

Leghe Leggere

Silmax presenta ALU Smart Line, gamma con prestazioni superiori, adatta a soddisfare le più svariate esigenze di asportazione del truciolo.

Light Alloys

Silmax presents ALU Smart Line, a high-performance range, suited to meet the varying requirements of chip removal.

Leghe Leggere Light Alloys



Multifunzione

Ampio spettro di applicazioni: dai componenti per il settore aeronautico ai profilati per serramenti.

Multi-purpose

Large number of applications: from aeronautics components to doors and windows sections.



Geometrie di taglio

La gamma è caratterizzata da geometrie di taglio specifiche e versatili.

Cutting geometries

The range is characterised by specific and versatile cutting geometries.



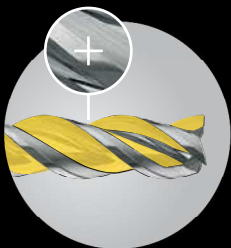
ALUSPEED BY CEMECON®

Rivestimento Aluspeed by Cemecon®

Nuovo rivestimento ultra scorrevole per le situazioni più impegnative e per materiali tendenti all'abrasione.

Aluspeed Coating by Cemecon®

New, ultra-smooth coating for the most demanding situations and specifically developed for easily abraded materials.

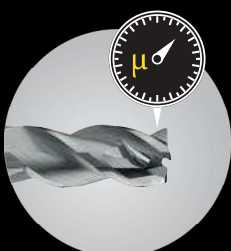


Super finiture superfici taglienti

Le super finiture delle superfici taglienti garantiscono le massime prestazioni per le più svariate esigenze di asportazione truciolo.

Super-finishing of cutting surfaces

The super-finishing treatments of cutting surfaces ensure the maximum performances for the varying requirements of chip removal.



Centrature millesimali

Per una perfetta bilanciatura ad elevati regimi di rotazione.

Micrometric Precision Centering

For perfect balancing at high rotating conditions.

Per maggiori informazioni
scarica la brochure digitale.

For further information
download the digital brochure.

silmax.it/alu



700

Fresa monotagliante elica Dx, taglio Dx

Monolith cutter, right hand helix, right cut

→ 141

701

Fresa monotagliante elica Sx, taglio Dx

Monolith cutter, left hand helix, right cut

→ 141

175

Fresa 2 taglienti serie normale

2 flute end mill, regular version

→ 143



177 NEW

Fresa 2 taglienti serie lunga

2 flute end mill, long version

→ 143

735 NEW

Fresa 2 taglienti serie normale semisferica

2 flute ball nose end mill, regular version

→ 145



765

Fresa 2 taglienti semisferica per elevate asportazioni

2 flute ball nose end mill, for high chip removal

→ 145

115

Fresa 3 taglienti serie normale

3 flute end mill, regular version

→ 147



125 NEW

Fresa 3 taglienti serie normale con divise irregolare

3 flute end mill, regular version with unequal flute spacing

→ 149

127 NEW

Fresa 3 taglienti serie lunga con divise irregolare

3 flute end mill, long version with unequal flute spacing

→ 151



129 NEW

Fresa 3 taglienti serie lunga con divise irregolare

3 flute end mill, long version with unequal flute spacing

→ 151

015

Fresa 3 taglienti a sgrossare serie normale con rompitrucolo

3 flute roughing end mill with chip breaker, regular version

→ 153



SIL SERVICE

L'esperienza Silmax dimostra che un utensile correttamente affilato ha un rendimento uguale a quello nuovo.

Silmax experience shows that a properly sharpened tool grants the same performances of a new tool.



Riaffilatura e rigenerazione
Resharpener and Reconditioning



Esecuzione perfetta
Perfect Execution



Rivestimento PVD
PVD Coating



Trattamento 4S
4S Treatment





Consegna rapida
Fast Delivery

Alu Smart Line

700/701

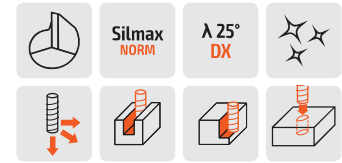
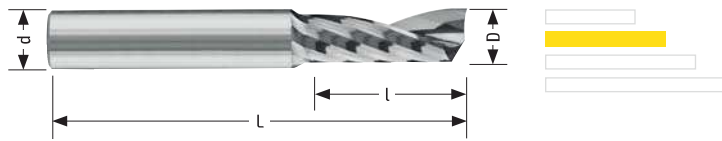
Parametri di lavoro / Working Parameters

Materiale Material	Diametro Diameter	 1,00 D			 0,20 D		
		m/min	Vc=600			Vc=700	
Alluminio e leghe Aluminium & Alloys	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,012	1146	95493	0,012	1337	111408
	3,0	0,018	1146	63662	0,018	1337	74272
	4,0	0,024	1146	47746	0,024	1337	55704
	5,0	0,050	1910	38197	0,050	2228	44563
	6,0	0,065	2069	31831	0,065	2414	37136
	8,0	0,094	2244	23873	0,094	2618	27852
	10,0	0,116	2215	19099	0,116	2585	22282
	12,0	0,134	2133	15915	0,134	2488	18568
	14,0	0,145	1978	13642	0,145	2308	15915
	16,0	0,163	1946	11937	0,163	2270	13926
	20,0	0,185	1767	9549	0,185	2061	11141
Rame e leghe Copper & Alloys	m/min	Vc=380			Vc=500		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,012	726	60479	0,012	955	79577
	3,0	0,018	726	40319	0,018	955	53052
	4,0	0,024	726	30239	0,024	955	39789
	5,0	0,050	1210	24192	0,050	1592	31831
	6,0	0,065	1310	20160	0,065	1724	26526
	8,0	0,094	1421	15120	0,094	1870	19894
	10,0	0,116	1403	12096	0,116	1846	15915
	12,0	0,134	1351	10080	0,134	1777	13263
	14,0	0,145	1253	8640	0,145	1648	11368
	16,0	0,163	1232	7560	0,163	1621	9947
20,0	0,185	1119	6048	0,185	1472	7958	
Resina termoplastica Thermoplastics	m/min	Vc=450			Vc=600		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,012	859	71620	0,012	1146	95493
	3,0	0,018	859	47746	0,018	1146	63662
	4,0	0,024	859	35810	0,024	1146	47746
	5,0	0,050	1432	28648	0,050	1910	38197
	6,0	0,065	1552	23873	0,065	2069	31831
	8,0	0,094	1683	17905	0,094	2244	23873
	10,0	0,116	1662	14324	0,116	2215	19099
	12,0	0,134	1600	11937	0,134	2133	15915
	14,0	0,145	1484	10231	0,145	1978	13642
	16,0	0,163	1459	8952	0,163	1946	11937
20,0	0,185	1325	7162	0,185	1767	9549	

Notes

700

Fresa monotagliante elica Dx, taglio Dx
Monolith cutter, right hand helix, right cut



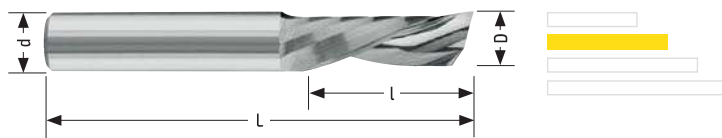
6

90°

D h10	d h6	L	l ap	Z	Non rivestito Uncoated	AluSpeed®
2,0	2	40	10,0	1	HM0700020	HMA700020
3,0	3	40	12,0	1	HM0700030	HMA700030
4,0	4	40	15,0	1	HM0700040	HMA700040
5,0	5	50	16,0	1	HM0700050	HMA700050
6,0	6	60	20,0	1	HM0700060	HMA700060
8,0	8	63	22,0	1	HM0700080	HMA700080
10,0	10	72	25,0	1	HM0700100	HMA700100
12,0	12	83	30,0	1	HM0700120	HMA700120
14,0	14	83	30,0	1	HM0700140	HMA700140
16,0	16	92	35,0	1	HM0700160	HMA700160
20,0	20	104	40,0	1	HM0700200	HMA700200

701

Fresa monotagliante elica Sx, taglio Dx
Monolith cutter, left hand helix, right cut



6

90°

D h10	d h6	L	l ap	Z	Non rivestito Uncoated	AluSpeed®
2,0	2	40	10,0	1	HM0701020	HMA701020
3,0	3	40	12,0	1	HM0701030	HMA701030
4,0	4	40	15,0	1	HM0701040	HMA701040
5,0	5	50	16,0	1	HM0701050	HMA701050
6,0	6	60	20,0	1	HM0701060	HMA701060
8,0	8	63	22,0	1	HM0701080	HMA701080
10,0	10	72	25,0	1	HM0701100	HMA701100
12,0	12	83	30,0	1	HM0701120	HMA701120
14,0	14	83	30,0	1	HM0701140	HMA701140
16,0	16	92	35,0	1	HM0701160	HMA701160
20,0	20	104	40,0	1	HM0701200	HMA701200

1 Acciaio
Steel

2 Ghise
Cast Iron

3 Acciai
Temprati
Hardened Steel

4 Acciaio
Inox
Stainless Steel

5 Titanio
Titanium

6 Leghe
Leggere
Light Alloys

7 PH
Duplex

8 Superleghe
Superalloys

9 Compositi
Composite Materials



→ 16 Guida alla
lettura
Reading guide

→ 18 Legenda
Legend

Alu Smart Line

175/177* (*) Parametri di lavoro da ridurre del 15% / Working parameters to be reduced by 15%

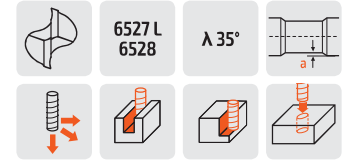
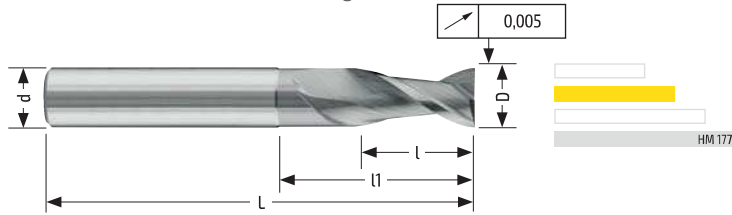
Parametri di lavoro / Working Parameters

Materiale Material	Diametro Diameter	 1,00 D			 0,50 D		
		m/min	Vc=600			Vc=800	
Alluminio e leghe Aluminium & Alloys	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	1910	95493	0,010	2546	127324
	3,0	0,016	2037	63662	0,016	2716	84883
	4,0	0,025	2387	47746	0,025	3183	63662
	5,0	0,040	3056	38197	0,040	4074	50930
	6,0	0,060	3820	31831	0,060	5093	42441
	8,0	0,075	3581	23873	0,075	4775	31831
	10,0	0,100	3820	19099	0,100	5093	25465
	12,0	0,120	3820	15915	0,120	5093	21221
	14,0	0,135	3683	13642	0,135	4911	18189
	16,0	0,150	3581	11937	0,150	4775	15915
	20,0	0,175	3342	9549	0,175	4456	12732
	25,0	0,200	3056	7639	0,200	4074	10186
Rame e leghe Copper & Alloys	m/min	Vc=370			Vc=500		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	1178	58887	0,010	1592	79577
	3,0	0,016	1256	39258	0,016	1698	53052
	4,0	0,025	1472	29444	0,025	1989	39789
	5,0	0,040	1884	23555	0,040	2546	31831
	6,0	0,060	2355	19629	0,060	3183	26526
	8,0	0,075	2208	14722	0,075	2984	19894
	10,0	0,100	2355	11777	0,100	3183	15915
	12,0	0,120	2355	9815	0,120	3183	13263
	14,0	0,135	2271	8412	0,135	3069	11368
	16,0	0,150	2208	7361	0,150	2984	9947
	20,0	0,175	2061	5889	0,175	2785	7958
25,0	0,200	1884	4711	0,200	2546	6366	
Resina termoplastica Thermoplastics	m/min	Vc=450			Vc=600		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	1432	71620	0,010	1910	95493
	3,0	0,016	1528	47746	0,016	2037	63662
	4,0	0,025	1790	35810	0,025	2387	47746
	5,0	0,040	2292	28648	0,040	3056	38197
	6,0	0,060	2865	23873	0,060	3820	31831
	8,0	0,075	2686	17905	0,075	3581	23873
	10,0	0,100	2865	14324	0,100	3820	19099
	12,0	0,120	2865	11937	0,120	3820	15915
	14,0	0,135	2762	10231	0,135	3683	13642
	16,0	0,150	2686	8952	0,150	3581	11937
	20,0	0,175	2507	7162	0,175	3342	9549
20,0	0,175	2507	7162	0,175	3342	9549	

1
Acciaio
Steel2
Ghise
Cast
Iron3
Acciai
Temprati
Hardened
Steel4
Acciaio
Inox
Stainless
Steel5
Titanio
Titanium6
Leghe
Leggere
Light
Alloys7
PH
Duplex8
Superleghe
Superalloys9
Compositi
Composite
Materials→ 16
Guida alla
lettura
Reading
guide→ 18
Legenda
Legend

175

Fresa 2 taglienti serie normale
2 flute end mill, regular version



6

90°

D	d	L	l	l1	a	90°	Z	Non rivestito	AluSpeed®
h6	h6		ap					Uncoated	
2,0	3	50	6,0	-	-	-	2	HM0175020	HMA175020
3,0	3	50	7,0	18,0	0,10	-	2	HM0175030	HMA175030
4,0	4	50	8,0	19,0	0,10	-	2	HM0175040	HMA175040
5,0	5	50	10,0	21,0	0,10	-	2	HM0175050	HMA175050
6,0	6	57	10,0	21,0	0,15	-	2	HM0175060	HMA175060
8,0	8	63	16,0	27,0	0,15	-	2	HM0175080	HMA175080
10,0	10	72	19,0	30,0	0,15	-	2	HM0175100	HMA175100
12,0	12	83	22,0	38,0	0,20	-	2	HM0175120	HMA175120
14,0	14	83	22,0	38,0	0,20	-	2	HM0175140	HMA175140
16,0	16	92	26,0	42,0	0,20	-	2	HM0175160	HMA175160
20,0	20	104	32,0	54,0	0,20	-	2	HM0175200	HMA175200
25,0	25	121	40,0	68,0	0,20	-	2	HM0175250	HMA175250

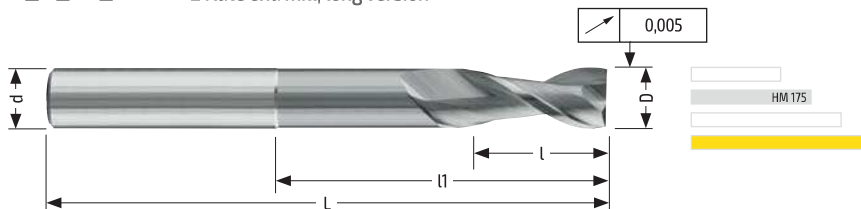
Cr

D	d	L	l	l1	a	Cr	Z	Non rivestito	AluSpeed®
h10	h6		ap					Uncoated	
2,0	3	50	6,0	-	-	0,30	2	HM0175020CR03	HMA175020CR03
3,0	3	50	7,0	18,0	0,10	0,30	2	HM0175030CR03	HMA175030CR03
4,0	4	50	8,0	19,0	0,10	0,30	2	HM0175040CR03	HMA175040CR03
4,0	4	50	8,0	19,0	0,10	0,50	2	HM0175040CR05	HMA175040CR05
5,0	5	50	10,0	21,0	0,10	0,50	2	HM0175050CR05	HMA175050CR05
6,0	6	57	10,0	21,0	0,15	0,50	2	HM0175060CR05	HMA175060CR05
8,0	8	63	16,0	27,0	0,15	0,50	2	HM0175080CR05	HMA175080CR05
8,0	8	63	16,0	27,0	0,15	0,80	2	HM0175080CR08	HMA175080CR08
10,0	10	72	19,0	30,0	0,15	0,50	2	HM0175100CR05	HMA175100CR05
10,0	10	72	19,0	30,0	0,15	1,00	2	HM0175100CR10	HMA175100CR10
12,0	12	83	22,0	38,0	0,20	1,00	2	HM0175120CR10	HMA175120CR10
12,0	12	83	22,0	38,0	0,20	1,50	2	HM0175120CR15	HMA175120CR15
14,0	14	83	22,0	38,0	0,20	1,50	2	HM0175140CR15	HMA175140CR15
16,0	16	92	26,0	42,0	0,20	1,00	2	HM0175160CR10	HMA175160CR10
16,0	16	92	26,0	42,0	0,20	1,50	2	HM0175160CR15	HMA175160CR15
20,0	20	104	32,0	54,0	0,20	2,00	2	HM0175200CR20	HMA175200CR20

NEW

177

Fresa 2 taglienti serie lunga
2 flute end mill, long version



6

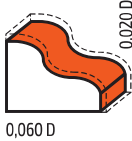
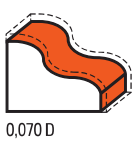
90°

D	d	L	l	l1	a	Z	Non rivestito	AluSpeed®
h10	h6		ap				Uncoated	
6,0	6	75	13,0	32,0	0,15	2	HM0177060	HMA177060
8,0	8	78	19,0	42,0	0,15	2	HM0177080	HMA177080
10,0	10	104	22,0	55,0	0,15	2	HM0177100	HMA177100
12,0	12	110	26,0	64,0	0,20	2	HM0177120	HMA177120
16,0	16	130	32,0	75,0	0,20	2	HM0177160	HMA177160
20,0	20	150	38,0	90,0	0,20	2	HM0177200	HMA177200

Alu Smart Line

735/765

Parametri di lavoro / Working Parameters

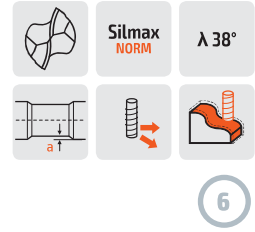
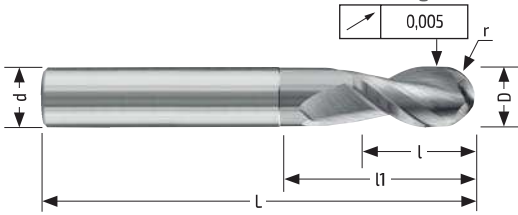
Materiale Material	Diametro Diameter	735			765		
							
Alluminio e leghe Aluminium & Alloys	m/min	Vc=650			Vc=800		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	-	-	-	0,022	3737	84926
	4,0	-	-	-	0,035	4459	63694
	6,0	0,055	3793	34484	0,055	4669	42441
	8,0	0,080	4138	25863	0,080	5093	31831
	10,0	0,100	4138	20690	0,100	5093	25465
	12,0	0,120	4138	17242	0,120	5093	21221
	16,0	0,130	3362	12931	0,130	4138	15915
20,0	-	-	-	0,180	4584	12732	
Rame e leghe Copper & Alloys	m/min	Vc=450			Vc=500		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	-	-	-	0,022	2335	53079
	4,0	-	-	-	0,035	2787	39809
	6,0	0,055	2626	23873	0,055	2918	26526
	8,0	0,080	2865	17905	0,080	3183	19894
	10,0	0,100	2865	14324	0,100	3183	15915
	12,0	0,120	2865	11937	0,120	3183	13263
	16,0	0,130	2328	8952	0,130	2586	9947
20,0	-	-	-	0,180	2865	7958	
Resina termoplastica Thermoplastics	m/min	Vc=500			Vc=600		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	-	-	-	0,022	2803	63694
	4,0	-	-	-	0,035	3344	47771
	6,0	0,055	2918	26526	0,055	3501	31831
	8,0	0,080	3183	19894	0,080	3820	23873
	10,0	0,100	3183	15915	0,100	3820	19099
	12,0	0,120	3183	13263	0,120	3820	15915
	16,0	0,130	2586	9947	0,130	3104	11937
20,0	-	-	-	0,180	3438	9549	

Notes

NEW

735

Fresa 2 taglienti serie normale semisferica
2 flute ball nose end mill, regular version



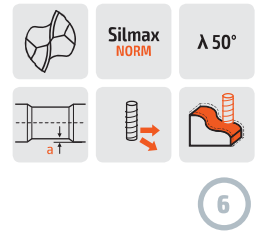
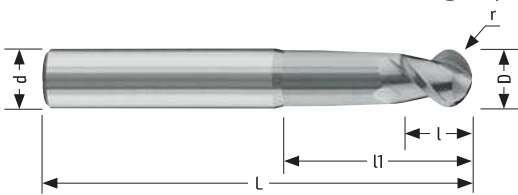
6



D h6	d h6	L	l ap	l1	a	r +/- 0,01	Z	Non rivestito Uncoated	AluSpeed®
6,0	6	57	10,0	21,0	0,15	3,00	2	HM0735060	HMA735060
8,0	8	63	16,0	27,0	0,15	4,00	2	HM0735080	HMA735080
10,0	10	72	19,0	30,0	0,15	5,00	2	HM0735100	HMA735100
12,0	12	83	22,0	38,0	0,20	6,00	2	HM0735120	HMA735120
16,0	16	92	26,0	42,0	0,20	8,00	2	HM0735160	HMA735160

765

Fresa 2 taglienti semisferica per elevate asportazioni
2 flute ball nose end mill, for high chip removal



6



D h10	d h6	L	l ap	l1	a	r f8	Z	Non rivestito Uncoated	AluSpeed®
3,0	3	50	3,0	22,0	0,15	1,50	2	HM0765030	HMA765030
4,0	4	50	4,0	22,0	0,20	2,00	2	HM0765040	HMA765040
5,0	5	50	5,0	22,0	0,20	2,50	2	HM0765050	HMA765050
6,0	6	57	6,0	21,0	0,25	3,00	2	HM0765060	HMA765060
8,0	8	63	8,0	27,0	0,35	4,00	2	HM0765080	HMA765080
10,0	10	72	10,0	32,0	0,50	5,00	2	HM0765100	HMA765100
12,0	12	83	12,0	38,0	0,50	6,00	2	HM0765120	HMA765120
16,0	16	92	16,0	44,0	0,80	8,00	2	HM0765160	HMA765160
20,0	20	104	20,0	54,0	0,90	10,00	2	HM0765200	HMA765200

1 Acciaio
Steel

2 Ghise
Cast Iron

3 Acciai
Temprati
Hardened Steel

4 Acciaio
Inox
Stainless Steel

5 Titanio
Titanium

6 Leghe
Leggere
Light Alloys

7 PH
Duplex

8 Superleghe
Superalloys

9 Compositi
Composite Materials


→ 16 Guida alla
lettura
Reading guide

→ 18 Legenda
Legend

Alu Smart Line

115

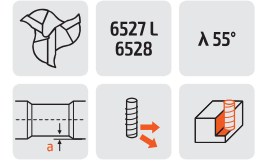
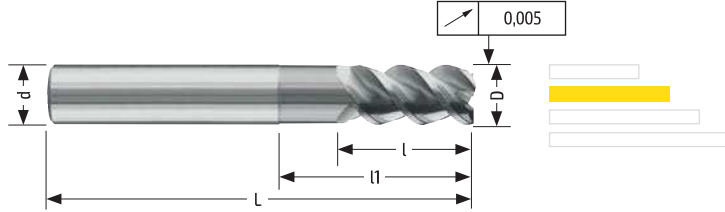
Parametri di lavoro / Working Parameters

Materiale Material	Diametro Diameter	 0,10 D 1,50 D			
Alluminio e leghe Aluminium & Alloys	m/min	Vc=800			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,020	3820	63662	
	5,0	0,035	5348	50930	
	6,0	0,050	6366	42441	
	8,0	0,070	6685	31831	
	10,0	0,090	6875	25465	
	12,0	0,105	6685	21221	
	14,0	0,110	6002	18189	
	16,0	0,130	6207	15915	
20,0	0,160	6112	12732		
Rame e leghe Copper & Alloys	m/min	Vc=500			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,020	2387	39789	
	5,0	0,035	3342	31831	
	6,0	0,050	3979	26526	
	8,0	0,070	4178	19894	
	10,0	0,090	4297	15915	
	12,0	0,105	4178	13263	
	14,0	0,110	3752	11368	
	16,0	0,130	3879	9947	
20,0	0,160	3820	7958		
Resina termoplastica Thermoplastics	m/min	Vc=600			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,020	2865	47746	
	5,0	0,035	4011	38197	
	6,0	0,050	4775	31831	
	8,0	0,070	5013	23873	
	10,0	0,090	5157	19099	
	12,0	0,105	5013	15915	
	14,0	0,110	4502	13642	
	16,0	0,130	4655	11937	
20,0	0,160	4584	9549		

Notes

115

Fresa 3 taglienti serie normale
3 flute end mill, regular version



6

90°

D h6	d h6	L	l ap	l1	a	90°	Z	Non rivestito Uncoated	AluSpeed®
4,0	4	50	8,0	19,0	0,10	-	3	HM0115040	HMA115040
5,0	5	50	10,0	21,0	0,10	-	3	HM0115050	HMA115050
6,0	6	57	10,0	21,0	0,15	-	3	HM0115060	HMA115060
7,0	7	60	13,0	24,0	0,15	-	3	HM0115070	HMA115070
8,0	8	63	16,0	27,0	0,15	-	3	HM0115080	HMA115080
9,0	9	67	16,0	27,0	0,15	-	3	HM0115090	HMA115090
10,0	10	72	19,0	30,0	0,15	-	3	HM0115100	HMA115100
12,0	12	83	22,0	38,0	0,20	-	3	HM0115120	HMA115120
14,0	14	83	22,0	38,0	0,20	-	3	HM0115140	HMA115140
16,0	16	92	26,0	42,0	0,20	-	3	HM0115160	HMA115160
20,0	20	104	32,0	54,0	0,20	-	4	HM0115200	HMA115200

Cr

D h10	d h6	L	l ap	l1	a	Cr	Z	Non rivestito Uncoated	AluSpeed®
4,0	4	50	8,0	19,0	0,10	0,30	3	HM0115040CR03	HMA115040CR03
5,0	5	50	10,0	21,0	0,10	0,30	3	HM0115050CR03	HMA115050CR03
6,0	6	57	10,0	21,0	0,15	0,30	3	HM0115060CR03	HMA115060CR03
7,0	7	60	13,0	24,0	0,15	0,30	3	HM0115070CR03	HMA115070CR03
8,0	8	63	16,0	27,0	0,15	0,30	3	HM0115080CR03	HMA115080CR03
9,0	9	67	16,0	27,0	0,15	0,50	3	HM0115090CR05	HMA115090CR05
10,0	10	72	19,0	30,0	0,15	0,50	3	HM0115100CR05	HMA115100CR05
12,0	12	83	22,0	38,0	0,20	0,50	3	HM0115120CR05	HMA115120CR05
14,0	14	83	22,0	38,0	0,20	1,00	3	HM0115140CR10	HMA115140CR10
16,0	16	92	26,0	42,0	0,20	1,00	3	HM0115160CR10	HMA115160CR10
20,0	20	104	32,0	54,0	0,20	1,00	4	HM0115200CR10	HMA115200CR10

1
Acciaio
Steel

2
Ghise
Cast
Iron

3
Acciai
Temprati
Hardened
Steel

4
Acciaio
Inox
Stainless
Steel

5
Titanio
Titanium

6
Leghe
Leggere
Light
Alloys

7
PH
Duplex

8
Superleghe
Superalloys

9
Compositi
Composite
Materials


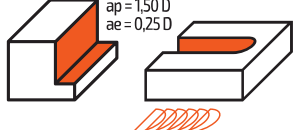
→ 16
Guida alla
lettura
Reading
guide

→ 18
Legenda
Legend

Alu Smart Line

125

Parametri di lavoro / Working Parameters

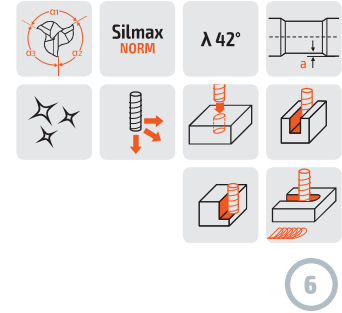
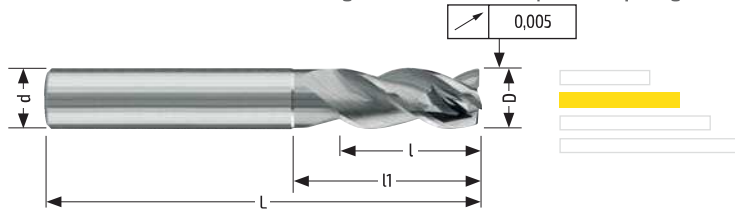
Materiale Material	Diametro Diameter								
		1,00 D				ap = 1,50 D ae = 0,25 D			
Alluminio e leghe Aluminium & Alloys	m/min	Vc=600				Vc=800			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	3,0	0,012	2292	63662	0,012	3056	84883		
	4,0	0,020	2865	47746	0,020	3820	63662		
	5,0	0,035	4011	38197	0,035	5348	50930		
	6,0	0,050	4775	31831	0,050	6366	42441		
	8,0	0,070	5013	23873	0,070	6685	31831		
	10,0	0,090	5157	19099	0,090	6875	25465		
	12,0	0,105	5013	15915	0,105	6685	21221		
	14,0	0,110	4502	13642	0,110	6002	18189		
	16,0	0,130	4655	11937	0,130	6207	15915		
20,0	0,160	4584	9549	0,160	6112	12732			
Rame e leghe Copper & Alloys	m/min	Vc=350				Vc=500			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	3,0	0,012	1337	37136	0,012	1910	53052		
	4,0	0,020	1671	27852	0,020	2387	39789		
	5,0	0,035	2340	22282	0,035	3342	31831		
	6,0	0,050	2785	18568	0,050	3979	26526		
	8,0	0,070	2924	13926	0,070	4178	19894		
	10,0	0,090	3008	11141	0,090	4297	15915		
	12,0	0,105	2924	9284	0,105	4178	13263		
	14,0	0,110	2626	7958	0,110	3752	11368		
	16,0	0,130	2716	6963	0,130	3879	9947		
20,0	0,160	2674	5570	0,160	3820	7958			
Resina termoplastica Thermoplastics	m/min	Vc=450				Vc=600			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	3,0	0,012	1719	47746	0,012	2292	63662		
	4,0	0,020	2149	35810	0,020	2865	47746		
	5,0	0,035	3008	28648	0,035	4011	38197		
	6,0	0,050	3581	23873	0,050	4775	31831		
	8,0	0,070	3760	17905	0,070	5013	23873		
	10,0	0,090	3867	14324	0,090	5157	19099		
	12,0	0,105	3760	11937	0,105	5013	15915		
	14,0	0,110	3376	10231	0,110	4502	13642		
	16,0	0,130	3491	8952	0,130	4655	11937		
20,0	0,160	3438	7162	0,160	4584	9549			

Notes

NEW

125

Fresa 3 taglienti serie normale con divise irregolare
3 flute end mill, regular version with unequal flute spacing



6

45°

D h6	d h6	L	l ap	l1	a	45° +0,05/+0	Z	Non rivestito Uncoated	AluSpeed®
3,0	6	57	8,0	-	-	0,05	3	HMO125030	HMA125030
4,0	6	57	11,0	-	-	0,05	3	HMO125040	HMA125040
5,0	6	57	13,0	-	-	0,10	3	HMO125050	HMA125050
6,0	6	57	13,0	20,0	0,15	0,10	3	HMO125060	HMA125060
8,0	8	63	19,0	25,0	0,15	0,15	3	HMO125080	HMA125080
10,0	10	72	22,0	30,0	0,15	0,20	3	HMO125100	HMA125100
12,0	12	83	26,0	36,0	0,20	0,25	3	HMO125120	HMA125120
16,0	16	92	32,0	42,0	0,20	0,30	3	HMO125160	HMA125160
20,0	20	104	38,0	52,0	0,20	0,35	3	HMO125200	HMA125200

Cr

D h6	d h6	L	l ap	l1	a	Cr	Z	Non rivestito Uncoated	AluSpeed®
6,0	6	57	13,0	20,0	0,15	0,50	3	HMO125060CR05	HMA125060CR05
8,0	8	63	19,0	25,0	0,15	0,50	3	HMO125080CR05	HMA125080CR05
8,0	8	63	19,0	25,0	0,15	1,00	3	HMO125080CR10	HMA125080CR10
10,0	10	72	22,0	30,0	0,15	1,00	3	HMO125100CR10	HMA125100CR10
10,0	10	72	22,0	30,0	0,15	1,50	3	HMO125100CR15	HMA125100CR15
10,0	10	72	22,0	30,0	0,15	2,00	3	HMO125100CR20	HMA125100CR20
12,0	12	83	26,0	36,0	0,20	1,00	3	HMO125120CR10	HMA125120CR10
12,0	12	83	26,0	36,0	0,20	1,50	3	HMO125120CR15	HMA125120CR15
12,0	12	83	26,0	36,0	0,20	2,00	3	HMO125120CR20	HMA125120CR20
16,0	16	92	32,0	42,0	0,20	1,00	3	HMO125160CR10	HMA125160CR10
16,0	16	92	32,0	42,0	0,20	2,00	3	HMO125160CR20	HMA125160CR20
16,0	16	92	32,0	42,0	0,20	3,00	3	HMO125160CR30	HMA125160CR30
20,0	20	104	38,0	52,0	0,20	2,00	3	HMO125200CR20	HMA125200CR20
20,0	20	104	38,0	52,0	0,20	3,00	3	HMO125200CR30	HMA125200CR30

1
Acciaio
Steel

2
Ghise
Cast
Iron

3
Acciai
Temprati
Hardened
Steel

4
Acciaio
Inox
Stainless
Steel

5
Titanio
Titanium

6
Leghe
Leggere
Light
Alloys

7
PH
Duplex

8
Superleghe
Superalloys

9
Compositi
Composite
Materials


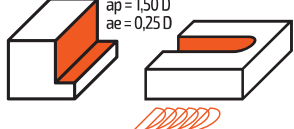
→ 16
Guida alla
lettura
Reading
guide

→ 18
Legenda
Legend

Alu Smart Line

127/129

Parametri di lavoro / Working Parameters

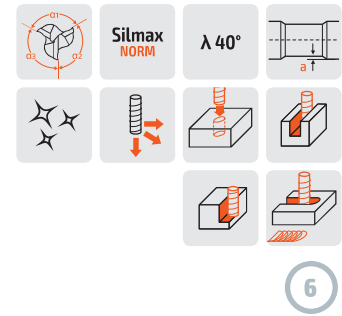
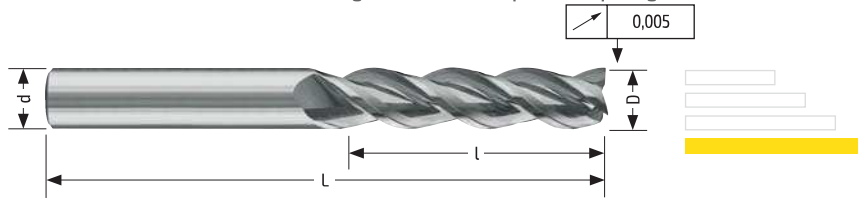
Materiale Material	Diametro Diameter								
		1,00 D				1,00 D			
Alluminio e leghe Aluminium & Alloys	m/min	Vc=600				Vc=800			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	6,0	0,060	5730	31831	0,060	7639	42441		
	8,0	0,075	5371	23873	0,075	7162	31831		
	10,0	0,100	5730	19099	0,100	7639	25465		
	12,0	0,120	5730	15915	0,120	7639	21221		
16,0	0,150	5371	11937	0,150	7162	15915			
Rame e leghe Copper & Alloys	m/min	Vc=350				Vc=500			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	6,0	0,060	3342	18568	0,060	4775	26526		
	8,0	0,075	3133	13926	0,075	4476	19894		
	10,0	0,100	3342	11141	0,100	4775	15915		
	12,0	0,120	3342	9284	0,120	4775	13263		
16,0	0,150	3133	6963	0,150	4476	9947			
Resina termoplastica Thermoplastics	m/min	Vc=450				Vc=600			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	6,0	0,060	4297	23873	0,060	5730	31831		
	8,0	0,075	4029	17905	0,075	5371	23873		
	10,0	0,100	4297	14324	0,100	5730	19099		
	12,0	0,120	4297	11937	0,120	5730	15915		
16,0	0,150	4029	8952	0,150	5371	11937			

Notes

NEW

127

Fresa 3 taglienti serie lunga con divisone irregolare
3 flute end mill, long version with unequal flute spacing



6

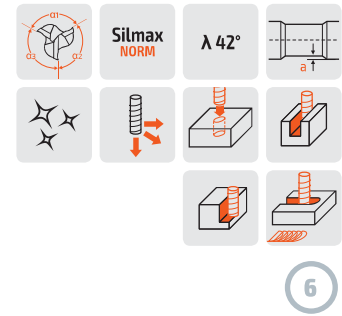
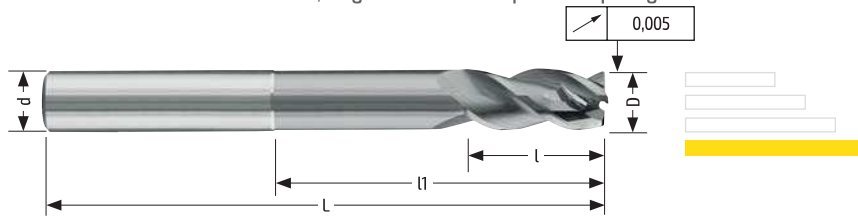
45°

D h6	d h6	L	l ap	45° +0,05/+0	Z	Non rivestito Uncoated	AluSpeed®
6,0	6	75	26,0	0,10	3	HM0127060	HMA127060
8,0	8	78	36,0	0,15	3	HM0127080	HMA127080
10,0	10	104	45,0	0,20	3	HM0127100	HMA127100
12,0	12	110	53,0	0,25	3	HM0127120	HMA127120
16,0	16	130	63,0	0,30	3	HM0127160	HMA127160

NEW

129

Fresa 3 taglienti serie lunga con divisone irregolare
3 flute end mill, long version with unequal flute spacing



6

45°

D h6	d h6	L	l ap	l1	a	45° +0,05/+0	Z	Non rivestito Uncoated	AluSpeed®
10,0	10	104	22,0	55,0	0,15	0,20	3	HM0129100	HMA129100
12,0	12	110	26,0	64,0	0,20	0,25	3	HM0129120	HMA129120
16,0	16	130	32,0	75,0	0,20	0,30	3	HM0129160	HMA129160

1 Acciaio
Steel

2 Ghise
Cast Iron

3 Acciai
Temprati
Hardened Steel

4 Acciaio
Inox
Stainless Steel

5 Titanio
Titanium

6 Leghe
Leggere
Light Alloys

7 PH
Duplex

8 Superleghe
Superalloys

9 Compositi
Composite Materials



→ 16 Guida alla
lettura
Reading guide

→ 18 Legenda
Legend

Alu Smart Line

015

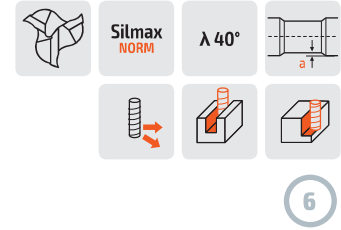
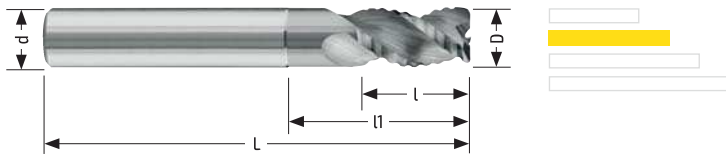
Parametri di lavoro / Working Parameters

Materiale Material	Diametro Diameter	 1,00 D				 0,50 D			
		Vc=600				Vc=880			
Alluminio e leghe Aluminium & Alloys	m/min								
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	8,0	0,120	8594	23873	0,110	11555	35014		
	10,0	0,150	8594	19099	0,135	11345	28011		
	12,0	0,170	8117	15915	0,155	10854	23343		
	16,0	0,200	7162	11937	0,185	9716	17507		
20,0	0,230	6589	9549	0,215	9034	14006			
Rame e leghe Copper & Alloys	m/min	Vc=350				Vc=500			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	8,0	0,120	5013	13926	0,110	6565	19894		
	10,0	0,150	5013	11141	0,140	6685	15915		
	12,0	0,170	4735	9284	0,160	6366	13263		
	16,0	0,200	4178	6963	0,190	5670	9947		
20,0	0,230	3844	5570	0,220	5252	7958			
Resina termoplastica Thermoplastics	m/min	Vc=300				Vc=400			
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm		
	8,0	0,120	4297	11937	0,110	5252	15915		
	10,0	0,150	4297	9549	0,140	5348	12732		
	12,0	0,170	4058	7958	0,160	5093	10610		
	16,0	0,200	3581	5968	0,190	4536	7958		
20,0	0,230	3295	4775	0,220	4202	6366			

Notes

015

Fresa 3 taglienti a sgrassare serie normale con rompitruciolo
3 flute roughing end mill with chip breaker, regular version



D h10	d h6	L	l ap	l1	a	Cr	Z	Non rivestito Uncoated	AluSpeed®
8,0	8	63	12,0	24,0	0,15	1,00	3	HM0015080	HMA015080
10,0	10	72	15,0	30,0	0,15	1,00	3	HM0015100	HMA015100
12,0	12	83	18,0	36,0	0,20	1,00	3	HM0015120	HMA015120
16,0	16	92	24,0	42,0	0,20	1,00	3	HM0015160	HMA015160
20,0	20	104	30,0	52,0	0,20	1,00	3	HM0015200	HMA015200

31
UNV
Universali
Universal Line

53
HPC
Alto Rendimento
High Performance

75
HRC
Stampi
Molds

113
TIS
Titanox e Superleghe
Titanox & Superalloys

137
ALU
Leghe Leggere
Light Alloys

155
CMP
Materiali Compositi
Composite Materials

- 1
Acciaio
Steel
- 2
Ghise
Cast
Iron
- 3
Acciai
Temprati
Hardened
Steel
- 4
Acciaio
Inox
Stainless
Steel
- 5
Titanio
Titanium
- 6
Leghe
Leggere
Light
Alloys
- 7
PH
Duplex
- 8
Superleghe
Superalloys
- 9
Compositi
Composite
Materials
- 16
Guida alla
lettura
Reading
guide
- 18
Legenda
Legend