



**th3**®

Tools High  
Technology

Utensili di qualità per la  
meccanica di precisione.

MATERIE PRIME

FRESE PIANE

FRESE A SGROSSARE

FRESE MULTITAGLIENTI

FRESE ALLUMINIO

FRESE SFERICHE

FRESE TORICHE

BULINI

FRESE PER ACCESSORI

PARAMETRI DI TAGLIO



Tools High  
Technology

th3<sup>®</sup>

th3 è una dinamica realtà con una forte capacità produttiva, che esprime il trentennale know how dei propri addetti nella produzione di utensili per tutti i tipi di lavorazioni con macchine di precisione.

L'estrema flessibilità strutturale, sommata all'esperienza specifica nelle lavorazioni meccaniche, permettono di sviluppare servizi e prodotti ad elevato livello di personalizzazione con criteri di esclusività.

Ogni utensile th3 è un'eccellente attrezzatura per il lavoro meccanico, frutto della perfetta sinergia tra esperienza, ingegneria, tecnicità, materiali, con performance di elevata qualità.

th3: qualità, servizio, rapidità e soluzioni esclusive per tutte le officine meccaniche che lavorano ogni tipo di materiale.

th3: Tools High Technology.

### Tipi di utensile standard o su misura:

- Frese frontali.
- Frese cilindriche.
- Frese sferiche.
- Frese coniche.
- Frese toriche.
- Punte di ogni tipologia.
- Maschi (filettature).
- Alesatori.
- Utensili speciali a disegno.

### Utensili per la lavorazione meccanica di:

- Acciai.
- Super leghe.
- Inox.
- Titanio.
- Alluminio.
- Leghe leggere.
- Ottone.
- Ghisa.
- Hastelloy.
- Plastiche e Resine.

■	<b>MATERIE PRIME</b>	Pag. 07
■	<b>FRESE PIANE</b>	
	Fresa piana a 1 tagliente in metallo duro	Pag. 09
	Fresa piana a 2 taglienti in metallo duro	Pag. 10
	Fresa piana a 3 taglienti in metallo duro	Pag. 11
	Fresa piana a 4 taglienti in metallo duro	Pag. 12
	Fresa piana a 2 taglienti in metallo duro	Pag. 13
■	<b>FRESE A SGROSSARE</b>	Pag. 14
■	<b>FRESE MULTITAGLIENTI</b>	Pag. 15
■	<b>FRESE ALLUMINIO</b>	Pag. 16
■	<b>FRESE SFERICHE</b>	
	Fresa sferica a 2 taglienti in metallo duro	Pag. 17
	Fresa sferica a 3 taglienti in metallo duro	Pag. 18
	Fresa sferica con scarico a 2 taglienti in metallo duro	Pag. 19
	Fresa sferica a 4 taglienti in metallo duro	Pag. 20
■	<b>FRESE TORICHE</b>	
	Fresa torica a 2 taglienti in metallo duro	Pag. 21
	Fresa torica a 3 taglienti in metallo duro	Pag. 22
	Fresa torica a 4 taglienti in metallo duro	Pag. 23
	Fresa torica per lega leggera	Pag. 24
■	<b>BULINI</b>	
	Bulino Z1 raggio	Pag. 25
	Bulino Z1 piatto	Pag. 26
	Bulino Z3 piatto	Pag. 27
■	<b>FRESE PER ACCESSORI</b>	
	Fresa a 2 taglienti per accessori	Pag. 28
■	<b>PARAMETRI DI TAGLIO</b>	Pag. 29





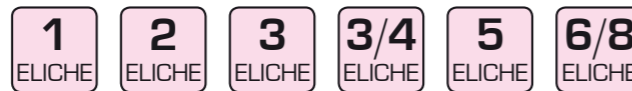
Fresa piana a 1 tagliente in metallo duro



**RIVESTIMENTO**



**NUMERO ELICHE**



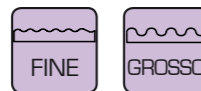
**ANGOLO ELICHE**



**DIREZIONE DI LAVORO**



**TIPO ROMPIRUCIOLO**



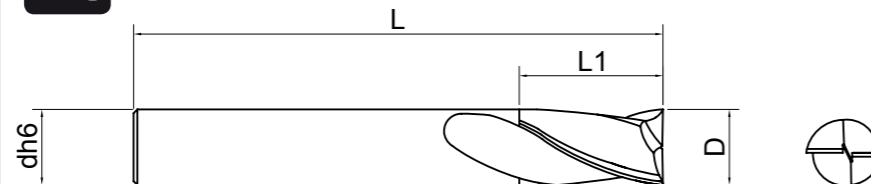
**SU ORDINAZIONE**



**LAVORAZIONE MAGNESIO**



**DISEGNO TECNICO**



**MISURE IN MM.**

- D = Diametro utensile
- dh6 = Diametro codolo
- L1 = Lunghezza tagli
- L2 = Profondità lavoro
- L = Lunghezza totale
- R = Raggio
- TIALN = Rivestimento multistrato
- CNI = Rivestimento Alluminio rame
- HSC = High speed cutting

- Progettazione utensili su misura.
- Produzioni personalizzate.
- Affilatura e manutenzione di utensili.
- Modifiche di utensili standard.
- Magazzino di utensili standard.
- Servizio 48h.
- Certificazione delle misure degli utensili con sistema Helicheck.

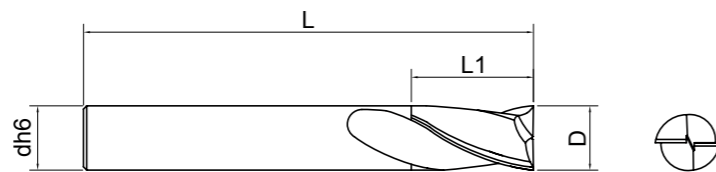
DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
2	6	50	10	1 0 1 0 2 0 0 1 0	1 0 1 0 2 0 0 1 0 R M
3	6	50	12	1 0 1 0 3 0 0 1 2	1 0 1 0 3 0 0 1 2 R M
4	6	50	12	1 0 1 0 4 0 0 1 2	1 0 1 0 4 0 0 1 2 R M
4	6	50	15	1 0 1 0 4 0 0 1 5	1 0 1 0 4 0 0 1 5 R M
5	6	50	16	1 0 1 0 5 0 0 1 6	1 0 1 0 5 0 0 1 6 R M
6	6	50	16	1 0 1 0 6 0 0 1 6	1 0 1 0 6 0 0 1 6 R M
6	6	60	20	1 0 1 0 6 0 0 2 0	1 0 1 0 6 0 0 2 0 R M
8	8	60	22	1 0 1 0 8 0 0 2 2	1 0 1 0 8 0 0 2 2 R M
10	10	72	25	1 0 1 1 0 0 0 2 5	1 0 1 1 0 0 0 2 5 R M
12	12	75	25	1 0 1 1 2 0 0 2 5	1 0 1 1 2 0 0 2 5 R M
12	12	75	30	1 0 1 1 2 0 0 3 0	1 0 1 1 2 0 0 3 0 R M
12	12	83	40	1 0 1 1 2 0 0 4 0	1 0 1 1 2 0 0 4 0 R M
16	16	90	35	1 0 1 1 6 0 0 3 5	1 0 1 1 6 0 0 3 5 R M
20	20	104	40	1 0 1 2 0 0 0 4 0	1 0 1 2 0 0 0 4 0 R M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**



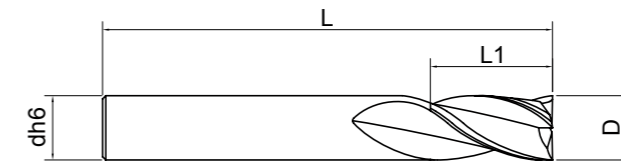
**FRESA PIANA art. 102 2 taglienti**

Fresa piana a 2 taglienti in metallo duro



**3 taglienti art. 103 FRESA PIANA**

Fresa piana a 3 taglienti in metallo duro



TIALN

TH3 STD

2 ELICHE

30°

30°

\*

Mg

DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
2,0	6	50	3	1 0 2 0 2 0 0 0 3	1 0 2 0 2 0 0 0 3 R M
2,0	6	50	4	1 0 2 0 2 0 0 0 4	1 0 2 0 2 0 0 0 4 R M
2,0	6	50	6	1 0 2 0 2 0 0 0 6	1 0 2 0 2 0 0 0 6 R M
2,5	6	50	4	1 0 2 0 2 5 0 0 4	1 0 2 0 2 5 0 0 4 R M
2,5	6	50	6	1 0 2 0 2 5 0 0 6	1 0 2 0 2 5 0 0 6 R M
2,5	6	50	8	1 0 2 0 2 5 0 0 8	1 0 2 0 2 5 0 0 8 R M
3,0	6	50	4	1 0 2 0 3 0 0 0 4	1 0 2 0 3 0 0 0 4 R M
3,0	6	50	6	1 0 2 0 3 0 0 0 6	1 0 2 0 3 0 0 0 6 R M
3,0	6	50	8	1 0 2 0 3 0 0 0 8	1 0 2 0 3 0 0 0 8 R M
3,5	6	50	6	1 0 2 0 3 5 0 0 6	1 0 2 0 3 5 0 0 6 R M
3,5	6	50	8	1 0 2 0 3 5 0 0 8	1 0 2 0 3 5 0 0 8 R M
3,5	6	50	10	1 0 2 0 3 5 0 1 0	1 0 2 0 3 5 0 1 0 R M
4,0	6	50	6	1 0 2 0 4 0 0 0 6	1 0 2 0 4 0 0 0 6 R M
4,0	6	50	8	1 0 2 0 4 0 0 0 8	1 0 2 0 4 0 0 0 8 R M
4,0	6	50	12	1 0 2 0 4 0 0 1 2	1 0 2 0 4 0 0 1 2 R M
4,5	6	50	6	1 0 2 0 4 5 0 0 6	1 0 2 0 4 5 0 0 6 R M
4,5	6	50	10	1 0 2 0 4 5 0 1 0	1 0 2 0 4 5 0 1 0 R M
4,5	6	50	12	1 0 2 0 4 5 0 1 2	1 0 2 0 4 5 0 1 2 R M
5,0	6	50	8	1 0 2 0 5 0 0 0 8	1 0 2 0 5 0 0 0 8 R M
5,0	6	50	10	1 0 2 0 5 0 0 1 0	1 0 2 0 5 0 0 1 0 R M
5,0	6	50	14	1 0 2 0 5 0 0 1 4	1 0 2 0 5 0 0 1 4 R M
5,5	6	50	8	1 0 2 0 5 5 0 0 8	1 0 2 0 5 5 0 0 8 R M
5,5	6	50	12	1 0 1 0 5 5 0 1 2	1 0 1 0 5 5 0 1 2 R M
6,0	6	50	8	1 0 2 0 6 0 0 0 8	1 0 2 0 6 0 0 0 8 R M
6,0	6	50	10	1 0 2 0 6 0 0 1 0	1 0 2 0 6 0 0 1 0 R M
6,0	6	60	15	1 0 2 0 6 0 0 1 5	1 0 2 0 6 0 0 1 5 R M
6,0	6	70	30	1 0 2 0 6 0 0 3 0	1 0 2 0 6 0 0 3 0 R M
7,0	8	60	10	1 0 2 0 7 0 0 1 0	1 0 2 0 7 0 0 1 0 R M
7,0	8	60	20	1 0 2 0 7 0 0 2 0	1 0 2 0 7 0 0 2 0 R M
8,0	8	60	10	1 0 2 0 8 0 0 1 0	1 0 2 0 8 0 0 1 0 R M
8,0	8	60	16	1 0 2 0 8 0 0 1 6	1 0 2 0 8 0 0 1 6 R M
8,0	8	60	22	1 0 2 0 8 0 0 2 2	1 0 2 0 8 0 0 2 2 R M
8,0	8	100	40	1 0 2 0 8 0 0 4 0	1 0 2 0 8 0 0 4 0 R M
9,0	9	60	10	1 0 2 0 9 0 0 1 0	1 0 2 0 9 0 0 1 0 R M
9,0	9	75	22	1 0 2 0 9 0 0 2 2	1 0 2 0 9 0 0 2 2 R M
10,0	10	70	12	1 0 2 1 0 0 0 1 2	1 0 2 1 0 0 0 1 2 R M
10,0	10	70	19	1 0 2 1 0 0 0 1 9	1 0 2 1 0 0 0 1 9 R M
10,0	10	80	25	1 0 2 1 0 0 0 2 5	1 0 2 1 0 0 0 2 5 R M
10,0	10	100	40	1 0 2 1 0 0 0 4 0	1 0 2 1 0 0 0 4 0 R M
12,0	12	70	15	1 0 2 1 2 0 0 1 5	1 0 2 1 2 0 0 1 5 R M
12,0	12	70	22	1 0 2 1 2 0 0 2 2	1 0 2 1 2 0 0 2 2 R M
12,0	12	80	30	1 0 2 1 2 0 0 3 0	1 0 2 1 2 0 0 3 0 R M
12,0	12	100	45	1 0 2 1 2 0 0 4 5	1 0 2 1 2 0 0 4 5 R M
13,0	13	75	22	1 0 2 1 3 0 0 2 2	1 0 2 1 3 0 0 2 2 R M
13,0	13	100	45	1 0 2 1 3 0 0 4 5	1 0 2 1 3 0 0 4 5 R M
14,0	14	80	22	1 0 2 1 4 0 0 2 2	1 0 2 1 4 0 0 2 2 R M
14,0	14	80	30	1 0 2 1 4 0 0 3 0	1 0 2 1 4 0 0 3 0 R M
14,0	14	100	45	1 2 0 1 4 0 0 4 5	1 2 0 1 4 0 0 4 5 R M
16,0	16	90	26	1 0 2 1 6 0 0 2 6	1 0 2 1 6 0 0 2 6 R M
16,0	16	90	35	1 0 2 1 6 0 0 3 5	1 0 2 1 6 0 0 3 5 R M
16,0	16	104	45	1 0 2 1 6 0 0 4 5	1 0 2 1 6 0 0 4 5 R M
18,0	18	104	32	1 0 2 1 8 0 0 3 2	1 0 2 1 8 0 0 3 2 R M
20,0	20	104	32	1 0 2 2 0 0 0 3 2	1 0 2 2 0 0 0 3 2 R M
20,0	20	104	40	1 0 2 2 0 0 0 4 0	1 0 2 2 0 0 0 4 0 R M
20,0	20	130	60	1 0 2 2 0 0 0 6 0 *	1 0 2 2 0 0 0 6 0 R * M
22,0	22	104	38	1 0 2 2 2 0 0 3 8 *	1 0 2 2 2 0 0 3 8 R * M
22,0	22	150	75	1 0 2 2 2 0 0 7 5 *	1 0 2 2 2 0 0 7 5 R * M
25,0	25	104	38	1 0 2 2 5 0 0 3 8 *	1 0 2 2 5 0 0 3 8 R * M
25,0	25	150	75	1 0 2 2 5 0 0 7 5 *	1 0 2 2 5 0 0 7 5 R * M
30,0	30	104	38	1 0 2 3 0 0 0 3 8 *	1 0 2 3 0 0 0 3 8 R * M
30,0	30	150	75	1 0 2 3 0 0 0 7 5 *	1 0 2 3 0 0 0 7 5 R * M
32,0	32	120	40	1 0 2 3 2 0 0 4 0 *	1 0 2 3 2 0 0 4 0 R * M
32,0	32	150	75	1 0 2 3 2 0 0 7 5 *	1 0 2 3 2 0 0 7 5 R * M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

TIALN

TH3 STD

3 ELICHE

30°

30°

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Mg

DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
2	6	50	3	1 0 3 0 2 0 0 0 3	1 0 3 0 2 0 0 0 3 R M
2	6	50	5	1 0 3 0 2 0 0 0 5	1 0 3 0 2 0 0 0 5 R M
3	6	50	4	1 0 3 0 3 0 0 0 4	1 0 3 0 3 0 0 0 4 R M
3	6	50	7	1 0 3 0 3 0 0 0 7	1 0 3 0 3 0 0 0 7 R M
4	6	50	6	1 0 3 0 4 0 0 0 6	1 0 3 0 4 0 0 0 6 R M
4	6	50	10	1 0 3 0 4 0 0 1 0	1 0 3 0 4 0 0 1 0 R M
5	6	50	8	1 0 3 0 5 0 0 0 8	1 0 3 0 5 0 0 0 8 R M
5	6	50	10	1 0 3 0 5 0 0 1 0	1 0 3 0 5 0 0 1 0 R M
6	6	50	8	1 0 3 0 6 0 0 0 8	1 0 3 0 6 0 0 0 8 R M
6	6	50	12	1 0 3 0 6 0 0 1 2	1 0 3 0 6 0 0 1 2 R M
6	6	60	15	1 0 3 0 6 0 0 1 5	1 0 3 0 6 0 0 1 5 R M
8	8	60	10	1 0 3 0 8 0 0 1 0	1 0 3 0 8 0 0 1 0 R M
8	8	60	16	1 0 3 0 8 0 0 1 6	1 0 3 0 8 0 0 1 6 R M
8	8	75	25	1 0 3 0 8 0 0 2 5	1 0 3 0 8 0 0 2 5 R M
10	10	70	12	1 0 3 1 0 0 0 1 2	1 0 3 1 0 0 0 1 2 R M
10	10	70	22	1 0 3 1 0 0 0 2 2	1 0 3 1 0 0 0 2 2 R M
10	10	75	30	1 0 3 1 0 0 0 3 0	1 0 3 1 0 0 0 3 0 R M
12	12	75	14	1 0 3 1 2 0 0 1 4	1 0 3 1 2 0 0 1 4 R M
12	12	75	22	1 0 3 1 2 0 0 2 2	1 0 3 1 2 0 0 2 2 R M
12	12	100	45	1 0 3 1 2 0 0 4 5	1 0 3 1 2 0 0 4 5 R M
14	14	80	22	1 0 3 1 4 0 0 2 2	1 0 3 1 4 0 0 2 2 R M
14	14	80	32	1 0 3 1 4 0 0 3 2	1 0 3 1 4 0 0 3 2 R M
16	16	90	28	1 0 3 1 6 0 0 2 8	1 0 3 1 6 0 0 2 8 R M
16	16	90	40	1 0 3 1 6 0 0 4 0	1 0 3 1 6 0 0 4 0 R M
20	20	100	30	1 0 3 2 0 0 0 3 0	1 0 3 2 0 0 0 3 0 R M
20	20	100	40	1 0 3 2 0 0 0 4 0	1 0 3 2 0 0 0 4 0 R M
22	22	104	38	1 0 3 2 2 0 0 3 8 *	1 0 3 2 2 0 0 3 8 R * M
22	22	150	75	1 0 3 2 2 0 0 7 5 *	1 0 3 2 2 0 0 7 5 R * M
25	25	104	38	1 0 3 2 5 0 0 3 8 *	1 0 3 2 5 0 0 3 8 R * M
25	25	150	75	1 0 3 2 5 0 0 7 5 *	1 0 3 2 5 0 0 7 5 R * M
30	30	104	38	1 0 3 3 0 0 0 3 8 *	1 0 3 3 0 0 0 3 8 R * M
30	30	150	75	1 0 3 3 0 0 0 7 5 *	1 0 3 3 0 0 0 7 5 R * M
32	32	120	40	1 0 3 3 2 0 0 4 0 *	1 0 3 3 2 0 0 4 0 R * M
32	32	150	75	1 0 3 3 2 0 0 7 5 *	1 0 3 3 2 0 0 7 5 R * M

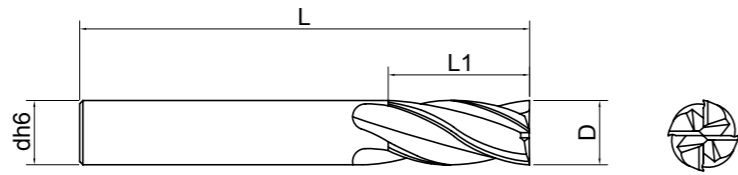
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# FRESA PIANA

art. 104

4 taglienti

Fresa piana a 4 taglienti in metallo duro

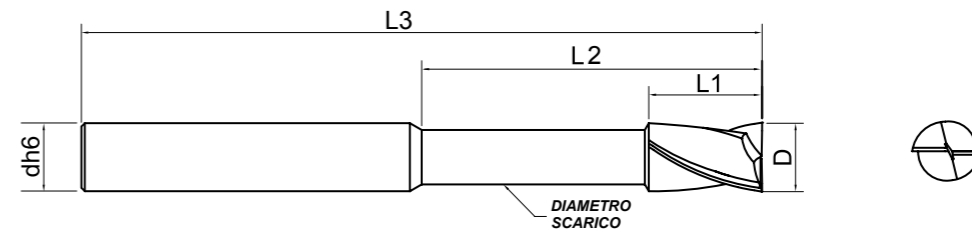


# 2 taglienti

art. 202

# FRESA PIANA

Fresa piana a 2 taglienti in metallo duro



TIALN

TH3 STD

4 ELICHE

30°

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Mg

DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
3,0	6	50	4	104030004	104030004 R M
3,0	6	50	6	104030006	104030006 R M
3,5	6	50	4	104035004	104035004 R M
3,5	6	50	6	104035006	104035006 R M
3,5	6	50	8	104035008	104035008 R M
4,0	6	50	5	104040005	104040005 R M
4,0	6	50	8	104040008	104040008 R M
4,0	6	50	10	104040010	104040010 R M
4,5	6	50	8	104045008	104045008 R M
4,5	6	50	10	104045010	104045010 R M
5,0	6	50	6	104050006	104050006 R M
5,0	6	50	10	104050010	104050010 R M
5,0	6	60	14	104050014	104050014 R M
6,0	6	50	8	104060008	104060008 R M
6,0	6	50	10	104060010	104060010 R M
6,0	6	60	15	104060015	104060015 R M
6,0	6	70	30	104060030	104060030 R M
7,0	8	60	8	104070008	104070008 R M
7,0	8	60	15	104070015	104070015 R M
8,0	8	60	10	104080010	104080010 R M
8,0	8	60	16	104080016	104080016 R M
8,0	8	80	22	104080022	104080022 R M
8,0	8	100	40	104080040	104080040 R M
9,0	10	70	15	104090015	104090015 R M
9,0	10	80	22	104090022	104090022 R M
10,0	10	70	15	104100015	104100015 R M
10,0	10	70	22	104100022	104100022 R M
10,0	10	80	30	104100030	104100030 R M
10,0	10	100	45	104100045	104100045 R M
12,0	12	75	16	104120016	104120016 R M
12,0	12	75	26	104120026	104120026 R M
12,0	12	100	45	104120045	104120045 R M
13,0	14	75	22	104130022	104130022 R M
13,0	14	100	45	104130045	104130045 R M
14,0	14	75	18	104140018	104140018 R M
14,0	14	80	26	104140026	104140026 R M
14,0	14	100	45	104140045	104140045 R M
16,0	16	80	25	104160025	104160025 R M
16,0	16	90	32	104160032	104160032 R M
16,0	16	120	50	104160050	104160050 R M
20,0	20	100	32	104200032	104200032 R M
20,0	20	100	40	104200040	104200040 R M
20,0	20	120	60	104200060	104200060 R M
22,0	22	104	38	104220038 *	104220038 R * M
22,0	22	150	75	104220075 *	104220075 R * M
25,0	25	104	38	104250038 *	104250038 R * M
25,0	25	150	75	104250075 *	104250075 R * M
30,0	30	104	38	104300038 *	104300038 R * M
30,0	30	150	75	104300075 *	104300075 R * M
32,0	32	120	40	104320040 *	104320040 R * M
32,0	32	150	75	104320075 *	104320075 R * M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

TIALN

TH3 STD

2 ELICHE

30°

Mg

DIMENSIONI						CODICE	
D	dh6	L1	L2	L3	Diametro scarico	Senza rivestimento	Rivestimento TIALN
1,0	4	1,5	4	45	0,97	202010004	202010004 R M
1,0	4	1,5	6	45	0,97	202010006	202010006 R M
1,0	4	1,5	8	45	0,95	202010008	202010008 R M
1,0	4	1,5	10	45	0,95	202010010	202010010 R M
1,0	4	1,5	12	45	0,93	202010012	202010012 R M
1,0	4	1,5	16	45	0,93	202010016	202010016 R M
1,0	4	1,5	20	45	0,93	202010020	202010020 R M
1,2	4	1,8	6	45	1,17	202012006	202012006 R M
1,2	4	1,8	8	45	1,15	202012008	202012008 R M
1,2	4	1,8	10	45	1,15	202012010	202012010 R M
1,2	4	1,8	12	45	1,13	202012012	202012012 R M
1,2	4	1,8	16	50	1,13	202012016	202012016 R M
1,4	4	2,1	6	45	1,35	202014006	202014006 R M
1,4	4	2,1	8	45	1,35	202014008	202014008 R M
1,4	4	2,1	10	45	1,35	202014010	202014010 R M
1,4	4	2,1	12	45	1,33	202014012	202014012 R M
1,4	4	2,1	14	45	1,33	202014014	202014014 R M
1,4	4	2,1	16	50	1,31	202014016	202014016 R M
1,4	4	2,1	22	55	1,31	202014022	202014022 R M
1,5	4	2,3	6	45	1,47	202015006	202015006 R M
1,5	4	2,3	8	45	1,45	202015008	202015008 R M
1,5	4	2,3	10	45	1,45	202015010	202015010 R M
1,5	4	2,3	12	45	1,45	202015012	202015012 R M
1,5	4	2,3	14	50	1,43	202015014	202015014 R M
1,5	4	2,3	16	50	1,41	202015016	202015016 R M
1,5	4	2,3	18	55	1,41	202015018	202015018 R M
1,5	4	2,3	20	55	1,41	202015020	202015020 R M
1,6	4	2,4	6	45	1,57	202016006	202016006 R M
1,6	4	2,4	8	45	1,50	202016008	202016008 R M
1,6	4	2,4	10	45	1,50	202016010	202016010 R M
1,6	4	2,4	12	45	1,53	202016012	202016012 R M
1,6	4	2,4	14	50	1,53	202016014	202016014 R M
1,6	4	2,4	16	50	1,53	202016016	202016016 R M
1,6	4	2,4	18	55	1,53	202016018	202016018 R M
1,6	4	2,4	20	55	1,53	202016020	202016020 R M
1,6	4	2,4	26	60	1,53	202016026	202016026 R M
1,8	4	2,7	6	45	1,77	202018006	202018006 R M
1,8	4	2,7	8	45	1,75	202018008	202018008 R M
1,8	4	2,7	10	45	1,75	202018010	202018010 R M
1,8	4	2,7	12	45	1,73	202018012	202018012 R M
1,8	4	2,7	14	45	1,73	202018014	202018014 R M
1,8	4	2,7	16	50	1,71	202018016	202018016 R M
1,8	4	2,7	18	55	1,71	202018018	202018018 R M
1,8	4	2,7	20	55	1,75	202018020	202018020 R M
1,8	4	2,7	25	55	1,75	202018025	202018025 R M
2,0	4	3,0	6	45	1,97	202020006	202020006 R M
2,0	4	3,0	8	45	1,95	202020008	202020008 R M
2,0	4	3,0	10	45	1,95	202020010	202020010 R M
2,0	4	3,0	12	45	1,93	202020012	202020012 R M
2,0	4	3,0	14	50	1,93	202020014	202020014 R M
2,0	4	3,0	16	50	1,91	202020016	202020016 R M
2,0	4	3,0	18	55	1,91	202020018	202020018 R M
2,0	4	3,0	20	55	1,89	202020020	202020020 R M
2,0	4	3,0	25	60	1,89	202020025	202020025 R M
2,0	4	3,0	30	70	1,89	202020030	202020030 R M
2,5	4	3,7	8	45	2,40	202025008	202025008 R M
2,5	4	3,7	10	45	2,40	202025010	202025010 R M
2,5	4	3,7	12	45	2,40	202025012	202025012 R M
2,5	4	3,7	14	50	2,40	202025014	202025014 R M
2,5	4	3,7	16	55	2,40	202025016	202025016 R M
2,5	4	3,7	18	55	2,40	202025018	202025018 R M
2,5	4	3,7	20	60	2,40	202025020	202025020 R M
2,5	4	3,7	25	70	2,40	202025025	202025025 R M
2,5	4	3,7	30	80	2,40	202025030	202025030 R M
3,0	6	4,5	8	45	2,85	202030008	202030008 R M
3,0	6	4,5	10	45	2,85	202030010	202030010 R M
3,0	6	4,5	12	45	2,85	202030012	202030012 R M
3,0	6	4,5	14	50	2,85	202030014	202030014 R M
3,0	6	4,5	16	55	2,85	202030016	202030016 R M
3,0	6	4,5	18	55	2,85	202030018	202030018 R M

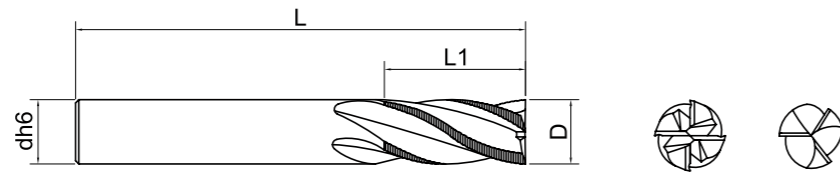
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# FRESE A SGROSSARE

art. 130

3/4 taglienti

Fresa a sgrossare a 3 taglienti in metallo duro



DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
4,0	6	50	14	1 3 0 0 4 0 0 1 4	1 3 0 0 4 0 0 1 4 R M
4,5	6	50	14	1 3 0 0 4 5 0 1 4	1 3 0 0 4 5 0 1 4 R M
5,0	6	50	14	1 3 0 0 5 0 0 1 4	1 3 0 0 5 0 0 1 4 R M
5,5	6	50	14	1 3 0 0 5 5 0 1 4	1 3 0 0 5 5 0 1 4 R M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

TIALN

TH3  
STD

3/4  
ELICHE

30°



FINE

GROSSO

**Mg**

Fresa a sgrossare a 4 taglienti

DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
6,0	6	50	14	1 3 0 0 6 0 0 1 4	1 3 0 0 6 0 0 1 4 R M
7,5	8	60	19	1 3 0 0 7 5 0 1 9	1 3 0 0 7 5 0 1 9 R M
8,0	8	60	19	1 3 0 0 8 0 0 1 9	1 3 0 0 8 0 0 1 9 R M
9,5	10	70	22	1 3 0 0 9 5 0 2 2	1 3 0 0 9 5 0 2 2 R M
10,0	10	70	22	1 3 0 1 0 0 0 2 2	1 3 0 1 0 0 0 2 2 R M
11,5	12	75	26	1 3 0 1 1 5 0 2 6	1 3 0 1 1 5 0 2 6 R M
12,0	12	75	26	1 3 0 1 2 0 0 2 6	1 3 0 1 2 0 0 2 6 R M
13,5	14	75	28	1 3 0 1 3 5 0 2 8	1 3 0 1 3 5 0 2 8 R M
14,0	14	75	28	1 3 0 1 4 0 0 2 8	1 3 0 1 4 0 0 2 8 R M
15,5	16	80	32	1 3 0 1 5 5 0 3 2	1 3 0 1 5 5 0 3 2 R M
16,0	16	80	32	1 3 0 1 6 0 0 3 2	1 3 0 1 6 0 0 3 2 R M
19,5	20	100	38	1 3 0 1 9 5 0 3 8	1 3 0 1 9 5 0 3 8 R M
20,0	20	100	38	1 3 0 2 0 0 0 3 8	1 3 0 2 0 0 0 3 8 R M
22,0	22	100	40	1 3 0 2 2 0 0 4 0	1 3 0 2 2 0 0 4 0 R M
25,0	25	100	45	1 3 0 2 5 0 0 4 5	1 3 0 2 5 0 0 4 5 R M

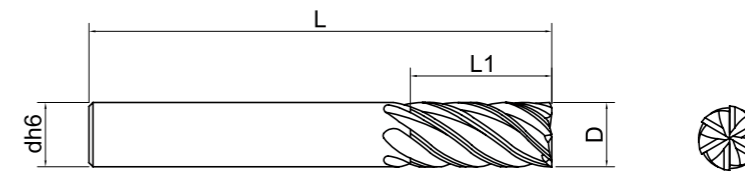
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

6/8 taglienti

art. 155

# FRESE MULTITAGLIENTI

Fresa piana a 6 taglienti in metallo duro



DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
4	6	60	13	1 5 5 0 4 0 0 1 3	1 5 5 0 4 0 0 1 3 R M
6	6	60	13	1 5 5 0 6 0 0 1 3	1 5 5 0 6 0 0 1 3 R M
6	6	70	20	1 5 5 0 6 0 0 2 0	1 5 5 0 6 0 0 2 0 R M
8	8	63	19	1 5 5 0 8 0 0 1 9	1 5 5 0 8 0 0 1 9 R M
8	8	90	30	1 5 5 0 8 0 0 3 0	1 5 5 0 8 0 0 3 0 R M
10	10	72	22	1 5 5 1 0 0 0 2 2	1 5 5 1 0 0 0 2 2 R M
10	10	100	40	1 5 5 1 0 0 0 4 0	1 5 5 1 0 0 0 4 0 R M
12	12	83	26	1 5 5 1 2 0 0 2 6	1 5 5 1 2 0 0 2 6 R M
12	12	110	50	1 5 5 1 2 0 0 5 0	1 5 5 1 2 0 0 5 0 R M
16	16	92	32	1 5 5 1 6 0 0 3 2	1 5 5 1 6 0 0 3 2 R M
16	16	130	66	1 5 5 1 6 0 0 6 6	1 5 5 1 6 0 0 6 6 R M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

TIALN

TH3  
STD

6/8  
ELICHE

55°

**Mg**

Fresa piana a 8 taglienti in metallo duro

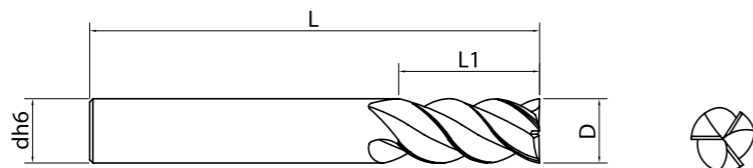
DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
20	20	104	38	1 5 5 2 0 0 0 3 8	1 5 5 2 0 0 0 3 8 R M
20	20	140	75	1 5 5 2 0 0 0 7 5	1 5 5 2 0 0 0 7 5 R M
25	25	104	44	1 5 5 2 5 0 0 4 4	1 5 5 2 5 0 0 4 4 R M
25	25	180	92	1 5 5 2 5 0 0 9 2	1 5 5 2 5 0 0 9 2 R M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**



# FRESE ALLUMINIO art. 145A2 2/3 taglienti

Fresa piana a 2 taglienti in metallo duro



DIMENSIONI				CODICE			
D	dh6	L	L1	Senza rivestimento		Rivestimento TiAlN	
3	6	60	8	1 4 5 0 3 A 2 0 8	1 4 5 0 3 A 2 0 8 R	M	
4	6	60	11	1 4 5 0 4 A 2 1 1	1 4 5 0 4 A 2 1 1 R	M	
5	6	60	13	1 4 5 0 5 A 2 1 3	1 4 5 0 5 A 2 1 3 R	M	
6	6	60	13	1 4 5 0 6 A 2 1 3	1 4 5 0 6 A 2 1 3 R	M	
8	8	60	19	1 4 5 0 5 A 2 1 9	1 4 5 0 5 A 2 1 9 R	M	
10	10	70	22	1 4 5 1 0 A 2 2 2	1 4 5 1 0 A 2 2 2 R	M	
12	12	83	26	1 4 5 1 2 A 2 2 6	1 4 5 1 2 A 2 2 6 R	M	
14	14	83	26	1 4 5 1 4 A 2 2 6	1 4 5 1 4 A 2 2 6 R	M	
16	16	92	32	1 4 5 1 6 A 2 3 2	1 4 5 1 6 A 2 3 2 R	M	
20	20	100	38	1 4 5 2 0 A 2 3 8	1 4 5 2 0 A 2 3 8 R	M	
22	22	104	40	1 4 5 2 2 A 2 4 0 *	1 4 5 2 2 A 2 4 0 R *	M	
25	25	120	45	1 4 5 2 5 A 2 4 5 *	1 4 5 2 5 A 2 4 5 R *	M	

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

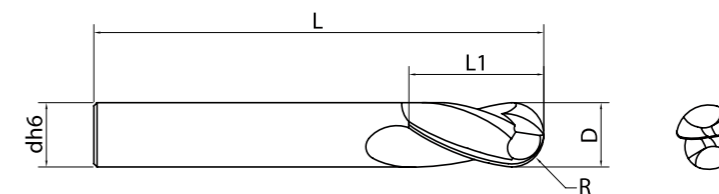
# Fresa piana a 3 taglienti in metallo duro art. 145A3

DIMENSIONI				CODICE			
D	dh6	L	L1	Senza rivestimento		Rivestimento TiAlN	
6	6	60	14	1 4 5 0 6 A 3 1 4	1 4 5 0 6 A 3 1 4 R	M	
8	8	60	19	1 4 5 0 8 A 3 1 9	1 4 5 0 8 A 3 1 9 R	M	
10	10	70	22	1 4 5 1 0 A 3 2 2	1 4 5 1 0 A 3 2 2 R	M	
12	12	75	26	1 4 5 1 2 A 3 2 6	1 4 5 1 2 A 3 2 6 R	M	
16	16	90	32	1 4 5 1 6 A 3 3 2	1 4 5 1 6 A 3 3 2 R	M	
20	20	100	38	1 4 5 2 0 A 3 3 8	1 4 5 2 0 A 3 3 8 R	M	
22	22	104	40	1 4 5 2 2 A 3 4 0 *	1 4 5 2 2 A 3 4 0 R *	M	
25	25	120	45	1 4 5 2 5 A 3 4 5 *	1 4 5 2 5 A 3 4 5 R *	M	

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# 2 taglienti art. 102R FRESE SFERICHE

Fresa sferica a 2 taglienti in metallo duro



DIMENSIONI					CODICE			
D	dh6	L	L1	R	Senza rivestimento		Rivestimento TiAlN	
1,0	6	50	3	0,50	1 0 2 0 1 R 0 0 3	1 0 2 0 1 R 0 0 3 R	M	
1,5	6	50	3	0,75	1 0 2 0 1 5 R 0 3	1 0 2 0 1 5 R 0 3 R	M	
2,0	6	50	4	1,00	1 0 2 0 2 R 0 0 4	1 0 2 0 2 R 0 0 4 R	M	
2,0	6	60	6	1,00	1 0 2 0 2 R 0 0 6	1 0 2 0 2 R 0 0 6 R	M	
2,5	6	50	5	1,25	1 0 2 0 2 5 R 0 5	1 0 2 0 2 5 R 0 5 R	M	
2,5	6	60	8	1,25	1 0 2 0 2 5 R 0 8	1 0 2 0 2 5 R 0 8 R	M	
3,0	6	50	6	1,50	1 0 2 0 3 R 0 0 6	1 0 2 0 3 R 0 0 6 R	M	
3,0	6	60	10	1,50	1 0 2 0 3 R 0 1 0	1 0 2 0 3 R 0 1 0 R	M	
3,5	6	50	8	1,75	1 0 2 0 3 5 R 0 8	1 0 2 0 3 5 R 0 8 R	M	
3,5	6	60	15	1,75	1 0 2 0 3 5 R 1 5	1 0 2 0 3 5 R 1 5 R	M	
4,0	6	50	8	2,00	1 0 2 0 4 R 0 0 8	1 0 2 0 4 R 0 0 8 R	M	
4,0	6	60	16	2,00	1 0 2 0 4 R 0 1 6	1 0 2 0 4 R 0 1 6 R	M	
4,5	6	50	10	2,25	1 0 2 0 4 5 R 1 0	1 0 2 0 4 5 R 1 0 R	M	
4,5	6	60	18	2,25	1 0 2 0 4 5 R 1 8	1 0 2 0 4 5 R 1 8 R	M	
5,0	6	50	10	2,50	1 0 2 0 5 R 0 1 0	1 0 2 0 5 R 0 1 0 R	M	
5,0	6	60	20	2,50	1 0 2 0 5 R 0 2 0	1 0 2 0 5 R 0 2 0 R	M	
5,5	6	50	10	2,75	1 0 2 0 5 5 R 1 0	1 0 2 0 5 5 R 1 0 R	M	
5,5	6	60	20	2,75	1 0 2 0 5 5 R 2 0	1 0 2 0 5 5 R 2 0 R	M	
6,0	6	50	12	3,00	1 0 2 0 6 R 0 1 2	1 0 2 0 6 R 0 1 2 R	M	
6,0	6	60	20	3,00	1 0 2 0 6 R 0 2 0	1 0 2 0 6 R 0 2 0 R	M	
7,0	7	60	16	3,50	1 0 2 0 7 R 0 1 6	1 0 2 0 7 R 0 1 6 R	M	
8,0	8	60	12	4,00	1 0 2 0 8 R 0 1 2	1 0 2 0 8 R 0 1 2 R	M	
8,0	8	75	26	4,00	1 0 2 0 8 R 0 2 6	1 0 2 0 8 R 0 2 6 R	M	
9,0	9	70	20	4,50	1 0 2 0 9 R 0 2 0	1 0 2 0 9 R 0 2 0 R	M	
10,0	10	75	22	5,00	1 0 2 1 0 R 0 2 2	1 0 2 1 0 R 0 2 2 R	M	
10,0	10	100	40	5,00	1 0 2 1 0 R 0 4 0	1 0 2 1 0 R 0 4 0 R	M	
11,0	11	70	22	5,50	1 0 2 1 1 R 0 2 2	1 0 2 1 1 R 0 2 2 R	M	
12,0	12	75	16	6,00	1 0 2 1 2 R 0 1 6	1 0 2 1 2 R 0 1 6 R	M	
12,0	12	100	40	6,00	1 0 2 1 2 R 0 4 0	1 0 2 1 2 R 0 4 0 R	M	
13,0	13	75	26	6,50	1 0 2 1 3 R 0 2 6	1 0 2 1 3 R 0 2 6 R	M	
14,0	14	75	28	7,00	1 0 2 1 4 R 0 2 8	1 0 2 1 4 R 0 2 8 R	M	
14,0	14	120	45	7,00	1 0 2 1 4 R 0 4 5	1 0 2 1 4 R 0 4 5 R	M	
16,0	16	90	32	8,00	1 0 2 1 6 R 0 3 2	1 0 2 1 6 R 0 3 2 R	M	
16,0	16	120	50	8,00	1 0 2 1 6 R 0 5 0	1 0 2 1 6 R 0 5 0 R	M	
18,0	18	100	25	9,00	1 0 2 1 8 R 0 2 5	1 0 2 1 8 R 0 2 5 R	M	
18,0	18	105	36	9,00	1 0 2 1 8 0 3 6 R	1 0 2 1 8 0 3 6 R R	M	
20,0	20	100	36	10,00	1 0 2 2 0 R 0 3 6	1 0 2 2 0 R 0 3 6 R	M	
20,0	20	120	60	10,00	1 0 2 2 0 R 0 6 0	1 0 2 2 0 R 0 6 0 R	M	
22,0	22	104	38	11,00	1 0 2 2 2 R 0 3 8 *	1 0 2 2 2 R 0 3 8 R *	M	
22,0	22	150	75	11,00	1 0 2 2 2 R 0 7 5 *	1 0 2 2 2 R 0 7 5 R *	M	
25,0	25	104	38	12,50	1 0 2 2 5 R 0 3 8 *	1 0 2 2 5 R 0 3 8 R *	M	
25,0	25	150	75	12,50	1 0 2 2 5 R 0 7 5 *	1 0 2 2 5 R 0 7 5 R *	M	
30,0	30	104	38	15,00	1 0 2 3 0 R 0 3 8 *	1 0 2 3 0 R 0 3 8 R *	M	
30,0	30	150	75	15,00	1 0 2 3 0 R 0 7 5 *	1 0 2 3 0 R 0 7 5 R *	M	
32,0	32	120	40	16,00	1 0 2 3 2 R 0 4 0 *	1 0 2 3 2 R 0 4 0 R *	M	
32,0	32	150	75	16,00	1 0 2 3 2 R 0 7 5 *	1 0 2 3 2 R 0 7 5 R *	M	

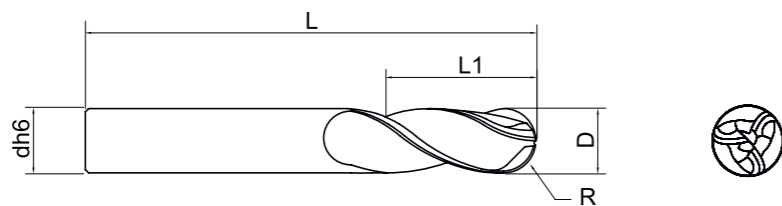
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# FRESE SFERICHE

art. 103R

3 taglienti

Fresa sferica a 3 taglienti in metallo duro



TIALN

TH3 STD

3 ELICHE

30°

\*

Mg

DIMENSIONI				CODICE		
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN	
3	6	50	4	1 0 3 0 3 R 0 0 4	1 0 3 0 3 R 0 0 4 R	M
3	6	50	7	1 0 3 0 3 R 0 0 7	1 0 3 0 3 R 0 0 7 R	M
4	6	50	6	1 0 3 0 4 R 0 0 6	1 0 3 0 4 R 0 0 6 R	M
4	6	50	10	1 0 3 0 4 R 0 1 0	1 0 3 0 4 R 0 1 0 R	M
5	6	50	8	1 0 3 0 5 R 0 0 8	1 0 3 0 5 R 0 0 8 R	M
5	6	50	10	1 0 3 0 5 R 0 1 0	1 0 3 0 5 R 0 1 0 R	M
6	6	50	8	1 0 3 0 6 R 0 0 8	1 0 3 0 6 R 0 0 8 R	M
6	6	50	12	1 0 3 0 6 R 0 1 2	1 0 3 0 6 R 0 1 2 R	M
6	6	60	15	1 0 3 0 6 R 0 1 5	1 0 3 0 6 R 0 1 5 R	M
8	8	60	10	1 0 3 0 8 R 0 1 0	1 0 3 0 8 R 0 1 0 R	M
8	8	60	16	1 0 3 0 8 R 0 1 6	1 0 3 0 8 R 0 1 6 R	M
8	8	75	25	1 0 3 0 8 R 0 2 5	1 0 3 0 8 R 0 2 5 R	M
10	10	70	12	1 0 3 1 0 R 0 1 2	1 0 3 1 0 R 0 1 2 R	M
10	10	70	22	1 0 3 1 0 R 0 2 2	1 0 3 1 0 R 0 2 2 R	M
10	10	75	30	1 0 3 1 0 R 0 3 0	1 0 3 1 0 R 0 3 0 R	M
12	12	75	14	1 0 3 1 2 R 0 1 4	1 0 3 1 2 R 0 1 4 R	M
12	12	75	22	1 0 3 1 2 R 0 2 2	1 0 3 1 2 R 0 2 2 R	M
12	12	100	45	1 0 3 1 2 R 0 4 5	1 0 3 1 2 R 0 4 5 R	M
14	14	80	22	1 0 3 1 4 R 0 2 2	1 0 3 1 4 R 0 2 2 R	M
14	14	80	32	1 0 3 1 4 R 0 3 2	1 0 3 1 4 R 0 3 2 R	M
16	16	90	28	1 0 3 1 6 R 0 2 8	1 0 3 1 6 R 0 2 8 R	M
16	16	90	40	1 0 3 1 6 R 0 4 0	1 0 3 1 6 R 0 4 0 R	M
20	20	100	30	1 0 3 2 0 R 0 3 0	1 0 3 2 0 R 0 3 0 R	M
20	20	100	40	1 0 3 2 0 R 0 4 0	1 0 3 2 0 R 0 4 0 R	M
22	22	104	38	1 0 3 2 2 R 0 3 8 *	1 0 3 2 2 R 0 3 8 R *	M
22	22	150	75	1 0 3 2 2 R 0 7 5 *	1 0 3 2 2 R 0 7 5 R *	M
25	25	104	38	1 0 3 2 5 R 0 3 8 *	1 0 3 2 5 R 0 3 8 R *	M
25	25	150	75	1 0 3 2 5 R 0 7 5 *	1 0 3 2 5 R 0 7 5 R *	M
30	30	104	38	1 0 3 3 0 R 0 3 8 *	1 0 3 3 0 R 0 3 8 R *	M
30	30	150	75	1 0 3 3 0 R 0 7 5 *	1 0 3 3 0 R 0 7 5 R *	M
32	32	120	40	1 0 3 3 2 R 0 4 0 *	1 0 3 3 2 R 0 4 0 R *	M
32	32	150	75	1 0 3 3 2 R 0 7 5 *	1 0 3 3 2 R 0 7 5 R *	M

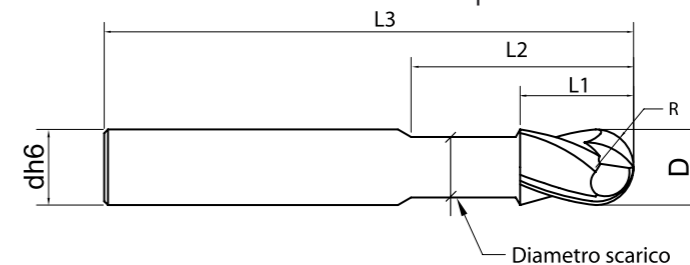
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

2 taglienti

art. 202R

# FRESE SFERICHE

Fresa sferica per nervature a 2 taglienti in metallo duro



TIALN

TH3 STD

2 ELICHE

30°

Mg

DIMENSIONI							CODICE		
D	dh6	L1	L2	L3	R±0,01	Diametro scarico	Senza rivestimento	Rivestimento TIALN	
1,0	4	1,5	3	45	0,50	0,97	2 0 2 R 1 0 0 0 3	2 0 2 R 1 0 0 0 3 R	M
1,0	4	1,5	4	45	0,50	0,97	2 0 2 R 1 0 0 0 4	2 0 2 R 1 0 0 0 4 R	M
1,0	4	1,5	5	45	0,50	0,97	2 0 2 R 1 0 0 0 5	2 0 2 R 1 0 0 0 5 R	M
1,0	4	1,5	6	45	0,50	0,97	2 0 2 R 1 0 0 0 6	2 0 2 R 1 0 0 0 6 R	M
1,0	4	1,5	7	45	0,50	0,95	2 0 2 R 1 0 0 0 7	2 0 2 R 1 0 0 0 7 R	M
1,0	4	1,5	8	45	0,50	0,95	2 0 2 R 1 0 0 0 8	2 0 2 R 1 0 0 0 8 R	M
1,0	4	1,5	9	45	0,50	0,95	2 0 2 R 1 0 0 0 9	2 0 2 R 1 0 0 0 9 R	M
1,0	4	1,5	10	45	0,50	0,95	2 0 2 R 1 0 0 1 0	2 0 2 R 1 0 0 1 0 R	M
1,0	4	1,5	12	45	0,50	0,93	2 0 2 R 1 0 0 1 2	2 0 2 R 1 0 0 1 2 R	M
1,0	4	1,5	14	50	0,50	0,93	2 0 2 R 1 0 0 1 4	2 0 2 R 1 0 0 1 4 R	M
1,0	4	1,5	16	50	0,50	0,93	2 0 2 R 1 0 0 1 6	2 0 2 R 1 0 0 1 6 R	M
1,0	4	1,5	20	55	0,50	0,93	2 0 2 R 1 0 0 2 0	2 0 2 R 1 0 0 2 0 R	M
1,2	4	1,8	8	45	0,50	1,17	2 0 2 R 1 2 0 0 8	2 0 2 R 1 2 0 0 8 R	M
1,2	4	1,8	12	45	0,60	1,13	2 0 2 R 1 2 0 1 2	2 0 2 R 1 2 0 1 2 R	M
1,4	4	2,1	8	45	0,70	1,35	2 0 2 R 1 4 0 0 8	2 0 2 R 1 4 0 0 8 R	M
1,4	4	2,1	12	45	0,70	1,35	2 0 2 R 1 4 0 1 2	2 0 2 R 1 4 0 1 2 R	M
1,4	4	2,1	16	50	0,70	1,31	2 0 2 R 1 4 0 1 6	2 0 2 R 1 4 0 1 6 R	M
1,5	4	2,3	6	45	0,75	1,47	2 0 2 R 1 5 0 0 6	2 0 2 R 1 5 0 0 6 R	M
1,5	4	2,3	8	45	0,75	1,45	2 0 2 R 1 5 0 0 8	2 0 2 R 1 5 0 0 8 R	M
1,5	4	2,3	10	45	0,75	1,45	2 0 2 R 1 5 0 1 0	2 0 2 R 1 5 0 1 0 R	M
1,5	4	2,3	12	45	0,75	1,43	2 0 2 R 1 5 0 1 2	2 0 2 R 1 5 0 1 2 R	M
1,5	4	2,3	16	50	0,75	1,41	2 0 2 R 1 5 0 1 6	2 0 2 R 1 5 0 1 6 R	M
1,5	4	2,3	20	55	0,75	1,39	2 0 2 R 1 5 0 2 0	2 0 2 R 1 5 0 2 0 R	M
1,6	4	2,4	8	45	0,80	1,55	2 0 2 R 1 6 0 0 8	2 0 2 R 1 6 0 0 8 R	M
1,6	4	2,4	12	45	0,80	1,53	2 0 2 R 1 6 0 1 2	2 0 2 R 1 6 0 1 2 R	M
1,6	4	2,4	16	50	0,80	1,51	2 0 2 R 1 6 0 1 6	2 0 2 R 1 6 0 1 6 R	M
1,6	4	2,4	20	55	0,80	1,49	2 0 2 R 1 6 0 2 0	2 0 2 R 1 6 0 2 0 R	M
1,8	4	2,7	8	45	0,90	1,75	2 0 2 R 1 8 0 0 8	2 0 2 R 1 8 0 0 8 R	M
1,8	4	2,7	12	45	0,90	1,73	2 0 2 R 1 8 0 1 2	2 0 2 R 1 8 0 1 2 R	M
1,8	4	2,7	16	50	0,90	1,71	2 0 2 R 1 8 0 1 6	2 0 2 R 1 8 0 1 6 R	M
1,8	4	2,7	20	55	0,90	1,69	2 0 2 R 1 8 0 2 0	2 0 2 R 1 8 0 2 0 R	M
2,0	4	3,0	4	45	1,00	1,97	2 0 2 R 2 0 0 0 4	2 0 2 R 2 0 0 0 4 R	M
2,0	4	3,0	6	45	1,00	1,97	2 0 2 R 2 0 0 0 6	2 0 2 R 2 0 0 0 6 R	M
2,0	4	3,0	8	45	1,00	1,95	2 0 2 R 2 0 0 0 8	2 0 2 R 2 0 0 0 8 R	M
2,0	4	3,0	10	45	1,00	1,93	2 0 2 R 2 0 0 1 0	2 0 2 R 2 0 0 1 0 R	M
2,0	4	3,0	12	50	1,00	1,93	2 0 2 R 2 0 0 1 2	2 0 2 R 2 0 0 1 2 R	M
2,0	4	3,0	14	50	1,00	1,93	2 0 2 R 2 0 0 1 4	2 0 2 R 2 0 0 1 4 R	M
2,0	4	3,0	16	50	1,00	1,91	2 0 2 R 2 0 0 1 6	2 0 2 R 2 0 0 1 6 R	M
2,0	4	3,0	20	55	1,00	1,89	2 0 2 R 2 0 0 2 0	2 0 2 R 2 0 0 2 0 R	M
2,0	4	3,0	22	60	1,00	1,89	2 0 2 R 2 0 0 2 2	2 0 2 R 2 0 0 2 2 R	M
2,0	4	3,0	25	60	1,00	1,89	2 0 2 R 2 0 0 2 5	2 0 2 R 2 0 0 2 5 R	M
2,0	4	3,0	30	70	1,00	1,89	2 0 2 R 2 0 0 3 0	2 0 2 R 2 0 0 3 0 R	M
3,0	6	4,5	8	50	1,50	2,85	2 0 2 R 3 0 0 0 8	2 0 2 R 3 0 0 0 8 R	M
3,0	6	4,5	10	50	1,50	2,85	2 0 2 R 3 0 0 1 0	2 0 2 R 3 0 0 1 0 R	M
3,0	6	4,5	12	50	1,50	2,85	2 0 2 R 3 0 0 1 2	2 0 2 R 3 0 0 1 2 R	M
3,0	6	4,5	16	55	1,50	2,85	2 0 2 R 3 0 0 1 6	2 0 2 R 3 0 0 1 6 R	M
3,0	6	4,5	20	60	1,50	2,85	2 0 2 R 3 0 0 2 0	2 0 2 R 3 0 0 2 0 R	M
3,0	6	4,5	25	65	1,50	2,85	2 0 2 R 3 0 0 2 5	2 0 2 R 3 0 0 2 5 R	M
3,0	6	4,5	30	70	1,50	2,85	2 0 2 R 3 0 0 3 0	2 0 2 R 3 0 0 3 0 R	M
3,0	6	4,5	35	80	1,50	2,85	2 0 2 R 3 0 0 3 5	2 0 2 R 3 0 0 3 5 R	M
4,0	6	6,0	10	60	2,00	3,85	2 0 2 R 4 0 0 1 0	2 0 2 R 4 0 0 1 0 R	M
4,0	6	6,0	12	60	2,00	3,85	2 0 2 R 4 0 0 1 2	2 0 2 R 4 0 0 1 2 R	M
4,0	6	6,0	16	60	2,00	3,85	2 0 2 R 4 0 0 1 6	2 0 2 R 4 0 0 1 6 R	M
4,0	6	6,0	20	65	2,00	3,85	2 0 2 R 4 0 0 2 0	2 0 2 R 4 0 0 2 0 R	M
4,0	6	6,0	25	70	2,00	3,85	2 0 2 R 4 0 0 2 5	2 0 2 R 4 0 0 2 5 R	M
4,0	6	6,0	30	70	2,00	3,85	2 0 2 R 4 0 0 3 0	2 0 2 R 4 0 0 3 0 R	M
4,0	6	6,0	35	80	2,00	3,85	2 0 2 R 4 0 0 3 5	2 0 2 R 4 0 0 3 5 R	M
4,0	6	6,0	40	90	2,00	3,85	2 0 2 R 4 0 0 4 0	2 0 2 R 4 0 0 4 0 R	M
4,0	6	6,0	45	90	2,00	3,85	2 0 2 R 4 0 0 4 5	2 0 2 R 4 0 0 4 5 R	M
4,0	6	6,0	50	100	2,00	3,85	2 0 2 R 4 0 0 5 0	2 0 2 R 4 0 0 5 0 R	M
5,0	6	7,5	16	60	2,50	4,80	2 0 2 R 5 0 0 1 6	2 0 2 R 5 0 0 1 6 R	M
5,0	6	7,5	20	60	2,50	4,80	2 0 2 R 5 0 0 2 0	2 0 2 R 5 0 0 2 0 R	M
5,0	6	7,5	25	70	2,50	4,80	2 0 2 R 5 0 0 2 5	2 0 2 R 5 0 0 2 5 R	M
5,0	6	7,5	30	80	2,50	4,80	2 0 2 R 5 0 0 3 0	2 0 2 R 5 0 0 3 0 R	M
6,0	6	9,0	20	80	3,00	5,80	2 0 2 R 6 0 0 2 0	2 0 2 R 6 0 0 2 0 R	M
6,0	6	9,0	30	90	3,00	5,80	2 0 2 R 6 0 0 3 0	2 0 2 R 6 0 0 3 0 R	M
6,0	6	9,0	40	100	3,00	5,80	2 0 2 R 6 0 0 4 0	2 0 2 R 6 0 0 4 0 R	M
6,0	6	9,0	50	110	3,00	5,80	2 0 2 R 6 0 0 5 0	2 0 2 R 6 0 0 5 0 R	M
8,0	2	12,0	50	104	4,00	7,80	2 0 2 R 8 0 0 5 0	2 0 2 R 8 0 0 5 0 R	M
10,0	10	15,0	50	104	5,00	9,80	2 0 2 R 1 0 0 5 0	2 0 2 R 1 0 0 5 0 R	M
12,0	12	18,0	50	104	6,00	11,80	2 0 2 R 1 2 0 5 0	2 0 2 R 1 2 0 5 0 R	M
16,0	16	24,0	50	104	8,00	15,80	2 0 2 R 1 6 0 5 0	2 0 2 R 1 6 0 5 0 R	M
20,0	20	30,0	50	104	10,00	19,80	2 0 2 R 2 0 0 5 0	2 0 2 R 2 0 0 5 0 R	M

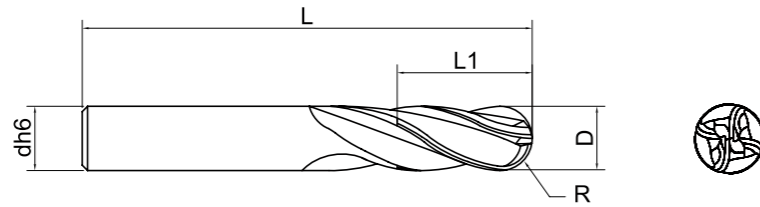
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# FRESE SFERICHE

art. 104R

4 taglienti

Fresa sferica a 4 taglienti in metallo duro

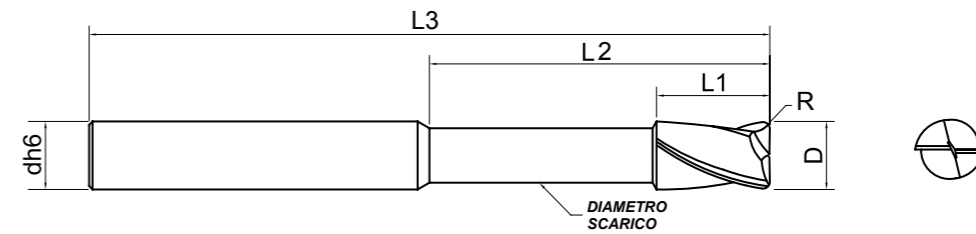


2 taglienti

art. 102RT

# FRESE TORICHE

Fresa torica a 2 taglienti in metallo duro



TIALN

TH3 STD

4 ELICHE

30°

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Mg

DIMENSIONI					CODICE		
D	dh6	L	L1	R	Senza rivestimento	Rivestimento TIALN	
3,0	6	50	6	1,50	1 0 4 0 3 R 0 0	1 0 4 0 3 R 0 0 R	M
3,0	6	60	10	1,50	1 0 4 0 3 R 0 1	1 0 4 0 3 R 0 1 R	M
3,5	6	50	8	1,75	1 0 4 0 3 5 R 0	1 0 4 0 3 5 R 0 R	M
3,5	6	60	15	1,75	1 0 4 0 3 5 R 1	1 0 4 0 3 5 R 1 R	M
4,0	6	50	8	2,00	1 0 4 0 4 R 0 0	1 0 4 0 4 R 0 0 R	M
4,0	6	60	16	2,00	1 0 4 0 4 R 0 1	1 0 4 0 4 R 0 1 R	M
4,5	6	50	10	2,25	1 0 4 0 4 5 R 0	1 0 4 0 4 5 R 0 R	M
4,5	6	60	18	2,25	1 0 4 0 4 5 R 1	1 0 4 0 4 5 R 1 R	M
5,0	6	50	10	2,50	1 0 4 0 5 R 0 0	1 0 4 0 5 R 0 0 R	M
5,0	6	60	20	2,50	1 0 4 0 5 R 0 1	1 0 4 0 5 R 0 1 R	M
5,5	6	50	10	2,75	1 0 4 0 5 5 R 0	1 0 4 0 5 5 R 0 R	M
5,5	6	60	20	2,75	1 0 4 0 5 5 R 1	1 0 4 0 5 5 R 1 R	M
6,0	6	50	12	3,00	1 0 4 0 6 R 0 0	1 0 4 0 6 R 0 0 R	M
6,0	6	60	20	3,00	1 0 4 0 6 R 0 1	1 0 4 0 6 R 0 1 R	M
7,0	7	60	16	3,50	1 0 4 0 7 R 0 0	1 0 4 0 7 R 0 0 R	M
8,0	8	60	16	4,00	1 0 4 0 8 R 0 0	1 0 4 0 8 R 0 0 R	M
8,0	8	75	26	4,00	1 0 4 0 8 R 0 1	1 0 4 0 8 R 0 1 R	M
9,0	9	70	20	4,50	1 0 4 0 9 R 0 0	1 0 4 0 9 R 0 0 R	M
10,0	10	75	22	5,00	1 0 4 1 0 R 0 0	1 0 4 1 0 R 0 0 R	M
10,0	10	100	40	5,00	1 0 4 1 0 R 0 1	1 0 4 1 0 R 0 1 R	M
11,0	11	70	22	5,50	1 0 4 1 1 R 0 0	1 0 4 1 1 R 0 0 R	M
12,0	12	75	26	6,00	1 0 4 1 2 R 0 0	1 0 4 1 2 R 0 0 R	M
12,0	12	100	45	6,00	1 0 4 1 2 R 0 1	1 0 4 1 2 R 0 1 R	M
13,0	13	75	26	6,50	1 0 4 1 3 R 0 0	1 0 4 1 3 R 0 0 R	M
14,0	14	75	28	7,00	1 0 4 1 4 R 0 0	1 0 4 1 4 R 0 0 R	M
14,0	14	120	45	7,00	1 0 4 1 4 R 0 1	1 0 4 1 4 R 0 1 R	M
16,0	16	90	32	8,00	1 0 4 1 6 R 0 0	1 0 4 1 6 R 0 0 R	M
16,0	16	120	50	8,00	1 0 4 1 6 R 0 1	1 0 4 1 6 R 0 1 R	M
20,0	20	100	36	10,00	1 0 4 2 0 R 0 0	1 0 4 2 0 R 0 0 R	M
20,0	20	120	60	10,00	1 0 4 2 0 R 0 1	1 0 4 2 0 R 0 1 R	M
22,0	22	104	38	11,00	1 0 4 2 2 R 0 3 8 *	1 0 4 2 2 R 0 3 8 R *	M
22,0	22	150	75	11,00	1 0 4 2 2 R 0 7 5 *	1 0 4 2 2 R 0 7 5 R *	M
25,0	25	104	38	12,50	1 0 4 2 5 R 0 3 8 *	1 0 4 2 5 R 0 3 8 R *	M
25,0	25	150	75	12,50	1 0 4 2 5 R 0 7 5 *	1 0 4 2 5 R 0 7 5 R *	M
30,0	30	104	38	15,00	1 0 4 3 0 R 0 3 8 *	1 0 4 3 0 R 0 3 8 R *	M
30,0	30	150	75	15,00	1 0 4 3 0 R 0 7 5 *	1 0 4 3 0 R 0 7 5 R *	M
32,0	32	120	40	16,00	1 0 4 3 2 R 0 4 0 *	1 0 4 3 2 R 0 4 0 R *	M
32,0	32	150	75	16,00	1 0 4 3 2 R 0 7 5 *	1 0 4 3 2 R 0 7 5 R *	M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

TIALN

TH3 STD

2 ELICHE

30°

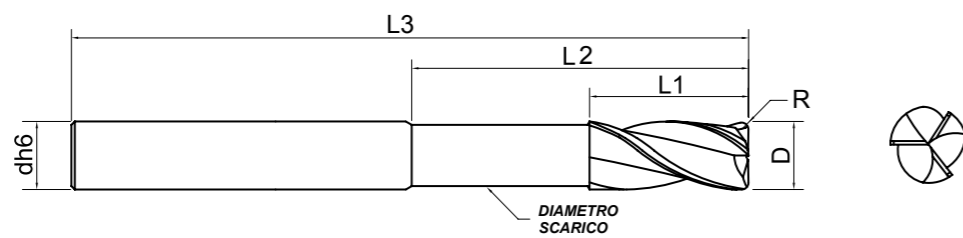
Mg

DIMENSIONI							CODICE	
dh6	D	L1	L2	L3	R±0,01	Diametro scarico	Senza rivestimento	Rivestimento TIALN
6	3	4	8	60	0,3	2,95	1 0 2 0 3 R T 0 3	1 0 2 0 3 R T 0 3 R M
6	4	5	9	60	0,3	3,95	1 0 2 0 4 R T 0 3	1 0 2 0 4 R T 0 3 R M
6	4	5	9	60	0,5	3,95	1 0 2 0 4 R T 0 5	1 0 2 0 4 R T 0 5 R M
6	5	7	11	60	0,3	4,90	1 0 2 0 5 R T 0 3	1 0 2 0 5 R T 0 3 R M
6	5	7	11	60	0,5	4,90	1 0 2 0 5 R T 0 5	1 0 2 0 5 R T 0 5 R M
6	6	9	13	60	0,3	5,90	1 0 2 0 6 R T 0 3	1 0 2 0 6 R T 0 3 R M
6	6	9	13	60	0,5	5,90	1 0 2 0 6 R T 0 5	1 0 2 0 6 R T 0 5 R M
6	6	9	13	60	1,0	5,90	1 0 2 0 6 R T 1 0	1 0 2 0 6 R T 1 0 R M
8	8	11	20	70	0,3	7,90	1 0 2 0 8 R T 0 3	1 0 2 0 8 R T 0 3 R M
8	8	11	20	70	0,5	7,90	1 0 2 0 8 R T 0 5	1 0 2 0 8 R T 0 5 R M
8	8	11	20	70	1,0	7,90	1 0 2 0 8 R T 1 0	1 0 2 0 8 R T 1 0 R M
8	8	11	20	70	1,5	7,90	1 0 2 0 8 R T 1 5	1 0 2 0 8 R T 1 5 R M
10	10	15	40	100	0,5	9,90	1 0 2 1 0 R T 0 5	1 0 2 1 0 R T 0 5 R M
10	10	15	40	100	1,0	9,90	1 0 2 1 0 R T 1 0	1 0 2 1 0 R T 1 0 R M
10	10	15	40	100	1,5	9,90	1 0 2 1 0 R T 1 5	1 0 2 1 0 R T 1 5 R M
10	10	15	40	100	2,0	9,90	1 0 2 1 0 R T 2 0	1 0 2 1 0 R T 2 0 R M
12	12	21	50	100	0,5	11,90	1 0 2 1 2 R T 0 5	1 0 2 1 2 R T 0 5 R M
12	12	21	50	100	1,0	11,90	1 0 2 1 2 R T 1 0	1 0 2 1 2 R T 1 0 R M
12	12	21	50	100	1,5	11,90	1 0 2 1 2 R T 1 5	1 0 2 1 2 R T 1 5 R M
12	12	21	50	100	2,0	11,90	1 0 2 1 2 R T 2 0	1 0 2 1 2 R T 2 0 R M
16	16	25	50	110	0,5	15,90	1 0 2 1 6 R T 0 5	1 0 2 1 6 R T 0 5 R M
16	16	25	50	110	1,0	15,90	1 0 2 1 6 R T 1 0	1 0 2 1 6 R T 1 0 R M
16	16	25	50	110	1,5	15,90	1 0 2 1 6 R T 1 5	1 0 2 1 6 R T 1 5 R M
16	16	25	50	110	2,0	15,90	1 0 2 1 6 R T 2 0	1 0 2 1 6 R T 2 0 R M
20	20	30	50	110	0,5	19,90	1 0 2 2 0 R T 0 5	1 0 2 2 0 R T 0 5 R M
20	20	30	50	110	1,0	19,90	1 0 2 2 0 R T 1 0	1 0 2 2 0 R T 1 0 R M
20	20	30	50	110	1,5	19,90	1 0 2 2 0 R T 1 5	1 0 2 2 0 R T 1 5 R M
20	20	30	50	110	2,0	19,90	1 0 2 2 0 R T 2 0	1 0 2 2 0 R T 2 0 R M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

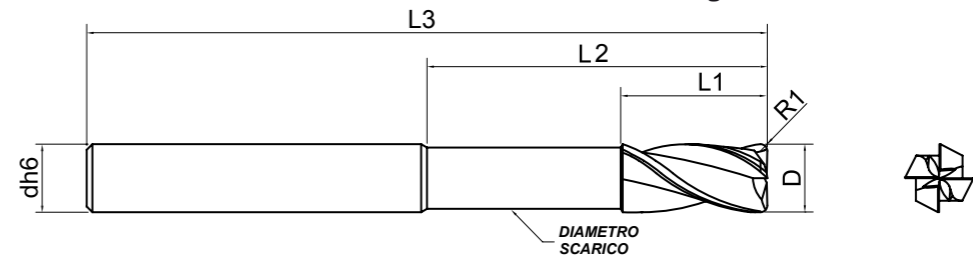
# FRESE TORICHE art. 103RT 3 taglienti

Fresa torica a 3 taglienti in metallo duro



# 4 taglienti art. 104RT FRESE TORICHE

Fresa torica a 4 taglienti in metallo duro



TIALN

TH3 STD

3 ELICHE

30°

Mg

Mg

DIMENSIONI							CODICE		
D	dh6	L1	L2	L3	R±0,01	Diametro scarico	Senza rivestimento	Rivestimento TIALN	
4	6	5	9	60	0,3	3,95	1 0 3 0 4 R T 0 3	1 0 3 0 4 R T 0 3 R M	
4	6	5	9	60	0,5	3,95	1 0 3 0 4 R T 0 5	1 0 3 0 4 R T 0 5 R M	
5	6	7	11	60	0,3	4,90	1 0 3 0 5 R T 0 3	1 0 3 0 5 R T 0 3 R M	
5	6	7	11	60	0,5	4,90	1 0 3 0 5 R T 0 5	1 0 3 0 5 R T 0 5 R M	
6	6	9	13	60	0,3	5,90	1 0 3 0 6 R T 0 3	1 0 3 0 6 R T 0 3 R M	
6	6	9	13	60	0,5	5,90	1 0 3 0 6 R T 0 5	1 0 3 0 6 R T 0 5 R M	
6	6	9	13	60	1,0	5,90	1 0 3 0 6 R T 1 0	1 0 3 0 6 R T 1 0 R M	
8	8	11	20	70	0,3	7,90	1 0 3 0 8 R T 0 3	1 0 3 0 8 R T 0 3 R M	
8	8	11	20	70	0,5	7,90	1 0 3 0 8 R T 0 5	1 0 3 0 8 R T 0 5 R M	
8	8	11	20	70	1,0	7,90	1 0 3 0 8 R T 1 0	1 0 3 0 8 R T 1 0 R M	
10	10	15	40	100	0,5	9,90	1 0 3 1 0 R T 0 5	1 0 3 1 0 R T 0 5 R M	
10	10	15	40	100	1,0	9,90	1 0 3 1 0 R T 1 0	1 0 3 1 0 R T 1 0 R M	
10	10	15	40	100	1,5	9,90	1 0 3 1 0 R T 1 5	1 0 3 1 0 R T 1 5 R M	
10	10	15	40	100	2,0	9,90	1 0 3 1 0 R T 2 0	1 0 3 1 0 R T 2 0 R M	
12	12	21	50	110	0,5	11,90	1 0 3 1 2 R T 0 5	1 0 3 1 2 R T 0 5 R M	
12	12	21	50	100	1,0	11,90	1 0 3 1 2 R T 1 0	1 0 3 1 2 R T 1 0 R M	
12	12	21	50	100	1,5	11,90	1 0 3 1 2 R T 1 5	1 0 3 1 2 R T 1 5 R M	
12	12	21	50	100	2,0	11,90	1 0 3 1 2 R T 2 0	1 0 3 1 2 R T 2 0 R M	
16	16	25	50	110	0,5	15,90	1 0 3 1 6 R T 0 5	1 0 3 1 6 R T 0 5 R M	
16	16	25	50	110	1,0	15,90	1 0 3 1 6 R T 1 0	1 0 3 1 6 R T 1 0 R M	
16	16	25	50	110	1,5	15,90	1 0 3 1 6 R T 1 5	1 0 3 1 6 R T 1 5 R M	
16	16	25	50	110	2,0	15,90	1 0 3 1 6 R T 2 0	1 0 3 1 6 R T 2 0 R M	
20	20	30	50	110	0,5	19,90	1 0 3 2 0 R T 0 5	1 0 3 2 0 R T 0 5 R M	
20	20	30	50	110	1,0	19,90	1 0 3 2 0 R T 1 0	1 0 3 2 0 R T 1 0 R M	
20	20	30	50	110	1,5	19,90	1 0 3 2 0 R T 1 5	1 0 3 2 0 R T 1 5 R M	
20	20	30	50	110	2,0	19,90	1 0 3 2 0 R T 2 0	1 0 3 2 0 R T 2 0 R M	

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

TIALN

TH3 STD

4 ELICHE

30°

Mg

Mg

DIMENSIONI							CODICE		
D	dh6	L1	L2	L3	R±0,01	Diametro scarico	Senza rivestimento	Rivestimento TIALN	
8	8	11	20	70	0,3	7,9	1 0 4 0 8 R T 0 3	1 0 4 0 8 R T 0 3 R M	
8	8	11	20	70	0,5	7,9	1 0 4 0 8 R T 0 5	1 0 4 0 8 R T 0 5 R M	
8	8	11	20	70	1,0	7,9	1 0 4 0 8 R T 1 0	1 0 4 0 8 R T 1 0 R M	
8	8	11	20	70	1,5	7,9	1 0 4 0 8 R T 1 5	1 0 4 0 8 R T 1 5 R M	
10	10	15	40	100	0,5	9,9	1 0 4 1 0 R T 0 5	1 0 4 1 0 R T 0 5 R M	
10	10	15	40	100	1,0	9,9	1 0 4 1 0 R T 1 0	1 0 4 1 0 R T 1 0 R M	
10	10	15	40	100	1,5	9,9	1 0 4 1 0 R T 1 5	1 0 4 1 0 R T 1 5 R M	
10	10	15	40	100	2,0	9,9	1 0 4 1 0 R T 2 0	1 0 4 1 0 R T 2 0 R M	
12	12	21	50	100	0,5	11,9	1 0 4 1 2 R T 0 5	1 0 4 1 2 R T 0 5 R M	
12	12	21	50	100	1,0	11,9	1 0 4 1 2 R T 1 0	1 0 4 1 2 R T 1 0 R M	
12	12	21	50	100	1,5	11,9	1 0 4 1 2 R T 1 5	1 0 4 1 2 R T 1 5 R M	
12	12	21	50	100	2,0	11,9	1 0 4 1 2 R T 2 0	1 0 4 1 2 R T 2 0 R M	
16	16	25	50	110	0,5	15,9	1 0 4 1 6 R T 0 5	1 0 4 1 6 R T 0 5 R M	
16	16	25	50	110	1,0	15,9	1 0 4 1 6 R T 1 0	1 0 4 1 6 R T 1 0 R M	
16	16	25	50	110	1,5	15,9	1 0 4 1 6 R T 1 5	1 0 4 1 6 R T 1 5 R M	
16	16	25	50	110	2,0	15,9	1 0 4 1 6 R T 2 0	1 0 4 1 6 R T 2 0 R M	
20	20	30	50	110	0,5	19,9	1 0 4 2 0 R T 0 5	1 0 4 2 0 R T 0 5 R M	
20	20	30	50	110	1,0	19,9	1 0 4 2 0 R T 1 0	1 0 4 2 0 R T 1 0 R M	
20	20	30	50	110	1,5	19,9	1 0 4 2 0 R T 1 5	1 0 4 2 0 R T 1 5 R M	
20	20	30	50	110	2,0	19,9	1 0 4 2 0 R T 2 0	1 0 4 2 0 R T 2 0 R M	

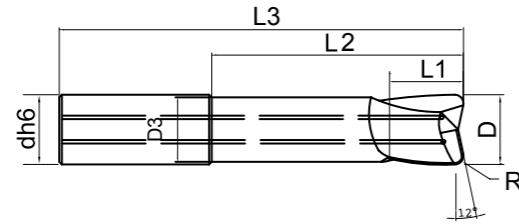
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# FRESE TORICHE

art. 303

2 taglienti

Fresa torica a 2 taglienti in metallo duro per alluminio con adduzione interna



DIMENSIONI							CODICE		
D	dh6	L1	L2	L3	Diametro scanico	R	Senza rivestimento	Rivestimento TIALN	
6	6	6	20	60	5,5	1,0	3 0 3 0 6 2 0 0 1	3 0 3 0 6 2 0 0 1 R M	
8	8	8	34	70	7,4	2,5	3 0 3 0 8 3 4 2 5	3 0 3 0 8 3 4 2 5 R M	
8	8	8	46	80	7,4	2,0	3 0 3 0 8 4 6 2 0	3 0 3 0 8 4 6 2 0 R M	
10	10	10	32	70	9,0	2,5	3 0 3 1 0 3 2 2 5	3 0 3 1 0 3 2 2 5 R M	
10	10	10	44	80	9,0	2,0	3 0 3 1 0 4 4 2 0	3 0 3 1 0 4 4 2 0 R M	
12	12	12	35	70	11,1	2,5	3 0 3 1 2 3 5 2 5	3 0 3 1 2 3 5 2 5 R M	
12	12	12	35	70	11,1	3,0	3 0 3 1 2 3 5 3 0	3 0 3 1 2 3 5 3 0 R M	
12	12	12	44	80	11,0	2,0	3 0 3 1 2 4 4 2 0	3 0 3 1 2 4 4 2 0 R M	
12	12	12	55	100	11,0	2,0	3 0 3 1 2 5 5 2 0	3 0 3 1 2 5 5 2 0 R M	
16	16	16	52	90	14,8	2,5	3 0 3 1 6 5 2 2 5	3 0 3 1 6 5 2 2 5 R M	
16	16	16	52	90	14,8	4,0	3 0 3 1 6 5 2 4 0	3 0 3 1 6 5 2 4 0 R M	
16	16	16	64	104	14,8	2,5	3 0 3 1 6 6 4 2 5	3 0 3 1 6 6 4 2 5 R M	
16	16	16	64	104	14,8	4,0	3 0 3 1 6 6 4 4 0	3 0 3 1 6 6 4 4 0 R M	
16	16	16	64	104	14,8	6,0	3 0 3 1 6 6 4 6 0	3 0 3 1 6 6 4 6 0 R M	
16	16	16	76	116	14,8	2,5	3 0 3 1 6 7 6 2 5	3 0 3 1 6 7 6 2 5 R M	
16	16	16	76	116	14,8	4,0	3 0 3 1 6 7 6 4 0	3 0 3 1 6 7 6 4 0 R M	
16	16	16	76	116	14,8	6,0	3 0 3 1 6 7 6 6 0	3 0 3 1 6 7 6 6 0 R M	
18	18	18	80	120	16,5	2,5	3 0 3 1 8 8 0 2 5	3 0 3 1 8 8 0 2 5 R M	
18	18	18	90	130	16,5	2,5	3 0 3 1 8 9 0 2 5	3 0 3 1 8 9 0 2 5 R M	
20	20	20	73	116	18,5	2,5	3 0 3 2 0 7 3 2 5	3 0 3 2 0 7 3 2 5 R M	
20	20	20	73	116	18,5	4,0	3 0 3 2 0 7 3 4 0	3 0 3 2 0 7 3 4 0 R M	
20	20	20	73	116	18,5	6,0	3 0 3 2 0 7 3 6 0	3 0 3 2 0 7 3 6 0 R M	
20	20	20	88	130	18,5	4,0	3 0 3 2 0 8 8 4 0	3 0 3 2 0 8 8 4 0 R M	
20	20	20	88	130	18,5	6,0	3 0 3 2 0 8 8 6 0	3 0 3 2 0 8 8 6 0 R M	

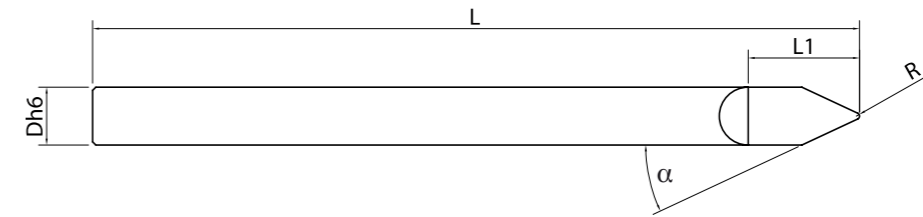
I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**

# Z1 raggio

art. BLR

# BULINI

Bulino Z1 raggio in metallo duro



DIMENSIONI					CODICE	
dh6	α	L	L1	R	Senza rivestimento	Rivestimento TIALN
3	10°	40	10	0,1	BLR310R01	BLR310R01R
3	10°	40	10	0,2	BLR310R02	BLR310R02R
3	15°	40	8	0,1	BLR315R01	BLR315R01R
3	15°	40	8	0,2	BLR315R02	BLR315R02R
3	20°	40	6	0,1	BLR320R01	BLR320R01R
3	20°	40	6	0,2	BLR320R02	BLR320R02R
3	25°	40	6	0,1	BLR325R01	BLR325R01R
3	25°	40	6	0,2	BLR325R02	BLR325R02R
3	30°	40	6	0,1	BLR330R01	BLR330R01R
3	30°	40	6	0,2	BLR330R02	BLR330R02R
3	45°	40	5	0,1	BLR345R01	BLR345R01R
3	45°	40	5	0,2	BLR345R02	BLR345R02R
4	10°	40	13	0,1	BLR410R01	BLR410R01R
4	10°	40	13	0,2	BLR410R02	BLR410R02R
4	15°	40	9	0,1	BLR415R01	BLR415R01R
4	15°	40	9	0,2	BLR415R02	BLR415R02R
4	20°	40	8	0,1	BLR420R01	BLR420R01R
4	20°	40	8	0,2	BLR420R02	BLR420R02R
4	25°	40	8	0,1	BLR425R01	BLR425R01R
4	25°	40	8	0,2	BLR425R02	BLR425R02R
4	30°	40	6	0,1	BLR430R01	BLR430R01R
4	30°	40	6	0,2	BLR430R02	BLR430R02R
4	45°	40	6	0,1	BLR445R01	BLR445R01R
4	45°	40	6	0,2	BLR445R02	BLR445R02R
6	10°	50	20	0,1	BLR610R01	BLR610R01R
6	10°	50	20	0,2	BLR610R02	BLR610R02R
6	15°	50	13	0,1	BLR615R01	BLR615R01R
6	15°	50	13	0,2	BLR615R02	BLR615R02R
6	20°	50	10	0,1	BLR620R01	BLR620R01R
6	20°	50	10	0,2	BLR620R02	BLR620R02R
6	25°	50	10	0,1	BLR625R01	BLR625R01R
6	25°	50	10	0,2	BLR625R02	BLR625R02R
6	30°	50	10	0,1	BLR630R01	BLR630R01R
6	30°	50	10	0,2	BLR630R02	BLR630R02R
6	45°	50	8	0,1	BLR645R01	BLR645R01R
6	45°	50	8	0,2	BLR645R02	BLR645R02R

TH3 STD

HSC

2 ELICHE

40°

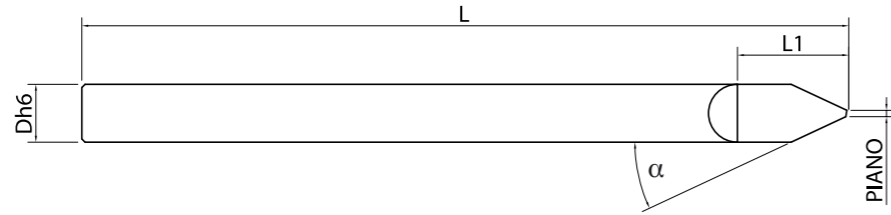
Mg

TIALN

TH3 STD

1 ELICHE

Bulino ad 1 tagliente in metallo duro



TIALN

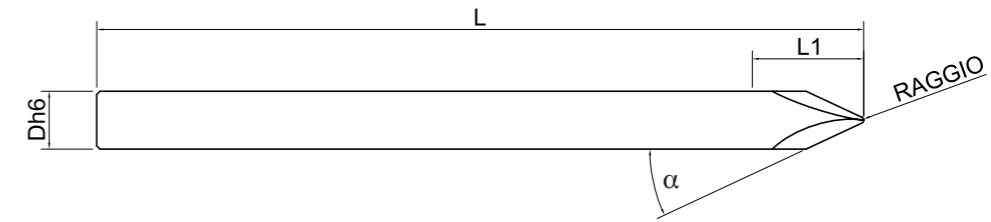
TH3  
STD

1  
ELICHE



DIMENSIONI					CODICE	
dh6	$\alpha$	L	L1	Piano	Senza rivestimento	Rivestimento TIALN
3	10°	40	10	0,1	BLP310P01	BLP310P01R
3	10°	40	10	0,2	BLP310P02	BLP310P02R
3	15°	40	8	0,1	BLP315P01	BLP315P01R
3	15°	40	8	0,2	BLP315P02	BLP315P02R
3	20°	40	6	0,1	BLP320P01	BLP320P01R
3	20°	40	6	0,2	BLP320P02	BLP320P02R
3	25°	40	6	0,1	BLP325P01	BLP325P01R
3	25°	40	6	0,2	BLP325P02	BLP325P02R
3	30°	40	6	0,1	BLP330P01	BLP330P01R
3	30°	40	6	0,2	BLP330P02	BLP330P02R
3	45°	40	5	0,1	BLP345P01	BLP345P01R
3	45°	40	5	0,2	BLP345P02	BLP345P02R
4	10°	40	13	0,1	BLP410P01	BLP410P01R
4	10°	40	13	0,2	BLP410P02	BLP410P02R
4	15°	40	9	0,1	BLP415P01	BLP415P01R
4	15°	40	9	0,2	BLP410P02	BLP410P02R
4	20°	40	8	0,1	BLP420P01	BLP420P01R
4	20°	40	8	0,2	BLP420P02	BLP420P02R
4	25°	40	8	0,1	BLP425P01	BLP425P01R
4	25°	40	8	0,2	BLP425P02	BLP425P02R
4	30°	40	6	0,1	BLP430P01	BLP430P01R
4	30°	40	6	0,2	BLP430P02	BLP430P02R
4	45°	40	6	0,1	BLP445P01	BLP445P01R
4	45°	40	6	0,2	BLP445P02	BLP445P02R
6	10°	50	20	0,1	BLP610P01	BLP610P01R
6	10°	50	20	0,2	BLP610P02	BLP610P02R
6	15°	50	13	0,1	BLP615P01	BLP615P01R
6	15°	50	13	0,2	BLP615P02	BLP615P02R
6	20°	50	10	0,1	BLP620P01	BLP620P01R
6	20°	50	10	0,2	BLP620P02	BLP620P02R
6	25°	50	10	0,1	BLP625P01	BLP625P01R
6	25°	50	10	0,2	BLP625P02	BLP625P02R
6	30°	50	10	0,1	BLP630P01	BLP630P01R
6	30°	50	10	0,2	BLP630P02	BLP630P02R
6	45°	50	8	0,1	BLP645P01	BLP645P01R
6	45°	50	8	0,2	BLP645P02	BLP645P02R

Bulino piatto a 3 taglienti elicoidali



DIMENSIONI					CODICE	
dh6	$\alpha$	L	L1	Piano	Senza rivestimento	Rivestimento TIALN
3	15°	40	10	0,1	BLE31501	BLE31501R
3	15°	40	10	0,2	BLE31502	BLE31502R
3	20°	40	8	0,1	BLE32001	BLE32001R
3	20°	40	8	0,2	BLE32002	BLE32002R
4	15°	40	6	0,1	BLE41501	BLE41501R
4	15°	40	6	0,2	BLE41502	BLE41502R
4	20°	40	6	0,1	BLE42001	BLE42001R
4	20°	40	6	0,2	BLE42002	BLE42002R

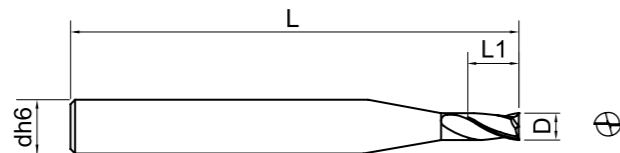
TIALN

TH3  
STD

3  
ELICHE



Frese a 2 taglienti per accessori



TIALN

TH3 STD

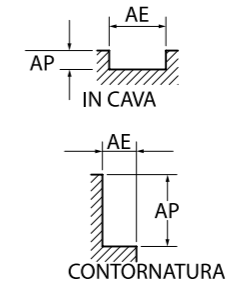
2 ELICHE

30°

Mg

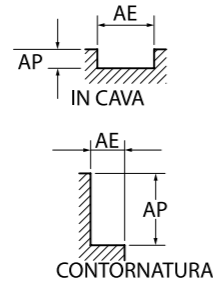
DIMENSIONI				CODICE	
D	dh6	L	L1	Senza rivestimento	Rivestimento TIALN
1,0	6	50	2,0	3 0 2 0 1 0 0 0 2	3 0 2 0 1 0 0 0 2 R M
1,0	6	50	3,0	3 0 2 0 1 0 0 0 3	3 0 2 0 1 0 0 0 3 R M
1,0	6	50	4,0	3 0 2 0 1 0 0 0 4	3 0 2 0 1 0 0 0 4 R M
1,5	6	50	3,0	3 0 2 0 1 5 0 0 3	3 0 2 0 1 5 0 0 3 R M
1,5	6	50	4,5	3 0 2 0 1 5 0 4 5	3 0 2 0 1 5 0 4 5 R M
1,5	6	50	6,0	3 0 2 0 1 5 0 0 6	3 0 2 0 1 5 0 0 6 R M
2,0	6	50	4,0	3 0 2 0 2 0 0 0 4	3 0 2 0 2 0 0 0 4 R M
2,0	6	50	6,0	3 0 2 0 2 0 0 0 6	3 0 2 0 2 0 0 0 6 R M
2,0	6	50	8,0	3 0 2 0 2 0 0 0 8	3 0 2 0 2 0 0 0 8 R M
2,5	6	50	4,0	3 0 2 0 2 5 0 0 4	3 0 2 0 2 5 0 0 4 R M
2,5	6	50	6,0	3 0 2 0 2 5 0 0 6	3 0 2 0 2 5 0 0 6 R M
2,5	6	50	8,0	3 0 2 0 2 5 0 0 8	3 0 2 0 2 5 0 0 8 R M
3,0	6	50	6,0	3 0 2 0 3 0 0 0 6	3 0 2 0 3 0 0 0 6 R M
3,0	6	50	8,0	3 0 2 0 3 0 0 0 8	3 0 2 0 3 0 0 0 8 R M
3,0	6	50	10,0	3 0 2 0 3 0 0 1 0	3 0 2 0 3 0 0 1 0 R M
3,5	6	50	7,0	3 0 2 0 3 5 0 0 7	3 0 2 0 3 5 0 0 7 R M
3,5	6	50	9,0	3 0 2 0 3 5 0 0 9	3 0 2 0 3 5 0 0 9 R M
3,5	6	50	11,0	3 0 2 0 3 5 0 1 1	3 0 2 0 3 5 0 1 1 R M
4,0	6	50	6,0	3 0 2 0 4 0 0 0 6	3 0 2 0 4 0 0 0 6 R M
4,0	6	50	8,0	3 0 2 0 4 0 0 0 8	3 0 2 0 4 0 0 0 8 R M
4,0	6	50	10,0	3 0 2 0 4 0 0 1 0	3 0 2 0 4 0 0 1 0 R M
4,5	6	50	8,0	3 0 2 0 4 5 0 0 8	3 0 2 0 4 5 0 0 8 R M
4,5	6	50	10,0	3 0 2 0 4 5 0 1 0	3 0 2 0 4 5 0 1 0 R M
4,5	6	50	12,0	3 0 2 0 4 5 0 1 2	3 0 2 0 4 5 0 1 2 R M
5,0	6	50	10,0	3 0 2 0 5 0 0 1 0	3 0 2 0 5 0 0 1 0 R M
5,0	6	50	12,0	3 0 2 0 5 0 0 1 2	3 0 2 0 5 0 0 1 2 R M
5,0	6	50	14,0	3 0 2 0 5 0 0 1 4	3 0 2 0 5 0 0 1 4 R M
5,5	6	50	10,0	3 0 2 0 5 5 0 1 0	3 0 2 0 5 5 0 1 0 R M
5,5	6	50	12,0	3 0 2 0 5 5 0 1 2	3 0 2 0 5 5 0 1 2 R M
6,0	6	50	10,0	3 0 2 0 6 0 0 1 0	3 0 2 0 6 0 0 1 0 R M
6,0	6	50	12,0	3 0 2 0 6 0 0 1 2	3 0 2 0 6 0 0 1 2 R M
6,0	6	50	15,0	3 0 2 0 6 0 0 1 5	3 0 2 0 6 0 0 1 5 R M

I codici degli utensili per la lavorazione del Magnesio terminano con la lettera M **Mg**



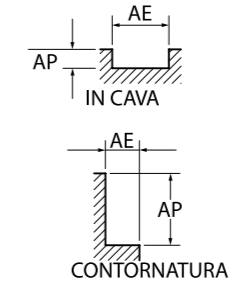
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
Durezza	Hrc 30		Hrc 30-40		Hrc 40-50													
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63694	315	41401	200
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31847	260	20701	165
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21231	400	13800	260
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15924	410	10350	220
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12739	420	8280	225
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10616	800	6900	410
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9099	230	5914	360
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7962	600	5175	410
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7077	550	4600	370
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6369	600	4140	410
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5790	550	3764	360
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5308	550	3450	350
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4900	500	3185	350
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4550	550	2957	400
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3981	500	2588	380
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3539	480	2300	330
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3185	450	2070	290
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD	
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# PARAMETRI DI TAGLIO art. 102



Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo		
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401	414	
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	510	20701	331	
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	807	13800	524	
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	828	10350	538	
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	841	8280	546	
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	1274	6900	828	
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	1092	5914	710	
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	1274	5175	828	
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	1132	4600	736	
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	1274	4140	828	
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	1158	3764	753	
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	1168	3450	759	
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	1078	3185	701	
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	1183	2957	769	
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	1035	2588	673	
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	991	2300	644	
20	1242	348	1083	303	955	268	510	143	605	169	478	134	955	268	3185	892	2070	580	
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D

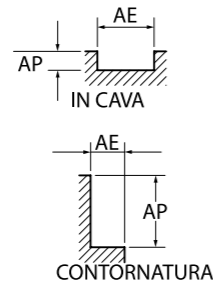
# art. 103 PARAMETRI DI TAGLIO



Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo		
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	47771	717	31847	478	12739	191	28662	430	31847	478	6369	96	19108	287	63694	955	41401	621	
2	23885	573	15924	382	6369	153	14331	344	15924	382	3185	76	9554	229	31847	764	20701	497	
3	15924	908	10616	605	4246	242	9554	545	10616	605	2123	121	6369	363	21231	1210	13800	787	
4	11943	932	7962	621	3185	248	7166	559	7962	621	1592	124	4777	373	15924	1242	10350	807	
5	9554	946	6369	631	2548	252	5732	568	6369	631	1274	126	3822	378	12739	1261	8280	820	
6	7962	1433	5308	955	2123	382	4777	860	5308	955	1062	191	3185	573	10616	1911	6900	1242	
7	6824	1228	4550	819	1820	328	4095	737	4550	819	910	164	2730	491	9099	1638	5914	1065	
8	5971	1433	3981	955	1592	382	3583	860	3981	955	796	191	2389	573	7962	1911	5175	1242	
9	5308	1274	3539	849	1415	340	3185	764	3539	849	708	170	2123	510	7077	1699	4600	1104	
10	4777	1433	3185	955	1274	382	2866	860	3185	955	637	191	1911	573	6369	1911	4140	1242	
11	4343	1303	2895	869	1158	347	2606	782	2895	869	579	174	1737	521	5790	1737	3764	1129	
12	3981	1314	2654	876	1062	350	2389	788	2654	876	531	175	1592	525	5308	1752	3450	1139	
13	3675	1213	2450	808	980	323	2205	728	2450	808	490	162	1470	485	4900	1617	3185	1051	
14	3412	1331	2275	887	910	355	2047	798	2275	887	455	177	1365	532	4550	1774	2957	1153	
16	2986	1164	1990	776	796	311	1791	699	1990	776	398	155	1194	466	3981	1553	2588	1009	
18	2654	1115	1769	743	708	297	1592	669	1769	743	354	149	1062	446	3539	1486	2300	966	
20	2389	1003	1592	669	637	268	1433	602	1592	669	318	134	955	401	3185	1338	2070	869	
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D

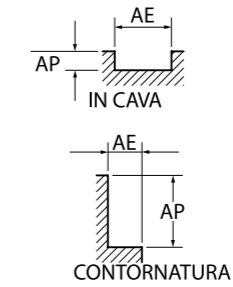


# PARAMETRI DI TAGLIO art. 104



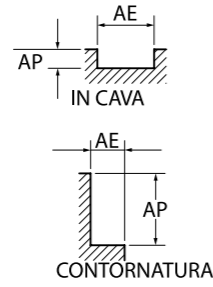
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min
1	47771	955	31847	637	12739	255	28662	573	31847	637	6369	127	19108	382	63694	1274	41401	828
2	23885	764	15924	510	6369	204	14331	459	15924	510	3185	102	9554	306	31847	1019	20701	662
3	15924	1210	10616	807	4246	323	9554	726	10616	807	2123	161	6369	484	21231	1614	13800	1049
4	11943	1242	7962	828	3185	331	7166	745	7962	828	1592	166	4777	497	15924	1656	10350	1076
5	9554	1261	6369	841	2548	336	5732	757	6369	841	1274	168	3822	504	12739	1682	8280	1093
6	7962	1911	5308	1274	2123	510	4777	1146	5308	1274	1062	255	3185	764	10616	2548	6900	1656
7	6824	1638	4550	1092	1820	437	4095	983	4550	1092	910	218	2730	655	9099	2184	5914	1419
8	5971	1911	3981	1274	1592	510	3583	1146	3981	1274	796	255	2389	764	7962	2548	5175	1656
9	5308	1699	3539	1132	1415	453	3185	1019	3539	1132	708	226	2123	679	7077	2265	4600	1472
10	4777	1911	3185	1274	1274	510	2866	1146	3185	1274	637	255	1911	764	6369	2548	4140	1656
11	4343	1737	2895	1158	1158	463	2606	1042	2895	1158	579	232	1737	695	5790	2316	3764	1506
12	3981	1752	2654	1168	1062	467	2389	1051	2654	1168	531	234	1592	701	5308	2335	3450	1518
13	3675	1617	2450	1078	980	431	2205	970	2450	1078	490	216	1470	647	4900	2156	3185	1401
14	3412	1774	2275	1183	910	473	2047	1065	2275	1183	455	237	1365	710	4550	2366	2957	1538
16	2986	1553	1990	1035	796	414	1791	932	1990	1035	398	207	1194	621	3981	2070	2588	1346
18	2654	1486	1769	991	708	396	1592	892	1769	991	354	198	1062	594	3539	1982	2300	1288
20	2389	1338	1592	892	637	357	1433	803	1592	892	318	178	955	535	3185	1783	2070	1159
CAVA APxAE	1,5DXD		1,5DXD		1,5DXD		1,5DXD		1,5DXD		1,5DXD		1,5DXD		1,5DXD		1,5DXD	
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# art. 202 PARAMETRI DI TAGLIO



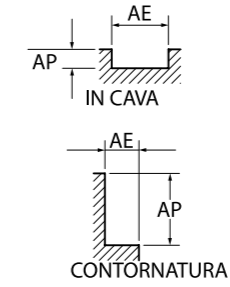
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min
1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401	414
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	510	20701	331
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	807	13800	524
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	828	10350	538
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	841	8280	546
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	1274	6900	828
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	1092	5914	710
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	1274	5175	828
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	1132	4600	736
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	1274	4140	828
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	1158	3764	753
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	1168	3450	759
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	1078	3185	701
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	1183	2957	769
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	1035	2588	673
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	991	2300	644
20	1242	348	1083	303	955	268	510	143	605	169	478	134	955	268	3185	892	2070	580
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD	
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# PARAMETRI DI TAGLIO art. 130



Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50														
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
4	6369	96	5573	84	4777	358	3981	299	4379	328	1592	119	7166	537	15924	1194	10350	776
4,5	5662	136	4954	119	4246	318	3539	265	3892	292	1415	106	6369	478	14154	1062	9200	690
5	5096	290	4459	254	3822	344	3185	287	3503	315	1274	115	5732	516	12739	1146	8280	745
5,5	4632	361	4053	316	3474	417	2895	347	3185	382	1158	139	5211	625	11581	1390	7528	903
6	4246	420	3715	368	3185	382	2654	318	2919	350	1062	127	4777	573	10616	1274	6900	828
7,5	3397	815	2972	713	2548	713	2123	594	2335	654	849	238	3822	1070	8493	2378	5520	1546
8	3185	764	2787	669	2389	707	1990	589	2189	648	796	236	3583	1061	7962	2357	5175	1532
9,5	2682	858	2347	751	2011	595	1676	496	1844	546	670	198	3017	893	6705	1985	4358	1290
10	2548	815	2229	713	1911	611	1592	510	1752	561	637	204	2866	917	6369	2038	4140	1325
11,5	2215	886	1939	775	1662	532	1385	443	1523	487	554	177	2492	798	5539	1772	3600	1152
12	2123	849	1858	743	1592	510	1327	425	1460	467	531	170	2389	764	5308	1699	3450	1104
13,5	1887	830	1651	727	1415	510	1180	425	1297	467	472	170	2123	764	4718	1699	3067	1104
14	1820	801	1592	701	1365	491	1137	409	1251	450	455	164	2047	737	4550	1638	2957	1065
15,5	1644	855	1438	748	1233	493	1027	411	1130	452	411	164	1849	740	4109	1644	2671	1068
16	1592	828	1393	725	1194	478	995	398	1095	438	398	159	1791	717	3981	1592	2588	1035
19,5	1307	732	1143	640	980	470	817	392	898	431	327	157	1470	706	3266	1568	2123	1019
20	1274	713	1115	624	955	535	796	446	876	490	318	178	1433	803	3185	1783	2070	1159
CAVA APxAE	0,7DXD		0,5DXD		0,3DXD		0,3DXD		0,3DXD		0,1DXD		0,7DXD		0,7DXD		0,7DXD	
CONT APxAE	1,5DX0,3D		1,5DX0,02D		1,5DX0,2D		1,5DX0,2D		1,5DX0,2D		1,5DX0,1D		1,5DX0,3D		1,5DX0,3D		1,5DX0,3D	

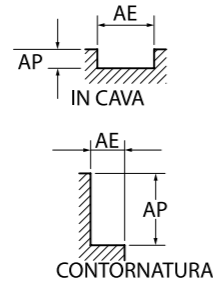
# art. 155 PARAMETRI DI TAGLIO



Materiale	Acciai da utensili		Acciai elevata resistenza		Acciai temperati		Acciai temperati	
Durezza	Hrc 40		Hrc 40-50		Hrc 50-60		Hrc 60-65	
Res-traz	1200 N/mm <sup>2</sup>		1500 N/mm <sup>2</sup>					
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
4	2149	396	2548	306	1353	168	1098	132
6	2200	470	1700	350	1400	250	1100	200
8	1700	450	1250	330	1050	240	850	180
10	1300	440	1000	300	850	230	700	160
12	1100	400	850	270	700	210	550	150
16	850	330	650	230	550	170	420	130
20	700	280	500	200	420	150	320	120
25	550	240	400	170	350	130	270	95
CONTORNATURA APxAE	1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# PARAMETRI DI TAGLIO

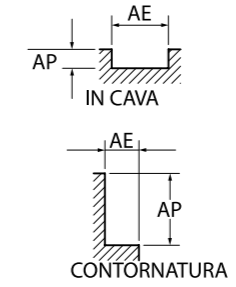
## art. 145A2



Materiale	Leghe di alluminio	ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo			
		Hrc 30-40	Hrc 40-50	1300 N/mm2	≥1300 N/mm2														
Durezza	Res-traz	Diametro		Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10616	849	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9952	896	0	0	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10191	1019	0	0	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10085	1210	0	0	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7962	1354	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7962	1592	0	0	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6635	1725	0	0	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5687	1706	0	0	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4976	1592	0	0	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3981	1592	0	0	
CAVA APxAE															0,5DXD				
CONT APxAE															DX0,5D>D10 0,25D <D10				

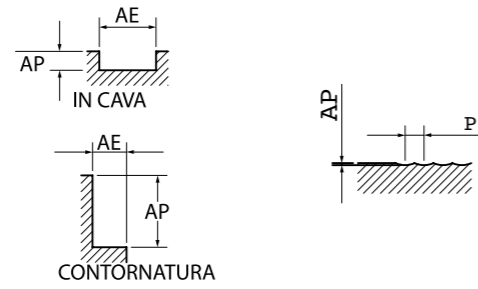
# art. 145A3

# PARAMETRI DI TAGLIO



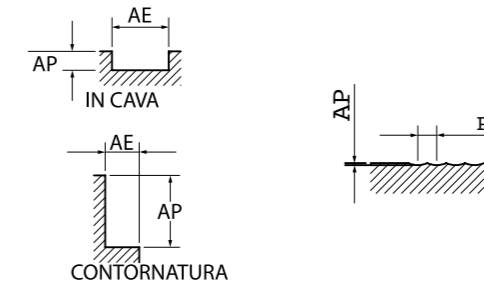
Materiale	Leghe di alluminio	ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo			
		Hrc 30-40	Hrc 40-50	1300 N/mm2	≥1300 N/mm2														
Durezza	Res-traz	Diametro		Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10616	1274	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9952	1344	0	0	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10191	1529	0	0	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10085	1815	0	0	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7962	2030	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7962	2389	0	0	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6635	2588	0	0	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5687	2559	0	0	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4976	2389	0	0	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3981	2389	0	0	
CAVA APxAE															0,5DXD				
CONT APxAE															1,5DX0,2D				

# PARAMETRI DI TAGLIO art. 102R



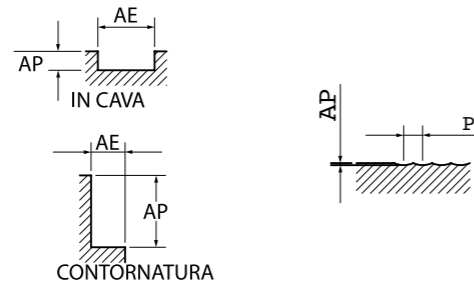
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Hrc 30		Hrc 30-40		Hrc 40-50													
Durezza	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min		Giri/min	
	1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	510	20701	331
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	807	13800	524
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	828	10350	538
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	841	8280	546
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	1274	6900	828
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	1092	5914	710
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	1274	5175	828
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	1132	4600	736
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	1274	4140	828
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	1158	3764	753
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	1168	3450	759
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	1078	3185	701
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	1183	2957	769
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	1035	2588	673
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	991	2300	644
20	1242	348	1083	303	955	268	510	143	605	169	478	134	955	268	3185	892	2070	580
APXP	0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D	

# art. 103R PARAMETRI DI TAGLIO



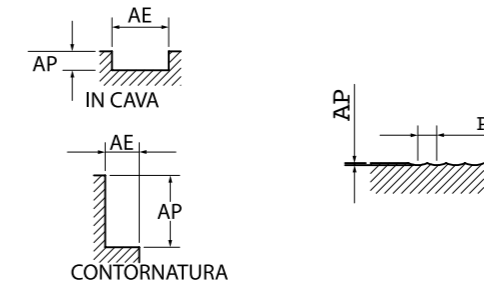
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Hrc 30		Hrc 30-40		Hrc 40-50													
Durezza	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min		Giri/min		mm/min		Giri/min	
	1	47771	717	31847	478	12739	191	28662	430	31847	478	6369	96	19108	287	63694	955	41401
2	23885	573	15924	382	6369	153	14331	344	15924	382	3185	76	9554	229	31847	764	20701	497
3	15924	908	10616	605	4246	242	9554	545	10616	605	2123	121	6369	363	21231	1210	13800	787
4	11943	932	7962	621	3185	248	7166	559	7962	621	1592	124	4777	373	15924	1242	10350	807
5	9554	946	6369	631	2548	252	5732	568	6369	631	1274	126	3822	378	12739	1261	8280	820
6	7962	1433	5308	955	2123	382	4777	860	5308	955	1062	191	3185	573	10616	1911	6900	1242
7	6824	1228	4550	819	1820	328	4095	737	4550	819	910	164	2730	491	9099	1638	5914	1065
8	5971	1433	3981	955	1592	382	3583	860	3981	955	796	191	2389	573	7962	1911	5175	1242
9	5308	1274	3539	849	1415	340	3185	764	3539	849	708	170	2123	510	7077	1699	4600	1104
10	4777	1433	3185	955	1274	382	2866	860	3185	955	637	191	1911	573	6369	1911	4140	1242
11	4343	1303	2895	869	1158	347	2606	782	2895	869	579	174	1737	521	5790	1737	3764	1129
12	3981	1314	2654	876	1062	350	2389	788	2654	876	531	175	1592	525	5308	1752	3450	1139
13	3675	1213	2450	808	980	323	2205	728	2450	808	490	162	1470	485	4900	1617	3185	1051
14	3412	1331	2275	887	910	355	2047	798	2275	887	455	177	1365	532	4550	1774	2957	1153
16	2986	1164	1990	776	796	311	1791	699	1990	776	398	155	1194	466	3981	1553	2588	1009
18	2654	1115	1769	743	708	297	1592	669	1769	743	354	149	1062	446	3539	1486	2300	966
20	2389	1003	1592	669	637	268	1433	602	1592	669	318	134	955	401	3185	1338	2070	869
APXP	0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,7DX0,3D		0,2DX0,1D	

# PARAMETRI DI TAGLIO art. 202R



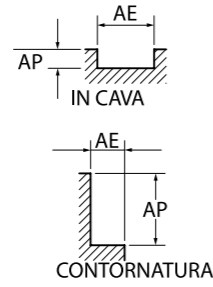
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50														
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401	414
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	510	20701	331
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	807	13800	524
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	828	10350	538
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	841	8280	546
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	1274	6900	828
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	1092	5914	710
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	1274	5175	828
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	1132	4600	736
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	1274	4140	828
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	1158	3764	753
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	1168	3450	759
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	1078	3185	701
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	1183	2957	769
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	1035	2588	673
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	991	2300	644
20	1242	348	1083	303	955	401	510	143	605	169	478	134	955	268	3185	892	2070	580
APXP	0,2X1		0,2X1		0,2X1		0,2X1		0,2X1		0,2X1		0,2X1		0,2X1		0,2X1	

# art. 104R PARAMETRI DI TAGLIO



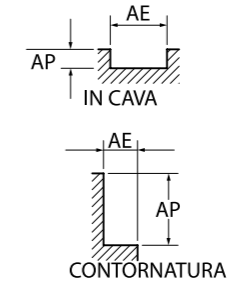
Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50														
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	47771	955	31847	637	12739	255	28662	573	31847	637	6369	127	19108	382	63694	1274	41401	828
2	23885	764	15924	510	6369	204	14331	459	15924	510	3185	102	9554	306	31847	1019	20701	662
3	15924	1210	10616	807	4246	323	9554	726	10616	807	2123	161	6369	484	21231	1614	13800	1049
4	11943	1242	7962	828	3185	331	7166	745	7962	828	1592	166	4777	497	15924	1656	10350	1076
5	9554	1261	6369	841	2548	336	5732	757	6369	841	1274	168	3822	504	12739	1682	8280	1093
6	7962	1911	5308	1274	2123	510	4777	1146	5308	1274	1062	255	3185	764	10616	2548	6900	1656
7	6824	1638	4550	1092	1820	437	4095	983	4550	1092	910	218	2730	655	9099	2184	5914	1419
8	5971	1911	3981	1274	1592	510	3583	1146	3981	1274	796	255	2389	764	7962	2548	5175	1656
9	5308	1699	3539	1132	1415	453	3185	1019	3539	1132	708	226	2123	679	7077	2265	4600	1472
10	4777	1911	3185	1274	1274	510	2866	1146	3185	1274	637	255	1911	764	6369	2548	4140	1656
11	4343	1737	2895	1158	1158	463	2606	1042	2895	1158	579	232	1737	695	5790	2316	3764	1506
12	3981	1752	2654	1168	1062	467	2389	1051	2654	1168	531	234	1592	701	5308	2335	3450	1518
13	3675	1617	2450	1078	980	431	2205	970	2450	1078	490	216	1470	647	4900	2156	3185	1401
14	3412	1774	2275	1183	910	473	2047	1065	2275	1183	455	237	1365	710	4550	2366	2957	1538
16	2986	1553	1990	1035	796	414	1791	932	1990	1035	398	207	1194	621	3981	2070	2588	1346
18	2654	1486	1769	991	708	396	1592	892	1769	991	354	198	1062	594	3539	1982	2300	1288
20	2389	1338	1592	892	637	357	1433	803	1592	892	318	178	955	535	3185	1783	2070	1159
APXP	0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D	

# PARAMETRI DI TAGLIO art. 102RT



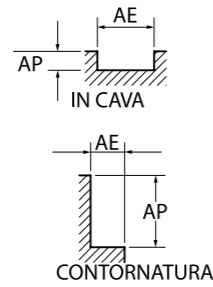
Materiale	ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Hrc 30		Hrc 30-40		Hrc 40-50													
Durezza	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401	414
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	1019	20701	331
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	1614	13800	524
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	1656	10350	538
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	1682	8280	546
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	2548	6900	828
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	2184	5914	710
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	2548	5175	828
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	2265	4600	736
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	2548	4140	828
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	2316	3764	753
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	2335	3450	759
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	2156	3185	701
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	2366	2957	769
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	2070	2588	673
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	1982	2300	644
20	1242	348	1083	303	955	268	510	143	605	169	478	134	955	268	3185	1783	2070	580
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD	
CONT APxAE	1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# art. 103RT PARAMETRI DI TAGLIO



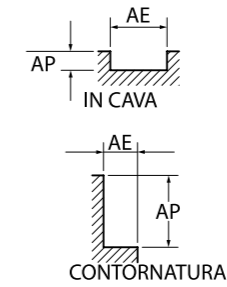
Materiale	ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Hrc 30		Hrc 30-40		Hrc 40-50													
Durezza	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Res-traz	1000 N/mm2		1300 N/mm2		≥1300 N/mm2													
Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min
1	47771	717	31847	478	12739	191	28662	430	31847	478	6369	96	19108	287	63694	955	41401	621
2	23885	573	15924	382	6369	153	14331	344	15924	382	3185	76	9554	229	31847	764	20701	662
3	15924	908	10616	605	4246	242	9554	545	10616	605	2123	121	6369	363	21231	1210	13800	1049
4	11943	932	7962	621	3185	248	7166	559	7962	621	1592	124	4777	373	15924	1242	10350	1076
5	9554	946	6369	631	2548	252	5732	568	6369	631	1274	126	3822	378	12739	1261	8280	1093
6	7962	1433	5308	955	2123	382	4777	860	5308	955	1062	191	3185	573	10616	1911	6900	1656
7	6824	1228	4550	819	1820	328	4095	737	4550	819	910	164	2730	491	9099	1638	5914	1419
8	5971	1433	3981	955	1592	382	3583	860	3981	955	796	191	2389	573	7962	1911	5175	1656
9	5308	1274	3539	849	1415	340	3185	764	3539	849	708	170	2123	510	7077	1699	4600	1472
10	4777	1433	3185	955	1274	382	2866	860	3185	955	637	191	1911	573	6369	1911	4140	1656
11	4343	1303	2895	869	1158	347	2606	782	2895	869	579	174	1737	521	5790	1737	3764	1506
12	3981	1314	2654	876	1062	350	2389	788	2654	876	531	175	1592	525	5308	1752	3450	1518
13	3675	1213	2450	808	980	323	2205	728	2450	808	490	162	1470	485	4900	1617	3185	1401
14	3412	1331	2275	887	910	355	2047	798	2275	887	455	177	1365	532	4550	1774	2957	1538
16	2986	1164	1990	776	796	311	1791	699	1990	776	398	155	1194	466	3981	1553	2588	1346
18	2654	1115	1769	743	708	297	1592	669	1769	743	354	149	1062	446	3539	1486	2300	1288
20	2389	1003	1592	669	637	268	1433	602	1592	669	318	134	955	401	3185	1338	2070	1159
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD	
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# PARAMETRI DI TAGLIO art. 104RT

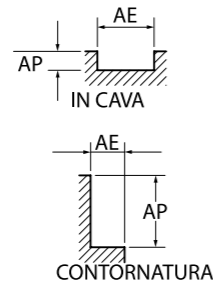


Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min
1	47771	955	31847	637	12739	255	28662	573	31847	637	6369	127	19108	382	63694	1274	41401	828
2	23885	764	15924	510	6369	204	14331	459	15924	510	3185	102	9554	306	31847	1019	20701	662
3	15924	1210	10616	807	4246	323	9554	726	10616	807	2123	161	6369	484	21231	1614	13800	1049
4	11943	1242	7962	828	3185	331	7166	745	7962	828	1592	166	4777	497	15924	1656	10350	1076
5	9554	1261	6369	841	2548	336	5732	757	6369	841	1274	168	3822	504	12739	1682	8280	1093
6	7962	1911	5308	1274	2123	510	4777	1146	5308	1274	1062	255	3185	764	10616	2548	6900	1656
7	6824	1638	4550	1092	1820	437	4095	983	4550	1092	910	218	2730	655	9099	2184	5914	1419
8	5971	1911	3981	1274	1592	510	3583	1146	3981	1274	796	255	2389	764	7962	2548	5175	1656
9	5308	1699	3539	1132	1415	453	3185	1019	3539	1132	708	226	2123	679	7077	2265	4600	1472
10	4777	1911	3185	1274	1274	510	2866	1146	3185	1274	637	255	1911	764	6369	2548	4140	1656
11	4343	1737	2895	1158	1158	463	2606	1042	2895	1158	579	232	1737	695	5790	2316	3764	1506
12	3981	1752	2654	1168	1062	467	2389	1051	2654	1168	531	234	1592	701	5308	2335	3450	1518
13	3675	1617	2450	1078	980	431	2205	970	2450	1078	490	216	1470	647	4900	2156	3185	1401
14	3412	1774	2275	1183	910	473	2047	1065	2275	1183	455	237	1365	710	4550	2366	2957	1538
16	2986	1553	1990	1035	796	414	1791	932	1990	1035	398	207	1194	621	3981	2070	2588	1346
18	2654	1486	1769	991	708	396	1592	892	1769	991	354	198	1062	594	3539	1982	2300	1288
20	2389	1338	1592	892	637	357	1433	803	1592	892	318	178	955	535	3185	1783	2070	1159
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD	
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	

# art. 303 PARAMETRI DI TAGLIO



Materiale	ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		ACCAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo	
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min	mm/min	Giri/min
1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401	414
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	510	20701	331
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	807	13800	524
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	828	10350	538
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	841	8280	546
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	1274	6900	828
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	1092	5914	710
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	1274	5175	828
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	1132	4600	736
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	1274	4140	828
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	1158	3764	753
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	1168	3450	759
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	1078	3185	701
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	1183	2957	769
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	1035	2588	673
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	991	2300	644
20	1242	348	1083	303	955	268	510	143	605	169	478	134	955	268	3185	892	2070	580
CAVA APxAE	0,5DXD		0,3DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD		0,5DXD	
CONT APxAE	1,5DX0,1D		1,5DX0,05D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D		1,5DX0,1D	



Materiale	ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		ACCIAI al carbonio, legati, da utensili		Inox aisi 304		Inox aisi 316		Inconel		Ghisa		Leghe di alluminio		Ottone e bronzo			
	Durezza	Hrc 30	Hrc 30-40	Hrc 40-50	Res-traz	1000 N/mm2	1300 N/mm2	≥1300 N/mm2	Diametro	Giri/min	mm/min	Diametro	Giri/min	mm/min	Diametro	Giri/min	mm/min	Diametro	Giri/min	mm/min
1	24841	248	21656	217	19108	191	10191	102	12102	121	9554	96	19108	191	63694	637	41401	414		
2	12420	199	10828	173	9554	153	5096	82	6051	97	4777	76	9554	153	31847	510	20701	331		
3	8280	315	7219	274	6369	242	3397	129	4034	153	3185	121	6369	242	21231	807	13800	524		
4	6210	323	5414	282	4777	248	2548	132	3025	157	2389	124	4777	248	15924	828	10350	538		
5	4968	328	4331	286	3822	252	2038	135	2420	160	1911	126	3822	252	12739	841	8280	546		
6	4140	497	3609	433	3185	382	1699	204	2017	242	1592	191	3185	382	10616	1274	6900	828		
7	3549	426	3094	371	2730	328	1456	175	1729	207	1365	164	2730	328	9099	1092	5914	710		
8	3105	497	2707	433	2389	382	1274	204	1513	242	1194	191	2389	382	7962	1274	5175	828		
9	2760	442	2406	385	2123	340	1132	181	1345	215	1062	170	2123	340	7077	1132	4600	736		
10	2484	497	2166	433	1911	382	1019	204	1210	242	955	191	1911	382	6369	1274	4140	828		
11	2258	452	1969	394	1737	347	926	185	1100	220	869	174	1737	347	5790	1158	3764	753		
12	2070	455	1805	397	1592	350	849	187	1008	222	796	175	1592	350	5308	1168	3450	759		
13	1911	420	1666	366	1470	323	784	172	931	205	735	162	1470	323	4900	1078	3185	701		
14	1774	461	1547	402	1365	355	728	189	864	225	682	177	1365	355	4550	1183	2957	769		
16	1553	404	1354	352	1194	311	637	166	756	197	597	155	1194	311	3981	1035	2588	673		
18	1380	386	1203	337	1062	297	566	159	672	188	531	149	1062	297	3539	991	2300	644		
20	1242	348	1083	303	955	268	510	143	605	169	478	134	955	268	3185	892	2070	580		
APXP	0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D		0,2DX0,1D	

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