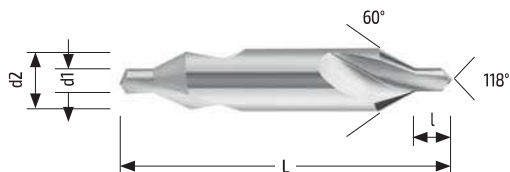


PUNTE A CENTRARE CENTER DRILLS

351

Punta a centrare
Center drill



d1 k12	d2 h6	L	l ap	Non rivestito Uncoated	Balinit Alcrona®
1,00	3,15	31	1,3-1,6	HM0351100	HMG351100
1,25	3,15	31	1,6-1,9	HM0351125	HMG351125
1,60	4,00	35	2,0-2,4	HM0351160	HMG351160
2,00	5,00	40	2,5-2,9	HM0351200	HMG351200
2,50	6,30	45	3,1-3,6	HM0351250	HMG351250
3,15	8,00	50	3,9-4,4	HM0351315	HMG351315
4,00	10,00	55	5,0-5,6	HM0351400	HMG351400
5,00	12,50	63	6,3-6,9	HM0351500	HMG351500

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



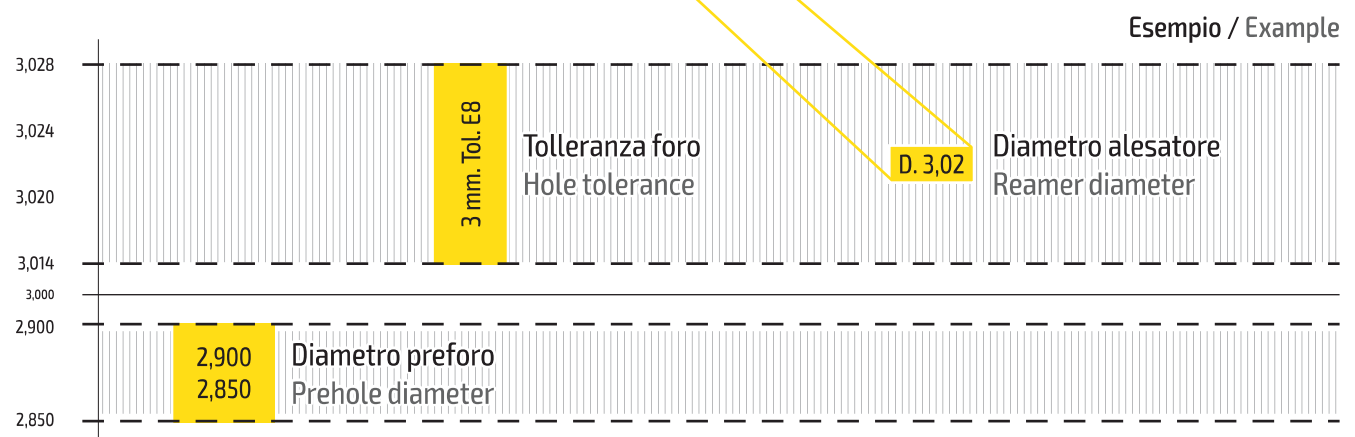
Consegna
rapida
Fast Delivery

ALESATORI CENTESIMALI REAMERS

503

Scelta dell'alesatore / Choice of the reamer

Toll.	D. 2 mm	D. 3 mm	D. 4 mm	D. 5 mm	D. 6 mm	D. 8 mm	D. 10 mm	D. 12 mm
D10	2,04	3,04	4,05	5,06	6,06	8,07	10,08	12,10
E8	2,02	3,02	4,03	5,03	6,03	8,03	10,03	12,04
E9	2,03	3,03	4,04	5,04	6,04	8,05	10,05	12,06
F7	2,01	3,01	4,01	5,01	6,01	8,02	10,02	12,02
F8	2,01	3,01	4,02	5,02	6,02	8,02	10,02	12,03
G7	-	-	-	-	-	8,01	10,01	12,01
H6	2,00	3,00	4,00	5,00	6,00	8,00	10,00	12,00
H7	-	-	-	-	-	-	-	-
H8	-	-	4,01	5,01	6,01	8,01	10,01	12,01
H9	2,01	3,01	4,02	5,02	6,02	8,02	10,02	12,03
M7	1,99	2,99	3,99	4,99	5,99	7,99	9,99	11,99
N7	1,99	2,99	3,99	4,99	5,99	7,98	9,98	11,98
P7	1,99	2,99	3,98	4,98	5,98	7,98	9,98	11,97
R7	1,98	2,98	3,98	4,98	5,98	7,98	9,98	11,97



f/giro f/rpm	Vc m/min	20-25	12-18	10-15	7-12	6-10	25-30	40-60
		Acciaio / Steel <800 N/mm ²	Acciaio / Steel <1000 N/mm ²	Acciaio / Steel <1300 N/mm ²	Acciaio inossidabile Stainless Steel	Superleghe Superalloys	Rame e leghe Copper & Alloys	Alluminio e leghe Aluminium & Alloys
D.2 mm		0,10	0,08	0,08	0,07	0,07	0,12	0,15
D.6 mm		0,12	0,10	0,09	0,08	0,10	0,18	0,18
D.10 mm		0,18	0,15	0,14	0,12	0,12	0,20	0,25
D.16 mm		0,18	0,20	0,18	0,15	0,15	0,25	0,30

SIL SERVICE

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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

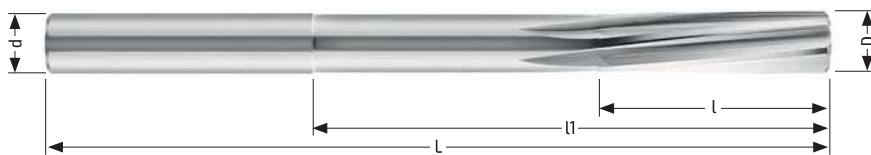


Consegna
rapida
Fast Delivery

503

Alesatore centesimale
Reamer

DIN
2128



D	Tolerance h9	d	l	L	l1	Z	Non rivestito Uncoated	Balinit® Alcrona
0,90 ÷ 0,99 (× 0,01 mm)	+0,004/+0	D	8	40	-	4	HM0503...	HMG503...
1,00 ÷ 1,50 (× 0,01 mm)	+0,004/+0	D	8	40	-	4	HM0503...	HMG503...
1,51 ÷ 1,90 (× 0,01 mm)	+0,004/+0	D	9	43	-	4	HM0503...	HMG503...
1,91 ÷ 2,12 (× 0,01 mm)	+0,004/+0	2,0	11	49	26	4	HM0503...	HMG503...
2,13 ÷ 2,36 (× 0,01 mm)	+0,004/+0	2,0	12	53	-	4	HM0503...	HMG503...
2,37 ÷ 2,48 (× 0,01 mm)	+0,004/+0	2,3	14	57	-	4	HM0503...	HMG503...
2,49 ÷ 2,65 (× 0,01 mm)	+0,004/+0	2,5	14	57	-	4	HM0503...	HMG503...
2,66 ÷ 2,96 (× 0,01 mm)	+0,004/+0	2,5	15	61	-	4	HM0503...	HMG503...
2,97 ÷ 3,35 (× 0,01 mm)	+0,004/+0	3,0	16	65	40	4	HM0503...	HMG503...
3,36 ÷ 3,75 (× 0,01 mm)	+0,004/+0	3,5	18	70	45	4	HM0503...	HMG503...
3,76 ÷ 4,02 (× 0,01 mm)	+0,004/+0	4,0	19	75	46	6	HM0503...	HMG503...
4,03 ÷ 4,25 (× 0,01 mm)	+0,004/+0	4,0	19	80	46	6	HM0503...	HMG503...
4,26 ÷ 4,52 (× 0,01 mm)	+0,004/+0	4,5	21	80	46	6	HM0503...	HMG503...
4,53 ÷ 4,75 (× 0,01 mm)	+0,004/+0	5,0	21	86	51	6	HM0503...	HMG503...
4,76 ÷ 5,02 (× 0,01 mm)	+0,004/+0	5,0	23	86	51	6	HM0503...	HMG503...
5,03 ÷ 5,52 (× 0,01 mm)	+0,004/+0	5,5	26	93	56	6	HM0503...	HMG503...
5,53 ÷ 6,00 (× 0,01 mm)	+0,004/+0	6,0	26	93	56	6	HM0503...	HMG503...
6,01 ÷ 6,52 (× 0,01 mm)	+0,005/+0	6,0	28	100	63	6	HM0503...	HMG503...
6,53 ÷ 6,70 (× 0,01 mm)	+0,005/+0	6,0	28	100	63	6	HM0503...	HMG503...
6,71 ÷ 7,02 (× 0,01 mm)	+0,005/+0	7,0	31	109	68	6	HM0503...	HMG503...
7,03 ÷ 7,50 (× 0,01 mm)	+0,005/+0	7,0	31	109	68	6	HM0503...	HMG503...
7,51 ÷ 8,02 (× 0,01 mm)	+0,005/+0	8,0	33	117	74	6	HM0503...	HMG503...
8,03 ÷ 8,50 (× 0,01 mm)	+0,005/+0	8,0	33	117	74	6	HM0503...	HMG503...
8,51 ÷ 9,02 (× 0,01 mm)	+0,005/+0	9,0	36	125	80	6	HM0503...	HMG503...
9,03 ÷ 9,50 (× 0,01 mm)	+0,005/+0	9,0	36	125	80	6	HM0503...	HMG503...
9,51 ÷ 10,02 (× 0,01 mm)	+0,005/+0	10,0	38	133	86	6	HM0503...	HMG503...
10,03 ÷ 10,60 (× 0,01 mm)	+0,005/+0	10,0	38	133	86	6	HM0503...	HMG503...
10,61 ÷ 11,47 (× 0,01 mm)	+0,005/+0	10,0	41	142	95	6	HM0503...	HMG503...
11,48 ÷ 12,02 (× 0,01 mm)	+0,005/+0	12,0	44	150	103	6	HM0503...	HMG503...
12,03 ÷ 12,47 (× 0,01 mm)	+0,005/+0	12,0	44	151	104	6	HM0503...	HMG503...

Come ordinare (esempio) How to order (example)	Rivestimento Coating	Codice Code	Diametro Diameter	Codice per ordine Code to place order
	HMG	503	0403 (= 4,03mm)	HMG5030403

170

PHM

Punte Alto Rendimento
High-Performance Drills

186

PHG

Punte a Gradino
Step Drills

188

PHC

Punte a Centrare
Center Drills

190

ALR

Alesatori Centesimali
Reamers

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






D=Ø 10mm BT

ALTRO OTHER PRODUCTS

	Codice Code	Ø (D mm)	Pagina Page
ALH Altre Frese Other Mills			194
	320	1,0 ÷ 10,0	195
	330	1,0 ÷ 10,0	195
	10G	r0,5 ÷ r2,5	196

	Codice Code	Ø (D mm)	Pagina Page
LIM Lime Rotative Rotary Burrs			197
	401	6,0 ÷ 16,0	198
	405	6,0 ÷ 16,0	199
	410	6,0 ÷ 16,0	200
	420	6,0 ÷ 16,0	201
	430	6,0 ÷ 16,0	202
	440	6,0 ÷ 16,0	203
	450	6,0 ÷ 16,0	204
	460	6,0 ÷ 16,0	205
	470	6,0 ÷ 16,0	206
	475	6,0 ÷ 16,0	207
	480	6,0 ÷ 16,0	208
	490	6,0 ÷ 12,0	209
	495	6,0 ÷ 12,0	210

	Codice Code	Ø (D mm)	Pagina Page
BUL Bulini Burins			211
	205	1,5 ÷ 3,0	211
	210	3,0 ÷ 16,0	211
	220	3,0 ÷ 16,0	211

ALTRE FRESE OTHER MILLS

V Plus (320-330)

330	Centrata Centering	320 330	Smusso Chamfering	330	Foratura Drilling	330	Cava a V V-Grooving
320 330	Smusso longitudinale Longitudinal chamfering	320 330	Smusso longitudinale Longitudinal chamfering	330	Foratura interpolata Interpolation drilling	320 330	Contornitura Contouring

Suggerimenti per lavorare / Suggestions for machining

	m/min	Vc=55-100		
		D mm	fz mm/z	fz mm/z
Acciaio < 800 N/mm ² Steel < 800 N/mm ²	3,0-4,0		0,050	0,008
	5,0-6,0		0,080	0,014
	8,0-10,0		0,140	0,025
	12,0		0,200	0,040
Acciaio < 1000 N/mm ² Steel < 1000 N/mm ²	3,0-4,0		0,050	0,008
	5,0-6,0		0,080	0,014
	8,0-10,0		0,140	0,025
	12,0		0,190	0,040
Acciaio < 1300 N/mm ² Steel < 1300 N/mm ²	3,0-4,0		0,045	0,008
	5,0-6,0		0,070	0,013
	8,0-10,0		0,120	0,025
	12,0		0,180	0,040
Acciaio da stampi Mold Steel	3,0-4,0		0,006	0,013
	5,0-6,0		0,012	0,025
	8,0-10,0		0,016	0,040
	12,0		0,016	0,040
Acciaio inossidabile Stainless Steel	3,0-4,0		0,040	0,008
	5,0-6,0		0,060	0,013
	8,0-10,0		0,110	0,025
	12,0		0,160	0,035
Superleghe Superalloys	3,0-4,0		0,003	0,008
	5,0-6,0		0,005	0,013
	8,0-10,0		0,010	0,025
	12,0		0,013	0,035
Rame e leghe Copper & Alloys	3,0-4,0		0,100	0,010
	5,0-6,0		0,150	0,015
	8,0-10,0		0,250	0,030
	12,0		0,300	0,045
Alluminio e leghe Resina termoplastica Aluminium & alloys Thermoplastics	3,0-4,0		0,050	0,008
	5,0-6,0		0,090	0,013
	8,0-10,0		0,160	0,030
	12,0		0,200	0,045

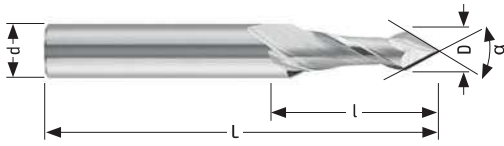
320

VPlus 60°

V
Plus

Silmax
NORM

λ 30°



D h9	d h6	L	l	α ±1°	Z	Non rivestito Uncoated	Balinit® Alcrona
1,0	3	39	2,0	60	2	HM0320010	HMG320010
2,0	3	39	4,0	60	2	HM0320020	HMG320020
3,0	4	50	6,0	60	2	HM0320030	HMG320030
4,0	5	50	8,0	60	2	HM0320040	HMG320040
5,0	6	50	10,0	60	2	HM0320050	HMG320050
6,0	8	60	12,0	60	2	HM0320060	HMG320060
8,0	10	70	16,0	60	2	HM0320080	HMG320080
10,0	12	70	18,0	60	2	HM0320100	HMG320100

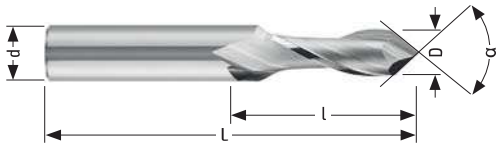
330

VPlus 90°

V
Plus

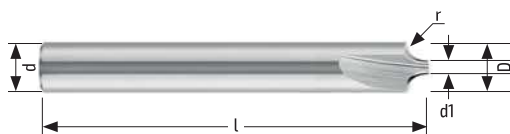
Silmax
NORM

λ 30°



D h9	d h6	L	l	α ±1°	Z	Non rivestito Uncoated	Balinit® Alcrona
1,0	3	39	2,0	90	2	HM0330010	HMG330010
2,0	3	39	4,0	90	2	HM0330020	HMG330020
3,0	4	50	6,0	90	2	HM0330030	HMG330030
4,0	5	50	8,0	90	2	HM0330040	HMG330040
5,0	6	50	10,0	90	2	HM0330050	HMG330050
6,0	8	60	12,0	90	2	HM0330060	HMG330060
8,0	10	70	16,0	90	2	HM0330080	HMG330080
10,0	12	70	18,0	90	2	HM0330100	HMG330100

Notes

10GFrese a quarto di cerchio
Quarter circle cutterSilmax
NORM $\lambda 0^\circ$ 

r ±0,02	D h6	d h6	d1	L	Z	Non rivestito Uncoated	Balinit® Alcrona
0,50	4,0	4	1,5	50	2	HMO10G005	HMG10G005
0,60	4,0	4	1,5	50	2	HMO10G006	HMG10G006
0,80	4,0	4	1,5	50	2	HMO10G008	HMG10G008
1,00	4,0	4	1,5	50	2	HMO10G101	HMG10G101
1,25	6,0	6	2,0	50	2	HMO10G112	HMG10G112
1,50	6,0	6	2,0	50	2	HMO10G115	HMG10G115
2,00	8,0	8	2,5	50	2	HMO10G102	HMG10G102
2,50	8,0	8	2,5	50	2	HMO10G125	HMG10G125

10G

Parametri di lavoro / Working Parameters

Acciaio <800 N/mm ² Steel <800 N/mm ²	m/min	Vc=130			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,020	414	10345	
	6,0	0,025	345	6897	
Acciaio <1000 N/mm ² Steel <1000 N/mm ² Ghisa - Cast iron	m/min	Vc=100			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,015	239	7958	
	6,0	0,020	212	5305	
Acciaio <1300 N/mm ² Steel <1300 N/mm ²	m/min	Vc=80			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,010	102	5093	
	6,0	0,015	102	3395	
Acciaio inossidabile Stainless Steel	m/min	Vc=60			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,010	95	4775	
	6,0	0,015	95	3183	
	m/min	Vc=60			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,010	95	4775	
	6,0	0,015	95	3183	

Titanio Titanium	m/min	Vc=60			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,010	95	4775	
	6,0	0,015	95	3183	
Rame e leghe Copper & Alloys	m/min	Vc=160			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,015	382	12732	
	6,0	0,020	340	8488	
Alluminio e leghe Aluminium & Alloys	m/min	Vc=180			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,010	286	14324	
	6,0	0,015	286	9549	
	m/min	Vc=180			
	D mm	fz mm/z	F mm/min	n rpm	
	4,0	0,010	286	14324	
	6,0	0,015	286	9549	

Notes

Altre Frese Other Mills

005F

Fresa a "T"
a sgrossare
Roughing
T-slot mill

→ 278



105T

Fresa a
"T" a finire
Finishing
T-slot mill

→ 278



1W5

Fresa
Woodruff
Woodruff
mill

→ 279



10C

Fresa
ad angolo
convergente
Dovetail
mill with
convergent
taper angle

→ 279



10D

Fresa
ad angolo
divergente
Dovetail
mill with
divergent
taper angle

→ 280



10G

Fresa
a quarto
di cerchio
Quarter
circle mill

→ 280



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
Resharpening
and Reconditioning



Esecuzione
perfetta
Perfect
Execution



Rivestimento
PVD
PVD Coating

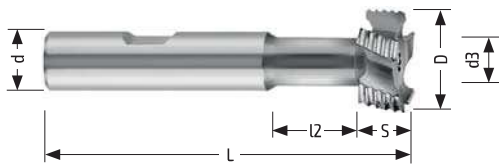


Trattamento
4S
4S Treatment



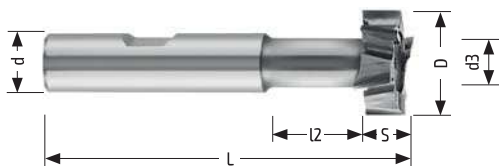
Consegna
rapida
Fast Delivery

005F

Fresa a "T" a sgrossare
Roughing T-slot millHSS
Co8NRF
F FormISO
3337DIN
851AB λ 25°
 γ 10°

D k12	S d11	L h6	d	d3	L2	Z	Non rivestito Uncoated	Balinit® Alcrona
12,5	6,0	57	10	5	7	4	SIL005F12	NIG005F12
16,0	8,0	62	10	7	10	5	SIL005F16	NIG005F16
18,0	8,0	70	12	8	13	5	SIL005F18	NIG005F18
21,0	9,0	74	12	10	16	5	SIL005F21	NIG005F21
22,0	10,0	82	16	10	16	5	SIL005F22	NIG005F22
25,0	11,0	82	16	12	17	5	SIL005F25	NIG005F25
30,0	12,0	90	16	14	22	6	SIL005F30	NIG005F30
32,0	14,0	90	16	15	22	6	SIL005F32	NIG005F32
36,0	16,0	108	25	17	27	6	SIL005F36	NIG005F36
40,0	18,0	108	25	19	27	8	SIL005F40	NIG005F40

105T

Fresa a "T" a finire
Finishing T-slot mill

HSSE

ISO
3337DIN
851AB

N

 λ 15°
 γ 12°

D d11	S d11	L	d h6	d3	L2	Z	Non rivestito Uncoated	Balinit® Alcrona
12,5	6,0	57	10	5	7	6	SIL105T12	NIG105T12
16,0	8,0	62	10	7	10	6	SIL105T16	NIG105T16
18,0	8,0	70	12	8	13	6	SIL105T18	NIG105T18
19,0	9,0	70	12	8	13	6	SIL105T19	NIG105T19
21,0	9,0	74	12	10	16	6	SIL105T21	NIG105T21
22,0	10,0	74	12	10	16	6	SIL105T22	NIG105T22
25,0	11,0	82	16	12	17	6	SIL105T25	NIG105T25
28,0	12,0	85	16	13	20	6	SIL105T28	NIG105T28
32,0	14,0	90	16	15	22	8	SIL105T32	NIG105T32

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

1W5

Fresa Woodruff
Woodruff mill



HSSE

DIN
8508

λ 10°
 γ 10°



221



PM

Frese in Acciaio Sinterizzato
Powder Metal End Mills

231



SGR

Frese a Sgrossare in HSSCo8
Roughing End Mills in HSSCo8

243



FIN

Frese a Finire in HSSCo8
Finishing End Mills in HSSCo8

267



FRF

Frese Frontali e a Disco
Shell End Mills and Side Milling Cutters

277



ALT

Altre Frese
Other mills

D h12	S e8	L h8	d	Z	Non rivestito Uncoated
10,5	2,0	50	6	6	SIL1W5102
10,5	2,5	50	6	6	SIL1W5125
10,5	3,0	50	6	6	SIL1W5103
13,5	2,0	56	10	8	SIL1W5132
13,5	3,0	56	10	8	SIL1W5133
13,5	4,0	56	10	8	SIL1W5134
16,5	3,0	56	10	8	SIL1W5163
16,5	4,0	56	10	8	SIL1W5164
16,5	5,0	56	10	8	SIL1W5165
16,5	6,0	56	10	8	SIL1W5166
19,5	3,0	56	10	8	SIL1W5193
19,5	4,0	56	10	8	SIL1W5194
19,5	5,0	56	10	8	SIL1W5195
19,5	6,0	56	10	8	SIL1W5196
22,5	4,0	56	10	8	SIL1W5224
22,5	5,0	56	10	8	SIL1W5225
22,5	6,0	56	10	8	SIL1W5226
22,5	8,0	56	10	8	SIL1W5228
25,5	5,0	56	10	8	SIL1W5255
25,5	6,0	56	10	8	SIL1W5256
25,5	7,0	56	10	8	SIL1W5257
25,5	8,0	56	10	8	SIL1W5258

10C

Fresa ad angolo convergente
Dovetail mill with convergent taper angle



HSSE

DIN
18338

λ 0°
 γ 0°



α +/-30°	D js16	S js14	L	d h8	Z	Non rivestito Uncoated
45°	16,0	4,0	60	12	8	SIL10C164
45°	20,0	5,0	63	12	8	SIL10C204
45°	25,0	6,3	67	16	10	SIL10C254
60°	16,0	6,3	60	12	8	SIL10C166
60°	20,0	8,0	63	12	8	SIL10C206
60°	25,0	10,0	67	16	10	SIL10C256
70°	16,0	7,0	60	12	8	SIL10C167
70°	20,0	9,0	63	12	8	SIL10C207
70°	25,0	11,0	67	16	10	SIL10C257

10D

Fresa ad angolo divergente
Dovetail mill with divergent taper angle



HSSE

DIN
1833B $\lambda 0^\circ$
 $\gamma 0^\circ$ 

α +/-30'	D js16	S js14	L	d h8	Z	Non rivestito Uncoated
45°	16,0	4,0	60	12	8	SIL10D164
45°	20,0	5,0	63	12	8	SIL10D204
45°	25,0	6,3	67	16	10	SIL10D254
60°	16,0	6,3	60	12	8	SIL10D166
60°	20,0	8,0	63	12	8	SIL10D206
60°	25,0	10,0	67	16	10	SIL10D256
70°	16,0	7,0	60	12	8	SIL10D167
70°	20,0	9,0	63	12	8	SIL10D207
70°	25,0	11,0	67	16	10	SIL10D257

10G

Fresa a quarto di cerchio
Quarter circle mill



HSSE

DIN
6518B $\lambda 0^\circ$
 $\gamma 6^\circ$ 

r H11	D	L	d h6	Z	Non rivestito Uncoated	Balinit® Alcrona
1,0	8,0	60	10	4	SIL10G101	NIG10G101
1,5	9,0	60	10	4	SIL10G115	NIG10G115
2,0	10,0	60	10	4	SIL10G102	NIG10G102
2,5	11,0	60	12	4	SIL10G125	NIG10G125
3,0	12,0	60	12	4	SIL10G103	NIG10G103
3,5	14,0	60	12	4	SIL10G135	NIG10G135
4,0	14,0	60	12	4	SIL10G104	NIG10G104
4,5	16,0	60	12	4	SIL10G145	NIG10G145
5,0	16,0	60	16	4	SIL10G205	NIG10G205
5,5	20,0	67	16	4	SIL10G255	NIG10G255
6,0	20,0	67	16	4	SIL10G206	NIG10G206
6,5	24,0	71	16	4	SIL10G265	NIG10G265
7,0	24,0	71	16	4	SIL10G207	NIG10G207
7,5	24,0	71	16	4	SIL10G275	NIG10G275
8,0	24,0	71	16	4	SIL10G208	NIG10G208
8,5	28,0	85	20	4	SIL10G385	NIG10G385
9,0	28,0	85	20	4	SIL10G309	NIG10G309
9,5	28,0	85	20	4	SIL10G395	NIG10G395
10,0	28,0	85	20	4	SIL10G310	NIG10G310
11,0	32,0	90	20	4	SIL10G311	NIG10G311
12,0	34,0	90	20	4	SIL10G312	NIG10G312
14,0	44,0	100	20	6	SIL10G414	NIG10G414
15,0	46,0	100	20	6	SIL10G415	NIG10G415
16,0	48,0	100	20	6	SIL10G516	NIG10G516
18,0	52,0	112	20	6	SIL10G618	NIG10G618
20,0	58,0	112	20	6	SIL10G620	NIG10G620

005F/105T/1W5/10C/10D/10G

Parametri di lavoro / Working Parameters

m/min →		Vc=30-35	Vc=25-30	Vc=20-25	Vc=15-20	Vc=15-20	Vc=45-50	Vc=60-80
D [mm] ↓		Acciaio / Steel ≤ 800 N/mm ²	Acciaio / Steel ≤ 1000 N/mm ²	Acciaio / Steel ≤ 1300 N/mm ²	Acciaio inossidabile Stainless Steel	Titanio Titanium	Rame e leghe Copper & Alloys	Alluminio e leghe Aluminum & Alloys
fz [mm]	8	0,005	0,005	0,005	0,005	0,005	0,005	0,005
	10	0,010	0,010	0,010	0,010	0,010	0,010	0,010
	12	0,015	0,015	0,015	0,015	0,015	0,015	0,015
	16	0,025	0,025	0,025	0,025	0,025	0,025	0,025
	18	0,030	0,030	0,030	0,030	0,030	0,030	0,030
	20	0,035	0,035	0,035	0,035	0,035	0,035	0,035
	22	0,040	0,040	0,040	0,040	0,040	0,040	0,040
	25	0,045	0,045	0,045	0,045	0,045	0,045	0,045
	28	0,050	0,050	0,050	0,050	0,050	0,050	0,050
	30	0,055	0,055	0,055	0,055	0,055	0,055	0,055
	32	0,060	0,060	0,060	0,060	0,060	0,060	0,060
	36	0,065	0,065	0,065	0,065	0,065	0,065	0,065
	40	0,070	0,070	0,070	0,070	0,070	0,070	0,070
	44	0,075	0,075	0,075	0,075	0,075	0,075	0,075
	48	0,080	0,080	0,080	0,080	0,080	0,080	0,080
58	0,090	0,090	0,090	0,090	0,090	0,090	0,090	

221

PM

Frese in Acciaio Sinterizzato
Powder Metal End Mills

231

SGR

Frese a Sgrossare in HSSCo8
Roughing End Mills in HSSCo8

243

FIN

Frese a Finire in HSSCo8
Finishing End Mills in HSSCo8

267

FRF

Frese Frontali e a Disco
Shell End Mills and Side Milling Cutters

277

ALT

Altre Frese
Other mills

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



FORATURA DRILLING

	Codice Code	Ø (D mm)	Pagina Page
PCC Punte a Centrare Center Drills			284
	351	1,0 ÷ 6,3	284
	355	1,6 ÷ 6,3	284
	350	1,0 ÷ 4,0	285
	352	1,0 ÷ 6,3	285
	356	1,6 ÷ 6,3	286
	353	1,5 ÷ 6,0	286
	357	3,0 ÷ 20,0	287
	358	3,0 ÷ 20,0	287
UTP Punte a Eliche Indipendenti Subland Drills			288
	301	M3 ÷ M10	288
	302	M5 ÷ M20	289
	311	M3 ÷ M8	290
	312	M5 ÷ M14	290
	321	M3 ÷ M12	291
	322	M8 ÷ M20	291

PUNTE A CENTRARE

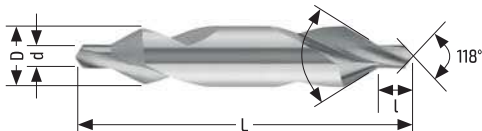
CENTER DRILLS

351

Punta a centrare
Center drill

HSSE

Form A

DIN
333A

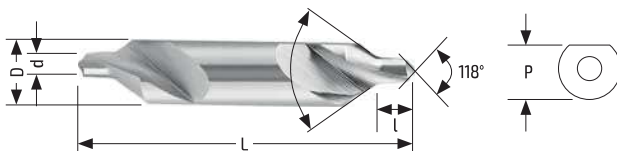
D h7	d k12	L	l	Non rivestito Uncoated	Balinit® Alcrona
3,15	1,00	31	1,3-1,6	PCC351100	NIG351100
3,15	1,25	31	1,6-1,9	PCC351125	NIG351125
4,00	1,60	35	2,0-2,4	PCC351160	NIG351160
5,00	2,00	40	2,5-2,9	PCC351200	NIG351200
6,30	2,50	45	3,1-3,6	PCC351250	NIG351250
8,00	3,15	50	3,9-4,4	PCC351315	NIG351315
10,00	4,00	55	5,0-5,6	PCC351400	NIG351400
12,50	5,00	63	6,3-6,9	PCC351500	NIG351500
16,00	6,30	71	8,0-8,6	PCC351630	NIG351630

355

Punta a centrare con piatto sul gambo
Center drill with flatted shank

HSSE

Form A

DIN
333A

D h7	d k12	L	l	P	Non rivestito Uncoated	Balinit® Alcrona
4,00	1,60	35	2,0-2,4	3,25	PCC355160	NIG355160
5,00	2,00	40	2,5-2,9	4,20	PCC355200	NIG355200
6,30	2,50	45	3,1-3,6	5,35	PCC355250	NIG355250
8,00	3,15	50	3,9-4,4	6,95	PCC355315	NIG355315
10,00	4,00	55	5,0-5,6	8,40	PCC355400	NIG355400
12,50	5,00	63	6,3-6,9	10,95	PCC355500	NIG355500
16,00	6,30	71	8,0-8,6	14,00	PCC355630	NIG355630

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perfetta
Perfect
Execution



Rivestimento
PVD
PVD Coating



Trattamento
4S
4S Treatment



Consegna
rapida
Fast Delivery

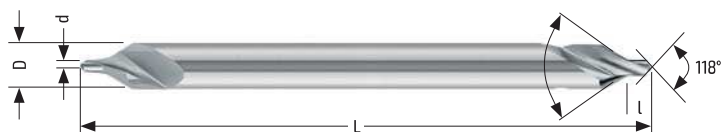
350

Punta a centrare serie lunga
Center drill long version

HSSE

Form A

Silmax
NORM



D h7	d k12	L	l	Non rivestito Uncoated	Balinit® Alcrona
4,00	1,00	100	1,3-1,6	PCC350100	NIG350100
5,00	1,50	100	2,0-2,4	PCC350150	NIG350150
6,00	2,00	100	2,5-2,9	PCC350200	NIG350200
8,00	2,50	100	3,1-3,6	PCC350250	NIG350250
8,00	3,00	100	3,9-4,4	PCC350300	NIG350300
10,00	4,00	100	5,0-5,6	PCC350400	NIG350400

352

Punta a centrare
Center drill

HSSE

Form R

DIN
333R



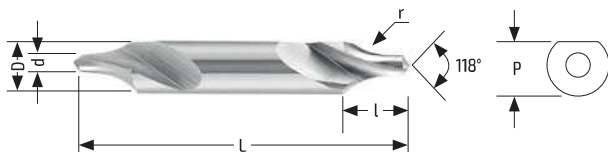
D h7	d k12	L	l	r	Non rivestito Uncoated	Balinit® Alcrona
3,15	1,00	31	3,0-3,3	2,90	PCC352100	NIG352100
3,15	1,25	31	3,3-3,6	3,15	PCC352125	NIG352125
4,00	1,60	35	4,2-4,7	4,00	PCC352160	NIG352160
5,00	2,00	40	5,0-5,4	5,00	PCC352200	NIG352200
6,30	2,50	45	6,3-6,8	6,30	PCC352250	NIG352250
8,00	3,15	50	8,0-8,5	8,00	PCC352315	NIG352315
10,00	4,00	55	10,0-10,6	10,00	PCC352400	NIG352400
12,50	5,00	63	12,5-13,1	12,50	PCC352500	NIG352500
16,00	6,30	71	16,0-16,6	16,00	PCC352630	NIG352630

Notes

356Punta a centrare con piatto sul gambo
Center drill with flatted shank

HSSE

Form R

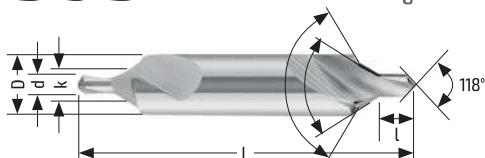
DIN
333R

D h7	d k12	L	l	r	P	Non rivestito Uncoated	Balinit® Alcrona
4,00	1,60	35	4,2-4,7	4,0	3,25	PCC356160	NIG356160
5,00	2,00	40	5,0-5,4	5,0	4,20	PCC356200	NIG356200
6,30	2,50	45	6,3-6,8	6,3	5,35	PCC356250	NIG356250
8,00	3,15	50	8,0-8,5	8,0	6,95	PCC356315	NIG356315
10,00	4,00	55	10,0-10,6	10,0	8,40	PCC356400	NIG356400
12,50	5,00	63	12,5-13,1	12,5	10,95	PCC356500	NIG356500
16,00	6,30	71	16,0-16,6	16,0	14,00	PCC356630	NIG356630

353Punta a centrare con paracentro
Center drill with saved angle

HSSE

Form B

DIN
333B

D h7	d k12	L	l	k	Non rivestito Uncoated	Balinit® Alcrona
5,00	1,50	40	2,0-2,4	3,00	PCC353150	NIG353150
6,00	2,00	45	2,5-2,9	4,00	PCC353200	NIG353200
8,00	2,50	50	3,1-3,6	5,50	PCC353250	NIG353250
10,00	3,00	55	3,9-4,4	7,00	PCC353300	NIG353300
10,00	4,00	55	5,0-5,6	8,00	PCC353400	NIG353400
12,00	5,00	63	6,3-6,9	9,00	PCC353500	NIG353500
18,00	6,00	77	8,0-8,6	12,00	PCC353600	NIG353600

Notes

357

Punta a centrare
Center drill

HSSE NC ISO 10898 λ 20°



D h7	L	l	Non rivestito Uncoated	Balinit® Alcrona
3,00	50	10	PCC357003	NIG357003
4,00	52	12	PCC357004	NIG357004
5,00	60	15	PCC357005	NIG357005
6,00	66	20	PCC357006	NIG357006
8,00	79	25	PCC357008	NIG357008
10,00	89	25	PCC357010	NIG357010
12,00	102	30	PCC357012	NIG357012
14,00	115	35	PCC357014	NIG357014
16,00	115	35	PCC357016	NIG357016
20,00	131	40	PCC357020	NIG357020

358

Punta a centrare
Center drill

HSSE NC ISO 10898 λ 20°



D h7	L	l	Non rivestito Uncoated	Balinit® Alcrona
3,00	50	10	PCC358003	NIG358003
4,00	52	12	PCC358004	NIG358004
5,00	60	15	PCC358005	NIG358005
6,00	66	20	PCC358006	NIG358006
8,00	79	25	PCC358008	NIG358008
10,00	89	25	PCC358010	NIG358010
12,00	102	30	PCC358012	NIG358012
16,00	114	35	PCC358016	NIG358016
20,00	130	40	PCC358020	NIG358020

Notes

PUNTE A ELICHE INDIPENDENTI SUBLAND DRILLS

301

Punta a eliche indipendenti
Subland drill

HSS

DIN
8376

180°

Fil	d h9	D h8	l1	l2	L	Non rivestito Uncoated
M3	3,4	6,0	9	57	93	UTP301003
M3	3,2	5,9	6	52	88	UTP301031
M3	3,2	5,9	11	57	93	UTP301032
M4	4,5	8,0	11	75	117	UTP301004
M4	4,3	7,4	6	56	98	UTP301041
M4	4,3	7,4	13	63	105	UTP301042
M5	5,5	10,0	13	87	133	UTP301005
M5	5,3	9,4	6	65	110	UTP301051
M5	5,3	9,4	16	75	120	UTP301052
M6	6,6	11,0	15	94	142	UTP301006
M6	6,4	10,4	10	83	133	UTP301061
M6	6,4	10,4	20	83	133	UTP301062
*M8	9,0	15,0	19	114	169	UTP301008
M8	8,4	13,5	13	100	160	UTP301081
M8	8,4	13,5	23	100	160	UTP301082
*M10	11,0	18,0	23	130	191	UTP301010
*M10	10,5	16,5	15	105	176	UTP301101
*M10	10,5	16,5	25	115	186	UTP301102

* Gambo D. 13,5 / * Shank D. 13,5

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perfetta
Perfect
Execution



Rivestimento
PVD
PVD Coating



Trattamento
4S
4S Treatment



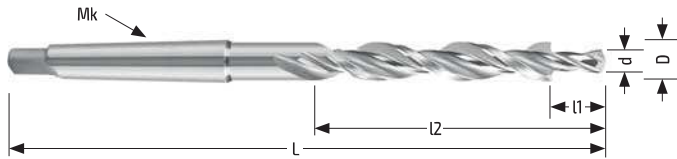
Consegna
rapida
Fast Delivery

302

Punta a eliche indipendenti
Subland drill

HSS

DIN
8377



180°

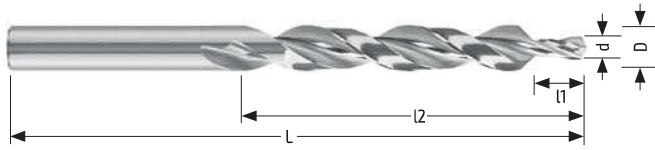
Fil	d h9	D h8	l1	l2	L	Mk	Non rivestito Uncoated
M5	5,5	10,0	13	87	168	1	UTP302005
M5	5,3	9,4	6	77	158	1	UTP302051
M5	5,3	9,4	16	87	168	1	UTP302052
M6	6,6	11,0	15	94	175	1	UTP302006
M6	6,4	10,4	10	84	165	1	UTP302061
M6	6,4	10,4	20	94	175	1	UTP302062
M8	9,0	15,0	19	114	212	2	UTP302008
M8	9,0	15,0	10	105	203	2	UTP302080
M8	8,4	13,5	13	104	189	1	UTP302081
M8	8,4	13,5	23	114	199	1	UTP302082
M10	11,0	18,0	23	130	228	2	UTP302010
M10	11,0	18,0	13	120	218	2	UTP302100
M10	10,5	16,5	15	120	218	2	UTP302101
M10	10,5	16,5	25	130	228	2	UTP302102
M12	14,0	20,0	27	140	238	2	UTP302012
M12	14,0	20,0	17	130	228	2	UTP302120
M12	13,0	19,0	17	130	228	2	UTP302121
M12	13,0	19,0	27	140	238	2	UTP302122
M14	16,0	24,0	31	160	281	3	UTP302014
M14	16,0	24,0	21	150	271	3	UTP302140
M14	15,0	23,0	21	150	271	3	UTP302141
M14	15,0	23,0	31	160	281	3	UTP302142
M16	18,0	26,0	35	165	286	3	UTP302016
M16	18,0	26,0	25	155	276	3	UTP302160
M16	17,0	25,0	25	155	276	3	UTP302161
M16	17,0	25,0	35	165	286	3	UTP302162
M18	20,0	30,0	39	175	296	3	UTP302018
M18	20,0	30,0	29	165	286	3	UTP302180
M18	19,0	28,0	29	165	286	3	UTP302181
M18	19,0	28,0	39	175	296	3	UTP302182
M20	22,0	33,0	43	185	334	4	UTP302020
M20	22,0	33,0	33	175	324	4	UTP302200
M20	21,0	31,0	33	175	300	3	UTP302201
M20	21,0	31,0	43	185	310	3	UTP302202

Notes

311

Punta a eliche indipendenti
Subland drill

HSS

DIN
8374

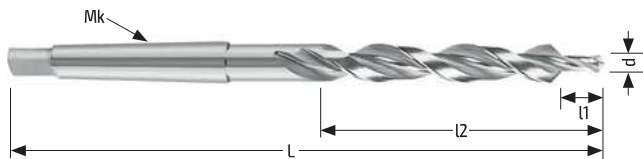
Fil	d h9	D h8	l1	l2	L	Non rivestito Uncoated
M3	3,4	6,6	9	63	101	UTP311003
M3	3,2	6,3	11	52	90	UTP311032
M4	4,5	9,0	11	81	125	UTP311004
M4	4,3	8,3	13	63	105	UTP311042
M5	5,5	11,0	13	94	142	UTP311005
M5	5,3	10,4	16	83	133	UTP311052
M6	6,6	13,0	15	101	151	UTP311006
M6	6,4	12,4	20	90	142	UTP311062
*M8	9,0	17,2	19	130	191	UTP311008
*M8	8,4	16,5	23	115	186	UTP311082

* Gambo D. 13,5 / * Shank D. 13,5

312

Punta a eliche indipendenti
Subland drill

HSS

DIN
8375

Fil	d h9	D h8	l1	l2	L	Mk	Non rivestito Uncoated
M5	5,5	11,0	13	94	175	1	UTP312005
M5	5,3	10,4	16	84	168	1	UTP312052
M6	6,6	13,0	15	101	182	1	UTP312006
M6	6,4	12,4	20	95	182	1	UTP312062
M8	9,0	17,2	19	130	228	2	UTP312008
M8	8,4	16,5	23	120	223	2	UTP312082
M10	11,0	21,5	23	150	248	2	UTP312010
M10	10,5	20,5	25	135	240	2	UTP312102
M12	13,0	25,0	28	155	281	3	UTP312122
M14	15,0	28,0	31	165	291	3	UTP312142

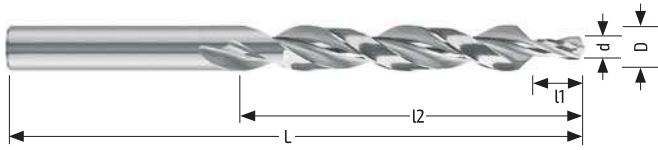
Notes

321

Punta a eliche indipendenti per fori da filettare
Subland drill for tapped holes

HSS

DIN
8378



File	d h9	D h8	l1	l2	L	Non rivestito Uncoated
M3	2,5	3,4	9	39	70	UTP321003
M4	3,3	4,5	11	47	80	UTP321004
M5	4,2	5,5	14	57	93	UTP321005
M6	5,0	6,6	16	63	101	UTP321006
M8	6,8	9,0	21	81	125	UTP321008
M10	8,5	11,0	25	94	142	UTP321010
*M12	10,2	14,0	30	108	160	UTP321012

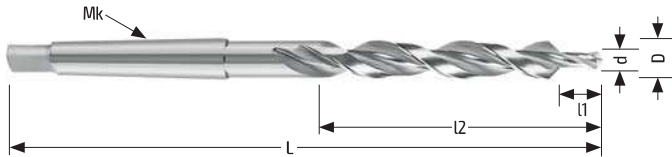
* Gambo D. 13,5 / * Shank D. 13,5

322

Punta a gradino per fori da filettare
Subland drill for tapped holes

HSS

DIN
8379










File	d h9	D h8	l1	l2	L	Mk	Non rivestito Uncoated
M8	6,8	9,0	21	81	162	1	UTP322008
M10	8,5	11,0	25	94	175	1	UTP322010
M12	10,2	14,0	30	108	189	1	UTP322012
M14	12,0	16,0	34	120	218	2	UTP322014
M16	14,0	18,0	38	130	228	2	UTP322016
M18	15,5	20,0	43	140	238	2	UTP322018
M20	17,5	22,0	47	150	248	2	UTP322020

Notes



SEDI VITI E SVASATORI COUNTERBORE CUTTERS AND COUNTERSINKS

			Pagina Page
FSB Frese per Sedi Viti Counterbore Cutters	Codice Code	Ø (D mm)	294
	401	M3 ÷ M12	294
	402	M10 ÷ M20	294
	403	M3 ÷ M10	294
PSV Svasatori Countersinks	Codice Code	Ø (D mm)	295
	361	6,3 ÷ 25,0	295
	362	4,3 ÷ 31,0	295
	367	12,4 ÷ 31,0	296
	363	8,0 ÷ 25,0	296

FRESE PER SEDI VITI COUNTERBORE CUTTERS

401

Sedi viti
Counterborers

HSSE

ISO
4205DIN
373

dv	d1 e8	D z9	L	d h8	Z	Non rivestito Uncoated
M3	3,2	6,0	71	6	4	FSB401003
M4	4,3	7,4	71	8	4	FSB401004
M5	5,3	9,4	80	10	4	FSB401005
M6	6,4	10,4	80	10	4	FSB401006
M8	8,4	13,5	100	12	4	FSB401008
M10	10,5	16,5	100	12	4	FSB401010
M12	13,0	20,0	100	12	4	FSB401012

402

Sedi viti
Counterborers

HSSE

ISO
4205DIN
373

dv	d1 e8	D z9	L	Mk	Z	Non rivestito Uncoated
M10	10,5	16,5	145	2	4	FSB402010
M12	13,0	20,0	150	2	4	FSB402012
M14	15,0	23,0	160	2	4	FSB402014
M16	17,0	25,0	165	2	4	FSB402016
M18	19,0	28,0	175	2	4	FSB402018
M20	21,0	31,0	200	3	4	FSB402020

403

Sedi viti
Counterborers

HSSE

ISO
4206DIN
1866

dv	d1 e8	D z9	L	d h8	Z	Non rivestito Uncoated
M3	3,2	6,5	71	6	4	FSB403003
M4	4,3	8,6	71	8	4	FSB403004
M5	5,3	10,6	80	10	4	FSB403005
M6	6,4	12,6	80	10	4	FSB403006
M8	8,4	16,7	100	12	4	FSB403008
M10	10,5	20,7	100	12	4	FSB403010

SVASATORI COUNTERSINKS

361

Svasatore
Countersink

HSSE

Z3

DIN
334C

D z9	d1	d h9	L	Non rivestito Uncoated	Balinit® Alcrona
6,3	1,5	5	47	PSV361063	NIG361063
8,3	2,0	6	52	PSV361083	NIG361083
10,4	2,5	6	53	PSV361104	NIG361104
12,4	3,0	8	60	PSV361124	NIG361124
16,5	4,0	10	65	PSV361165	NIG361165
20,5	4,0	10	69	PSV361205	NIG361205
25,0	5,0	10	75	PSV361250	NIG361250

362

Svasatore
Countersink

HSSE

Z3

DIN
335C

D z9	d1	d h9	L	Non rivestito Uncoated	Balinit® Alcrona
4,3	1,3	4	40	PSV362043	NIG362043
5,3	1,5	4	40	PSV362053	NIG362053
6,3	2,0	5	45	PSV362063	NIG362063
7,3	2,0	6	50	PSV362073	NIG362073
8,3	2,5	6	50	PSV362083	NIG362083
9,4	3,0	6	50	PSV362094	NIG362094
10,4	3,0	6	50	PSV362104	NIG362104
12,4	3,0	8	56	PSV362124	NIG362124
16,5	4,0	10	60	PSV362165	NIG362165
20,5	4,0	10	63	PSV362205	NIG362205
25,0	4,0	10	67	PSV362250	NIG362250
31,0	4,0	12	71	PSV362310	NIG362310

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.



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rigenerazione
Reshaping and
Reconditioning



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perfetta
Perfect
Execution



Rivestimento
PVD
PVD Coating



Trattamento
4S
4S Treatment



Consegna
rapida
Fast Delivery

367Svasatore per l'impiego a mano
Countersinking with flatted shanks

HSSE

Z3

DIN
335C

D z9	d1	d h9	L	Non rivestito Uncoated	Balinit® Alcrona
12,4	3,0	8	56	PSV367124	NIG367124
16,5	4,0	10	60	PSV367165	NIG367165
20,5	4,0	10	63	PSV367205	NIG367205
25,0	4,0	10	67	PSV367250	NIG367250
31,0	4,0	12	71	PSV367310	NIG367310

363Svasatore
Countersinking cutter

HSSE

Z3

DIN
335C

D z9	d1	d h9	L	Non rivestito Uncoated	Balinit® Alcrona
8,0	2,0	6	49	PSV363080	NIG363080
12,5	2,8	8	54	PSV363125	NIG363125
16,0	3,2	10	57	PSV363160	NIG363160
20,0	3,5	10	59	PSV363200	NIG363200
25,0	3,8	10	63	PSV363250	NIG363250

Notes