



**FRESE** | Fräser | End Mills | Fraises | Fresas

**HSS-CO** | **HSS-CO-PM**





A

p.001

FRESE A  
**CANDELA** A  
2 TAGLIENTI

- SCHAFTFRÄSER MIT 2 SCHNEIDEN
- END MILLS WITH 2 FLUTES
- FRAISES AVEC 2 DENTS
- FRESAS DE 2 LABIOS



B

p.009

FRESE A  
**CANDELA** A  
3 TAGLIENTI

- SCHAFTFRÄSER MIT 3 SCHNEIDEN
- END MILLS WITH 3 FLUTES
- FRAISES AVEC 3 DENTS
- FRESAS DE 3 LABIOS



C

p.037

FRESE A  
**CANDELA** A  
4<sup>E</sup> TAGLIENTI  
*Finitura*

- SCHLICHT SCHAFTFRÄSER MIT 4 UND MEHR SCHNEIDEN
- FINISHING END MILLS WITH 4 OR MORE FLUTES
- FRAISES AVEC 4 OU PLUS DE DENTS POUR FINITION
- FRESAS DE 4 O MAS LABIOS, DE ACABADO



D

p.061

FRESE A  
**CANDELA** A  
4<sup>E</sup> TAGLIENTI  
*semi Finitura*

- HALBFEINSCHLICHTFRÄSER MIT 4 UND MEHR SCHNEIDEN
- SEMIFINISHING END MILLS WITH 4 OR MORE FLUTES
- FRAISES AVEC 4 OU PLUS DE DENTS POUR SEMI-FINITION
- FRESAS DE 4 O MAS LABIOS, DE SEMIACABADO



E

p.075

FRESE A  
**CANDELA** A  
4<sup>E</sup> TAGLIENTI  
*Sgrossatura*

- SCHRUPP-SCHAFTFRÄSER MIT 4 UND MEHR SCHNEIDEN
- ROUGHING END MILLS WITH 4 OR MORE FLUTES
- FRAISES DEUX TAILLES D'ÉBAUCHE AVEC 4 OU PLUS DE DENTS
- FRESAS DE 4 O MAS LABIOS, DE DESBASTE



F

p.095

FRESE A  
**CANDELA**  
CON ATTACCO  
**CONICO**

- SCHAFTFRÄSER MIT KEGELSCHAFT
- END MILLS WITH TAPER SHANK
- FRAISES DEUX TAILLES AVEC QUEUE CONIQUE
- FRESAS MANGO CONICO

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

## FRESE A MANICOTTO

p.109



- GESENKFRÄSER
- TAPER CUTTERS
- FRAISES CONIQUES
- FRESAS CONICAS

## FRESE CONICHE

p.125



- RADIUSCHAFTFRÄSER
- BALL NOSE CUTTERS
- FRAISES À BOUT HÉMISFÉRIQUE
- FRESAS ESFÉRICAS

## FRESE SEMISFERICHE

p.149



- NUTENFRÄSER
- SLOT CUTTERS
- FRAISES POUR RAINURES
- FRESAS PARA RANURAS

## FRESE PER SCANALATURE

p.173



- SCHEIBENFRÄSER
- SIDE AND FACE MILLING CUTTERS
- FRAISES 3 TAILLES
- FRESAS DE DISCO

## FRESE A DISCO

p.193

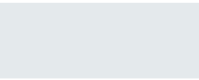













































































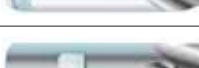














































- ALLGEMEINE INFORMATIONEN
- GENERAL INFORMATION
- INFORMATIONS GÉNÉRALES
- INFORMACIÓN GENERAL

## INFORMAZIONI GENERALI











































































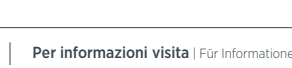




p.215
































CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>3200</b>			1-40	30°		2	HSS-Co8	-
<b>3200C</b>			1-40	30°		2	HSS-Co8	 TICN
<b>3200F</b>			1-40	30°		2	HSS-Co8	 TIALN FUTURA
<b>3201</b>			1-50	30°		2	HSS-Co8	-
<b>3201C</b>			1-50	30°		2	HSS-Co8	 TICN
<b>3202</b>			1-45	30°		2	HSS-Co8	-
<b>3202C</b>			1-45	30°		2	HSS-Co8	-
<b>3220</b>			2-25	30°		2	ASP-30	-
<b>3220C</b>			2-25	30°		2	ASP-30	 TICN
<b>3204</b>			3-36	30°		2	HSS-Co8	-
<b>3204C</b>			3-36	30°		2	HSS-Co8	 TICN
<b>3206</b>			3,5-28	30°		2	HSS-Co8	-
<b>3206C</b>			3-40	30°		2	HSS-Co8	 TICN
<b>3224</b>			3-25	30°		2	ASP-30	-
<b>3224C</b>			3-25	30°		2	ASP-30	 TICN
<b>3308</b>			1,8-36	30°		3	HSS-Co8	-
<b>3308C</b>			1,8-36	30°		3	HSS-Co8	 TICN
<b>3310</b>			3,5-28	30°		3	HSS-Co8	-
<b>3300</b>			1,8-34	30°		3	HSS-Co8	-
<b>3300C</b>			1,8-35	30°		3	HSS-Co8	 TICN
<b>3300F</b>			1,8-35	30°		3	HSS-Co8	 TIALN FUTURA
<b>3302</b>			1,8-36	30°		3	HSS-Co8	-
<b>3320</b>			2-25	30°		3	ASP-30	-
<b>3320C</b>			2-25	30°		3	ASP-30	 TICN
<b>3304</b>			2,8-21,7	30°		3	HSS-Co8	-

Attacco	Taglio al centro											Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	2-3	7
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	○	-	2-3	7
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	2-3	7
 DIN 1835/A	✓	■	-	-	-	●	○	○	○	○	-	2-3	7
 DIN 1835/A	✓	■	-	-	-	●	●	●	○	●	-	2-3	7
 DIN 1835/A	✓	■	-	-	-	●	○	○	○	○	-	2-3	7
 DIN 1835/A	✓	■	-	-	-	●	●	●	○	●	-	2-3	7
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	4	7
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	4	7
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	5	7
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	5	7
 DIN 1835/A	✓	■	-	-	-	●	○	○	○	○	-	5	7
 DIN 1835/A	✓	■	-	-	-	●	●	●	○	●	-	5	7
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	6	7
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	○	-	6	7
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	10-11	31
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	10-11	31
 DIN 1835/A	✓	■	-	-	-	●	○	○	○	○	-	10-11	31
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	12-13	31
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	12-13	31
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	12-13	31
 DIN 1835/A	✓	■	-	-	-	●	○	○	○	○	-	12-13	31
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	14	31
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	14	31
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	15	31


























































































● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible






























CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>3304C</b>			2,8-21,7	30°		3	HSS-Co8	
<b>3324</b>			4,5-24	30°		3	ASP-30	-
<b>3324C</b>			3-24	30°		3	ASP-30	
<b>4330C</b>			6-25	60°		3/4	ASP-30	
<b>4300</b>			2-36	40°		3/4	HSS-Co8	-
<b>4300C</b>			2-36	40°		3/4	HSS-Co8	
<b>4302</b>			2-36	40°		3/4	HSS-Co8	-
<b>4302C</b>			2-36	40°		3/4	HSS-Co8	
<b>4320</b>			2-25	40°		3/4	ASP-30	-
<b>4320C</b>			2-25	40°		3/4	ASP-30	
<b>4306</b>			3-35	40°		3/4	HSS-Co8	-
<b>4306C</b>			3-35	40°		3/4	HSS-Co8	
<b>4304</b>			3-40	40°		3/4	HSS-Co8	-
<b>4304C</b>			3-40	40°		3/4	HSS-Co8	
<b>4324</b>			3-25	40°		3/4	ASP-30	-
<b>4324C</b>			3-25	40°		3/4	ASP-30	
<b>4337</b>			8-32	20°		2/3	ASP-60	-
<b>4308</b>			10-46	40°		3/5	HSS-Co5	-
<b>4308C</b>			10-46	40°		3/5	HSS-Co5	
<b>5300C</b>			10-36	40°		3	HSS-Co5	
<b>5320</b>			6-25	40°		3/4	ASP-30	-
<b>5320C</b>			6-25	40°		3/4	ASP-30	
<b>5304</b>			8-36	40°		3/4	HSS-Co5	-
<b>5304C</b>			8-36	40°		3/4	HSS-Co5	
<b>5324</b>			10-25	40°		3/4	ASP-30	-

Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	15	31
 DIN 1835/B	✓	■	-	-	-	●	○	○	○	○	-	16	31
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	16	31
 DIN 1835/B	✓	■	-	-	-	●	●	●	○	●	-	18	31
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	19	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	19	32
 DIN 1835/A	✓	-	■	-	-	-	-	-	●	-	-	19	32
 DIN 1835/A	✓	-	■	-	-	-	-	-	●	-	-	19	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	20	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	20	32
 DIN 1835/A	✓	-	■	-	-	-	-	-	●	-	-	21	32
 DIN 1835/A	✓	-	■	-	-	-	-	-	●	-	-	21	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	21	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	21	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	22	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	22	32
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	23	32
 DIN 228/A	-	-	■	-	-	-	-	-	●	-	-	24	32
 DIN 228/A	-	-	■	-	-	-	-	-	●	-	-	24	32
 DIN 1835/A	✓	-	■	-	-	-	-	-	●	-	-	25	33
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	26	33
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	26	33
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	27	33
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	27	33
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	28	33

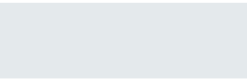
























































































● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible
































CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>5324C</b>			8-25	40°		3/4	ASP-30	
<b>7302</b> <b>AERO</b>			8-32	20°		2/3	ASP-60	-
<b>7301</b>			8-16	30°		3	ASP-60	-
<b>7301C</b>			8-16	30°		3	ASP-60	
<b>4400</b>			6-20	40°		4	HSS-Co8	-
<b>4400C</b>			6-20	40°		4	HSS-Co8	
<b>4404</b>			2-50	30°		4/8	HSS-Co8	-
<b>4404C</b>			2-50	30°		4/8	HSS-Co8	
<b>4404F</b>			2-45	30°		4/8	HSS-Co8	
<b>4406</b>			2-36	30°		4/6	HSS-Co8	-
<b>4406C</b>			2-36	30°		4/6	HSS-Co8	
<b>4458</b>			2-25	30°		4/5	ASP-30	-
<b>4458C</b>			2-25	30°		4/5	ASP-30	
<b>4412</b>			16-32	30°		4/6	HSS-Co8	-
<b>4412C</b>			16-32	30°		4/6	HSS-Co8	
<b>4414</b>			16-32	30°		4/6	HSS-Co8	-
<b>4414C</b>			16-32	30°		4/6	HSS-Co8	
<b>4416</b>			3-22	40°		4	HSS-Co8	-
<b>4416C</b>			3-22	40°		4	HSS-Co8	
<b>4466</b>			3-18	40°		4	ASP-30	-
<b>4420</b>			3-50	30°		4/8	HSS-Co8	-
<b>4420C</b>			3-50	30°		4/8	HSS-Co8	
<b>4333</b> <b>HIGH ALLOYS</b>			6-32	50°		3/6	HSS-Co8	-
<b>4333C</b> <b>HIGH ALLOYS</b>			6-32	50°		3/6	HSS-Co8	
<b>4334</b> <b>HIGH ALLOYS</b>			6-32	50°		3/6	HSS-Co8	-





















































































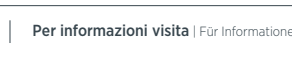


Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	28	33
 DIN 1835/B	✓	-	■	-	-	-	-	-	●	-	-	29	33
 DIN 1835/B	✓	-	■	-	-	○	-	○	○	-	-	30	34
 DIN 1835/B	✓	-	■	-	-	●	-	●	●	○	-	30	34
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	-	-	38	56
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	38	56
 DIN 1835/B	✓	-	■	-	-	●	●	-	○	-	-	39-40	56
 DIN 1835/B	✓	-	■	-	-	●	●	-	○	○	-	39-40	56
 DIN 1835/B	✓	-	■	-	-	●	●	-	○	○	-	39-40	56
 DIN 1835/A	✓	-	■	-	-	●	●	-	○	-	-	39-40	56
 DIN 1835/A	✓	-	■	-	-	●	●	-	○	○	-	39-40	56
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	41	56
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	41	56
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	42	56
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	42	56
 DIN 1835/A	✓	-	■	-	-	●	○	○	○	-	-	42	56
 DIN 1835/A	✓	-	■	-	-	●	●	●	○	○	-	42	56
 DIN 1835/B	-	-	■	-	-	●	○	○	○	-	-	43	56
 DIN 1835/B	-	-	■	-	-	●	●	●	○	○	-	43	56
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	○	-	44	56
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	45	56
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	45	56
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	●	-	46	57
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	●	-	46	57
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	46	57






























● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible

CODICE			Ø d <sub>1</sub>	Elica	Serie	Dente Z	Materiale	Rivestimento
<b>4334C</b> HIGH ALLOYS			6-32	50°		3/6	HSS-Co8	
<b>4401</b> INOX			2-32	40°		4/6	HSS-Co8	-
<b>4401C</b> INOX			2-32	40°		4/6	HSS-Co8	
<b>4403</b> INOX			2-32	40°		4/6	HSS-Co8	-
<b>4403C</b> INOX			2-32	40°		4/6	HSS-Co8	
<b>4335</b> HIGH ALLOYS			6-32	50°		3/6	ASP-60	-
<b>4335C</b> HIGH ALLOYS			6-32	50°		3/6	ASP-60	
<b>4336</b> HIGH ALLOYS			6-32	50°		3/6	ASP-60	-
<b>4336C</b> HIGH ALLOYS			6-32	50°		3/6	ASP-60	
<b>4405</b> INOX			4-32	40°		4/6	ASP-60	-
<b>4405C</b> INOX			4-32	40°		4/6	ASP-60	
<b>4407</b> INOX			4-32	40°		4/6	ASP-60	-
<b>4407C</b> INOX			4-32	40°		4/6	ASP-60	
<b>4427</b> INOX			4-32	40°		4/6	ASP-60	-
<b>4427C</b> INOX			4-32	40°		4/6	ASP-60	
<b>4474</b>			4-25	30°		4/5	ASP-30	-
<b>4474C</b>			4-25	30°		4/5	ASP-30	
<b>4428</b>			16-32	30°		4/6	HSS-Co8	-
<b>4428C</b>			16-32	30°		4/6	HSS-Co8	
<b>4432</b>			6-50	30°		4/8	HSS-Co5	-
<b>4436</b>			10-56	30°		4/8	HSS-Co5	-
<b>5400</b>			6-34	30°		4/6	HSS-Co8	-
<b>5400C</b>			6-36	30°		4/6	HSS-Co8	
<b>5404</b>			6-28	30°		4/5	HSS-Co8	-
<b>5404C</b>			6-28	30°		4/5	HSS-Co8	
























































































Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	46	57
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	○	-	47	58
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	●	-	47	58
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	○	-	47	58
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	47	58
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	●	-	48	57
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	●	-	48	57
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	48	57
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	48	57
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	○	-	49	58
 DIN 1835/A	✓	-	■	-	-	-	●	-	○	●	-	49	58
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	○	-	49	58
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	49	58
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	○	-	50	58
 DIN 1835/B	✓	-	■	-	-	-	●	-	○	●	-	50	58
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	○	-	52	56
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	●	-	52	56
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	53	56
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	53	56
 DIN 228/A	-	-	■	-	-	●	○	○	○	-	-	54	56
 DIN 228/A	-	-	■	-	-	●	○	○	○	-	-	55	56
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	62	71
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	62	71
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	63	71
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	63	71




























● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible

CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>5408</b>			6-34	30°		4/6	HSS-Co8	-
<b>5408C</b>			6-36	30°		4/6	HSS-Co8	
<b>5412</b>			10-28	30°		4/5	HSS-Co8	-
<b>5412C</b>			10-28	30°		4/5	HSS-Co8	
<b>5450</b> <small>HARD-WAVE</small>			12-30	30°		4	ASP-30	-
<b>5460</b> <small>HARD-WAVE</small>			12-28	30°		4/5	ASP-30	-
<b>5416</b>			11-50	30°		4/8	HSS-Co5	-
<b>5418</b>			12	30°		4/6	HSS-Co8	-
<b>5418C</b>			12-32	30°		4/6	HSS-Co8	
<b>5420</b>			10-50	30°		4/8	HSS-Co5	-
<b>7400</b>			6-20	30°		4	HSS-Co8	-
<b>7400C</b>			6-20	30°		4	HSS-Co8	
<b>7450</b>			8-32	30°		4/6	ASP-30	-
<b>7450C</b>			8-32	30°		4/6	ASP-30	
<b>7404</b>			6-50	30°		4/8	HSS-Co8	-
<b>7404C</b>			6-50	30°		4/8	HSS-Co8	
<b>7406</b>			7-45	30°		4/6	HSS-Co8	-
<b>7406C</b>			7-45	30°		4/8	HSS-Co8	
<b>7454</b>			6-25	30°		4	ASP-30	-
<b>7454C</b>			6-25	30°		4	ASP-30	
<b>7408</b>			4-50	30°		4/8	HSS-Co8	-
<b>7408C</b>			4-50	30°		4/8	HSS-Co8	
<b>7458</b>			6-25	30°		4	ASP-30	-
<b>7458C</b>			6-25	30°		4	ASP-30	
<b>7484</b> <small>JET-CUT</small>			16-25	30°		4/6	HSS-Co8	-

Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	64	71
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	64	71
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	65	71
 DIN 1835/B	✓	-	■	-	-	●	●	○	○	○	-	65	71
 DIN 1835/B	-	-	■	-	-	●	●	○	-	-	-	66	72
 DIN 1835/B	-	-	■	-	-	●	●	○	-	-	-	67	72
 DIN 228/A	-	-	■	-	-	●	○	○	○	○	-	68	71
 DIN 228/A	✓	-	■	-	-	●	○	○	○	-	-	69	71
 DIN 228/A	✓	-	■	-	-	●	●	○	○	○	-	69	71
 DIN 228/A	-	-	■	-	-	●	○	○	○	-	-	70	71
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	76	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	76	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	77	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	77	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	78	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	78	92
 DIN 1835/A	✓	-	■	-	-	●	○	○	○	-	-	78	92
 DIN 1835/A	✓	-	■	-	-	●	●	●	○	○	-	78	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	○	-	79	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	●	-	79	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	○	-	80	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	●	-	80	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	○	-	81	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	●	-	81	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	○	-	82	92

● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible






























CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>7484C</b> JET-CUT			16-32	30°		4/6	HSS-Co8	
<b>7486</b> JET-CUT			16-32	30°		4/6	HSS-Co8	-
<b>7486C</b> JET-CUT			16-32	30°		4/6	HSS-Co8	
<b>7412</b>			6-45	30°		4/6	HSS-Co8	-
<b>7412C</b>			6-45	30°		4/6	HSS-Co8	
<b>7414</b>			6-36	30°		4/6	HSS-Co8	-
<b>7414C</b>			6-36	30°		4/6	HSS-Co8	
<b>7462</b>			6-25	30°		4	ASP-30	-
<b>7462C</b>			6-25	30°		4	ASP-30	
<b>7416</b>			6-32	30°		4/6	HSS-Co8	-
<b>7416C</b>			6-32	30°		4/6	HSS-Co8	
<b>7466</b>			6-25	30°		4	ASP-30	-
<b>7466C</b>			6-25	30°		4	ASP-30	
<b>7467</b> HARD STEEL			6-36	30°		4/6	ASP-60	-
<b>7467C</b> HARD STEEL			6-36	30°		4/6	ASP-60	
<b>7469</b> HARD STEEL			6-36	30°		4/6	ASP-60	-
<b>7469C</b> HARD STEEL			6-36	30°		4/6	ASP-60	
<b>7420</b>			6-60	30°		4/8	HSS-Co5	-
<b>7422</b>			12-32	30°		4/6	HSS-Co5	-
<b>7422C</b>			12-32	30°		4/6	HSS-Co5	
<b>7424</b>			10-45	30°		4/6	HSS-Co5	-
<b>9501</b>			32-63	≈30°		6/8	HSS-Co5	-
<b>9502</b>			32-80	≈30°		6/10	HSS-Co5	-
<b>9503</b>			32-80	≈30°		6/10	HSS-Co5	-
<b>9504</b>			32-45	≈30°		6/8	HSS-Co5	-

Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	●	-	82	92
 DIN 1835/A	✓	-	■	-	-	●	○	○	○	○	-	82	92
 DIN 1835/A	✓	-	■	-	-	●	●	●	○	●	-	82	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	84	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	84	92
 DIN 1835/A	✓	-	■	-	-	●	○	○	○	-	-	84	92
 DIN 1835/A	✓	-	■	-	-	●	●	●	○	○	-	84	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	85	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	85	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	86	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	86	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	○	-	-	87	92
 DIN 1835/B	✓	-	■	-	-	●	●	●	○	○	-	87	92
 DIN 1835/A	✓	-	■	-	-	●	○	○	-	-	-	88	92
 DIN 1835/A	✓	-	■	-	-	●	○	○	-	-	-	88	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	-	-	-	88	92
 DIN 1835/B	✓	-	■	-	-	●	○	○	-	-	-	88	92
 DIN 228/A	-	-	■	-	-	●	○	○	○	-	-	89	92
 DIN 228/A	✓	-	■	-	-	●	○	○	○	-	-	90	92
 DIN 228/A	✓	-	■	-	-	●	●	●	○	○	-	90	92
 DIN 228/A	-	-	■	-	-	●	○	○	○	-	-	91	92
 DIN 2080	-	-	■	-	-	●	●	●	●	●	-	96	106
 DIN 2080	-	-	■	-	-	●	●	●	●	●	-	97	106
 DIN 69871/A	-	-	■	-	-	●	●	●	●	●	-	98	106
 DIN 69871/A	-	-	■	-	-	●	●	●	●	●	-	99	106



































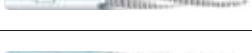











































● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible






































CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
9505			36-63	≈30°		6/8	HSS-Co5	-
9506			40-80	≈30°		6/10	HSS-Co5	-
9507			32-80	≈30°		6/10	HSS-Co5	-
9508			40-80	≈30°		6/10	HSS-Co5	-
9509			32-80	≈30°		6/10	HSS-Co5	-
9510			32-45	≈30°		6	HSS-Co5	-
9561		-	40-125	25°		6/14	HSS-Co5	-
9561C		-	40-125	25°		6/14	HSS-Co5	
9564		-	50-160	25°		8/16	HSS-Co8	-
9564C		-	50-160	25°		8/16	HSS-Co8	
9563 ALU		-	40-160	30°		6/10	HSS-Co5	-
9565		-	40-160	25°		7/14	HSS-Co5	-
9567		-	100-160	25°		8/14	HSS-Co8	-
9567C		-	63-160	25°		8/12	HSS-Co8	
9571		-	40-125	25°		7/12	HSS-Co5	-
9570 INOX		-	50-80	40°		8/10	ASP-60	-
9570C INOX		-	50-80	40°		8/10	ASP-60	
9585		-	40-100	25°		8/10	ASP-60	-
9585C		-	40-100	25°		8/10	ASP-60	
9574		-	50-75	25°		6/8	HSS-Co8	-
9574C		-	50-75	25°		6/8	HSS-Co8	
9586		-	40-100	25°		6/12	ASP-60	-
9586C		-	40-100	25°		6/12	ASP-60	
8501			4-12	-		4	HSS-Co8	-
8500			6-16	-		4	HSS-Co8	-











Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
	-	-	■	-	-	●	●	●	●	●	-	100	107
	-	-	■	-	-	●	●	●	●	●	-	101	107
	-	-	■	-	-	●	●	●	●	●	-	102	107
	-	-	■	-	-	●	●	●	●	●	-	103	107
	-	-	■	-	-	●	●	●	●	●	-	104	107
	-	-	■	-	-	●	●	●	●	●	-	105	107
	-	-	■	-	-	●	●	●	●	-	-	110	120
	-	-	■	-	-	●	●	●	●	○	-	110	120
	-	-	■	-	-	●	●	●	●	-	-	111	120
	-	-	■	-	-	●	●	●	●	○	-	111	120
	-	-	■	-	-	-	-	-	●	-	-	112	121
	-	-	■	-	-	●	○	●	○	○	-	113	122
	-	-	■	-	-	●	○	●	○	○	-	114	122
	-	-	■	-	-	●	●	●	○	●	-	114	122
	-	-	■	-	-	●	○	●	●	○	-	115	122
	-	-	■	-	-	○	●	-	○	○	-	116	123
	-	-	■	-	-	○	●	-	○	●	-	116	123
	-	-	■	-	-	○	-	-	-	-	-	117	122
	-	-	■	-	-	○	-	-	●	-	-	117	122
	-	-	■	-	-	○	-	-	-	-	-	118	122
	-	-	■	-	-	○	-	-	●	-	-	118	122
	-	-	■	-	-	●	○	●	○	○	-	119	122
	-	-	■	-	-	●	●	●	●	●	-	119	122
	✓	-	-	-	■	●	○	●	○	○	-	126	145
	✓	-	-	-	■	●	○	●	○	○	-	127	145






























● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible

CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
8503			6-12	-		4	HSS-Co8	-
8504			8-16	-		4	HSS-Co8	-
8512			8-12	-		4	HSS-Co8	-
8516			8	-		4/6	HSS-Co8	-
8520			6-16	-		4/6	HSS-Co8	-
8528			8-16	-		4	HSS-Co8	-
8532			12-16	-		4/6	HSS-Co8	-
8540			12	-		4/6	HSS-Co8	-
8544			6-20	-		4/6	HSS-Co8	-
8548			8-12	-		4	HSS-Co8	-
8552			8-16	-		4/6	HSS-Co8	-
8556			8-20	-		4/5	HSS-Co8	-
8560			8-12	-		4	HSS-Co8	-
8564			8-16	-		4	HSS-Co8	-
8568			8-20	-		4/5	HSS-Co8	-
4200			2-30	30°		2	HSS-Co8	-
4200C			2-30	30°		2	HSS-Co8	
4201			2-30	30°		2	HSS-Co8	-
4201C			2-30	30°		2	HSS-Co8	
4202			2-30	30°		2	HSS-Co8	-
4202C			2-30	30°		2	HSS-Co8	
4220			2-25	30°		2	ASP-30	-
4220C			2-25	30°		2	ASP-30	
4204			3-30	30°		2	HSS-Co8	-
4204C			3-30	30°		2	HSS-Co8	

Attacco	Taglio al centro											Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	128	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	129	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	130	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	132	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	133	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	134	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	136	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	137	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	138	145
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	139	146
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	140	146
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	141	146
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	142	146
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	143	146
 DIN 1835/B	✓	-	-	-	■	●	○	●	○	○	-	144	146
 DIN 1835/B	✓	■	-	-	-	●	○	●	○	○	-	150	170
 DIN 1835/B	✓	■	-	-	-	●	●	●	●	●	-	150	170
 DIN 1835/A	✓	■	-	-	-	●	○	●	○	○	-	150	170
 DIN 1835/A	✓	■	-	-	-	●	●	●	●	●	-	150	170
 DIN 1835/A	✓	■	-	-	-	●	○	●	○	○	-	150	170
 DIN 1835/A	✓	■	-	-	-	●	●	●	●	●	-	150	170
 DIN 1835/B	✓	■	-	-	-	●	○	●	○	○	-	151	170
 DIN 1835/B	✓	■	-	-	-	●	●	●	●	●	-	151	170
 DIN 1835/B	✓	■	-	-	-	●	○	●	○	-	-	152	170
 DIN 1835/B	✓	■	-	-	-	●	●	●	●	●	-	152	170






























● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible

CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>4206</b>			3-25	30°		2	HSS-Co8	-
<b>4224</b>			3-25	30°		2	ASP-30	-
<b>4224C</b>			3-25	30°		2	ASP-30	
<b>4439</b>			5-30	30°		2	ASP-60	-
<b>4439C</b>			4-8	30°		2	ASP-60	
<b>4493</b>			6-40	30°		2	ASP-60	-
<b>4493C</b>			6-40	30°		2	ASP-60	
<b>4438</b>			6-40	30°		4/6	HSS-Co8	-
<b>4438C</b>			6-40	30°		4/6	HSS-Co8	
<b>4488</b>			6-40	30°		4/6	ASP-30	-
<b>4488C</b>			6-40	30°		4/6	ASP-30	
<b>4442</b>			6-40	30°		4/6	HSS-Co8	-
<b>4442C</b>			6-40	30°		4/6	HSS-Co8	
<b>4495</b>			4-16	30°		3	ASP-60	-
<b>4495C</b>			4-16	30°		3	ASP-60	
<b>4446</b>			10-32	-		4/6	HSS-Co8	-
<b>4446C</b>			10-32	-		4/6	HSS-Co8	
<b>4448</b>			10-25	-		4/6	HSS-Co8	-
<b>4448C</b>			10-25	-		4/6	HSS-Co8	
<b>7426</b>			6-40	30°		4/6	HSS-Co8	-
<b>7426C</b>			6-40	30°		4/6	HSS-Co8	
<b>7476</b>			6-32	30°		4/6	ASP-30	-
<b>7476C</b>			6-32	30°		4/6	ASP-30	
<b>7430</b>			6-40	30°		4/6	HSS-Co8	-
<b>7430C</b>			6-40	30°		4/6	HSS-Co8	

Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
	✓	■	-	-	-	●	○	●	○	-	-	152	170
	✓	■	-	-	-	●	○	●	○	○	-	153	170
	✓	■	-	-	-	●	●	●	●	●	-	153	170
	✓	■	-	-	-	●	○	●	○	○	-	154	170
	✓	■	-	-	-	●	●	●	●	●	-	154	170
	✓	■	-	-	-	●	○	●	○	○	-	155	170
	✓	■	-	-	-	●	●	●	●	●	-	155	170
	✓	-	■	-	-	●	○	●	○	-	-	156	170
	✓	-	■	-	-	●	●	●	●	●	-	156	170
	✓	-	■	-	-	●	○	●	○	○	-	157	170
	✓	-	■	-	-	●	●	●	●	●	-	157	170
	✓	-	■	-	-	●	○	●	○	-	-	158	170
	✓	-	■	-	-	●	●	●	●	●	-	158	170
	✓	-	■	-	-	●	○	●	○	○	-	159	170
	✓	-	■	-	-	●	●	●	●	●	-	159	170
	✓	-	■	-	-	●	○	●	○	○	-	160	170
	✓	-	■	-	-	●	●	●	●	●	-	160	170
	✓	-	■	-	-	●	○	●	○	-	-	161	170
	✓	-	■	-	-	●	●	●	●	●	-	161	170
	✓	-	■	-	-	●	○	●	○	○	-	162	171
	✓	-	■	-	-	●	●	●	●	●	-	162	171
	✓	-	■	-	-	●	○	●	○	○	-	164	171
	✓	-	■	-	-	●	●	●	●	●	-	164	171
	✓	-	■	-	-	●	○	●	○	○	-	165	171
	✓	-	■	-	-	●	●	●	●	●	-	165	171









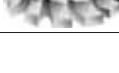
● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible























CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>7427</b> HARD STEEL			6-32	30°		4/6	ASP-60	-
<b>7427C</b> HARD STEEL			6-32	30°		4/6	ASP-60	
<b>7429</b> HARD STEEL			6-32	30°		4/6	ASP-60	-
<b>7429C</b> HARD STEEL			6-32	30°		4/6	ASP-60	
<b>7480</b>			6-40	30°		4/6	ASP-30	-
<b>7480C</b>			6-40	30°		4/6	ASP-30	
<b>7434</b>			10-32	-		4/6	HSS-Co8	-
<b>7434C</b>			10-32	-		4/6	HSS-Co8	
<b>7436</b>			10-40	-		4/6	HSS-Co8	-
<b>7436C</b>			10-40	-		4/6	HSS-Co8	
<b>9520</b>			11-60	-	-	6/10	HSS-Co5	-
<b>9522</b>			11-45	-	-	6/10	HSS-Co5	-
<b>9524</b>			18-50	-	-	6/10	HSS-Co5	-
<b>9526</b>			21-45	20°	-	6/8	HSS-Co5	-
<b>9530</b>			56-95	20°	-	10	HSS-Co5	-
<b>9536</b>			56-95	20°	-	10	HSS-Co5	-
<b>9542</b>			10,5-45,5	-	-	6/12	HSS-Co5	-
<b>9544</b>			10,5-28,5	-	-	6/10	HSS-Co5	-
<b>9546</b>		-	16-25	-	-	8/10	HSS-Co5	-
<b>9548</b>		-	16-25	-	-	8/10	HSS-Co5	-
<b>9550</b>		-	16-25	-	-	8/10	HSS-Co5	-
<b>9552</b>		-	20-25	-	-	8/10	HSS-Co5	-
<b>9554</b>		-	1-20	-	-	4/6	HSS-Co5	-
<b>9556</b>		-	1,25-20	-	-	4/6	HSS-Co5	-
<b>9575</b>		-	40-160	-	-	14/28	HSS	-

























Attacco	Taglio al centro					P	M	K	N	S	H	Rif. pagina prodotto	Rif. pagina dati di taglio
	✓	-	■	-	-	●	○	●	○	○	-	166	171
	✓	-	■	-	-	●	●	●	●	●	-	166	171
	✓	-	■	-	-	●	○	●	○	○	-	166	171
	✓	-	■	-	-	●	●	●	●	●	-	166	171
	✓	-	■	-	-	●	○	●	○	○	-	167	171
	✓	-	■	-	-	●	●	●	●	●	-	167	171
	✓	-	■	-	-	●	○	●	○	○	-	168	171
	✓	-	■	-	-	●	●	●	●	●	-	168	171
	✓	-	■	-	-	●	○	●	○	○	-	169	171
	✓	-	■	-	-	●	●	●	●	●	-	169	171
	-	-	-	-	■	●	○	●	●	○	-	174	186
	-	-	-	-	■	●	○	●	●	○	-	174	186
	-	-	-	-	■	●	○	●	●	○	-	175	186
	-	-	-	-	■	●	○	●	●	○	-	176	186
	-	-	-	-	■	●	○	●	●	○	-	177	186
	-	-	-	-	■	●	○	●	●	○	-	178	186
	-	-	-	-	■	●	○	●	●	○	-	179	188
	-	-	-	-	■	●	○	●	●	○	-	179	188
	-	-	-	-	■	●	○	●	●	○	-	180	189
	-	-	-	-	■	●	○	●	●	○	-	180	189
	-	-	-	-	■	●	○	●	●	○	-	181	189
	-	-	-	-	■	●	○	●	●	○	-	181	189
	-	-	-	-	■	●	○	●	●	○	-	182	189
	-	-	-	-	■	●	○	●	●	○	-	182	189
	-	-	-	-	■	●	○	●	●	○	-	183	190

● RACCOMANDATO | Empfohlen | Suggested | Conseillé | Aconsejado ○ POSSIBILE | Möglich | Possible | Possible | Possible



CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>9595</b>		-	80-160	-	-	20/32	HSS-Co5	-
<b>9576</b>		-	50-100	-	-	16/26	HSS	-
<b>9577</b>		-	50-200	-	-	12/24	HSS-Co5	-
<b>9578</b>		-	50-250	-	-	16/32	HSS-Co5	-
<b>9579</b>		-	50-125	-	-	16/24	HSS-Co5	-
<b>9580</b> <b>ALU</b>		-	50-200	-	-	6/12	HSS	-
<b>9581</b>		-	63-160	-	-	28/36	HSS-Co5	-
<b>9582</b>		-	63-160	-	-	32/52	HSS-Co5	-
<b>9583</b>		-	80-250	-	-	50/136	HSS-Co5	-
<b>9584</b>		-	63-160	-	-	16/30	HSS-Co5	-
<b>9591</b>		-	50-100	-	-	12/22	HSS	-
<b>9592</b>		-	50-100	-	-	12/14	HSS	-
<b>9593</b>		-	80	-	-	12	HSS	-

Attacco	Taglio al centro											Rif. pagina prodotto	Rif. pagina dati di taglio
 DIN 138	-	-	-	-	■	●	○	●	●	○	-	184	190
 DIN 138	-	-	-	-	■	●	○	●	●	○	-	185	191
 DIN 138	-	-	-	-	■	●	○	●	●	-	-	194-195	210
 DIN 138	-	-	-	-	■	●	○	●	○	○	-	196-197	210
 DIN 138	-	-	-	-	■	●	○	●	○	-	-	198-199	210
 DIN 138	-	-	-	-	■	-	-	-	●	-	-	200-201	211
 DIN 138	-	-	-	-	■	●	○	●	○	○	-	202-203	212
 DIN 138	-	-	-	-	■	●	-	●	○	○	-	204	212
 DIN 138	-	-	-	-	■	●	-	●	○	○	-	205	212
 DIN 138	-	-	-	-	■	○	○	●	●	○	-	206	212
 DIN 138	-	-	-	-	■	●	○	●	●	○	-	207	213
 DIN 138	-	-	-	-	■	●	○	●	●	○	-	208	213
 DIN 138	-	-	-	-	■	●	○	●	●	○	-	209	213

DIN	Tipo				Serie	Materiale	Rivestimento					Rif. pag.
<b>327</b>	<b>N</b>					HSS-Co8	 TICN  TIALN FUTURA	●	●	●	-	<b>2</b>
<b>327</b>	<b>N</b>					ASP-30	 TICN	-	●	-	-	<b>4</b>
<b>ILICO NORM</b>	<b>N</b>					HSS-Co8	 TICN	-	●	●	-	<b>5</b>
<b>ILICO NORM</b>	<b>N</b>					ASP-30	 TICN	-	●	-	-	<b>6</b>

# FRESE A CANDELA A 2 TAGLIENTI

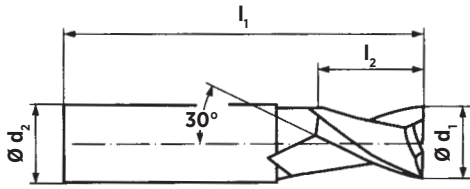
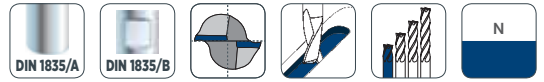
- SCHAFTFRÄSER MIT 2 SCHNEIDEN
- END MILLS WITH 2 FLUTES
- FRAISES AVEC 2 DENTS
- FRESAS DE 2 LABIOS



# HSS-Co8

## DIN 327

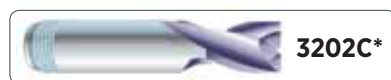
EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



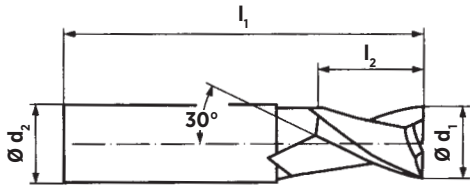
$\emptyset d_1, e_8$	$\emptyset d_1, h_{10}$	$l_2$	$l_1$	$\emptyset d_2, h_6$	Z
	1 <sup>▲</sup>	2,5	36	6	2
	1,5 <sup>▲</sup>	3	36	6	2
	1,8	4	48	6	2
2		4	48	6	2
2,5		5	49	6	2
	2,8	5	49	6	2
3		5	49	6	2
	3,5	6	50	6	2
	3,8	7	51	6	2
4		7	51	6	2
	4,5	7	51	6	2
	4,8	8	52	6	2
5		8	52	6	2
	5,5	8	52	6	2
	5,75	8	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

3200	3200C	3200F	3201	3201C	3202
HSS-Co8	HSS-Co8 TiCN	HSS-Co8 TiAlN FUTURA	HSS-Co8	HSS-Co8 TiCN	HSS-Co8
€ 21,15	€ 28,50	€ 29,25	€ 21,15	€ 28,50	€ 22,20
€ 19,70	€ 27,05	€ 27,75	€ 19,70	€ 27,05	-
€ 18,65	€ 26,05	€ 26,80	€ 18,80	€ 26,05	€ 22,50
€ 15,35	€ 22,70	€ 23,45	€ 15,35	€ 22,70	€ 19,25 ■
€ 15,35	€ 22,70	€ 23,45	€ 15,35	€ 22,70	€ 19,25
€ 18,65	€ 26,05	€ 26,80	€ 18,80	€ 26,05	€ 22,50
€ 15,35	€ 22,70	€ 23,45	€ 15,35	€ 22,70	-
€ 16,75	€ 24,05	€ 24,75	€ 16,75	€ 24,05	€ 20,65
€ 17,85	€ 25,20	€ 25,90	€ 17,85	€ 25,20	€ 21,80
€ 14,82	€ 22,15	€ 22,85	€ 14,82	€ 22,15	€ 18,75
€ 16,75	€ 24,05	€ 24,75	€ 16,75	€ 24,05	€ 20,65
€ 17,85	€ 25,20	€ 25,90	€ 17,85	€ 25,20	€ 21,80
€ 14,82	€ 22,15	€ 22,85	€ 14,82	€ 22,15	€ 18,75
€ 16,75	€ 24,05	€ 24,75	€ 16,75	€ 24,05	€ 20,65
€ 17,85	€ 25,20	€ 25,90	€ 17,85	€ 25,20	€ 21,80
€ 14,82	€ 22,15	€ 22,85	€ 14,82	€ 22,15	€ 18,75
€ 21,90	€ 33,45	€ 34,75	€ 21,90	€ 33,50	-
€ 24,15	€ 35,75	€ 37,20	€ 24,15	€ 35,75	€ 28,00
€ 20,10	€ 31,70	€ 32,90	€ 20,10	€ 31,70	€ 23,85
€ 21,90	€ 33,45	€ 34,75	€ 21,90	€ 33,50	-
€ 22,20	€ 33,85	€ 35,05	€ 22,20	€ 33,85	€ 26,10
€ 18,95	€ 30,55	€ 31,75	€ 18,95	€ 30,50	€ 22,90
€ 22,75	€ 34,35	€ 35,65	€ 22,80	€ 34,35	€ 26,60
€ 26,50	€ 38,15	€ 39,35	€ 26,50	€ 38,15	€ 30,75
€ 21,90	€ 33,45	€ 34,75	€ 21,90	€ 33,50	€ 25,90
€ 22,75	€ 34,35	€ 35,65	€ 22,80	€ 34,35	€ 26,60
€ 25,20	€ 36,85	€ 38,15	€ 25,20	€ 36,85	€ 29,05
€ 20,85	€ 32,40	€ 33,70	€ 20,85	€ 32,40	-
€ 27,40	€ 40,00	€ 41,30	€ 27,40	€ 40,00	€ 31,40
€ 29,65	€ 42,20	€ 43,50	€ 29,65	€ 42,30	€ 33,45
€ 24,95	€ 37,65	€ 38,55	€ 24,95	€ 37,65	-
€ 27,95	€ 40,50	€ 41,70	€ 27,90	€ 40,50	€ 31,90
€ 28,50	€ 41,30	€ 42,20	€ 28,50	€ 41,30	€ 32,55
€ 23,80	€ 36,40	€ 37,65	€ 23,80	€ 36,40	€ 28,00 ■
€ 38,35	€ 51,00	€ 52,40	€ 38,35	€ 51,00	€ 42,40
€ 31,75	€ 45,00	€ 46,50	€ 31,75	€ 45,00	€ 35,80

p. 220 p. 7



P	●●●	●●●	●●●	●●●	●●●
M	●●○	●●○	●●○	●●○	●●○
K	●○○	●○○	●○○	●○○	●○○
N	●○○	●○○	●○○	●○○	●○○
S	●○○	●○○	●○○	●○○	●○○
H	○○○	○○○	○○○	○○○	○○○



Ø d <sub>1</sub> e <sub>8</sub>	Ø d <sub>1</sub> h <sub>10</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	Z
---------------------------------	----------------------------------	----------------	----------------	---------------------------------	---

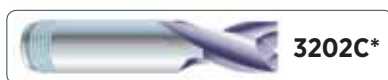
	13,7	16	73	12	2
14		16	73	12	2
	14,7	16	73	12	2
	15	16	73	12	2
	15,7	19	79	16	2
16		19	79	16	2
	16,7	19	79	16	2
17		19	79	16	2
	17,7	19	79	16	2
18		19	79	16	2
18 ▲		19	85	20	2
	19	19	79	16	2
	19,7	22	88	20	2
20		22	88	20	2
	21,7	22	88	20	2
22		22	88	20	2
22		22	98	25	2
	23,7	26	102	25	2
24		26	102	25	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
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
50 ▲		45	125	32	2

3200	3200C	3200F	3201	3201C	3202
------	-------	-------	------	-------	------

HSS-Co8	HSS-Co8 TiCN	HSS-Co8 TiAlN FUTURA	HSS-Co8	HSS-Co8 TiCN	HSS-Co8

€ 34,50	€ 47,60	€ 49,10	€ 34,50	€ 47,60	€ 38,50
€ 28,50	€ 41,70	€ 43,30	€ 28,50	€ 41,70	-
€ 40,00	€ 53,50	€ 54,90	€ 40,00	€ 53,50	€ 44,00
€ 33,35	€ 46,70	€ 48,10	€ 33,35	€ 46,70	€ 37,45
€ 40,00	€ 61,50	€ 59,30	€ 40,00	€ 61,50	€ 45,20
€ 33,35	€ 54,50	€ 52,40	€ 33,35	€ 54,50	€ 38,50
€ 55,90	€ 80,50	€ 76,60	-	-	€ 52,10
€ 46,70	€ 71,00	€ 67,00	€ 46,70	€ 71,00	€ 61,30
€ 46,70	€ 71,00	€ 67,00	€ 46,70	€ 71,00	€ 52,10
€ 38,85	€ 63,20	€ 59,30	€ 38,85	€ 63,20	-
-	-	-	-	-	€ 52,10 ■
€ 54,90	€ 79,30	€ 75,50	€ 54,90	€ 79,30	€ 60,80
€ 53,50	€ 77,80	€ 78,30	€ 53,50	€ 77,80	-
€ 44,40	€ 69,30	€ 69,90	€ 44,40	€ 69,30	€ 50,80
€ 78,80	€ 107,00	€ 108,00	€ 78,80	€ 107,00	€ 85,00
€ 66,50	€ 93,90	€ 95,60	€ 66,50	€ 93,90	€ 72,00 ■
-	-	-	-	-	€ 81,70
€ 102,50	€ 137,00	€ 137,50	€ 102,50	€ 137,00	-
€ 86,70	€ 120,50	€ 122,00	€ 86,70	€ 120,50	€ 91,90
€ 102,50	€ 137,00	€ 137,50	€ 102,50	€ 137,00	€ 107,50
€ 86,70	€ 120,50	€ 122,00	€ 86,70	€ 120,50	€ 91,90
€ 114,50	€ 155,00	€ 153,00	€ 114,50	€ 155,00	€ 119,50
€ 145,00	€ 185,50	€ 183,50	€ 145,00	€ 185,50	€ 150,00 ■
€ 123,00	€ 164,00	€ 162,00	€ 123,00	€ 164,00	€ 128,50
€ 146,50 ■	€ 194,85 ■	€ 191,00 ■	€ 146,50 ■	€ 193,00 ■	€ 157,50 ■
€ 129,00	€ 169,50	€ 166,50	€ 129,00	€ 169,50	€ 134,00
€ 129,00	€ 174,50	€ 171,50	€ 129,00	€ 174,50	€ 134,00
-	-	€ 239,00 ■	-	-	€ 216,00
€ 175,00	€ 228,00	€ 229,00	€ 175,00	€ 228,00	€ 197,00 ■
€ 173,00	€ 225,50	€ 227,50	€ 173,00	€ 225,50	€ 194,50
-	-	-	€ 241,50	€ 304,00	€ 236,50
€ 241,50	€ 304,00	€ 307,00	-	-	-
-	-	-	-	-	€ 375,00
-	-	-	-	-	€ 408,00
-	-	-	€ 304,00	€ 430,00	€ 292,00
-	-	-	€ 366,00	€ 490,00	-

p. 220 p. 7



P	●●●●	●●●●	●●●●	●●●●	●●●●
M	●●●●	●●●●	●●●●	●●●●	●●●●
K	●●●●	●●●●	●●●●	●●●●	●●●●
N	●●●●	●●●●	●●●●	●●●●	●●●●
S	●●●●	●●●●	●●●●	●●●●	●●●●
H	○●○●	○●○●	○●○●	○●○●	○●○●

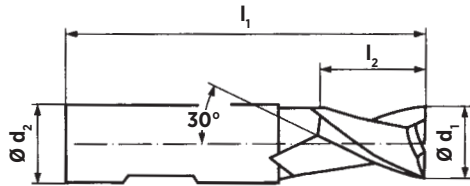
ILLICO NORM \* Articolo a richiesta | Auf Anfrage | On request | Sur demande | Bajo pedido



# ASP-30

## DIN 327

EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



$\emptyset d_1, e_8$	$\emptyset d_1, h_{10}$	$l_2$	$l_1$	$\emptyset d_2, h_6$	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
22		22	88	20	2
24		26	102	25	2
25		26	102	25	2

	3220	3220C
	ASP-030	ASP-030 TICN
	€ 18,40	€ 25,70
	€ 18,40	€ 25,70
	€ 18,40	€ 25,70
	€ 20,10	€ 27,45
	€ 17,70	€ 25,10
	€ 20,10	€ 27,45
	€ 17,70	€ 25,10
	€ 20,10	€ 27,45
	€ 17,70	€ 25,10
	€ 26,20	€ 37,80
	€ 24,05	€ 35,65
	€ 26,20	€ 37,80
	€ 22,75	€ 34,30
	€ 27,25	€ 39,10
	€ 26,20	€ 37,80
	€ 27,25	€ 39,10
	€ 24,95	€ 36,65
	€ 32,75	€ 45,40
	€ 29,90	€ 42,50
	€ 33,40	€ 46,30
	€ 28,55	€ 41,30
	€ 41,30	€ 54,50
	€ 36,85	€ 50,00
	€ 43,50	€ 56,90
	€ 43,30	€ 61,00
	€ 60,40	€ 79,30
	€ 50,60	€ 69,90
	€ 71,00	€ 90,10
	€ 57,30	€ 81,60
	€ 85,00	€ 113,50
	€ 111,50	€ 145,50
	€ 113,50	€ 148,50



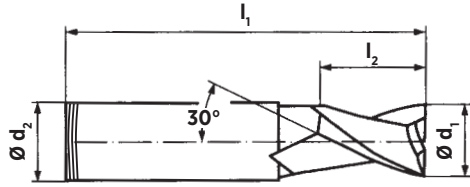
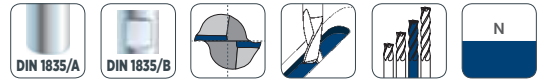
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1, e_8$	$\varnothing d_1, h_{10}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	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
36		53	186	32	2
40		63	196	40	2

	3204	3204C	3206	3206C
	€ 21,90	€ 29,25	-	€ 38,05 ■
	€ 25,20	€ 32,45	€ 29,05 ■	-
	€ 22,45	€ 29,75	-	-
	€ 25,20	€ 32,45	€ 28,85 ■	€ 41,60 ■
	€ 22,45	€ 32,10	€ 26,40 ■	€ 41,40 ■
	€ 25,20	€ 34,80	-	€ 44,50 ■
	€ 22,45	€ 32,10	-	€ 41,40 ■
	€ 30,65	€ 47,10	-	-
	€ 27,95	€ 44,40	€ 31,90 ■	-
	€ 30,65	€ 47,10	€ 34,70 ■	-
	€ 26,95	€ 43,50	€ 30,75 ■	-
	€ 34,00	€ 50,60	-	€ 62,20 ■
	€ 35,10	€ 52,00	-	-
	€ 35,10	€ 52,00	€ 38,95 ■	€ 63,20 ■
	€ 28,50	€ 45,00	-	€ 55,80 ■
	-	-	-	€ 64,80 ■
	€ 35,10	€ 52,90	-	€ 64,80 ■
	-	-	€ 38,20 ■	€ 64,80 ■
	€ 32,40	€ 50,00	-	€ 61,60 ■
	€ 45,40	€ 64,80	€ 49,90 ■	-
	€ 42,80	€ 62,60	-	€ 75,30 ■
	€ 52,90	€ 72,10	-	€ 86,90 ■
	€ 50,60	€ 75,50	-	€ 91,10 ■
	€ 75,50	€ 108,50	€ 80,60 ■	€ 129,50 ■
	€ 64,30	€ 97,80	€ 69,40 ■	-
	€ 79,30	€ 112,50	-	€ 134,00 ■
	€ 66,50	€ 99,50	€ 72,00 ■	-
	€ 87,20	€ 139,00	-	€ 164,50 ■
	€ 112,50	€ 192,50	€ 118,00 ■	€ 223,50 ■
	€ 112,50	€ 192,50	€ 118,00 ■	€ 223,50 ■
	-	-	€ 157,00 ■	€ 290,00 ■
	€ 151,50	€ 250,50	€ 157,00 ■	€ 290,00 ■
	€ 174,50	€ 273,00	-	€ 316,00 ■
	€ 181,00	€ 290,00	-	-
	€ 310,00	€ 420,00	-	-
	€ 275,00	€ 385,00	-	-
	-	-	-	€ 548,00
P	●●●●	●●●●	●●●●	●●●●
M	●●●●	●●●●	●●●●	●●●●
K	●●●●	●●●●	●●●●	●●●●
N	●●●●	●●●●	●●●●	●●●●
S	●●●●	●●●●	●●●●	●●●●
H	○●○●	○●○●	○●○●	○●○●



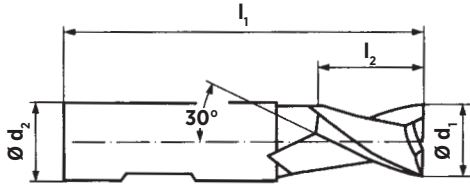




# ASP-30

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1, e_8$     $\emptyset d_1, h_{10}$     $l_2$     $l_1$     $\emptyset d_2, h_6$     $Z$

$\emptyset d_1, e_8$	$\emptyset d_1, h_{10}$	$l_2$	$l_1$	$\emptyset d_2, h_6$	$Z$
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

**3224**   **3224C**

ASP-030

ASP-030  
TiCN

€ 26,80	€ 34,15
€ 30,80	€ 38,15
€ 27,45	€ 37,20
€ 30,80	€ 40,50
€ 27,45	€ 39,55
€ 30,80	€ 42,80
€ 27,45	€ 39,55
€ 37,65	€ 53,90
€ 34,15	€ 51,00
€ 37,65	€ 53,90
€ 32,75	€ 49,50
€ 41,50	€ 58,70
€ 43,00	€ 59,30
€ 43,00	€ 59,30
€ 34,80	€ 51,60
€ 43,00	€ 61,00
€ 43,00	€ 61,00
€ 43,00	€ 61,00
€ 39,55	€ 57,30
€ 60,40	€ 79,30
€ 56,30	€ 76,10
€ 69,90	€ 88,90
€ 66,50	€ 91,70
€ 99,50	€ 132,50
€ 85,00	€ 118,50
€ 104,50	€ 138,00
€ 87,20	€ 120,50
€ 114,50	€ 166,00
€ 148,00	€ 228,00
€ 148,00	€ 228,00

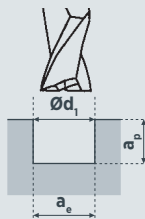


P  
M  
K  
N  
S  
H



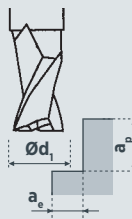
## TIPO N | TYPE N

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

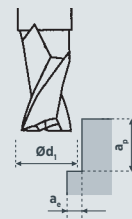


$$a_p = 0.5 \times d_1 \text{ mm}$$

$$a_e = d_1 \text{ mm}$$



$$a_p = 0.25 \times d_1 \text{ mm}$$



$$a_p = 1.5 \times d_1 \text{ mm}$$

Ø	CONTORNATURA   SIDE MILLING				
	CAVA DAL PIENO $f_z$ SLOTING $f_z$	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0.3 \times d_1 \text{ mm}$	FINITURA $f_z$ FINISHING $f_z$	$a_e = 0.02 \times d_1 \text{ mm}$
1	0,005	0,007	0,30	0,010	0,02
2	0,007	0,012	0,60	0,016	0,04
3	0,011	0,018	0,90	0,024	0,06
4	0,014	0,024	1,20	0,032	0,08
5	0,018	0,030	1,50	0,040	0,10
6	0,022	0,036	1,80	0,048	0,12
8	0,029	0,048	2,40	0,064	0,16
10	0,036	0,060	3,00	0,080	0,20
12	0,043	0,072	3,60	0,096	0,24
14	0,050	0,084	4,20	0,112	0,28
16	0,058	0,096	4,80	0,128	0,32
18	0,065	0,108	5,40	0,144	0,36
20	0,072	0,120	6,00	0,160	0,40
25	0,090	0,150	7,50	0,200	0,50
28	0,101	0,168	8,40	0,224	0,56
32	0,115	0,192	9,60	0,256	0,64
36	0,130	0,216	10,80	0,288	0,72
40	0,144	0,240	12,00	0,320	0,80
45	0,162	0,270	13,50	0,360	0,90
50	0,180	0,300	15,00	0,400	1,00













































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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-
	Max	40	30	20	15	12	35	25	50	40	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	-	-	-
	Max	35	25	20	10	8	25	20	45	35	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (cava dal pieno) "f<sub>z</sub>" 0,058 materiale gruppo P<sub>3</sub> - 0,058x0,6 = 0,035 "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) "f<sub>z</sub>" 0,058 material group P<sub>3</sub> - 0,058x0,6 = 0,035 "f<sub>z</sub>"



DIN	Tipo			Serie	Materiale	Rivestimento					Rif. pag.
327	N				HSS-Co8	TICN	-	●	●	-	10
844K	N				HSS-Co8	TICN TIALN FUTURA	-	●	●	-	12
844K	N				ASP-30	TICN	-	●	-	-	14
ILLICO NORM	N				HSS-Co8	TICN	-	●	-	-	15
ILLICO NORM	N				ASP-30	TICN	-	●	-	-	16
844K	N				ASP-30	TICN	-	●	-	-	18
844K	W				HSS-Co8	TICN	-	●	●	-	19
844K	W				ASP-30	TICN	-	●	-	-	20
844L	W				HSS-Co8	TICN	-	●	●	-	21
844L	W				ASP-30	TICN	-	●	-	-	22
844L	AH AERO				ASP-60	TICN	-	●	-	-	23
845K	W				HSS-Co5	TICN	-	-	-	●	24
844K	WF				HSS-Co5	TICN	●	-	-	-	25
844K	WF				ASP-30	TICN	-	●	-	-	26
844L	WF				HSS-Co5	TICN	-	●	-	-	27
844L	WF				ASP-30	TICN	-	●	-	-	28
844L	AHR AERO				ASP-60	-	-	●	-	-	29
844K	NR				ASP-60	TICN	-	●	-	-	30

# FRESE A CANDELA A 3 TAGLIENTI

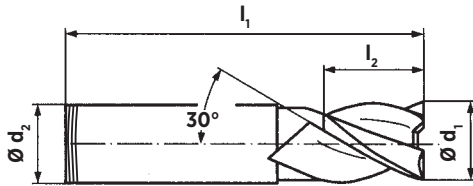
- SCHAFTFRÄSER MIT 3 SCHNEIDEN
- END MILLS WITH 3 FLUTES
- FRAISES AVEC 3 DENTS
- FRESAS DE 3 LABIOS



# HSS-Co8

## DIN 327

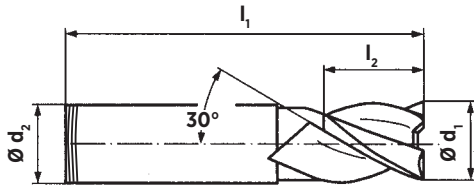
EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



$\varnothing d_1, e_8$	$\varnothing d_1, h_{10}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	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

	3308	3308C	3310
	HSS-Co8	HSS-Co8 TiCN	HSS-Co8
	€ 18,95	€ 25,65	-
	€ 15,40	€ 22,15	-
	€ 15,40	€ 22,15	-
	€ 18,95	€ 25,65	-
	€ 15,40	€ 22,15	-
	€ 16,80	€ 23,55	€ 20,30 ■
	€ 18,95	€ 25,65	-
	€ 15,40	€ 22,15	-
	€ 16,80	€ 23,55	-
	€ 18,95	€ 25,65	-
	€ 15,40	€ 22,15	€ 18,10 ■
	€ 16,80	€ 23,55	-
	€ 18,95	€ 25,65	-
	€ 15,40	€ 22,15	€ 18,10 ■
	€ 22,75	€ 35,15	€ 26,00
	€ 28,65	€ 41,10	-
	€ 22,15	€ 34,65	€ 24,95 ■
	€ 22,75	€ 35,15	-
	€ 23,25	€ 35,70	-
	€ 19,45	€ 31,70	€ 21,90 ■
	€ 23,25	€ 35,70	-
	€ 28,65	€ 41,10	-
	€ 22,15	€ 34,65	-
	€ 24,40	€ 36,80	-
	€ 25,95	€ 38,40	-
	€ 22,15	€ 34,65	-
	€ 28,65	€ 42,10	-
	€ 33,00	€ 46,50	-
	€ 25,95	€ 39,30	-
	€ 28,65	€ 42,10	-
	€ 30,80	€ 44,10	-
	€ 23,75	€ 37,20	€ 27,10 ■
	€ 43,30	€ 56,60	-
	€ 34,65	€ 48,80	€ 36,90 ■
	€ 37,80	€ 52,00	-
	€ 31,35	€ 45,50	-
P	●●●	●●●	●●●
M	●●●	●●●	●●●
K	●●●	●●●	●●●
N	●●●	●●●	●●●
S	●●●	●●●	●●●
H	○●○	○●○	○●○





$\varnothing d_1, e_8$	$\varnothing d_1, h_{10}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	Z
14,7	16	73	12	3	
15	16	73	12	3	
15,7	19	79	16	3	
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 <sup>▲</sup>	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	

3308	3308C	3310
€ 46,60	€ 61,00	-
€ 35,15	€ 49,30	€ 36,90 ■
€ 45,40	€ 68,20	-
€ 35,65	€ 58,10	€ 38,95 ■
€ 66,00	€ 86,00	-
€ 52,40	€ 72,70	-
€ 53,60	€ 73,80	-
€ 45,00	€ 65,50	-
€ 61,00	€ 81,00	-
€ 59,80	€ 83,80	-
€ 48,70	€ 73,20	-
€ 86,70	€ 114,50	-
€ 70,40	€ 98,30	-
€ 112,00	€ 145,50	-
€ 94,40	€ 128,50	-
€ 117,00	€ 151,00	-
€ 91,10	€ 125,00	-
€ 111,00	€ 151,00	-
€ 166,50	€ 207,00	-
€ 132,00	€ 172,50	€ 130,00 ■
€ 176,50	€ 217,00	-
€ 141,00	€ 181,50	-
€ 138,00	€ 183,50	-
€ 232,00	€ 286,00	-
€ 210,50	€ 265,00	-
€ 185,00	€ 239,50	-

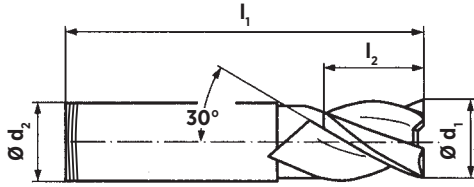
p. 220 p. 31

P			
M			
K			
N			
S			
H			

# HSS-Co8

## DIN 844K

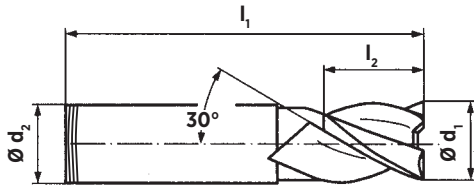
CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1, e_8$	$\emptyset d_1, h_{10}$	$l_2$	$l_1$	$\emptyset d_2, h_6$	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

	3300	3300C	3300F	3302
	€ 20,00	€ 27,35	€ 28,05	€ 23,10 ■
	€ 16,40	€ 23,60	€ 24,30	€ 19,50 ■
	€ 16,40	€ 23,60	€ 24,30	€ 19,50 ■
	€ 20,00	€ 27,35	€ 28,05	€ 23,10 ■
	€ 16,40	€ 23,60	€ 24,30	-
	€ 18,35	€ 25,70	€ 26,35	€ 23,10 ■
	€ 20,00	€ 27,35	€ 28,05	€ 21,95 ■
	€ 16,40	€ 23,60	€ 24,30	-
	€ 18,35	€ 25,70	€ 26,35	€ 21,50 ■
	€ 20,00	€ 27,35	€ 28,05	€ 23,10 ■
	€ 16,40	€ 23,60	€ 24,30	-
	€ 18,35	€ 25,70	€ 26,35	-
	€ 20,00	€ 27,35	€ 28,05	€ 23,10 ■
	€ 16,40	€ 23,60	€ 24,30	-
	€ 23,80	€ 35,40	€ 36,65	-
	€ 28,40	€ 40,00	€ 41,30	€ 31,40 ■
	€ 23,40	€ 35,00	€ 36,15	-
	€ 23,80	€ 35,40	€ 36,65	€ 26,60 ■
	€ 25,20	€ 36,85	€ 38,15	€ 28,00 ■
	€ 20,80	€ 32,40	€ 33,65	-
	€ 24,80	€ 36,40	€ 37,80	€ 28,00 ■
	€ 28,40	€ 40,00	€ 41,30	€ 31,40 ■
	€ 23,40	€ 35,00	€ 36,15	-
	€ 26,05	€ 37,65	€ 38,85	€ 29,05 ■
	€ 26,95	€ 38,55	€ 39,80	€ 29,75 ■
	€ 22,85	€ 34,50	€ 35,70	-
	€ 29,75	€ 43,00	€ 44,10	-
	€ 32,55	€ 45,90	€ 47,10	€ 40,10 ■
	€ 27,40	€ 40,50	€ 42,10	-
	€ 29,75	€ 43,00	€ 44,10	€ 32,55 ■
	€ 32,00	€ 45,20	€ 46,50	€ 34,70 ■
	€ 26,65	€ 39,80	€ 41,10	-
	€ 43,50	€ 56,90	€ 58,70	-
	€ 36,65	€ 51,00	€ 52,90	-
	€ 40,00	€ 54,50	€ 56,30	€ 42,40 ■
	€ 33,10	€ 47,60	€ 49,10	-
P	●●●	●●●	●●●	●●●
M	●○○	●●○	●●○	●○○
K	●○○	●●○	●●○	●○○
N	●○○	●○○	●○○	●○○
S	●○○	●○○	●○○	●○○
H	○○○	○○○	○○○	○○○





$\varnothing d_1, e_8$	$\varnothing d_1, h_{10}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	Z
14,7		26	83	12	3
15		26	83	12	3
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
18,7		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
25,7		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

3300	3300C	3300F	3302
€ 45,90	€ 60,40	€ 62,60	-
€ 37,80	€ 52,00	€ 53,90	-
€ 46,50	€ 67,70	€ 69,90	€ 49,90 ■
€ 38,85	€ 59,80	€ 62,60	€ 42,40 ■
€ 66,50	€ 90,60	€ 91,10	€ 68,90 ■
€ 54,90	€ 79,30	€ 80,00	-
€ 56,90	€ 81,00	€ 81,60	€ 59,70 ■
€ 46,90	€ 71,60	€ 72,10	-
€ 76,60	€ 100,50	€ 101,00	€ 78,40 ■
€ 63,20	€ 87,70	€ 88,40	-
€ 62,60	€ 87,20	€ 87,70	€ 66,60 ■
€ 52,00	€ 76,60	€ 77,10	-
€ 89,40	€ 121,00	€ 122,50	-
€ 74,90	€ 107,00	€ 108,00	€ 78,40 ■
€ 116,00	€ 153,00	€ 155,00	€ 116,50 ■
€ 97,30	€ 134,50	€ 137,00	€ 98,80 ■
€ 116,00	€ 153,00	€ 155,00	€ 116,50 ■
€ 97,30	€ 134,50	€ 137,00	€ 98,80 ■
€ 137,00 ■	€ 189,06 ■	€ 191,80 ■	€ 142,50 ■
€ 119,50	€ 164,00	€ 162,00	€ 109,00 ■
€ 159,00 ■	€ 219,42 ■	€ 206,70 ■	-
€ 139,50	€ 184,00	€ 181,00	€ 149,50 ■
€ 160,00 ■	€ 220,80 ■	€ 208,00 ■	-
€ 146,00	€ 191,00	€ 188,00	€ 132,50 ■
€ 146,00	€ 193,50	€ 191,00	-
€ 239,00	€ 296,00	€ 297,00	€ 213,50 ■
-	€ 263,00 ■	€ 264,00 ■	€ 195,00 ■
-	-	-	€ 176,50 ■

p. 220 p. 31

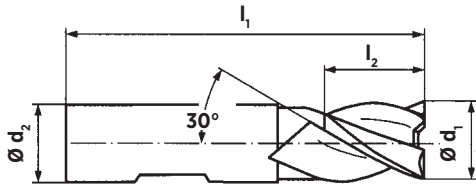
P	●●●●	●●●●	●●●●	●●●●
M	●○○○	●○○○	●○○○	●○○○
K	●○○○	●○○○	●○○○	●○○○
N	●○○○	●○○○	●○○○	●○○○
S	●○○○	●○○○	●○○○	●○○○
H	○○○○	○○○○	○○○○	○○○○



# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 e_8$     $\varnothing d_1 h_{10}$     $l_2$     $l_1$     $\varnothing d_2 h_6$    Z

$\varnothing d_1 e_8$	$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

3320

3320C

ASP-030

ASP-030  
TiCN

€ 17,65	€ 25,00
€ 17,65	€ 25,00
€ 17,65	€ 25,00
€ 19,75	€ 27,05
€ 17,65	€ 25,00
€ 19,75	€ 27,05
€ 17,65	€ 25,00
€ 19,75	€ 27,05
€ 17,65	€ 25,00
€ 19,75	€ 27,05
€ 17,65	€ 25,00
€ 25,65	€ 37,40
€ 25,25	€ 36,85
€ 25,65	€ 37,40
€ 22,85	€ 34,15
€ 26,90	€ 38,55
€ 25,25	€ 36,85
€ 28,05	€ 39,80
€ 24,60	€ 36,25
€ 34,80	€ 47,60
€ 32,15	€ 44,70
€ 34,80	€ 47,60
€ 31,15	€ 44,40
€ 46,50	€ 61,00
€ 42,10	€ 56,30
€ 47,80	€ 62,60
€ 49,50	€ 70,40
€ 69,90	€ 93,90
€ 59,80	€ 84,40
€ 80,00	€ 104,00
€ 66,50	€ 90,60
€ 95,00	€ 127,00
€ 123,00	€ 160,50
€ 122,50	€ 154,50



p. 220



p. 31

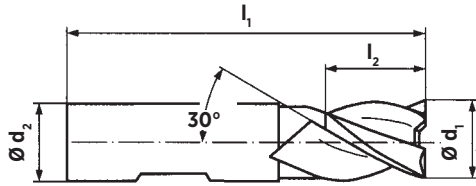
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1, e_8$	$\emptyset d_1, h_{10}$	$l_2$	$l_1$	$\emptyset d_2, h_6$	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
7		16	80	10	3
	7,75	19	88	10	3
8		19	88	10	3
	9	19	88	10	3
	9,7	22	95	10	3
10		22	95	10	3
	11	22	102	12	3
	11,7	26	110	12	3
12		26	110	12	3
	13	26	110	12	3
	13,7	26	110	12	3
14		26	110	12	3
	15	26	110	12	3
	15,7	32	123	16	3
16		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
20		38	141	20	3
	21,7	38	141	20	3

	3304	3304C
	€ 25,20	€ 32,50
	€ 20,90	€ 28,25
	€ 24,05	€ 31,35
	€ 25,20	€ 32,50
	€ 20,90	€ 28,25
	€ 25,20	€ 32,50
	€ 25,20	€ 34,85
	€ 20,90	€ 30,65
	€ 25,20	€ 34,85
	€ 25,20	€ 34,85
	€ 20,90	€ 30,65
	€ 29,05	€ 45,70
	€ 31,40	€ 47,80
	€ 26,05	€ 42,50
	€ 30,85	€ 47,30
	€ 32,55	€ 49,10
	€ 27,70	€ 44,10
	€ 35,90	€ 53,90
	€ 39,55	€ 57,30
	€ 32,55	€ 50,60
	€ 37,20	€ 56,30
	€ 53,50	€ 72,70
	€ 44,10	€ 63,20
	€ 52,00	€ 71,60
	€ 62,60	€ 87,20
	€ 52,00	€ 77,10
	€ 81,00	€ 114,50
	€ 81,00	€ 114,50
	€ 68,20	€ 101,50
	€ 96,70 ■	€ 143,11 ■
	€ 85,00	€ 118,50
	€ 69,90	€ 103,50
	€ 97,30 ■	€ 144,00 ■



p. 220



p. 31

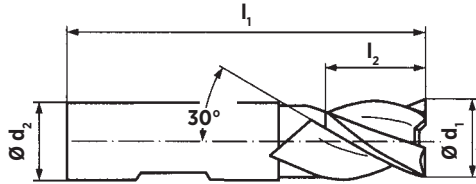
P  
M  
K  
N  
S  
H



# ASP-30

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 e_8$	$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-----------------------	--------------------------	-------	-------	-----------------------	---

3		8	56	6	3
	3,5	10	59	6	3
	4,5	11	63	6	3
7		16	80	10	3
8		19	88	10	3
9		19	88	12	3
11		22	95	12	3
12		26	110	12	3
15		26	110	16	3
17		32	123	16	3
20		38	141	20	3
24		45	166	25	3

3324	3324C
------	-------

HSS-Co8

HSS-Co8  
TiCN

-	€ 30,65 ■
-	€ 34,25 ■
€ 35,70 ■	€ 35,35 ■
€ 33,20 ■	€ 44,00 ■
€ 29,75 ■	€ 40,40 ■
€ 35,60 ■	€ 46,20 ■
-	€ 52,40 ■
-	€ 49,00
€ 59,70 ■	€ 80,59 ■
€ 93,50 ■	€ 126,22 ■
€ 79,60 ■	€ 107,46 ■
€ 139,00 ■	€ 170,00 ■



P  
M  
K  
N  
S  
H



# SETTORI DI COMPETENZA

## COMPETENCE FIELDS



Angelo Ghezzi & C SpA



**Energia**  
Energy



**Medicale**  
Medical



**Meccanica Pesante**  
Heavy Industry



**Aerospaziale**  
Aerospace



**Meccanica Generale**  
General Engineering



**Stampisti**  
Die-Mold

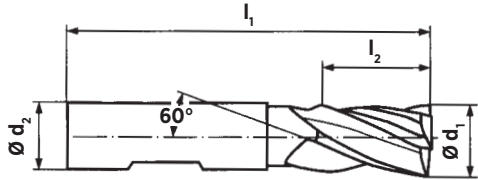


**Automobilistico**  
Automotive

# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

**4330C**



€ 53,10 ■
€ 66,75 ■
€ 71,87 ■
€ 81,25 ■
€ 113,50 ■
€ 171,87 ■
€ 221,00 ■



p. 220

p. 31

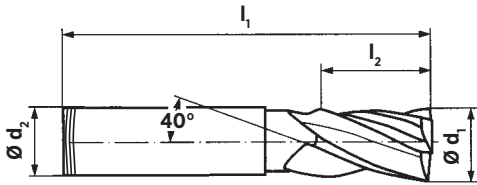
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



Ø d <sub>2</sub> k <sub>10</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	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
36	53	133	32	4

4300	4300C	4302	4302C
------	-------	------	-------

HSS-Co8	HSS-Co8 TiCN	HSS-Co8	HSS-Co8 TiCN
€ 23,40	€ 30,75	€ 26,40 ■	€ 38,60 ■
-	-	€ 26,10 ■	€ 38,95 ■
€ 22,85	€ 29,95	€ 25,65 ■	€ 37,75 ■
€ 22,80 ■	€ 29,64 ■	€ 27,45 ■	€ 40,60 ■
€ 20,25	€ 27,60	€ 23,35 ■	€ 34,32 ■
-	-	€ 29,20 ■	€ 42,92 ■
€ 20,25	€ 27,60	€ 23,35 ■	€ 35,15 ■
€ 20,90	€ 28,25	€ 23,85 ■	€ 35,70 ■
€ 27,80	€ 39,55	€ 30,75 ■	€ 48,50 ■
€ 24,30	€ 35,90	€ 27,30 ■	€ 44,20 ■
€ 32,00	€ 43,70	€ 34,95 ■	€ 53,20 ■
€ 27,40	€ 39,10	€ 30,25 ■	€ 47,90 ■
-	€ 45,00 ■	€ 37,80 ■	€ 59,00 ■
€ 31,40	€ 44,70	€ 34,25 ■	€ 54,30 ■
-	-	-	€ 71,10 ■
€ 37,20	€ 51,60	€ 39,70 ■	€ 61,60 ■
-	-	-	€ 72,70 ■
€ 45,20	€ 66,50	€ 48,40 ■	€ 79,00 ■
-	-	€ 68,20 ■	€ 107,00 ■
€ 59,30	€ 66,50	€ 61,80 ■	€ 98,00 ■
-	-	€ 82,20 ■	€ 124,00 ■
€ 69,90	€ 94,40	€ 73,60 ■	€ 111,50 ■
€ 85,00	€ 116,50	€ 87,60 ■	€ 136,00 ■
€ 93,00 ■	€ 129,00 ■	€ 98,30 ■	€ 154,50 ■
€ 96,70	€ 134,00	€ 98,30 ■	€ 154,50 ■
-	-	€ 130,00 ■	€ 199,50 ■
€ 106,00 ■	€ 149,00 ■	€ 121,50 ■	€ 188,50 ■
€ 127,50 ■	€ 178,5 ■	€ 145,00 ■	€ 216,50 ■
-	€ 172,50 ■	-	€ 218,00 ■
-	-	-	€ 307,00 ■
€ 376,00	€ 417,00	€ 187,50	€ 283,00

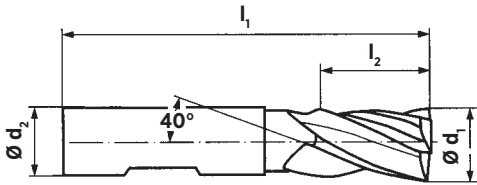


P	○○○	○○○	○○○	○○○
M	○○○	○○○	○○○	○○○
K	○○○	○○○	○○○	○○○
N	●●●	●●●	●●●	●●●
S	○○○	○○○	○○○	○○○
H	○○○	○○○	○○○	○○○



# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1 k_{10}$	$l_2$	$l_1$	$\emptyset d_2 h_6$	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

	4320	4320C
		
	ASP-30	ASP-30 TICN
	€ 27,45	€ 34,80
	€ 27,85	€ 35,15
	€ 26,50	€ 33,85
	€ 25,70	€ 33,10
	€ 23,80	€ 31,15
	€ 31,45	€ 38,85
	€ 23,80	€ 31,15
	€ 24,55	€ 31,90
	€ 32,50	€ 44,10
	€ 28,50	€ 40,30
	€ 37,65	€ 49,50
	€ 32,15	€ 43,90
	€ 42,20	€ 55,40
	€ 36,85	€ 50,00
	€ 56,30	€ 70,40
	€ 45,70	€ 60,40
	€ 57,80	€ 72,10
	€ 55,90	€ 77,10
	€ 82,20	€ 107,00
	€ 72,70	€ 96,70
	€ 99,50	€ 123,50
	€ 86,00	€ 111,00
	€ 104,00	€ 135,50
	€ 114,00 ■	€ 150,00 ■
	€ 119,00	€ 156,00



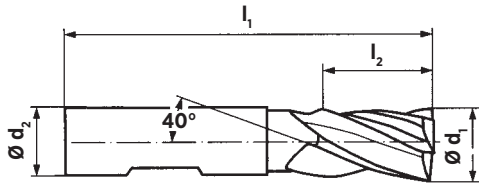
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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
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
35	106	186	32	4
36	106	186	32	4
40	125	217	40	4

	4306	4304	4304C
	€ 26,55	€ 25,20	€ 32,50
	€ 29,15	-	-
	€ 27,15	€ 25,70	€ 33,10
	€ 30,70	-	-
	€ 27,15	€ 25,70	€ 35,40
	€ 26,55	€ 24,95	€ 34,65
	€ 33,95	€ 33,10	€ 49,50
	€ 29,80	€ 28,50	€ 45,20
	€ 38,05	€ 37,80	€ 54,50
	€ 32,90	€ 32,00	€ 48,60
	€ 43,00	-	-
	€ 37,00	€ 36,65	€ 54,50
	€ 51,00	-	-
	€ 49,50	€ 50,00	€ 69,30
	€ 63,20	€ 57,80	€ 82,70
	-	€ 71,00	€ 104,50
	€ 87,70	€ 90,10	€ 123,50
	€ 106,00	€ 110,50	€ 162,50
	€ 120,50	€ 128,00	€ 207,50
	€ 120,50	€ 128,00	€ 207,50
	€ 161,00	-	-
	€ 156,50	€ 146,00	€ 243,50
	€ 184,50	€ 173,50	€ 272,00
	€ 203,00	€ 191,00	€ 299,00
	€ 262,00	-	-
	-	-	€ 645,00
	-	€ 368,00	€ 491,00



P	○○○	○○○	○○○
M	○○○	○○○	○○○
K	○○○	○○○	○○○
N	●●●	●●●	●●●
S	○○○	○○○	○○○
H	○○○	○○○	○○○

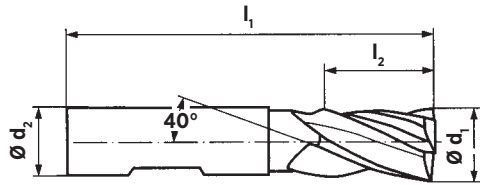
\* Articolo a richiesta | Auf Anfrage | On request | Sur demande | Bajo pedido



# ASP-30

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

	4324	4324C
	ASP-30	ASP-30 TICN
	€ 28,85	€ 36,25
	€ 29,55	€ 39,35
	€ 29,55	€ 39,35
	€ 28,55	€ 38,35
	€ 38,15	€ 54,90
	€ 32,75	€ 49,50
	€ 43,50	€ 59,80
	€ 36,85	€ 53,50
	€ 50,60	€ 68,70
	€ 42,10	€ 59,80
	€ 66,00	€ 85,00
	€ 62,10	€ 81,00
	€ 78,30	€ 97,30
	€ 72,10	€ 96,10
	€ 88,40	€ 121,50
	€ 111,50	€ 145,00
	€ 137,00	€ 188,00
	€ 158,00	€ 238,00
	€ 158,00	€ 238,00

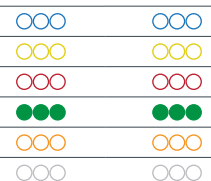


p. 220



p. 32

P  
M  
K  
N  
S  
H



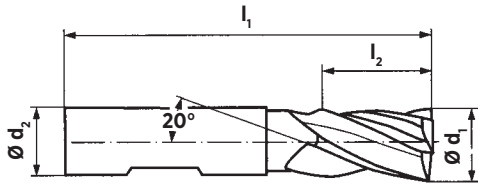
# ASP-60

DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



**AERO**



$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
8	38	88	10	2
10	45	95	10	2
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

4337	
	ASP-60
€ 68,70	
€ 75,30	
€ 128,50	
€ 154,00	
€ 197,00	
€ 270,00	
€ 362,00	
€ 401,00	

p. 220 p. 32

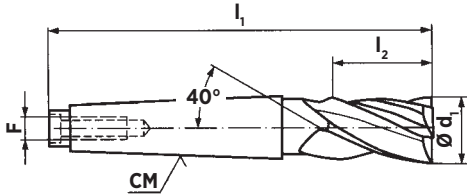
P  
M  
K  
N  
S  
H

○○○  
○○○  
○○○  
●●●  
○○○  
○○○

# HSS-Co5

## DIN 845K

CORTA | KURZ | SHORT | COURTE | CORTA



Ø d <sub>1</sub> k <sub>10</sub>	L <sub>2</sub>	L <sub>1</sub>	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
25	45	147	3	M 12	4
26	45	147	3	M 12	4
27	45	147	3	M 12	4
29	45	147	3	M 12	4
32*	53	201	4	M 16	4
36*	53	201	4	M 16	4
40*	63	211	4	M 16	4
46*	63	211	4	M 16	5

	4308	4308C
	€ 41,30 ■	€ 57,50 ■
	€ 45,30 ■	€ 61,30 ■
	€ 43,20 ■	€ 60,20 ■
	€ 49,60 ■	€ 67,70 ■
	-	€ 64,50 ■
	€ 51,80 ■	€ 70,40 ■
	€ 51,80 ■	-
	-	€ 99,40 ■
	€ 58,00 ■	€ 90,30 ■
	-	€ 107,00 ■
	€ 67,70 ■	€ 99,40 ■
	€ 94,60 ■	€ 138,12 ■
	€ 80,10 ■	€ 116,95 ■
	€ 89,80 ■	€ 131,11 ■
	€ 110,50 ■	€ 161,33 ■
	€ 119,50 ■	€ 174,47 ■
	€ 184,50 ■	€ 269,37 ■
	€ 165,00 ■	€ 240,90 ■
	€ 253,00 ■	€ 369,38 ■
	€ 369,38 ■	€ 539,29 ■
	€ 481,00 ■	€ 702,26 ■



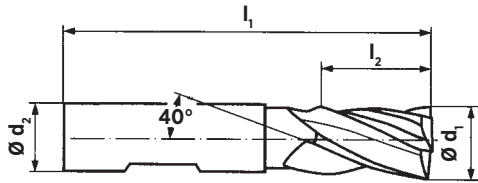
P	○○○	○○○
M	○○○	○○○
K	○○○	○○○
N	●●●	●●●
S	○○○	○○○
H	○○○	○○○

\*Attacco cono Morse DIN 2207 | Morsekegel neck DIN 2207 | Morse taper shank acc. DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

# HSS-Co5

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
10	22	72	10	3
12	26	83	12	3
14	26	83	12	3
18	32	92	16	3
25	45	121	25	3
28	45	121	25	3
32	53	133	32	3
36	53	133	32	3

**5300C**



€ 53,82 ■
€ 57,50 ■
€ 65,52 ■
€ 92,40 ■
€ 152,50 ■
€ 166,40 ■
€ 202,50 ■
€ 272,00 ■

p. 220 p. 33

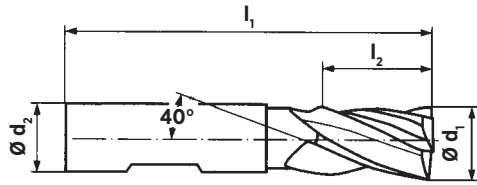
P  
M  
K  
N  
S  
H



# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{12}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

	5320	5320C
--	------	-------



	€ 37,65	€ 45,00
	€ 47,10	€ 59,30
	€ 51,00	€ 62,60
	€ 54,50	€ 67,70
	€ 67,00	€ 81,00
	€ 77,80	€ 99,00
	€ 90,10	€ 114,50
	€ 104,00	€ 129,00
	€ 151,50	€ 188,50



p. 220



p. 33

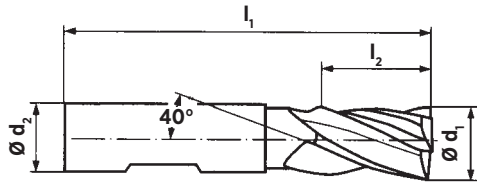
P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
8	38	88	10	3
10	45	95	10	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
36	106	186	32	4

	5304	5304C
	€ 53,50	€ 69,90
	€ 56,90	€ 73,20
	€ 68,70	€ 87,70
	-	€ 107,00 ■
	€ 96,10	€ 129,50
	-	€ 147,50 ■
	€ 166,00	€ 248,00
	€ 188,50 ■	€ 279,00 ■
	€ 295,00 ■	€ 396,00 ■



p. 220



p. 33

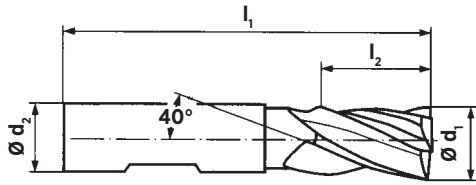
P  
M  
K  
N  
S  
H

○○○	○○○
○○○	○○○
○○○	○○○
●●●	●●●
○○○	○○○
○○○	○○○

# ASP-30

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



5324

5324C



	ASP-30	ASP-30 TICN
	-	€ 78,30
	€ 66,00	€ 82,20
	€ 73,80	€ 91,10
	€ 86,00	€ 105,00
	€ 103,50	€ 129,00
	€ 120,00	€ 153,50
	€ 142,50	€ 175,50
	€ 208,00	€ 291,00

$\emptyset d_1 k_{12}$     $l_2$     $l_1$     $\emptyset d_2 h_6$    Z

$\emptyset d_1 k_{12}$	$l_2$	$l_1$	$\emptyset d_2 h_6$	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



p. 220



p. 33

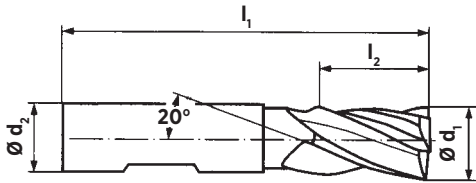
P  
M  
K  
N  
S  
H

	○○○	○○○
	○○○	○○○
	○○○	○○○
	●●●	●●●
	○○○	○○○
	○○○	○○○

# ASP-60

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

**7302**



€ 75,40
€ 77,90
€ 104,00
€ 144,50
€ 142,00
€ 184,00
€ 180,50
€ 312,00
€ 413,00
€ 449,00

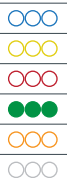


p. 220



p. 33

P  
M  
K  
N  
S  
H

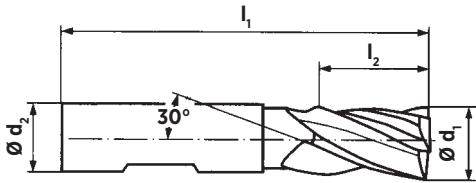






# ASP-60

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 K_{12}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
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

	7301	7301C
		
	ASP-60	ASP-60 TICN
	€ 54,90	€ 61,60
	-	€ 62,90
	€ 66,00	€ 71,10
	€ 81,10	€ 84,10
	€ 89,60	€ 93,40

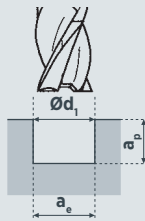


P  
M  
K  
N  
S  
H



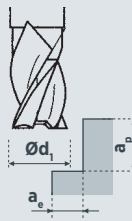
## TIPO N | TYPE N

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

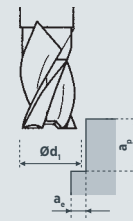


$$a_p = 0.5 \times d_1 \text{ mm}$$

$$a_e = d_1 \text{ mm}$$



$$a_p = 0.25 \times d_1 \text{ mm}$$



$$a_p = 1.5 \times d_1 \text{ mm}$$

Ø	CONTORNATURA   SIDE MILLING				
	CAVA DAL PIENO $f_z$ SLOTING $f_z$	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0.3 \times d_1 \text{ mm}$	FINITURA $f_z$ FINISHING $f_z$	$a_e = 0.02 \times d_1 \text{ mm}$
2	0,007	0,012	0,60	0,016	0,04
3	0,011	0,018	0,90	0,024	0,06
4	0,014	0,024	1,20	0,032	0,08
5	0,018	0,030	1,50	0,040	0,10
6	0,022	0,036	1,80	0,048	0,12
8	0,029	0,048	2,40	0,064	0,16
10	0,036	0,060	3,00	0,080	0,20
12	0,043	0,072	3,60	0,096	0,24
14	0,050	0,084	4,20	0,112	0,28
16	0,058	0,096	4,80	0,128	0,32
18	0,065	0,108	5,40	0,144	0,36
20	0,072	0,120	6,00	0,160	0,40
25	0,090	0,150	7,50	0,200	0,50
28	0,101	0,168	8,40	0,224	0,56
32	0,115	0,192	9,60	0,256	0,64
36	0,130	0,216	10,80	0,288	0,72
40	0,144	0,240	12,00	0,320	0,80
45	0,162	0,270	13,50	0,360	0,90

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-
	Max	40	30	20	15	12	35	25	50	40	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	-	-	-
	Max	35	25	20	10	8	25	20	45	35	-	-	-
* COEFFICIENTE AVANZAMENTO		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4
* FEED COEFFICIENT													

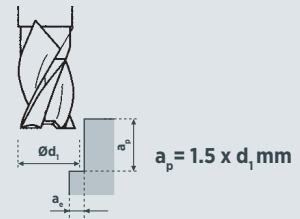
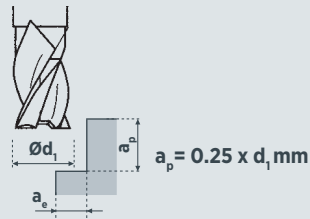
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (cava dal pieno) "f<sub>z</sub>" 0,058 materiale gruppo P<sub>3</sub> - 0,058x0,6 = 0,035 "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) "f<sub>z</sub>" 0,058 material group P<sub>3</sub> - 0,058x0,6 = 0,035 "f<sub>z</sub>"



## TIPO W-AH | TYPE W-AH

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



CONTORNATURA   SIDE MILLING				
Ø	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0.3 \times d_1$ mm	FINITURA $f_z$ FINISHING $f_z$	$a_e = 0.02 \times d_1$ mm
2	0,007	0,60	0,013	0,04
3	0,011	0,90	0,020	0,06
4	0,015	1,20	0,026	0,08
5	0,019	1,50	0,033	0,10
6	0,022	1,80	0,040	0,12
8	0,030	2,40	0,053	0,16
10	0,037	3,00	0,066	0,20
12	0,044	3,60	0,079	0,24
14	0,052	4,20	0,092	0,28
16	0,059	4,80	0,106	0,32
18	0,067	5,40	0,119	0,36
20	0,074	6,00	0,132	0,40
22	0,081	6,60	0,145	0,44
25	0,093	7,50	0,165	0,50
28	0,104	8,40	0,185	0,56
32	0,118	9,60	0,211	0,64
36	0,133	10,80	0,238	0,72
40	0,148	12,00	0,264	0,80
45	0,167	13,50	0,297	0,90

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	-	-	-	-	-	-	-	60	30	-	-	-
	Max	-	-	-	-	-	-	-	80	50	-	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	-	-	-	-	-	-	-	45	20	-	-	-
	Max	-	-	-	-	-	-	-	100	40	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

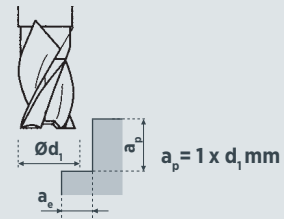
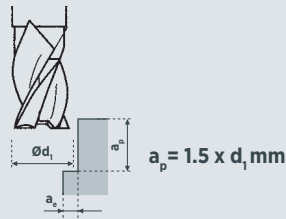
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (finitura)  $f_z$  0,106 materiale gruppo N<sub>1</sub> -  $0,106 \times 1,8 = 0,19$  "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (finishing) "f<sub>z</sub>" 0,106 material group N<sub>1</sub> -  $0,106 \times 1,8 = 0,19$  "f<sub>z</sub>"



## TIPO AHR-WF | TYPE AHR-WF

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



CONTORNATURA   SIDE MILLING				
$\varnothing$	SEMI SGROSSATURA $f_z$ SEMI ROUGHING $f_z$	$a_e = 0.15 \times d_1 \text{ mm}$	SGROSSATURA $f_z$ ROUGHING $f_z$	$a_e = 0.3 \times d_1 \text{ mm}$
2	0,016	0,30	0,012	0,60
3	0,024	0,45	0,018	0,90
4	0,032	0,60	0,024	1,20
5	0,040	0,75	0,030	1,50
6	0,048	0,90	0,036	1,80
8	0,064	1,20	0,048	2,40
10	0,080	1,50	0,060	3,00
12	0,096	1,80	0,072	3,60
14	0,112	2,10	0,084	4,20
16	0,128	2,40	0,096	4,80
18	0,144	2,70	0,108	5,40
20	0,160	3,00	0,120	6,00
22	0,176	3,30	0,132	6,60
25	0,200	3,75	0,150	7,50
28	0,224	4,20	0,168	8,40
32	0,256	4,80	0,192	9,60
36	0,288	5,40	0,216	10,80
40	0,320	6,00	0,240	12,00
45	0,360	6,75	0,270	13,50

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	-	-	-	-	-	-	-	60	30	-	-	-
	Max	-	-	-	-	-	-	-	80	50	-	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	-	-	-	-	-	-	-	45	20	-	-	-
	Max	-	-	-	-	-	-	-	100	40	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

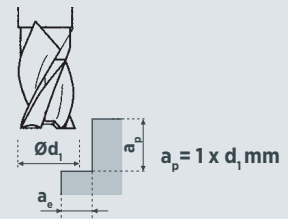
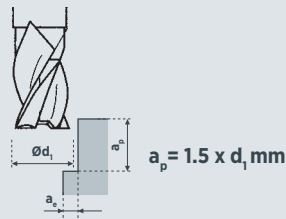
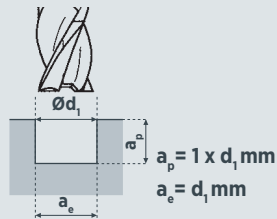
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\varnothing$  16 (sgrossatura)  $f_z$  0,096 materiale gruppo N<sub>1</sub> -  $0,096 \times 1,8 = 0,17$  "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\varnothing$  16 (roughing) "f<sub>z</sub>" 0,096 material group N<sub>1</sub> -  $0,096 \times 1,8 = 0,17$  "f<sub>z</sub>"



## TIPO NR | TYPE NR

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



Ø	CONTORNATURA   SIDE MILLING				
	CAVA DAL PIENO $f_z$ SLOTING $f_z$	SEMI SGROSSATURA $f_z$ SEMI ROUGHING $f_z$	$a_e = 0.1 \times d_1$ mm	SGROSSATURA $f_z$ ROUGHING $f_z$	$a_e = 0.3 \times d_1$ mm
6	0,021	0,030	0,60	0,024	1,80
8	0,028	0,040	0,80	0,032	2,40
10	0,035	0,050	1,00	0,040	3,00
12	0,042	0,060	1,20	0,048	3,60
14	0,049	0,070	1,40	0,056	4,20
16	0,056	0,080	1,60	0,064	4,80
18	0,063	0,090	1,80	0,072	5,40
20	0,070	0,100	2,00	0,080	6,00
22	0,077	0,110	2,20	0,088	6,60
25	0,088	0,125	2,50	0,100	7,50
28	0,098	0,140	2,80	0,112	8,40
32	0,112	0,160	3,20	0,128	9,60
36	0,126	0,180	3,60	0,144	10,80

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	25	10	15	10	25	10	-	50	15	-	-
	Max	60	50	20	30	20	50	20	-	70	25	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	-	-	-	-	-	-	-	-	-	-	-	-
	Max	-	-	-	-	-	-	-	-	-	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (cava dal pieno) " $f_z$ " 0,056 materiale gruppo M<sub>1</sub> -  $0,056 \times 0,6 = 0,033$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) " $f_z$ " 0,056 material group M<sub>1</sub> -  $0,056 \times 0,6 = 0,033$  " $f_z$ "























































**SERVIZI DI  
RIAFFILATURA  
RIVESTIMENTO**

RE-SHARPENING  
AND COATING  
SERVICE



**Angelo Ghezzi & C SpA**



DIN	Tipo			Serie	Materiale	Rivestimento					Rif. pag.
ILICO NORM	N				HSS-Co8	TICN	-	●	-	-	38
844K	N				HSS-Co8	TICN TIALN FUTURA	-	●	●	-	39
844K	HS				ASP-30	TICN	-	●	-	-	41
844K	NJC				HSS-Co8	TICN	●	●	-	-	42
844K	N				HSS-Co8	TICN	-	●	-	-	43
844K	N				ASP-30	TICN	-	●	-	-	44
844K	N				HSS-Co8	TICN	-	●	-	-	45
844K	SW HIGH ALLOYS				HSS-Co8	TICN	●	●	-	-	46
844K	VA INOX				HSS-Co8	TICN	●	●	-	-	47
844K	SW HIGH ALLOYS				ASP-60	TICN	●	●	-	-	48
844K	VA INOX				ASP-60	TICN	●	●	-	-	49
844L	VA INOX				ASP-60	TICN	-	●	-	-	50
844L	HS				ASP-30	TICN	-	●	-	-	52
ILICO NORM	N				HSS-Co8	TICN	-	●	-	-	53
845K	N				HSS-Co5	-	-	-	-	●	54
845L	N				HSS-Co5	-	-	-	-	●	55

# FRESE A CANDELA A 4<sup>E</sup>+ TAGLIENTI

*Finitura*

- SCHLICHT SCHAFTFRÄSER MIT 4 UND MEHR SCHNEIDEN
- FINISHING END MILLS WITH 4 OR MORE FLUTES
- FRAISES AVEC 4 OU PLUS DE DENTS POUR FINITION
- FRESAS DE 4 O MAS LABIOS, DE ACABADO



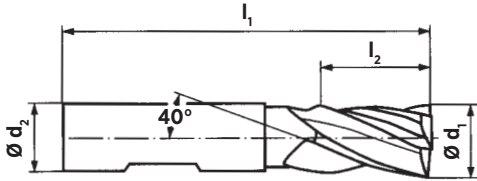
ILLI-CO HIGH QUALITY



# HSS-Co8

## ILLICO NORM\*

EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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
20	22	88	20	4

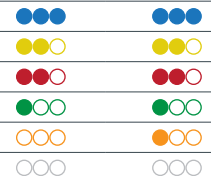
	4400	4400C
--	------	-------



	€ 20,05	€ 28,15
	-	€ 37,05
	€ 25,40	€ 38,30
	€ 32,65	€ 46,70
	€ 35,40	€ 50,00
	€ 39,10	€ 58,50
	€ 56,40	€ 83,50



P  
M  
K  
N  
S  
H

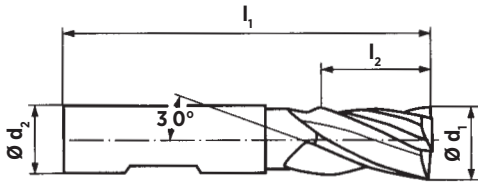
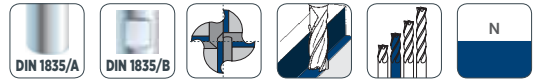


\*Similare a DIN 327 | Ähnlich DIN 327 | Similar to DIN 327 | Similaire DIN 327 | Similar a DIN 327

# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



Ø d <sub>1</sub> k <sub>10</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	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

4404	4404C	4404F	4406	4406C
€ 20,30	€ 28,40	€ 29,25 ■	€ 25,85 ■	€ 39,25 ■
€ 20,75	€ 28,85	€ 29,75	€ 26,55 ■	€ 40,00 ■
€ 19,00	€ 27,20	€ 27,90	-	€ 37,90 ■
€ 21,70	€ 29,85	€ 30,60	€ 27,55 ■	€ 41,30 ■
€ 19,00	€ 27,20	€ 27,90	-	€ 37,90 ■
€ 24,00	€ 32,10	€ 32,90	€ 30,05 ■	€ 44,10 ■
€ 19,00	€ 27,20	€ 27,90	€ 24,75 ■	€ 37,90 ■
€ 24,30	€ 32,35	€ 33,20	€ 30,40 ■	€ 46,51 ■
€ 19,30	€ 27,40	€ 28,15	-	-
€ 26,70	€ 39,45	€ 41,10	€ 32,90 ■	€ 52,70 ■
€ 23,45	€ 36,25	€ 37,70	€ 29,50 ■	-
€ 26,40	€ 39,25	€ 40,80	€ 32,90 ■	€ 52,70 ■
€ 22,95	€ 35,70	€ 37,05	-	-
€ 29,40	€ 42,40	€ 43,80	€ 36,15 ■	€ 56,60 ■
€ 26,70	€ 39,45	€ 41,10	-	-
€ 29,40	€ 42,40	€ 43,80	€ 36,15 ■	€ 56,60 ■
€ 25,90	€ 38,70	€ 40,10	-	-
€ 34,35	€ 48,80	€ 50,60	€ 41,20 ■	€ 63,45 ■
€ 29,70	€ 44,30	€ 45,60	-	€ 58,50 ■
€ 36,15	€ 50,80	€ 52,10	€ 43,00 ■	€ 66,60 ■
€ 29,15	€ 43,80	€ 45,10	-	-
€ 37,95	€ 54,30	€ 56,00	-	-
€ 35,05	€ 51,10	€ 52,70	-	-
€ 38,45	€ 54,80	€ 56,40	€ 45,60 ■	€ 70,22 ■
€ 40,20	€ 63,30	€ 66,20	-	-
€ 57,90	€ 85,30	€ 86,00	-	-
€ 49,40	€ 76,60	€ 77,30	-	-
€ 70,50	€ 97,70	€ 98,30	€ 80,40 ■	€ 121,4 ■
€ 60,30	€ 87,20	€ 87,70	-	-
€ 77,90	€ 112,50	€ 114,50	-	€ 143,50 ■
€ 70,50	€ 105,00	€ 107,50	-	-
€ 92,70	€ 127,50	€ 129,50	€ 106,50 ■	€ 161,50 ■
€ 89,00	€ 130,00	€ 132,00	-	€ 162,50 ■
€ 89,60	€ 131,00	€ 133,00	€ 101,50 ■	€ 163,41 ■
€ 108,50	€ 158,50	€ 155,50	€ 122,00 ■	€ 197,00 ■
€ 106,50	€ 155,50	€ 153,00	-	-

p. 220 p. 56

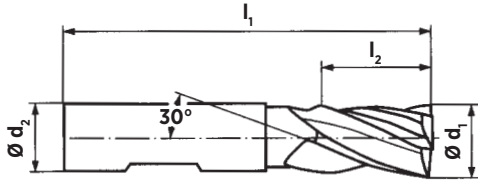
P	●●●	●●●	●●●	●●●	●●●
M	●●●	●●●	●●●	●●●	●●●
K	○●○	○●○	○●○	○●○	○●○
N	●○●	●○●	●○●	●○●	●○●
S	○●○	○●○	○●○	○●○	○●○
H	○●○	○●○	○●○	○●○	○●○

\*Senza taglio al centro | Ohne Zentrumschnitt | Without center cut | Sans coupe au centre | Sin corte al centro

# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



Ø d <sub>1</sub> k <sub>10</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	Z
----------------------------------	----------------	----------------	---------------------------------	---

30*	45	121	25	5
32*	53	133	32	6
36*	53	133	32	6
40*	63	155	40	6
45*	63	155	40	8
50*	75	177	50	8

4404	4404C	4404F	4406	4406C
------	-------	-------	------	-------

HSS-Co8	HSS-Co8 TICN	HSS-Co8 TIALN FUTURA	HSS-Co8	HSS-Co8 TICN
€ 125,00	€ 175,00	€ 171,50	-	-
€ 128,50	€ 180,00	€ 177,50	€ 142,50 ■	€ 223,50 ■
€ 166,00	€ 225,00	€ 227,00	€ 182,50 ■	€ 279,00 ■
€ 261,00	€ 377,00	€ 384,00	-	-
€ 327,00	€ 497,00	€ 488,00	-	-
€ 413,00	€ 587,00	-	-	-

p. 220 p. 56

P	●●●	●●●	●●●	●●●	●●●
M	●●●	●●●	●●●	●●●	●●●
K	○●○	○●○	○●○	○●○	○●○
N	●○○	●○○	●○○	●○○	●○○
S	○●○	○●○	○●○	○●○	○●○
H	○○○	○○○	○○○	○○○	○○○

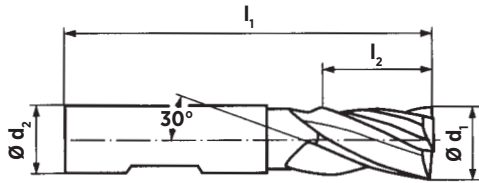
\*Senza taglio al centro | Ohne Zentrumschnitt | Without center cut | Sans coupe au centre | Sin corte al centro



# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 K_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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
15	26	83	12	4
16	32	92	16	4
18	32	92	16	4
20	38	104	20	4
22	38	104	20	5
25	45	121	25	5

	4458	4458C
	ASP-30	ASP-30 TiCN
	€ 25,85	€ 33,15
	€ 27,05	€ 34,40
	€ 25,20	€ 32,50
	€ 27,05	€ 34,40
	€ 25,20	€ 32,50
	€ 30,20	€ 37,65
	€ 25,20	€ 32,50
	€ 25,80	€ 32,90
	€ 30,65	€ 42,20
	€ 30,20	€ 42,10
	€ 35,15	€ 46,90
	€ 33,35	€ 45,20
	€ 39,80	€ 52,90
	€ 38,35	€ 51,60
	€ 55,40	€ 69,90
	€ 56,90	€ 77,80
	€ 68,20	€ 92,30
	€ 82,70	€ 107,00
	€ 99,00	€ 130,50
	€ 121,00	€ 158,00



p. 220



p. 56

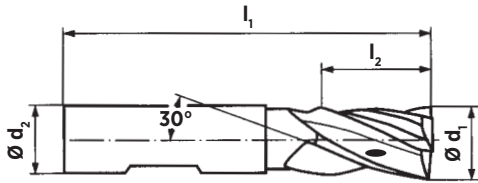
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
16	32	92	16	4
20	38	104	20	4
25	45	121	25	5
32	53	133	32	6

4412	4412C	4414	4414C
€ 97,00	€ 120,00	€ 97,00	€ 120,00
€ 151,50	€ 177,50	€ 151,50	€ 177,50
€ 190,00	€ 230,50	€ 190,00	€ 230,50
€ 300,00	€ 353,00	€ 300,00	€ 353,00

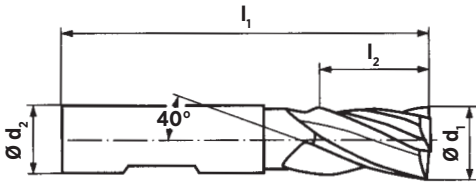


P	●●●●	●●●●	●●●●	●●●●
M	●●○○	●●○○	●●○○	●●○○
K	●●○○	●●○○	●●○○	●●○○
N	●●○○	●●○○	●●○○	●●○○
S	●●○○	●●○○	●●○○	●●○○
H	○○○○	○○○○	○○○○	○○○○

# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



4416

4416C

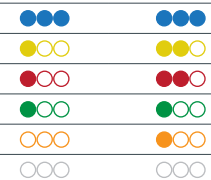


$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
3	8	52	6	4
4	11	55	6	4
5	13	57	6	4
6	13	57	6	4
7	16	66	10	4
8	19	69	10	4
9	19	69	10	4
12	26	83	12	4
14	26	83	12	4
15	26	83	12	4
18	32	92	16	4
22	38	104	20	4

	4416	4416C
	€ 22,35 ■	€ 27,00 ■
	€ 22,35 ■	€ 27,94 ■
	€ 22,35 ■	€ 27,94 ■
	-	€ 29,15 ■
	€ 27,45 ■	€ 39,80 ■
	-	€ 39,80 ■
	€ 31,20 ■	€ 45,24 ■
	-	€ 46,20 ■
	€ 41,00 ■	€ 57,40 ■
	€ 45,10 ■	€ 63,14 ■
	€ 57,60 ■	€ 80,64 ■
	€ 82,20 ■	€ 115,08 ■



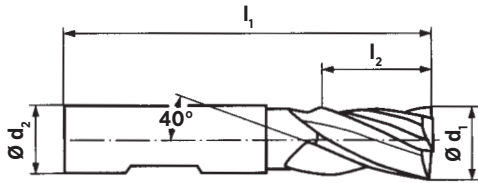
P  
M  
K  
N  
S  
H



# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
--------------------------	-------	-------	-----------------------	---

3	8	52	6	4
5	13	57	6	4
7	16	66	10	4
9	19	69	10	4
14	26	83	12	4
15	26	83	12	4
18	32	92	16	4

4466



ASP-30

€ 17,85 ■
€ 17,85 ■
€ 22,05 ■
€ 25,05 ■
€ 34,05 ■
€ 36,20 ■
€ 46,20 ■



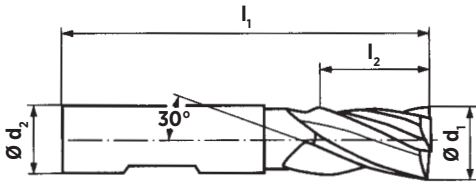
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844K

LUNGA | LANGE | LONG | LONGUE | LARGA



Ø d <sub>1</sub> k <sub>10</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	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
36*	106	186	32	6
40*	125	217	40	6
45*	125	217	40	8
50*	150	252	50	8

	4420	4420C
--	------	-------

	HSS-Co8	HSS-Co8 TiCN
	€ 24,10	€ 32,25
	€ 27,05	€ 35,15
	€ 23,30	€ 31,40
	€ 27,55	€ 35,65
	€ 23,35	€ 34,00
	€ 23,95	€ 34,60
	€ 28,80	€ 47,00
	€ 27,05	€ 45,40
	€ 31,85	€ 50,20
	€ 30,05	€ 48,30
	€ 39,75	€ 59,60
	€ 35,00	€ 54,80
	€ 47,90	€ 69,20
	€ 44,30	€ 65,60
	€ 49,70	€ 71,10
	€ 54,80	€ 81,60
	€ 73,50	€ 110,50
	€ 64,90	€ 102,00
	€ 80,40	€ 117,00
	€ 97,00	€ 156,00
	€ 122,00	€ 213,00
	€ 124,50	€ 215,00
	€ 156,50	€ 264,00
	€ 150,00	€ 257,00
	€ 182,50	€ 292,00
	€ 193,50	€ 314,00
	€ 241,00	€ 366,00
	€ 361,00	€ 482,00
	€ 548,00	€ 720,00
	€ 666,00	€ 854,00



P  
M  
K  
N  
S  
H



\*Senza taglio al centro | Ohne Zentrumschnitt | Without center cut | Sans coupe au centre | Sin corte al centro



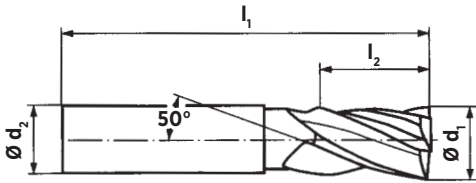
# HSS-Co8

DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



**HIGH ALLOYS**



$\emptyset d_1 k_{10}$	$l_2$	$l_1$	$\emptyset d_2 h_6$	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

4333	4333C	4334	4334C
------	-------	------	-------



€ 24,70	€ 28,80	€ 24,70	€ 28,80
€ 24,85	€ 35,35	€ 24,85	€ 35,35
€ 39,70	€ 48,30	€ 39,70	€ 48,30
-	-	€ 48,30	€ 57,60
€ 67,40	€ 83,50	€ 67,40	€ 83,50
€ 101,00	€ 114,50	€ 101,00	€ 114,50
€ 166,00	€ 190,00	€ 166,00	€ 190,00
€ 256,50	€ 282,00	€ 256,50	€ 282,00



p. 220



p. 57

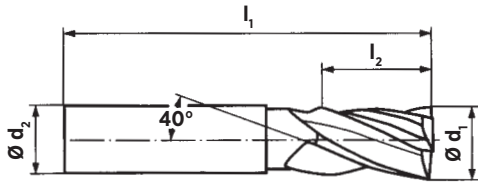
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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
14	26	83	12	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
32	53	133	32	6

4401	4401C	4403	4403C
------	-------	------	-------



€ 27,80	€ 31,50	€ 27,80	€ 31,50
€ 26,85	€ 30,75	€ 26,85	€ 30,75
€ 26,85	€ 30,75	€ 26,85	€ 30,75
€ 26,85	€ 30,75	€ 26,85	€ 30,75
€ 26,85	€ 30,75	€ 26,85	€ 30,75
€ 32,30	€ 41,80	€ 32,30	€ 41,80
€ 31,15	€ 40,90	€ 31,15	€ 40,90
€ 35,00	€ 44,20	€ 35,00	€ 44,20
€ 50,10	€ 61,20	€ 50,10	€ 61,20
€ 71,40	€ 89,00	€ 62,12	€ 89,00
€ 86,70	€ 102,00	-	€ 102,00
€ 100,00	€ 126,00	€ 100,00	€ 126,00
€ 115,00	€ 146,00	€ 123,00	€ 153,00
€ 121,00	€ 151,50	€ 128,50	€ 158,00
€ 145,50	€ 181,00	€ 155,50	€ 190,00
€ 180,00	€ 215,00	€ 189,50	€ 223,50



p. 220



p. 58

P  
M  
K  
N  
S  
H



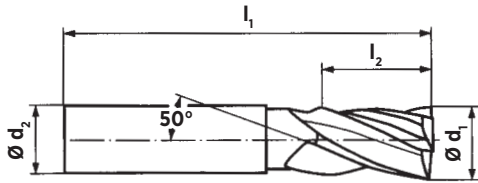
# ASP-60

DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



**HIGH ALLOYS**



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

4335	4335C	4336	4336C
------	-------	------	-------



ASP-60



ASP-60  
TiCN



ASP-60



ASP-60  
TiCN

€ 40,80	€ 42,90	€ 40,80	€ 42,90
€ 47,30	€ 54,90	€ 47,30	€ 54,90
€ 53,80	€ 60,40	€ 53,80	€ 60,40
€ 63,10	€ 70,50	€ 63,20	€ 70,50
€ 90,30	€ 103,00	€ 90,30	€ 103,00
€ 126,50	€ 136,50	€ 126,50	€ 136,50
€ 210,00	€ 228,00	€ 210,00	€ 228,00
€ 253,00	€ 274,00	€ 253,00	€ 274,00
€ 319,00	€ 337,00	€ 319,00	€ 337,00



p. 220



p. 57

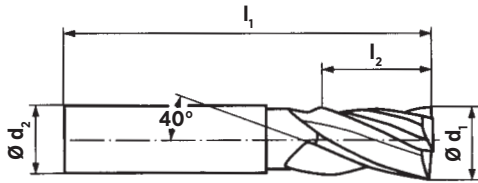
P  
M  
K  
N  
S  
H

○○○	○○○	○○○	○○○
●●●	●●●	●●●	●●●
○○○	○○○	○○○	○○○
●○○	●○○	●○○	●○○
●●●	●●●	●●●	●●●
○○○	○○○	○○○	○○○

# ASP-60

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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
14	26	83	12	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
32	53	133	32	6

4405	4405C	4407	4407C
------	-------	------	-------



€ 30,20	€ 33,65	€ 30,20	€ 33,65
€ 30,20	€ 33,65	€ 30,20	€ 33,65
€ 30,20	€ 33,65	€ 30,20	€ 33,65
€ 38,00	€ 46,80	€ 38,00	€ 46,80
€ 36,55	€ 45,50	€ 36,55	€ 45,50
€ 41,60	€ 50,10	€ 41,60	€ 50,10
€ 58,40	€ 68,60	€ 58,40	€ 68,60
€ 85,30	€ 101,50	€ 85,30	€ 101,50
€ 104,00	€ 118,00	€ 104,00	€ 118,00
€ 121,00	€ 144,50	€ 121,00	€ 144,50
€ 156,00	€ 182,00	€ 163,50	€ 188,50
€ 182,50	€ 213,50	€ 191,00	€ 221,50
€ 234,00	€ 262,00	€ 241,00	€ 269,00

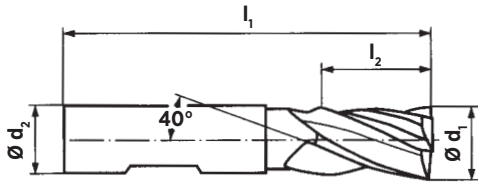


P	○○○	○○○	○○○	○○○
M	●●●	●●●	●●●	●●●
K	○○○	○○○	○○○	○○○
N	●○○	●○○	●○○	●○○
S	●○○	●○○	●○○	●○○
H	○○○	○○○	○○○	○○○

# ASP-60

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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	4
25	90	166	25	6
28	90	166	25	6
30	90	166	25	6
32	106	186	32	6

4427	4427C
------	-------



€ 36,55	€ 39,20
€ 36,55	€ 43,30
€ 36,55	€ 43,30
€ 42,60	€ 57,50
€ 45,50	€ 59,80
€ 54,80	€ 69,90
€ 67,70	€ 82,80
€ 88,10	€ 104,00
€ 102,50	€ 130,00
€ 132,50	€ 156,00
€ 160,00	€ 203,50
€ 210,00	€ 282,00
€ 316,00	€ 388,00
€ 301,00	€ 377,00
€ 335,00	€ 425,00



p. 220



p. 58

P  
M  
K  
N  
S  
H

○○○	○○○
●●●	●●●
○○○	○○○
●○○	●○○
●○○	●○○
○○○	○○○

**I NOSTRI SERVIZI  
SEMPRE A  
DISPOSIZIONE**

OUR PROMPT  
SERVICES ALWAYS  
READY FOR YOU



**Angelo Ghezzi & C SpA**

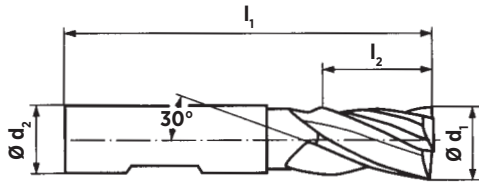


**UTENSILI SPECIALI**  
SPECIAL TOOLS DEPARTMENT

# ASP-30

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



4474

4474C

ASP-60

ASP-60  
TiCN

€ 29,35

€ 36,85

€ 29,35

€ 39,10

€ 29,35

€ 39,10

€ 33,70

€ 50,60

€ 43,30

€ 61,00

€ 54,50

€ 73,80

€ 66,50

€ 91,10

€ 77,10

€ 111,00

€ 95,60

€ 129,00

€ 145,00

€ 225,50

$\emptyset d_1 k_{10}$     $l_2$     $l_1$     $\emptyset d_2 h_6$    Z

$\emptyset d_1 k_{10}$	$l_2$	$l_1$	$\emptyset d_2 h_6$	Z
4	19	63	6	4
5	24	68	6	4
6	24	68	6	4
8	38	88	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
25	90	166	25	5

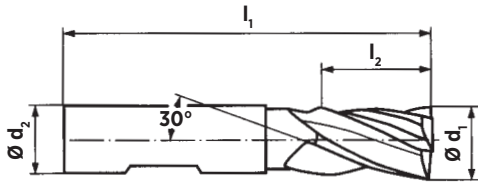
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

EXTRA LUNGA | EXTRA LANGE | EXTRA LONG | EXTRA LONGUE | EXTRA LARGA



**4428**      **4428C**

HSS-Co8      HSS-Co8  
TiCN

€ 87,20      € 171,00  
 € 134,50      € 246,00  
 € 218,50      € 355,00  
 € 361,00      € 510,00

$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
16	95	145	16	4
20	120	180	20	4
25	150	200	25	5
32	180	230	32	6

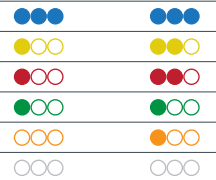


p. 220



p. 56

P  
M  
K  
N  
S  
H

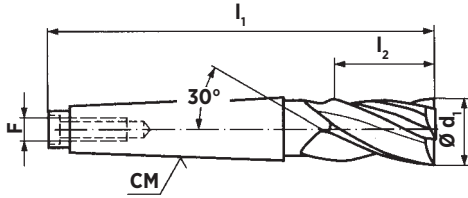




# HSS-Co5

## DIN 845K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	CM	F	Z
--------------------------	-------	-------	----	---	---

6 <sup>▲</sup>	13	80	1	M 6	4
8 <sup>▲</sup>	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
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
20	38	123	2	M 10	4
21	38	123	2	M 10	5
22	38	123	2	M 10	5
25	45	147	3	M 12	5
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
36*	53	201	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

4432



€ 44,20
€ 43,40
€ 42,40
€ 50,00
€ 46,00
€ 50,00
€ 57,70
€ 57,70
€ 63,30
€ 75,70
€ 97,60
€ 84,60
€ 96,90
€ 128,50
€ 121,50
€ 132,00
€ 207,50
€ 255,50
€ 290,00
€ 419,00
€ 505,00



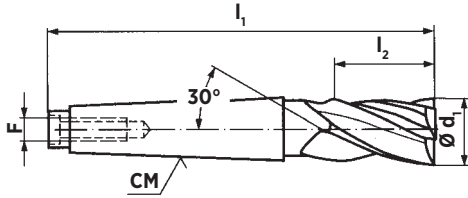
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 845L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1, k_{10}$	$l_2$	$l_1$	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
56	150	336	5	M 20	8

4436
------



€ 58,70 ■
€ 60,20 ■
€ 71,50 ■
€ 71,50 ■
€ 67,80 ■
€ 80,10 ■
€ 98,30 ■
€ 782,00 ■



p. 220

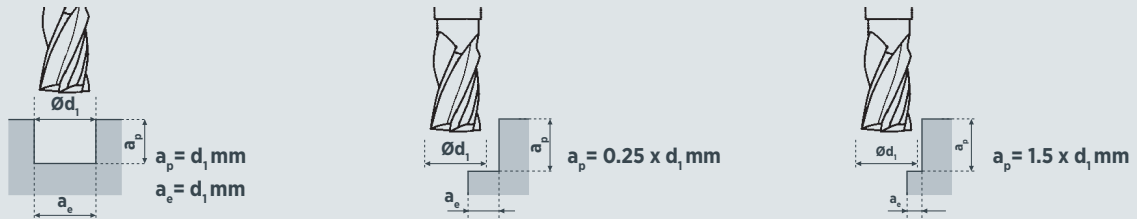
p. 56

P  
M  
K  
N  
S  
H



## TIPO N-NJC-HS | TYPE N-NJC-HS

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



Ø	CAVA DAL PIENO $f_z$ SLOTING $f_z$	CONTORNATURA   SIDE MILLING			
		SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0.3 \times d_1 \text{ mm}$	FINITURA $f_z$ FINISHING $f_z$	$a_e = 0.02 \times d_1 \text{ mm}$
2	0,007	0,012	0,60	0,016	0,04
3	0,011	0,018	0,90	0,024	0,06
4	0,014	0,024	1,20	0,032	0,08
5	0,018	0,030	1,50	0,040	0,10
6	0,022	0,036	1,80	0,048	0,12
8	0,029	0,048	2,40	0,064	0,16
10	0,036	0,060	3,00	0,080	0,20
12	0,043	0,072	3,60	0,096	0,24
14	0,050	0,084	4,20	0,112	0,28
16	0,058	0,096	4,80	0,128	0,32
18	0,065	0,108	5,40	0,144	0,36
20	0,072	0,120	6,00	0,160	0,40
25	0,090	0,150	7,50	0,200	0,50
28	0,101	0,168	8,40	0,224	0,56
32	0,115	0,192	9,60	0,256	0,64
36	0,130	0,216	10,80	0,288	0,72
40	0,144	0,240	12,00	0,320	0,80
45	0,162	0,270	13,50	0,360	0,90
50	0,180	0,300	15,00	0,400	1,00
56	0,192	0,33	17,50	0,44	1,10

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

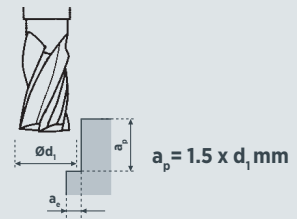
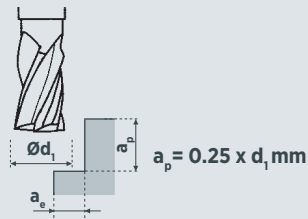
		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-
	Max	50	40	25	15	12	35	25	90	80	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	8	-	-
	Max	35	30	15	10	8	25	20	60	55	10	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (cava dal pieno) " $f_z$ " 0,058 materiale gruppo P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) " $f_z$ " 0,058 material group P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ "

## TIPO SW | TYPE SW

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



### CONTORNATURA | SIDE MILLING

Ø	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0.1 \times d_1$ mm	FINITURA $f_z$ FINISHING $f_z$	$a_e = 0.02 \times d_1$ mm
	2	0,012	0,20	0,013
3	0,018	0,30	0,020	0,06
4	0,024	0,40	0,026	0,08
5	0,030	0,50	0,033	0,10
6	0,036	0,60	0,040	0,12
8	0,048	0,80	0,053	0,16
10	0,060	1,00	0,066	0,20
12	0,072	1,20	0,079	0,24
14	0,084	1,40	0,092	0,28
16	0,096	1,60	0,106	0,32
18	0,108	1,80	0,119	0,36
20	0,120	2,00	0,132	0,40
22	0,132	2,20	0,145	0,44
25	0,150	2,50	0,165	0,50
28	0,168	2,80	0,185	0,56
32	0,192	3,20	0,211	0,64
36	0,216	3,60	0,238	0,72
40	0,240	4,00	0,264	0,80
45	0,270	4,50	0,297	0,90

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

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

\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (finitura)  $f_z$  0,106 materiale gruppo M<sub>1</sub> - 0,106x0,6 = 0,06 "f<sub>z</sub>"

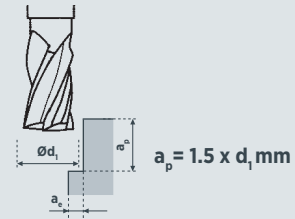
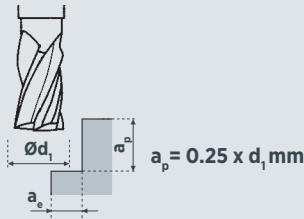
\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (finishing) "f<sub>z</sub>" 0,106 material group M<sub>1</sub> - 0,106x0,6 = 0,06 "f<sub>z</sub>"



p. 222

## TIPO VA | TYPE VA

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



### CONTORNATURA | SIDE MILLING

Ø	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$		FINITURA $f_z$ FINISHING $f_z$	
	$a_e = 0.3 \times d_1$ mm	$a_e = 0.02 \times d_1$ mm	$a_e = 0.3 \times d_1$ mm	$a_e = 0.02 \times d_1$ mm
2	0,012	0,60	0,016	0,04
3	0,018	0,90	0,024	0,06
4	0,024	1,20	0,032	0,08
5	0,030	1,50	0,040	0,10
6	0,036	1,80	0,048	0,12
8	0,048	2,40	0,064	0,16
10	0,060	3,00	0,080	0,20
12	0,072	3,60	0,096	0,24
14	0,084	4,20	0,112	0,28
16	0,096	4,80	0,128	0,32
18	0,108	5,40	0,144	0,36
20	0,120	6,00	0,160	0,40
22	0,132	6,60	0,176	0,44
25	0,150	7,50	0,200	0,50
28	0,168	8,40	0,224	0,56
32	0,192	9,60	0,256	0,64

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

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

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (finitura) " $f_z$ " 0,128 materiale gruppo M<sub>1</sub> -  $0,128 \times 0,6 = 0,077$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (finishing) " $f_z$ " 0,128 material group M<sub>1</sub> -  $0,128 \times 0,6 = 0,077$  " $f_z$ "



**PER ULTERIORI  
INFORMAZIONI  
CONTATTATECI**

FOR MORE  
INFORMATION  
PLEASE  
CONTACT US



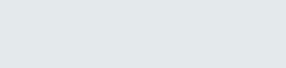

































**Angelo Ghezzi & C SpA**



**Numero Verde 800-018130**

**SERVIZIO TECNICO**  
TECHNICAL HELP

**FRESE A CANDELA A 4 E PIÙ TAGLIENTI, PER SEMIFINITURA** | HALBFEINSCHLICHTFRÄSER MIT 4 UND MEHR SCHNEIDEN  
 SEMIFINISHING END MILLS WITH 4 OR MORE FLUTES | FRAISES AVEC 4 OU PLUS DE DENTS POUR SEMI-FINITION  
 FRESAS DE 4 O MAS LABIOS, DE SEMIACABADO

DIN	Tipo				Serie	Materiale	Rivestimento					Rif. pag.
<b>844K</b>	<b>NF</b>				HSS-Co8	HSS-Co8	TICN	-	●	-	-	<b>62</b>
<b>844K</b>	<b>HFS</b>				HSS-Co8	HSS-Co8	TICN	-	●	-	-	<b>63</b>
<b>844L</b>	<b>NF</b>				HSS-Co8	HSS-Co8	TICN	-	●	-	-	<b>64</b>
<b>844L</b>	<b>HFS</b>				HSS-Co8	HSS-Co8	TICN	-	●	-	-	<b>65</b>
<b>844K</b> HARD-WAVE	<b>HW</b>				ASP-30	ASP-30	-	-	●	-	-	<b>66</b>
<b>844L</b> HARD-WAVE	<b>HW</b>				ASP-30	ASP-30	-	-	●	-	-	<b>67</b>
<b>845K</b>	<b>NF</b>				HSS-Co5	HSS-Co5	-	-	-	-	●	<b>68</b>
<b>845K</b>	<b>HFS</b>				HSS-Co8	HSS-Co8	TICN	-	-	-	●	<b>69</b>
<b>845L</b>	<b>NF</b>				HSS-Co5	HSS-Co5	-	-	-	-	●	<b>70</b>

# FRESE A CANDELA A 4<sup>E</sup>+ TAGLIENTI

*semi  
Finitura*

- HALBFEINSCHLICHTFRÄSER MIT 4 UND MEHR SCHNEIDEN
- SEMIFINISHING END MILLS WITH 4 OR MORE FLUTES
- FRAISES AVEC 4 OU PLUS DE DENTS POUR SEMI-FINITION
- FRESAS DE 4 O MAS LABIOS, DE SEMIACABADO

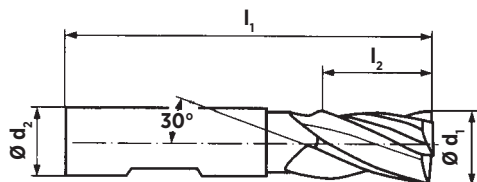




# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



5400

5400C

HSS-Co8

HSS-Co8  
TiCN

€ 30,65	€ 38,15
€ 38,35	€ 50,00
€ 37,80	€ 49,50
€ 41,70	€ 53,50
€ 40,00	€ 52,00
€ 46,70	€ 59,80
€ 43,00	€ 56,30
€ 49,10	€ 63,20
€ 48,30	€ 62,60
€ 54,90	€ 69,90
€ 56,90	€ 77,80
€ 66,50	€ 91,10
€ 78,30	€ 103,00
€ 90,10	€ 121,50
€ 116,00	€ 153,00
€ 113,00	€ 150,00
€ 138,50	€ 183,00
€ 134,50	€ 179,50
€ 159,50	€ 203,50
€ 160,50	€ 208,00
€ 216,00 ■	€ 258,00 ■
-	€ 261,00 ■

Ø d<sub>1</sub> k<sub>10</sub>   l<sub>2</sub>   l<sub>1</sub>   Ø d<sub>2</sub> h<sub>6</sub>   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
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
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
36*	53	133	32	6



p. 220



p. 71

P  
M  
K  
N  
S  
H

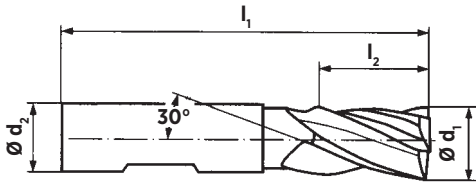


\*Senza taglio al centro | Ohne Zentrumschnitt | Without center cut | Sans coupe au centre | Sin corte al centro

# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



5404

5404C

HSS-Co8

HSS-Co8  
TiCN

$\varnothing d_1$ $k_{12}$	$l_2$	$l_1$	$\varnothing d_2$ $h_6$	Z
6	13	57	6	4
8	19	69	10	4
10	22	72	10	4
14	26	83	12	4
18	32	92	16	4
22	38	104	20	4
25	45	121	25	4
28	45	121	25	5

€ 28,10 ■	€ 36,53 ■
€ 35,40 ■	€ 46,02 ■
€ 38,15 ■	€ 49,59 ■
€ 49,00 ■	€ 61,80 ■
€ 66,10 ■	€ 85,93 ■
-	€ 118,50 ■
€ 104,50 ■	€ 135,85 ■
€ 130,50 ■	€ 172,00 ■

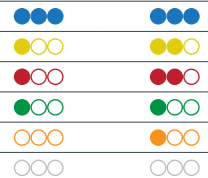


p. 220



p. 71

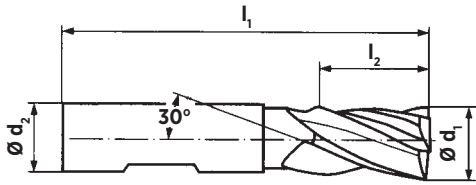
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{12}$     $l_2$     $l_1$     $\varnothing d_2 h_6$    Z

$\varnothing d_1 k_{12}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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



5408

5408C



	5408	5408C
	€ 43,00	€ 52,90
	€ 50,60	€ 66,50
	€ 54,90	€ 71,60
	€ 69,30	€ 87,20
	€ 59,80	€ 77,10
	€ 69,30	€ 88,90
	€ 66,50	€ 86,00
	€ 78,30	€ 97,30
	€ 79,30	€ 103,50
	€ 91,70	€ 125,00
	€ 110,50	€ 143,00
	€ 126,00	€ 177,00
	€ 146,00	€ 226,50
	€ 162,50	€ 243,00
	€ 189,50	€ 289,00
	€ 199,00	€ 299,00
	€ 226,50	€ 326,00
	€ 248,00	€ 354,00
	€ 308,00 ■	€ 405,00 ■
	-	€ 405,00 ■
	-	€ 405,00 ■



p. 220



p. 71

P  
M  
K  
N  
S  
H

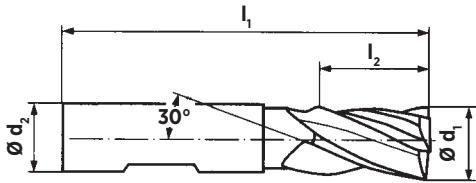


\*Senza taglio al centro | Ohne Zentrumschnitt | Without center cut | Sans coupe au centre | Sin corte al centro

# HSS-Co8

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{12}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

5412	5412C
------	-------

HSS-Co8

HSS-Co8  
TiCN

€ 49,40	€ 62,74
€ 68,50	€ 86,99
€ 62,90	€ 80,10
€ 71,90	€ 91,53
€ 87,60	€ 139,50
€ 122,00	€ 178,33
€ 118,00	€ 172,50
€ 152,50	€ 222,65
€ 188,50	€ 279,00

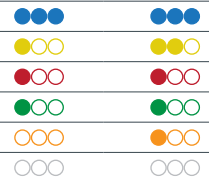


p. 220



p. 71

P  
M  
K  
N  
S  
H

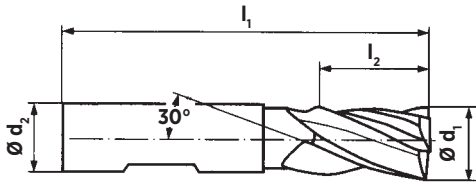


# ASP-30

DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA

**HARD-WAVE**



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
--------------------------	-------	-------	-----------------------	---

12	26	83	12	4
14	26	83	12	4
16	32	92	16	4
18	32	92	16	4
22	38	104	20	4
25	45	121	25	4
30	45	121	25	4

5450



€ 90,60
€ 100,50
€ 121,50
€ 142,50
€ 199,00
€ 258,00
€ 365,00



p. 220



p. 72

P  
M  
K  
N  
S  
H

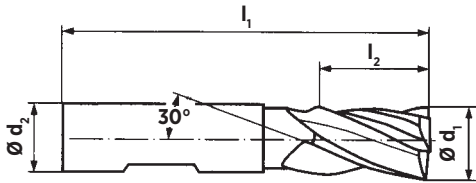


# ASP-30

DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA

**HARD-WAVE**



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

5460



€ 124,00
€ 140,00
€ 169,50
€ 197,00
€ 242,00
€ 279,00
€ 353,00
€ 437,00



p. 220



p. 72

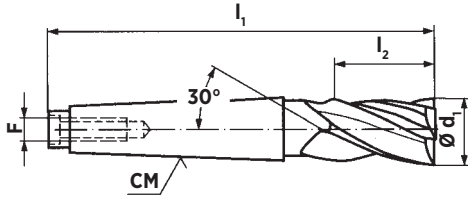
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 845K

CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1, k_{12}$	$l_2$	$l_1$	CM	F	Z
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
16	32	117	2	M 10	4
18	32	117	2	M 10	4
19	32	117	2	M 10	4
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
45*	63	211	4	M 16	6
50*	75	261	5	M 20	8

5416
€ 60,20 ■
€ 55,60 ■
€ 62,90 ■
€ 57,00 ■
€ 66,60 ■
€ 74,20 ■
€ 98,80 ■
€ 219,00 ■
€ 338,00 ■
€ 319,00 ■
€ 295,00 ■
€ 491,00 ■
€ 574,00 ■

HSS-Co5

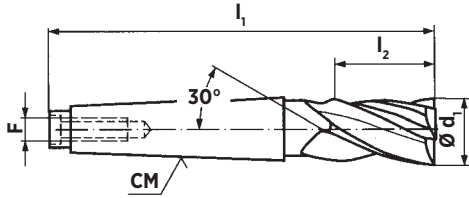


P	●●●
M	●○○
K	●○○
N	●○○
S	●○○
H	○○○

# HSS-Co8

## DIN 845K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$ k <sub>12</sub>	l <sub>2</sub>	l <sub>1</sub>	CM	F	Z
-----------------------------------	----------------	----------------	----	---	---

12	26	96	1	M 6	4
16	32	117	2	M 10	4
32*	53	201	4	M 16	6

	5418	5418C
--	------	-------

HSS-Co8

HSS-Co8  
TiCN

€ 59,20 ■

€ 75,80 ■

-

€ 94,00 ■

-

€ 354,00 ■



p. 220



p. 71

P  
M  
K  
N  
S  
H



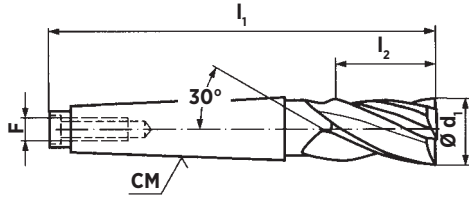
\*Attacco con Morse DIN 2207 | Morsekegel nach DIN 2207 | Morse taper shank acc. DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207



# HSS-Co5

## DIN 845L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 k_{12}$	$l_2$	$l_1$	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
18	63	148	2	M 10	4
25	90	192	3	M 12	5
36*	106	254	4	M 16	6
50*	150	336	5	M 20	8

5420
------

HSS-Co5

€ 75,80 ■
€ 80,60 ■
€ 86,60 ■
€ 91,40 ■
€ 103,00 ■
€ 193,50 ■
€ 432,00 ■
€ 799,00 ■



p. 220

p. 71

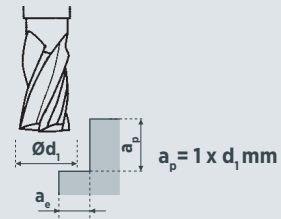
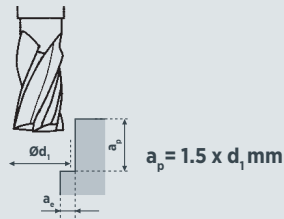
P  
M  
K  
N  
S  
H



\*Attacco cono Morse DIN 2207 | Morsekegel neck DIN 2207 | Morse taper shank acc. DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

## TIPO NF-HFS | TYPE NF-HFS

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



CONTORNATURA | SIDE MILLING

Ø	SEMI SGROSSATURA $f_z$ SEMI ROUGHING $f_z$		SGROSSATURA $F_z$ ROUGHING $F_z$	
	$a_e = 0.1 \times d_1$ mm	$a_e = 0.3 \times d_1$ mm	$a_e = 0.1 \times d_1$ mm	$a_e = 0.3 \times d_1$ mm
6	0,030	0,60	0,025	1,80
8	0,040	0,80	0,033	2,40
10	0,050	1,00	0,041	3,00
12	0,060	1,20	0,049	3,60
14	0,070	1,40	0,057	4,20
16	0,080	1,60	0,066	4,80
18	0,090	1,80	0,074	5,40
20	0,100	2,00	0,082	6,00
22	0,110	2,20	0,090	6,60
25	0,125	2,50	0,103	7,50
28	0,140	2,80	0,115	8,40
32	0,160	3,20	0,131	9,60
36	0,180	3,60	0,148	10,80
40	0,200	4,00	0,164	12,00
45	0,225	4,50	0,185	13,50
50	0,250	5,00	0,205	15,00

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	25	15	15	10	25	10	-	50	15	10	-
	Max	60	50	30	30	20	50	20	-	70	25	15	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	30	20	15	10	7	20	15	-	35	10	-	-
	Max	40	35	20	20	15	30	25	-	55	20	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

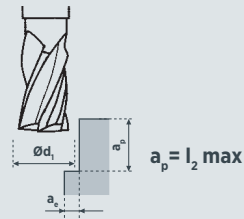
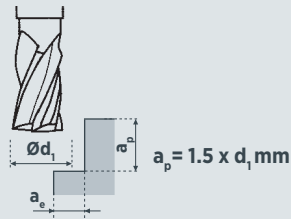
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (sgrossatura) " $f_z$ " 0,066 materiale gruppo P<sub>2</sub> - 0,066x0,8 = 0,053 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (roughing) " $f_z$ " 0,066 material group P<sub>2</sub> - 0,066x0,8 = 0,053 " $f_z$ "



## TIPO HW | TYPE HW

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



### CONTORNATURA | SIDE MILLING

Ø	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$		FINITURA $f_z$ FINISHING $f_z$	
	$a_e = 0.3 \times d_1$ mm	$a_e = 0.02 \times d_1$ mm	$a_e = 0.3 \times d_1$ mm	$a_e = 0.02 \times d_1$ mm
12	0,048	3,60	0,084	0,24
14	0,056	4,20	0,098	0,28
16	0,064	4,80	0,112	0,32
18	0,072	5,40	0,126	0,36
20	0,080	6,00	0,140	0,40
22	0,088	6,60	0,154	0,44
25	0,100	7,50	0,175	0,50
28	0,112	8,40	0,196	0,56
32	0,128	9,60	0,224	0,64

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	-	-	-	-	-	-	-	-	-	-	-	-
	Max	-	-	-	-	-	-	-	-	-	-	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	35	30	-	15	7	30	20	-	-	-	-	-
	Max	50	40	-	20	15	40	30	-	-	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (finitura) " $f_z$ " 0,112 materiale gruppo P<sub>2</sub> - 0,112x0,8 = 0,09 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (finishing) " $f_z$ " 0,112 material group P<sub>2</sub> - 0,112x0,8 = 0,09 " $f_z$ "



E-COMMERCE
































































Angelo Ghezzi & C SpA



**ORDINI ONLINE** | ONLINE ORDERS

[www.angeloghezzi.it](http://www.angeloghezzi.it)

**FRESE A CANDELA A 4 E PIÙ TAGLIANTI, PER SGROSSATURA** | SCHRUPP-SCHAFTFRÄSER MIT 4 UND MEHR SCHNEIDEN  
 ROUGHING END MILLS WITH 4 OR MORE FLUTES | FRAISES DEUX TAILLES D'ÉBAUCHE AVEC 4 OU PLUS DE DENTS  
 FRESAS DE 4 O MAS LABIOS, DE DESBASTE

DIN	Tipo			Serie	Materiale	Rivestimento					Rif. pag.
ILLICO NORM	HRS				HSS-Co8		-	●	-	-	76
ILLICO NORM	HRS				ASP-30		-	●	-	-	77
844K	NR				HSS-Co8		-	●	●	-	78
844K	NR				ASP-30		-	●	-	-	79
844K	HRS				HSS-Co8		-	●	-	-	80
844K	HRS				ASP-30		-	●	-	-	81
844K	HJC				HSS-Co8		●	●	-	-	82
844L	NR				HSS-Co8		-	●	●	-	84
844L	NR				ASP-30		-	●	-	-	85
844L	HRS				HSS-Co8		-	●	-	-	86
844L	HRS				ASP-30		-	●	-	-	87
844L	HRS <small>HIGH ALLOYS</small>				ASP-60		●	●	-	-	88
845K	NR				HSS-Co5	-	-	-	-	●	89
845K	HRS				HSS-Co5	-	-	-	-	●	90
845L	NR				HSS-Co5	-	-	-	-	●	91

# FRESE A CANDELA A 4<sup>E</sup>+ TAGLIENTI

*Sgrossatura*

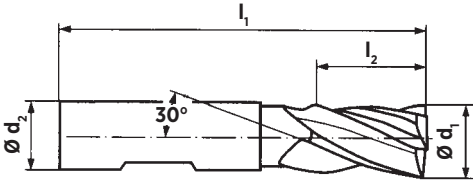
- SCHRUPP-SCHAFTFRÄSER MIT 4 UND MEHR SCHNEIDEN
- ROUGHING END MILLS WITH 4 OR MORE FLUTES
- FRAISES DEUX TAILLES D'ÉBAUCHE AVEC 4 OU PLUS DE DENTS
- FRESAS DE 4 O MAS LABIOS, DE DESBASTE



# HSS-Co8

## ILLICO NORM\*

EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



$\emptyset d_1 k_{12}$	$l_2$	$l_1$	$\emptyset d_2 h_6$	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

	7400	7400C
	 HSS-Co8	 HSS-Co8 TiCN
	€ 29,70	€ 36,85
	€ 35,90	€ 47,60
	€ 38,35	€ 50,00
	€ 47,80	€ 61,00
	€ 53,50	€ 66,50
	€ 65,50	€ 82,20
	€ 68,70	€ 87,70
	€ 84,40	€ 108,50



P  
M  
K  
N  
S  
H

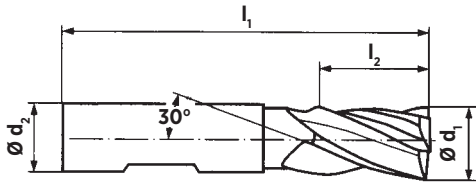


\*Similare a DIN 327 | Ähnlich DIN 327 | Similar to DIN 327 | Similaire DIN 327 | Similar a DIN 327

# ASP-30

## ILLICO NORM\*

EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



$\varnothing d_1 k_{12}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

	7450	7450C
	ASP-30	ASP-30 TiCN
	€ 45,20	€ 56,90
	€ 47,10	€ 59,30
	€ 54,90	€ 67,70
	€ 61,50	€ 74,40
	€ 77,10	€ 95,00
	€ 78,80	€ 97,80
	€ 96,70	€ 121,50
	€ 110,50	€ 138,50
	€ 140,50	€ 174,50
	€ 164,00	€ 204,50
	€ 197,50	€ 245,50



P  
M  
K  
N  
S  
H



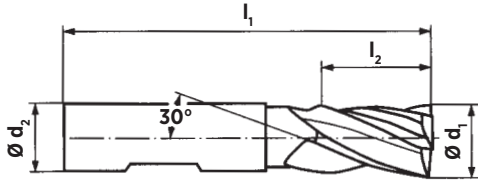
\*Similare a DIN 327 | Ähnlich DIN 327 | Similar to DIN 327 | Similaire DIN 327 | Similar a DIN 327



# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1, k_{12}$	$l_2$	$l_1$	$\emptyset d_2, h_6$	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
35*	53	133	32	6
36*	53	133	32	6
40*	63	155	40	6
45 <sup>▲</sup> *	63	143	32	6
50*	75	177	50	8

7404	7404C	7406	7406C
€ 29,75	€ 37,20	-	-
€ 37,20	€ 49,10	€ 39,70 ■	€ 58,76 ■
€ 36,65	€ 48,30	-	-
€ 40,50	€ 52,40	€ 42,80 ■	€ 63,34 ■
€ 38,85	€ 50,60	€ 41,30 ■	€ 61,12 ■
€ 45,20	€ 58,70	€ 47,60 ■	€ 70,45 ■
€ 41,70	€ 54,90	-	-
€ 47,60	€ 62,10	€ 49,90 ■	€ 73,85 ■
€ 46,90	€ 61,50	-	-
€ 53,50	€ 67,70	€ 55,40 ■	€ 81,99 ■
€ 54,90	€ 76,10	-	-
€ 79,30	€ 103,50	-	€ 120,50 ■
€ 64,80	€ 88,90	€ 67,20 ■	€ 99,46 ■
€ 87,20	€ 111,50	€ 89,30 ■	€ 132,16 ■
€ 76,10	€ 100,00	-	-
€ 87,20	€ 119,00	€ 89,80 ■	€ 132,9 ■
€ 112,50	€ 149,50	-	€ 171,00 ■
€ 110,00	€ 146,50	-	-
€ 134,00	€ 178,50	€ 134,00 ■	€ 204,00 ■
€ 131,00	€ 175,00	€ 148,50 ■	€ 220,50 ■
€ 155,00	€ 199,00	€ 154,00 ■	€ 226,50 ■
€ 155,50	€ 203,00	€ 155,00 ■	€ 230,50 ■
-	€ 274,00	€ 215,00 ■	€ 310,00 ■
€ 223,50	€ 279,00	€ 219,50 ■	€ 324,86 ■
€ 293,00	€ 395,00	-	-
-	-	€ 367,00 ■	€ 543,16 ■
€ 430,00 ■	€ 569,00 ■	-	-



P  
M  
K  
N  
S  
H

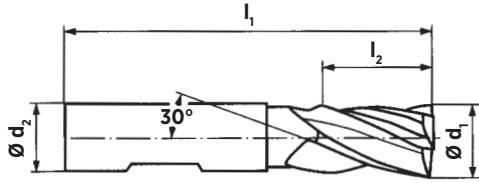




# ASP-30

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$   $K_{12}$   $l_2$   $l_1$   $\varnothing d_2$   $h_6$  Z

$\varnothing d_1$	$K_{12}$	$l_2$	$l_1$	$\varnothing d_2$	$h_6$	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
15		26	83	12		4
18		32	92	16		4
19		32	92	16		4
20		38	104	20		4
24		45	121	25		4
25		45	121	25		4

	7454	7454C
		
	ASP-30	ASP-30 TiCN
	€ 34,80	€ 42,20
	€ 43,00	€ 54,90
	€ 45,70	€ 57,30
	€ 49,10	€ 62,60
	€ 59,80	€ 73,80
	€ 67,70	€ 81,60
	€ 82,20	€ 107,00
	€ 101,00 ■	€ 131,30 ■
	€ 96,10	€ 120,50
	€ 130,00 ■	€ 164,00 ■
	€ 139,00	€ 175,50

 p. 220  p. 92

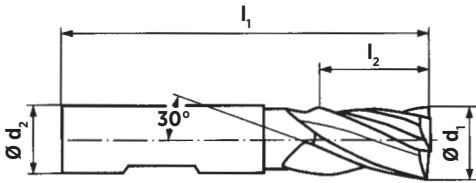
P  
M  
K  
N  
S  
H





# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1, k_{12}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	Z	7408	7408C
						
4	11	55	6	3	€ 44,20	€ 53,50
5	13	57	6	3	€ 44,20	€ 53,50
6	13	57	6	4	€ 32,75	€ 40,00
8	19	69	10	4	€ 41,10	€ 52,90
10	22	72	10	4	€ 44,40	€ 56,30
12	26	83	12	4	€ 47,10	€ 60,40
14	26	83	12	4	€ 53,90	€ 68,20
16	32	92	16	4	€ 62,60	€ 83,80
18	32	92	16	4	€ 73,20	€ 97,30
20	38	104	20	4	€ 83,80	€ 108,00
22	38	104	20	4	€ 99,00	€ 130,50
24	45	121	25	4	€ 146,50	€ 183,50
25	45	121	25	4	€ 122,00	€ 159,50
28	45	121	25	5	€ 144,50	€ 188,50
30	45	121	25	5	€ 181,00	€ 225,50
32	53	133	32	6	€ 184,50	€ 234,00
36	53	133	32	6	€ 264,00	€ 319,00
40 <sup>▲</sup>	63	143	40	6	€ 347,00	€ 434,00
45 <sup>▲</sup>	63	143	32	6	€ 480,00	€ 578,00
50 <sup>▲</sup>	63	143	32	8	€ 551,00	€ 677,00



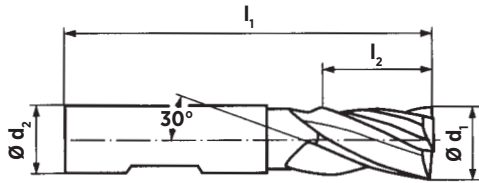
P  
M  
K  
N  
S  
H



# ASP-30

## DIN 844K

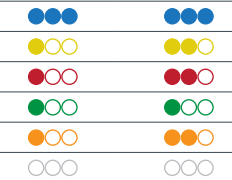
CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1, k_{12}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	Z		7458	7458C
6	13	57	6	4		ASP-30	ASP-30 TiCN
8	19	69	10	4		€ 38,35	€ 45,70
10	22	72	10	4		€ 48,10	€ 59,80
12	26	83	12	4		€ 52,00	€ 63,80
14	26	83	12	4		€ 55,40	€ 68,70
16	32	92	16	4		€ 68,20	€ 82,70
18	32	92	16	4		€ 80,00	€ 100,50
20	38	104	20	4		€ 92,30	€ 116,50
22	38	104	20	4		€ 106,50	€ 130,50
24	45	121	25	4		€ 125,00	€ 156,50
25	45	121	25	4		€ 162,50	€ 199,00
						€ 155,00	€ 235,50



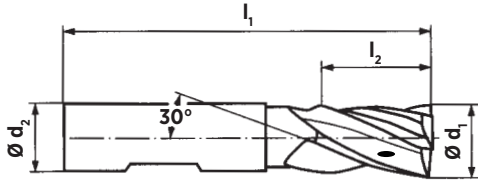
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 844K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 k_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
16	32	92	16	4
20	38	104	20	4
25	45	121	25	5
32	53	133	32	6

7484	7484C	7486	7486C
€ 176,50	€ 198,00	€ 176,50	€ 198,00
€ 250,00	€ 274,00	€ 250,00	€ 274,00
€ 301,00	€ 338,00	€ 290,00 ■	€ 325,00 ■
-	€ 566,00 ■	€ 518,00 ■	€ 566,00 ■

p. 220 p. 92

P  
M  
K  
N  
S  
H

--	--	--	--

PER ULTERIORI  
INFORMAZIONI  
CONTATTATECI

FOR MORE  
INFORMATION  
PLEASE  
CONTACT US



Angelo Ghezzi & C SpA



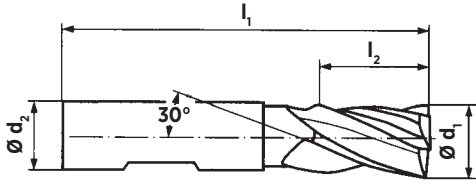
**FOLLOW  
US!**

[www.angeloghezzi.it](http://www.angeloghezzi.it)

# HSS-Co8

## DIN 844L





LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1, k_{12}$	$l_2$	$l_1$	$\varnothing d_2, h_e$	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
45	125	217	40	6

7412	7412C	7414	7414C
------	-------	------	-------

 HSS-Co8	 HSS-Co8 TICN	 HSS-Co8	 HSS-Co8 TICN
€ 38,85	€ 48,60	€ 44,00 ■	€ 61,60 ■
€ 45,20	€ 62,10	-	€ 76,90 ■
€ 51,00	€ 67,70	€ 57,00 ■	€ 83,80 ■
€ 49,50	€ 66,50	-	-
-	-	€ 68,90 ■	€ 98,50 ■
€ 53,90	€ 71,60	€ 59,70 ■	€ 88,50 ■
€ 62,60	€ 81,00	€ 68,90 ■	€ 100,00 ■
€ 60,40	€ 79,30	€ 77,10 ■	€ 111,79 ■
€ 70,40	€ 89,40	€ 79,00 ■	€ 109,50 ■
€ 71,60	€ 96,10	-	-
€ 82,70	€ 116,00	€ 90,30 ■	€ 141,00 ■
€ 99,00	€ 132,50	€ 108,50 ■	€ 162,50 ■
€ 113,50	€ 194,00	€ 124,00 ■	€ 230,50 ■
€ 131,50	€ 212,00	€ 142,00 ■	€ 250,50 ■
€ 145,50	€ 226,00	€ 156,00 ■	€ 270,00 ■
€ 171,00	€ 269,00	€ 182,00 ■	€ 318,00 ■
€ 180,00	€ 279,00	€ 190,50 ■	€ 329,00 ■
€ 203,50	€ 303,00	€ 216,50 ■	€ 374,00 ■
€ 221,50	€ 331,00	€ 236,50 ■	€ 409,00 ■
-	€ 379,00 ■	€ 314,00 ■	€ 491,00 ■
-	-	-	€ 484,00 ■
-	€ 377,00 ■	€ 298,00 ■	€ 465,00 ■
€ 494,00	€ 736,00	-	-



p. 220

p. 92

P  
M  
K  
N  
S  
H

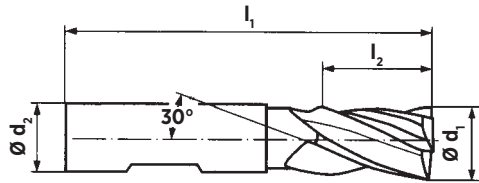


\*Senza taglio al centro | Ohne Zentrumschnitt | Without center cut | Sans coupe au centre | Sin corte al centro

# ASP-30

DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1, k_{1,2}$     $l_2$     $l_1$     $\varnothing d_2, h_6$    Z

$\varnothing d_1, k_{1,2}$	$l_2$	$l_1$	$\varnothing d_2, h_6$	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
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
25	90	166	25	4

7462      7462C



ASP-30



ASP-30  
TiCN

€ 49,10	€ 59,30
€ 57,30	€ 73,80
€ 62,60	€ 78,80
€ 68,20	€ 85,50
€ 82,20	€ 101,00
€ 91,00	€ 103,50
€ 97,30	€ 121,50
€ 112,50	€ 145,50
€ 131,00	€ 164,00
€ 150,00	€ 230,00
€ 192,50	€ 275,00



p. 220



p. 92

P  
M  
K  
N  
S  
H

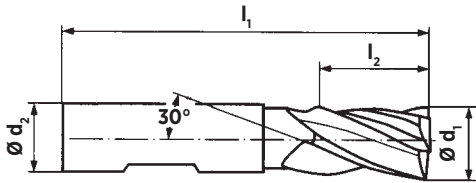




# HSS-Co8

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1, k_{12}$     $l_2$     $l_1$     $\varnothing d_2, h_e$    Z

$\varnothing d_1, k_{12}$	$l_2$	$l_1$	$\varnothing d_2, h_e$	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

7416

7416C

HSS-Co8

HSS-Co8  
TiCN

€ 44,10	€ 53,90
€ 51,60	€ 68,20
€ 55,40	€ 72,10
€ 62,10	€ 79,30
€ 67,00	€ 86,00
€ 81,00	€ 105,50
€ 93,40	€ 127,50
€ 111,00	€ 143,50
€ 133,00	€ 185,00
€ 162,50	€ 245,50
€ 224,00	€ 322,00
€ 224,50	€ 324,00
€ 253,00	€ 350,00
€ 287,00	€ 396,00



p. 220



p. 92

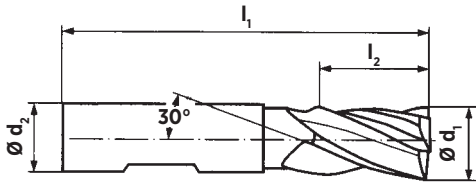
P  
M  
K  
N  
S  
H



# ASP-30

DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1$	$k_{12}$	$l_2$	$l_1$	$\varnothing d_2$	$h_6$	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
18		63	123	16		4
20		75	141	20		4
22		75	141	20		4
25		90	166	25		4

	7466	7466C
--	------	-------



	€ 55,90	€ 66,00
	€ 65,50	€ 81,60
	€ 69,90	€ 86,70
	€ 77,80	€ 95,60
	€ 106,50	€ 130,50
	€ 122,50	€ 155,50
	€ 144,50	€ 177,50
	€ 174,50	€ 226,50
	€ 212,50	€ 296,00



P  
M  
K  
N  
S  
H



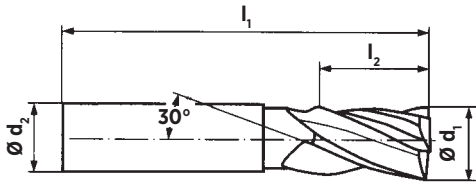
# ASP-60

## DIN 844L

LUNGA | LANGE | LONG | LONGUE | LARGA



**HARD STEEL**

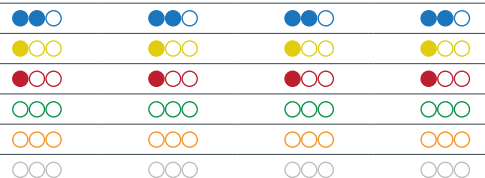


Ø d <sub>1</sub> k <sub>12</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	Z
6	24	68	6	4
8	38	88	10	4
10	45	35	10	4
12	53	110	12	4
14	53	110	12	4
16	63	123	16	4
18	63	123	16	4
20	75	141	20	5
25	90	166	25	5
30	90	166	25	6
32	106	186	32	6
36	106	186	32	6

	7467	7467C	7469	7469C
	ASP-60	ASP-60 TiCN	ASP-60	ASP-60 TiCN
	€ 78,90	€ 80,40	€ 78,90	€ 80,40
	€ 80,40	€ 90,20	€ 80,40	€ 90,20
	€ 82,50	€ 91,50	€ 82,50	€ 91,50
	€ 101,00	€ 109,50	€ 101,00	€ 109,50
	€ 127,50	€ 134,50	€ 127,50	€ 134,50
	€ 133,00	€ 146,00	€ 133,00	€ 146,00
	€ 162,50	€ 182,50	€ 162,50	€ 182,50
	€ 179,50	€ 197,50	€ 179,50	€ 197,50
	€ 291,00	€ 354,00	€ 291,00	€ 354,00
	€ 402,00	€ 466,00	€ 402,00	€ 466,00
	€ 442,00	€ 517,00	€ 442,00	€ 517,00
	€ 853,00	€ 877,00	€ 853,00	€ 877,00



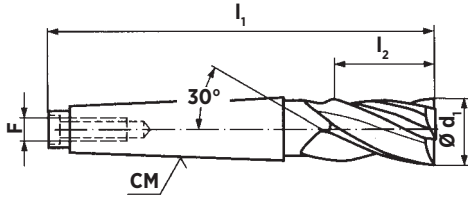
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 845K

CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1, k_{12}$   $l_2$   $l_1$  CM F Z

$\emptyset d_1, k_{12}$	$l_2$	$l_1$	CM	F	Z
6 <sup>▲</sup>	13	80	1	M 6	4
8 <sup>▲</sup>	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
14	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
22	38	123	2	M 10	4
24	45	147	3	M 12	4
25	45	147	3	M 12	4
28	45	147	3	M 12	5
32*	53	201	4	M 16	6
36*	53	201	4	M 16	6
45*	63	211	4	M 16	6
60*	75	261	5	M 20	8

7420

HSS-Co5

€ 61,80 ■
€ 64,00 ■
€ 51,80 ■
€ 60,20 ■
€ 55,60 ■
€ 57,00 ■
€ 66,60 ■
€ 89,80 ■
€ 74,20 ■
€ 98,80 ■
€ 84,40 ■
€ 99,40 ■
€ 127,50 ■
€ 155,00 ■
€ 151,50 ■
€ 219,00 ■
€ 295,00 ■
€ 491,00 ■
€ 671,00 ■



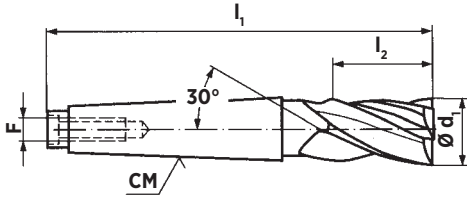
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 845K

CORTA | KURZ | SHORT | COURTE | CORTA



7422 7422C



€ 64,00 ■	€ 80,60 ■
€ 76,90 ■	€ 96,12 ■
-	€ 127,5 ■
-	€ 230,52 ■
€ 251,00 ■	€ 316,26 ■

Ø d <sub>1</sub> k <sub>12</sub>	I <sub>2</sub>	I <sub>1</sub>	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
32*	53	201	4	M 16	6

P  
M  
K  
N  
S  
H



p. 220



p. 92

\*Attacco cono Morse DIN 2207 | Morsekegel nack DIN 2207 | Morse taper shank acc. DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

# HSS-Co5

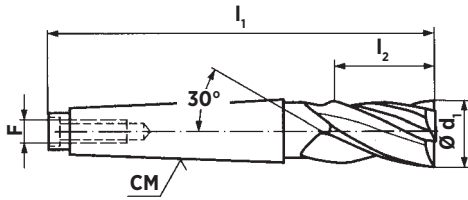
## DIN 845L

LUNGA | LANGE | LONG | LONGUE | LARGA



7424

HSS-Co5



Ø d, k <sub>12</sub>	l <sub>2</sub>	l <sub>1</sub>	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
25	90	192	3	M 12	5
28	90	192	3	M 12	5
45*	125	273	4	M 16	6

€ 73,10
€ 79,00
€ 85,00
€ 88,70
€ 88,70
€ 100,00
€ 183,50
€ 213,00
€ 640,00

p. 220 p. 92

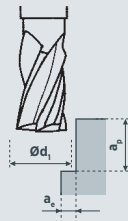
P  
M  
K  
N  
S  
H



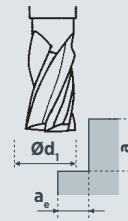
\*Attacco cono Morse DIN 2207 | Morsekegel nack DIN 2207 | Morse taper shank acc. DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

## TIPO HRS-NR-HJC | TYPE HRS-NR-HJC

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



$$a_p = 1.5 \times d_1 \text{ mm}$$



$$a_p = 1 \times d_1 \text{ mm}$$

CONTORNATURA   SIDE MILLING				
$\varnothing$	SEMI SGROSSATURA $f_z$ SEMI ROUGHING $f_z$	$a_e = 0.1 \times d_1 \text{ mm}$	SGROSSATURA $f_z$ ROUGHING $f_z$	$a_e = 0.3 \times d_1 \text{ mm}$
6	0,030	0,60	0,024	1,80
8	0,040	0,80	0,032	2,40
10	0,050	1,00	0,040	3,00
12	0,060	1,20	0,048	3,60
14	0,070	1,40	0,056	4,20
16	0,080	1,60	0,064	4,80
18	0,090	1,80	0,072	5,40
20	0,100	2,00	0,080	6,00
25	0,125	2,50	0,100	7,50
30	0,160	3,20	0,128	9,60
40	0,200	4,00	0,160	12,00
50	0,250	5,00	0,200	15,00
60	0,300	6,00	0,240	18,00

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	25	10	15	10	25	10	-	50	15	-	-
	Max	60	50	20	30	20	50	20	-	70	25	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	25	20	7	10	7	20	7	-	30	7	-	-
	Max	40	30	15	25	15	30	15	-	50	17	-	-
* COEFFICIENTE AVANZAMENTO		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4
* FEED COEFFICIENT													

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\varnothing 16$  (sgrossatura) " $f_z$ " 0,064 materiale gruppo M<sub>1</sub> -  $0,064 \times 0,6 = 0,038$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\varnothing 16$  (roughing) " $f_z$ " 0,064 material group M<sub>1</sub> -  $0,064 \times 0,6 = 0,038$  " $f_z$ "



# SETTORI DI COMPETENZA

## COMPETENCE FIELDS



Angelo Ghezzi & C SpA



**Energia**  
Energy



**Medicale**  
Medical



**Meccanica Pesante**  
Heavy Industry



**Aerospaziale**  
Aerospace



**Meccanica Generale**  
General Engineering




































**Stampisti**  
Die-Mold



**Automobilistico**  
Automotive



DIN	Tipo			Serie	Materiale	Rivestimento					Rif. pag.
<b>2328K</b>	<b>N</b>				HSS-Co5	-	●	-	-	-	<b>96</b>
<b>2328L</b>	<b>N</b>				HSS-Co5	-	●	-	-	-	<b>97</b>
<b>ILLICO NORM</b>	<b>N</b>				HSS-Co5	-	-	-	●	-	<b>98</b>
<b>ILLICO NORM</b>	<b>N</b>				HSS-Co5	-	-	-	●	-	<b>99</b>
<b>2328K</b>	<b>NF</b>				HSS-Co5	-	-	●	-	-	<b>100</b>
<b>2328L</b>	<b>NF</b>				HSS-Co5	-	-	●	-	-	<b>101</b>
<b>2328K</b>	<b>NR</b>				HSS-Co5	-	●	-	-	-	<b>102</b>
<b>2328L</b>	<b>NR</b>				HSS-Co5	-	●	-	-	-	<b>103</b>
<b>ILLICO NORM</b>	<b>NR</b>				HSS-Co5	-	-	-	●	-	<b>104</b>
<b>ILLICO NORM</b>	<b>NR</b>				HSS-Co5	-	-	-	●	-	<b>105</b>

# FRESE A CANDELA CON ATTACCO CONICO

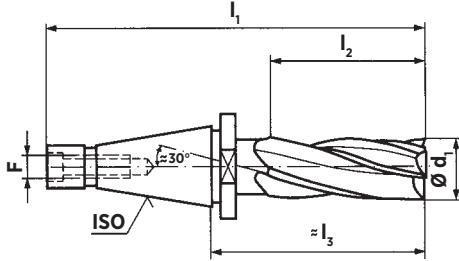
- SCHAFTFRÄSER MIT KEGELSCHAFT
- END MILLS WITH TAPER SHANK
- FRAISES DEUX TAILLES AVEC QUEUE CONIQUE
- FRESAS MANGO CONICO



# HSS-Co5

DIN 2328K

CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1$   $k_{10}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9501

HSS-Co5

32	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	252	50	M 24	125	8
56	75	252	50	M 24	125	8
63	90	267	50	M 24	140	8

€ 272,00
€ 338,00
€ 454,00
€ 435,00
€ 520,00
€ 583,00
€ 654,00
€ 761,00

p. 220 p. 106

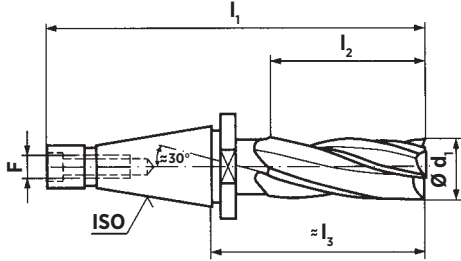
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 2328L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1$   $k_{10}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9502

HSS-Co5

32	106	241	40	M 16	148	6
40	125	302	50	M 24	175	6
40 <sup>▲</sup>	160	337	50	M 24	210	6
45 <sup>▲</sup>	100	277	50	M 24	150	8
45	125	260	40	M 16	167	8
45	125	302	50	M 24	175	8
50 <sup>▲</sup>	112	289	50	M 24	162	8
50 <sup>▲</sup>	200	377	50	M 24	250	8
56 <sup>▲</sup>	112	289	50	M 24	162	8
75 <sup>▲</sup>	110	287	50	M 24	160	10
75 <sup>▲</sup>	150	327	50	M 24	200	10
80 <sup>▲</sup>	160	337	50	M 24	210	10
80	212	389	50	M 24	262	10
80 <sup>▲</sup>	300	477	50	M 24	350	10

€ 327,00 ■
€ 616,00 ■
€ 663,00 ■
€ 600,00 ■
€ 508,00 ■
€ 733,00 ■
€ 622,00 ■
€ 924,00 ■
€ 827,00 ■
€ 1.191,00 ■
€ 1.364,00 ■
€ 1.435,00 ■
€ 1.647,00 ■
€ 2.265,00 ■



p. 220



p. 106

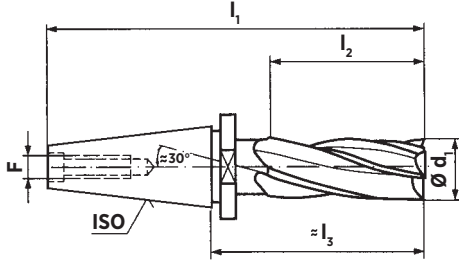
P  
M  
K  
N  
S  
H



# HSS-Co5

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\emptyset d_1$   $k_{10}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9503

HSS-Co5

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	231	50	M 24	129	8
56	150	306	50	M 24	204	8
63	90	246	50	M 24	144	8
80	106	262	50	M 24	160	10

€ 435,00
€ 450,00
€ 514,00
€ 706,00
€ 769,00
€ 600,00
€ 769,00
€ 867,00
€ 882,00
€ 1.186,00
€ 1.112,00
€ 1.635,00



p. 220



p. 106

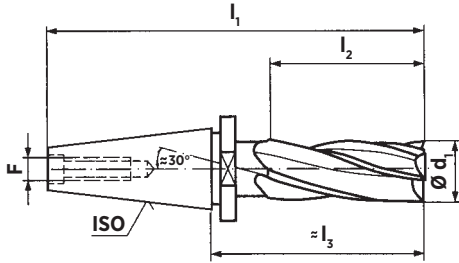
P  
M  
K  
N  
S  
H



# HSS-Co5

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1$   $k_{10}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9504

HSS-Co5

32	106	224	40	M 16	156	6
40	125	281	50	M 24	179	6
45	125	281	50	M 24	179	8
45	160	316	50	M 24	214	8

€ 510,00
€ 897,00
€ 1.058,00
€ 1.186,00

p. 220 p. 106

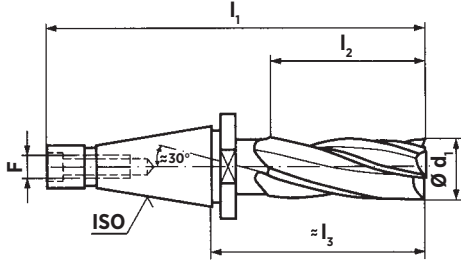
P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 2328K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1, k_{12}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9505

HSS-Co5

36	53	188	40	M 16	95	6
40	63	240	50	M 24	113	6
45	63	240	50	M 24	113	8
56	75	252	50	M 24	125	8
63	90	267	50	M 24	140	8

€ 335,00
€ 490,00
€ 622,00
€ 737,00
€ 858,00



p. 220



p. 107

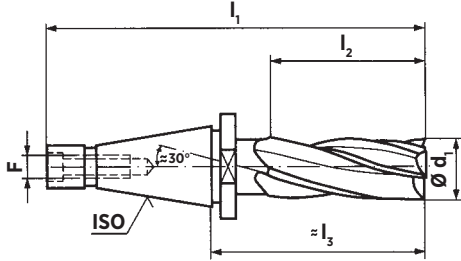
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 2328L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1, k_{12}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9506

HSS-Co5

40 <sup>▲</sup>	100	277	50	M 24	150	6
40	125	302	50	M 24	175	6
40 <sup>▲</sup>	160	337	50	M 24	210	6
45 <sup>▲</sup>	100	277	50	M 16	150	8
45 <sup>▲</sup>	160	337	50	M 24	210	8
50 <sup>▲</sup>	112	289	50	M 24	162	8
56 <sup>▲</sup>	112	289	50	M 24	162	8
56	150	327	50	M 24	200	8
63 <sup>▲</sup>	140	317	50	M 24	190	8
63 <sup>▲</sup>	250	427	50	M 24	300	8
75 <sup>▲</sup>	110	287	50	M 24	160	10
75 <sup>▲</sup>	150	327	50	M 24	200	10
75 <sup>▲</sup>	200	377	50	M 24	250	10
75 <sup>▲</sup>	250	427	50	M 24	300	10
75 <sup>▲</sup>	300	477	50	M 24	350	10
80 <sup>▲</sup>	160	337	50	M 24	210	10

€ 622,00 ■
€ 690,00 ■
€ 752,00 ■
€ 773,00 ■
€ 929,00 ■
€ 822,00 ■
€ 987,00 ■
€ 1.124,00 ■
€ 1.141,00 ■
€ 1.520,00 ■
€ 1.391,00 ■
€ 1.603,00 ■
€ 1.764,00 ■
€ 1.954,00 ■
€ 2.145,00 ■
€ 1.581,00 ■



p. 220



p. 107

P  
M  
K  
N  
S  
H

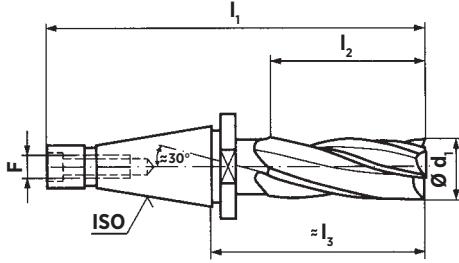




# HSS-Co5

DIN 2328K

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$K_{12}$	$l_2$	$l_1$	ISO	F	$l_3$	Z
-------------------	----------	-------	-------	-----	---	-------	---

32		53	188	40	M 16	95	6
36		53	188	40	M 16	95	6
40		63	240	50	M 24	113	6
45		63	240	50	M 24	113	6
50		75	252	50	M 24	125	8
56		75	252	50	M 24	125	8
80		106	283	50	M 24	156	10

9507



HSS-Co5

€ 312,00
€ 335,00
€ 514,00
€ 622,00
€ 654,00
€ 737,00
€ 1.293,00



p. 220



p. 107

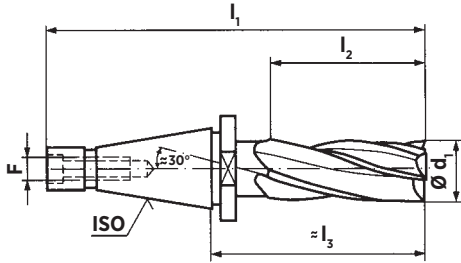
P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 2328L

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1$  K<sub>12</sub> l<sub>2</sub> l<sub>1</sub> ISO F l<sub>3</sub> Z

9508

HSS-Co5

40 <sup>▲</sup>	100	277	50	M 24	150	6
40	125	302	50	M 24	175	6
40 <sup>▲</sup>	160	337	50	M 24	210	6
45	125	260	40	M 24	167	8
45 <sup>▲</sup>	100	277	50	M 16	150	8
45 <sup>▲</sup>	160	337	50	M 24	210	8
50 <sup>▲</sup>	112	289	50	M 24	162	8
50	150	327	50	M 24	200	8
56	150	327	40	M 16	192	8
56 <sup>▲</sup>	112	289	50	M 16	162	8
63 <sup>▲</sup>	140	317	50	M 24	190	8
75 <sup>▲</sup>	150	327	50	M 24	200	10
75 <sup>▲</sup>	250	427	50	M 24	300	10
80 <sup>▲</sup>	160	337	50	M 24	210	10
80 <sup>▲</sup>	300	477	50	M 24	350	10

€ 622,00 ■
€ 723,00 ■
€ 789,00 ■
€ 773,00 ■
€ 720,00 ■
€ 929,00 ■
€ 822,00 ■
€ 957,00 ■
€ 987,00 ■
€ 902,00 ■
€ 1.141,00 ■
€ 1.603,00 ■
€ 1.954,00 ■
€ 1.581,00 ■
€ 2.513,00 ■



p. 220



p. 107

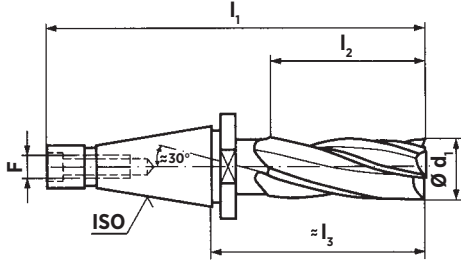
P  
M  
K  
N  
S  
H



# HSS-Co5

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1, k_{12}$	$l_2$	$l_1$	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	100	256	50	M 24	154	6
45	63	219	50	M 24	117	6
50	75	193	40	M 16	125	8
50	75	231	50	M 24	129	8
63	90	246	50	M 24	144	8
80	106	262	50	M 24	160	10
80	160	316	50	M 24	214	10

9509



€ 510,00 ■
€ 538,00 ■
€ 626,00 ■
€ 867,00 ■
€ 907,00 ■
€ 821,00 ■
€ 953,00 ■
€ 1.245,00 ■
€ 1.745,00 ■
€ 2.011,00 ■



p. 220



p. 107

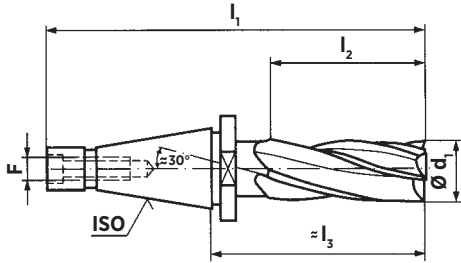
P  
M  
K  
N  
S  
H



# HSS-Co5

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1$   $k_{12}$   $l_2$   $l_1$  ISO F  $l_3$  Z

9510

HSS-Co5

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	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

€ 692,00
€ 702,00
€ 821,00
€ 1.102,00
€ 1.009,00
€ 1.145,00
€ 1.243,00



p. 220



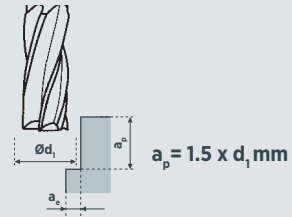
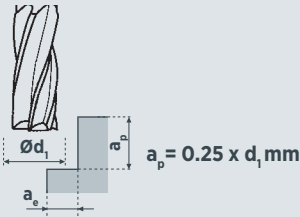
p. 107

P  
M  
K  
N  
S  
H



## TIPO N | TYPE N

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



### CONTORNATURA | SIDE MILLING

Ø	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$		FINITURA $f_z$ FINISHING $f_z$	
	$f_z$	$a_e = 0.3 \times d_1$ mm	$f_z$	$a_e = 0.02 \times d_1$ mm
32	0,192	9,60	0,256	0,64
36	0,216	10,80	0,288	0,72
40	0,240	12,00	0,320	0,80
45	0,270	13,50	0,360	0,90
50	0,300	15,00	0,400	1,00
55	0,330	16,50	0,440	1,10
60	0,360	18,00	0,480	1,20
65	0,390	19,50	0,520	1,30
70	0,420	21,00	0,560	1,40
75	0,450	22,50	0,600	1,50
80	0,480	24,00	0,640	1,60

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-
	Max	50	40	25	15	12	35	25	90	80	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	8	-	-
	Max	35	30	15	10	8	25	20	60	55	10	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

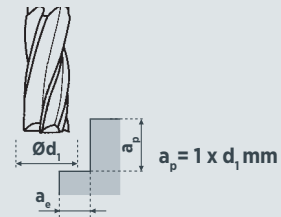
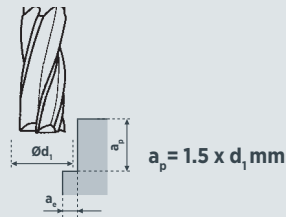
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 32 (finitura) " $f_z$ " 0,256 materiale gruppo P<sub>3</sub> - 0,256x0,6 = 0,15 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 32 (finitura) " $f_z$ " 0,256 material group P<sub>3</sub> - 0,256x0,6 = 0,15 " $f_z$ "



## TIPO NF-NR | TYPE NF-NR

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



### CONTORNATURA | SIDE MILLING

Ø	SEMI SGROSSATURA $f_z$ SEMI ROUGHING $f_z$		SGROSSATURA $f_z$ ROUGHING $f_z$	
	$a_e = 0.1 \times d_1$ mm	$a_e = 0.3 \times d_1$ mm	$a_e = 0.1 \times d_1$ mm	$a_e = 0.3 \times d_1$ mm
32	0,160	3,20	0,131	9,60
36	0,180	3,60	0,148	10,80
40	0,200	4,00	0,164	12,00
45	0,225	4,50	0,185	13,50
50	0,250	5,00	0,205	15,00
55	0,275	5,50	0,226	16,50
60	0,300	6,00	0,246	18,00
65	0,325	6,50	0,267	19,50
70	0,350	7,00	0,287	21,00
75	0,375	7,50	0,308	22,50
80	0,400	8,00	0,328	24,00


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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	25	10	15	10	25	10	-	50	15	-	-
	Max	60	50	20	30	20	50	20	-	70	25	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	25	20	7	10	7	20	7	-	30	7	-	-
	Max	40	30	15	25	15	30	15	-	50	17	-	-
* COEFFICIENTE AVANZAMENTO		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4
* FEED COEFFICIENT													

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 32 (sgrossatura) " $f_z$ " 0,131 materiale gruppo M<sub>1</sub> - 0,131x0,6 = 0,079 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 32 (roughing) " $f_z$ " 0,131material group M<sub>1</sub> - 0,131x0,6 = 0,079 " $f_z$ "



DIN	Tipo			Serie	Materiale	Rivestimento					Rif. pag.
1880	N		-	-	HSS-Co5	 TICN	-	-	-	-	110
1880	HS		-	-	HSS-Co8	 TICN	-	-	-	-	111
1880	<b>W</b> <b>ALU</b>		-	-	HSS-Co5	-	-	-	-	-	112
1880	NF		-	-	HSS-Co5	-	-	-	-	-	113
1880	HFS		-	-	HSS-Co8	 TICN	-	-	-	-	114
1880	NR		-	-	HSS-Co5	-	-	-	-	-	115
1880	<b>VA</b> <b>INOX</b>		-	-	ASP-60	 TICN	-	-	-	-	116
1880	NR		-	-	ASP-60	 TICN	-	-	-	-	117
841	NR		-	-	HSS-Co8	 TICN	-	-	-	-	118
1880	HRS		-	-	ASP-60	 TICN	-	-	-	-	119

# FRESE A MANICOTTO

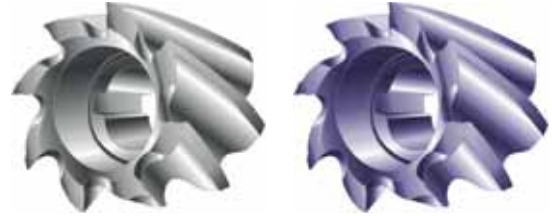
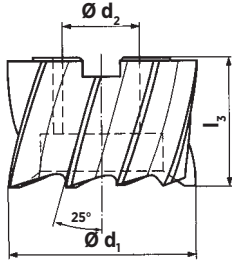
- WALZENSTIRNFRÄSER
- SHELL END MILLS
- FRAISES EN BOUT
- FRESAS HUECA





# HSS-Co5

DIN 1880



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

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

**9561** **9561C**



HSS-Co5



HSS-Co5  
TiCN

€ 132,50

€ 166,00

€ 168,00

€ 207,50

€ 212,00

€ 259,00

€ 299,00

€ 356,00

€ 486,00

€ 575,00

€ 756,00

€ 831,00



p. 220



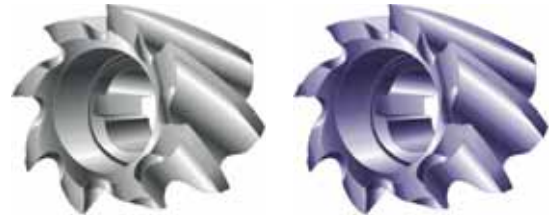
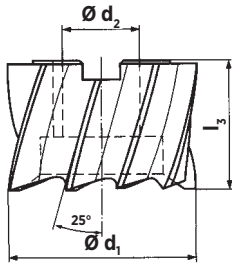
p. 120

P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1880



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

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

**9564** **9564C**



HSS-Co8



HSS-Co8  
TiCN

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



p. 220



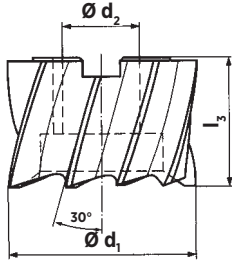
p. 120

P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 1880



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

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

9563



HSS-Co5

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



p. 220



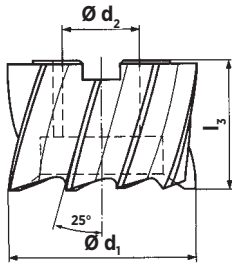
p. 121

P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 1880



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

**9565**



HSS-Co8

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

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



p. 220



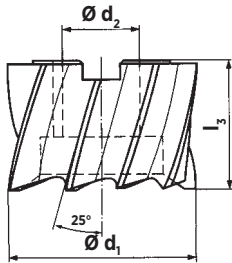
p. 122

P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1880



Ø d<sub>1</sub> JS<sub>14</sub> l<sub>3</sub> Ø d<sub>2</sub> h<sub>6</sub> Z

63	40	27	8
100	50	32	12
125	56	40	12
160	63	50	14

**9567** **9567C**



HSS-Co8



HSS-Co8  
TICN

-	€ 280,05 ■
€ 592,00 ■	€ 756,00 ■
€ 902,00 ■	€ 1.084,00 ■
€ 1.467,00 ■	€ 1.760,40 ■



p. 220



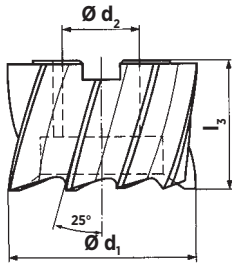
p. 122

P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 1880



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

9571

HSS-Co5

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

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



p. 220



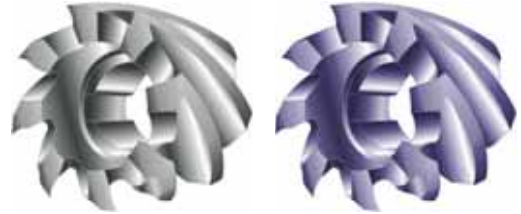
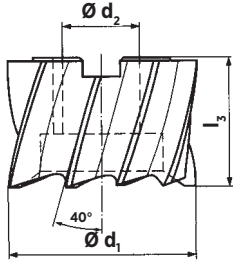
p. 122

P  
M  
K  
N  
S  
H



# ASP-60

## DIN 1880



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

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

**9570** **9570C**



ASP-60



ASP-60  
TICN

€ 425,00

€ 522,00

€ 751,00

€ 383,00

€ 495,00

€ 684,00



p. 220



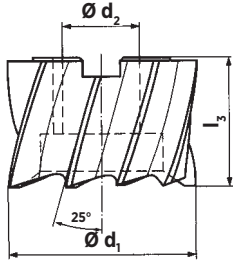
p. 123

P  
M  
K  
N  
S  
H



# ASP-60

## DIN 1880



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

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

**9585** **9585C**



ASP-60



ASP-60  
TICN

€ 222,00
€ 308,00
€ 442,00
€ 1.030,00

€ 253,50
€ 339,00
€ 546,00
€ 1.135,00



p. 220



p. 122

P  
M  
K  
N  
S  
H

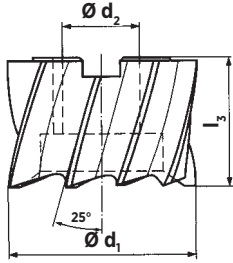
●○○
○○○
○○○
○○○
○○○
○○○
○○○

●○○
○○○
○○○
●●○
○○○
○○○
○○○



# HSS-Co8

DIN 841



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

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

9574

9574C



HSS-Co8



HSS-Co8  
TICN

€ 299,00

€ 265,00

€ 508,00

€ 471,00

€ 807,00

€ 753,00



p. 220



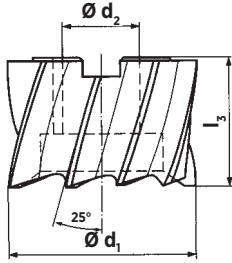
p. 122

P  
M  
K  
N  
S  
H



# ASP-60

## DIN 1880



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

$\varnothing d_1$	$l_3$	$\varnothing d_2$	$Z$
40	32	16	6
50	36	22	8
63	40	27	10
80	45	27	10
100	50	32	12

**9586** **9586C**



ASP-60



ASP-60  
TICN

€ 343,00

€ 335,00

-

€ 394,00 ■

€ 519,00

€ 523,00

€ 737,00

€ 715,00

€ 1.165,00

€ 1.135,00



p. 220



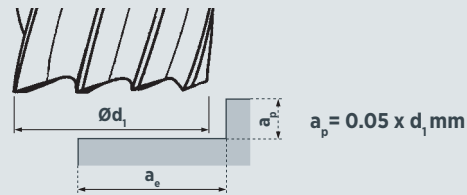
p. 122

P  
M  
K  
N  
S  
H



## TIPO N-HS | TYPE N-HS

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



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

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

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

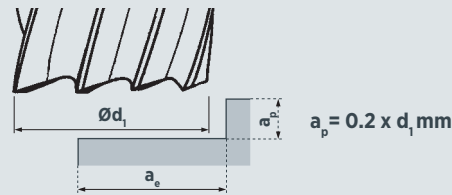
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 40 (spianatura) "f<sub>z</sub>" 0,06 materiale gruppo P<sub>1</sub> - 0,06x1 = 0,06 "f<sub>z</sub>"

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



## TIPO W | TYPE W

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



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

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

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

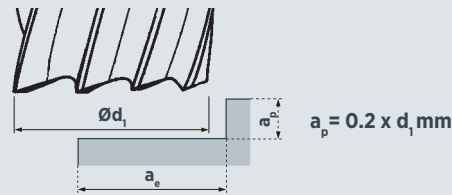
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\emptyset$  12 (spianatura) " $f_z$ " 0,072 materiale gruppo N<sub>1</sub> -  $0,072 \times 1,8 = 0,13$  " $f_z$ "

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



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

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



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

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

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

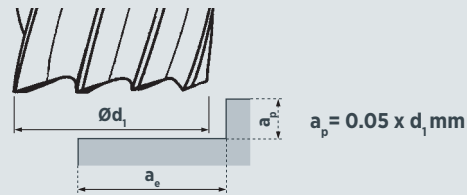
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 40 (spianatura) "f<sub>z</sub>" 0,072 materiale gruppo P<sub>1</sub> - 0,072x1 = 0,072 "f<sub>z</sub>"

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



## TIPO VA | TYPE VA

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



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

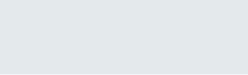






















































$V_c$  [m/min] VELOCITÀ DI TAGLIO |  $V_c$  [m/min] CUTTING SPEED

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

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

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



DIN	Tipo				Serie	Materiale	Rivestimento	Conicità $\alpha/2$		Rif. pag.
ILLICO NORM	NS					HSS-Co8	-	0,5°	●	126
ILLICO NORM	NS					HSS-Co8	-	1°	●	127
ILLICO NORM	NS					HSS-Co8	-	1,5°	●	128
ILLICO NORM	NS					HSS-Co8	-	2°	●	129
ILLICO NORM	NS					HSS-Co8	-	4°	●	130
ILLICO NORM	NS					HSS-Co8	-	5°	●	132
ILLICO NORM	NS					HSS-Co8	-	6°	●	133
1889	NS					HSS-Co8	-	1:10 (5°43')	●	134
1889	NS					HSS-Co8	-	1:20 (2°52')	●	136
1889	BNS					HSS-Co8	-	1:10 (5°43')	●	137
1889	BNS					HSS-Co8	-	1:20 (2°52')	●	138
1889	RS					HSS-Co8	-	1:6 (9°28')	●	139
1889	RS					HSS-Co8	-	1:10 (5°43')	●	140
1889	RS					HSS-Co8	-	1:20 (2°52')	●	141
1889	BRS					HSS-Co8	-	1:6 (9°28')	●	142
1889	BRS					HSS-Co8	-	1:10 (5°43')	●	143
1889	BRS					HSS-Co8	-	1:20 (2°52')	●	144

# FRESE CONICHE

- GESENKFRÄSER
- TAPER CUTTERS
- FRAISES CONIQUES
- FRESAS CONICAS



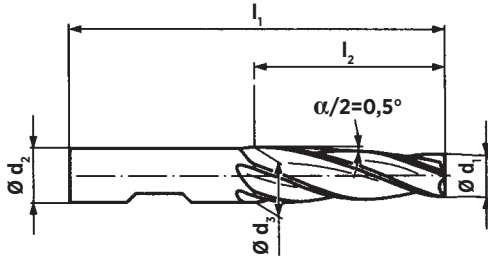
ILLI-CO HIGH QUALITY



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

8501



€ 76,10  
 € 95,00  
 € 98,30  
 € 112,50  
 € 177,00



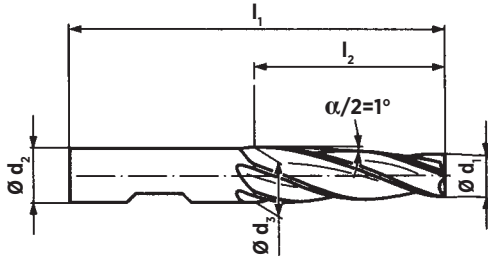
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

6	7,4	40	90	8	4
8	10,5	70	125	10	4
12	14,1	60	120	12	4
12	14,8	80	140	12	4
16	18,1	60	125	16	4

8500



- € 91,40 ■
- € 109,00 ■
- € 125,50 ■
- € 131,50 ■
- € 173,50 ■



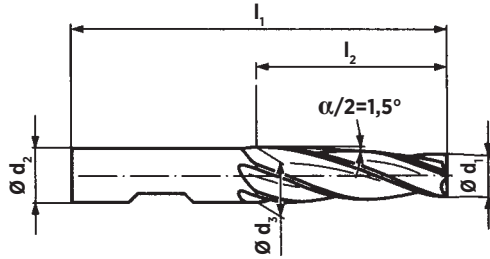
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

6	7,98	35	100	8	4
10	12,88	55	120	12	4
12	15,14	60	120	16	4

8503



€ 95,00

€ 108,00 ■

€ 177,00



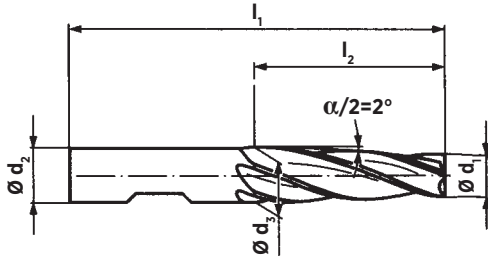
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

8	10,8	40	95	10	4
12	16,2	60	125	16	4
16	20,2	60	125	20	4

8504



€ 104,50 ■  
 € 140,50 ■  
 € 202,50 ■



p. 220



p. 145

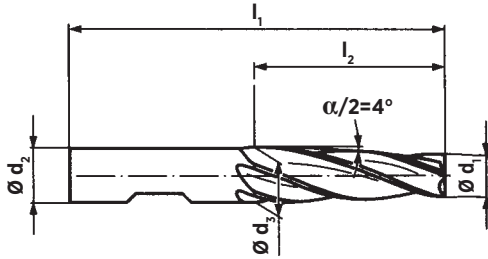
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

8	13,6	40	100	12	4
8	15	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
12	20,4	60	125	20	4

8512



€ 113,50
€ 132,50
€ 154,00
€ 129,00
€ 143,00
€ 182,50



P  
M  
K  
N  
S  
H



**SERVIZI DI  
RIAFFILATURA  
RIVESTIMENTO**

RE-SHARPENING  
AND COATING  
SERVICE



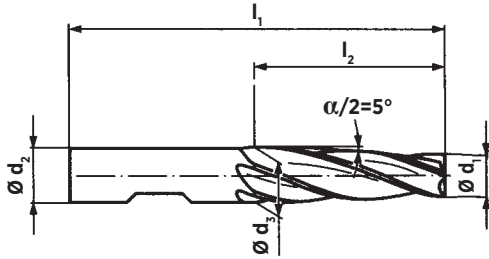
**Angelo Ghezzi & C SpA**



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



8516

HSS-Co8

€ 216,00 ■

$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

8	20,3	70	135	20	4
---	------	----	-----	----	---

p. 220 p. 145

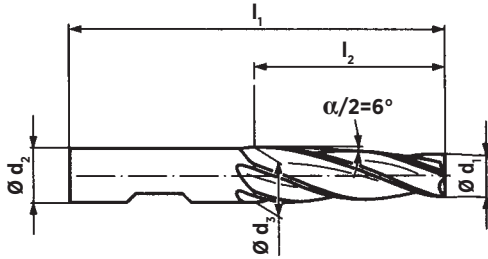
P  
M  
K  
N  
S  
H



# HSS-Co8

## ILLICO NORM

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

6	16,5	50	115	16	4
8	22,7	70	135	20	4
10	18,4	40	105	16	4
10	26,8	80	150	25	4
12	24,6	60	130	25	4
12	28,8	80	150	25	4
16	37	100	175	32	6

8520



€ 140,00

€ 225,50 ■

€ 155,50

€ 275,00

€ 229,00

€ 293,00

€ 636,00



p. 220



p. 145

P  
M  
K  
N  
S  
H

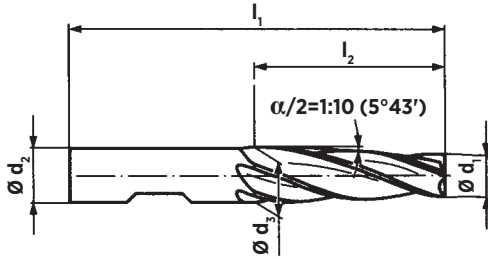




# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

8	17	45	103	16	4
12	21	45	106	20	4
12	26,2	71	140	25	4
16	26	50	120	25	4

8528



€ 164,00	■
€ 193,00	■
€ 254,50	■
€ 257,00	■



P  
M  
K  
N  
S  
H



**I NOSTRI SERVIZI  
SEMPRE A  
DISPOSIZIONE**

OUR PROMPT  
SERVICES ALWAYS  
READY FOR YOU



**Angelo Ghezzi & C SpA**

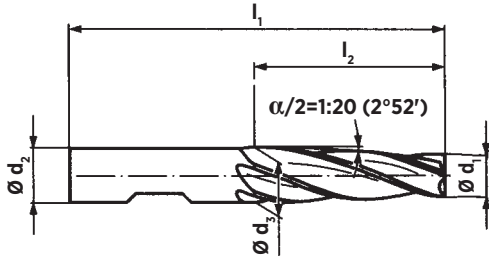


**UTENSILI SPECIALI**  
SPECIAL TOOLS DEPARTMENT

# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

12	17	50	109	16	4
12	20	80	140	20	4
16	25	90	160	25	6

8532



€ 154,50 ■  
 € 206,50 ■  
 € 292,00 ■



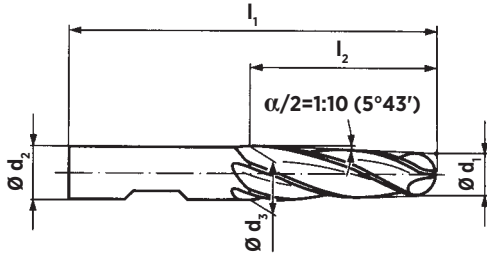
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

12	21	45	106	20	4
12	26,2	71	140	25	4

8540



€ 232,50 ■  
€ 289,00 ■



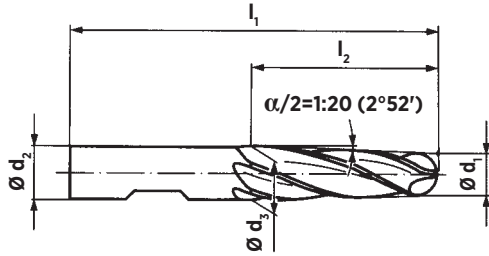
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

6	10	40	95	10	4
16	21,6	56	120	20	4
16	25	90	160	25	6
20	26,3	63	135	25	6

8544



- € 161,00 ■
- € 282,00 ■
- € 347,00 ■
- € 400,00 ■

p. 220 p. 145

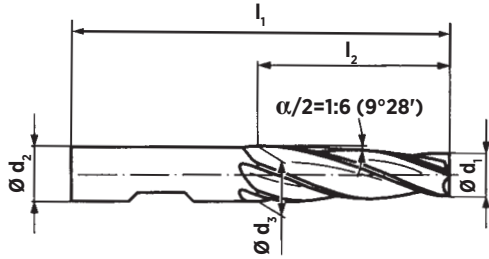
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

8	25	50	120	25	4
12	33	63	135	32	4

8548



€ 257,00 ■

€ 433,00 ■



p. 220



p. 146

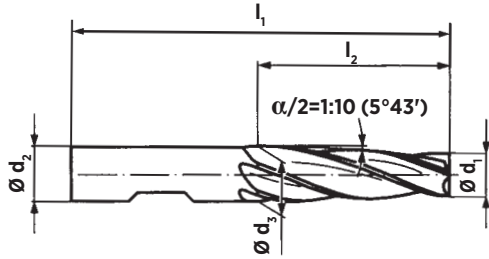
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

<b>8552</b>
-------------

HSS-Co8

€ 178,50 ■
€ 323,00 ■
€ 299,00 ■
€ 377,00 ■
€ 427,00 ■

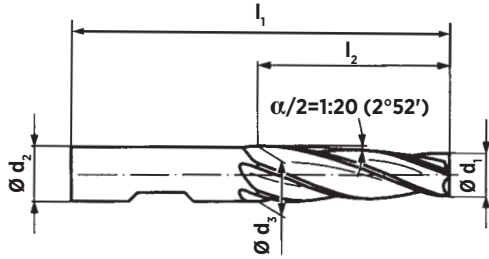
p. 220 p. 146

P	●●●
M	●○○
K	●●○
N	●○○
S	●○○
H	○○○

# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2, h_6$	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

<b>8556</b>
-------------

HSS-Co8

€ 147,00 ■
€ 224,50 ■
€ 265,00 ■
€ 265,00 ■
€ 310,00 ■
€ 413,00 ■
€ 433,00 ■
€ 505,00 ■

p. 220 p. 146

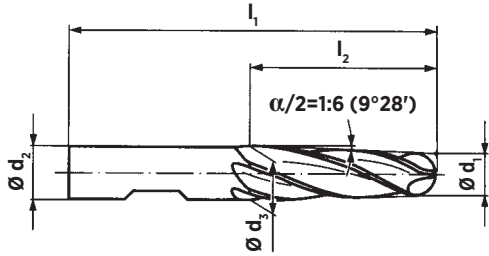
P	●●●
M	●○○
K	●●○
N	●○○
S	●○○
H	○○○



# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

8	25	50	120	25	4
12	33	63	135	32	4

8560



€ 310,00 ■  
€ 496,00 ■

p. 220 p. 146

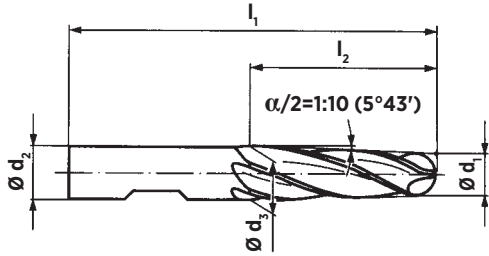
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

<b>8564</b>
-------------

HSS-Co8

€ 222,00
€ 385,00
€ 385,00
€ 441,00 ■
€ 516,00

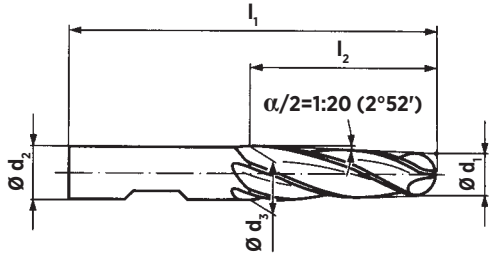
p. 220 p. 146

P	
M	
K	
N	
S	
H	

# HSS-Co8

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1$	$\varnothing d_3$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
-------------------	-------------------	-------	-------	-----------------------	---

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

<b>8568</b>
-------------



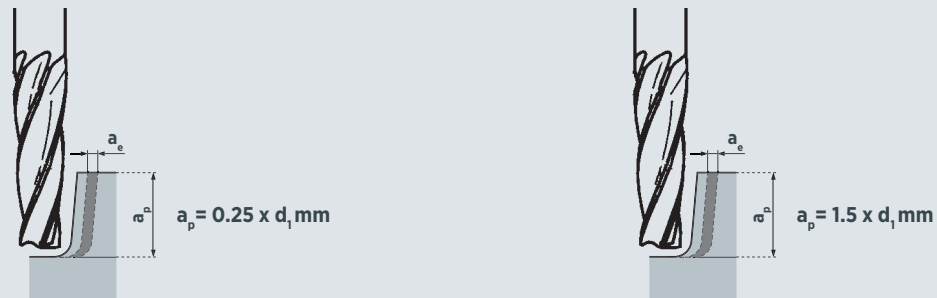
€ 280,00
€ 385,00
€ 345,00
€ 400,00
€ 501,00
€ 554,00
€ 626,00



P	●●●
M	●○○
K	●●○
N	●○○
S	●○○
H	○○○

## TIPO NS-BNS | TYPE NS-BNS

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



CONTORNATURA   SIDE MILLING				
$\emptyset$	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0.3 \times d_1$ mm	FINITURA $f_z$ FINISHING $f_z$	$a_e = 0.02 \times d_1$ mm
4	0,024	1,20	0,032	0,08
5	0,030	1,50	0,040	0,10
6	0,036	1,80	0,048	0,12
8	0,048	2,40	0,064	0,16
10	0,060	3,00	0,080	0,20
12	0,072	3,60	0,096	0,24
14	0,084	4,20	0,112	0,28
16	0,096	4,80	0,128	0,32
20	0,120	6,00	0,160	0,40

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-
	Max	50	40	25	15	12	35	25	90	80	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	8	-	-
	Max	35	30	15	10	8	25	20	60	55	10	-	-
* COEFFICIENTE AVANZAMENTO		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

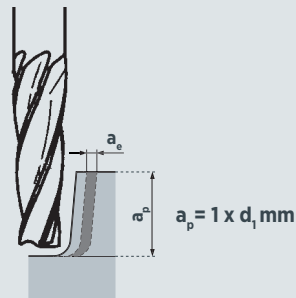
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\emptyset$  16 (finitura) " $f_z$ " 0,128 materiale gruppo P<sub>3</sub> -  $0,128 \times 0,6 = 0,077$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\emptyset$  16 (finishing) " $f_z$ " 0,128 material group P<sub>3</sub> -  $0,128 \times 0,6 = 0,077$  " $f_z$ "



## TIPO RS-BRS | TYPE RS-BRS

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



CONTORNATURA   SIDE MILLING		
$\emptyset$	SGROSSATURA $f_z$ ROUGHING $f_z$	$a_e = 0.3 \times d_1$ mm
8	0,032	2,40
10	0,040	3,00
12	0,048	3,60
14	0,056	4,20
16	0,064	4,80
18	0,072	5,40
20	0,080	6,00

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	25	10	15	10	25	10	-	50	15	-	-
	Max	60	50	20	30	20	50	20	-	70	25	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	25	20	7	10	7	20	7	-	30	7	-	-
	Max	40	30	15	25	15	30	15	-	50	17	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\emptyset$  16 (sgrossatura) " $f_z$ " 0,064 materiale gruppo M<sub>1</sub> -  $0,064 \times 0,6 = 0,038$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\emptyset$  16 (roughing) " $f_z$ " 0,064 material group M<sub>1</sub> -  $0,064 \times 0,6 = 0,038$  " $f_z$ "



PER ULTERIORI  
INFORMAZIONI  
CONTATTATECI

FOR MORE  
INFORMATION  
PLEASE  
CONTACT US






















































































Angelo Ghezzi & C SpA



Numero Verde 800-018130

**SERVIZIO TECNICO**  
TECHNICAL HELP

DIN	Tipo				Serie	Materiale	Rivestimento					Rif. pag.
ILLICO NORM	BN					HSS-Co8		●	●	●	-	150
ILLICO NORM	BN					ASP-30		-	●	-	-	151
ILLICO NORM	BN					HSS-Co8		-	●	●	-	152
ILLICO NORM	BN					ASP-30		-	●	-	-	153
ILLICO NORM	BN					ASP-60		●	-	-	-	154
ILLICO NORM	BN					ASP-60		●	-	-	-	155
1889	BN					HSS-Co8		-	●	-	-	156
1889	BN					ASP-30		-	●	-	-	157
1889	BN					HSS-Co8		-	●	-	-	158
1889	BN					ASP-60		●	-	-	-	159
1889D	BN					HSS-Co8		-	-	-	●	160
1889D	BN					HSS-Co8		-	-	-	●	161
1889	BNR					HSS-Co8		-	●	-	-	162
1889	BNR					ASP-30		-	●	-	-	164
1889	BNR					HSS-Co8		-	●	-	-	165
1889	<b>BNR</b> HARD STEEL					ASP-60		●	●	-	-	166
1889	BNR					ASP-30		-	●	-	-	167
1889D	BNR					HSS-Co8		-	-	-	●	168
1889D	BNR					HSS-Co8		-	-	-	●	169

# FRESE SEMISFERICHE

- RADIUSCHAFTFRÄSER
- BALL NOSE CUTTERS
- FRAISES À BOUT HÉMISFÉRIQUE
- FRESAS ESFÉRICAS

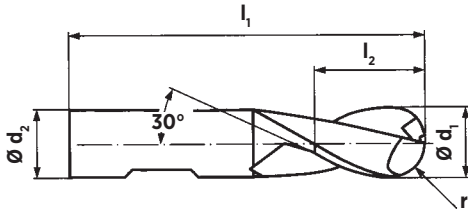
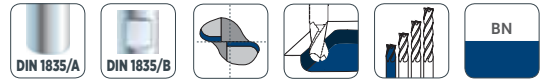




# HSS-Co8

## ILLICO NORM\*

EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



Ø d <sub>1</sub> h <sub>10</sub>	r	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	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

4200	4200C	4201	4201C	4202
€ 28,50	€ 35,90	€ 28,50	€ 35,90	€ 31,30 ■
€ 28,50	€ 35,90	€ 28,50	€ 35,90	€ 31,30 ■
€ 28,50	€ 35,90	€ 28,50	€ 35,90	€ 31,30 ■
€ 28,50	€ 35,90	€ 28,50	€ 35,90	€ 31,30 ■
€ 32,55	€ 40,00	€ 32,55	€ 40,00	€ 35,40 ■
€ 41,30	€ 52,90	€ 41,30	€ 52,90	€ 43,60 ■
€ 36,65	€ 48,30	€ 36,65	€ 48,30	€ 39,20 ■
€ 43,00	€ 54,90	€ 43,00	€ 54,90	€ 45,20 ■
€ 38,85	€ 50,60	€ 38,85	€ 50,60	€ 41,30 ■
€ 54,90	€ 67,70	€ 54,90	€ 67,70	€ 57,00 ■
€ 50,00	€ 62,60	€ 50,10	€ 62,60	€ 51,70 ■
€ 61,50	€ 74,40	€ 61,50	€ 74,40	€ 63,40 ■
€ 59,80	€ 73,20	€ 59,80	€ 73,20	-
€ 67,70	€ 81,00	€ 67,70	€ 81,00	€ 69,40 ■
€ 67,70	€ 85,00	€ 67,70	€ 85,00	€ 69,90 ■
€ 73,80	€ 92,30	€ 73,80	€ 92,30	€ 75,80 ■
€ 74,90	€ 99,50	€ 74,90	€ 99,50	€ 78,40 ■
€ 112,50	€ 140,50	€ 112,50	€ 140,50	€ 114,00 ■
€ 134,00	€ 167,50	€ 134,00	€ 167,50	€ 134,00 ■
€ 132,50	€ 166,50	€ 132,50	€ 166,50	€ 133,00 ■
€ 171,00	€ 211,50	€ 171,00	€ 211,50	€ 164,50 ■
€ 171,00	€ 211,50	€ 171,00	€ 211,50	€ 164,50 ■
€ 174,00	€ 215,00	€ 174,00	€ 215,00	€ 167,50 ■

p. 220 p. 170



P	M	K	N	S	H
●●●	●●●	●●●	●●●	●●●	●●●
●○○	●○○	●○○	●○○	●○○	●○○
●○○	●○○	●○○	●○○	●○○	●○○
●○○	●○○	●○○	●○○	●○○	●○○
○○○	○○○	○○○	○○○	○○○	○○○

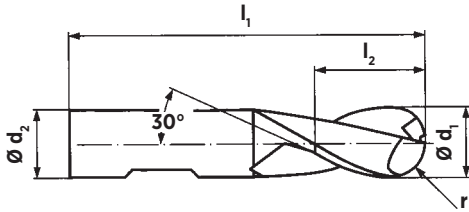
\*Similare a DIN 327 | Ähnlich DIN 327 | Similar to DIN 327 | Similaire DIN 327 | Similar a DIN 327 \*\*Articolo a richiesta | Auf Anfrage | On request | Sur demande | Bajo pedido

# ASP-30

## ILLICO NORM\*



EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA



$\varnothing d_1 h_{10}$	r	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

	4220	4220C
	ASP-30	ASP-30 TICN
	€ 33,40	€ 40,80
	€ 33,40	€ 40,80
	€ 33,40	€ 40,80
	€ 33,40	€ 40,80
	€ 38,35	€ 45,70
	€ 48,30	€ 60,40
	€ 43,00	€ 54,90
	€ 50,60	€ 62,60
	€ 45,70	€ 57,30
	€ 64,80	€ 77,10
	€ 58,70	€ 71,00
	€ 77,80	€ 91,10
	€ 75,50	€ 88,90
	€ 85,50	€ 99,00
	€ 85,50	€ 103,00
	€ 92,80	€ 111,50
	€ 95,00	€ 119,50
	€ 142,00	€ 170,50
	€ 169,50	€ 203,00
	€ 168,50	€ 202,00



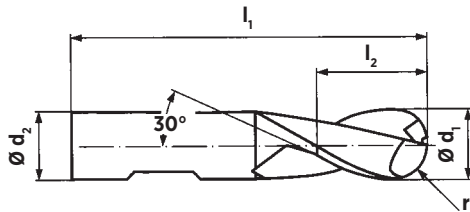
P	●●●	●●●
M	●●●	●●●
K	●●●	●●●
N	●●●	●●●
S	●●●	●●●
H	○●○	○●○

\*Similare a DIN 327 | Ähnlich DIN 327 | Similar to DIN 327 | Similaire DIN 327 | Similar a DIN 327

# HSS-Co8

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 h_{10}$	r	$l_2$	$l_1$	$\varnothing d_2 h_6$	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	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

4204	4204C	4206
------	-------	------

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

€ 35,90	€ 43,50	€ 38,50 ■
€ 35,45	€ 43,00	-
€ 35,45	€ 45,20	€ 38,10 ■
€ 35,45	€ 45,20	€ 38,10 ■
€ 45,90	€ 62,60	-
€ 42,50	€ 59,30	€ 44,70 ■
€ 49,10	€ 66,00	-
€ 45,90	€ 62,60	€ 48,00 ■
€ 61,00	€ 78,30	-
€ 59,30	€ 77,10	€ 60,80 ■
€ 69,30	€ 88,40	-
€ 64,80	€ 84,40	-
€ 73,20	€ 92,30	-
€ 72,70	€ 96,70	-
€ 93,90	€ 128,00	€ 95,20 ■
€ 95,60	€ 129,00	-
€ 119,50	€ 171,50	€ 121,50 ■
€ 145,00	€ 227,50	-
€ 141,00	€ 223,50	€ 141,00 ■
€ 226,00	€ 325,00	-

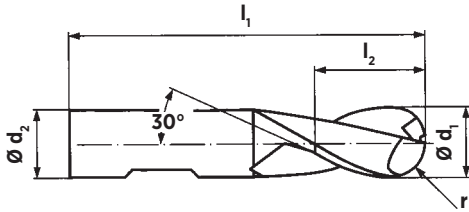


P	●●●	●●●	●●●
M	●○○	●○○	●○○
K	●●○	●●○	●●○
N	●○○	●○○	●○○
S	○○○	○○○	○○○
H	○○○	○○○	○○○

# ASP-30

## ILLICO NORM

LUNGA | LANGE | LONG | LONGUE | LARGA



4224

4224C



ASP-30	ASP-30 TiCN
€ 42,20	€ 49,50
€ 41,50	€ 49,10
€ 41,50	€ 51,60
€ 41,50	€ 51,60
€ 53,90	€ 69,90
€ 49,50	€ 66,50
€ 57,80	€ 74,40
€ 53,90	€ 69,90
€ 71,00	€ 88,90
€ 69,30	€ 87,20
€ 87,20	€ 106,50
-	€ 101,00
€ 92,30	€ 111,50
€ 91,70	€ 116,00
€ 119,50	€ 152,00
€ 120,50	€ 154,00
€ 151,00	€ 203,00
€ 183,50	€ 266,00
€ 177,50	€ 260,00

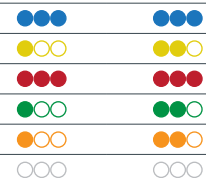
Ø d <sub>1</sub> h <sub>10</sub>	r	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	Z
3	1,5	8	56	6	2
4	2	11	63	6	2
5	2,5	13	68	6	2
6	3	13	68	6	2
7	3,5	16	80	10	2
8	4	19	88	10	2
9	4,5	19	88	10	2
10	5	22	95	10	2
11	5,5	22	102	12	2
12	6	26	110	12	2
13	6,5	26	110	12	2
14	7	26	110	12	2
15	7,5	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



p. 220

p. 170

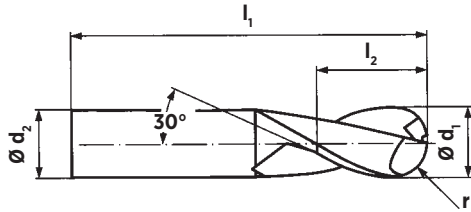
P  
M  
K  
N  
S  
H



# ASP-60

## ILLICO NORM

EXTRA LUNGA | EXTRA LANGE | EXTRA LONG | EXTRA LONGUE | EXTRA LARGA



$\varnothing d_1 h_{10}$     $r$     $l_2$     $l_1$     $\varnothing d_2 h_6$     $Z$

5	2,5	30	80	8	2
6	3	50	100	8	2
8	4	50	100	8	2
16	8	50	100	16	2
30	15	50	100	20	2

**4439**      **4439C**

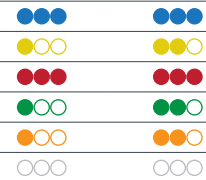
ASP-60

ASP-60  
TICN

€ 230,50	■	€ 276,60	■
€ 291,00	■	€ 349,20	■
€ 291,00	■	€ 349,20	■
€ 345,00	■	€ 414,00	■
€ 583,00	■	€ 699,60	■



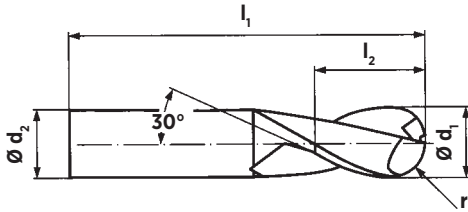
P  
M  
K  
N  
S  
H



# ASP-60

## ILICO NORM

EXTRA LUNGA TOP | TOP EXTRA LANGE | EXTRA LONG TOP | EXTRA LONGUE TOP | EXTRA LARGA TOP



$\varnothing d_1 h_{10}$	r	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

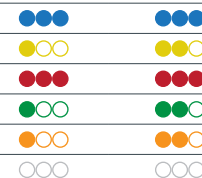
**4493**      **4493C**



€ 345,00	■	€ 414,00	■
€ 359,00	■	€ 430,80	■
€ 499,00	■	€ 598,80	■
€ 499,00	■	€ 598,80	■



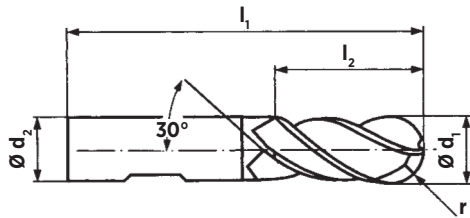
P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



**4438**      **4438C**

 HSS-Co8

 HSS-Co8 TiCN

€ 60,40	€ 67,70
€ 73,80	€ 85,50
€ 81,00	€ 92,80
€ 92,30	€ 105,00
€ 120,00	€ 140,50
€ 165,50	€ 190,50
€ 202,50	€ 239,00
€ 301,00	€ 348,00
€ 516,00	€ 617,00

$\varnothing d_1 h_{10}$      $r$      $l_2$      $l_1$      $\varnothing d_2 h_6$     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



p. 220



p. 170

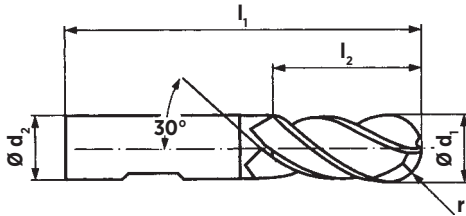
P  
M  
K  
N  
S  
H



# ASP-30

## DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 h_{10}$    r    $l_2$     $l_1$     $\varnothing d_2 h_6$    Z

$\varnothing d_1 h_{10}$	r	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

**4488**   **4488C**

ASP-30

ASP-30  
TiCN

€ 69,90	€ 77,10
€ 85,50	€ 97,30
€ 93,90	€ 105,50
€ 107,00	€ 120,00
-	€ 170,50
€ 207,00	€ 232,00
€ 254,50	€ 292,00
€ 374,00	€ 423,00
€ 607,00	€ 709,00

p. 220   p. 170

P  
M  
K  
N  
S  
H

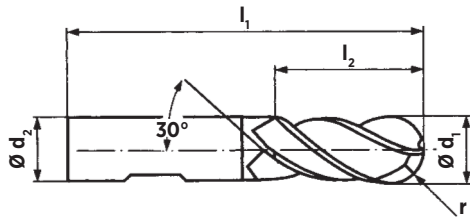




# HSS-Co8

DIN 1889

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 h_{10}$    r    $l_2$     $l_1$     $\varnothing d_2 h_6$    Z

6 <sup>▲</sup>	3	24	68	6	4
8 <sup>▲</sup>	4	38	88	10	4
10	5	45	95	10	4
12	6	53	110	12	4
16	8	63	123	16	4
25	12,5	90	166	25	5
32	16	106	186	32	6
40	20	125	217	40	6

4442      4442C

HSS-Co8

HSS-Co8  
TiCN

€ 66,50	€ 78,80
€ 80,00	€ 96,10
€ 88,90	€ 105,00
€ 101,50	€ 119,50
€ 140,50	€ 165,00
€ 269,00	€ 350,00
€ 389,00	€ 495,00
€ 607,00	€ 734,00



p. 220



p. 170

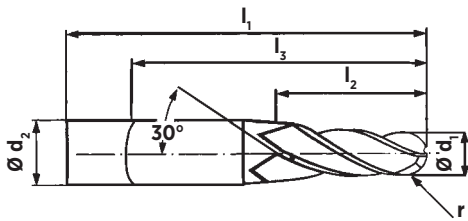
P  
M  
K  
N  
S  
H



# ASP-60

## DIN 1889

EXTRA LUNGA | EXTRA LANGE | EXTRA LONG | EXTRA LONGUE | EXTRA LARGA



$\varnothing d_1 h_{10}$   
 $\pm 0,02$      $r$      $l_2$      $l_3$      $l_1$      $\varnothing d_2 h_6$      $Z$

$\varnothing d_1 h_{10}$ $\pm 0,02$	$r$	$l_2$	$l_3$	$l_1$	$\varnothing d_2 h_6$	$Z$
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
16	8	19,2	150	200	20	4



**4495**      **4495C**

ASP-60

ASP-60  
TICN

€ 93,10	€ 106,50
€ 106,00	€ 124,00
€ 119,00	€ 142,00
-	€ 152,68 ■
€ 204,00	€ 248,00

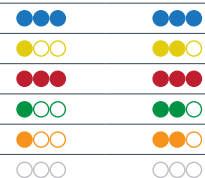


p. 220



p. 170

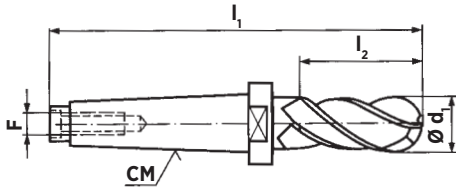
P  
M  
K  
N  
S  
H



# HSS-Co8

## DIN 1889D

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1, h_{10}$	$l_2$	$l_1$	CM	F	Z
---------------------------	-------	-------	----	---	---

10	22	92	1	M6	4
12	26	96	1	M6	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

	4446	4446C
--	------	-------

HSS-Co8

HSS-Co8  
TiCN

€ 147,00 ■	€ 163,00 ■
€ 160,00 ■	€ 177,00 ■
€ 210,00 ■	€ 234,00 ■
€ 253,00 ■	€ 286,00 ■
€ 353,00 ■	€ 441,25 ■
€ 481,00 ■	€ 602,00 ■



p. 220



p. 170

P  
M  
K  
N  
S  
H

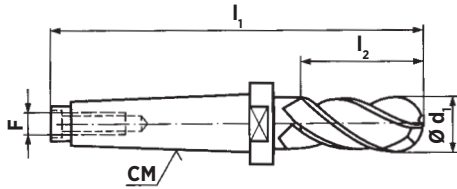


\*Attacco cono Morse secondo DIN 2207 | Morsekegel nach DIN 2207 | Morse taper shank according to DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

# HSS-Co8

DIN 1889D

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1, h_{10}$	$l_2$	$l_1$	CM	F	Z
---------------------------	-------	-------	----	---	---

10	45	115	1	M6	4
12	53	123	1	M6	4
16	63	148	2	M10	4
20	75	160	2	M10	4
25	90	192	3	M12	6

	4448	4448C
--	------	-------

HSS-Co8

HSS-Co8  
TiCN

€ 170,00	€ 191,50
€ 179,00	€ 202,50
€ 249,00	€ 276,00
-	€ 338,00
€ 446,00	€ 532,00



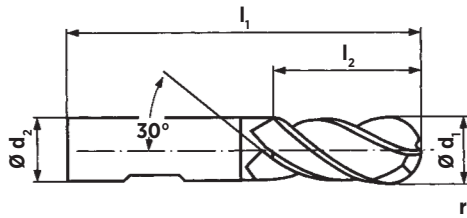
P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

	7426	7426C
	 HSS-Co8	 HSS-Co8 TiCN
	€ 74,90	€ 82,20
	€ 85,50	€ 97,30
	€ 86,00	€ 97,80
	€ 102,50	€ 115,00
	€ 138,50	€ 159,00
	€ 175,00	€ 199,00
	€ 224,50	€ 263,00
	€ 327,00	€ 373,00
	€ 516,00	€ 622,00



p. 220



p. 171

P  
M  
K  
N  
S  
H



E-COMMERCE



Angelo Ghezzi & C SpA



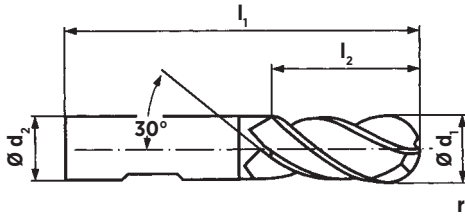
**ORDINI ONLINE** | ONLINE ORDERS

[www.angeloghezzi.it](http://www.angeloghezzi.it)

# ASP-30

DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	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

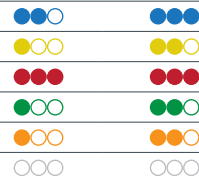
	7476	7476C
--	------	-------



€ 112,50	€ 114,00
€ 130,00	€ 132,00
€ 132,50	€ 134,50
€ 157,00	€ 159,50
€ 220,50	€ 226,50
€ 285,00	€ 286,00
€ 375,00	€ 389,00
€ 552,00	€ 563,00



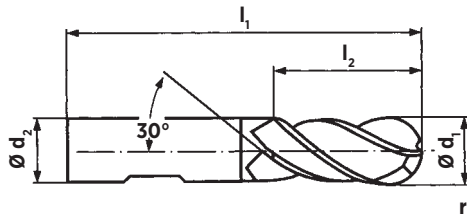
P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1889

LUNGA | LANGE | LONG | LONGUE | LARGA



$\varnothing d_1 h_{10}$	$l_2$	$l_1$	$\varnothing d_2 h_6$	Z
--------------------------	-------	-------	-----------------------	---

6 <sup>▲</sup>	24	68	6	4
8 <sup>▲</sup>	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

7430	7430C
------	-------



€ 90,60	€ 102,50
€ 104,00	€ 121,00
€ 117,50	€ 133,50
€ 138,50	€ 156,00
€ 188,50	€ 214,00
€ 236,00	€ 271,00
€ 332,00	€ 413,00
€ 491,00	€ 597,00
€ 807,00	€ 927,00



P  
M  
K  
N  
S  
H





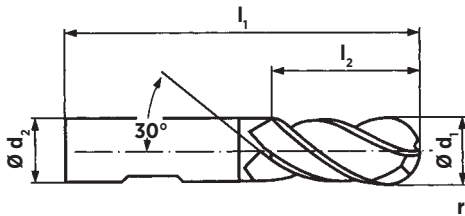
# ASP-60

DIN 1889

CORTA | KURZ | SHORT | COURTE | CORTA



**HARD STEEL**



Ø d <sub>1</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	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

7427	7427C	7429	7429C
€ 112,50	€ 114,00	€ 112,50	€ 114,00
€ 130,00	€ 132,00	€ 130,00	€ 132,00
€ 132,50	€ 134,50	€ 132,50	€ 134,50
€ 157,00	€ 159,50	€ 157,00	€ 159,50
€ 220,50	€ 226,50	€ 220,50	€ 286,00
€ 285,00	€ 286,00	€ 285,00	€ 286,00
€ 375,00	€ 389,00	€ 386,00	€ 389,00
€ 552,00	€ 563,00	€ 561,00	€ 569,00



p. 220



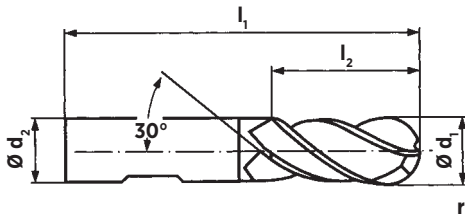
p. 171

P	●●●●	●●●●	●●●●	●●●●
M	●●●●	●●●●	●●●●	●●●●
K	●●●●	●●●●	●●●●	●●●●
N	●●●●	●●●●	●●●●	●●●●
S	●●●●	●●●●	●●●●	●●●●
H	○●○●	○●○●	○●○●	○●○●

# ASP-30

DIN 1889

LUNGA | LANGE | LONG | LONGUE | LARGA



Ø d <sub>1</sub> h <sub>10</sub>	l <sub>2</sub>	l <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	Z
----------------------------------	----------------	----------------	---------------------------------	---

6 <sup>▲</sup>	24	68	6	4
8 <sup>▲</sup>	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

7480	7480C
------	-------



€ 98,30	€ 111,00
€ 113,50	€ 130,00
€ 128,50	€ 144,50
€ 151,00	€ 168,50
€ 206,00	€ 229,50
€ 258,50	€ 292,00
€ 368,00	€ 449,00
€ 539,00	€ 646,00
€ 884,00	€ 1.010,00



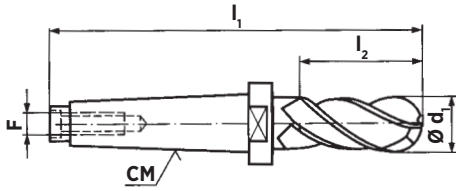
P  
M  
K  
N  
S  
H



# HSS-Co8

DIN 1889D

CORTA | KURZ | SHORT | COURTE | CORTA



**7434**      **7434C**


















 HSS-Co8       HSS-Co8  
TiCN

€ 188,00	€ 204,00
€ 204,00	€ 221,50
€ 266,00	€ 291,00
€ 312,00	€ 345,00
€ 425,00	€ 506,00
€ 574,00	€ 700,00

Ø d <sub>1</sub>	l <sub>2</sub>	l <sub>1</sub>	CM	F	Z
------------------	----------------	----------------	----	---	---

10	22	92	1	M6	4
12	26	96	1	M6	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

 p. 220       p. 171

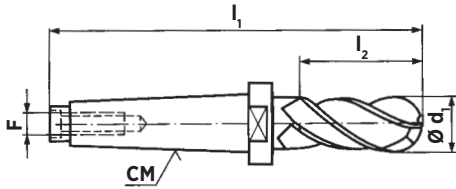
P	   	   
M	   	   
K	   	   
N	   	   
S	   	   
H	   	   

\*Attacco cono Morse secondo DIN 2207 | Morsekegel nach DIN 2207 | Morse taper shank according to DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

# HSS-Co8

## DIN 1889D

LUNGA | LANGE | LONG | LONGUE | LARGA



$\emptyset d_1$	$l_2$	$l_1$	CM	F	Z
10	45	115	1	M6	4
12	53	123	1	M6	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

	7436	7436C
	€ 228,00	€ 252,50
	€ 269,00	€ 293,00
	€ 322,00	€ 350,00
	€ 384,00	€ 420,00
	€ 545,00	€ 636,00
	€ 772,00	€ 884,00
	€ 1.141,00	€ 1.276,00

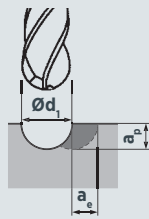


P		
M		
K		
N		
S		
H		

\*Attacco cono Morse secondo DIN 2207 | Morsekegel nach DIN 2207 | Morse taper shank according to DIN 2207 | Queue cône Morse suivant DIN 2207 | Mango cónico según DIN 2207

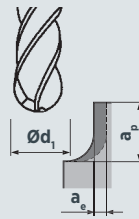
## TIPO BN | TYPE BN

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



$$a_p = 0,5 \times d_1 \text{ mm}$$

$$a_e = 0,5 \times d_1 \text{ mm}$$



$$a_p = 1 \times d_1 \text{ mm}$$

Ø	CONTORNATURA   SIDE MILLING		
	CAVA $f_z$ SLOTING $f_z$	SEMI FINITURA $f_z$ SEMI FINISHING $f_z$	$a_e = 0,25 \times d_1 \text{ mm}$
2	0,007	0,012	0,50
3	0,011	0,018	0,75
4	0,014	0,024	1,00
5	0,018	0,030	1,25
6	0,022	0,036	1,50
8	0,029	0,048	2,00
10	0,036	0,060	2,50
12	0,043	0,072	3,00
14	0,050	0,084	3,50
16	0,058	0,096	4,00
18	0,065	0,108	4,50
20	0,072	0,120	5,00
22	0,079	0,132	5,50
25	0,090	0,150	6,25
28	0,101	0,168	7,00
32	0,115	0,192	8,00
36	0,130	0,216	9,00
40	0,144	0,240	10,00

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-
	Max	50	40	25	15	12	35	25	90	80	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	8	-	-
	Max	35	30	15	10	8	25	20	60	55	10	-	-
* COEFFICIENTE AVANZAMENTO		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4
* FEED COEFFICIENT													

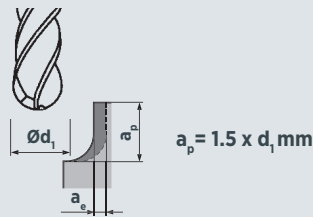
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (cava) " $f_z$ " 0,058 materiale gruppo P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) " $f_z$ " 0,058 material group P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ "



## TIPO BNR | TYPE BNR

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



CONTORNATURA   SIDE MILLING		
Ø	SGROSSATURA $f_z$ ROUGHING $f_z$	$a_e = 0.1 \times d_1$ mm
5	0,021	0,50
6	0,025	0,60
8	0,034	0,80
10	0,042	1,00
12	0,050	1,20
14	0,059	1,40
16	0,067	1,60
18	0,076	1,80
20	0,084	2,00
22	0,092	2,20
25	0,105	2,50
28	0,118	2,80
32	0,134	3,20
36	0,151	3,60
40	0,168	4,00

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	30	25	10	15	10	25	10	-	50	15	-	-
	Max	60	50	20	30	20	50	20	-	70	25	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	25	20	7	10	7	20	7	-	30	7	-	-
	Max	40	30	15	25	15	30	15	-	50	17	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (sgrossatura) " $f_z$ " 0,067 materiale gruppo M<sub>1</sub> -  $0,067 \times 0,6 = 0,04$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (roughing) " $f_z$ " 0,067 material group M<sub>1</sub> -  $0,067 \times 0,6 = 0,04$  " $f_z$ "



DIN	Tipo			Serie	Materiale	Rivestimento					Rif. pag.
851	N			-	HSS-Co5	-	-	●	●	-	174
851	N			-	HSS-Co5	-	-	-	-	●	175
851	NF			-	HSS-Co5	-	●	-	-	-	176
851	NF			-	HSS-Co5	-	-	-	-	●	177
851	NR			-	HSS-Co5	-	-	-	-	●	178
851	N			-	HSS-Co5	-	-	●	●	-	179
1833	N		-	-	HSS-Co5	-	-	●	●	-	180
1833	N		-	-	HSS-Co5	-	-	●	●	-	181
6518	N		-	-	HSS-Co5	-	-	●	●	-	182
842	N		-	-	HSS	-	-	-	-	-	183
842	NF		-	-	HSS-Co5	-	-	-	-	-	184
847	N		-	-	HSS	-	-	-	-	-	185

# FRESE PER SCANALATURE

- NUTENFRÄSER
- SLOT CUTTERS
- FRAISES POUR RAINURES
- FRESAS PARA RANURAS



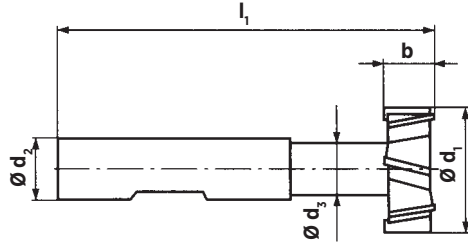
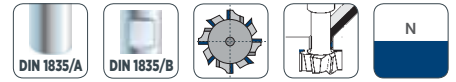


# HSS-Co5

## DIN 851

PER SCANALATURE SECONDO DIN 650

FÜR NUTEN NACH DIN 650 | FOR KEYWAYS ACC. DIN 650 | POUR RAINURES SELON DIN 650 | PARA RANURAS SEGUN DIN 650



$\emptyset d_1, d_{11}$	b	$\emptyset d_3, h_{12}$	$l_1$	$\emptyset d_2$	Z
-------------------------	---	-------------------------	-------	-----------------	---

11	4	4	53,5	10	6
12,5	6	5	57	10	6
16	8	7	62	10	6
18	8	8	70	12	6
19 <sup>▲</sup>	9	8	71	12	6
21	9	10	74	12	6
22 <sup>▲</sup>	10	10	75	12	6
25	11	12	82	16	8
28 <sup>▲</sup>	12	13	85	16	8
32	14	15	90	16	8
36 <sup>▲</sup>	16	17	103	25	8
40	18	19	108	25	10
45 <sup>▲</sup>	20	21	113	25	10
50	22	25	124	32	10
60	28	30	139	32	10

	9520	9522
--	------	------

	HSS-Co5	HSS-Co5
	€ 71,00	€ 66,60 ■
	€ 76,10	-
	€ 96,10	-
	€ 106,50	€ 71,00 ■
	€ 113,50	€ 106,00 ■
	€ 116,50	-
	€ 132,50	-
	€ 160,50	-
	€ 186,50	€ 174,50 ■
	€ 190,00	-
	€ 264,00	-
	€ 322,00	-
	€ 374,00	€ 353,00 ■
	€ 471,00	-
	€ 589,00	-



P  
M  
K  
N  
S  
H

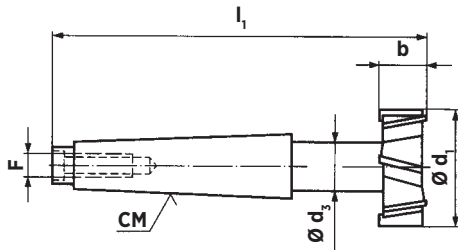


# HSS-Co5

## DIN 851

PER SCANALATURE SECONDO DIN 650

FÜR NUTEN NACH DIN 650 | FOR KEYWAYS ACC. DIN 650 | POUR RAINURES SELON DIN 650 | PARA RANURAS SEGUN DIN 650



$\emptyset d_1 d_{11}$	b	$\emptyset d_3 h_{12}$	$l_1$	CM	F	Z
------------------------	---	------------------------	-------	----	---	---

18	8	8	82	1	M 6	6
21	9	10	102	2	M10	6
25	11	12	104	2	M10	8
28 <sup>▲</sup>	12	13	106	2	M10	8
50	22	25	187	4	M16	10

9524



€ 108,00 ■
€ 121,50 ■
€ 151,50 ■
€ 162,00 ■
€ 435,00 ■



p. 220



p. 186

P  
M  
K  
N  
S  
H

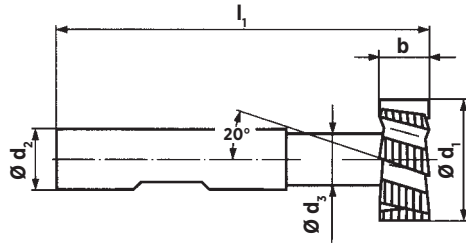


# HSS-Co5

## DIN 851

PER SCANALATURE SECONDO DIN 650

FÜR NUTEN NACH DIN 650 | FOR KEYWAYS ACC. DIN 650 | POUR RAINURES SELON DIN 650 | PARA RANURAS SEGUN DIN 650



$\emptyset d_1, d_{11}$     $b$     $\emptyset d_3, h_{12}$     $l_1$     $\emptyset d_2$     $Z$

9526

HSS-Co5

21	9	10	74	12	6
22 <sup>▲</sup>	10	10	75	12	6
25	11	12	82	16	6
28 <sup>▲</sup>	12	13	85	16	6
32	14	15	90	16	6
36 <sup>▲</sup>	16	17	103	25	6
40	18	19	108	25	8
45 <sup>▲</sup>	20	21	113	25	8

€ 151,50
€ 156,50
€ 173,00
€ 184,50
€ 209,00
€ 274,00
€ 322,00
€ 401,00



P  
M  
K  
N  
S  
H

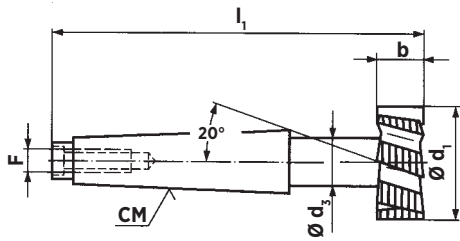


# HSS-Co5

## DIN 851

PER SCANALATURE SECONDO DIN 650

FÜR NUTEN NACH DIN 650 | FOR KEYWAYS ACC. DIN 650 | POUR RAINURES SELON DIN 650 | PARA RANURAS SEGUN DIN 650



$\varnothing d_1 d_{11}$	b	$\varnothing d_3 h_{12}$	$l_1$	CM	F	Z
--------------------------	---	--------------------------	-------	----	---	---

56 <sup>▲</sup>	24	28	192	4	M16	10
85	40	42	255	5	M20	10
95	44	44	264	5	M20	10

9530



€ 574,00 ■  
 € 1.145,00 ■  
 € 1.356,00 ■



P  
M  
K  
N  
S  
H

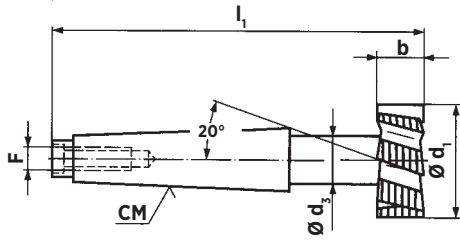


# HSS-Co5

## DIN 851

PER SCANALATURE SECONDO DIN 650

FÜR NUTEN NACH DIN 650 | FOR KEYWAYS ACC. DIN 650 | POUR RAINURES SELON DIN 650 | PARA RANURAS SEGUN DIN 650



Ø d <sub>1</sub> d <sub>11</sub>	b	Ø d <sub>3</sub> h <sub>12</sub>	l <sub>1</sub>	CM	F	Z
----------------------------------	---	----------------------------------	----------------	----	---	---

56 <sup>▲</sup>	24	28	192	4	M16	10
72	35	36	248	5	M20	10
85	40	42	255	5	M20	10
95	44	44	264	5	M20	10

9536

HSS-Co5

€ 548,00 ■
€ 1.059,00 ■
€ 1.359,00 ■
€ 1.356,00 ■



p. 220



p. 186

P  
M  
K  
N  
S  
H



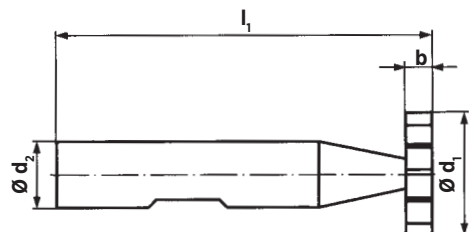


# HSS-Co5

## DIN 851

PER SCANALATURE SECONDO DIN 6888

FÜR NUTEN NACH DIN 6888 | FOR KEYWAYS ACC. DIN 6888 | POUR RAINURES SELON DIN 6888 | PARA RANURAS SEGUN DIN 6888



$\emptyset d_1$ h10	$b e_8$	$l_1$	$\emptyset d_2$	Z
10,5	2	50	6	6
10,5	2,5	50	6	6
10,5	3	50	6	6
13,5 <sup>▲</sup>	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 <sup>▲</sup>	3	63	10	8
19,5	4	63	10	8
19,5	5	63	10	8
19,5	6	63	10	8
22,5 <sup>▲</sup>	4	63	10	8
22,5	5	63	10	8
22,5	6	63	10	8
22,5	8	63	10	8
25,5 <sup>▲</sup>	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 <sup>▲</sup>	6	71	12	10
32,5	8	71	12	10
32,5	10	71	12	10
38,5 <sup>▲</sup>	8	71	12	10
45,5 <sup>▲</sup>	8	71	12	12
45,5	10	71	12	12

	9542	9544
	<input type="checkbox"/>	<input type="checkbox"/>
	HSS-Co5	HSS-Co5
	€ 56,30	€ 53,50 ■
	€ 56,30	-
	€ 56,30	-
	€ 62,60	-
	€ 62,60	-
	€ 64,80	-
	€ 67,70	€ 64,50 ■
	€ 69,90	-
	€ 69,90	€ 66,60 ■
	€ 88,90	-
	€ 88,90	-
	€ 88,90	€ 84,40 ■
	€ 88,90	-
	€ 104,50	-
	€ 104,50	€ 99,40 ■
	€ 104,50	-
	€ 104,50	-
	€ 137,00	€ 130,00 ■
	€ 137,00	-
	€ 147,50	€ 139,00 ■
	€ 147,50	-
	€ 147,50	€ 139,00 ■
	€ 156,50	-
	€ 156,50	-
	€ 156,50	-
	€ 239,50	-
	€ 274,00	-
	€ 274,00	-



p. 220



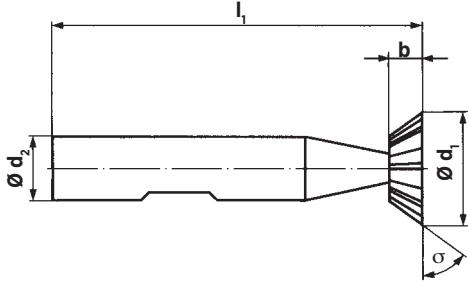
p. 188

P  
M  
K  
N  
S  
H



# HSS-Co5

## DIN 1833



$\varnothing d_1$	$\sigma$	b	$l_1$	$\varnothing d_2$	Z
-------------------	----------	---	-------	-------------------	---

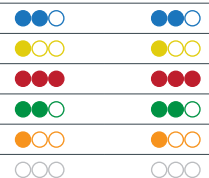
16	45°	4	60	12	8
20	45°	5	63	12	10
25	45°	6,3	67	12	10
16	50°	5	60	12	8
20	50°	6,3	63	12	10
25	50°	8	67	12	10
16	55°	5,6	60	12	8
20	55°	7,1	63	12	10
25	55°	9	67	12	10
16	60°	6,3	60	12	8
20	60°	8	63	12	10
25	60°	10	67	12	10
16 <sup>▲</sup>	70°	7	60	12	8
20 <sup>▲</sup>	70°	9	63	12	10
25 <sup>▲</sup>	70°	11	67	12	10

9546	9548
------	------

HSS-Co5	HSS-Co5
€ 68,70	-
€ 84,40	-
€ 118,50	€ 110,00 ■
€ 72,10	€ 67,20 ■
€ 85,00	€ 79,60 ■
€ 118,50	-
€ 72,10	€ 67,20 ■
€ 85,00	€ 79,60 ■
€ 118,50	€ 110,00 ■
€ 68,70	€ 64,00 ■
€ 84,40	-
€ 118,50	-
€ 72,70	€ 67,70 ■
€ 91,70	€ 85,50 ■
€ 122,00	€ 114,00 ■

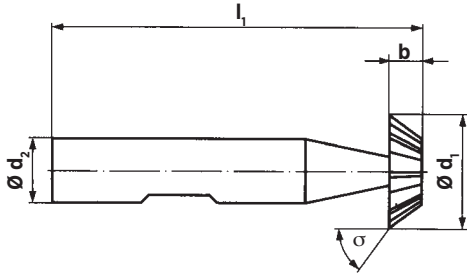


P  
M  
K  
N  
S  
H



# HSS-Co5

DIN 1833



$\varnothing d_1$	$\sigma$	b	$l_1$	$\varnothing d_2$	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 <sup>▲</sup>	70°	5,6	60	12	8
20 <sup>▲</sup>	70°	7,1	63	12	10
25 <sup>▲</sup>	70°	9	67	12	10

	9550	9552
--	------	------



	€ 68,70	-
	€ 84,40	-
	€ 118,50	-
	€ 68,70	-
	€ 84,30	€ 78,40 ■
	€ 118,00	€ 108,50 ■
	€ 72,70	-
	€ 91,70	€ 85,50 ■
	€ 122,00	€ 114,00 ■



P	●●○	●●○
M	●○○	●○○
K	●●●	●●●
N	●●○	●●○
S	●○○	●○○
H	○○○	○○○

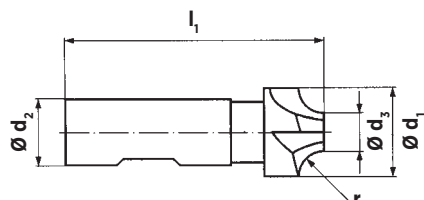


# HSS-Co5

## DIN 6518

1/4 CIRCOLARE

VIERTELRUND | CORNER-ROUNDING | 1/4 DE CERCLE | DE CUARTO DE CIRCULO



$r_{\text{HM}}$	$\varnothing d_1$	$\varnothing d_3$	$l_1$	$\varnothing d_2$	Z
-----------------	-------------------	-------------------	-------	-------------------	---

1	8	6	60	10	4
1,25	8,5	6	60	10	4
1,5	9	6	60	10	4
1,6	9,2	6	60	10	4
2	10	6	60	10	4
2,5	11	6	60	10	4
3	12	6	60	12	4
3,5	13	6	60	12	4
4	14	6	60	12	4
4,5	15	6	60	12	4
5	16	6	60	12	4
5,5	19	8	67	16	4
6	20	8	67	16	4
6,3	20,6	8	71	16	4
6,5	21	8	71	16	4
7	22	8	71	16	4
7,5	23	8	71	16	4
8	24	8	71	16	4
8,5	25	8	85	25	4
9	26	8	85	25	4
9,5	27	8	85	25	4
10	28	8	85	25	4
11	32	10	90	25	4
12	34	10	90	25	4
12,5	41	16	100	25	6
13	42	16	100	25	6
14	44	16	100	25	6
15	46	16	100	25	6
16	48	16	100	25	6
18	52	16	112	32	6
20	56	16	112	32	6

	9554	9556
--	------	------

	HSS-Co5	HSS-Co5
	€ 54,90	-
	€ 59,30	€ 59,20 ■
	€ 59,30	-
	-	€ 58,00 ■
	€ 59,30	-
	€ 59,30	-
	€ 59,30	-
	€ 62,60	€ 63,40 ■
	€ 63,80	€ 63,40 ■
	€ 74,90	€ 75,30 ■
	€ 74,90	-
	€ 89,40	€ 89,80 ■
	€ 89,40	€ 89,80 ■
	€ 115,00 ■	€ 98,30 ■
	€ 100,00	€ 100,50 ■
	€ 100,00	€ 100,50 ■
	€ 104,50	€ 105,00 ■
	€ 100,00	€ 100,50 ■
	€ 127,00	€ 133,00 ■
	€ 123,50	€ 130,00 ■
	€ 130,50	€ 136,50 ■
	€ 130,50	-
	€ 159,50	€ 165,50 ■
	€ 163,50	-
	€ 247,00	-
	€ 253,50	-
	€ 253,50	€ 259,50 ■
	€ 347,00	-
	€ 347,00	€ 354,00 ■
	€ 415,00	€ 421,00 ■
	€ 495,00	€ 499,00 ■

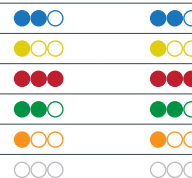


p. 220



p. 189

P  
M  
K  
N  
S  
H

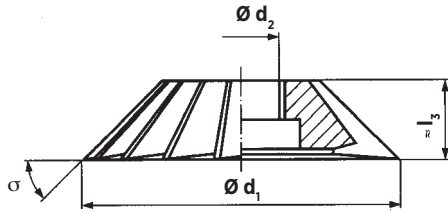


# HSS

## DIN 842

### FRESE A MANICOTTO

AUFSTECK FRÄSER | SHELL ENDMILLS | FRAISES A TROU LISSE | FRESAS HUECAS



$\varnothing d_1$	$\sigma$	$l_3$	$\varnothing d_2$	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

9575	
<input type="checkbox"/>	HSS
	€ 153,00
	€ 178,50
	€ 227,50
	€ 319,00
	€ 485,00
	€ 153,00
	€ 178,50
	€ 227,50
	€ 319,00
	€ 485,00
	€ 854,00
	€ 153,00
	€ 178,50
	€ 227,50
	€ 319,00
	€ 485,00
	€ 854,00
	€ 153,00
	€ 178,50
	€ 227,50
	€ 319,00
	€ 485,00
	€ 854,00
	€ 1.479,00



p. 220



p. 190

P  
M  
K  
N  
S  
H

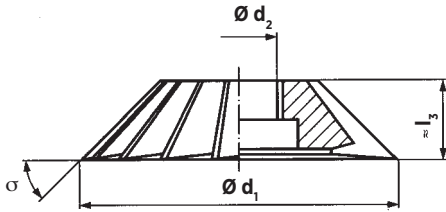


# HSS-Co5

## DIN 842

### FRESE A MANICOTTO

AUFSTECK FRÄSER | SHELL ENDMILLS | FRAISES A TROU LISSE | FRESAS HUECAS



$\varnothing d_1 K_{14}$	$\sigma$	$l_3$	$\varnothing d_2 h_7$	Z
--------------------------	----------	-------	-----------------------	---

80	45°	22	22	22
100	45°	28	27	26
160	45°	45	40	28
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

	<b>9595</b>
--	-------------



HSS-Co5

€ 717,00
€ 1.082,00
€ 2.984,00
€ 717,00
€ 1.082,00
€ 1.922,00
€ 717,00
€ 1.082,00
€ 1.806,00
€ 3.051,00

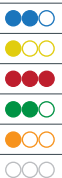


p. 220



p. 190

P  
M  
K  
N  
S  
H

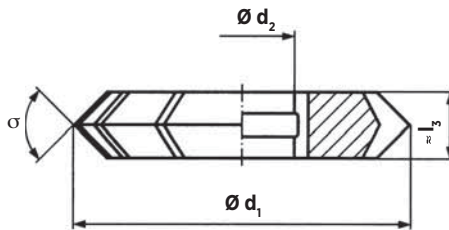


# HSS

## DIN 847

FRESE A MANICOTTO

AUFSTECK FRÄSER | SHELL ENDMILLS | FRAISES A TROU LISSE | FRESAS HUECAS



$\varnothing d_1$	$\sigma$	$l_3$	$\varnothing d_2$	Z
50	45°	8	16	20
63	45°	10	22	22
80	45°	12	27	24
100	45°	18	32	26
50	60°	10	16	18
63	60°	14	22	20
80	60°	18	27	22
100	60°	25	32	24
50	90°	14	16	16
63	90°	20	22	18
80	90°	22	27	20
100	90°	32	32	24
50 <sup>▲</sup>	120°	14	16	16
63 <sup>▲</sup>	120°	20	22	16
80 <sup>▲</sup>	120°	25	27	20
100 <sup>▲</sup>	120°	36	32	24

9576



€ 170,00
€ 222,00
€ 318,00
€ 518,00
€ 170,00
€ 222,00
€ 318,00
€ 518,00
€ 171,00
€ 231,00
€ 333,00
€ 534,00
€ 170,00
€ 222,00
€ 318,00
€ 567,00



p. 220



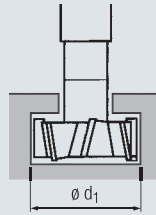
p. 191

P  
M  
K  
N  
S  
H



## TIPO N-NR | TYPE N-NR

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



$\emptyset$	CAVA $f_z$ SLOTING $f_z$
11	0,014
16	0,021
18	0,032
20	0,036
22	0,040
25	0,030
28	0,034
32	0,038
40	0,144
50	0,180
60	0,216

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

		<b>P<sub>1</sub></b>	<b>P<sub>2</sub></b>	<b>P<sub>3</sub></b>	<b>M<sub>1</sub></b>	<b>M<sub>2</sub></b>	<b>K<sub>1</sub></b>	<b>K<sub>2</sub></b>	<b>N<sub>1</sub></b>	<b>N<sub>2</sub></b>	<b>S<sub>1</sub></b>	<b>S<sub>2</sub></b>	<b>H</b>
$V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	7	20	15	70	30	10	-	-
	Max	35	30	25	15	10	30	25	100	45	15	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	60	15	7	-	-
	Max	25	20	15	10	7	20	15	90	20	10	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		<b>1</b>	<b>0,8</b>	<b>0,6</b>	<b>0,6</b>	<b>0,4</b>	<b>1</b>	<b>0,7</b>	<b>1,8</b>	<b>1</b>	<b>0,4</b>	<b>0,6</b>	<b>0,4</b>

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\emptyset$  11 (cava) " $f_z$ " 0,014 materiale gruppo P<sub>3</sub> - 0,014x0,6 = 0,008 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\emptyset$  11 (slotting) " $f_z$ " 0,014 material group P<sub>3</sub> - 0,014x0,6 = 0,008 " $f_z$ "



PER ULTERIORI  
INFORMAZIONI  
CONTATTATECI

FOR MORE  
INFORMATION  
PLEASE  
CONTACT US



Angelo Ghezzi & C SpA

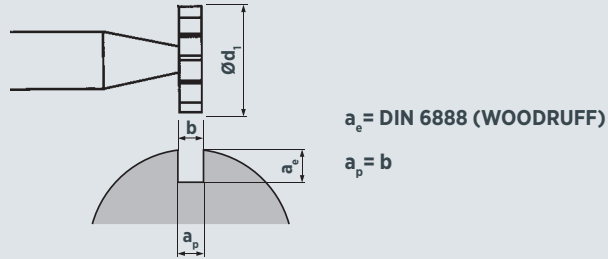


**FOLLOW  
US!**

[www.angeloghezzi.it](http://www.angeloghezzi.it)

## TIPO N | TYPE N

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



$\varnothing$	CAVA f SLOTTING $f_z$
10,5	0,026
13,5	0,034
16,5	0,041
19,5	0,049
22,5	0,032
28,5	0,040
32,5	0,046
38,5	0,054
45,5	0,064

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

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

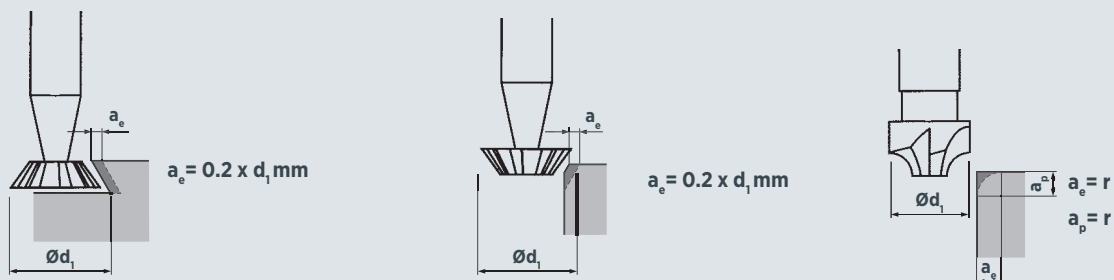
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\varnothing$  12 (cava) " $f_z$ " 0,026 materiale gruppo P<sub>3</sub> - 0,026x0,6 = 0,015 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\varnothing$  12 (slotting) " $f_z$ " 0,026 material group P<sub>3</sub> - 0,026x0,6 = 0,015 " $f_z$ "



## TIPO N | TYPE N

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



Ø	CAVA $f_z$ SLOTTING $f_z$	PROFILATURA $f_z$ PROFILING $f_z$
16	0,011	0,015
20	0,014	0,018
25	0,018	0,023

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

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

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.

Esempio: fresa Ø 16 (cava) " $f_z$ " 0,011 materiale gruppo P<sub>3</sub> - 0,011x0,6 = 0,006 " $f_z$ "

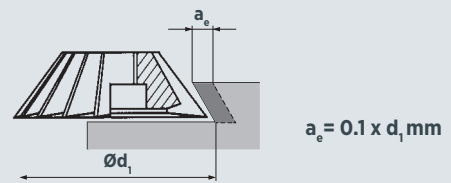
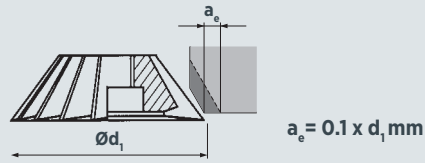
\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) " $f_z$ " 0,011 material group P<sub>3</sub> - 0,011x0,6 = 0,006 " $f_z$ "





## TIPO N-NF | TYPE N-NF

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



Ø	CONTORNATURA $f_z$ SIDE MILLING $f_z$	CAVA $f_z$ SLOTTING $f_z$
40	0,008	0,006
50	0,010	0,008
63	0,013	0,009
80	0,016	0,012
100	0,020	0,015
125	0,025	0,019
160	0,032	0,024

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

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

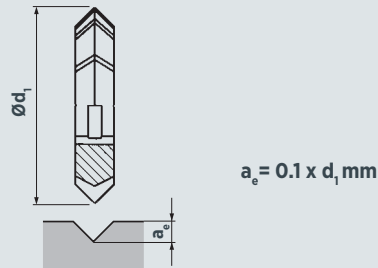
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 40 (cava) " $f_z$ " 0,006 materiale gruppo P<sub>3</sub> -  $0,006 \times 0,6 = 0,0036$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 40 (slotting) " $f_z$ " 0,006 material group P<sub>3</sub> -  $0,006 \times 0,6 = 0,0036$  " $f_z$ "



## TIPO N | TYPE N

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



$\varnothing$	CAVA f SLOTTING $f_z$
50	0,010
63	0,012
80	0,015
100	0,019

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

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

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\varnothing$  40 (cava) " $f_z$ " 0,006 materiale gruppo P<sub>3</sub> - 0,006x0,6 = 0,0036 " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\varnothing$  40 (slotting) " $f_z$ " 0,006 material group P<sub>3</sub> - 0,006x0,6 = 0,0036 " $f_z$ "



DIN	Tipo		Serie	Materiale	Rivestimento	Rif. pag.
885	N		-	HSS-Co5	-	194
885	HS		-	HSS-Co5	-	196
885	H		-	HSS-Co5	-	198
885	W		-	HSS-Co5	-	200
1834	N		-	HSS-Co5	-	202
1834	N		-	HSS-Co5	-	204
ILICO NORM	N		-	HSS-Co5	-	205
ILICO NORM	N		-	HSS-Co5	-	206
856	N		-	HSS	-	207
855A	N		-	HSS	-	208
6513R	N		-	HSS	-	209

# FRESE A DISCO

- SCHEIBENFRÄSER
- SIDE AND FACE MILLING CUTTERS
- FRAISES 3 TAILLES
- FRESAS DE DISCO

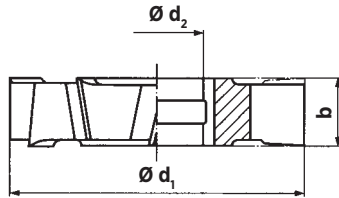


# HSS-Co5

## DIN 885

### DENTI RINFORZATI ELICOIDALI ALTERNATI

KREUTZVERZAHNT | STAGGERED TEETH | DENTURE DOUBLE HELICE ALTERNÉE | DENTADO CRUZADO



Ø d <sub>1</sub>	b	Ø d <sub>2</sub>	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 <sup>▲</sup>	18	22	12
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	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 <sup>▲</sup>	5	32	14
125	8	32	16
125	10	32	16

9577	
HSS-Co5	
€ 127,00	
€ 129,50	
€ 131,50	
€ 146,00	
€ 157,50	
€ 138,00	
€ 147,50	
€ 145,00	
€ 160,00	
€ 180,00	
€ 202,50	
€ 229,50	
€ 242,00	
€ 311,00	
€ 187,00	
€ 189,50	
€ 202,50	
€ 207,50	
€ 234,00	
€ 268,00	
€ 290,00	
€ 290,00	
€ 338,00	
€ 247,50	
€ 270,00	
€ 289,00	
€ 312,00	
€ 348,00	
€ 367,00	
€ 431,00	
€ 426,00	
€ 590,00	
€ 551,00	
€ 295,00 ■	
€ 358,00	
€ 384,00	



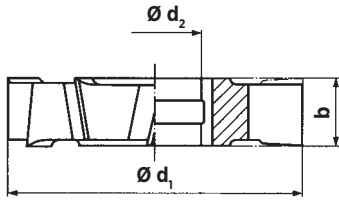
p. 220



p. 210

P  
M  
K  
N  
S  
H





Ø d <sub>1</sub>	b	Ø d <sub>2</sub>	Z
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 <sup>▲</sup>	6	40	18
160 <sup>▲</sup>	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 <sup>▲</sup>	8	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

9577	
	HSS-Co5
€ 416,00	
€ 469,00	
€ 495,00	
€ 537,00	
€ 572,00	
€ 721,00	
€ 691,00	
€ 900,00	
€ 593,00	
€ 630,00	
€ 566,00	
€ 632,00	
€ 667,00	
€ 718,00	
€ 802,00	
€ 810,00	
€ 1.118,00	
€ 993,00	
€ 1.301,00	
€ 1.260,00	
€ 636,00 ■	
€ 910,00	
€ 1.031,00	
€ 1.047,00	
€ 1.136,00	
€ 1.170,00	
€ 1.590,00	
€ 1.383,00	
€ 1.869,00	
€ 1.811,00	



P  
M  
K  
N  
S  
H

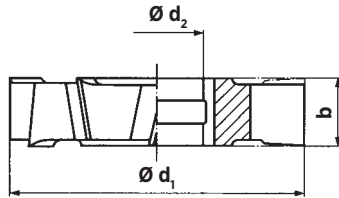


# HSS-Co5

## DIN 885

### DENTI RINFORZATI ELICOIDALI ALTERNATI

KREUTZVERZAHNT | STAGGERED TEETH | DENTURE DOUBLE HELICE ALTERNÉE | DENTADO CRUZADO



$\varnothing d_1$	b	$\varnothing d_2$	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 <sup>▲</sup>	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 <sup>▲</sup>	5	32	20
125	8	32	24
125	10	32	22
125	12	32	22

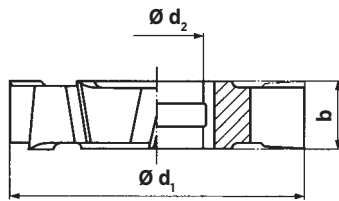
9578	
	HSS-Co5
	€ 145,00
	€ 147,50
	€ 154,00
	€ 165,00
	€ 182,00
	€ 158,50
	€ 171,00
	€ 164,00
	€ 184,00
	€ 206,00
	€ 234,00
	€ 263,00
	€ 279,00
	€ 357,00
	€ 216,00
	€ 221,50
	€ 231,50
	€ 238,50
	€ 268,00
	€ 308,00
	€ 336,00
	€ 386,00
	€ 386,00
	€ 283,00
	€ 310,00
	€ 333,00
	€ 359,00
	€ 400,00
	€ 423,00
	€ 500,00
	€ 500,00
	€ 620,00
	€ 388,00
	€ 414,00
	€ 444,00
	€ 477,00
P	
M	
K	
N	
S	
H	



p. 220



p. 210



Ø d <sub>1</sub>	b	Ø d <sub>2</sub>	Z
------------------	---	------------------	---

125	14	32	22
125	16	32	22
125	18	32	22
125	20	32	22
125	25	32	22
160 <sup>▲</sup>	8	40	26
160	10	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	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 <sup>▲</sup>	20	40	40

9578
------



HSS-Co5

€ 537,00
€ 554,00
€ 639,00
€ 656,00
€ 787,00
€ 658,00
€ 658,00
€ 772,00
€ 826,00
€ 910,00
€ 910,00
€ 1.136,00
€ 1.429,00
€ 1.062,00
€ 1.170,00
€ 1.203,00
€ 1.316,00
€ 1.338,00
€ 1.620,00
€ 2.047,00
€ 2.471,00 ■



p. 220

p. 210

P  
M  
K  
N  
S  
H



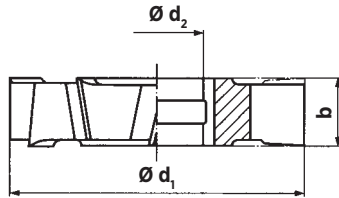


# HSS-Co5

## DIN 885

**DENTI RINFORZATI DIRITTI**

GERÄDEVERZAHNT | STRAIGHT TEETH | DENTURE DROITE | DIENTES RECTOS



$\varnothing d_1$	b	$\varnothing d_2$	Z
50	4	16	16
50	5	16	16
50	6	16	16
50	8	16	16
50	10	16	16
63	4	22	18
63	5	22	18
63	6	22	18
63	8	22	18
63	10	22	18
63	12	22	18
63	14	22	18
63	16	22	18
80	5	27	20
80	6	27	20
80	8	27	20
80	10	27	20
80	12	27	20
80	14	27	20
80	16	27	20
80	18	27	20
80	20	27	20
100	6	32	24
100	8	32	24
100	10	32	24
100	12	32	24
100	14	32	24
100	16	32	24
100	18	32	24
100	20	32	24
100	25	32	24
125	8	32	24
125	10	32	24
125	12	32	24
125	14	32	24
125	16	32	24

9579	
	HSS-Co5
	€ 130,00
	€ 143,00
	€ 143,00
	€ 168,50
	€ 182,50
	€ 163,00
	€ 187,00
	€ 167,00
	€ 179,00
	€ 189,50
	€ 219,50
	€ 265,00
	€ 273,00
	€ 216,00
	€ 215,00
	€ 224,00
	€ 245,00
	€ 271,00
	€ 296,00
	€ 335,00
	€ 354,00
	€ 386,00
	€ 295,00
	€ 314,00
	€ 317,00
	€ 354,00
	€ 408,00
	€ 435,00
	€ 500,00
	€ 476,00
	€ 564,00
	€ 416,00
	€ 426,00
	€ 450,00
	€ 521,00
	€ 556,00
P	
M	
K	
N	
S	
H	

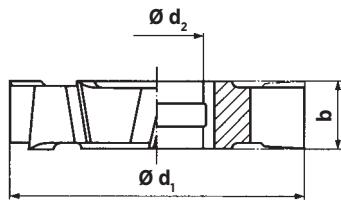


p. 220



p. 210

 P  
M  
K  
N  
S  
H



$\varnothing d_1$	b	$\varnothing d_2$	Z
125	18	32	24
125	20	32	24
125	25	32	24

9579	
	HSS-Co5
	€ 606,00
	€ 613,00
	€ 729,00

 p. 220  p. 210

P  
M  
K  
N  
S  
H



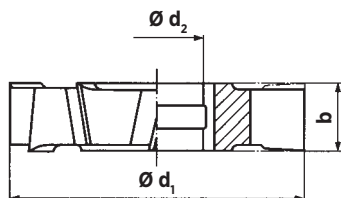
# HSS

## DIN 885



### DENTI RINFORZATI ELICOIDALI ALTERNATI

KREUTZVERZAHNT | STAGGERED TEETH | DENTURE DOUBLE HELICE ALTERNÉE | DENTADO CRUZADO



Ø d <sub>1</sub>	b	Ø d <sub>2</sub>	Z
50	4	16	6
50	5	16	6
50	6	16	6
50	8	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 <sup>▲</sup>	18	22	6
80 <sup>▲</sup>	4	27	6
80	5	27	6
80	8	27	6
80	8	27	6
80	12	27	6
80	14	27	6
80	16	27	6
80	18	32	6
100 <sup>▲</sup>	4	32	8
100 <sup>▲</sup>	5	32	8
100	8	32	8
100	10	32	8
100	16	32	8
100	18	32	8
125 <sup>▲</sup>	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 <sup>▲</sup>	8	40	10
160	10	40	10
160	12	40	10

9580
------



€ 134,50
€ 130,00
€ 133,00
€ 144,00
€ 144,00
€ 155,00
€ 153,50
€ 170,00
€ 177,00
€ 201,50
€ 250,00
€ 239,00
€ 187,50
€ 187,50
€ 199,50
€ 238,00
€ 268,00
€ 288,00
€ 334,00
€ 253,50
€ 253,50
€ 271,00
€ 288,00
€ 366,00
€ 421,00
€ 357,00
€ 357,00
€ 381,00
€ 405,00
€ 463,00
€ 534,00
€ 551,00
€ 538,00
€ 538,00
€ 551,00
€ 606,00
○○○
○○○
○○○
●●○
○○○
○○○

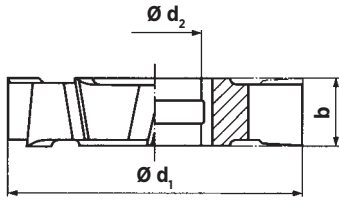


p. 220




p. 211



P  
M  
K  
N  
S  
H



$\varnothing d_1$	b	$\varnothing d_2$	Z
160	16	40	10
160	18	40	10
200 <sup>▲</sup>	6	40	12
200 <sup>▲</sup>	8	40	12
200 <sup>▲</sup>	10	40	12
200	12	40	12
200	14	40	12
200	16	40	12
200	18	40	12
200	20	40	12

9580	
	HSS
€ 692,00	
€ 878,00	
€ 742,00	
€ 742,00	
€ 796,00	
€ 863,00	
€ 929,00	
€ 946,00	
€ 1.084,00	
€ 1.100,00	

 p. 220  p. 211

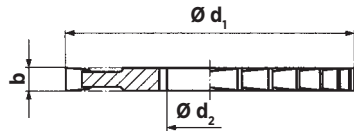
P	
M	
K	
N	
S	
H	

## HSS-Co5

## DIN 1834

DENTI RINFORZATI ELICOIDALI ALTERNATI, PER TAGLI SOTTILI

KREUTZVERZAHNT, SCHMALE | STAGGERED TEETH, NARROW | DENTURE DOUBLE HELICE ALTERNÉE, FINE | DENTADO CRUZADO, ESTRECHO



$\varnothing d_1$	b	$\varnothing d_2$	Z		9581
					HSS-Co5
63	1,6	22	28		€ 150,00
63	2	22	28		€ 146,00
63	2,5	22	28		€ 149,00
63	3	22	28		€ 153,00
63 <sup>▲</sup>	4	22	28		€ 170,50
63 <sup>▲</sup>	5	22	28		€ 180,00
80	1,6	27	32		€ 176,50
80	2	27	32		€ 170,50
80	2,5	27	32		€ 173,50
80	3	27	32		€ 180,00
80	4	27	32		€ 192,00
80 <sup>▲</sup>	5	27	32		€ 216,50
80 <sup>▲</sup>	6	27	32		€ 232,50
100	1,6	32	36		€ 220,50
100	2	32	36		€ 209,50
100	2,5	32	36		€ 216,50
100	3	32	36		€ 222,00
100	4	32	36		€ 239,50
100	5	32	36		€ 263,00
100 <sup>▲</sup>	6	32	36		€ 293,00
100 <sup>▲</sup>	8	32	36		€ 321,00
125	1,6	32	40		€ 292,00
125	2	32	40		€ 275,00
125	2,5	32	40		€ 281,00
125	3	32	40		€ 293,00
125	4	32	40		€ 312,00
125	5	32	40		€ 343,00
125	6	32	40		€ 374,00
125 <sup>▲</sup>	8	32	40		€ 432,00
125 <sup>▲</sup>	10	32	40		€ 472,00
160	2	40	48		€ 472,00
160	2,5	40	48		€ 456,00
160	3	40	48		€ 466,00
160	4	40	48		€ 491,00
160	5	40	48		€ 520,00

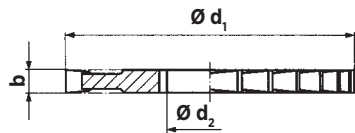


p. 220



p. 212

P  
M  
K  
N  
S  
H



$\varnothing d_1$	b	$\varnothing d_2$	Z
-------------------	---	-------------------	---

160	6	40	48
160	8	40	36

			9581
--	--	--	------

HSS-Co5

€ 554,00  
€ 641,00

p. 220 p. 212

P  
M  
K  
N  
S  
H

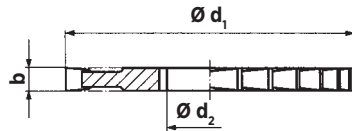
●●○  
●○○  
●●●  
●○○  
●○○  
○○○

# HSS-Co5

## DIN 1834

DENTI RINFORZATI DIRITTI, PER TAGLI SOTTILI

GERADEVERZAHNT, SCHMALE | STRAIGHT TEETH, NARROW | DENTURE DROITE, FINE | DIENTES RECTOS, ESTRECHO



$\varnothing d_1$	b	$\varnothing d_2$	Z	9582
63	1,6	22	32	€ 150,00
63	2	22	32	€ 146,00
63	2,5	22	32	€ 149,00
63	3	22	32	€ 153,00
80	1,6	27	36	€ 176,50
80	2	27	36	€ 170,50
80	2,5	27	36	€ 173,50
80	3	27	36	€ 180,00
80	4	27	36	€ 192,00
100	1,6	32	40	€ 220,50
100	2	32	40	€ 209,50
100	2,5	32	40	€ 216,50
100	3	32	40	€ 222,00
100	4	32	40	€ 239,50
100	5	32	40	€ 263,00
125	1,6	32	44	€ 292,00
125	2	32	44	€ 275,00
125	2,5	32	44	€ 281,00
125	3	32	44	€ 293,00
125	4	32	44	€ 312,00
125	5	32	44	€ 343,00
125	6	32	44	€ 374,00
125 <sup>▲</sup>	8	32	36	€ 432,00
160	2	40	52	€ 472,00
160	2,5	40	52	€ 456,00
160	3	40	52	€ 466,00
160	4	40	52	€ 491,00
160	5	40	52	€ 520,00
160	6	40	52	€ 554,00
160	8	40	52	€ 641,00

HSS-Co5

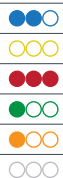


p. 220



p. 212

P  
M  
K  
N  
S  
H

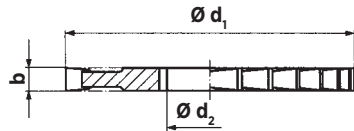


# HSS-Co5

## ILLICO NORM

DENTATURA ALTERNATA FINE, PER TAGLI SOTTILI

KREUZVERZAHNT FEIN, SCHMALE | STAGGERED TEETH FINE, NARROW | DENTURE ALTERNÉE FINE, FINE | DENTADO CRUZADO FINO, ESTRECHO



Ø d <sub>1</sub>	b	Ø d <sub>2</sub>	Z		9583
					HSS-Co5
80 <sup>▲</sup>	5	27	72		€ 186,50 ■
80 <sup>▲</sup>	6	27	72		€ 198,00 ■
100 <sup>▲</sup>	8	32	50		€ 274,00 ■
125	6	32	88		€ 398,00 ■
125 <sup>▲</sup>	10	32	56		€ 408,00 ■
160	8	40	64		€ 560,00 ■
160 <sup>▲</sup>	12	40	64		€ 627,00 ■
200	8	40	76		€ 850,00 ■
200	10	40	76		€ 884,00 ■
200 <sup>▲</sup>	12	40	76		€ 937,00 ■
200 <sup>▲</sup>	14	40	76		€ 991,00 ■
250	2,5	40	136		€ 956,00 ■
250	8	40	88		€ 1.413,00 ■
250	12	40	88		€ 1.511,00 ■
250 <sup>▲</sup>	14	40	88		€ 1.595,00 ■



P	●●○
M	○○○
K	●●●
N	●○○
S	●○○
H	○○○

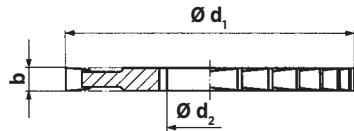


# HSS-Co5

## ILLICO NORM

DENTATURA ALTERNATA GROSSA, PER TAGLI SOTTILI

KREUZVERZAHNT GROB, SCHMALE | STAGGERED TEETH COARSE, NARROW | DENTURE ALTERNÉE GROSSE, FINE | DENTADO CRUZADO GRUESO, ESTRECHA



Ø d <sub>1</sub>	b	Ø d <sub>2</sub>	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 <sup>▲</sup>	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

9584	
HSS-Co5	
€ 150,00	
€ 146,00	
€ 149,00	
€ 153,00	
€ 176,50	
€ 170,50	
€ 173,50	
€ 180,00	
€ 192,00	
€ 232,50	
€ 220,50	
€ 209,50	
€ 216,50	
€ 222,00	
€ 239,50	
€ 263,00	
€ 292,00	
€ 275,00	
€ 281,00	
€ 293,00	
€ 312,00	
€ 343,00	
€ 374,00	
€ 456,00	
€ 466,00	
€ 491,00	
€ 520,00	
€ 554,00	



p. 220



p. 212

P  
M  
K  
N  
S  
H

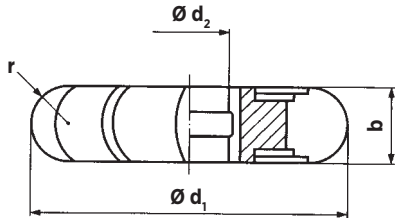


# HSS

## DIN 856

PROFILO COSTANTE

HINTERDREHT | RELIEVED | PROFIL DETALONNÉ | DESTALONADA



Ø d <sub>1</sub>	r H <sub>11</sub>	b	Ø d <sub>2</sub>	Z
50	0,75	1,5	16	16
50	1	2	16	14
50	1,25	2,5	16	14
50 <sup>▲</sup>	1,5	3	16	14
50	1,6	3,2	16	14
50 <sup>▲</sup>	1,75	3,5	16	14
50	2	4	16	14
63 <sup>▲</sup>	2,25	4,5	22	12
63	2,5	5	22	22
63	3	6	22	12
63 <sup>▲</sup>	3,5	7	22	12
63	4	8	22	12
63 <sup>▲</sup>	4,5	9	22	12
63	5	10	22	12
80 <sup>▲</sup>	5,5	11	27	12
80	6	12	27	12
80 <sup>▲</sup>	6,5	13	27	12
80 <sup>▲</sup>	7	14	27	12
80 <sup>▲</sup>	7,5	15	27	12
80	8	16	27	12
100 <sup>▲</sup>	8,5	17	32	12
100 <sup>▲</sup>	9	18	32	12
100	10	20	32	12
100 <sup>▲</sup>	11	22	32	12
100	12	24	32	12

9591
HSS
€ 178,50
€ 143,50
€ 188,00
€ 169,50
€ 183,50
€ 202,00
€ 163,50
€ 240,50
€ 218,50
€ 199,00
€ 240,50
€ 218,50
€ 273,00
€ 241,50
€ 341,00
€ 299,00
€ 368,00
€ 348,00
€ 407,00
€ 342,00
€ 525,00
€ 476,00
€ 476,00
€ 530,00
€ 545,00



p. 220



p. 213

P  
M  
K  
N  
S  
H

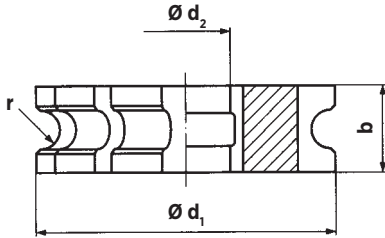


# HSS

## DIN 855A

PROFILO COSTANTE

HINTERDREHT | RELIEVED | PROFIL DETALONNÉ | DESTALONADA



Ø d <sub>1</sub>	r H <sub>11</sub>	b	Ø d <sub>2</sub>	Z
50	1	6	16	14
50 <sup>▲</sup>	1,5	8	16	14
50	2	9	16	14
63	2,5	10	22	12
63	3	12	22	12
63 <sup>▲</sup>	3,5	16	22	12
63	4	16	22	12
63 <sup>▲</sup>	4,5	18	22	12
63	5	20	22	12
80 <sup>▲</sup>	5,5	22	27	12
80	6	24	27	12
80 <sup>▲</sup>	6,5	28	27	12
80 <sup>▲</sup>	7	32	27	12
80 <sup>▲</sup>	7,5	32	27	12
80	8	32	27	12
100	10	36	32	12
100	12	40	32	12

9592



€ 212,50
€ 215,00
€ 215,50
€ 226,00
€ 203,50
€ 267,00
€ 231,50
€ 296,00
€ 260,00
€ 403,00
€ 318,00
€ 432,00
€ 388,00
€ 465,00
€ 414,00
€ 578,00
€ 671,00



p. 220



p. 213

P  
M  
K  
N  
S  
H

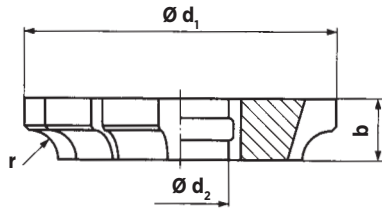


# HSS

## DIN 6513R

**PROFILO COSTANTE, TAGLIO DESTRO**

HINTERDREHT, HINTERDREHT | RELIEVED, RIGHT-HAND CUTTING | PROFIL DETALONNÉ, COUPÉ A DROITE | DESTALONADA, CORTE A LA DERECHA



$\varnothing d_1$	r H <sub>11</sub>	b	$\varnothing d_2$	Z
-------------------	-------------------	---	-------------------	---

80	8	16	27	12
----	---	----	----	----

<b>9593</b>
-------------



€ 566,00 ■



p. 220



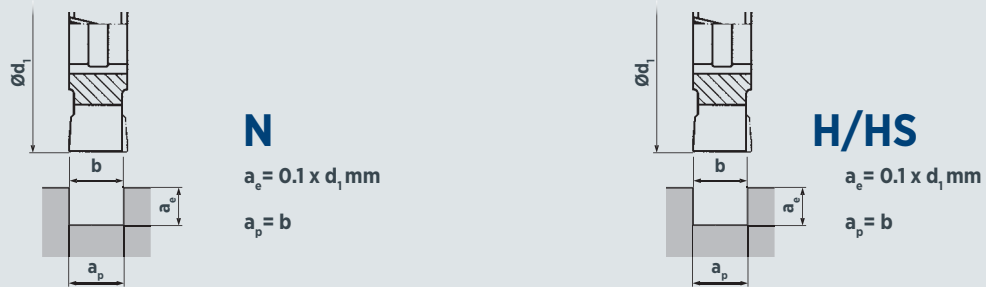
p. 213

P  
M  
K  
N  
S  
H



## TIPO N-H-HS | TYPE N-H-HS

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



Ø	CAVA DAL PIENO $f_z$ SLOTING $f_z$	CAVA DAL PIENO $f_z$ SLOTING $f_z$
50	0,020	0,013
63	0,025	0,016
80	0,032	0,020
100	0,040	0,025
125	0,050	0,031
160	0,064	0,040
200	0,080	0,050

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

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

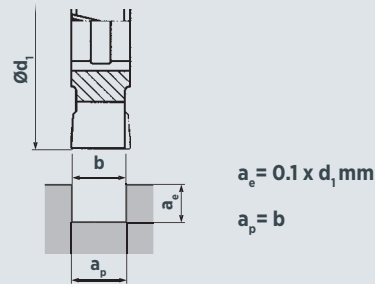
\* Moltiplicare l'avanzamento "f<sub>z</sub>" relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 50 (cava dal pieno - N) "f<sub>z</sub>" 0,020 materiale gruppo P<sub>3</sub> - 0,020x0,6 = 0,012 "f<sub>z</sub>"

\* Multiply the feed "f<sub>z</sub>" of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 50 (slotting - N) "f<sub>z</sub>" 0,020 material group P<sub>3</sub> - 0,020x0,6 = 0,012 "f<sub>z</sub>"



## TIPO W | TYPE W

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



Ø	CAVA DAL PIENO $f_z$ SLOTING $f_z$
50	0,026
63	0,032
80	0,041
100	0,052
125	0,065
160	0,083
200	0,104

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

		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	-	-	-	-	-	-	-	-	-	-	-	-
	Max	-	-	-	-	-	-	-	-	-	-	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	-	-	-	-	-	-	-	50	20	-	-	-
	Max	-	-	-	-	-	-	-	80	40	-	-	-
* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT		1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4

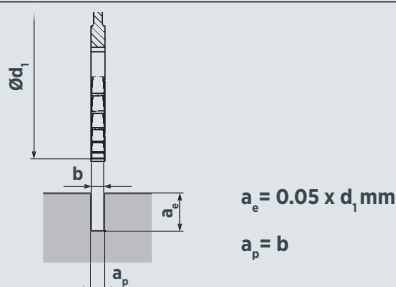
\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 50 (cava dal pieno) " $f_z$ " 0,026 materiale gruppo N<sub>1</sub> -  $0,026 \times 1,8 = 0,047$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 50 (slotting) " $f_z$ " 0,026 material group N<sub>1</sub> -  $0,026 \times 1,8 = 0,047$  " $f_z$ "



## TIPO N | TYPE N

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



$\varnothing$	CAVA DAL PIENO $f_z$ SLOTING $f_z$
63	0,008
80	0,010
100	0,012
125	0,015
160	0,019
200	0,024
250	0,030

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

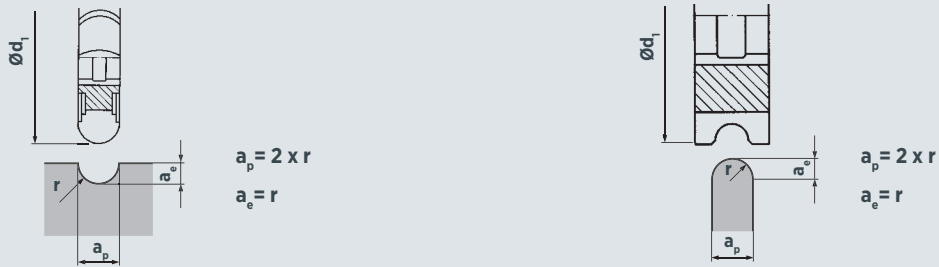
		P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
$V_c$ [m/min] RIVESTITO COATED	Min	-	-	-	-	-	-	-	-	-	-	-	-
	Max	-	-	-	-	-	-	-	-	-	-	-	-
$V_c$ [m/min] NON RIVESTITO UNCOATED	Min	15	10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

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa  $\varnothing$  63 (cava dal pieno) " $f_z$ " 0,008 materiale gruppo P<sub>3</sub> -  $0,008 \times 0,6 = 0,005$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill  $\varnothing$  63 (slotting) " $f_z$ " 0,008 material group P<sub>3</sub> -  $0,008 \times 0,6 = 0,005$  " $f_z$ "

## TIPO N | TYPE N

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



Ø	$r \leq 5$ mm PROFILATURA $f_z$ PROFILING $f_z$	$r > 5$ mm PROFILATURA $f_z$ PROFILING $f_z$
50	0,015	0,030
63	0,019	0,038
80	0,024	0,048
100	0,030	0,060

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

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

\* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 50 (profilatura -  $r \leq 5$ ) " $f_z$ " 0,015 materiale gruppo P<sub>3</sub> -  $0,015 \times 0,6 = 0,009$  " $f_z$ "

\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 50 (profiling -  $r \leq 5$ ) " $f_z$ " 0,015 material group P<sub>3</sub> -  $0,015 \times 0,6 = 0,009$  " $f_z$ "





	Rif. pag.
<b>LEGENDA</b>   ZEICHENERKLÄRUNG   KEY TO SYMBOLS   LÉGENDE   LEYENDA	<b>216-217-218</b>
<b>LEGENDA (PAGINA PRODOTTO)</b>   PRODUKTSEITE   PRODUCT PAGE   PAGE PRODUIT PÁGINA PRODUCTO	<b>220</b>
<b>LEGENDA (PAGINA "SELEZIONE UTENSILE")</b>   SEITE "WERKZEUG-AUSWAHL"   "SELECTION TOOL" PAGE PAGE "CHOIX OUTIL"   PÁGINA "SELECCIÓN DE HERRAMIENTA"	<b>221</b>
<b>LEGENDA (PAGINA PARAMETRI DI TAGLIO)</b>   SCHNITTDATENSEITE   CUTTING PARAMETERS PAGE PAGE PARAMÈTRES DE COUPE   PÁGINA PARAMETROS DE CORTE	<b>222</b>
<b>IDENTIFICAZIONE CODICE FRESE</b>   IDENTIFIZIERUNG DER ARTIKELNUMMER   END MILLS CODE IDENTIFICATION   IDENTIFICATION DU CODE DES FRAISES   IDENTIFICACIÓN CÓDIGO FRESAS	<b>223</b>
<b>MATERIALI</b>   MATERIALEN   MATERIALS   MATÉRIAUX   MATERIALES	<b>224 a 239</b>
<b>INDICE DEI NUMERI DI CODICE</b>   ARTIKELNUMMERN-VERZEICHNIS   CODE INDEX TABLEAU DE CODES   ÍNDICE DE CÓDIGOS	<b>240</b>

# INFORMAZIONI GENERALI



- ALLGEMEINE INFORMATIONEN
- GENERAL INFORMATION
- INFORMATIONS GÉNÉRALES
- INFORMACIÓN GENERAL



ILLI-CO HIGH QUALITY

**ESECUZIONE FRONTALE** | STIRNAUSFÜHRUNG | FACE DESIGN | TYPE DE FACE | DISEÑO FRONTAL



Z2

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z2

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z3

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro



Z3

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z4+

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z4

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro



Z4

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro



Z4

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z4

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z4

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z4

Con taglio al centro  
Zentrumschnitt  
Center cutting  
Coupe au centre  
Corte al centro



Z+

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro



Z+

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro



Z+

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro



Z+

Senza taglio al centro  
Ohne Zentrumschnitt  
Without center cutting  
Sans coupe au centre  
Sin corte al centro

**SERIE** | AUSFUHRUNG | SERIES | SÉRIE | SERIE



Extra corta  
Extra kurz  
Extra short  
Extra courte  
Extra corta



Corta  
Kurz  
Short  
Courte  
Corta



Lunga  
Lange  
Long  
Longue  
Larga



Extra lunga  
Extra lange  
Extra long  
Extra longue  
Extra larga

**ATTACCO** | SCHAFT | SHANK | QUEUE | MANGO



Attacco cilindrico  
Zylinderschaft  
Straight shank  
Queue cylindrique  
Mango cilindrico



Attacco weldon  
Weldonschaft  
Weldon shank  
Queue avec méplant  
Mango weldon



Attacco filettato  
Schaft mit gewinde  
Threaded shank  
Queue fileté  
Mango roscado



Attacco conico  
Kegelschaft  
Morse taper shank  
Queue conique  
Mango conico



ISO DIN 2080



ISO DIN 69871/A

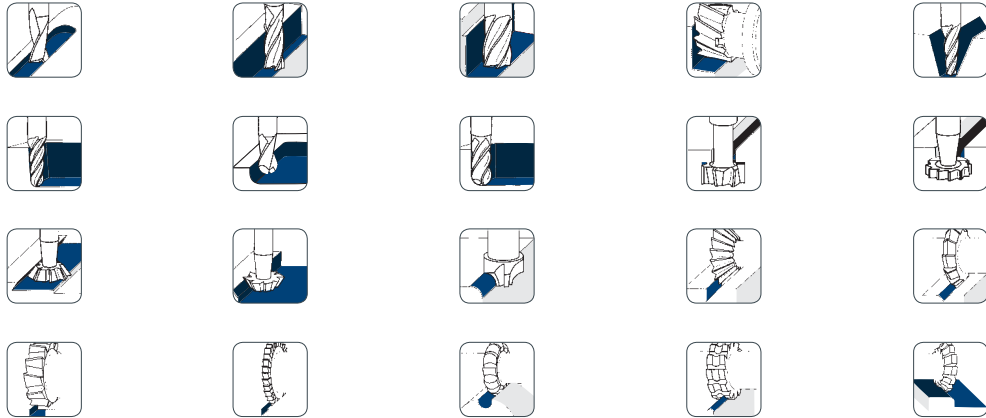


Chiavetta di trascimento longitudinale  
Zylindrische Bohrung mit Längsnut  
Straight bore with standard keyway  
Alésage cylindrique avec rainure de  
clavette longitudinale.  
Taladro cilindrico con ranura longitudinal

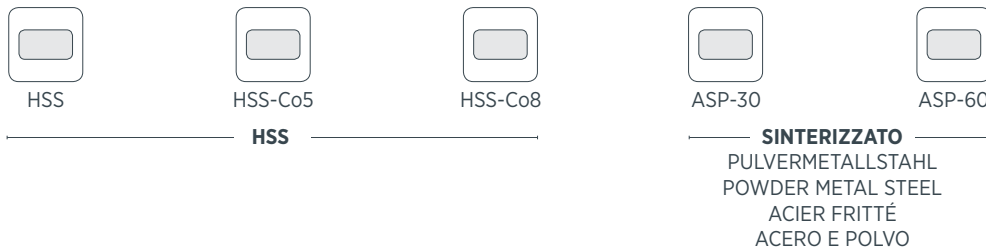


Chiavetta di trascimento longitudinale e trasversale  
Zylindrische Bohrung mit Längsnut und Quernut  
Straight bore with standard keyway and driving slot  
Alésage cylindrique avec rainure de  
clavette longitudinale et rainure transversale.  
Taladro cilindrico con ranura longitudinal y transversal

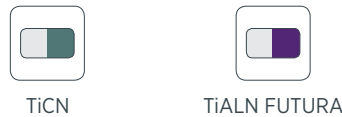
BEARBEITUNGSART | MACHINE WORK TYPE | TYPE DE USINAGE | TIPOLOGIA DE APLICACIÓN | **TIPOLOGIA DI LAVORAZIONE**



WERKZEUGSTOFF | TOOL MATERIAL | MATIÈRE OUTIL | MATERIAL HERRAMIENTA | **MATERIALE UTENSILE**



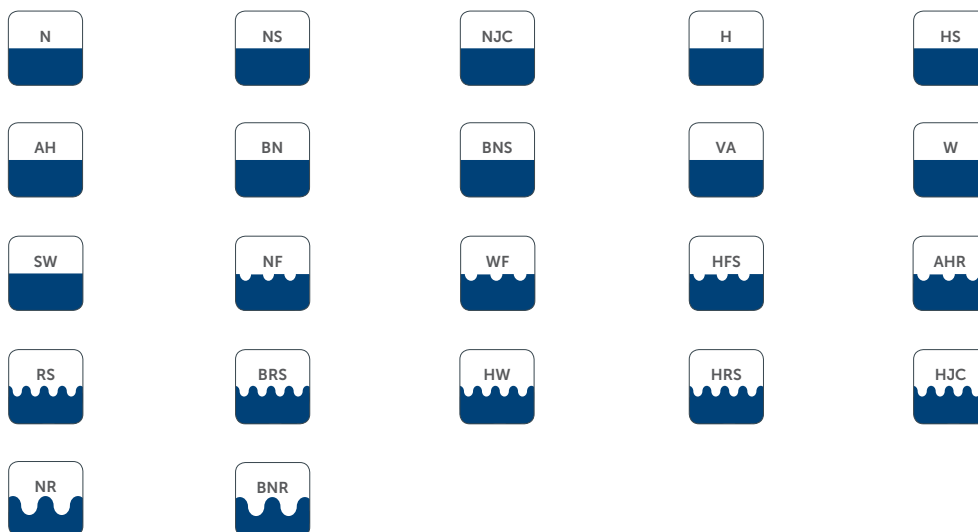
WERKZEUG BESCHICHTUNG | TOOL COATING | REVÊTEMENT OUTIL | RECUBRIMIENTO HERRAMIENTA | **RIVESTIMENTO UTENSILE**











VERARBEITBARE MATERIALEN | MACHINABLE MATERIALS | MATÉRIAUX USINABLES | MATERIALES LABORABLES | **MATERIALI LAVORABILI**



**TIPOLOGIA DI TAGLIO** | SCHNEIDETYP | CUTTING TYPE | TYPOLOGIE DE COUPE | TIPOLOGIA DE CORTE



Tipo - Typ Type - Type - Tipo	Profilo - Profil Profile - Profil - Perfil	
<b>W-H</b>		<b>LAVORAZIONI DI LEGHE LEGGERE</b> Bearbeitung von leichtmetall Light alloys workings Usinages de alliage légers Mecanizado de aleaciones ligeras
<b>WF</b>		
<b>NS-BNS-BN-N-NJC</b>		
<b>NF</b>		<b>LAVORAZIONI GENERICHE</b> Allgemeine bearbeitung General workings Usinages généraux Mecanizado generico
<b>NR-RS-BRS-BNR</b>		
<b>HS</b>		
<b>HFS</b>		<b>LAVORAZIONI DI MATERIALI DIFFICILI</b> Schwere Bearbeitungen von harte Materialien Difficult machine work of hard materials Usinage difficile de matériaux durs Mecanizado de materiales dificiles
<b>HRS-HW-HJC</b>		
<b>AERO AH</b>		<b>LAVORAZIONI DI MATERIALI AERONAUTICI</b> Bearbeitung von aeronautischen Materialien Aeronautical materials machine work Usinage de matières aéronautiques Mecanizado de materiales aeronáutique
<b>AERO AHR</b>		
<b>INOX VA</b>		<b>LAVORAZIONI DI MATERIALI INOSSIDABILI</b> Bearbeitung von rostfreier Materialien Stainless Steel machine work Usinage de matières inoxydables Mecanizado de materiales inoxidable
<b>SW</b>		<b>LAVORAZIONI DI ACCIAIO ALTO LEGATO</b> Bearbeitung von hochlegierte Materialien High alloyed Steel materials machine work Usinage de acier fortement allié Mecanizado de acero de alta aleación

# SETTORI DI COMPETENZA

## COMPETENCE FIELDS



Angelo Ghezzi & C SpA



**Energia**  
Energy



**Medicale**  
Medical



**Meccanica Pesante**  
Heavy Industry



**Aerospaziale**  
Aerospace



**Meccanica Generale**  
General Engineering



**Stampisti**  
Die-Mold



**Automobilistico**  
Automotive



SEITE "WERKZEUG-AUSWAHL" | "SELECTION TOOL" PAGE | PAGE "CHOIX OUTIL" | PÁGINA "SELECCIÓN DE HERRAMIENTA" | **PAGINA "SELEZIONE UTENSILE"**

- 1 Codice prodotto** | Katalognummer  
Item code | Reference produit  
Código referencia
- 2 Immagine prodotto** | Produktimage  
Product image | Image produit | Imagen  
producto
- 3 Esecuzione frontale** | Stirnausführung  
Face design | Type de face | Diseño frontal
- 4 Diametro** | Durchmesser  
Diameter | Diamètre | Diámetro
- 5 Angolo elica** | Drallwinkel  
Helix angle | Angle d'hélicè | Ángulo de hélice
- 6 Serie** | Ausführung | Series | Série | Serie
- 7 N°denti** | Zähnezahl  
No flutes | Nombre de dents | Número de labios
- 8 Materiale utensile** | Werkzeugstoff  
Tool material | Matière outil  
Material herramienta
- 9 Rivestimento utensile**  
Werkzeug Beschichtung | Tool coating  
Revêtement outil  
Recubrimiento herramienta
- 10 Attacco** | Schaft  
Shank | Queue | Mango
- 11 Taglio al centro** | Zentrumschnitt  
Center cutting | Coupe au centre  
Corte al centro
- 12 Sgrossatura** | Schruppen  
Roughing | Ebauche | Desbaste
- 13 Finitura** | Schlichten  
Finishing | Finition | Acabado
- 14 Copiatura** | Kopieren  
Copy milling | Copiage | Copia
- 15 Speciale** | Sonder  
Special | Spécial | Especial
- 16 Gruppo Materiali** | Material-Beispiele  
Material groups | Groupes de matériaux  
Grupos de materiales
- 17 Riferimento pagina prodotto** | Produktseite  
Product page | Page produit | Página producto
- 18 Riferimento pagina parametri di taglio** |  
Schnittdatenseite | Cutting parameters page |  
Page paramètres de coupe | Página Parametros  
de corte

**GUIDA ALLA SELEZIONE DELL'UTENSILE** | WERKZEUG-AUSWAHLHILFE | TOOL SELECTION GUIDE  
GUIDE POUR LE CHOIX DE L'OUTIL | GUÍA DE SELECCIÓN DE HERRAMIENTA

1	2	3	4	5	6	7	8	9
CODICE			Ø d <sub>1</sub>	Elica	Serie	Z	Materiale	Rivestimento
<b>3200</b>			1-40	30°		2	HSS-Co8	-
<b>3200C</b>			1-40	30°		2	HSS-Co8	TICN
<b>3200F</b>			1-40	30°		2	HSS-Co8	TIALN FUTURA
<b>3201</b>			1-50	30°		2	HSS-Co8	-
<b>3201C</b>			1-50	30°		2	HSS-Co8	TICN
<b>3202</b>			1-45	30°		2	HSS-Co8	-
<b>3202C</b>			1-45	30°		2	HSS-Co8	-
<b>3220</b>			2-25	30°		2	ASP-30	-
<b>3220C</b>			2-25	30°		2	ASP-30	TICN
<b>3204</b>			3-36	30°		2	HSS-Co8	-
<b>3204C</b>			3-36	30°		2	HSS-Co8	TICN
<b>3206</b>			3,5-28	30°		2	HSS-Co8	-
<b>3206C</b>			3-40	30°		2	HSS-Co8	TICN
<b>3224</b>								-

WERKZEUG-AUSWAHLHILFE | TOOL SELECTION GUIDE | **GUIDA ALLA SELEZIONE DELL'UTENSILE**  
GUIDE POUR LE CHOIX DE L'OUTIL | GUÍA DE SELECCIÓN DE HERRAMIENTA

10	11	12	13	14	15	16	17	18
Attacco	Taglio al centro				S	P M K N S H	Rif. pagina prodotto	Rif. pagina dati di taglio
	✓	■	-	-	-	● ○ ○ ○ ○ ○ -	<b>2-3</b>	<b>7</b>
	✓	■	-	-	-	● ● ● ○ ○ -	<b>2-3</b>	<b>7</b>
	✓	■	-	-	-	● ● ● ○ ● -	<b>2-3</b>	<b>7</b>
	✓	■	-	-	-	● ○ ○ ○ ○ -	<b>2-3</b>	<b>7</b>
	✓	■	-	-	-	● ○ ○ ○ ○ -	<b>2-3</b>	<b>7</b>
	✓	■	-	-	-	● ● ● ○ ● -	<b>2-3</b>	<b>7</b>
	✓	■	-	-	-	● ○ ○ ○ ○ -	<b>4</b>	<b>7</b>
	✓	■	-	-	-	● ● ● ○ ● -	<b>4</b>	<b>7</b>
	✓	■	-	-	-	● ○ ○ ○ ○ -	<b>5</b>	<b>7</b>
	✓	■	-	-	-	● ● ● ○ ● -	<b>5</b>	<b>7</b>
	✓	■	-	-	-	● ○ ○ ○ ○ -	<b>5</b>	<b>7</b>
	✓	■	-	-	-	● ● ● ○ ● -	<b>5</b>	<b>7</b>
	✓	■	-	-	-	● ○ ○ ○ ○ -	<b>5</b>	<b>7</b>



PAGINA PARAMETRI DI TAGLIO | SCHNITTDATENSEITE | CUTTING PARAMETERS PAGE | PAGE PARAMÈTRES DE COUPE | PÁGINA PARAMETROS DE CORTE

SCHNITTDATEN | CUTTING PARAMETERS | PARAMÈTRES DE COUPE | PARAMETROS DE CORTE | **PARAMETRI DI TAGLIO**

**1 TIPO N | TYPE N**

**2  $f_z$  [mm] AVANZAMENTO AL DENTE |  $f_z$  [mm] FEED PER TOOTH**

**3**  $a_p = 0.5 \times d, mm$   $a_p = d, mm$   $a_p = 1.5 \times d, mm$

**4 CONTORNATURA | SIDE MILLING**

Ø	CAVA DAL PIENO $f_z$ 5 SLOTING $f_z$		SEMI FINITURA $f_z$ 6 SEMI FINISHING $f_z$ $a_p = 0.3 \times d, mm$		FINITURA $f_z$ 7 FINISHING $f_z$ $a_p = 0.02 \times d, mm$	
	1	2	3	4	5	6
1	0,005	0,007	0,30	0,010	0,02	0,02
2	0,007	0,012	0,60	0,016	0,04	0,04
3	0,011	0,018	0,90	0,024	0,06	0,06
4	0,014	0,024	1,20	0,032	0,08	0,08
5	0,018	0,030	1,50	0,040	0,10	0,10
6	0,022	0,036	1,80	0,048	0,12	0,12
8	0,029	0,048	2,40	0,064	0,16	0,16
10	0,036	0,060	3,00	0,080	0,20	0,20
12	0,043	0,072	3,60	0,096	0,24	0,24
14	0,050	0,084	4,20	0,112	0,28	0,28
16	0,058	0,096	4,80	0,128	0,32	0,32
18	0,065	0,108	5,40	0,144	0,36	0,36
20	0,072	0,120	6,00	0,160	0,40	0,40
25	0,090	0,150	7,50	0,200	0,50	0,50
28	0,101	0,168	8,40	0,224	0,56	0,56
32	0,115	0,192	9,60	0,256	0,64	0,64
36	0,130	0,216	10,80	0,288	0,72	0,72
40	0,144	0,240	12,00	0,320	0,80	0,80
45	0,162	0,270	13,50	0,360	0,90	0,90
50	0,180	0,300	15,00	0,400	1,00	1,00

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

		Min	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	K <sub>1</sub>	K <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	H
10 $V_c$ [m/min] RIVESTITO COATED	Min	25	20	15	10	8	15	20	40	35	10	-	-	-
	Max	40	30	20	15	12	35	25	50	40	15	-	-	-
11 $V_c$ [m/min] NON RIVESTITO UNCOATED	Min	20	15	10	7	5	15	10	35	25	-	-	-	-
	Max	35	25	20	10	8	25	20	45	35	-	-	-	-
12	* COEFFICIENTE AVANZAMENTO * FEED COEFFICIENT	1	0,8	0,6	0,6	0,4	1	0,7	1,8	1	0,4	0,6	0,4	

**13** \* Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.  
Esempio: fresa Ø 16 (cava dal pieno) " $f_z$ " 0,058 materiale gruppo P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".  
\* Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: Endmill Ø 16 (slotting) " $f_z$ " 0,058 material group P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".

**14** p. 222

Per informazioni visita | For informationen besuchen Sie bitte | Pour plus d'informations visitez | For information visit | Para más información visite | [www.angeloghezzi.it](http://www.angeloghezzi.it) | ILLICO.18 | 7

**1 TIPO UTENSILE | Werkzeugtyp**  
Tool type | Type outil | Tipología herramienta

**2  $f_z$ =Avanzamento al dente |  $f_z$ =Zahnvorschub**  
 $f_z$ =Feed per tooth |  $f_z$ =Avancement au dent  
 $f_z$ =Avance al labios

**3 Disegno tecnico | Technischen Zeichnung**  
Technical drawing | Plan technique | Dibujo técnico

**4 Contornatura | Kontour | Side Milling**  
Contournage | Fresado lateral

**5 Cava dal pieno | Bohrnuten | Slotting**  
Rainurage | Ranura

**6 Semi Finitura | Halb Feinschlichten**  
Semi Finishing | Semi Finition | Semi Acabado

**7 Finitura | Feinschlichten**  
Finishing | Finition | Acabado

**8  $V_c$ =Velocità di taglio |  $V_c$ =Schnitgeschwindigkeit**  
 $V_c$ =Cutting Speed |  $V_c$ =Vitesse de Coupe  
 $V_c$ =Velocidad de Corte

**10  $V_c$  Rivestito |  $V_c$  Beschichtet**  
 $V_c$  Coated |  $V_c$  Revêtu |  $V_c$  Recubrimiento

**11  $V_c$  Non rivestito |  $V_c$  Unbeschichtet**  
 $V_c$  Uncoated |  $V_c$  Pas revêtu  
 $V_c$  Non recubrimiento

**12 Coefficiente Avanzamento**  
Vorschub Koeffizient | Feed Coefficient  
Coefficiente Avancement  
Coeficiente Avance

**13 Moltiplicare l'avanzamento " $f_z$ " relativo al diametro x il coefficiente avanzamento relativo al materiale.**  
Esempio: fresa Ø 16 (cava dal pieno) " $f_z$ " 0,058 materiale gruppo P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".  
Vorschub " $f_z$ " bezüglich Durchmesser mit vorschub koeffizient bezüglich material multiplizieren.  
Beispiel: fräser Ø 16 (bohrnuten) " $f_z$ " 0,058 material gruppe P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".  
Multiply the feed " $f_z$ " of the diameter by the feed coefficient of the related material.  
Example: endmill Ø 16 (slotting) " $f_z$ " 0,058 material group P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".  
Multiplier l'avance " $f_z$ " du diamètre par le coefficient avancement relatif à la matiere.  
Example: fraise Ø 16 (rainurage) " $f_z$ " 0,058 matiere groupe P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".  
Multiplicar l'avance " $f_z$ " del diametro por el coeficiente avance relativo al material.  
Ejemplo: fresa Ø 16 (ranura) " $f_z$ " 0,058 grupo material P<sub>3</sub> - 0,058x0,6 = 0,035 " $f_z$ ".

**14 Informazioni generali | Allgemeine Informationen**  
General information  
Informations générales | Información generalx

MILLING	
SGROSSATURA $f_z$ 15 ROUGHING $f_z$	$a_p = 0.3 \times d, mm$
0,024	1,80
0,032	0,10

**15 Sgrossatura | Schruppen**  
Roughing | Ebauche | Desbaste

**9 Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

P <sub>1</sub>	ACCIAIO NON LEGATO   Unalloyed Steel < 800 N/mm <sup>2</sup>
P <sub>2</sub>	ACCIAIO BASSO E MEDIO LEGATO   Low and Medium Steel 700/1000 N/mm <sup>2</sup>
P <sub>3</sub>	ACCIAIO ALTO LEGATO   High-Alloyed Steel 1000/1300 N/mm <sup>2</sup>
M <sub>1</sub>	ACCIAIO INOSSIDABILE - FERRITICO/MARTENSITICO   Stainless Steel - Ferritic/Martensitic
M <sub>2</sub>	ACCIAIO INOSSIDABILE - AUSTENICO   Stainless Steel - Austenitic
K <sub>1</sub>	GHISA GRIGIA   Gray Cast Iron
K <sub>2</sub>	GHISA SFEROIDALE   Nodular Cast Iron
N <sub>1</sub>	ALLUMINIO E LEGHE DI ALLUMINIO   Aluminum & Aluminum Alloys
N <sub>2</sub>	OTTONE E LEGHE DI RAME   Brass and Copper Alloys
S <sub>1</sub>	TITANIO E LEGHE DI TITANIO   Titanium and Titanium Alloys
S <sub>2</sub>	LEGHE RESISTENTI AL CALORE   Heat Resistant Super Alloys HRSA
H	TEMPRATI   Hard Materials

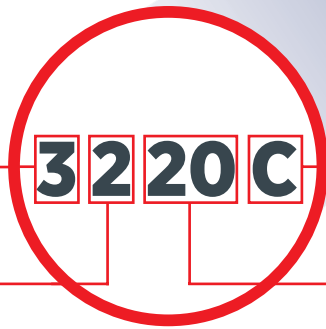
FRESE A CANDELA | SCHAFTFRÄSER | END MILLS | FRAISES | FRESAS

## ASP-30

DIN 327

EXTRA CORTA | EXTRA KURZ | EXTRA SHORT | EXTRA COURTE | EXTRA CORTA

Ø d <sub>1</sub> e <sub>3</sub>	Ø d <sub>1</sub> h <sub>10</sub>	L <sub>2</sub>	L <sub>1</sub>	Ø d <sub>2</sub> h <sub>6</sub>	Z	ASP-030	ASP-030 TICN
2	4	48	6	2		€ 18,40	€ 25,70
2,5	5	49	6	2		€ 18,40	€ 25,70
3	5	49	6	2		€ 18,40	€ 25,70
3,5	6	50	6	2		€ 20,10	€ 27,45
4	7	51	6	2		€ 17,70	€ 25,10
4,5	7	51	6	2		€ 20,10	€ 27,45
5	8	52	6	2		€ 17,70	€ 25,10
5,5	8	52	6	2		€ 20,10	€ 27,45
6	8	52	6	2		€ 17,70	€ 25,10
6,5	10	60	10	2		€ 26,20	€ 37,80
7	10	60	10	2		€ 24,05	€ 35,65
7,5	10	60	10	2		€ 26,20	€ 37,80
8	11	61	10	2		€ 22,75	€ 34,30
8,5	11						€ 39,10
9							



**3 = PER CAVE**

Langlochfräser  
Slot mills  
Fraises à rainurer  
Para ranuras

**4 = PER FINITURA**

Schlichtfräser  
Finishing mills  
Fraises de finition  
Para acabado

**5 = PER SEMIFINITURA**

Schrupp-Schlichtfräser  
Semifinishing mill  
Fraises de semifinition  
Para semi-acabado

**7 = PER SGROSSATURA**

Schruppfräser  
Roughing mills  
Fraises d'ébauche  
Para desbaste

**8 = PER STAMPI CONICHE**

Gesenkkegelfräser  
Die sinking taper cutters  
Fraises coniques pour matrices  
Fresas conicas para moldes

**9 = MISCELLANEA**

Verschiedenes  
Miscellany  
Melange  
Mezcla

**2 = TAGLIENTI**

Schneiden  
Flutes  
Dents  
Labios

**3 = TAGLIENTI**

Schneiden  
Flutes  
Dents  
Labios

**4 = TAGLIENTI**

Schneiden  
Flutes  
Dents  
Labios

**5 = MISCELLANEA**

Verschiedenes  
Miscellany  
Melange  
Mezcla

**NUMERO PROGRESSIVO**

Fortlaufend Nummer  
Progressive number  
Nombre progressif  
Numero progresivo

**C = TICN**



**F = TiALN FUTURA**



<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO NON LEGATO › *Unalloyed Steel* < 800 N/mm<sup>2</sup>

1.0035	St 33					A 33	Fe 320		AE 235-B	
1.0036	UST 37-2		A 570 Gr. 33	K 02502	4360-40 B	E 24-2	Fe 360 B FU	1311	AE 235-B	SS 34
1.0037	St 37-2									
1.0038	RSt 37-2		A 570 Gr. 36	K 02502	4260-40 C	E 24-2 NE	Fe 360 B FN	1312		SS 34
1.0044	St 44-2		A 570 Gr. 40	K 02502	4360-43 B	E 28-2	Fe 430 BFN	1412	AE 275-B	SM 41 B
1.0050	St 50-2		A 570 Gr. 50		4360-50 B	A 50-2	Fe 490	2172	A 490-2	SS 50
1.0060	St 60-2				4360-55 E	A 60-2	Fe 60-2		A 590-2	SM 58
1.0070	St 70-2					A 70-2	Fe 70-2		A 690-2	
1.0116	St 37-3		A 570 Gr. 36		4360-40 C	E 24-3	Fe 37-3	1312	A 360 C	
1.0144	St 44-3		A 573 Gr. 70		4360-43 C	E 28-3	Fe 430 D FF	1414	AE 275-D	
1.0301	C 10		1010	G10100	045 M 10	XC 10	C 10		F.151	S 10 C
1.0401	C 15		1015	G10170	080 M 15	CC 12	C 15	1350	F.111	S 15 C
1.0402	C 22	1 C 22	1020	G10200	050 A 20	CC 20	C 20	1450	F.112	S 22 C
1.0405	SM45.8									
1.0406	C 25	1 C 25	1025	G10250	070 M 26	CC 25	C 25		C 25 k	
1.0420	GS-38	GE 200				230-400M		1306		
1.0446	GS-45	GE 230			A1	E23-45M		1305	F.221	
1.0461	SIE 255			K01800						
1.0462	WSIE 255			K01800						
1.0463	TSIE 255			K01800						
1.0482	19 Mn 5			K03102	224-460	A 52 CP; AP; FP				
1.0486	SIE 285			K01802			Fe E 285 KG		AE 285 KG	
1.0487	WSIE 285			K01802			Fe E 285 KW		AE 285 KW	
1.0488	TSIE 285			K01803			Fe E 285 KT		AE 285 KT	
1.0501	C 35	1 C 35	1035	G10350	060 A 35	CC 35	C 35	1550	F.113	
1.0503	C 45	1 C 45	1045	G10450	080 M 46	CC 45	C 45	1650	C 45 k	
1.0505	SIE 315									
1.0506	WSIE 315									
1.0508	TSIE 315									
1.0511	C 40	1 C 40	1040	G10400	080 M 40				F.114.A	
1.0528	C 30	1 C 30	1030	G10300	080 M 30	CC 32	C 30			
1.0532	St 52-2									
1.0535	C 55	1 C 55	1055		070 M 55		C 55	1655		
1.0540	C 50	1 C 50	1050	G10500	080 M 50			1674		
1.0552	GS-52	GE 260								
1.0558	GS-60	GE 300			A3	320-560M	C 45	1606		
1.0562	SIE 355		A 633 Gr. C	K12000		E 355 R/FP	Fe E 355 KG	2132	AE 355 KG	SM 50 YB
1.0565	WSIE 355									
1.0566	TSIE 355									
1.0570	St 52-3	S 355 J 2 G 3			4360-50 B	E 36-3	Fe 510 B	2132	A 510 C	SM 50 YB
1.0601	C 60	1 C 60	1060	G10600	080 A 62	AF 70 C 55	C 60			
1.0619	GS-C25									
1.0710	15 S 10									
1.0711	9 S 20		1212	G12120	220 M 07		CF 9 S 22			SUM 21
1.0715	9 SMn 28	11 SMn 28	1213	G12130	230 M 07	S 250	CF 9 SMn 28	1912	11 SMn 28	SUM 22
1.0718	9 SMnPb 28	11 SMnPb 28	12 L 13	G12134		S 250 Pb	CF 9 SMnPb 28	1914	11 SMnPb 28	SUM 22 L
1.0721	10 S 20	10 S 20	1108	G11080	210 M 15	10 F 1	CF 10 S 20		10 S 20	
1.0722	10 SPb 20	10 SPb 20	11 L 08	G11084		10 Pb F 2	CF 10 SPb 20		10 SPb 20	
1.0726	35 S 20	35 S 20	1140	G11400	212 M 36	35 MF 4		1957	F.210G	
1.0727	45 S 20	45 S 20	1146	G11460	212 M 44	45 MF 4		1973		
1.0728	60 S 20	60 S 20				60 MF 4				
1.0736	9 SMn 36		1215	G12150	240 M 07	S 300	CF 9 SMn 36		12 SMn 35	
1.0737	9 SMnPb 36		12 L 14	G12144		S 300 Pb	CF 9 SMnPb 36	1926	12 SMnPb 35	
1.0903	51 Si 7		9255	G92550	250 A 53	51 S 7	48 Si 7	2090	50 Si 7	
1.0904	55 Si 7		9255	G92550	250 A 53	55 S 7	55 Si 8	2085	56 Si 7	
1.0906	65 Si 7				250 A 61					
1.0961	60 SiCr 7		9262	G92620	250 A 61	60 SC 7	60 SiCr 8		60 SiCr 8	SUP 7
1.0966	QSiE 690 TM									
1.0971	QSiE 260 N									
1.0973	QSiE 300 N									
1.0974	QSiE 340 TM					E 335 D				
1.0975	QSiE 340 N						Fe E 355 TD			
1.0976	QSiE 360 TM						Fe E 355 TM			
1.0977	QSiE 360 N									

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO NON LEGATO › *Unalloyed Steel* < 800 N/mm<sup>2</sup>

1.0978	QSiE 380 TM						E 390 D										
1.0979	QSiE 380 N							Fe E 380 TD									
1.0980	QSiE 420 TM						E 430 D	Fe E 420 TM									
1.0981	QSiE 420 N							Fe E 420 TD									
1.0982	QSiE 460 TM				50/45 HR		E 445 D										
1.0983	QSiE 460 N							Fe E 460 TD									
1.0984	QSiE 500 TM						E 490 D	Fe E 490 TM									
1.0985	QSiE 500 N																
1.0986	QSiE 550 TM				60/55 HS			Fe E 560 TM									
1.0987	QSiE 550 N																
1.1103	ESiE 255																
1.1104	ESiE 285																
1.1105	ESiE 315																
1.1106	ESiE 355																
1.1120	GS-20 Mn 5																
1.1121	Ck 10	2 C 10	1010	G10100	040 A 10		XC 10	C 10	1265				C 10 k			S 10 C	
1.1127	36 Mn 6		1141	G11410	212 M 36											SMn 443	
1.1131	GS-16 Mn 5	GE 17 Mn 5															
1.1132	Cq15	C15 KD															
1.1133	20 Mn 5		1022	G10220	120 M 19			G 22 Mn 3					20 Mn 6			SMn 420	
1.1141	Ck 15	2 C 15	1015	G10150	080 M 15		XC 15	C 15	1370				C 16 k			S 15 C	
1.1149	Cm 22	3 C 22			070 M 20		XC 18 u										
1.1151	Ck 22	2 C 22	1023	G10230	050 A 20		XC 25	C 20					C 25 k			S 22 C	
1.1152	Cq 22	C 21 KD															
1.1157	40_Mn_4		1039	G10390	150 M 36		35 M 5										
1.1157	40_Mn_4		1039	G10390	150 M 36		35 M 5										
1.1158	Ck_25	2 C 25	1025	G10250	070 M 26		XC 25	C 25					C 25 k			S 25 C	
1.1165	GS-30_Mn_5		1330										30 Mn 5				
1.1167	36_Mn_5		1335	G13350	150 M 36		40 M 5		2120				36 Mn 5			SMn 438(H)	
1.1169	20 Mn 6				150 M 19		20 M 5	20 Mn 6									
1.1170	28_Mn_6	28 Mn 6	1330	G13300	150 M 28		35 M 5	C 28 Mn					36 Mn 6			SCMn 1	
1.1172	Cq_35	C 35 KD	1030	G10300													
1.1178	Ck_30	2 C 30	1030	G10300	080 M 30		XC 32	C 30								S 30 C	
1.1180	Cm_35	3 C 35	1035	G10350	080 M 36		38 H1 k		1572-03				C 33 k-1				
1.1181	Ck_35	2 C 35	1034	G10340	080 M 36		XC 38 H1	C 35	1572				C 35 k			S 35 C	
1.1183	Cf_35		1035	G10350	060 A 35		XC 38 TS	C 35	1572							S 35 C	
1.1186	Ck_40	2 C 40	1040	G10400	080 A 40		XC 42 H1	C 40								S 40 C	
1.1191	Ck_45	2 C 45	1045	G10450	080 M 46		XC 42	C 40					C 45 k			S 45 C	
1.1192	Cq_45	C 45 KD	1045	G10450													
1.1193	Cf_45		1045	G10450	060 A 47		XC 42 TS	C 43	1672							S 45 C	
1.1199	49 MnVS 3																
1.1201	Cm 45	3 C 45	1045	G10450	080 M 46		XC 48 H1u		1672				C 45 k-1			S 50 C	
1.1203	Ck 55	2 C 55	1055	G10550	070 M 55		XC 55 H1	C 55					C 55 k			S 55 C	
1.1206	Ck 50	2 C 50	1050	G10500	080 M 50			C 50	1674							S 50 C	
1.1209	Cm 55	3 C 55	1055	G10550	070 M 55		XC 55 H1						C 55 k-1				
1.1210	Ck 53 N		1050	G10500												S 53 C	
1.1213	Cf 53		1050	G10500	060 A 57		XC 48 TS	C 48	1674							S 50 C	
1.1221	Ck 60	2 C 60	1060	G10640	060 A 62		XC 60	C 60	1678							S 58 C	
1.1223	Cm 60	3 C 60			080 A 67												
1.1231	Ck 67		1070	G10700	060 A 67		XC 68	C 70	1770								
1.1248	Ck 75		1080	G10800	060 A 78		XC 75	C 75	1774								
1.1249	Cf 70		1070	G10700			XC 70										
1.1269	Ck 85		1086	G10860			XC 90	C 90									
1.1273	90 Mn 4		1090	G10900	060 A 96												SUP4
1.1274	Ck 101		1095	G10950	060 A 96		XC_100	C 100	1870							SUP_4	
1.1520	C 70 W1							C 70 KU									
1.1525	C 80 W1	C 80 U	W 108	T72301			Y1 90	C 80 KU					F513				
1.1545	C 105 W1	C 105 U	W 110	T72301			Y1 105	C 100 KU	1880				F515				
1.1620	C 70 W2	C 70 U															
1.1625	C 80 W2		W 1			BW 1B	Y1 90						C 80			SKC 3	
1.1645	C 105 W2												C 102			SK 3	

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO BASSO E MEDIO LEGATO › *Low and Medium Steel* 700/1000 N/mm<sup>2</sup>

1.1654	C 110 W																
1.1663	C 125 W	C 120 U	W 112	T72301			Y2 120	C 120 KU		C 120						SK 2	
1.1673	C 135 W						Y2 140	C 140 KU								SK 1	
1.1730	C 45 W	C 45 U					Y3 42										
1.1740	C 60 W						Y3 55									SK 7	
1.1744	C 67 W						Y1 70			F.512							
1.1750	C 75 W		W 1		BW 1A												
1.1820	C 55 W																
1.1830	C 85 W	C 90 U					Y3 90									SK 5	
1.2002	125 Cr 1						Y2 120 C										
1.2003	75 Cr 1																
1.2004	85 Cr 1						Y1 100 C 2										
1.2008	140 Cr 3						Y2 140 C									SKS 8	
1.2056	90 Cr 3																
1.2057	105 Cr 4									F.120.J						SKC 11	
1.2063	145 Cr 6																
1.2067	100 Cr 6	99 Cr 6	L3		BL 3	Y 100 C 6				100 Cr 6							
1.2101	62 SiMnCr 4																
1.2103	58 SiCr 8																
1.2108	90 CrSi 5																
1.2109	125 CrSi 5																
1.2127	105 MnCr 4							100 CrMn 4 KU								SUJ 3	
1.2129	200 CrMn 8																
1.2162	21 MnCr 5	21 MnCr 5					20 NC 5									SCR 420 H	
1.2206	140 CrV 1						130 C 3										
1.2208	31 CrV 3																
1.2210	115 CrV 3		L2	T61202				107 CrV 3 KU		F.520.L							
1.2235	80 CrV 2									F.520.J							
1.2241	51 CrV 4	51 CrMnV 4						51 CrMnV 4 KU									
1.2242	59 CrV 4																
1.2243	61 CrSiV 5																
1.2248	38 SiCrV 6																
1.2249	45 SiCrV 6																
1.2303	100 CrMo 5		L 7							F.520.F							
1.2307	29 CrMoV 9																
1.2311	40 CrMnMo 7							35 CrMo 8 KU									
1.2312	40 CrMnMoS 8 6																
1.2313	21 CrMo 10																
1.2323	48 CrMoV 6 7						45 CDV 6										
1.2328	45 CrMoV 7																
1.2414	120 W 4									F.532							
1.2419	105 WCr 6	105 WCr 5					105 WC 13	107 WCr 5 KU	2140	105 WCr 5					SKS 31		
1.2442	115 W 8									F.520.P							
1.2510	100 MnCrW 4	(95 MnWCr 5)	01	T31501	BO 1			95 MnWCr 5 KU		95 MnCrW 5							
1.2511	80 WCrV 3																
1.2515	100 WV 4															SKS 21	
1.2516	120 WV 4							110 W 4 KU									
1.2519	110 WCrV 5									102 WCrV 5							
1.2542	45 WCrV 7	45 WCrV 8	S1	T41901	BS 1			45 WCrV 8 KU	2710	45 WCrSi 8							
1.2550	60 WCrV 7	60 WCrV 8					55 WC 20	55 WCrV 8 KU									
1.2552	80 WCrV 8									60 WCrSi 8							
1.2562	142 WV 13																
1.2710	45 NiCr 6																
1.2711	54 NiCrMoV 6						55 NCDV 6										
1.2713	55 NiCrMoV 6	55 NiCrMoV 7	L6	T61206			55 NCDV 7			F.520.S					SKT 4		
1.2714	56 NiCrMoV 7	55 NiCrMoV 7															
1.2718	55 NiCr 10																
1.2721	50 NiCr 13																
1.2726	26 NiCrMoV 5																
1.2735	15 NiCr 14		P 6	T51606			10 NC 12									SNC 22	
1.2737	28 NiCrV 15																
1.2740	28 NiCrMoV 10																
1.2743	60 NiCrMoV 12 4																
1.2744	57 NiCrMoV 7 7																

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO BASSO E MEDIO LEGATO › *Low and Medium Steel* 700/1000 N/mm<sup>2</sup>

1.2745	14 NiCr 18																
1.2747	28 NiMo 17																
1.2762	75 CrMoNiW 6 7																
1.2823	70 Si 7																
1.2826	60 MnSi 4																
1.2833	100 V 1		W210	T72302	BW 2	Y1 105 V	102 V 2 KU									SKS 43	
1.2838	145 V 33																
1.2842	90 MnCrV 8		O 2	T31502	BO 2	90 MV 8	90 MnVCr 8 KU										
1.2851	34 CrAl 6																
1.2766	35 NiCrMo 16																
1.3501	100 Cr 2		E 50100	G50986		100 C 2											
1.3503	105 Cr 4		E 51100	G51986													
1.3505	100 Cr 6	100 Cr 6	E 52100	G52986	535 A 99	100 C 6	100 Cr 6	2258	100 Cr 6							SUJ 2	
1.3520	100 CrMn 6	100 CrMn 6				100 CM 6									100 CrMn 6		
1.3536	100 CrMn 7 3	100 CrMnMo 7				100 CD 7									100 CrMnMo 7		
1.3551	80 MoCrV 42 16		M 50			80 DCV 40	X 80 MoCrV 4 4								80 MoCrV 40-16		
1.3561	44 Cr 2																
1.3563	43 CrMo 4																
1.3565	48 CrMo 4																
1.4700	8 CrSi 7 7																
1.2369	81 MoCrV 42 16																
1.2603	45 CrVMoW 5 8																
1.2604	73 WCrMoV 2 2																
1.5022	38 Si 6																
1.5023	38 Si 7																
1.5024	46 Si 7					45 S 7								46 Si 7			
1.5025	51 Si 7																
1.5026	55 Si 7																
1.5028	65 Si 7																SUP 7
1.5029	71 Si 7																
1.5120	38 MnSi 4																
1.5121	46 MnSi 4																
1.5122	37 MnSi 5					38 MS 5		F.130.A									
1.5131	50 MnSi 4																
1.5141	53 MnSi 4																
1.5142	60 SiMn 5																
1.5223	42 MnV 7																
1.5225	51 MnV 7																
1.5231	38 MnSiVS 5																
1.5232	27 MnSiVS 6																
1.5233	44 MnSiVS 6																
1.5310	8 SiTi 4																
1.5403	17 MnMoV 6 4					1501-261											
1.5404	21 MoV 5 3																
1.5406	17 MoV 8 4																
1.5415	15 Mo 3		A 204 Gr. A	K11820	1501-240	15 D3	16 Mo 3 KW	2912	16 Mo 3								
1.5419	GS 22 Mo 4		4419	G44190	243-430		G 22 Mo 5										SCPH 11
1.5423	16 Mo 5		4520	K11522	1503-245-420		16 Mo 5								16 Mo 5		
1.5508	22 B 2	C 22 BE 69													21 B 3 DF		
1.5510	28 B 2	C 30 B															
1.5511	35 B 2	C 35 B													35 B 3 DF		
1.5523	19 MnB 4					170 H 20								20 MnB 4 DF			
1.5622	14 Ni 6		A 350-LF 5	K22103		15 N 6	14 Ni 6							15 Ni 6			
1.5633	24 Ni 8			J22501		22 N 8											SCPL 21
1.5637	10 Ni 14		A 350-LF 5	K31718	503		18 Ni 14 KT										SL 3 N 26
1.5662	X 8 Ni 9		A 353	K81340	509	9 Ni	X 10 Ni 9							X 8 Ni 09			SL 9 N 53
1.5680	12 Ni 19		E 2515	K41583		Z 18 N 5											
1.5710	36 NiCr 6		3135		640 A 35	30 NC 6											SNC 236
1.5732	14 NiCr 10		3415			14 NC 11	16 NiCr 11							15 NiCr 11			SNC 415 H
1.5736	36 NiCr 10		3435			30 NC 11	35 NiCr 9										SNC 631 H
1.5752	14 NiCr 14		E3310	G33106	655 M 13	16 NC 12											SNC 815 H
1.5755	31 NiCr 14				653 M 31	18 NC 13											SNC 836
1.5860	14 NiCr 18													F.153			
1.5864	35 NiCr 18																

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO BASSO E MEDIO LEGATO › *Low and Medium Steel* 700/1000 N/mm<sup>2</sup>

1.5919	15 CrNi 6				S107	16 NC 6	16 CrNi 4										
1.5920	18 CrNi 8					20 NC 6					F.150.E						
1.6311	20 MnMoNi 4 5				K12539												SQV 2 B
1.6368	15 NiCuMoNb 5				K12039	3604-591											SBV 2
1.6511	36 CrNiMo 4	36 CrNiMo 4	9840	G98400	816 M 40	40 NCD 3	38 NiCrMo 4 KB				35 NiCrMo 4						
1.6513	28 NiCrMo 4																
1.6523	21 NiCrMo 2	20 NiCrMo 2 KD	8620	G86200	805 M 20	20 NCD 2	20 NiCrMo 2	2506			20 NiCrMo 2						SNCM 220 H
1.6580	30 CrNiMo 8	30 CrNiMo 8 KD			823 M 30	30 CND 8	30 NiCrMo 8										SNCM 431
1.6582	34 CrNiMo 6	34 CrNiMo 6	4340		817 M 40	35 NCD 6	35 NiCrMo 6 KB	2541			40 NiCrMo 7						SNCM 447
1.6587	17 CrNiMo 6				820 A 16	18 NCD 6	18 NiCrMo 7				14 NiCrMo 13						
1.6971	79 Ni 1																
1.6972	83 Ni 1																
1.7001	38 Cr 1										38 Cr 1 KB						
1.7002	46 Cr 1																
1.7003	38 Cr 2	38 Cr 2 KD															
1.7005	45 Cr 2																
1.7006	46 Cr 2	46 Cr 2 KD	5045														
1.7012	13 Cr 2																
1.7015	15 Cr 3		5015	G50150	523 M15	12 C 3											SCr 415 H
1.7016	17 Cr 3	(15 Cr 2 KD)	5117	G51170		18 C 3											
1.7020	32 Cr 2																
1.7030	28 Cr 4		5130	G51300	530 A 30												
1.7030	28 Cr 4		5130	G51300	530 A 30												
1.7033	34 Cr 4	34 Cr 4 KD	5130 H	G51300	530 A 32	32 C 4	34 Cr 4 KB				35 Cr 4						SCr 430 H
1.7034	37 Cr 4	37 Cr 4	5132 H	G51320	530 A 36	38 C 4	36 CrMn 4				38 Cr 4						SCr 435 H
1.7035	41 Cr 4	41 Cr 4	5140	G51400	530 M 40	42 C 4	41 Cr 4				42 Cr 4						SCr 440 H
1.7037	34 CrS 4	34 CrS 4															
1.7038	37 CrS 4	37 CrS 4															
1.7039	41 CrS 4	41 CrS 4															
1.7043	38 Cr 4																
1.7045	42 Cr 4		5140		530 A 40	42 C 4 TS	41 Cr 4	2245			42 Cr 4						SCr 440
1.7103	67 SiCr 5										67 SiCr 5						
1.7108	60 SiCr 7																
1.7131	16 MnCr 5	16 MnCr 5 KD	5115	G 51150	527 M 17	16 MC 5	16 MnCr 5	2173			16 MnCr 5						SCR 415
1.7138	52 MnCrB 3		50 B 50 H	H50501													SUP 11
1.7139	16 MnCrS 5																
1.7147	20 MnCr 5		5120	G51200		20 MC 5	20 MnCr 5				F.150.D						SMnC 420 H
1.7149	20 MnCrS 5																
1.7176	55 Cr 3		5155	G51550	527 A 60	55 C 3	55 Cr 3	2253			55 Cr 3						SUP 9 (A)
1.7218	25 CrMo 4	25 CrMo 4 KD	4130	G41300	708 A 25	25 CD 4	25 CrMo 4 (KB)	2225			25 CrMo 4						SCM 420
1.7219	26 CrMo 4				K13047												
1.7220	34 CrMo 4	34 CrMo 4 KD	4135 H	H41350	708 A 37	35 CD 4	35 CrMo 4	2234			35 CrMo 4						SCM 435 H
1.7223	41 CrMo 4		4142	G41420	708 M 40	42 CD 4 TS	41 CrMo 4	2244			42 CrMo 4						SCM 440
1.7223	41 CrMo 4		4142	G41420	708 M 40	42 CD 4 TS	41 CrMo 4	2244			42 CrMo 4						SCM 440
1.7225	42 CrMo 4	42 CrMo 4	4140	G41400	708 A 42	42 CD 4	42 CrMo 4	2244			40 CrMo 4						SCM 440 H
1.7226	34 CrMoS 4	34 CrMoS 4															35 CrMo 4-1
1.7227	42 CrMoS 4	42 CrMoS 4				708 H 42					40 CrMo 4						
1.7228	50 CrMo 4		4150	G41500	708 A 47												SCM 445 H
1.7238	49 CrMo 4																SCM 445
1.7242	16 CrMo 4																
1.7258	24 CrMo 5					15 CD 3.5	18 CrMo 4				18 CrMo 4						SCM 418 H
1.7259	26 CrMo 7																SCM 822 H
1.7262	15 CrMo 5																
1.7264	20 CrMo 5					12 CD 4					12 CrMo 4						SCM 415 H
1.7271	23 CrMoB 3 3					18 CD 4					18 CrMo 4-1						SCM 421
1.7273	24 CrMo 10																
1.7276	10 CrMo 11																
1.7281	16 CrMo 9 3					12 CD 10											
1.7311	20 CrMo 2					20 CD 8											
1.7321	20 MoCr 4																20 MoCr 4
1.7323	20 MoCrS 4																
1.7325	25 MoCr 4																
1.7326	25 MoCrS 4																
1.7335	13 CrMo 4 4		A182-F11	K11562	1501-621	15 CD 4.05	14 CrMo 4 5	2216			14 CrMo 4 5						SFVA F 12

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO BASSO E MEDIO LEGATO › *Low and Medium Steel* 700/1000 N/mm<sup>2</sup>

1.7337	16 CrMo 4 4		A 387 Gr. 12 Cl. 2	K11564			A 18 CrMo 4 5 KW											
1.7350	22 CrMo 4 4																	
1.7357	GS-17 CrMo 5 5			J11872			G 15 CrMo 5 5					AM 18 CrMo 05-05		SCPH 21				
1.7361	32 CrMo 12				722 M 24	30 CD 12	32 CrMo 12	2240				F.124.A						
1.7362	12 CrMo 19 5			K41545	3606-625	Z 10 CD 5.05	16 CrMo 20 5							SCMV 6				
1.7379	GS-18 CrMo 9 10																	
1.7380	10 CrMo 9 10		A182-F22	J21890	1502-622	10 CD 9.10	12 CrMo 9 10	2218						SCMV 4				
1.7561	42 CrV 6																	
1.7701	51 CrMoV 4					51 CDV 4	51 CrMoV 4											
1.7706	GS-17 CrMoV 5 11			J21610										SCPH 23				
1.7707	30 CrMoV 9																	
1.7709	21 CrMoV 5 7																	
1.7711	40 CrMoV 4 7			K14072	1506-670-860												SNB 21-1-5	
1.7715	14 MoV 6 3			K11591	1503-660-440									13 MoCrV 6				
1.7725	GS-30 CrMoV 6 4																	
1.7733	24 CrMoV 5 5					20 CDV 6	24 CrMoV 5 5											
1.7735	14 CrMoV 6 9																	
1.7755	GS-45 CrMoV 10 4																	
1.7766	17 CrMoV 10																	
1.7779	20 CrMoV 13 5																	
1.8070	21 CrMoV 5 11						21 CrMoV 5 11											
1.8159	50 CrV 4	51 CrV 4	6150	G61500	735 A 50	50 CV 4	50 CrV 4	2230				51 CrV 4		SUP 10				
1.8161	58 CrV 4																	
1.8212	21 CrVMoW 12																	
1.8504	34 CrAl 6																	
1.8506	34 CrAlS 5																	
1.8506	34 CrAlS 5																	
1.8507	34 CrAlMo 5	(34 CrAlMo 5)	A 355 Cl.D	K23510	905 M 31	30 CAD 6.12	34 CrAlMo 7					34 CrAlMo 5						
1.8509	41 CrAlMo 7		A 355 Cl.A	J24056	905 M 39		41 CrAlMo 7	2940				41 CrAlMo 7		SACM 645				
1.8515	31 CrMo 12	31 CrMo 12			722 M 24		31 CrMo 12					31 CrMo 12						
1.8519	31 CrMoV 9						31 CrMoV 10					31 CrMoV 10						
1.8521	15 CrMoV 5 9																	
1.8523	39 CrMoV 13 9				897 M 39													
1.8550	34 CrAlNi 7			K52440														
1.8900	SIE 380											Fe E 390 KG	AE 390 Grado KG	SM 50 B				
1.8902	SIE 420		A 633 Gr. E	K02002		E 420-I	Fe E 420 KG					Fe E 420 KG	AE 420 Grado KG	SM 50 C				
1.8905	SIE 460		A 633 Gr. E	K02900		E 460-I	Fe E 460 KG					Fe E 460 KG	AE 460 Grado KG	SM 53 B				
1.8907	SIE 500			K02001										SM 58				
1.8910	TSIE 380											Fe E 390 KT	2117	AE 390 Grado KT				
1.8911	ESIE 380																	
1.8912	TSIE 420			K02002		E 420 T-I	Fe E 420 KT						AE 420 Grado KT					
1.8913	ESIE 420																	
1.8915	TSIE 460			K02900		E 460 T-I	Fe E 460 KT						AE 460 Grado KT					
1.8917	TSIE 500			K02001		E 500 T-I												
1.8918	ESIE 460																	
1.8919	ESIE 500																	
1.8930	WSIE 380											Fe E 390 KW	2116	AE 390 Grado KW				
1.8932	WSIE 420			K02002			Fe E 420 KW					Fe E 420 KW		AE 420 Grado KW				
1.8935	WSIE 460			K02900			Fe E 460 KW					Fe E 460 KW		AE 460 Grado KW				
1.8937	WSIE 500			K02001														
1.8960	WTSI 37-2				WR 50 B	E 24 W-2											SMA 41 A	
1.8961	WTSI 37-3											Fe 360 D FF		SMA 50 A				
1.8962	9 CrNiCuP 3 2 4			K11430	WR 50 A									SPA-H				
1.8963	WTSI 52-3			K11430	WR 50 C	E 36 W-A2								SMA 58				



<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO ALTO LEGATO › High-Alloyed Steel 1000/1300 N/mm<sup>2</sup>

1.2080	X 210 Cr 12	X 210 Cr 12	D3	T30403	BD 3	Z 200 C 12	X 205 Cr 12 KU		X 210 Cr 12	SKD 1
1.2082	X 20 Cr 13	X20Cr13							X 20 Cr 13	
1.2083	X 42 Cr 13	X 42 Cr 13				Z 40 C 14	X 41 CR 13 KU			SUS 420 J2
1.2201	X 165 CrV 12									
1.2316	X 36 CrMo 17	X 36 CrMo 17					X 38 CrMo 16 1 KU		X 38 CrMo 16	
1.2341	X 6 CrMo 4	X 6 CrMo 4	P 4	T51604						
1.2343	X 38 CrMoV 5 1	X 38 CrMoV 5 1	H 11	T20811	BH 11	Z 38 CDV 5	X 37 CrMoV 5 1 KU		X 37 CrMoV 5	SKD 6
1.2344	X 40 CrMoV 5 1	X 40 CrMoV 5 1	H 13	T20813	BH 13	Z 40 CDV 5	X 40 CrMoV 5 1 1 KU	2242	X 40 CrMoV 5	SKD 61
1.2362	X 63 CrMoV 5 1									
1.2363	X 100 CrMoV 5 1	X 100 CrMoV 5 1	A 2	T30102	BA 2	Z 100 CDV 5	X 100 CrMoV 5 1 KU	2260	X 100 CrMoV 5	SKD 12
1.2365	X 32 CrMoV 3 3	X 32 CrMoV 12H-28	H 10	T20810	BH 10	32 DCV 28	30 CrMoV 12 27 KU		30 CrMoV 12	SKD 7
1.2367	X 38 CrMoV 5 3									
1.2376	X 96 CrMoV 12									
1.2378	X 220 CrVMo 12 2									
1.2379	X 155 CrVMo 12 1	X 153 CrMoV 12	D 2	T30402	BD 2	Z 160 CDV 12	X 155 CrVMo 12 1 KU			SKD 11
1.2436	X 210 CrW 12	X 210 CrW 12					X 215 CrW 12 1 KU	2312	X 210 CrW 12	SKD 2
1.2453	X 130 W 5									
1.2564	X 30 WCrV 4 1								F.527	
1.2567	X 30 WCrV 5 3	X 30 WCrV 5 3				Z 32 WCV 5	X 30 WCrV 5 3 KU			SKD 4
1.2581	X 30 WCrV 9 3	X 30 WCrV 9 3	H 21	T20821	BH 21	Z 30 WCV 9	X 30 WCrV 9 3 KU		X 30 WCrV 9	SKD 5
1.2601	X 165 CrMoV 12	X 165 CrMoV 12					X 165 CrMoV 12 KU	2310	X 160 CrMoV 12	
1.2606	X 37 CrMoV 5 1		H 12	T20812	BH 12	Z 35 CWDV 5	X 35 CrMoV 05 KU		F.537	SKD 62
1.2622	X 60 WCrMoV 9 4									
1.2631	X 50 CrMoW 9 1 1									
1.2662	X 30 WCrCoV 9 3									
1.2678	X 45 CrCoWV 5 5 5									
1.2709	X 3 NiCoMoTi 18 9 5									
1.2731	X 50 NiCrWV 13 13									
1.2764	X 19 NiCrMo 4									
1.2767	X 45 NiCrMo 4	40 NiCrMo 4				Y35 NCD 16	42 NiCrMo 15 7 KU			
1.2786	X 13 NiCrSi 36 15									
1.2787	X 23 CrNi 17									
1.2880	X 165 CrCoMo 12									
1.2884	X 210 CrCoW 12									
1.2888	X 20 CoCrWMo 10 9									
1.2889	X 45 CoCrMoV 5 5 3									
1.3202	S 12-1-4-5	(HS12-1-5-5)	T 15	T12015	BT 15		HS 12-1-5-5		12-1-5-5	
1.3207	S 10-4-3-10	HS10-4-3-10			BT 42	Z130WKCDV10-10-04-04	HS 10-4-3-10		10-4-3-10	SKH 57
1.3243	S 6-5-2-5	(HS6-5-2-5)	M 35			KCV 06-05-05-04-02	HS 6-5-2-5	2723	6-5-2-5	SKH 55
1.3246	S 7-4-2-5	HS1-8-1	M 41	T11341		Z110 WKCDV 07-05-04	HS 7-4-2-5		7-4-2-5	
1.3247	S 2-10-1-8	HS2-9-1-8	M 42	T11342	BM 42	Z110 DKCWV 09-08-04	HS 2-9-1-8		2-10-1-8	
1.3249	S 2-9-2-8				BM 34				2-9-2-8	
1.3255	S 18-1-2-5	(HS18-1-1-5)	T 4	T12004	BT 4	Z80 WKCV 18-05-04-01	HS18-1-1-5		18-1-1-5	SKH 3
1.3257	S 18-1-2-15									
1.3265	S 18-1-2-10	(HS18-0-1-10)	T 5	T12005	BT 5		HS18-0-1-10		18-0-2-10	SKH 4A
1.3302	S12-1-4						(X 150 WV 1305 KU)			
1.3318	S12-1-2									
1.3333	S3-3-2						HS 3-3-2			
1.3342	SC6-5-2	(HS6-5-2)	M 3	T11313		Z90WDCV06-05-04-02	HSC 6-5-3			
1.3343	S6-5-2	HS6-5-3	M 2	T11302	BM 2	Z85WDCV06-05-04-02	HS 6-5-2	2722	6-5-2	SKH 51
1.3344	S6-5-3		M 3 Cl.2	T11323		Z120WDCV06-05-04-03			6-5-3	SKH 52
1.3346	S2-9-1	HS1-8-1	M 1	T20842	BM 1	Z85DCWV08-04-02-01	HS 1-8-1			
1.3348	S2-9-2	HS2-9-2	M 7	T11307		Z100DCWV09-04-02-02	HS 2-9-2	2782	2-9-2	
1.3355	S18-0-1	HS18-0-1	T 1	T12001	BT 1	Z80WCV18-04-01	HS 18-0-1		18-0-1	SKH 2
1.3401	X120Mn 12		A 128	J91109		Z 120 M 12	X G 120 Mn 12		AM-X 120 Mn 12	SCMnH 1
1.3543	X 102 CrMo 17			J91639			X 105 CrMo 17		X 100 CrMo 17	
1.3549	X 89 CrMoV 18 1									
1.3802	X 120 Mn 13									
1.3805	X 35 Mn 18									
1.3813	X 40 MnCrN 19									
1.3815	X 40 MnCr 18 2									
1.3817	X 40 MnCr 18									
1.3819	X 50 MnCrV 20 14									
1.3941	X 4 CrNi 18 13									

<b>D</b>		<b>UK</b>	<b>USA</b>		<b>UK</b>	<b>F</b>	<b>IT</b>	<b>S</b>	<b>E</b>	<b>J</b>
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO ALTO LEGATO › High-Alloyed Steel 1000/1300 N/mm<sup>2</sup>

1.3949	X 5 MnCr 18 13									
1.3952	X 4 CrNiMoN 18 14									
1.3953	X 2 CrNiMo 18 15									
1.3958	X 5 CrNi 18 11									
1.3960	X 45 MnNiCrV 13 7 6									
1.3962	X 15 CrNiMn 12 10									
1.3964	X 4 CrNiMnMoN19 16 5									
1.3965	X 8 CrMnNi 18 8									
1.3967	X 50 CrMnNiN 22 9									
1.3968	X 12 MnCr 18 12									
1.3974	X 3 CrNiMoNbN 23 17									
1.4704	X 45 SiCr 4		HNV 2	S64006						
1.4710	G-X 30 CrSi 6									
1.4712	X 10 CrSi 6									
1.4713	X 10 CrAl 7								X 10 CrAl 7	
1.4716	X 8 Cr 9									
1.4718	X 45 CrSi 9 3	X 45 CrSi 8	HNV 3	S65007	401 S 45	Z 45 CS 9	X 45 CrSi 8		X 4 CrSi 09-03	SUH 1
1.4721	215 Cr 12									
1.4722	X 10 CrSi 13								X 10 CrSi 13	
1.4725	CrAl 14 4									
1.4731	X 40 CrSiMo 10 2					Z 40 CSD 10			X 40 CrSiMo 10-02	SUH 3
1.4732	X 80 CrSiMoW 15 2									
1.4741	X 10 CrSi 18									
1.4743	G-X 160 CrSi 18									
1.4748	X 85 CrMoV 18 2					Z 85 CDMV 18.02	X 85 CrMoV 19 3		X 85 CrMoV 18-02	
1.4748	X 85 CrMoV 18 2					Z 85 CDMV 18.02	X 85 CrMoV 19 3			
1.4765	CrAl 25 5									
1.4767	CrAl 20 5									
1.4773	X 8 Cr 30									
1.4777	G-X 130 CrSi 29									
1.4785	X60 CrMnMoVNbN 21 10									
1.4820	X 12 CrNi 25 4									
1.4822	G-X 40 CrNi 24 5									
1.4829	X 12 CrNi 22 12			S30980			X 16 CrNi 23 14			SUS Y 309
1.4832	G-X 25 CrNiSi 20 14									
1.4842	X 12 CrNi 25 20			S31080	310 S 94					
1.4843	CrNi 25 20			J94202						SCS 18
1.4846	X 40 CrNi 25 21				310 S 98					SCH 13
1.4860	NiCr 30 20									
1.4861	X 10 NiCr 32 20									
1.4873	X 45 CrNiW 18 9				331 S 40	Z 35 CNWS 14.14	X 45 CrNiW 18 9		X 45 CrNiSiW 18-09	SUH 31
1.4875	X 55 CrMnNiN 20 8		EV 12	S63012					X 55 CrMnNiN 20-08	
1.4882	X 50 CrMnNiNbN 21 9					Z 50 CMNNb 21.09				
1.4911	X 8 CrCoNiMo 10 6				S.152					
1.4913	X 19 CrMoVNbN 11 1									
1.4920	X 15 CrMoV 12 1									
1.4921	X 19 CrMoV 12 1									
1.4922	X 20 CrMoV 12 1									
1.4935	X 20 CrMoWV 12 1		422	S42200			X 22 CrMoWV 121			SUH 616
1.4936	X 24 CrMoV 12 1									
1.4945	X 6 CrNiWNb 16 16									
1.4960	X 40 CrNiCoNb 13 13									
1.4962	X 12 CrNiWTi 16 13									
1.4971	X 12 CrCoNi 21 20		661	R30155						SUH 661
1.4978	X 50 CoCrNi 20 20									
1.4986	X 8 CrNiMoNbN 16 16									
1.6903	X 10 CrNiTi 18 10									
1.6905	X 10 CrNiNb 18 10									
1.6906	X 5 CrNi 18 10									

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO INOSSIDABILE - FERRITICO/MARTENSITICO › *Stainless Steel - Ferritic/Martensitic*

1.2780	X 16 CrNiSi 20 12	X 16 CrNiSi 20 12				Z 15 CN 24.13											SUS 309 S
1.2782	X 16 CrNiSi 25 20	X 16 CrNiSi 25 20				Z 15 CN 24.13											SUS 309 S
1.4000	X 6 Cr 13	X 6 Cr 13	403	S40300	403 S 17	Z 6 C 13	X 6 Cr 13	2301	X 6 Cr 13								SUS 403
1.4002	X 6 CrAl 13	X 6 CrAl 13	405	S40500	405 S 17	Z 6 CA 13	X 6 CrAl 13	2302	X 6 CrAl 13								SUS 405
1.4005	X 12 CrS 13	X 12 CrS 13	416	S41600	416 S 21	Z 12 CF 13	X 12 CrS 13	2380	X 12 CrS 13								SUS 416
1.4006	X 10 Cr 13	(X 12 Cr 13 KD)	410	S41000	410 S 21	Z 12 C 13	X 12 Cr 13	2302	X 12 Cr 13								SUS 410
1.4008	G-X 8 CrNi 13				410 C 21	Z 12 CN 13 M	GX 12 Cr 13										SCS 1
1.4009	X 8 Cr 14																
1.4015	X 8 Cr 18																
1.4016	X 6 Cr 17		430	S43000	430 S 15	Z 8 C 17	X 8 Cr 17 KD	2320	X 8 Cr 17								SUS 430
1.4021	X 20 Cr 13	X 20 Cr 13	420	S42000	420 S 37	Z 20 C 13	X 20 Cr 13	2303	X 20 Cr 13								SUS 420 J1
1.4024	X 15 Cr 13	X 15 Cr 13			420 S 29		X 12 Cr 13										SUS 410 J1
1.4024	X 15 Cr 13	X 15 Cr 13			420 S 29		X 12 Cr 13										SUS 410 J1
1.4027	G-X 20 Cr 14				420 C 29	Z 20 C 13 M											SCS 2
1.4028	X 30 Cr 13	X 30 Cr 13			420 S 45	Z 30 C 13	X 30 Cr 13	2304	X 30 Cr 13								SUS 420 J2
1.4031	X 38 Cr 13	X 40 Cr 13				Z 40 C 14	X 40 Cr 14	2304	X 40 Cr 13								SUS 420 J2
1.4034	X 46 Cr 13	X 45 Cr 13			(420 S45)	Z 40 C 14	X 40 Cr 14		X 46 Cr 13								
1.4057	X 20 CrNi 17 2	X 19 CrNi 17 2	431	S43100	431 S 29	Z 15 CN 16.02	X 16 CrNi 16	2321	X 15 CrNi 16								SUS 431
1.4059	G-X 22 CrNi 17					Z 20 CN 17.2 M											
1.4085	G-X 70 Cr 29																
1.4086	G-X 120 Cr 29																
1.4104	X 12 CrMoS 17	X 14 CrMoS 17	430 F	S43020		Z 10 CF 17	X 10 CrS 17	2383	X 10 CrS 17								SUS 430 F
1.4105	X 4 CrMoS 18																
1.4106	X 10 CrMo 13																
1.4107	G-X 8 CrNi 12																
1.4108	X 100 CrMo 13																
1.4109	X 65 CrMo 14					Z 70 CD 14											
1.4110	X 55 CrMo 14					Z 50 CD 13											
1.4111	X 110 CrMoV 15																
1.4112	X 90 CrMoV 18		440 B	S44003													SUS 440 B
1.4113	X 6 CrMo 17 1	(X 8 CrMo 17)	434	S43400	434 S 17	Z 8 CD 17.01	X 8 CrMo 17	2325									SUS 434
1.4115	X 20 CrMo 17 1																
1.4116	X 45 CrMoV 15								X 46 CrMo 16								
1.4117	X 38 CrMoV 15																
1.4119	X 15 CrMo 13																
1.4120	X 20 CrMo 13					Z 20 CD 14											
1.4122	X 35 CrMo 17						X 35 CrMo 17										
1.4125	X 105 CrMo 17		440 C	S44004		Z 100 CD 17											SUS 440 C
1.4136	G-X 70 CrMo 29 2					Z 60 CD 29.2 M											
1.4510	X 6 CrTi 17	X 8 CrTi 17	430 Ti	S 43036		Z 8 CT 17	X 6 CrTi 17		X 8 CrTi 17								SUS 430 LX
1.4511	X 6 CrNb 17		430 Nb			Z 8 CNb 17	X 6 CrNb 17										SUS 430 LX
1.4512	X 6 CrTi 12		409	S40900	409 S 19	Z 6 CT 12	X 6 CrTi 12										SUH 409
1.4742	X 10 CrAl 18		430	S43000	(430 S 15)	Z 10 CAS 18	(X 8 Cr 17)		X 10 CrAl 18								SUH 21
1.4747	X 80 CrNiSi 20		HNV 6	S65006	443 S 65	Z 80 CSN 20.02	X 80 CrSiNi 20		X 80 CrSiNi20-02								SUH 4
1.4762	X 10 CrAl 24		446	S44600		Z 10 CAS 24	X 16 Cr 26		X 10 CrAl 24								SUH 442

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO INOSSIDABILE - AUSTENICO › *Stainless Steel - Austenitic*

1.4301	X 5 CrNi 18 10	X 6 CrNi 18 10 KD	304 H		304 S 15	Z 6 CN 18.09	X 5 CrNi 18 10	2332	X 5 CrNi 18 11	SUS 304					
1.4302	X 5 CrNi 19 9														
1.4303	X 5 CrNi 18 12	X 8 CrNi18 12 KD	308	S30500	305 S 19	Z 8 CN 18.12	X 8 CrNi 19 10		X 8 CrNi18-12	SUS 305					
1.4305	X 10 CrNiS 18 9	X 10 CrNiS 18 9	303	S30300	303 S 21	Z 10 CNF 18.09	X 10 CrNiS 18 09	2346	X 10 CrNiS 18 9	SUS 303					
1.4306	X 2 CrNi 19 11	(X 3 CrNi18 10 KD)	304 L	S30403	304 S 11	Z 2 CN 18.09	X 2 CrNi 18 11	2352	X 2 CrNi 19-10	SCS 19					
1.4308	G-X 6 CrNi 18 9		CF-8		304 C 15	Z 6 CN 18.10 M		2333		SCS 13					
1.4310	X 12 CrNi 17 7	X 12 CrNi 17 7	301	S30100	301 S 21	Z 12 CN 17.07	X 12 CrNi 17 07		X 12 CrNi 17 07	SUS 301					
1.4311	X 2 CrNiN 18 10	X 2 CrNiN 18 10	304 LN	S30453	304 S 62	Z 8 CN 18.12	X 8 CrNi 19 10	2371	X 8 CrNi 18-12	SUS 304 LN					
1.4312	G-X 10 CrNi 18 8				302 C 25	Z 10 CN 18.9 M				SCS 12					
1.4313	X 5 CrNi 13 4		CA 6-NM			Z 4 CDN 13.4	X 6 CrNi 13 04	2385							
1.4316	X 2 CrNi 19 9					Z 2 CN 20.10									
1.4321	X 2 NiCr 18 16														
1.4332	X 2 CrNi 24 12					Z 2 CN 24.13									
1.4337	X 10 CrNi 30 9														
1.4340	G-X 40 CrNi 27 4						GX 35 CrNi 28 05								
1.4347	G-X 8 CrNi 26 7														
1.4351	X 3 CrNi 13 4														
1.4370	X 15 CrNiMn 18 8														
1.4401	X 5 CrNiMo 17 12 2	X6 CrNiMo 17 12 2 KD	316	S31600	316 S 16	Z 6 CND 17.11	X 5 CrNiMo 17 12	2347	X 5 CrNiMo 17-12	SUS 316					
1.4403	X 5 CrNiMo 19 11			S30882											
1.4404	G-X 2 CrNiMo 18 10	GX3CrNiMo 17 12 2 KD	316 L	S31603	316 S 12	Z 3 CND 19.10 M	GX 2 CrNiMo 19 11	2348	X 2 CrNiMo 17-12-03	SUS 316 L					
1.4404	X 2 CrNiMo 17 13 2	X3 CrNiMo 17 12 2 KD	316 L	S31603	316 S 11	Z 2 CND 17.12	X 2 CrNiMo 17 12	2348	X 2 CrNiMo 17-12-03	SUS 316 L					
1.4405	G-X 5 CrNiMo 16 5														
1.4406	X 2 CrNiMoN 17 12 2	X 3 CrNiMoN 17 12 2	316 LN	S31653	316 S 61	Z 2 CND 17.12 Az	X 2 CrNiMoN 17 12			SUS 316 LN					
1.4408	G-X 6 CrNiMo 18 10		CF-8M	J92900	316 C 16			2343	X 7 CrNiMo 20 10	SCS 14					
1.4429	X 2 CrNiMoN 17 13 3	X 3 CrNiMoN 17 13 3	316 LN	S31653	316 S 62	Z 2 CND 17.13 Az	X 2 CrNiMoN 17 13	2375		SUS 316 LN					
1.4430	X 2 CrNiMo 19 12			S31683	316 S 93	Z 2 CND 19.12									
1.4435	X 2 CrNiMo 18 14 3		316 L	S31603	316 S 11	Z 2 CND 17.13	X 2 CrNiMo 17 13	2353	X 2 CrNiMo 17-12-03	SCS 16					
1.4436	X 5 CrNiMo 18 13 3	X6 CrNiMo 18 13 3 KD	316	S31600	316 S 16	Z 6 CND 17.12	X 5 CrNiMo 17 13	2343	X 6 CrNiMo 17-12-03	SUS 316					
1.4437	G-X 6 CrNiMo 18 12				317 C 12										
1.4438	X 2 CrNiMo 18 16 4	X 3 CrNiMo 18 16 4	317 L	S31703	317 S 12	Z 2 CND 19.15	X 2 CrNiMo 18 15	2367		SUS 317 L					
1.4439	X 2 CrNiMoN 17 13 5														
1.4440	X 2 CrNiMo 18 16 5			S31780											
1.4446	G-X 2 CrNiMoN17 13 2														
1.4448	G-X 6 CrNiMo 17 13			J93000	317 C 16										
1.4449	X 5 CrNiMo 17 13		317	S31700	317 S 16		X 5 CrNiMo 18 15			SUS 317					
1.4455	X 2 CrNiMnMoN 20 16														
1.4463	G-X 6 CrNiMo 24 8 2														
1.4465	X 1 CrNiMoN 25 25 2														
1.4502	X 8 CrTi 18														
1.4503	X 3 NiCrCuMoTi 27 23														
1.4505	X 5 NiCrMoCuNb 20 18														
1.4506	X 5 NiCrMoCuTi 20 18														
1.4523	X 8 CrMoTi 17														
1.4528	X 105 CrCoMo 18 2														
1.4529	X 1 NiCrMoCu 25 20 6														
1.4531	G-X 2NiCrMoCuN 20 18														
1.4535	X 90 CrCoMoV 17														
1.4536	G-X 2NiCrMoCuN 25 20														
1.4539	X 1 NiCrMoCu 25 20 5			N08904		Z 1 NCDU 25.20		2662							
14.541	X 6 CrNiTi 18 10	X 6 CrNiTi 18 10	321	S32100	321 S 12	Z 6 CNT 18.10	X 6 CrNiTi 18 11	2337	X 7 CrNiTi 18-11	SUS 321					
1.4543	X 5 CrNiNb 18 9						X 6 CrNiNb 18 11								
1.4550	X 6 CrNiNb 18 10	X 6 CrNiNb 18 10	347	S34700	347 S 17	Z 6 CND 18.10	X 6 CrNiNb 18 11	2338	X 6 CrNiNb 18-11	SUS 347					
1.4551	X 5 CrNiNb 19 9			S34780											
1.4552	G-X 5 CrNiNb 18 9				347 C 17	Z 4 CND 19.10 M				SCS 21					
1.4571	X 6 CrNiMoTi 17 12 2		316 Ti		320 S 31	Z 6 CNDT 17.12	X 6 CrNiMoTi 17 12	2350	X 6 CrNiMoTi 17-12-03						
1.4573	X 10 CrNiMoTi 18 12		316 Ti		320 S 33		X 6 CrNiMoTi 17 13								
1.4575	X 1 CrNiMoNb 28 4 2														
1.4576	X 5 CrNiMoNb 19 12			S31980	318 S 96										
1.4577	X 3 CrNiMoTi 25 25														
1.4580	X 6 CrNiMoNb 17 12 2		316 Nb			Z 6 CNDNb 17.12	X 6 CrNiMoNb 17 12								
1.4581	G-X 5 CrNiMoNb 18 10				318 C 17	Z 4 CNDNb 18.12 M	GX 6 CRNOMONB 20 11								
1.4582	X 4 CrNiMoNb 25 7									SCS 22					
1.4583	X 10 CrNiMoNb 18 12		318				X 6 CrNiMoNb 17 13								

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## ACCIAIO INOSSIDABILE - FERRITICO/MARTENSITICO › Stainless Steel - Ferritic/Martensitic

1.4585	G-X7 CrNiMoCuNb 1818																
1.4586	X 5 CrNiMoCuNb 22 18																
1.4724	X 10 CrAl 13					(403 S 17)	Z 10 C 13	X 10 CrAl 12		X 10 CrAl 13							
1.4776	G-X 40 CrSi 29							GX 35 Cr 28								SCH 2	
1.4821	X 20 CrNiSi 25 4						Z 20 CNS 25.04	X 20 CrNiSi 254		X 20 CrNiSi 25-04							
1.4823	G-X 40 CrNiSi 27 4				J92605												
1.4825	G-X 25 CrNiSi 18 9				J92603												
1.4826	G-X 40 CrNiSi 22 9				J92603											SCH 12	
1.4828	X 15 CrNiSi 20 12		309	S30900	309 S 24	Z 15 CNS 20.12	X 16 CrNiSi 25.20			X 15 CrNiSi 20-12					SUH 309		
1.4833	X 7 CrNi 23 14		309 S	J93400	309 S 24	Z 15 CN 24.13	X 6 CrNi 23 14								SUS 309 S		
1.4837	G-X 40 CrNiSi 25 12			J93503	309 C 30		GX 35 CrNi 25 12								SCS 17		
1.4841	X 15 CrNiSi 25 20		310	S31000		Z 15 CNS 25.20	X 16 CrNiSi 25 20			X 15 CrNiSi 25-20					SUH 310		
1.4845	X 12 CrNi 25 21		310 S	S31008	310 S 24	Z 12 CN 25.20	X 6 CrNi 25 20		2361	F.331					SUS 310 S		
1.4848	G-X 40 CrNiSi 25 20		HK	J94204	310 C 40		GX 40 CrNi 26 20			X 40 CrNi 25 20					SCH 21		
1.4871	X 53 CrMnNiN 21 9		EV 8	S63008	349 S 54	Z 52 CMN 21.09	X 53 CrMnNiN 21 9			X 53 CrMnNiN 21-09					SUH 35		
1.4878	X 12 CrNiTi 18 9		321		321 S 20	Z 6 CNT 18.12	X 6 CrNiTi 18.11		2337	X 6 CrNiTi 18 11					SUS 321		
1.4910	X 3 CrNiMoN 17 13							X 2 CrNiMoN 17 12									
1.4919	X 6 CrNiMo 17 13		316 H	S31609	316 S 51												
1.4923	X 22 CrMoV 12 1							X 22 CrMoV 121									
1.4931	G-X 22 CrMoV 12 1																
1.4941	X 8 CrNiTi 18 10																
1.4948	X 6 CrNi 18 11				304 S 51												

## ACCIAIO INOSSIDABILE - AUSTENITICO/FERRITICO (DUPLEX) › Stainless Steel - Austenitic/Ferritic (Duplex)

1.4949	X 3 CrNiN 18 11	X 2 CrNiN 18 11						Duplex									
1.4410	G-X 10 CrNiMo 18 9						Z 5 CND 20.10 M	Super Duplex							SCS 14 A		
1.4462	X 2 CrNiMoN 22 5 3	X 2 CrNiMoN 22 5 3	F51 Cr22	S31803	318S13		Z 2 CND 24.08 M	Duplex	2377								
1.4460	X 3 CrNiMoN 27 5 2		329	S32900			Z 3 CND 25.09 M	Duplex	2324	X 8 CrNiMo 27-05				SUS 329 J1			
1.4501	X 2 CrNiMoCuWN 25 7 4		F55	S32760			Z3 CNDU 25.06	Duplex									
1.4542	X 5 CrNiCuNb 16 4	X 5 CrNiCuNb 16 4	17-4PH	S17400			Z 7 CNU 16.04								SUS 630		
1.4961	X 8 CrNiNb 16 13									X 7 CrNiNb 16-13							
1.4980	X 6 NiCrTiMoVB25 15 2			S66286			Z 5 NCTDV26.15 B								SUS 660		
1.4981	X 8 CrNiMoNb 16 16									X 7 CrNiMo 16-16							
1.4988	X 8 CrNiMoNb 16 13																
2.4537	G-NiMo 16 CrW																
1.4539	X1 NiCrMoCu 25 20 5		904L	N 08904	904S13		Z2 NCDU 25.20.5										
2.4631	NiCr 20 TiAl																

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## GHISA GRIGIA › Gray Cast Iron

0.6012	GG 150 HB	GJL-HB 170															
0.6015	GG 15	GJL-150	A48-25 B	F11701	Grade 150	FGL 150	G 15	0115-00	FG 15	FC 15							
0.6017	GG 170 HB	GJL-HB 205															
0.6020	GG 20	GJL-200	A48-30 B		Grade 200	Ft 20 D	G 20	0120-00	FG 20	FC 200							
0.6022	GG 190 HB	GJL-HB 195															
0.6025	GG 25	GJL-250	A48-40 B		Grade 260	FGL 250	G 25	0125-00	FG 25	FC 250							
0.6027	GG 220 HB	GJL-HB 250															
0.6030	GG 30	GJL-300	A48-45 B		Grade 300	Ft 30 D	G 30	0130-00	FG 30	FC 30							
0.6032	GG 240 HB	GJL-HB 275															
0.6035	GG 35	GJL-350	A48-50 B		Grade 350	Ft 35 D	G 35	0135-00	FG 35	FC 35							
0.6037	GG 260 HB	GJL-HB 275															
0.6040	GG 40	GJL-400	A48-60 B		Grade 400	Ft 40 D		0140-00									
0.6652	GGL-NiMn 13 7	GJLA-XNiMn 13-7			L-NiMn 13 7	L-NM 13 7											
0.6655	GGL-NiCuCr 15 6 2	GJLA-XNiCuCr 15-6-2	A 436 Type 1		L-NiCuCr 15 6 2	L-NUC 15 6 2											
0.6656	GGL-NiCuCr 15 6 3	GJLA-XNiCuCr 15-6-3	A 436 Type 1b		L-NiCuCr 15 6 3	L-NUC 15 6 3											
0.6660	GGL-NiCr 20 2	GJLA-XNiCr 20-2	A 436 Type 2		L-NiCr 20 2	L-NC 20 2		0523-00									
0.6661	GGL-NiCr 20 3	GJLA-XNiCr 20-3	A 436 Type 2b		L-NiCr 20 3												
0.6667	GGL-NiSiCr 20 5 3	GJLA-XNiSiCr 20-5-3			L-NiSiCr 20 5 3	L-NSC 20 5 3											



**Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## GHISA SFEROIDALE › Nodular Cast Iron

0.7033	GGG-35-3																
0.7040	GGG-40		60-40-18		420/12	FGS 400-12	GS 400-12	0717-02		FCD 40							
0.7043	GGG-40-3				370/17	FGS 370-17	GSO 42/15	0717-15									
0.7050	GGG-50		65-45-12		500/7	FGS 500-7	GS 500/7	0727-02		FCD 50							
0.7060	GGG-60		80-55-06		600/3	FGS 600-3	GS 600/3	0732-03		FCD 60							
0.7070	GGG-70		100-70-03		700/2	FGS 700-2	GS 700-2	0737-01		FCD 70							
0.7080	GGG-80		120-90-02		800/2	FGS 800-2	GS 800-2										
0.7652	GGG-NiMn 13 7	GJSA-XNiMn 13-7			S-NiMn 13 7	S-Mn 13 7		0772-00									
0.7659	GGG-NiCrNb 20 2	GJSA-XNiCrNb 20-2															
0.7660	GGG-NiCr 20 2	GJSA-XNiCr 20-2	A 439 Type D-2		L-NiCuCr 20 2	L-NC 20 2		0523-00									
0.7661	GGG-NiCr 20 3	GJSA-XNiCr 20-3	A 439 Type D-2B		S-NiCr 20 3												
0.7665	GGG-NiSiCr 20 5 2	GJSA-XNiSiCr 20-5-2			S-NiSiCr 20 5 2	S-NSC 20 5 2											
0.7670	GGG-Ni 22	GJSA-XNi 22	A 439 Type D-2C		S-Ni 22	S-N 22											
0.7673	GGG-NiMn 23 4	GJSA-XNiMn 23-4	A 571 Type D-2M		S-NiMn 23 4												

## GHISA MALLEABILE E AUSTEMPERATA › Ductile & Austempered Cast Iron

0.8035	GTW-35-04	GJMW-350-4															
0.8038	GTW-S 38-12	GJMW-360-12															
0.8040	GTW-40-05	GJMW-400-5					MB 40-10		GMB 40								
0.8045	GTW-45-07	GJMW-450-7							GMB 45								
0.8055	GTW-55								GMB 55								
0.8065	GTW-65								GMB 65								
0.8135	GTS-35-10	GJMB-350-10	32510		B 340/12	MN 35-10		0815		FCMW 330							
0.8145	GTS-45-06	GJMB-450-6	40010		P 440/7			0852		FCMW 440							
0.8155	GTS-55-04	GJMB-550-4	50005		P 510/4	MP 50-5		0854		FCMW 490							
0.8165	GTS-65-02	GJMB-650-2	70003		P 570/3	MP 60-3		0858		FCMW 540							
0.8170	GTS-70-02	GJMB-700-2	90001		P 690/2	Mn 700-2		GMN 70	0862								

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>SAISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
 Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## OTTONE E LEGHE DI RAME › Brass and Copper Alloys

2.0040	OF-Cu																
2.0060	E-Cu 57		B-120														
2.0065	E-Cu 58		C 11000		C 101	Cn-a2											
2.0070	SE-Cu		C 10300		C 101	Cu-c1											
2.0082	G-CuL45		C 81100		HCC 1												
2.0085	G-CuL50		C 81100		HCC 1												
2.0220	CuZn 5																
2.0240	CuZn 15		C 23000			CuZn 15										C 2300	
2.0241	G-CuZn 40 MnPb																
2.0265	CuZn 30		C 26000		CZ 102	CuZn 30										C 2600	
2.0290	G-CuZn 33 Pb																
2.0321	CuZn 37		C 27200		CZ 108	CuZn 37	C 2720										
2.0330	CuZn 36 Pb 1.5																
2.0331	CuZn 36 Pb 1,5																
2.0340	G-CuZn 37 Pb																
2.0380	CuZn 39 Pb 2																
2.0401	CuZn 39 Pb 3																
2.0402	CuZn 39 Pb 2																
2.0460	CuZn 20 Al 2																
2.0492	G-CuZn 15 Si 4		B-198														
2.0510	CuZn 37 Al 1																
2.0550	CuZn 40 Al 2																
2.0561	CuZn 40 Al 1																
2.0590	G-CuZn 40 Fe																
2.0591	GK-CuZn 38 Al																
2.0592	G-CuZn 35 Al 1		C 86500		HTB 1	U-Z 36 N 3											
2.0595	GK-CuZn 37 Al 1																
2.0596	G-CuZn 34 Al 2		C 86200		HTB 1	U-Z 36 N 3											
2.0598	G-CuZn 25 Al 5																
2.0872	CuNi 10 Fe 1 Mn																
2.0882	CuNi 30 Mn 1 Fe																
2.0936	CuAl 10 Fe 3 Mn 2				CA 103	U-A 10 Fe											
2.0940	G-CuAl 10 Fe																
2.0966	CuAl 10 Ni 5 Fe 4		C 63000		Ca 104	U-A 10 N											
2.0975	G-CuAl 10 Ni		B-148-52														
2.1050	G-CuSn 10		C 90700		CT 1												
2.1052	G-CuSn 12		C 90800		Pb 2	UE 12 P											
2.1060	G-CuSn 12 Ni		C 91700														
2.1061	G-CuSn 12 Pb																
2.1086	G-CuSn 10 Zn																
2.1090	G-CuSn 7 ZnPb		C 93200			U-E 7 Z 5 Pb 4											
2.1093	G-CuSn 6 ZnNi				LG 4												
2.1096	G-CuSn 5 ZnPb		C 83600		LG 2	U-E 5 Pb 5 Z 5											
2.1098	G-CuSn 2 ZnPb																
2.1176	G-CuPb 10 Sn		C 93700		LB 2	U-E 10 Pb 10											
2.1182	G-CuPb 15 Sn		C 93800		LB 1	U-Pb 15 E 8											
2.1188	G-CuPb 20 Sn		C 94100		LB 5	U-Pb 20											
2.1292	G-CuCrF 35		C 81500		CC1-FF												
2.1293	CuCrZr		C 18200		CC 102	U-Cr 0.8 Zr											
2.1871	G-AlCu 4 TiMg																





<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>AISI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							



**Gruppo Materiali**  
Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

## LEGHE RESISTENTI AL CALORE › Heat Resistant Super Alloys HRSA

0.6676	GGL-NiCr 30 3	GJLA-XNiCr 30-3	A 436 Type 3			L-NiCr 30 3	L-NC 30 3										
0.6680	GGL-NiSiCr 30 5 5	GJLA-XNiSiCr 30-5-5	A 436 Type 4			L-NiSiCr 30 5 5	L-NSC 30 5 5										
0.7676	GGG-NiCr 30 3	GJSA-XNiCr 30-3	A 439 Type D-3			S-NiCr 30 3	S-NC 30 3										
0.7677	GGG-NiCr 30 1	GJSA-XNiCr 30-1	A 439 Type D-3A			S-NiCr 30 1	S-NC 30 1										
0.7679	GGG-NiSiCr 30 5 5	GJSA-XNiSiCr 30-5-5															
0.7680	GGG-NiSiCr 30 5 3	GJSA-XNiSiCr 30-5-3	A 439 Type D-4			S-NiSiCr 30 5 5	S-NSC 30 5 5										
0.7683	GGG-Ni 35	GJSA-XNi 35	A 439 Type D-5			S-Ni 35	S-N 35										
0.7685	GGG-NiCr 35 3	GJSA-XNiCr 35-3	A 439 Type D-5A			S-NiCr 35 3	S-NC 35 3										
0.7688	GGG-NiSiCr 35 5 2	GJSA-XNiSiCr 35-5-2															
1.4335	X 2 CrNi 25 20																
1.4361	X 2 CrNiSi 18 15						Z 1 CNS 18.15										
1.4558	X2 NiCrAlTi 32 20																NCF 800 TB
1.4562	X1 NiCrMoCu 32 28 7																
1.4563	X1 NiCrMoCuNi 31 27 4				N08028		Z2 NCDU 31.27.03		2584								
1.4857	G-X 40 CrNiSi 35 25				J95705			GX 50 NiCr 35 25									
1.4862	X 8 CrNiSi 38 18																
1.4864	X 12 NiCrSi 36 16		330			NA 17	Z 12 NCS 37.18					X 12 CrNiSi 36-16					SUH 330
1.4864	Incoloy																
1.4865	G-X 40 NiCrSi 38 18				J94605	330 C 40		GX 50 NiCr 39 19									SCH 15
1.4876	X 10 NiCrAlTi 32 20		B 163			NA 15	Z 8 NC 32.21					X 10 NiCrAlTi 32-30					NCF 800
1.4939	X 12 CrNiMo 12					S.151											
1.4944	A 286																SUH 660
1.4958	X 5 NiCrAlTi 31 20																
1.4959	X 5 NiCrAlTi 32 21																
1.4977	X 40 CoCrNi 20 20																
1.4980	X 5 CrNiTi 26 15		660	S66286		286 S 31	Z 6 NCTDV 25.15 B										
2.4060	Ni 99,6																
2.4066	Ni 99,2		N 02200			NA 11											
2.4170	G-Ni 95		SZ-100														
2.4175	G-Ni 93 C		CZ-100														
2.4180	G-Ni 93 Si																
2.4360	NiCu 30 Fe		N 04400			NA 13	NU 30	Monel 400									
2.4365	G-NiCu 30 Nb		M 35-1/2														
2.4367	G-NiCu 30 Si 3		M 30-H														
2.4368	G-NiCu 30 Si 4		M-255														
2.4375	NiCu 30 Al		N 05500			NA 18	NU 30 AT										
2.4375	NiCu 30 Al		N 05500			NA 18	NU 30 AT										
2.4602	NiCr 21 Mo 14 W																
2.4610	NiMo 16 Cr 16 Ti		N 06455														
2.4617	NiMo 28		N 10665				NiMo 28										
2.4619	NiCr 22 Mo 7 Cu		N 06985														
2.4630	NiCr 20 Ti		N 06075			HR5	NC 20 T	Nimonic 75									
2.4632	NiCr 20 Co 18 Ti							Nimonic 90									
2.4634	NiCo 20 Cr 15 MoAlTi							Nimonic 105									
2.4642	NiCr 29 Fe		N 06690				NC 30 Fe										
2.4650	NiCo 20 Cr 20 MoTi		N 07263			HR 10	NCK 20 D	Nimonic C-263									
2.4654	NiCr20Co14MoTi						NC20K14	Waspaloy									
2.4658	NiCr 70 30																
2.4660	NiCr 20 CuMo		N 08020														
2.4663	NiCr 23 Co 12 Mo		N 06617														
2.4665	NiCr 22 Fe 18 Mo																
2.4668	NiCr 19 FeNbMo		N 07718				NC 19 Fe Nb	Inconel 718									
2.4669	NiCr 15 Fe 7 TiAl		N 07750				NC 15 TNb A										
2.4685	G-NiMo 28		N-7 M														
2.4686	G-NiMo 17 CrW		CW-12 MW														
2.4694	NiCr 16 Fe 7 TiAl																
2.4778	G-CoCr 28																
2.4810	G-NiMo 30		N-12 MV														
2.4816	NiCr 15 Fe		N 06600			NA 14	NC 15 Fe										NCF 600
2.4819	NiMo 16 Cr 15 W		N 10276				NC 17 D										
2.4851	NiCr 23 Fe		N 06601				NC 23 Fe A										
2.4856	NiCr 22 Mo 9 Nb		N 06625			NA 21	NC 22 Fe DNb	Inconel 625									
2.4858	NiCr 21 Mo		N 08825			NA 16	NC 21 Fe DU										NCF 825
2.4867	NiCr 60 15																

<b>D</b>		<b>UK</b>		<b>USA</b>		<b>UK</b>		<b>F</b>		<b>IT</b>		<b>S</b>		<b>E</b>		<b>J</b>	
<b>W.-NR.</b>	<b>DIN</b>	<b>EN</b>	<b>SAI</b>	<b>UNS</b>	<b>BS</b>	<b>AFNOR</b>	<b>UNI</b>	<b>SS</b>	<b>UNE</b>	<b>JIS</b>							

**S<sub>2</sub>****Gruppo Materiali**

Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

**LEGHE RESISTENTI AL CALORE** › *Heat Resistant Super Alloys HRSA*

2.4869	NiCr 80 20																
2.4879	G-NiCr 28 W																
2.4883	G-NiMo 16 CrW																
2.4951	NiCr 20 Ti		N 06075		HR 5		NC 20 T										
2.4952	NiCr 20 TiAl		N 07080		NA 20		NC 20 TA										
2.4955	NiFe 25 Cr 20 NbTi																
2.4964	CoCr 20 W 15 Ni		R 30605		HR 240		KC 22 WN										
2.4969	NiCr 20 Co 18 Ti																
2.4973	NiCr19Co11Mo10Ti3		AMS 5399				NC 19 KDT										
2.4975	NiFeCr 12 Mo																
2.4976	NiCr 20 Mo																
2.4982	NiCr 20 CoMo																
2.4983	NiCr 18 Co 18 MoTi																
2.4989	CoCr 20 NiW																

**S<sub>1</sub>****Gruppo Materiali**

Material-Beispiele | Material groups | Groupes de matériaux | Grupos de materiales

**TITANIO E LEGHE DI TITANIO** › *Titanium and Titanium Alloys*

3.7025	Ti 1		R 50250		2 TA 1												
3.7035	Ti 2		R 50400		2 TA 2-5												
3.7055	Ti 3		R 50550		TA 3												
3.7065	Ti 4		R 50700		2 TA 6-9												
3.7105	TiNi 0.8 Mo 0.3																
3.7110	TiAl 5 Fe 2.5																
3.7115	TiAl 5 Sn 2																
3.7124	TiCu2				2 TA 21-24												
3.7145	TiAl 6 Sn 2 Zr 4MoSi		R 54620														
3.7155	TiAl 6 ZrMo 0.5				TA 43												
3.7165	TiAl 6 V 4		R 56400		TA 10-13		T-A 6 V										
3.7175	TiAl 6 V 6 Sn 2																
3.7185	TiAl 4 Mo 4 Sn 2				TA 45-51												
3.7195	TiAl 3 V 2.5																
3.7225	Ti 1 Pd		R 52250		TP 1												
3.7235	Ti 2 Pd		R 52400														
3.7255	Ti 3 Pd																

<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página	<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página	<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página
<b>3200</b>	<b>2-3</b>	<b>4302C</b>	<b>19</b>	<b>4412C</b>	<b>42</b>
<b>3200C</b>	<b>2-3</b>	<b>4320</b>	<b>20</b>	<b>4414</b>	<b>42</b>
<b>3200F</b>	<b>2-3</b>	<b>4320C</b>	<b>20</b>	<b>4414C</b>	<b>42</b>
<b>3201</b>	<b>2-3</b>	<b>4306</b>	<b>21</b>	<b>4416</b>	<b>43</b>
<b>3201C</b>	<b>2-3</b>	<b>4306C</b>	<b>21</b>	<b>4416C</b>	<b>43</b>
<b>3202</b>	<b>2-3</b>	<b>4304</b>	<b>21</b>	<b>4466</b>	<b>44</b>
<b>3202C</b>	<b>2-3</b>	<b>4304C</b>	<b>21</b>	<b>4420</b>	<b>45</b>
<b>3220</b>	<b>4</b>	<b>4324</b>	<b>22</b>	<b>4420C</b>	<b>45</b>
<b>3220C</b>	<b>4</b>	<b>4324C</b>	<b>22</b>	<b>4333</b>	<b>46</b>
<b>3204</b>	<b>5</b>	<b>4337</b>	<b>23</b>	<b>4333C</b>	<b>46</b>
<b>3204C</b>	<b>5</b>	<b>4308</b>	<b>24</b>	<b>4334</b>	<b>46</b>
<b>3206</b>	<b>5</b>	<b>4308C</b>	<b>24</b>	<b>4334C</b>	<b>46</b>
<b>3206C</b>	<b>5</b>	<b>5300C</b>	<b>25</b>	<b>4401</b>	<b>47</b>
<b>3224</b>	<b>6</b>	<b>5320</b>	<b>26</b>	<b>4401C</b>	<b>47</b>
<b>3224C</b>	<b>6</b>	<b>5320C</b>	<b>26</b>	<b>4403</b>	<b>47</b>
<b>3308</b>	<b>10-11</b>	<b>5304</b>	<b>27</b>	<b>4403C</b>	<b>47</b>
<b>3308C</b>	<b>10-11</b>	<b>5304C</b>	<b>27</b>	<b>4335</b>	<b>48</b>
<b>3310</b>	<b>10-11</b>	<b>5324</b>	<b>28</b>	<b>4335C</b>	<b>48</b>
<b>3300</b>	<b>12-13</b>	<b>5324C</b>	<b>28</b>	<b>4336</b>	<b>48</b>
<b>3300C</b>	<b>12-13</b>	<b>7302</b>	<b>29</b>	<b>4336C</b>	<b>48</b>
<b>3300F</b>	<b>12-13</b>	<b>7301</b>	<b>30</b>	<b>4405</b>	<b>49</b>
<b>3302</b>	<b>12-13</b>	<b>7301C</b>	<b>30</b>	<b>4405C</b>	<b>49</b>
<b>3320</b>	<b>14</b>	<b>4400</b>	<b>38</b>	<b>4407</b>	<b>49</b>
<b>3220C</b>	<b>14</b>	<b>4400C</b>	<b>38</b>	<b>4407C</b>	<b>49</b>
<b>3304</b>	<b>15</b>	<b>4404</b>	<b>39-40</b>	<b>4427</b>	<b>50</b>
<b>3304C</b>	<b>15</b>	<b>4404C</b>	<b>39-40</b>	<b>4427C</b>	<b>50</b>
<b>3324</b>	<b>16</b>	<b>4404F</b>	<b>39-40</b>	<b>4474</b>	<b>52</b>
<b>3324C</b>	<b>16</b>	<b>4406</b>	<b>39-40</b>	<b>4474C</b>	<b>52</b>
<b>4330C</b>	<b>18</b>	<b>4406C</b>	<b>39-40</b>	<b>4428</b>	<b>53</b>
<b>4300</b>	<b>19</b>	<b>4458</b>	<b>41</b>	<b>4428C</b>	<b>53</b>
<b>4300C</b>	<b>19</b>	<b>4458C</b>	<b>41</b>	<b>4432</b>	<b>54</b>
<b>4302</b>	<b>19</b>	<b>4412</b>	<b>42</b>	<b>4436</b>	<b>55</b>

<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página	<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página	<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página
<b>5400</b>	<b>62</b>	<b>7412</b>	<b>84</b>	<b>9563</b>	<b>112</b>
<b>5400C</b>	<b>62</b>	<b>7412C</b>	<b>84</b>	<b>9565</b>	<b>113</b>
<b>5404</b>	<b>63</b>	<b>7414</b>	<b>84</b>	<b>9567</b>	<b>114</b>
<b>5404C</b>	<b>63</b>	<b>7414C</b>	<b>84</b>	<b>9567C</b>	<b>114</b>
<b>5408</b>	<b>64</b>	<b>7462</b>	<b>85</b>	<b>9571</b>	<b>115</b>
<b>5408C</b>	<b>64</b>	<b>7462C</b>	<b>85</b>	<b>9570</b>	<b>116</b>
<b>5412</b>	<b>65</b>	<b>7416</b>	<b>86</b>	<b>9570C</b>	<b>116</b>
<b>5412C</b>	<b>65</b>	<b>7416C</b>	<b>86</b>	<b>9585</b>	<b>117</b>
<b>5450</b>	<b>66</b>	<b>7466</b>	<b>87</b>	<b>9585C</b>	<b>117</b>
<b>5460</b>	<b>67</b>	<b>7466C</b>	<b>87</b>	<b>9574</b>	<b>118</b>
<b>5416</b>	<b>68</b>	<b>7467</b>	<b>88</b>	<b>9574C</b>	<b>118</b>
<b>5418</b>	<b>69</b>	<b>7467C</b>	<b>88</b>	<b>9586</b>	<b>119</b>
<b>5418C</b>	<b>69</b>	<b>7469</b>	<b>88</b>	<b>9586C</b>	<b>119</b>
<b>5420</b>	<b>70</b>	<b>7469C</b>	<b>88</b>	<b>8501</b>	<b>126</b>
<b>7400</b>	<b>76</b>	<b>7420</b>	<b>89</b>	<b>8500</b>	<b>127</b>
<b>7400C</b>	<b>76</b>	<b>7422</b>	<b>90</b>	<b>8503</b>	<b>128</b>
<b>7450</b>	<b>77</b>	<b>7422C</b>	<b>90</b>	<b>8504</b>	<b>129</b>
<b>7450C</b>	<b>77</b>	<b>7424</b>	<b>91</b>	<b>8512</b>	<b>130</b>
<b>7404</b>	<b>78</b>	<b>9501</b>	<b>96</b>	<b>8516</b>	<b>132</b>
<b>7404C</b>	<b>78</b>	<b>9502</b>	<b>97</b>	<b>8520</b>	<b>133</b>
<b>7406</b>	<b>78</b>	<b>9503</b>	<b>98</b>	<b>8528</b>	<b>134</b>
<b>7406C</b>	<b>78</b>	<b>9504</b>	<b>99</b>	<b>8532</b>	<b>136</b>
<b>7454</b>	<b>79</b>	<b>9505</b>	<b>100</b>	<b>8540</b>	<b>137</b>
<b>7454C</b>	<b>79</b>	<b>9506</b>	<b>101</b>	<b>8544</b>	<b>138</b>
<b>7408</b>	<b>80</b>	<b>9507</b>	<b>102</b>	<b>8548</b>	<b>139</b>
<b>7408C</b>	<b>80</b>	<b>9508</b>	<b>103</b>	<b>8552</b>	<b>140</b>
<b>7458</b>	<b>81</b>	<b>9509</b>	<b>104</b>	<b>8556</b>	<b>141</b>
<b>7458C</b>	<b>81</b>	<b>9510</b>	<b>105</b>	<b>8560</b>	<b>142</b>
<b>7484</b>	<b>82</b>	<b>9561</b>	<b>110</b>	<b>8564</b>	<b>143</b>
<b>7484C</b>	<b>82</b>	<b>9561C</b>	<b>110</b>	<b>8568</b>	<b>144</b>
<b>7486</b>	<b>82</b>	<b>9564</b>	<b>111</b>	<b>4200</b>	<b>150</b>
<b>7486C</b>	<b>82</b>	<b>9564C</b>	<b>111</b>	<b>4200C</b>	<b>150</b>

<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página	<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página	<b>CODICE</b> Kat. Nr   Item No. Réf.   Códigos	<b>PAGINA</b> Seite   Page Page   Página
<b>4201</b>	<b>150</b>	<b>7430C</b>	<b>165</b>	<b>9581</b>	<b>202-203</b>
<b>4201C</b>	<b>150</b>	<b>7427</b>	<b>166</b>	<b>9582</b>	<b>204</b>
<b>4202</b>	<b>150</b>	<b>7427C</b>	<b>166</b>	<b>9583</b>	<b>205</b>
<b>4202C</b>	<b>150</b>	<b>7429</b>	<b>166</b>	<b>9584</b>	<b>206</b>
<b>4220</b>	<b>151</b>	<b>7429C</b>	<b>166</b>	<b>9591</b>	<b>207</b>
<b>4220C</b>	<b>151</b>	<b>7480</b>	<b>167</b>	<b>9592</b>	<b>208</b>
<b>4204</b>	<b>152</b>	<b>7480C</b>	<b>167</b>	<b>9593</b>	<b>209</b>
<b>4204C</b>	<b>152</b>	<b>7434</b>	<b>168</b>		
<b>4206</b>	<b>152</b>	<b>7434C</b>	<b>168</b>		
<b>4224</b>	<b>153</b>	<b>7436</b>	<b>169</b>		
<b>4224C</b>	<b>153</b>	<b>7436C</b>	<b>169</b>		
<b>4439</b>	<b>154</b>	<b>9520</b>	<b>174</b>		
<b>4439C</b>	<b>154</b>	<b>9522</b>	<b>174</b>		
<b>4493</b>	<b>155</b>	<b>9524</b>	<b>175</b>		
<b>4493C</b>	<b>155</b>	<b>9526</b>	<b>176</b>		
<b>4438</b>	<b>156</b>	<b>9530</b>	<b>177</b>		
<b>4438C</b>	<b>156</b>	<b>9536</b>	<b>178</b>		
<b>4488</b>	<b>157</b>	<b>9542</b>	<b>179</b>		
<b>4488C</b>	<b>157</b>	<b>9544</b>	<b>179</b>		
<b>4442</b>	<b>158</b>	<b>9546</b>	<b>180</b>		
<b>4442C</b>	<b>158</b>	<b>9548</b>	<b>180</b>		
<b>4495</b>	<b>159</b>	<b>9550</b>	<b>181</b>		
<b>4495C</b>	<b>159</b>	<b>9552</b>	<b>181</b>		
<b>4446</b>	<b>160</b>	<b>9554</b>	<b>182</b>		
<b>4446C</b>	<b>160</b>	<b>9556</b>	<b>182</b>		
<b>4448</b>	<b>161</b>	<b>9575</b>	<b>183</b>		
<b>4448C</b>	<b>161</b>	<b>9595</b>	<b>184</b>		
<b>7426</b>	<b>162</b>	<b>9576</b>	<b>185</b>		
<b>7426C</b>	<b>162</b>	<b>9577</b>	<b>194-195</b>		
<b>7476</b>	<b>164</b>	<b>9578</b>	<b>196-197</b>		
<b>7476C</b>	<b>164</b>	<b>9579</b>	<b>198-199</b>		
<b>7430</b>	<b>165</b>	<b>9580</b>	<b>200-201</b>		









Le informazioni e le caratteristiche tecniche possono essere soggette a variazioni senza preavviso. Angelo Ghezzi Spa si riserva in qualsiasi momento, a suo giudizio e senza preavviso, di apportare modifiche ai prodotti inseriti nel proprio catalogo. I dati tecnici contenuti nel catalogo sono da considerarsi validi salvo errori e/o omissioni. La riproduzione del materiale contenuto nel presente catalogo è vietata senza il consenso scritto da parte di Angelo Ghezzi Spa.

*The information and specifications are subject to changes without notice. Angelo Ghezzi Spa reserves the right at any time at its discretion and without notice, to make changes to the products included in its catalogue. The technical data in the catalogue are valid except for errors and/or omissions. The reproduction of the material contained in this catalogue is prohibited without the written consent of Angelo Ghezzi Spa.*



**Angelo Ghezzi & C SpA**

Via Privata Gorlich, 1 | 20037 Paderno Dugnano (MI)  
Tel. +39 02 9189314 | Fax +39 02 99041403  
info@angeloghezzi.it | [www.angeloghezzi.it](http://www.angeloghezzi.it)