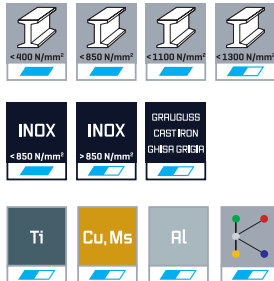


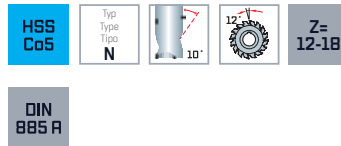
**D Scheibenfräser**  
kreuzverzahnt, DIN 885 A

**Einsatzbereich:**  
Empfohlen zum Fräsen von Bau-, Einsatz- und Vergütungsstählen bis 1.100 N/mm<sup>2</sup> Festigkeit sowie für kurzspanende NE-Metalle.



**E Side milling cutters**  
staggered teeth, DIN 885 A

**Range of application:**  
Recommended for milling in construction steels, tempered steels and cementation steels up to a tensile strength of 1.100 N/mm<sup>2</sup> as well as in short-chipping non-ferrous metals.



**I Frese a disco a tre**  
tagli denti alternati, DIN 885 A

**Impiego:**  
Fresatura generale di incasso: adatte per tutti i tipi di acciaio con R = 1.100 N/mm<sup>2</sup>, acciai da costruzione, acciai bonificati, acciai da cementazione, materiali non ferrosi a truciolo corto.

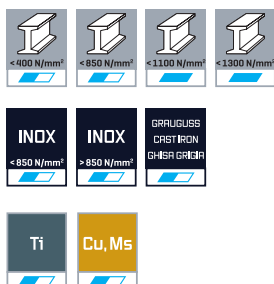


d1 <sub>js16</sub> mm	b <sub>k11</sub> mm	a mm	d2 <sub>H7</sub> mm	Z	Code 3174 Art.-Nr.
50	4	11,5	16	12	0 3174004901 00
50	5	11,5	16	12	0 3174005001 00
50	6	11,5	16	12	0 3174005101 00
50	8	11,5	16	12	0 3174005201 00
63	4	14,5	22	12	0 3174005901 00
63	6	14,5	22	12	0 3174006101 00
63	8	14,5	22	12	0 3174006201 00
63	10	14,5	22	12	0 3174006301 00
63	12	14,5	22	12	0 3174006401 00
80	4	19,5	27	14	0 3174007901 00
80	5	19,5	27	14	0 3174008001 00
80	6	19,5	27	14	0 3174008101 00
80	8	19,5	27	14	0 3174008201 00

d1 <sub>js16</sub> mm	b <sub>k11</sub> mm	a mm	d2 <sub>H7</sub> mm	Z	Code 3174 Art.-Nr.
80	10	19,5	27	14	0 3174008301 00
80	12	19,5	27	14	0 3174008401 00
100	5	26	32	14	0 3174010001 00
100	6	26	32	14	0 3174010101 00
100	8	26	32	14	0 3174010201 00
100	10	26	32	14	0 3174010301 00
125	6	38,5	32	16	0 3174011901 00
125	8	38,5	32	16	0 3174012001 00
125	10	38,5	32	16	0 3174012101 00
125	12	38,5	32	16	0 3174012201 00
160	8	51	40	18	0 3174016001 00
160	12	51	40	18	0 3174016201 00

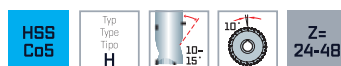
**D Metallkreisfräser**  
kreuzverzahnt

**Einsatzbereich:**  
Empfohlen zum Fräsen von harten, kurzspanenden Werkstoffen wie Grauguss, Messing, Bronze und legierten Werkzeugstählen.



**E Metal slitting cutters**  
staggered teeth

**Range of application:**  
Recommended for milling in hard, short-chipping materials such as grey cast iron, brass, bronze and alloyed tool steels.



**I Seghe circolari a denti alternati**

**Impiego:**  
Fresatura generale di acciai duri a truciolo corto, ghisa grigia, ottone, bronzo, acciai legati da utensili.



d1 <sub>js16</sub> mm	b <sub>k9</sub> mm	d2 <sub>H7</sub> mm	Z	Code 3224 Art.-Nr.
50	1,6	16	24	0 3224005001 00
50	2,0	16	24	0 3224005101 00
50	2,5	16	24	0 3224005201 00
63	1,6	22	28	0 3224006001 00
63	2,0	22	28	0 3224006101 00
63	2,5	22	28	0 3224006201 00
63	3,0	22	28	0 3224006301 00
80	1,6	27	32	0 3224008001 00
80	2,0	27	32	0 3224008101 00
80	2,5	27	32	0 3224008201 00
80	3,0	27	32	0 3224008301 00
80	4,0	27	32	0 3224008501 00
100	1,6	32	36	0 3224010001 00
100	2,0	32	36	0 3224010101 00

d1 <sub>js16</sub> mm	b <sub>k9</sub> mm	d2 <sub>H7</sub> mm	Z	Code 3224 Art.-Nr.
100	2,5	32	36	0 3224010201 00
100	3,0	32	36	0 3224010301 00
100	4,0	32	36	0 3224010501 00
100	5,0	32	36	0 3224010601 00
125	2,0	32	40	0 3224012001 00
125	2,5	32	40	0 3224012101 00
125	3,0	32	40	0 3224012201 00
125	4,0	32	40	0 3224012401 00
125	5,0	32	40	0 3224012501 00
160	2,0	40	48	0 3224016001 00
160	3,0	40	48	0 3224016201 00
160	4,0	40	48	0 3224016401 00
160	5,0	40	48	0 3224016501 00

**D Winkelstirnfräser**  
DIN 842 A

**Einsatzbereich:**

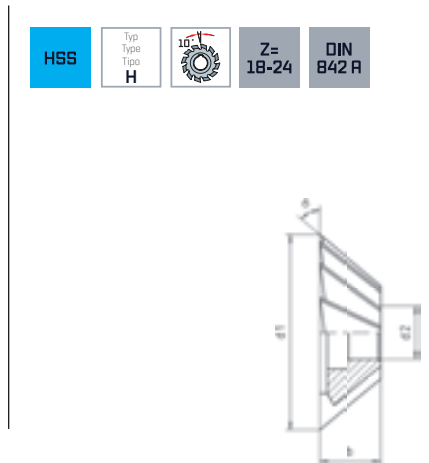
Empfohlen zum Fräsen von geraden Nuten und Führungen in Bau-, Einsatz- und Vergütungsstählen bis 1.100 N/mm<sup>2</sup> Festigkeit.



**E Single angle cutters**  
DIN 842 A

**Range of application:**

Recommended for milling straight slots and guidances in construction-, cementation- and tempered steels up to a tensile strength of 1.100 N/mm<sup>2</sup>.



**I Frese frontali ad angolo**  
DIN 842 A

**Impiego:**

Fresatura generale di scanalature diritte e di guide in acciai da costruzione, acciai da cementazione, acciai bonificati, con R fino a 1.100 N/mm<sup>2</sup>.



$\sigma$	d1 <sub>js16</sub> mm	b <sub>js14</sub> mm	d2 <sub>H7</sub> mm	Z	Code 3293 Art.-Nr.
45°	63	18	16	18	0 3293006401 00
45°	80	22	22	20	0 3293008401 00
45°	100	28	27	22	0 3293010401 00
50°	50	16	13	16	0 3293005501 00
50°	63	20	16	18	0 3293006501 00
50°	80	25	22	20	0 3293008501 00
50°	100	32	27	22	0 3293010501 00

$\sigma$	d1 <sub>js16</sub> mm	b <sub>js14</sub> mm	d2 <sub>H7</sub> mm	Z	Code 3293 Art.-Nr.
60°	50	16	13	16	0 3293005601 00
60°	63	20	16	18	0 3293006601 00
60°	80	25	22	20	0 3293008601 00
60°	100	32	27	22	0 3293010601 00
60°	125	40	32	24	0 3293012601 00



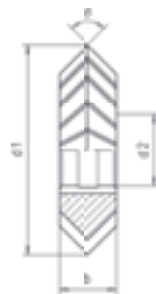
**D** **Prismenfräser**  
DIN 847

**Einsatzbereich:**  
Empfohlen zum Fräsen von prismatischen Nuten und Führungen in Bau-, Einsatz- und Vergütungsstählen bis 1.100 N/mm<sup>2</sup> Festigkeit.



**E** **Double angle cutters**  
DIN 847

**Range of application:**  
Recommended for milling of prismatical slots and guidances in construction-, cementation- and tempered steels up to a tensile strength of 1.100 N/mm<sup>2</sup>.



**I** **Frese prismatiche**  
DIN 847

**Impiego:**  
Fresatura generale di scanalature prismatiche e di guide in acciai da costruzione, acciai da cementazione, acciai bonificati, con R fino a 1.100 N/mm<sup>2</sup>.



$\sigma$	d1 <sub>js16</sub> mm	b <sub>js16</sub> mm	d2 <sub>H7</sub> mm	Z	Code 3303 Art.-Nr.
45°	50	8	16	20	0 3303005401 00
45°	63	10	22	22	0 3303006401 00
45°	80	12	27	24	0 3303008401 00
45°	100	18	32	26	0 3303010401 00
60°	50	10	16	18	0 3303005601 00
60°	63	14	22	20	0 3303006601 00
60°	80	18	27	22	0 3303008601 00
60°	100	25	32	24	0 3303010601 00

$\sigma$	d1 <sub>js16</sub> mm	b <sub>js16</sub> mm	d2 <sub>H7</sub> mm	Z	Code 3303 Art.-Nr.
90°	50	14	16	16	0 3303005901 00
90°	63	20	22	18	0 3303006901 00
90°	80	22	27	20	0 3303008901 00
90°	100	32	32	22	0 3303010901 00

**D** **Halbrund-Profilfräser**  
hinterdreht, DIN 856

**Einsatzbereich:**  
Halbrundfräser nach außen gewölbt (konvex). Empfohlen zum Fräsen von halbrunden Nuten in Bau-, Einsatz- und Vergütungsstahl bis 1.100 N/mm<sup>2</sup> Festigkeit.



**E** **Half circle form cutters**  
relieved, DIN 856

**Range of application:**  
Convex cutters, relieved. Recommended for milling semicircular slots in construction-, cementation- and tempered steels up to a tensile strength of 1.100 N/mm<sup>2</sup>.



**I** **Frese semicircolari**  
convesse, DIN 856

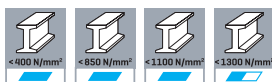
**Impiego:**  
Fresatura generale di scanalature semicircolari convesse in acciai da costruzione, acciai da cementazione, acciai bonificati con R fino a 1.100 N/mm<sup>2</sup>.



$r_{H11}$ mm	$d1_{js16}$ mm	b mm	$d2_{H7}$ mm	Z	Code 3313 Art.-Nr.
1	50	2	16	14	0 3313001001 00
1,6	50	3,2	16	14	0 3313001601 00
2	50	4	16	14	0 3313002001 00
2,5	63	5	22	12	0 3313002501 00
3	63	6	22	12	0 3313003001 00
4	63	8	22	12	0 3313004001 00
5	63	10	22	12	0 3313005001 00
6	80	12	27	12	0 3313006001 00
8	80	16	27	12	0 3313008001 00

**D Halbrund-Profilfräser**  
hinterdreht, DIN 855

**Einsatzbereich:**  
Halbrundfräser nach innen gewölbt (konkav).  
Empfohlen zum Fräsen von halbrunden Profilen  
in Bau-, Einsatz- und Vergütungsstahl bis  
1.100 N/mm<sup>2</sup> Festigkeit.



**E Half circle form cutters**  
relieved, DIN 855

**Range of application:**  
Concave cutters, relieved. Recommended for  
milling semicircular profiles in construction-,  
cementation- and tempered steels up to a tensile  
strength of 1.100 N/mm<sup>2</sup>.



**I Frese semicirculari**  
concave, DIN 855

**Impiego:**  
Fresatura generale di scanalature semicirculari  
concave in acciai da costruzione, acciai da cementa-  
zione, acciai bonificati con R fino a 1.100 N/mm<sup>2</sup>.



$r_{H11}$ mm	$d1_{js16}$ mm	b mm	$d2_{H7}$ mm	Z	Code 3323 Art.-Nr.
2	50	9	16	14	0 3323002001 00
2,5	63	10	22	12	0 3323002501 00
3	63	12	22	12	0 3323003001 00
4	63	16	22	12	0 3323004001 00
5	63	20	22	12	0 3323005001 00
6	80	24	27	12	0 3323006001 00
8	80	32	27	12	0 3323008001 00
10	100	36	32	12	0 3323010001 00
12	100	40	32	12	0 3323012001 00

