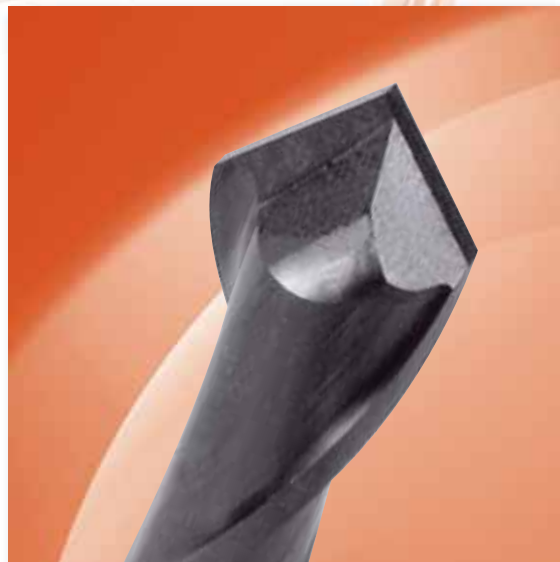
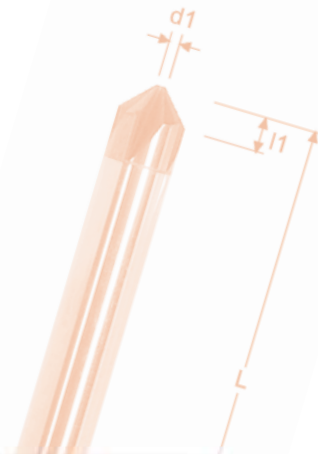
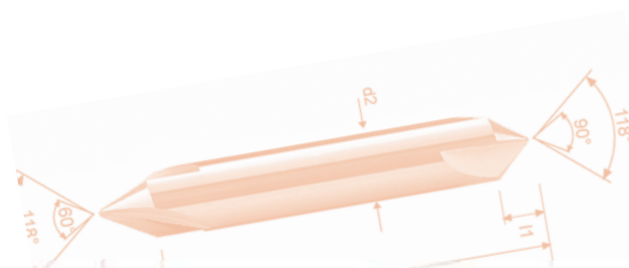
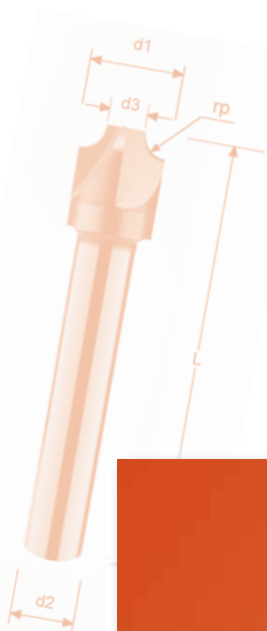


TK FRÉZY TVAROVÉ, ZRÁŽACIE A ZAHLBOVACIE

Countersink end mills



Fresa per esecuzione raggi in metallo duro integrale

Solid carbide concave radius end mill

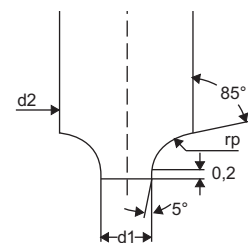
VHM- Viertelkreisentgrater - Fraise en carbure a rayon concave

Фреза твердосплавная концевая с радиусом - Fréza pro zaoblení hran



CODE UNCOATED	CODE HYPER	d1 mm	d2h6 mm	rp mm	L mm	Z no.
CTK.R0020	CTK.RT0020	5.4	6	0.2	50	4
CTK.R0025	CTK.RT0025	5.3	6	0.25	50	4
CTK.R0030	CTK.RT0030	5.2	6	0.3	50	4
CTK.R0040	CTK.RT0040	5	6	0.4	50	4
CTK.R0050	CTK.RT0050	6.8	8	0.5	50	4
CTK.R0060	CTK.RT0060	6.6	8	0.6	50	4
CTK.R0075	CTK.RT0075	6.3	8	0.75	50	4
CTK.R0080	CTK.RT0080	6.2	8	0.8	50	4
CTK.R0100	CTK.RT0100	5.8	8	1	50	4
CTK.R0125	CTK.RT0125	5.3	8	1.25	50	4
CTK.R0150	CTK.RT0150	6.8	10	1.5	50	4
CTK.R0175	CTK.RT0175	6.3	10	1.75	50	4
CTK.R0200	CTK.RT0200	7.8	12	2	50	4
CTK.R0225	CTK.RT0225	7.3	12	2.25	50	4
CTK.R0250	CTK.RT0250	6.8	12	2.5	50	4
CTK.R0275	CTK.RT0275	6.3	12	2.75	50	4
CTK.R0300	CTK.RT0300	5.8	12	3	63	4
CTK.R0351	CTK.RT0351	8.6	16	3.5	80	4
CTK.R0401	CTK.RT0401	7.6	16	4	80	4
CTK.R0451	CTK.RT0451	6.6	16	4.5	80	4
CTK.R0501	CTK.RT0501	9.6	20	5	80	4
CTK.R0601	CTK.RT0601	7.6	20	6	80	4

→ Help 187



HRC
< 60

CAST
IRON

NE
NON
FERROUS

INOX
Stainless
Steel

MICRO
GRAIN

DIN 6535
Form HA

0°

rp

UNCOATED
HYPER

Z 4

UNCOATED
HYPER

d1
-0
-0.1

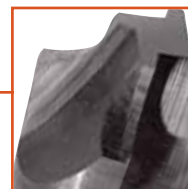
Fresa per esecuzione raggi gambo in HSS

Concave radius end mill with Steel Shank

Viertelkreisentgrater mit stal Schaft - Fraise a rayon concave avec queue en acier

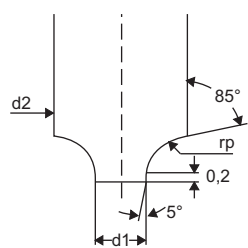
Фреза твердосплавная концевая с радиусом со стальным хвостовиком

Fréza pro zaoblení hran s ocelovou stopkou



CODE	d1 mm	d2 mm	d3h7 mm	rp mm	L mm	Z no.
CTK.R0350	7.6	15	12	3.5	82	4
CTK.R0400	6.6	15	12	4	82	4
CTK.R0450	7.6	17	12	4.5	85	4
CTK.R0500	8.6	19	12	5	85	4
CTK.R0600	7.6	20	12	6	85	4
CTK.R0800	7.6	24	20	8	93	4
CTK.R1000	10.6	31	20	10	98	4
CTK.R1200	12.6	37	20	12	100	6

→ Help 187



HRC
< 40

CAST
IRON

NE
NON
FERROUS

INOX
Stainless
Steel

MICRO
GRAIN

DIN 6535
Form HA

0°

rp

UNCOATED

Z 4

Z 6

015-031

037

UNCOATED

d1
-0
-0.1

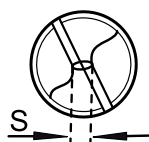
Fresa multifunzione a 90°

Solid carbide multimill 90°

VHM- Multimill 90° - Fraise en carbure multifunction 90° - Sk fréza pro zaoblení hran



CODE UNCOATED	CODE HYPER	d1h7 mm	d2h6 mm	l1 mm	L mm	S mm	Z no.
200V.001	200VT.001	0.1	3	0.2	40	0.01	2
200V.002	200VT.002	0.2	3	0.4	40	0.02	2
200V.003	200VT.003	0.3	3	0.6	40	0.03	2
200V.004	200VT.004	0.4	3	0.8	40	0.04	2
200V.005	200VT.005	0.5	3	1	40	0.05	2
200V.006	200VT.006	0.6	3	1.2	40	0.06	2
200V.007	200VT.007	0.7	3	1.4	40	0.07	2
200V.008	200VT.008	0.8	3	1.6	40	0.08	2
200V.009	200VT.009	0.9	3	1.8	40	0.09	2
200V.010	200VT.010	1	3	2	40	0.10	2
200V.011	200VT.011	1.1	3	2.2	40	0.11	2
200V.012	200VT.012	1.2	3	2.4	40	0.12	2
200V.013	200VT.013	1.3	3	2.6	40	0.13	2
200V.014	200VT.014	1.4	3	2.8	40	0.14	2
200V.015	200VT.015	1.5	3	3	40	0.15	2
200V.016	200VT.016	1.6	3	3.2	40	0.16	2
200V.017	200VT.017	1.7	3	3.4	40	0.17	2
200V.018	200VT.018	1.8	3	3.6	40	0.18	2
200V.019	200VT.019	1.9	3	3.8	40	0.19	2
200V.020	200VT.020	2	3	4	40	0.20	2
200V.025	200VT.025	2.5	3	5	40	0.25	2
200V.030	200VT.030	3	4	6	50	0.30	2
200V.040	200VT.040	4	5	8	50	0.40	2
200V.050	200VT.050	5	6	10	50	0.50	2
200V.060	200VT.060	6	8	12	60	0.60	2
200V.080	200VT.080	8	10	16	70	0.80	2
200V.100	200VT.100	10	12	18	75	1.00	2
200V.120	200VT.120	12	12	20	75	1.20	2
200V.160	200VT.160	16	16	26	85	1.60	2
200V.200	200VT.200	20	20	32	100	2.00	2



UNCOATED

HRC < 65

HRC < 45

CAST IRON

INOX Stainless Steel

Inconell

NE NON FERROUS

MICRO GRAIN

DIN 6535 Form HA

30°

90°

(+)

Z 2

UNCOATED HYPER

→ Help 193

Sbavatore a spingere e a tirare in metallo duro integrale

Solid carbide forward and backward burr remover end mill

VHM-Vorwärts und Rückwärtsentgrater - Fraise en carbure de retoucher bavure en deux direction

Фреза твердосплавная концевая с поступательным движением - Sk fréza pro čelní a zpětné sražení hran



CODE	d1 mm	d2h6 mm	S MAX mm	l1 mm	l2 mm	L mm	d3 mm	Z no.
CTM.010060	1	3	0.3	0.5	5.5	60	0.7	3
CTM.015060	1.5	3	0.45	0.7	6.7	60	1.1	3
CTM.018060	1.8	3	0.6	0.75	8.7	60	1.5	3
CTM.020060	2	3	0.6	0.95	9	60	1.5	3
CTM.028060	2.8	3	0.9	1.3	10	60	2.1	3
CTM.028100	2.8	6	1.2	1.1	11	100	2.2	4
CTM.030060	3	3	0.9	1.5	11.5	60	2.1	3
CTM.030100	3	6	1.2	1.3	10	100	2.2	4
CTM.038100	3.8	6	1.6	1.55	14	100	2.9	4
CTM.040100	4	6	1.6	1.75	14	100	2.9	4
CTM.048100	4.8	6	2	2.1	17	100	3.4	4
CTM.050100	5	6	2	2.3	17	100	3.4	4
CTM.058100	5.8	6	2.4	2.7	20	100	3.8	4
CTM.060100	6	6	2.4	2.9	21	100	3.8	4
CTM.078100	7.8	6	4.9	2.8	37	100	4.9	4
CTM.080100	8	6	4.9	3.1	37	100	4.9	4
CTM.098100	9.8	6	5.9	3.8	38	100	5.9	4
CTM.100100	10	6	5.9	4.1	38	100	5.9	4
CTM.118100	11.8	6	5.9	5.8	40	100	5.9	4
CTM.120100	12	6	5.9	6.1	40	100	5.9	4



HRC < 60

CAST IRON

NE NON FERROUS

INOX Stainless Steel

MICRO GRAIN

DIN 6535 Form HA

15°

45°

(-)

Z 3

Z 4

01-03

02,8-012

HYPER

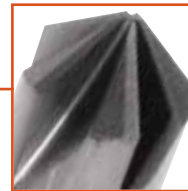
→ Help 198

Fresa a 60°-90° in metallo duro integrale

Solid carbide 60°-90° end mill

VHM-Entgrater 60°-90° - Fraise en carbure a Chanfrein 60°-90°

Фреза твердосплавная концевая, угол наклона винтовой канавки 60°- 90°- Sk fréza 60°-90°



CODE 60°	d1 mm	d2h6 mm	l1 mm	L mm	Z no.
CTS60.030	0.3	3	2.6	50	3
CTS60.040	0.4	4	3.4	50	4
CTS60.060	0.6	6	5.2	57	4
CTS60.080	0.8	8	6.9	60	5
CTS60.100	1.0	10	8.7	70	6
CTS60.120	1.2	12	10.4	75	6

CODE 90°	d1 mm	d2h6 mm	l1 mm	L mm	Z no.
CTS90.030	0.3	3	1.5	50	3
CTS90.040	0.4	4	2	50	4
CTS90.060	0.6	6	3	57	4
CTS90.080	0.8	8	4	60	5
CTS90.100	1.0	10	5	70	6
CTS90.120	1.2	12	6	75	6

→ Help 187

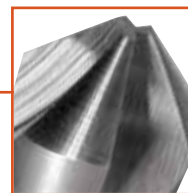


HRC < 60	CAST IRON	INOX Stainless Steel	Inconell
MICRO GRAIN		DIN 6535 Form HA	
0°		30°	
45°		HYPER	
	Z 4	Z 5	
	Ø4-Ø6	Ø8	
Z 6			
Ø10 - Ø16			
d1 -0 -0.1			

Svasatore a 60°-90°

Countersink 60°-90°

Kegelsenker 60°-90° - Chanfrein 60°-90° - Záhľubníky, srážeče 60°-90°



CODE 60°	CODE 90°	d1 mm	d3 mm	d2 mm	L mm	Z no.	DIN
CTK60053/3	CTK90053/3	5.3	1.5	6	50	3	M2.6
CTK60058/3	CTK90058/3	5.8	1.5	6	50	3	M3.0
CTK60063/3	CTK90063/3	6.3	1.5	6	50	3	M3.5
CTK60073/3	CTK90073/3	7.3	1.8	6	50	3	M4.0
CTK60083/3	CTK90083/3	8.3	2.0	6	50	3	-
CTK60094/3	CTK90094/3	9.4	2.2	6	50	3	M5.0
CTK60104/3	CTK90104/3	10.4	2.5	6	54	3	M6.0
CTK60124/3	CTK90124/3	12.4	2.8	6	54	3	-
CTK60165/3	CTK90165/3	16.5	3.2	6	60	3	-
CTK60205/3	CTK90205/3	20.5	3.5	8	63	3	-
CTK60250/3	CTK90250/3	25.0	3.8	8	66	3	M12

→ Help 187

Dal Ø 7,3 mm gambo in acciaio
From Ø 7,3 mm Steel Shank
Von Ø 7,3 mm Stahl Shaft



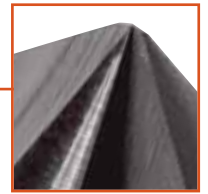
HRC < 40	CAST IRON	INOX Stainless Steel	
	Inconell	NON FERROUS	
MICRO GRAIN		DIN 6535 Form HA	
0°		60°-90°	
		UNCOATED	
	Z 3	d1 -0 -0.1	

Punta a forare e svasare in metallo duro integrale

Solid carbide chanfer and spot drill

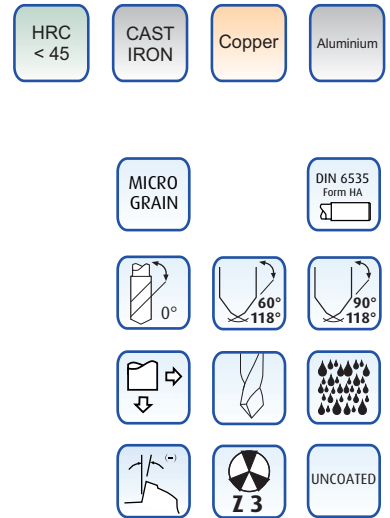
VHM - Anböhler - Fraise carbure

Сверло твердосплавное - Sk srážeče a navrtávky



CODE	d2h6 mm	l1 mm	l2 mm	L mm	Z no.
142.060	6	2.5	4.5	50	3
142.080	8	3.5	6.0	60	3
142.100	10	4.5	8.0	70	3
142.120	12	5.5	9.5	75	3

→ Help 187



Formule

Formulas

Formel - Formules

Формулы

Fz (mm) = Avanzamento per Dente
Feed per tooth
Vorschub pro Zain
Avance par dent
Подача на зуб
Posuv na zub

N (1/min) = Velocità di rotazione
Rotation number
Drehzahl
Frequence de rotation
Частота вращения шпинделя
Otáčky

Vc (m/min) = Velocità di taglio
Cutting speed
Schnittgeschwindigkeit
Vitesse de coupe
Скорость резания
Řezná rychlost

Vf (mm/min) = Velocità di avanzamento
Feed Speed
Vorschubgeschwindigkeit
Vitesse d'avance
Скорость подачи
Rychlost posuvu

Q (cm³/min) = Volume truciolo asportato
Quantity of removed chip
Swarf Volumen
Coupeau volume
Количество снимаемой стружки
Množství odebraného materiálu

$$Fz = \frac{Vf}{Z \times N} \text{ mm}$$

$$N = \frac{Vc \times 1000}{\pi \times \emptyset} \text{ 1/min.}$$

$$Vf = Z \times N \times fz \text{ mm/min.}$$

$$Vc = \frac{\pi \times \emptyset \times N}{1000} \text{ m/min.}$$

$$Q = \frac{a_e \times a_p \times V_f}{1000} \text{ cm}^3/\text{min.}$$

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE: 122F - 122FL - 122FN - 122FALX

MATERIAL	HARDNESS	Type	VC	Ø				
				Ø 3 - 5	Ø 5 - 8	Ø 8.1 - 12	Ø 12.1 - 16	Ø 16.1 - 20
				FZ	FZ	FZ	FZ	FZ
Steel СТАЛЬ	< 500 N/mm2		70 - 90	0.001	0.012	0.015	0.020	0.025
	< 800 N/mm2		50 - 80	0.010	0.012	0.015	0.020	0.025
	< 1000 N/mm2		45 - 60	0.010	0.012	0.013	0.017	0.020
	< 1300 N/mm2		40 - 55	0.010	0.012	0.013	0.017	0.020
Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ			25 ÷ 55	0.04 ÷ 0.10	0.05 ÷ 0.15	0.05 ÷ 0.18	0.08 ÷ 0.20	0.10 ÷ 0.20
Cast steel ЛИТАЯ СТАЛЬ	< 600 N/mm	GS 38	40 - 70	0.05 - 0.15	0.05 - 0.20	0.10 - 0.22	0.10 - 0.25	0.10 - 0.25
	< 700 N/mm	GS 52	30 - 50	0.04 - 0.10	0.05 - 0.15	0.05 - 0.18	0.08 - 0.20	0.10 - 0.20
	> 700 N/mm	GS 62	25 - 55	0.04 - 0.10	0.05 - 0.15	0.10 - 0.18	0.08 - 0.20	0.10 - 0.20
Cast Iron ЧГУН	< 200 N/mm	GG 20	80 - 130	0.10 - 0.25	0.15 - 0.30	0.20 - 0.40	0.25 - 0.45	0.30 - 0.50
		GGG 40 GTS 45						
	< 250 N/mm	GG 30	70 - 115	0.10 - 0.20	0.12 - 0.25	0.15 - 0.35	0.20 - 0.40	0.25 - 0.45
		GGG 50 GTS 40						
> 250 N/mm	GG 40	60 - 100	0.10 - 0.20	0.12 - 0.25	0.15 - 0.35	0.20 - 0.40	0.25 - 0.45	
350 HB 450 HB	GGG 70 GTS 70							
Copper - Bronze - Brass МЕДЬ - БРОНЗА - ЛАТУНЬ			70 - 300	0.07 - 0.18	0.12 - 0.25	0.20 - 0.35	0.25 - 0.45	0.30 - 0.50
Aluminium АЛЮМИНИЙ	> 10 % Si		90 - 300	0.10 - 0.25	0.15 - 0.35	0.25 - 0.45	0.30 - 0.50	0.35 - 0.55
	< 10 % Si		100 - 400	0.10 - 0.25	0.15 - 0.35	0.25 - 0.45	0.30 - 0.50	0.35 - 0.55
Titanium ТИТАН			15 - 45	0.02 - 0.07	0.04 - 0.10	0.06 - 0.12	0.08 - 0.15	0.08 - 0.15
Inconel ИНКОНЕЛЬ		Inconel	15 - 35	0.02 - 0.07	0.04 - 0.10	0.06 - 0.12	0.08 - 0.15	0.08 - 0.15

CORRECTION FACTORS - УТОЧНЯЮЩИЕ ДАННЫЕ

5 x d = x 0,8

8 x d = x 0,7

CODE: CTM

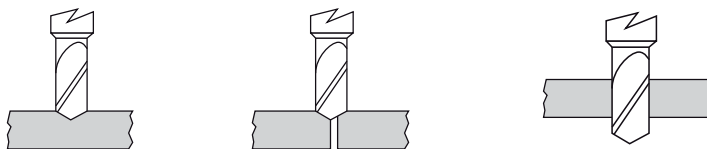
MATERIAL	HARDNESS	VC	Ø			
			Ø 1 - 2	Ø 3-4	Ø 6 - 8	Ø 10 - 12
			FZ	FZ	FZ	FZ
Steel СТАЛЬ	< 500 N/mm2	70 - 90	0.001	0.012	0.015	0.02
	< 800 N/mm2	50 - 80	0.01	0.012	0.015	0.02
	< 1000 N/mm2	45 - 60	0.01	0.012	0.013	0.017
	< 1300 N/mm2	40 - 50	0.01	0.012	0.013	0.017
Stainless Steel-Steel НЕРЖАВЕЮЩАЯ СТАЛЬ	< 1300 N/mm2	35 - 50	0.07	0.01	0.01	0.015
Cast Iron ЧГУНn	< 180 HB	45-60	0,01	0,012	0,013	0,017
Cast Iron ЧГУНn	< 180 HB	40-55	0,01	0,012	0,013	0,017
Inconel - Titanium ИНКОНЕЛЬ - ТИТАН		25-40	0,007	0,01	0,01	0,015
Copper - Bronze - Brass МЕДЬ - БРОНЗА - ЛАТУНЬ		60-100	0,012	0,012	0,015	0,02
Aluminium АЛЮМИНИЙ	<6% Si	80-120	0,012	0,012	0,015	0,02
	>6% Si	110-180	0,012	0,012	0,015	0,02

Rezné parametre

Cutting speed

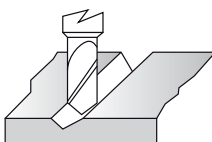
Richtwerte - Paramètres

Режимы обработки - Режимы обработки

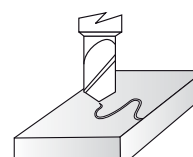
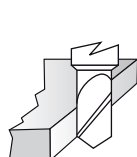
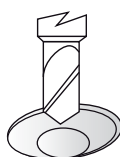
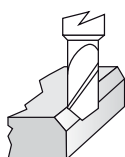


CODE: 200V

MATERIAL	HARDNESS	Vc	Ø																	
			Ø3 - Ø4			Ø5 - Ø6			Ø8 - Ø10			Ø12			Ø16			Ø20		
			n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz
Steel	< 500 N/mm ²	70-75	6400	320	0.050	4000	320	0.080	2500	350	0.140	1900	361	0.190	1500	360	0.240	1300	364	0.280
Steel	< 800 N/mm ²	40-60	4000	200	0.050	2600	208	0.080	1600	224	0.140	1200	240	0.20	900	225	0.250	850	238	0.280
Steel	< 1000 N/mm ²	35-40	3200	144	0.045	2200	154	0.070	1400	168	0.120	1000	180	0.180	850	187	0.220	680	190	0.280
Cast Iron	< 180 HB																			
Stainless Steel-Steel	< 1300 N/mm ²	30-35	2800	126	0.045	1800	126	0.070	1100	132	0.120	800	136	0.170	650	143	0.220	550	143	0.260
Cast Iron	> 180 HB																			
Stainless Steel-Steel		25-30	2200	88	0.040	1600	96	0.060	900	99	0.110	660	105	0.160	500	110	0.220	480	120	0.250
Inconel		20	1800	72	0.040	1100	66	0.060	700	77	0.110	500	80	0.160	400	80	0.200	320	80	0.250
Titanium																				
Copper-Bronze-Brass		50-120	5000	500	0.100	3500	525	0.150	2200	550	0.250	1900	570	0.30	1700	595	0.350	1400	630	0.450
Aluminioium		150	10000	500	0.050	6300	567	0.090	4000	600	0.150	3200	640	0.20	2500	625	0.270	2000	700	0.350



MATERIAL	HARDNESS	Vc	Ø																	
			Ø3 - Ø4			Ø5 - Ø6			Ø8 - Ø10			Ø12			Ø16			Ø20		
			n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz
Steel	< 500 N/mm ²	70-75	6800	65	0.005	4300	65	0.008	2650	70	0.014	2000	75	0.019	1500	75	0.025	1200	75	0.030
Steel	< 800 N/mm ²	40-60	5400	55	0.005	3500	55	0.008	2100	58	0.014	1600	60	0.019	1200	60	0.025	1000	60	0.030
Steel	< 1000 N/mm ²	35-40	3600	28	0.004	2300	28	0.006	1400	34	0.012	1000	35	0.017	800	35	0.020	630	35	0.027
Cast Iron	< 180 HB																			
Stainless Steel-Steel	< 1300 N/mm ²	30-35	3000	25	0.004	2000	25	0.006	1200	30	0.012	900	30	0.016	700	30	0.020	550	30	0.027
Cast Iron	> 180 HB																			
Stainless Steel-Steel		25-30	2200	17	0.004	1600	20	0.006	1000	20	0.010	760	20	0.013	600	22	0.018	400	22	0.027
Inconel		20	1800	11	0.003	1100	12	0.005	700	14	0.010	500	14	0.013	400	15	0.018	320	16	0.025
Titanium																				
Copper-Bronze-Brass		50-120	7000	112	0.008	6000	120	0.010	3500	120	0.017	3200	128	0.020	2200	132	0.030	1750	140	0.040
Aluminioium		150	13000	200	0.008	8600	220	0.013	5300	240	0.023	4000	240	0.030	3000	250	0.040	2400	250	0.050



MATERIAL	HARDNESS	Vc	Ø																	
			Ø3 - Ø4			Ø5 - Ø6			Ø8 - Ø10			Ø12			Ø16			Ø20		
			n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz	n	Vf	Fz
Steel	< 500 N/mm ²	70-75	6800	110	0.008	4300	120	0.014	2650	130	0.025	2000	150	0.040	1500	156	0.052	1200	156	0.065
Steel	< 800 N/mm ²	40-60	5400	85	0.008	3500	90	0.013	2100	105	0.025	1600	120	0.040	1200	125	0.052	1000	125	0.062
Steel	< 1000 N/mm ²	35-40	3600	58	0.008	2300	60	0.013	1400	70	0.025	1000	80	0.040	800	80	0.050	630	80	0.062
Cast Iron	< 180 HB																			
Stainless Steel-Steel	< 1300 N/mm ²	30-35	3000	45	0.008	2000	50	0.013	1200	60	0.025	900	65	0.036	700	65	0.050	550	65	0.060
Cast Iron	> 180 HB																			
Stainless Steel-Steel		25-30	2200	35	0.008	1600	40	0.013	1000	50	0.025	760	55	0.036	600	55	0.045	400	55	0.070
Inconel		20	1800	25	0.007	1100	25	0.011	700	35	0.025	500	35	0.035	400	40	0.050	320	40	0.060
Titanium																				
Copper-Bronze-Brass		50-120	7000	200	0.010	6000	210	0.015	3500	216	0.030	3200	225	0.045	2200	230	0.050	1750	234	0.065
Aluminioium		150	13000	210	0.008	8600	225	0.013	5300	320	0.030	4000	360	0.045	3000	300	0.050	2400	310	0.065

Rezné parametre

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE: 600 - 600T

MATERIAL	HARDNESS	Vc	Ø 4-6 Fz	Ø 8.0 Fz	Ø 10.0 Fz	Ø 12.0 Fz	Ø 14.0 Fz	Ø 16.0 Fz	Ø 18.0 Fz	Ø 20.0 Fz
Steel	<700 N/mm	90-200	0.035-0.100	0.040-0.120	0.045-0.150	0.050-0.180	0.060-0.021	0.070-0.250	0.080-0.280	0.090-0.350
	<700-900 N/mm	80-160	0.030-0.090	0.035-0.100	0.040-0.130	0.045-0.150	0.050-0.180	0.060-0.210	0.070-0.250	0.080-0.300
	900-1200 N/mm	60-120	0.025-0.080	0.030-0.090	0.035-0.110	0.040-0.130	0.045-0.160	0.050-0.190	0.055-0.220	0.060-0.250
	>1200 N/mm	40-100	0.020-0.070	0.025-0.080	0.030-0.100	0.035-0.120	0.040-0.150	0.045-0.180	0.050-0.210	0.055-0.230
Stainless Steel		25-80	0.025-0.080	0.030-0.080	0.035-0.110	0.040-0.130	0.045-0.160	0.050-0.190	0.055-0.220	0.060-0.250
Stainless Steel Hard		20-65	0.020-0.070	0.025-0.070	0.030-0.100	0.035-0.120	0.040-0.150	0.045-0.180	0.050-0.210	0.055-0.230
Cast Iron		80-180	0.035-0.100	0.040-0.120	0.045-0.150	0.050-0.180	0.060-0.210	0.070-0.250	0.080-0.280	0.090-0.350
Cast Iron		65-150	0.030-0.090	0.035-0.100	0.040-0.130	0.045-0.150	0.050-0.180	0.060-0.210	0.070-0.250	0.080-0.300
Nodular Cast Iron High Hardness		50-120	0.025-0.080	0.030-0.090	0.035-0.110	0.040-0.130	0.045-0.160	0.050-0.190	0.055-0.220	0.060-0.250
Nodular Cast Hard Workability		40-100	0.020-0.070	0.025-0.080	0.030-0.100	0.035-0.120	0.040-0.150	0.045-0.180	0.050-0.210	0.055-0.210
Aluminium <15%		100-350	0.050-0.200	0.070-0.240	0.090-0.280	0.110-0.300	0.130-0.350	0.140-0.400	0.150-0.450	0.160-0.500
Aluminium >15%		80-250	0.040-0.100	0.060-0.140	0.080-0.180	0.100-0.200	0.120-0.250	0.130-0.300	0.140-0.350	0.150-0.400
Brass		80-180	0.030-0.090	0.035-0.100	0.040-0.130	0.045-0.150	0.050-0.180	0.060-0.210	0.070-0.250	0.080-0.300
Bronze		70-200	0.030-0.090	0.035-0.100	0.040-0.130	0.045-0.150	0.050-0.180	0.060-0.210	0.070-0.250	0.080-0.300
Titanium		20-60	0.020-0.070	0.025-0.080	0.030-0.100	0.035-0.120	0.040-0.150	0.045-0.180	0.050-0.210	0.055-0.230

CODE: 900T - 910 - 910T

MATERIAL	CUTTING SPEED Vc = m/mm	FEED fz = mm per tooth				
		Ø 1 ÷ 4	Ø 4 ÷ 8	Ø 8 ÷ 12	Ø 12 ÷ 16	Ø 16 ÷ 20
Non alloy steel	15 ÷ 22	0.12	0.16	0.25	0.30	0.35
	10 ÷ 18	0.10	0.13	0.20	0.25	0.30
	8 ÷ 15	0.10	0.15	0.16	0.20	0.25
Alloy steel	6 ÷ 12	0.07	0.10	0.13	0.15	0.25
	5 ÷ 10	0.05	0.08	0.10	0.13	0.15
Heat resistant steels	5 ÷ 10	0.03	0.05	0.08	0.10	0.12
Stainless steel	8 ÷ 12	0.04	0.06	0.08	0.10	0.12
Cast Iron	8 ÷ 12	0.20	0.25	0.30	0.35	0.40
	10 ÷ 14	0.20	0.25	0.30	0.30	0.35
Aluminium and other non-ferrous materials	18 ÷ 30	0.20	0.30	0.35	0.40	0.50

CODE: CTK - CTK.R - CTS60 - CTS90 - 142

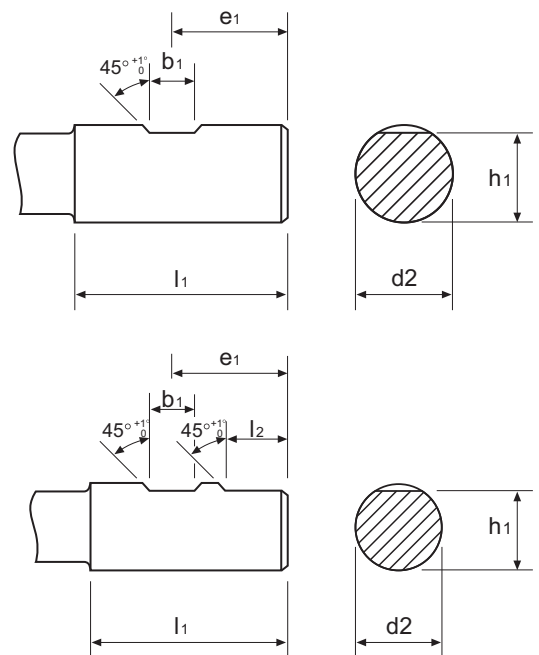
MATERIAL	VC	FZ					
		Ø 1-2	Ø 3-4	Ø 5-8	Ø 10-12	Ø 13-25	Ø 26-40
Steel <500 N/mm	40 - 80	0.001	0.012	0.015	0.020	0.020	0.020
Steel <800 N/mm	40 - 80	0.001	0.012	0.015	0.020	0.020	0.020
Steel >800 N/mm	30 - 50	0.010	0.012	0.013	0.017	0.017	0.017
Stainless steel	30 - 50	0.007	0.010	0.010	0.015	0.015	0.015
Inconell	25 - 40	0.007	0.010	0.010	0.015	0.015	0.015
Titanium	20 - 40	0.007	0.010	0.010	0.015	0.015	0.015
Cast Iron	20 - 50	0.010	0.012	0.013	0.012	0.012	0.016
Steel	20 - 50	0.010	0.012	0.013	0.013	0.013	0.015
Alluminium	70 - 150	0.012	0.012	0.015	0.020	0.020	0.025
Brass, Bronze, Copper, Plastic	60 - 100	0.012	0.012	0.015	0.060	0.120	0.160

Dimensioni gambi weldon DIN 6535 HB a richiesta

Weldon shank dimentions DIN 6535 HB on request

Dimension Weldon DIN 6535 HB auf Anfrage - Dimensions queue weldon DIN 6535 HB sur demande
Хвостовик типа Weldon DIN 6535 HB

d2 mm	b1 mm	e1 mm	h1 mm	l1 mm	l2 mm
6	4.2	18.0	5.1	36	-
8	5.5	18.0	6.9	36	-
10	7.0	20.0	8.5	40	-
12	8.0	22.5	10.4	45	-
14	8.0	22.5	12.7	45	-
16	10.0	24.0	14.2	48	-
18	10.0	24.0	16.2	48	-
20	11.0	25.0	18.2	50	-
25	12.0	32.0	23.0	56	17
32	14.0	36.0	30.0	60	19



Dimensioni gambi flat DIN 6535 HE a richiesta

Whistle notch shank dimentions DIN 6535 HE on request

Dimension spannflache DIN 6535 HE auf anfrage - Dimensions queue flat DIN 6535 HE sur demande
Хвостовик типа HEWeldon DIN 6535

d2 mm	b1 mm	b2 mm	h2 mm	h1 mm	l1 mm	l3 mm	l2 mm	r mm
6	3.5	4.8	5.4	4.8	36	25	18	1.2
8	4.7	6.1	7.2	6.6	36	25	18	1.2
10	5.7	7.3	9.1	8.4	40	28	20	1.2
12	6.0	8.2	11.2	10.4	45	33	22.5	1.2
16	7.6	10.1	15.0	14.2	48	36	24	1.6
20	8.4	11.5	19.1	18.2	50	38	25	1.6
25	9.3	13.6	24.1	23.0	56	44	32	1.6
32	9.4	15.5	31.2	30.0	60	48	35	1.6

