

FRÉZY TVRDOKOVOVÉ

INOX



Fresa con fori in elica a grossare in metallo duro integrale

Solid carbide coolant feed roughing end mill

VHM - Schruppfräser mit Durchgewendelten Kühlkanälen - Fraise carbure ébauche à trous de réfrigération
 Фреза концевая твердосплавная с подачей СОЖ для черновой обработки
 Sk hrubovací fréza s chlazením všech břitů



CODE	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
454.060	6	6	20	50	3
454.080	8	8	22	60	3
454.100	10	10	25	70	3
454.120	12	12	27	75	3
454.140	14	14	30	85	3
454.160	16	16	30	85	3
454.180	18	18	40	100	3
454.200	20	20	40	100	3
454.250	25	25	40	100	3

→ Help 186



INOX Stainless Steel	Inconell	HRC < 40
MICRO GRAIN		DIN 6535 Form HA
45°	FLAT	
45°		
(+)	Z 3	UNCOATED

Fresa testa piana in metallo duro integrale

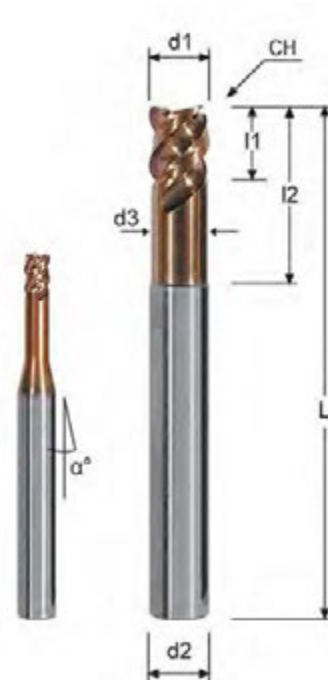
Solid carbide flat nose end mill

VHM - Schaftfräser - Fraise carbure à bout plat
 Фреза концевая твердосплавная с плоским торцом - Sk rohová fréza



CODE	d1h8 mm	d2h6 mm	CH mm	l1 mm	l2 mm	L mm	d3 mm	Z no.	α°
302.030	3	6	0.10	4	14	57	2.8	3	15°
302.040	4	6	0.10	5	16	57	3.8	3	15°
302.050	5	6	0.15	6	18	57	4.8	3	15°
302.060	6	6	0.15	7	20	57	5.5	3	-
302.080	8	8	0.15	9	26	63	7.5	3	-
302.100	10	10	0.20	11	30	72	9.2	3	-
302.120	12	12	0.20	13	37	83	11.2	3	-
302.160	16	16	0.20	17	45	92	15.2	3	-
302.200	20	20	0.20	22	55	100	19.2	3	-

→ Help 166



INOX Stainless Steel	Inconell	
MICRO GRAIN	DIN NORM	DIN 6535 Form HA
55°		HHC
45°		
(+)	Z 3	GOLD

Fresa con fori in elica a grossare in metallo duro integrale

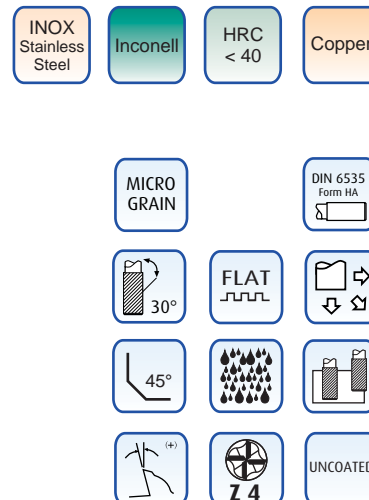
Solid carbide coolant feed roughing end mill

VHM - Schruppfräser mit Durchgewendelten Kühlkanälen - Fraise carbure a degrosir à trous de réfrigération
Фреза концевая твердосплавная с подачей СОЖ для полуступовой обработки
Sk hrubovací fréza s chlazením všech břitů



CODE	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
T2206	6	6	20	50	4
T2208	8	8	22	60	4
T2210	10	10	25	70	4
T2212	12	12	27	75	4
T2214	14	14	30	85	4
T2216	16	16	30	85	4
T2220	20	20	40	100	4
T2225	25	25	40	100	4

→ Help 186



Frese testa piana in metallo duro integrale

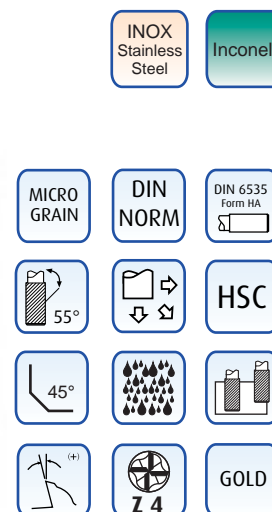
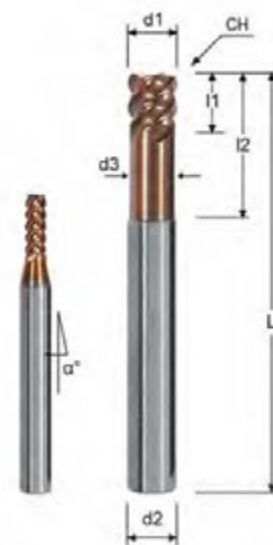
Solid carbide flat nose end mill

VHM - Schafffräser - Fraise carbure à bout plat
Фреза концевая твердосплавная с плоским торцом - Sk rohová fréza



CODE	d1h8 mm	d2h6 mm	CH	l1 mm	l2 mm	L mm	d3 mm	Z no.	α°
40403057	3	6	0.10	8	-	57	-	4	15°
40403057.1	3	6	0.10	4	14	57	2.8	4	15°
40404057	4	6	0.10	11	-	57	-	4	15°
40404057.1	4	6	0.10	5	16	57	3.8	4	15°
40405057	5	6	0.15	13	-	57	-	4	15°
40405057.1	5	6	0.15	6	18	57	4.8	4	15°
40406057	6	6	0.15	13	-	57	-	4	-
40406057.1	6	6	0.15	7	20	57	5.5	4	-
40408063	8	8	0.15	19	-	63	-	4	-
40408063.1	8	8	0.15	9	26	63	7.5	4	-
40410072	10	10	0.20	22	-	72	-	4	-
40410072.1	10	10	0.20	11	31	72	9.2	4	-
40412083	12	12	0.20	26	-	83	-	4	-
40412083.1	12	12	0.20	13	37	83	11.2	4	-
40416092	16	16	0.20	32	-	92	15.2	4	-
40416092.1	16	16	0.20	17	43	92	15.2	4	-
40420100	20	20	0.20	40	-	100	19.2	4	-
40420100.1	20	20	0.20	21	53	100	19.2	4	-

→ Help 166



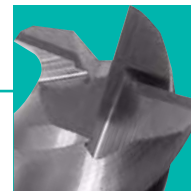
Fresa ad alto avanzamento in metallo duro integrale

Solid carbide High feed end mill

VHM- Fräser für Hoch Vorschub - Fraise carbure pour Haut avances

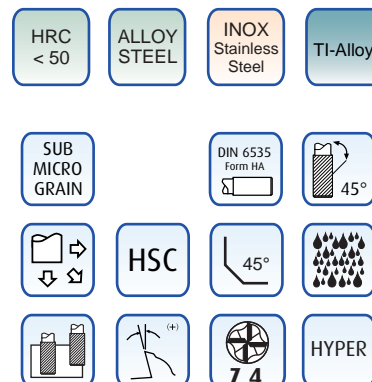
Фреза концевая твердосплавная для обработки с высокими параметрами подачи

Sk vysokoposuvová fréza



CODE	d1h8 mm	d2h6 mm	CH mm	l1 mm	L mm	Z no.
Y400.030	3	6	0.05	8	60	4
Y400.040	4	6	0.05	11	60	4
Y400.050	5	6	0.05	13	60	4
Y400.060	6	6	0.05	13	60	4
Y400.080	8	8	0.10	19	75	4
Y400.100	10	10	0.10	22	80	4
Y400.120	12	12	0.10	25	100	4
Y400.160	16	16	0.10	30	100	4
Y400.200	20	20	0.10	40	100	4

→ Help 175



Fresa testa torica alto avanzamento in metallo duro integrale

Solid carbide corner radius end mill, High Feed

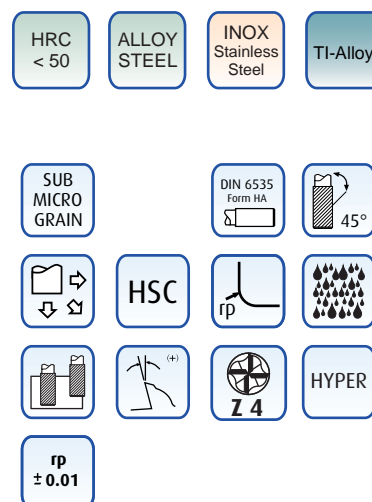
VHM - Gesenkräfer mit Eckenradius High Feed - Fraise carbure avec rayon d'angle, High Feed

Фреза концевая твердосплавная с угловым радиусом - Sk vysokoposuvová fréza s rohovým rádiusem



CODE	d1h8 mm	d2h6 mm	rp mm	l1 mm	L mm	Z no.
Y400.030.02	3	6	0.2	8	60	4
Y400.030.05	3	6	0.5	8	60	4
Y400.040.02	4	6	0.2	11	60	4
Y400.040.05	4	6	0.5	11	60	4
Y400.040.1	4	6	1.0	11	60	4
Y400.050.02	5	6	0.2	13	60	4
Y400.050.05	5	6	0.5	13	60	4
Y400.050.1	5	6	1.0	13	60	4
Y400.060.03	6	6	0.3	13	60	4
Y400.060.05	6	6	0.5	13	60	4
Y400.060.1	6	6	1.0	13	60	4
Y400.060.15	6	6	1.5	13	60	4
Y400.080.03	8	8	0.3	19	75	4
Y400.080.05	8	8	0.5	19	75	4
Y400.080.1	8	8	1.0	19	75	4
Y400.080.15	8	8	1.5	19	75	4
Y400.080.2	8	8	2.0	19	75	4
Y400.100.03	10	10	0.3	22	80	4
Y400.100.05	10	10	0.5	22	80	4
Y400.100.1	10	10	1.0	22	80	4
Y400.100.15	10	10	1.5	22	80	4
Y400.100.2	10	10	2.0	22	80	4
Y400.100.3	10	10	3.0	22	80	4
Y400.120.05	12	12	0.5	25	100	4
Y400.120.1	12	12	1.0	25	100	4
Y400.120.15	12	12	1.5	25	100	4
Y400.120.2	12	12	2.0	25	100	4
Y400.120.3	12	12	3.0	25	100	4
Y400.160.1	16	16	1.0	30	100	4
Y400.160.15	16	16	1.5	30	100	4
Y400.160.2	16	16	2.0	30	100	4
Y400.160.3	16	16	3.0	30	100	4
Y400.160.5	16	16	5.0	30	100	4
Y400.200.1	20	20	1.0	40	100	4
Y400.200.15	20	20	1.5	40	100	4
Y400.200.2	20	20	2.0	40	100	4
Y400.200.3	20	20	3.0	40	100	4
Y400.200.5	20	20	5.0	40	100	4

→ Help 175



Fresa a divisione irregolare in metallo duro integrale

Solid carbide unequal division end mill

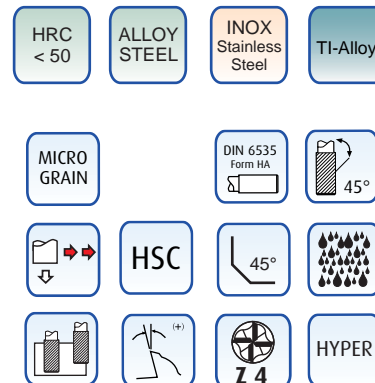
VHM-Ungleiche Drallwinkel Fräser - Fraise carbure avec division irregular

Фреза концевая твердосплавная с переменным углом наклона винтовой канавки
Sk fréza s nerovnoměrným úhlem šroubovice



CODE	d1h8 mm	d2h6 mm	CH mm	l1 mm	L mm	Z no.
400V.030	3	6	0.05	8	60	4
400V.040	4	6	0.05	11	60	4
400V.050	5	6	0.05	13	60	4
400V.060	6	6	0.05	13	60	4
400V.080	8	8	0.10	19	75	4
400V.100	10	10	0.10	22	80	4
400V.120	12	12	0.10	25	100	4
400V.160	16	16	0.10	30	100	4
400V.200	20	20	0.10	40	100	4

→ Help 175



Fresa testa torica a divisione irregolare in metallo duro integrale

Solid carbide corner radius end mill unequal division

VHM-Ungleiche Drallwinkel Fräser - Fraise carbure rayon d'angle avec division irregular

Фреза концевая твердосплавная с переменным углом наклона винтовой канавки
Sk fréza s rohovým rádiusem a nerovnoměrným úhlem šroubovice



CODE	d1h8 mm	d2h6 mm	rp mm	l1 mm	L mm	Z no.
Y400V.030.02	3	6	0.2	8	60	4
Y400V.030.05	3	6	0.5	8	60	4
Y400V.040.02	4	6	0.2	11	60	4
Y400V.040.05	4	6	0.5	11	60	4
Y400V.040.1	4	6	1.0	11	60	4
Y400V.050.02	5	6	0.2	13	60	4
Y400V.050.05	5	6	0.5	13	60	4
Y400V.050.1	5	6	1.0	13	60	4
Y400V.060.03	6	6	0.3	13	60	4
Y400V.060.05	6	6	0.5	13	60	4
Y400V.060.1	6	6	1.0	13	60	4
Y400V.060.15	6	6	1.5	13	60	4
Y400V.080.03	8	8	0.3	19	75	4
Y400V.080.05	8	8	0.5	19	75	4
Y400V.080.1	8	8	1.0	19	75	4
Y400V.080.15	8	8	1.5	19	75	4
Y400V.080.2	8	8	2.0	19	75	4
Y400V.100.03	10	10	0.3	22	80	4
Y400V.100.05	10	10	0.5	22	80	4
Y400V.100.1	10	10	1.0	22	80	4
Y400V.100.15	10	10	1.5	22	80	4
Y400V.100.2	10	10	2.0	22	80	4
Y400V.100.3	10	10	3.0	22	80	4
Y400V.120.05	12	12	0.5	25	100	4
Y400V.120.1	12	12	1.0	25	100	4
Y400V.120.15	12	12	1.5	25	100	4
Y400V.120.2	12	12	2.0	25	100	4
Y400V.120.3	12	12	3.0	25	100	4
Y400V.160.05	16	16	0.5	30	100	4
Y400V.160.1	16	16	1.0	30	100	4
Y400V.160.15	16	16	1.5	30	100	4
Y400V.160.2	16	16	2.0	30	100	4
Y400V.160.3	16	16	3.0	30	100	4
Y400V.160.5	16	16	5.0	30	100	4
Y400V.200.1	20	20	1.0	40	100	4
Y400V.200.15	20	20	1.5	40	100	4
Y400V.200.2	20	20	2.0	40	100	4
Y400V.200.3	20	20	3.0	40	100	4
Y400V.200.5	20	20	5.0	40	100	4

→ Help 175



Fresa testa torica a Divisione Irregolare-Elica Variabile in metallo duro integrale

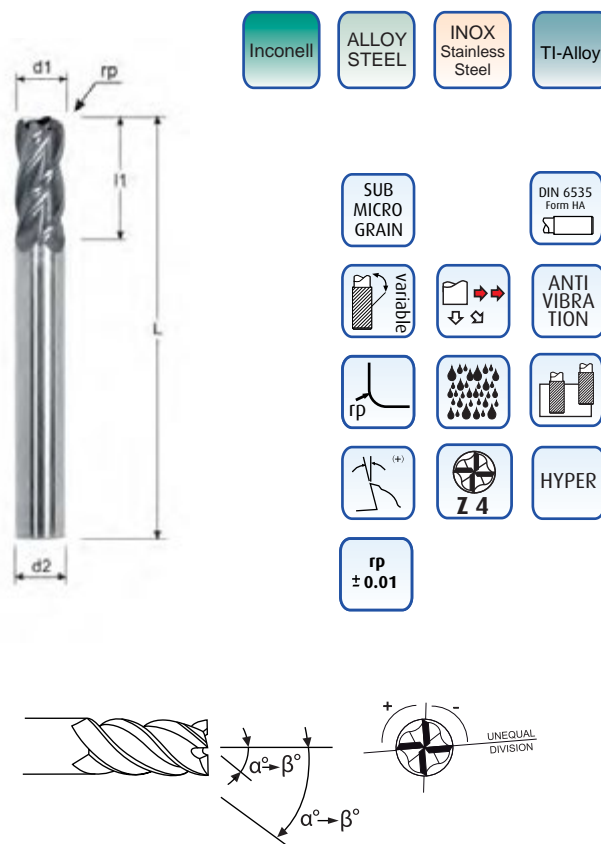
Solid carbide corner radius end mill, unequal division - Variable Helix

VHM-Torusfräser Ungleiche Drallwinkel-Ungleiche Teilung - Fraise end carbur avec rayon d'angle, Irrégulière Division-Hélice Variable
 Фреза концевая твердосплавная с угловым радиусом с переменным углом наклона винтовой канавки
 Sk fréza s rohovým rádiusem a nerovnoměrným úhlem šroubovice - Variabilní helix



CODE	d1h8 mm	d2h6 mm	rp mm	l1 mm	L mm	Z no.
500RV03.50R03	3	6	0.3	10	50	4
500RV03.50R05	3	6	0.5	10	50	4
500RV04.50R05	4	6	0.5	12	50	4
500RV05.50R05	5	6	0.5	14	50	4
500RV06.50R05	6	6	0.5	20	50	4
500RV06.100R05	6	6	0.5	40	100	4
500RV06.75R1	6	6	1	20	75	4
500RV06.75R15	6	6	1.5	20	75	4
500RV08.60R05	8	8	0.5	22	60	4
500RV08.100R05	8	8	0.5	40	100	4
500RV08.100R1	8	8	1	22	100	4
500RV08.100R15	8	8	1.5	22	100	4
500RV08.100R2	8	8	2	22	100	4
500RV08.100R25	8	8	2.5	22	100	4
500RV10.070R05	10	10	0.5	25	70	4
500RV10.100R05	10	10	0.5	45	100	4
500RV10.100R1	10	10	1	25	100	4
500RV10.100R15	10	10	1.5	25	100	4
500RV10.100R2	10	10	2	25	100	4
500RV10.100R25	10	10	2.5	25	100	4
500RV10.100R3	10	10	3	25	100	4
500RV12.075R05	12	12	0.5	27	75	4
500RV12.100R05	12	12	0.5	45	100	4
500RV12.100R1	12	12	1	27	100	4
500RV12.100R15	12	12	1.5	27	100	4
500RV12.100R2	12	12	2	27	100	4
500RV12.100R25	12	12	2.5	27	100	4
500RV12.100R3	12	12	3	27	100	4
500RV16.085R05	16	16	0.5	30	85	4
500RV16.100R05	16	16	0.5	45	100	4
500RV16.150R05	16	16	0.5	65	150	4
500RV16.100R1	16	16	1	30	100	4
500RV16.100R15	16	16	1.5	30	100	4
500RV16.100R2	16	16	2	30	100	4
500RV16.100R3	16	16	3	30	100	4
500RV16.100R5	16	16	5	30	100	4
500RV20.100R05	20	20	0.5	40	100	4
500RV20.150R05	20	20	0.5	65	150	4
500RV20.100R1	20	20	1	40	100	4
500RV20.100R15	20	20	1.5	40	100	4
500RV20.100R2	20	20	2	40	100	4
500RV20.100R3	20	20	3	40	100	4
500RV20.100R5	20	20	5	40	100	4

→ Help 176-177



I multi fori laterali realizzati all'interno dell'eliche facilitano l'evacuazione del truciolo, migliorano la finitura del pezzo lavorato ed eliminano il grave problema dell'incollaggio del truciolo al tagliente. Il foro frontale è ceco per aumentare la pressione del refrigerante all'interno del dente.

The multi lateral holes inside of the flutes facilitate the chip evacuation, improve finish and avoid the chip sticking to the tooth. The front hole is blinded to increase the pressure of the coolant inside the tooth.

Die Multi seitlichen Bohrungen im Inneren der Rillen erleichtern die Spanabfuhr verbessern beenden und vermeiden Sie den Chip kleben auf den Zahn. Die vordere Öffnung ist verblendet, um den Druck des Kühlmittels im Inneren des Zahnes zu erhöhen.

Les multi trous latéraux dans les hélices facilitent l'évacuation des copeaux, améliorer la finition de la pièce et enlever le collage de copeaux à la dent. Le trou avant est tchèque pour l'augmentation de la pression refrigerante dans la dent.

Боковые отверстия внутри винтовой канавки для упрощения отхода стружки, улучшения финишной обработки и устранения налипания стружки. Глухие лицевые отверстия для увеличения давления хладагента внутри зуба.

Mnohostranné otvory uvnitř drážek usnadní odvod třísek, zlepši tím dokončení a vyhne se přilepení třísek na zub. Přední otvor je zaslepena pro zvýšení tlaku chladicí kapaliny uvnitř zubu.

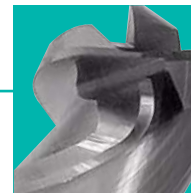
Fresa testa torica a divisione irregolare, elica differenziata in metallo duro integrale

Solid carbide corner radius end mill, unequal division - Differentiated Helix

VHM - Torusfräser ungleiche Drallwinkel - Ungleiche Teilung - Fraise carbure avec rayon d'angle à Haut Performance

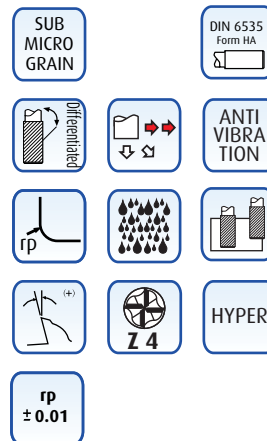
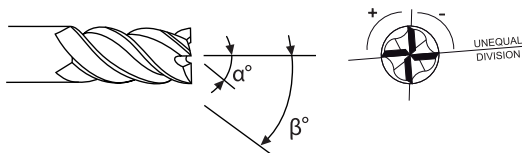
Фреза концевая твердосплавная с угловым радиусом высокопроизводительная

Sk vysoce výkonná fréza s rohovým rádiusem



CODE	d1h8 mm	d2h6 mm	rp mm	l1 mm	L mm	Z no.
400RV.030	3	6	0.5	10	50	4
400RV.040	4	6	0.5	12	50	4
400RV.060	6	6	0.5	20	50	4
400RV06100	6	6	0.5	40	100	4
400RV.080	8	8	0.5	22	60	4
400RV08100	8	8	0.5	40	100	4
400RV.100	10	10	0.5	25	70	4
400RV10100	10	10	0.5	45	100	4
400RV.120	12	12	0.5	27	75	4
400RV12100	12	12	0.5	45	100	4
400RV.140	14	14	0.5	30	85	4
400RV14100	14	14	0.5	45	100	4
400RV.160	16	16	0.5	30	85	4
400RV16100	16	16	0.5	45	100	4
400RV16150	16	16	0.5	65	150	4
400RV.200	20	20	0.5	40	100	4
400RV20150	20	20	0.5	65	150	4

→ Help 176-177



Fresa testa torica in metallo duro integrale

Solid carbide corner radius end mill

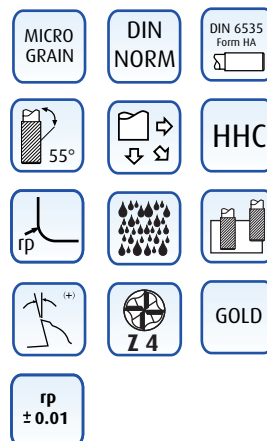
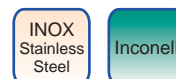
VHM - Stirn Radiusfräser - Fraise carbure avec rayon d'angle

Фреза концевая твердосплавная с угловым радиусом - Sk fréza s rohovým rádiusem



CODE	d1h8 mm	d2h6 mm	rp mm	l1 mm	L mm	Z no.
Y401.060.05	6	6	0.5	13	57	4
Y401.060.1	6	6	1	13	57	4
Y401.060.15	6	6	1.5	13	57	4
Y401.080.05	8	8	0.5	19	63	4
Y401.080.1	8	8	1	19	63	4
Y401.080.15	8	8	1.5	19	63	4
Y401.100.05	10	10	0.5	22	72	4
Y401.100.1	10	10	1	22	72	4
Y401.100.15	10	10	1.5	22	72	4
Y401.120.05	12	12	0.5	26	83	4
Y401.120.1	12	12	1	26	83	4
Y401.120.15	12	12	1.5	26	83	4
Y401.160.05	16	16	0.5	32	92	4
Y401.160.1	16	16	1	32	92	4
Y401.160.15	16	16	1.5	32	92	4
Y401.200.05	20	20	0.5	40	100	4
Y401.200.1	20	20	1	40	100	4
Y401.200.15	20	20	1.5	40	100	4

→ Help 166-167



Fresa testa torica per lavorazione pale in metallo duro integrale

Solid carbide corner radius end mill for turbine blades

VHM - Fräser mit eckenradius für Turbinenschaufeln - Fraise carbure avec rayon d'angle pour aubes de turbine
Sk vysoco výkonná fréza s rohovým rádiusem



CODE	d1h8 mm	d2h6 mm	rp mm	l1 mm	l2 mm	L mm	d3 mm	Z no.
Y507.030.03	3	6	0.3	8	12	75	2.9	4
Y507.030.05	3	6	0.5	8	12	75	2.9	4
Y507.040.03	4	6	0.3	10	15	75	3.9	4
Y507.040.05	4	6	0.5	10	15	75	3.9	4
Y507.050.03	5	6	0.3	12	18	75	4.9	4
Y507.050.05	5	6	0.5	12	18	75	4.9	4
Y507.060.05	6	6	0.5	13	21	75	5.9	6
Y507.060.1	6	6	1.0	13	21	75	5.9	6
Y507.060.1.5	6	6	1.5	13	21	75	5.9	6
Y507.080.05	8	8	0.5	20	28	100	7.8	6
Y507.080.1	8	8	1.0	20	28	100	7.8	6
Y507.080.15	8	8	1.5	20	28	100	7.8	6
Y507.080.2	8	8	2.0	20	28	100	7.8	6
Y507.080.25	8	8	2.5	20	28	100	7.8	6
Y507.100.05	10	10	0.5	22	35	100	9.8	8
Y507.100.1	10	10	1.0	22	35	100	9.8	8
Y507.100.15	10	10	1.5	22	35	100	9.8	8
Y507.100.2	10	10	2.0	22	35	100	9.8	8
Y507.120.05	12	12	0.5	25	40	100	11.7	8
Y507.120.1	12	12	1.0	25	40	100	11.7	8
Y507.120.15	12	12	1.5	25	40	100	11.7	8
Y507.120.2	12	12	2.0	25	40	100	11.7	8
Y507.120.3	12	12	3.0	25	40	100	11.7	8
Y507.160.05	16	16	0.5	30	40	100	15.7	10
Y507.160.1	16	16	1.0	30	45	100	15.7	10
Y507.160.15	16	16	1.5	30	45	100	15.7	10
Y507.160.2	16	16	2.0	30	45	100	15.7	10
Y507.160.3	16	16	3.0	30	45	100	15.7	10
Y507.160.5	16	16	5.0	30	45	100	15.7	10
Y507.200.05	20	20	0.5	40	50	100	19.7	10
Y507.200.1	20	20	1.0	40	50	100	19.7	10
Y507.200.15	20	20	1.5	40	50	100	19.7	10
Y507.200.2	20	20	2.0	40	50	100	19.7	10
Y507.200.3	20	20	3.0	40	50	100	19.7	10
Y507.200.5	20	20	5.0	40	50	100	19.7	10
Y507.250.1	25	25	1	40	50	100	24.8	10
Y507.250.15	25	25	1.5	40	50	100	24.8	10
Y507.250.2	25	25	2	40	50	100	24.8	10
Y507.250.3	25	25	3	40	50	100	24.8	10
Y507.250.5	25	25	5	40	50	100	24.8	10



Inconell

INOX
Stainless
Steel

HRC
< 52

SUB
MICRO
GRAIN

DIN 6535
Form HA

45°

HSC
HHC

rp

GOLD

Z 4

Z 6

Z 8

Z 10

06 - 08

010-012

016-025

rp
± 0.01

→ Help 167-179



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

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

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

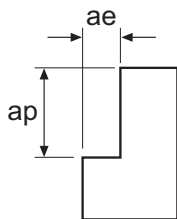
$$Vf = Z \times N \times fz \text{ mm/min.}$$

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

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

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost



$$ae = 0,5 \times d$$

$$ap = 1 \times d$$

CODE: T2000 - T2200 - T2203 - T3000 - T4000 - 451 - 452 - 454 - 455

MATERIAL	HARDNESS	Ø									
		Ø 3.0		Ø 4.0		Ø 5.0		Ø 6.0		Ø 8.0	
		Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
Non Alloy Steel	< 500 N/mm	80-140	0.023	80-140	0.023	80-140	0.033	80-140	0.033	80-140	0.045
	< 700 N/mm	70-120	0.023	120	0.023	120	0.033	120	0.033	120	0.045
	< 800 N/mm	70-120	0.023	70-120	0.023	70-120	0.033	70-120	0.033	70-120	0.045
Alloy Steel	< 1000 N/mm	50-85	0.014	50-85	0.014	80-85	0.022	50-85	0.022	50-85	0.280
	< 1200 N/mm	40-70	0.013	40-70	0.013	40-70	0.020	40-70	0.020	40-70	0.025
High Alloy Steel	< 1000 N/mm	50-85	0.014	50-85	0.014	80-85	0.022	50-85	0.022	50-85	0.280
	< 1200 N/mm	40-70	0.013	40-70	0.013	40-70	0.020	40-70	0.020	40-70	0.025
Steel	< 50 HRC	35-45	0.013	35-45	0.013	35-45	0.015	35-45	0.015	35-45	0.015
	< 65 HRC	30-40	0.010	30-40	0.010	30-40	0.012	30-40	0.012	30-40	0.012
Stainless Steel	< 700 HRC	55-90	0.015	55-90	0.015	55-90	0.025	55-90	0.025	55-90	0.030
	< 850 HRC	45-85	0.012	45-85	0.012	45-85	0.017	45-85	0.017	45-85	0.025
Cast Iron	< 180 HB	70-130	0.010	70-130	0.020	70-130	0.030	70-130	0.030	70-130	0.040
	< 180 HB	60-100	0.010	60-100	0.020	60-100	0.030	60-100	0.030	60-100	0.040
Titanium		55-75	0.008	55-75	0.016	55-75	0.024	55-75	0.024	55-75	0.032
Inconel		50-70	0.090	50-70	0.090	50-70	0.015	50-70	0.015	50-70	0.015
Graphyte		100-200	0.014	100-200	0.014	100-200	0.014	100-200	0.028	100-200	0.056

CODE: T2000 - T2200 - T2203 - T3000 - T4000 - 451 - 452 - 454 - 455

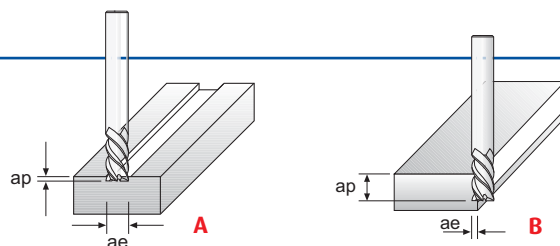
MATERIAL	HARDNESS	Ø							
		Ø 10.0		Ø 12.0		Ø 14 - 16		Ø 18 - 20	
		Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
Non Alloy Steel	< 500 N/mm	80-140	0.060	80-140	0.080	80-140	0.100	80-140	0.120
	< 700 N/mm	120	0.060	120	0.080	120	0.100	120	0.120
	< 850 N/mm	70-120	0.060	70-120	0.080	70-120	0.100	70-120	0.120
Alloy Steel	< 1000 N/mm	50-85	0.035	50-85	0.045	50-85	0.060	50-85	0.080
	< 1200 N/mm	40-70	0.030	40-70	0.040	40-70	0.055	40-70	0.065
High Alloy Steel	< 1000 N/mm	50-85	0.035	50-85	0.045	50-85	0.060	50-85	0.080
	< 1200 N/mm	40-70	0.030	40-70	0.040	40-70	0.055	40-70	0.065
Steel	< 50 HRC	35-45	0.030	35-45	0.030	35-45	0.040	35-45	0.065
	< 65 HRC	30-40	0.020	30-40	0.020	30-40	0.030	30-40	0.050
Stainless Steel	< 700 HRC	55-90	0.040	55-90	0.050	55-90	0.055	55-90	0.090
	< 850 HRC	45-85	0.032	45-85	0.045	45-85	0.060	45-85	0.075
Cast Iron	< 180 HB	70-130	0.050	70-130	0.060	70-130	0.080	70-130	0.100
	< 180 HB	60-100	0.050	60-100	0.060	60-100	0.080	60-100	0.100
Titanium		55-75	0.040	55-75	0.050	55-75	0.060	55-75	0.070
Inconel		50-70	0.030	50-70	0.030	50-70	0.050	50-70	0.060
Graphyte		100-200	0.056	100-200	0.084	100-200	0.084	100-200	0.140

Rezné parametre

Cutting speed

Richtwerte - Paramètres

Режимы обработки - Режимы обработки - Rezná rychlost



CODE: 5040 - Y5040 - 5040R (A)

MATERIAL	ROUGHING																						
	Fine Grain Graphite					Mean Grain Graphite					Coarse Grain Graphite					Carbon Fibre							
	Hardned	Vc	n	Vf	ae	ap	Vc	n	Vf	ae	ap	Vc	n	Vf	ae	ap	Vc	Fz	n	Vf	ae	ap	
Ø	m/min	min/°	mm/min	mm	mm	m/min	min/°	mm/min	mm	mm	m/min	min/°	mm/min	mm	mm	m/min	mm	min/°	mm/min	mm	mm	mm	
3	520	55202	3900-6500	3	10	780	24841	3900-6500	3	10	1040	33121	3900-6500	3	10	150	0.010	15924	955	3	1.5		
4	520	41401	4550-7150	4	10	780	24841	4550-7150	4	10	1040	33121	4550-7150	4	10	150	0.015	11943	1075	4	2.5		
5	520	33121	4875-8125	5	10	780	24841	4875-8125	5	10	1040	33121	4875-8125	5	10	150	0.020	9554	1146	5	3.1		
6	520	27601	5200-9100	6	20	780	12420	5200-9100	6	20	1040	16561	5200-9100	6	20	150	0.020	7962	955	6	3.7		
8	520	20701	5850-10400	8	20	780	12420	5850-10400	8	20	1040	16561	5850-10400	8	20	150	0.025	5971	1200	8	5		
10	520	16561	6500-11050	10	25	780	9936	6500-11050	10	25	1040	13248	6500-11050	10	25	150	0.040	4777	1529	10	6.2		
12	520	13800	7800-11700	12	30	780	8280	7800-11700	12	30	1040	11040	7800-11700	12	30	150	0.050	3981	1990	12	7.5		

CODE: 6010D - 6010RD (A)

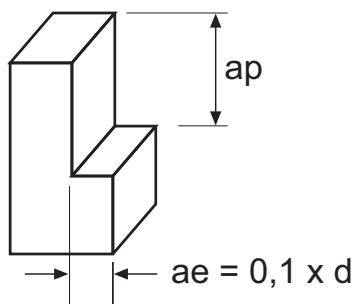
MATERIAL	ROUGHING																						
	Fine Grain Graphite					Mean Grain Graphite					Coarse Grain Graphite												
	Hardned	Vc	n	Vf	ae	ap	Vc	n	Vf	ae	ap	Vc	n	Vf	ae	ap							
Ø	m/min	min/°	mm/min	mm	mm	m/min	min/°	mm/min	mm	mm	m/min	min/°	mm/min	mm	mm	mm							
3	400	42463	3000-5000	3	10	600	19108	3000-5000	3	10	800	25478	3000-5000	3	10								
4	400	31847	3500-5500	4	10	600	19108	3500-5500	4	10	800	25478	3500-5500	4	10								
5	400	25478	3750-6250	5	10	600	19108	3750-6250	5	10	800	25478	3750-6250	5	10								
6	400	21231	4000-7000	6	20	600	9554	4000-7000	6	20	800	12739	4000-7000	6	20								
8	400	15924	4500-8000	8	20	600	9554	4500-8000	8	20	800	12739	4500-8000	8	20								
10	400	12739	5000-8500	10	25	600	7643	5000-8500	10	25	800	10191	5000-8500	10	25								
12	400	10616	6000-9000	12	30	600	6369	6000-9000	12	30	800	8493	6000-9000	12	30								

CODE: Y507 (B)

MATERIAL	SIDE MILLING																							
	Stainless Steel Cr-Ni НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel Cr-Ni-Mo НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Hardned	Vc	Fz	n	Vf	ae	ap	Vc	Fz	n	Vf	ae	ap	Vc	Fz	n	Vf	ae	ap	Vc	Fz	n	Vf	ae
Ø	m/min	mm	min/°	mm/min	mm	mm	m/min	mm	min/°	mm/min	mm	mm	m/min	mm	min/°	mm/min	mm	mm	m/min	mm	min/°	mm/min	mm	mm
3	80	0.010	8493	340	1.2	3	40	0.010	4246	170	2.40	3	25	0.010	2654	106	2.4	9	15	0.010	1592	64	2.4	3
4	80	0.015	6369	382	1.6	4	40	0.015	3185	191	2.40	4	25	0.015	1990	119	3.2	12	15	0.015	1194	72	2.4	4
6	80	0.020	4246	510	2.4	6	40	0.020	2123	255	2.40	6	25	0.020	1327	159	2.4	12	15	0.020	796	96	2.4	6
8	80	0.030	3185	573	3.2	8	40	0.030	1592	287	3.20	8	25	0.030	995	179	3.2	12	15	0.030	597	107	3.2	8
10	80	0.035	2548	713	4.0	10	40	0.035	1274	357	4.00	10	25	0.035	796	223	4.0	15	15	0.035	478	134	4.0	10
12	80	0.040	2123	679	4.8	12	40	0.040	1062	340	4.80	12	25	0.040	663	212	4.8	18	15	0.040	398	127	4.8	12
16	80	0.065	1592	828	3.2	16	40	0.065	796	518	6.40	16	25	0.065	498	323	6.4	24	15	0.065	299	194	6.4	16
20	80	0.070	1274	713	3.2	20	40	0.070	637	446	6.40	20	25	0.070	398	279	6.4	24	15	0.070	239	167	6.4	20
25	80	0.080	1019	652	3.2	25	40	0.080	510	408	6.40	25	25	0.080	318	255	6.4	24	15	0.080	191	153	6.4	25

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

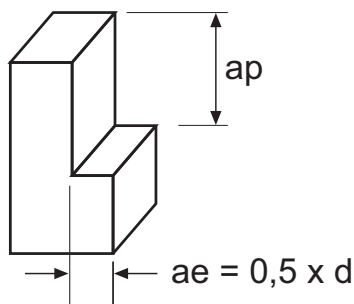


CODE: 400RV - 500RV FINISHING

MATERIAL	APPLICATION	VC m/min	FINISHING								
			FZ mm/tooth								
			Ø 3	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20
Construction steel 500 N/mm ²	ap=1xd	210-250	0.01	0.015	0.025	0.032	0.039	0.048	0.053	0.058	0.073
	ap=2xd	140-170	0.01	0.015	0.025	0.032	0.039	0.048	0.053	0.058	0.073
Construction steel 510-800 N/mm ²	ap=1xd	190-230	0.013	0.039	0.033	0.047	0.059	0.072	0.08	0.088	0.1
	ap=2xd	125-155	0.01	0.015	0.024	0.032	0.038	0.046	0.05	0.054	0.066
Tooling steel 850-1000 N/mm ²	ap=1xd	160-200	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09
	ap=2xd	100-125	0.004	0.007	0.013	0.019	0.025	0.03	0.034	0.038	0.045
Stainless steel 850 N/mm ²	ap=1xd	70-90	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
Tempered steel <60 HRC	ap=1xd	60-75	0.007	0.016	0.017	0.024	0.03	0.036	0.041	0.045	0.057
Super Alloy 850-1000 N/mm ²	ap=1xd	180-230	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
	ap=2xd	120-140	0.007	0.016	0.017	0.024	0.03	0.036	0.041	0.045	0.057
Super Alloy 1000-1200 N/mm ²	ap=1xd	155-190	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09
	ap=2xd	100-125	0.004	0.007	0.013	0.019	0.025	0.03	0.034	0.038	0.045
Inconell	ap=1xd	70-90	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09
Cast iron 240 HB	ap=1xd	255-313	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.1
	ap=2xd	180-220	0.01	0.015	0.024	0.032	0.038	0.046	0.05	0.054	0.065
Cast iron <300 HB	ap=1xd	250-313	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
	ap=2xd	160-200	0.007	0.011	0.017	0.024	0.03	0.036	0.041	0.045	0.057
Titanium <850 N/mm ²	ap=1xd	120-145	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09
	ap=2xd	80-95	0.004	0.007	0.013	0.019	0.025	0.03	0.034	0.038	0.045
Titanium Alloy	ap=1xd	100-120	0.01	0.015	0.027	0.035	0.044	0.052	0.058	0.063	0.08
	ap=2xd	60-75	0.003	0.006	0.011	0.016	0.021	0.026	0.029	0.032	0.038
Aluminium	ap=2xd	600-740	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09
Copper	ap=2xd	180-220	0.01	0.015	0.027	0.035	0.044	0.052	0.058	0.063	0.08

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost



CODE: 400RV - 500RV - T2201 ROUGHING

MATERIAL	APPLICATION	VC m/min	ROUGHING								
			FZ mm/tooth								
			Ø 3	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20
Construction steel 500 N/mm ²	$a_p=1xd$	170-200	0.024	0.028	0.041	0.058	0.073	0.09	0.1	0.11	0.13
	$a_p=2xd$ ($a_e=0.25xd$)	110-130	0.016	0.021	0.027	0.035	0.044	0.052	0.058	0.063	0.08
Construction steel 510-800 N/mm ²	$a_p=1xd$	160-188	0.022	0.026	0.036	0.052	0.066	0.085	0.093	0.1	0.12
	$a_p=2xd$	100-125	0.015	0.02	0.031	0.042	0.05	0.058	0.065	0.071	0.09
Tooling steel 850-1000 N/mm ²	$a_p=1xd$	70-90	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
	$a_p=2xd$ ($a_e=0.25xd$)	80-100	0.01	0.015	0.025	0.032	0.039	0.048	0.053	0.058	0.073
Stainless steel 850 N/mm ²	$a_p=1xd$	95-115	0.019	0.024	0.039	0.053	0.065	0.079	0.087	0.095	0.11
Tooling steel <60 HRC	$a_p=1xd$	45-55	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09
Super Alloy 850-1000 N/mm ²	$a_p=1xd$	150-185	0.019	0.024	0.039	0.053	0.065	0.079	0.087	0.095	0.11
	$a_p=2xd$ ($a_e=0.25xd$)	95-120	0.01	0.015	0.027	0.035	0.044	0.052	0.058	0.063	0.08
Super Alloy 1000-1200 N/mm ²	$a_p=1xd$	125-150	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.1
	$a_p=2xd$ ($a_e=0.25xd$)	80-100	0.01	0.015	0.025	0.032	0.039	0.048	0.052	0.058	0.073
Inconell 1200 N/mm ²	$a_p=1xd$	56-70	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.1
Cast iron 240 HB	$a_p=1xd$	220-270	0.022	0.026	0.036	0.052	0.066	0.085	0.093	0.1	0.12
	$a_p=2xd$ ($a_e=0.25xd$)	140-170	0.015	0.02	0.031	0.042	0.05	0.058	0.065	0.071	0.09
Cast iron <300 HB	$a_p=1xd$	115-140	0.019	0.024	0.039	0.053	0.065	0.079	0.087	0.095	0.11
	$a_p=2xd$ ($a_e=0.25xd$)	130-160	0.01	0.016	0.027	0.064	0.044	0.052	0.058	0.063	0.08
Titanium <850 N/mm ²	$a_p=1xd$	90-110	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.01
	$a_p=2xd$ ($a_e=0.25xd$)	60-70	0.01	0.015	0.025	0.032	0.039	0.048	0.053	0.058	0.073
Titanium 850-1200 N/mm ²	$a_p=1xd$	75-90	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
	$a_p=2xd$ ($a_e=0.25xd$)	50-60	0.01	0.015	0.024	0.032	0.038	0.046	0.05	0.054	0.066
Aluminium	$a_p=1xd$ $a_p=2xd$ ($a_e=0.25xd$)	500-650	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
Copper	$a_p=1xd$	210-260	0.022	0.026	0.036	0.052	0.066	0.085	0.093	0.1	0.12
	$a_p=2xd$ ($a_e=0.25xd$)	140-171	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09

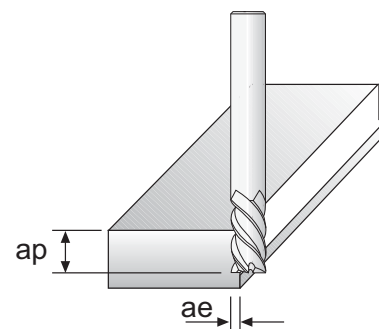
Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE: Y400-Y400V SIDE MILLING

MATERIAL	Carbon Steel - Cast Iron			Aloy Steel - Tool Steel - СУПЕР СПЛАВ			Steel - СТАЛЬ		
HARDNESS	750/mm2			<30HRC			<40HRC		
Ø	Vc	Fz	RPM	Vc	Fz	RPM	Vc	Fz	RPM
ae=0.2xd ap=1.5xd									
3	100	0.02	10600	78	0.02	8280	65	0.02	6900
4	100	0.03	7960	78	0.03	6210	65	0.03	5175
5	100	0.03	6370	78	0.03	4968	65	0.03	4140
6	100	0.06	5300	78	0.06	4140	65	0.06	3450
8	100	0.08	3980	78	0.08	3105	65	0.08	2587
10	100	0.09	3185	78	0.09	2480	65	0.09	2070
12	100	0.10	2650	78	0.10	2070	65	0.10	1720
16	100	0.12	1990	78	0.12	1550	65	0.12	1293
20	100	0.12	1592	78	0.12	1242	65	0.12	1035

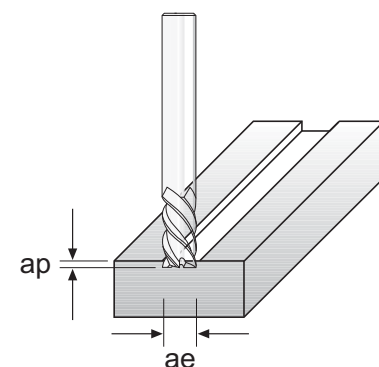
MATERIAL	Steel - СТАЛЬ					
HARDNESS	<45HRC			<50HRC		
Ø	Vc	Fz	RPM	Vc	Fz	RPM
ae=0.1xd ap=1.5xd						
3	62	0.02	6580	60	0.02	6370
4	62	0.03	4936	60	0.03	4780
5	62	0.04	3950	60	0.04	3820
6	62	0.04	3290	60	0.04	3184
8	62	0.06	2468	60	0.06	2388
10	62	0.07	1974	60	0.07	1910
12	62	0.08	1645	60	0.07	1592
16	62	0.09	1234	60	0.08	1194
20	62	0.10	990	60	0.08	955



CODE: Y400-Y400V SLOT MILLING

MATERIAL	Carbon Steel - Cast Iron			Aloy Steel - Tool Steel - СУПЕР СПЛАВ			Steel - СТАЛЬ		
HARDNESS	750/mm2			<30HRC			<40HRC		
Ø	Vc	Fz	RPM	Vc	Fz	RPM	Vc	Fz	RPM
ap=0.5xd									
3	100	0.02	8500	78	0.03	6350	65	0.02	5850
4	100	0.03	6350	78	0.03	4750	65	0.03	4400
5	100	0.03	5100	78	0.04	3800	65	0.03	3500
6	100	0.04	4250	78	0.04	3200	65	0.06	2900
8	100	0.05	3200	78	0.05	2400	65	0.08	2200
10	100	0.06	2550	78	0.07	1900	65	0.09	1750
12	100	0.07	2100	78	0.07	1600	65	0.10	1450
16	100	0.09	1600	78	0.09	1200	65	0.12	1100
20	100	0.10	1250	78	0.10	955	65	0.12	875

MATERIAL	Steel - СТАЛЬ					
HARDNESS	<45HRC			<50HRC		
Ø	Vc	Fz	RPM	Vc	Fz	RPM
ap=0.5xd						
3	62	0.02	5500	60	0.02	4450
4	62	0.03	4150	60	0.03	3350
5	62	0.03	3300	60	0.04	2650
6	62	0.04	2750	60	0.05	2250
8	62	0.06	2050	60	0.06	1650
10	62	0.07	1650	60	0.07	1350
12	62	0.08	1400	60	0.09	1100
16	62	0.09	1050	60	0.09	835
20	62	0.10	830	60	0.10	670



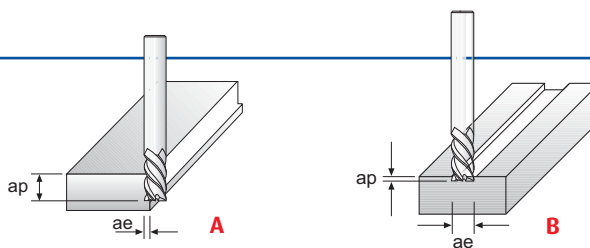
Y400V: +30%

Rezné parametre

Cutting speed

Richtwerte - Paramètres

Режимы обработки - Ре́зная гычлост



CODE: Y401 SIDE MILLING (A)

MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Cr-Ni						Cr-Ni-Mo																	
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm
6	80	0.025	4250	425	2.4	9	40	0.025	2120	210	2.40	9	25	0.020	1330	105	2.4	9	15	0.020	800	65	2.4	9
8	80	0.035	3200	445	3.2	12	40	0.035	1600	225	3.20	12	25	0.030	1000	120	3.2	12	15	0.030	600	70	3.2	12
10	80	0.045	2550	460	4.0	15	40	0.045	1300	230	4.00	15	25	0.035	800	110	4	15	15	0.035	480	65	4	15
12	80	0.050	2120	425	4.8	18	40	0.050	1060	210	4.80	18	25	0.040	670	105	4.8	18	15	0.040	400	65	4.8	18
16	80	0.075	1600	475	3.2	24	40	0.075	800	240	6.40	24	25	0.060	500	120	6.4	24	15	0.060	300	70	6.4	24

CODE: Y401 SLOT MILLING (B)

MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Cr-Ni						Cr-Ni-Mo																	
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm
6	60	0.030	3200	380	6	3	30	0.030	1600	190	6	3	20	0.025	1060	105	6	3	10	0.025	530	55	6	3
8	60	0.040	2390	380	8	4	30	0.040	1200	190	8	4	20	0.035	800	110	8	4	10	0.035	400	55	8	4
10	60	0.055	1910	420	10	5	30	0.055	960	210	10	5	20	0.045	640	115	10	5	10	0.045	320	60	10	5
12	60	0.055	1600	350	12	6	30	0.055	800	175	12	6	20	0.050	530	105	12	6	10	0.050	265	55	12	6
16	60	0.085	1200	405	16	8	30	0.085	600	200	16	8	20	0.075	400	120	16	8	10	0.075	200	60	16	8

CODE: 506 - Y507 SIDE MILLING (A)

MATERIAL	Steel - СТАЛЬ												Cast Iron - ЧУГУН											
	< 850						< HRC 52						< HRC56											
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm
1	170	0.010	19100	764	0.10	1	110	0.010	35000	1400	0.05	1.5	90	0.010	28660	1146	0.1	1.5	130	0.010	41400	1656	0.1	1
2	170	0.010	19100	764	0.15	2	110	0.010	35000	1400	0.05	3	90	0.010	14330	573	0.1	3	130	0.010	20700	828	0.1	2
3	170	0.010	18046	721	0.15	3	110	0.015	11670	700	0.05	4.5	90	0.010	9550	380	0.1	4.5	130	0.010	13795	550	0.2	3
4	170	0.010	13535	541	0.20	4	110	0.020	8755	700	0.1	6	90	0.015	7160	430	0.1	6	130	0.010	10345	415	0.2	4
5	170	0.015	10828	650	0.25	5	110	0.025	7000	875	0.1	7.5	90	0.020	5730	575	0.1	7.5	130	0.015	8275	495	0.3	5
6	170	0.015	9020	810	0.30	9	110	0.030	5835	1050	0.1	9	90	0.025	4775	715	0.1	9	130	0.015	6895	620	0.3	9
8	170	0.025	6765	1015	0.40	12	110	0.040	4375	1050	0.1	12	90	0.030	3580	645	0.1	12	130	0.025	5175	775	0.4	12
10	170	0.030	5410	975	0.50	15	110	0.050	3500	1050	0.1	15	90	0.040	2865	690	0.1	15	130	0.030	4140	745	0.5	15
12	170	0.035	4510	945	0.60	18	110	0.060	2920	1050	0.1	18	90	0.050	2385	715	0.1	18	130	0.035	3450	725	0.6	18
16	170	0.045	3380	912	0.80	24	110	0.080	2190	1050	0.1	24	90	0.065	1790	700	0.1	24	130	0.045	2585	930	0.8	24
20	170	0.055	2705	892	1.0	30	110	0.100	1750	1050	0.1	30	90	0.080	1430	687	0.1	30	130	0.055	2070	683	1.00	30
25	170	0.070	2165	1818	1.25	37	110	0.120	1410	2030	0.1	37	90	0.100	1146	1375	0.1	37	130	0.060	1656	1192	1.25	37

CODE: 506 - Y507 SIDE MILLING (A)

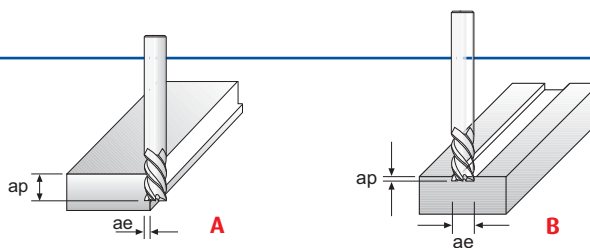
MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ					
HARDNESS												
Ø	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/'	Vf mm/min	ae mm	ap mm
1	90	0.010	28662	1720	0.50	1	130	0.010	41401	2484	0.05	1.5
2	90	0.010	14331	860	1.00	2	130	0.010	20701	1242	0.05	3
3	90	0.015	9554	860	1.50	3	130	0.020	13800	1656	0.05	4.5
4	90	0.020	7166	860	2.00	4	130	0.025	10350	1553	0.1	6
5	90	0.025	5732	860	2.50	5	130	0.030	8280	1490	0.1	7.5
6	90	0.030	4777	860	3.00	6	130	0.040	6900	1656	0.1	8
8	90	0.040	3583	860	4.00	8	130	0.055	5175	1708	0.1	12
10	90	0.055	2866	946	5.00	10	130	0.065	4140	1615	0.1	15
12	90	0.055	2389	788	6.00	12	130	0.070	3450	1449	0.12	18
16	90	0.085	1791	914	8.00	16	130	0.080	2588	1242	0.16	24
20	90	0.100	1433	860	10.0	20	130	0.100	2070	1242	0.20	30
25	90	0.120	1146	1651	12.00	25	130	0.120	1656	2384	0.25	37

Rezné parametre

Cutting speed

Richtwerte - Paramètres

Режимы обработки - Ре́зная гычлост



CODE: 302 - 404 SIDE MILLING (A)

MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Cr-Ni						Cr-Ni-Mo																	
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm
3	80	0.015	8490	380	1.2	3	40	0.015	4250	190	1.2	3	25	0.015	2650	120	1.2	3	15	0.015	1600	70	1.2	3
4	80	0.020	6365	380	1.6	4	40	0.020	3200	190	1.6	4	25	0.020	2000	120	1.6	4	15	0.020	1200	70	1.6	4
5	80	0.025	5095	380	2	5	40	0.025	2560	190	2	5	25	0.025	1600	120	2	5	15	0.025	960	70	2	5
6	80	0.030	4245	380	2.4	6	40	0.030	2120	190	2.4	6	25	0.030	1330	120	2.4	6	15	0.030	800	70	2.4	6
8	80	0.040	3185	380	3.2	8	40	0.040	1600	190	3.2	8	25	0.035	1000	105	3.2	8	15	0.035	600	60	3.2	8
10	80	0.055	2545	420	4	10	40	0.055	1280	210	4	10	25	0.045	800	105	4	10	15	0.045	480	65	4	10
12	80	0.065	2120	415	4.8	12	40	0.065	1050	205	4.8	12	25	0.050	670	100	4.8	12	15	0.050	410	60	4.8	12
16	80	0.085	1590	405	6.4	16	40	0.085	800	205	6.4	16	25	0.060	500	90	6.4	16	15	0.060	305	55	6.4	16

CODE: 302 - 404 SLOT MILLING (B)

MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Cr-Ni						Cr-Ni-Mo																	
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm
3	60	0.015	6370	285	3.00	1.5	30	0.015	3190	145	3	1.5	20	0.015	2120	95	3	1.5	10	0.015	1060	50	3	1.5
4	60	0.020	4780	285	4.00	2	30	0.020	2390	145	4	2	20	0.020	1600	95	4	2	10	0.020	800	50	4	2
5	60	0.025	3800	285	5.00	2.5	30	0.025	1900	145	5	2.5	20	0.025	1280	95	5	2.5	10	0.025	640	50	5	2.5
6	60	0.030	3200	285	6.00	3	30	0.030	1600	145	6	3	20	0.030	1080	95	6	3	10	0.030	530	50	6	3
8	60	0.040	3390	285	8.00	4	30	0.040	1200	145	8	4	20	0.035	800	95	8	4	10	0.035	401	40	8	4
10	60	0.055	1900	315	10.00	5	30	0.055	960	160	10	5	20	0.045	640	95	10	5	10	0.045	320	45	10	5
12	60	0.065	1600	310	12.00	6	30	0.065	800	155	12	6	20	0.050	540	95	12	6	10	0.050	270	40	12	6
16	60	0.085	1200	305	16.00	8	30	0.085	600	150	16	8	20	0.060	400	95	16	8	10	0.060	200	35	16	8

CODE: Y401 SIDE MILLING (A)

MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Cr-Ni						Cr-Ni-Mo																	
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm
3	80	0.015	8500	510	1.20	4.5	40	0.015	4250	260	1.20	4.5	25	0.010	2660	105	1.2	4.5	15	0.01	1600	65	1.2	4.5
4	80	0.020	6370	510	1.60	6	40	0.020	3190	260	1.60	6	25	0.015	2000	120	1.6	6	15	0.015	1200	70	1.6	6
5	80	0.025	5100	510	2.00	7.5	40	0.025	2550	260	2.00	7.5	25	0.020	1600	125	2	7.5	15	0.02	1000	75	2	7.5
6	80	0.025	4250	425	2.40	9	40	0.025	2120	210	2.40	9	25	0.020	1325	105	2.4	9	15	0.02	800	65	2.4	9
8	80	0.035	3190	445	3.20	12	40	0.035	1600	230	3.20	12	25	0.030	1000	120	3.2	12	15	0.03	600	70	3.2	12
10	80	0.045	2550	460	4.00	15	40	0.045	1280	230	4.00	15	25	0.035	800	110	4	15	15	0.035	480	65	4	15
12	80	0.050	2120	425	4.80	18	40	0.050	1060	210	4.80	18	25	0.040	665	105	4.8	18	15	0.04	400	65	4.8	18
16	80	0.075	1600	475	6.4	24	40	0.075	800	240	6.4	24	25	0.060	500	120	6.4	24	15	0.06	300	70	6.4	24

CODE: Y401 SLOT MILLING (B)

MATERIAL	Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Stainless Steel НЕРЖАВЕЮЩАЯ СТАЛЬ						Super Alloy СУПЕР СПЛАВ						Inconel 718 ИНКОНЕЛЬ					
	Cr-Ni						Cr-Ni-Mo																	
HARDNESS																								
Ø	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm	Vc m/min	Fz mm	n min/°	Vf mm/min	ae mm	ap mm
3	60	0.015	6400	380	3	1.5	30	0.015	3185	190	3	1.5	20	0.015	2120	125	3	1.5	10	0.015	1060	65	3	1.5
4	60	0.020	4780	380	4	2	30	0.020	2385	190	4	2	20	0.020	1600	125	4	2	10	0.020	800	65	4	2
5	60	0.025	3820	380	5	2.5	30	0.025	1910	190	5	2.5	20	0.025	1280	130	5	2.5	10	0.025	640	65	5	2.5
6	60	0.030	3200	380	6	3	30	0.030	1590	190	6	3	20	0.025	1060	105	6	3	10	0.025	530	65	6	3
8	60	0.040	2390	380	8	4	30	0.040	1200	190	8	4	20	0.035	800	110	8	4	10	0.035	400	65	8	4
10	60	0.055	1910	420	10	5	30	0.055	960	190	10	5	20	0.045	640	115	10	5	10	0.045	320	65	10	5
12	60	0.055	1600	350	12	6	30	0.055	800	190	12	6	20	0.050	530	115	12	6	10	0.050	265	65	12	6
16	60	0.085	1200	410	16	8	30	0.085	600	190	16	8	20	0.075	400	120	16	8	10	0.075	200	65	16	8

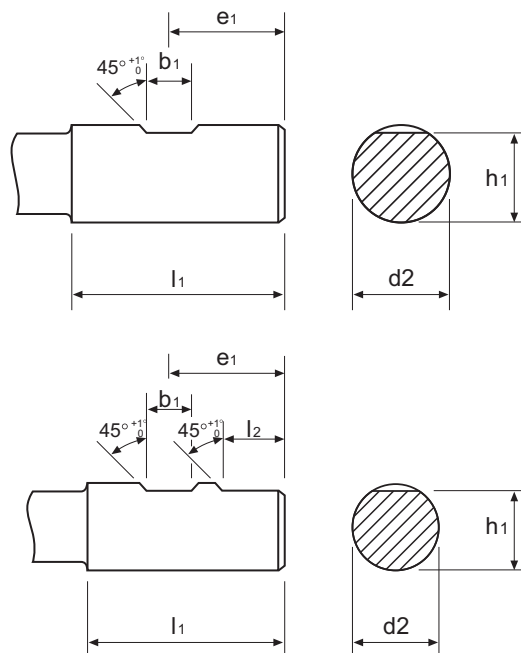
Dimensioni gambi weldon DIN 6535 HB a richiesta

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

