraînement par tenon et par clavette selon DIN 842



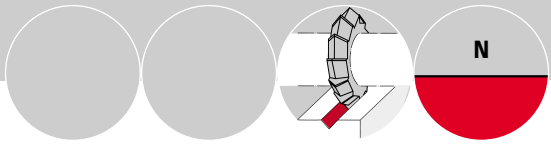
DIN 842
HSS-Co5

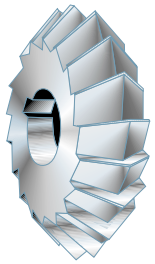
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9595**
Ød1 K14	σ	l_3	$Ød_2$ h7	Z							
80	45°	22	22	22							●
100	45°	28	27	26							●
125	45°	36	32	28							●
160	45°	45	40	32							●
80	50°	25	22	22							●
100	50°	32	27	26							●
125	50°	40	32	28							●
80	60°	25	22	20							●
100	60°	32	27	22							●
125	60°	40	32	24							●
160	60°	50	40	28							●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

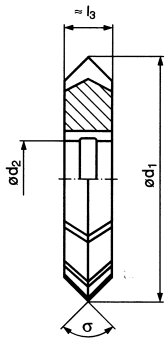
Frese frontali ad angolo prismatiche
Prismenfräser





Tipo N, con taglio di chiavetta longitudinale secondo DIN 138

Typ N, mit Längsnut nach DIN 138



DIN 847
HSS

HSS

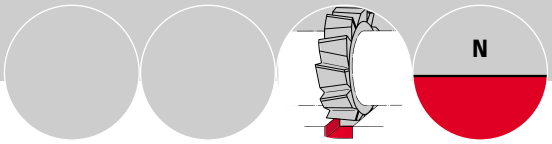
Double angle milling cutters symmetrical
Type N, with standard keyway acc. DIN 138

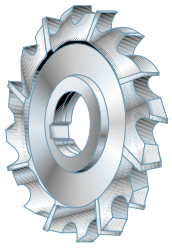
Fraises isocèles
Type N, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9576**
Ød1	σ	l_3	$Ød_2$	Z							
50	45°	8	16	20							●
63	45°	10	22	22							●
80	45°	12	27	24							●
100	45°	18	32	26							●
50	60°	10	16	18							●
63	60°	14	22	20							●
80	60°	18	27	22							●
100	60°	25	32	24							●
50	90°	14	16	16							●
63	90°	20	22	18							●
80	90°	22	27	20							●
100	90°	32	32	24							●
50▲	100°	14	16	16							●
63▲	100°	20	22	16							●
80▲	100°	25	27	20							●
100▲	100°	36	32	24							●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

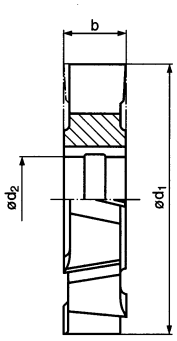
Frese a disco
Scheibenfräser kreuzverzahnt





Tipo N, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138

Typ N, mit Längsnut nach DIN 138



DIN 885
HSS-Co5

HSS-Co5

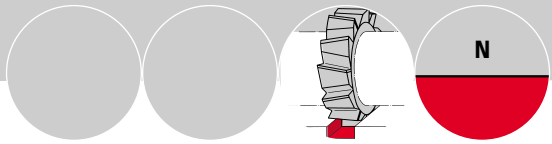
Side and face milling cutters
Type N, staggered teeth, with standard keyway acc. DIN 138

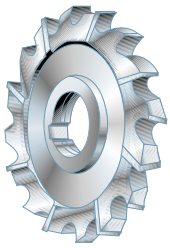
Fraises 3 tailles
Type N, denture double hèlice alternée, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9577**
Ød1	b	$Ød_2$	Z					
50	4	16	12					●
50	5	16	12					●
50	6	16	12					●
50	8	16	12					●
50	10	16	12					●
63	4	22	12					●
63	5	22	12					●
63	6	22	12					●
63	8	22	12					●
63	10	22	12					●
63	12	22	12					●
63	14	22	12					●
63	16	22	12					●
63▲	18	22	12					●
80▲	4	27	14					●
80	5	27	14					●
80	6	27	14					●
80	8	27	14					●
80	10	27	14					●
80	12	27	14					●
80	14	27	14					●
80	16	27	14					●
80	18	27	14					●
80	20	27	14					●
100▲	4	32	14					●
100▲	5	32	14					●
100	6	32	14					●
100	8	32	14					●
100	10	32	14					●
100	12	32	14					●
100	14	32	14					●
100	16	32	14					●
100	18	32	14					●
100	20	32	14					●
100	22	32	14					●
100	25	32	14					●
125▲	5	32	14					●
125▲	6	32	14					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese a disco
Scheibenfräser kreuzverzahnt



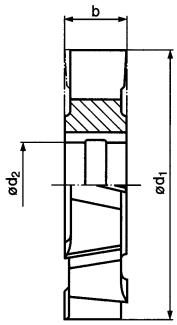


Tipo N, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138

Typ N, mit Längsnut nach DIN 138

Side and face milling cutters
Type N, staggered teeth, with standard keyway acc. DIN 138

Fraises 3 tailles
Type N, denture double hèlice alternée, avec entraînement par clavette selon DIN 138



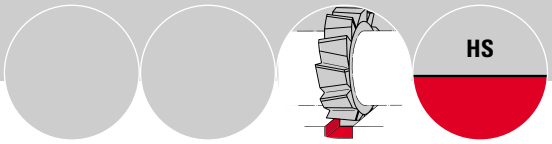
DIN 885
HSS-Co5

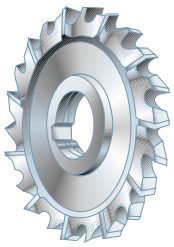
HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9577**
Ød1	b	$Ød_2$	Z					
125	8	32	16					●
125	10	32	16					●
125	12	32	16					●
125	14	32	16					●
125	16	32	16					●
125	18	32	16					●
125	20	32	16					●
125	22	32	16					●
125	25	32	16					●
125	28	32	16					●
160▲	6	40	18					●
160▲	8	40	18					●
160	10	40	18					●
160	12	40	18					●
160	14	40	18					●
160	16	40	18					●
160	18	40	18					●
160	20	40	18					●
160	22	40	18					●
160	25	40	18					●
160	28	40	18					●
160	32	40	18					●
200▲	6	40	24					●
200▲	8	40	24					●
200▲	10	40	24					●
200	12	40	24					●
200	14	40	24					●
200	16	40	24					●
200	18	40	24					●
200	20	40	24					●
200	22	40	24					●
200	25	40	24					●
200	28	40	24					●
200	32	40	24					●
250▲	8	40	30					■
250▲	12	40	30					■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

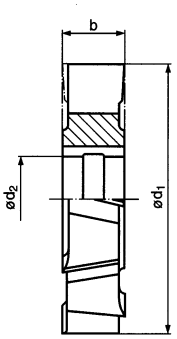
Frese a disco
Scheibenfräser kreuzverzahnt





Tipo HS, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138

Typ HS, mit Längsnut nach DIN 138



DIN 885
HSS-Co5

HSS-Co5

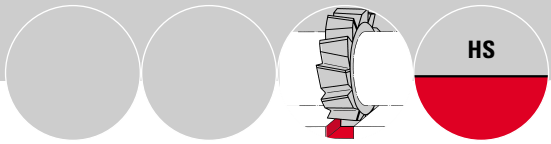
Side and face milling cutters
Type HS, staggered teeth, with standard keyway acc. DIN 138

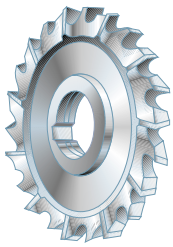
Fraises 3 tailles
Type HS, denture double hèlice alternée, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9578**
Ød1	b	$Ød_2$	Z					
50	4	16	16					●
50	5	16	16					●
50	6	16	16					●
50	8	16	16					●
50	10	16	16					●
63	4	22	18					●
63	5	22	18					●
63	6	22	18					●
63	8	22	18					●
63	10	22	18					●
63	12	22	18					●
63	14	22	18					●
63	16	22	18					●
63▲	18	22	18					●
80	5	27	20					●
80	6	27	20					●
80	8	27	20					●
80	10	27	18					●
80	12	27	18					●
80	14	27	18					●
80	16	27	18					●
80	18	27	18					●
80	20	27	18					●
100	6	32	22					●
100	8	32	22					●
100	10	32	20					●
100	12	32	20					●
100	14	32	20					●
100	16	32	20					●
100	18	32	20					●
100	20	32	20					●
100	25	32	20					●
125▲	5	32	20					●
125	8	32	24					●
125	10	32	22					●
125	12	32	22					●
125	14	32	22					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

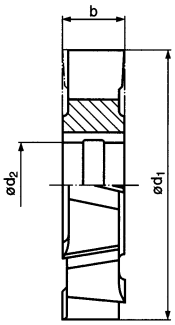
Frese a disco
Scheibenfräser kreuzverzahnt





Tipo HS, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138

Typ HS, mit Längsnut nach DIN 138



DIN 885
HSS-Co5

HSS-Co5

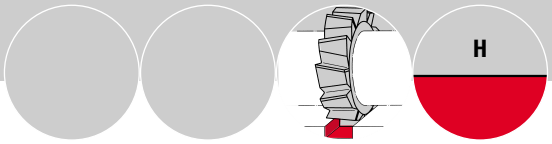
Side and face milling cutters
Type HS, staggered teeth, with standard keyway acc. DIN 138

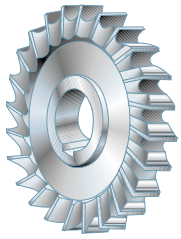
Fraises 3 tailles
Type HS, denture double hèlice alternée, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9578**
Ød1	b	Ød$_2$	z					
125	16	32	22					●
125	18	32	22					●
125	20	32	22					●
125	25	32	22					●
160▲	8	40	26					●
160	10	40	26					●
160	12	40	26					■
160	14	40	26					●
160	16	40	26					●
160	18	40	26					●
160	20	40	26					●
160	25	40	26					●
160	32	40	26					●
200▲	10	40	32					●
200	12	40	32					●
200	14	40	32					●
200	16	40	32					●
200	18	40	32					●
200	20	40	32					●
200	25	40	32					●
200	32	40	32					●
250▲	8	40	40					■
250▲	10	40	40					■
250▲	12	40	40					■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

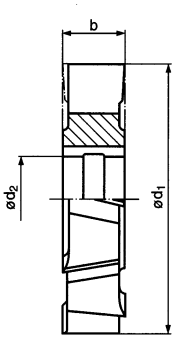
Frese a disco
Scheibenfräser geradeverzahnt





Tipo H, denti rinforzati diritti, con taglio di chiavetta longitudinale secondo DIN 138

Typ H, mit Längsnut nach DIN 138



DIN 885
HSS-Co5

HSS-Co5

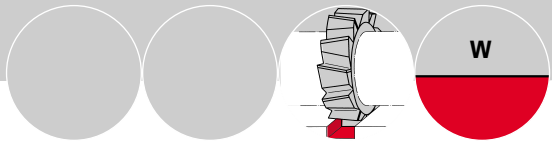
Side and face milling cutters
Type H, straight teeth,
with standard keyway acc. DIN 138

Fraises 3 tailles
Type H, denture droite,
avec entraînement par clavette
selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9579**
Ød1	b	$Ød_2$	Z					
50	4	16	16					●
50	5	16	16					●
50	6	16	16					●
50	8	16	16					●
50	10	16	16					●
63	4	22	18					●
63	5	22	18					●
63	6	22	18					●
63	8	22	18					●
63	10	22	18					●
63	12	22	18					●
63	14	22	18					●
63	16	22	18					●
80	5	27	20					●
80	6	27	20					●
80	8	27	20					●
80	10	27	20					●
80	12	27	20					●
80	14	27	20					●
80	16	27	20					●
80	18	27	20					●
80	20	27	20					●
100	6	32	24					●
100	8	32	24					●
100	10	32	24					●
100	12	32	24					●
100	14	32	24					●
100	16	32	24					●
100	18	32	24					●
100	20	32	24					●
100	25	32	24					●
125	8	32	24					●
125	10	32	24					●
125	12	32	24					●
125	14	32	24					●
125	16	32	24					●
125	18	32	24					●
125	20	32	24					●
125	25	32	24					●

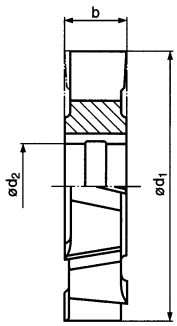
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

Frese a disco, per leghe leggere
Scheibenfräser kreuzverzahnt



Tipo W, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138

Typ W, mit Längsnut nach DIN 138



DIN 885
HSS

HSS

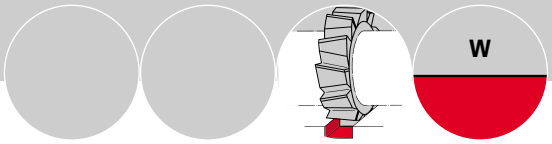
Side and face milling cutters
Type W, staggered teeth, with standard keyway acc. DIN 138

Fraises 3 tailles
Type W, denture double hèlice alternée, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9580**
Ød1	b	Ød$_2$	Z					
50	4	16	6					●
50	5	16	6					●
50	6	16	6					●
50	8	16	6					●
50	10	16	6					●
63	4	22	6					●
63	5	22	6					●
63	6	22	6					●
63	8	22	6					●
63	10	22	6					●
63	12	22	6					●
63	16	22	6					●
63▲	18	22	6					●
80▲	4	27	6					●
80	5	27	6					●
80	6	27	6					●
80	8	27	6					●
80	10	27	6					●
80	12	27	6					●
80	14	27	6					●
80	16	27	6					●
80	18	32	6					●
100▲	4	32	8					●
100▲	5	32	8					●
100	6	32	8					●
100	8	32	8					●
100	10	32	8					●
100	16	32	8					●
100	18	32	8					●
125▲	5	32	8					●
125	8	32	8					●
125	10	32	8					●
125	12	32	8					●
125	14	32	8					●
125	18	32	8					●
125	20	32	8					●
160	6	40	10					●
160▲	8	40	10					●
160	10	40	10					●

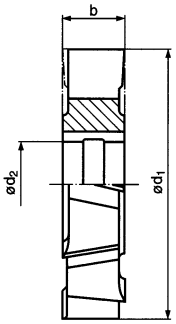
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese a disco, per leghe leggere
Scheibenfräser kreuzverzahnt



Tipo W, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138

Typ W, mit Längsnut nach DIN 138



DIN 885
HSS

HSS

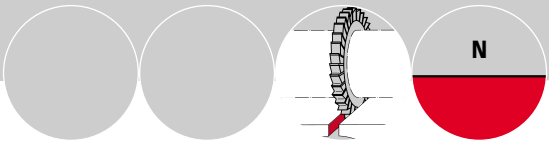
Side and face milling cutters
Type W, staggered teeth, with standard keyway acc. DIN 138

Fraises 3 tailles
Type W, denture double hèlice alternée, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9580**
Ød1	b	$Ød_2$	Z					
160	12	40	10					●
160	16	40	10					●
160	18	40	10					●
200▲	6	40	12					●
200▲	8	40	12					●
200▲	10	40	12					●
200	12	40	12					●
200	14	40	12					●
200	16	40	12					●
200	18	40	12					●
200	20	40	12					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese a disco a tagli sottili
Schmale Scheibenfräser



Con taglio di chiavetta longitudinale secondo DIN 138

Denti rinforzati elicoidali alternati

Schmale Scheibenfräser mit Längsnut nach DIN 138

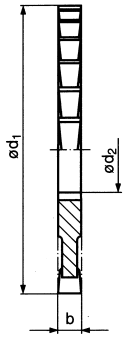
Kreuzverzahnt

Narrow side and face milling cutters, with standard keyway acc. DIN 138

Staggered teeth

Fraises 3 tailles fines avec entraînement par clavette selon DIN 138

Denture double hèlice alternée



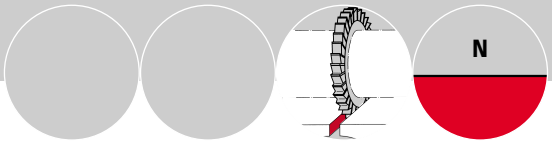
DIN 1834
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9581**
Ød1	b	Ød$_2$	z					
63	1,6	22	28					●
63	2	22	28					●
63	2,5	22	28					●
63	3	22	28					●
63▲	4	22	28					●
63▲	5	22	28					●
80	1,6	27	32					●
80	2	27	32					●
80	2,5	27	32					●
80	3	27	32					●
80	4	27	32					●
80▲	5	27	32					●
80▲	6	27	32					●
100	1,6	32	36					●
100	2	32	36					●
100	2,5	32	36					●
100	3	32	36					●
100	4	32	36					●
100	5	32	36					●
100▲	6	32	36					●
100▲	8	32	36					●
125	1,6	32	40					●
125	2	32	40					●
125	2,5	32	40					●
125	3	32	40					●
125	4	32	40					●
125	5	32	40					●
125	6	32	40					●
125▲	8	32	40					●
125▲	10	32	40					●
160	2	40	48					●
160	2,5	40	48					●
160	3	40	48					●
160	4	40	48					●
160	5	40	48					●
160	6	40	48					●
160	8	40	36					●
200	4	40	56					■
200	6	40	56					■

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese a disco a tagli sottili
Schmale Scheibenfräser



Con taglio di chiavetta longitudinale secondo DIN 138

Denti rinforzati diritti

Schmale Scheibenfräser mit Längsnut nach DIN 138

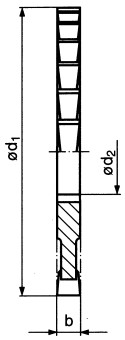
Geradeverzahnt

Narrow side and face milling cutters with standard keyway acc. DIN 138

Straight teeth

Fraises 3 tailles fines avec entraînement par clavette selon DIN 138

Denture droite



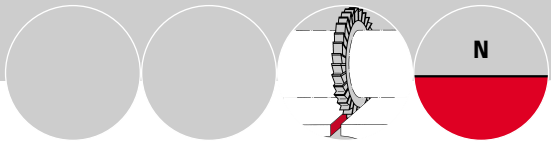
DIN 1834
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9582**
Ød1	b	$Ød_2$	Z					
63	1,6	22	32					●
63	2	22	32					●
63	2,5	22	32					●
63	3	22	32					●
63▲	4	22	32					●
63▲	5	22	32					●
80	1,6	27	36					●
80	2	27	36					●
80	2,5	27	36					●
80	3	27	36					●
80	4	27	36					●
100	1,6	32	40					●
100	2	32	40					●
100	2,5	32	40					●
100	3	32	40					●
100	4	32	40					●
100	5	32	40					●
125	1,6	32	44					●
125	2	32	44					●
125	2,5	32	44					●
125	3	32	44					●
125	4	32	44					●
125	5	32	44					●
125	6	32	44					●
125▲	8	32	36					●
160	2	40	52					●
160	2,5	40	52					●
160	3	40	52					●
160	4	40	52					●
160	5	40	52					●
160	6	40	52					●
160	8	40	52					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese a disco a tagli sottili
Schmale Scheibenfräser

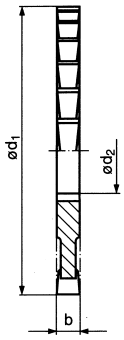


Con taglio di chiavetta longitudinale secondo DIN 138

Dentatura alternata fine

Schmale Scheibenfräser mit Längsnut nach DIN 138

Wechselseitig feinverzahnt



ILLICO NORM
HSS-Co5

HSS-Co5

Narrow side and face milling cutters with standard keyway acc. DIN 138

Alternating teeth, fine

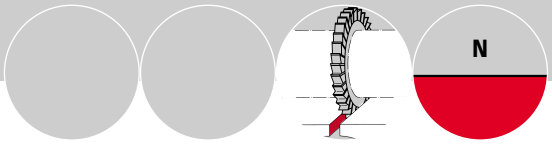
Fraises 3 tailles fines, avec entraînement par clavette selon DIN 138

Denture alternée fine

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9583**
Ød1	b	$Ød_2$	Z					
63	1,6	22	64					■
63	2	22	64					■
63	2,5	22	64					■
63	3	22	64					■
63	4	22	64					■
63▲	5	22	64					■
80	2,5	27	72					■
80	4	27	72					■
80▲	5	27	72					■
80▲	6	27	72					■
100	1,6	32	80					■
100	2,5	32	80					■
100	3	32	80					■
100	5	32	80					■
100▲	6	32	80					■
100▲	8	32	50					■
125	1,6	32	88					■
125	2	32	88					■
125	2,5	32	88					■
125	3	32	88					■
125	4	32	88					■
125▲	8	32	56					■
125▲	10	32	56					■
160	2	40	104					■
160	2,5	40	104					■
160	4	40	104					■
160	5	40	104					■
160	8	40	64					■
160▲	10	40	64					■
160▲	12	40	64					■
200	2	40	120					■
200	2,5	40	120					■
200	3	40	120					■
200	4	40	120					■
200	5	40	120					■
200	6	40	120					■
200	8	40	76					■
200	10	40	76					■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese a disco a tagli sottili
Schmale Scheibenfräser



Con taglio di chiavetta longitudinale secondo DIN 138

Dentatura alternata fine

Schmale Scheibenfräser mit Längsnut nach DIN 138

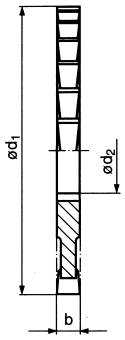
Wechselseitig feinverzahnt

Narrow side and face milling cutters with standard keyway acc. DIN 138

Alternating teeth, fine

Fraises 3 tailles fines avec entraînement par clavette selon DIN 138

Denture alternée fine



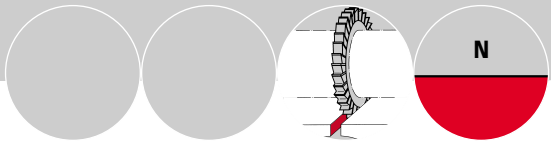
ILLICO NORM
HSS-Co5

HSS-Co5

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.							**9583**
Ød1	b	Ød$_2$	Z				
200▲	12	40	76				■
200▲	14	40	76				■
250	2	40	136				■
250	2,5	40	136				■
250	3	40	136				■
250	5	40	136				■
250	6	40	136				■
250	8	40	88				■
250	10	40	88				■
250	12	40	88				■
250▲	14	40	88				■

■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese a disco a tagli sottili
Schmale Scheibenfräser

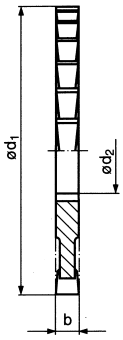


Con taglio di chiavetta longitudinale secondo DIN 138

Dentatura alternata grossa

Schmale Scheibenfräser mit Längsnut nach DIN 138

Kreuzverzahnt groß



ILLICO NORM
HSS-Co5

HSS-Co5

Narrow side and face milling cutters with standard keyway acc. DIN 138

Staggered teeth, coarse

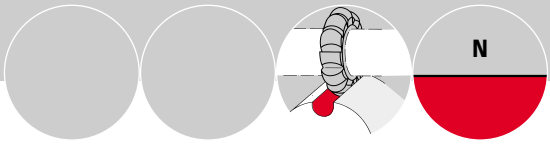
Fraises 3 tailles fines avec entraînement par clavette selon DIN 138

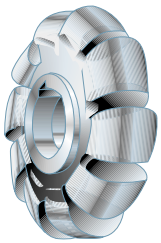
Denture double hèlice alternée grosse

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.								**9584**
Ød1	b	$Ød_2$	Z					
63	1,6	22	16					●
63	2	22	16					●
63	2,5	22	16					●
63	3	22	16					●
80	1,6	27	20					●
80	2	27	20					●
80	2,5	27	20					●
80	3	27	20					●
80	4	27	20					●
80▲	6	27	20					●
100	1,6	32	24					●
100	2	32	24					●
100	2,5	32	24					●
100	3	32	24					●
100	4	32	24					●
100	5	32	24					●
125	1,6	32	26					●
125	2	32	26					●
125	2,5	32	26					●
125	3	32	26					●
125	4	32	26					●
125	5	32	26					●
125	6	32	26					●
160	2,5	40	30					●
160	3	40	30					●
160	4	40	30					●
160	5	40	30					●
160	6	40	30					●
160	8	40	22					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

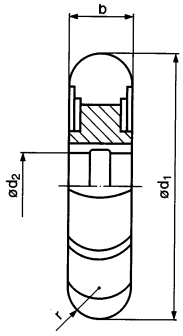
Frese a profilo semicircolare
Halbrund - Profilfräser





Convessa, profilo costante, con taglio di chiavetta longitudinale secondo DIN 138

Konvex, hinterdreht, mit Längsnut nach DIN 138



DIN 856
HSS

HSS

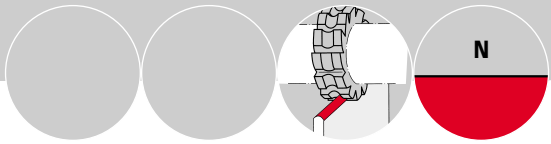
Convex milling cutters relieved, with standard keyway acc. DIN 138

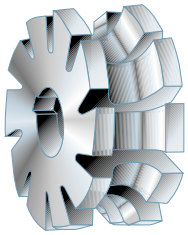
Fraises à rayon 1/2 cercle convexe, profil détalonné, avec entraînement par clavette selon DIN 138

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9591**
Ød1	r H_{11}	b	$Ød_2$	Z							
50	1	2	16	14							●
50	1,25	2,5	16	14							●
50▲	1,5	3	16	14							●
50	1,6	3,2	16	14							●
50▲	1,75	3,5	16	14							●
50	2	4	16	14							●
50	0,75	1,5	16	16							●
63▲	2,25	4,5	22	12							●
63	2,5	5	22	22							●
63	3	6	22	12							●
63▲	3,5	7	22	12							●
63	4	8	22	12							●
63▲	4,5	9	22	12							●
63▲	4,75	9,5	22	12							●
63	5	10	22	12							●
80▲	5,5	11	27	12							●
80	6	12	27	12							●
80▲	6,5	13	27	12							●
80▲	7	14	27	12							●
80▲	7,5	15	27	12							●
80	8	16	27	12							●
100▲	8,5	17	32	12							●
100▲	9	18	32	12							●
100	10	20	32	12							●
100▲	11	22	32	12							●
100	12	24	32	12							●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

Frese a profilo semicircolare
Halbrund - Profilfräser



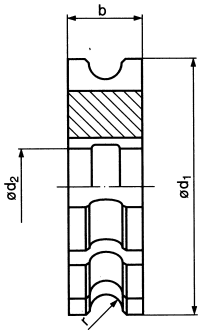


Concava, profilo costante, con taglio di chiavetta longitudinale secondo DIN 138

Konkav, hinterdreht, mit Längsnut nach DIN 138

Concave milling cutters relieved, with standard keyway acc. DIN 138

Fraises à rayon 1/2 cercle concave, profil détalonné, avec entraînement par clavette selon DIN 138



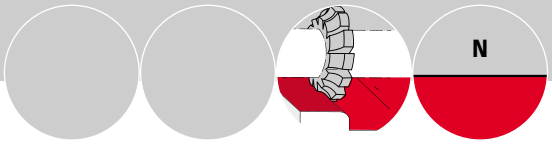
DIN 855A
HSS

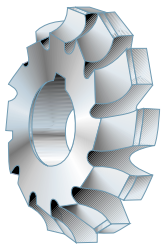
HSS

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.									9592
Ød1	r H_{11}	b	$Ød_2$	Z					
50	1	6	16	14					●
50	1,25	6	16	14					■
50▲	1,5	8	16	14					●
50	2	9	16	14					●
63	2,5	10	22	12					●
63	3	12	22	12					●
63▲	3,5	16	22	12					●
63	4	16	22	12					●
63	4,25	18	22	12					■
63▲	4,5	18	22	12					●
63	5	20	22	12					●
80▲	5,5	22	27	12					●
80	6	24	27	12					●
80▲	6,5	28	27	12					●
80▲	7	32	27	12					●
80▲	7,5	32	27	12					●
80	8	32	27	12					●
100▲	9	36	32	12					●
100	10	36	32	12					●
100▲	11	40	32	12					●
100	12	40	32	12					●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

Frese a profilo 1/4 circolare
Halbrund - Profilfräser



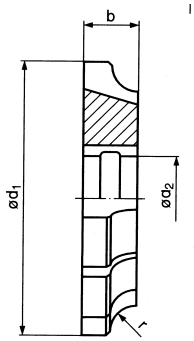


Concava, profilo costante, taglio destro con taglio di chiavetta longitudinale secondo DIN 138

Konkav, hinterdreht, rechtsschneidend mit Längsnut nach DIN 138

Corner-rounding cutters concave relieved, right-hand cutting with standard keyway acc. DIN 138

Fraises à rayon 1/4 cercle concave, profil détalonné, coupé a droite, avec entraînement par clavette selon DIN 138

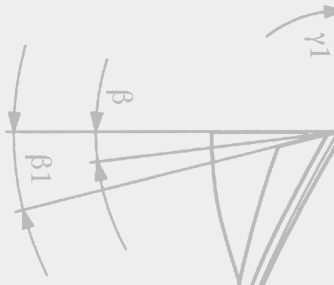


DIN 6513R
HSS

HSS

Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat.											**9593**
Ød1	r H_{11}	b	$Ød_2$	Z							
63	4	8	22	12							●
63	5	10	22	12							●
80	6	12	27	12							●
80	8	16	27	12							●
100	10	18	32	12							●

● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



Informazioni Tecniche
Technische Hinweise
Technical Instruction
Instructions Techniques

Calcolo dei parametri di taglio
Ermittlung der verschiedenen Schnittdaten

Cutting parameters calculation
Evaluation des paramètres de coupe

Velocità di taglio (Vt) e numero di giri (n)
Schnittgeschwindgkeit (Vt) und Umdrehungen (n)
Cutting speed (Vt) and number of turns (n)
Vitesse de coupe et numéro de tours

$$V_t = \frac{d_1 \times 3{,}14 \times n}{1000} = \textbf{m/min}$$

$$n = \frac{V_t \times 1000}{d_1 \times 3{,}14} = \textbf{giri/min}$$

Alimentazione (Vf) e avanzamento per dente (fz)
Vorschub (pro Minute) (Vf) und Vorschub pro Schneide (fz)
Feed per min (Vf) and feed per tooth (fz)
Alimentation et avancement par dent

$$V_f = \frac{f_z \times z \times n}{1000} = \textbf{mm/min}$$

$$F_z = \frac{V_f}{z \times n} = \textbf{mm/z}$$

Legenda • Legende • Caption • Légende

V_t	**Velocità di taglio (m/min)** Schnittgeschwindigkeit (m/min) Cutting length (m/min) Vitesse de coupe (m/min)
n	**Numero di giri (giri/min)** Umdrehungen (U/min) Number of turns (U/min) Numéro de tours (T/min)
d_1	**Diametro nominale (mm)** Nenndurchmesser (mm) Nominal diameter (mm) Diamètre nominal (mm)
V_f	**Alimentazione (mm/min)** Vorschub pro Minute (mm/min) Feed per min. (mm/min) Alimentation (mm/min)
f_z	**Avanzamento per dente (mm/z)** Vorschub pro Schneide (mm/Z) Feed per tooth (m/Z) Avancement par dent (m/Z)
z	**Numero dei denti** Zähnezahl Number of teeth Numéro de dents
P	**Potenza richiesta (Kw)** Gefragte Leistung (Kw) Required power (Kw) Puissance demandée (Kw)
a_p	**Profondità di taglio (mm)** Schnittiefe (mm) Cutting depth (mm) Profondeur de coupe (mm)
a_t	**Larghezza di taglio (mm)** Schnittbreite (mm) Cutting width (mm) Largeur de coupe (mm)
h_m	**Spessore medio del truciolo (mm)** Durchschnittliche Spanungsdicke (m/m) Medium chip thickness (mm) Epaisseur moyen du copeau (mm)
Q	**Materiale asportato (cm³/min/kw)** Spanmenge (cm³/min/kw) Removed material (cm³/min/kw) Matière emportée (cm³/min/kw)

Potenza richiesta (P) e spessore medio del truciolo (hm)
Mittenspandicke (hm) und benötigte Leistung (P)
Required power (P) and medium chip thickness (hm)
Puissance demandée et épaisseur moyen du copeau

$$P_z = \frac{a_t \times a_p \times V_f}{1000 \times Q} = \textbf{Kw}$$

$$h_m = f_z \times \sqrt{\frac{a_t}{d_1}} = \textbf{mm}$$

Valori di Q • Q-Werte • Q-Values • Valeur de Q

Materiale Werkstoff Materials Matière		**Q**
Acciaio < 700 N/mm² Steel < 700 N/mm²	Stahl < 700 N/mm² Acier < 700 N/mm²	20-25
Acciaio < 1000 N/mm² Steel < 1000 N/mm²	Stahl < 1000 N/mm² Acier < 1000 N/mm²	16-24
Acciaio > 1000 N/mm² Steel > 1000 N/mm²	Stahl > 1000 N/mm² Acier > 1000 N/mm²	15-22
Acciaio inossidabile Stainless steel	Rostfreier Stahl Acier inoxydable	14-20
Ghisa grigia Gray pig iron	Grauguß Fonte grise	30-45
Ghisa sferoidale Spheroidal graphite cast iron	Sphäroguß Fonte sphéroidale	25-35
Alluminio e sue leghe Aluminium and alloys	Aluminium und Legierungen Alluminium et ses alliages	60-80
Titanio Titanium	Titan Titane	10-14
Rame-ottone Copper-brass	Kupfer-Messing Cuivre-laiton	38-45

Campo di applicazione per operazioni di semifinitura e sgrossatura
Anwendungsbereich für Schruppfräser und Schlicht-Schruppfräser

Application field for semifinishing and roughing workings
Champs d'application pour usinage semi-finition et ébauche

Materiali Werkstoffe Materials Matières	**Tipologia** • Typ • Type • Type					
	NF		**HFS**		**WF**	
	HSS-Co8		HSS-Co8	ASP-60	HSS-Co8	ASP-60
Acciaio R ≤ 600 N/mm² Stahl R ≤ 600 N/mm² Steel R ≤ 600 N/mm² Acier R ≤ 600 N/mm²	○ ● ● ●					
Acciaio R ≤ 900 N/mm² Stahl R ≤ 900 N/mm² Steel R ≤ 900 N/mm² Acier R ≤ 900 N/mm²	○ ● ● ●					
Acciaio R ≤ 1100 N/mm² Stahl R ≤ 1100 N/mm² Steel R ≤ 1100 N/mm² Acier R ≤ 1100 N/mm²	●		●	●		
Acciaio R ≥ 1100 N/mm² Stahl R ≥ 1100 N/mm² Steel R ≥ 1100 N/mm² Acier R ≥ 1100 N/mm²			●	●		
Acc. inossidabile, res. al calore Warmfester rostfreier Stahl Stainless steel, heat resisting Acier inoxydable	●		○ ●	○ ●		
Ghisa HB ≤ 250 Gußeisen HB ≤ 250 Cast iron HB ≤ 250 Fonte HB ≤ 250	○ ●					
Ghisa HB > 250 Gußeisen HB > 250 Cast iron HB > 250 Fonte HB > 250			●	○ ●		
Titanio e sue leghe R ≤ 900 N/mm² Titan und Legierungen R ≤ 900 N/ mm² Titanium and alloys R ≤ 900 N/mm² Titane et alliage de titane R ≤ 900 N/mm²			○ ●	○ ●		
Titanio e sue leghe R > 900 N/mm² Titan und Legierungen R > 900 N/ mm² Titanium and alloys R > 900 N/mm² Titane et alliage de titane R > 900 N/mm²			○ ●	○ ●		
Leghe Ni-Cr R ≤ 900 N/mm² Ni-Cr Legierungen ≤ 900 N/ mm² Ni-Cr Alloys Alliages speciaux à base Ni-Cr ≤ 900 N /mm²			○ ●	○ ●		
Leghe Ni-Cr R > 900 N/mm² Ni-Cr Legierungen > 900 N/ mm² Ni-Cr Alloys Alliages spéciaux à base Ni-Cr > 900 N/ mm²			○ ●	○ ●		
Rame Kupfer Copper Cuivre					○ ● ●	○ ● ●
Leghe Rame - Nichel - Zinco Kupfer-, Nickel-, und Zinklegierungen Copper, Nickel and Zinc alloys Alliage Cuivre/Nickel/Zinc	○					
Alluminio dolce Weiches Aluminium Soft aluminium Aluminium doux					○ ●	○ ●
Leghe Al - Si con Si ≤ 10% Al-, Si-Legierungen mit Si ≤ 10% Al and Si alloys with Si ≤ 10% Aluminium et alliage d'aluminium ≤ 10%					○ ●	○ ●
Leghe Al - Si con Si > A 10% Al-, Si-Legierungen mit Si > A 10% Al and Si alloys with Si ≤ 10% Aluminium et alliage d'aluminium > 10% Si			●	●		

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Uncoated
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TiN

TiCN

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Tipologia • Typ • Type • Type

HARD-WAVE		NR		HRS		JET-CUT		AH	
	ASP 60	HSS-Co8	ASP-60	HSS-Co8	ASP-60		ASP-60		ASP-60

Velocità di taglio per operazioni di sgrossatura con frese in HSS-Co8
Empfohlene Schnittgeschwindigkeiten für Schruppfräser HSS-Co8

Cutting speed for roughing workings with HSS-Co8 mills-end mills
Vitesse de coupe pour fraise ebauche avec HSS-Co8

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Acciaio R ≤ 600 N/mm² **Acc. alta velocità, da costruzione** Stahl R ≤ 600 N/mm² Freischnittstahl Steel R ≤ 600 N/mm² High speed structural steel Acier R ≤ 600 N/mm² Acier de décolletage et de contruction	Fe 37 C 10 C35 9 S Mn Pb 28	1.0315 1.0301 1.0501 1.0718	**25-35**	**40-56**	**48-65**	**48-65**
Acciaio R ≤ 900 N/mm² **Acc. da costruzione in fusione poco legati, da cementazione, da bonifica, da nitrurazione per lav. a freddo** Stahl R ≤ 900 N/mm² Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl Steel R ≤ 900 N/mm² Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel Acier R ≤ 900 N/mm² De construction, coulé, au carbure, haute résistence, nitruré et laminé à froid	60 S 20 C45 31 Ni Cr 14V 90 Mn Cr V8 34 Cr 4V 38 Mn Si 4V GS-70 26 Cr Mo 4	1.0728 1.0503 1.5755 1.2842 1.7033 1.5120 1.7219	**16-27**	**26-43**	**30-51**	**30-51**
Acciaio R ≤1100 N/mm² **Acc. da nitrurazione, da bonifica resistente al calore in fusione legati, per lav. a caldo, rapido** Stahl R ≤ 1100 N/mm² Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl Steel R ≤ 1100 N/mm² Nitrided, heat-threated, heat resisting, heat-working, high speed steel Acier R ≤ 1100 N/mm² Nitruré, haute résistence, résistent à la chaleur et acier rapide	28 Ni Cr Mo 4 50 Cr Mo 4 56 - 5 - 2 - 5 46 Mn Si 4 36 Cr Ni Mo 4V 40 Cr MoV 47	1.6513 1.7228 1.3243 1.5121 1.6511 1.7711	**14-21**	**22-33**	**26-40**	**26-40**
Acciaio R > 1100 N/mm² **Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle** Stahl R > 1100 N/mm² Nitrier-, Vergütungs-, Warmarbeits-, Federstahl Steel R > 1100 N/mm² Nitrided, heat-threated, heat-working, spring steel Acier R > 1100 N/mm² Nitruré, pour traitement thermique, laminé à chaud	X 40 Cr Mo V51 55 Ni Cr MoV6V 36 Ni Cr 10 60 Si Mn 5	1.2344 1.2713 1.5736 1.0908	**10-16**	**16-26**	**19-30**	**19-30**
Acciaio inossidabile, resistente al calore e resistente alla corrosione Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl Stainless, heat-resisting, corrosion-resisting steel Acier inoxydable résistent à la chaleur et à la corrosion	X 10 Cr 13 X 20 Cr Ni 172 Aisi 303 304 316 321	1.4006 1.4057 1.4305 1.4301 1.4401 1.4541	**10-15**		**19-28**	**19-28**
Ghisa ≤ 250 HB **fusioni di ghisa grigia, ghisa lamellare** Gußeisen ≤ 250 HB Ausschmelzungen von Grauguß, Lamellengraphit Cast iron ≤ 250 HB Gray pig iron Fonte ≤ 250 HB Fonte grise	GG 15 GG 20 GG 25 GTS 55	0.6015 0.6020 0.6025	**18-25**	**29-40**	**34-47**	**34-47**
Ghisa dura > 250 HB **ghisa sferoidale, ghisa speciale** Gußeisen > 250 HB Sphäroguß , Sondergrauguß Cast iron > 250 HB Spheroidal cast iron , Special cast iron Fonte > 250 HB Fonte sphéroidale	GG 40 GGG 50 GGG 60 GTW 40 GTW 55	0.6040 0.7050 0.7060	**14-20**	**22-32**	**26-38**	**26-38**

Neutro
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I valori massimi sono consigliabili per le tipologie -H-
Die Höchstwerte sind bei der Anwendung der Typen H zu empfehlen
Maximum values are advisable for type H
Valeurs maximales sont conseillées pour les H type

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Titanio ricotto R ≤ 900 N/mm² **leghe di titanio ricotte** Ausgeglühtes Titan R ≤ 900 N/mm² ausgeglühte Titanlegierungen Annealed titanium ≤ 900 N/mm² Annealed titanium allays Titane recuit R ≤ 900 N/mm² Alliages de titane recuites	Ti 99.7 Ti Al 6V4 Ti Al 5 Sn2	3.7034 3.7164 3.7154	**10-16**		**18-25**	**18-25**
Leghe di titanio ricotto R ≤ 1200 N/mm² **leghe di titanio indurite** Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm² Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys Alliages de titane durcies R ≤ 1200 N/mm²	Ti Cu 2 Ti Al 5 Sn2 Ti Al 6 Zr5	3.7124 3.711S 3.7154LN	**6-10**		**9-16**	**9-16**
Leghe Ni - Cr resistenti al calore **R ≤ 900 N/mm²** Wärmebeständige Ni-Cr Legierungen/R ≤ 900 N/mm² Heat-resisting Ni-Cr alloys R ≤ 900 N/mm² Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm²	Incoloy 800 Inconel 600 Inconel 601 Monel 400 Hastelloy B	1.4876 2.4816 2.4851 2.4360 2.4800	**6-10**		**11-16**	**11-16**
Leghe Ni - Cr altamente resistenti al calore **R ≤ 1300 N/mm²** Hochwärmebeständige Ni-Cr- Legierungen/ R ≤ 1300 N/mm Heat-resisting Ni-Cr alloys R ≤ 1300 N/mm Acier résistent à la chaleur base Ni-Cr R ≤ 1300 N/mm	Waspaloy Inconel 718 Nimonic 80A Udimet 630	2.6554 2.4668 2.4881 2.4668	**5-7**		**8-11**	**8-11**
Rame Kupfer Copper Cuivre	E - Cu F - Cu	2.0060 2.0080	**40-90**	**64-145**	**75-170**	**75-170**
Leghe rame-nichel-zinco Kupfer-, Nickel-, und Zinklegierungen Copper, Nickel and Zinc alloys Alliage cuivre, Nickel et Zinc	Cu Ni 10 Zn 42 Pb Cu Ni 18 Zn 19 Pb	2.0770 2.0790	**35-70**	**60-110**	**70-130**	**70-130**
Alluminio dolce Weiches Aluminium Soft aluminium Aluminium doux	Al 99.5 Al Mg Si Pb Al Zu Mg Cu 1,5	3.0255 3.0615 3.4365	**140-200**	**190-280**	**220-320**	**220-320**
Leghe Al-Si ≤ 10% Al-Si ≤ 10% Legierungen Al-Si ≤ 10% alloys Alliage Aluminium ≤ 10% Si	G - Al Si 5 Mg G - Al Si 6 Cn 4 G - Al Mg 3 Al - Mg 5	3.2341 3.2151 3.3541.01 3.3555	**60-120**	**90-180**	**110-210**	**110-210**
Leghe Al-Si > 10% **Leghe di magnesio** Al-Si >10% Legierungen Magnesiumlegierungen Al-Si > 10% alloys Magnesium alloys Alliage aluminium > 10% Si Alliages magnésium	G - Al Si 10 Mg G - Al Si 12 Mg Al 6 Zu G - Mg Al 9 Zu 2	3.2381 3.2581 3.5612	**30-70**	**48-110**	**55-130**	**55-130**

Velocità di taglio per operazioni di sgrossatura con frese in ASP-60
Empfohlene Schnittgeschwindigkeiten für Schruppfräser ASP-60

Cutting speed for roughing workings with ASP-60 mills - end mills
Vitesse de coupe pour fraise ebauche ASP-60

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Acciaio R ≤ 600 N/mm² **Acc. alta velocità, da costruzione** Stahl R ≤ 600 N/mm² Freischnittstahl Steel R ≤ 600 N/mm² High speed structural steel Acier R ≤ 600 N/mm² Acier de décolletage et de contruction	Fe 37 C 10 C35 9 S Mn Pb 28	1.0315 1.0301 1.0501 1.0718	**29-40**	**45-65**	**55-75**	**55-75**
Acciaio R ≤ 900 N/mm² **Acc. da costruzione, in fusione poco legati, da cementazione, da bonifica, da nitrurazione per lav. a freddo** Stahl R ≤ 900 N/mm² Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl Steel R ≤ 900 N/mm² Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel Acier R ≤ 900 N/mm² De construction, coulé, au carbure, haute résistence,nitruré et laminé à froid	60 S 20 C45 31 Ni Cr 14V 90 Mn Cr V8 34 Cr 4V 38 Mn Si 4V GS-70 26 Cr Mo 4	1.0728 1.0503 1.5755 1.2842 1.7033 1.5120 1.7219	**20-32**	**30-50**	**35-60**	**35-60**
Acciaio R ≤1100 N/mm² **Acc. da nitrurazione, da bonifica resistente al calore in fusione legati, per lav. a caldo, rapido** Stahl R ≤ 1100 N/mm² Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl Steel R ≤ 1100 N/mm² Nitrided, heat-threated, heat resisting, heat-working, high speed steel Acier R ≤ 1100 N/mm² Nitruré, haute résistence, résistent à la chaleur et acier rapide	28 Ni Cr Mo 4 50 Cr Mo 4 56 - 5 - 2 - 5 46 Mn Si 4 36 Cr Ni Mo 4V 40 Cr MoV 47	1.6513 1.7228 1.3243 1.5121 1.6511 1.7711	**17-25**	**25-40**	**30-45**	**30-45**
Acciaio R > 1100 N/mm² **Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle** Stahl R > 1100 N/mm² Nitrier-, Vergütungs-, Warmarbeits-, Federstahl Steel R > 1100 N/mm² Nitrided, heat-threated, heat-working, spring steel Acier R > 1100 N/mm² Nitruré, pour traitement thermique, laminé à chaud	X 40 Cr Mo V51 55 Ni Cr MoV6V 36 Ni Cr 10 60 Si Mn 5	1.2344 1.2713 1.5736 1.0908	**14-22**	**20-35**	**25-42**	**25-42**
Acciaio inossidabile, resistente al calore e resistente alla corrosione Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl Stainless, heat-resisting, corrosion-resisting steel Acier inoxydable résistent à la chaleur et à la corrosion	X 10 Cr 13 X 20 Cr Ni 172 Aisi 303 304 316 321	1.4006 1.4057 1.4305 1.4301 1.4401 1.4541	**14-20**		**25-38**	**25-38**
Ghisa ≤ 250 HB **fusioni di ghisa grigia, ghisa lamellare** Gußeisen ≤ 250 HB Ausschmelzungen von Grauguß, Lamellengraphit Cast iron ≤ 250 HB Gray pig iron Fonte ≤ 250 HB Fonte grise	GG 15 GG 20 GG 25 GTS 55	0.6015 0.6020 0.6025	**20-32**	**32-50**	**38-60**	**38-60**
Ghisa dura > 250 HB **ghisa sferoidale, ghisa speciale** Gußeisen > 250 HB Sphäroguß , Sondergrauguß Cast iron > 250 HB Spheroidal cast iron , Special cast iron Fonte > 250 HB Fonte sphéroidale	GG 40 GGG 50 GGG 60 GTW 40 GTW 55	0.6040 0.7050 0.7060	**18-25**	**28-40**	**34-45**	**34-45**

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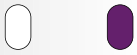
TiN **TiCN** **TiALN FUTURA®**

I valori massimi sono consigliabili per le tipologie -H-
Die Höchstwerte sind bei der Anwendung der Typen H zu empfehlen
Maximum values are advisable for type H
Valeurs maximales sont conseillées pour les H type

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Titanio ricotto R ≤ 900 N/mm² **leghe di titanio ricotte** Ausgeglühtes Titan R ≤ 900 N/mm² ausgeglühte Titanlegierungen Annealed titanium alloys ≤ 900 N/mm² Annealed titanium alloys Titane recuit R ≤ 900 N/mm² Alliages de titane recuites	Ti 99.7 Ti Al 6V4 Ti Al 5 Sn2	3.7034 3.7164 3.7154	**14-21**		**25-40**	**25-40**
Leghe di titanio ricotto R ≤ 1200 N/mm² **leghe di titanio indurite** Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm² Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys Alliages de titane durcies R ≤ 1200 N/mm²	Ti Cu 2 Ti Al 5 Sn2 Ti Al 6 Zr5	3.7124 3.711S 3.7154LN	**8-14**		**15-26**	**15-26**
Leghe Ni - Cr resistenti al calore **R ≤ 900 N/mm²** Wärmebeständige Ni-Cr Legierungen/R ≤ 900 N/mm² Heat-resisting Ni-Cr alloys R ≤ 900 N/mm² Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm²	Incoloy 800 Inconel 600 Inconel 601 Monel 400 Hastelloy B	1.4876 2.4816 2.4851 2.4360 2.4800	**8-12**		**15-22**	**15-22**
Leghe Ni - Cr altamente resistenti al calore **R ≤ 1300 N/mm²** Hochwärmebeständige Ni-Cr- Legierungen/ R ≤ 1300 N/mm Heat-resisting Ni-Cr alloys R ≤ 1300 N/mm Acier résistent à la chaleur base Ni-Cr R ≤ 1300 N/mm	Waspaloy Inconel 718 Nimonic 80A Udimet 630	2.6554 2.4668 2.4881 2.4668	**6-10**		**10-19**	**10-19**
Rame Kupfer Copper Cuivre	E - Cu F - Cu	2.0060 2.0080	**48-110**	**76-170**	**90-200**	**90-200**
Leghe rame-nichel-zinco Kupfer-, Nickel-, und Zinklegierungen Copper, Nickel and Zinc alloys Alliage cuivre, Nickel et Zinc	Cu Ni 10 Zn 42 Pb Cu Ni 18 Zn 19 Pb	2.0770 2.0790	**42-85**	**65-130**	**80-160**	**80-160**
Alluminio dolce Weiches Aluminium Soft aluminium Aluminium doux	Al 99.5 Al Mg Si Pb Al Zu Mg Cu 1,5	3.0255 3.0615 3.4365	**165-215**	**230-300**	**260-340**	**260-340**
Leghe Al-Si ≤ 10% Al-Si ≤ 10% Legierungen Al-Si ≤ 10% alloys Alliage Aluminium ≤ 10% Si	G - Al Si 5 Mg G - Al Si 6 Cn 4 G - Al Mg 3 Al - Mg 5	3.2341 3.2151 3.3541.01 3.3555	**70-145**	**110-230**	**13-270**	**13-270**
Leghe Al-Si > 10% **Leghe di magnesio** Al-Si >10% Legierungen Magnesiumlegierungen Al-Si > 10% alloys Magnesium alloys Alliage aluminium > 10% Si Alliages magnésium	G - Al Si 10 Mg G - Al Si 12 Mg Al 6 Zu G - Mg Al 9 Zu 2	3.2381 3.2581 3.5612	**35-85**	**55-130**	**65-160**	**65-160**

Campo di applicazione per operazioni di finitura, esecuzioni sedi di chiavetta e scanalature
Anwendungsbereich für Schlicht-Keilnuten-, und Bohrnutenfräser ASP-60

Application field for finishing working, keyseat and slot execution
Champs d'application pour fraises de finition, de clavette et de rainurage

Materiali Werkstoffe Materials Matières	**Tipologia** • Typ • Type • Type					
	N		**HS**		**W**	
	HSS-Co8		HSS-Co8	ASP-60	HSS-Co8	ASP-60
Acciaio R ≤ 600 N/mm² Stahl R ≤ 600 N/mm² Steel R ≤ 600 N/mm² Acier R ≤ 600 N/mm²						
Acciaio R ≤ 900 N/mm² Stahl R ≤ 900 N/mm² Steel R ≤ 900 N/mm² Acier R ≤ 900 N/mm²						
Acciaio R ≤ 1100 N/mm² Stahl R ≤ 1100 N/mm² Steel R ≤ 1100 N/mm² Acier R ≤ 1100 N/mm²						
Acciaio R ≥ 1100 N/mm² Stahl R ≥ 1100 N/mm² Steel R ≥ 1100 N/mm² Acier R ≥ 1100 N/mm²						
Acc. inossidabile, res. al calore Warmfester rostfreier Stahl Stainless steel, heat resisting Acier inoxydable						
Ghisa HB ≤ 250 Gußeisen HB ≤ 250 Cast iron HB ≤ 250 Fonte HB ≤ 250						
Ghisa HB > 250 Gußeisen HB > 250 Cast iron HB > 250 Fonte HB > 250						
Titanio e sue leghe R ≤ 900 N/mm² Titan und Legierungen R ≤ 900 N/ mm² Titanium and alloys R ≤ 900 N/mm² Titane et alliage de titane R ≤ 900 N/mm²						
Titanio e sue leghe R > 900 N/mm² Titan und Legierungen R > 900 N/ mm² Titanium and alloys R > 900 N/mm² Titane et alliage de titane R > 900 N/mm²						
Leghe Ni-Cr R ≤ 900 N/mm² Ni-Cr Legierungen ≤ 900 N/ mm² Alloys Ni-Cr Alliages speciaux à base Ni-Cr ≤ 900 N /mm²						
Leghe Ni-Cr R > 900 N/mm² Ni-Cr Legierungen > 900 N/ mm² Alloys Ni-Cr Alliages spéciaux à base Ni-Cr > 900 N/ mm²						
Rame Kupfer Copper Cuivre						
Leghe Rame - Nichel - Zinco Kupfer-, Nickel-, und Zinklegierungen Copper, Nickel and Zinc alloys Alliage Cuivre/Nickel/Zinc						
Alluminio dolce Weiches Aluminium Soft aluminium Aluminium doux						
Leghe Al - Si con Si ≤ 10% Al-, Si-Legierungen mit Si ≤ 10% Al and Si alloys with Si ≤ 10% Aluminium et alliage d'aluminium ≤ 10%						
Leghe Al - Si con Si > A 10% Al-, Si-Legierungen mit Si > A 10% Al and Si alloys with > A 10% Aluminium et alliage d'aluminium > 10% Si						

Neutro
Unbeschichtet
Uncoated
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TiN

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TiALN FUTURA®

Tipologia • Typ • Type • Type

JET-CUT		N-2 tagli • 2 Schneiden • 2 Flutes • 2 Tailles		N-3 tagli • 3 Schneiden • 3 Flutes • 3 Tailles		VA		AH	
HSS-Co8		HSS-Co8	ASP-60	HSS-Co8	ASP-60	HSS-Co8	ASP-60		ASP-60

Velocità di taglio per operazioni di finitura con frese in HSS-Co8
Empfohlene Schnittgeschwindigkeiten für Schlichtfräser HSS-Co8

Cutting speed for finishing workings with HSS-Co8 mills - end mills
Vitesse de coupe pour fraise de finition avec HSS-Co8

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Acciaio R ≤ 600 N/mm² **Acc. alta velocità da costruzione** Stahl R ≤ 600 N/mm² Freischnittstahl Steel R ≤ 600 N/mm² High speed structural steel Acier R ≤ 600 N/mm² Acier de décolletage et de contruction	Fe 37 C 10 C35 9 S Mn Pb 28	1.0315 1.0301 1.0501 1.0718	**30-40**	**48-65**	**55-80**	**55-80**
Acciaio R ≤ 900 N/mm² **Acc. da costruzione, in fusione poco legati, da cementazione, da bonifica, da nitrurazione, per lav. a freddo** Stahl R ≤ 900 N/mm² Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl Steel R ≤ 900 N/mm² Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel Acier R ≤ 900 N/mm² De construction, coulé, au carbure, haute résistence,nitruré et laminé à froid	60 S 20 C45 31 Ni Cr 14V 90 Mn Cr V8 34 Cr 4V 38 Mn Si 4V GS-70 26 Cr Mo 4	1.0728 1.0503 1.5755 1.2842 1.7033 1.5120 1.7219	**20-34**	**32-55**	**38-64**	**38-64**
Acciaio R ≤1100 N/mm² **Acc. da nitrurazione, da bonifica resistente al calore, in fusione legati, per lav. a caldo, rapido** Stahl R ≤ 1100 N/mm² Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl Steel R ≤ 1100 N/mm² Nitrided, heat-threated, heat resisting, heat-working, high speed steel Acier R ≤ 1100 N/mm² Nitruré, haute résistence, résistent à la chaleur et acier rapide	28 Ni Cr Mo 4 50 Cr Mo 4 56 - 5 - 2 - 5 46 Mn Si 4 36 Cr Ni Mo 4V 40 Cr MoV 47	1.6513 1.7228 1.3243 1.5121 1.6511 1.7711	**17-27**	**27-43**	**32-51**	**32-51**
Acciaio R > 1100 N/mm² **Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle** Stahl R > 1100 N/mm² Nitrier-, Vergütungs-, Warmarbeits-, Federstahl Steel R > 1100 N/mm² Nitrided, heat-threated, heat-working, spring steel Acier R > 1100 N/mm² Nitruré, pour traitement thermique, laminé à chaud	X 40 Cr Mo V51 55 Ni Cr MoV6V 36 Ni Cr 10 60 Si Mn 5	1.2344 1.2713 1.5736 1.0908	**12-20**	**20-32**	**22-38**	**22-38**
Acciaio inossidabile, resistente al calore e resistente alla corrosione Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl Stainless, heat-resisting, corrosion-resisting steel Acier inoxydable résistent à la chaleur et à la corrosion	X 10 Cr 13 X 20 Cr Ni 172 Aisi 303 304 316 321	1.4006 1.4057 1.4305 1.4301 1.4401 1.4541	**13-20**		**25-85**	**25-85**
Ghisa ≤ 250 HB **fusioni di ghisa grigia, ghisa lamellare** Gußeisen ≤ 250 HB Ausschmelzungen von Grauguß, Lamellengraphit Cast iron ≤ 250 HB Gray pig iron Fonte ≤ 250 HB Fonte grise	GG 15 GG 20 GG 25 GTS 55	0.6015 0.6020 0.6025	**20-30**	**32-50**	**40-60**	**40-60**
Ghisa dura > 250 HB **ghisa sferoidale, ghisa speciale** Gußeisen > 250 HB Ghisa Sphäroguß , Sondergrauguß Cast iron > 250 HB Spheroidal cast iron , Special cast iron Fonte > 250 HB Fonte sphéroidale	GG 40 GGG 50 GGG 60 GTW 40 GTW 55	0.6040 0.7050 0.7060	**17-23**	**28-38**	**32-45**	**32-45**

Neutro
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TiN **TiCN** **TiALN FUTURA®**

I valori massimi sono consigliabili per le tipologie -H-
Die Höchstwerte sind bei der Anwendung der Typen H zu empfehlen
Maximum values are advisable for type H
Valeurs maximales sont conseillées pour les H type

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Titanio ricotto R ≤ 900 N/mm² **leghe di titanio ricotte** Ausgeglühtes Titan R ≤ 900 N/mm² ausgeglühte Titanlegierungen Annealed titanium alloys ≤ 900 N/mm² Annealed titanium alloys Titane recuit R ≤ 900 N/mm² Alliages de titane recuites	Ti 99.7 Ti Al 6V4 Ti Al 5 Sn2	3.7034 3.7164 3.7154	**13-19**		**20-30**	**20-30**
Leghe di titanio ricotto R ≤ 1200 N/mm² **leghe di titanio indurite** Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm² Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys Alliages de titane durcies R ≤ 1200 N/mm²	Ti Cu 2 Ti Al 5 Sn2 Ti Al 6 Zr5	3.7124 3.711S 3.7154LN	**8-14**		**12-22**	**12-22**
Leghe Ni - Cr resistenti al calore **R ≤ 900 N/mm²** Wärmebeständige Ni-Cr Legierungen/R ≤ 900 N/mm² Heat-resisting Ni-Cr alloys R ≤ 900 N/mm² Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm²	Incoloy 800 Inconel 600 Inconel 601 Monel 400 Hastelloy B	1.4876 2.4816 2.4851 2.4360 2.4800	**8-12**		**15-22**	**15-22**
Leghe Ni - Cr altamente resistenti al calore **R ≤ 1300 N/mm²** Hochwärmebeständige Ni-Cr- Legierungen/ R ≤ 1300 N/mm² Heat-resisting Ni-Cr alloys R ≤ 1300 N/mm² Acier résistent à la chaleur base Ni-Cr R ≤ 1300 N/mm²	Waspaloy Inconel 718 Nimonic 80A Udimet 630	2.6554 2.4668 2.4881 2.4668	**5-9**		**8-15**	**8-15**
Rame Kupfer Copper Cuivre	E - Cu F - Cu	2.0060 2.0080	**60-120**	**90-170**	**110-200**	**110-200**
Leghe rame-nichel-zinco Kupfer-, Nickel-, und Zinklegierungen Copper, Nickel and Zinc alloys Alliage cuivre, Nickel et Zinc	Cu Ni 10 Zn 42 Pb Cu Ni 18 Zn 19 Pb	2.0770 2.0790	**50-90**	**80-140**	**90-160**	**90-160**
Alluminio dolce Weiches Aluminium Soft aluminium Aluminium doux	Al 99.5 Al Mg Si Pb Al Zu Mg Cu 1,5	3.0255 3.0615 3.4365	**160-240**	**220-330**	**250-380**	**250-380**
Leghe Al-Si ≤ 10% Al-Si ≤ 10% Legierungen Al-Si ≤ 10% alloys Alliage Aluminium ≤ 10% Si	G - Al Si 5 Mg G - Al Si 6 Cn 4 G - Al Mg 3 Al - Mg 5	3.2341 3.2151 3.3541.01 3.3555	**80-140**	**120-210**	**140-250**	**140-250**
Leghe Al-Si > 10% **Leghe di magnesio** Al-Si >10% Legierungen Magnesiumlegierungen Al-Si > 10% alloys Magnesium alloys Alliage aluminium > 10% Si Alliages magnésium	G - Al Si 10 Mg G - Al Si 12 Mg Al 6 Zu G - Mg Al 9 Zu 2	3.2381 3.2581 3.5612	**50-90**	**80-150**	**100-170**	**100-170**

Velocità di taglio per operazioni di finitura con frese in ASP-60
Empfohlene Schnittgeschwindigkeiten Keilnuten-, und Bohrnutenfräser ASP-60

Cutting speed for finishing workings with ASP-60 mills - end mills
Vitesse de coupe pour fraise de finition ASP-60

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Acciaio R ≤ 600 N/mm² **Acc. alta velocità da costruzione** Stahl R ≤ 600 N/mm² Freischnittstahl Steel R ≤ 600 N/mm² High speed structural steel Acier R ≤ 600 N/mm² Acier de décolletage et de contruction	Fe 37 C 10 C35 9 S Mn Pb 28	1.0315 1.0301 1.0501 1.0718	**35-46**	**55-74**	**65-85**	**65-85**
Acciaio R ≤ 900 N/mm² **Acc. da costruzione, in fusione poco legati, da cementazione, da bonifica, da nitrurazione, per lav. a freddo** Stahl R ≤ 900 N/mm² Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl Steel R ≤ 900 N/mm² Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel Acier R ≤ 900 N/mm² De construction, coulé, au carbure, haute résistence,nitruré et laminé à froid	60 S 20 C45 31 Ni Cr 14V 90 Mn Cr V8 34 Cr 4V 38 Mn Si 4V GS-70 26 Cr Mo 4	1.0728 1.0503 1.5755 1.2842 1.7033 1.5120 1.7219	**24-40**	**35-65**	**45-75**	**45-75**
Acciaio R ≤1100 N/mm² **Acc. da nitrurazione, da bonifica, resistente al calore in fusione legati, per lav. a caldo, rapido** Stahl R ≤ 1100 N/mm² Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl Steel R ≤ 1100 N/mm² Nitrided, heat-threated, heat resisting, heat-working, high speed steel Acier R ≤ 1100 N/mm² Nitruré, haute résistence, résistent à la chaleur et acier rapide	28 Ni Cr Mo 4 50 Cr Mo 4 56 - 5 - 2 - 5 46 Mn Si 4 36 Cr Ni Mo 4V 40 Cr MoV 47	1.6513 1.7228 1.3243 1.5121 1.6511 1.7711	**20-32**	**32-50**	**35-60**	**35-60**
Acciaio R > 1100 N/mm² **Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle** Stahl R > 1100 N/mm² Nitrier-, Vergütungs-, Warmarbeits-, Federstahl Steel R > 1100 N/mm² Nitrided, heat-threated, heat-working, spring steel Acier R > 1100 N/mm² Nitruré, pour traitement thermique, laminé à chaud	X 40 Cr Mo V51 55 Ni Cr MoV6V 36 Ni Cr 10 60 Si Mn 5	1.2344 1.2713 1.5736 1.0908	**18-27**	**28-43**	**35-50**	**35-50**
Acciaio inossidabile, resistente al calore e resistente alla corrosione Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl Stainless, heat-resisting, corrosion-resisting steel Acier inoxydable résistent à la chaleur et à la corrosion	X 10 Cr 13 X 20 Cr Ni 172 Aisi 303 304 316 321	1.4006 1.4057 1.4305 1.4301 1.4401 1.4541	**16-26**		**30-50**	**30-50**
Ghisa ≤ 250 HB **fusioni di ghisa grigia, ghisa lamellare** Gußeisen ≤ 250 HB Ausschmelzungen von Grauguß mit Lamellengraphit Cast iron ≤ 250 HB Gray pig iron Fonte ≤ 250 HB Fonte grise	GG 15 GG 20 GG 25 GTS 55	0.6015 0.6020 0.6025	**25-40**	**40-65**	**45-75**	**45-75**
Ghisa dura > 250 HB **ghisa sferoidale, ghisa speciale** Gußeisen > 250 HB Ghisa Sphäroguß , Sondergrauguß Cast iron > 250 HB Spheroidal cast iron , Special cast iron Fonte > 250 HB Fonte sphéroidale	GG 40 GGG 50 GGG 60 GTW 40 GTW 55	0.6040 0.7050 0.7060	**22-32**	**35-50**	**40-60**	**40-60**

Neutro Unbeschichtet Uncoated Non Revêtu

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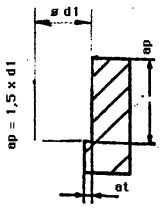
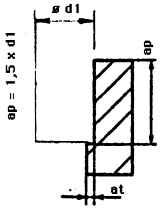
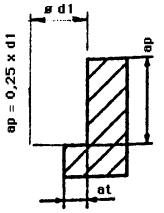
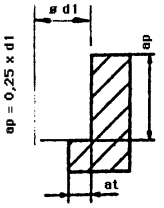
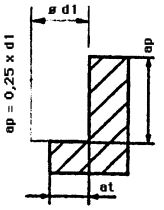
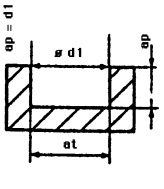
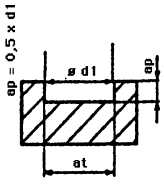
Die Höchstwerte sind bei der Anwendung der Typen H zu empfehlen
Maximum values are advisable for type H
Valeurs maximales sont conseillées pour les H type

Materiali Werkstoffe Materials Matières	**Esempi** Beispiele Examples Exemple		**Velocità di taglio** • Schnittgeschwindigkeit Cutting speed • Vitesse de coupe V_t = m/min			
Titanio ricotto R ≤ 900 N/mm² **leghe di titanio ricotte** Ausgeglühtes Titan R ≤ 900 N/mm² ausgeglühte Titanlegierungen Annealed titanium alloys ≤ 900 N/mm² Annealed titanium alloys Titane recuit R ≤ 900 N/mm² Alliages de titane recuites	Ti 99.7 Ti Al 6V4 Ti Al 5 Sn2	3.7034 3.7164 3.7154	**16-25**		**30-48**	**30-48**
Leghe di titanio ricotto R ≤ 1200 N/mm² **leghe di titanio indurite** Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm² Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys Alliages de titane durcies R ≤ 1200 N/mm²	Ti Cu 2 Ti Al 5 Sn2 Ti Al 6 Zr5	3.7124 3.711S 3.7154LN	**12-20**		**22-38**	**22-38**
Leghe Ni - Cr resistenti al calore **R ≤ 900 N/mm²** Wärmebeständige Ni-Cr Legierungen/R ≤ 900 N/mm² Heat-resisting Ni-Cr alloys R ≤ 900 N/mm² Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm²	Incoloy 800 Inconel 600 Inconel 601 Monel 400 Hastelloy B	1.4876 2.4816 2.4851 2.4360 2.4800	**10-16**		**19-30**	**19-30**
Leghe Ni - Cr altamente resistenti al calore **R ≤ 1300 N/mm²** Hochwärmebeständige Ni-Cr- Legierungen/ R ≤ 1300 N/mm² Heat-resisting Ni-Cr alloys R ≤ 1300 N/mm² Acier résistent à la chaleur base Ni-Cr R ≤ 1300 N/mm²	Waspaloy Inconel 718 Nimonic 80A Udimet 630	2.6554 2.4668 2.4881 2.4668	**6-12**		**10-22**	**10-22**
Rame Kupfer Copper Cuivre	E - Cu F - Cu	2.0060 2.0080	**70-145**	**110-230**	**130-270**	**130-270**
Leghe rame-nichel-zinco Kupfer-, Nickel-, und Zinklegierungen Copper, Nickel and Zinc alloys Alliage cuivre, Nickel et Zinc	Cu Ni 10 Zn 42 Pb Cu Ni 18 Zn 19 Pb	2.0770 2.0790	**60-105**	**95-170**	**110-190**	**110-190**
Alluminio dolce Weiches Aluminium Soft aluminium Aluminium doux	Al 99.5 Al Mg Si Pb Al Zu Mg Cu 1,5	3.0255 3.0615 3.4365	**190-280**	**260-390**	**300-440**	**300-440**
Leghe Al-Si ≤ 10% Al-Si ≤ 10% Legierungen Al-Si ≤ 10% alloys Alliage Aluminium ≤ 10% Si	G - Al Si 5 Mg G - Al Si 6 Cn 4 G - Al Mg 3 Al - Mg 5	3.2341 3.2151 3.3541.01 3.3555	**95-160**	**150-250**	**180-300**	**180-300**
Leghe Al-Si > 10% **Leghe di magnesio** Al-Si >10% Legierungen Magnesiumlegierungen Al-Si > 10% alloys Magnesium alloys Alliage aluminium > 10% Si Alliages magnésium	G - Al Si 10 Mg G - Al Si 12 Mg Al 6 Zu G - Mg Al 9 Zu 2	3.2381 3.2581 3.5612	**60-105**	**95-160**	**110-190**	**110-190**

Avanzamento per tagliente f_z per frese frontali, per cave, a manicotto e a disco
Vorschub pro Zahn "f_z" für Schaft-, Nuten-, Walzenstirn-, und Scheibenfräser

Feed per tooth "f_z" for end mills, slot mills, shell end mills and side cutters
Avance par dent "f_z" pour fraises deux tailles, fraises a' rainurer et 3 tailles

	Tipo • Typ • Type • Type **N/HS** **Finitura** • Fertigbearbeitung Finishing • Finition			**Tipo** • Typ • Type • Type **NR/HRS** **Sgrossatura** • Schruppen Roughing • Ebauche			**2T-3T per cave** Fräser mit 2-3 Schneiden Slot mills with 2-3 flutes Fraise à rainurer 2 ou 3 dents
							
Ø mm	a_t = 0.2 ÷ 0.3 mm	a_t = 0.1 x d_1	a_t = 0.25 x d_1	a_t = 0.25 x d_1	a_t = 0.5 x d_1	a_t = d_1 a_t • 0.3 mm	a_t = d_1
2	0,009	0,009	0,006				0,008
3	0,012	0,012	0,009				0,011
4	0,040	0,018	0,011				0,015
5	0,045	0,023	0,014				0,018
6	0,050	0,027	0,017	0,027	0,025	0,022	0,022
8	0,060	0,036	0,023	0,036	0,033	0,029	0,029
10	0,070	0,045	0,029	0,045	0,041	0,036	0,036
12	0,090	0,055	0,034	0,055	0,050	0,044	0,044
14	0,120	0,064	0,040	0,064	0,059	0,051	0,051
16	0,150	0,073	0,046	0,073	0,068	0,058	0,058
18	0,180	0,082	0,051	0,082	0,075	0,065	0,065
20	0,200	0,091	0,057	0,091	0,082	0,073	0,073
22	0,210	0,100	0,063	0,100	0091	0,080	0,080
25	0,220	0,114	0,071	0,114	0,100	0,091	0,091
28	0,230	0,127	0,080	0,127	0,115	0,102	0,102
32	0,240	0,145	0,091	0,145	0,130	0,116	0,116
36	0,250	0,160	0,100	0,160	0,145	0,130	0,130
40	0,250	0,160	0,100	0,160	0,145	0,130	0,130
45	0,250	0,160	0,100	0,160	0,160	0,150	0,130
50	0,250	0,160	0,100	0,160	0,160	0,150	0,130
56	0,250	0,160	0,100	0,160	0,160	0,150	0,130
63	0,250	0,160	0,100	0,160	0,160	0,150	0,130

Fattore di correzione "F": (da moltiplicare per f_z)

- **acciaio R > 1100 M/min², titanio, leghe speciali** F=0,7
- **alluminio, leghe leggere** F=1,3
- **foratura** F=10,4

Korrekturfaktor "F" (zum Multiplizieren mit f_z)

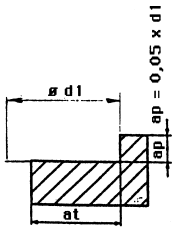
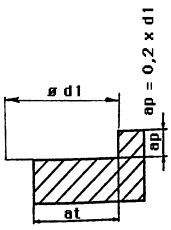
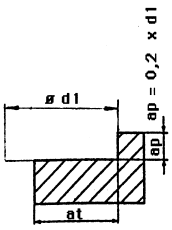
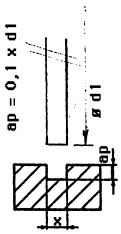
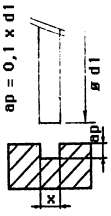
- Stahl R > 1100 N/mm², Titan, Sonderlegierungen F=0,7
- Aluminium, weiche Legierungen F=1,3
- Bohren F=0,4

"F" correction factor (to be multiplied by f_z)

- Steel R> 1100 N/mm², titanium, special alloys F=0,7
- Aluminium, light alloys F=1,3
- Drilling F=0,4

"F" facteur de correction (à multiplier par f_z)

- Acier R> 1100 N/mm², titane, alliages spécial F=0,7
- Aluminium, alliages léger F=1,3
- Perçage F=0,4

Ø mm	**Tipo** • Typ • Type • Type **N/HS** **Finitura** • Fertigbearbeitung Finishing • Finition	**Tipo** • Typ • Type • Type **NR/HRS** **Sgrossatura** • Schruppen Roughing • Ebauche	**Tipo** • Typ • Type • Type **W** **Per leghe leggere** • Für Leichlegierungen For light alloys • Pour alliage léger	**Frese a disco** • Scheibenfräser Side cutter • Fraises 3 tailles **Tipo** • Typ Type • Type **N**	**Tipo** • Typ Type • Type **W**
					
	$a_t = 0.75 \times d_1$	$a_t = 0.75 \times d_1$	$a_t = 0.75 \times d_1$	x = mm 10	x = mm 10
30	0,070	0,050	0,095		
35	0,075	0,055	0,105		
40	0,080	0,060	0,115		
50	0,085	0,070	0,135	0,075	0,140
60	0,095	0,075	0,150		
63	0,100	0,080	0,155	0,095	0,150
75	0,100	0,075	0,175		
80	0,105	0,080	0,180	0,080	0,165
90	0,090	0,085	0,190		
100	0,105	0,070	0,200	0,095	0,140
110	0,115	0,075	0,155		
125	0,115	0,080	0,170	0,085	0,170
130	0,130	0,080	0,180		
150	0,130	0,085	0,155		
160	0,120	0,090	0,160	0,070	0,155
200				0,060	0,160

Tolleranze ISO - Albero base
ISO Toleranz - Einheitswelle

ISO Tolerance - Shaft
ISO Tolerance - Arbre articulé

Gruppo di diametri (mm) • Durchmessergruppen (mm) • Range of diameters (mm) • Gamme de diamètre (mm)

	>1 ≤ 3		>3 ≤ 6		>6 ≤ 10		>10 ≤ 18		>18 ≤ 30		>30 ≤ 50		>50 ≤ 80		>80 ≤ 120		>120 ≤ 180	
g5	-3	-8	-4	-9	-5	-11	-6	-14	-7	-16	-9	-20	-10	-23	-12	-27	-14	-32
h5	0	-5	0	-5	0	-6	0	-8	0	-	0	-11	0	-13	0	-15	0	-18
j5	+4	-1	+4	-1	+4	-2	+5	-3	+5	-4	+6	-5	+6	-7	+6	-9	+7	-11
k5	-	-	-	-	+7	+1	+9	+1	+11	+2	+13	+2	+15	+2	+18	+3	+21	+3
m5	+7	+2	+9	+4	+12	+6	+15	+7	+17	+8	+20	+9	+24	+11	+28	+13	+33	+15
n5	+11	+6	+13	+8	+16	+10	+20	+12	+24	+15	+28	+17	+33	+20	+38	+23	+45	+27
g6	-3	-10	-4	-12	-5	-14	-6	-17	-7	-20	-9	-25	-10	-29	-12	-34	-14	-39
h6	0	-7	0	-8	0	-9	0	-110	-13	0	-16	0	-19	0	-22	0	-25	
j6	+6	-1	+7	-1	+7	-2	+8	-3	+9	-4	+11	-5	+12	-7	+13	-9	+14	-11
k6	-	-	-	-	+10	+1	+12	+1	+15	+2	+18	+2	+21	+2	+25	+3	+28	+3
m6	+9	+2	+12	+4	+15	+6	+18	+7	+21	+8	+25	+9	+30	+11	+35	+13	+40	+15
n6	+13	+6	+16	+8	+19	+10	+23	+12	+28	+15	+33	+17	+39	+20	+45	+23	+52	+27
p6	+16	+9	+20	+12	+24	+15	+29	+18	+35	+22	+42	+26	+51	+32	+59	+37	+68	+43
e7	-14	-23	-20	-32	-25	-40	-32	-50	-40	-61	-50	-75	-60	-90	-72	-107	-85	-125
f7	-7	-16	-10	-22	-13	-28	-16	-34	-20	-41	-25	-50	-30	-60	-36	-71	-43	-83
h7	0	-9	0	-12	0	-15	0	-18	0	-21	0	-25	0	-30	0	-35	0	-40
j7	+7	-2	+9	-3	+10	-5	+12	-6	+13	-8	+15	-10	+18	-12	+20	-15	+22	-18
k7	-	-	-	-	+16	+1	+19	+1	+23	+2	+27	+2	+32	+2	+38	+3	+43	+3
m7	-	-	-	-	+21	+6	+25	+7	+29	+8	+34	+9	+41	+11	+48	+13	+55	+15
n7	+15	+6	+20	+8	+25	+10	+30	+12	+36	+15	+42	+17	+50	+20	+58	+23	+67	+27
d8	-20	-34	-30	-48	-40	-62	-50	-77	-65	-93	-80	-119	-100	-146	-120	-174	-145	-208
e8	-14	-28	-20	-38	-47	-32	-59	-40	-73	-50	-89	-60	-106	-72	-126	-85	-148	
f8	-7	-21	-10	-28	-13	-35	-16	-43	-20	-53	-25	-64	-30	-76	-36	-90	-43	-106
h8	0	-14	0	-18	0	-22	0	-27	0	-33	0	-46	0	-54	0	-63		
j8	+7	-7	+9	-9	+11	-11	+14	-13	+17	-16	+20	-19	+23	-23	+27	-27	+32	-31
k8	+14	0	+18	0	+22	0	+27	0	+33	0	+39	0	+46	0	+54	0	+63	0
d9	-20	-45	-30	-60	-40	-76	-50	-93	-65	-117	-80	-142	-100	-174	-120	-207	-145	-245
e9	-14	-39	-20	-50	-25	-61	-32	-75	-40	-92	-50	-112	-60	-134	-72	-159	-85	-185
h9	0	-25	0	-30	0	-36	0	-43	0	-52	0	-62	0	-74	0	-87	0	-100
j9	+13	-12	+15	+18	-18	+22	-21	+26	-26	+31	-31	+37	-37	+44	-43	+50	-50	
k9	+25	0	+30	0	+36	0	+43	0	+52	0	+62	0	+74	0	+87	0	+100	0
d10	-20	-60	-30	-78	-40	-98	-50	-120	-65	-149	-80	-180	-100	-220	-120	-260	-145	-305
h10	0	-40	0	-48	0	-58	0	-70	0	-84	0	-100	0	-120	0	-140	0	-160
j10	+20	-20	+24	-24	+29	-29	+35	-35	+42	-42	+50	-50	+60	-60	+70	-70	+80	-80
k10	+40	0	+48	0	+58	0	+70	0	+84	0	+100	0	+120	0	+140	0	+160	0
d11	-20	-80	+30	-105	-40	-130	+50	-160	-65	-195	-80	-240	-100	+290	-120	-340	-145	-395
h11	0	-60	0	-75	0	-90	0	-110	-130	0	-160	0	-190	0	-220	0	-250	
j11	+30	-30	+38	-37	+45	-45	+55	-55	+65	-65	+80	-80	+95	-95	+110	-110	+125	-125
k11	+60	0	+75	0	+90	0	+110	0	+130	0	+160	0	+190	0	+220	0	+250	0
h12	0	-100	0	-120	0	-150	0	-180	0	-210	0	-250	0	-300	0	-350	0	-400
k12	+100	0	+120	0	+150	0	+180	0	+210	0	+250	0	+300	0	+350	0	+400	0

Valori espressi in µ
Werte in µ
Values in µ
Valeur en µ

Formazione

Il settore meccanico è in costante evoluzione.
I metodi di realizzo degli utensili e i loro impieghi necessitano di costante informazione da parte delle aziende produttrici.
Per ottenere sempre elevate prestazioni dagli utensili di ultima generazione Angelo Ghezzi Spa, in collaborazione con prestigiosi produttori del settore, organizza dei corsi gratuiti rivolti ai clienti e utilizzatori.
I seminari riguardano sia nozioni base che argomenti specifici sugli utensili evoluti e sono tenuti principalmente dai tecnici responsabili di settore.
Chiama direttamente la sede al numero **02.9189314** per prenotare il tuo corso.

Numeri di codice in progressione
Numeri di codice in progressione

Cod.	Pag.	Cod.	Pag.	Cod.	Pag.	Cod.	Pag.
3200	4	4220T	143	4404T	43	4438C	148
3200C	4	4220C	143	4404C	43	4439	146
3200F	4	4220F	143	4404F	43	4439C	146
3200T	4	4224	145	4405	55	4439F	146
3201	4	4224T	145	4405C	55	4442	150
3201C	4	4224C	145	4405F	55	4442T	150
3204	8	4300	25	4406	43	4442C	150
3204T	8	4300T	25	4407	55	4446	153
3204C	8	4300C	25	4407C	55	4446T	153
3204F	8	4300F	25	4407F	55	4446C	153
3206	8	4302	25	4408	45	4448	154
3220	6	4304	27	4408C	45	4448T	154
3220T	6	4304T	27	4408F	45	4448C	154
3220C	6	4304C	27	4412	47	4458	46
3220F	6	4308	30	4412C	47	4458C	46
3224	10	4308T	30	4412F	47	4458F	46
3224T	10	4308C	30	4414	47	4466	49
3224C	10	4320	26	4414C	47	4466C	49
3300	16	4320T	26	4416	48	4466F	49
3300T	16	4320C	26	4416T	48	4474	59
3300C	16	4324	28	4416C	48	4474C	59
3300F	16	4324T	28	4416F	48	4488	149
3302	16	4324C	28	4420	50	4488T	149
3304	20	4330	24	4420T	50	4488C	149
3304T	20	4330T	24	4420C	50	4492	152
3304C	20	4330C	24	4420F	50	4492T	152
3308	14	4330F	24	4421	54	4492C	152
3308T	14	4333	51	4421C	54	4493	147
3308C	14	4333C	51	4421F	54	4493C	147
3308F	14	4333F	51	4423	54	4493F	147
3310	14	4334	51	4423C	54	4495	151
3310	15	4334C	51	4423F	54	4495C	151
3320	18	4334F	51	4424	58	4495F	151
3320T	18	4335	53	4424C	58	5300	31
3320C	18	4335C	53	4425	56	5300T	31
3320F	18	4335F	53	4425C	56	5300C	31
3324	22	4336	53	4425F	56	5304	33
3324T	22	4336C	53	4427	57	5304T	33
3324C	22	4336F	53	4427C	57	5304C	33
4200	142	4337	29	4427F	57	5320	32
4200T	142	4400	42	4428	60	5320T	32
4200C	142	4400T	42	4428T	60	5320C	32
4200F	142	4400C	42	4428C	60	5324	34
4201	142	4401	52	4432	62	5324T	34
4201C	142	4401C	52	4434	63	5324C	34
4204	144	4401F	52	4434T	63	5400	65
4204T	144	4403	52	4434C	63	5400T	65
4204C	144	4403C	52	4436	64	5400C	65
4206	144	4403F	52	4438	148	5400F	65
4220	143	4404	43	4438T	148	5404	66

Cod.	Pag.	Cod.	Pag.	Cod.	Pag.	Cod.	Pag.
5404C	66	7426C	155	7486F	85	9564T	110
5408	68	7426F	155	8500	123	9564C	110
5408T	68	7427	158	8501	122	9565	113
5408C	68	7427C	158	8503	124	9567	114
5412	70	7427F	158	8504	125	9567T	114
5412C	70	7429	158	8508	126	9567C	114
5416	74	7429C	158	8512	127	9568	109
5418	75	7429F	158	8516	128	9568C	109
5418T	75	7430	157	8520	129	9568F	109
5418C	75	7430T	157	8524	130	9569	111
5420	76	7430C	157	8528	131	9569C	111
5434	67	7434	160	8532	132	9569F	111
5434C	67	7434T	160	8540	133	9570	116
5442	71	7434C	160	8544	134	9570C	116
5442C	71	7436	161	8548	135	9570F	116
5450	72	7436T	161	8552	136	9571	115
5460	73	7436C	161	8556	137	9573	119
7300	36	7450	79	8560	138	9573T	119
7300C	36	7450C	79	8564	139	9573C	119
7300F	36	7450F	79	8568	140	9574	118
7301	37	7454	81	9501	96	9574C	118
7301C	37	7454T	81	9502	97	9574F	118
7301F	37	7454C	81	9503	98	9575	175
7302	35	7454F	81	9504	99	9576	177
7400	78	7458	83	9505	100	9577	178
7400C	78	7458C	83	9506	101	9577	179
7400F	78	7458F	83	9507	102	9578	180
7404	80	7462	87	9508	103	9579	182
7404T	80	7462T	87	9509	104	9580	183
7404C	80	7462C	87	9510	105	9581	185
7404F	80	7466	89	9520	164	9582	186
7406	80	7466C	89	9522	164	9583	187
7408	82	7466F	89	9524	165	9584	189
7408C	82	7467	90	9526	166	9585	117
7408F	82	7467C	90	9530	167	9585C	117
7412	86	7467F	90	9532	168	9585F	117
7412T	86	7469	90	9536	169	9586	120
7412C	86	7469C	90	9538	170	9586C	120
7412F	86	7469F	90	9542	171	9586F	120
7414	86	7476	156	9544	171	9591	190
7416	88	7476T	156	9546	172	9592	191
7416C	88	7476C	156	9548	172	9593	192
7416F	88	7480	159	9550	173	9595	176
7420	91	7480T	159	9552	173		
7422	92	7480C	159	9554	174		
7422T	92	7484	84	9556	174		
7422C	92	7484C	84	9561	108		
7424	93	7484F	84	9561C	108		
7426	155	7486	85	9563	112		
7426T	155	7486C	85	9564	110		