

Nuova C.U.M.E.T.



SilverPro



Precision in *movement!*

Certificato

Reg. № IT-TO-012-164-Q/24.10.2018



Il sistema di gestione di

Nuova C.U.M.E.T. Srl

Via Torino, 502 – 10032 Brandizzo (TO)

è valutato ed approvato nel
rispetto dei requisiti di

ISO 9001:2015

Scopo di certificazione:

Progettazione e produzione di utensili standard e speciali in metallo
duro integrale per la meccanica in generale

Sito lavorativo:

Via Torino, 502 – 10032 Brandizzo (TO)

Codici EA: 17

BORIS STOYANOV,
Direttore

Senza l'effettuazione degli audit di sorveglianza, questo certificato è valido fino al 23.10.2019

Dopo l'esito positivo dell'audit di prima sorveglianza, AQ Cert emette l'Allegato 1 per espandere la validità fino al 23.10.2020

Dopo l'esito positivo dell'audit di seconda sorveglianza, AQ Cert emette l'Allegato 2 per espandere la validità fino al 23.10.2021

La validità del certificato può essere verificata su italia.aqcert.org/check

AQ Cert - Organismo di certificazione per i sistemi di gestione, accreditato da
EA "Bulgarian Accreditation Service", certificato № 9 OCC/23.10.2018
19 Banat Str., Sofia, Bulgaria +359 2 8628357 office@aqcert.org
Per informazioni in Italiano, contatto autorizzato per l'Italia +39 347 87 97 694



Fresa a Divisione Irregolare-Elica Variabile in metallo duro integrale

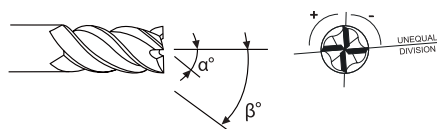
Solid carbide end mill, unequal division - Variable Helix

VHM-Torusfräser Ungleiche Drallwinkel-Ungleike 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

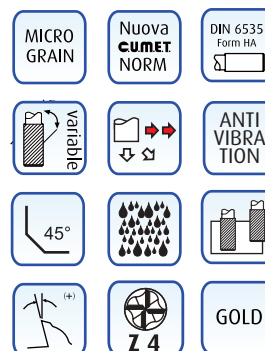


CODE	*d1 mm	d2 mm	CH mm	l1 mm	l2 mm	L mm	d3 mm	Z no.	Euro
400SVS.030	3	6	0.1x45°	9	12	57	2.8	4	17.00
400SVS.040	4	6	0.1x45°	11	16	57	3.8	4	17.00
400SVS.050	5	6	0.1x45°	13	20	57	4.8	4	17.00
400SVS.060	6	6	0.3x45°	13	23	57	5.8	4	15.00
400SVS.080	8	8	0.3x45°	22	29	63	7.8	4	21.00
400SVS.100	10	10	0.3x45°	25	34	72	9.8	4	32.00
400SVS.120	12	12	0.3x45°	27	42	83	11.8	4	39.00
400SVS.140	14	14	0.3x45°	30	45	83	13.8	4	54.23
400SVS.160	16	16	0.3x45°	34	49	92	15.8	4	68.00
400SVS.200	20	20	0.3x45°	40	55	104	19.8	4	108.00

*d1 ≤ ø 6 h9
 d1 ≤ ø20 f7



→ Help 12-13



Fresa Torica a Divisione Irregolare-Elica Variabile in metallo duro integrale

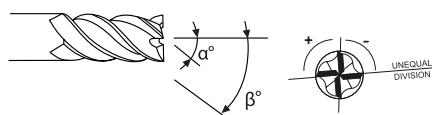
Solid carbide end mill, unequal division - Variable Helix

VHM-Torusfräser Ungleiche Drallwinkel-Ungleike 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

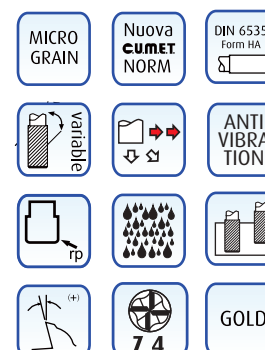


CODE	*d1 mm	d2 mm	Rp mm	l1 mm	l2 mm	L mm	d3 mm	Z no.	Euro
500RVS.060R05	6	6	0.5	13	21	57	5.8	4	19.00
500RVS.060R1	6	6	1.0	13	21	57	5.8	4	19.00
500RVS.080R05	8	8	0.5	19	27	63	7.6	4	24.00
500RVS.080R1	8	8	1.0	19	27	63	7.6	4	24.00
500RVS.100R05	10	10	0.5	22	32	72	9.5	4	36.00
500RVS.100R1	10	10	1.0	22	32	72	9.5	4	36.00
500RVS.120R05	12	12	0.5	26	38	83	11.5	4	46.00
500RVS.120R1	12	12	1.0	26	38	83	11.5	4	46.00
500RVS.160R1	16	16	1.0	32	44	92	15.5	4	73.00
500RVS.160R2	16	16	2.0	32	44	92	15.5	4	73.00
500RVS.160R3	16	16	3.0	32	44	92	15.5	4	73.00
500RVS.160R4	16	16	4.0	32	44	92	15.5	4	73.00
500RVS.200R1	20	20	1.0	38	54	104	19.5	4	113.00
500RVS.200R2	20	20	2.0	38	54	104	19.5	4	113.00
500RVS.200R3	20	20	3.0	38	54	104	19.5	4	113.00
500RVS.200R4	20	20	4.0	38	54	104	19.5	4	113.00

*d1 ≤ ø 6 h9
 d1 ≤ ø20 f7



→ Help 12-13



Fresa rompitruciolo antivibrante in metallo duro integrale

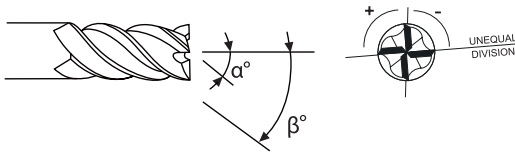
Solid carbide anti-vibration roughing end mill

VHM - Schruppfräser Schwingungsdämpfer - Fraise carbure à dégrossir à Haute Performance
Фреза концевая твердосплавная для черновой обработки высокопроизводительная
Sk hrubovací vysoce výkonná fréza



CODE	d1h11 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
T2201S03050	3	6	8	50	3	18.00
T2201S04050	4	6	12	50	3	18.00
T2201S05050	5	6	15	50	3	18.00
T2201S06050	6	6	16	50	4	18.00
T2201S08060	8	8	22	60	4	24.00
T2201S10070	10	10	25	72	4	36.00
T2201S12075	12	12	27	75	4	46.00
T2201S16092	16	16	30	92	4	76.30
T2201S20100	20	20	40	104	4	115.00

→ Help 12



HRC
< 50

CAST
IRON

INOX
Stainless
Steel

Ti-Alloy

Ni-Alloy

MICRO
GRAIN

Nuova
CUMET
NORM

DIN 6535
Form HA

Variable

ANTI
VIBRA
TION

45°

Z 3

Z 4

03 - 05

06 - 020

1mm

1,5

03 - 012

016 - 020

HYPER

Fresa rompitruciolo in metallo duro integrale

Solid carbide roughing end mill

VHM - Schruppfräser - Fraise carbure profil ébauche
Фреза концевая твердосплавная для черновой обработки - Sk hrubovací fréza



CODE	d1h11 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
T2203S03050	3	6	8	50	3	17.00
T2203S04050	4	6	12	50	3	17.00
T2203S05050	5	6	15	50	3	17.00
T2203S06050	6	6	20	50	4	16.00
T2203S08060	8	8	22	60	4	22.50
T2203S10070	10	10	25	72	4	31.00
T2203S12075	12	12	27	75	4	42.00
T2203S16085	16	16	30	92	4	66.00
T2203S20100	20	20	40	104	4	109.52

→ Help 16



HRC
< 50

CAST
IRON

Ti-Alloy

MICRO
GRAIN

Nuova
CUMET
NORM

DIN 6535
Form HA

20°

HSC

45°

Z 3

Z 4

03 - 05

06 - 020

Z 5

1mm

1,5

025

03 - 012

014 - 025

HYPER

Fresa testa piana in metallo duro integrale

Solid carbide flat nose end mill

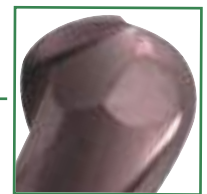
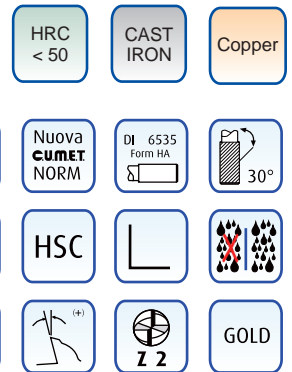
VHM - Schaftfräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с прямым зубом - Sk rohová fréza



CODE	d1h9 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
201S.010.4	1	4	2	50	2	8.00
201S.010	1	6	2.5	50	2	12.00
201S.015.4	1.5	4	3	50	2	8.00
201S.015	1.5	6	4	50	2	12.00
201S.020.4	2	4	4	50	2	8.00
201S.020	2	6	6	50	2	12.00
201S.025	2.5	6	6	50	2	12.00
201S.030.4	3	4	6	50	2	8.00
201S.030	3	6	7	50	2	12.00
201S.035	3.5	6	7	50	2	12.00
201S.040	4	6	8	50	2	12.00
201S.045	4.5	6	9	50	2	12.00
201S.050	5	6	10	50	2	12.00
201S.055	5.5	6	10	50	2	10.00
201S.060	6	6	12	50	2	10.00

→ Help 17-18



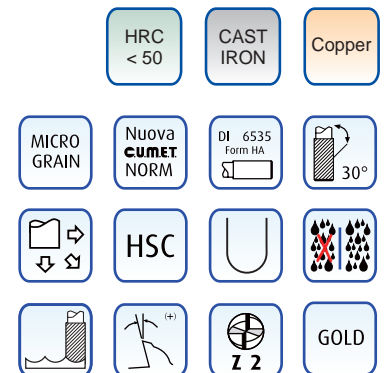
Solid carbide ball nose end mill

VHM - Radiusfräser - Fraise carbure à bout hémisphérique

Фреза концевая твердосплавная полусферическая - Sk kulová fréza

CODE	d1h9 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
201RS.010.4	1	4	2	50	2	9.90
201RS.010	1	6	2.5	50	2	13.50
201RS.015.4	1.5	4	3	50	2	9.90
201RS.015	1.5	6	4	50	2	13.50
201RS.020.4	2	4	4	50	2	9.90
201RS.020	2	6	6	50	2	13.50
201RS.025	2.5	6	6	50	2	13.50
201RS.030.4	3	4	6	50	2	9.90
201RS.030	3	6	7	50	2	13.50
201RS.035	3.5	6	7	50	2	13.50
201RS.040	4	6	8	50	2	13.50
201RS.045	4.5	6	9	50	2	13.50
201RS.050	5	6	10	50	2	13.50
201RS.055	5.5	6	10	50	2	11.70
201RS.060	6	6	12	50	2	11.70

→ Help 19



Fresa testa piana in metallo duro integrale

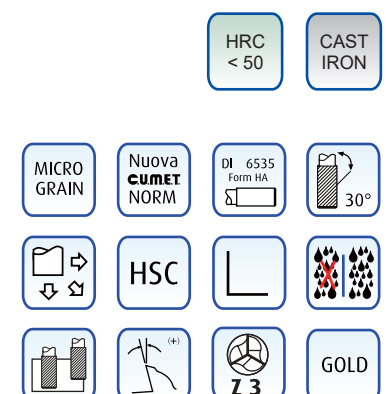
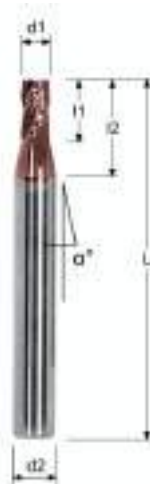
Solid carbide flat nose end mill

VHM - Schaftfräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с прямым зубом - Sk rohová fréza

CODE	d1h9 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
301S.010.4	1	4	2	50	3	8.00
301S.010	1	6	2.5	50	3	12.00
301S.015.4	1.5	4	3	50	3	8.00
301S.015	1.5	6	4	50	3	12.00
301S.020.4	2	4	5	50	3	8.00
301S.020	2	6	6	50	3	12.00
301S.025	2.5	6	6	50	3	12.00
301S.030.4	3	4	7	50	3	8.00
301S.030	3	6	7	50	3	12.00
301S.035	3.5	6	7	50	3	12.00
301S.040	4	6	8	50	3	12.00
301S.045	4.5	6	9	50	3	12.00
301S.050	5	6	10	50	3	12.00
301S.055	5.5	6	10	50	3	10.00
301S.060	6	6	12	50	3	10.00

→ Help 17-18



Fresa testa piana in metallo duro integrale

Solid carbide flat nose end mill

VHM - Schaftfräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с прямым зубом - Sk rohová fréza



CODE	d1h9 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
401S.010.4	1	4	2	50	4	8.00
401S.010	1	6	2.5	50	4	12.00
401S.015.4	1.5	4	3	50	4	8.00
401S.015	1.5	6	4	50	4	12.00
401S.020.4	2	4	5	50	4	8.00
401S.020	2	6	6	50	4	12.00
401S.025	2.5	6	6	50	4	12.00
401S.030.4	3	4	7	50	4	8.00
401S.030	3	6	7	50	4	12.00
401S.035	3.5	6	7	50	4	12.00
401S.040	4	6	8	50	4	12.00
401S.045	4.5	6	9	50	4	12.00
401S.050	5	6	10	50	4	12.00
401S.055	5.5	6	10	50	4	10.00
401S.060	6	6	12	50	4	10.00

→ Help 17-18



HRC < 50
CAST IRON

MICRO GRAIN
Nuova CUMET NORM
DI 6535 Form HA
30°

HSC

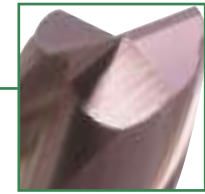
Z 4
GOLD

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

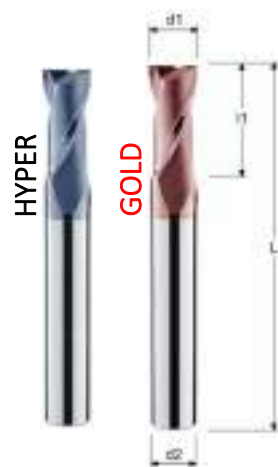


CODE	d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro HYPER	Euro GOLD
200TS.030	3	3	8	40	2	7.08	7.08
200TS.040	4	4	10	50	2	7.89	7.89
200TS.050	5	5	12	50	2	8.95	8.95
200TS.060	6	6	12	50	2	9.55	9.55
200TS.080	8	8	20	60	2	15.50	15.50
200TS.100	10	10	22	72	2	22.61	22.61
200TS.120	12	12	25	75	2	32.54	32.54
200TS.140	14	14	30	85	2	49.00	49.00
200TS.160	16	16	30	92	2	52.00	52.00
200TS.200	20	20	40	104	2	85.00	85.00

*d1 ≤ ø 6 h9
d1 ≤ ø 20 f7

Example ø6mm:
GOLD = 200TS.060
HYPER = 200TS.060H

→ Help 17-18



GOLD
HRC < 60
HYPER
HRC < 50
CAST IRON

MICRO GRAIN
Nuova CUMET NORM
DI 6535 Form HA

30°
HSC
HHC

Z 2
HYPER GOLD

Solid carbide ball nose end mill

VHM - Radiusfräser - Fraise carbure à bout hémisphérique

Фреза концевая твердосплавная полусферическая - Sk kulová fréza

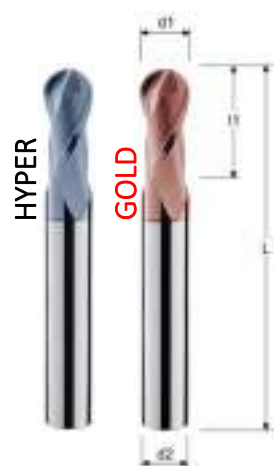


CODE	d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro HYPER	Euro GOLD
200RTS.030	3	3	8	40	2	8.50	8.50
200RTS.040	4	4	10	50	2	9.47	9.47
200RTS.050	5	5	12	50	2	11.00	11.00
200RTS.060	6	6	12	50	2	11.50	11.50
200RTS.080	8	8	20	60	2	18.60	18.60
200RTS.100	10	10	22	72	2	27.00	27.00
200RTS.120	12	12	25	75	2	38.00	38.00
200RTS.160	16	16	30	92	2	62.40	62.40
200RTS.200	20	20	40	104	2	98.40	98.40

*d1 ≤ ø 6 h9
d1 ≤ ø 20 f7

Example ø6mm:
GOLD = 200RTS.060
HYPER = 200RTS.060H

→ Help 19



GOLD
HRC < 60
HYPER
HRC < 50
CAST IRON

MICRO GRAIN
Nuova CUMET NORM
DI 6535 Form HA

30°
HSC
HHC

Z 2
HYPER GOLD

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

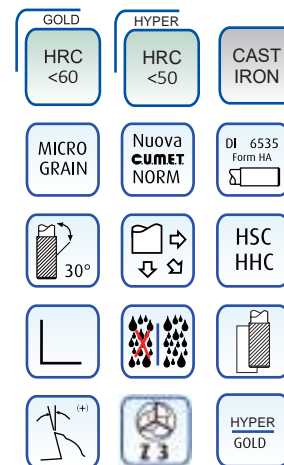
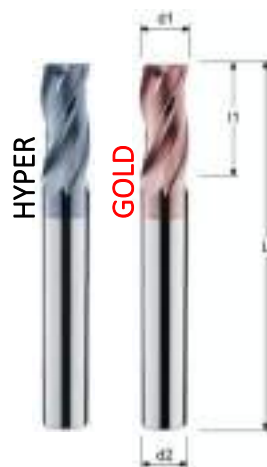


CODE	d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro HYPER	Euro GOLD
300TS.030	3	3	12	40	3	7.08	7.08
300TS.040	4	4	16	50	3	7.89	7.89
300TS.050	5	5	20	50	3	8.95	8.95
300TS.060	6	6	20	50	3	9.55	9.55
300TS.080	8	8	22	60	3	15.50	15.50
300TS.100	10	10	25	72	3	22.61	22.61
300TS.120	12	12	27	75	3	32.54	32.54
300TS.160	16	16	30	92	3	52.00	52.00
300TS.200	20	20	40	104	3	85.00	85.00

*d1 ≤ ø 6 h9
d1 ≤ ø20 f7

Example ø6mm:
GOLD = 300TS.060
HYPER = 300TS.060H

→ Help 17-18



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

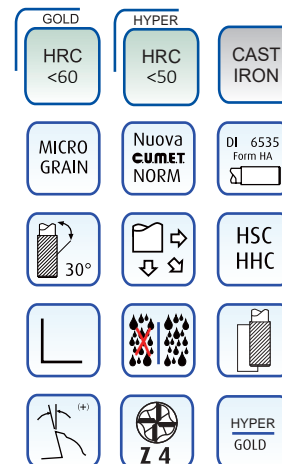
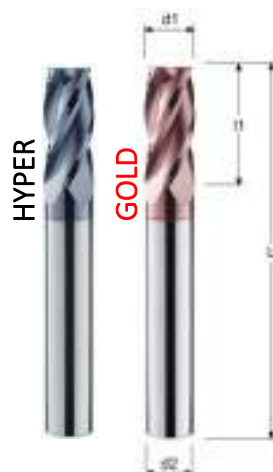


CODE	d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro HYPER	Euro GOLD
400TS.030	3	3	12	40	4	7.08	7.08
400TS.040	4	4	16	50	4	7.89	7.89
400TS.050	5	5	20	50	4	8.95	8.95
400TS.060	6	6	20	50	4	9.55	9.55
400TS.080	8	8	22	60	4	15.50	15.50
400TS.100	10	10	25	72	4	22.61	22.61
400TS.120	12	12	27	75	4	32.54	32.54
400TS.140	14	14	30	85	4	49.00	49.00
400TS.160	16	16	30	92	4	52.00	52.00
400TS.200	20	20	40	104	4	85.00	85.00

*d1 ≤ ø 6 h9
d1 ≤ ø20 f7

Example ø6mm:
GOLD = 400TS.060
HYPER = 400TS.060H

→ Help 17-18

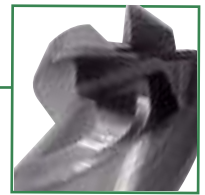


Fresa Torica in metallo duro integrale

Solid carbide corner radius end mill

VHM-torusfräser - Fraise carbure pour cuivre avec rayon d'angle

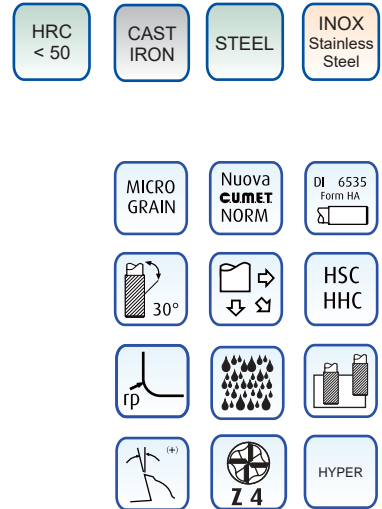
Фреза концевая твердосплавная с угловым радиусом для меди - Sk fréza s rohovým rádiusem



CODE	*d1 mm	d2 mm	Rp mm	l1 mm	l2 mm	L mm	d3 mm	Z no.	Euro
400RPS.030R05	3	4	0.5	9	-	50	-	4	12.00
400RPS.040R05	4	4	0.5	12	-	50	-	4	12.00
400RPS.050R05	5	6	0.5	15	-	50	-	4	14.00
400RPS.060R05	6	6	0.5	18	-	50	-	4	14.00
400RPS.060R1	6	6	1.0	18	-	50	-	4	14.00
400RPS.080R05	8	8	0.5	22	-	60	-	4	20.04
400RPS.080R1	8	8	1.0	22	-	60	-	4	20.04
400RPS.100R05	10	10	0.5	25	-	72	-	4	28.20
400RPS.100R1	10	10	1.0	25	-	72	-	4	28.20
400RPS.120R05	12	12	0.5	27	-	75	-	4	37.00
400RPS.120R1	12	12	1.0	27	-	75	-	4	37.00
400RPS.120R2	12	12	2.0	27	-	75	-	4	37.00
400RPS.160R1	16	16	1.0	32	-	92	-	4	76.00
400RPS.160R2	16	16	2.0	32	-	92	-	4	76.00
400RPS.200R1	20	20	1.0	40	-	104	-	4	115.00
400RPS.200R2	20	20	2.0	40	-	104	-	4	115.00

*d1=h9

→ Help 17

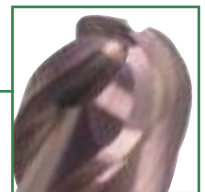


Fresa testa sferica in metallo duro integrale

Solid carbide ball nose end mill

VHM - Radiusfräser - Fraise carbure à bout hémisphérique

Фреза концевая твердосплавная полусферическая - Sk kulová fréza

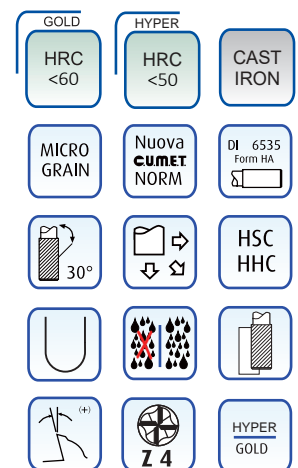


CODE	d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro HYPER	Euro GOLD
400RTS.030	3	3	12	50	4	9.90	9.90
400RTS.040	4	4	16	50	4	11.20	11.20
400RTS.050	5	5	20	50	4	12.70	12.70
400RTS.060	6	6	20	50	4	13.60	13.60
400RTS.080	8	8	22	60	4	20.04	20.04
400RTS.100	10	10	25	72	4	28.20	28.20
400RTS.120	12	12	27	75	4	40.00	40.00
400RTS.160	16	16	30	92	4	76.00	76.00
400RTS.200	20	20	40	100	4	115.00	115.00

*d1 ≤ ø 6 h9
d1 ≤ ø 20 f7

Example ø6mm:
GOLD = 400RTS.060
HYPER = 400RTS.060H

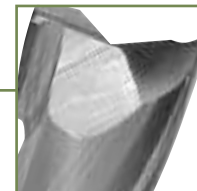
→ Help 19



Fresa testa torcia antivibrante ad alto avanzamento in metallo duro integrale

Solid carbide corner radius end mill high feed

VHM- Stirn RadiusFräser High feed - Fraise carbure avec rayon d'angle à Haute avancement
Sk vysokorychlostní fréza s rohovým rádiusem



CODE	*d1 mm	d2h6 mm	rp-CH mm	l1 mm	l2 mm	L mm	d3 mm	Z no.	Euro
Y703S.030	3	6	0.05x45°	3	10	60	5.8	2	18.00
Y703S.030.03	3	6	0.3	3	10	60	5.8	2	18.00
Y703S.040	4	6	0.05x45°	3	10	60	5.8	2	18.00
Y703S.040.05	4	6	0.5	3	10	60	5.8	2	18.00
Y703S.050.05	5	6	0.5	3	10	60	5.8	2	18.00
Y703S.060	6	6	0.05x45°	6	18	60	5.8	2	18.00
Y703S.060.05	6	6	0.5	6	18	60	5.8	2	18.00
Y703S.080	8	8	0.05x45°	8	24	75	7.8	2	29.00
Y703S.080.05	8	8	0.5	8	24	75	7.8	2	29.00
Y703S.100	10	10	0.05x45°	10	30	80	9.7	2	40.00
Y703S.100.05	10	10	0.5	10	30	80	9.7	2	40.00
Y703S.120	12	12	0.05x45°	12	36	100	11.7	2	60.00
Y703S.120.05	12	12	0.5	12	36	100	11.7	2	60.00
Y703S.160	16	16	0.05x45°	16	50	100	15.5	2	90.00
Y703S.160.05	16	16	0.5	16	50	100	15.5	2	90.00
Y703S.200	20	20	0.05x45°	20	60	104	19.5	2	135.00
Y703S.200.1	20	20	1.0	20	60	104	19.5	2	135.00

*d1 ≤ ø 6 h9
d1 ≤ ø20 f7

→ Help 15



AL Alloy

MICRO GRAIN

Nuova CUMET NORM

DIN 6535 Form HA

10°

HSC

45°

UNCOATED

Z 2

LAPPED

Fresa Alufast ad alto avanzamento testa piana in metallo duro itegrale

Alufast solid carbide high feed flat nose end mill

VHM-Alufast Gesenkfräser - Fraise carbure Alufast à bout plat
Sk rohová fréza alufast

HIGH FEED



CODE	*d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
755S.030	3	6	9	57	2	13.00
755S.040	4	6	12	57	2	13.00
755S.050	5	6	15	57	2	13.00
755S.060	6	6	18	57	2	12.00
755S.080	8	8	20	63	2	20.40
755S.100	10	10	25	70	2	28.40
755S.120	12	12	25	75	2	35.80
755S.160	16	16	32	92	2	69.40
755S.200	20	20	40	100	2	112.00

*d1 ≤ ø 6 h9
d1 ≤ ø20 h7

→ Help 14



Aluminium

MICRO GRAIN

DIN NORM

DIN 6535 Form HA

55°

HSC

OIL AIR

UNCOATED

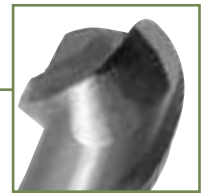
Z 2

Fresa testa sferica 3D in metallo duro integrale

Solid carbide 3D ball nose end mill

VHM - 3D Radiusfräser - Fraise carbure 3D hémisphérique

Фреза концевая твердосплавная полусферическая 3D - Sk 3D kulová fréza



Code UNCOATED	*d1 mm	d2h6 mm	l1 mm	L mm	Z no.	Euro
700SRS.030	3	6	10	75	2	19.70
700SRS.040	4	6	10	75	2	19.70
700SRS.060	6	6	15	100	2	20.30
700SRS.080	8	8	20	100	2	29.40
700SRS.100	10	10	25	100	2	40.00
700SRS.120	12	12	25	100	2	53.00
700SRS.160	16	16	30	100	2	79.00
700SRS.200	20	20	30	100	2	119.00

*d1 ≤ ø 6 h9
d1 ≤ ø20 f7

→ Help 19



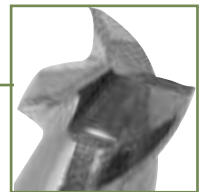
- ALUSPEED Aluminium <12% Si
- UNCOATED Aluminium <6% Si
- Plastic
- MICRO GRAIN
- Nuova CUMET NORM
- DIN 6535 Form HA
- 45°
- HSC
- U
- OIL
- UNCOATED
- Z 2
- R ± 0.01

Fresa testa piana in metallo duro integrale

Solid carbide flat nose end mill

VHM - Gesenkfräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с плоским торцом - Sk rohová fréza



CODE	*d1 mm	d2h6 mm	CH mm	l1 mm	L mm	Z no.	Euro
456S.030	3	6	0.05	10	57	3	14.90
456S.040	4	6	0.05	15	57	3	14.90
456S.050	5	6	0.05	18	57	3	14.90
456S.060	6	6	0.05	20	57	3	13.30
456S.080	8	8	0.05	25	63	3	20.70
456S.100	10	10	0.05	25	72	3	28.40
456S.120	12	12	0.05	30	83	3	40.80
456S.160	16	16	0.05	32	92	3	69.40
456S.200	20	20	0.05	38	104	3	112.00

*d1 ≤ ø 6 h9
d1 ≤ ø20 f7

→ Help 14



- Aluminium
- MICRO GRAIN
- DIN NORM
- DIN 6535 Form HA
- 45°
- HSC
- 45°
- OIL AIR
- UNCOATED
- Z 3
- LAPPED

Set Box



400SVS PAGE 1

SET400SVS.681012 **Euro 112.00**
6mm | 8mm | 10mm | 12mm

500RVS PAGE 1

SET500RVS.681012R05 **Euro 130.00**
SET500RVS.681012R1 **Euro 130.00**
6mm | 8mm | 10mm | 12mm

T2201S PAGE 2

SETT2203S.681012 **Euro 129.00**
6mm | 8mm | 10mm | 12mm

T2203S PAGE 2

SETT2203S.681012 **Euro 116.50**
6mm | 8mm | 10mm | 12mm

201S PAGE 3

SET201S.123456S4 **Euro 63.00**
1mm SHANK 4 | 2mm SHANK 4 | 3mm SHANK 4 | 4mm | 5mm | 6mm
SET201S.123456S6 **Euro 73.00**
1mm SHANK 6 | 2mm SHANK 6 | 3mm SHANK 6 | 4mm | 5mm | 6mm

201RS PAGE 3

SET201RS.123456S4 **Euro 60.00**
1mm SHANK 4 | 2mm SHANK 4 | 3mm SHANK 4 | 4mm | 6mm
SET201RS.123456S6 **Euro 70.70**
1mm SHANK 6 | 2mm SHANK 6 | 3mm SHANK 6 | 4mm | 6mm

401S PAGE 4

SET401S.123456S4 **Euro 63.00**
1mm SHANK 4 | 2mm SHANK 4 | 3mm SHANK 4 | 4mm | 5mm | 6mm
SET401S.123456S6 **Euro 63.00**
1mm SHANK 6 | 2mm SHANK 6 | 3mm SHANK 6 | 4mm | 5mm | 6mm

755S PAGE 7

SET755S.681012 **Euro 101.60**
6mm | 8mm | 10mm | 12mm

456S PAGE 8

SET456S.681012 **Euro 108.20**
6mm | 8mm | 10mm | 12mm

Y703S PAGE 7

SETY703S.681012CHO.05 **Euro 152.00**
SETY703S.681012R05 **Euro 152.00**
SETY703S.681012R1 **Euro 152.00**
6mm | 8mm | 10mm | 12mm

400RPS PAGE 6

SET400RPS.681012R05 **Euro 105.00**
SET400RPS.681012R1 **Euro 105.00**
6mm | 8mm | 10mm | 12mm

XMD SET LIME ROTATIVE - ROTARY FILES SET

XMD203-3 N°20PCS 3mm STANDARD CUT 03 **Euro 90.00**
XMD203-4 N°20PCS 3mm DIAMOND CUT 04 **Euro 108.00**
XMD203-6 N°20PCS 3mm DOUBLE CUT 06 **Euro 90.00**

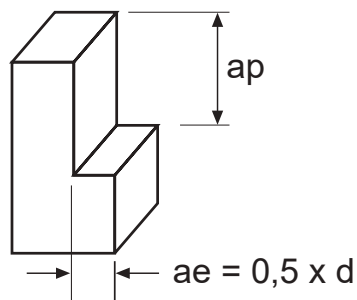


Tutti i set sono preparati a ricevimento ordine / All Sets are made to order / Alle Sätze werden auf Bestellung angefertigt

Parametri di taglio

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost



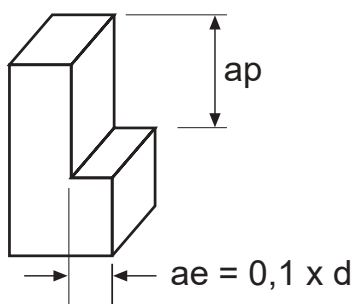
CODE: 400SV - 500RV - T2201 ROUGHING

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	$ap=1xd$	170-200	0.024	0.028	0.041	0.058	0.073	0.09	0.1	0.11	0.13
	$ap=2xd$ ($ae=0.25xd$)	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	$ap=1xd$	160-188	0.022	0.026	0.036	0.052	0.066	0.085	0.093	0.1	0.12
	$ap=2xd$	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	$ap=1xd$	70-90	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
	$ap=2xd$ ($ae=0.25xd$)	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	$ap=1xd$	95-115	0.019	0.024	0.039	0.053	0.065	0.079	0.087	0.095	0.11
Tooling steel <60 HRC	$ap=1xd$	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	$ap=1xd$	150-185	0.019	0.024	0.039	0.053	0.065	0.079	0.087	0.095	0.11
	$ap=2xd$ ($ae=0.25xd$)	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	$ap=1xd$	125-150	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.1
	$ap=2xd$ ($ae=0.25xd$)	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	$ap=1xd$	56-70	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.1
Cast iron 240 HB	$ap=1xd$	220-270	0.022	0.026	0.036	0.052	0.066	0.085	0.093	0.1	0.12
	$ap=2xd$ ($ae=0.25xd$)	140-170	0.015	0.02	0.031	0.042	0.05	0.058	0.065	0.071	0.09
Cast iron <300 HB	$ap=1xd$	115-140	0.019	0.024	0.039	0.053	0.065	0.079	0.087	0.095	0.11
	$ap=2xd$ ($ae=0.25xd$)	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	$ap=1xd$	90-110	0.013	0.02	0.033	0.047	0.059	0.072	0.08	0.088	0.01
	$ap=2xd$ ($ae=0.25xd$)	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	$ap=1xd$	75-90	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
	$ap=2xd$ ($ae=0.25xd$)	50-60	0.01	0.015	0.024	0.032	0.038	0.046	0.05	0.054	0.066
Aluminium	$ap=1xd$ $ap=2xd$ ($ae=0.25xd$)	500-650	0.016	0.021	0.029	0.042	0.053	0.063	0.071	0.079	0.097
Copper	$ap=1xd$	210-260	0.022	0.026	0.036	0.052	0.066	0.085	0.093	0.1	0.12
	$ap=2xd$ ($ae=0.25xd$)	140-171	0.015	0.02	0.031	0.042	0.05	0.059	0.065	0.071	0.09

Parametri di taglio

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost



CODE: 400SV - 500RV - FINISHING

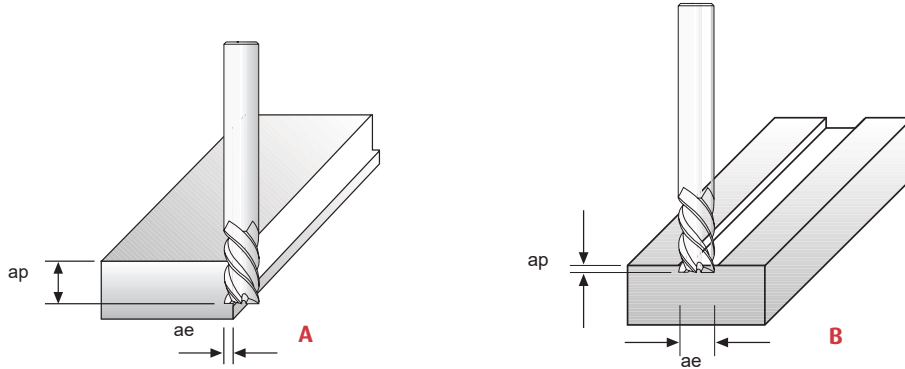
MATERIAL	APPLICATION	VC m/min	FINISHING								
			FZ mm/tooth								
			Ø 3	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20
Construction steel 500 N/mm ²	$a_p=1x_d$	210-250	0.01	0.015	0.025	0.032	0.039	0.048	0.053	0.058	0.073
	$a_p=2x_d$	140-170	0.01	0.015	0.025	0.032	0.039	0.048	0.053	0.058	0.073
Construction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

Parametri di taglio

Cutting speed

Richtwerte - Paramètres

Режимы обработки - Řežná rychlost



CODE: 755

Slot Milling B							
MATERIAL	Aluminium Alloy - АЛЮМИНИЙ						
HARDNESS							
	Vc	Fz	n	Vf Min.	Vf Max	ae	ap
Ø	m/min	mm	min/'	mm/min	mm/min	mm	mm
3	200	0.024	21231	1000	1200	3.0	3.0
4	250	0.025	19904	1000	1200	4.0	4.0
5	300	0.026	19108	1000	1200	5.0	5.0
6	400	0.066	21231	2800	4000	6.0	6.0
8	400	0.094	15924	3000	4000	8.0	8.0
10	400	0.141	12739	3600	4500	10.0	10.0
12	400	0.170	10616	3600	4500	12.0	12.0
16	450	0.201	8957	3600	4500	16.0	16.0
20	450	0.223	7166	3200	4300	20.0	20.0

CODE: 456

MATERIAL	Side Milling A						Slot Milling B					
	Aluminium Alloy - АЛЮМИНИЙ						Aluminium Alloy - АЛЮМИНИЙ					
	HARDNESS											
Ø	Vc	Fz	n	Vf	ae	ap	Vc	Fz	n	Vf	ae	ap
	m/min	mm	min/'	mm/min	mm	mm	m/min	mm	min/'	mm/min	mm	mm
3	550	0.045	58400	7880	1.20	3.6	450	0.030	47800	4300	3	1
4	550	0.060	43770	7880	1.60	4.8	450	0.040	35900	4300	4	2
5	550	0.075	35015	7880	2.00	6.0	450	0.055	28700	4725	5	2
6	550	0.100	29200	8760	2.40	7.2	450	0.070	23900	5015	6	2
8	550	0.120	21900	7890	3.20	9.6	450	0.085	17900	4656	8	3
10	550	0.150	17510	7890	4.00	12.0	450	0.105	14300	4510	10	4
12	550	0.180	14600	7890	4.80	14.4	450	0.125	11940	4475	12	5
16	550	0.190	10950	6235	6.40	19.2	450	0.135	9000	3625	16	6
20	550	0.225	8760	5900	8.00	24.0	450	0.160	7160	3435	20	8

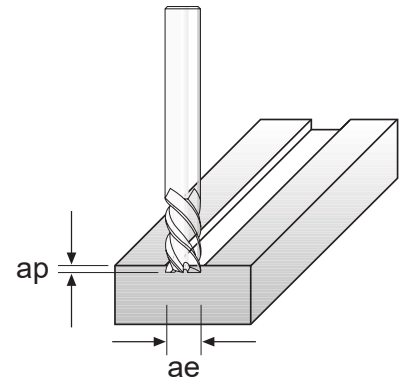
Parametri di taglio

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE: Y703 ROUGHING HIGH SPEED CUTTING

MATERIAL	Aluminium - АЛЮМИНИЙ				Copper - МЕДЬ			
HARDNESS								
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	500	0.021	1 x d	0.5 x d	300	0.015	1 x d	0.5 x d
4	500	0.028	1 x d	0.5 x d	300	0.016	1 x d	0.5 x d
5	500	0.035	1 x d	0.5 x d	300	0.020	1 x d	0.5 x d
6	500	0.045	1 x d	0.5 x d	300	0.024	1 x d	0.5 x d
8	500	0.056	1 x d	0.5 x d	300	0.032	1 x d	0.5 x d
10	500	0.070	1 x d	0.5 x d	300	0.040	1 x d	0.5 x d
12	500	0.084	1 x d	0.5 x d	300	0.048	1 x d	0.5 x d
16	500	0.112	1 x d	0.5 x d	300	0.064	1 x d	0.5 x d



CODE: Y703 ROUGHING HIGH SPEED CUTTING

MATERIAL	Thermo Plastic - ТЕРМО ПЛАСТИК							
HARDNESS	Soft				Harder			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	500	0.021	1 x d	0.5 x d	300	0.013	1 x d	0.5 x d
4	500	0.028	1 x d	0.5 x d	300	0.020	1 x d	0.5 x d
5	500	0.033	1 x d	0.5 x d	300	0.026	1 x d	0.5 x d
6	500	0.042	1 x d	0.5 x d	300	0.030	1 x d	0.5 x d
8	500	0.056	1 x d	0.5 x d	300	0.040	1 x d	0.5 x d
10	500	0.060	1 x d	0.5 x d	300	0.051	1 x d	0.5 x d
12	500	0.084	1 x d	0.5 x d	300	0.060	1 x d	0.5 x d
16	500	0.112	1 x d	0.5 x d	300	0.075	1 x d	0.5 x d

Y703: +30%

CODE: Y703 FINISHING HIGH SPEED CUTTING

MATERIAL	Aluminium - АЛЮМИНИЙ				Copper - МЕДЬ			
HARDNESS								
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	500	0.021	1 x d	0.050 x d	300	0.015	1 x d	0.030 x d
4	500	0.028	1 x d	0.050 x d	300	0.016	1 x d	0.030 x d
5	500	0.035	1 x d	0.050 x d	300	0.020	1 x d	0.030 x d
6	500	0.045	1 x d	0.050 x d	300	0.024	1 x d	0.030 x d
8	500	0.056	1 x d	0.050 x d	300	0.032	1 x d	0.030 x d
10	500	0.070	1 x d	0.050 x d	300	0.040	1 x d	0.030 x d
12	500	0.084	1 x d	0.050 x d	300	0.048	1 x d	0.030 x d
16	500	0.112	1 x d	0.050 x d	300	0.064	1 x d	0.030 x d

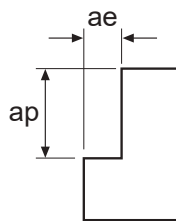
CODE: Y703 FINISHING HIGH SPEED CUTTING

MATERIAL	Thermo Plastic - ТЕРМО ПЛАСТИК							
HARDNESS	Soft				Harder			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	500	0.021	1 x d	0.030 x d	300	0.013	1 x d	0.020 x d
4	500	0.028	1 x d	0.030 x d	300	0.016	1 x d	0.020 x d
5	500	0.035	1 x d	0.030 x d	300	0.020	1 x d	0.020 x d
6	500	0.045	1 x d	0.030 x d	300	0.024	1 x d	0.020 x d
8	500	0.056	1 x d	0.030 x d	300	0.032	1 x d	0.020 x d
10	500	0.070	1 x d	0.030 x d	300	0.040	1 x d	0.020 x d
12	500	0.084	1 x d	0.030 x d	300	0.048	1 x d	0.020 x d
16	500	0.128	1 x d	0.030 x d	300	0.064	1 x d	0.020 x d

Parametri di taglio

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost



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

$$ap = 1 \times d$$

CODE: T2203

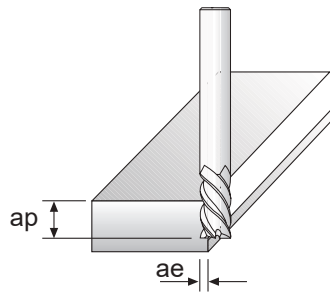
MATERIAL	HARDNESS	Ø									
		Ø 3.0		Ø 4.0		Ø 5.0		Ø 6.0		Ø 8.0	
		Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
Non Alloy Steel	< 500 N/mm	80-140	0.023	80-140	0.023	80-140	0.033	80-140	0.033	80-140	0.045
	< 700 N/mm	70-120	0.023	120	0.023	120	0.033	120	0.033	120	0.045
	< 800 N/mm	70-120	0.023	70-120	0.023	70-120	0.033	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

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

Parametri di taglio

Cutting speed

Richtwerte - Paramètres
Режимы обработки - Řežná rychlost



For finishing:
 $ae < 0,02 - 0,03 \times d$
 $ap < 0,8 \times d$
 $Vc = 1,2 \times Vc$ (Parameter List)
 $Fz = 0,7 \times Vc$ (Parameter List)

CODE:200T - 201T - 300T - 301T - 400T - 401T - 400RP

MATERIAL	Steel - СТАЛЬ											
	< 170 HRC				< 50 HRC				HRC 48 - 56			
HARDNESS												
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	130	0.012	0.2 x d	1 x d	110	0.013	0.1 x d	1 x d	60	0.010	0.05 x d	0.010 x d
4	130	0.024	0.2 x d	1 x d	110	0.026	0.1 x d	1 x d	60	0.020	0.05 x d	0.010 x d
5	130	0.024	0.2 x d	1 x d	110	0.026	0.1 x d	1 x d	60	0.020	0.05 x d	0.010 x d
6	130	0.024	0.2 x d	1 x d	110	0.026	0.1 x d	1 x d	60	0.020	0.05 x d	0.010 x d
8	130	0.048	0.2 x d	1 x d	110	0.052	0.1 x d	1 x d	60	0.040	0.05 x d	0.010 x d
10	130	0.048	0.2 x d	1 x d	110	0.052	0.1 x d	1 x d	60	0.040	0.05 x d	0.010 x d
12	130	0.072	0.2 x d	1 x d	110	0.078	0.1 x d	1 x d	60	0.060	0.05 x d	0.010 x d
14 - 18	130	0.072	0.2 x d	1 x d	110	0.078	0.1 x d	1 x d	60	0.060	0.05 x d	0.010 x d
20 - 25	130	0.120	0.2 x d	1 x d	110	0.130	0.1 x d	1 x d	60	0.100	0.05 x d	0.010 x d

MATERIAL	Cast Iron - ЧУГУН								Copper - МЕДЬ			
	Nodulaire - ЧУГУН				Lamellaire - ЛАМЕЛАР							
HARDNESS												
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	110	0.013	0.1 x d	1 x d	120	0.017	0.2 x d	1 x d	200	0.009	1 x d	0.3 x d
4	110	0.026	0.1 x d	1 x d	120	0.034	0.2 x d	1 x d	200	0.018	1 x d	0.3 x d
5	110	0.026	0.1 x d	1 x d	120	0.034	0.2 x d	1 x d	200	0.018	1 x d	0.3 x d
6	110	0.026	0.1 x d	1 x d	120	0.034	0.2 x d	1 x d	200	0.018	1 x d	0.3 x d
8	110	0.052	0.1 x d	1 x d	120	0.068	0.2 x d	1 x d	200	0.036	1 x d	0.3 x d
10	110	0.052	0.1 x d	1 x d	120	0.068	0.2 x d	1 x d	200	0.036	1 x d	0.3 x d
12	110	0.078	0.1 x d	1 x d	120	0.102	0.2 x d	1 x d	200	0.054	1 x d	0.3 x d
14 - 18	110	0.078	0.1 x d	1 x d	120	0.102	0.2 x d	1 x d	200	0.054	1 x d	0.3 x d
20 - 25	110	0.130	0.1 x d	1 x d	120	0.170	0.2 x d	1 x d	200	0.090	1 x d	0.3 x d

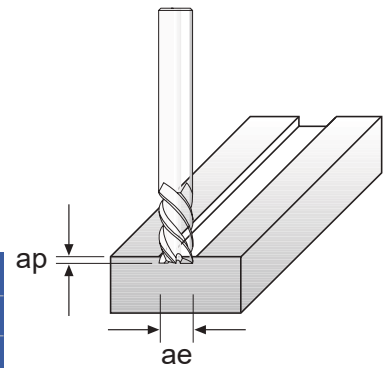
MATERIAL	Titanium - ТИТАН				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ				Super Alloy - СУПЕР СПЛАВ			
HARDNESS												
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	80	0.011	0.1 x d	1 x d	70	0.012	0.1 x d	1 x d	30	0.012	0.08 x d	1 x d
4	80	0.023	0.1 x d	1 x d	70	0.024	0.1 x d	1 x d	30	0.024	0.08 x d	1 x d
5	80	0.023	0.1 x d	1 x d	70	0.024	0.1 x d	1 x d	30	0.024	0.08 x d	1 x d
6	80	0.023	0.1 x d	1 x d	70	0.024	0.1 x d	1 x d	30	0.024	0.08 x d	1 x d
8	80	0.046	0.1 x d	1 x d	70	0.047	0.1 x d	1 x d	30	0.048	0.08 x d	1 x d
10	80	0.046	0.1 x d	1 x d	70	0.047	0.1 x d	1 x d	30	0.048	0.08 x d	1 x d
12	80	0.068	0.1 x d	1 x d	70	0.071	0.1 x d	1 x d	30	0.072	0.08 x d	1 x d
14 - 18	80	0.068	0.1 x d	1 x d	70	0.071	0.1 x d	1 x d	30	0.072	0.08 x d	1 x d
20 - 25	80	0.114	0.1 x d	1 x d	70	0.118	0.1 x d	1 x d	30	0.120	0.08 x d	1 x d

Parametri di taglio

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE:200T - 201T-300T - 301T - 400T - 401T - 400RP



For finishing:
 $ae < 0,02 - 0,03 \times d$
 $ap < 0,8 \times d$
 $Vc = 1,2 \times Vc$ (Parameter List)
 $Fz = 0,7 \times Vc$ (Parameter List)

MATERIAL	Steel - СТАЛЬ							
HARDNESS	< 170 HB				< 50HRC			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1-3	110	0.008	1 x d	0.1 x d	90	0.007	1 x d	0.1 x d
4	110	0.016	1 x d	0.1 x d	90	0.012	1 x d	0.1 x d
5	110	0.016	1 x d	0.1 x d	90	0.012	1 x d	0.1 x d
6	110	0.016	1 x d	0.1 x d	90	0.012	1 x d	0.1 x d
8	110	0.032	1 x d	0.1 x d	90	0.024	1 x d	0.1 x d
10	110	0.032	1 x d	0.1 x d	90	0.024	1 x d	0.1 x d
12	110	0.048	1 x d	0.1 x d	90	0.036	1 x d	0.1 x d
14 - 18	110	0.048	1 x d	0.1 x d	90	0.036	1 x d	0.1 x d
20 - 25	110	0.080	1 x d	0.1 x d	90	0.060	1 x d	0.1 x d

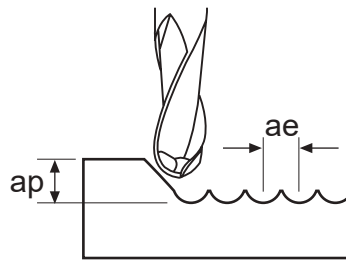
MATERIAL	Steel - СТАЛЬ				Cast Iron							
HARDNESS	HRC 48 - 56				Nodulaire - ЧУГУН				Lamellaire - ЛАМЕЛАР			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1-3	40	0.006	1 x d	0.05 x d	90	0.006	1 x d	0.1 x d	100	0.009	1 x d	0.2 x d
4	40	0.008	1 x d	0.05 x d	90	0.013	1 x d	0.1 x d	100	0.018	1 x d	0.2 x d
5	40	0.008	1 x d	0.05 x d	90	0.013	1 x d	0.1 x d	100	0.018	1 x d	0.2 x d
6	40	0.008	1 x d	0.05 x d	90	0.013	1 x d	0.1 x d	100	0.018	1 x d	0.2 x d
8	40	0.016	1 x d	0.05 x d	90	0.026	1 x d	0.1 x d	100	0.036	1 x d	0.2 x d
10	40	0.016	1 x d	0.05 x d	90	0.026	1 x d	0.1 x d	100	0.036	1 x d	0.2 x d
12	40	0.024	1 x d	0.05 x d	90	0.038	1 x d	0.1 x d	100	0.054	1 x d	0.2 x d
14 - 18	40	0.024	1 x d	0.05 x d	90	0.038	1 x d	0.1 x d	100	0.054	1 x d	0.2 x d
20 - 25	40	0.040	1 x d	0.05 x d	90	0.064	1 x d	0.1 x d	100	0.090	1 x d	0.2 x d

MATERIAL	Titanium - ТИТАН				Copper - МЕДЬ				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ			
HARDNESS												
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	60	0.006	1 x d	0.1 x d	200	0.009	1 x d	0.3 x d	50	0.006	1 x d	0.1 x d
4	60	0.013	1 x d	0.1 x d	200	0.018	1 x d	0.3 x d	50	0.013	1 x d	0.1 x d
5	60	0.013	1 x d	0.1 x d	200	0.018	1 x d	0.3 x d	50	0.013	1 x d	0.1 x d
6	60	0.013	1 x d	0.1 x d	200	0.018	1 x d	0.3 x d	50	0.013	1 x d	0.1 x d
8	60	0.026	1 x d	0.1 x d	200	0.036	1 x d	0.3 x d	50	0.026	1 x d	0.1 x d
10	60	0.026	1 x d	0.1 x d	200	0.036	1 x d	0.3 x d	50	0.026	1 x d	0.1 x d
12	60	0.038	1 x d	0.1 x d	200	0.054	1 x d	0.3 x d	50	0.038	1 x d	0.1 x d
14 - 18	60	0.038	1 x d	0.1 x d	200	0.054	1 x d	0.3 x d	50	0.038	1 x d	0.1 x d
20 - 25	60	0.064	1 x d	0.1 x d	200	0.090	1 x d	0.3 x d	50	0.064	1 x d	0.1 x d

Parametri di taglio

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost



For finishing:
 $ae < 0,02 - 0,03 \times d$
 $ap < 0,8 \times d$
 $Vc = 1,2 \times Vc$ (Parameter List)
 $Fz = 0,7 \times Vc$ (Parameter List)

CODE: 700SR - 200RT - 201R - 400RT STANDARD CUTTING SPEED

MATERIAL	Steel - СТАЛЬ											
HARDNESS	< 170 HB				< 50 HRC				< 60 HRC			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	140	0.016	0.03 x d	0.03 x d	120	0.016	0.03 x d	0.03 x d	70	0.014	0.03 x d	0.03 x d
4	140	0.032	0.03 x d	0.03 x d	120	0.032	0.03 x d	0.03 x d	70	0.028	0.03 x d	0.03 x d
6	140	0.032	0.03 x d	0.03 x d	120	0.032	0.03 x d	0.03 x d	70	0.028	0.03 x d	0.03 x d
8	140	0.064	0.03 x d	0.03 x d	120	0.064	0.03 x d	0.03 x d	70	0.056	0.03 x d	0.03 x d
10	140	0.064	0.03 x d	0.03 x d	120	0.064	0.03 x d	0.03 x d	70	0.056	0.03 x d	0.03 x d
12 - 18	140	0.096	0.03 x d	0.03 x d	120	0.096	0.03 x d	0.03 x d	70	0.084	0.03 x d	0.03 x d
20 - 25	140	0.160	0.03 x d	0.03 x d	120	0.160	0.03 x d	0.03 x d	70	0.140	0.03 x d	0.03 x d

MATERIAL	Aluminium - Copper - МЕДЬ				Titanium - ТИТАН				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ			
HARDNESS	< 170 HB				< 50 HRC				< 60 HRC			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	350	0.020	0.03 x d	0.03 x d	90	0.014	0.03 x d	0.03 x d	80	0.015	0.03 x d	0.03 x d
4	350	0.040	0.03 x d	0.03 x d	90	0.028	0.03 x d	0.03 x d	80	0.030	0.03 x d	0.03 x d
6	350	0.040	0.03 x d	0.03 x d	90	0.028	0.03 x d	0.03 x d	80	0.030	0.03 x d	0.03 x d
8	350	0.080	0.03 x d	0.03 x d	90	0.057	0.03 x d	0.03 x d	80	0.060	0.03 x d	0.03 x d
10	350	0.080	0.03 x d	0.03 x d	90	0.057	0.03 x d	0.03 x d	80	0.060	0.03 x d	0.03 x d
12 - 18	350	0.120	0.03 x d	0.03 x d	90	0.085	0.03 x d	0.03 x d	80	0.090	0.03 x d	0.03 x d
20 - 25	350	0.200	0.03 x d	0.03 x d	90	0.142	0.03 x d	0.03 x d	80	0.150	0.03 x d	0.03 x d

MATERIAL	Super Alloy - СУПЕР СПЛАВ				Cast Iron - ЧУГУН							
HARDNESS					Lamellaire - ЛАМЕЛАР				Nodulaire - ЧУГУН			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	40	0.015	0.03 x d	0.03 x d	130	0.019	0.03 x d	0.03 x d	120	0.015	0.03 x d	0.03 x d
4	40	0.030	0.03 x d	0.03 x d	130	0.038	0.03 x d	0.03 x d	120	0.030	0.03 x d	0.03 x d
6	40	0.030	0.03 x d	0.03 x d	130	0.038	0.03 x d	0.03 x d	120	0.030	0.03 x d	0.03 x d
8	40	0.060	0.03 x d	0.03 x d	130	0.076	0.03 x d	0.03 x d	120	0.060	0.03 x d	0.03 x d
10	40	0.060	0.03 x d	0.03 x d	130	0.076	0.03 x d	0.03 x d	120	0.060	0.03 x d	0.03 x d
12 - 18	40	0.090	0.03 x d	0.03 x d	130	0.114	0.03 x d	0.03 x d	120	0.090	0.03 x d	0.03 x d
20 - 25	40	0.150	0.03 x d	0.03 x d	130	0.190	0.03 x d	0.03 x d	120	0.150	0.03 x d	0.03 x d



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