

INSERTI DI TORNITURA ISO



W	N	M	G
1	2	3	4

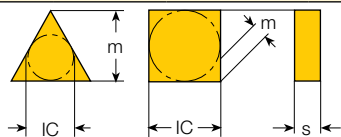
08	04	08	E	GN
5	6	7	8	9

1. Forma

	75°		80°	
90°	55°			
60°	35°		55°	
80°/100°	25°		80°	

2. Angolo di spoglia

3. Tolleranza



	m	s	IC
E	±0.025	±0.025	±0.025
G	±0.025	±0.13	±0.025
M	da ±0.08	±0.13	da ±0.05
U	a ±0.18 ⁽¹⁾		a ±0.13 ⁽¹⁾
	da ±0.13	±0.13	da ±0.08
	a ±0.38 ⁽¹⁾		a ±0.25 ⁽¹⁾

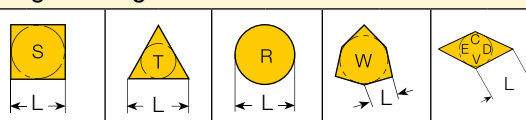
⁽¹⁾ La tolleranza esatta dipende dalla dimensione dell'inserto

IC	Tolleranza in mm			
	Su m		Su IC	
	Classe M	Classe U	Classe M	Classe U
6.35	±0.08	±0.13	±0.05	±0.08
9.52	±0.08	±0.13	±0.05	±0.08
12.70	±0.13	±0.20	±0.08	±0.13
15.87	±0.15	±0.27	±0.10	±0.18
19.05	±0.15	±0.27	±0.10	±0.18
25.40	±0.18	±0.38	±0.13	±0.25

4. Tipo

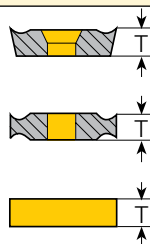
	A	Senza formatruciolo, con foro
	G	Formatruciolo su entrambi i lati, con foro
	M, S	Formatruciolo su un lato, con foro
	R	Formatruciolo su un lato, senza foro
	B, W	Svasatura su un lato, con foro
	T, H	Formatruciolo su un lato, con foro e svasatura
	P	Neg./pos. su uno o entrambi i lati, con foro
	Z, X	Speciale

5. Lunghezza tagliente

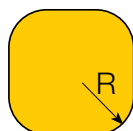


pollici	IC mmmm	Simbolo (L)							
		C	D	R	S	T	V	W	Q
5/32	3.97		04		03	06	06	02 ⁽¹⁾	
7/32	5.56	05				09			
1/4	6.35	06	07			11	11		
9/32	7.15						12		
	8.00			08					
3/8	9.52	09	11		09	16	16	06	09
	10.00			10					
	12.00			12					
1/2	12.70	12	15		12	22	22	08	12
5/8	15.88	16			15	27			
	16.00			16					
3/4	19.05	19			19	33		13	
	20.00			20					
	25.00			25					
1	25.40				25				

⁽¹⁾ WBM T 06...




6. Spessore

01	=	1.59 mm
T1	=	1.98 mm
02	=	2.38 mm
03	=	3.18 mm
T3	=	3.97 mm
04	=	4.76 mm
06	=	6.35 mm
07	=	7.94 mm

7. Raggio

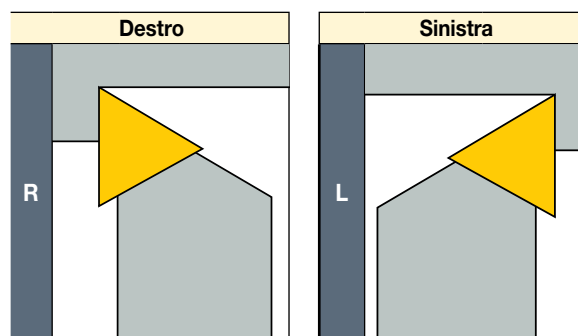
02	=	0.2 mm
04	=	0.4 mm
08	=	0.8 mm
12	=	1.2 mm
16	=	1.6 mm
20	=	2.0 mm
24	=	2.4 mm

8. Tagliente (Opzionale)

	F	Affilato
	E	Arrotondato
	T	Con smussi
	S	Smusso + honing

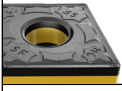
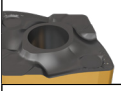
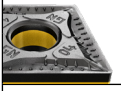
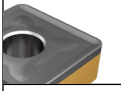



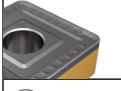
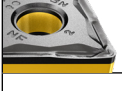

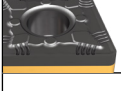
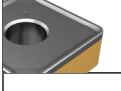
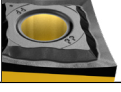
9. Descrizione formatruciolo



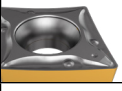
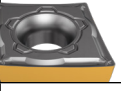

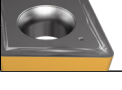
SF	AS/AF	TF	Nm
PF	../Z-RF/LF ⁽¹⁾	PP	TNM
NF	WF	GN	NR
SM	WG	NmS	RP
14	VL		



Guida alla scelta del grado e del formatruciolo

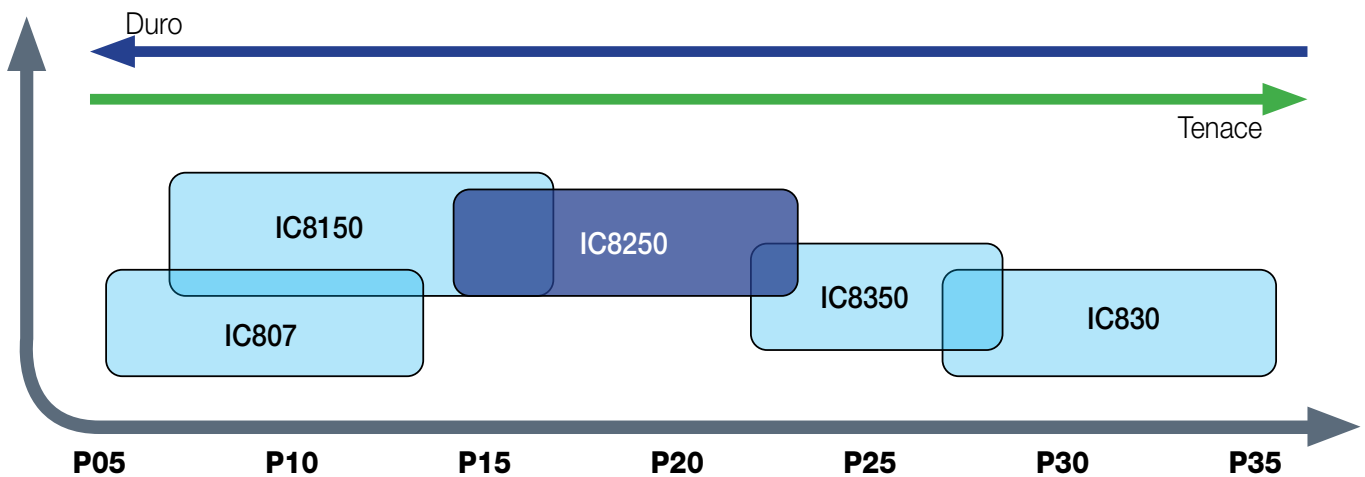
ISO P-Acciai

		Finitura		Lav. Medie		Sgrossatura		Gravosa	
Negativo	Stretto		SF		M4PW		GN		H3P
	↑		F3P		TF		R3P		H4P
	↓		NF		M3P		NR		H5P
	↓								
	Aperto					PP			

		Finitura		Lav. Medie	
Positivo	Stretto		F3P		SM
	↑		PF		M3P
	↓		SM		
	Aperto		14		

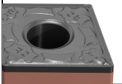



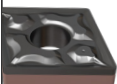





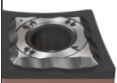
■ Prima scelta


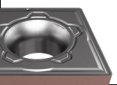
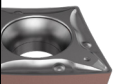

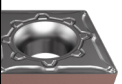
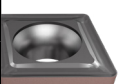
Gradi consigliati



* Per i gradi ceramici e CBN per acciai induriti, vedere pag (237)

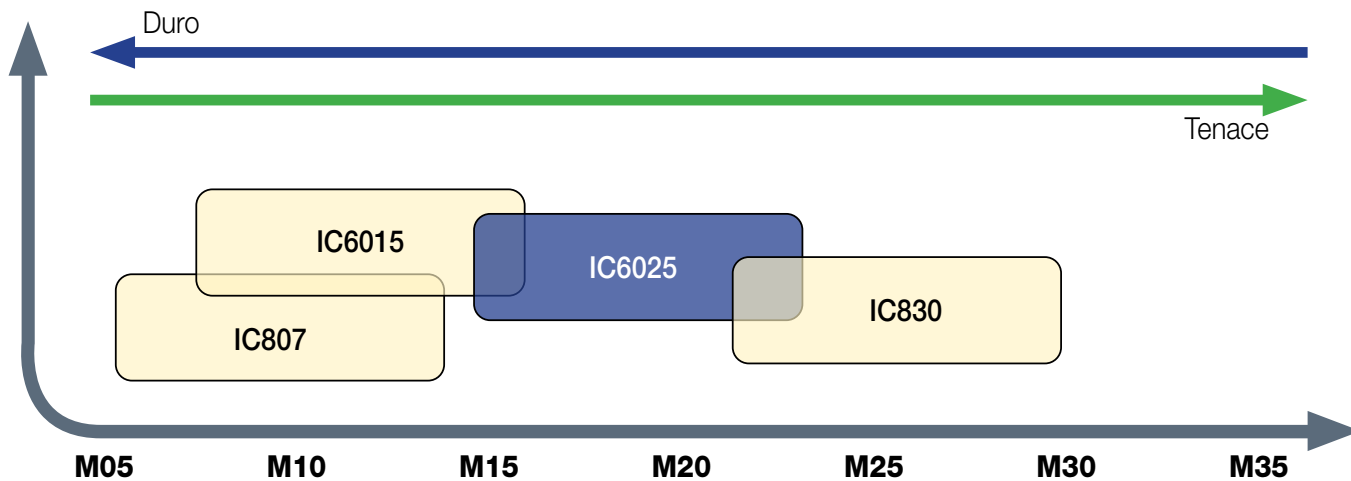
ISO M- Acciai inox

		Finitura		Lav. Medie		Sgrossatura	
Negativo	Stretto		SF		M4MW		GN
			F3M		TF		R3M
			NF		M3M		NR
					VL		
	Aperto				PP		

		Finitura		Lav. Medie	
Positivo	Stretto		SM		M3M
			PF		SM
			F3M		
	Aperto		14		

■ Prima scelta

Gradi consigliati



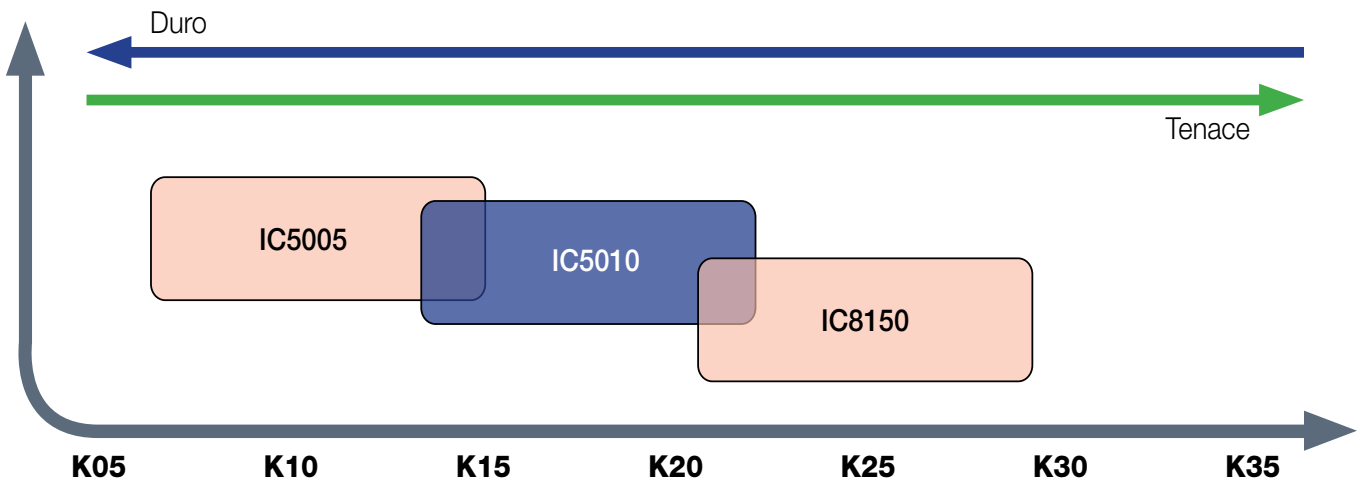
Guida alla scelta del grado e del formatruciolo

ISO K-Ghise

		Finitura		Lav. Medie		Sgrossatura			
Negativo	Stretto		M3P	Stretto		GN	Stretto		NR
	Aperto		GN	Aperto		A	Aperto		A
Positivo	Stretto		SM	Stretto		SM			
	Aperto		14	Aperto		14			

Prima scelta


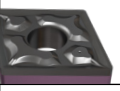
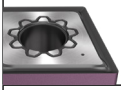

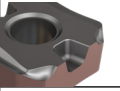


Gradi consigliati


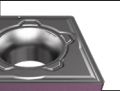
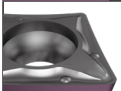





* Per i gradi ceramici e CBN per acciai induriti, vedere pag (237)

Guida alla scelta del grado e del formatruciolo

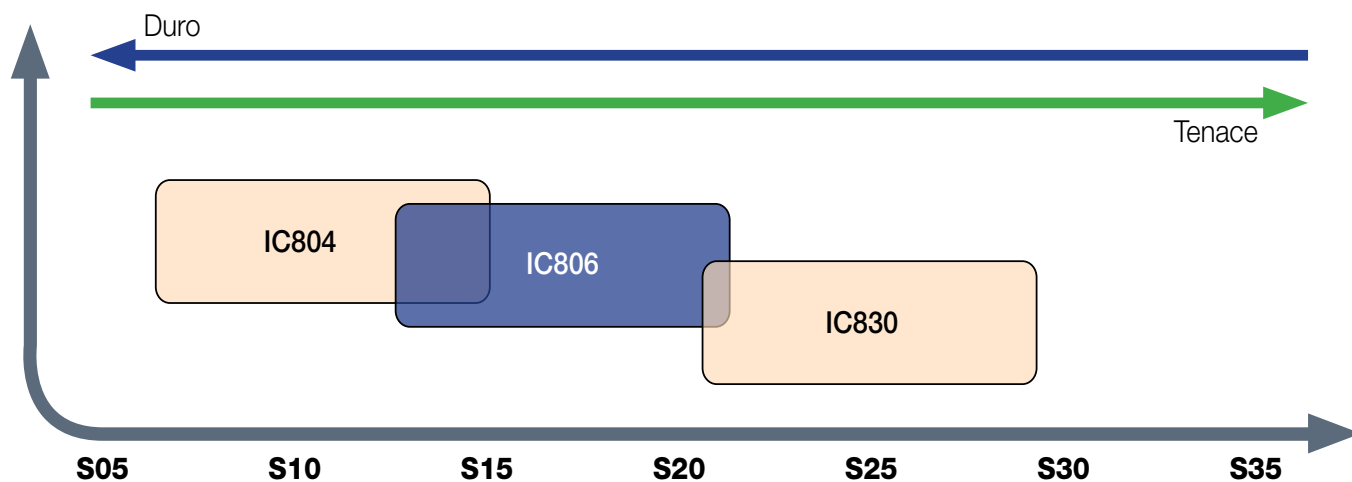
ISO S-Superleghe

		Finitura		Lav. Medie	
Negativo	Stretto		F3M		TF
			F3S		M3M
					EM-M
					VL
	Aperto				PP

		Finitura		Lav. Medie	
Positivo	Stretto		SM		M3M
			PF		SM
			F3M		
			14		
	Aperto				

■ Prima scelta


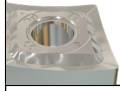
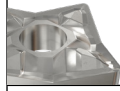


Gradi consigliati

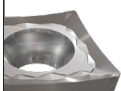



* Per i gradi ceramici e CBN per acciai induriti, vedere pag (237)

Guida alla scelta del grado e del formatruciolo

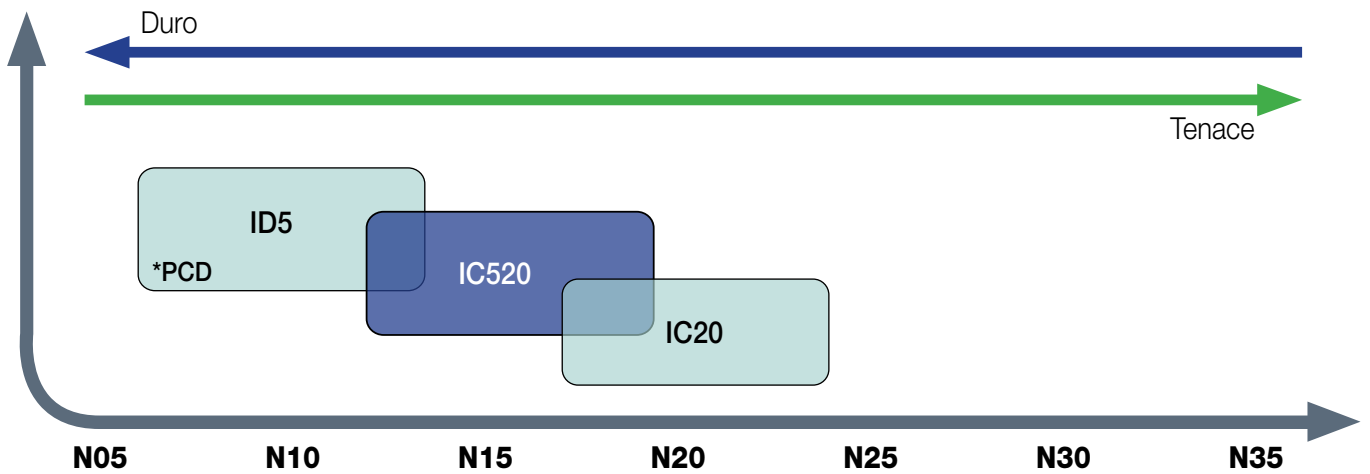
ISO N-Alluminio

		Finitura		Lav. Medie		Sgrossatura			
Negativo	Stretto		NF	Stretto		PP	Stretto		NmS12
	Aperto		F3N	Aperto		M3N	Aperto		

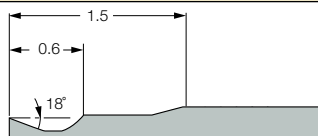
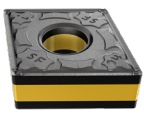
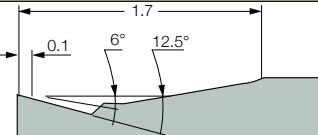

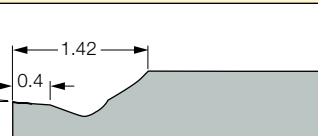

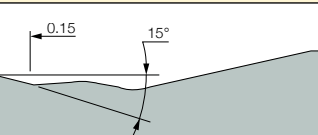

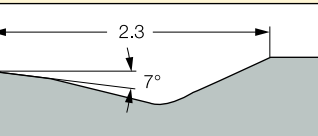

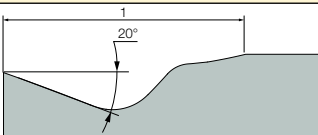
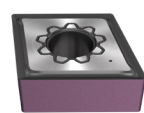
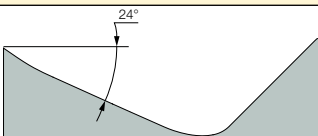

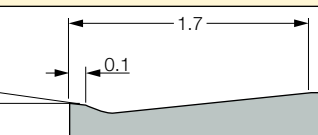
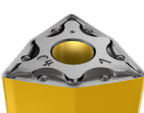
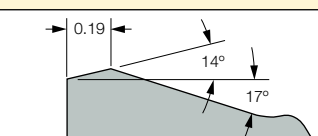

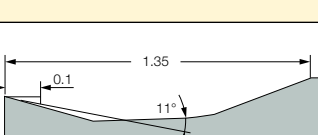

		Finitura	
Positivo	Stretto		AS
	Aperto		

 Prima scelta

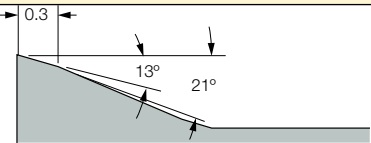

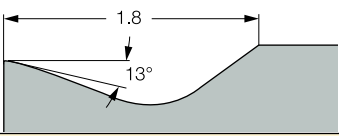
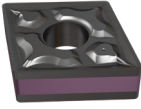
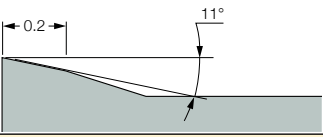

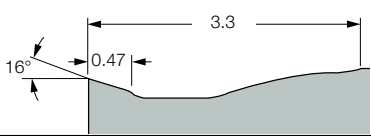

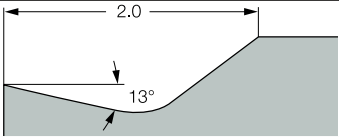
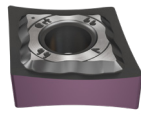


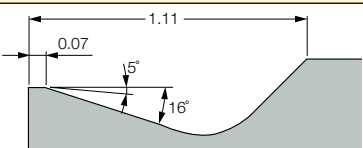
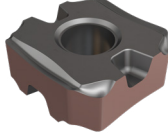
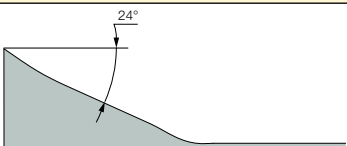

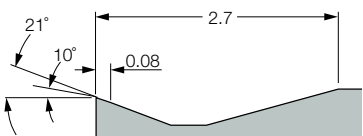
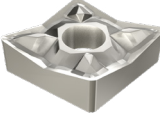
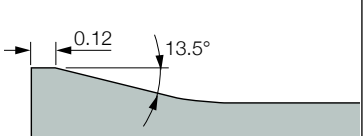

Gradi consigliati

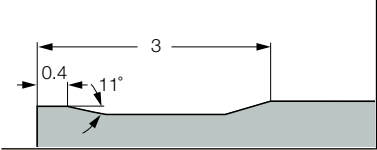
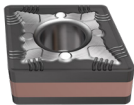
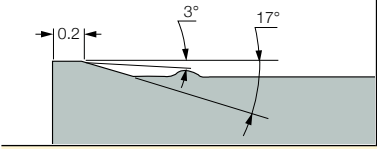

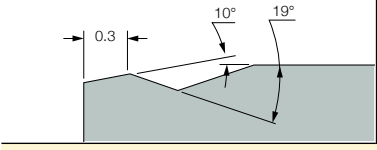

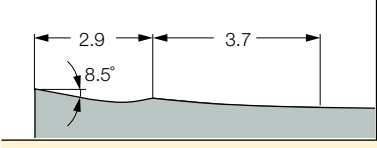

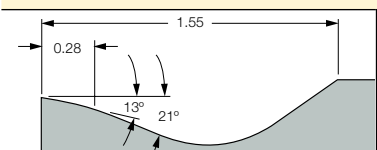
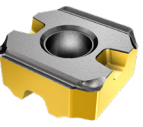
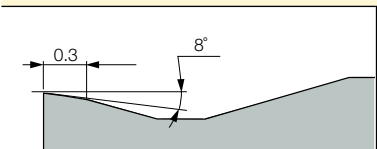

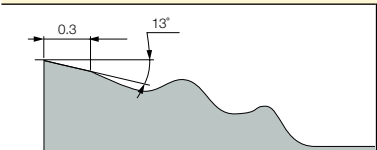

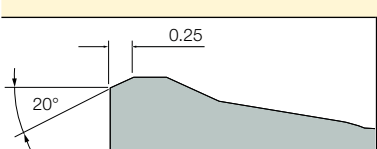
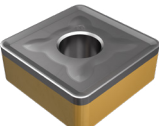
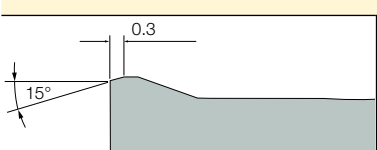
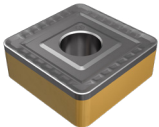
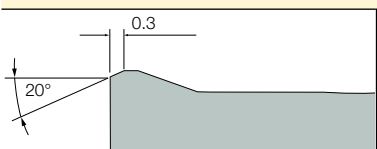
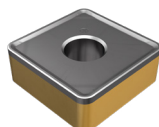


Formatrucioli negativi
Formatrucioli negativi

Formatruciolo SF		
		Esclusivo formatruciolo per superfinitura per il controllo del truciolo con avanzamenti molto bassi e profondità ridotte. Riduce l'usura per craterizzazione.
Formatruciolo F3P		
		Inserti bilaterali con spoglia positiva per minori forze di taglio in finitura di acciai
Formatruciolo NF		
		Bilaterale, per lavorazioni di semi-finitura e finitura. Basse forze di taglio grazie agli angoli di spoglia molto positivi.
Formatruciolo F3M		
		Inserti bilaterali con spoglia positiva per finitura di acciai inox. L'esclusiva geometria con superficie ondulata evita che il truciolo aderisca al tagliente
Formatruciolo GN		
		Bilaterali, per lavorazioni generali. Tagliente per lavorazioni medie e di semi-sgrossatura di acciai e ghise
Formatruciolo F3S		
		Formatruciolo con spoglia positiva per finitura di superleghe.
Formatruciolo F3N		
		Inserti lappati e super positivi, per finitura di alluminio e materiali non ferrosi
Formatruciolo WF		
		Geometria raschiante per finitura con elevati avanzamenti di materiali soffici e gommosi
Formatruciolo M4PW		
		Bilaterali, per sgrossatura. Gamma avanzamenti: 0.25 mm/giro a 0.8 mm/giro. Profondità di taglio da 2.00 a 10.0 mm.
Formatruciolo M3P		
		Inserti bilaterali per lavorazioni medie su acciai, con taglienti rinforzati per una maggiore durata.

Formatrucioli negativi

Formatruciolo M4MW		
		Formatruciolo per lavorazioni gravose di acciai inox. Gli inserti hanno taglienti radiali molto positivi, con spoglia positiva
Formatruciolo TF		
		Bilaterale con spoglia positiva per prevenire l'incrudimento. Lungo il tagliente la spoglia diventa negativa, per prevenire eventuali scheggiature. Geometria per ridurre la craterizzazione. Per acciai legati, inox e superleghe.
Formatruciolo M3M		
		Inserti bilaterali per lavorazioni medie di acciai inox, con tagliente rinforzato per ridurre l'usura del nocciolo
Formatruciolo VL		
		Spoglia molto positiva e speciale preparazione del tagliente, per sgrossatura e finitura di superleghe. Eccellenti prestazioni nelle lavorazioni delle valvole nell'industria automotive.
Formatruciolo PP		
		Bilaterale, con spoglia molto positiva, tagliente radiale positivo per la lavorazione di superleghe, acciai inox, leghe di alluminio e acciai
Formatruciolo A		
		Inserti piatti, per la lavorazione di materiali a truciolo corto come ghise
Formatruciolo EM-M		
		Taglienti affilati bilaterali con spoglia positiva a 16°, per lavorazioni di superleghe con $a_p < 3$ mm.
Formatruciolo M3N		
		Inserti lappati e super positivi, per lavorazioni di alluminio e materiali non ferrosi in condizioni medie
Formatruciolo 12		
		Monolaterale, per lavorazioni medie e sgrossatura di alluminio e materiali soffici
Formatruciolo R3P		
		Formatruciolo per sgrossatura di acciai, con spoglia positiva e tagliente rinforzato, per migliori prestazioni e maggiore durata.

Formatruciolo NR		
		Inserti bilaterali con taglienti affilati positivi a 13°, per la lavorazione di superleghe con $a_p < 6$ mm
Formatruciolo R3M		
		Inserti bilaterali per sgrossatura di acciai inox con esclusivo deflettore per migliorare il controllo del truciolo. Superfici ondulate per evitare che il truciolo si saldi al tagliente
Formatruciolo T3P		
		Inserti triangolari bilaterali negativi a 6°, per la lavorazione di acciai con elevati avanzamenti
Formatruciolo TNM		
		Inserti bilaterali triangolari per sgrossatura. Avanzamento: da 0.25 a 0.65 mm/giro. Profondità di taglio da 2 a 7 mm.
Formatruciolo EM-R		
		Inserti bilaterali con taglienti affilati positivi a 13°, per la lavorazione di superleghe con $a_p < 6$ mm
Formatruciolo HT/WG		
		Inserti bilaterali per sgrossatura. Avanzamenti: da 0.25 mm/giro a 0.8 mm/giro. Profondità di taglio da 2.00 a 10.0 mm.
Formatruciolo HM		
		Gamma avanzamento: da 0.08 mm/giro a 0.75 mm/giro. Profondità di taglio da 1.5 mm a 8.0 mm.
Formatruciolo H3P		
		<ul style="list-style-type: none"> • Per sgrossatura gravosa • Per macchine con potenza ridotta • Eccellente controllo del truciolo
Formatruciolo H4P		
		<ul style="list-style-type: none"> • Per sgrossatura gravosa • Per grandi profondità di taglio ed elevati avanzamenti • Tagliente robusto grazie all'ampia superficie e all'elevato angolo di attacco
Formatruciolo H5P		
		<ul style="list-style-type: none"> • Per sgrossatura gravosa • Per grandi profondità di taglio ed elevati avanzamenti • Tagliente estremamente robusto grazie all'ampia superficie e all'elevato angolo di attacco • Adatto per lavorazioni con parametri elevati

Formatrucioli negativi

Formatruciolo H6P

		<p>Inserti tangenziali con 4 taglienti per elevate asportazioni su acciai, con PdT fino a 35 mm</p>
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Formatrucioli positivi

Formatruciolo F3P

		<p>Per super finitura e finitura, principalmente con inserti positivi. Gamma avanzamento: 0.03-0.20 mm/giro. DOC 0.25-3.0 mm.</p>
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Formatruciolo PF

		<p>Per super finitura e finitura, principalmente con inserti positivi. Gamma avanzamento: 0.03-0.20 mm/giro. DOC 0.25-3.0 mm.</p>
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Formatruciolo SM

		<p>Per finitura e barenatura. Gamma Avanzamenti: 0.06-0.25 mm/giro. PdT 0.5-2.5 mm.</p>
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Formatruciolo F3M

		<p>Formatruciolo con spoglia positiva per finitura di acciai inox. Adatto anche per superleghe e materiali esotici.</p>
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14 Formatruciolo

		<p>Semi-finitura e finitura. Avanzamenti medi.</p>
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Formatruciolo AS

		<p>Per uso generale su alluminio e materiali soffici.</p>
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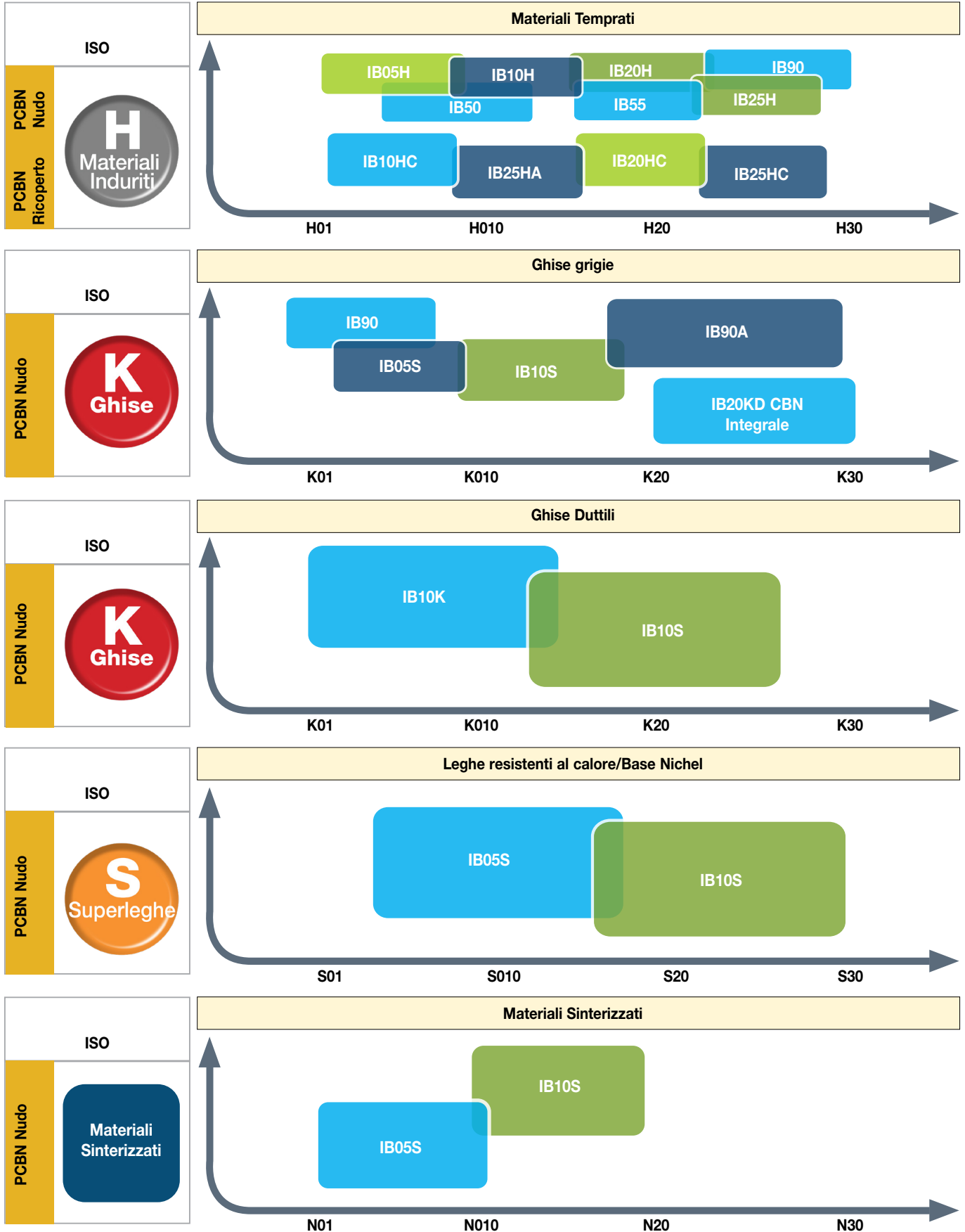
Formatruciolo M3P

		<p>Formatruciolo con tagliente rinforzato e spoglie positive, per lavorazioni medie di acciai.</p>
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Formatruciolo M3M

		<p>Formatruciolo con tagliente rinforzato e spoglia positiva, per lavorazioni medie di acciai inox</p>
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Gradi PCBN



Gradi ceramici

