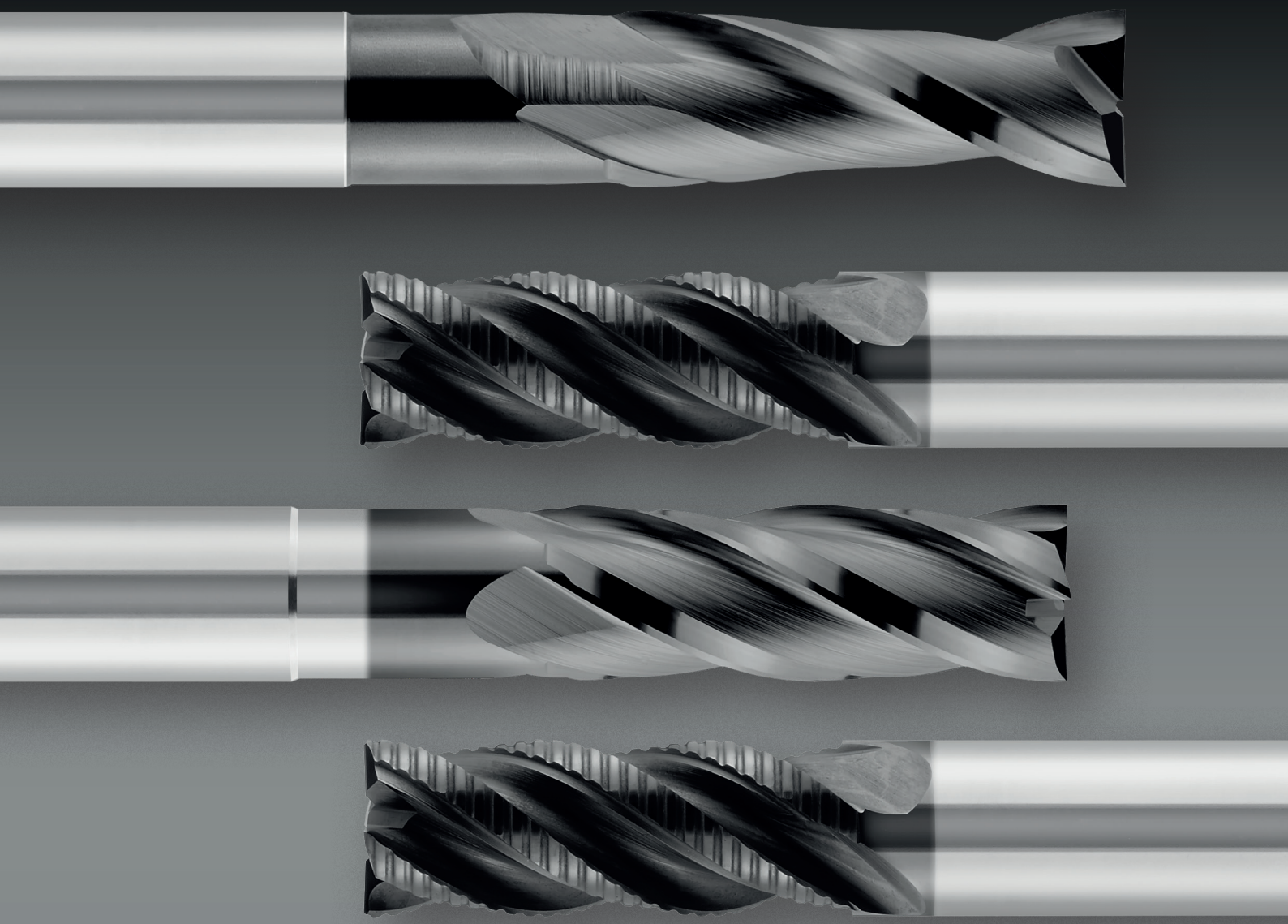


GU SERIE STANDARD

Frese in metallo duro integrale / Solid carbide end mills

generalutensili

ACCREDIA L'ENTE DI ACCREDITAMENTO

PERRY JOHNSON REGISTRARS, INC.

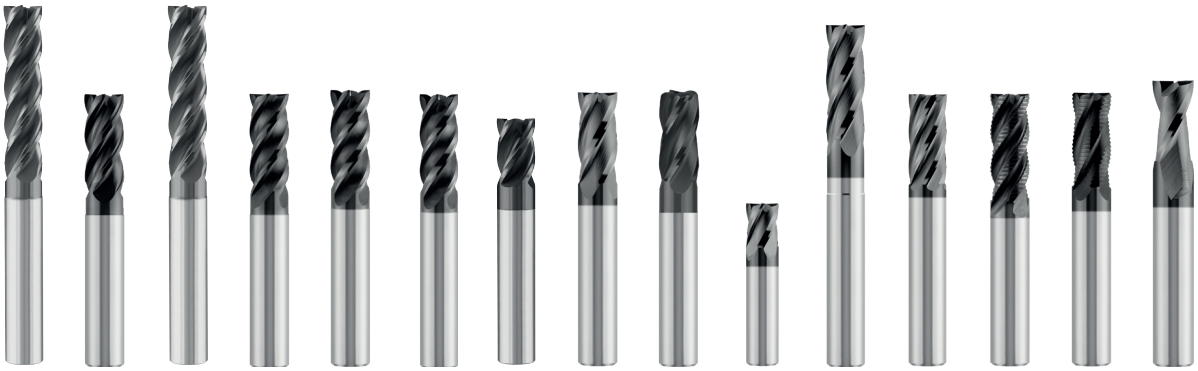
generalutensili.com

GU

SERIE STANDARD

Frese in metallo duro integrale

Generalutensili presenta la nuova linea GU STANDARD una serie di utensili con elica differenziata con divisione irregolare dei taglienti, e standard, per la lavorazione di acciai generici, acciai inossidabili ferritici ed austenitici e leghe leggere, sia corte che lunghe. Tutte le frese sono rivestite con Alcrona Pro.



	GU100	GU101	GU102	GU103	GU104	GU105	GU106	GU107	GU108	GU109	GU110	GU111	GU112	GU113	GU114
Ø (D mm)	5,0 ÷ 20,0	3,0 ÷ 20,0	5,0 ÷ 20,0	3,0 ÷ 20,0	4,0 ÷ 20,0	5,0 ÷ 20,0	3,0 ÷ 20,0	2,0 ÷ 20,0	2,0 ÷ 12,0	2,0 ÷ 10,0	3,0 ÷ 16,0	6,0 ÷ 20,0	4,0 ÷ 16,0	4,0 ÷ 20,0	2,0 ÷ 20,0
Z	4	4	4	4	4	4	4	4	4	4	4	6	4	4	2
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X
	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	-	-	X	X	-	X		X
ALLUMINIO RAME PLASTICHE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACCIAIO INOX TITANIO	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X
ACCIAIO GHISA INOX	X	-	-	X	X	x	X	X	X	X	X	X	X	X	X
Pagina Page	4	4	5	5	6	7	8	9	10	10	11	11	12	12	13

INDICE / INDEX

04	**Gamma prodotti** Product range
22	**Parametri di lavoro** Working parameters
27	**Legenda** Legend

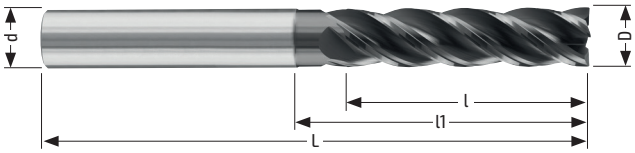
Solid carbide end mills

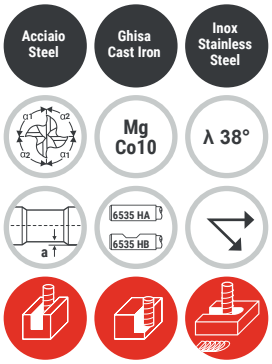
General Utensili presents the new line GU Standard: a line with variable helix with inequal flute spacing, and standard, for machining of generic steels, ferritic and austenic stainless steels, long and short light alloys.

	GU115	GU116	GU117	GU118	GU119	GU120	GU1121	GU122	GU123	GU124	GU125	GU126	GU127	GU128	GU129	GU129
	2,0 ÷ 12,0	2,0 ÷ 20,0	6,0 ÷ 16,0	2,0 ÷ 20,0	4,0 ÷ 16,0	2,0 ÷ 10,0	2,0 ÷ 20,0	4,0 ÷ 16,0	2,0 ÷ 20,0	2,0 ÷ 10,0	4,0 ÷ 16,0	4,0 ÷ 20,0	3,0 ÷ 20,0	2,0 ÷ 20,0	3,0 ÷ 20,0	3,0 ÷ 20,0
	2	4	4	2	2	2	2	2	3	3	3	2	3/4	3	4/6	4/6
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X
	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-
	X	-	-	-	-	X	X	X	X	X	X	X	-	X	-	-
	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-
	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
	X	-	-	-	-	-	-	X	X	X	X	X	X	X	-	-
	X	-	-	-	-	X	X	X	X	X	X	X	X	X	-	-
	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-
	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
	X	X	X	X	X	X	X	X	X	X	X	-	-	-	X	X
	14	14	15	15	16	16	17	17	18	18	19	19	20	20	21	21

GU100

FRESA ELICOIDALE LUNGA RIVESTITA
COATED HELICAL END MILL LONG VERSION



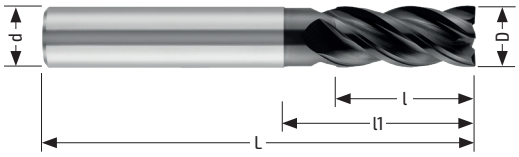


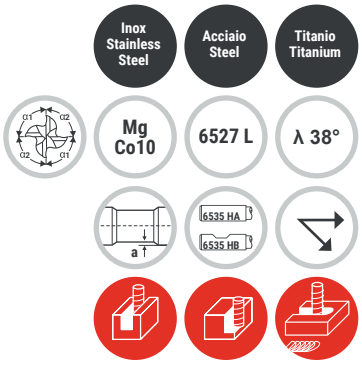
45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
5,0	20	25	4	6	74	0,10	0,10	GU100SMLD05	GU100SMLWD05
6,0	24	30	4	6	74	0,15	0,10	GU100SMLD06	GU100SMLWD06
8,0	32	40	4	8	80	0,15	0,15	GU100SMLD08	GU100SMLWD08
10,0	40	46	4	10	87	0,15	0,15	GU100SMLD10	GU100SMLWD10
12,0	48	58	4	12	105	0,20	0,15	GU100SMLD12	GU100SMLWD12
14,0	48	58	4	14	105	0,20	0,15	GU100SMLD14	GU100SMLWD14
16,0	64	68	4	16	125	0,20	0,20	GU100SMLD16	GU100SMLWD16
20,0	70	80	4	20	160	0,20	0,20	GU100SMLD20	GU100SMLWD20

GU101

FRESA ELICOIDALE RIVESTITA PER INOX
COATED HELICAL END MILL FOR INOX



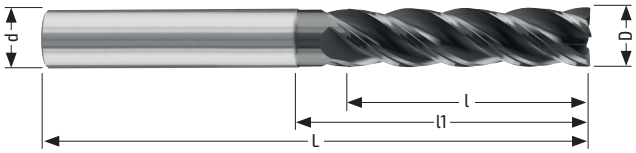


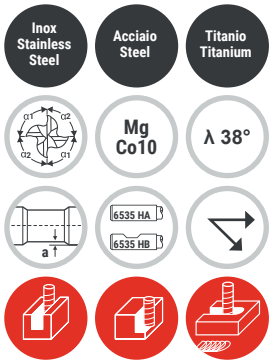
45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
3,0	8	11	4	6	57	0,10	0,10	GU101SMD03	GU101SMWD03
4,0	11	16	4	6	57	0,10	0,10	GU101SMD04	GU101SMWD04
5,0	13	18	4	6	57	0,10	0,10	GU101SMD05	GU101SMWD05
6,0	13	20	4	6	57	0,15	0,10	GU101SMD06	GU101SMWD06
8,0	19	25	4	8	63	0,15	0,15	GU101SMD08	GU101SMWD08
10,0	22	30	4	10	72	0,15	0,15	GU101SMD10	GU101SMWD10
12,0	26	36	4	12	83	0,20	0,15	GU101SMD12	GU101SMWD12
14,0	26	36	4	14	83	0,20	0,15	GU101SMD14	GU101SMWD14
16,0	32	42	4	16	92	0,20	0,20	GU101SMD16	GU101SMWD16
18,0	32	42	4	18	92	0,20	0,20	GU101SMD18	GU101SMWD18
20,0	38	52	4	20	104	0,20	0,20	GU101SMD20	GU101SMWD20

GU102

FRESA ELICOIDALE LUNGA RIVESTITA PER INOX
COATED HELICAL END MILL FOR
STAINLESS STELL LONG VERSION



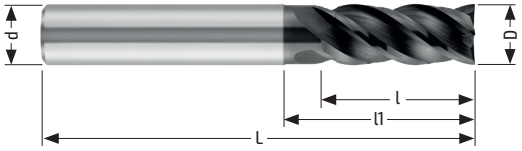


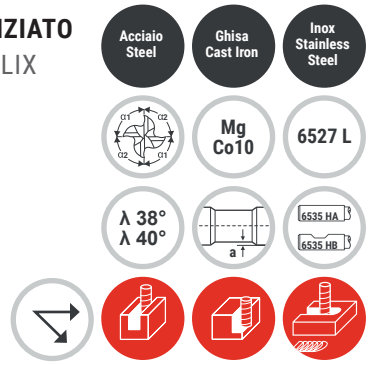
45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
5,0	20	25	4	6	74	0,10	0,10	GU102SMLD05	GU102SMLWD05
6,0	24	30	4	6	74	0,15	0,10	GU102SMLD06	GU102SMLWD06
8,0	32	40	4	8	80	0,15	0,15	GU102SMLD08	GU102SMLWD08
10,0	40	46	4	10	87	0,15	0,15	GU102SMLD10	GU102SMLWD10
12,0	48	58	4	12	105	0,20	0,15	GU102SMLD12	GU102SMLWD12
14,0	48	58	4	14	105	0,20	0,15	GU102SMLD14	GU102SMLWD14
16,0	64	68	4	16	125	0,20	0,20	GU102SMLD16	GU102SMLWD16
20,0	70	80	4	20	160	0,20	0,20	GU102SMLD20	GU102SMLWD20

GU103

FRESA ELICOIDALE RIVESTITA PASSO DIFFERENZIATO
COATED HELICAL END MILL WITH VARIABLE HELIX



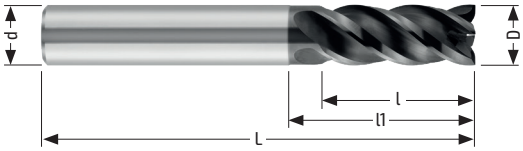


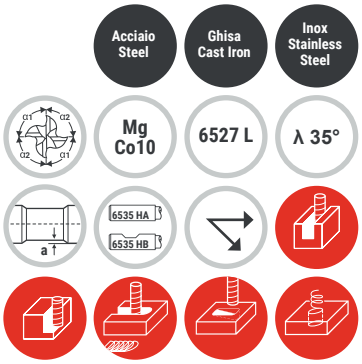
45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
3,0	8		4	6	57		0,05	GU103SMD03	GU103SMWD03
4,0	11	16	4	6	57	0,10	0,05	GU103SMD04	GU103SMWD04
5,0	13	18	4	6	57	0,10	0,05	GU103SMD05	GU103SMWD05
6,0	13	20	4	6	57	0,15	0,05	GU103SMD06	GU103SMWD06
8,0	19	25	4	8	63	0,15	0,05	GU103SMD08	GU103SMWD08
10,0	22	30	4	10	72	0,15	0,05	GU103SMD10	GU103SMWD10
12,0	26	36	4	12	83	0,20	0,05	GU103SMD12	GU103SMWD12
14,0	26	36	4	14	83	0,20	0,05	GU103SMD14	GU103SMWD14
16,0	32	42	4	16	92	0,20	0,05	GU103SMD16	GU103SMWD16
18,0	32	42	4	18	92	0,20	0,05	GU103SMD18	GU103SMWD18
20,0	38	52	4	20	104	0,20	0,05	GU103SMD20	GU103SMWD20

GU104

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL



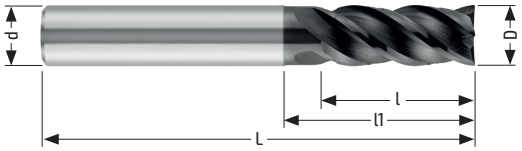


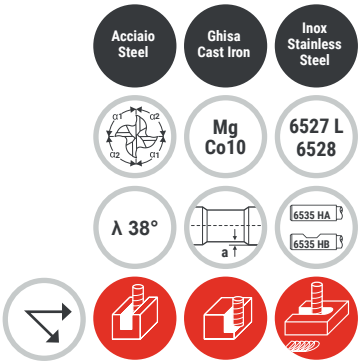
45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
4,0	11	15	4	6	57	0,15	0,20	GU104SMD04	GU104SMWD04
5,0	13	18	4	6	57	0,15	0,20	GU104SMD05	GU104SMWD05
6,0	13	20	4	6	57	0,15	0,25	GU104SMD06	GU104SMWD06
8,0	19	25	4	8	63	0,15	0,30	GU104SMD08	GU104SMWD08
10,0	22	30	4	10	72	0,15	0,35	GU104SMD10	GU104SMWD10
12,0	26	36	4	12	83	0,20	0,40	GU104SMD12	GU104SMWD12
16,0	32	42	4	16	92	0,20	0,45	GU104SMD16	GU104SMWD16
20,0	38	52	4	20	104	0,20	0,50	GU104SMD20	GU104SMWD20

GU105

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL





90°

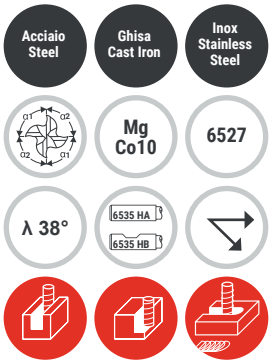
D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
3,0	8	-	4	3	38	-	-	GU105D03	-
3,0	8	11	4	6	57	0,10	-	GU105D03G6	GU105WD03G6
4,0	11	16	4	4	50	0,10	-	GU105D04	-
4,0	11	16	4	6	57	0,10	-	GU105D04G6	GU105WD04G6
5,0	13	18	4	5	50	0,10	-	GU105D05	-
5,0	13	18	4	6	57	0,10	-	GU105D05G6	GU105WD05G6
6,0	13	20	4	6	57	0,15	-	GU105D06	GU105WD06
8,0	19	25	4	8	63	0,15	-	GU105D08	GU105WD08
10,0	22	30	4	10	72	0,15	-	GU105D10	GU105WD10
12,0	26	36	4	12	83	0,20	-	GU105D12	GU105WD12
14,0	26	36	4	14	83	0,20	-	GU105D14	GU105WD14
16,0	32	42	4	16	92	0,20	-	GU105D16	GU105WD16
18,0	32	42	4	18	92	0,20	-	GU105D18	GU105WD18
20,0	38	52	4	20	104	0,20	-	GU105D20	GU105WD20

45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
3,0	8	-	4	3	38	-		GU105SMD03	-
3,0	8	11	4	6	57	0,10	0,05	GU105SMD03G6	GU105SMWD03G6
4,0	11	16	4	4	50	0,10	0,10	GU105SMD04	-
4,0	11	16	4	6	57	0,10	0,10	GU105SMD04G6	GU105SMWD04G6
5,0	13	18	4	5	50	0,10	0,10	GU105SMD05	-
5,0	13	18	4	6	57	0,10	0,10	GU105SMD05G6	GU105SMWD05G6
6,0	13	20	4	6	57	0,15	0,10	GU105SMD06	GU105SMWD06
8,0	19	25	4	8	63	0,15	0,15	GU105SMD08	GU105SMWD08
10,0	22	30	4	10	72	0,15	0,15	GU105SMD10	GU105SMWD10
12,0	26	36	4	12	83	0,20	0,15	GU105SMD12	GU105SMWD12
14,0	26	36	4	14	83	0,20	0,15	GU105SMD14	GU105SMWD14
16,0	32	42	4	16	92	0,20	0,20	GU105SMD16	GU105SMWD16
18,0	32	42	4	18	92	0,20	0,20	GU105SMD18	GU105SMWD18
20,0	38	52	4	20	104	0,20	0,20	GU105SMD20	GU105SMWD20

GU106

FRESA ELICOIDALE CORTA RIVESTITA
COATED HELICAL END MILL SHORT VERSION



90°

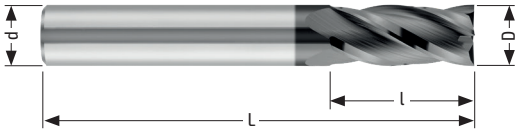
D h10	l ap	Z	d h6	L	45° +0,05/+0	Normale	Weldon
3,0	6	4	6	54	-	GU106CD03	GU106CWD03
4,0	8	4	6	54	-	GU106CD04	GU106CWD04
5,0	9	4	6	54	-	GU106CD05	GU106CWD05
6,0	10	4	6	54	-	GU106CD06	GU106CWD06
8,0	12	4	8	57	-	GU106CD08	GU106CWD08
10,0	14	4	10	66	-	GU106CD10	GU106CWD10
12,0	16	4	12	73	-	GU106CD12	GU106CWD12
14,0	18	4	14	75	-	GU106CD14	GU106CWD14
16,0	22	4	16	82	-	GU106CD16	GU106CWD16
18,0	24	4	18	84	-	GU106CD18	GU106CWD18
20,0	26	4	20	92	-	GU106CD20	GU106CWD20

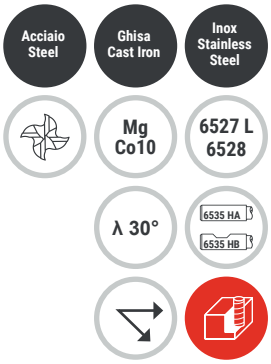
45°

D h10	l ap	Z	d h6	L	45° +0,05/+0	Normale	Weldon
3,0	6	4	6	54	0,05	GU106SMCD03	GU106SMCWD03
4,0	8	4	6	54	0,10	GU106SMCD04	GU106SMCWD04
5,0	9	4	6	54	0,10	GU106SMCD05	GU106SMCWD05
6,0	10	4	6	54	0,10	GU106SMCD06	GU106SMCWD06
8,0	12	4	8	57	0,15	GU106SMCD08	GU106SMCWD08
10,0	14	4	10	66	0,15	GU106SMCD10	GU106SMCWD10
12,0	16	4	12	73	0,15	GU106SMCD12	GU106SMCWD12
14,0	18	4	14	75	0,15	GU106SMCD14	GU106SMCWD14
16,0	22	4	16	82	0,20	GU106SMCD16	GU106SMCWD16
18,0	24	4	18	84	0,20	GU106SMCD18	GU106SMCWD18
20,0	26	4	20	92	0,20	GU106SMCD20	GU106SMCWD20

GU107

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL



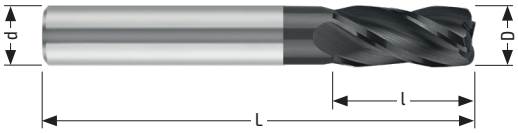


90°

D h10	l ap	Z	d h6	L	Normale	Weldon
2,00	7	4	4	50	GU107D02	-
2,50	8	4	4	50	GU107D02.5	-
3,00	8	4	4	50	GU107D03	-
3,50	10	4	4	50	GU107D03.5	-
4,00	11	4	4	50	GU107D04	-
4,50	11	4	5	50	GU107D04.5	-
5,00	13	4	5	50	GU107D05	-
5,50	13	4	6	57	GU107D05.5	GU107WD05.5
6,00	13	4	6	57	GU107D06	GU107WD06
6,50	16	4	7	60	GU107D06.5	GU107WD06.5
7,00	16	4	7	60	GU107D07	GU107WD07
7,50	19	4	8	63	GU107D07.5	GU107WD07.5
8,00	19	4	8	63	GU107D08	GU107WD08
8,50	19	4	9	67	GU107D08.5	GU107WD08.5
9,00	19	4	9	67	GU107D09	GU107WD09
9,50	22	4	10	72	GU107D09.5	GU107WD9.5
10,00	22	4	10	72	GU107D10	GU107WD10
11,00	26	4	11	83	GU107D11	GU107WD11
12,00	26	4	12	83	GU107D12	GU107WD12
13,00	26	4	13	83	GU107D13	GU107WD13
14,00	26	4	14	83	GU107D14	GU107WD14
15,00	32	4	15	92	GU107D15	GU107WD15
16,00	32	4	16	92	GU107D16	GU107WD16
18,00	32	4	18	92	GU107D18	GU107WD18
20,00	38	4	20	104	GU107D20	GU107WD20

GU108

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL



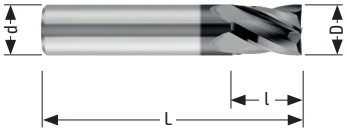
Acciaio Steel | Ghisa Cast Iron | Inox Stainless Steel | Mg Co10 | 6527 L 6528 | λ 30° | 6535 HA | 6535 HB

Cr

D h10	l ap	Z	d h6	L	CR	Normale	Weldon
2,00	7	4	4	50	0,50	GU108D02R05	-
3,00	8	4	4	50	0,50	GU108D03R05	-
4,00	11	4	4	50	0,50	GU108D04R05	-
5,00	13	4	5	50	1,00	GU108D05R10	-
6,00	13	4	6	57	0,50	GU108D06R05	GU108WD06R05
6,00	13	4	6	57	1,00	GU108D06R10	GU108WD06R10
8,00	19	4	8	63	0,50	GU108D08R05	GU108WD08R05
8,00	19	4	8	63	1,00	GU108D08R10	GU108WD08R10
10,00	22	4	10	72	0,50	GU108D10R05	GU108WD10R05
10,00	22	4	10	72	1,00	GU108D10R10	GU108WD10R10
10,00	22	4	10	72	2,00	GU108D10R20	GU108WD10R20
12,00	26	4	12	83	0,50	GU108D12R05	GU108WD12R05
12,00	26	4	12	83	1,00	GU108D12R10	GU108WD12R10
12,00	26	4	12	83	2,00	GU108D12R20	GU108WD12R20

GU109

FRESA ELICOIDALE EXTRA CORTA RIVESTITA
COATED HELICAL END MILL EXTRA SHORT VERSION



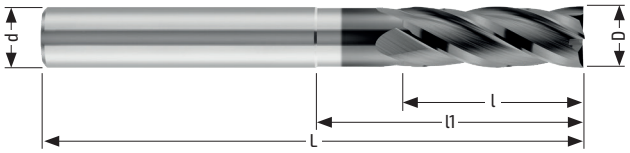
Acciaio Steel | Ghisa Cast Iron | Inox Stainless Steel | Mg Co10 | λ 30° | 6535 HA

90°

D h10	l ap	Z	d h6	L	Normale
2,0	4	4	6	38	GU109XCD02
3,0	5	4	6	38	GU109XCD03
4,0	7	4	6	38	GU109XCD04
5,0	8	4	6	38	GU109XCD05
6,0	8	4	6	38	GU109XCD06
8,0	11	4	8	43	GU109XCD08
10,0	13	4	10	50	GU109XCD10

GU110

FRESA ELICOIDALE LUNGA RIVESTITA
COATED HELICAL END MILL LONG VERSION



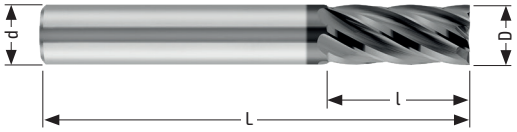
Acciaio Steel | Ghisa Cast Iron | Inox Stainless Steel | Mg Co10 | λ 30° | 6535 HA | 6535 HB

90°

D h10	l ap	l1	Z	d h6	L	a	Normale	Weldon
3,0	14	-	4	3	62	-	GU110LD03	-
4,0	16	-	4	4	62	-	GU110LD04	-
5,0	20	-	4	5	62	-	GU110LD05	-
6,0	20	30	4	6	78	0,15	GU110LD06	GU110LWD06
8,0	25	35	4	8	78	0,15	GU110LD08	GU110LWD08
10,0	28	48	4	10	105	0,15	GU110LD10	GU110LWD10
12,0	32	52	4	12	105	0,20	GU110LD12	GU110LWD12
16,0	40	60	4	16	130	0,20	GU110LD16	GU110LWD16

GU111

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL



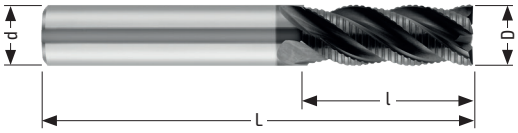
Acciaio Steel | Ghisa Cast Iron | Inox Stainless Steel | Mg Co10 | 6527 L | λ 30° | 6535 HA | 6535 HB

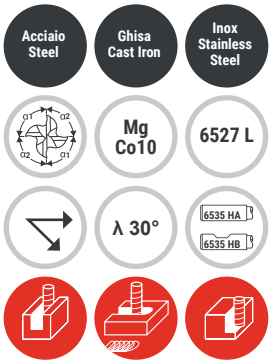
90°

D h10	l ap	Z	d h6	L	Normale	Weldon
6,0	13	6	6	57	GU111D06	GU111WD06
8,0	19	6	8	63	GU111D08	GU111WD08
10,0	22	6	10	72	GU111D10	GU111WD10
12,0	26	6	12	83	GU111D12	GU111WD12
14,0	26	6	14	83	GU111D14	GU111WD14
16,0	32	6	16	92	GU111D16	GU111WD16
20,0	38	6	20	104	GU111D20	GU111WD20

GU112

FRESA ELICOIDALE IRREGOLARE RIVESTITA
COATED HELICAL END MILL IRREGULAR VERSION



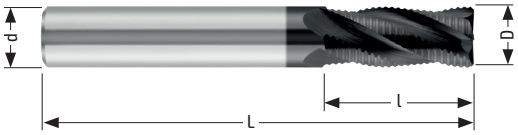


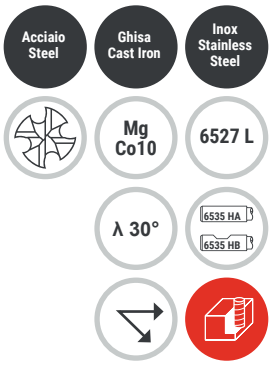
45°

D h10	l ap	Z	d h6	L	45° +0,05/+0	Normale	Weldon
4,0	13	4	6	57	0,40	GU112SMID04	GU112SMIWD04
5,0	13	4	6	57	0,50	GU112SMID05	GU112SMIWD05
6,0	13	4	6	57	0,50	GU112SMID06	GU112SMIWD06
8,0	19	4	8	63	0,50	GU112SMID08	GU112SMIWD08
10,0	22	4	10	72	0,50	GU112SMID10	GU112SMIWD10
12,0	26	4	12	83	0,50	GU112SMID12	GU112SMIWD12
16,0	32	4	16	92	0,60	GU112SMID16	GU112SMIWD16

GU113

FRESA ELICOIDALE RIVESTITA CON ROMPITRUCIOLO
COATED HELICAL END MILL WITHCHIP BRAKER



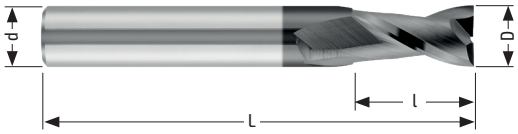


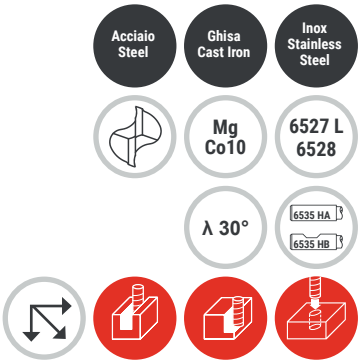
45°

D h10	l ap	Z	d h6	L	45° +0,05/+0	Normale	Weldon
4,0	13	4	6	57	0,40	GU113SMTD04	GU113SMTWD04
5,0	13	4	6	57	0,50	GU113SMTD05	GU113SMTWD05
6,0	13	4	6	57	0,50	GU113SMTD06	GU113SMTWD06
8,0	19	4	8	63	0,50	GU113SMTD08	GU113SMTWD08
10,0	22	4	10	72	0,50	GU113SMTD10	GU113SMTWD10
12,0	26	4	12	83	0,50	GU113SMTD12	GU113SMTWD12
16,0	32	4	16	92	0,60	GU113SMTD16	GU113SMTWD16
20,0	38	4	20	104	0,60	GU113SMTD20	GU113SMTWD20

GU114

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL VERSION



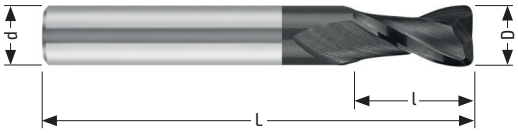


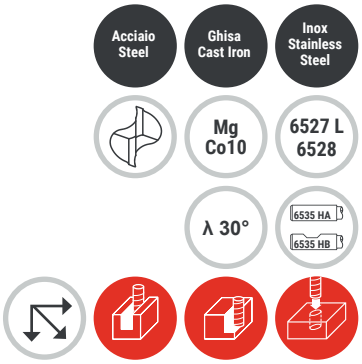
90°

D h10	l ap	Z	d h6	L	Normale	Weldon
2,0	5	2	4	50	GU114D02	-
2,5	7	2	4	50	GU114D02.5	-
3,0	7	2	4	50	GU114D03	-
3,5	7	2	4	50	GU114D03.5	-
4,0	8	2	4	50	GU114D04	-
4,5	8	2	5	50	GU114D04.5	-
5,0	10	2	5	50	GU114D05	-
5,5	10	2	6	57	GU114D05.5	GU114WD05.5
6,0	10	2	6	57	GU114D06	GU114WD06
7,0	13	2	7	60	GU114D07	GU114WD07
8,0	16	2	8	63	GU114D08	GU114WD08
9,0	16	2	9	67	GU114D09	GU114WD09
10,0	19	2	10	72	GU114D10	GU114WD10
11,0	22	2	11	83	GU114D11	GU114WD11
12,0	22	2	12	83	GU114D12	GU114WD12
13,0	22	2	13	83	GU114D13	GU114WD13
14,0	22	2	14	83	GU114D14	GU114WD14
15,0	26	2	15	92	GU114D15	GU114WD15
16,0	26	2	16	92	GU114D16	GU114WD16
17,0	26	2	17	92	GU114D17	GU114WD17
18,0	26	2	18	92	GU114D18	GU114WD18
19,0	26	2	19	92	GU114D19	GU114WD19
20,0	32	2	20	104	GU114D20	GU114WD20

GU115

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL VERSION



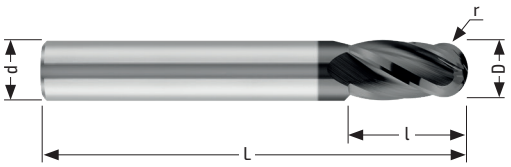


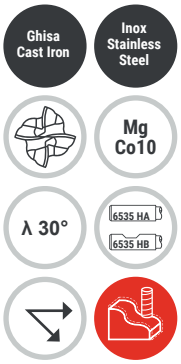
Cr

D h10	l ap	Z	d h6	L	CR	Normale	Weldon
2,0	5	2	4	50	0,50	GU115D02R05	-
3,0	7	2	4	50	0,50	GU115D03R05	-
4,0	8	2	4	50	0,50	GU115D04R05	-
5,0	10	2	5	50	1,00	GU115D05R10	-
6,0	10	2	6	57	0,50	GU115D06R05	GU115WD06R05
6,0	10	2	6	57	1,00	GU115D06R10	GU115WD06R10
8,0	16	2	8	63	0,50	GU115D08R05	GU115WD08R05
8,0	16	2	8	63	1,00	GU115D08R10	GU115WD08R10
10,0	19	2	10	72	0,50	GU115D10R05	GU115WD10R05
10,0	19	2	10	72	1,00	GU115D10R10	GU115WD10R10
10,0	19	2	10	72	2,00	GU115D10R20	GU115WD10R20
12,0	22	2	12	83	0,50	GU115D12R05	GU115WD12R05
12,0	22	2	12	83	1,00	GU115D12R10	GU115WD12R10
12,0	22	2	12	83	2,00	GU115D12R20	GU115WD12R20

GU116

FRESA ELICOIDALE SEMISFERICA
COATED HELICAL BALL NOSE END MILL



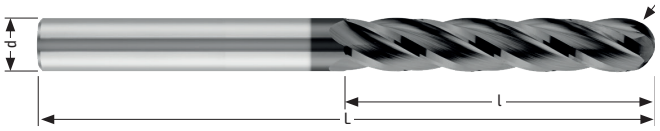


D h10	l ap	Z	d h6	L	r	Normale	Weldon
2,00	5	4	3	38	1,00	GU116SD02	-
3,00	7	4	3	38	1,50	GU116SD03	-
4,00	8	4	4	50	2,00	GU116SD04	-
5,00	10	4	5	50	2,50	GU116SD05	-
6,00	10	4	6	57	3,00	GU116SD06	GU116SWD06
7,00	13	4	7	60	3,50	GU116SD07	GU116SWD07
8,00	16	4	8	63	4,00	GU116SD08	GU116SWD08
9,00	16	4	9	67	4,50	GU116SD09	GU116SWD09
10,00	19	4	10	72	5,00	GU116SD10	GU116SWD10
12,00	22	4	12	83	6,00	GU116SD12	GU116SWD12
13,00	22	4	13	83	6,50	GU116SD13	GU116SWD13
14,00	22	4	14	83	7,00	GU116SD14	GU116SWD14
16,00	26	4	16	92	8,00	GU116SD16	GU116SWD16
18,00	26	4	18	92	9,00	GU116SD18	GU116SWD18
20,00	32	4	20	104	10,00	GU116SD20	GU116SWD20

GU117

FRESA ELICOIDALE SEMISFERICA LUNGA
COATED HELICAL BALL NOSE END MILL LONG VERSION

Acciaio Steel | Ghisa Cast Iron | Inox Stainless Steel | Mg Co10 | λ 30° | 6535 HA | 6535 HB

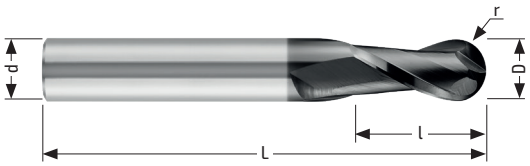


D h10	l ap	Z	d h6	L	r	Normale	Weldon
6,00	42	4	6	105	3	GU117LSD06	GU117LSWD06
8,00	50	4	8	105	4	GU117LSD08	GU117LSWD08
10,00	50	4	10	120	5	GU117LSD10	GU117LSWD10
12,00	65	4	12	160	6	GU117LSD12	GU117LSWD12
16,00	70	4	16	160	8	GU117LSD16	GU117LSWD16

GU118

FRESA ELICOIDALE SEMISFERICA
COATED HELICAL BALL NOSE END MILL

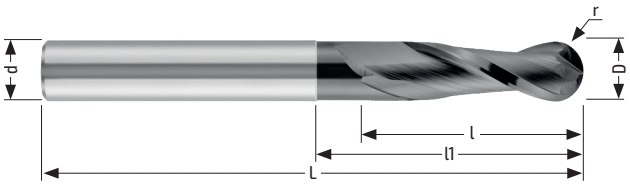
Acciaio Steel | Ghisa Cast Iron | Inox Stainless Steel | Mg Co10 | 6527 L 6528 | λ 30° | 6535 HA | 6535 HB

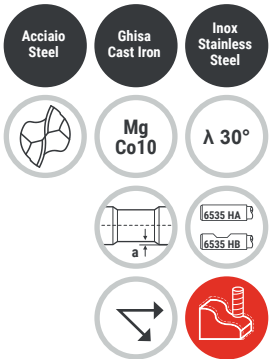


D h10	l ap	Z	d h6	L	r	Normale	Weldon
2,00	5	2	4	50	1,00	GU118SD02	-
3,00	7	2	4	50	1,50	GU118SD03	-
4,00	8	2	4	50	2,00	GU118SD04	-
5,00	10	2	5	50	2,50	GU118SD05	-
6,00	10	2	6	57	3,00	GU118SD06	GU118SWD06
8,00	16	2	8	63	4,00	GU118SD08	GU118SWD08
10,00	19	2	10	72	5,00	GU118SD10	GU118SWD10
12,00	22	2	12	83	6,00	GU118SD12	GU118SWD12
14,00	22	2	14	83	7,00	GU118SD14	GU118SWD14
16,00	26	2	16	92	8,00	GU118SD16	GU118SWD16
20,00	32	2	20	104	10,00	GU118SD20	GU118SWD20

GU119

FRESA ELICOIDALE SEMISFERICA MEDIA
COATED HELICAL BALL NOSE END MILL MEDIUM

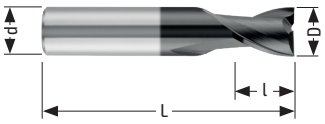


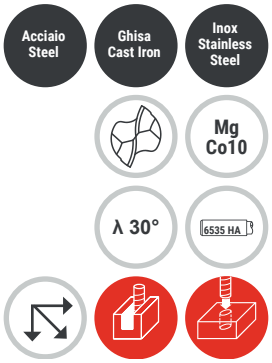


D h10	l ap	l 1	Z	d h6	L	a	r	Normale	Weldon
4,0	16		2	4	62	-	2,00	GU119MSD04	-
5,0	20		2	5	62	-	2,50	GU119MSD05	-
6,0	20	30	2	6	78	0,15	3,00	GU119MSD06	GU119MSWD06
8,0	25	35	2	8	78	0,15	4,00	GU1129MSD8	GU119MSWD08
10,0	28	48	2	10	105	0,15	5,00	GU119MSD10	GU119MSWD10
12,0	32	52	2	12	105	0,20	6,00	GU119MSD12	GU119MSWD12
16,0	40	60	2	16	130	0,20	8,00	GU119MSD16	GU119MSWD16

GU120

FRESA ELICOIDALE EXTRA CORTA RIVESTITA
COATED HELICAL END MILL EXTRA SORT VERSION



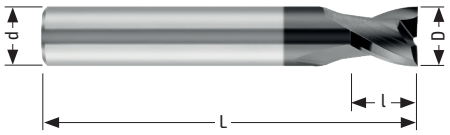


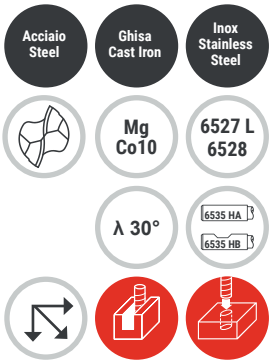
90°

D h10	l ap	Z	d h6	L	Normale	Weldon
2,0	3	2	6	38	GU120XCD02	
3,0	4	2	6	38	GU120XCD03	
4,0	5	2	6	38	GU120XCD04	
5,0	6	2	6	38	GU120XCD05	
6,0	7	2	6	38	GU120XCD06	
7,0	9	2	8	43	GU120XCD07	
8,0	9	2	8	43	GU120XCD08	
9,0	11	2	10	50	GU120XCD09	
10,0	11	2	10	50	GU120XCD10	

GU121

FRESA ELICOIDALE CORTA RIVESTITA
COATED HELICAL END MILL SORT VERSION



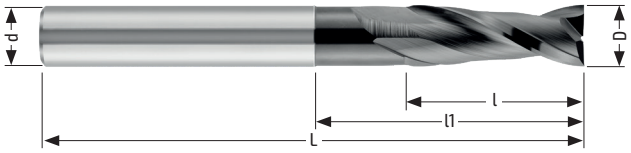


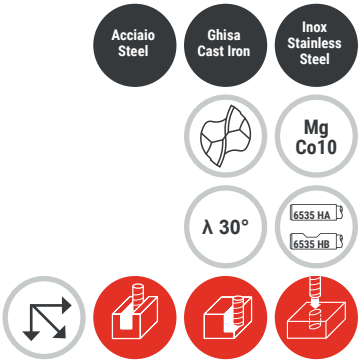
90°

D e8	l ap	Z	d h6	L	Normale	Weldon
2,0	3	2	6	50	GU121CD02	GU121CWD02
3,0	4	2	6	50	GU121CD03	GU121CWD03
4,0	5	2	6	54	GU121CD04	GU121CWD04
5,0	6	2	6	54	GU121CD05	GU121CWD05
6,0	7	2	6	54	GU121CD06	GU121CWD06
7,0	9	2	8	58	GU121CD07	GU121CWD07
8,0	9	2	8	58	GU121CD08	GU121CWD08
9,0	11	2	10	66	GU121CD09	GU121CWD09
10,0	11	2	10	66	GU121CD10	GU121CWD10
11,0	12	2	12	73	GU121CD11	GU121CWD11
12,0	12	2	12	73	GU121CD12	GU121CWD12
13,0	14	2	14	75	GU121CD13	GU121CWD13
14,0	14	2	14	75	GU121CD14	GU121CWD14
16,0	16	2	16	82	GU121CD16	GU121CWD16
20,0	20	2	20	92	GU121CD20	GU121CWD20

GU122

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL



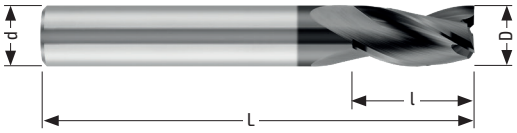


90°

D h10	l ap	l1	Z	d h6	L	a	Normale	Weldon
4,0	16	-	2	4	62	-	GU122MD04	-
5,0	20	-	2	5	62	-	GU122MD05	-
6,0	20	30	2	6	78	0,15	GU122MD06	GU122MWD06
8,0	25	35	2	8	78	0,15	GU122MD08	GU122MWD08
10,0	28	48	2	10	105	0,15	GU122MD10	GU122MWD10
12,0	32	52	2	12	105	0,20	GU122MD12	GU122MWD12
16,0	40	60	2	16	130	0,20	GU122MD16	GU122MWD16

GU123

FRESA ELICOIDALE RIVESTITA
COATED HELICAL END MILL



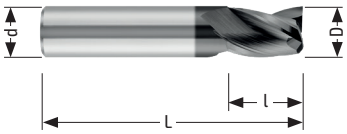
Acciaio Steel · Ghisa Cast Iron · Inox Stainless Steel · Mg Co10 · 6527 L 6528 · λ 30° · 6535 HA · 6535 HB

90°

D h10	l ap	Z	d h6	L	Normale	Weldon
2,0	5	3	4	50	GU123D02	-
3,0	7	3	4	50	GU123D03	-
4,0	8	3	4	50	GU123D04	-
5,0	10	3	5	50	GU123D05	-
6,0	10	3	6	57	GU123D06	GU123WD06
8,0	16	3	8	63	GU123D08	GU123WD08
10,0	19	3	10	72	GU123D10	GU123WD10
12,0	22	3	12	83	GU123D12	GU123WD12
16,0	26	3	16	92	GU123D16	GU123WD16
20,0	32	3	20	104	GU123D20	GU123WD20

GU124

FRESA ELICOIDALE EXTRA CORTA RIVESTITA
COATED HELICAL END MILL EXTRA SHORT VERSION



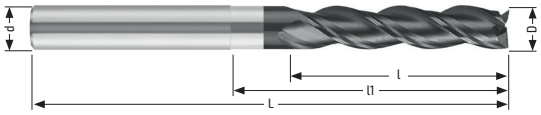
Acciaio Steel · Ghisa Cast Iron · Inox Stainless Steel · Mg Co10 · λ 30° · 6535 HA

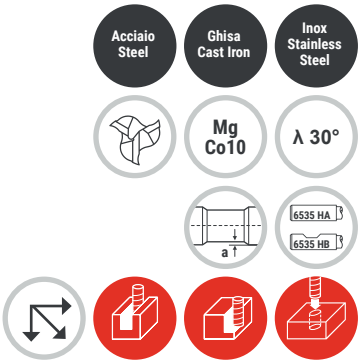
90°

D h10	l ap	Z	d h6	L	Normale
2,0	4	3	6	38	GU124XCD02
2,5	4	3	6	38	GU124XCD02.5
3,0	5	3	6	38	GU124XCD03
3,5	6	3	6	38	GU124XCD03.5
4,0	7	3	6	38	GU124XCD04
4,5	8	3	6	38	GU124XCD04.5
5,0	8	3	6	38	GU124XCD05
6,0	8	3	6	38	GU124XCD06
7,0	11	3	8	43	GU124XCD07
8,0	11	3	8	43	GU124XCD08
9,0	13	3	10	50	GU124XCD09
10,0	13	3	10	50	GU124XCD10

GU125

FRESA ELICOIDALE LUNGA RIVESTITA
COATED HELICAL END MILL LONG VERSION



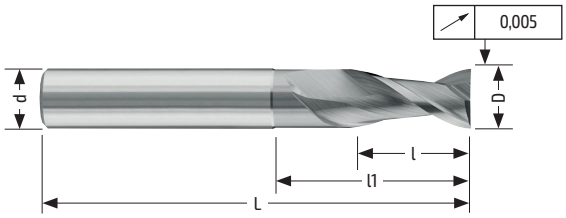


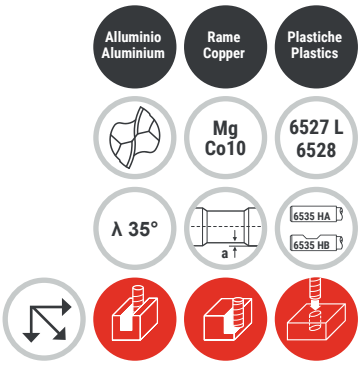
90°

D h10	l ap	l1	Z	d h6	L	a	Normale	Weldon
4,0	16	-	3	4	62	-	GU125LD04	-
5,0	20	-	3	5	62	-	GU125LD05	-
6,0	20	30	3	6	78	0,15	GU125LD06	GU125LWD06
8,0	25	35	3	8	78	0,15	GU125LD08	GU125LWD08
10,0	28	48	3	10	105	0,15	GU125LD10	GU125LWD10
12,0	32	52	3	12	105	0,20	GU125LD12	GU125LWD12
16,0	40	60	3	16	130	0,20	GU125LD16	GU125LWD16

GU126

FRESA ELICOIDALE PER ALLUMINIO
COATED HELICAL END MILL FOR ALLUMINIUM



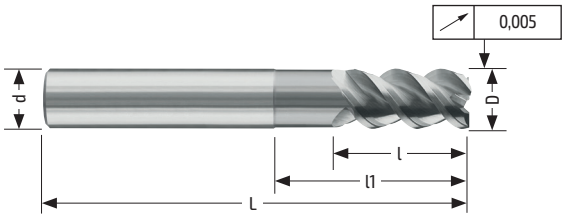


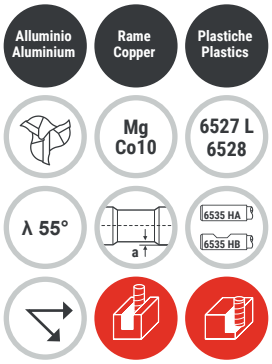
90°

D h10	l ap	l1	Z	d h6	L	a	Normale	Weldon
2,0	6	-	2	3	50	-	GU126AD02	-
3,0	7	18	2	3	50	0,10	GU126AD03	-
4,0	8	19	2	4	50	0,10	GU126AD04	-
5,0	10	21	2	5	50	0,10	GU126AD05	-
6,0	10	21	2	6	57	0,15	GU126AD06	GU126AWD06
8,0	16	27	2	8	63	0,15	GU126AD08	GU126AWD08
10,0	19	30	2	10	72	0,15	GU126AD10	GU126AWD10
12,0	22	38	2	12	83	0,20	GU126AD12	GU126AWD12
14,0	22	38	2	14	83	0,20	GU126AD14	GU126AWD14
16,0	26	42	2	16	92	0,20	GU126AD16	GU126AWD16
20,0	32	54	2	20	104	0,20	GU126AD20	GU126AWD20

GU127

FRESA ELICOIDALE PER ALLUMINIO
COATED HELICAL END MILL FOR ALLUMINIUM



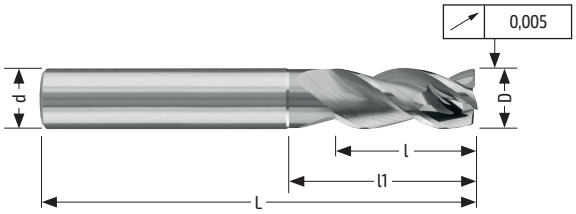


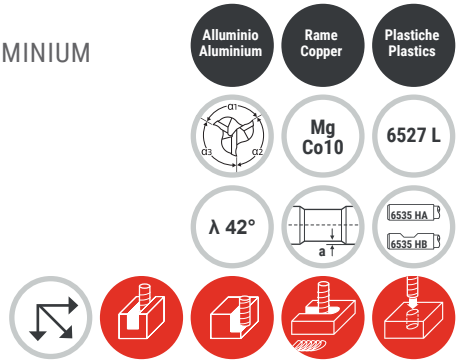
90°

D h10	l ap	l1	Z	d h6	L	a	Normale	Weldon
4,0	8	19	3	4	50	0,10	GU127AD04	-
5,0	10	21	3	5	50	0,10	GU127AD05	-
6,0	10	21	3	6	57	0,15	GU127AD06	GU127AWD06
7,0	13	24	3	7	60	0,15	GU127AD07	GU127AWD07
8,0	16	27	3	8	63	0,15	GU127AD08	GU127AWD08
9,0	16	27	3	9	67	0,15	GU127AD09	GU127AWD09
10,0	19	30	3	10	72	0,15	GU127AD10	GU127AWD10
12,0	22	38	3	12	83	0,20	GU127AD12	GU127AWD12
14,0	22	38	3	14	83	0,20	GU127AD14	GU127AWD14
16,0	26	42	3	16	92	0,20	GU127AD16	GU127AWD16
20,0	32	54	3	20	104	0,20	GU127AD20	GU127AWD20

GU128

FRESA ELICOIDALE PER ALLUMINIO
COATED HELICAL END MILL FOR ALLUMINIUM



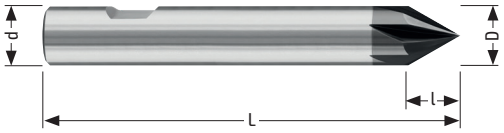


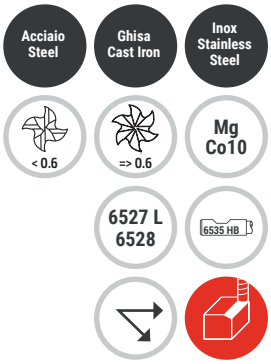
45°

D h10	l ap	l1	Z	d h6	L	a	45° +0,05/+0	Normale	Weldon
3,0	8	-	3	6	57	-	0,05	GU128SMAD03	GU128SMAWD03
4,0	11	-	3	6	57	-	0,05	GU128SMAD04	GU128SMAWD04
5,0	13	-	3	6	57	-	0,10	GU128SMAD05	GU128SMAWD05
6,0	13	20	3	6	57	0,15	0,10	GU128SMAD06	GU128SMAWD06
8,0	19	25	3	8	63	0,15	0,15	GU128SMAD08	GU128SMAWD08
10,0	22	30	3	10	72	0,15	0,20	GU128SMAD10	GU128SMAWD10
12,0	26	36	3	12	83	0,20	0,25	GU128SMAD12	GU128SMAWD12
16,0	32	42	3	16	92	0,20	0,30	GU128SMAD16	GU128SMAWD16
20,0	38	52	3	20	104	0,20	0,35	GU128SMAD20	GU128SMAWD20

GU129

FRESA PER SMUSSI 60° RIVESTITA
COATED END MILL FOR CHAMFER 60°



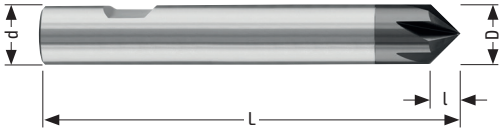


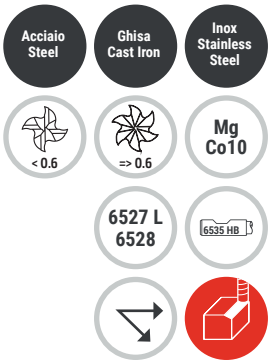
60°

D e8	Z	d h6	L	Weldon	
3,0	4	4	50	6535 HA (no Weldon)	GU129SM60WD03
4,0	4	4	50	6535 HA (no Weldon)	GU129SM60WD04
6,0	6	6	57		GU129SM60WD06
8,0	6	8	63		GU129SM60WD08
10,0	6	10	72		GU129SM60WD10
12,0	6	12	83		GU129SM60WD12
16,0	6	16	92		GU129SM60WD16
20,0	6	20	104		GU129SM60WD18

GU129

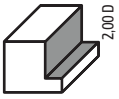
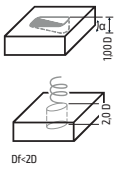
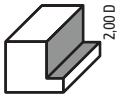
FRESA PER SMUSSI 90° RIVESTITA
COATED END MILL FOR CHAMFER 90°





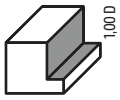
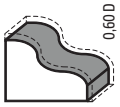
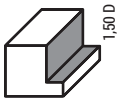
90°

D e8	Z	d h6	L	Weldon	
3,0	4	4	50	6535 HA (no Weldon)	GU129SM60WD03
4,0	4	4	50	6535 HA (no Weldon)	GU129SM60WD04
6,0	6	6	57		GU129SM60WD06
8,0	6	8	63		GU129SM60WD08
10,0	6	10	72		GU129SM60WD10
12,0	6	12	83		GU129SM60WD12
16,0	6	16	92		GU129SM60WD16
20,0	6	20	104		GU129SM60WD18

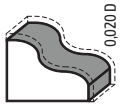
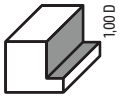
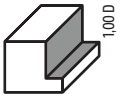
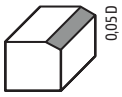
Materiale Material	Diametro Diameter	GU103						GU100 / GU104						GU104			GU104 / GU103					
																						
Acciaio <800 N/mm² Steel <800 N/mm²	m/min	Vc=140			Vc=160			Vc = 140			Vc = 160			α=12° Vc= 140			Vc= 260			Vc= 330		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	594	14862	0,010	679	16985	0,010	594	14854	0,010	679	16977	-	-	-	-	-	-	-	-	-
	4,0	0,015	669	11146	0,015	764	12739	0,015	668	11141	0,015	764	12732	0,015	668	11141	0,013	1055	20690	0,013	1339	26261
	5,0	0,020	713	8917	0,020	815	10191	0,02	713	8913	0,020	815	10186	0,020	713	8913	0,017	1126	16552	0,017	1429	21008
	6,0	0,030	892	7431	0,030	1019	8493	0,03	891	7427	0,030	1019	8488	0,030	891	7427	0,026	1407	13793	0,026	1786	17507
	8,0	0,045	1003	5573	0,045	1146	6369	0,045	1003	5570	0,045	1146	6366	0,045	1003	5570	0,038	1583	10345	0,038	2009	13130
	10,0	0,060	1070	4459	0,060	1223	5096	0,060	1069	4456	0,060	1222	5093	0,060	1069	4456	0,051	1688	8276	0,051	2143	10504
	12,0	0,070	1040	3715	0,070	1189	4246	0,070	1040	3714	0,070	1188	4244	0,070	1040	3714	0,060	1641	6897	0,060	2083	8754
	14,0	-	-	-	-	-	-	0,072	917	3183	0,072	1048	3638	-	-	-	-	-	-	-	-	-
	16,0	0,075	836	2787	0,075	955	3185	0,075	836	2785	0,075	955	3183	0,075	836	2785	0,064	1319	5173	0,064	1674	6565
	20,0	0,082	731	2229	0,090	917	2548	0,082	731	2228	0,090	917	2546	0,082	731	2228	0,070	1154	4138	0,070	1464	5252
Acciaio <1000 N/mm² - Ghisa Steel <1000 N/mm² - Cast iron	m/min	Vc=115			Vc=130			Vc = 115			Vc = 125			α=12° Vc= 115			Vc = 220			Vc = 280		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	488	12208	0,010	552	13800	0,010	488	12202	0,010	531	13263	-	-	-	-	-	-	-	-	-
	4,0	0,015	549	9156	0,015	621	10350	0,015	549	9151	0,015	597	9947	0,015	549	9151	0,013	893	17507	0,013	1136	22282
	5,0	0,020	586	7325	0,020	662	8280	0,02	586	7321	0,020	637	7958	0,020	586	7321	0,017	952	14006	0,017	1212	17825
	6,0	0,030	732	6104	0,030	828	6900	0,03	732	6101	0,030	796	6631	0,030	732	6101	0,026	1190	11671	0,026	1515	14854
	8,0	0,045	824	4578	0,045	932	5175	0,045	824	4576	0,045	895	4974	0,045	824	4576	0,038	1339	8754	0,038	1705	11141
	10,0	0,060	879	3662	0,060	994	4140	0,060	879	3661	0,060	955	3979	0,060	879	3661	0,051	1429	7003	0,051	1818	8913
	12,0	0,070	855	3052	0,070	966	3450	0,070	854	3050	0,070	928	3316	0,070	854	3050	0,060	1389	5836	0,060	1768	7427
	14,0	-	-	-	-	-	-	0,072	753	2615	0,072	819	2842	-	-	-	-	-	-	-	-	-
	16,0	0,075	687	2289	0,075	776	2588	0,075	686	2288	0,075	746	2487	0,075	686	2288	0,064	1116	4377	0,064	1420	5570
	20,0	0,082	601	1831	0,090	745	2070	0,082	600	1830	0,090	716	1989	0,082	600	1830	0,070	976	3501	0,070	1242	4456
Acciaio <1300 N/mm² Steel <1300 N/mm²	m/min	Vc=85			Vc=100			Vc = 85			Vc = 95			α=12° Vc= 85			Vc = 180			Vc = 230		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	361	9023	0,010	425	10616	0,010	361	9019	0,010	403	10080	-	-	-	-	-	-	-	-	-
	4,0	0,015	406	6768	0,015	478	7962	0,015	406	6764	0,015	454	7560	0,015	406	6764	0,013	731	14324	0,013	933	18303
	5,0	0,020	433	5414	0,020	510	6369	0,020	433	5411	0,02	484	6048	0,020	433	5411	0,017	779	11459	0,017	996	14642
	6,0	0,030	541	4512	0,030	637	5308	0,030	541	4509	0,03	605	5040	0,030	541	4509	0,026	974	9549	0,026	1245	12202
	8,0	0,045	609	3384	0,045	717	3981	0,045	609	3382	0,045	680	3780	0,045	609	3382	0,038	1096	7162	0,038	1400	9151
	10,0	0,060	650	2707	0,060	764	3185	0,060	649	2706	0,060	726	3024	0,060	649	2706	0,051	1169	5730	0,051	1494	7321
	12,0	0,070	632	2256	0,070	743	2654	0,070	631	2255	0,070	706	2520	0,070	631	2255	0,060	1136	4775	0,060	1452	6101
	14,0	-	-	-	-	-	-	0,072	557	1933	0,072	622	2160	-	-	-	-	-	-	-	-	-
	16,0	0,075	508	1692	0,075	597	1990	0,075	507	1691	0,075	567	1890	0,075	507	1691	0,064	913	3581	0,064	1167	4576
	20,0	0,082	444	1354	0,090	573	1592	0,082	444	1353	0,090	544	1512	0,082	444	1353	0,070	799	2865	0,070	1021	3661
Acciai altolegati High alloyed tool steel	m/min	Vc=45			Vc=60			Vc = 45			Vc = 50			α=10° Vc= 45			Vc = 80			Vc = 110		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	191	4777	0,010	255	6369	0,010	191	4775	0,010	212	5305	-	-	-	-	-	-	-	-	-
	4,0	0,015	215	3583	0,015	287	4777	0,015	215	3581	0,015	239	3979	0,015	215	3581	0,013	325	6366	0,013	446	8754
	5,0	0,020	229	2866	0,020	306	3822	0,020	229	2865	0,020	255	3183	0,020	229	2865	0,017	346	5093	0,017	476	7003
	6,0	0,030	287	2389	0,030	382	3185	0,030	286	2387	0,030	318	2653	0,030	286	2387	0,026	433	4244	0,026	595	5836
	8,0	0,045	322	1791	0,045	430	2389	0,045	322	1790	0,045	358	1989	0,045	322	1790	0,038	487	3183	0,038	670	4377
	10,0	0,060	344	1433	0,060	459	1911	0,060	344	1432	0,060	382	1592	0,060	344	1432	0,051	519	2546	0,051	714	3501
	12,0	0,070	334	1194	0,070	446	1592	0,070	334	1194	0,070	371	1326	0,070	334	1194	0,060	505	2122	0,060	694	2918
	14,0	-	-	-	-	-	-	0,072	295	1023	0,072	327	1137	-	-	-	-	-	-	-	-	-
	16,0	0,075	269	896	0,075	358	1194	0,075	269	895	0,075	298	995	0,075	269	895	0,064	406	1592	0,064	558	2188
	20,0	0,082	235	717	0,090	344	955	0,082	235	716	0,090	286	796	0,820	235	716	0,070	355	1273	0,070	488	1751
Acciaio Inox Stainless Steel	m/min	Vc=95			Vc=100			Vc = 35			Vc = 45			α=8° Vc= 45			Vc = 80			Vc = 110		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	403	10085	0,010	403	10085	0,010	149	3714	0,010	191	4775	-	-	-	-	-	-	-	-	-
	4,0	0,015	454	7564	0,015	454	7564	0,015	167	2785	0,015	215	3581	0,015	167	2785	0,013	325	6366	0,013	446	8754
	5,0	0,020	484	6051	0,020	484	6051	0,020	178	2228	0,020	229	2865	0,020	178	2228	0,017	346	5093	0,017	476	7003
	6,0	0,030	605	5042	0,030	605	5042	0,030	223	1857	0,030	286	2387	0,030	223	1857	0,026	433	4244	0,026	595	5836
	8,0	0,045	681	3782	0,045	681	3782	0,045	251	1393	0,045	322	1790	0,045	251	1393	0,038	487	3183	0,038	670	4377
	10,0	0,060	726	3025	0,060	726	3025	0,060	267	1114	0,060	344	1432	0,060	267	1114	0,051	519	2546	0,051	714	3501
	12,0	0,070	706	2521	0,070	706	2521	0,070	260	928	0,070	334	1194	0,070	260	928	0,060	505	2122	0,060	694	2918
	14,0	-	-	-	-	-	-	0,072	229	796	0,072	295	1023	-	-	-	-	-	-	-	-	-
	16,0	0,075	567	1891	0,075	567	1891	0,075	209	696	0,075	269	895	0,075	209	696	0,064	406	1592	0,064	558	2188
	20,0	0,082	496	1513	0,090	545	1513	0,082	183	557	0,090	258	716	0,082	183	557	0,070	355	1273	0,070	488	1751

Serie lunga: -15% rispetto ai parametri di lavoro del corrispettivo utensile serie normale. / Long series: 15% less than the working parameters of the corresponding tool standard series.

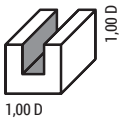
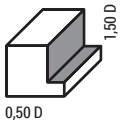
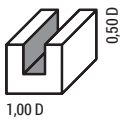
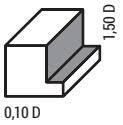
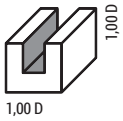
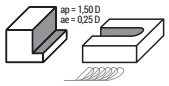
Parametri di lavoro /// Working parameters

Materiale / Material	Diametro / Diameter	GU107				GU109				GU111				GU116				GU112				GU113				GU114			
		1,50 D / 0,20 D				 1,00 D / 0,20 D				1,50 D / 0,20 D				 0,60 D / 0,20 D				1,00 D / 1,00 D				 1,50 D / 0,50 D				1,50 D / 0,25 D				0,50 D / 1,00 D			
Acciaio <800 N/mm² / Steel <800 N/mm²	m/min	Vc = 175				Vc = 150				Vc = 175				Vc = 360				Vc = 140				Vc = 160				Vc = 140				Vc = 120			
	D mm	fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm	
	2,0	0,002	223	27852		0,002	191	23885		-	-	-		0,035	8021	57296		-	-	-		-	-	-		-	-	-		0,002	76	19099	
	3,0	0,007	520	18568		0,004	255	15924		-	-	-		0,059	9015	38197		-	-	-		-	-	-		-	-	-		0,003	76	12732	
	4,0	0,012	668	13926		0,007	334	11943		-	-	-		0,117	13407	28648		0,025	1114	11141		0,025	1273	12732		0,018	802	11141		0,004	76	9549	
	5,0	0,017	758	11141		0,012	459	9554		-	-	-		0,162	14851	22918		0,030	1070	8913		0,030	1222	10186		0,020	713	8913		0,007	107	7639	
	6,0	0,022	817	9284		0,016	510	7962		0,022	1225	9284		0,198	15126	19099		0,040	1188	7427		0,040	1358	8488		0,028	832	7427		0,009	115	6366	
	8,0	0,029	808	6963		0,020	478	5971		0,029	1212	6963		0,256	14668	14324		0,060	1337	5570		0,060	1528	6366		0,039	869	5570		0,016	153	4775	
	10,0	0,035	780	5570		0,025	478	4777		0,035	1170	5570		0,300	13751	11459		0,070	1248	4456		0,070	1426	5093		0,048	856	4456		0,022	168	3820	
	12,0	0,039	724	4642		-	-	-		0,039	1086	4642		0,337	12872	9549		0,080	1188	3714		0,080	1358	4244		0,055	817	3714		0,026	166	3183	
	14,0	0,043	684	3979		-	-	-		0,043	1027	3979		0,367	12016	8185		-	-	-		-	-	-		0,061	777	3183		0,030	164	2728	
	16,0	0,047	655	3482		-	-	-		0,047	1309	3482		0,394	11287	7162		0,085	947	2785		0,085	1082	3183		0,067	746	2785		0,033	158	2387	
	20,0	0,052	579	2785		-	-	-		0,052	1159	2785		0,420	9626	5730		-	-	-		-	-	-		0,076	677	2228		0,039	149	1910	
Acciaio <1000 N/mm² - Ghisa / Steel <1000 N/mm² - Cast iron	m/min	Vc = 145				Vc = 125				Vc = 145				Vc = 295				Vc = 115				Vc = 125				Vc = 115				Vc = 100			
	D mm	fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm	
	2,0	0,002	185	23077		0,002	159	19904		-	-	-		0,035	6573	46951		-	-	-		-	-	-		-	-	-		0,002	64	15915	
	3,0	0,007	431	15385		0,004	212	13270		-	-	-		0,059	7387	31300		-	-	-		-	-	-		-	-	-		0,003	64	10610	
	4,0	0,012	554	11539		0,007	279	9952		-	-	-		0,117	10986	23475		0,025	915	9151		0,025	995	9947		0,018	659	9151		0,004	64	7958	
	5,0	0,017	628	9231		0,012	382	7962		-	-	-		0,162	12170	18780		0,030	879	7321		0,030	955	7958		0,02	586	7321		0,007	89	6366	
	6,0	0,022	677	7692		0,016	425	6635		0,022	1015	7692		0,198	12395	15650		0,040	976	6101		0,040	1061	6631		0,028	683	6101		0,009	95	5305	
	8,0	0,029	669	5769		0,02	398	4976		0,029	1004	5769		0,256	12019	11738		0,060	1098	4576		0,060	1194	4974		0,039	714	4576		0,016	127	3979	
	10,0	0,035	646	4615		0,025	398	3981		0,035	969	4615		0,300	11268	9390		0,070	1025	3661		0,070	1114	3979		0,048	703	3661		0,022	140	3183	
	12,0	0,039	600	3846		-	-	-		0,039	900	3846		0,337	10548	7825		0,080	976	3050		0,080	1061	3316		0,055	671	3050		0,026	138	2653	
	14,0	0,043	567	3297		-	-	-		0,043	851	3297		0,367	9846	6707		-	-	-		-	-	-		0,061	638	2615		0,030	136	2274	
	16,0	0,047	542	2885		-	-	-		0,047	1085	2885		0,394	9249	5869		0,085	778	2288		0,085	846	2487		0,067	613	2288		0,033	131	1989	
	20,0	0,052	480	2308		-	-	-		0,052	960	2308		0,420	7888	4695		-	-	-		-	-	-		0,076	556	1830		0,039	124	1592	
Acciaio <1300 N/mm² / Steel <1300 N/mm²	m/min	Vc = 110				Vc = 90				Vc = 110				Vc = 225				Vc = 85				Vc = 95				Vc = 90				Vc = 75			
	D mm	fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm	
	2,0	0,002	140	17507		0,002	115	14331		-	-	-		0,035	5013	35810		-	-	-		-	-	-		-	-	-		0,002	48	11937	
	3,0	0,007	327	11671		0,004	153	9554		-	-	-		0,059	5634	23873		-	-	-		-	-	-		-	-	-		0,003	48	7958	
	4,0	0,012	420	8754		0,007	201	7166		-	-	-		0,117	8380	17905		0,025	676	6764		0,025	756	7560		0,018	516	7162		0,004	48	5968	
	5,0	0,017	476	7003		0,012	275	5732		-	-	-		0,162	9282	14324		0,030	649	5411		0,03	726	6048		0,02	458	5730		0,007	67	4775	
	6,0	0,022	514	5836		0,016	306	4777		0,022	770	5836		0,198	9454	11937		0,040	721	4509		0,04	806	5040		0,028	535	4775		0,009	72	3979	
	8,0	0,029	508	4377		0,02	287	3583		0,029	762	4377		0,256	9167	8952		0,060	812	3382		0,06	907	3780		0,039	559	3581		0,016	95	2984	
	10,0	0,035	490	3501		0,025	287	2866		0,035	735	3501		0,300	8594	7162		0,070	758	2706		0,070	847	3024		0,048	550	2865		0,022	105	2387	
	12,0	0,039	455	2918		-	-	-		0,039	683	2918		0,337	8045	5968		0,080	722	2255		0,080	806	2520		0,055	525	2387		0,026	103	1989	
	14,0	0,043	430	2501		-	-	-		0,043	645	2501		0,367	7510	5116		-	-	-		-	-	-		0,061	499	2046		0,030	102	1705	
	16,0	0,047	411	2188		-	-	-		0,047	823	2188		0,394	7055	4476		0,085	575	1691		0,085	643	1890		0,067	480	1790		0,033	98	1492	
	20,0	0,052	364	1751		-	-	-		0,052	728	1751		0,420	6016	3581		-	-	-		-	-	-		0,076	435	1432		0,039	93	1194	
Acciai altolegati / High alloyed tool steel	m/min	Vc = 55				Vc = 40				Vc = 55				Vc = 115				Vc = 45				Vc = 50				Vc = 45				Vc = 40			
	D mm	fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm	
	2,0	0,002	70	8754		0,002	51	6369		-	-	-		0,035	2562	18303		-	-	-		-	-	-		-	-	-		0,002	25	6366	
	3,0	0,007	163	5836		0,004	68	4246		-	-	-		0,059	2880	12202		-	-	-		-	-	-		-	-	-		0,003	25	4244	
	4,0	0,012	210	4377		0,007	89	3185		-	-	-		0,117	4283	9151		0,025	358	3581		0,025	398	3979		0,018	258	3581		0,004	25	3183	
	5,0	0,017	238	3501		0,012	122	2548		-	-	-		0,162	4744	7321		0,030	344	2865		0,030	382	3183		0,02	229	2865		0,007	36	2546	
	6,0	0,022	257	2918		0,016	136	2123		0,022	385	2918		0,198	4832	6101		0,040	382	2387		0,040	424	2653		0,028	267	2387		0,009	38	2122	
	8,0	0,029	254	2188		0,02	127	1592		0,029	381	2188		0,256	4686	4576		0,060	430	1790		0,060	477	1989		0,039	279	1790		0,016	51	1592	
	10,0	0,035	245	1751		0,025	127	1274		0,035	368	1751		0,300	4393	3661		0,070	401	1432		0,070	446	1592		0,048	275	1432		0,022	56	1273	
	12,0	0,039	228	1459		-	-	-		0,039	341	1459		0,337	4112	3050		0,080	382	1194		0,080	424	1326		0,055	263	1194		0,026	55	1061	
	14,0	0,043	215	1251		-	-	-		0,043	323	1251		0,367	3838	2615		-	0	1023			0	1137		0,061	250	1023		0,030	55	909	
	16,0	0,047	206	1094		-	-	-		0,047	411	1094		0,394	3606	2288		0,085	304	895		0,085	338	995		0,067	240	895		0,033	53	796	
	20,0	0,052	182	875		-	-	-		0,052	364	875		0,420	3075	1830		-	-	-		-	-	-		0,076	218	716		0,039	50	637	
Acciaio Inox / Stainless Steel	m/min	Vc = 45				Vc = 45				Vc = 45				Vc = 75				Vc = 35				Vc = 45				Vc = 40				Vc = 40			
	D mm	fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm		fz mm/z	F mm/min	n rpm	
	2,0	0,002	57	7162		0,002	57	7166		-	-	-		0,035	1671	11937		-	-	-		-	-	-		-	-	-		0,002	22	5570	
	3,0	0,007	134	4775		0,004	76	4777		-	-	-		0,059	1878	7958		-	-	-		-	-	-		-	-	-		0,003	22	3714	
	4,0	0,012	172	3581		0,007	100	3583		-	-	-		0,117	2793	5968		0,025	279	2785		0,025	358	3581		0,018	229	3183		0,004	22	2785	
	5,0	0,017	195	2865		0,012	138	2866		-	-	-		0,162	3094	4775		0,030	267	2228		0,030	344	2865		0,02	204	2546		0,007	31	2228	
	6,0	0,022	210	2387		0,016	153	2389		0,022	315	2387		0,198	3151	3979		0,040	297	1857		0,040	382	2387		0,028	238	2122		0,009	33	1857	
	8,0	0,029	208	1790		0,02	143	1791		0,029	312	1790		0,256	3056	2984		0,060	334	1393		0,06	430	1790		0,039	248	1592		0,016	45	1393	
	10,0	0,035	201	1432		0,025	143	1433		0,035	301	1432		0,300	2865	2387		0,070	312	1114		0,070	401	1432		0,048	244	1273		0,022	49	1114	
	12,0	0,039	186	1194		-	-	-		0,039	279	1194		0,337	2682	1989		0,080	297	928		0,080	382	1194		0,055	233	1061		0,026	48	928	
	14,0	0,043	176	1023		-	-	-		0,043	264	1023		0,367	3503	1705		-	-	-		-	-	-		0,061	222	909		0,030	48	796	
	16,0	0,047	168	895		-	-	-		0,047	337	895		0,394	2352	1492		0,085	237	696		0,085	304	895		0,067	213	796		0,033	46	696	
	20,0	0,052	149	716		-	-	-		0,052	298	716		0,420	2005	1194		-	-	-		-	-	-		0,076	194	637		0,039	43	557	

Serie lunga: -15% rispetto ai parametri di lavoro del corrispettivo utensile serie normale. / Long series: 15% less than the working parameters of the corresponding tool standard series.

Materiale / Material	Diametro / Diameter	GU120			GU121			GU118			GU123			GU123			GU124			GU124			GU129		
																									
Acciaio <800 N/mm² Steel <800 N/mm²	m/min	Vc = 120			Vc = 120			Vc = 360			Vc = 130			Vc = 120			Vc = 130			Vc = 120			Vc=90		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	76	19108	0,002	76	19108	0,022	2521	57296	0,002	124	20701	0,002	115	19108	0,002	124	20701	0,002	115	19108	-	-	-
	3,0	0,004	102	12739	0,004	102	12739	0,081	6188	38197	0,004	166	13800	0,004	153	12739	0,004	166	13800	0,004	153	12739	0,020	764	9554
	4,0	0,009	172	9554	0,009	172	9554	0,139	7964	28648	0,009	279	10350	0,009	258	9554	0,009	279	10350	0,009	258	9554	0,030	860	7166
	5,0	0,014	214	7643	0,014	214	7643	0,184	8434	22918	0,014	348	8280	0,014	321	7643	0,014	348	8280	0,014	321	7643	-	-	-
	6,0	0,018	229	6369	0,018	229	6369	0,220	8403	19099	0,018	373	6900	0,018	344	6369	0,018	373	6900	0,018	344	6369	0,040	764	4777
	8,0	0,023	220	4777	0,023	220	4777	0,278	7964	14324	0,023	357	5175	0,023	330	4777	0,023	357	5175	0,023	330	4777	0,050	717	3583
	10,0	0,028	214	3822	0,028	214	3822	0,322	7380	11459	0,028	348	4140	0,028	321	3822	0,028	348	4140	0,028	321	3822	0,060	688	2866
	12,0	-	-	-	0,032	204	3185	0,359	6856	9549	0,032	331	3450	0,032	306	3185	-	-	-	-	-	-	0,070	669	2389
	14,0	-	-	-	0,034	186	2730	0,389	6368	8185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16,0	-	-	-	0,038	182	2389	0,416	5959	7162	0,038	295	2588	0,038	272	2389	-	-	-	-	-	-	0,070	502	1791
	20,0	-	-	-	0,042	161	1911	-	-	-	0,042	261	2070	0,042	241	1911	-	-	-	-	-	-	0,080	459	1433
Acciaio <1000 N/mm² - Ghisa Steel <1000 N/mm² - Cast iron	m/min	Vc = 100			Vc = 100			Vc = 295			Vc = 110			Vc = 100			Vc = 110			Vc = 100			Vc=70		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	64	15924	0,002	64	15924	0,022	2066	46951	0,002	105	17516	0,002	96	15924	0,002	105	17516	0,002	96	15924	-	-	-
	3,0	0,004	85	10616	0,004	85	10616	0,081	5071	31300	0,004	140	11677	0,004	127	10616	0,004	140	11677	0,004	127	10616	0,020	594	7431
	4,0	0,009	143	7962	0,009	143	7962	0,139	6526	23475	0,009	236	8758	0,009	215	7962	0,009	236	8758	0,009	215	7962	0,030	669	5573
	5,0	0,014	178	6369	0,014	178	6369	0,184	6911	18780	0,014	294	7006	0,014	268	6369	0,014	294	7006	0,014	268	6369	-	-	-
	6,0	0,018	191	5308	0,018	191	5308	0,22	6886	15650	0,018	315	5839	0,018	287	5308	0,018	315	5839	0,018	287	5308	0,040	594	3715
	8,0	0,023	183	3981	0,023	183	3981	0,278	6526	11738	0,023	302	4379	0,023	275	3981	0,023	302	4379	0,023	275	3981	0,050	557	2787
	10,0	0,028	178	3185	0,028	178	3185	0,322	6047	9390	0,028	294	3503	0,028	268	3185	0,028	294	3503	0,028	268	3185	0,060	535	2229
	12,0	-	-	-	0,032	170	2654	0,359	5618	7825	0,032	280	2919	0,032	255	2654	-	-	-	-	-	-	0,070	520	1858
	14,0	-	-	-	0,034	155	2275	0,389	5218	6707	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16,0	-	-	-	0,038	151	1990	0,416	4883	5869	0,038	250	2189	0,038	227	1990	-	-	-	-	-	-	0,070	390	1393
	20,0	-	-	-	0,042	134	1592	-	-	-	0,042	221	1752	0,042	201	1592	-	-	-	-	-	-	0,080	357	1115
Acciaio <1300 N/mm² Steel <1300 N/mm²	m/min	Vc = 75			Vc = 75			Vc = 225			Vc = 80			Vc = 75			Vc = 80			Vc = 75			Vc=60		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	48	11943	0,002	48	11943	0,022	1576	35810	0,002	76	12739	0,002	72	11943	0,002	76	12739	0,002	72	11943	-	-	-
	3,0	0,004	64	7962	0,004	64	7962	0,081	3867	23873	0,004	102	8493	0,004	96	7962	0,004	102	8493	0,004	96	7962	0,020	510	6369
	4,0	0,009	107	5971	0,009	107	5971	0,139	4978	17905	0,009	172	6369	0,009	161	5971	0,009	172	6369	0,009	161	5971	0,030	573	4777
	5,0	0,014	134	4777	0,014	134	4777	0,184	5271	14324	0,014	214	5096	0,014	201	4777	0,014	214	5096	0,014	201	4777	-	-	-
	6,0	0,018	143	3981	0,018	143	3981	0,220	5252	11937	0,018	229	4246	0,018	215	3981	0,018	229	4246	0,018	215	3981	0,040	510	3185
	8,0	0,023	137	2986	0,023	137	2986	0,278	4978	8952	0,023	220	3185	0,023	206	2986	0,023	220	3185	0,023	206	2986	0,050	478	2389
	10,0	0,028	134	2389	0,028	134	2389	0,322	4612	7162	0,028	214	2548	0,028	201	2389	0,028	214	2548	0,028	201	2389	0,060	459	1911
	12,0	-	-	-	0,032	127	1990	0,359	4285	5968	0,032	204	2123	0,032	191	1990	-	-	-	-	-	-	0,070	446	1592
	14,0	-	-	-	0,034	116	1706	0,389	3980	5116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16,0	-	-	-	0,038	113	1493	0,416	3724	4476	0,038	182	1592	0,038	170	1493	-	-	-	-	-	-	0,070	334	1194
	20,0	-	-	-	0,042	100	1194	-	-	-	0,042	161	1274	0,042	150	1194	-	-	-	-	-	-	0,080	306	955
Acciai altolegati High alloyed tool steel	m/min	Vc = 40			Vc = 40			Vc = 115			Vc = 40			Vc = 40			Vc = 40			Vc = 40			Vc=40		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	25	6369	0,002	25	6369	0,022	805	18303	0,002	38	6369	0,002	38	6369	0,002	38	6369	0,002	38	6369	-	-	-
	3,0	0,004	34	4246	0,004	34	4246	0,081	1977	12202	0,004	51	4246	0,004	51	4246	0,004	51	4246	0,004	51	4246	0,020	340	4246
	4,0	0,009	57	3185	0,009	57	3185	0,139	2544	9151	0,009	86	3185	0,009	86	3185	0,009	86	3185	0,009	86	3185	0,030	382	3185
	5,0	0,014	71	2548	0,014	71	2548	0,184	2694	7321	0,014	107	2548	0,014	107	2548	0,014	107	2548	0,014	107	2548	-	-	-
	6,0	0,018	76	2123	0,018	76	2123	0,220	2684	6101	0,018	115	2123	0,018	115	2123	0,018	115	2123	0,018	115	2123	0,040	340	2123
	8,0	0,023	73	1592	0,023	73	1592	0,278	2544	4576	0,023	110	1592	0,023	110	1592	0,023	110	1592	0,023	110	1592	0,050	318	1592
	10,0	0,028	71	1274	0,028	71	1274	0,322	2357	3661	0,028	107	1274	0,028	107	1274	0,028	107	1274	0,028	107	1274	0,060	306	1274
	12,0	-	-	-	0,032	68	1062	0,359	2190	3050	0,032	102	1062	0,032	102	1062	-	-	-	-	-	-	0,070	297	1062
	14,0	-	-	-	0,034	62	910	0,389	2034	2615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16,0	-	-	-	0,038	61	796	0,416	1903	2288	0,038	91	796	0,038	91	796	-	-	-	-	-	-	0,070	223	796
	20,0	-	-	-	0,042	54	637	-	-	-	0,042	80	637	0,042	80	637	-	-	-	-	-	-	0,080	204	637
Acciaio Inox Stainless Steel	m/min	Vc = 40			Vc = 40			Vc = 75			Vc = 40			Vc = 40			Vc = 40			Vc = 40			Vc=80		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	25	6369	0,002	25	6369	0,022	525	11937	0,002	38	6369	0,002	38	6369	0,002	38	6369	0,002	38	6369	-	-	-
	3,0	0,004	34	4246	0,004	34	4246	0,081	1289	7958	0,004	51	4246	0,004	51	4246	0,004	51	4246	0,004	51	4246	0,020	679	8493
	4,0	0,009	57	3185	0,009	57	3185	0,139	1659	5968	0,009	86	3185	0,009	86	3185	0,009	86	3185	0,009	86	3185	0,030	764	6369
	5,0	0,014	71	2548	0,014	71	2548	0,184	1757	4775	0,014	107	2548	0,014	107	2548	0,014	107	2548	0,014	107	2548	-	-	-
	6,0	0,018	76	2123	0,018	76	2123	0,220	1751	3979	0,018	115	2123	0,018	115	2123	0,018	115	2123	0,018	115	2123	0,040	679	4246
	8,0	0,023	73	1592	0,023	73	1592	0,278	1659	2984	0,023	110	1592	0,023	110	1592	0,023	110	1592	0,023	110	1592	0,050	637	3185
	10,0	0,028	71	1274	0,028	71	1274	0,322	1537	2387	0,028	107	1274	0,028	107	1274	0,028	107	1274	0,028	107	1274	0,060	611	2548
	12,0	-	-	-	0,032	68	1062	0,359	1428	1989	0,032	102	1062	0,032	102	1062	-	-	-	-	-	-	0,070	594	2123
	14,0	-	-	-	0,034	62	910	0,389	1327	1705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16,0	-	-	-	0,038	61	796	0,416	1241	1492	0,038	91	796	0,038	91	796	-	-	-	-	-	-	0,070	446	1592
	20,0	-	-	-	0,042	54	637	-	-	-	0,042	80	637	0,042	80	637	-	-	-	-	-	-	0,080	408	1274

Serie lunga: -15% rispetto ai parametri di lavoro del corrispettivo utensile serie normale. / Long series: 15% less than the working parameters of the corresponding tool standard series.

Materiale Material	Diametro Diameter	GU126						GU127						GU128					
																			
	m/min	Vc = 600			Vc = 795			Vc = 600			Vc = 795			Vc=600			Vc=800		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Alluminio e leghe < 6% Si Aluminium and alloys < 6% Si	2,0	0,010	1910	95493	0,010	2531	126528	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,014	1783	63662	0,014	2362	84352	-	-	-	-	-	-	0,012	2292	63662	0,012	3056	84883
	4,0	0,024	2292	47746	0,024	3037	63264	0,021	3008	47746	0,021	3986	63264	0,020	2865	47746	0,020	3820	63662
	5,0	0,044	3361	38197	0,044	4454	50611	0,035	4011	38197	0,035	5314	50611	0,035	4011	38197	0,035	5348	50930
	6,0	0,060	3820	31831	0,060	5061	42176	0,050	4775	31831	0,050	6326	42176	0,050	4775	31831	0,050	6366	42441
	8,0	0,086	4106	23873	0,086	5441	31632	0,073	5228	23873	0,073	6927	31632	0,070	5013	23873	0,070	6685	31831
	10,0	0,106	4049	16099	0,106	5365	25306	0,091	5214	19099	0,091	6908	25306	0,090	5157	19099	0,090	6875	25465
	12,0	0,122	3883	15915	0,122	5145	21088	0,105	5013	15915	0,105	6643	21088	0,105	5013	15915	0,105	6685	21221
	14,0	0,136	3711	13642	0,136	4917	18075	0,118	4829	13642	0,118	6399	18075	0,110	4502	13642	0,110	6002	18189
	16,0	0,148	3533	11937	0,148	4682	15816	0,128	4584	11937	0,128	6073	15816	0,130	4655	11937	0,130	6207	15915
	20,0	0,160	3056	9549	0,160	4049	12653	0,140	4011	9549	0,140	5314	12653	0,160	4584	9549	0,160	6112	12732
	m/min	Vc = 225			Vc = 300			Vc = 225			Vc = 300			Vc=600			Vc=800		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Alluminio e leghe > 6% Si Aluminium and alloys > 6% Si	2,0	0,010	716	35810	0,010	955	47746	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,014	668	23873	0,014	891	31831	-	-	-	-	-	-	0,012	2292	63662	0,012	3056	84883
	4,0	0,024	859	17905	0,024	1146	23873	0,021	1128	17905	0,021	1504	23873	0,020	2865	47746	0,020	3820	63662
	5,0	0,044	1261	14324	0,044	1681	19099	0,035	1504	14324	0,035	2005	19099	0,035	4011	38197	0,035	5348	50930
	6,0	0,060	1432	11937	0,060	1910	15915	0,050	1790	11937	0,050	2387	15915	0,050	4775	31831	0,050	6366	42441
	8,0	0,086	1540	8952	0,086	2053	11937	0,073	1961	8952	0,073	2614	11937	0,070	5013	23873	0,070	6685	31831
	10,0	0,106	1518	7162	0,106	2024	9549	0,091	1955	7162	0,091	2607	9549	0,090	5157	19099	0,090	6875	25465
	12,0	0,122	1456	5968	0,122	1942	7958	0,105	1880	5968	0,105	2057	7958	0,105	5013	15915	0,105	6685	21221
	14,0	0,136	1391	5116	0,136	1855	6821	0,118	1811	5116	0,118	2415	6821	0,110	4502	13642	0,110	6002	18189
	16,0	0,148	1325	4476	0,148	1767	5968	0,128	1719	4476	0,128	2292	5968	0,130	4655	11937	0,130	6207	15915
	20,0	0,160	1146	3581	0,160	1528	4775	0,140	1504	3581	0,140	2005	4775	0,160	4584	9549	0,160	6112	12732
	m/min	Vc = 375			Vc = 495			Vc = 375			Vc = 495			Vc=350			Vc=500		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Rame e leghe Copper and alloys	2,0	0,010	1194	59683	0,010	1576	78782	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,014	1114	39789	0,014	1471	52521	-	-	-	-	-	-	0,012	1337	37136	0,012	1910	53052
	4,0	0,024	1432	29842	0,024	1891	39391	0,021	1880	29842	0,021	2482	39391	0,020	1671	27852	0,020	2387	39789
	5,0	0,044	2101	23873	0,044	2773	31513	0,035	2507	23873	0,035	3309	31513	0,035	2340	22282	0,035	3342	31831
	6,0	0,060	2387	19894	0,060	3151	26261	0,050	2984	19894	0,050	3939	26261	0,050	2785	18568	0,050	3979	26526
	8,0	0,086	2566	14921	0,086	3388	19695	0,073	3268	14921	0,073	4313	19695	0,070	2924	13926	0,070	4178	19894
	10,0	0,106	2531	11937	0,106	3340	15756	0,091	3259	11937	0,091	4301	15756	0,090	3008	11141	0,090	4297	15915
	12,0	0,122	2427	9947	0,122	3204	13130	0,105	3133	9947	0,105	4136	13130	0,105	2924	9284	0,105	4178	13263
	14,0	0,136	2319	8526	0,136	3061	11255	0,118	3018	8526	0,118	3984	11255	0,110	2626	7958	0,110	3752	11368
	16,0	0,148	2208	7460	0,148	2915	9848	0,128	2865	7460	0,128	3782	9848	0,130	2716	6963	0,130	3879	9947
	20,0	0,160	1910	5968	0,160	2521	7878	0,140	2507	5968	0,140	3309	7878	0,160	2674	5570	0,160	3820	7958
	m/min	Vc = 450			Vc = 595			Vc = 450			Vc = 595			Vc=450			Vc=600		
	D mm	fz ßmm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Resina termoplastica Thermoplastics	2,0	0,010	1432	71620	0,010	1894	94697	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,014	1337	47746	0,014	1768	63131	-	-	-	-	-	-	0,012	1719	47746	0,012	2292	63662
	4,0	0,024	1719	35810	0,024	2273	47349	0,021	2256	35810	0,021	2983	47349	0,020	2149	35810	0,020	2865	47746
	5,0	0,044	2521	28648	0,044	3333	37879	0,035	3008	28648	0,035	3977	37879	0,035	3008	28648	0,035	4011	38197
	6,0	0,060	2865	23873	0,060	3788	31566	0,050	3581	23873	0,050	4735	31566	0,050	3581	23873	0,050	4775	31831
	8,0	0,086	3080	17905	0,086	4072	23674	0,073	3921	17905	0,073	5185	23674	0,070	3760	17905	0,070	5013	23873
	10,0	0,106	3037	14324	0,106	4015	18939	0,091	3910	14324	0,091	5170	18939	0,090	3867	14324	0,090	5157	19099
	12,0	0,122	2913	11937	0,122	3851	15783	0,105	3760	11937	0,105	4972	15783	0,105	3760	11937	0,105	5013	15915
	14,0	0,136	2783	10231	0,136	3680	13528	0,118	3622	10231	0,118	4789	13528	0,110	3376	10231	0,110	4502	13642
	16,0	0,148	2650	8952	0,148	3504	11837	0,128	3438	8952	0,128	4545	11837	0,130	3491	8952	0,130	4655	11937
	20,0	0,160	2292	7162	0,160	3030	9470	0,140	3008	7162	0,140	3977	9470	0,160	3438	7162	0,160	4584	9549

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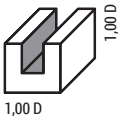

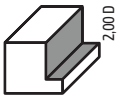

Materiale / Material	Diametro / Diameter						
	m/min	Vc=130			Vc=140		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Inox ferritico / Ferritic stainless steel	3,0	0,013	718	13800	0,013	773	14862
	4,0	0,020	828	10350	0,020	892	11146
	5,0	0,025	828	8280	0,025	892	8917
	6,0	0,030	828	6900	0,030	892	7431
	8,0	0,040	828	5175	0,040	892	5573
	10,0	0,050	828	4140	0,050	892	4459
	12,0	0,060	828	3450	0,060	892	3715
	16,0	0,070	725	2588	0,070	780	2787
	20,0	0,080	662	2070	0,080	713	2229
	m/min	Vc=110			Vc=120		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Inox austenitico / Austenitic stainless steel	3,0	0,013	607	11677	0,013	662	12739
	4,0	0,020	701	8758	0,020	764	9554
	5,0	0,025	701	7006	0,025	764	7643
	6,0	0,030	701	5839	0,030	764	6369
	8,0	0,040	701	4379	0,040	764	4777
	10,0	0,050	701	3503	0,050	764	3822
	12,0	0,060	701	2919	0,060	764	3185
	16,0	0,070	613	2189	0,070	669	2389
	20,0	0,080	561	1752	0,080	611	1911
	m/min	Vc=60			Vc=70		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Titanio / Titanium	3,0	0,005	127	6369	0,010	297	7431
	4,0	0,007	124	4777	0,016	357	5573
	5,0	0,009	130	3822	0,020	357	4459
	6,0	0,010	127	3185	0,030	446	3715
	8,0	0,013	124	2389	0,040	446	2787
	10,0	0,018	138	1911	0,050	446	2229
	12,0	0,022	140	1592	0,060	446	1858
	16,0	0,032	153	1194	0,080	446	1393
	20,0	0,040	153	955	0,100	446	1115
	m/min	Vc=130			Vc=140		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Acciaio <800 N/mm² / Steel < 800N/mm²	3,0	0,013	718	13800	0,013	773	14862
	4,0	0,020	828	10350	0,020	892	11146
	5,0	0,025	828	8280	0,025	892	8917
	6,0	0,030	828	6900	0,030	892	7431
	8,0	0,040	828	5175	0,040	892	5573
	10,0	0,050	828	4140	0,050	892	4459
	12,0	0,060	828	3450	0,060	892	3715
	16,0	0,070	725	2588	0,070	780	2787
	20,0	0,080	662	2070	0,080	713	2229

	2 Taglienti 2 Flutes		Attacchi 6535 HA + 6535 HB 6535 HA + 6535 HB holders
	3 Taglienti 3 Flutes		Attacco 6535 HA 6535 HA holder
	3 Taglienti con elica differenziata 3 Flutes with unequal helix		Attacco 6535 HB 6535 HB holder
	4 Taglienti 4 Flutes		Direzione di avanzamento Feed direction
	4 Taglienti 4 Flutes		Fresatura di cava Slotting
	4 Taglienti 4 Flutes		Fresatura laterale e frontale Side and face milling
	4 Taglienti con elica differenziata 4 Flutes with unequal helix		Fresatura trocoidale Trochoidal milling
	6 Taglienti 6 Flutes		Fresatura in rampa Ramp milling
Mg Co10	Qualità metallo duro Hard metal quality		Copiatura 3D 3D Copy milling
6527 L 6528	Norma 6527 L 6528 6527 L 6528 Norm		Smussatura Chamfering
6527 L	Norma 6527 L 6527 L Norm	45°	Geometria frontale 45° 45° Profile geometry
6527 L	Norma 6527 K 6528 6527 K 6528 Norm	60°	Geometria frontale 60° 60° Profile geometry
λ 38° λ 40°	Angolo elica Helix angle	90°	Geometria frontale 90° 90° Profile geometry
	Ribassamento dopo il tagliente / Neck relief	Cr	Geom. front. corner radius Corner radius prof. geom.
			Geom. front. semisferica Ball nose profile geometry

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