для заказа - ilix@ilix-tools.ru

ILLI•CO HIGH QUALITY

# **PRODUCTION**PROGRAMME

ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Identificazione codice frese
## Identification der Artikelnummer

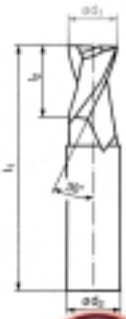
End mills code identification
Identification du code des fraises

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

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

Typ N, ≈ 30° Drallwinkel,
10° Spanwinkel,
mit Zylindershaft nach
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 | $l_2$ | $l_1$ | 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 | | | | ● | ● | ● | ● |

**3 2 2 0 T**

**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®**



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |

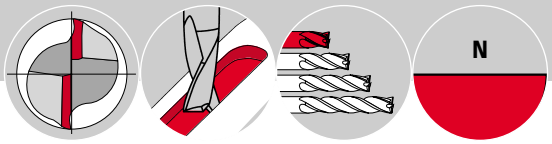
IN = Illico Norm



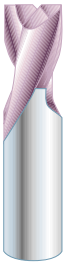
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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




3202

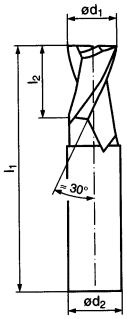


**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 e8 | l2 | l1 | Ød2 | 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 | ● | ● | ● | ● | ● | ● |

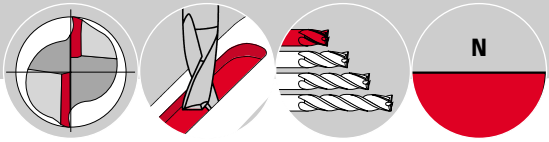
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM



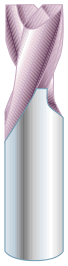
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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




3202

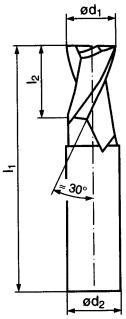


**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | Ød2 | 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 | | ● | | ● | | |

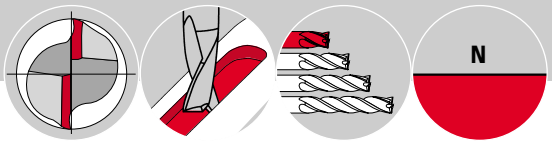
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM

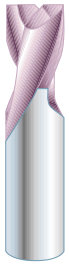


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



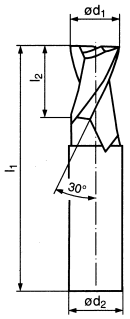



**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | 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 | | | ● | ● | ● | ● |
| **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 | | | ● | ● | ● | ● |

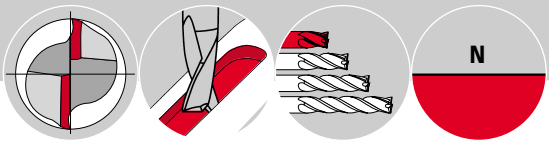
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

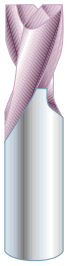


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



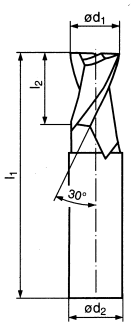



**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | $Ød_2$ | Z | | | | | | |
| **22** | 22 | 88 | 20 | 2 | | | ● | ● | ● | ● |
| **24** | 26 | 102 | 25 | 2 | | | ● | ● | ● | ● |
| **25** | 26 | 102 | 25 | 2 | | | ● | ● | ● | ● |

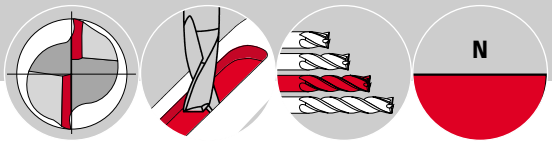
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

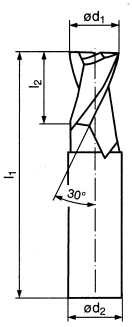


**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | Ød2 | 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 | | | ● | | | |

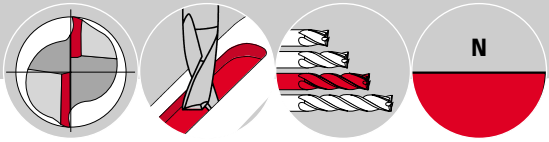
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

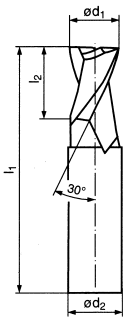


**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | Ød2 | Z | | | | | | |
| **45** | 63 | 203 | 32 | 2 | | | ■ | | | |
| **48** | 75 | 203 | 32 | 2 | | | ■ | | | |
| **50** | 75 | 203 | 32 | 2 | | | ● | | | |

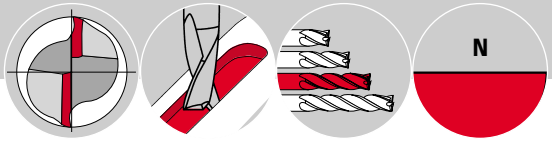
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
✱ Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

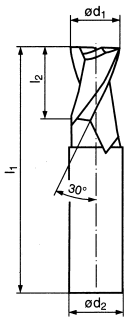


**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | Ød2 | 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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.

ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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.



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |

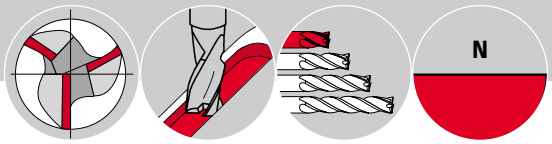
IN = Illico Norm

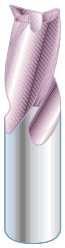


ILLICO HIGH QUALITY
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



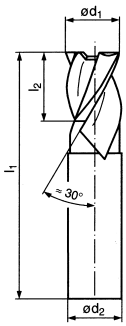



**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 e8 | $l_2$ | $l_1$ | Ød2 | 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 | | ● | ● | ● | ● | ● |

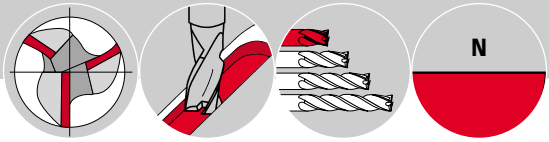
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

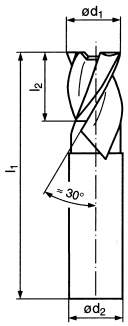


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | $Ød_2$ | 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 | | | ● | | | |

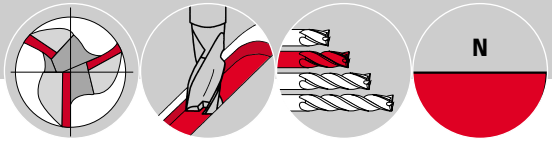
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

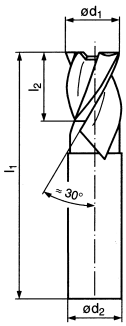


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 e8 | l2 | l1 | Ød2 | 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 | | ● | ● | ● | ● | ● |

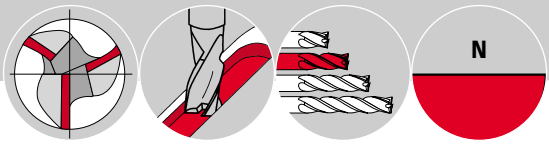
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

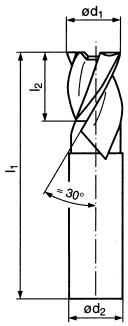


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | $Ød_2$ | 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 | | | ● | | | |

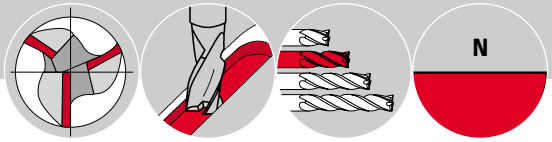
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

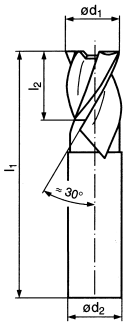


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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
# ASP-60

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

| 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Uno sguardo al futuro

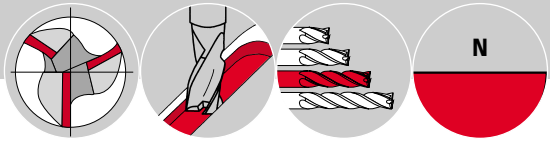
In un mercato dove si succedono sempre più assestamenti a livello internazionale, l'unico modo per migliorare la qualità del proprio servizio è avere grande attenzione agli utilizzatori e alle loro problematiche.
Angelo Ghezzi Spa, attraverso la partnership con gli stabilimenti ILLI-CO, ha come obiettivo 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.



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

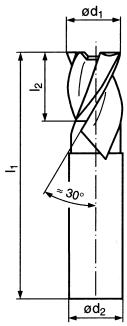


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | Ød2 | 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 | | | | ● | ● | ● |

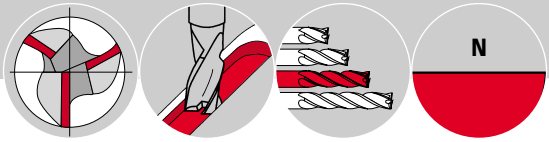
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

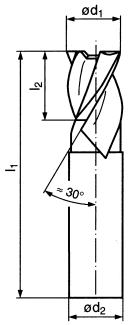


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | 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 | | | | ■ | ■ | |

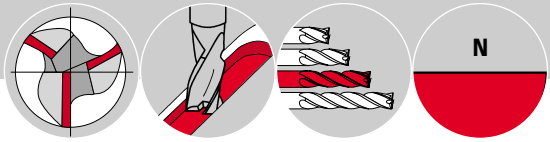
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

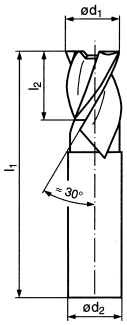


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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** e8 | $l_2$ | $l_1$ | Ød2 | 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Numero Verde

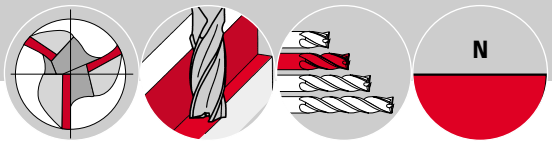
Durante le delicate fasi del montaggio in macchina di un utensile può essere talvolta necessaria una consultazione per una visione più chiara delle caratteristiche del prodotto. Al Numero Verde **800-018130** è collegato un servizio di consulenza in linea per risolvere in tempo reale i problemi legati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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

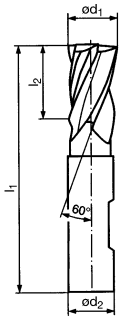


**Tipo N, ≈ 60° elica, 13° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

**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




# 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. | | | | | | | 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 | | | ■ | ■ | ■ | ■ |

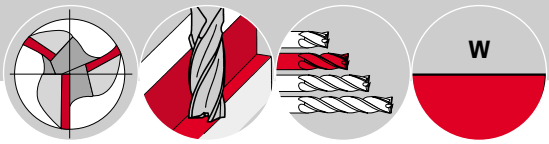
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

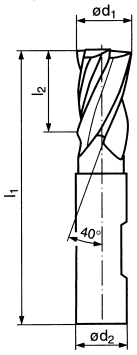


**Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | ● | | ● | ● | ● |

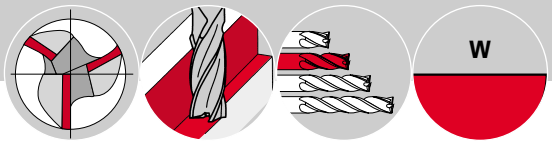
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

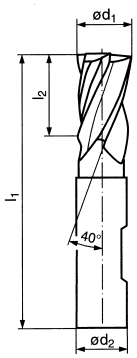


**Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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'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. | | | | | | | | 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 | | | | ● | ● | ● |

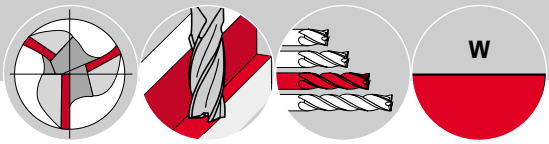
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

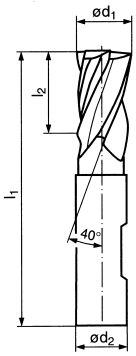


**Tipo W, ≈40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

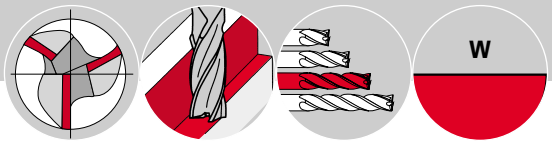
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

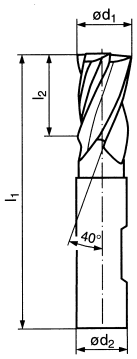


**Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

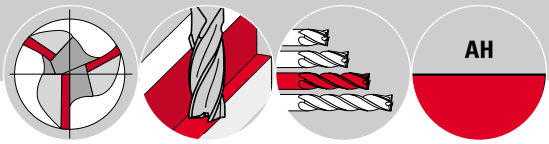
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

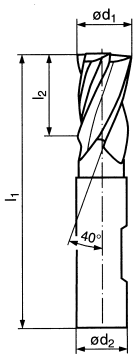
для заказа - ilix@ilix-tools.ru

# 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**

Aero

| 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 | | | | | | ● |

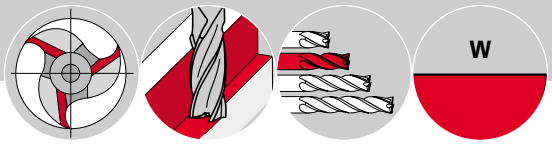
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

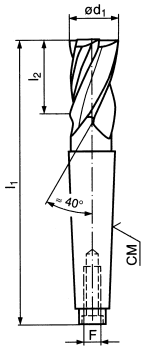


**Tipo W, ≈ 40° elica, 24° angolo di spoglia, con codolo conico morse secondo DIN 228/1**

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

**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




**DIN 845K**
**HSS-Co5**

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

| **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 | | | | ● | ● | ● |

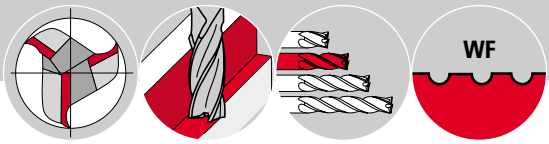
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

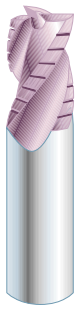


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



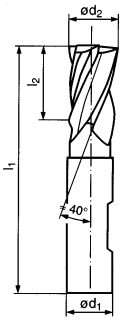



**Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ■ | ■ | ■ |

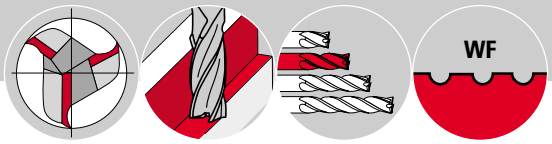
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

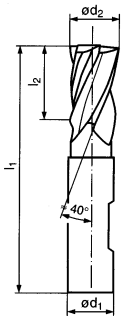


**Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

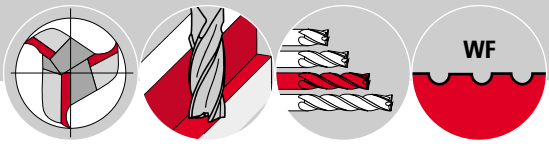
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

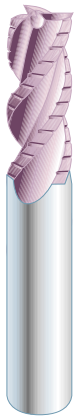


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



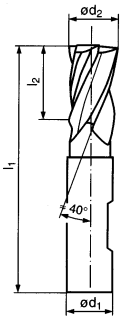



**Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ■ | ■ | ■ |

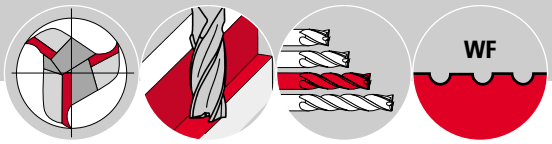
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

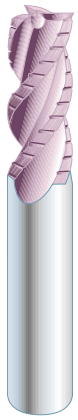


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



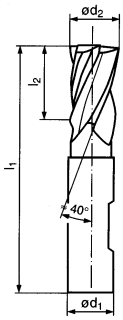



**Tipo WF, ≈ 40° elica, 24° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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**
**ASP-60**

ASP-60
ASP-60 TiN
ASP-60 TiCN

| **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 | | | | ● | ● | ● |

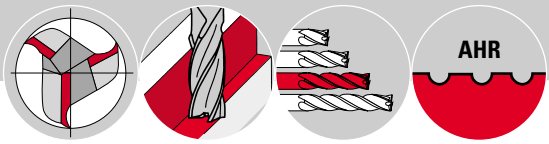
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

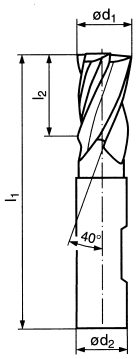
для заказа - ilix@ilix-tools.ru

# 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 | | | | | | ● |

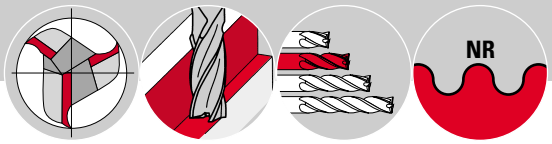
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

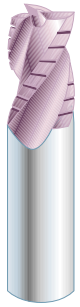


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



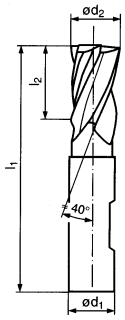



**Tipo NR, ≈ 30° elica, 11° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | | | | ● | ● | ● |

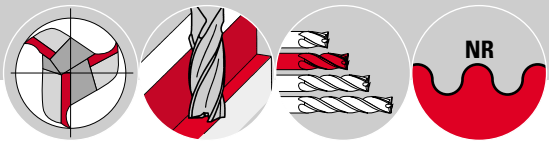
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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

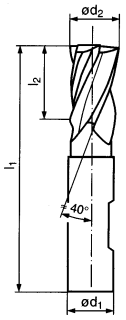


**Tipo NR, ≈ 30° elica, 11° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

Typ NR, ≈ 30° Drallwinkle, 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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.



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 New | HRS | | ASP-60 | | | | ● | | ● | | 90 |
| 845K | NR | | HSS-Co5 | | | | | | | ● | 91 |
| 845K | HRS | | HSS-Co8 | | | | | | | ● | 92 |
| 845L | NR | | HSS-Co5 | | | | | | | ● | 93 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

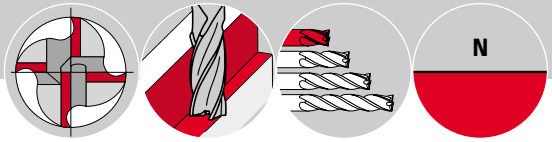
IN = Illico Norm

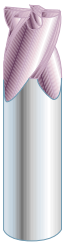


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali serie extra corta
## Schaftfräser extra kurze Ausfürung



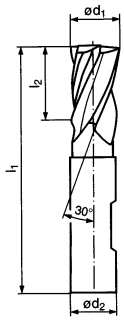



**Tipo N, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ■ |

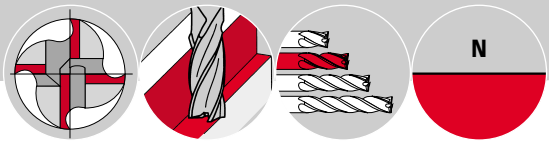
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

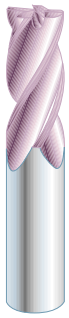


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali serie corta
## Schaftfräser kurze Ausführung



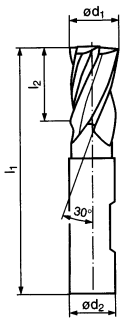



**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | ● | ● | ● | ● | ● |

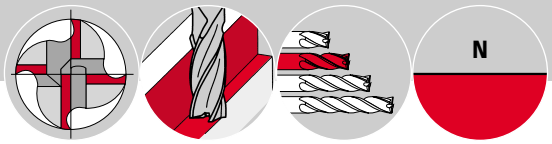
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

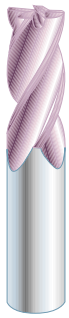


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali serie corta
## Schaftfräser kurze Ausführung



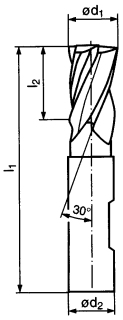



**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | ● | | ● | ● | |

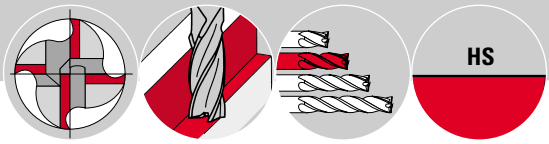
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10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

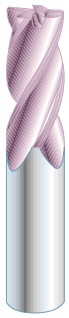


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



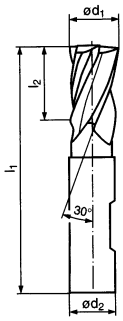



**Tipo HS ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ■ | ■ | |

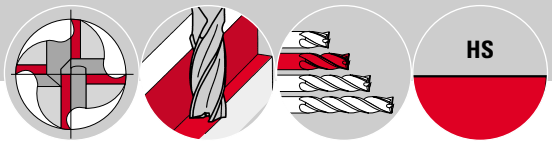
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

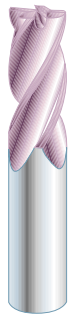


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



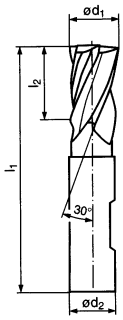



**Tipo HS, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

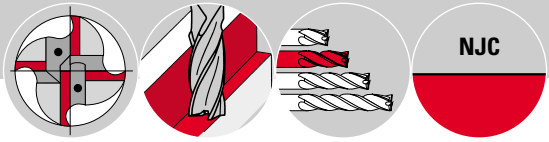


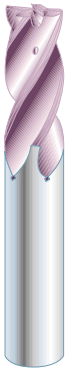
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, jet-cut, serie corta con fori di lubrificazione

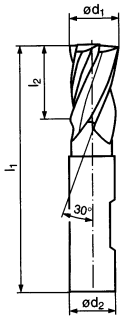
## Schaftfräser mit innerer Kühlmittelzufuhr kurz



**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 | | ● | ● | ● | ● | ● |

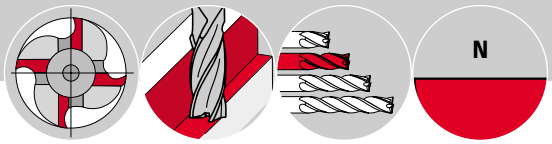
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

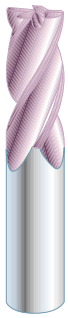


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali serie corta
## Schaftfräser kurze Ausfürung



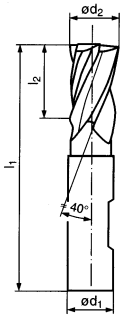



**Tipo N, ≈ 40°elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | ■ | ■ | ■ | |

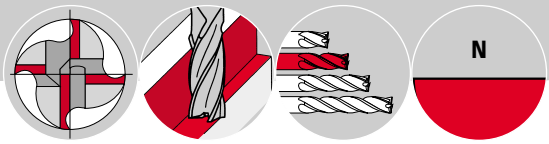
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

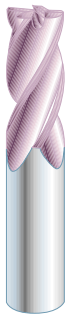


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali a serie corta
## Schaftfräser kurze Ausführung



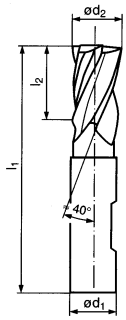



**Tipo N, ≈ 40°elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ■ | ■ | ■ |

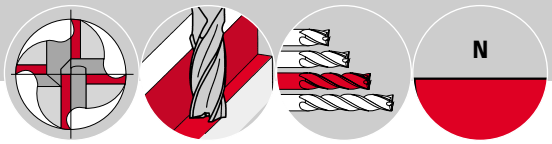
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

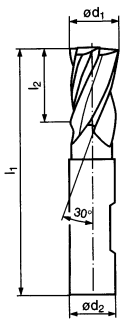


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | ● | ● | ● | ● |

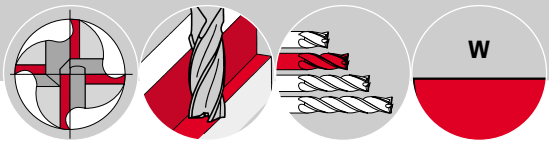
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurz

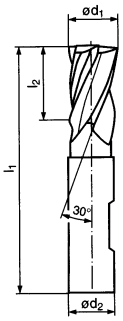


**Tipo W, ≈ 50° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | ● | ● | ● | ● | ● | ● |

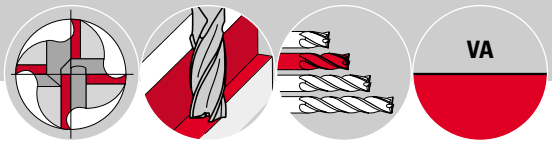
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

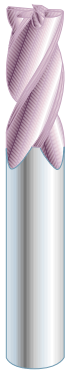


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurz



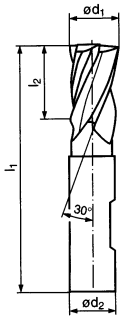



**Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | ● | ● | ● | ● | ● | ● |

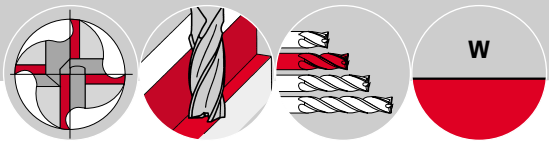
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurz

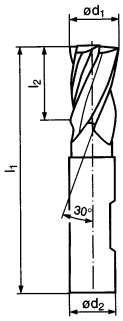


**Tipo W, ≈ 50° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | ● | ● | ● | ● | ● | ● |

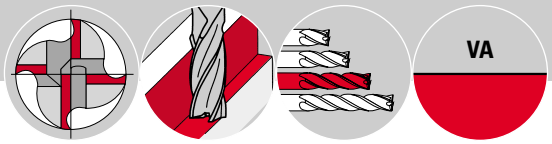
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lang

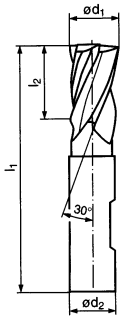


**Tipo VA ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| New INOX | | | | | | | | | | |
| 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 | ● | ● | ● | ● | ● | ● |

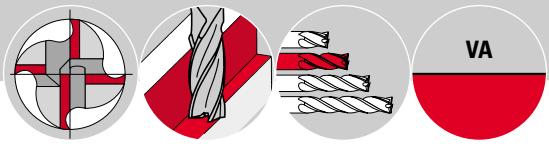
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

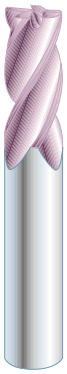


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurz



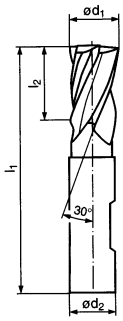



**Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| New INOX | | | | | | | | | | |
| **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 | ● | ● | ● | ● | ● | ● |

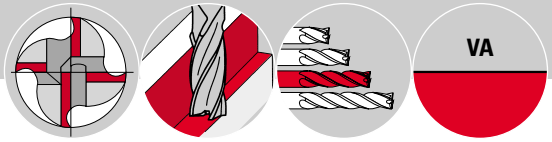
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lang

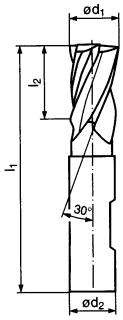


**Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | | | | ● | ● | ● |

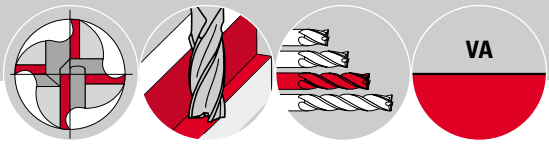
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lang

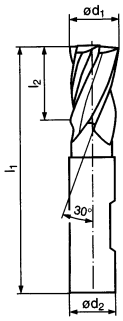


**Tipo VA, ≈ 40° elica, 16° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | | | | ● | ● | ● |

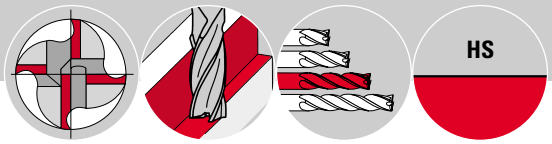
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

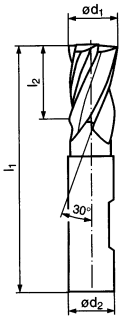


**Tipo HS, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | ■ | ■ |

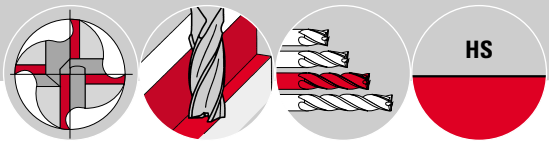
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

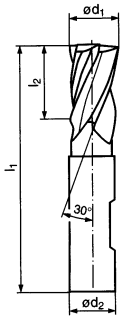


**Tipo HS, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | ● | ● |

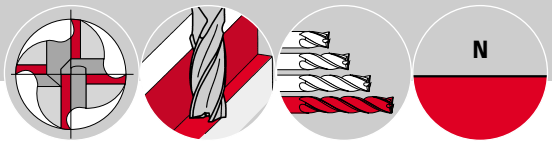
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie extra lunga
## Schaftfräser extra lange

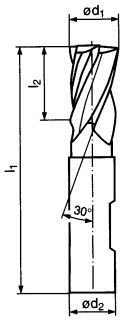


**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Ordini & Consegna

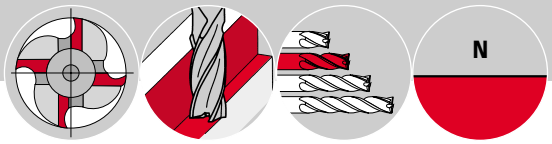
La merce viene evasa quotidianamente e consegnata al cliente in qualunque punto d'Italia attraverso il mezzo di spedizione richiesto.
Al massimo entro le 24 ore successive gli utensili sono recapitati e pronti per l'uso.
La consegna avviene sia di mattina che di pomeriggio. Al momento dell'ordine Il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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

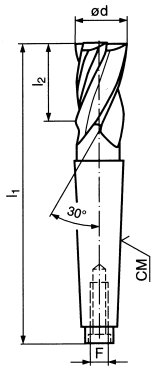


**Tipo N, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse DIN 228/1**

Typ N, ≈ 30° Drallwinkel, 12° Spanwinkel, mit Morsekegelshaft 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 | | | | | | ● |

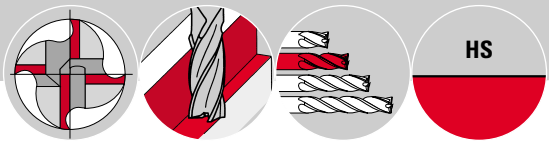
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

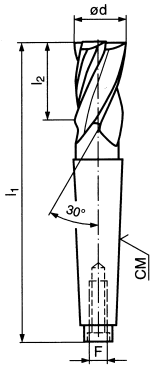


**Tipo HS, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse secondo DIN 228/1**

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 | | | | ● | ● | ● |

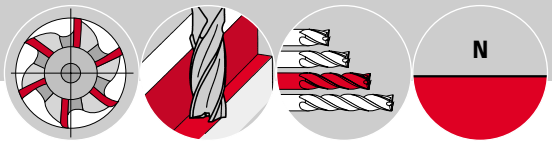
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

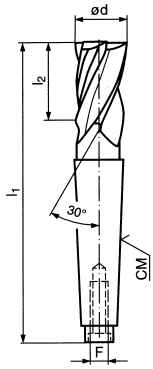


**Tipo N, ≈ 30° elica,**
**12° angolo di spoglia,**
**con codolo conico Morse**
**secondo DIN 228/1**

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 | | | | | | ■ |

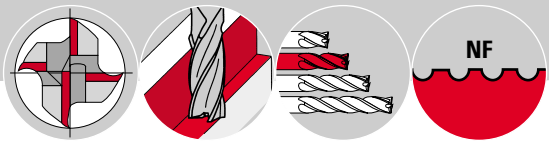
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

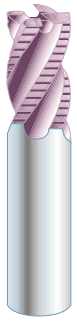


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



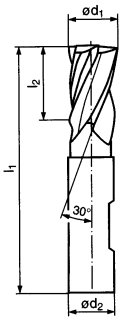



**Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | ■ | | ■ | |

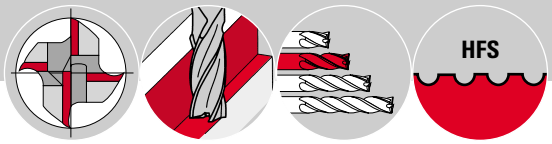
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

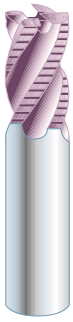


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



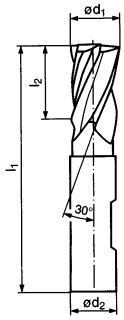



**Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | ■ | ■ |

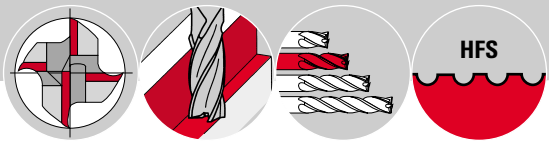
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

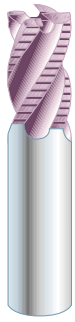


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



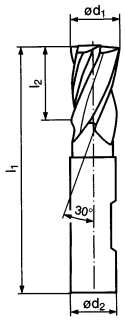



**Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | ■ | ■ |

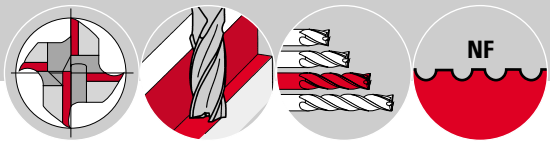
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

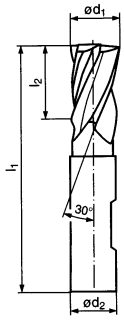


**Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

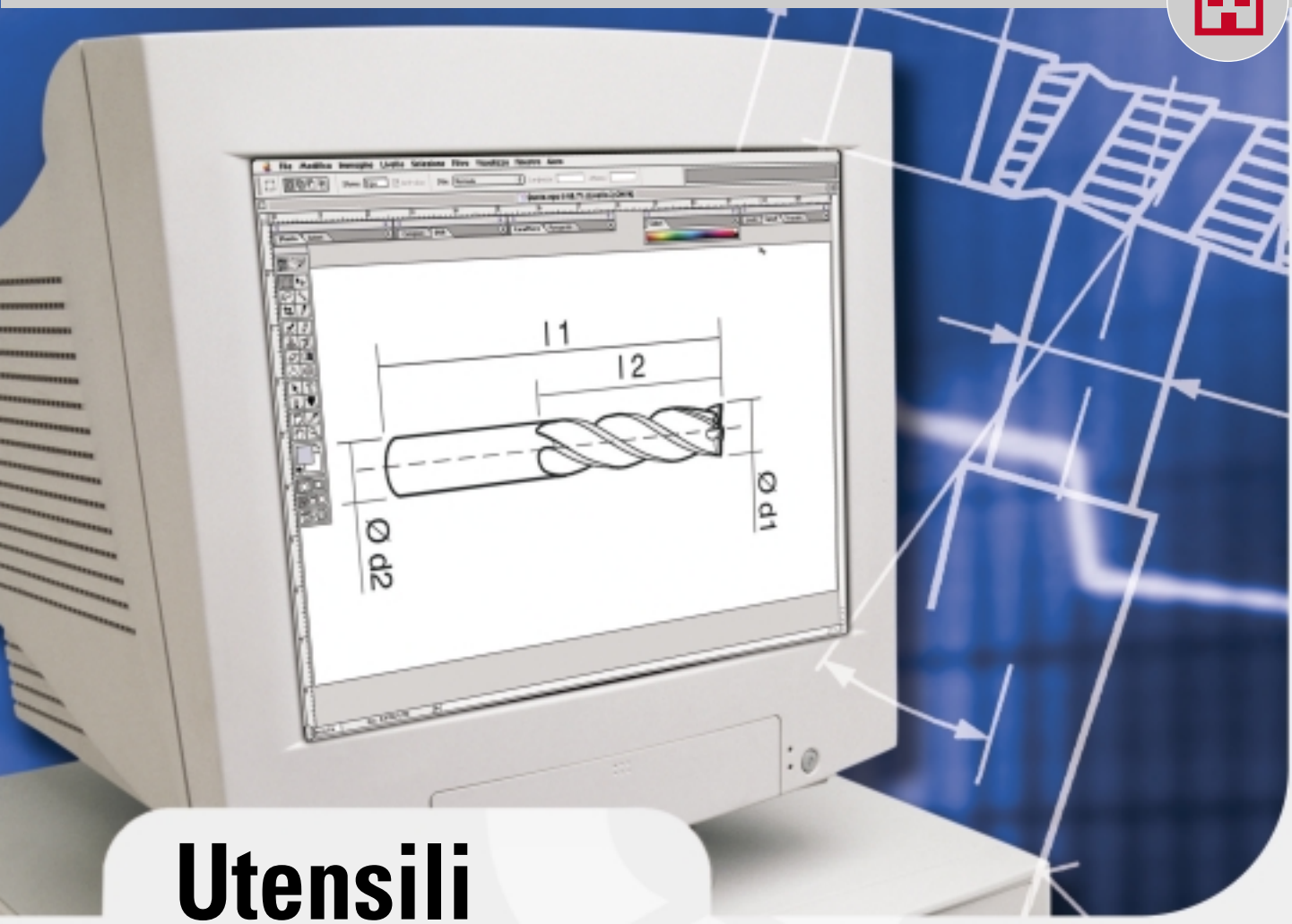
| **Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | | 5408 | 5408T | 5408C |
|---|---|---|---|---|---|---|---|---|---|---|
| **Ød1** $K_{12}$ | $l_2$ | $l_1$ | $Ød_2$ | Z | | | | | | |
| **6** | 24 | 68 | 6 | 4 | | | | ● | ● | ● |
| **8** | 38 | 88 | 10 | 4 | | | | ● | ● | ● |
| **10** | 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru




# Utensili speciali

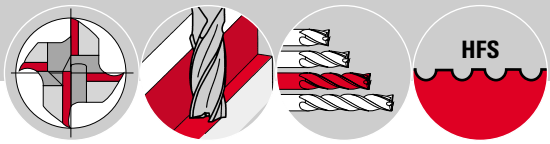
Presso la sede dell'Angelo Ghezzi Spa è stato creato l'Ufficio Richieste Utensili Speciali che offre un servizio di realizzazione di frese speciali non a catalogo.
Una volta vagliato il progetto, l'ufficio invia immediatamente l'ordine ai tecnici ILLI-CO per la sua realizzazione.
L'utensile speciale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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

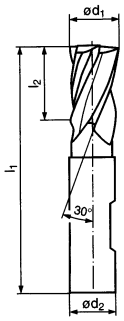


**Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | ■ | |

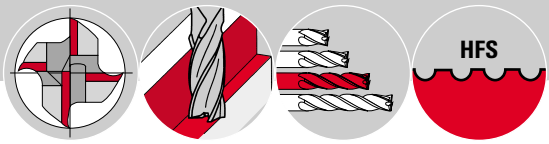
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

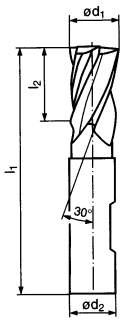


**Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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



ilix@ilix-tools.ru
www.ilix-tools.ru

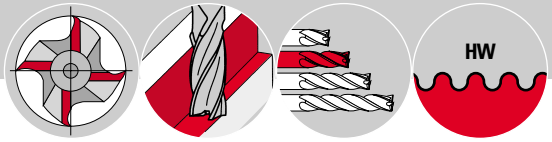
для заказа - ilix@ilix-tools.ru

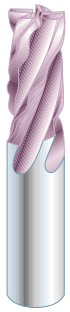


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



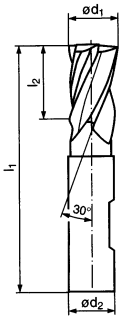



**≈ 30° elica,**
**10° angolo di spoglia,**
**con codolo cilindrico**
**secondo DIN 1835/1**

≈ 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 | | | | | | ● |

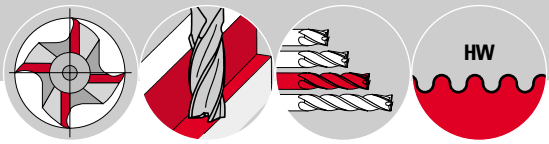
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

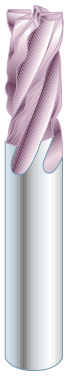


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

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



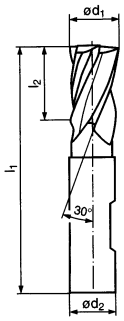



**≈ 30° elica,**
**10° angolo di spoglia,**
**con codolo cilindrico**
**secondo DIN 1835/1**

≈ 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 | | | | | | ● |

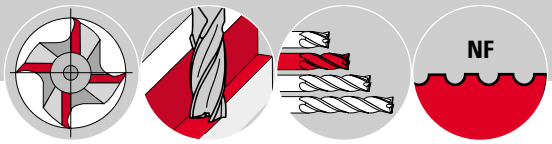
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

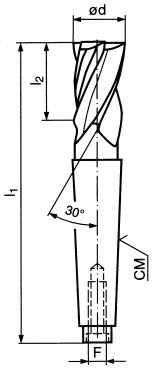


**Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse secondo DIN 228/1**

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 | | | | | | ● |
| | | | | | | | | | | | ● |

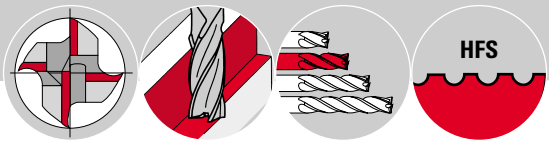
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

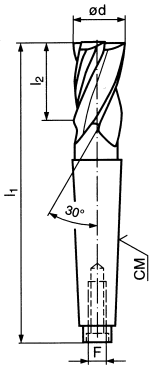


**Tipo HFS, ≈ 30° elica, 10° angolo di spoglia, con codolo conico Morse secondo DIN 228/1**

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 | | | | ■ | ■ | ■ |

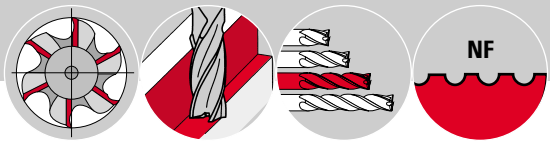
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

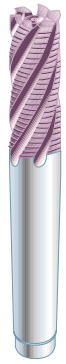


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



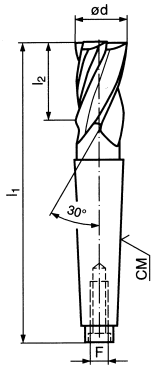



**Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico Morse DIN 228/1**

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 | | | | | | ● |

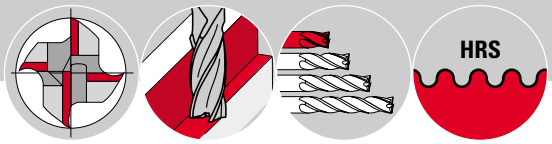
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie extra corta
## Schaftfräser extra kurze Ausführung

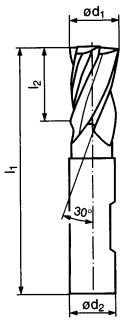


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

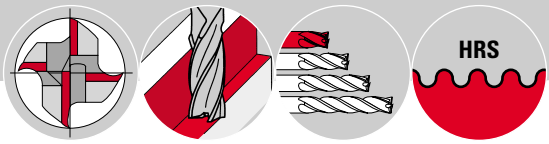
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie extra corta
## Schaftfräser extra kurze Ausführung

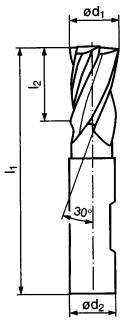


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

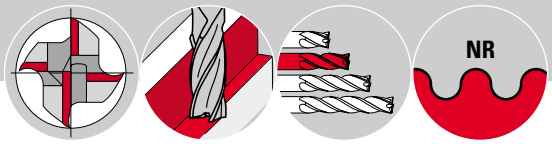
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

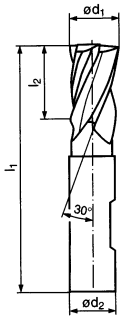


**Tipo NR ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | ■ | | ■ | ■ | |

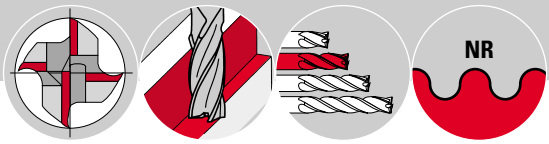
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10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

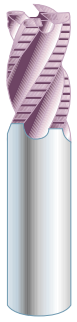


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



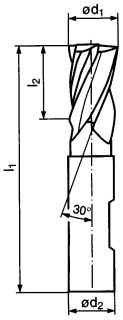



**Tipo NR ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | ● | ● | ● | ● |

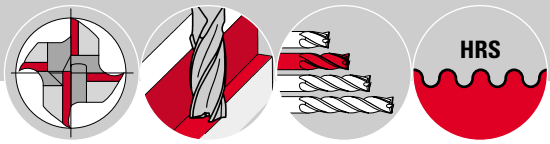
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

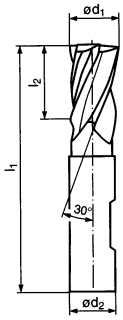


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

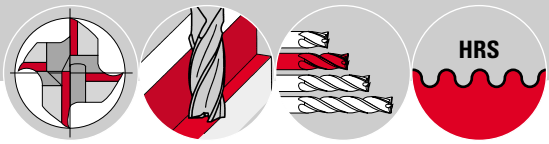
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

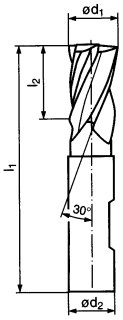


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

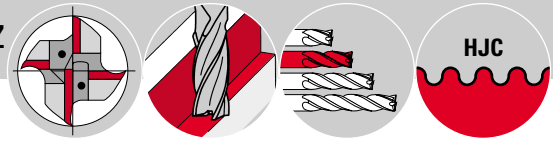


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, jet-cut, serie corta con fori di lubrificazione

## Schaftfräser mit innerer Kühlmittelzufuhr kurz

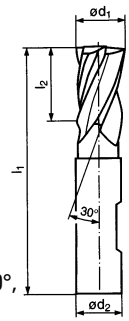


**Tipo HJC, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

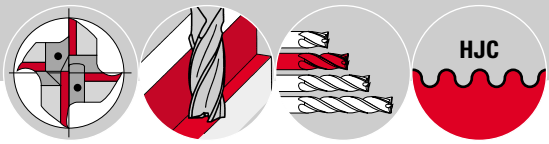


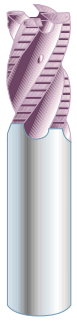
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, jet-cut serie corta con fori di lubrificazione

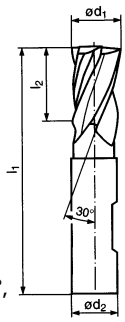
## Schaftfräser mit innerer Kühlmittelzufuhr kurz



**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 | | | | ● | ● | ● |

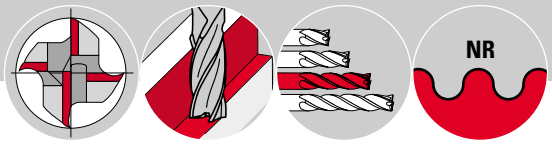
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

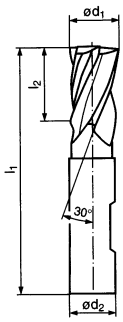


**Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | ■ | | | | |

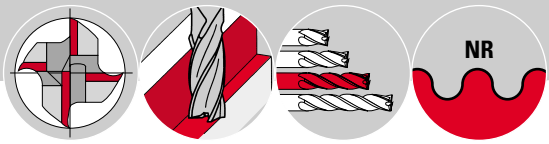
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

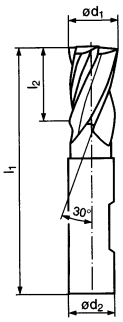


**Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ■ | | ■ |

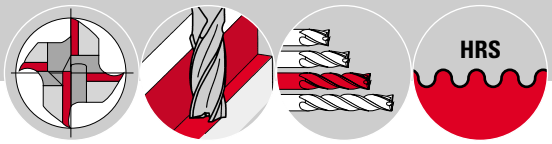
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

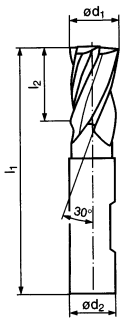


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

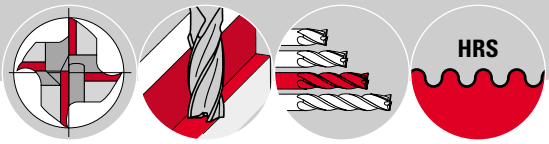
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

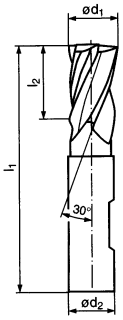


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

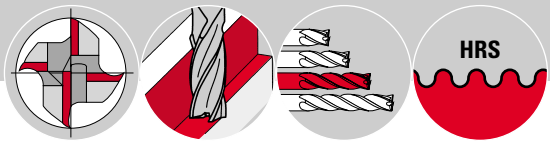
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung

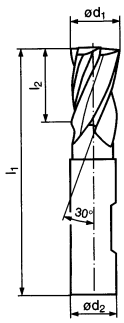


**Tipo HRS, ≈ 30° elica, 7° angolo di spoglia, con codolo cilindrico secondo DIN 1835A/B**

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 | ● | ● | ● | ● | ● | ● |

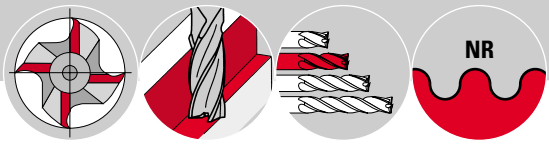
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

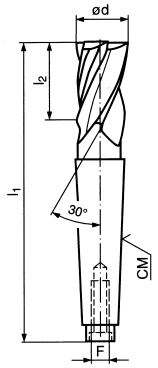


**Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo conico Morse secondo DIN 228/1**

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 | | | | | | ■ |

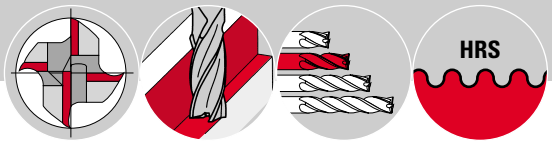
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung

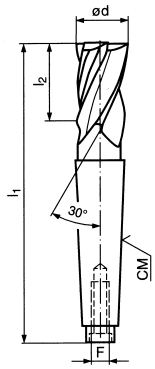


**Tipo HRS, ≈ 30° elica, 10° angolo di spoglia, con codolo conico Morse secondo DIN 228/1**

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 | | | | ● | ● | ● |

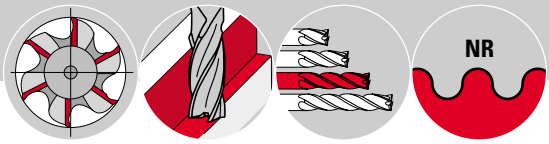
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

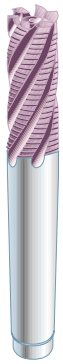


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



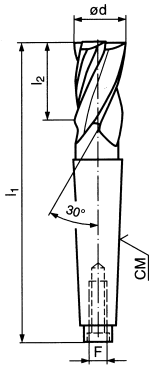



**Tipo NR, ≈ 30° elica, 14° angolo di spoglia, con codolo conico Morse secondo DIN 228/1**

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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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.



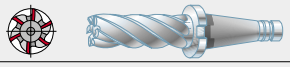
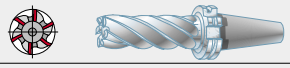
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |

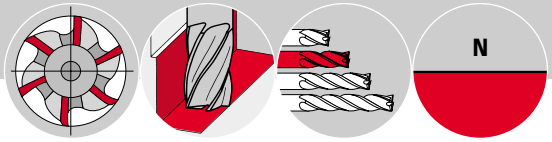
IN = Illico Norm

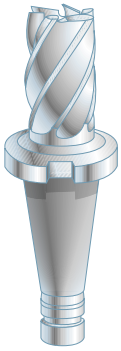


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



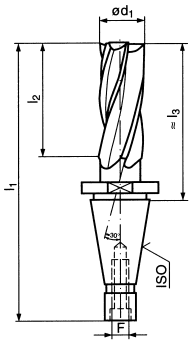



**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 2080**

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 | | | | | | ■ |

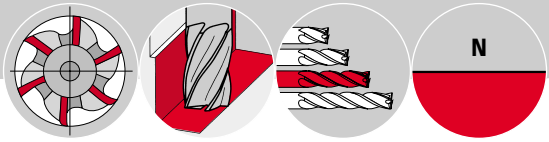
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

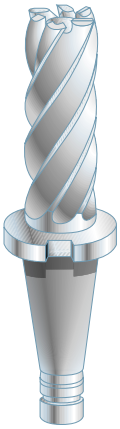


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

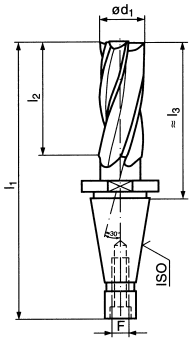
# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



**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 | 9502 |
|---|---|---|---|---|---|---|---|
| **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 | ■ |

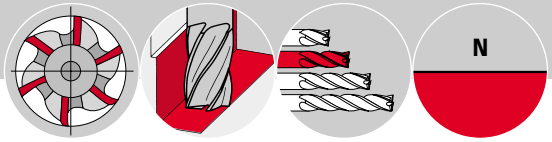
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

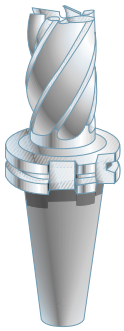


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurz Ausführung



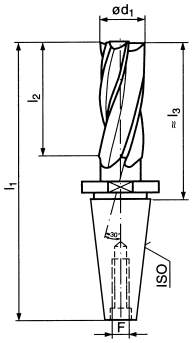



**Tipo N, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 69871/1**

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

**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




**ILLICO NORM HSS-Co5**

HSS-Co5

| **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 | | | | | | ■ |

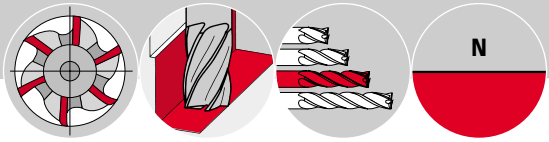
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

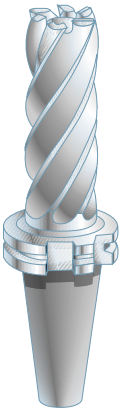


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

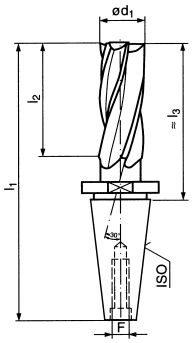
# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



**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 | 9504 |
|---|---|---|---|---|---|---|---|
| **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 | ● |

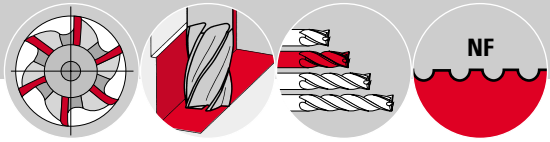
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

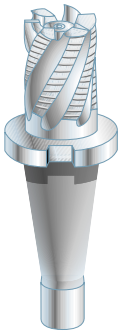


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



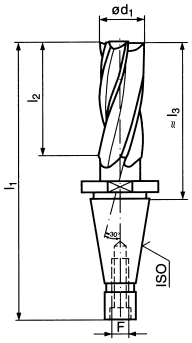



**Tipo NF, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 2080**

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

**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




**2328K**
**HSS-Co5**

HSS-Co5

| **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 | | | | | | ■ |

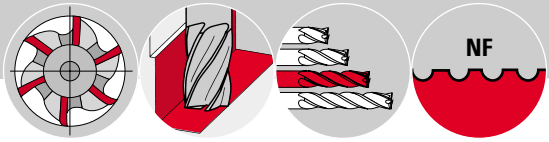
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

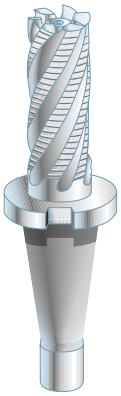


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

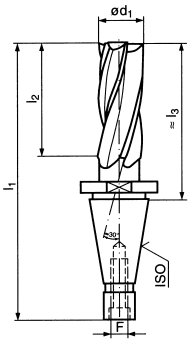
# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



**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 | 9506 |
|---|---|---|---|---|---|---|---|
| **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 | ■ |

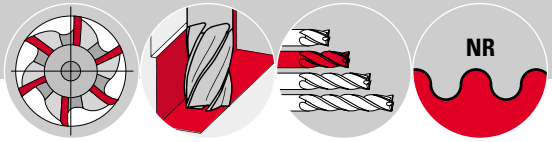
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

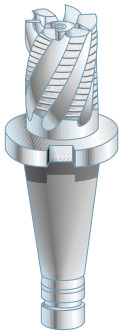


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



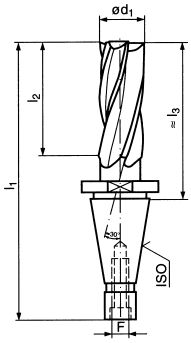



**Tipo NR, ≈ 30° elica, 10° angolo di spoglia, con codolo conico ISO secondo DIN 2080**

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

**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




**DIN 2328K**
**HSS-Co5**

HSS-Co5

| **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 | | | | | | ■ |

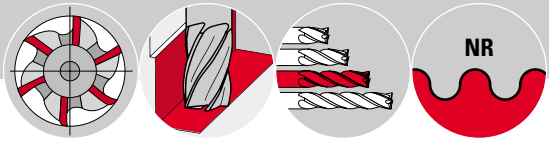
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

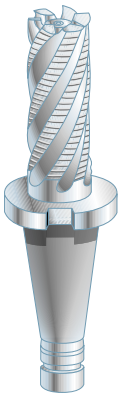


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

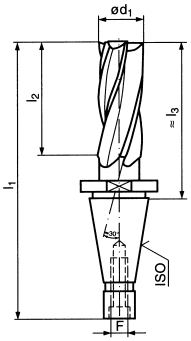
# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



**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 cône 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 | | | | | | ■ |
| | | | | | | | | | | | | ■ |

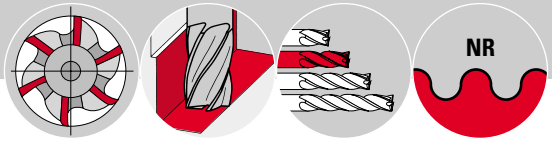
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

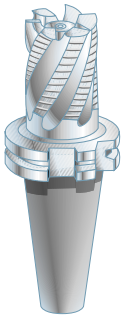


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali, serie corta
## Schaftfräser kurze Ausführung



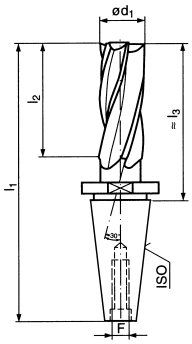



**Tipo NR, ≈ 30° elica, 12° angolo di spoglia, con codolo conico ISO secondo DIN 69871/1**

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

**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 cône SA DIN 69871/1




**ILLICO NORM**
**HSS-Co5**

HSS-Co5

| **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 | | | | | | ■ |

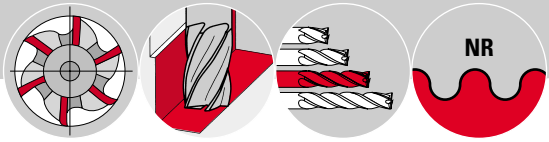
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

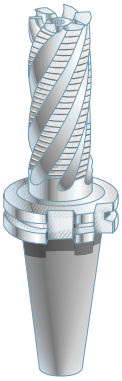


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

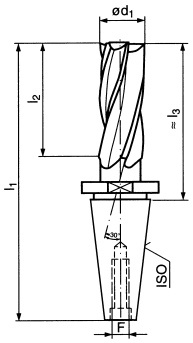
# Frese frontali, serie lunga
## Schaftfräser lange Ausführung



**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 cône 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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.



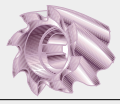
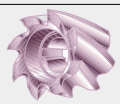
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |

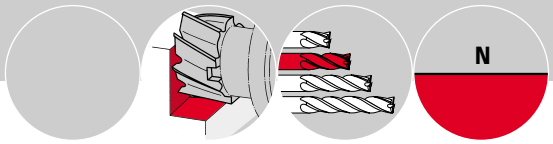
IN = Illico Norm

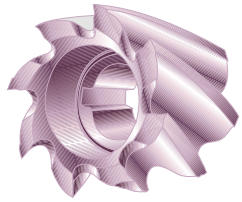


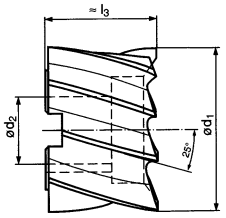
ILLI-CO HIGH QUALITY
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |
|---|---|---|---|---|---|---|---|---|---|
| **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 | | | | | ● | ● |

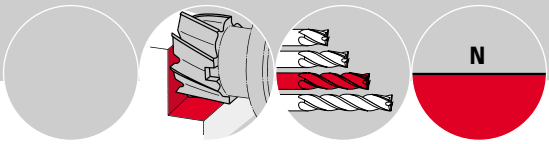
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

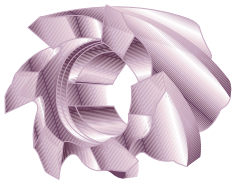


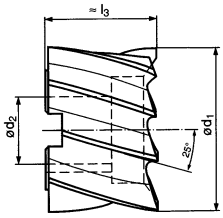
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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** |
|---|---|---|---|---|---|---|---|---|---|
| | New | | | | | | | | |
| **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 | | | | ● | ● | ● |

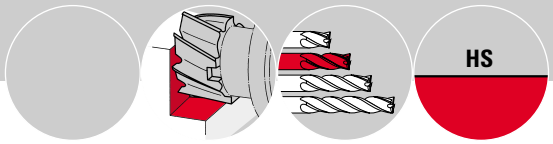
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
§ Questa misura è disponibile solo con attacco a chiavetta standard - Diese Abmessung wird nur mit Längsnut geliefert
This dimensions is available only with standard keyway - Ce diamètre est disponible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

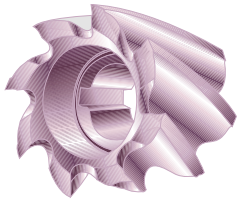


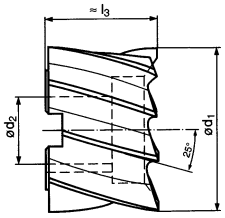
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 | | | | ■ | ■ | ■ |

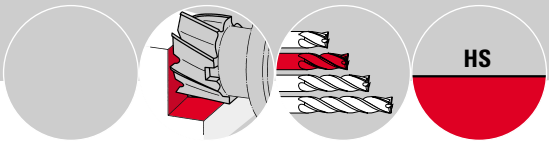
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

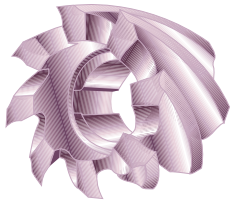


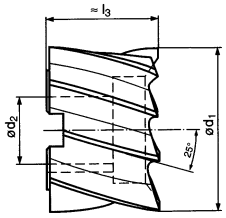
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**

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

**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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| **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 | | | | ● | ● | ● |

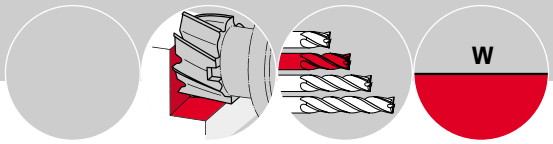
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

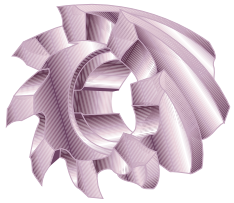


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese cilindriche frontali, per leghe leggere
## Walzenstirnfräser



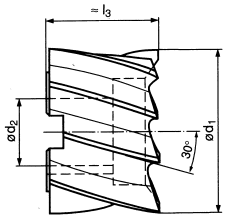



**Tipo W, taglio destro,**
**≈ 30° elica destra,**
**24° angolo di spoglia, con taglio di chiavetta longidutinale e trasversale secondo DIN 138**

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 | | | | | ■ |

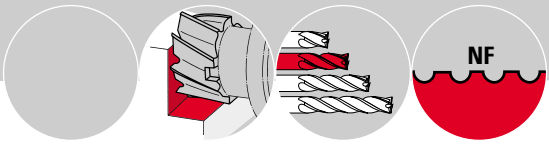
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

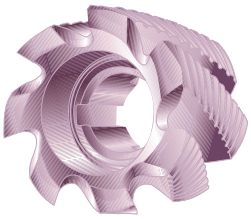


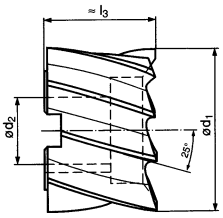
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**

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

**DIN 1880**
**HSS-Co5**

HSS-Co5

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

| **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 | | | | | | ■ |

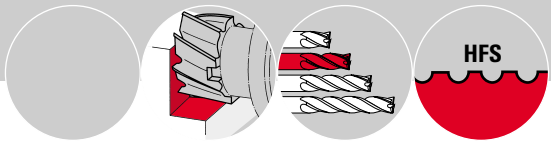
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

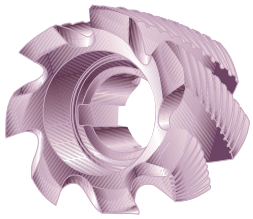


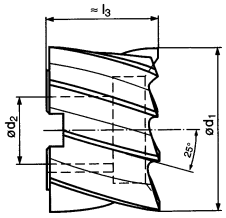
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**

Typ HFS, 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 HFS, right-hand cutting,
≈ 25° right-hand spiral, rake angle 10°,
with driving slot and standard
keyway acc. 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

| **Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | 9567 | 9567T | 9567C |
|---|---|---|---|---|---|---|---|---|---|
| **Ød1** Js14 | $l_3$ | Ød2 | 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 | | | | ■ | | |

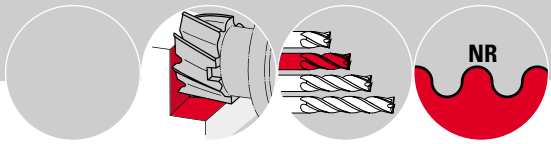
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

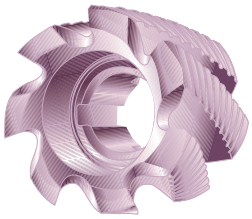


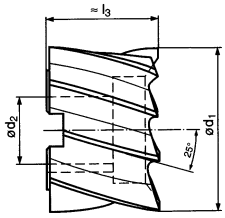
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 | | | | | | ■ |

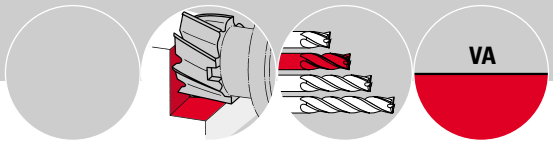
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

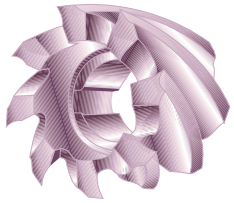


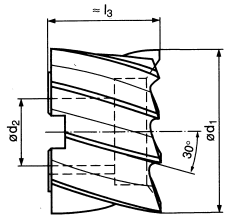
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese cilindriche frontali
## Walzenstirnfräser






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

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

**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 | | | | ● | ● | ● |

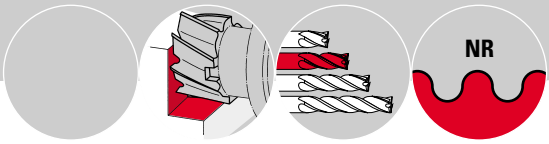
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

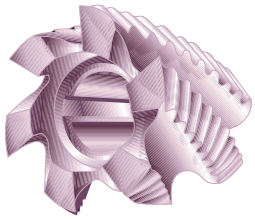


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**

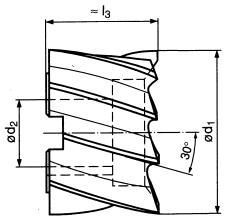
Type NR, rechtsschneidend, ≈ 25° Rechtsspirale, 10° Spanwinkel, mit längs- und Quernut nach DIN 138

# DIN 1880
# ASP-60

ASP-60

ASP-60 TiCN

ASP-60 TiALN FUTURA®




**Shell end mills**
Type NR, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, 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 10°, avec entraînement par tenon et par clavette selon DIN 138

| **Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | 9585 | 9585C | 9585F |
|---|---|---|---|---|---|---|---|---|---|
| | New | | | | | | | | |
| **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 | | | | ● | ● | ● |

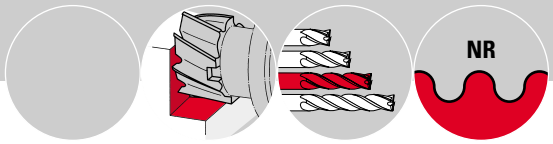
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

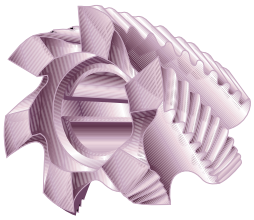


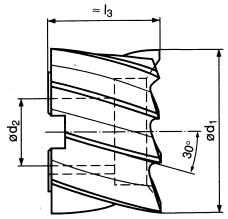
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese cilindriche frontali
## Walzenstirnfräser






**Tipo NR, ≈ 25° elica, 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 841**
**HSS-Co8**

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

**Shell end mills**
Type NR, right-hand cutting, ≈ 25° right-hand spiral, 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. | | | | | | | 9574 | 9574C | 9574F |
|---|---|---|---|---|---|---|---|---|---|
| | New | | | | | | | | |
| **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 | | | | ● | ● | ● |
| | | | | | | | ● | ● | ● |

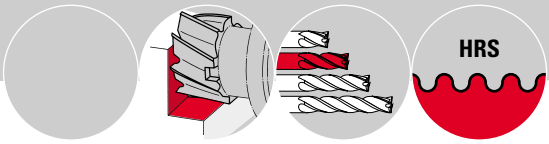
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

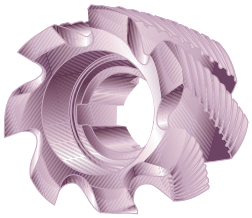


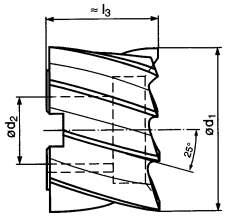
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**

Typ HRS, 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 HRS, right-hand cutting, ≈ 25° right-hand spiral, rake angle 10°, with driving slot and standard keyway acc. 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

| **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 | | | | ■ | ■ | ■ |

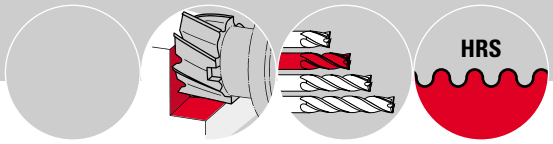
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

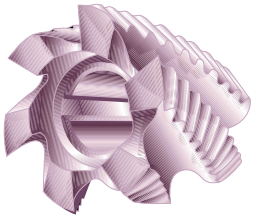


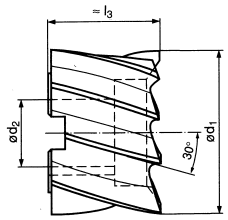
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |
|---|---|---|---|---|---|---|---|---|---|
| | New | | | | | | | | |
| **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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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 |
| | | | | | | | | |

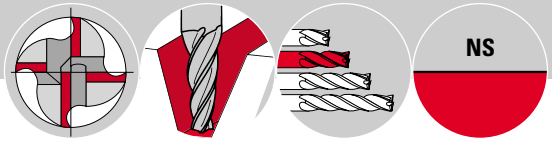
IN = Illico Norm

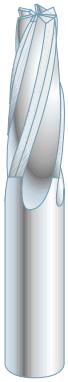


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



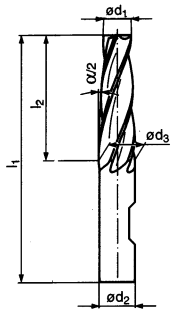



**Tipo NS, con testa piatta, con conicità α/2 = 0,5°, con codolo cilindrico secondo DIN 1835/1**

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

**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




**ILLICO NORM**
**HSS-Co8**

HSS-Co8

| 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 | | | | | | ● |

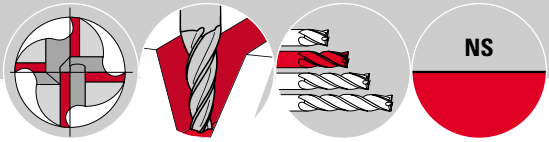
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

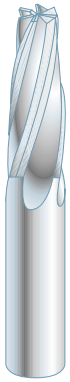


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



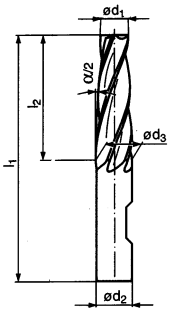



**Tipo NS, con testa piatta, con conicità α/2 =1°, con codolo cilindrico secondo DIN 1835/1**

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

**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




**ILLICO NORM**
**HSS-Co8**

HSS-Co8

| 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 | | | | | | ● |

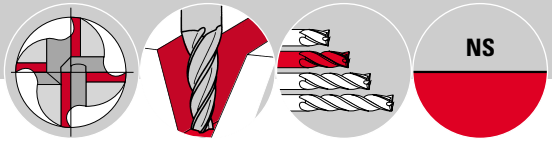
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

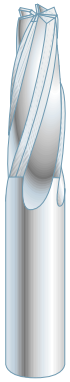


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



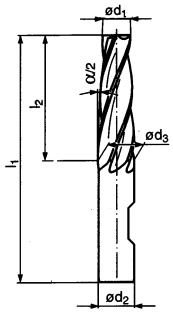



**Tipo NS, con testa piatta, con conicità α/2 = 1,5°, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ● |

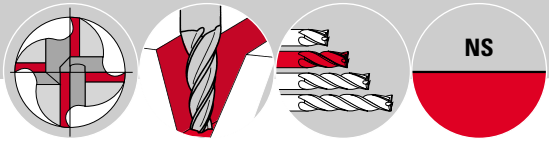
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

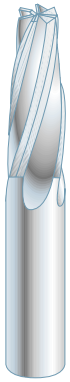


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



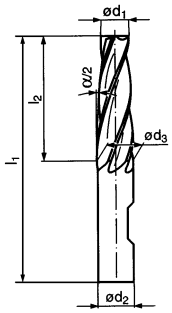



**Tipo NS, con testa piatta, con conicità α/2 = 2°, con codolo cilindrico secondo DIN 1835/1**

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

**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




**ILLICO NORM**
**HSS-Co8**

HSS-Co8

| 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 | | | | | | ● |

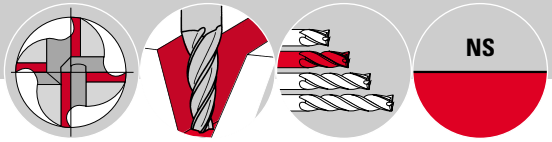
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

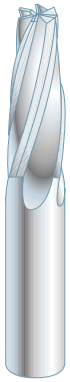


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



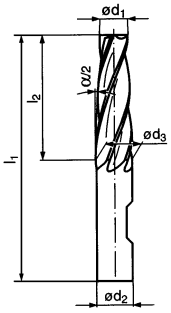



**Tipo NS, con testa piatta, con conicità α/2 = 3°, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ● |

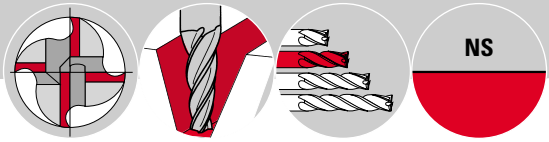
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

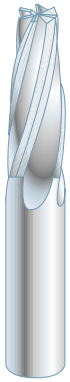


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



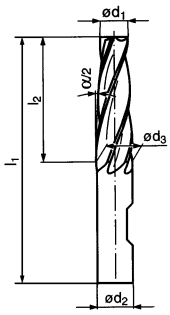



**Tipo NS, con testa piatta, con conicità α/2 = 4°, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ● |

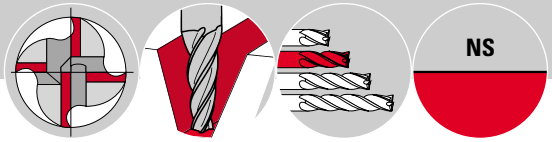
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

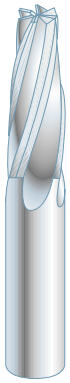


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



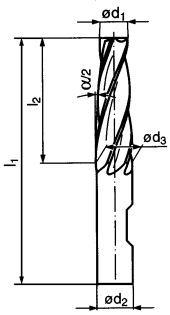



**Tipo NS, con testa piatta, con conicità α/2 = 5°, con codolo cilindrico secondo DIN 1835/1**

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

**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




**ILLICO NORM**
**HSS-Co8**

HSS-Co8

| **Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | | | | | **8516** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ød1** | Ød$_3$ | l$_2$ | l$_1$ | Ød$_2$ | 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 | | | | | | ● |

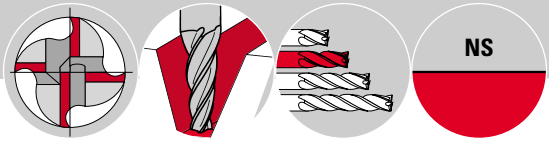
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

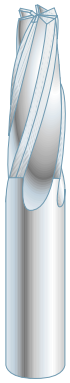


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



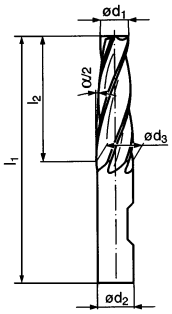



**Tipo NS, con testa piatta, con conicità α/2 = 6°, con codolo cilindrico secondo DIN 1835/1**

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

**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




# ILLICO NORM
# HSS-Co8

HSS-Co8

**Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. **8520**

| Ød1 | Ød3 | l2 | l1 | Ød2 | Z | 8520 |
|---|---|---|---|---|---|---|
| **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 | ● |

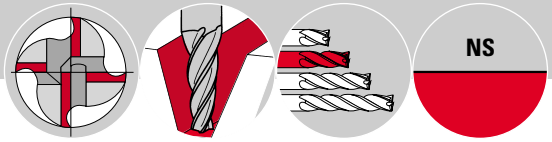
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

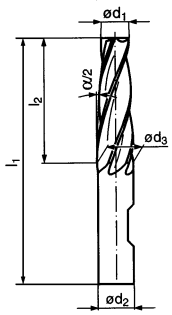


**Tipo NS, con testa piatta, con conicità α/2 = 1:6 (9°28'), con codolo cilindrico secondo DIN 1835/1**

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

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

| **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 | | | | | | ● |

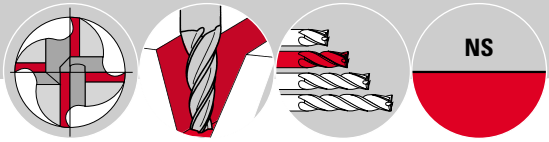
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

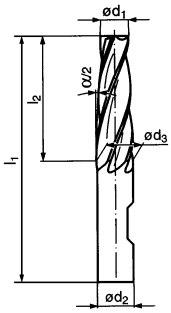
для заказа - ilix@ilix-tools.ru

# 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 | | | | | | ● |

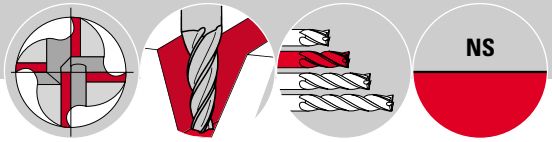
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

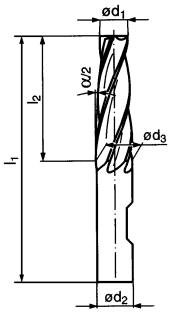


**Tipo NS, con testa piatta, con conicità α/2 = 1: 20 (2°52'), con codolo cilindrico secondo DIN 1835/1**

Typ NS, mit flacher Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

| **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 | | | | | | ● |

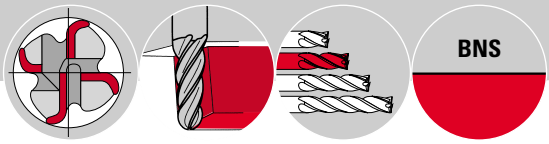
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

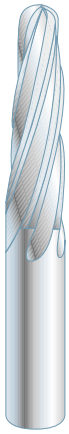


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

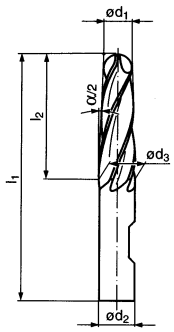
# Frese coniche per stampi
## Gesenkfräser kegelig



**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 | Ød3 | l2 | l1 | Ød2 | Z | 8540 |
|---|---|---|---|---|---|---|
| **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 | ■ |

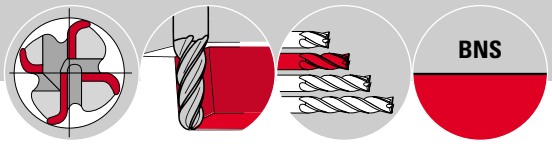
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

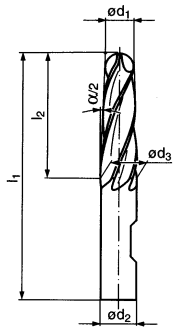


**Tipo BNS, con testa raggiata, con conicità α/2 = 1: 20 (2°52'), con codolo cilindrico secondo DIN 1835/1**

Typ BNS, mit runder Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

**Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. **8544**

| Ød1 | Ød3 | l2 | l1 | Ød2 | Z | 8544 |
|---|---|---|---|---|---|---|
| **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 | ■ |

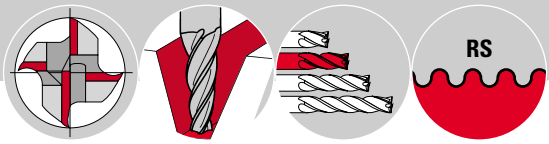
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

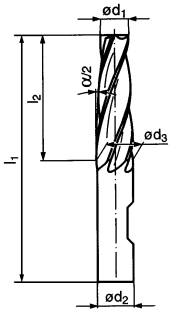


**Tipo RS, con testa piatta, con conicità α/2 = 1:6 (9°28'), con codolo cilindrico secondo DIN 1835/1**

Typ RS, mit flacher Stirn, mit Neigung 1:6, mit Zylindershaft nach DIN 1835/1

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

| **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 | | | | | | ● |

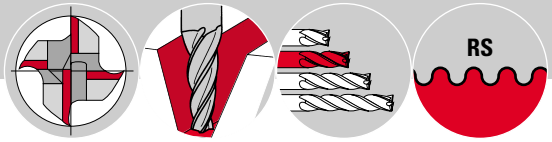
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

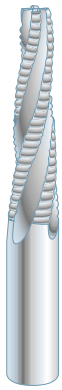


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig



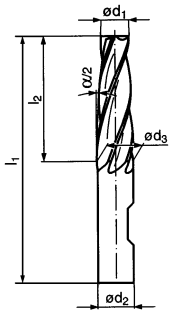



**Tipo RS, con testa piatta, con conicità α/2 = 1:10 (5°43'), con codolo cilindrico secondo DIN 1835/1**

Typ RS, mit flacher Stirn, mit Neigung 1:10, mit Zylindershaft nach DIN 1835/1

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

| **Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | | | | | **8552** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ød1** | Ød$_3$ | l$_2$ | l$_1$ | Ød$_2$ | 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 | | | | | | ● |

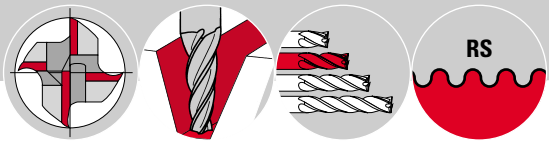
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

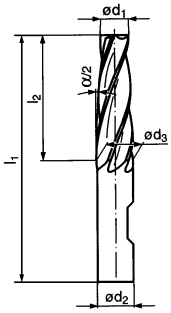


**Tipo RS, con testa piatta, con conicità α/2 = 1:20 (2°52'), con codolo cilindrico secondo DIN 1835/1**

Typ RS, mit flacher Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

| **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 | | | | | | ● |

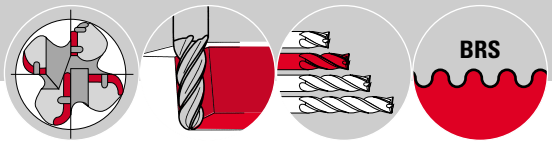
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

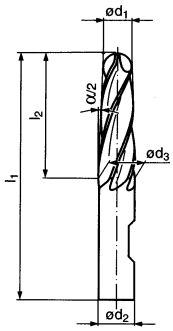


**Tipo BRS, con testa raggiata, con conicità α/2 = 1:6 (9°28'), con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ● |

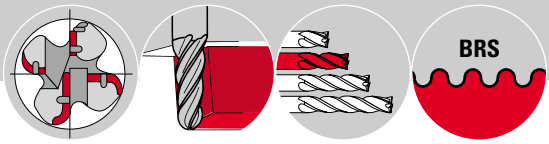
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

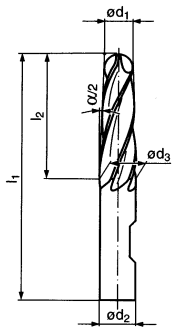


**Tipo BRS, con testa raggiata, con conicità α/2 = 1:10 (5°43'), con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ● |

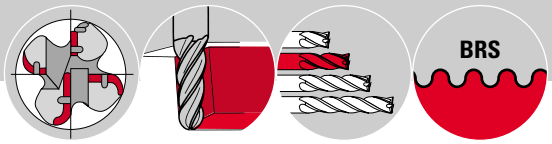
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese coniche per stampi
## Gesenkfräser kegelig

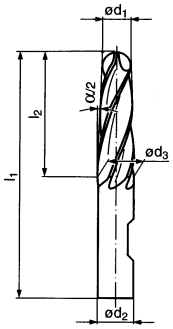


**Tipo BRS, con testa raggiata, con conicità α/2 = 1:20 (2°52'), con codolo cilindrico secondo DIN 1835/1**

Typ BRS, mit runder Stirn, mit Neigung 1:20, mit Zylindershaft nach DIN 1835/1

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8

| **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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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

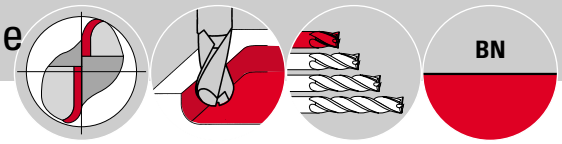


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese semisferiche a 2 taglienti, serie extra corta

## Radiusschaftfräser 2 - Schneiden extra kurze



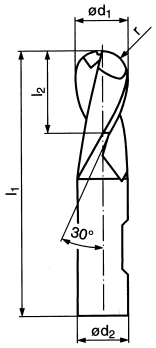

4202

**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

**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




**ILLICO NORM**
(similare a 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. | | | | | | 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

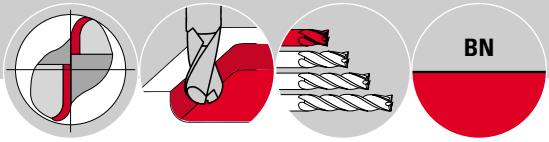


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

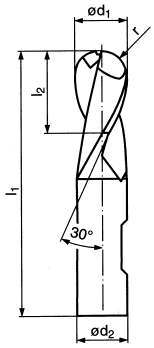
# Frese semisferiche a 2 taglienti, serie extra corta

## 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 | | | ● | ● | ● | ● |

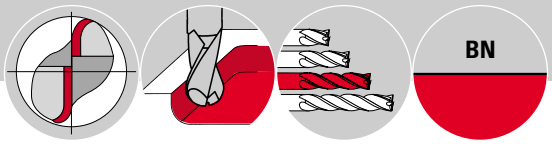
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

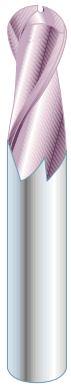


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese semisferiche a 2 taglienti, serie lunga
## Radiusschaftfräser 2 - Schneiden lang



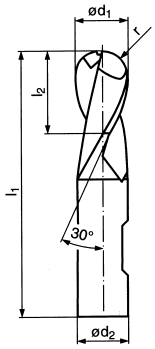



**Tipo BN, ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

**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




# ILLICO NORM HSS-Co8

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

| **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 | | | ● | ● | ● | ● |

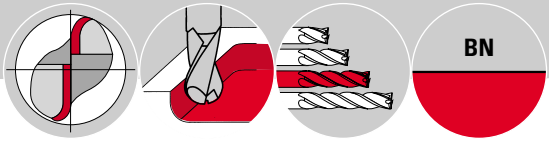
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

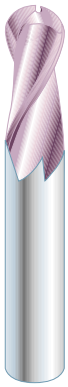


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese semisferiche a 2 taglienti, serie lunga
## Radiusschaftfräser 2-Schneiden lang



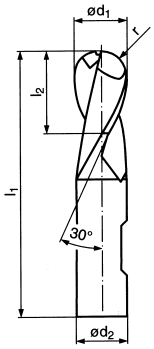



**Tipo BN, ≈ 30° elica, con codolo cilindrico secondo DIN 1835/1**

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

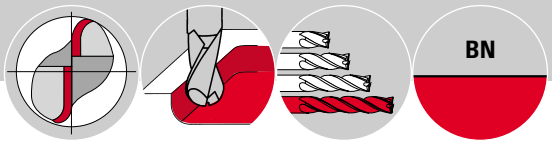


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese semisferiche a 2 taglienti, serie extra lunga

## Radiusschaftfräser 2-Schneiden extra lang

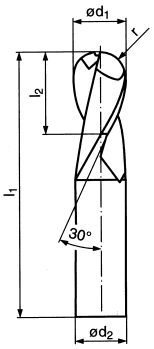


**Tipo BN, ≈ 30° elica, con codolo cilindrico secondo DIN 1835A**

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | New | | | | | | | | | |
| **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

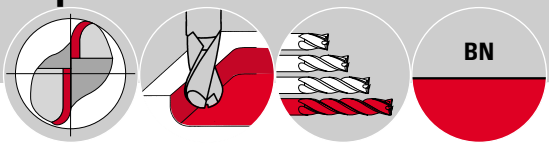


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese semisferiche a 2 taglienti, serie extra lunga top

## Radiusschaftfräser 2-Schneiden top extra lang

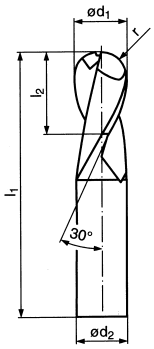


**Tipo BN, ≈ 30° elica, con codolo cilindrico secondo DIN 1835A**

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 | l2 (New) | l1 | Ød2 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



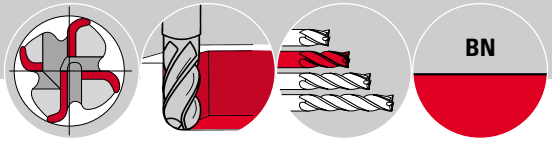
ilix@ilix-tools.ru
www.ilix-tools.ru

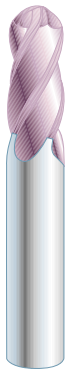
для заказа - ilix@ilix-tools.ru

ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie corta
## Gesenkfräser kurz zylindrisch



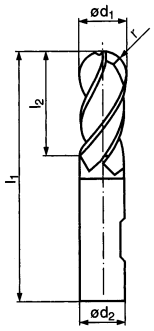



**Tipo BN, ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

| **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 | | | | ● | ● | ● |

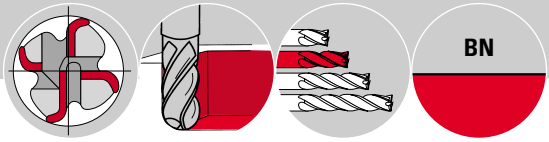
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie corta
## Gesenkfräser kurz zylindrisch

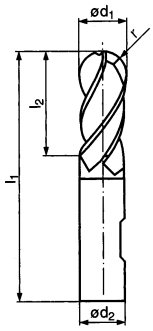


**Tipo BN ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

**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




# DIN 1889
# ASP-60

ASP-60
ASP-60 TiN
ASP-60 TiCN

| 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 | | | ● | ● | ● |

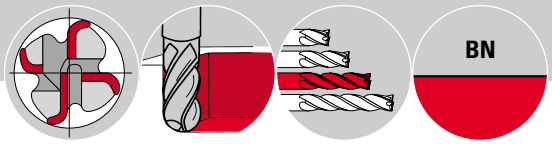
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

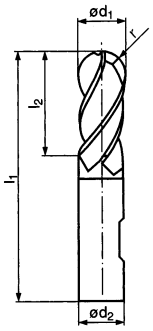
для заказа - ilix@ilix-tools.ru

# 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




**DIN 1889**
**HSS-Co8**

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

**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

| **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 | | | | ● | ● | ● |

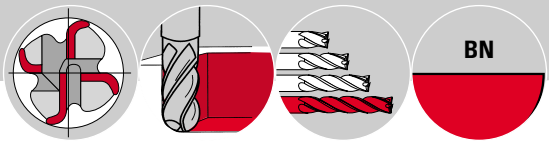
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

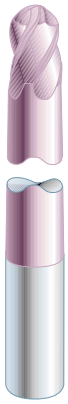


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie extra lunga
## Gesenkfräser extra lang zylindrisch



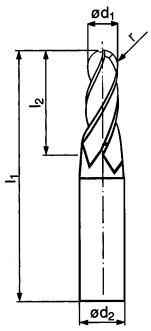



**Tipo BN ≈ 30° elica, con codolo cilindrico secondo DIN 1835A**

Typ BN, ≈ 30° Drallwinkel, mit Zylindershaft nach DIN 1835A

**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




# DIN 1889
# ASP-60

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

| 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 | | | | ● | ● | ● |

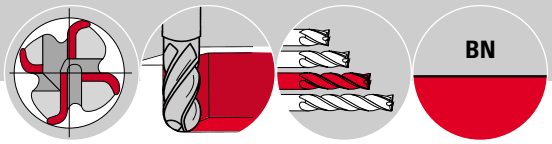
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie lunga
## Gesenkfräser lang zylindrisch

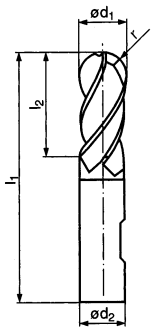


**Tipo BN ≈ 30° elica, 6° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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 | | | | ● | ● | ● |

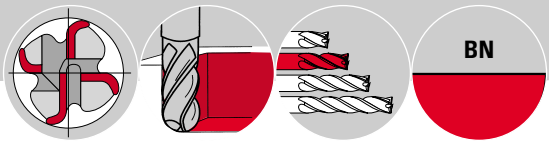
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

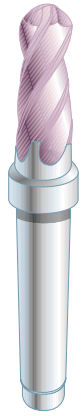


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie corta
## Gesenkfräser kurz zylindrisch



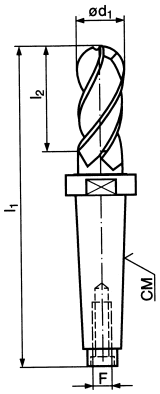



**Tipo BN,**
**con codolo conico Morse**
**secondo DIN 228/1**

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 | | | | ● | ● | ● |

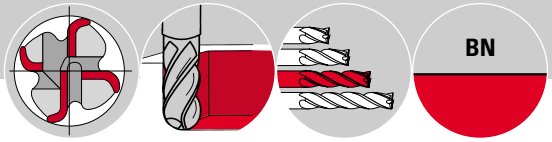
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

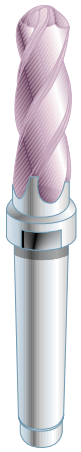


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie lunga
## Gesenkfräser lang zylindrisch



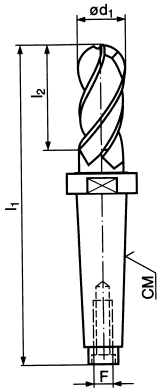



**Tipo BN,**
**con codolo conico Morse**
**secondo DIN 228/1**

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 | | | | ● | ● | ● |

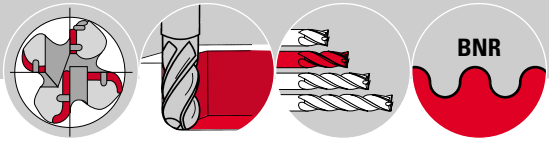
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

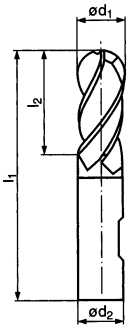
для заказа - ilix@ilix-tools.ru

# 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 | | | ● | ● | ● | |

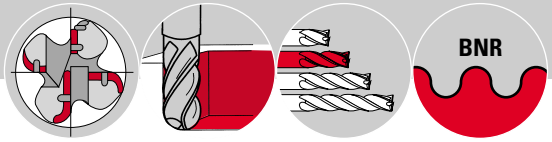
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie corta
## Gesenkfräser kurz zylindrisch

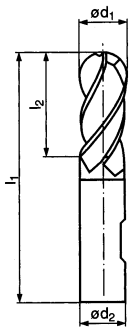


**Tipo BNR ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

**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




**DIN 1889**
**ASP-60**

ASP-60
ASP-60 TiN
ASP-60 TiCN

| **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 | | | | ● | ● | ● |

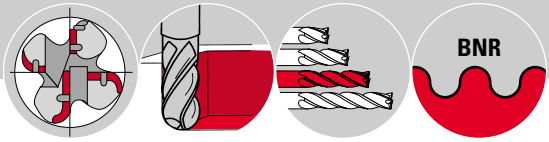
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie lunga
## Gesenkfräser lang zylindrisch

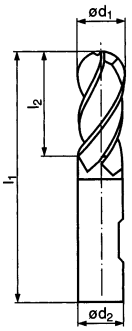


**Tipo BNR ≈ 30° elica, 10° angolo di spoglia, con codolo cilindrico secondo DIN 1835/1**

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

**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




**DIN 1889**
**HSS-Co8**

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

| 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 | | | | ● | ● | ● |

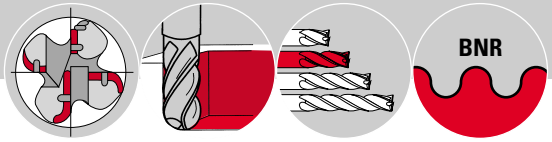
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie corta
## Gesenkfräser kurz zylindrisch

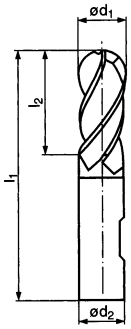


**Tipo BNR ≈ 30° elica con codolo conico morse secondo DIN 1835A/B**

Typ BNR, ≈ 30° Drallwinkel, mit Zylindershaft nach DIN 1835A/B

**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




**DIN 1889**
**ASP-60**

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

| 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 | ● | ● | ● | ● | ● | ● |

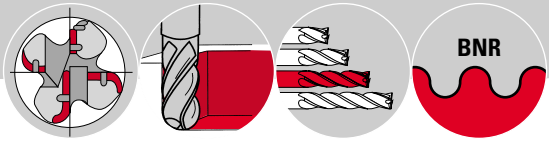
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

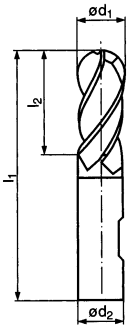
для заказа - ilix@ilix-tools.ru

# 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 | | | | ● | ● | ● |

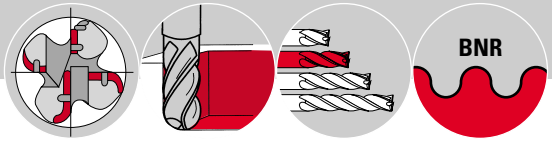
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie corta
## Gesenkfräser kurz zylindrisch

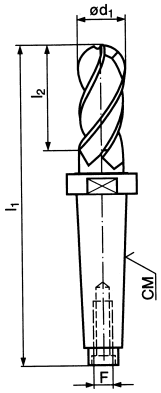


**tipo BNR,**
**con codolo conico Morse**
**secondo DIN 228/1**

Typ BNR, mit Morsekegelschaft
nach DIN 228/1

**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




**DIN 1889D**
**HSS-Co8**

HSS-Co8
HSS-Co8 TiN
HSS-Co8 TiCN

| **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 | | | | ● | ● | ● |

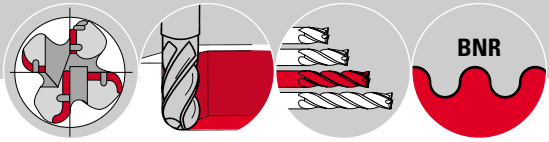
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
* Tolleranza h 10 - Toleranz h 10 - Tolerance h 10 - Tolérance h 10

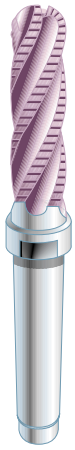


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per stampi a più taglienti, serie lunga
## Gesenkfräser lang zylindrisch



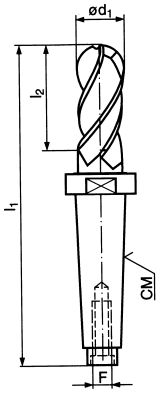



**Tipo BNR,**
**con codolo conico Morse**
**secondo DIN 228/1**

Typ BNR, mit Morsekegelschaft
nach DIN 228/1

**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




**DIN 1889D**
**HSS-Co8**

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

| **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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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

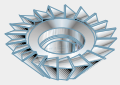
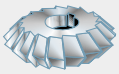
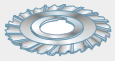
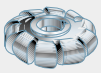
| DIN | Tipo | | Materiale | Uncoated | | | | | Pag. |
|---|---|---|---|---|---|---|---|---|---|
| 851 | N | | HSS-Co5 | | ● | ● | | | 164 |
| 851 | N | | HSS-Co5 | | | | | ● | 165 |
| 851 | NF | | HSS-Co5 | | ● | | | | 166 |
| 851 | NF | | HSS-Co5 | | | | | ● | 167 |
| 851 | NR | | HSS-Co5 | | ● | | | | 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

| 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 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

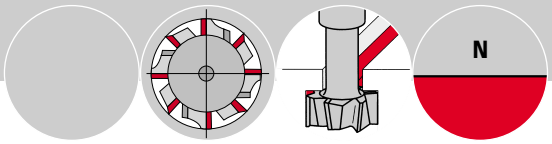
IN = Illico Norm

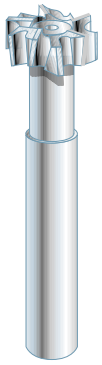


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per scanalature, a T, dentatura incrociata
## T-Nutenfräser kreuzverzahnt



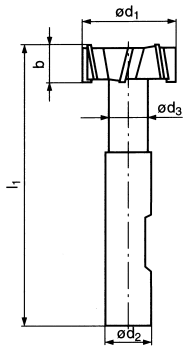



**Tipo N, per scanalature secondo DIN 650, con codolo cilindrico secondo DIN 1835/1**

Typ N, für Nuten nach DIN 650, mit Zylindershaft nach DIN 1835/1

**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




**DIN 851**
**HSS-Co5**

HSS-Co5

| **Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | | | | 9520 | 9522 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ød1** d11 | b | Ød3 h12 | $l_1$ | Ød2 | 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 | | | | | ● | ● |

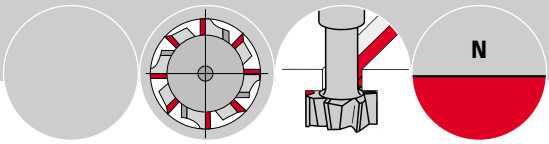
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

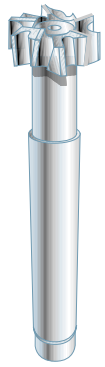


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per scanalature a T, dentatura incrociata
## T-Nutenfräser kreuzverzahnt



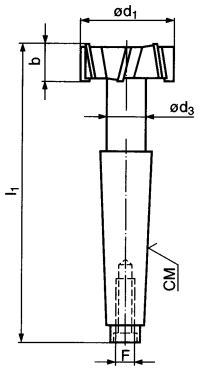



**Tipo N, per scanalature secondo DIN 650, con codolo conico morse secondo DIN 228/1**

Typ N, für Nuten nach DIN 650, mit Morsekegelschaft nach DIN 228/1

**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




**DIN 851**
**HSS-Co5**

HSS-Co5

**Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat. | **9524**

| Ød1 d11 | b | Ød3 h12 | l1 | CM | F | Z | 9524 |
|---|---|---|---|---|---|---|---|
| **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 | ■ |

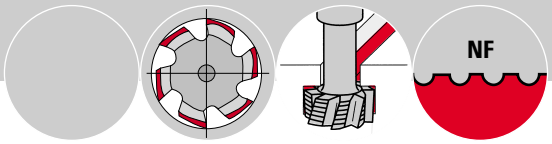
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

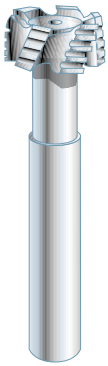


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per scanalature a T, dentatura incrociata
## T-Nutenfräser



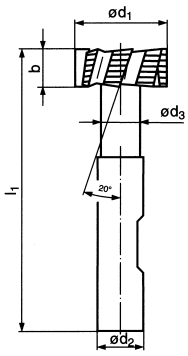



**Tipo NF, ≈ 20° elica per scanalature secondo DIN 650, con codolo cilindrico secondo DIN 1835/1**

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 | Ød3 h12 | $l_1$ | Ød2 | 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 | | | | | | ● |

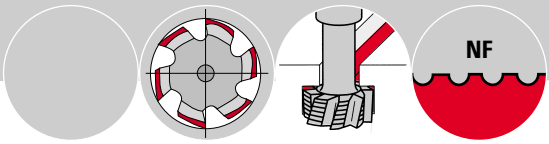
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

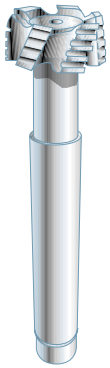


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per scanalature a T
## T-Nutenfräser



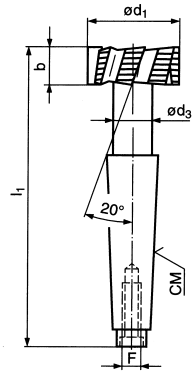



**Tipo NF, ≈ 20° elica, per scanalature secondo DIN 650, con codolo conico Morse secondo DIN 228/1**

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** d11 | b | Ød3 h12 | l1 | CM | F | Z | 9530 |
|---|---|---|---|---|---|---|---|
| **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 | ■ |

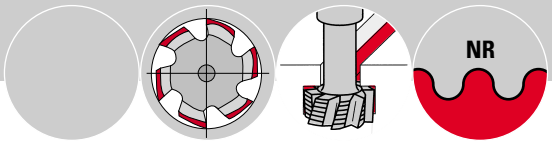
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

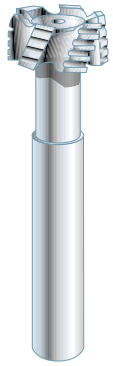


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per scanalature a T
## T-Nutenfräser



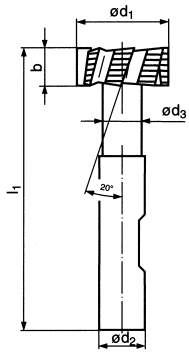



**Tipo NR, ≈ 20° elica, per scanalature secondo DIN 650, con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | ■ |

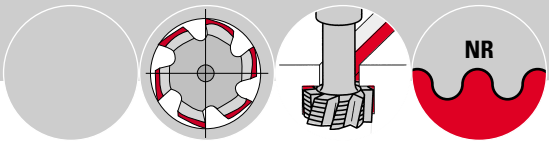
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

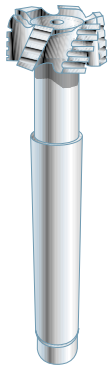


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per scanalature a T
## T-Nutenfräser



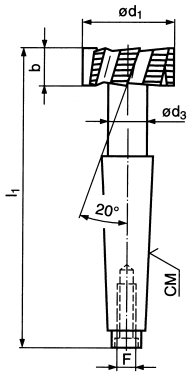



**Tipo NR, ≈ 20° elica, per scanalature secondo DIN 650, con codolo conico Morse secondo DIN 228/1**

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 d11 | b | Ød3 h12 | l1 | 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 | ■ |

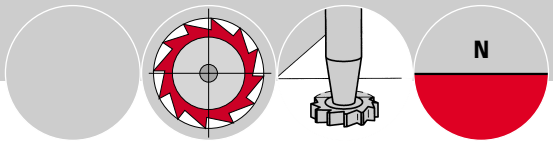
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

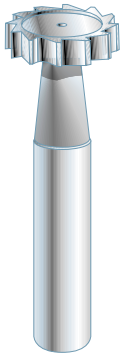


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per sedi di linguette americane
## Schlitzfräser geradeverzahnt



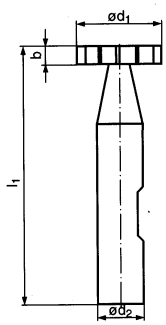



**(Woodruff), denti diritti, per scanalature secondo DIN 6888, con codolo cilindrico secondo DIN 1835/1**

(Woodruff) für Nuten nach DIN 6888, mit Zylindershaft nach DIN 1835/1

**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




**DIN 850**
**HSS-Co5**

HSS-Co5

| **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 | | | | | | ■ |

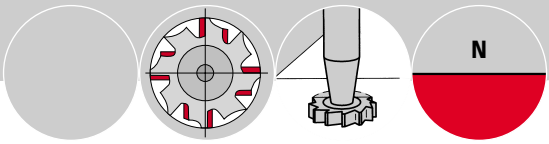
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

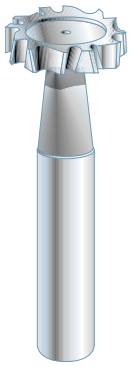


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese per sedi di linguette americane
## Schlitzfräser kreuzverzahnt



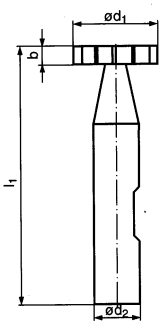



**(Woodruff) dentatura incrociata, per scanalature secondo DIN 6888, con codolo cilindrico secondo DIN 1835/1**

(Woodruff) für Nuten nach DIN 6888, mit Zylindershaft nach DIN 1835/1

**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




**DIN 850**
**HSS-Co5**

HSS-Co5

| 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 | | | | | ● | ● |

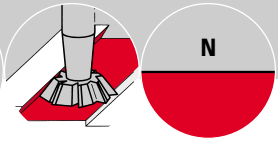
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese ad angolo
## Winkelfräser

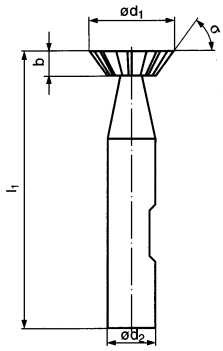


**Con codolo cilindrico secondo DIN 1835/1**

Mit Zylindershaft nach DIN 1835/1

**Dovetail cutters**
with straight shank acc. DIN 1835/1

**Fraises conique cône reversé,**
avec queue selon DIN 1835/1




**DIN 1833**
**HSS-Co5**

HSS-Co5

| **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 | | | | ● | ● |

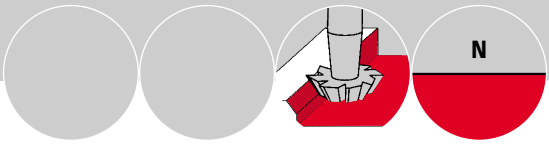
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese ad angolo
## Winkelfräser

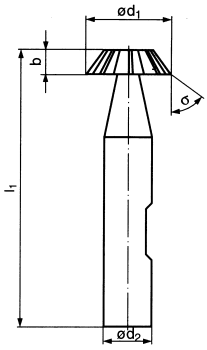


**Con codolo cilindrico secondo DIN 1835/1**

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 | | | | | ● | ● |

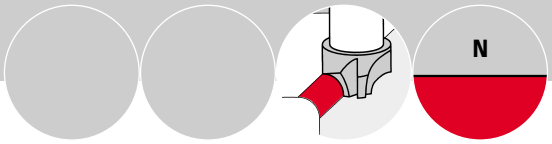
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a profilo, concave
## Viertelrund - Profilfräser konkav

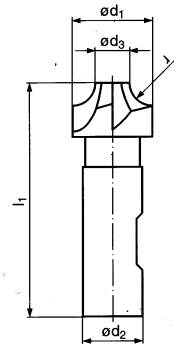


**1/4 circolare con codolo cilindrico secondo DIN 1835/1**

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 | | | | | | |

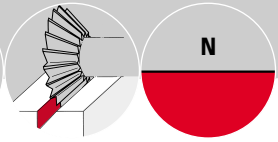
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock

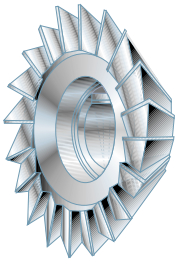


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali ad angolo a manicotto
## Aufsteckwinkelstirnfräser



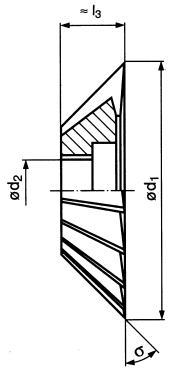



**Tipo N, con taglio di chiavetta longitudinale secondo DIN 138**

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 | | | | | | ● |

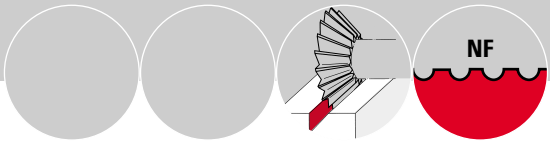
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock

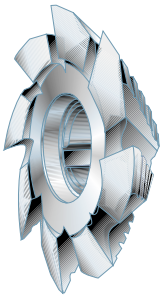


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali ad angolo a manicotto
## Aufsteckwinkelstirnfräser



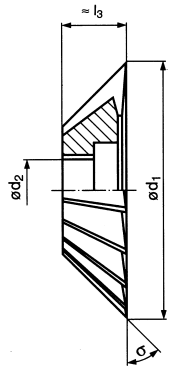



**Tipo NF, con taglio di chiavetta longitudinale secondo DIN 842**

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 | | | | | | ● |

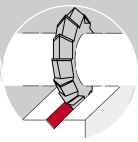
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



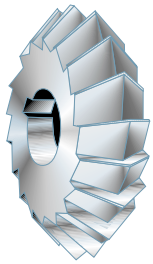
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese frontali ad angolo prismatiche
## Prismenfräser



N

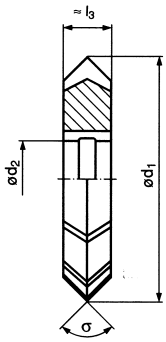


**Tipo N, con taglio di chiavetta longitudinale secondo DIN 138**

Typ N, mit Längsnut nach DIN 138

**Double angle milling cutters symmetrical**
Type N, with standard keyway acc. DIN 138

**Fraises isocèles**
Type N, avec entraînement par clavette selon DIN 138




**DIN 847**
**HSS**

HSS

**Cat. Nr.** - Kat. Nr. - Cat. no. - No. de cat.

| Ød1 | σ | $l_3$ | $Ød_2$ | Z | 9576 |
|---|---|---|---|---|---|
| **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 | ● |

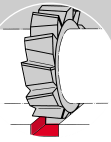
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



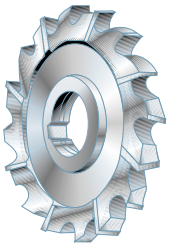
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco
## Scheibenfräser kreuzverzahnt



N

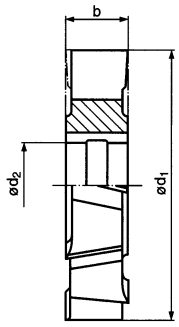


**Tipo N, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138**

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 | | | | | |
| **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 | | | | | ● |

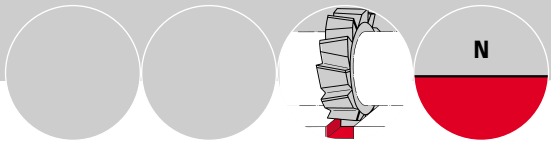
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

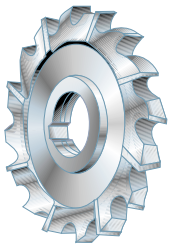


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

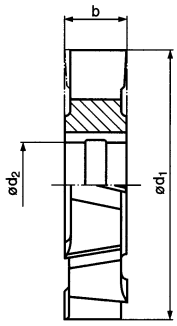
# Frese a disco
## Scheibenfräser kreuzverzahnt



**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 | | | | | | |
| **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

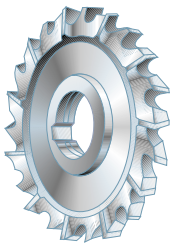


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco
## Scheibenfräser kreuzverzahnt

HS

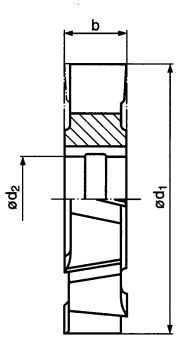


**Tipo HS, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138**

Typ HS, mit Längsnut nach DIN 138

**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




**DIN 885**
**HSS-Co5**

HSS-Co5

| **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 | | | | | ● |

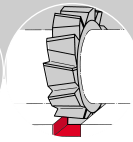
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



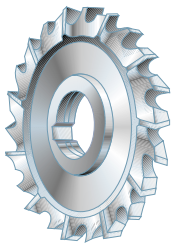
ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco
## Scheibenfräser kreuzverzahnt



HS

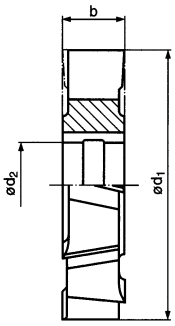


**Tipo HS, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138**

Typ HS, mit Längsnut nach DIN 138

**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




**DIN 885**
**HSS-Co5**

HSS-Co5

| **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 | | | | | | ■ |

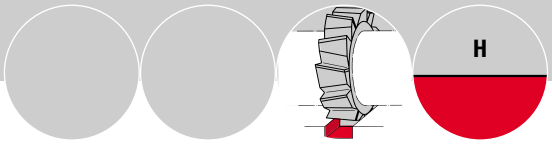
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM

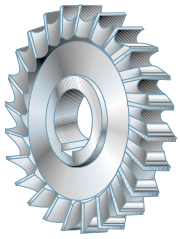


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

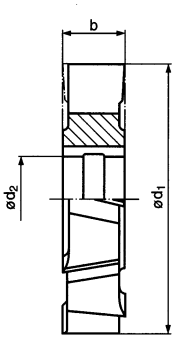
# Frese a disco
## Scheibenfräser geradeverzahnt



**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 | Ød2 | 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 | | | | | | ● |

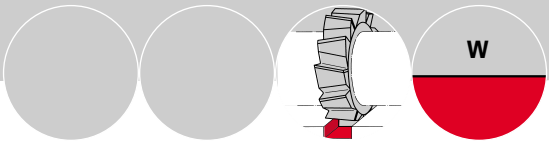
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock



ilix@ilix-tools.ru
www.ilix-tools.ru

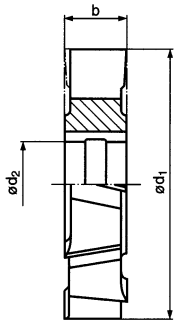
для заказа - ilix@ilix-tools.ru

# 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 | | | | | | ● |

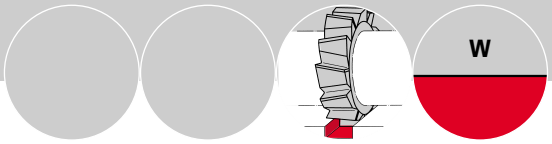
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco, per leghe leggere
## Scheibenfräser kreuzverzahnt

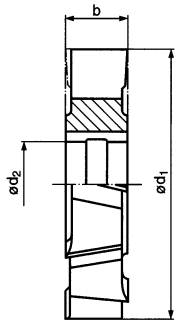


**Tipo W, denti rinforzati elicoidali alternati con taglio di chiavetta longitudinale secondo DIN 138**

Typ W, mit Längsnut nach DIN 138

**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




**DIN 885**
**HSS**

HSS

| Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | | 9580 |
|---|---|---|---|---|---|---|---|---|
| **Ød1** | b | Ød2 | 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 | | | | | ● |

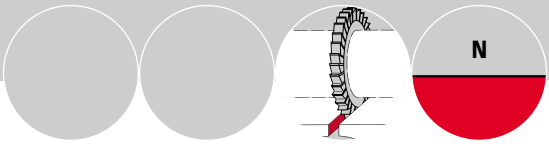
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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

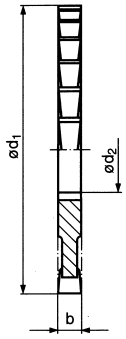
Kreuzverzahnt

**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 | Ød2 | 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco a tagli sottili
## Schmale Scheibenfräser

N

**Con taglio di chiavetta longitudinale secondo DIN 138**

Denti rinforzati diritti

Schmale Scheibenfräser mit Längsnut nach DIN 138

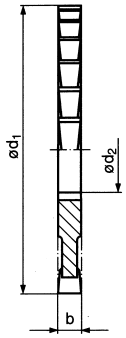
Geradeverzahnt

**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 | | | | | ● |

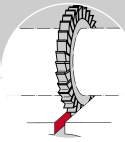
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco a tagli sottili
## Schmale Scheibenfräser



N

**Con taglio di chiavetta longitudinale secondo DIN 138**

Dentatura alternata fine

Schmale Scheibenfräser mit Längsnut nach DIN 138

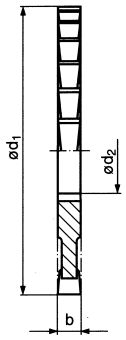
Wechselseitig feinverzahnt

**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 | | | | | | |
| **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 | | | | | | ■ |

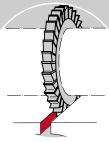
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a disco a tagli sottili
## Schmale Scheibenfräser



N

**Con taglio di chiavetta longitudinale secondo DIN 138**

Dentatura alternata fine

Schmale Scheibenfräser mit Längsnut nach DIN 138

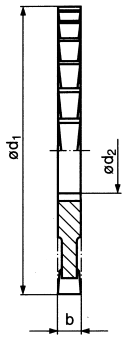
Wechselseitig feinverzahnt

**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 | | | | | ■ |

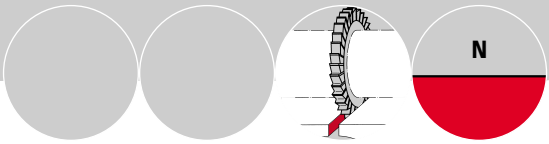
■ Fino ad esaurimento scorte - Solange der Vorrat reicht - Discontinued available until sold out - Jusqu'à épuisement de stock
▲ ILLICO NORM



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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

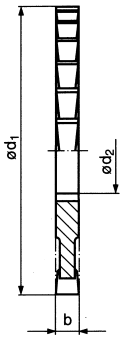
Kreuzverzahnt groß

**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




# ILLICO NORM HSS-Co5

HSS-Co5

| Cat. Nr. - Kat. Nr. - Cat. no. - No. de cat. | | | | | | | | | 9584 |
|---|---|---|---|---|---|---|---|---|---|
| **Ød1** | b | Ød2 | 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 | | | | | | ● |

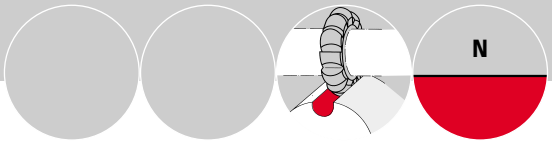
● Utensile disponibile a magazzino - Tool in stock - Werkzeug vorratig ab lager - Outil disponible à stock
▲ ILLICO NORM

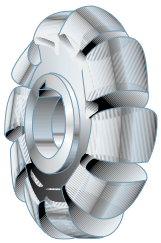


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a profilo semicircolare
## Halbrund - Profilfräser



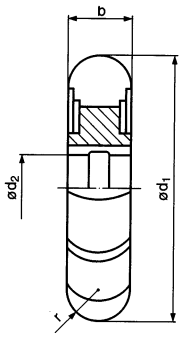



**Convessa, profilo costante, con taglio di chiavetta longitudinale secondo DIN 138**

Konvex, hinterdreht, mit Längsnut nach DIN 138

**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




**DIN 856**
**HSS**

HSS

| 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

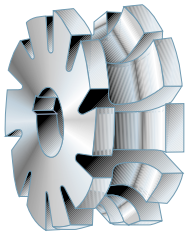


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a profilo semicircolare
## Halbrund - Profilfräser

N

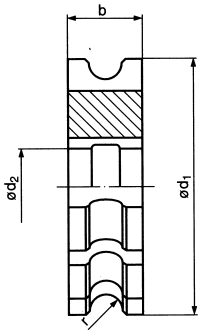


**Concava, profilo costante, con taglio di chiavetta longitudinale secondo DIN 138**

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.

| Ød1 | r H11 | b | Ød2 | Z | | | | | | 9592 |
|---|---|---|---|---|---|---|---|---|---|---|
| **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

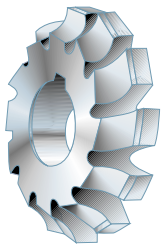


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Frese a profilo 1/4 circolare
## Halbrund - Profilfräser

N

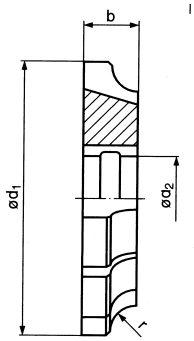


**Concava, profilo costante, taglio destro con taglio di chiavetta longitudinale secondo DIN 138**

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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Informazioni Tecniche

## Technische Hinweise

### Technical Instruction
### Instructions Techniques



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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

$$V_t = \frac{d_1 \times 3{,}14 \times n}{1000} = \text{m/min}$$

$$n = \frac{V_t \times 1000}{d_1 \times 3{,}14} = \text{giri/min}$$

### 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

$$V_f = \frac{f_z \times z \times n}{1000} = \text{mm/min}$$

$$F_z = \frac{V_f}{z \times n} = \text{mm/z}$$

### Legenda • Legende • Caption • Légende

| | |
|---|---|
| $V_t$ | **Velocità di taglio (m/min)**<br>Schnittgeschwindigkeit (m/min)<br>Cutting length (m/min)<br>Vitesse de coupe (m/min) |
| n | **Numero di giri (giri/min)**<br>Umdrehungen (U/min)<br>Number of turns (U/min)<br>Numéro de tours (T/min) |
| $d_1$ | **Diametro nominale (mm)**<br>Nenndurchmesser (mm)<br>Nominal diameter (mm)<br>Diamètre nominal (mm) |
| $V_f$ | **Alimentazione (mm/min)**<br>Vorschub pro Minute (mm/min)<br>Feed per min. (mm/min)<br>Alimentation (mm/min) |
| $f_z$ | **Avanzamento per dente (mm/z)**<br>Vorschub pro Schneide (mm/Z)<br>Feed per tooth (m/Z)<br>Avancement par dent (m/Z) |
| z | **Numero dei denti**<br>Zähnezahl<br>Number of teeth<br>Numéro de dents |
| P | **Potenza richiesta (Kw)**<br>Gefragte Leistung (Kw)<br>Required power (Kw)<br>Puissance demandée (Kw) |
| $a_p$ | **Profondità di taglio (mm)**<br>Schnittiefe (mm)<br>Cutting depth (mm)<br>Profondeur de coupe (mm) |
| $a_t$ | **Larghezza di taglio (mm)**<br>Schnittbreite (mm)<br>Cutting width (mm)<br>Largeur de coupe (mm) |
| $h_m$ | **Spessore medio del truciolo (mm)**<br>Durchschnittliche Spanungsdicke (m/m)<br>Medium chip thickness (mm)<br>Epaisseur moyen du copeau (mm) |
| Q | **Materiale asportato (cm³/min/kw)**<br>Spanmenge (cm³/min/kw)<br>Removed material (cm³/min/kw)<br>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

$$P_z = \frac{a_t \times a_p \times V_f}{1000 \times Q} = \text{Kw}$$

$$h_m = f_z \times \sqrt{\frac{a_t}{d_1}} = \text{mm}$$

### Valori di Q • Q-Werte • Q-Values • Valeur de Q

| **Materiale**<br>Werkstoff<br>Materials<br>Matière | | Q |
|---|---|---|
| **Acciaio < 700 N/mm²**<br>Steel < 700 N/mm² | Stahl < 700 N/mm²<br>Acier < 700 N/mm² | 20-25 |
| **Acciaio < 1000 N/mm²**<br>Steel < 1000 N/mm² | Stahl < 1000 N/mm²<br>Acier < 1000 N/mm² | 16-24 |
| **Acciaio > 1000 N/mm²**<br>Steel > 1000 N/mm² | Stahl > 1000 N/mm²<br>Acier > 1000 N/mm² | 15-22 |
| **Acciaio inossidabile**<br>Stainless steel | Rostfreier Stahl<br>Acier inoxydable | 14-20 |
| **Ghisa grigia**<br>Gray pig iron | Grauguß<br>Fonte grise | 30-45 |
| **Ghisa sferoidale**<br>Spheroidal graphite cast iron | Sphäroguß<br>Fonte sphéroidale | 25-35 |
| **Alluminio e sue leghe**<br>Aluminium and alloys | Aluminium und Legierungen<br>Alluminium et ses alliages | 60-80 |
| **Titanio**<br>Titanium | Titan<br>Titane | 10-14 |
| **Rame-ottone**<br>Copper-brass | Kupfer-Messing<br>Cuivre-laiton | 38-45 |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**<br>Werkstoffe<br>Materials<br>Matières | **Tipologia** • Typ • Type • Type | | | | | |
|---|---|---|---|---|---|---|
| | **NF** | | **HFS** | | **WF** | |
| | HSS-Co8 | | HSS-Co8 | ASP-60 | HSS-Co8 | ASP-60 |
| **Acciaio R ≤ 600 N/mm²**<br>Stahl R ≤ 600 N/mm²<br>Steel R ≤ 600 N/mm²<br>Acier R ≤ 600 N/mm² | ○ ● ● ● | | | | | |
| **Acciaio R ≤ 900 N/mm²**<br>Stahl R ≤ 900 N/mm²<br>Steel R ≤ 900 N/mm²<br>Acier R ≤ 900 N/mm² | ○ ● ● ● | | | | | |
| **Acciaio R ≤ 1100 N/mm²**<br>Stahl R ≤ 1100 N/mm²<br>Steel R ≤ 1100 N/mm²<br>Acier R ≤ 1100 N/mm² | ● | | ● | ● | | |
| **Acciaio R ≥ 1100 N/mm²**<br>Stahl R ≥ 1100 N/mm²<br>Steel R ≥ 1100 N/mm²<br>Acier R ≥ 1100 N/mm² | | | ● | ● | | |
| **Acc. inossidabile, res. al calore**<br>Warmfester rostfreier Stahl<br>Stainless steel, heat resisting<br>Acier inoxydable | ● | | ○ ● | ○ ● | | |
| **Ghisa HB ≤ 250**<br>Gußeisen HB ≤ 250<br>Cast iron HB ≤ 250<br>Fonte HB ≤ 250 | ○ ● | | | | | |
| **Ghisa HB > 250**<br>Gußeisen HB > 250<br>Cast iron HB > 250<br>Fonte HB > 250 | | | ● | ○ ● | | |
| **Titanio e sue leghe R ≤ 900 N/mm²**<br>Titan und Legierungen R ≤ 900 N/ mm²<br>Titanium and alloys R ≤ 900 N/mm²<br>Titane et alliage de titane R ≤ 900 N/mm² | | | ○ ● | ○ ● | | |
| **Titanio e sue leghe R > 900 N/mm²**<br>Titan und Legierungen R > 900 N/ mm²<br>Titanium and alloys R > 900 N/mm²<br>Titane et alliage de titane R > 900 N/mm² | | | ○ ● | ○ ● | | |
| **Leghe Ni-Cr R ≤ 900 N/mm²**<br>Ni-Cr Legierungen ≤ 900 N/ mm²<br>Ni-Cr Alloys<br>Alliages speciaux à base Ni-Cr ≤ 900 N /mm² | | | ○ ● | ○ ● | | |
| **Leghe Ni-Cr R > 900 N/mm²**<br>Ni-Cr Legierungen > 900 N/ mm²<br>Ni-Cr Alloys<br>Alliages spéciaux à base Ni-Cr > 900 N/ mm² | | | ○ ● | ○ ● | | |
| **Rame**<br>Kupfer<br>Copper<br>Cuivre | | | | | ○ ● ● | ○ ● ● |
| **Leghe Rame - Nichel - Zinco**<br>Kupfer-, Nickel-, und Zinklegierungen<br>Copper, Nickel and Zinc alloys<br>Alliage Cuivre/Nickel/Zinc | ○ | | | | | |
| **Alluminio dolce**<br>Weiches Aluminium<br>Soft aluminium<br>Aluminium doux | | | | | ○ ● | ○ ● |
| **Leghe Al - Si con Si ≤ 10%**<br>Al-, Si-Legierungen mit Si ≤ 10%<br>Al and Si alloys with Si ≤ 10%<br>Aluminium et alliage d'aluminium ≤ 10% | | | | | ○ ● | ○ ● |
| **Leghe Al - Si con Si > A 10%**<br>Al-, Si-Legierungen mit Si > A 10%<br>Al and Si alloys with Si ≤ 10%<br>Aluminium et alliage d'aluminium > 10% Si | | | ● | ● | | |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

Neutro
Unbeschichtet
Uncoated
Non Revêtu

TiN

TiCN

TiALN FUTURA®

**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 |
| | | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | | | | | | Neutro |
| | Neutro | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | | | | Neutro, TiCN, TiALN FUTURA® | | |
| | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | TiCN, TiALN FUTURA® | | |
| | TiCN, TiALN FUTURA® | | | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | TiCN, TiALN FUTURA® | | |
| | Neutro | Neutro, TiCN | Neutro, TiCN | | TiCN | | Neutro, TiCN | | Neutro |
| | TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | | TiCN, TiALN FUTURA® | | |
| | TiALN FUTURA® | | | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | TiCN, TiALN FUTURA® | | |
| | Neutro | Neutro, TiCN | Neutro, TiCN | TiCN | TiCN | | Neutro, TiCN | | Neutro |
| | Neutro | | | | | | Neutro, TiCN | | |
| | Neutro | Neutro, TiCN | Neutro, TiCN | TiCN | TiCN | | Neutro, TiCN | | Neutro |
| | Neutro | | | Neutro | Neutro | | Neutro, TiCN | | |
| | | TiN, TiCN | TiN, TiCN | | | | | | |
| | | | | Neutro, TiCN | Neutro, TiCN | | Neutro, TiCN | | Neutro |
| | | | | | | | | | Neutro |
| | | | | | | | | | Neutro |
| | | | | | | | | | Neutro |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# Velocità di taglio per operazioni di sgrossatura con frese in HSS-Co8
## Empfohlene Scnittgeschwindigkeiten 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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>$V_t$ = m/min | | | |
|---|---|---|---|---|---|---|
| **Acciaio R ≤ 600 N/mm²**<br>**Acc. alta velocità, da costruzione**<br>Stahl R ≤ 600 N/mm²<br>Freischnittstahl<br>Steel R ≤ 600 N/mm²<br>High speed structural steel<br>Acier R ≤ 600 N/mm²<br>Acier de décolletage et de contruction | Fe 37<br>C 10<br>C35<br>9 S Mn Pb 28 | 1.0315<br>1.0301<br>1.0501<br>1.0718 | **25-35** | **40-56** | **48-65** | **48-65** |
| **Acciaio R ≤ 900 N/mm²**<br>**Acc. da costruzione in fusione poco legati, da cementazione, da bonifica, da nitrurazione per lav. a freddo**<br>Stahl R ≤ 900 N/mm²<br>Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl<br>Steel R ≤ 900 N/mm²<br>Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel<br>Acier R ≤ 900 N/mm²<br>De construction, coulé, au carbure, haute résistence, nitruré et laminé à froid | 60 S 20<br>C45<br>31 Ni Cr 14V<br>90 Mn Cr V8<br>34 Cr 4V<br>38 Mn Si 4V<br>GS-70<br>26 Cr Mo 4 | 1.0728<br>1.0503<br>1.5755<br>1.2842<br>1.7033<br>1.5120<br><br>1.7219 | **16-27** | **26-43** | **30-51** | **30-51** |
| **Acciaio R ≤1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica resistente al calore in fusione legati, per lav. a caldo, rapido**<br>Stahl R ≤ 1100 N/mm²<br>Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl<br>Steel R ≤ 1100 N/mm²<br>Nitrided, heat-threated, heat resisting, heat-working, high speed steel<br>Acier R ≤ 1100 N/mm²<br>Nitruré, haute résistence, résistent à la chaleur et acier rapide | 28 Ni Cr Mo 4<br>50 Cr Mo 4<br>56 - 5 - 2 - 5<br>46 Mn Si 4<br>36 Cr Ni Mo 4V<br>40 Cr MoV 47 | 1.6513<br>1.7228<br>1.3243<br>1.5121<br>1.6511<br>1.7711 | **14-21** | **22-33** | **26-40** | **26-40** |
| **Acciaio R > 1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle**<br>Stahl R > 1100 N/mm²<br>Nitrier-, Vergütungs-, Warmarbeits-, Federstahl<br>Steel R > 1100 N/mm²<br>Nitrided, heat-threated, heat-working, spring steel<br>Acier R > 1100 N/mm²<br>Nitruré, pour traitement thermique, laminé à chaud | X 40 Cr Mo V51<br>55 Ni Cr MoV6V<br>36 Ni Cr 10<br>60 Si Mn 5 | 1.2344<br>1.2713<br>1.5736<br>1.0908 | **10-16** | **16-26** | **19-30** | **19-30** |
| **Acciaio inossidabile, resistente al calore e resistente alla corrosione**<br>Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl<br>Stainless, heat-resisting, corrosion-resisting steel<br>Acier inoxydable résistent à la chaleur et à la corrosion | X 10 Cr 13<br>X 20 Cr Ni 172<br>Aisi 303<br>304<br>316<br>321 | 1.4006<br>1.4057<br>1.4305<br>1.4301<br>1.4401<br>1.4541 | **10-15** | | **19-28** | **19-28** |
| **Ghisa ≤ 250 HB**<br>**fusioni di ghisa grigia, ghisa lamellare**<br>Gußeisen ≤ 250 HB<br>Ausschmelzungen von Grauguß, Lamellengraphit<br>Cast iron ≤ 250 HB<br>Gray pig iron<br>Fonte ≤ 250 HB<br>Fonte grise | GG 15<br>GG 20<br>GG 25<br>GTS 55 | 0.6015<br>0.6020<br>0.6025 | **18-25** | **29-40** | **34-47** | **34-47** |
| **Ghisa dura > 250 HB**<br>**ghisa sferoidale, ghisa speciale**<br>Gußeisen > 250 HB<br>Sphäroguß , Sondergrauguß<br>Cast iron > 250 HB<br>Spheroidal cast iron , Special cast iron<br>Fonte > 250 HB<br>Fonte sphéroidale | GG 40<br>GGG 50<br>GGG 60<br>GTW 40<br>GTW 55 | 0.6040<br>0.7050<br>0.7060 | **14-20** | **22-32** | **26-38** | **26-38** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

**Neutro** Unbeschichtet Uncoated Non Revêtu | **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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>**$V_t$ = m/min** | | | |
|---|---|---|---|---|---|---|
| **Titanio ricotto R ≤ 900 N/mm²**<br>**leghe di titanio ricotte**<br>Ausgeglühtes Titan R ≤ 900 N/mm²<br>ausgeglühte Titanlegierungen<br>Annealed titanium ≤ 900 N/mm²<br>Annealed titanium allays<br>Titane recuit R ≤ 900 N/mm²<br>Alliages de titane recuites | Ti 99.7<br>Ti Al 6V4<br>Ti Al 5 Sn2 | 3.7034<br>3.7164<br>3.7154 | **10-16** | | **18-25** | **18-25** |
| **Leghe di titanio ricotto R ≤ 1200 N/mm²**<br>**leghe di titanio indurite**<br>Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm²<br>Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys<br>Alliages de titane durcies R ≤ 1200 N/mm² | Ti Cu 2<br>Ti Al 5 Sn2<br>Ti Al 6 Zr5 | 3.7124<br>3.711S<br>3.7154LN | **6-10** | | **9-16** | **9-16** |
| **Leghe Ni - Cr resistenti al calore**<br>**R ≤ 900 N/mm²**<br>Wärmebeständige<br>Ni-Cr Legierungen/R ≤ 900 N/mm²<br>Heat-resisting Ni-Cr alloys<br>R ≤ 900 N/mm²<br>Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm² | Incoloy 800<br>Inconel 600<br>Inconel 601<br>Monel 400<br>Hastelloy B | 1.4876<br>2.4816<br>2.4851<br>2.4360<br>2.4800 | **6-10** | | **11-16** | **11-16** |
| **Leghe Ni - Cr altamente resistenti al calore**<br>**R ≤ 1300 N/mm²**<br>Hochwärmebeständige Ni-Cr- Legierungen/<br>R ≤ 1300 N/mm<br>Heat-resisting Ni-Cr alloys<br>R ≤ 1300 N/mm<br>Acier résistent à la chaleur base Ni-Cr<br>R ≤ 1300 N/mm | Waspaloy<br>Inconel 718<br>Nimonic 80A<br>Udimet 630 | 2.6554<br>2.4668<br>2.4881<br>2.4668 | **5-7** | | **8-11** | **8-11** |
| **Rame**<br>Kupfer<br>Copper<br>Cuivre | E - Cu<br>F - Cu | 2.0060<br>2.0080 | **40-90** | **64-145** | **75-170** | **75-170** |
| **Leghe rame-nichel-zinco**<br>Kupfer-, Nickel-, und Zinklegierungen<br>Copper, Nickel and Zinc alloys<br>Alliage cuivre, Nickel et Zinc | Cu Ni 10 Zn 42 Pb<br>Cu Ni 18 Zn 19 Pb | 2.0770<br>2.0790 | **35-70** | **60-110** | **70-130** | **70-130** |
| **Alluminio dolce**<br>Weiches Aluminium<br>Soft aluminium<br>Aluminium doux | Al 99.5<br>Al Mg Si Pb<br>Al Zu Mg Cu 1,5 | 3.0255<br>3.0615<br>3.4365 | **140-200** | **190-280** | **220-320** | **220-320** |
| **Leghe Al-Si ≤ 10%**<br>Al-Si ≤ 10% Legierungen<br>Al-Si ≤ 10% alloys<br>Alliage Aluminium ≤ 10% Si | G - Al Si 5 Mg<br>G - Al Si 6 Cn 4<br>G - Al Mg 3<br>Al - Mg 5 | 3.2341<br>3.2151<br>3.3541.01<br>3.3555 | **60-120** | **90-180** | **110-210** | **110-210** |
| **Leghe Al-Si > 10%**<br>**Leghe di magnesio**<br>Al-Si >10% Legierungen<br>Magnesiumlegierungen<br>Al-Si > 10% alloys<br>Magnesium alloys<br>Alliage aluminium > 10% Si<br>Alliages magnésium | G - Al Si 10 Mg<br>G - Al Si 12<br>Mg Al 6 Zu<br>G - Mg Al 9 Zu 2 | 3.2381<br>3.2581<br>3.5612 | **30-70** | **48-110** | **55-130** | **55-130** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>$V_t$ = m/min | | | |
|---|---|---|---|---|---|---|
| **Acciaio R ≤ 600 N/mm²**<br>**Acc. alta velocità, da costruzione**<br>Stahl R ≤ 600 N/mm²<br>Freischnittstahl<br>Steel R ≤ 600 N/mm²<br>High speed structural steel<br>Acier R ≤ 600 N/mm²<br>Acier de décolletage et de contruction | Fe 37<br>C 10<br>C35<br>9 S Mn Pb 28 | 1.0315<br>1.0301<br>1.0501<br>1.0718 | **29-40** | **45-65** | **55-75** | **55-75** |
| **Acciaio R ≤ 900 N/mm²**<br>**Acc. da costruzione, in fusione poco legati, da cementazione, da bonifica, da nitrurazione per lav. a freddo**<br>Stahl R ≤ 900 N/mm²<br>Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl<br>Steel R ≤ 900 N/mm²<br>Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel<br>Acier R ≤ 900 N/mm²<br>De construction, coulé, au carbure, haute résistence,nitruré et laminé à froid | 60 S 20<br>C45<br>31 Ni Cr 14V<br>90 Mn Cr V8<br>34 Cr 4V<br>38 Mn Si 4V<br>GS-70<br>26 Cr Mo 4 | 1.0728<br>1.0503<br>1.5755<br>1.2842<br>1.7033<br>1.5120<br><br>1.7219 | **20-32** | **30-50** | **35-60** | **35-60** |
| **Acciaio R ≤1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica resistente al calore in fusione legati, per lav. a caldo, rapido**<br>Stahl R ≤ 1100 N/mm²<br>Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl<br>Steel R ≤ 1100 N/mm²<br>Nitrided, heat-threated, heat resisting, heat-working, high speed steel<br>Acier R ≤ 1100 N/mm²<br>Nitruré, haute résistence, résistent à la chaleur et acier rapide | 28 Ni Cr Mo 4<br>50 Cr Mo 4<br>56 - 5 - 2 - 5<br>46 Mn Si 4<br>36 Cr Ni Mo 4V<br>40 Cr MoV 47 | 1.6513<br>1.7228<br>1.3243<br>1.5121<br>1.6511<br>1.7711 | **17-25** | **25-40** | **30-45** | **30-45** |
| **Acciaio R > 1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle**<br>Stahl R > 1100 N/mm²<br>Nitrier-, Vergütungs-, Warmarbeits-, Federstahl<br>Steel R > 1100 N/mm²<br>Nitrided, heat-threated, heat-working, spring steel<br>Acier R > 1100 N/mm²<br>Nitruré, pour traitement thermique, laminé à chaud | X 40 Cr Mo V51<br>55 Ni Cr MoV6V<br>36 Ni Cr 10<br>60 Si Mn 5 | 1.2344<br>1.2713<br>1.5736<br>1.0908 | **14-22** | **20-35** | **25-42** | **25-42** |
| **Acciaio inossidabile, resistente al calore e resistente alla corrosione**<br>Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl<br>Stainless, heat-resisting, corrosion-resisting steel<br>Acier inoxydable résistent à la chaleur et à la corrosion | X 10 Cr 13<br>X 20 Cr Ni 172<br>Aisi 303<br>304<br>316<br>321 | 1.4006<br>1.4057<br>1.4305<br>1.4301<br>1.4401<br>1.4541 | **14-20** | | **25-38** | **25-38** |
| **Ghisa ≤ 250 HB**<br>**fusioni di ghisa grigia, ghisa lamellare**<br>Gußeisen ≤ 250 HB<br>Ausschmelzungen von Grauguß, Lamellengraphit<br>Cast iron ≤ 250 HB<br>Gray pig iron<br>Fonte ≤ 250 HB<br>Fonte grise | GG 15<br>GG 20<br>GG 25<br>GTS 55 | 0.6015<br>0.6020<br>0.6025 | **20-32** | **32-50** | **38-60** | **38-60** |
| **Ghisa dura > 250 HB**<br>**ghisa sferoidale, ghisa speciale**<br>Gußeisen > 250 HB<br>Sphäroguß , Sondergrauguß<br>Cast iron > 250 HB<br>Spheroidal cast iron , Special cast iron<br>Fonte > 250 HB<br>Fonte sphéroidale | GG 40<br>GGG 50<br>GGG 60<br>GTW 40<br>GTW 55 | 0.6040<br>0.7050<br>0.7060 | **18-25** | **28-40** | **34-45** | **34-45** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

**Neutro** Unbeschichtet Uncoated Non Revêtu | **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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>$V_t$ = m/min | | | |
|---|---|---|---|---|---|---|
| **Titanio ricotto R ≤ 900 N/mm²**<br>**leghe di titanio ricotte**<br>Ausgeglühtes Titan R ≤ 900 N/mm²<br>ausgeglühte Titanlegierungen<br>Annealed titanium alloys ≤ 900 N/mm²<br>Annealed titanium alloys<br>Titane recuit R ≤ 900 N/mm²<br>Alliages de titane recuites | Ti 99.7<br>Ti Al 6V4<br>Ti Al 5 Sn2 | 3.7034<br>3.7164<br>3.7154 | **14-21** | | **25-40** | **25-40** |
| **Leghe di titanio ricotto R ≤ 1200 N/mm²**<br>**leghe di titanio indurite**<br>Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm²<br>Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys<br>Alliages de titane durcies R ≤ 1200 N/mm² | Ti Cu 2<br>Ti Al 5 Sn2<br>Ti Al 6 Zr5 | 3.7124<br>3.711S<br>3.7154LN | **8-14** | | **15-26** | **15-26** |
| **Leghe Ni - Cr resistenti al calore**<br>**R ≤ 900 N/mm²**<br>Wärmebeständige<br>Ni-Cr Legierungen/R ≤ 900 N/mm²<br>Heat-resisting Ni-Cr alloys<br>R ≤ 900 N/mm²<br>Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm² | Incoloy 800<br>Inconel 600<br>Inconel 601<br>Monel 400<br>Hastelloy B | 1.4876<br>2.4816<br>2.4851<br>2.4360<br>2.4800 | **8-12** | | **15-22** | **15-22** |
| **Leghe Ni - Cr altamente resistenti al calore**<br>**R ≤ 1300 N/mm²**<br>Hochwärmebeständige Ni-Cr- Legierungen/<br>R ≤ 1300 N/mm<br>Heat-resisting Ni-Cr alloys<br>R ≤ 1300 N/mm<br>Acier résistent à la chaleur base Ni-Cr<br>R ≤ 1300 N/mm | Waspaloy<br>Inconel 718<br>Nimonic 80A<br>Udimet 630 | 2.6554<br>2.4668<br>2.4881<br>2.4668 | **6-10** | | **10-19** | **10-19** |
| **Rame**<br>Kupfer<br>Copper<br>Cuivre | E - Cu<br>F - Cu | 2.0060<br>2.0080 | **48-110** | **76-170** | **90-200** | **90-200** |
| **Leghe rame-nichel-zinco**<br>Kupfer-, Nickel-, und Zinklegierungen<br>Copper, Nickel and Zinc alloys<br>Alliage cuivre, Nickel et Zinc | Cu Ni 10 Zn 42 Pb<br>Cu Ni 18 Zn 19 Pb | 2.0770<br>2.0790 | **42-85** | **65-130** | **80-160** | **80-160** |
| **Alluminio dolce**<br>Weiches Aluminium<br>Soft aluminium<br>Aluminium doux | Al 99.5<br>Al Mg Si Pb<br>Al Zu Mg Cu 1,5 | 3.0255<br>3.0615<br>3.4365 | **165-215** | **230-300** | **260-340** | **260-340** |
| **Leghe Al-Si ≤ 10%**<br>Al-Si ≤ 10% Legierungen<br>Al-Si ≤ 10% alloys<br>Alliage Aluminium ≤ 10% Si | G - Al Si 5 Mg<br>G - Al Si 6 Cn 4<br>G - Al Mg 3<br>Al - Mg 5 | 3.2341<br>3.2151<br>3.3541.01<br>3.3555 | **70-145** | **110-230** | **13-270** | **13-270** |
| **Leghe Al-Si > 10%**<br>**Leghe di magnesio**<br>Al-Si >10% Legierungen<br>Magnesiumlegierungen<br>Al-Si > 10% alloys<br>Magnesium alloys<br>Alliage aluminium > 10% Si<br>Alliages magnésium | G - Al Si 10 Mg<br>G - Al Si 12<br>Mg Al 6 Zu<br>G - Mg Al 9 Zu 2 | 3.2381<br>3.2581<br>3.5612 | **35-85** | **55-130** | **65-160** | **65-160** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**<br>Werkstoffe<br>Materials<br>Matières | **Tipologia** • Typ • Type • Type | | | | | |
|---|---|---|---|---|---|---|
| | **N** | | **HS** | | **W** | |
| | HSS-Co8 | | HSS-Co8 | ASP-60 | HSS-Co8 | ASP-60 |
| **Acciaio R ≤ 600 N/mm²**<br>Stahl R ≤ 600 N/mm²<br>Steel R ≤ 600 N/mm²<br>Acier R ≤ 600 N/mm² | ○ ● ● ● | | | | | |
| **Acciaio R ≤ 900 N/mm²**<br>Stahl R ≤ 900 N/mm²<br>Steel R ≤ 900 N/mm²<br>Acier R ≤ 900 N/mm² | ○ ● ● ● | | | | | |
| **Acciaio R ≤ 1100 N/mm²**<br>Stahl R ≤ 1100 N/mm²<br>Steel R ≤ 1100 N/mm²<br>Acier R ≤ 1100 N/mm² | ○ ● | | ○ ● | ○ ● | | |
| **Acciaio R ≥ 1100 N/mm²**<br>Stahl R ≥ 1100 N/mm²<br>Steel R ≥ 1100 N/mm²<br>Acier R ≥ 1100 N/mm² | | | ○ ● | ○ ● | | |
| **Acc. inossidabile, res. al calore**<br>Warmfester rostfreier Stahl<br>Stainless steel, heat resisting<br>Acier inoxydable | ● | | | | | |
| **Ghisa HB ≤ 250**<br>Gußeisen HB ≤ 250<br>Cast iron HB ≤ 250<br>Fonte HB ≤ 250 | ● ● | | | | | |
| **Ghisa HB > 250**<br>Gußeisen HB > 250<br>Cast iron HB > 250<br>Fonte HB > 250 | | | ○ ● | ○ ● | | |
| **Titanio e sue leghe R ≤ 900 N/mm²**<br>Titan und Legierungen R ≤ 900 N/ mm²<br>Titanium and alloys R ≤ 900 N/mm²<br>Titane et alliage de titane R ≤ 900 N/mm² | ● | | | | | |
| **Titanio e sue leghe R > 900 N/mm²**<br>Titan und Legierungen R > 900 N/ mm²<br>Titanium and alloys R > 900 N/mm²<br>Titane et alliage de titane R > 900 N/mm² | | | ○ ● | ○ ● | | |
| **Leghe Ni-Cr R ≤ 900 N/mm²**<br>Ni-Cr Legierungen ≤ 900 N/ mm²<br>Alloys Ni-Cr<br>Alliages speciaux à base Ni-Cr ≤ 900 N /mm² | ● ● | | | | | |
| **Leghe Ni-Cr R > 900 N/mm²**<br>Ni-Cr Legierungen > 900 N/ mm²<br>Alloys Ni-Cr<br>Alliages spéciaux à base Ni-Cr > 900 N/ mm² | ● ● | | | | | |
| **Rame**<br>Kupfer<br>Copper<br>Cuivre | ● ● | | | | | |
| **Leghe Rame - Nichel - Zinco**<br>Kupfer-, Nickel-, und Zinklegierungen<br>Copper, Nickel and Zinc alloys<br>Alliage Cuivre/Nickel/Zinc | | | ● | ○ ● | ○ ● | |
| **Alluminio dolce**<br>Weiches Aluminium<br>Soft aluminium<br>Aluminium doux | | | | | ○ ● | ○ ● |
| **Leghe Al - Si con Si ≤ 10%**<br>Al-, Si-Legierungen mit Si ≤ 10%<br>Al and Si alloys with Si ≤ 10%<br>Aluminium et alliage d'aluminium ≤ 10% | | | | | ○ ● | ○ ● |
| **Leghe Al - Si con Si > A 10%**<br>Al-, Si-Legierungen mit Si > A 10%<br>Al and Si alloys with > A 10%<br>Aluminium et alliage d'aluminium > 10% Si | ● ● ● | | | | | |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

Neutro
Unbeschichtet
Uncoated
Non Revêtu

TiN

TiCN

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 |
| | | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | | Neutro |
| Neutro, TiCN | | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | | | | |
| Neutro, TiCN | | Neutro, TiCN, TiALN FUTURA® | Neutro, TiCN, TiALN FUTURA® | Neutro, TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | | | |
| Neutro, TiCN | | | Neutro, TiCN, TiALN FUTURA® | | Neutro, TiCN, TiALN FUTURA® | | | | |
| Neutro, TiCN, TiALN FUTURA® | | | | Neutro, TiCN, TiALN FUTURA® | Neutro, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | | Neutro |
| Neutro, TiCN | | Neutro, TiCN, TiALN FUTURA® | Neutro, TiCN, TiALN FUTURA® | Neutro, TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | | | |
| Neutro, TiCN | | | TiCN, TiALN FUTURA® | | TiCN, TiALN FUTURA® | | | | |
| Neutro, TiCN | | Neutro, TiCN | Neutro, TiCN | Neutro, TiCN | Neutro, TiCN | Neutro, TiN, TiCN | Neutro, TiN, TiCN | | Neutro |
| TiCN, TiALN FUTURA® | | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | TiCN, TiALN FUTURA® | | | | |
| TiALN FUTURA® | | TiALN FUTURA® | TiCN, TiALN FUTURA® | | | | | | |
| | | | | TiN, TiCN | TiN, TiCN | | | | |
| Neutro, TiCN | | Neutro, TiCN | Neutro, TiN, TiCN | Neutro, TiCN | TiN, TiCN | | | | |
| Neutro, TiCN | | Neutro, TiCN | Neutro, TiN, TiCN | Neutro, TiCN | TiN, TiCN | | | | Neutro |
| | | | | Neutro, TiN | TiN | | | | Neutro |
| | | | | Neutro, TiN, TiCN, TiALN FUTURA® | TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN | Neutro, TiN, TiCN | | Neutro |
| | | | | Neutro, TiN, TiCN, TiALN FUTURA® | TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | Neutro, TiN, TiCN, TiALN FUTURA® | | Neutro |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>$V_t$ = m/min | | | |
|---|---|---|---|---|---|---|
| **Acciaio R ≤ 600 N/mm²**<br>**Acc. alta velocità da costruzione**<br>Stahl R ≤ 600 N/mm²<br>Freischnittstahl<br>Steel R ≤ 600 N/mm²<br>High speed structural steel<br>Acier R ≤ 600 N/mm²<br>Acier de décolletage et de contruction | Fe 37<br>C 10<br>C35<br>9 S Mn Pb 28 | 1.0315<br>1.0301<br>1.0501<br>1.0718 | **30-40** | **48-65** | **55-80** | **55-80** |
| **Acciaio R ≤ 900 N/mm²**<br>**Acc. da costruzione, in fusione poco legati, da cementazione, da bonifica, da nitrurazione, per lav. a freddo**<br>Stahl R ≤ 900 N/mm²<br>Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl<br>Steel R ≤ 900 N/mm²<br>Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel<br>Acier R ≤ 900 N/mm²<br>De construction, coulé, au carbure, haute résistence,nitruré et laminé à froid | 60 S 20<br>C45<br>31 Ni Cr 14V<br>90 Mn Cr V8<br>34 Cr 4V<br>38 Mn Si 4V<br>GS-70<br>26 Cr Mo 4 | 1.0728<br>1.0503<br>1.5755<br>1.2842<br>1.7033<br>1.5120<br><br>1.7219 | **20-34** | **32-55** | **38-64** | **38-64** |
| **Acciaio R ≤1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica resistente al calore, in fusione legati, per lav. a caldo, rapido**<br>Stahl R ≤ 1100 N/mm²<br>Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl<br>Steel R ≤ 1100 N/mm²<br>Nitrided, heat-threated, heat resisting, heat-working, high speed steel<br>Acier R ≤ 1100 N/mm²<br>Nitruré, haute résistence, résistent à la chaleur et acier rapide | 28 Ni Cr Mo 4<br>50 Cr Mo 4<br>56 - 5 - 2 - 5<br>46 Mn Si 4<br>36 Cr Ni Mo 4V<br>40 Cr MoV 47 | 1.6513<br>1.7228<br>1.3243<br>1.5121<br>1.6511<br>1.7711 | **17-27** | **27-43** | **32-51** | **32-51** |
| **Acciaio R > 1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle**<br>Stahl R > 1100 N/mm²<br>Nitrier-, Vergütungs-, Warmarbeits-, Federstahl<br>Steel R > 1100 N/mm²<br>Nitrided, heat-threated, heat-working, spring steel<br>Acier R > 1100 N/mm²<br>Nitruré, pour traitement thermique, laminé à chaud | X 40 Cr Mo V51<br>55 Ni Cr MoV6V<br>36 Ni Cr 10<br>60 Si Mn 5 | 1.2344<br>1.2713<br>1.5736<br>1.0908 | **12-20** | **20-32** | **22-38** | **22-38** |
| **Acciaio inossidabile, resistente al calore e resistente alla corrosione**<br>Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl<br>Stainless, heat-resisting, corrosion-resisting steel<br>Acier inoxydable résistent à la chaleur et à la corrosion | X 10 Cr 13<br>X 20 Cr Ni 172<br>Aisi 303<br>304<br>316<br>321 | 1.4006<br>1.4057<br>1.4305<br>1.4301<br>1.4401<br>1.4541 | **13-20** | | **25-85** | **25-85** |
| **Ghisa ≤ 250 HB**<br>**fusioni di ghisa grigia, ghisa lamellare**<br>Gußeisen ≤ 250 HB<br>Ausschmelzungen von Grauguß, Lamellengraphit<br>Cast iron ≤ 250 HB<br>Gray pig iron<br>Fonte ≤ 250 HB<br>Fonte grise | GG 15<br>GG 20<br>GG 25<br>GTS 55 | 0.6015<br>0.6020<br>0.6025 | **20-30** | **32-50** | **40-60** | **40-60** |
| **Ghisa dura > 250 HB**<br>**ghisa sferoidale, ghisa speciale**<br>Gußeisen > 250 HB<br>Ghisa Sphäroguß , Sondergrauguß<br>Cast iron > 250 HB<br>Spheroidal cast iron , Special cast iron<br>Fonte > 250 HB<br>Fonte sphéroidale | GG 40<br>GGG 50<br>GGG 60<br>GTW 40<br>GTW 55 | 0.6040<br>0.7050<br>0.7060 | **17-23** | **28-38** | **32-45** | **32-45** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

**Neutro** Unbeschichtet Uncoated Non Revêtu | **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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>**$V_t$ = m/min** | | | |
|---|---|---|---|---|---|---|
| **Titanio ricotto R ≤ 900 N/mm²**<br>**leghe di titanio ricotte**<br>Ausgeglühtes Titan R ≤ 900 N/mm²<br>ausgeglühte Titanlegierungen<br>Annealed titanium alloys ≤ 900 N/mm²<br>Annealed titanium alloys<br>Titane recuit R ≤ 900 N/mm²<br>Alliages de titane recuites | Ti 99.7<br>Ti Al 6V4<br>Ti Al 5 Sn2 | 3.7034<br>3.7164<br>3.7154 | **13-19** | | **20-30** | **20-30** |
| **Leghe di titanio ricotto R ≤ 1200 N/mm²**<br>**leghe di titanio indurite**<br>Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm²<br>Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys<br>Alliages de titane durcies R ≤ 1200 N/mm² | Ti Cu 2<br>Ti Al 5 Sn2<br>Ti Al 6 Zr5 | 3.7124<br>3.711S<br>3.7154LN | **8-14** | | **12-22** | **12-22** |
| **Leghe Ni - Cr resistenti al calore**<br>**R ≤ 900 N/mm²**<br>Wärmebeständige<br>Ni-Cr Legierungen/R ≤ 900 N/mm²<br>Heat-resisting Ni-Cr alloys<br>R ≤ 900 N/mm²<br>Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm² | Incoloy 800<br>Inconel 600<br>Inconel 601<br>Monel 400<br>Hastelloy B | 1.4876<br>2.4816<br>2.4851<br>2.4360<br>2.4800 | **8-12** | | **15-22** | **15-22** |
| **Leghe Ni - Cr altamente resistenti al calore**<br>**R ≤ 1300 N/mm²**<br>Hochwärmebeständige Ni-Cr- Legierungen/<br>R ≤ 1300 N/mm²<br>Heat-resisting Ni-Cr alloys<br>R ≤ 1300 N/mm²<br>Acier résistent à la chaleur base Ni-Cr<br>R ≤ 1300 N/mm² | Waspaloy<br>Inconel 718<br>Nimonic 80A<br>Udimet 630 | 2.6554<br>2.4668<br>2.4881<br>2.4668 | **5-9** | | **8-15** | **8-15** |
| **Rame**<br>Kupfer<br>Copper<br>Cuivre | E - Cu<br>F - Cu | 2.0060<br>2.0080 | **60-120** | **90-170** | **110-200** | **110-200** |
| **Leghe rame-nichel-zinco**<br>Kupfer-, Nickel-, und Zinklegierungen<br>Copper, Nickel and Zinc alloys<br>Alliage cuivre, Nickel et Zinc | Cu Ni 10 Zn 42 Pb<br>Cu Ni 18 Zn 19 Pb | 2.0770<br>2.0790 | **50-90** | **80-140** | **90-160** | **90-160** |
| **Alluminio dolce**<br>Weiches Aluminium<br>Soft aluminium<br>Aluminium doux | Al 99.5<br>Al Mg Si Pb<br>Al Zu Mg Cu 1,5 | 3.0255<br>3.0615<br>3.4365 | **160-240** | **220-330** | **250-380** | **250-380** |
| **Leghe Al-Si ≤ 10%**<br>Al-Si ≤ 10% Legierungen<br>Al-Si ≤ 10% alloys<br>Alliage Aluminium ≤ 10% Si | G - Al Si 5 Mg<br>G - Al Si 6 Cn 4<br>G - Al Mg 3<br>Al - Mg 5 | 3.2341<br>3.2151<br>3.3541.01<br>3.3555 | **80-140** | **120-210** | **140-250** | **140-250** |
| **Leghe Al-Si > 10%**<br>**Leghe di magnesio**<br>Al-Si >10% Legierungen<br>Magnesiumlegierungen<br>Al-Si > 10% alloys<br>Magnesium alloys<br>Alliage aluminium > 10% Si<br>Alliages magnésium | G - Al Si 10 Mg<br>G - Al Si 12<br>Mg Al 6 Zu<br>G - Mg Al 9 Zu 2 | 3.2381<br>3.2581<br>3.5612 | **50-90** | **80-150** | **100-170** | **100-170** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>$V_t$ = m/min | | | |
|---|---|---|---|---|---|---|
| **Acciaio R ≤ 600 N/mm²**<br>**Acc. alta velocità da costruzione**<br>Stahl R ≤ 600 N/mm²<br>Freischnittstahl<br>Steel R ≤ 600 N/mm²<br>High speed structural steel<br>Acier R ≤ 600 N/mm²<br>Acier de décolletage et de contruction | Fe 37<br>C 10<br>C35<br>9 S Mn Pb 28 | 1.0315<br>1.0301<br>1.0501<br>1.0718 | **35-46** | **55-74** | **65-85** | **65-85** |
| **Acciaio R ≤ 900 N/mm²**<br>**Acc. da costruzione, in fusione poco legati, da cementazione, da bonifica, da nitrurazione, per lav. a freddo**<br>Stahl R ≤ 900 N/mm²<br>Bau-, niedriglegierter Guß-, Einsatz-, Vergütungs-, Nitrier-, Kaltarbeitsstahl<br>Steel R ≤ 900 N/mm²<br>Structural weakly alloyed cast casehardening, heat-treated, nitrided cold-working steel<br>Acier R ≤ 900 N/mm²<br>De construction, coulé, au carbure, haute résistence,nitruré et laminé à froid | 60 S 20<br>C45<br>31 Ni Cr 14V<br>90 Mn Cr V8<br>34 Cr 4V<br>38 Mn Si 4V<br>GS-70<br>26 Cr Mo 4 | 1.0728<br>1.0503<br>1.5755<br>1.2842<br>1.7033<br>1.5120<br><br>1.7219 | **24-40** | **35-65** | **45-75** | **45-75** |
| **Acciaio R ≤1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica, resistente al calore in fusione legati, per lav. a caldo, rapido**<br>Stahl R ≤ 1100 N/mm²<br>Nitrier-, Vergütungs-, legierter Guß-, Warmfester-, Warmarbeits-, Schnellarbeitsstahl<br>Steel R ≤ 1100 N/mm²<br>Nitrided, heat-threated, heat resisting, heat-working, high speed steel<br>Acier R ≤ 1100 N/mm²<br>Nitruré, haute résistence, résistent à la chaleur et acier rapide | 28 Ni Cr Mo 4<br>50 Cr Mo 4<br>56 - 5 - 2 - 5<br>46 Mn Si 4<br>36 Cr Ni Mo 4V<br>40 Cr MoV 47 | 1.6513<br>1.7228<br>1.3243<br>1.5121<br>1.6511<br>1.7711 | **20-32** | **32-50** | **35-60** | **35-60** |
| **Acciaio R > 1100 N/mm²**<br>**Acc. da nitrurazione, da bonifica, per lav. a caldo, per molle**<br>Stahl R > 1100 N/mm²<br>Nitrier-, Vergütungs-, Warmarbeits-, Federstahl<br>Steel R > 1100 N/mm²<br>Nitrided, heat-threated, heat-working, spring steel<br>Acier R > 1100 N/mm²<br>Nitruré, pour traitement thermique, laminé à chaud | X 40 Cr Mo V51<br>55 Ni Cr MoV6V<br>36 Ni Cr 10<br>60 Si Mn 5 | 1.2344<br>1.2713<br>1.5736<br>1.0908 | **18-27** | **28-43** | **35-50** | **35-50** |
| **Acciaio inossidabile, resistente al calore e resistente alla corrosione**<br>Rostfreier, wärmebeständiger und korrosionsbeständiger Stahl<br>Stainless, heat-resisting, corrosion-resisting steel<br>Acier inoxydable résistent à la chaleur et à la corrosion | X 10 Cr 13<br>X 20 Cr Ni 172<br>Aisi 303<br>304<br>316<br>321 | 1.4006<br>1.4057<br>1.4305<br>1.4301<br>1.4401<br>1.4541 | **16-26** | | **30-50** | **30-50** |
| **Ghisa ≤ 250 HB**<br>**fusioni di ghisa grigia, ghisa lamellare**<br>Gußeisen ≤ 250 HB<br>Ausschmelzungen von Grauguß mit Lamellengraphit<br>Cast iron ≤ 250 HB<br>Gray pig iron<br>Fonte ≤ 250 HB<br>Fonte grise | GG 15<br>GG 20<br>GG 25<br>GTS 55 | 0.6015<br>0.6020<br>0.6025 | **25-40** | **40-65** | **45-75** | **45-75** |
| **Ghisa dura > 250 HB**<br>**ghisa sferoidale, ghisa speciale**<br>Gußeisen > 250 HB<br>Ghisa Sphäroguß , Sondergrauguß<br>Cast iron > 250 HB<br>Spheroidal cast iron , Special cast iron<br>Fonte > 250 HB<br>Fonte sphéroidale | GG 40<br>GGG 50<br>GGG 60<br>GTW 40<br>GTW 55 | 0.6040<br>0.7050<br>0.7060 | **22-32** | **35-50** | **40-60** | **40-60** |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

**Neutro** Unbeschichtet Uncoated Non Revêtu | **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**<br>Werkstoffe<br>Materials<br>Matières | **Esempi**<br>Beispiele<br>Examples<br>Exemple | | **Velocità di taglio** • Schnittgeschwindigkeit<br>Cutting speed • Vitesse de coupe<br>$V_t$ = m/min | | | |
|---|---|---|---|---|---|---|
| **Titanio ricotto R ≤ 900 N/mm²**<br>**leghe di titanio ricotte**<br>Ausgeglühtes Titan R ≤ 900 N/mm²<br>ausgeglühte Titanlegierungen<br>Annealed titanium alloys ≤ 900 N/mm²<br>Annealed titanium alloys<br>Titane recuit R ≤ 900 N/mm²<br>Alliages de titane recuites | Ti 99.7<br>Ti Al 6V4<br>Ti Al 5 Sn2 | 3.7034<br>3.7164<br>3.7154 | **16-25** | | **30-48** | **30-48** |
| **Leghe di titanio ricotto R ≤ 1200 N/mm²**<br>**leghe di titanio indurite**<br>Ausgeglühte und schleiffeste Titanlegierungen R ≤ 1200 N/mm²<br>Annealed titanium alloys R ≤ 1200 N/mm² and hardened Titanium alloys<br>Alliages de titane durcies R ≤ 1200 N/mm² | Ti Cu 2<br>Ti Al 5 Sn2<br>Ti Al 6 Zr5 | 3.7124<br>3.711S<br>3.7154LN | **12-20** | | **22-38** | **22-38** |
| **Leghe Ni - Cr resistenti al calore**<br>**R ≤ 900 N/mm²**<br>Wärmebeständige<br>Ni-Cr Legierungen/R ≤ 900 N/mm²<br>Heat-resisting Ni-Cr alloys<br>R ≤ 900 N/mm²<br>Acier résistent à la chaleur base Ni-Cr ≤ 900 N/mm² | Incoloy 800<br>Inconel 600<br>Inconel 601<br>Monel 400<br>Hastelloy B | 1.4876<br>2.4816<br>2.4851<br>2.4360<br>2.4800 | **10-16** | | **19-30** | **19-30** |
| **Leghe Ni - Cr altamente resistenti al calore**<br>**R ≤ 1300 N/mm²**<br>Hochwärmebeständige Ni-Cr- Legierungen/<br>R ≤ 1300 N/mm²<br>Heat-resisting Ni-Cr alloys<br>R ≤ 1300 N/mm²<br>Acier résistent à la chaleur base Ni-Cr<br>R ≤ 1300 N/mm² | Waspaloy<br>Inconel 718<br>Nimonic 80A<br>Udimet 630 | 2.6554<br>2.4668<br>2.4881<br>2.4668 | **6-12** | | **10-22** | **10-22** |
| **Rame**<br>Kupfer<br>Copper<br>Cuivre | E - Cu<br>F - Cu | 2.0060<br>2.0080 | **70-145** | **110-230** | **130-270** | **130-270** |
| **Leghe rame-nichel-zinco**<br>Kupfer-, Nickel-, und Zinklegierungen<br>Copper, Nickel and Zinc alloys<br>Alliage cuivre, Nickel et Zinc | Cu Ni 10 Zn 42 Pb<br>Cu Ni 18 Zn 19 Pb | 2.0770<br>2.0790 | **60-105** | **95-170** | **110-190** | **110-190** |
| **Alluminio dolce**<br>Weiches Aluminium<br>Soft aluminium<br>Aluminium doux | Al 99.5<br>Al Mg Si Pb<br>Al Zu Mg Cu 1,5 | 3.0255<br>3.0615<br>3.4365 | **190-280** | **260-390** | **300-440** | **300-440** |
| **Leghe Al-Si ≤ 10%**<br>Al-Si ≤ 10% Legierungen<br>Al-Si ≤ 10% alloys<br>Alliage Aluminium ≤ 10% Si | G - Al Si 5 Mg<br>G - Al Si 6 Cn 4<br>G - Al Mg 3<br>Al - Mg 5 | 3.2341<br>3.2151<br>3.3541.01<br>3.3555 | **95-160** | **150-250** | **180-300** | **180-300** |
| **Leghe Al-Si > 10%**<br>**Leghe di magnesio**<br>Al-Si >10% Legierungen<br>Magnesiumlegierungen<br>Al-Si > 10% alloys<br>Magnesium alloys<br>Alliage aluminium > 10% Si<br>Alliages magnésium | G - Al Si 10 Mg<br>G - Al Si 12<br>Mg Al 6 Zu<br>G - Mg Al 9 Zu 2 | 3.2381<br>3.2581<br>3.5612 | **60-105** | **95-160** | **110-190** | **110-190** |

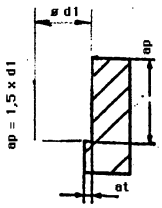
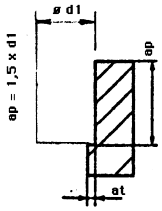
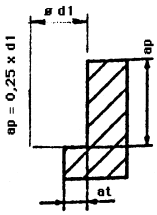
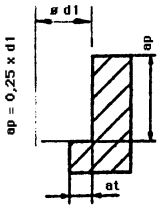
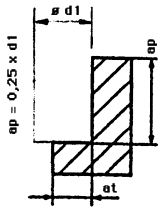
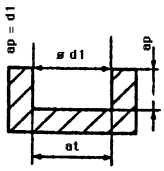
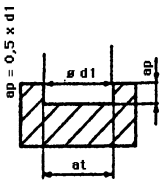


ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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

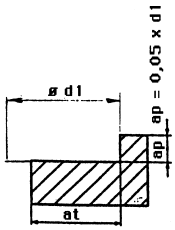
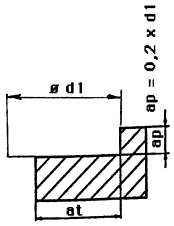
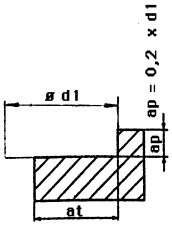
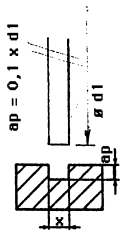
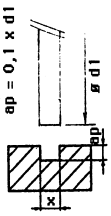
"F" facteur de correction (à multiplier par $f_z$)

- Acier R> 1100 N/mm², titane, alliages spécial F=0,7
- Aluminium, alliages léger F=1,3
- Perçage F=0,4



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

| | **Tipo** • Typ • Type • Type<br>**N/HS**<br>**Finitura** • Fertigbearbeitung<br>Finishing • Finition | **Tipo** • Typ • Type • Type<br>**NR/HRS**<br>**Sgrossatura** • Schruppen<br>Roughing • Ebauche | **Tipo** • Typ • Type • Type<br>**W**<br>**Per leghe leggere** • Für Leichlegierungen<br>For light alloys • Pour alliage léger | **Frese a disco** • Scheibenfräser<br>Side cutter • Fraises 3 tailles<br>**Tipo** • Typ<br>Type • Type<br>**N** | **Tipo** • Typ<br>Type • Type<br>**W** |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| Ø mm | $a_t = 0.75 \times d_1$ | $a_t = 0.75 \times d_1$ | $a_t = 0.75 \times d_1$ | 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 |



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru

# 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.



ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru



# 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 |




ilix@ilix-tools.ru
www.ilix-tools.ru

для заказа - ilix@ilix-tools.ru


| 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 | | |




ilix@ilix-tools.ru
www.ilix-tools.ru