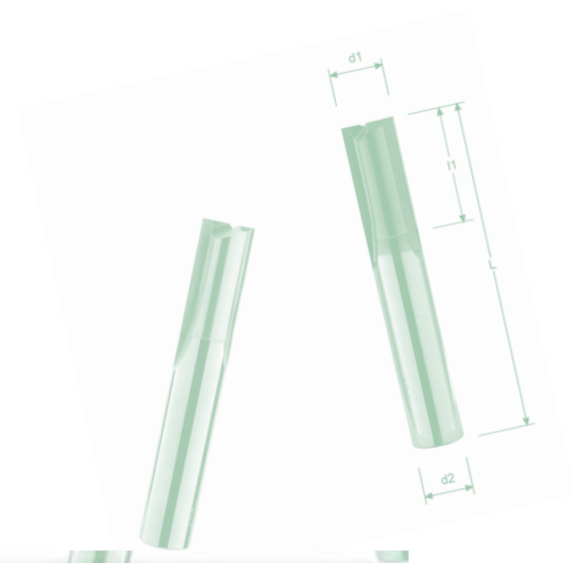
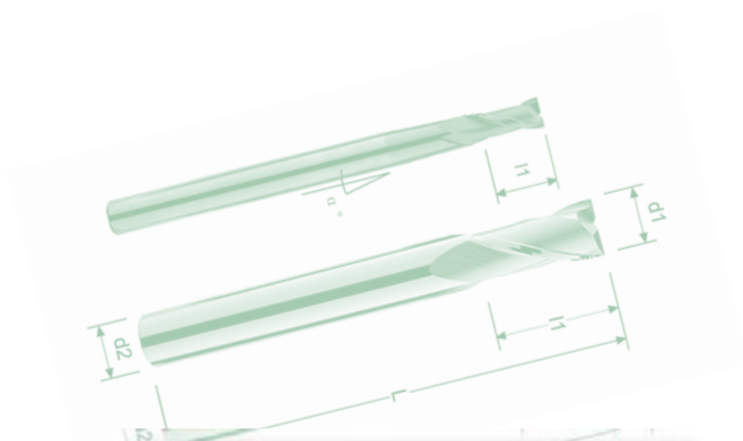


FRÉZY TVRDOKOVOVÉ

ECONOMY LINE

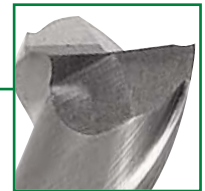


Fresa testa piana in metallo duro integrale

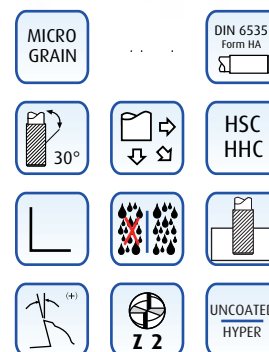
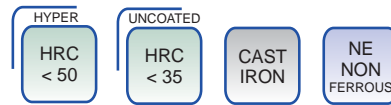
Solid carbide flat nose end mill

VHM - Schafffräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с плоским торцом - Sk rohová fréza



CODE UNCOATED	CODE HYPER	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
200.010G1	200T.010G1	1	1	5	40	2
200.010	200T.010	1	3	2.5	40	2
200.015G15	200T.015G15	1.5	1.5	5	40	2
200.015	200T.015	1.5	3	4	40	2
200.020G2	200T.020G2	2	2	8	40	2
200.020	200T.020	2	3	6	40	2
200.025G25	200T.025G25	2.5	2.5	8	40	2
200.025	200T.025	2.5	3	6	40	2
200.030	200T.030	3	3	8	40	2
20003060	200T03060	3	3	30	60	2
20003075	200T03075	3	3	30	75	2
200.035	200T.035	3.5	3.5	10	40	2
200.040	200T.040	4	4	10	50	2
20004060	200T04060	4	4	30	60	2
20004075	200T04075	4	4	30	75	2
200.045	200T.045	4.5	4.5	10	50	2
200.050	200T.050	5	5	12	50	2
20005070	200T05070	5	5	35	70	2
20005100	200T05100	5	5	40	100	2
200.055	200T.055	5.5	5.5	12	50	2
200.060	200T.060	6	6	12	50	2
20006100	200T06100	6	6	40	100	2
20006150	200T06150	6	6	50	150	2
200.070	200T.070	7	7	16	60	2
200.080	200T.080	8	8	20	60	2
20008100	200T08100	8	8	40	100	2
20008150	200T08150	8	8	50	150	2
200.090	200T.090	9	9	20	70	2
200.100	200T.100	10	10	22	70	2
20010100	200T10100	10	10	45	100	2
20010150	200T10150	10	10	60	150	2
200.110	200T.110	11	11	22	75	2
200.120	200T.120	12	12	25	75	2
20012100	200T12100	12	12	45	100	2
20012150	200T12150	12	12	75	150	2
200.130	200T.130	13	13	25	75	2
200.140	200T.140	14	14	30	85	2
20014100	200T14100	14	14	45	100	2
20014150	200T14150	14	14	65	150	2
20014150.1	200T14150.1	14	14	75	150	2
200.150	200T.150	15	15	30	85	2
20015100	200T15100	15	15	45	100	2
200.160	200T.160	16	16	30	85	2
20016100	200T16100	16	16	45	100	2
20016150	200T16150	16	16	65	150	2
20016150.1	200T16150.1	16	16	75	150	2
200.180	200T.180	18	18	38	100	2
20018150	200T18150	18	18	50	150	2
20018150.1	200T18150.1	18	18	65	150	2
20018150.2	200T18150.2	18	18	75	150	2
200.200	200T.200	20	20	40	100	2
20020150	200T20150	20	20	55	150	2
20020150.1	200T20150.1	20	20	65	150	2
20020150.2	200T20150.2	20	20	75	150	2
200.250	200T.250	25	25	40	100	2
20025150	200T25150	25	25	65	150	2
20025150.1	200T25150.1	25	25	75	150	2
200.320	200T.320	32	32	40	100	2
20032150	200T32150	32	32	75	150	2



→ Help 192

Fresa testa sferica in metallo duro integrale

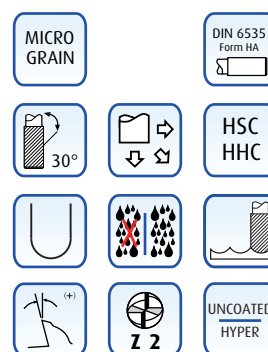
Solid carbide ball nose end mill

VHM - Radiusfräser - Fraise carbure à bout hémisphérique

Фреза концевая твердосплавная полусферическая - Sk kulová fréza



CODE UNCOATED	CODE HYPER	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
200R.010G1	200RT.010G1	1	1	5	38	2
200R.010	200RT.010	1	3	2.5	40	2
200R.015G15	200RT.015G15	1.5	1.5	5	38	2
200R.015	200RT.015	1.5	3	4	40	2
200R.020G2	200RT.020G2	2	2	8	38	2
200R.020	200RT.020	2	3	6	40	2
200R.025G25	200RT.025G25	2.5	2.5	8	38	2
200R.025	200RT.025	2.5	3	6	40	2
200R.030	200RT.030	3	3	8	40	2
200RL.030	200RLT.030	3	3	30	60	2
200RL.030.1	200RLT.030.1	3	3	30	75	2
200R.035	200RT.035	3.5	3.5	10	40	2
200R.040	200RT.040	4	4	10	50	2
200RL.040	200RLT.040	4	4	30	60	2
200RL.040.1	200RLT.040.1	4	4	30	75	2
200R.045	200RT.045	4.5	4.5	10	50	2
200R.050	200RT.050	5	5	12	50	2
200RL.050	200RLT.050	5	5	35	70	2
200RL.050.1	200RLT.050.1	5	5	40	100	2
200R.055	200RT.055	5.5	5.5	12	50	2
200R.060	200RT.060	6	6	12	50	2
200RL.060	200RLT.060	6	6	40	100	2
200RL.060.1	200RLT.060.1	6	6	50	150	2
200R.070	200RT.070	7	7	16	60	2
200R.080	200RT.080	8	8	20	60	2
200RL.080	200RLT.080	8	8	40	100	2
200RL.080.1	200RLT.080.1	8	8	50	150	2
200R.090	200RT.090	9	9	20	70	2
200R.100	200RT.100	10	10	22	70	2
200RL.100	200RLT.100	10	10	45	100	2
200RL.100.1	200RLT.100.1	10	10	60	150	2
200R.110	200RT.110	11	11	22	75	2
200R.120	200RT.120	12	12	25	75	2
200RL.120	200RLT.120	12	12	45	100	2
200RL.120.1	200RLT.120.1	12	12	75	150	2
200R.130	200RT.130	13	13	25	75	2
200R.140	200RT.140	14	14	30	85	2
200RL.140	200RLT.140	14	14	45	100	2
200RL.140.1	200RLT.140.1	14	14	65	150	2
200RL.140.2	200RLT.140.2	14	14	75	150	2
200R.150	200RT.150	15	15	30	85	2
200RL.150	200RLT.150	15	15	45	100	2
200R.160	200RT.160	16	16	30	85	2
200RL.160	200RLT.160	16	16	45	100	2
200RL.160.1	200RLT.160.1	16	16	65	150	2
200RL.160.2	200RLT.160.2	16	16	75	150	2
200R.180	200RT.180	18	18	38	100	2
200RL.180	200RLT.180	18	18	50	150	2
200RL.180.1	200RLT.180.1	18	18	65	150	2
200RL.180.2	200RLT.180.2	18	18	75	150	2
200R.200	200RT.200	20	20	40	100	2
200RL.200	200RLT.200	20	20	55	150	2
200RL.200.1	200RLT.200.1	20	20	65	150	2
200RL.200.2	200RLT.200.2	20	20	75	150	2
200R.250	200RT.250	25	25	40	100	2
200RL.250	200RLT.250	25	25	65	150	2
200RL.250.1	200RLT.250.1	25	25	75	150	2
200R.320	200RT.320	32	32	40	100	2
200RL.320	200RLT.320	32	32	75	150	2



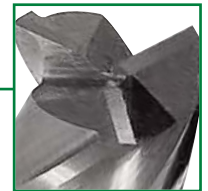
→ Help 155-194

Fresa testa piana in metallo duro integrale

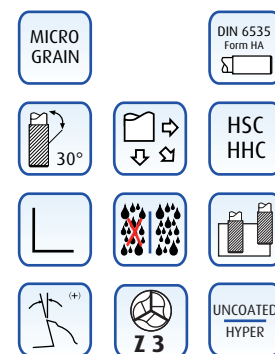
Solid carbide flat nose end mill

VHM - Schafffräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с плоским торцом - Sk rohová fréza



CODE UNCOATED	CODE HYPER	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
300.010	300T.010	1	3	2.5	40	3
300.015	300T.015	1.5	3	4	40	3
300.020	300T.020	2	3	5	40	3
300.025	300T.025	2.5	3	7	40	3
300.030	300T.030	3	3	12	40	3
30003060	300T03060	3	3	30	60	3
30003075	300T03075	3	3	30	75	3
300.035	300T.035	3.5	3.5	12	40	3
300.040	300T.040	4	4	16	50	3
30004060	300T04060	4	4	30	60	3
30004075	300T04075	4	4	30	75	3
300.045	300T.045	4.5	4.5	16	50	3
300.050	300T.050	5	5	20	50	3
30005070	300T05070	5	5	35	70	3
30005100	300T05100	5	5	40	100	3
300.055	300T.055	5.5	5.5	20	50	3
300.060	300T.060	6	6	20	50	3
30006100	300T06100	6	6	40	100	3
30006150	300T06150	6	6	50	150	3
300.070	300T.070	7	7	22	60	3
300.080	300T.080	8	8	22	60	3
30008100	300T08100	8	8	40	100	3
30008150	300T08150	8	8	50	150	3
300.090	300T.090	9	9	22	70	3
300.100	300T.100	10	10	25	70	3
30010100	300T10100	10	10	45	100	3
30010150	300T10150	10	10	60	150	3
300.110	300T.110	11	11	27	75	3
300.120	300T.120	12	12	27	75	3
30012100	300T12100	12	12	45	100	3
30012150	300T12150	12	12	75	150	3
300.130	300T.130	13	13	27	75	3
300.140	300T.140	14	14	30	85	3
30014100	300T14100	14	14	45	100	3
30014150	300T14150	14	14	65	150	3
30014150.1	300T14150.1	14	14	75	150	3
300.150	300T.150	15	15	30	85	3
30015100	300T15100	15	15	45	100	3
300.160	300T.160	16	16	30	85	3
30016100	300T16100	16	16	45	100	3
30016150	300T16150	16	16	65	150	3
30016150.1	300T16150.1	16	16	75	150	3
300.180	300T.180	18	18	40	100	3
30018150	300T18150	18	18	50	150	3
30018150.1	300T18150.1	18	18	65	150	3
30018150.2	300T18150.2	18	18	75	150	3
300.200	300T.200	20	20	40	100	3
30020150	300T20150	20	20	55	150	3
30020150.1	300T20150.1	20	20	65	150	3
30020150.2	300T20150.2	20	20	75	150	3
300.220	300T.220	22	22	40	100	3
300.250	300T.250	25	25	40	100	3
30025150	300T25150	25	25	65	150	3
30025150.1	300T25150.1	25	25	75	150	3
300.320	300T.320	32	32	40	100	3
30032150	300T32150	32	32	75	150	3



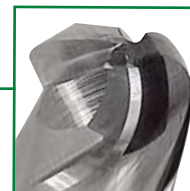
→ Help 189-190-192

Fresa testa sferica in metallo duro integrale

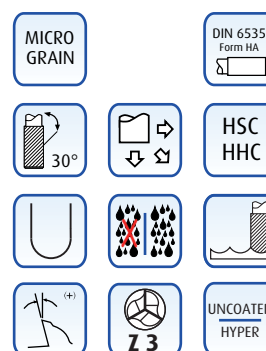
Solid carbide ball nose end mill

VHM - Radiusfräser - Fraise carbure à bout hémisphérique

Фреза концевая твердосплавная полусферическая - Sk kulová fréza



CODE UNCOATED	CODE HYPER	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
300R.010	300RT.010	1	3	2.5	40	3
300R.015	300RT.015	1.5	3	4	40	3
300R.020	300RT.020	2	3	5	40	3
300R.025	300RT.025	2.5	3	7	40	3
300R.030	300RT.030	3	3	12	40	3
300RL.030	300RLT.030	3	3	30	60	3
300RL.030.1	300RLT.030.1	3	3	30	75	3
300R.035	300RT.035	3.5	3.5	12	40	3
300R.040	300RT.040	4	4	16	50	3
300RL.040	300RLT.040	4	4	30	60	3
300RL.040.1	300RLT.040.1	4	4	30	75	3
300R.045	300RT.045	4.5	4.5	16	50	3
300R.050	300RT.050	5	5	20	50	3
300RL.050	300RLT.050	5	5	35	70	3
300RL.050.1	300RLT.050.1	5	5	40	100	3
300R.055	300RT.055	5.5	5.5	20	50	3
300R.060	300RT.060	6	6	20	50	3
300RL.060	300RLT.060	6	6	40	100	3
300RL.060.1	300RLT.060.1	6	6	50	150	3
300R.070	300RT.070	7	7	22	60	3
300R.080	300RT.080	8	8	22	60	3
300RL.080	300RLT.080	8	8	40	100	3
300RL.080.1	300RLT.080.1	8	8	50	150	3
300R.090	300RT.090	9	9	22	70	3
300R.100	300RT.100	10	10	25	70	3
300RL.100	300RLT.100	10	10	45	100	3
300RL.100.1	300RLT.100.1	10	10	60	150	3
300R.110	300RT.110	11	11	27	75	3
300R.120	300RT.120	12	12	27	75	3
300RL.120	300RLT.120	12	12	45	100	3
300RL.120.1	300RLT.120.1	12	12	75	150	3
300R.130	300RT.130	13	13	27	75	3
300R.140	300RT.140	14	14	30	85	3
300RL.140	300RLT.140	14	14	45	100	3
300RL.140.1	300RLT.140.1	14	14	65	150	3
300RL.140.2	300RLT.140.2	14	14	75	150	3
300R.150	300RT.150	15	15	30	85	3
300RL.150	300RLT.150	15	15	45	100	3
300R.160	300RT.160	16	16	30	85	3
300RL.160	300RLT.160	16	16	45	100	3
300RL.160.1	300RLT.160.1	16	16	65	150	3
300RL.160.2	300RLT.160.12	16	16	75	150	3
300R.180	300RT.180	18	18	40	100	3
300RL.180	300RLT.180	18	18	50	150	3
300RL.180.1	300RLT.180.1	18	18	65	150	3
300RL.180.2	300RLT.180.2	18	18	75	150	3
300R.200	300RT.200	20	20	40	100	3
300RL.200	300RLT.200	20	20	55	150	3
300RL.200.1	300RLT.200.1	20	20	65	150	3
300RL.200.2	300RLT.200.2	20	20	75	150	3
300R.250	300RT.250	25	25	40	100	3
300RL.250	300RLT.250	25	25	55	150	3
300RL.250.1	300RLT.250.1	25	25	75	150	3
300R.320	300RT.320	32	32	40	100	3
300RL.320	300RLT.320	32	32	75	150	3



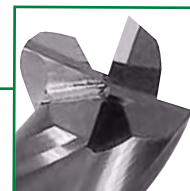
→ Help 155-194

Fresa testa piana in metallo duro integrale

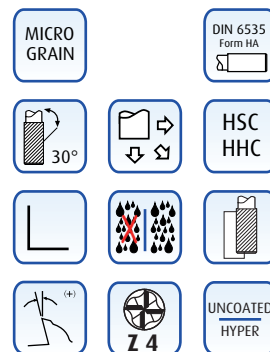
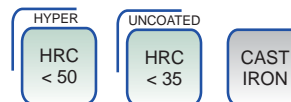
Solid carbide flat nose end mill

VHM - Schafffräser - Fraise carbure à bout plat

Фреза концевая твердосплавная с плоским торцом - Sk rohová fréza



CODE UNCOATED	CODE HYPER	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
400.010G1	400T.010G1	1	1	5	38	4
400.010	400T.010	1	3	2.5	40	4
400.015G15	400T.015G15	1.5	1.5	5	38	4
400.015	400T.015	1.5	3	4	40	4
400.020G2	400T.020G2	2	2	8	38	4
400.020	400T.020	2	3	5	40	4
400.025G25	400T.025G25	2.5	2.5	8	38	4
400.025	400T.025	2.5	3	7	40	4
400.030	400T.030	3	3	12	40	4
40003060	400T03060	3	3	30	60	4
40003075	400T03075	3	3	30	75	4
400.035	400T.035	3.5	3.5	12	40	4
400.040	400T.040	4	4	16	50	4
40004060	400T04060	4	4	30	60	4
40004075	400T04075	4	4	30	75	4
400.045	400T.045	4.5	4.5	16	50	4
400.050	400T.050	5	5	20	50	4
40005070	400T05070	5	5	35	70	4
40005100	400T05100	5	5	40	100	4
400.055	400T.055	5.5	5.5	20	50	4
400.060	400T.060	6	6	20	50	4
40006100	400T06100	6	6	40	100	4
40006150	400T06150	6	6	50	150	4
400.070	400T.070	7	7	22	60	4
400.080	400T.080	8	8	22	60	4
40008100	400T08100	8	8	40	100	4
40008150	400T08150	8	8	50	150	4
400.090	400T.090	9	9	22	70	4
400.100	400T.100	10	10	25	70	4
40010100	400T10100	10	10	45	100	4
40010150	400T10150	10	10	60	150	4
400.110	400T.110	11	11	27	75	4
400.120	400T.120	12	12	27	75	4
40012100	400T12100	12	12	45	100	4
40012150	400T12150	12	12	75	150	4
400.130	400T.130	13	13	27	75	4
400.140	400T.140	14	14	30	85	4
40014100	400T14100	14	14	45	100	4
40014150	400T14150	14	14	65	150	4
40014150.1	400T14150.1	14	14	75	150	4
400.150	400T.150	15	15	30	85	4
40015100	400T15100	15	15	45	100	4
400.160	400T.160	16	16	30	85	4
40016100	400T16100	16	16	45	100	4
40016150	400T16150	16	16	65	150	4
40016150.1	400T16150.1	16	16	75	150	4
400.180	400T.180	18	18	40	100	4
40018150	400T18150	18	18	50	150	4
40018150.1	400T18150.1	18	18	65	150	4
40018150.2	400T18150.2	18	18	75	150	4
400.200	400T.200	20	20	40	100	4
40020150	400T20150	20	20	55	150	4
40020150.1	400T20150.1	20	20	65	150	4
40020150.2	400T20150.2	20	20	75	150	4
400.220	400T.220	22	22	40	100	4
400.250	400T.250	25	25	40	100	4
40025150	400T25150	25	25	55	150	4
40025150.1	400T25150.1	25	25	75	150	4
400.320	400T.320	32	32	40	100	4
40032150	400T32150	32	32	75	150	4



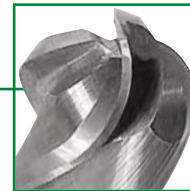
→ Help 191-192

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 UNCOATED	CODE HYPER	d1h8 mm	d2h6 mm	l1 mm	L mm	Z no.
400R.010G1	400RT.010G1	1	1	5	38	4
400R.010	400RT.010	1	3	2.5	40	4
400R.015G15	400RT.015G15	1.5	1.5	5	38	4
400R.015	400RT.015	1.5	3	4	40	4
400R.020G2	400RT.020G2	2	2	8	38	4
400R.020	400RT.020	2	3	5	40	4
400R.025G25	400RT.025G25	2.5	2.5	8	38	4
400R.025	400RT.025	2.5	3	7	40	4
400R.030	400RT.030	3	3	12	40	4
400RL.030	400RLT.030	3	3	30	60	4
400RL.030.1	400RLT.030.1	3	3	30	75	4
400R.040	400RT.040	4	4	16	50	4
400RL.040	400RLT.040	4	4	30	60	4
400RL.040.1	400RLT.040.1	4	4	30	75	4
400R.045	400RT.045	4.5	4.5	16	50	4
400R.050	400RT.050	5	5	20	50	4
400RL.050	400RLT.050	5	5	35	70	4
400RL.050.1	400RLT.050.1	5	5	40	100	4
400R.055	400RT.055	5.5	5.5	20	50	4
400R.060	400RT.060	6	6	20	50	4
400RL.060	400RLT.060	6	6	40	100	4
400RL.060.1	400RLT.060.1	6	6	50	150	4
400R.070	400RT.070	7	7	22	60	4
400R.080	400RT.080	8	8	22	60	4
400RL.080	400RLT.080	8	8	40	100	4
400RL.080.1	400RLT.080.1	8	8	50	150	4
400R.090	400RT.090	9	9	22	70	4
400R.100	400RT.100	10	10	25	70	4
400RL.100	400RLT.100	10	10	45	100	4
400RL.100.1	400RLT.100.1	10	10	60	150	4
400R.110	400RT.110	11	11	27	75	4
400R.120	400RT.120	12	12	27	75	4
400RL.120	400RLT.120	12	12	45	100	4
400RL.120.1	400RLT.120.1	12	12	75	150	4
400R.130	400RT.130	13	13	27	75	4
400R.140	400RT.140	14	14	30	85	4
400RL.140	400RLT.140	14	14	45	100	4
400RL.140.1	400RLT.140.1	14	14	65	150	4
400RL.140.2	400RLT.140.2	14	14	75	150	4
400R.150	400RT.150	15	15	30	85	4
400RL.150	400RLT.150	15	15	45	100	4
400R.160	400RT.160	16	16	30	85	4
400RL.160	400RLT.160	16	16	45	100	4
400RL.160.1	400RLT.160.1	16	16	65	150	4
400RL.160.2	400RLT.160.2	16	16	75	150	4
400R.180	400RT.180	18	18	40	100	4
400RL.180	400RLT.180	18	18	50	150	4
400RL.180.1	400RLT.180.1	18	18	65	150	4
400RL.180.2	400RLT.180.2	18	18	75	150	4
400R.200	400RT.200	20	20	40	100	4
400RL.200	400RLT.200	20	20	55	150	4
400RL.200.1	400RLT.200.1	20	20	65	150	4
400RL.200.2	400RLT.200.2	20	20	75	150	4
400R.250	400RT.250	25	25	40	100	4
400RL.250	400RLT.250	25	25	55	150	4
400RL.250.1	400RLT.250.1	25	25	75	150	4
400R.320	400RT.320	32	32	40	100	4
400RL.320	400RLT.320	32	32	75	150	4

HYPER HRC < 50 UNCOATED HRC < 35 CAST IRON INOX Stainless Steel Copper



MICRO GRAIN DIN 6535 Form HA 30° HSC HHC UNCOATED HYPER Z 4

→ Help 155-194

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

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

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

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

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

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

REZNÉ PARAMETRE

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řezná rychlost

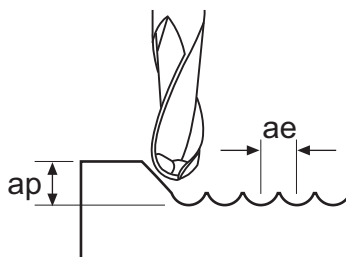
For finishing:

$a_e < 0,02 - 0,03 \times d$

$a_p < 0,8 \times d$

$V_c = 1,2 \times V_c$ (Parameter List)

$F_z = 0,7 \times V_c$ (Parameter List)



CODE: 200SR - 200SRT - 200R - 200RT - 200RLT - 300CR - 300R - 300RT - 300RLT - 400R - 400RT - 400RLT
 ROUGHING - STANDARD CUTTING SPEED

MATERIAL	Steel											
	< 170 HB - СТАЛЬ				< 50 HRC - СТАЛЬ				< 60 HRC - СТАЛЬ			
	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	0.132	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

CODE: 200SR - 200SRT - 200R - 200RT - 200RL - 200RLT - 300CR - 300R - 300RT - 300RLT - 400R - 400RT - 400RLT

MATERIAL	Copper - МЕДЬ				Titanium - ТИТАН				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ			
	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
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

CODE: 200SR - 200SRT - 200R - 200RT - 200RL - 200RLT - 300CR - 300R - 300RT - 300RLT - 400R - 400RT - 400RLT

MATERIAL	Super Alloy - СУПЕР СПЛАВ				Cast Iron - ЧУГУН							
					Lamellair - ЛАМЕЛАР				Nodulaire - ЧУГУН			
	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

REZNÉ PARAMETRE

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE: 202-402 SIDE MILLING

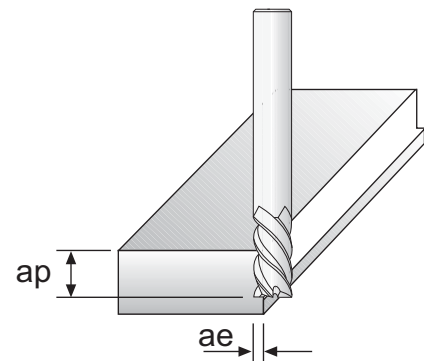
Material	Steel - СТАЛЬ																							
	<450N/mm2						450<700N/mm2						700<1200N/mm						HRC<52					
	Ø	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae
1	163	0.008	51730	830	0.4	1.2	150	0.008	47750	765	0.4	1.2	125	0.006	39790	480	0.4	1.2	63	0.012	19890	480	0.03	0.6
2	163	0.016	25860	830	0.8	2.4	150	0.060	23870	765	0.8	2.4	125	0.012	19890	480	0.8	2.4	63	0.024	9950	480	0.06	1.2
3	163	0.024	17240	830	1.2	3.6	150	0.024	15920	765	1.2	3.6	125	0.018	13260	480	1.2	3.6	63	0.036	6630	480	0.09	1.8
4	163	0.032	12930	830	1.6	4.8	150	0.032	11940	765	1.6	4.8	125	0.024	9950	480	1.6	4.8	63	0.048	4970	480	0.12	2.4
5	163	0.040	10350	830	2.0	6	150	0.040	9550	765	2.0	6	125	0.030	7960	480	2.0	6	63	0.060	3980	480	0.15	3
6	163	0.048	8260	830	2.4	7.2	150	0.048	7960	765	2.4	7.2	125	0.036	6830	480	2.4	7.2	63	0.072	3320	480	0.18	3.6
8	163	0.064	6470	830	3.2	9.6	150	0.064	5970	765	3.2	9.6	125	0.048	4970	480	3.2	9.6	63	0.096	2490	480	0.24	4.8
10	163	0.080	5170	830	4.0	12	150	0.080	4770	765	4.0	12	125	0.060	3980	480	4.0	12	63	0.120	1990	480	0.3	6
12	163	0.096	4310	830	4.8	14.4	150	0.096	3980	765	4.8	14.4	125	0.072	3320	480	4.8	14.4	63	0.145	1660	480	0.36	7.2
16	183	0.128	3230	830	6.4	19.2	150	0.128	2980	765	6.4	19.2	125	0.096	2490	480	6.4	19.2	63	0.192	1240	480	0.48	9.6
20	163	0.160	2590	830	8.0	24	150	0.160	2390	765	8.0	24	125	0.120	1990	480	8.0	24	63	0.240	990	480	0.6	12

CODE: 202-402 SIDE MILLING

Material	Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ												Cast Iron - ЧУГУН						Steel - СТАЛЬ					
	Hard						Soft																	
	Ø	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae
1	63	0.080	19890	320	0.4	1	100	0.008	19890	315	0.4	1	163	0.080	51730	830	0.4	1	313	0.090	99630	1792	0.4	1
2	63	0.016	9950	320	0.8	2	100	0.016	9950	315	0.8	2	163	0.016	25860	830	0.8	2	313	0.018	49820	1792	0.8	2
3	63	0.024	6630	320	1.2	3	100	0.024	6830	315	1.2	3	163	0.024	17240	830	1.2	3	313	0.027	33210	1792	1.2	3
4	63	0.032	4970	320	1.6	4	100	0.032	4970	315	1.6	4	163	0.032	12930	830	1.6	4	313	0.036	24910	1792	1.6	4
5	63	0.040	3980	320	2.0	5	100	0.040	3980	315	2.0	5	163	0.040	10350	830	2.0	5	313	0.045	19930	1792	2.0	5
6	63	0.048	3320	320	2.4	6	100	0.048	3320	315	2.4	6	163	0.048	8260	830	2.4	6	313	0.054	16610	1792	2.4	6
8	63	0.064	2490	320	3.2	8	100	0.064	2490	315	3.2	8	163	0.064	6470	830	3.2	8	313	0.072	12450	1792	3.2	8
10	63	0.080	1990	320	4.0	10	100	0.080	1990	315	4.0	10	163	0.080	5170	830	4.0	10	313	0.090	9960	1792	4.0	10
12	63	0.096	1660	320	4.8	12	100	0.096	1660	315	4.8	12	163	0.096	4310	830	4.8	12	313	0.108	8300	1792	4.8	12
16	63	0.128	1240	320	6.4	16	100	0.128	1240	315	6.4	16	163	0.128	3230	830	6.4	16	313	0.144	6230	1792	6.4	16
20	63	0.160	990	320	8.0	20	100	0.160	990	315	8.0	20	163	0.160	2590	830	8.0	20	313	0.180	4980	1792	8.0	20

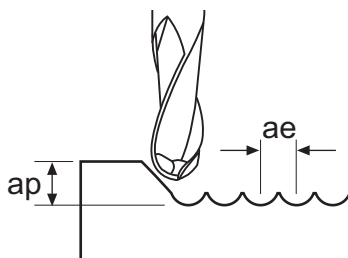
CODE: 202-402 SIDE MILLING

Material	Titanium - ТИТАН						Aluminum-Plastic - АЛЮМИНИЙ-ПЛАСТИК					
	Hard						Soft					
	Diameter	Vc (media)	Fz	n	Vf	ae	ap	Vc (media)	Fz	n	Vf	ae
1.0	75	0.007	23870	335	0.3	1	500	0.011	159150	3500	0.3	1
2.0	75	0.014	11940	335	0.6	2	500	0.022	79580	3500	0.6	2
3.0	75	0.021	7960	335	0.9	3	500	0.033	53050	3500	0.9	3
4.0	75	0.028	5970	335	1.2	4	500	0.044	39790	3500	1.2	4
5.0	75	0.035	4770	335	1.5	5	500	0.055	31830	3500	1.5	5
6.0	75	0.042	3980	335	1.8	6	500	0.066	26530	3500	1.8	6
8.0	75	0.056	2980	335	2.4	8	500	0.088	19890	3500	2.4	8
1.0	75	0.070	2390	335	3	10	500	0.110	15920	3500	3	10
1.2	75	0.084	1990	335	3.6	12	500	0.013	13260	3500	3.6	12
1.6	75	0.112	1490	335	4.8	16	500	0.176	9550	3500	4.8	16
20.0	75	0.140	1190	335	6	20	500	0.220	7960	3500	6	20



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: 200R - 200RT - 200RL - 200RLT - 201R - 300CR - 300R - 300RT - 300RLT - 400R - 400RT - 400RLT - 401
ROUGHING - STANDARD CUTTING SPEED

MATERIAL	Steel - СТАЛЬ											
	< 170 HB				< 50 HRC				< 60 HRC			
	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

CODE: 200R - 200RT - 200RL - 200RLT - 201R - 300CR - 300R - 300RT - 300RLT - 400R - 400RT - 400RLT - 401

MATERIAL	Copper - МЕДЬ				Titanium - ТИТАН				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ			
	< 170 HB				< 50 HRC				< 60 HRC			
	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

CODE: 200R - 200RT - 200RL - 200RLT - 201R - 300CR - 300R - 300RT - 300RLT - 400R - 400RT - 400RLT - 401

MATERIAL	Super Alloy - СУПЕР СПЛАВ				Cast Iron - ЧУГУН							
					Lamellair - ЛАМЕЛАР				Nodulaire - ЧУГУН			
	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

HSC

= Standard Cutting Speed X 1,4

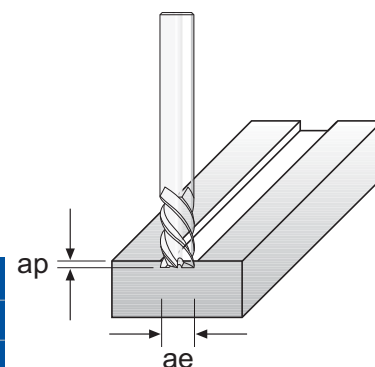
REZNÉ PARAMETRE

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řežná rychlost

CODE: 200 - 200T - 200D - 200DT - 200S - 200ST - 201 - 210
300 - 300T - 300C - 400 - 400T - 400D - 400DT - 401 - 410

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



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

HSC = Standard Cutting Speed X 2

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

CODE: T2204R SIDE MILLING

MATERIAL	Aluminum		Cast Aluminum		Steel - СТАЛЬ								Inox		Cast Iron - ЧУГУН	
HARDNESS			>10%Si		<500N		<750N		<900N		<1100N		<900N			
Ø	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC	FZ
5	350	0.023	250	0.023	160	0.023	140	0.023	130	0.023	80	0.023	90	0.023	120	0.023
6	350	0.033	250	0.033	160	0.033	140	0.033	130	0.033	80	0.033	90	0.033	120	0.033
8	350	0.045	250	0.045	160	0.045	140	0.045	130	0.045	80	0.045	90	0.045	120	0.045
10	350	0.060	250	0.060	160	0.060	140	0.060	130	0.060	80	0.060	90	0.060	120	0.060
12	350	0.080	250	0.080	160	0.080	140	0.080	130	0.080	80	0.080	90	0.080	120	0.080
14	350	0.080	250	0.080	160	0.080	140	0.080	130	0.080	80	0.080	90	0.080	120	0.080
16	350	0.100	250	0.100	160	0.100	140	0.100	130	0.100	80	0.100	90	0.100	120	0.100
18	350	0.100	250	0.100	160	0.100	140	0.100	130	0.100	80	0.100	90	0.100	120	0.100
20	350	0.120	250	0.120	160	0.120	140	0.120	130	0.120	80	0.120	90	0.120	120	0.120

CODE: T2204R SLOT MILLING

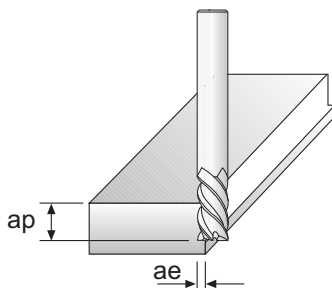
MATERIAL	Aluminum		Cast Aluminum		Steel - СТАЛЬ								Inox		Cast Iron - ЧУГУН	
HARDNESS			>10%Si		<500N		<750N		<900N		<1100N		<900N			
Ø	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm	VC m/'	FZ mm
5	350	0.025	250	0.025	160	0.025	140	0.025	130	0.025	80	0.025	90	0.025	120	0.025
6	350	0.037	250	0.037	160	0.037	140	0.037	130	0.037	80	0.037	90	0.037	120	0.037
8	350	0.051	250	0.051	160	0.051	140	0.051	130	0.051	80	0.051	90	0.051	120	0.051
10	350	0.068	250	0.068	160	0.068	140	0.068	130	0.068	80	0.068	90	0.068	120	0.068
12	350	0.090	250	0.090	160	0.090	140	0.090	130	0.090	80	0.090	90	0.090	120	0.090
14	350	0.090	250	0.090	160	0.090	140	0.090	130	0.090	80	0.090	90	0.090	120	0.090
16	350	0.113	250	0.113	160	0.113	140	0.113	130	0.113	80	0.113	90	0.113	120	0.113
18	350	0.113	250	0.113	160	0.113	140	0.113	130	0.113	80	0.113	90	0.113	120	0.113
20	350	0.135	250	0.135	160	0.135	140	0.135	130	0.135	80	0.135	90	0.135	120	0.135

REZNÉ PARAMETRE

Cutting speed

Richtwerte - Paramètres

Режимы обработки - Режимы обработки



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: 300C - 400 - 400T - 410

MATERIAL	Steel - СТАЛЬ											
HARDNESS	< 170 HRC				< 50 HRC				HRC 48 - 56			
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

CODE: 300C - 400 - 400T - 410

MATERIAL	Cast Iron - ЧУГУН								Copper - МЕДЬ			
HARDNESS	Nodulaire - ЧУГУН				Lamellaire - ЛАМЕЛАР							
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	300	0.016	0.3 x d	1 x d
4	110	0.026	0.1 x d	1 x d	120	0.034	0.2 x d	1 x d	300	0.032	0.3 x d	1 x d
5	110	0.026	0.1 x d	1 x d	120	0.034	0.2 x d	1 x d	300	0.032	0.3 x d	1 x d
6	110	0.026	0.1 x d	1 x d	120	0.034	0.2 x d	1 x d	300	0.032	0.3 x d	1 x d
8	110	0.052	0.1 x d	1 x d	120	0.068	0.2 x d	1 x d	300	0.064	0.3 x d	1 x d
10	110	0.052	0.1 x d	1 x d	120	0.068	0.2 x d	1 x d	300	0.064	0.3 x d	1 x d
12	110	0.078	0.1 x d	1 x d	120	0.102	0.2 x d	1 x d	300	0.096	0.3 x d	1 x d
14 - 18	110	0.078	0.1 x d	1 x d	120	0.102	0.2 x d	1 x d	300	0.096	0.3 x d	1 x d
20 - 25	110	0.130	0.1 x d	1 x d	120	0.170	0.2 x d	1 x d	300	0.160	0.3 x d	1 x d

CODE: 300C - 400 - 400T - 410

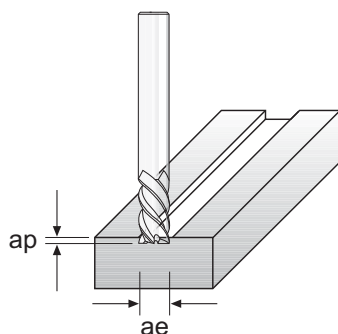
MATERIAL	Titanium - ТИТАН				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ				Super Alloy - СУПЕР СПЛАВ			
HARDNESS												
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
1 - 3	80	0.011	0.1 x d	1 x d	70	0.012	0.1 x d	1 x d	30	0.012	0.08 x d	1 x d
4	80	0.023	0.1 x d	1 x d	70	0.024	0.1 x d	1 x d	30	0.024	0.08 x d	1 x 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

REZNÉ PARAMETRE

Cutting speed

Richtwerte - Paramètres

Режимы обработки - Режимы обработки



CODE: 300 - 300T - 450 - 450T - 453 - 500 - 500T

MATERIAL	Aluminium - АЛЮМИНИЙ				Copper - МЕДЬ			
HARDNESS								
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	Max	0.010	1 x d	0.4 x d	200	0.009	1 x d	0.3 x d
4	Max	0.020	1 x d	0.4 x d	200	0.018	1 x d	0.3 x d
5	Max	0.020	1 x d	0.4 x d	200	0.018	1 x d	0.3 x d
6	Max	0.020	1 x d	0.4 x d	200	0.018	1 x d	0.3 x d
8	Max	0.040	1 x d	0.4 x d	200	0.036	1 x d	0.3 x d
10	Max	0.040	1 x d	0.4 x d	200	0.036	1 x d	0.3 x d
12	Max	0.060	1 x d	0.4 x d	200	0.054	1 x d	0.3 x d
14 - 18	Max	0.060	1 x d	0.4 x d	200	0.054	1 x d	0.3 x d
20 - 25	Max	0.100	1 x d	0.4 x d	200	0.090	1 x d	0.3 x d

CODE: 300 - 300T - 410 - 450 - 450T - 453 - 500 - 500T

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

CODE: 450 - 450T - 453 - 500 - 500T

MATERIAL	Super Alloy - СУПЕР СПЛАВ				Steel - СТАЛЬ							
HARDNESS					< 40 HRC				< 50 HRC			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	20	0.006	1 x d	0.08 x d	110	0.008	1 x d	0.1 x d	90	0.007	1 x d	0.1 x d
4	20	0.012	1 x d	0.08 x d	110	0.016	1 x d	0.1 x d	90	0.012	1 x d	0.1 x d
5	20	0.012	1 x d	0.08 x d	110	0.016	1 x d	0.1 x d	90	0.012	1 x d	0.1 x d
6	20	0.012	1 x d	0.08 x d	110	0.016	1 x d	0.1 x d	90	0.012	1 x d	0.1 x d
8	20	0.025	1 x d	0.08 x d	110	0.032	1 x d	0.1 x d	90	0.024	1 x d	0.1 x d
10	20	0.025	1 x d	0.08 x d	110	0.032	1 x d	0.1 x d	90	0.024	1 x d	0.1 x d
12	20	0.037	1 x d	0.08 x d	110	0.048	1 x d	0.1 x d	90	0.036	1 x d	0.1 x d
14 - 18	20	0.037	1 x d	0.08 x d	110	0.048	1 x d	0.1 x d	90	0.036	1 x d	0.1 x d
20 - 25	20	0.062	1 x d	0.08 x d	110	0.080	1 x d	0.1 x d	90	0.060	1 x d	0.1 x d

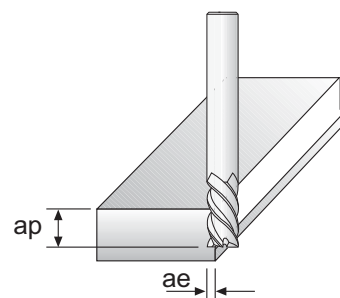
REZNÉ PARAMETRE

Cutting speed

Richtwerte - Paramètres - Режимы обработки - Řezná rychlost

CODE: 300 - 300T - 450 - 450T - 453 - 500 - 500T

MATERIAL	Aluminium - АЛЮМИНИЙ				Copper - МЕДЬ			
HARDNESS								
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	Max	0.018	0.4 x d	1 x d	300	0.016	0.3 x d	1 x d
4	Max	0.036	0.4 x d	1 x d	300	0.032	0.3 x d	1 x d
5	Max	0.036	0.4 x d	1 x d	300	0.032	0.3 x d	1 x d
6	Max	0.036	0.4 x d	1 x d	300	0.032	0.3 x d	1 x d
8	Max	0.072	0.4 x d	1 x d	300	0.064	0.3 x d	1 x d
10	Max	0.072	0.4 x d	1 x d	300	0.064	0.3 x d	1 x d
12	Max	0.108	0.4 x d	1 x d	300	0.096	0.3 x d	1 x d
14 - 18	Max	0.108	0.4 x d	1 x d	300	0.096	0.3 x d	1 x d
20 - 25	Max	0.180	0.4 x d	1 x d	300	0.160	0.3 x d	1 x d



CODE: 410 - 450 - 450T - 453 - 500 - 500T

MATERIAL	Titanium - ТИТАН				Stainless Steel - НЕРЖАВЕЮЩАЯ СТАЛЬ			
HARDNESS								
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	80	0.011	0.1 x d	1 x d	70	0.012	0.1 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
5	80	0.023	0.1 x d	1 x d	70	0.024	0.1 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
8	80	0.046	0.1 x d	1 x d	70	0.047	0.1 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
12	80	0.068	0.1 x d	1 x d	70	0.071	0.1 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
20 - 25	80	0.114	0.1 x d	1 x d	70	0.118	0.1 x d	1 x d

CODE: 450 - 450T - 453 - 500 - 500T

MATERIAL	Super Alloy - СУПЕР СПЛАВ				Steel - СТАЛЬ							
HARDNESS					< 35 HRC				< 50 HRC			
Ø	Vc	Fz	ae	ap	Vc	Fz	ae	ap	Vc	Fz	ae	ap
3	30	0.012	0.08 x d	1 x d	130	0.012	0.2 x d	1 x d	110	0.013	0.1 x d	1 x d
4	30	0.024	0.08 x d	1 x d	130	0.024	0.2 x d	1 x d	110	0.026	0.1 x d	1 x d
5	30	0.024	0.08 x d	1 x d	130	0.024	0.2 x d	1 x d	110	0.026	0.1 x d	1 x d
6	30	0.024	0.08 x d	1 x d	130	0.024	0.2 x d	1 x d	110	0.026	0.1 x d	1 x d
8	30	0.048	0.08 x d	1 x d	130	0.048	0.2 x d	1 x d	110	0.052	0.1 x d	1 x d
10	30	0.048	0.08 x d	1 x d	130	0.048	0.2 x d	1 x d	110	0.052	0.1 x d	1 x d
12	30	0.072	0.08 x d	1 x d	130	0.072	0.2 x d	1 x d	110	0.078	0.1 x d	1 x d
14 - 18	30	0.072	0.08 x d	1 x d	130	0.072	0.2 x d	1 x d	110	0.078	0.1 x d	1 x d
20 - 25	30	0.120	0.08 x d	1 x d	130	0.120	0.2 x d	1 x d	110	0.130	0.1 x d	1 x d

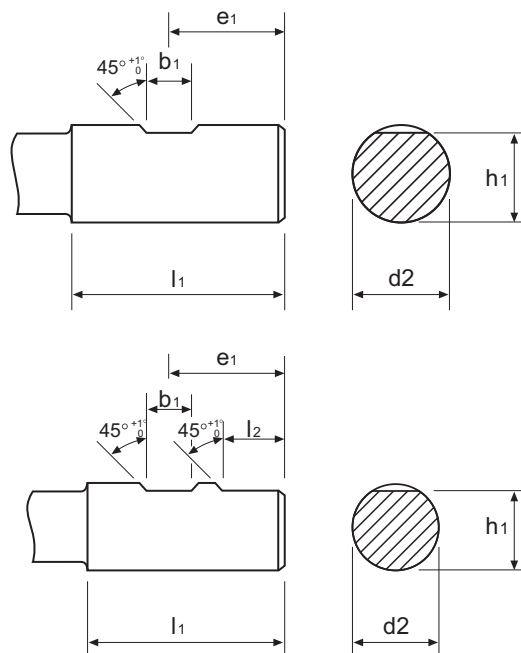
Dimensioni gambi weldon DIN 6535 HB a richiesta

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

