INSERTI
INSERTS

RIECO system

INSERTI SPECIALI

SPECIAL INSERTS

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TORNITURA | TURNING

INFORMAZIONI TECHICHE | TECHNICAL INFORMATION

ISO	Materiali - Materials	Durezza - Hardness Rm
HP HX	Acciaio non legato - Unalloyed steel	400-600 N/mm^2 - 120-180 HBN
		600-950 N/mm^2 - 180-200 HBN
	Acciaio legato - Alloy steel	700-950 N/mm^2 - 200-280 HBN
		950-1200 N/mm^2 - 280-355 HBN
		1200-1400 N/mm^2 - 355-415 HBN
	Acciaio da utensili - Tool steel	1200-1400 N/mm^2 - 355-415 HBN
HM HX	Acciaio inossidabile - Stainless steel	Austenitico+ferritico Serie300 - Austenitic+ferritic 300 series
		Martensitico Serie 400 - Martensitic 400 series
	Inossidabili PH - Stainless PH	Refrattario-Invecchiamento artificiale - Refractory Artificial aging
HK	Ghisa - Cast Iron	Grigia - Grey GG-Ft
		Sferoidale/duttile - Spheroidal/Ductile GGG-FGS
		Nodulare-Nodular GGG-L-N
		Malleabile-Malleable GTS-MN/MP
HN	Alluminio e leghe - Alluminum and alloys	Alluminio e leghe - Alluminum and alloys <16% 116 HBN
		Alluminio + silicio - Alluminum + silicon >16% 92 HBN
HS	Leghe resistenti al calore - Heat resistant alloys	A base di ferro - Based on iron
		A base di cobalto - Based on cobalt
		A base di nickel - Based on nickel
		A base di titanio - Based on titan 425-456 HBN
HC	Ghisa sferoidale - Spheroidal cast iron	Sferoidale/duttile - Spheroidal/Ductile GGG-FGS
	Acciaio non legato - Unalloyed steel	400-600 N/mm^2 - 120-180 HBN
		600-950 N/mm^2 - 180-200 HBN
	Acciaio legato - Alloy stee	950-1200 N/mm^2 - 280-355 HBN
		1200-1400 N/mm^2 - 355-415 HBN
	Acciaio inossidabile - Stainless steel	Austeinitico+ferritico Serie300 - Austenitic+ferritic 300 series
		Martensitico Serie 400 Martensitic 400 series

CALCOLO PARAMETRI | CALCULATE SPEED

NUMERO DI GIRI - NUMBER OF REVOLUTION PER MINUTE

$$N = \frac{Vcx1000}{\Pi \times D} = \text{(giri/min - Rpm)}$$

VELOCITÀ DI TAGLIO - CUTTING SPEED

$$Vc = \frac{\Pi \times D \times N}{1000} = \text{(m/min)}$$

AVANZAMENTO PEZZO - PIECE FEEDING

$$Vf = fz \times Z \times N = \text{(mm/min)}$$

LEGENDA | LEGEND

N	numero di giri - number of revolutions (giri/min - RPM)
Vc	velocità - speed (m/min)
d	diametro nominale - nominal diameter (mm)
Vf	avanzamento pezzo - piece feeding (mm/min)
fz	avanzamento dente - tooth feeding (mm)
Z	numero di denti - number of teeth
D	diametro del componente da filettare - Diameter of the threading (mm)

RIVESTIMENTI | COATING

TIPOLOGIE RIVESTIMENTI PVD | PVD TYPES OF COATING

TIPO/TYPE	DESCRIZIONE	DESCRIPTION
PVD - TIN	Il nitruro di titanio è stato il primo rivestimento PVD. È versatile ed ha un colore dorato.	The titanium nitrogen coating was the first type of PVD coating. It is an all-around coating and it has a golden colour.
PVD - Ti (C, N)	Il carbonitruro di titanio è più duro del TiN e conferisce una maggiore resistenza all'usura sul fianco.	The titanium carbonitrate is harder than TiN and gives a higher wear resistance on the side.
PVD - (Ti, Al) N	Il nitruro di alluminio e titanio ha un'elevata durezza abbinata alla resistenza all'ossidazione, che contribuisce ad aumentare la resistenza generale all'usura.	The aluminum and titanium nitrate has a high hardness combined with a oxidation resistance, which helps to increase general wear resistance.
PVD - AlTiN	È utilizzato per la sua inerzia chimica ed elevata resistenza all'usura per craterizzazione.	It is used for its chemical inertness and high resistance to crater wear.
PVD TiAlNB	Rivestimento a triplo strato submicrograna per acciai inossidabili, titanio e leghe ad alte temperature. Rivestimento di colore blu.	Triple layed coated submicrograin for stainless steel, titanium and most fo the high temperature alloys. Blu colour coating.
PVD DEVIL	Rivestimento multistrato per maggiore resistenza all'usura. Ideale per tutti i tipi di acciaio.	Multilayer coating with a high wear resistance for all types of steel.

TIPOLOGIE RIVESTIMENTI CVD | CVD COATING TYPES

TIPO/TYPE	DESCRIZIONE	DESCRIPTION
CVD-TiN	Migliora la resistenza all'usura ed è utilizzato per rilevare l'usura.	Improves wear resistance and is used to detect wear.
CVD-Ti (C, N)	La sua durezza garantisce una buona resistenza all'usura per abrasione, con conseguente diminuzione dell'usura sul fianco.	Its hardness guarantees a good resistance to wear due to abrasion, with a consequent reduction of wear on the side.
CVD-Ti (Al, N)	La sua inerzia chimica e la sua bassa conducibilità termica, lo rendono resistente all'usura per craterizzazione. Funge anche da barriera termica per aumentare la resistenza alla deformazione plastica.	Its chemical inertia and its low thermal conductivity make it resistant to crater wear. It also acts as a thermal barrier to increase resistance to plastic deformation.

QAULITÀ E VELOCITÀ | QUALITIES AND CUTTING SPEED

		TORNITURA POSITIVA POSITIVE TURNING	TORNITURA NEGATIVA NEGATIVE TURNING	FRESATURA - MILLING	FILETTATURA THREADING
HK1005					
Rivestimento CVD-multistrato TiAlN K05-K10. L'area di impiego di questa qualità è la lavorazione di tutti le ghise da fusione. Il nuovo substrato offre la necessaria tenacità e resistenza alle alte temperature, il rivestimento CVD assicura la resistenza all'usura oltre ad una ulteriore resistenza alle alte temperature.	CVD-TiAlN multilayer coating K05-K10. The main application area for this grade is the machining of all cast materials. The new substrate offers the necessary toughness and heat resistance, the CVD-coating.	Vc 200÷330			
HK1006					
Rivestimento PVD-multistrato - TiAlN K10-K20. Qualità per la fresatura di Ghisa grigia, Ghisa. Sferoidale ed acciai. Eccellente resistenza all'usura.	PVD -multilayer coating - TiAlN K10-K20. Grade for milling machining cast iron, nodular cast. Iron and steels. Excellent wear resistance.			Vc 200÷300	
HK1511					
Rivestimento CVD-multistrato TiAlN K10-K20. Qualità per la lavorazione di sgrossatura di Ghisa grigia e Ghisa sferoidale. Ottima resistenza all'usura e massima stabilità di taglio.	CVD-TiAlN multilayer coating K10-K20. Grade for roughing of cast iron and nodular cast iron. AK2110 has excellent wear resistance and low tendency for build up edge. For the universal use on grey cast iron and ductile iron.	Vc 170÷260	Vc 150÷250		
HK2011					
Rivestimento CVD-multistrato - TiAlN K15-K25. Qualità per la tornitura di Ghisa grigia e Ghisa sferoidale. Possiede un'ottima resistenza all'usura.	CVD-multilayer coating- TiAlN K15-K25. Main application for machining cast iron and nodular cast iron. Offers good wear resistance.		Vc 150÷300		
HK2511					
Rivestimento PVD-multistrato - TiN K20-K30. Qualità per la tornitura di Ghisa grigia e Ghisa Sferoidale. Eccellente resistenza all'usura.	PVD -multilayer coating - TiN K20-K30. Grade for machining cast iron and nodular cast iron. Excellent wear resistance.	Vc 100÷170			
HM2510					
Rivestimento PVD-multistrato - AlTiN M20-M30. Grado per la sgrossatura e semi-sgrossatura di acciai inossidabili.	PVD-multilayer coating - AlTiN M20-M30. The grade for roughing and medium roughing stainless steels.	Vc 100÷150	Vc 80÷150		
HM3001					
Rivestimento PVD - Devil M25-M35. Qualità universale per finitura di acciai inossidabili, acciai legati e materiali esotici.	PVD coating - Devil M25-M35. Universal grade for finishing stainless steels and alloyed steels as well as exotic materials.	Vc 80÷150			
HM3052					
Rivestimento PVD-multistrato - TiAlNB M20-M30. Grado resistente all'usura per la lavorazione di acciaio, fusioni, acciaio inossidabile, Superleghe.	PVD-multilayer coating - TiAlNB M20-M30. High wear resistant grade for machining steel, cast steel, stainless steel and high temperature super alloys.				Vc 100÷130
HM3054					
Rivestimento PVD-multistrato - TiAlN M25-M40. Qualità resistente all'usura con un buon filo tagliente per la lavorazione di acciaio, acciaio da fusione, acciaio inossidabile e materiali refrattari come superleghe e leghe ad alta temperatura.	PVD-multilayer coating - TiAlN M25-M40. Wear resistant grade for machining steel, cast steel, stainless steel and high temperature alloys (super alloys).		Vc 80÷140		
HM3055					
Rivestimento CVD-multistrato - TiAlN M25-M30. Grado resistente all'usura per la lavorazione di acciaio, fusioni, acciaio inossidabile, Superleghe.	CVD-multilayer coating - TiAlN M25-M30. High wear resistant grade for machining steel, cast steel, stainless steel and high temperature super alloys.	Vc 110÷200			
HM3060					
Rivestimento PVD-multistrato - TiAlN M25-M40. Inserto rettificato con grado resistente all'usura per la lavorazione di acciaio, fusioni, acciaio inossidabile, Superleghe.	PVD-multilayer coating - TiAlN M25-M40. Grinded insert high wear resistant grade for machining steel, cast steel, stainless steel and high temperature super alloys.				

Per velocità foratura v. tabella foratura a pg. C 3 - For drilling cutting speed see chart at pg. C 3

QAULITÀ E VELOCITÀ | QUALITIES AND CUTTING SPEED

		TORNITURA POSITIVA POSITIVE TURNING	TORNITURA NEGATIVA NEGATIVE TURNING	FRESATURA - MILLING	FILETTATURA THREADING
HM3101					
Rivestimento PVD-multistrato - TiCN M25-M35. Grado resistente all'usura per la lavorazione di acciaio, fusioni, acciaio inossidabile, Superleghe.	PVD-multilayer coating - TiCN M25-M35. High wear resistant grade for machining steel, cast steel, stainless steel and high temperature super alloys.			Vc 130÷180	
HM4060					
Rivestimento PVD-multistrato - AlTiN M35-M45. Grado resistente all'usura per la lavorazione di acciai inossidabili e superleghe.	PVD-multilayer coating - AlTiN M35-M45. High wear resistant grade for machining stainless steels and super alloys.			Vc 130÷190	
HM4061					
Rivestimento PVD-multistrato - TiN M30-M40. Grado resistente all'usura per la lavorazione di acciai inossidabili e superleghe.	PVD-multilayer coating - TiN M30-M40. High wear resistant grade for machining stainless steels and super alloys.			Vc 130÷170	
HN10					
Nudo lappato K10. Grado di metallo duro sub-micrograna per la lavorazione di alluminio e leghe di alluminio.	Uncoated - K10. Carbide grade for machining aluminum and aluminum alloys.	Vc 150÷400	Vc 250÷700	Vc 300÷800	
HP1015					
Rivestimento PVD-multistrato - TiAlN P10-P20. Qualità per la finitura di acciaio. La nuova tecnologia di rivestimento garantisce una maggiore resistenza all'usura ed una incrementata vita inserto.	PVD-multilayer coating - TiAlN P10-P20. Grade for finishing steel. New coating technology offer less wear and longer tool life.			Vc 150÷300	
HP1502					
Rivestimento CVD-multistrato- TiAlN P10-P20. Qualità per la lavorazione ad alta velocità di taglio di Acciaio. Adatto anche per la lavorazione di Ghisa Grigia e Ghisa Sferoidale.	CVD-multilayer coating- TiAlN P10-P20. Premium grade for "high speed" machining of steel. Also suitable for roughing of cast iron and nodular cast iron.	Vc 180÷300	Vc 80÷200		
HP1551					
Rivestimento PVD-multistrato- TiN P10-P20. Qualità per la lavorazione ad alta velocità di taglio di Acciaio. Adatto anche per la lavorazione di Ghisa Grigia e Ghisa Sferoidale.	PVD-multilayer coating- TiN P10-P20. Premium grade for "high speed" machining of steel. Also suitable for roughing of cast iron and nodular cast iron.			Vc 70÷120	
HP2011					
Rivestimento CVD-multistrato - TiAlN P20-P30. Qualità universale per svariati campi applicativi nella lavorazione di acciaio e materiali da fusione. È' inoltre idoneo ad alcune lavorazioni di acciaio inossidabile.	CVD-multilayer coating - TiAlN P20-P30. This multi purpose grade excels due to its versatile application area in steel and cast materials. It is also very suitable for machining stainless steel.		Vc 150÷300		
HP2052					
Rivestimento PVD-multistrato - TiAlN P15-P25. Qualità universale per le lavorazioni generiche di Acciaio di semi-finitura. Adatta anche per lavorazioni a taglio interrotto.	PVD-multilayer coating- TiAlN P15-P2 5. Grade for medium machining of steel in both uninterrupted and heavy interrupted cutting conditions.				Vc 80÷115
HP2501					
Rivestimento PVD-multistrato - TiN P20-P30. Qualità universale per le lavorazioni generiche di Acciaio.	PVD-multilayer coating- TiN P20-P30. Grade for medium machining of steel.				
HP2502					
Rivestimento CVD-multistrato - TiAlN P15-P25. Qualità universale per le lavorazioni generiche di Acciaio di semi-finitura. Adatta anche per lavorazioni a taglio interrotto.	CVD-multilayer coating- TiAlN P15-P25. Grade for medium machining of steel in both uninterrupted and heavy interrupted cutting conditions.	Vc 180÷300	Vc 80÷200		
HP2506					
Rivestimento PVD-multistrato - AlTiN P20-P30. Qualità per la sgrossatura di Acciaio. Resistente al taglio interrotto ed in condizioni instabili di lavoro.	PVD-multilayer coating - AlTiN P20-P30. Grade for heavy roughing applications in steel materials. Tough for heavy interrupted cuts and unfavorable conditions.			Vc 190÷300	

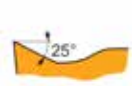
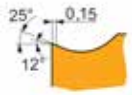
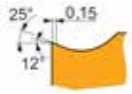
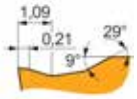
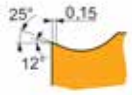
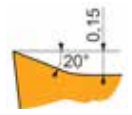
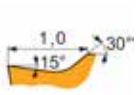
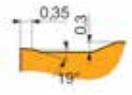
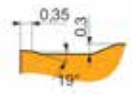
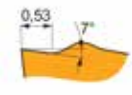
Per velocità foratura v. tabella foratura a pg. C 3 - For drilling cutting speed see chart at pg. C 3

QAULITÀ E VELOCITÀ | QUALITIES AND CUTTING SPEED

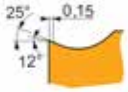
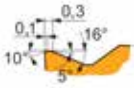
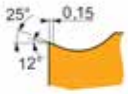
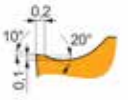
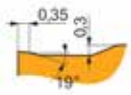
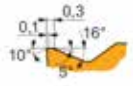
		TORNITURA POSITIVA POSITIVE TURNING	TORNITURA NEGATIVA NEGATIVE TURNING	FRESATURA - MILLING	FILETTATURA THREADING
HP2551					
Rivestimento PVD-multistrato - TiAlN P10-P20. Qualità universale per filettatura fresata, per le lavorazioni generiche di Acciaio e leghe di acciaio.	PVD-multilayer coating- TiAlN P10-P20. Grade for medium thread mill machining of steel and steel alloys.				Vc 70÷180
HP2559					
Rivestimento PVD-multistrato - TiN P20-P30. Qualità universale per svariati campi applicativi nella lavorazione di acciaio e materiali da fusione. È inoltre idoneo ad alcune lavorazioni di acciaio inossidabile.	PVD-multilayer coating - TiN P20-P30. This multi purpose grade excels due to its versatile application area in steel and cast materials. It is also very suitable for machining stainless steel.			Vc 80÷150	
HP2560					
Rivestimento PVD-multistrato - TiAlN P20-P30. Qualità universale per svariati campi applicativi nella lavorazione di acciaio e materiali da fusione. È inoltre idoneo ad alcune lavorazioni di acciaio inossidabile.	PVD-multilayer coating - TiAlN P20-P30. This multi purpose grade excels due to its versatile application area in steel and cast materials. It is also very suitable for machining stainless steel.			Vc 100÷180	
HP3001					
Rivestimento CVD-multistrato - TiAlN P25-P35. Qualità universale per svariati campi applicativi nella lavorazione di acciaio e materiali da fusione. È inoltre idoneo ad alcune lavorazioni di acciaio inossidabile.	CVD-multilayer coating - TiAlN P25-P35. This multi purpose grade excels due to its versatile application area in steel and cast materials. It is also very suitable for machining stainless steel.			Vc 180÷240	
HP3051					
Rivestimento PVD - TiN P25-P35. Qualità universale per acciai inossidabili e acciai legati.	PVD coating - TiN P25-P35. Universal grade for stainless steels and alloyed steels.			Vc 100÷180	
HC1510					
Rivestimento PVD - TiN P10-P20. Qualità CERMET micrograna con alta resistenza all'usura e tenacità per la lavorazione di acciaio, fusione di acciaio e ghisa sferoidale. Adatto a finitura e semi-finitura.	PVD- coating - TiN P10-P20. Fine grain CERMET. Grade with high wear resistance and toughness for machining steel, cast steel, spheroidal cast iron. For finishing and medium machining.	Vc 80÷250		Vc 150÷300	
HX2510					
Rivestimento PVD-multistrato - AlTiN M20-M30. Grado resistente all'usura per la lavorazione di acciaio, fusioni, acciaio inossidabile, Superleghe.	PVD-multilayer coating - AlTiN M20-M30. High wear resistant grade for machining steel, cast steel, stainless steel and high temperature super alloys.			Vc 80÷150	
HX3510					
Rivestimento PVD-multistrato - TiAlN M25-M35, Grado resistente all'usura per la lavorazione di acciaio, fusioni, acciaio inossidabile, Superleghe.	PVD-multilayer coating - TiAlN M25-M35. High wear resistant grade for machining steel, cast steel, stainless steel and high temperature super alloys.			Vc 80÷150	

Per velocità foratura v. tabella foratura a pg. C 3 - For drilling cutting speed see chart at pg. C 3

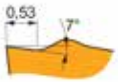
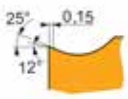
TORNITURA POSITIVA | POSITIVE TURNING

CODICE ROMPITRUCIOLO CHIP BREAKER CODE	TIPO ROMPITRUCIOLO CHIP BREAKER TYPE	PARAMETRI TAGLIO CUTTING PARAMETERS	RIVESTIMENTO COATING
AL		f 0,06÷0,40 - ap 0,3÷4,0	NUDO LAPPATO - UNCOATED LAPPED
NE		f 0,10÷0,35 - ap 0,2÷4,5	CVD - TiAlN
NE		f 0,10÷0,35 - ap 0,2÷4,5	CVD - TiAlN
NY		f 0,05÷0,40 - ap 0,10÷1,50	PVD - AlTiN
NE		f 0,10÷0,35 - ap 0,2÷4,5	PVD - AlTiN
L/R		f 0,05÷0,20 - ap 0,1÷0,25	PVD - DEVIL
VS		f 0,15÷0,60 - ap 0,4÷4,0	CVD - TiAlN
SN		f 0,20÷0,40 - ap 1,5÷4,0	CVD - TiAlN
SN		f 0,15÷0,40 - ap 1,0÷4,0	CVD -TiAlN
GG3		f 0,03÷0,20 - ap 0,2÷2,5	PVD - TiN
L/R		f 0,05÷0,20 - ap 0,2÷2,5	PVD - TiN

TORNITURA NEGATIVA | NEGATIVE TURNING

CODICE ROMPITRUCIOLO CHIP BREAKER CODE	TIPO ROMPITRUCIOLO CHIP BREAKER TYPE	PARAMETRI TAGLIO CUTTING PARAMETERS	RIVESTIMENTO COATING
AL		f 0,10÷0,50 - ap 0,5÷4,0	NUDO LAPPATO - UNCOATED LAPPED
NE		f 0,10÷0,60 - ap 0,4÷5,0	CVD - TiAlN
FN		f 0,20÷0,60 - ap 1,0÷5,5	CVD - TiAlN
NE		f 0,10÷0,60 - ap 0,4÷5,0	CVD - TiAlN
NB		f 0,12÷0,65 - ap 0,5÷4,0	PVD - AlTiN
IB/IT		f 0,12÷0,35 - ap 0,5÷3,5	PVD - TiAlN
SN		f 0,15÷0,40 - ap 0,8÷4,5	CVD -TiAlN
HI		f 0,30÷0,60 - ap 0,1÷6,0	CVD - TiAlN

FORATURA | DRILLING

CODICE ROMPITRUCIOLO CHIP BREAKER CODE	TIPO ROMPITRUCIOLO CHIP BREAKER TYPE	PARAMETRI TAGLIO CUTTING PARAMETERS	RIVESTIMENTO COATING
EB		vd tab. foratura - see drilling chart	NUDO LAPPATO - UNCOATED LAPPED
D31		vd tab. foratura - see drilling chart	PVD - TiN PVD - TiAlN
ET		vd tab. foratura - see drilling chart	PVD - TiN
T		vd tab. foratura - see drilling chart	PVD - TiAlN

NOTE

IDENTIFICAZIONE INSERTI ISO1832 | INSERTS DESIGNATION ISO1832

C **N** **M** **G**

1 Forma inserto / Insert's shape
2 Angolo di spoglia / Relief angle
3 Tolleranza / Tolerance
4 Tipo di inserto / Insert type

1

C		Rombico Rhombic	80°
D			55°
E			75°
F			50°
V			35°
R		Rotondo Round	-
S		Quadrato Square	90°
T		Triangolare Triangular	60°
W		Trigono Trine	80°
A		Parallelogrammo Parallelogram	85°
B			82°
K			55°
H		Esagonale Hexagonal	120°
O		Ottogonale Octagonal	135°
P		Pentagonale Pentagonal	108°
L		Rettangolare Rectangular	90°
M		Rombico Rhombic	86°

2

A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Descrizione specifica / Specific

3

	Altezza sporgenza Overhang thickness	IC	Spessore Thickness
A	+/- 0.005	+/- 0.025	+/- 0.025
F	+/- 0.005	+/- 0.013	+/- 0.025
C	+/- 0.013	+/- 0.025	+/- 0.025
H	+/- 0.013	+/- 0.013	+/- 0.025
E	+/- 0.025	+/- 0.025	+/- 0.025
G	+/- 0.025	+/- 0.025	+/- 0.13
J*	+/- 0.005	da +/- 0.05 a +/- 0.15	+/- 0.025
K*	+/- 0.013	da +/- 0.05 a +/- 0.15	+/- 0.025
L*	+/- 0.025	da +/- 0.05 a +/- 0.15	+/- 0.025
M*	da +/- 0.08 a +/- 0.2	da +/- 0.05 a +/- 0.15	+/- 0.13
N*	da +/- 0.08 a +/- 0.2	da +/- 0.05 a +/- 0.15	+/- 0.025
U*	da +/- 0.13 a +/- 0.38	da +/- 0.08 a +/- 0.25	+/- 0.13

Altezza "m" su tagliente affilato
Height on cutting edge "m"

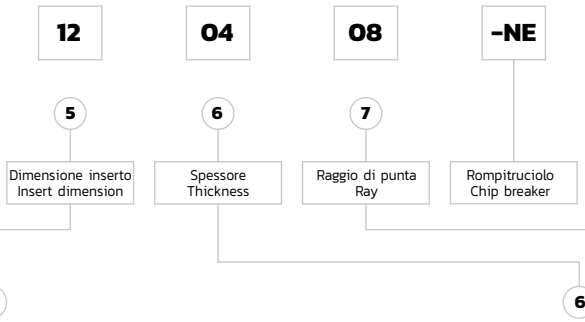
(*) Varia in fuzione della dimensione di IC
Variable - depending on IC
Vedere tabella sotto riportata
See chart below

IC (mm)	M	U
3.97	+/- 0.05	+/- 0.08
5.0		
5.56		
6.0		
6.35		
8.0		
9.525		
10.0		
12	+/- 0.08	+/- 0.13
12.7		
15.875	+/- 0.10	+/- 0.18
16.0		
19.05		
20.0		
25.0	+/- 0.13	+/- 0.25
25.4		
31.75	+/- 0.15	+/- 0.25
32		

4

	Foro Hole	Tipo di foro Hole type	Rompitruciolo Chip breaker	Forma Shape
N	Senza foro Without hole	-	Nessuno None	
R			Monolaterale Unilateral	
F			Bilaterale Bilateral	
A	Con foro - With hole	Foro diritto Straight hole	Nessuno None	
M			Monolaterale Unilateral	
G			Bilaterale Bilateral	
W		Foro diritto con svasatura Straight hole with chamfer (40°-60°)	Nessuno None	
T			Monolaterale Unilateral	
B		Foro diritto con svasatura Straight hole with chamfer (70°-90°)	Nessuno None	
H			Monolaterale Unilateral	
Q		Foro diritto con svasatura Straight hole with chamfer (40°-60°)	Nessuno None	
U			Bilaterale Bilateral	
C		Foro diritto con svasatura Straight hole with chamfer (70°-90°)	Nessuno None	
J			Bilaterale Bilateral	

IDENTIFICAZIONE INSERTI ISO1832 | INSERTS DESIGNATION ISO1832

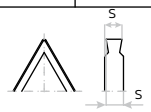


5

Forma Shape	ISO	Tagliente Cutter	IC	Forma Shape	ISO	Tagliente Cutter	IC	Forma Shape	ISO	Tagliente Cutter	IC
C	06	6.4	6.35	D	07	7.7	6.35	W	03	3.8	5.56
	08	8.0	6.35		11	11.6	9.525		04	4.3	6.35
	09	9.7	6.35		15	15.5	12.7		05	5.4	7.94
	12	12.9	6.35		19	19.4	15.875		06	6.5	9.525
	16	16.1	6.35	V	09	9.7	5.56		08	8.7	12.7
	19	19.3	6.35		11	11.1	6.35		10	10.9	15.875
S	06	6.35	6.35		16	16.6	9.525	R	08	8.0	8.0
	S7	7.14	7.14	T	06	6.9	3.97		10	10	10
	07	7.94	7.94		08	8.2	4.76		12	12	12
	09	9.525	9.525		09	9.6	5.56		12	12.7	12.7
	12	12.7	12.7		11	11	6.35		15	15.875	15.875
	15	15.875	15.875		16	16.5	9.525		16	16	16
	19	19.05	19.05		22	22	12.7		19	19.05	19.05
	25	25.4	25.4		27	27.5	15.875		25	25	25
	31	31.75	31.75		33	33	19.05		25	25.4	25.4

6

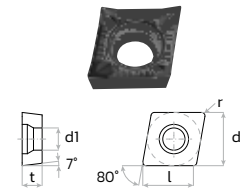
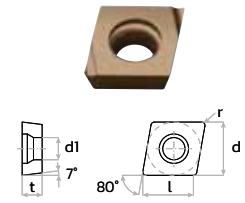
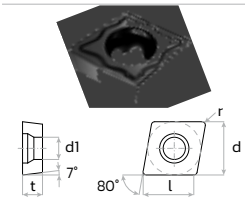
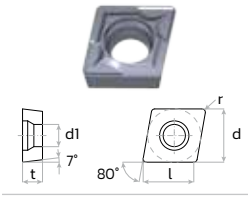
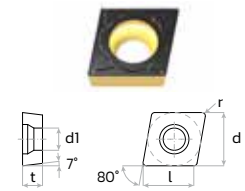
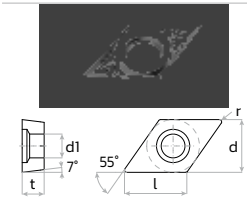
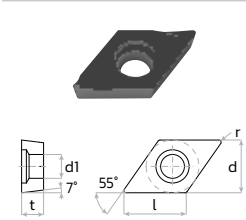
ISO	Spessore Thickness (mm)
01	1.59
02	2.38
T3	2.78
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
09	9.52



7

ISO	Raggio Ray (mm)
00	Tagliente affilato Shaped cutter
01	0.1
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
24	2.4
32	3.2
M0	Inserto tondo Round insert (metrico-metric)
00	Inserto tondo Round insert (pollici-inches)

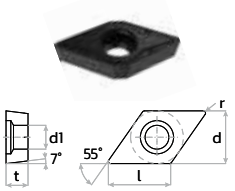
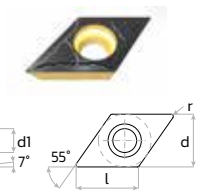
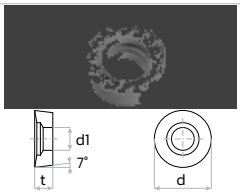
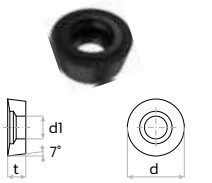
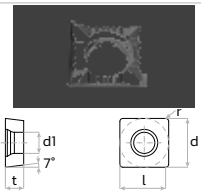
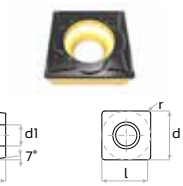
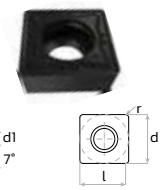
TORNITURA | TURNING
inserti positivi | positive insert

	ARTICOLO	DIMENSIONI - DIMENSIONS					HP1502	HP2502	HM2510	HM3001	HM3055	HK1005	HK1511	HK2511	HN10	HC1510
		l	d	t	r	d1										
	CCGT 060204-AL	6,5	6,35	2,38	0,4	2,8									■	
	09T304-AL	9,7	9,525	3,97	0,4	4,4									■	
	09T308-AL	9,7	9,525	3,97	0,8	4,4									■	
	120404-AL	12,9	12,7	4,76	0,4	5,5									■	
	120408-AL	12,9	12,7	4,76	0,8	5,5									■	
	CCGT 060202-L	6,5	6,35	2,38	0,2	2,8				■						
	060204-L	6,5	6,35	2,38	0,4	2,8				■						
	09T304-L	9,7	9,525	3,97	0,4	4,4				■						
	09T308-L	9,7	9,525	3,97	0,8	4,4				■						
	060204-R	6,5	6,35	2,38	0,4	2,8				■						
	09T304-R	9,7	9,525	3,97	0,4	4,4				■						
	CCMT 060204-SN	6,5	6,35	2,38	0,4	2,8							■			
	09T304-SN	9,7	9,525	3,97	0,4	4,4							■			
	09T308-SN	9,7	9,525	3,97	0,8	4,4							■			
	120404-SN	12,9	12,7	4,76	0,4	5,5							■			
	120408-SN	12,9	12,7	4,76	0,8	5,5							■			
	CCMT 060204-NY	6,5	6,35	2,38	0,4	2,8			■							
	09T304-NY	9,7	9,525	3,97	0,4	4,4			■							
	09T308-NY	9,7	9,525	3,97	0,8	4,4			■							
	CCMT 060204-NE	6,5	6,35	2,38	0,4	2,8	■									
	09T304-NE	9,7	9,525	3,97	0,4	4,4	■									
	09T308-NE	9,7	9,525	3,97	0,8	4,4	■	■								
	120404-NE	12.9	12.7	4.76	0.4	5.5	■		■							
	120408-NE	12,9	12,7	4,76	0,8	5,5	■	■	■							
	DCGT 070204-AL	7,8	6,35	2,38	0,4	2,8									■	
	11T304-AL	11,6	9,525	3,97	0,4	4,4									■	
	11T308-AL	11,6	9,525	3,97	0,7	4,4									■	
	DCGT 070202-L	7,8	6,35	2,38	0,2	2,8				■						
	070204-L	7,8	6,35	2,38	0,4	2,8				■						
	11T304-L	11,6	9,525	3,97	0,4	4,4				■						
	11T308-L	11,6	9,525	3,97	0,7	4,4				■						
	070204-R	7,8	6,35	2,38	0,4	2,8				■						
	11T304-R	11,6	9,525	3,97	0,4	4,4				■						

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

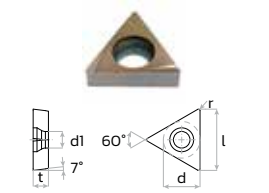
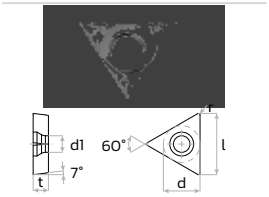
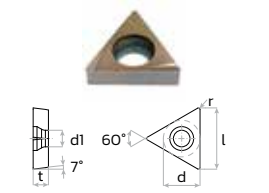
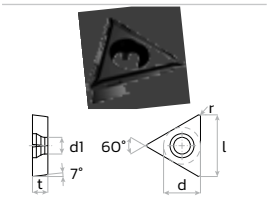
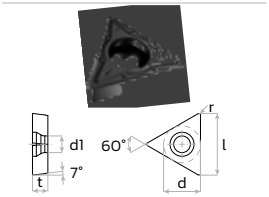
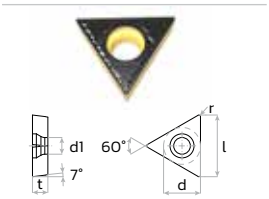
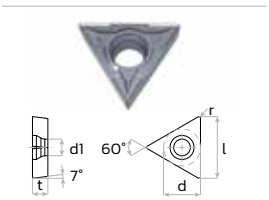
TORNITURA | TURNING
inserti positivi | positive insert

	ARTICOLO	DIMENSIONI - DIMENSIONS					HP1502	HP2502	HM2510	HM3001	HM3055	HK1005	HK1511	HK2511	HN10	HC1510
		l	d	t	r	d1										
	DCMT 11T304-SN	11,6	9,525	3,97	0,4	4,4							■			
	11T308-SN	11,6	9,525	3,97	0,8	4,4							■			
	DCMT 070204-NE	7,8	6,35	2,38	0,4	2,8			■							
	11T304-NE	11,6	9,525	3,97	0,4	4,4	■	■	■							
	11T308-NE	11,6	9,525	3,97	0,8	4,4	■	■	■							
	RCGT 0602M0-AL	-	6,0	2,38	-	2,2									■	
	0803M0-AL	-	8,0	3,18	-	3,35									■	
	10T3M0-AL	-	10,0	3,97	-	4,4									■	
	1204M0-AL	-	12,0	4,76	-	4,4									■	
	RCMT 0602M0E-VS	-	6,0	2,38	-	2,2					■					
	0803M0E-VS	-	8,0	3,18	-	3,35					■					
	10T3M0E-VS	-	10,0	3,97	-	4,4					■					
	1204M0E-VS	-	12,0	4,76	-	4,4					■					
	SCGT 09T304-AL	9,525	9,525	3,97	0,4	4,4									■	
	09T308-AL	9,525	9,525	3,97	0,8	4,4									■	
	120404-AL	12,7	12,7	4,76	0,4	5,5									■	
	120408-AL	12,7	12,7	4,76	0,8	5,5									■	
	SCMT 09T308-NE	9,525	9,525	3,97	0,8	4,4		■	■							
	120408-NE	12,7	12,7	4,76	0,8	5,5		■	■							
	SCMT 09T308-SN	9,525	9,525	3,97	0,8	4,4						■				
	120408-SN	12,7	12,7	4,76	0,8	5,5						■				

MATERIALI | MATERIALS

- ■ ***P rivestito*** *per acciaio*
  P coated *for steel*
- ■ ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ■ ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ■ ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ■ ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ■ ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

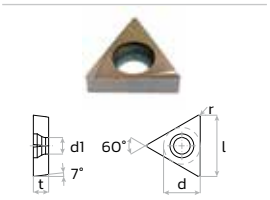
TORNITURA | TURNING
inserti positivi | positive insert

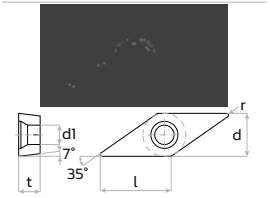
	ARTICOLO	DIMENSIONI - DIMENSIONS					HP1502	HP2502	HM2510	HM3001	HM3055	HK1005	HK1511	HK2511	HN10	HC1510
		l	d	t	r	d1										
	TBGT 060102-L	6,8	3,97	1,59	0,2	2,16				■						■
	TCGT 090202-AL	9,6	5,56	2,38	0,2	2,5									■	
	090204-AL	9,6	5,56	2,38	0,4	2,5									■	
	110204-AL	11,0	6,35	2,38	0,4	2,8									■	
	16T304-AL	16,5	9,525	3,97	0,4	4,4									■	
	16T308-AL	16,5	9,525	3,97	0,8	4,4									■	
	TCGT 090204-L	9,6	5,56	2,38	0,4	2,5				■						
	110204-L	11,0	6,35	2,38	0,4	2,8				■						
	16T304-L	16,5	9,525	3,97	0,4	4,4				■						
	16T308-L	16,5	9,525	3,97	0,8	4,4				■						
	090204-R	9,6	5,56	2,38	0,4	2,5				■						
	110204-R	11,0	6,35	2,38	0,4	2,8				■						
	16T304-R	16,5	9,525	3,97	0,4	4,4				■						
	TCMT 090204-GG3	9,6	5,56	2,38	0,4	2,5								■		
	110204-GG3	11,0	6,35	2,38	0,4	2,8								■		
	16T304-GG3	16,5	9,525	3,97	0,4	4,4								■		
	TCMT 16T308-SN	16,5	9,525	3,97	0,8	4,4							■			
	16T312-SN	16,5	9,525	3,97	1,2	4,4							■			
	TCMT 16T308-NE	16,5	9,525	3,97	0,8	4,4		■	■							
	16T304-NE	16,5	9,525	3,97	0,4	4,4	■									
	110204-NE	11,0	6,35	2,38	0,4	2,8	■									
	TCMT 06T104-NY	6.9	3.97	1.98	0,4	2.2			■							
	110204-NY	11,0	6,35	2,38	0,4	2,8			■							
	16T304-NY	16,5	9,525	3,97	0,4	4,4			■							
	16T308-NY	16,5	9,525	3,97	0,8	4,4			■							

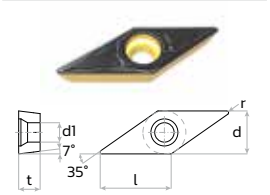
MATERIALI | MATERIALS

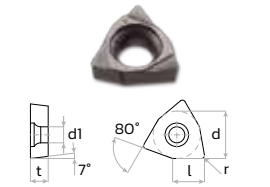
- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

TORNITURA | TURNING
inserti positivi | positive insert







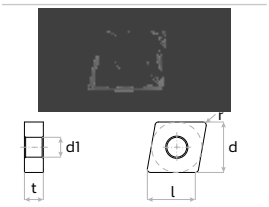
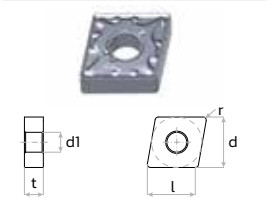
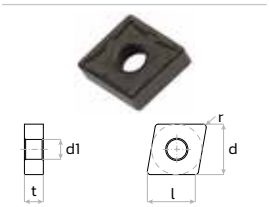
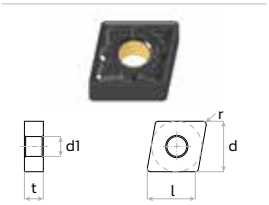
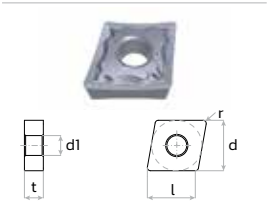
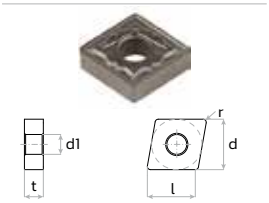
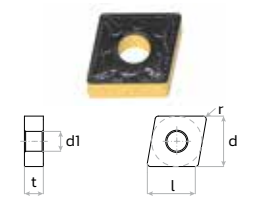


ARTICOLO		DIMENSIONI - DIMENSIONS					HP1502	HP2502	HM2510	HM3001	HM3055	HK1005	HK1511	HK2511	HN10	HC1510
		l	d	t	r	d1										
TPGT	080202-L	8,2	4,76	2,38	0,2	2,3										■
	080204-L	8,2	4,76	2,38	0,4	2,3				■						■
	090204-L	9,6	5,56	2,38	0,4	3,0				■						■
	110304-L	11,0	6,35	3,18	0,4	3,5				■						■
	160304-R	16,5	9,525	3,18	0,4	4,5										■
	160304-L	16,5	9,525	3,18	0,4	4,5										■
VCGT	110304-AL	11,0	6,35	3,18	0,4	3,4									■	
	110308-AL	11,0	6,35	3,18	0,8	3,4									■	
	160404-AL	16,5	9,525	4,76	0,4	4,4									■	
	160408-AL	16,5	9,525	4,76	0,8	4,4									■	
	220530-AL	22,1	12,7	5,56	3,0	5,6									■	
VCMT	110304-NE	11,0	6,35	3,18	0,4	3,4			■							
	160404-NE	16,5	9,525	4,76	0,4	4,4			■							
	160408-NE	16,5	9,525	4,76	0,8	4,4			■							
WCGT	020102-L	3,6	3,97	1,59	0,2	2,2										■
	020102-R	3,6	3,97	1,59	0,2	2,2										■

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

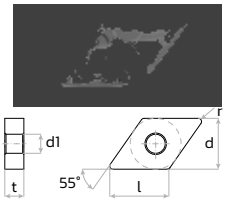
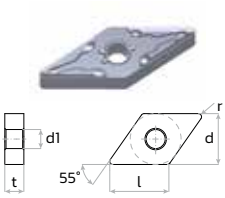
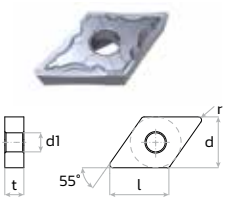
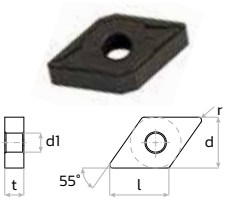
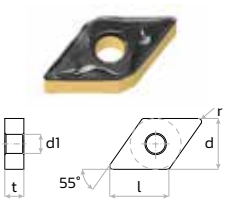
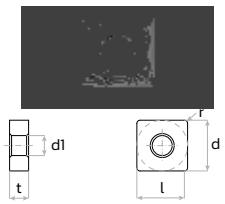
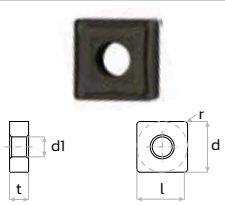
TORNITURA | TURNING
inserti negativi | negative insert

	ARTICOLO		DIMENSIONI - DIMENSIONS					HP1502	HP2011	HP2502	HM2510	HM3054	HK1511	HK2011	HN10
			l	d	t	r	d1								
	CNGG	120404-AL	12,9	12,7	4,76	0,4	5,16								■
		120408-AL	12,9	12,7	4,76	0,8	5,16								■
	CNMG	120404-NB	12,9	12,7	4,76	0,4	5,16				■				
		120408-NB	12,9	12,7	4,76	0,8	5,16				■				
	CNMG	120404-FN	12,9	12,7	4,76	0,4	5,16		■						
		120408-FN	12,9	12,7	4,76	0,8	5,16		■						
		120412-FN	12,9	12,7	4,76	1,2	5,16		■						
	CNMG	120408-HI	12,9	12,7	4,76	0,8	5,16							■	
		120412-HI	12,9	12,7	4,76	1,2	5,16							■	
	CNMG	120404-IB	12,9	12,7	4,76	0,4	5,16					■			
		120408-IB	12,9	12,7	4,76	0,8	5,16					■			
	CNMG	120408-IT	12,9	12,7	4,76	0,8	5,16					■			
	CNMG	120404-NE	12,9	12,7	4,76	0,4	5,16	■							
		120408-NE	12,9	12,7	4,76	0,8	5,16	■		■					

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

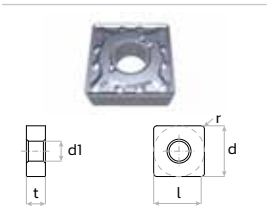
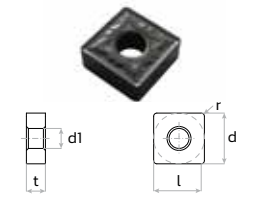
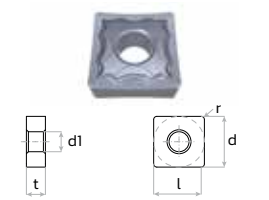
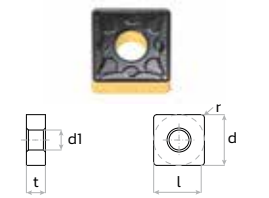
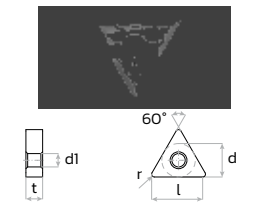
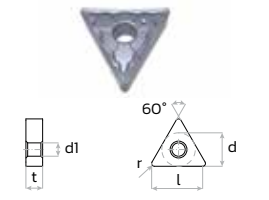
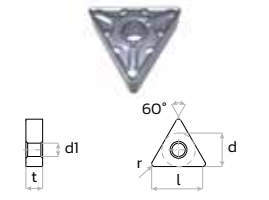
TORNITURA | TURNING
inserti negativi | negative insert

	ARTICOLO		DIMENSIONI - DIMENSIONS					HP1502	HP2011	HP2502	HM2510	HM3054	HK1511	HK2011	HN10
			l	d	t	r	d1								
	DNGG	150604-AL	15,5	12,7	6,35	0,4	5,16								■
		150608-AL	15,5	12,7	6,35	0,8	5,16								■
	DNMG	150604-NB	15,5	12,7	6,35	0,4	5,16				■				
		150608-NB	15,5	12,7	6,35	0,8	5,16				■				
	DNMG	150608-IT	15,5	12,7	6,35	0,8	5,16					■			
	DNMG	150608-FN	15,5	12,7	6,35	0,8	5,16						■		
	DNMG	150604-NE	15,5	12,7	6,35	0,4	5,16	■							
		150608-NE	15,5	12,7	6,35	0,8	5,16	■							
	SNGG	120408-AL	12,7	12,7	4,76	0,8	5,16								■
	SNMG	120408-FN	12,7	12,7	4,76	0,8	5,16		■				■		

MATERIALI | MATERIALS

- ■ ***P rivestito*** *per acciaio*
  P coated *for steel*
- ■ ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ■ ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ■ ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ■ ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ■ ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

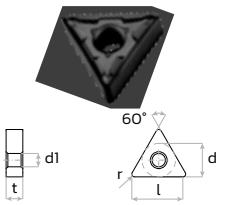
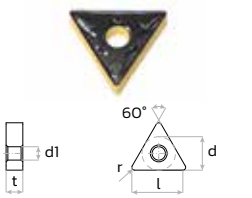
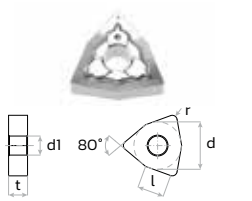
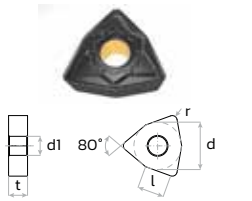
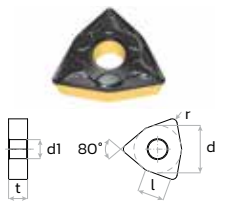
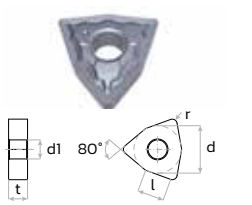
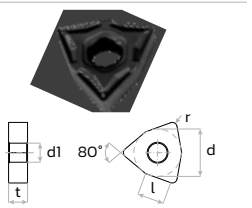
TORNITURA | TURNING
inserti negativi | negative insert

	ARTICOLO	DIMENSIONI - DIMENSIONS					HP1502	HP2011	HP2502	HM2510	HM3054	HK1511	HK2011	HN10
		l	d	t	r	d1								
	SNMG 120408-NB	12,7	12,7	4,76	0,8	5,16				■				
	SNMG 120408-IT	12,7	12,7	4,76	0,8	5,16					■			
	SNMG 120408-IB	12,7	12,7	4,76	0,8	5,16					■			
	SNMG 120408-NE	12,7	12,7	4,76	0,8	5,16	■							
	TNGG 160404-AL	15,5	9,525	4,76	0,4	3,81								■
	160408-AL	14,5	9,525	4,76	0,8	3,81								■
	TNMG 160408-IB	14,5	9,525	4,76	0,8	3,81					■			
	TNMG 160404-NB	15,5	9,525	4,76	0,4	3,81				■				
	160408-NB	14,5	9,525	4,76	0,8	3,81				■				

MATERIALI | MATERIALS

- ■ ***P rivestito*** *per acciaio*
  P coated *for steel*
- ■ ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ■ ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ■ ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ■ ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ■ ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

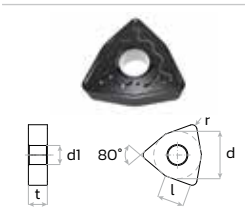
TORNITURA | TURNING
inserti negativi | negative insert

	ARTICOLO		DIMENSIONI - DIMENSIONS					HP1502	HP2011	HP2502	HM2510	HM3054	HK1511	HK2011	HN10
			l	d	t	r	d1								
	TNMG	160408-FN	14,5	9,525	4,76	0,8	3,81		■				■		
		220408-FN	20.0	12.7	4.76	0.8	5.16		■						
	TNMG	160404-NE	15,5	9,525	4,76	0,4	3,81	■							
		160408-NE	14,5	9,525	4,76	0,8	3,81	■							
	WNGG	080404-AL	8,7	12,7	4,76	0,4	5,16								■
		080408-AL	8,7	12,7	4,76	0,8	5,16								■
	WNMG	080404-NB	8,7	12,7	4,76	0,4	5,16				■				
		080408-NB	8,7	12,7	4,76	0,8	5,16				■				
	WNMG	080404-NE	8,7	12,7	4,76	0,4	5,16	■							
		080408-NE	8,7	12,7	4,76	0,8	5,16	■							
	WNMG	080404-IB	8,7	12,7	4,76	0,4	5,16					■			
		080408-IB	8,7	12,7	4,76	0,8	5,16					■			
	WNMG	080408-FN	8,7	12,7	4,76	0,8	5,16		■						

MATERIALI | MATERIALS

- ■ ***P rivestito*** *per acciaio*
  P coated *for steel*
- ■ ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ■ ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ■ ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ■ ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ■ ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

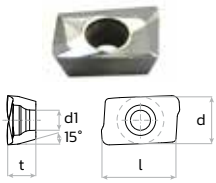
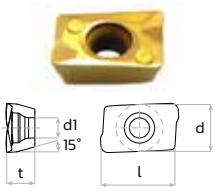
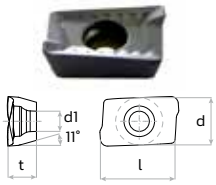
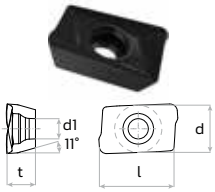
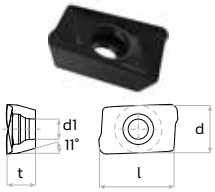
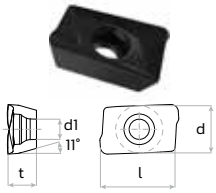
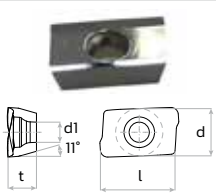
TORNITURA | TURNING
inserti negativi | negative insert



ARTICOLO	DIMENSIONI - DIMENSIONS					HP1502	HP2011	HP2502	HM2510	HM3054	HK1511	HK2011	HN10
	l	d	t	r	d1								
WNMG 080408-HI	8,7	12,7	4,76	0,8	5,16							■	
080412-HI	8,7	12,7	4,76	1,2	5,16							■	

MATERIALI | MATERIALS

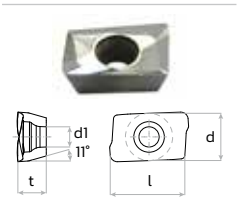
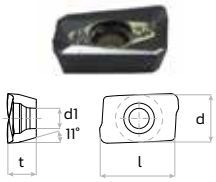
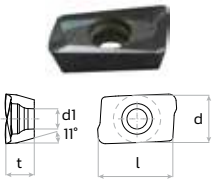
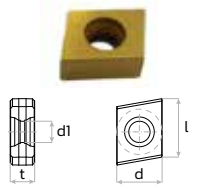
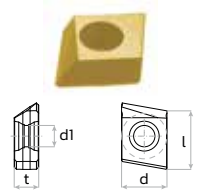
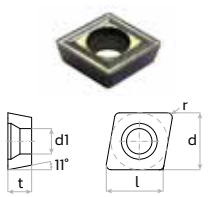
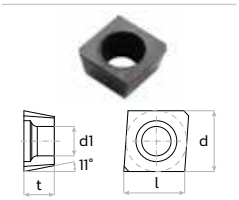
- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

	ARTICOLO	DIMENSIONI - DIMENSIONS						HP1015	HP2506	HP2559	HP2560	HP3001	HP3051	HP3056	HX2510	HX3510	HM3101	HM4060	HM4061	HN10	HK1006	HC1510
		l	d	t	r	d1	a															
	ADGT 1505 PDFR	15,0	9,525	5,6	0,8	4,5														■		
	ADKT 1505 PDR	15,0	9,525	5,6	0,8	4,5				■	■											
	APKT 1003 PDER-S	10,5	6,7	3,5	0,5	2,85												■				
	1604 PDER-S	16,4	9,525	4,76	0,8	4,4												■				
	APKT 1003 PDSR-41	10,5	6,7	3,5	0,5	2,85									■							
	1604 PDSR-41	16,4	9,525	4,76	0,8	4,4									■							
	APKT 100305 PDTR	10,5	6,7	3,5	0,5	2,85										■						
	160408 PDTR	16,4	9,525	4,76	0,8	4,4										■						
	APKT 1003 PDER-M	10,5	6,7	3,5	0,5	2,85															■	
	1604 PDER-M	16,4	9,525	4,76	0,8	4,4															■	
	APGT 1604 PDFR-AL	16,4	9,525	4,76	0,4	4,4														■		

MATERIALI | MATERIALS

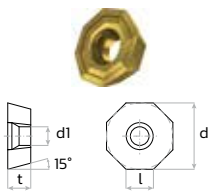
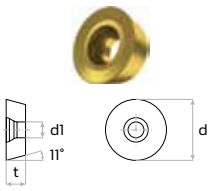
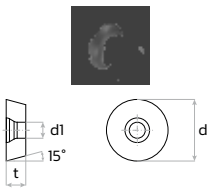
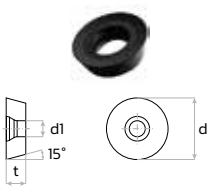
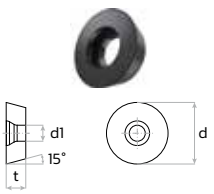
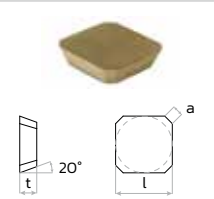
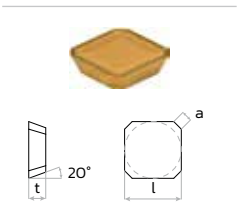
- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

FRESATURA | MILLING

	ARTICOLO	DIMENSIONI - DIMENSIONS						HP1015	HP2506	HP2559	HP2560	HP3001	HP3051	HP3056	HX2510	HX3510	HM3101	HM4060	HM4061	HN10	HK1006	HC1510
		l	d	t	r	d1	a															
	APGT 1003 PDER-AL	11	6,7	3,5	0,4	2,85														■		
	12T3 PDFR-AL	11,3	6,2	3,5	0,8	2,85														■		
	1604 PDFR-AL2	16,4	9,525	4,76	0,8	4,4														■		
	APLT 12T3 PDER-N3	11,2	6,2	3,5	0,8	2,85									■							
	APKT 1604 PDTR-MN0B	16,4	9,525	4,76	0,8	4,4											■					
	CNEU 1205	12,5	10	5,4		4,4							■								■	
	CNEX 1205	12,5	10	5,4		4,4							■								■	
	CPMT 05T104-EN	5,6	5,56	1,98	0,4	2,5										■						
	MPFW 0402 PPTR	4,76	4,76	2,38		2,4										■						
	0402 PPTL	4,76	4,76	2,38		2,4										■						

MATERIALI | MATERIALS

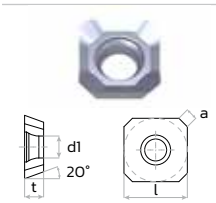
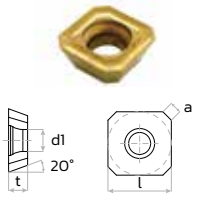
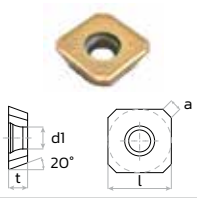
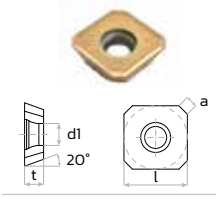
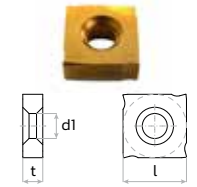
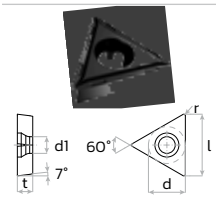
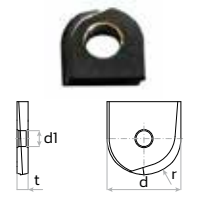
- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

	ARTICOLO	DIMENSIONI - DIMENSIONS						HP1015	HP2506	HP2559	HP2560	HP3001	HP3051	HP3056	HX2510	HX3510	HM3101	HM4060	HM4061	HN10	HK1006	HC1510
		l	d	t	r	d1	a															
	ODMT 0605 ZZN	6,5	15,87	5,56		5,5						■							■			
	RPET 1505 M0S-M		15,78	5,56		5,5						■							■			
	RDHT 0702 M0-FA		7	2,38		2,8														■		
	1003 M0-FA		10	3,18		3,9														■		
	12T3 M0-FA		12	3,97		3,9														■		
	1604 M0-FA		16	4,76		5,2														■		
	RDGT 0702 M0T		7	2,38		2,8												■				
	1003 M0T		10	3,18		3,9												■				
	12T3 M0T		12	3,97		3,9												■				
	1604 M0T		16	4,76		5,2												■				
	RDHX 0702 M0T		7	2,38		2,8			■													
	1003 M0T		10	3,18		3,9			■													
	12T3 M0T		12	3,97		3,9			■													
	1604 M0T		16	4,76		5,2			■													
	SEEN 1203 AFFN	12,7	12,7	3,18			2,3								■	■						
	1203 AFTN	12,7	12,7	3,18			2,3															■
	SEKR 1203 AFTN	12,7	12,7	3,18			2,3									■						

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

FRESATURA | MILLING

	ARTICOLO		DIMENSIONI - DIMENSIONS						HP1015	HP2506	HP2559	HP2560	HP3001	HP3051	HP3056	HX2510	HX3510	HM3101	HM4060	HM4061	HN10	HK1006	HC1510
			l	d	t	r	d1	a															
	SEGT	1204 AFFN-AL	12,7	12,7	4,76		5,5	3													■		
	SEKT	1204 AFSN	12,7	12,7	4,76		5,5	3								■		■					
	SEMT	13T3 AEFN	13,4	13,4	3,97		4,2	2,5								■		■					
	SEET	13T3 M-PM	13,4	13,4	3,97		4,2	2,5												■			
	SNHX	1102	11		2,3		4,3				■												
		1103	11		2,7		4,3				■												
		1203	12,7		3,18		4,8				■												
		1204	12,7		4		4,8				■												
		1245	12,7		4,5		4,8				■												
		1205	12,7		5,4		4,8				■												
		1207	12,7		7		4,8				■												
	TCMX	16T3	16.5	9.525	3.97	0.8	4.4				■												
	WPR	12 ELIX		12	2,48	6	5		■														
		16 ELIX		16	2,98	8	5		■														
		20 ELIX		20	3	10	5		■														
		25 ELIX		25	4	12,5	6		■														
		32 ELIX		32	5	16	8		■														

MATERIALI | MATERIALS

■ ***P rivestito*** *per acciaio*
P coated *for steel*

■ ***K rivestito*** *per ghisa*
K coated *for cast iron*

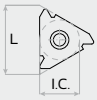
■ ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
CERMET coated *for steeel-stainless steel, spheroidal cast iron*

■ ***M rivestito*** *per acciaio-acciaio inossidabile*
M coated *for steel-stainless steel*

■ ***N nudo*** *per alluminio-materiale non ferrosi*
N uncoated *for aluminum-non ferrous materials*

■ ***X rivestito*** *per acciaio-acciaio inox-superleghe*
X coated *for steel-stainless steel-super alloys*

IDENTIFICAZIONE INSERTO TORNITURA FILETTI | THREAD TURNING INSERTS CODES

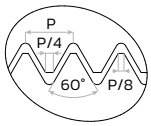
	16	E	R		1.0	ISO	HP2052
M = Maggiorato / Plus		E = Esterno / External I = Interno / Internal	R = Destro / Right	X = Rompitruciolo / Chip-breacker	**Passo / Pitch** in millimetri o filetti per pollice In mm or threads per inch	**Profilo / Profiles** ISO W = Whitworth	**Rivestimento / Coating** HP1551 Acciai legati HP2052 Generico HM3053 Inox HP1551 Alloy steel HP2052 Generic HM3053 Inox

L	I.C.
11	1/4"
16	3/8"
22	1/2"

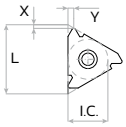
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

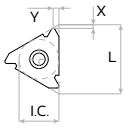
FILETTATURA | THREADING
profilo parziale 60° | partial thread 60°



esterno | external

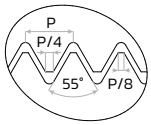


interno | internal

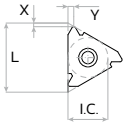


L	I.C.	PASSO PITCH	TPI	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551
11	1/4	0,5-1,5	48-16	**11 ER A60**	0,8	0,9		**11 IR A60**	0,8	0,9	
16	3/8	0,5-1,5	48-16	**16 ER A60**	0,8	0,9		**16 IR A60**	0,8	0,9	
		1,75-3,0	14-8	**16 ER G60**	1,2	1,7		**16 IR G60**	1,2	1,7	
		0,5-3,0	48-8	**16 ER AG60**	1,2	1,7		**16 IR AG60**	1,2	1,7	
22	1/2	3,5-5,0	7-5	**22 ER N60**	1,7	2,5		**22 IR N60**	1,7	2,5	

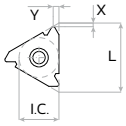
FILETTATURA | THREADING
profilo parziale 55° | partial thread 55°



esterno | external



interno | internal



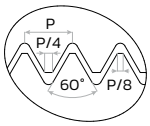
L	I.C.	PASSO PITCH	TPI	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551
11	1/4	0,5-1,5	48-16	**11 ER A55**	0,8	0,9		**11 IR A55**	0,8	0,9	
16	3/8	0,5-3,0	48-8	**16 ER AG55**	1,2	1,7		**16 IR AG55**	1,2	1,7	
22	1/2	3,5-5,0	7-5	**22 ER N55**	1,7	2,5		**22 IR N55**	1,7	2,5	

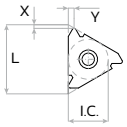
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

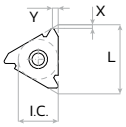
FILETTATURA | THREADING
ISO metrica | ISO metric

esterno | external





interno | internal



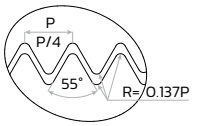
L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
11	1/4	0,35	11 ER 0,35 ISO	0,8	0,4				11 IR 0,35 ISO	0,8	0,3			
		0,4	11 ER 0,4 ISO	0,7	0,4				11 IR 0,4 ISO	0,8	0,4			
		0,45	11 ER 0,45 ISO	0,7	0,4				11 IR 0,45 ISO	0,8	0,4			
		0,5	11 ER 0,5 ISO	0,6	0,6				11 IR 0,5 ISO	0,6	0,6			
		0,6	11 ER 0,6 ISO	0,6	0,6				11 IR 0,6 ISO	0,6	0,6			
		0,7	11 ER 0,7 ISO	0,6	0,6				11 IR 0,7 ISO	0,6	0,6			
		0,75	11 ER 0,75 ISO	0,6	0,6				11 IR 0,75 ISO	0,6	0,6			
		0,8	11 ER 0,8 ISO	0,6	0,6				11 IR 0,8 ISO	0,6	0,6			
		1,0	11 ER 1,0 ISO	0,7	0,7				11 IR 1,0 ISO	0,6	0,7			
		1,25	11 ER 1,25 ISO	0,8	0,9				11 IR 1,25 ISO	0,8	0,8			
		1,5	11 ER 1,5 ISO	0,8	1,0				11 IR 1,5 ISO	0,8	1,0			
		1,75	11 ER 1,75 ISO	0,8	1,1				11 IR 1,75 ISO	0,8	1,1			
		2,0	-	-	-				11 IR 2,0 ISO	0,8	0,9			
		2,5	-	-	-				11 IR 2,5 ISO	0,8	1,2			
16	3/8	0,35	16 ER 0,35 ISO	0,8	0,4				16 IR 0,35 ISO	0,8	0,3			
		0,4	16 ER 0,4 ISO	0,7	0,4				16 IR 0,4 ISO	0,8	0,4			
		0,45	16 ER 0,45 ISO	0,7	0,4				16 IR 0,45 ISO	0,8	0,4			
		0,5	16 ER 0,5 ISO	0,6	0,6				16 IR 0,5 ISO	0,6	0,6			
		0,6	16 ER 0,6 ISO	0,6	0,6				16 IR 0,6 ISO	0,6	0,6			
		0,7	16 ER 0,7 ISO	0,6	0,6				16 IR 0,7 ISO	0,6	0,6			
		0,75	16 ER 0,75 ISO	0,6	0,6				16 IR 0,75 ISO	0,6	0,6			
		0,8	16 ER 0,8 ISO	0,6	0,6				16 IR 0,8 ISO	0,6	0,6			
		1,0	16 ER 1,0 ISO	0,7	0,7				16 IR 1,0 ISO	0,6	0,7			
		1,25	16 ER 1,25 ISO	0,8	0,9				16 IR 1,25 ISO	0,8	0,9			
		1,5	16 ER 1,5 ISO	0,8	1,0				16 IR 1,5 ISO	0,8	1,0			
		1,75	16 ER 1,75 ISO	0,9	1,2				16 IR 1,75 ISO	0,9	1,2			
		2,0	16 ER 2,0 ISO	1,0	1,3				16 IR 2,0 ISO	1,0	1,3			
		2,5	16 ER 2,5 ISO	1,1	1,5				16 IR 2,5 ISO	1,1	1,5			
		3,0	16 ER 3,0 ISO	1,2	1,6				16 IR 3,0 ISO	1,1	1,5			
		3,5	16 ER 3,5 ISO	1,2	1,7				16 IR 3,5 ISO	1,2	1,7			
22	1/2	3,5	22 ER 3,5 ISO	1,6	2,3				22 IR 3,5 ISO	1,6	2,3			
		4,0	22 ER 4,0 ISO	1,6	2,3				22 IR 4,0 ISO	1,6	2,3			
		4,5	22 ER 4,5 ISO	1,7	2,4				22 IR 4,5 ISO	1,6	2,4			
		5,0	22 ER 5,0 ISO	1,7	2,5				22 IR 5,0 ISO	1,6	2,3			

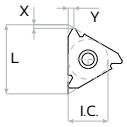
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

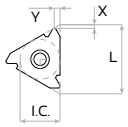
FILETTATURA | THREADING
whitworth 55° | whitworth 55°

esterno | external





interno | internal



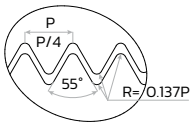
L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
11	1/4	72	11 ER 72 W	0,7	0,4				11 IR 72 W	0,7	0,4			
		60	11 ER 60 W	0,7	0,4				11 IR 60 W	0,7	0,4			
		56	11 ER 56 W	0,7	0,4				11 IR 56 W	0,7	0,4			
		48	11 ER 48 W	0,6	0,6				11 IR 48 W	0,6	0,6			
		40	11 ER 40 W	0,6	0,6				11 IR 40 W	0,6	0,6			
		36	11 ER 36 W	0,6	0,6				11 IR 36 W	0,6	0,6			
		32	11 ER 32 W	0,6	0,6				11 IR 32 W	0,6	0,6			
		28	11 ER 28 W	0,6	0,7				11 IR 28 W	0,6	0,7			
		26	11 ER 26 W	0,7	0,7				11 IR 26 W	0,7	0,7			
		24	11 ER 24 W	0,7	0,8				11 IR 24 W	0,7	0,8			
		22	11 ER 22 W	0,8	0,9				11 IR 22 W	0,8	0,9			
		20	11 ER 20 W	0,8	0,9				11 IR 20 W	0,8	0,9			
		19	11 ER 19 W	0,8	1,0				11 IR 19 W	0,8	1,0	■		
		18	11 ER 18 W	0,8	1,0				11 IR 18 W	0,8	1,0			
		16	11 ER 16 W	0,9	1,1				11 IR 16 W	0,9	1,1	■		
		14	11 ER 14 W	0,9	1,1				11 IR 14 W	0,9	1,1	■		
		12	11 ER 12 W	1,0	1,1				11 IR 12 W	1,0	1,1			
		11	11 ER 11 W	0,9	1,2				11 IR 11 W	0,9	1,2			
16	3/8	72	16 ER 72 W	0,7	0,4				16 IR 72 W	0,7	0,4			
		60	16 ER 60 W	0,7	0,4				16 IR 60 W	0,7	0,4			
		56	16 ER 56 W	0,7	0,4				16 IR 56 W	0,7	0,4			
		48	16 ER 48 W	0,6	0,6				16 IR 48 W	0,6	0,6			
		40	16 ER 40 W	0,6	0,6				16 IR 40 W	0,6	0,6			
		36	16 ER 36 W	0,6	0,6				16 IR 36 W	0,6	0,6			
		32	16 ER 32 W	0,6	0,6				16 IR 32 W	0,6	0,6			
		28	16 ER 28 W	0,6	0,7	■			16 IR 28 W	0,6	0,7			
		26	16 ER 26 W	0,7	0,7				16 IR 26 W	0,7	0,7			
		24	16 ER 24 W	0,7	0,8				16 IR 24 W	0,7	0,8			
		22	16 ER 22 W	0,8	0,9				16 IR 22 W	0,8	0,9			
		20	16 ER 20 W	0,8	0,9				16 IR 20 W	0,8	0,9			
		19	16 ER 19 W	0,8	1,0	■			16IR 19 W	0,8	1,0	■		■
		18	16 ER 18 W	0,8	1,0				16 IR 18 W	0,8	1,0			
		16	16 ER 16 W	0,9	1,1	■		■	16 IR 16 W	0,9	1,1	■		■
		14	16 ER 14 W	0,9	1,1	■			16 IR 14 W	0,9	1,1	■		■
		12	16 ER 12 W	1,0	1,1	■		■	16 IR 12 W	1,0	1,1			
		11	16 ER 11 W	0,9	1,2	■		■	16 IR 11 W	0,9	1,2	■		■
		10	16 ER 10 W	1,1	1,5	■			16 IR 10 W	1,1	1,5			
		9	16 ER 9 W	1,1	1,5	■		■	16 IR 9 W	1,2	1,7			

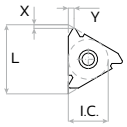
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

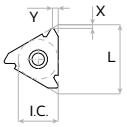
FILETTATURA | THREADING
whitworth 55° | whitworth 55°

esterno | external





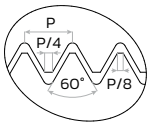
interno | internal

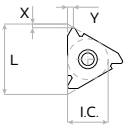


L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	8	**16 ER 8 W**	1,2	1,7				**16 IR 8 W**	1,2	1,5			
22	1/2	7	**22 ER 7 W**	1,6	2,3				**22 IR 7 W**	1,6	2,3			
		6	**22 ER 6 W**	1,6	2,3				**22 IR 6 W**	1,6	2,3			
		5	**22 ER 5 W**	1,6	2,3				**22 IR 5 W**	1,7	2,4			

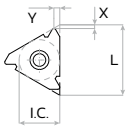
FILETTATURA | THREADING
ISO tipo M | ISO M type

esterno | external





interno | internal



L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	0,5	**M 16 ER 0,5 ISO**	1,3	0,6				**M 16 IR 0,5 ISO**	1,3	0,6			
		0,75	**M 16 ER 0,75 ISO**	1,3	0,6				**M 16 IR 0,75 ISO**	1,3	0,6			
		1,0	**M 16 ER 1,0 ISO**	1,3	0,7				**M 16 IR 1,0 ISO**	1,3	0,7			
		1,25	**M 16 ER 1,25 ISO**	1,3	0,9				**M 16 IR 1,25 ISO**	1,3	0,9			
		1,5	**M 16 ER 1,5 ISO**	1,3	1,0				**M 16 IR 1,5 ISO**	1,3	1,0			
		1,75	**M 16 ER 1,75 ISO**	1,3	1,2				**M 16 IR 1,75 ISO**	1,3	1,2			
		2,0	**M 16 ER 2,0 ISO**	1,3	1,3				**M 16 IR 2,0 ISO**	1,3	1,3			
		2,5	**M 16 ER 2,5 ISO**	1,3	1,5				**M 16 IR 2,5 ISO**	1,3	1,5			
		3,0	**M 16 ER 3,0 ISO**	1,3	1,6				**M 16 IR 3,0 ISO**	1,3	1,5			
22	1/2	3,5	**M 22 ER 3,5 ISO**	1,7	2,3				**M 22 IR 3,5 ISO**	1,6	2,3			
		4,0	**M 22 ER 4,0 ISO**	1,7	2,3				**M 22 IR 4,0 ISO**	1,6	2,3			
		4,5	**M 22 ER 4,5 ISO**	1,7	2,4				**M 22 IR 4,5 ISO**	1,6	2,4			
		5,0	**M 22 ER 5,0 ISO**	1,4	2,5				**M 22 IR 5,0 ISO**	1,4	2,3			
		5,5	**M 22 ER 5,5 ISO**	1,1	2,6				**M 22 IR 5,5 ISO**	1,1	2,3			
		6,0	**M 22 ER 6,0 ISO**	0,9	2,7				**M 22 IR 6,0 ISO**	0,9	2,4			

L16 = H4.10
L22 = H5.76

NOTA:
Spessore maggiorato

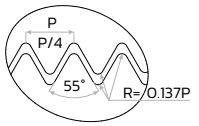
NOTE:
Higher thickness

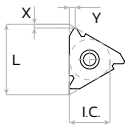
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

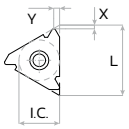
FILETTATURA | THREADING
whitworth tipo M | whitworth M type

esterno | external





interno | internal



L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	19	M 16 ER 19 W	1,3	1,0	■			M 16 IR 19 W	1,3	1,0	■		
		16	M 16 ER 16 W	1,3	1,1	■			M 16 IR 16 W	1,3	1,1	■		
		14	M 16 ER 14 W	1,3	1,2	■			M 16 IR 14 W	1,3	1,2	■		
		11	M 16 ER 11 W	1,3	1,5	■			M 16 IR 11 W	1,3	1,5	■		
		10	M 16 ER 10 W	1,3	1,5				M 16 IR 10 W	1,3	1,5			
22	1/2	7	M 22 ER 7 W	1,7	2,3				M 22 IR 7 W	1,6	2,3			
		6	M 22 ER 6 W	1,7	2,3				M 22 IR 6 W	1,6	2,3			
		5	M 22 ER 5 W	1,4	2,4				M 22 IR 5 W	1,4	2,4			
		4,5	M 22 ER 4,5 W	1,0	2,6				M 22 IR 4,5 W	1,0	2,6			
		4	M 22 ER 4 W	0,6	2,9				M 22 IR 4 W	0,7	2,8			

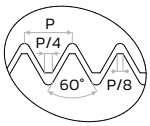
L16 = H4.10
L22 = H5.76

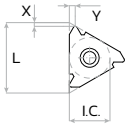
NOTA:
Spessore maggiorato

NOTE:
Higher thickness

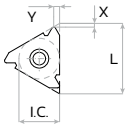
FILETTATURA | THREADING
ISO tipo X | ISO X type
inserto con rompitruciolo sinterizzato | sinthered chip-breaker

esterno | external





interno | internal



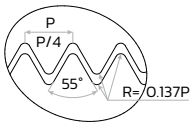
L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	0,8	16 ERX 0,8 ISO	0,6	0,6				-	-	-			
		1,0	16 ERX 1,0 ISO	0,7	0,7		■		16 IRX 1,0 ISO	0,7	0,7		■	
		1,25	16 ERX 1,25 ISO	0,8	0,9		■		16 IRX 1,25 ISO	0,8	0,9		■	
		1,5	16 ERX 1,5 ISO	0,8	1,0		■		16 IRX 1,5 ISO	0,8	1,0		■	
		1,75	16 ERX 1,75 ISO	0,9	1,2		■		16 IRX 1,75 ISO	0,9	1,2		■	
		2,0	16 ERX 2,0 ISO	1,0	1,3		■		16 IRX 2,0 ISO	1,0	1,3		■	
		2,5	16 ERX 2,5 ISO	1,1	1,5		■		16 IRX 2,5 ISO	1,1	1,5		■	
		3,0	16 ERX 3,0 ISO	1,2	1,6		■		16 IRX 3,0 ISO	1,2	1,6		■	

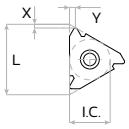
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

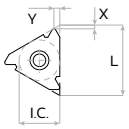
FILETTATURA | THREADING
whitworth tipo X | whitworth X type
inserto con rompitruciolo X sinterizzato | insert with sinthered chip-breaker X

esterno | external





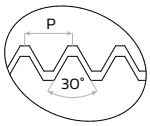
interno | internal

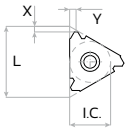


L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	19	16 ERX 19 W	0,8	1,0		■		16 IRX 19 W	0,8	1,0		■	
		16	16 ERX 16 W	0,9	1,1		■		16 IRX 16 W	0,9	1,1		■	
		14	16 ERX 14 W	1,0	1,2		■		16 IRX 14 W	1,0	1,2		■	
		11	16 ERX 11 W	1,1	1,5				16 IRX 11 W	1,1	1,5		■	
		10	16 ERX 10 W	1,1	1,5				16 IRX 10 W	1,1	1,5			

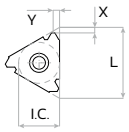
FILETTATURA | THREADING
trapezioidale DIN 103 | keystone DIN 103

esterno | external





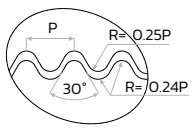
interno | internal

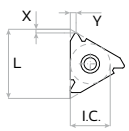


L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	1,5	16 ER 1,5 TR	1,0	1,1	■			-	-	-			
		2,0	16 ER 2 TR	1,0	1,3	■			16 IR 2 TR	1,0	1,3	■		
		3,0	16 ER 3 TR	1,3	1,5	■			16 IR 3 TR	1,3	1,5	■		
22	1/2	4,0	22 ER 4 TR	1,8	1,9	■			22 IR 4 TR	1,8	1,9	■		
		5,0	22 ER 5 TR	2,0	2,4	■			22 IR 5 TR	2,0	2,4	■		

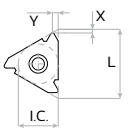
FILETTATURA | THREADING
rotonda DIN 405 | round DIN 405

esterno | external





interno | internal

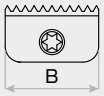


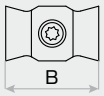
L	I.C.	PASSO PITCH	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053	ISO	DIMENSIONS X	DIMENSIONS Y	HP1551	HP2052	HM3053
16	3/8	8	16 ER 8 RD	1,4	1,4	■			16 IR 8 RD	1,4	1,4	■		
		6	16 ER 6 RD	1,4	1,5	■			16 IR 6 RD	1,4	1,5			
22	1/2	4	22 ER 4 RD	2,2	2,3	■			22 IR 4 RD	2,2	2,3	■		

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

IDENTIFICAZIONE INSERTO FRESATURA FILETTI | MILL-THREAD INSERTS CODES

TM	30	E	2.0	ISO	HP2551
	 B	E = Esterno / External	Passo / Pitch	Profilo / Profiles	Rivestimento / Coating
	14	I = Interno / Internal	in millimetri o filetti per pollice	ISO	HP2551 generico / generic
	21	- = Ext + Int	in mm or Threads per inch	W = Whitworth	
	30				
	40				

TM	G1	I	1,5 - 2,5	ISO	HP2551
	 B	I = Interno / Internal	Passo / Pitch	Profilo / Profiles	Rivestimento / Coating
	G1		in millimetri o filetti per pollice	ISO	HP2551 generico / generic
	G2		in mm or Threads per inch	W = Whitworth	
	G3				

AVANZAMENTO PEZZO DA IMPOSTARE PER FRESATURA FILETTATA
PIECE FEEDING SETTING FOR THREADING MILLING

$$Vf_1 = \frac{Vf \times (D-d)}{D} = (mm/min)$$

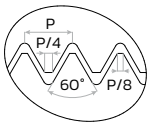
LEGENDA - LEGEND

Vf_1	Avanzamento pezzo a centro fresa - Piece feeding on mill center (mm/min)
Vf	Avanzamento pezzo - piece feeding (mm/min)
D	Diametro del componente da filettare - Diameter of the threading (mm)
d	Diametro nominale - nominal diameter

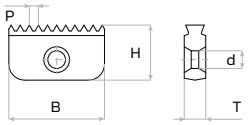
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

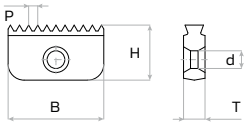
FRESATURA FILETTI | THREAD MILLING
ISO metrica | thread ISO



esterno | external



interno | internal



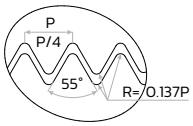
B	d	PASSO PITCH	ISO	DIMENSIONS H	DIMENSIONS T	HP2551	ISO	DIMENSIONS H	DIMENSIONS T	HP2551
14	3,3	0,5	-	-	-		TM 14 I 0,5 ISO	7,5	3,1	
		0,75	TM 14 E 0,75 ISO	7,5	3,1		TM 14 I 0,75 ISO	7,5	3,1	
		1,0	TM 14 E 1,0 ISO	7,5	3,1		TM 14 I 1,0 ISO	7,5	3,1	
		1,25	TM 14 E 1,25 ISO	7,5	3,1		TM 14 I 1,25 ISO	7,5	3,1	
		1,5	TM 14 E 1,5 ISO	7,5	3,1		TM 14 I 1,5 ISO	7,5	3,1	
		1,75	TM 14 E 1,75 ISO	7,5	3,1		TM 14 I 1,75 ISO	7,5	3,1	
		2,0	TM 14 E 2,0 ISO	7,5	3,1		TM 14 I 2,0 ISO	7,5	3,1	
		2,5	TM 14 E 2,5 ISO	7,5	3,1		TM 14 I 2,5 ISO	7,5	3,1	
21	4,2	1,0	TM 21 E 1,0 ISO	12	4,7		TM 21 I 1,0 ISO	12	4,7	
		1,5	TM 21 E 1,5 ISO	12	4,7		TM 21 I 1,5 ISO	12	4,7	
		1,75					TM 21 I 1,75 ISO	12	4,7	
		2,0	TM 21 E 2,0 ISO	12	4,7		TM 21 I 2,0 ISO	12	4,7	
		2,5	TM 21 E 2,5 ISO	12	4,7		TM 21 I 2,5 ISO	12	4,7	
		3,0	TM 21 E 3,0 ISO	12	4,7		TM 21 I 3,0 ISO	12	4,7	
		3,5	-	-	-		TM 21 I 3,5 ISO	12	4,7	
30	5,6	1,5	TM 30 E 1,5 ISO	16	5,5		TM 30 I 1,5 ISO	16	5,5	
		2,0	TM 30 E 2,0 ISO	16	5,5		TM 30 I 2,0 ISO	16	5,5	
		3,0	TM 30 E 3,0 ISO	16	5,5		TM 30 I 3,0 ISO	16	5,5	
		3,5	TM 30 E 3,5 ISO	16	5,5		TM 30 I 3,5 ISO	16	5,5	
		4,0	TM 30 E 4,0 ISO	16	5,5		TM 30 I 4,0 ISO	16	5,5	
		4,5	-	-	-		TM 30 I 4,5 ISO	16	5,5	
		5,0	-	-	-		TM 30 I 5,0 ISO	16	5,5	
40	5,7	1,5	TM 40 E 1,5 ISO	20	6,3		TM 40 I 1,5 ISO	20	6,3	
		2,0	TM 40 E 2,0 ISO	20	6,3		TM 40 I 2,0 ISO	20	6,3	
		3,0	TM 40 E 3,0 ISO	20	6,3		TM 40 I 3,0 ISO	20	6,3	
		3,5	-	-	-		TM 40 I 3,5 ISO	20	6,3	
		4,0	TM 40 E 4,0 ISO	20	6,3		TM 40 I 4,0 ISO	20	6,3	
		4,5	-	-	-		TM 40 I 4,5 ISO	20	6,3	
		5,0	TM 40 E 5,0 ISO	20	6,3		TM 40 I 5,0 ISO	20	6,3	
		5,5	-	-	-		TM 40 I 5,5 ISO	20	6,3	
		6,0	TM 40 E 6,0 ISO	20	6,3		TM 40 I 6,0 ISO	20	6,3	

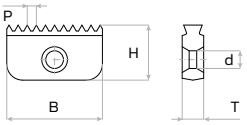
MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

FRESATURA FILETTI | THREAD MILLING
whitworth 55° | whitworth 55°

esterno-interno | external-internal





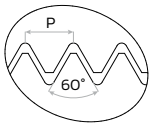
B	d	PASSO PITCH	ISO	DIMENSIONS H	DIMENSIONS T	HP2551		
14	3,3	24	TM 14-24 W	7,5	3,1	■		
		20	TM 14-20 W	7,5	3,1	■		
		19	TM 14-19 W	7,5	3,1	■		
		16	TM 14-16 W	7,5	3,1	■		
		14	TM 14-14 W	7,5	3,1	■		
21	4,2	20	TM 21-20 W	12	4,7	■		
		19	TM 21-19 W	12	4,7	■		
		16	TM 21-16 W	12	4,7	■		
		14	TM 21-14 W	12	4,7	■		
		11	TM 21-11 W	12	4.7	■		
30	5,6	16	TM 30-16 W	16	5,5	■		
		14	TM 30-14 W	16	5,5	■		
		11	TM 30-11 W	16	5,5	■		
40	5,7	11	TM 40-11 W	20	6,3	■		
		8	TM 40-8 W	20	6,3	■		

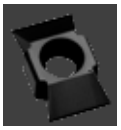
MATERIALI | MATERIALS

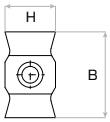
- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

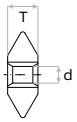
FRESATURA FILETTI | THREAD MILLING
ISO 60° | ISO metric 60°

esterno-interno | external-internal





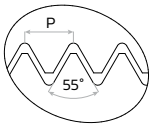


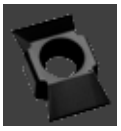


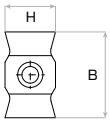
B	d	PASSO PITCH	ISO	DIMENSIONS H	DIMENSIONS T	HP2551
9	2,8	1,5-2,5	TM G1 I 1,5-2,5 ISO	5,5	3,18	■
		2,5-4,0	TM G1 I 2,5-4,0 ISO	5,6	3,18	■
13,5	3,4	1,5-2,5	TM G2 I 1,5-2,5 ISO	8,4	4,3	■
		2,5-5,5	TM G2 I 2,5-5,5 ISO	8,4	4,3	■
15,9	4	3-6	TM G3 I 3-6 ISO	9,4	5,3	■

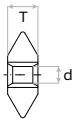
FRESATURA FILETTI | THREAD MILLING
whitworth 55° | whitworth 55°

esterno-interno | external-internal







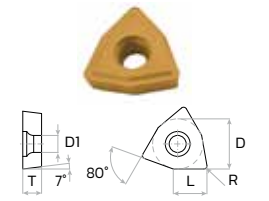
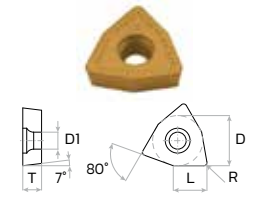
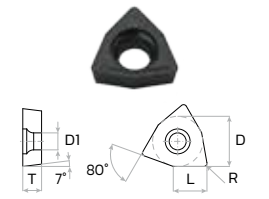
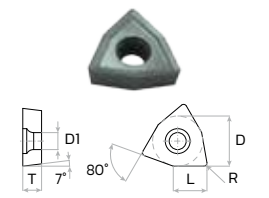
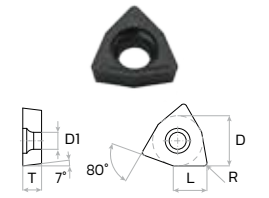


B	d	PASSO PITCH	ISO	DIMENSIONS H	DIMENSIONS T	HP2551
13,5	3,4	14-11	TM G2 I 14-11 W	8,4	4,3	■

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

FORATURA | DRILLING

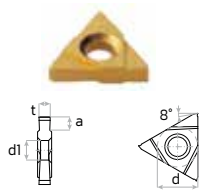
	ARTICOLO	DIMENSIONS					HP2501	HX3510	HM3060	HN10
		L	D	T	R	D1				
	WCMT 030208-D31	3,8	5,56	2,38	0,8	2,5	■			
	040208-D31	4,3	6,35	2,38	0,8	2,8	■			
	050308-D31	5,4	7,94	3,18	0,8	3,4	■			
	06T308-D31	6,5	9,525	3,97	0,8	4	■			
	080412-D31	8,7	12,7	4,76	1,2	4,3	■			
	WCMT 040204-ET	4,3	6,35	2,38	0,4	2,8	■			
	050308-ET	5,4	7,94	3,18	0,8	3,4	■			
	06T308-ET	6,5	9,525	3,97	0,8	4	■			
	080412-ET	8,7	12,7	4,76	1,2	4,3	■			
	WCGX 030204-T	3,8	5,56	2,38	0,4	2,5			■	
	040204-T	4,3	6,35	2,38	0,4	2,8			■	
	050308-T	5,4	7,94	3,18	0,8	3,4			■	
	06T308-T	6,5	9,525	3,97	0,8	4			■	
	080408-T*	8,7	12,7	4,76	0,8	4,3			■	
	WCKT 030208-EB	3,8	5,56	2,38	0,8	2,5				■
	040208-EB	4,3	6,35	2,38	0,8	2,8				■
	050308-EB	5,4	7,94	3,18	0,8	3,4				■
	06T308-EB	6,5	9,525	3,97	0,8	4				■
	080408-EB	8,7	12,7	4,76	0,8	4,3				■
	WCMX 040208-D31	4,3	6,35	2,38	0,8	2,8		■		
	050308-D31	5,4	7,94	3,18	0,8	3,4		■		
	06T308-D31	6,5	9,525	3,97	0,8	4		■		
	080412-D31	8,7	12,7	4,76	1,2	4,3		■		

** per l'utilizzo di questi inserti sostituire le viti della punta Speedy Drill con viti RUV0303 / use screw RUV0303 when using this insert on Speedy Drills*

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
  M coated *for steel-stainless steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***N nudo*** *per alluminio-materiale non ferrosi*
  N uncoated *for aluminum-non ferrous materials*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***X rivestito*** *per acciaio-acciaio inox-superleghe*
  X coated *for steel-stainless steel-super alloys*

INSERTI CANALINI SEEGER | INSERTS FOR SEEGER GROOVES



ARTICOLO		DIMENSIONS t	a	d	d1	HP2559
SEEGER	110	1,23	1,5	9,525	3,7	■
	130	1,43	1,5	9,525	3,7	■
	160	1,73	2,0	9,525	3,7	■
	185	1,83	2,0	9,525	3,7	■
	215	2,03	2,5	9,525	3,7	■
	265	2,28	3,5	9,525	3,7	■
	315	3,28	4,0	9,525	3,7	■
	415	4,28	4,0	9,525	3,7	■

MATERIALI | MATERIALS

- ***P rivestito*** *per acciaio*
  P coated *for steel*
- ***K rivestito*** *per ghisa*
  K coated *for cast iron*
- ***CERMET rivestito*** *per acciaio-acciaio inossidabile, ghisa sferoidale*
  CERMET coated *for steeel-stainless steel, spheroidal cast iron*
- ***M rivestito*** *per acciaio-acciaio inossidabile*
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  X coated *for steel-stainless steel-super alloys*