A Brand of X-Metal

HMW®

HARD METAL WORKING

2023

FRESATURA

MILLING

METAL

THINK MAKE INSERT

CATALOGO FRESATURA 2023

MILLING CATALOGUE 2023

X-Metal S.r.l. è una azienda italiana a tradizione familiare.

Fondata 40 anni fa, la società ha la propria sede a Legnano, nota città lombarda per la fiorente attività legata ai settori metalmeccanico e manufatturiero. Ci posizioniamo strategicamente a pochi minuti di macchina dall'aeroporto internazionale di Malpensa.

X-Metal è specializzata nella produzione di inserti in metallo duro sia standard che speciali, adatti ad un ampio range di applicazioni differenti e prodotti secondo le specifiche richieste dei clienti.

X-Metal S.r.l. is an italian family-run company.

Established 40 years ago, the company is headquartered in Legnano, a well known metal mechanic and manufacturing district in Lombardy. The Operational site is just a few minutes from Malpensa airport.

***X-Metal is specialized in producing both standard and "custom" indexable carbide inserts** to suit a wide range of different applications and customers' requirements.*

A Brand of X-Metal
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HARD METAL WORKING

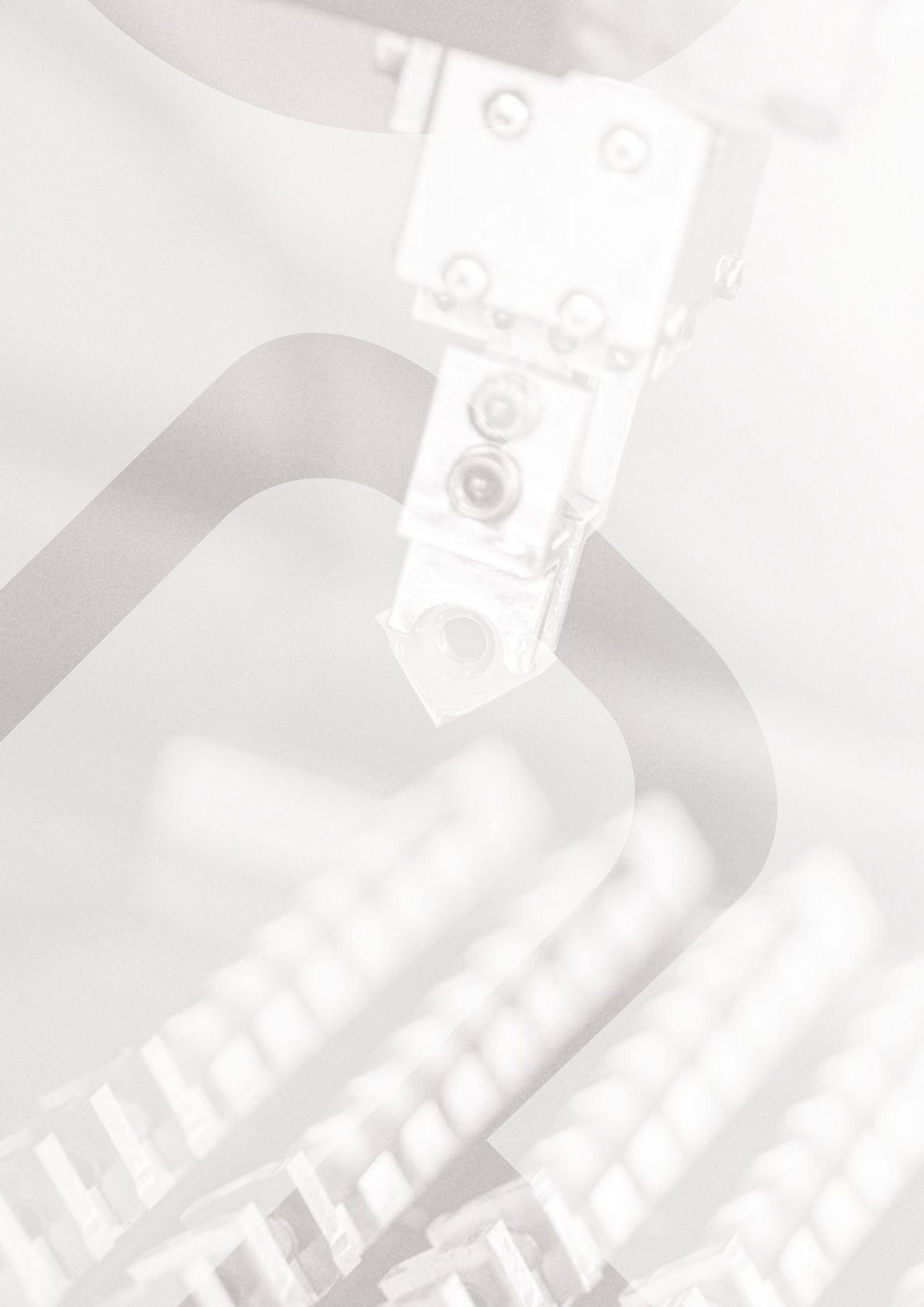
I NOSTRI PLUS

THE COMPANY TARGETS

- La soluzione giusta al momento giusto
  The right solution at the right time
- Continua ottimizzazione dei processi e del parco macchine
  Constant processes and equipment optimization
- Alto livello qualitativo
  High quality products
- Prezzi competitivi
  Competitive prices
- Packaging personalizzato
  Customized packaging
- Costante reintegro degli stock
  Constant stock replenishment
- Rapidi tempi di consegna
  Prompt delivery

QUALITÀ COMPETENZA PRECISIONE VELOCITÀ

QUALITY COMPETENCE ACCURACY FAST SOLUTION



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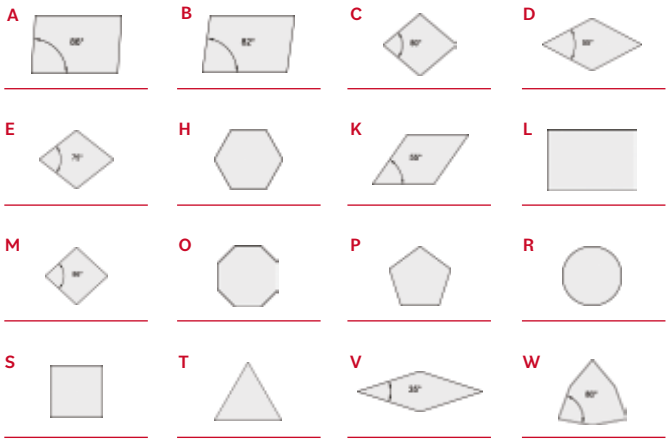
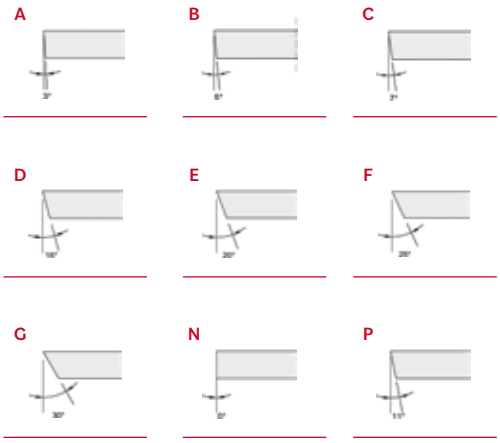
CLASSIFICAZIONE ISO - *ISO CLASSIFICATION*

S	E	H	T	13
1	2	3	4	5

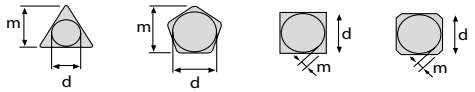
1 FORMA DELL'INSERTO *INSERT SHAPE*



2 ANGOLO DI SPOGLIA *CLEARANCE ANGLE*



3 TOLLERANZE *TOLERANCES*



Classe / *Class*	d	m	Spessore / *Thickness*
A	± 0,025	± 0,005	± 0,025
C	± 0,025	± 0,013	± 0,025
H	± 0,013	± 0,013	± 0,025
E	± 0,025	± 0,025	± 0,025
G	± 0,025	± 0,025	± 0,13
J	± 0,05 - ± 0,15	± 0,005	± 0,025
K	± 0,05 - ± 0,15	± 0,013	± 0,025
L	± 0,05 - ± 0,15	± 0,025	± 0,025
M	± 0,05 - ± 0,15	± 0,08 - ± 0,20	± 0,13
U	± 0,08 - ± 0,25	± 0,13 - ± 0,38	± 0,13

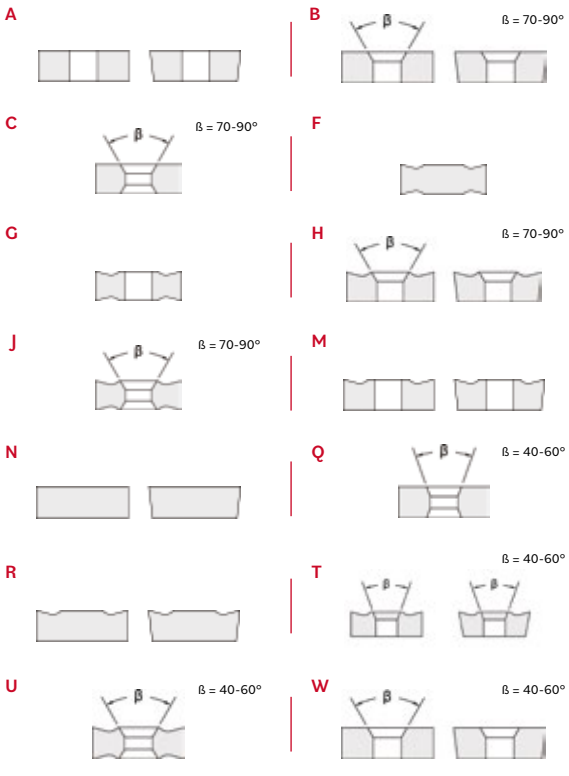
TOLLERANZE FORME C, H, R, T, W - *TOLERANCE OF C, H, R, T, W SHAPES*

d	Tolleranza di d - *Tolerance of d*		Tolleranza di m - *Tolerance of m*	
	J, K, L, M	U	M	U
6,35	± 0,05	± 0,08	± 0,08	± 0,13
9,525	± 0,05	± 0,08	± 0,08	± 0,13
12,7	± 0,08	± 0,13	± 0,13	± 0,20
15,875	± 0,10	± 0,18	± 0,15	± 0,27
19,05	± 0,10	± 0,18	± 0,15	± 0,27
25,4	± 0,13	± 0,25	± 0,18	± 0,38

TOLLERANZE FORME D - *TOLERANCE OF D SHAPES*

d	Tolleranza di d - *Tolerance of d*	Tolleranza di m - *Tolerance of m*
6,35	± 0,05	± 0,11
9,525	± 0,05	± 0,11
12,7	± 0,08	± 0,15
15,875	± 0,10	± 0,18
19,05	± 0,10	± 0,18

4 FORO E ROMPITRUCIOLO *HOLE & CHIPBREAKER*



X

TIPO SPECIALE - *SPECIAL TYPE*

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CLASSIFICAZIONE ISO - *ISO CLASSIFICATION*

T3	AG08	S	N	R2
6	7	8	9	10

5 LUNGHEZZA DEL TAGLIENTE
CUTTING EDGE LENGTH

A, B, K

C, D, E, M, V

H, O, P

L

R

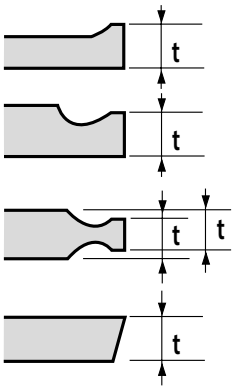
S

T

W

△	06	09	11	16	22	27	33	44
○ □	07	09	10	12	13	15	19	25
55°	04	06	07	11	15	19	23	31
80°	03	05	06	09	12	16	19	25

6 SPESSORE
THICKNESS



Codice *Code*	Spessore *Thickness* mm
-	0,79
T0	1,00
01	1,59
T1	1,98
02	2,38
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
08	8,00
09	9,52
11	11,11
12	12,70

7 VERTICE
CORNER RADIUS

Simbolo - *Symbol*	(r) mm	Simbolo - *Symbol*	(r) mm
00	0,0	12	1,2
02	0,2	15	1,5
04	0,4	16	1,6
05	0,5	24	2,4
08	0,8	32	3,2
10	1,0	40	4,0

Angolo di registrazione - *Cutting edge angle* Kr	Angolo di spoglia - *Clearance angle* a'n	
A - 45°	A - 3°	F - 25°
D - 60°	B - 5°	G - 30°
E - 75°	C - 7°	N - 0°
F - 85°	D - 15°	P - 11°
P - 90°	E - 20°	
Z - SPECIALE - *SPECIAL*		

8 PREPARAZIONE TAGLIENTE
CUTTING EDGE PREPARATION

F E T S

9 DIREZIONE DI TAGLIO
CUTTING HAND

R L N

10 ROMPITRUCIOLO DI FRESATURA
MILLING CHIPBREAKER

R1

METALLO DURO - *SINTERED TUNGSTEN CARBIDE*

WC

Il carburo di tungsteno (WC) conferisce resistenza all'usura e conducibilità termica

Tungsten carbide (WC) confers wear resistance and good thermal conductivity

Tic Tac

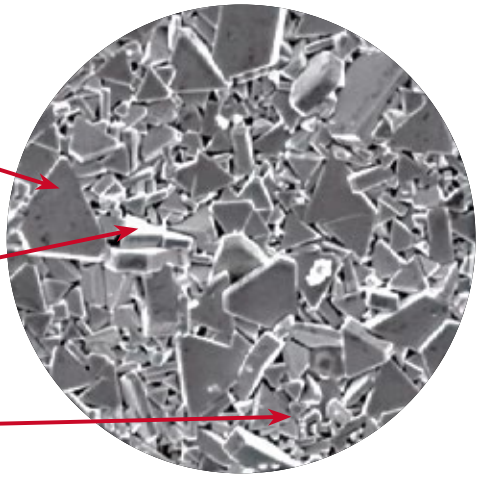
I carburi di titanio e tantalio aumentano le proprietà antisaldanti e migliorano la resistenza all'usura

Titanium and tantalium carbides reduce built-up edge and improve wear resistance

Co

Il cobalto è il legante del metallo duro e conferisce tenacità al materiale da taglio

Cobalt is the binder and confers toughness



MATERIALI DA TAGLIO - *CUTTING MATERIALS*

CLASSIFICAZIONE ISO - *ISO CLASSIFICATION*

LETTERA *LETTER*	COLORE *COLOUR*	MATERIALE DA LAVORARE *WORKPIECE MATERIAL*	SCALA ISO OPERAZIONE *APPLICATION SEVERITY*	DUREZZA *HARDNESS*	TENACITÀ *TOUGHNESS*
P	**Blu** *Blue*	**Acciai in genere** **Acciai legati** *Steel* *Alloyed steel*	**P01** **P10** **P20** **P30** **P40** **P50**	+ ↑ –	– ↓ +
M	**Giallo** *Yellow*	**Acciai inossidabili** *Stainless steel*	**M01** **M10** **M20** **M30** **M40** **M50**	+ ↑ –	– ↓ +
K	**Rosso** *Red*	**Ghise** *Cast iron*	**K01** **K10** **K20** **K30** **K40**	+ ↑ –	– ↓ +
N	**Verde** *Green*	**Alluminio e sue leghe** **Materiali non ferrosi** *Aluminium alloy* *Non ferrous metals*	**N01** **N10** **N20** **N30** **N40**	+ ↑ –	– ↓ +
S	**Arancio** *Orange*	**Leghe resistenti al calore** **Leghe di titanio** *HRSA* *Titanium*	**S01** **S10** **S20** **S30** **S40**	+ ↑ –	– ↓ +
H	**Grigio** *Grey*	**Acciai temprati** **Ghise dure** *Hardened steel* *Hardened cast iron*	**H01** **H10** **H20** **H30**	+ ↑ –	– ↓ +

GRADI DI FRESATURA - *MILLING GRADES*

NEW *CAPSULE LINE*

GRADI DI FRESATURA - *MILLING GRADES*

0F

Grado non rivestito ad elevata durezza per finitura su metalli non ferrosi in condizioni stabili.
Very hard uncoated grade for finishing of non-ferrous materials in stable conditions.

1F

Grado a grana fine non rivestito, adatto per lavorazioni generali su metalli non ferrosi.
Fine grained uncoated carbide grade. Suitable for general machining operations of non-ferrous alloys.

2F

Grado a grana fine ed elevata tenacità, per operazioni che vanno dalla semifinitura alla sgrossatura di metalli non ferrosi
Fine grained uncoated carbide grade with higher toughness, suitable for semi-finishing to roughing of non-ferrous alloys.

0FD

Grado ad elevata durezza con rivestimento PVD, per finitura di ghise, acciai ed acciai inossidabili.
Very hard PVD coated grade for finishing operations of cast iron, steel and stainless steel.

1FD

Grado duro con rivestimento PVD, adatto alla lavorazione di acciai, ghise e acciai inossidabili in condizioni stabili e con basse asportazioni.
Hard PVD coated carbide grade, suitable for machining of steels, cast iron and stainless steels in stable conditions and low material removal rates.

2FD

Grado rivestito PVD per lavorazioni generali su acciai, ghise e acciai inossidabili in condizioni stabili.
PVD coated carbide grade for general operations on steel, cast iron and stainless steel in stable conditions.

3FCRT

Grado con rivestimento PVD per lavorazioni generali di acciai, ghise e acciai inossidabili a velocità di taglio medie e basse.
PVD-coated grade for general maching of steel, cast iron and stainless steels at medium and low cutting speeds.

3MCC

Grado tenace con rivestimento PVD per lavorazioni medie e di sgrossatura su acciai, ghise e acciai inossidabili, in condizioni di taglio instabile.
Tough PVD coated grade suitable for unstable conditions and medium/roughing operations on steels, cast iron and stainless steels.

1PC9

Grado rivestito CVD per fresatura di acciai da media ad alta velocità in condizioni di taglio stabili.
CVD-coated grade for medium to high speed milling in stable cutting conditions.

2PCR

Grado con rivestimento AlCrN di ultima generazione per lavorazioni medie su acciai.
Last generation AlCrN PVD-coated grade for medium operations on steels.

GRADI DI FRESATURA - *MILLING GRADES*

3FCT

Il rivestimento ad alta durezza rende questo grado maggiormente indicato per gli acciai morbidi.
The high wear resistance coating makes this grade particularly suitable for the machining of soft steels.

4FCT

Grado con rivestimento PVD in TiAlN per lavorazioni generiche su acciai per stampi.
TiALN PVD-coated grade for general processing of die steel.

4MC9

Grado rivestito CVD adatto per operazioni dalla semifinitura alla sgrossatura di acciai inossidabili e leghe di titanio.
CVD coated grade for semi -finishing to roughing of stainless steels and titanium alloys.

4MHI

Grado con rivestimento multistrato in TiAlSiN per sgrossatura e lavorazioni instabili su acciai inossidabili e leghe di titanio.
Multilayer TiAlSiN PVD-coated grade, suitable for roughing and milling in unstable conditions of stainless steels and titanium alloys.

2KC9

Rivestimento CVD a medio spessore su substrato a grana fine. Adatto per finitura e semifinitura di ghise.
Medium thickness CVD coating on fine grained substrate. Suitable for finishing and semifinishing of cast iron.

2KCC

Grado rivestito PVD per lavorazioni generali su ghise in condizioni stabili.
PVD-coated carbide grade for general machining of cast irons in stable conditions.

3KCC

Grado rivestito PVD per fresatura di ghise a basse e medie velocità.
PVD coated carbide grade for milling of cast iron at medium and low speeds.

1HHD

Substrato e rivestimento ad alta durezza per finitura e semifinitura di acciai temprati.
Extremely hard coating over an hard substrate, aimed at finishing to semifinishing of hardened steels.

3SCC

Substrato ad elevata tenacità con nano-rivestimento per finitura e semifinitura di titanio e HRSA.
Extremely tough substrate with nano TiAl coating. Suitable for finishing and semifinishing of titanium and HRSA.

1C

Grado cermet nudo, adatto a finitura e operazioni medie su acciai e leghe di titanio.
Uncoated cermet grade, suitable for finishing and medium operations on steels and titanium alloys.

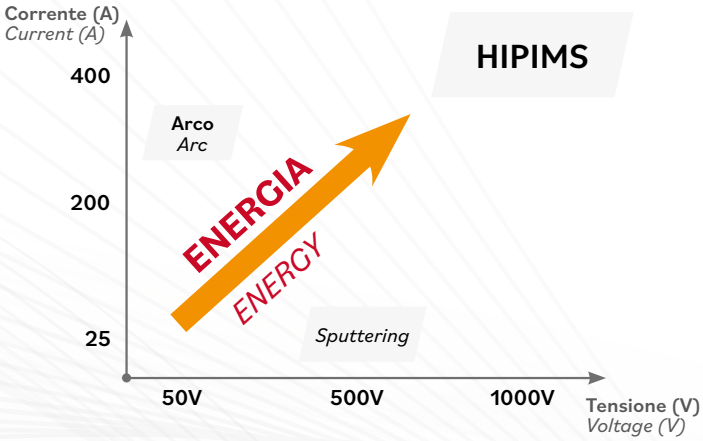
HMW Capsule Rivestimenti HIPIMS

HIPIMS coatings

Più energia per rivestimenti migliori
More energy for better coatings

La tecnologia di rivestimento PVD HIPIMS(HIgh Power Impulse Magnetron Sputtering) lavora a livelli di energia di ionizzazione più elevati rispetto alle tradizionali tecnologie PVD.

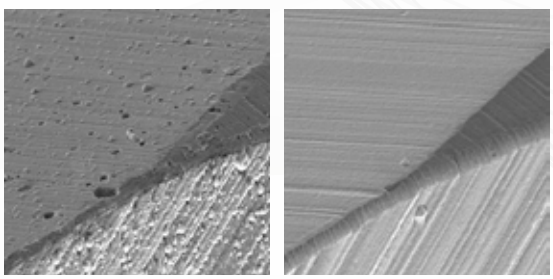
HIPIMS(HIgh Power Impulse Magnetron Sputtering) PVD coating technology operates at higher ionization energy levels compared to traditional PVD processes.



PIÙ ENERGIA
more energy

- **Meno attrito**
  Less friction
- **Migliore adesione**
  Better adhesion
- **Minori tensioni residue**
  Lower residual stresses
- **Maggiore densità**
  Higher density
- **Spessori fino a 12 micron**
  Thickness up to 12 microns

MENO ATTRITO
LESS FRICTION

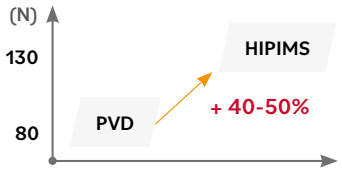


STANDARD PVD | HIPIMS PVD

La tecnologia HIPIMS elimina la formazione di gocce sulla superficie, con conseguente RIDUZIONE DELL'ATTRITO E DELLA TENDENZA A FORMARE TAGLIENTE DI RIPORTO.

HIPIMS technology completely eliminates droplets on the surface, leading to reduced friction and built-up edge formation.

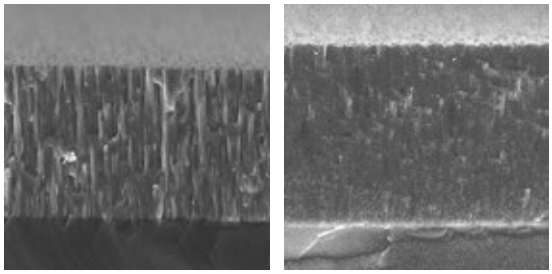
MIGLIORE ADESIONE
BETTER ADHESION



La maggiore energia utilizzata nel processo porta ad una MIGLIORE ADESIONE, con incrementi fino al 40-50% misurati con lo «scratch load test».

The high ionization energy leads to better adhesion, with an improvement up to 40-50% according to scratch load test results.

MAGGIORE DENSITÀ
HIGHER DENSITY



STANDARD PVD | HIPIMS PVD

Il rivestimento HIPIMS ha una densità maggiore, con incremento della durezza e minore tendenza alla propagazione di difetti.

HIPIMS technology enables us to deposit denser coatings, with higher hardness and more resistance to crack propagation.

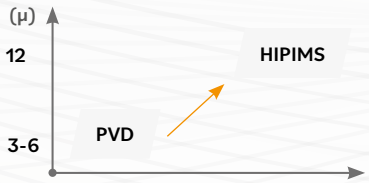
MINORI TENSIONI RESIDUE
LOWER RESIDUAL STRESSES

PVD	**Alta compressione** *High compression*
CVD	**Tensione** *Tensile*
HIPIMS	**Bassa compressione** *Low compression*

Il processo HIPIMS viene controllato per ottenere sforzi residui di leggera compressione che migliorano il comportamento a fatica dell'inserto.

The HIPIMS process is managed to obtain low compression residual stresses to improve fatigue resistance.

SPESSORE FINO A 12 MICRON
THICKNESS UP TO 12 MICRONS



I nostri rivestimenti TIAIN HIPIMS permettono spessori fino a 12 micron, comparabili con i rivestimenti CVD.

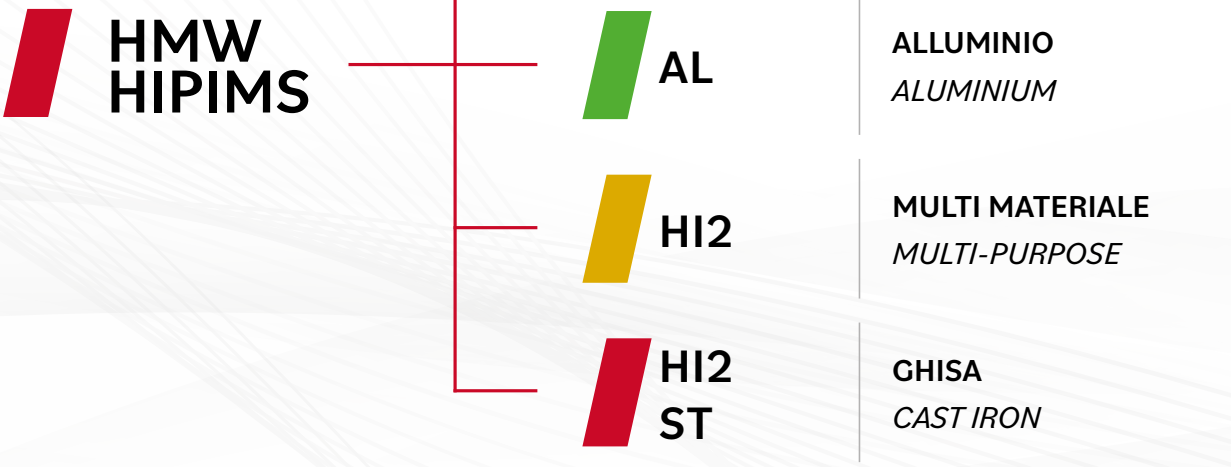
Our HIPIMS TiAlN coatings can reach a thickness of up to 12 microns, comparable with most CVD coatings.

RIVESTIMENTI HIPIMS - *HIPIMS COATINGS*

A Brand of X-Metal
HMW®
HARD METAL WORKING

La gamma di rivestimenti HIPIMS di HMW offre soluzioni specifiche per tutti i principali materiali: acciai, acciai inossidabili, acciai temprati, superleghe, ghise, titanio, alluminio ed altri metalli non ferrosi.

HMW HIPIMS coatings range provides solutions for all main worpiece material groups: steels, stainless steels, hardened steels, heat resistant superalloys, cast irons, titanium, aluminium and other non-ferrous metals.



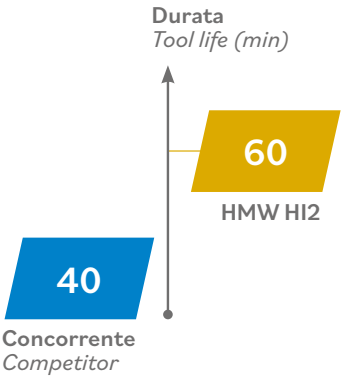
Il nostro team di supporto tecnico sarà sempre a vostra disposizione per individuare la migliore soluzione in termini di durata e produttività per le vostre applicazioni.

Our technical staff will always be available to identify the best solution in terms of tool life and productivity for all your applications.

CASI REALI *CASE STUDIES*

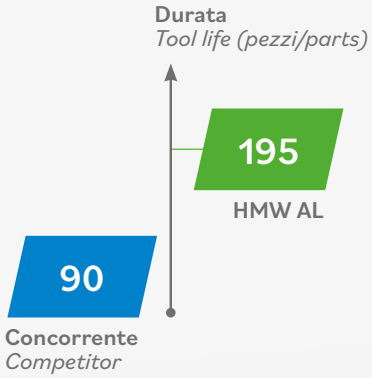
MATERIALE S335 J2
MATERIAL S335 J2

Inserto / *Insert*: XNGU 080608 ER M1
Grado / *Grade*: 4FHI2
vc: 200 m/min
fz: 0.15 mm
ap: 1.0 mm



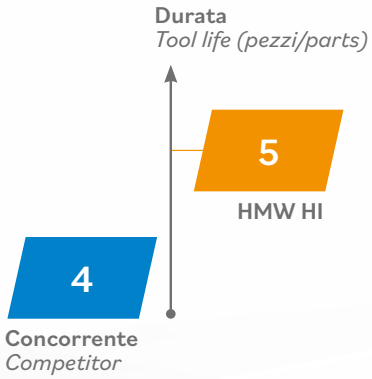
MATERIALE ALSI10MG
MATERIAL ALSI10MG

Inserto / *Insert*: XOHX 120404 ER R2
Grado / *Grade*: 1FAL
vc: 600 m/min
fz: 0.10 mm
ap: 0.4 mm



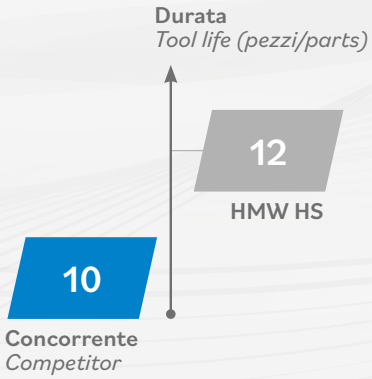
MATERIALE 1.2738
MATERIAL 1.2738

Inserto / *Insert*: XPHW 100312 SR
Grado / *Grade*: 2FHI
vc: 150 m/min
fz: 0.5 mm
ap: 0.5 mm



MATERIALE ACCIAIO TEMPRATO HRC 60
MATERIAL HARDENED STEEL HRC 60

Inserto / *Insert*: XOHX 120408 E R2
Grado / *Grade*: 2FHS
vc: 55 m/min
fz: 0.10 mm
ap: 1.0 mm



NEW CAPSULE LINE

1FAL

Substrato a grana fine con rivestimento HIPIMS in Ti B2 con alta resistenza all'usura e basso cofficiente d'attrito. Adatto per operazioni generali su metalli non ferrosi e titanio.

Fine grained carbide grade with TiB2 HIPIMS coating for higher wear resistance and low friction. Suitable for general operations on non- ferrous alloys and titanium.

2FAL

Substrato a grana fine con rivestimento HIPIMS in Ti B2 con alta resistenza all'usura e basso cofficiente d'attrito. Per operazioni dalla semifinitura alla sgrossatura di metalli non-ferrosi e titanio.

Fine grained carbide grade with TiB2 HIPIMS coating for higher wear resistance and low friction. Tougher than 1FAL and aimed at semifinishing to roughing applications of non-ferrous alloys and titanium.

4FHI2

Grado ad elevata tenacità con rivestimento PVD ad alta adesione. Per lavorazioni generali di acciai, ghise ed acciai inossidabili in un ampia gamma di operazioni.

PVD TiAlN coated grade with high toughness and high coating-substrate bonding strength. Suitable for general processing of steels, cast iron and stainless steels in a wide range of operations.

2FUS

Grado rivestito HIPIMS per lavorazioni generali su acciai. Rivestimento ad alta tenacità e basso coefficiente di attrito.

HIPIMS PVD-coated grade for general processing of steels. Very high coating toughness and low friction.

2FUSP

Grado rivestito HIPIMS per lavorazioni medie e di sgrossatura su acciai.

HIPIMS PVD-coated grade for processing of steels in medium and roughing operations.

2FST

Grado rivestito HIPIMS per sgrossatura di acciai, adatto anche per operazioni dove i rivestimenti CVD sono normalmente usati.

HIPMS PVD-coated grade for roughing of steels. Suitable for operations where CVD is normally used.

3MUSP

Substrato tenace con rivestimento PVD HIPIMS. Adatto per lavorazioni di acciai in condizioni instabili.

Tough carbide substrate with HIPIMS PVD coating. Suitable for machining of steels in unstable conditions.

3MST

Grado tenace con rivestimento HIPIMS PVD ad alto spessore. Adatto per lavorazioni medie e di sgrossatura su acciai.

Tough carbide grade with thick HIPIMS PVD coating. Suitable for medium to roughing operations on steels.

4KUSP

Grado con tenacità molto elevata e rivestimento HIPIMS migliorato. Adatto per la sgrossatura di acciai dove una buona taglienza è comunque richiesta.

Very tough carbide substrate with improved HIPIMS PVD coating. Suitable for roughing of steels when a certain amount of sharpness is still needed.

4KST

Grado con tenacità molto elevata e rivestimento HIPIMS ad alto spessore. Adatto per sgrossatura di acciai e condizioni di taglio instabile.

Very tough carbide substrate with ultra-thick HIPIMS PVD coating. Suitable for roughing of steels and unstable cutting conditions.

2FHI

Grado rivestito HIPIMS per operazioni di finitura e medie su acciai inossidabili e superleghe.

HIPIMS PVD-coated grade for finishing to medium operations on stainless steels and superalloys.

3MHI

Grado rivestito HIPIMS per operazioni di sgrossatura e medie su acciai inossidabili e superleghe.

HIPIMS PVD-coated grade for medium to roughing operations on stainless steels and superalloys.

4KHI

Grado rivestito HIPIMS per operazioni di sgrossatura su acciai inossidabili e superleghe in condizioni instabili.

HIPIMS PVD-coated grade roughing operations on stainless steels and superalloys in unstable conditions.

0FHS

Grado a durezza molto elevata e rivestimento PVD HIPIMS per finitura di acciai temprati e cementati.

Very hard carbide grade with HIPIMS PVD coating for finishing of hardened steels and cemented steels.


THINK

INSERTI E FRESE

INSERTS AND MILLING CUTTERS

SPALLAMENTO

INSERTS AND MILLING CUTTERS - SHOULDER MILLING

METAL
THINK MAKE INSERT

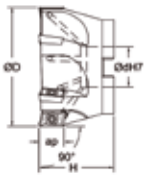
Inserti / *Inserts*

ADKT...15

CODICE / *CODE*	L (mm)	D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
												●		❤								●				
 **ADKT 1505PD ER ME**	14,85	9,65	5,60	1,00	15	M						√		√								●				

Frese / *Milling cutters*

AD15M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AD15M40Z4	40	**45**	16	**4**	VT75	**TX15**	ADKT 1505...
AD15M50Z5	50	**40**	22	**5**	VT75	**TX15**	ADKT 1505...
AD15M63Z6	63	**40**	22	**6**	VT75	**TX15**	ADKT 1505...
AD15M80Z7	80	**50**	27	**7**	VT75	**TX15**	ADKT 1505...
AD15M100Z8	100	**50**	32	**8**	VT75	**TX15**	ADKT 1505...

Applicazione / *Application*

● Taglio continuo / *Stable* ❤ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

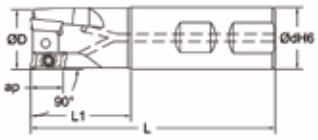
Disegni tecnici / *Technical drawings*

INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
ADKT 15 ME	AD15M / AD15W

Parametri di taglio / *Cutting parameters* *pag. 48*

Frese / *Milling cutters*

AD15W



CODICE / *CODE*	ØD	L	L1	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AD15W25Z2	25	**100**	44	**25**	2	**VT75**	TX15	**ADKT 1505...**
AD15W32Z3	32	**110**	50	**32**	3	**VT75**	TX15	**ADKT 1505...**
AD15W40Z4	40	**115**	45	**32**	4	**VT75**	TX15	**ADKT 1505...**

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

ADMW...15

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
													●		◥◤								●				
	**ADMW 150308 TR**	15,00	9,52	3,18	0,80	15	R						√		√								●				
	ADMW 150310 TR	15,00	9,52	3,18	1,00	15	R						√										●				
	ADMW 150315 TR	15,00	9,52	3,18	1,50	15	R						√										●				
	ADMW 150320 TR	15,00	9,52	3,18	2,00	15	R						√										●				
	ADMW 150325 TR	15,00	9,52	3,18	2,50	15	R						√										●				
	ADMW 150330 TR	15,00	9,52	3,18	3,00	15	R						√										●				
	ADMW 150335 TR	15,00	9,52	3,18	3,50	15	R						√										●				
	ADMW 150340 TR	15,00	9,52	3,18	4,00	15	R						√										●				

ADXT...16

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
													●		◥◤								●				
	**ADXT 160608 ER ME**	17,50	9,90	6,15	0,80	15	SF/M						√		√								●				
	ADXT 160620 ER ME	17,50	9,90	6,15	2,00	15	SF/M						√		√								●				

Applicazione / *Application*

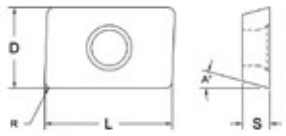
● Taglio continuo / *Stable* ◥◤ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

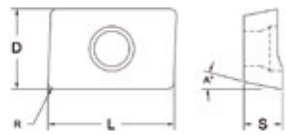


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
ADMW 15	-

Parametri di taglio / *Cutting parameters* *pag. 48*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			●				◡			●				
			●				●			●				
			●				●			●				

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
ADXT 16	-

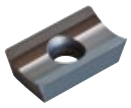
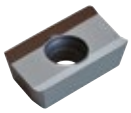
Parametri di taglio / *Cutting parameters* *pag. 48*

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

APEX / APHT / APHW / APKT...10-16

	CODICE / *CODE*	L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
		(mm)																									
									✓			●	●		✓								●				
APEX 10-16 RA/RX																											
	**APEX 1003PD FR RA**	10,35	6,70	3,18	0,5	11	F/M		√																		
	APEX 1604PD FL RA	16,20	9,52	4,76	0,4x45°	11	F/M		√																		
	APEX 1604PD FR RA	16,20	9,52	4,76	0,4x45°	11	F/M		√																		
	**APEX 1604PD ER RX**	16,20	9,52	4,76	0,8	11	F/M								√												
	APEX 1604PD FR RX	16,20	9,52	4,76	0,8	11	F/M		√																		
APHT 10 F3																											
	**APHT 100306ER F3**	10,35	6,70	3,50	0,60	11	SF/M					√			●												
	APHT 100310ER F3	10,35	6,70	3,50	1,00	11	SF/M					√			●												
	APHT 100315ER F3	10,35	6,70	3,50	1,50	11	SF/M					√			●												
	APHT 100320ER F3	10,35	6,70	3,50	2,00	11	SF/M					√			●												
	APHT 100325ER F3	10,35	6,70	3,50	2,50	11	SF/M					√			●												
	APHT 100330ER F3	10,35	6,70	3,50	3,00	11	SF/M					√			●												
APHW 10-16																											
	**APHW 1003PD ER**	10,40	6,70	3,18	0,6	11	F/M					√			√												
	**APHW 1604PD TR**	16,35	9,52	4,76	0,8	11	SF/M								√												
	APHW 160415 TR	16,35	9,52	4,76	1,50	11	SF/M								●												
	APHW 160420 TR	16,35	9,52	4,76	2,00	11	SF/M								√												
	APHW 160425 TR	16,35	9,52	4,76	2,50	11	SF/M								●												
	APHW 160430 TR	16,35	9,52	4,76	3,00	11	SF/M								√												
	APHW 160435 TR	16,35	9,52	4,76	3,50	11	SF/M								●												
	APHW 160440 TR	16,35	9,52	4,76	4,00	11	SF/M								●												
APKT 10-16 F1/R1/M1																											
	**APKT 1003PD ER F1**	10,70	6,70	3,70	0,8	11	F/SF						√		√								●				
	**APKT 1604PD ER R1**	16,10	9,52	5,20	0,8	11	M/R						√		√								●				
	**APKT 1003PD ER M1**					coming soon																	coming soon				
	APKT 1604PD ER M1					coming soon																	coming soon				

Applicazione / *Application*

● Taglio continuo / *Stable* — Taglio generico / *General* — ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

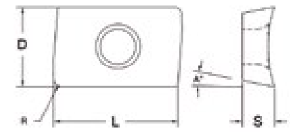
P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*

NEW CAPSULE LINE

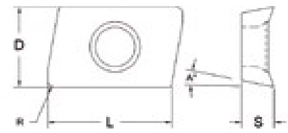
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
√														
●														
●														
●														
●														
												coming soon		
												coming soon		

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

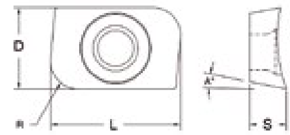
Disegni tecnici / *Technical drawings*



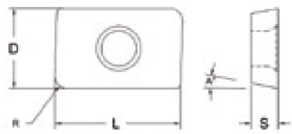
APEX 10-16 RA



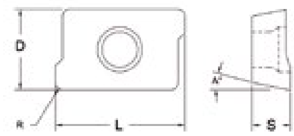
APEX 10-16 RX



APHT 10 F3



APHW 10-16



APKT 10-16 F1/R1/M1

INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
APEX 1003PD FR RA APHT 1003 APHW 1003PD ER APKT 1003	AP10CXL / AP10F / AP10W
APEX 1604PD APHW 1604PD APKT 1604	AP16F / AP16M / AP16W

Parametri di taglio / *Cutting parameters* *pag. 48-49*

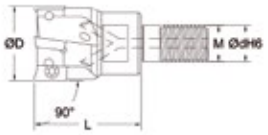
Lavorazione / *Operation*

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

AP10CXL

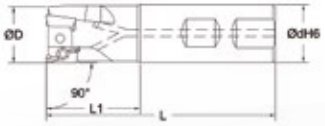
CODICE / *CODE*	ØD	L	L1	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AP10CXL16Z2-15	16	**200**	24	**15**	2	**VT15**	TX08	**AP...1003...**
AP10CXL16Z2	16	**200**	24	**16**	2	**VT15**	TX08	**AP...1003...**
AP10CXL20Z3-19	20	**200**	25	**19**	3	**VT15**	TX08	**AP...1003...**
AP10CXL20Z3	20	**200**	25	**20**	3	**VT15**	TX08	**AP...1003...**
AP10CXL25Z3-24	25	**200**	25	**24**	3	**VT15**	TX08	**AP...1003...**
AP10CXL25Z3	25	**200**	25	**25**	3	**VT15**	TX08	**AP...1003...**
AP10CXL25Z4-24	25	**200**	25	**24**	4	**VT15**	TX08	**AP...1003...**
AP10CXL25Z4	25	**200**	25	**25**	4	**VT15**	TX08	**AP...1003...**

AP10-16F



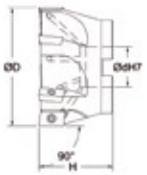
CODICE / *CODE*	ØD	L1	M	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AP10F16Z2	16	**25**	8	**8,5**	2	**VT15**	TX08	**AP...1003...**
AP10F20Z3	20	**30**	10	**10,5**	3	**VT15**	TX08	**AP...1003...**
AP10F25Z4	25	**35**	12	**12,5**	4	**VT15**	TX08	**AP...1003...**
AP10F32Z5	32	**43**	16	**17**	5	**VT15**	TX08	**AP...1003...**
AP16F25Z2	25	**35**	12	**12,5**	2	**VT75**	TX15	**AP...1604...**
AP16F32Z3	32	**43**	16	**17**	3	**VT75**	TX15	**AP...1604...**

AP10W



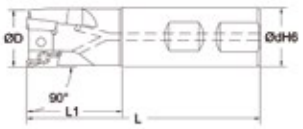
CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AP10W10Z1	10	**24**	80	**16**	1	**VT15**	TX08	**AP...1003...**
AP10W12Z1	12	**24**	80	**16**	1	**VT15**	TX08	**AP...1003...**
AP10W14Z1	14	**24**	80	**16**	1	**VT15**	TX08	**AP...1003...**
AP10W16Z2	16	**25**	85	**16**	2	**VT15**	TX08	**AP...1003...**
AP10W17Z2	17	**25**	85	**16**	2	**VT15**	TX08	**AP...1003...**
AP10W20Z3	20	**25**	90	**20**	3	**VT15**	TX08	**AP...1003...**
AP10W22Z3	22	**25**	90	**20**	3	**VT15**	TX08	**AP...1003...**
AP10W24Z3	24	**25**	95	**25**	3	**VT15**	TX08	**AP...1003...**
AP10W25Z3	25	**25**	95	**25**	3	**VT15**	TX08	**AP...1003...**
AP10W25Z4	25	**25**	95	**25**	4	**VT15**	TX08	**AP...1003...**
AP10W32Z5	32	**26**	95	**25**	5	**VT15**	TX08	**AP...1003...**

AP16M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AP16M40Z4	40	**40**	16	**4**	VT75	**TX15**	AP...1604...
AP16M50Z5	50	**40**	22	**5**	VT75	**TX15**	AP...1604...
AP16M63Z5	63	**40**	22	**5**	VT75	**TX15**	AP...1604...
AP16M63Z6	63	**40**	22	**6**	VT75	**TX15**	AP...1604...
AP16M80Z6	80	**50**	27	**6**	VT75	**TX15**	AP...1604...
AP16M100Z7	100	**50**	32	**7**	VT75	**TX15**	AP...1604...
AP16M125Z8	125	**63**	40	**8**	VT75	**TX15**	AP...1604...
AP16M160Z10	160	**63**	40	**10**	VT75	**TX15**	AP...1604...

AP16W



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AP16W25Z2	25	**44**	100	**25**	2	**VT75**	TX15	**AP...1604...**
AP16W28Z3	28	**44**	100	**25**	3	**VT75**	TX15	**AP...1604...**
AP16W32Z3	32	**50**	110	**32**	3	**VT75**	TX15	**AP...1604...**
AP16W40Z4	40	**45**	115	**32**	4	**VT75**	TX15	**AP...1604...**

Inserti / *Inserts*

APGT / APMT...11-16

CODICE / *CODE*	L	D	S	R	A°	Lavorazione / *Operation*	0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
			(mm)				GRADI / *GRADES*																			
APGT 11-16 N1									✓				✓			✓		+	+		●				✓	●
 **APGT 1135 PD FR N1**	10,70	6,16	3,50	0,80	11	F/M			√																	
APGT 1604 PD FR N1	16,20	9,26	4,76	0,80	11	F/M			√																	
APMT 11-16 F1/M1/R1																										
 **APMT 1135 PD ER F1**	10,70	6,16	3,50	0,80	11	F/SF							√			√		●	●						●	
APMT 1604 PD ER F1	16,20	9,26	4,76	0,80	11	F/SF							●					●							●	
 **APMT 1135 PD ER M1**	10,70	6,16	3,50	0,80	11	M							√			√		●	●		●				●	●
APMT 1604 PD ER M1	16,20	9,26	4,76	0,80	11	M							√			√		●	●		●				●	●
 **APMT 1135 PD ER R1**	10,70	6,16	3,50	0,80	11	R							√			√		●	●						●	
APMT 1604 PD ER R1	16,20	9,26	4,76	0,80	11	R							√			√			●		●				●	

Frese / *Milling cutters*

AM11-16C

CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AM11C16Z2-D15	16	**70**	150	**15**	2	**VT140**	TX07	**AP...T1035...**
AM11C16Z2-170	16	**50**	170	**16**	2	**VT140**	TX07	**AP...T1035...**
AM11C20Z3	20	**50**	160	**20**	3	**VT140**	TX07	**AP...T1035...**
AM11C25Z4	25	**50**	160	**25**	4	**VT140**	TX07	**AP...T1035...**
AM11 C32Z4	32	**80**	160	**32**	4	**VT140**	TX07	**AP...T1035...**
AM16C25Z2	25	**50**	160	**25**	2	**VT141**	TX15	**AP...T1604...**
AM16C32Z3	32	**50**	160	**32**	3	**VT141**	TX15	**AP...T1604...**

Applicazione / *Application*

● Taglio continuo / *Stable* ✓ Taglio generico / *General* + Taglio interrotto / *Unstable*

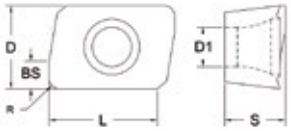
Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
	✓	+												
	●													
	●													
		●												
		√												
		√												
		√												
		√												
		●												

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
APGT 11 APMT 11	AM11M / AM11C
APGT 16 APMT 16	AM16M / AM16C

Parametri di taglio / *Cutting parameters* *pag. 50*

Frese / *Milling cutters*

AM11-16M

CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AM11M40Z5	40	**40**	16	**5**	VT140	**TX07**	AP...T1035...
AM11M50Z6	50	**50**	22	**6**	VT140	**TX07**	AP...T1035...
AM16M50Z4	50	**50**	22	**4**	VT141	**TX15**	AP...T1604...
AM16M63Z5	63	**50**	22	**5**	VT141	**TX15**	AP...T1604...
AM16M80Z6	80	**50**	27	**6**	VT141	**TX15**	AP...T1604...
AM16M100Z7	100	**63**	32	**7**	VT141	**TX15**	AP...T1604...
AM16M125Z8	125	**63**	40	**8**	VT141	**TX15**	AP...T1604...

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

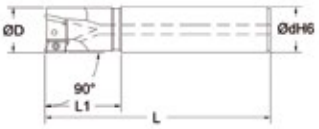
Inserti / *Inserts*

AXMT...11-17

	CODICE / *CODE*	L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
		(mm)																									
													●		◥												
	**AXMT 11T308 ER M2**	11,00	6,80	3,60	0,80	21	M						√		√												
	**AXMT 170408 ER ME**	17,30	9,60	6,35	0,80	19	M						√		√												

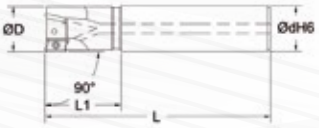
Frese / *Milling cutters*

AX11C



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AX11C16Z2	16	**25**	100	**16**	2	**VT15**	TX08	**AX...11T30...**
AX11C20Z3	20	**25**	110	**20**	3	**VT15**	TX08	**AX...11T30...**
AX11C25Z3	25	**32**	120	**25**	3	**VT15**	TX08	**AX...11T30...**
AX11C32Z3	32	**40**	130	**32**	3	**VT15**	TX08	**AX...11T30...**

AX17C



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AX17C25Z2	25	**50**	150	**25**	2	**VT50**	TX15	**AX...1704...**
AX17C32Z2	32	**50**	150	**32**	2	**VT50**	TX15	**AX...1704...**
AX17C40Z3	40	**40**	150	**40**	3	**VT50**	TX15	**AX...1704...**

Applicazione / *Application*

● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

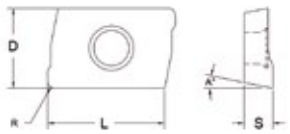
Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW® HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■		■		■		■	■	■			
			●		●		◡		✚	●	◡			
			•		•		•		Δ	•	•			
			•		√		•		Δ	√	Δ			

Disegni tecnici / *Technical drawings*

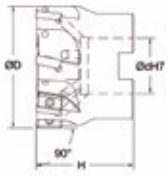


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
AXMT 11	AX11C / AX11M
AXMT 17	AX17C / AX17M

Parametri di taglio / *Cutting parameters* *pag. 50*

Frese / *Milling cutters*

AX11M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AX11M40Z4	40	**40**	16	**4**	VT15	**TX08**	AX...11T30...
AX11M50Z5	50	**40**	22	**5**	VT15	**TX08**	AX...11T30...
AX11M63Z6	63	**40**	22	**6**	VT15	**TX08**	AX...11T30...
AX11M80Z7	80	**50**	27	**7**	VT15	**TX08**	AX...11T30...

AX17M

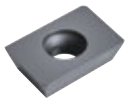
CODICE / *CODE*	ØD	L1	L	Ødh6	*Z*	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
AX17M63Z4	63	**42**	22	**4**	VT50	**TX15**	AX...1704...	**AX...1704...**
AX17M80Z5	80	**52**	27	**5**	VT50	**TX15**	AX...1704...	**AX...1704...**
AX17M100Z6	100	**52**	32	**6**	VT50	**TX15**	AX...1704...	**AX...1704...**

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

LECT / LECW...18

CODICE / *CODE*		L (mm)	D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
LECT 18 MA													●		◡								●				
	**LECT 180410 MA**	19,00	12,70	4,76	1,00	20	M						√										●				
LECW 18																											
	**LECW 180410 T**	19,00	12,70	4,76	1,00	20	M/R						√		√								●				

Applicazione / *Application*

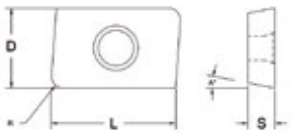
● Taglio continuo / *Stable* ◡ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
LECT 180410 MA	-
LECW 180410 T	-

Parametri di taglio / *Cutting parameters* *pag. 50*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

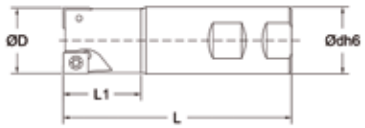
Inserti / *Inserts*

LNKU...12-16

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
														▼		●						●				▼	
	**LNKU 120704 ER F1**	12,00	10,00	8,00	0,40	0	F/SF							●								●				●	
	LNKU 160708 ER F1	16,00	11,20	7,90	0,80	0	F/SF							●								●				●	
	**LNKU 120708 TR M1**	12,00	10,00	8,00	0,80	0	M							√		●						●				●	
	LNKU 160708 TR M1	16,00	11,20	7,90	0,80	0	M							√		●						√				●	
	LNKU 160716 TR M1	16,00	11,20	7,90	1,60	0	M							●		●						●				●	
	**LNKU 160716 TR R1**	16,00	11,20	7,90	1,60	0	R							●		●										●	

Frese / *Milling cutters*

LK12-16C



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
LK12C32Z2	32	**40**	110	**32**	2	**VT142**	TX15	**LNKX1207**
LK12C40Z3	40	**40**	130	**32**	3	**VT142**	TX15	**LNKX1207**
LK16C32Z2	32	**40**	150	**32**	2	**VT143**	TX20	**LNKX1607**
LK16C32Z3	32	**40**	150	**32**	3	**VT143**	TX20	**LNKX1607**
LK16C40Z3-200	32	**56**	200	**32**	3	**VT143**	TX20	**LNKX1607**
LK16C40Z3	40	**47**	150	**32**	3	**VT143**	TX20	**LNKX1607**

Applicazione / *Application*

● Taglio continuo / *Stable* ▼ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

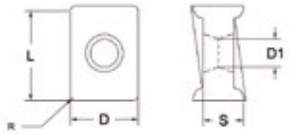
Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE													
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
		✚												
		●												
		●												
		√												
		√												
		●												
		●												

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
LNKU 120704	LNK12C / LNK12M
LNKU 160708	LNK16C / LNK16M

Parametri di taglio / *Cutting parameters* *pag. 51*

Frese / *Milling cutters*

LK12-16M

CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
LK12M50Z4	50	**40**	22	**4**	VT142	**TX15**	LNKX1207
LK12M63Z5	63	**40**	22	**5**	VT142	**TX15**	LNKX1207
LK16M50Z4	50	**40**	22	**4**	VT143	**TX20**	LNKX1607
LK16M63Z5	63	**40**	22	**5**	VT143	**TX20**	LNKX1607
LK16M80Z5	80	**50**	27	**5**	VT143	**TX20**	LNKX1607
LK16M80Z6	80	**50**	27	**6**	VT143	**TX20**	LNKX1607
LK16M100Z8	100	**50**	32	**8**	VT143	**TX20**	LNKX1607

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

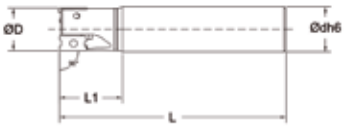
Inserti / *Inserts*

LNMU...15

CODICE / *CODE*		L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
		(mm)																								
													●													
	**LNMU 15T608 SR M1**	15,00	10,00	6,96	0,80	0	**M**						●													

Frese / *Milling cutters*

LN15C



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
LN15C25Z2	25	**32**	100	**25**	2	**VT85**	TX15	**LNMU 15T608...**
LN15C32Z3	32	**50**	130	**32**	3	**VT85**	TX15	**LNMU 15T608...**
LN15C40Z3	40	**50**	130	**32**	3	**VT85**	TX15	**LNMU 15T608...**

Applicazione / *Application*

● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

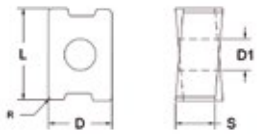
Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■	■	■					■				
			●	●	●					●				
			●	√	√					√				

Disegni tecnici / *Technical drawings*

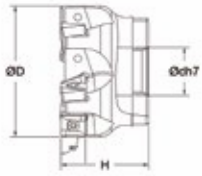


INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
LNMU 15T608	LN15C / LN15M

Parametri di taglio / *Cutting parameters* *pag. 51*

Frese / *Milling cutters*

LN15M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
LN15M50Z5	50	**40**	22	**5**	VT85	**TX15**	LNMU 15T608...
LN15M63Z5	63	**45**	22	**5**	VT85	**TX15**	LNMU 15T608...
LN15M80Z6	80	**52**	27	**6**	VT85	**TX15**	LNMU 15T608...

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

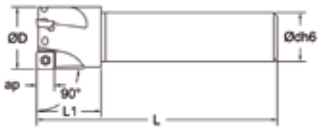
Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

SDHW / SDHT...09-12

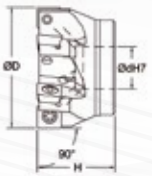
CODICE / *CODE*		L	D	S	R	A°	Lavorazione / *Operation*	0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
		(mm)					GRADI / *GRADES*																				
SDHW 09-12																											
	**SDHW 09T308 E**	9,52	9,52	3,97	0,80	15	F/SF						√		√								●				
	SDHW 09T3AE TN	9,52	9,52	3,97	0,8X45°	15	F/SF						√		√								●				
	SDHW 120412 TN	12,7	12,7	4,76	1,2	15	F/M						√		√								●				
	SDHW 1204AE TN	12,7	12,7	4,76	2X45°	15	F/M						√		√								●				
SDHT 12 ME																											
	**SDHT 120408 ER ME**	12,70	12,70	4,76	0,80	15	F/M						√		√								●				
	SDHT 120420 ER ME	12,70	12,70	4,76	2,00	15	F/M						√		√								●				

SD09C



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SD09C32Z3	32	**40**	100	**25**	3	**VT145**	TX15	**SD...09T3...**

SD09MN



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SD09MN40Z4	40	**40**	16	**4**	VT145	**TX15**	SD...09T3...
SD09MN40Z5	40	**40**	16	**5**	VT145	**TX15**	SD...09T3...
SD09MN50Z5	50	**40**	22	**5**	VT145	**TX15**	SD...09T3...
SD09MN63Z6	63	**40**	22	**6**	VT145	**TX15**	SD...09T3...

Applicazione / *Application*

● Taglio continuo / *Stable* ◥◤ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

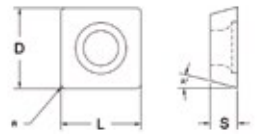
Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

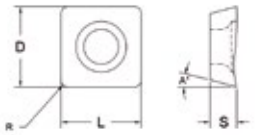
A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
										■				
										●				
										●				
										●				

Disegni tecnici / *Technical drawings*



SDHW 09-12



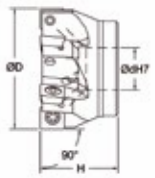
SDHT 12 ME

INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
SDHW 09T308	SD09C / SD09MN
SDHW 12 SDHT 120420 E ME	SD12MN

Parametri di taglio / *Cutting parameters* *pag. 51-52*

Frese / *Milling cutters*

SD12MN



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SD12MN50Z5	50	**40**	22	**5**	VT72	**TX20**	SD...1204...
SD12MN63Z6	63	**40**	22	**6**	VT72	**TX20**	SD...1204...
SD12MN80Z6	80	**50**	27	**6**	VT72	**TX20**	SD...1204...
SD12MN100Z8	100	**50**	32	**8**	VT72	**TX20**	SD...1204...
SD12MN125Z9	125	**63**	40	**9**	VT72	**TX20**	SD...1204...

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

TPKN / TPKR... 16-22

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
TPKN 16-22																										
	**TPKN 1603PD TR**	16,00	9,52	3,18	-	11	M/R						●		√								●				
	TPKN 2204PD TR	22,00	12,70	4,76	-	11	M/R						●		√								●				
TPKR 16 MF																										
	**TPKR 1603PD FR MF**	16,00	9,52	3,18	-	11	F/M		√																		

Applicazione / *Application*

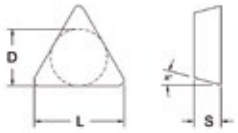
● Taglio continuo / *Stable* — Taglio generico / *General* — ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*

NEW Note / *Remarks*													Note / *Remarks*
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	
■														
✓														
●														

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
TPKN 16 TPKR 16	-
TPKN 22	-

Parametri di taglio / *Cutting parameters* *pag. 52*

✓ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

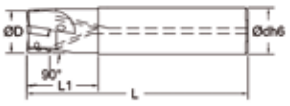
Inserti / *Inserts*

XOHX...12

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
	XOHX 120404 PXFR R2	12,60	8,18	4,90	0,40	14	F/M		√	●																	
	XOXH 120408 PXFR R2	12,60	8,18	4,90	0,80	14	F/M		●	●																	
	XOHX 120408 ER R2	12,60	8,18	4,90	0,80	14	F/M						√		√								●				
	XOHX 120412 ER R2	12,60	8,18	4,90	1,20	14	F/M						●		●								●				
	XOHX 120416 ER R2	12,60	8,18	4,90	1,60	14	F/M						●		●								●				
	XOHX 120420 ER R2	12,60	8,18	4,90	2,00	14	F/M						●		●								●				
	XOHX 120408 TR R2	12,60	8,18	4,90	0,80	14	F/M						√		√								●				

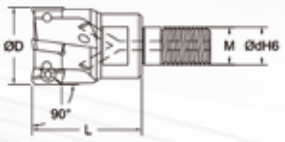
Frese / *Milling cutters*

XO12C



CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
XO12C20Z2	20	30	150	20	2	VT46	TX10	XO...1204...
XO12C20Z2-19	20	30	150	19	2	VT46	TX10	XO...1204...
XO12C25Z2	25	35	170	25	2	VT46	TX10	XO...1204...
XO12C25Z2-24	25	35	170	24	2	VT46	TX10	XO...1204...
XO12C25Z3	25	35	170	25	3	VT46	TX10	XO...1204...

XO12F



CODICE / *CODE*	ØD	L	M	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
XO12F20Z2	20	26	10	10,5	2	VT46	TX10	XO...1204...
XO12F25Z3	25	30	12	12,5	3	VT46	TX10	XO...1204...
XO12F32Z3	32	40	16	17	3	VT46	TX10	XO...1204...
XO12F32Z4	32	40	16	17	4	VT46	TX10	XO...1204...
XO12F40Z4	40	40	16	17	4	VT46	TX10	XO...1204...
XO12F40Z5	40	40	16	17	5	VT46	TX10	XO...1204...

Applicazione / *Application*

● Taglio continuo / *Stable* — Taglio generico / *General* — ✚ Taglio interrotto / *Unstable*

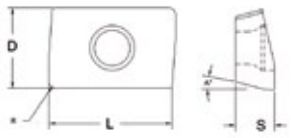
Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW® HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
◡	◡		●	●	●	◡	◡			●	◡			
√	●													
●	●													
			●	√	√	●	●			√	●			
			●	√	√	●	●			√	●			

Disegni tecnici / *Technical drawings*

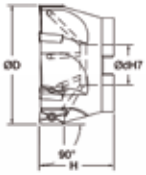


INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
XOHX 12	XO12C / XO12F / XO12M

Parametri di taglio / *Cutting parameters* *pag. 52*

Frese / *Milling cutters*

XO12M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
XO12M40Z4	40	**40**	16	**4**	VT46	**TX10**	XO...1204...
XO12M40Z5	40	**40**	16	**5**	VT46	**TX10**	XO...1204...
XO12M50Z5	50	**40**	22	**5**	VT46	**TX10**	XO...1204...
XO12M50Z7	50	**40**	22	**7**	VT46	**TX10**	XO...1204...
XO12M63Z6	63	**40**	27	**6**	VT46	**TX10**	XO...1204...
XO12M63Z8	63	**40**	27	**8**	VT46	**TX10**	XO...1204...
XO12M80Z7	80	**50**	27	**7**	VT46	**TX10**	XO...1204...
XO12M100Z8	100	**50**	32	**8**	VT46	**TX10**	XO...1204...

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

Inserti / *Inserts*

XNGU...04-08

CODICE / *CODE*		L	D	S	R	A°	Lavorazione / *Operation*	0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
		(mm)						GRADI / *GRADES*																			
																●	◥◤	◥◤		✚	✚	●				◥◤	
	**XNGU 080608 ER F1**	7,80	12,48	6,45	0,80	0	F/SF											●		●	●					●	
	**XNGU 040304 ER M1**	4,25	6,70	3,30	0,40	0	M									●	●			●		●				●	
	XNGU 040308 ER M1	4,25	6,70	3,30	0,80	0	M									●	√			●		●				√	
	XNGU 080608 ER M1	7,80	12,48	6,45	0,80	0	M									√	●			●		●				√	
	XNGU 080616 ER M1	7,80	12,48	6,45	1,60	0	M													●		●					
	**XNGU 080608 TR R1**	7,80	12,48	6,45	0,80	0	R									●	●									●	

Frese / *Milling cutters*

XN04-08C

CODICE / *CODE*	ØD	L1	L	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
XN04C25Z4	25	**30**	170	**25**	4	**VT145**	TG07	**XNGU0403...**
XN04C32Z5	32	**30**	195	**32**	5	**VT145**	TG07	**XNGU0403...**
XN04C40Z6	40	**30**	195	**32**	6	**VT145**	TG07	**XNGU0403...**
XN08C40Z3	40	**60**	160	**32**	3	**VT146**	TG15	**XNGU0806**

Applicazione / ***Application***

● Taglio continuo / *Stable* ◥◤ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

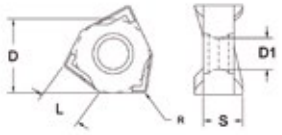
Materiale da lavorare / ***Workpiece material***

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
		✚												
		●												
		√												
		√												
		●												
		●												

Disegni tecnici / *Technical drawings*

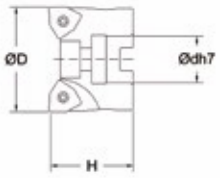


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
XNGU 08	XN04-08C / XN04-08M

Parametri di taglio / *Cutting parameters* *pag. 53*

Frese / *Milling cutters*

XN04-08M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
XN08M50Z4	50	**40**	22	**4**	VT146	**TG15**	XNGU0806...
XN08M50Z5	50	**40**	22	**5**	VT146	**TG15**	XNGU0806...
XN08M63Z6	63	**40**	22	**6**	VT146	**TG15**	XNGU0806...
XN08M80Z7	80	**50**	27	**7**	VT146	**TG15**	XNGU0806...
XN08M100Z8	100	**50**	32	**8**	VT146	**TG15**	XNGU0806...
XN08M125Z7	125	**63**	40	**7**	VT146	**TG15**	XNGU0806...

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

ADKT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* ME
P	**ADKT 1505 PD ER**	2FD	**10,0**	80-300	**0.08-0.18**
		3MCC	**10,0**	80-240	**0.08-0.18**
M	**ADKT 1505 PD ER**	2FD	**10,0**	110-180	**0.08-0.18**
		3MCC	**10,0**	100-160	**0.08-0.18**
K	**ADKT 1505 PD ER**	2FD 2KCC	**10,0**	80-300	**0.08-0.18**
		3MCC	**10,0**	80-240	**0.08-0.18**

ADMW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	**ADMW 1503... TR** tutti i raggi/*all radii*	2FD	**10,0**	110-280	**0.08-0.25**
		3MCC	**10,0**	90-240	**0.08-0.25**
M	**ADMW 1503... TR** tutti i raggi/*all radii*	2FD	**10,0**	85-195	**0.08-0.25**
		3MCC	**10,0**	70-165	**0.08-0.25**
K	**ADMW 1503... TR** tutti i raggi/*all radii*	2FD 2KCC	**10,0**	80-150	**0.08-0.25**
		3MCC	**10,0**	70-130	**0.08-0.25**

ADXT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* ME
P	**ADMW 1606... ER** tutti i raggi/*all radii*	2FD 2FUS 2FUSP 2FST	**10,0**	125-300	**0.08-0.25**
		3MCC 3MUSP 3MST	**10,0**	110-285	**0.08-0.25**
		4K USP 4KST	**10,0**	105-270	**0.08-0.25**
M	**ADMW 1606... ER** tutti i raggi/*all radii*	2FD 2FHI	**10,0**	100-230	**0.08-0.20**
		3MCC 3MHI	**10,0**	85-200	**0.08-0.20**
		4KHI	**10,0**	80-180	**0.08-0.20**
K	**ADMW 1606... ER** tutti i raggi/*all radii*	2FD 2KCC	**10,0**	95-175	**0.08-0.20**
		3MCC	**10,0**	80-150	**0.08-0.20**

APEX

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* RA	RX
P	**APEX 1604 PD ER**	3MCC	**6,0**	100-250	-	0.05-0.20
M	**APEX 1604 PD ER**	3MCC	**6,0**	80-200	-	0.05-0.20
K	**APEX 1604 PD ER**	3MCC	**6,0**	80-180	-	0.05-0.20
N	**APEX 1003 PD FR/FL**	1F 1FAL	**4,0**	800-1050	**0.05-0.20**	
	APEX 1604 PD FR/FL	1F 1FAL	**6,0**	800-1050	**0.05-0.20**	0.05-0.20

APHT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R3
P	**APHT 100306 ER** tutti i raggi/*all radii*	1FD	**8,0**	160-300	**0.05-0.16**
		3MCC	**8,0**	120-260	**0.05-0.17**
M	**APHT 100306 ER** tutti i raggi/*all radii*	1FD	**8,0**	140-270	**0.05-0.18**
		3MCC	**8,0**	110-210	**0.05-0.19**
K	**APHT 100306 ER** tutti i raggi/*all radii*	1FD	**8,0**	120-250	**0.05-0.20**
		3MCC	**8,0**	85,18	**0.05-0.21**

APHW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	**APHW 1003PD ER**	1FD	**8,0**	130-300	**0.08-0.17**
		3MCC	**8,0**	110-280	**0.08-0.17**
	APHW 1604... TR tutti i raggi/*all radii*	3MCC	**12,0**	110-280	**0.10-0.20**
M	**APHW 1003 PD ER**	1FD	**8,0**	100-180	**0.08-0.17**
		3MCC	**8,0**	80-150	**0.08-0.17**
	APHW 1604... TR tutti i raggi/*all radii*	3MCC	**12,0**	80-150	**0.10-0.20**
K	**APHW 1003 PD ER**	1FD	**8,0**	100-180	**0.08-0.17**
		3MCC	**8,0**	80-150	**0.08-0.17**
	APHW 1604... TR tutti i raggi/*all radii*	3MCC	**12,0**	80-150	**0.10-0.20**

APKT M2

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* M2
P	**APKT 1003 PD ER**	2FD	**4,0**	130-300	**0.08-0.17**
		3MCC	**4,0**	110-275	**0.08-0.17**
	APKT 1604 PD ER	2FD	**6,0**	130-300	**0.10-0.20**
		3MCC	**6,0**	110-275	**0.10-0.20**
M	**APKT 1003 PD ER**	2FD	**4,0**	110-220	**0.08-0.17**
		3MCC	**4,0**	85-200	**0.08-0.17**
	APKT 1604 PD ER	2FD	**6,0**	110-220	**0.10-0.20**
		3MCC	**6,0**	85-200	**0.10-0.20**
K	**APKT 1003 PD ER**	2FD 2KCC	**4,0**	90-175	**0.08-0.17**
		3MCC	**4,0**	80-150	**0.08-0.17**
	APKT 1604 PD ER	2FD 2KCC	**6,0**	90-175	**0.10-0.20**
		3MCC	**6,0**	80-150	**0.10-0.20**

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel*
M = **Acciaio Inossidabile** */ Stainless steel*
K = **Ghisa** */ Cast iron*
N = **Leghe Leggere** */ Non ferrous metals*
S = **Leghe resistenti al calore** */ Superalloys*
H = **Materiali Temprati** */ Hardened steel*

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

APGT/APMT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* N1	F1	M1	R1
P	**APGT/APMT 1135 PD ER**	3FCRT 4FHI2 2PCR 3FCT 4FCT	**4,0**	100-290	-	0.05-0.15	**0.10-0.20**	0.10-0.25
	APGT/APMT 1604 PD ER	3FCRT 4FHI2 2PCR 3FCT 4FCT	**6,0**	100-290	-	0.10-0.30	**0.15-0.35**	0.20-0.40
M	**APGT/APMT 1135 PD ER**	3FCRT 4FHI2 4MC9	**4,0**	100-220	-	0.05-0.20	**0.10-0.20**	0.10-0.30
	APGT/APMT 1604 PD ER	3FCRT 4FHI2 4MC9	**6,0**	100-200	-	0.10-0.20	**0.10-0.35**	0.10-0.40
K	**APGT/APMT 1135 PD ER**	3FCRT 4FHI2 2KC9 3KCC	**4,0**	120-220	-	0.05-0.15	**0.10-0.20**	0.10-0.30
	APGT/APMT 1604 PD ER	3FCRT 4FHI2 2KC9 3KCC	**6,0**	120-220	-	0.10-0.20	**0.15-0.40**	0.20-0.50
S	**APGT/APMT 1135 PD FR**	3SCC	**4,0**	30-60	-	0.05-0.13	**0.07-0.15**	0.10-0.17
	APGT/APMT 1604 PD FR	3SCC	**6,0**	30-60	-	0.05-0.15	**0.07-0.17**	0.10-0.20
N	**APGT/APMT 1135 PD FR**	2F 2FAL	**4,0**	300-1200	**0.05-0.15**	-	-	-
	APGT/APMT 1604 PD FR	2F 2FAL	**6,0**	300-1200	**0.05-0.2**	-	-	-

AXMT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* M2	ME
P	**AXMT 11T308 ER**	2FD 2FUS 2FST	**4,0**	150-280	**0-08-0.15**	-
		3MCC 3MUSP 3MST	**4,0**	130-250	**0-08-0.15**	-
		4KUSP 4KST	**4,0**	120-240	**0-08-0.15**	-
	AXMT 170408 ER	2FD 2FUS 2FST	**6,0**	150-280	-	0.10-0.20
		3MCC 3MUSP 3MST	**6,0**	130-250	-	0.10-0.20
		4KUSP 4KST	**6,0**	120-240	-	0.10-0.20
M	**AXMT 11T308 ER**	2FD 2FHI	**4,0**	120-250	**0-08-0.15**	-
		3MCC 3MHI	**4,0**	100-230	**0-08-0.15**	-
		4KHI	**4,0**	90-210	**0-08-0.15**	-
	AXMT 170408 ER	2FD 2FHI	**6,0**	120-250	-	0.10-0.20
		3MCC 3MHI	**6,0**	100-230	-	0.10-0.20
		4KHI	**6,0**	90-210	-	0.10-0.20
K	**AXMT 11T308 ER**	2FD	**4,0**	100-210	**0-08-0.15**	-
		3MCC	**4,0**	90-190	**0-08-0.15**	-
	AXMT 170408 ER	2FD	**6,0**	100-210	-	0.10-0.20
		3MCC	**6,0**	90-190	-	0.10-0.20

LECT/LECW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* MA	Piano / *Flat*
P	**LECT 180410**	2FD	**10,0**	120-300	**0.10-0.35**	-
	LECW 180410 T	2FD	**10,0**	120-300	-	0.10-0.35
		3MCC	**10,0**	100-250	-	0.10-0.35
M	**LECT 180410**	2FD	**10,0**	90-230	**0.10-0.25**	-
	LECW 180410 T	2FD	**10,0**	90-230	-	0.10-0.25
		3MCC	**10,0**	80-200	-	0.10-0.25
K	**LECT 180410**	2FD 2KCC	**10,0**	100-230	**0.10-0.25**	-
	LECW 180410 T	2FD 2KCC	**10,0**	100-230	-	0.10-0.25
		3MCC	**10,0**	80-190	-	0.10-0.25

LNKU

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* F1	M1	R1
P	**LNKU 120704 ER**	3FCRT 4FHI2 2PCR	**4,0**	110-220	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	LNKU 1607... ER	3FCRT 4FHI2 2PCR	**6,0**	110-221	**0.05-0.20**	0.10-0.35	**0.15-0.40**
M	**LNKU 120704 ER**	3FCRT 4FHI2 4MC9	**4,0**	80-180	**0.05-0.20**	0.10-0.25	**0.10-0.30**
	LNKU 1607... ER	3FCRT 4FHI2 4MC10	**6,0**	80-180	**0.05-0.20**	0.10-0.25	**0.10-0.30**
K	**LNKU 120704 ER**	3FCRT 4FHI2 2KC9 3KCC	**4,0**	100-220	**0.05-0.15**	0.05-0.20	**0.10-0.25**
	LNKU 1607... ER	3FCRT 4FHI2 2KC9 3KCC	**8,0**	100-221	**0.10-0.20**	0.10-0.35	**0.20-0.40**
S	**LNKU 120704 ER**	3SCC	**4,0**	50-100	**0.05-0.15**	0.05-0.15	**0.1-0.2**
	LNKU 1607... ER	3SCC	**8,0**	50-100	**0.05-0.15**	0.05-0.15	**0.1-0.2**

LNMU

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* M1
P	**LNMU 15T608 SR**	2FUS 2FUSP 2FST	**15,0**	120-260	**0.10-0.40**
M	**LNMU 15T608 SR**	2FHI	**15,0**	80-190	**0.10-0.40**

SDHW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	**SDHW 09T3... E**	2FD	**2,0**	125-300	**0.06-0.20**
		3MCC	**2,0**	100-250	**0.06-0.20**
	SDHW 1204... TN	2FD	**4,0**	125-300	**0.08-0.25**
		3MCC	**4,0**	100-250	**0.08-0.25**
M	**SDHW 09T3... E**	2FD	**2,0**	100-210	**0.06-0.20**
		3MCC	**2,0**	90-170	**0.06-0.20**
	SDHW 1204... TN	2FD	**4,0**	100-210	**0.08-0.25**
		3MCC	**4,0**	90-170	**0.08-0.25**
K	**SDHW 09T3... E**	2FD 2KCC	**2,0**	120-220	**0.06-0.20**
		3MCC	**2,0**	90-190	**0.06-0.20**
	SDHW 1204... TN	2FD 2KCC	**4,0**	120-220	**0.08-0.25**
		3MCC	**4,0**	90-190	**0.08-0.25**

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

SDHT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* ME
P	**SDHT 120408 E** tutti i raggi/*all radii*	2FD	**2,0**	125-300	**0.10-0.25**
		3MCC	**2,0**	100-250	**0.10-0.25**
M	**SDHT 120408 E** tutti i raggi/*all radii*	2FD	**2,0**	100-210	**0.10-0.25**
		3MCC	**2,0**	90-170	**0.10-0.25**
K	**SDHT 120408 E** tutti i raggi/*all radii*	2FD 2KCC	**2,0**	120-220	**0.10-0.25**
		3MCC	**2,0**	90-190	**0.10-0.25**

TPKN/TPKR

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* MF	Piano / *Flat*
P	**TPKN 1603 PD TR**	2FD	**6,0**	85-235	-	0.10-0.20
		3MCC	**6,0**	70-200	-	0.10-0.20
	TPKN 2204 PD TR	2FD	**10,0**	85-235	-	0.10-0.25
		3MCC	**10,0**	70-200	-	0.10-0.25
M	**TPKN 1603 PD TR**	2FD	**6,0**	100-190	-	0.10-0.20
		3MCC	**6,0**	85-160	-	0.10-0.20
	TPKN 2204 PD TR	2FD	**10,0**	100-190	-	0.10-0.25
		3MCC	**10,0**	85-160	-	0.10-0.25
K	**TPKN 1603 PD TR**	2FD 2KCC	**6,0**	95-160	-	0.10-0.18
		3MCC	**6,0**	80-140	-	0.10-0.18
	TPKN 2204 PD TR	2FD 2KCC	**10,0**	95-160	-	0.10-0.22
		3MCC	**10,0**	80-140	-	0.10-0.22
N	**TPKN 1603 PD TR**	1F 1FAL	**6,0**	300-1050	**0.05-0.20**	-

XOHX

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R2
P	**XOHX 1204... E** tutti i raggi/*all radii*	2FD 2FUS 2FUSP 2FST	**6,0**	125-300	**0.08-0.25**
		3MCC 3MUSP 3MST	**6,0**	105-250	**0.08-0.25**
	XOHX 120408 TR	2FD 2FUS 2FUSP 2FST	**6,0**	125-300	**0.08-0.25**
		3MCC 3MUSP 3MST	**6,0**	105-250	**0.08-0.25**
M	**XOHX 1204... E** tutti i raggi/*all radii*	2FD 2FHI	**6,0**	110-250	**0.08-0.25**
		3MCC 3MHI	**6,0**	95-210	**0.08-0.25**
	XOHX 120408 TR	2FD 2FHI	**6,0**	110-250	**0.08-0.25**
		3MCC 3MHI	**6,0**	95-210	**0.08-0.25**
K	**XOHX 1204... E** tutti i raggi/*all radii*	2FD 2KCC	**6,0**	95-210	**0.08-0.25**
		3MCC	**6,0**	80-180	**0.08-0.25**
	XOHX 120408 TR	2FD 2KCC	**6,0**	95-210	**0.08-0.25**
		3MCC	**6,0**	80-180	**0.08-0.25**
N	**XOHX 1204... PXFR R2** tutti i raggi/*all radii*	1F 1FAL	**6,0**	640-1485	**0.08-0.25**
		2F 2FAL	**6,0**	550--1235	**0.08-0.25**

XNGU

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* F1	M1	R1
P	**XNGU 040304 ER**	4FHI2 1PC9 2PCR	**2,5**	110-220	-	0.10-0.20	-
	XNGU 080608 ER	4FHI2 1PC9 2PCR 3FCT 4FCT	**5,0**	110-220	**0.05-0.20**	0.10-0.35	-
	XNGU 080608 TR	4FHI2 1PC9 2PCR	**5,0**	110-220	-	-	**0.15-0.40**
M	**XNGU 040304 ER**	4FHI2 4MC9	**2,5**	80-180	-	0.10-0.20	-
	XNGU 080608 ER	4FHI2 4MC9 4MHI	**5,0**	80-180	**0.1-0.20**	0.10-0.35	-
K	**XNGU 040304 ER**	4FHI2 2KC9 3KCC	**2,5**	100-220	-	0.10-0.20	-
	XNGU 080608 ER	4FHI2 2KC9 3KCC	**5,0**	100-220	**0.10-0.20**	0.1-0.4	-
	XNGU 080608 TR	3KCC	**5,0**	100-220	-	-	**0.2-0.45**
S	**XNGU 040304 ER**	3SCC	**2,5**	30-60	-	0.05-0.15	-
	XNGU 080608 ER	3SCC	**5,0**	30-60	**0.05-0.15**	0.05-0.2	-
	XNGU 080608 TR	3SCC	**5,0**	30-60	-	-	**0.1-0.2**

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel*
M = **Acciaio Inossidabile** */ Stainless steel*
K = **Ghisa** */ Cast iron*
N = **Leghe Leggere** */ Non ferrous metals*
S = **Leghe resistenti al calore** */ Superalloys*
H = **Materiali Temprati** */ Hardened steel*


THINK

SPIANATURA

INSERTS AND MILLING CUTTERS - FACE MILLING

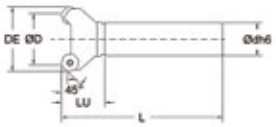
Inserti / *Inserts*

HNGX...06-09-13

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
																◡			✚		✚	●				◡	
	**HNGX 0604 ANEN F1**	3,40	12,00	4,45	1,00	0	F/SF									●			●		●	●				●	
	HNGX 0905 ANEN F1	4,60	15,88	5,56	2,20	0	F/SF									●			●		●	●				●	
	**HNGX 0604 ANEN M1**	3,40	12,00	4,45	1,00	0	M									√			√		√	●				●	
	HNGX 0905 ANEN M1	4,60	15,88	5,56	2,20	0	M									√			√		√	●				●	
	HNGX 1307 ANEN M1	7,30	22,25	7,48	1,30	0	M									●			●		●	●				●	
	**HNGX 0604 ANEN R1**	3,40	12,00	4,45	1,00	0	R												●			●					
	HNGX 0905 ANEN R1	4,60	15,88	5,56	2,20	0	R												●			●					
	HNGX 1307 ANEN R1	7,30	22,25	7,48	1,30	0	R												●			●					

Frese / *Milling cutters*

HN06-09CQ



CODICE / *CODE*	ØD	DE	L	LU	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
HN06CQ25Z3	25	33	120	32	20	3	VT147	TX15	HNGX0604...
HN06CQ32Z4	32	40	130	40	25	4	VT147	TX15	HNGX0604...
HN09CQ40Z4	40	50,7	107	50	25	4	VT147	TX15	HNGX0905...

Applicazione / ***Application***

● Taglio continuo / *Stable* ◡ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

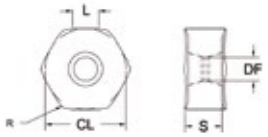
Materiale da lavorare / ***Workpiece material***

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

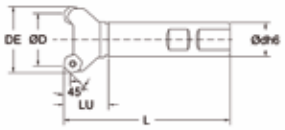


INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
HNGX 06	HN06CHF / HN06FQ / HN06CQ / HN06WQ
HNGX 09	HN09CQ / HN09WQ
HNGX 13	-

Parametri di taglio / *Cutting parameters* *pag. 80*

Frese / *Milling cutters*

HN06-09WQ



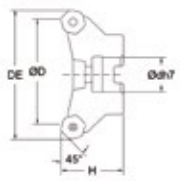
CODICE / *CODE*	ØD	DE	L	LU	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
HN06WQ25Z3	25	**33**	82	**32**	20	**3**	VT147	**TX15**	HNGX0604...
HN06WQ32Z4	32	**40**	97	**40**	25	**4**	VT147	**TX15**	HNGX0604...
HN09WQ40Z4	40	**50,6**	107	**50**	25	**4**	VT147	**TX15**	HNGX0905...

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

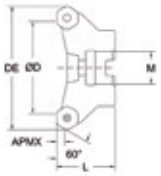
F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

HN06-09-13MQD



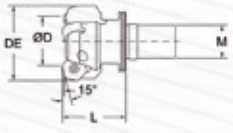
CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
HN06MQD40Z5	40	**48**	40	**16**	5	**VT147**	TX15	**HNGX0604...**
HN06MQD50Z6	50	**58**	40	**22**	6	**VT147**	TX15	**HNGX0604...**
HN06MQD63Z8	63	**71**	40	**22**	8	**VT147**	TX15	**HNGX0604...**
HN06MQD80Z8	80	**27**	50	**27**	8	**VT147**	TX15	**HNGX0604...**
HN06MQD80Z10	80	**27**	50	**27**	10	**VT147**	TX15	**HNGX0604...**
HN06MQD100Z9	100	**108**	50	**32**	9	**VT147**	TX15	**HNGX0604...**
HN06MQD100Z12	100	**108**	50	**32**	12	**VT147**	TX15	**HNGX0604...**
HN06MQD125Z12	125	**133**	63	**40**	12	**VT147**	TX15	**HNGX0604...**
HN06MQD125Z16	125	**133**	63	**40**	16	**VT147**	TX15	**HNGX0604...**
HN09MQD50Z5	50	**60,6**	40	**22**	5	**VT147**	TX15	**HNGX0905...**
HN09MQD63Z7	63	**73,6**	40	**22**	7	**VT147**	TX15	**HNGX0905...**
HN09MQD80Z9	80	**27**	50	**27**	9	**VT147**	TX15	**HNGX0905...**
HN09MQD100Z8	100	**110,6**	50	**32**	8	**VT147**	TX15	**HNGX0905...**
HN09MQD100Z11	100	**110,6**	50	**32**	11	**VT147**	TX15	**HNGX0905...**
HN09MQD125Z10	125	**135,6**	63	**40**	10	**VT147**	TX15	**HNGX0905...**
HN09MQD125Z14	125	**135,6**	63	**40**	14	**VT147**	TX15	**HNGX0905...**
HN13MQD200Z10	200	**215,4**	63	**60**	10	**VT147**	TX15	**HNGX1307...**
HN13MQD250Z14	250	**265,4**	63	**60**	14	**VT147**	TX15	**HNGX1307...**
HN13MQD315Z18	315	**330,4**	80	**60**	18	**VT147**	TX15	**HNGX1307...**

HN06MSD



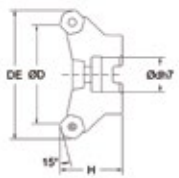
CODICE / *CODE*	ØD	DE	L	M	APMX	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
HN06MSD40Z5	40	**46,1**	40	**16**	4,3	**5**	VT147	**TX15**	HNGX0604...
HN06MSD50Z5	50	**56,1**	40	**22**	4,3	**5**	VT147	**TX15**	HNGX0604...
HN06MSD63Z6	63	**69,1**	40	**22**	4,3	**6**	VT147	**TX15**	HNGX0604...
HN06MSD80Z8	80	**86,1**	50	**27**	4,3	**8**	VT147	**TX15**	HNGX0604...
HN06MSD100Z9	100	**106,1**	50	**32**	4,3	**9**	VT147	**TX15**	HNGX0604...
HN06MSD125Z12	125	**131,1**	63	**40**	4,3	**12**	VT147	**TX15**	HNGX0604...

HN06FHF



CODICE / *CODE*	ØD	DE	L	M	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
HN06FHF25Z3	25	**38,2**	32	**16**	3	**VT147**	TX15	**HNGX0604...**
HN06FHF32Z3	32	**45**	40	**16**	3	**VT147**	TX15	**HNGX0604...**

HN06-09MHF

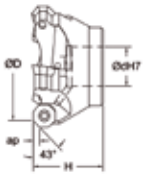


CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
HN06MHF40Z5	40	**53**	40	**16**	5	**VT147**	TX15	**HNGX0604...**
HN06MHF50Z5	50	**63**	40	**22**	5	**VT147**	TX15	**HNGX0604...**
HN06MHF63Z6	63	**76**	40	**22**	6	**VT147**	TX15	**HNGX0604...**
HN06MHF80Z8	80	**93**	50	**27**	8	**VT147**	TX15	**HNGX0604...**
HN06MHF50Z4	50	**67,7**	40	**22**	4	**VT147**	TX15	**HNGX0905...**
HN09MHF63Z5	63	**80,7**	40	**22**	5	**VT147**	TX15	**HNGX0905...**
HN09MHF80Z6	80	**97,7**	50	**27**	6	**VT147**	TX15	**HNGX0905...**
HN09MHF100Z8	100	**117,7**	50	**32**	8	**VT147**	TX15	**HNGX0905...**
HN09MHF125Z9	125	**142,7**	63	**40**	9	**VT147**	TX15	**HNGX0905...**
HN09MHF160Z12	160	**177,7**	63	**40**	12	**VT147**	TX15	**HNGX0905...**

ODHT / ODHW...05-06

CODICE / *CODE*	L (mm)	D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
ODHT 05-06 R2												●		◥								●				
 **ODHT 050408X EN R2**	5,00	12,70	4,76	0,80	15	F/M						√		√								●				
ODHT 060508X EN R2	6,00	15,88	5,56	0,80	15	F/M						√		√								●				
ODHW 05-06																										
 **ODHW 050408 TN**	5,00	12,70	4,76	0,80	15	F/M						●										●				
ODHW 060508 TN	6,00	15,88	5,56	0,80	15	F/M						●										●				

OD05M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
OD05M40Z3	40	**40**	16	**3**	VT77	**TX20**	OD...05...
OD05M50Z4	50	**40**	22	**4**	VT77	**TX20**	OD...05...
OD05M63Z5	63	**40**	22	**5**	VT77	**TX20**	OD...05...
OD05M80Z6	80	**50**	27	**6**	VT77	**TX20**	OD...05...
OD05M100Z7	100	**50**	32	**7**	VT77	**TX20**	OD...05...
OD05M125Z8	125	**63**	40	**8**	VT77	**TX20**	OD...05...

Applicazione / *Application*

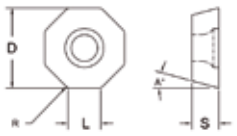
● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

NEW CAPSULE LINE													
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■	■		■		■	■	■				
			●	●		◆		✚	✚	●				
			●	√		●		●	√	●				
			●	√		●		●	√	●				

Disegni tecnici / *Technical drawings*

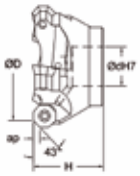


INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
ODHT..05 ODHW..05	OD05M
ODHT..06 ODHW..06	OD06M

Parametri di taglio / *Cutting parameters* *pag. 81*

Frese / *Milling cutters*

OD06M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
OD06M50Z4	50	**40**	22	**4**	VT92	**TX25**	OD...06...
OD06M63Z5	63	**40**	22	**5**	VT92	**TX25**	OD...06...
OD06M80Z5	80	**50**	27	**5**	VT92	**TX25**	OD...06...
OD06M100Z6	100	**50**	32	**6**	VT92	**TX25**	OD...06...
OD06M125Z7	125	**63**	40	**7**	VT92	**TX25**	OD...06...
OD06M160Z9	160	**63**	40	**9**	VT92	**TX25**	OD...06...

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

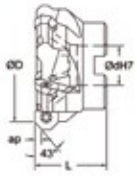
Inserti / *Inserts*

OFEX...05

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
	**OFEX 05T308 EN R2**	5,00	12,70	3,97	0,80	25	F/M						√		√								●				

Frese / *Milling cutters*

OF05M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
OF05M32Z3	32	**40**	16	**3**	VT77	**TX15**	OF...05T3...
OF05M40Z3	40	**40**	16	**3**	VT77	**TX15**	OF...05T3...
OF05M50Z4	50	**40**	22	**4**	VT77	**TX15**	OF...05T3...
OF05M50Z5	50	**40**	22	**5**	VT77	**TX15**	OF...05T3...
OF05M63Z5	63	**40**	22	**5**	VT77	**TX15**	OF...05T3...
OF05M80Z6	80	**40**	27	**6**	VT77	**TX15**	OF...05T3...
OF05M100Z7	100	**40**	32	**7**	VT77	**TX15**	OF...05T3...
OF05M125Z8	125	**40**	40	**8**	VT77	**TX15**	OF...05T3...

Applicazione / *Application*

● Taglio continuo / *Stable* ◡ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

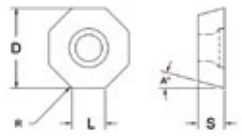
P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW® HARD METAL WORKING

NEW CAPSULE LINE

1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■											
			●											
			●											

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
OFEX 05T308 EN R2	OF05M

Parametri di taglio / *Cutting parameters* *pag. 81*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

OFHN / OFHR...07

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
OFHN 07													●										●				
	**OFHN 070412 TN**	7,40	18,00	4,76	1,20	25	F/M						●										●				
OFHR 07 ME																											
	**OFHR 070408 EN ME**	7,40	18,00	4,76	0,80	26	F/M						●										●				
	OFHR 070412 EN ME	7,40	18,00	4,76	1,20	27	F/M						●										●				

Applicazione / ***Application***

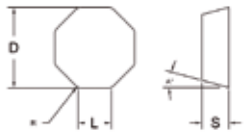
● Taglio continuo / *Stable* ● Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / ***Workpiece material***

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	OFHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
OFHN	-
OFHR 07	-

Parametri di taglio / *Cutting parameters* *pag. 82*

√ = **In stock**

● = **A richiesta** / Upon request

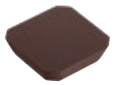
Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

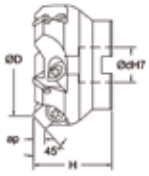
Inserti / *Inserts*

SEHN...12

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
													●		◥								●				
	**SEHN 1203AF TN**	12,70	12,70	3,18	-	20	M						√		●								●				
	SEHN 1204AF TN	12,70	12,70	3,18	-	21	M						√		●								●				

Frese / *Milling cutters*

SEH12M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SEH12M50Z4	50	**48**	22	**4**	VT88B	**HEX4**	SEHN1203...
SEH12M63Z5	63	**48**	22	**5**	VT88B	**HEX4**	SEHN1203...
SEH12M80Z6	80	**50**	27	**6**	VT88B	**HEX4**	SEHN1203...
SEH12M100Z6	100	**50**	32	**6**	VT88B	**HEX4**	SEHN1203...
SEH12M125Z7	125	**63**	40	**7**	VT88B	**HEX4**	SEHN1203...

Applicazione / *Application*

● Taglio continuo */ Stable*
◥ Taglio generico */ General*
✚ Taglio interrotto */ Unstable*

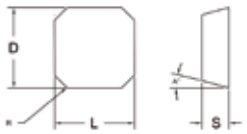
Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel*
M = **Acciaio Inossidabile** */ Stainless steel*
K = **Ghisa** */ Cast iron*
N = **Leghe Leggere** */ Non ferrous metals*
S = **Leghe resistenti al calore** */ Superalloys*
H = **Materiali Temprati** */ Hardened steel*

A Brand of X-Metal
HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
SEHN 1203AF TN	SEH12M

Parametri di taglio / *Cutting parameters* *pag. 82*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

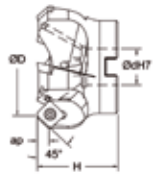
Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

SEHT / SEHW...12-15

CODICE / *CODE*		L (mm)	D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
SEHT 12 R2													●		ᗢ								●				
	**SEHT 1204AF TN R2**	12,70	12,70	4,76	0,80	20	M/F						√		√								●				
SEHW 12-15																											
	**SEHW 1204AF TN**	12,70	12,70	4,76	0,80	20	M/F						√		√								●				
	SEHW 150408 TN	15,88	15,88	4,76	0,80	20	M						√										●				
	SEHW 1504AF TN	15,88	15,88	4,76	0,80	20	M						√										●				
	**SEHW 1505AF SN**	15,88	15,88	5,56	0,80	20	M								√												

SE12M



CODICE / *CODE*	ØD	DE	L	M	APMX	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SE12M40Z3	40	**40**	16	**6**	3	**VT102**	TX25	**SEHT/W1204...**
SE12M50Z4	50	**48**	22	**6**	4	**VT102**	TX25	**SEHT/W1204...**
SE12M63Z5	63	**48**	22	**6**	5	**VT102**	TX25	**SEHT/W1204...**
SE12M80Z6	80	**50**	27	**6**	6	**VT102**	TX25	**SEHT/W1204...**
SE12M100Z6	100	**50**	32	**6**	6	**VT102**	TX25	**SEHT/W1204...**
SE12M125Z7	125	**63**	40	**6**	7	**VT102**	TX25	**SEHT/W1204...**

Applicazione / *Application*

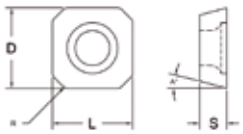
● Taglio continuo / *Stable* ᗢ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■			■				■				
			●			◥				●				
			•			•				•				
			•			•				•				
			•			•				•				
			•			•				•				
						•								

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
SEHT 1204AF TN R1	SE12M
SEHW 1204AF TN R1	SE12M

Parametri di taglio / *Cutting parameters* *pag. 83*

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

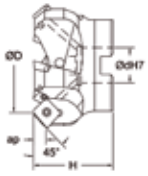
Inserti / *Inserts*

SEKT...13

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
	**SEKT 13T3AG SN R2**	13,40	13,40	3,97	-	20	M						√		√								●			

Frese / *Milling cutters*

SE13M



CODICE / *CODE*	ØD	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SE13M50Z4	50	**40**	22	**4**	VT45	**TX15**	SEKT13T3...
SE13M63Z5	63	**40**	22	**5**	VT45	**TX15**	SEKT13T3...
SE13M80Z6	80	**50**	27	**6**	VT45	**TX15**	SEKT13T3...
SE13M100Z6	100	**50**	32	**6**	VT45	**TX15**	SEKT13T3...
SE13M125Z7	125	**63**	40	**7**	VT45	**TX15**	SEKT13T3...
SE13M160Z8	160	**63**	40	**8**	VT45	**TX15**	SEKT13T3...

Applicazione / *Application*

● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

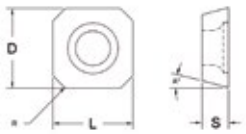
Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW® HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■		■	■	■	■	■					
			●		●	◆	◆	✚	✚					
			●		√	√	√	●	●					

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
SEKT 13T3AG SN R2	SE13M

Parametri di taglio / *Cutting parameters* *pag. 83*

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

SNEX / SNMX...12

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
SNEX 12 N1/F1/M1/R1/W1																											
	**SNEX 1206 ANFN N1**	9,10	12,70	6,35	0,80	0	F/M			●																	
	**SNEX 1206 ANEN F1**	9,10	12,70	6,35	0,80	0	F/M							●			●			●		●				●	
	**SNEX 1206 ANEN M1**	9,10	12,70	6,35	0,80	0	M							√			√			●		●				●	
	SNEX 1206 ZNEN M1	10,70	12,70	6,35	0,80	0	M										●			●		√				●	
	**SNEX 1206 ANSN R1**	9,10	12,70	6,35	0,80	0	R							√			●			√		●					
	**SNEX 1206 ANEN W1**	9,00	12,70	6,35	0,80	0	-															●					
	SNEX 1206 ZNEN W1	10,10	12,70	6,35	0,80	0	-																	●			
SNMX 12 F1/M1/R1																											
	**SNMX 1206 ZNEN F1**	10,70	12,70	6,35	0,80	0	F/M															●					
	**SNMX 1206 ANEN M1**	9,10	12,70	6,35	0,80	0	M							√			√	●		●		●		√		●	
	SNMX 1206 ZNEN M1	10,70	12,70	6,35	0,80	0	M										●			●		√		√		●	
	**SNMX 1206 ANSN R1**	9,10	12,70	6,35	0,80	0	R							√			√					●		√			
	SNMX 1206 ZNEN R1	10,70	12,70	6,35	0,80	0	R															●		●			

Applicazione / ***Application***

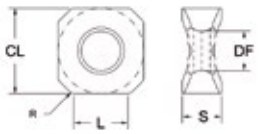
● Taglio continuo / *Stable* — ✓ Taglio generico / *General* — ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / ***Workpiece material***

P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
	●													
		●												
		√												
		√												
		√												
		√												
		●												
		√												
		●												

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
SNEX 1206	SN12MQR / SN12MQD / SN12MQE / SN12MN
SNMX 1206	SN12MQR / SN12MQD / SN12MQE / SN12MN

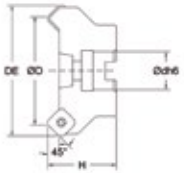
Parametri di taglio / *Cutting parameters* *pag. 84*

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

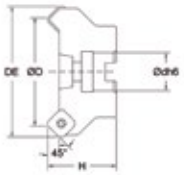
F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

SN12MQD



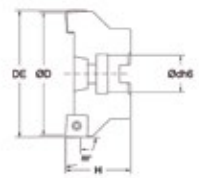
CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SN12MQD50Z4	50	63,5	40	22	4	VT149	TX15B	SN...X1206AN...N
SN12MDQ63Z5	63	76,5	40	22	5	VT149	TX15B	SN...X1206AN...N
SN12MQD80Z7	80	93,5	50	27	7	VT149	TX15B	SN...X1206AN...N
SN12MQD100Z8	100	113,5	50	32	8	VT149	TX15B	SN...X1206AN...N
SN12MQD125Z10	125	138,5	63	40	10	VT149	TX15B	SN...X1206AN...N
SN12MQD160Z12	160	173,5	63	40	12	VT149	TX15B	SN...X1206AN...N
SN12MQD200Z14	200	213,5	63	60	14	VT149	TX15B	SN...X1206AN...N
SN12MQD250Z16	250	263,5	63	60	16	VT149	TX15B	SN...X1206AN...N
SN12MQD315Z20	315	328,5	80	60	20	VT149	TX15B	SN...X1206AN...N

SN12MQE



CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SN12MQE50Z5	50	63,5	40	22	5	VT149	TX15B	SN...X1206AN...N
SN12MQE63Z6	63	76,5	40	22	6	VT149	TX15B	SN...X1206AN...N
SN12MQE80Z8	80	93,5	50	27	8	VT149	TX15B	SN...X1206AN...N
SN12MQE100Z10	100	113,5	50	32	10	VT149	TX15B	SN...X1206AN...N
SN12MQE125Z12	125	138,5	63	40	12	VT149	TX15B	SN...X1206AN...N
SN12MQE160Z15	160	173,5	63	40	15	VT149	TX15B	SN...X1206AN...N
SN12MQE200Z18	200	213,5	63	60	18	VT149	TX15B	SN...X1206AN...N
SN12MQE200Z20	200	213,5	63	60	20	VT149	TX15B	SN...X1206AN...N
SN12MQE250Z21	250	263,5	63	60	21	VT149	TX15B	SN...X1206AN...N
SN12MQE315Z24	315	328,5	80	60	24	VT149	TX15B	SN...X1206AN...N

SN12MN



CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SN12MN50Z4	50	**51**	40	**22**	4	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN63Z5	63	**64**	40	**22**	5	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN63Z6	63	**64**	40	**22**	6	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN80Z5	80	**81**	50	**27**	5	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN80Z7	80	**81**	50	**27**	7	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN100Z8	100	**101**	50	**32**	8	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN125Z10	125	**126**	63	**40**	10	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN160Z12	160	**161**	63	**40**	12	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN200Z14	200	**201**	63	**60**	14	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN250Z16	250	**251**	63	**60**	16	**VT149**	TX15B	**SN...X1206ZN...N**
SN12MN315Z20	315	**316**	80	**60**	20	**VT149**	TX15B	**SN...X1206ZN...N**

SPKN...12-15

	CODICE / *CODE*	L (mm)	D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
							GRADI / *GRADES*																				
													■										■				
													●										●				
	**SPKN 1203 ED TL**	12,70	12,70	3,18	-	11	M/R						√										●				
	**SPKN 1203 ED TR**	12,70	12,70	3,18	-	11	M/R						√										●				
	SPKN 1504 ED TR	15,88	15,88	4,76	-	11	R						√										●				

SPMT...12

	CODICE / *CODE*	L (mm)	D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
							GRADI / *GRADES*																				
													■		▼								■				
													●		▼								●				
	**SPMT 120408 SN M2**	12,70	12,70	4,76	0,80	11	M/R						√		√								●				
	SPMT 1204AZ SN M2	12,70	12,70	4,76	-	11	M/R						√		√								●				

Applicazione / *Application*

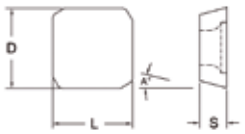
● Taglio continuo / *Stable* ▼ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

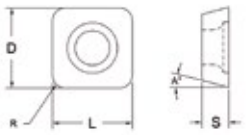


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
SPKN 12-15	-

Parametri di taglio / *Cutting parameters* *pag. 84*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
							●							
							√							
							√							

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
SPMT 12	-

Parametri di taglio / *Cutting parameters* *pag. 84*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

TEHN...22

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
	**TEHN 2204PE TR**	22,00	12,70	4,76	-	20	M						√		●								●				

Applicazione / *Application*

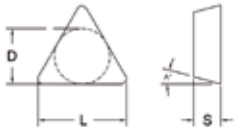
● Taglio continuo / *Stable* ● Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
TEHN 22	-

Parametri di taglio / *Cutting parameters* *pag. 84*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

HNGX fresa ...HF

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* F1	M1	R1
P	**HNGX 0604 ANEN**	1PC9 4FCT	**0,8**	210-290	-	0.50-1.20	**0.80-1.50**
	HNGX 0905 ANEN	1PC9 4FCT	**1,0**	210-290	-	0.80-1.50	**1.00-2.00**
M	**HNGX 0604 ANEN**	4MC9 4MHI	**0,8**	100-220	-	0.50-1.20	**0.80-1.50**
	HNGX 0905 ANEN	4MC9 4MHI	**1,0**	100-220	-	0.80-1.50	**1.00-2.00**
K	**HNGX 0604 ANEN**	2KC9 3KCC	**0,8**	120-220	-	0.50-1.20	**0.80-1.50**
	HNGX 0905 ANEN	2KC9 3KCC	**1,0**	120-220	-	0.80-1.50	**1.00-2.00**
S	**HNGX 0604 ANEN**	3SCC	**0,6**	30-60	-	0.30-0.70	-
	HNGX 0905 ANEN	3SCC	**0,8**	30-60	-	0.30-0.80	-

HNGX fresa ...Q

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* F1	M1	R1
P	**HNGX 0604 ANEN**	1PC9 4FCT	**2,0**	210-290	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	HNGX 0905 ANEN	1PC9 4FCT	**3,0**	210-290	**0.10-0.20**	0.15-0.25	**0.20-0.30**
	HNGX 1307 ANEN	1PC9 4FCT	**5,0**	210-290	-	0.15-0.25	**0.20-0.30**
M	**HNGX 0604 ANEN**	4MC9 4MHI	**2,0**	100-220	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	HNGX 0905 ANEN	4MC9 4MHI	**3,0**	100-220	**0.10-0.20**	0.15-0.25	**0.20-0.30**
	HNGX 1307 ANEN	4MC9 4MHI	**5,0**	100-220	-	0.15-0.25	**0.20-0.30**
K	**HNGX 0604 ANEN**	2KC9 3KCC	**2,0**	100-220	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	HNGX 0905 ANEN	2KC9 3KCC	**3,0**	100-220	**0.10-0.20**	0.15-0.25	**0.20-0.30**
	HNGX 1307 ANEN	2KC9 3KCC	**5,0**	100-220	-	0.15-0.25	**0.20-0.30**
S	**HNGX 0604 ANEN**	3SCC	**2,0**	30-60	**0.05-0.15**	0.06-0.18	-
	HNGX 0905 ANEN	3SCC	**3,0**	30-60	**0.05-0.15**	0.10-0.20	-
	HNGX 1307 ANEN	3SCC	**5,0**	30-60	-	0.10-0.20	-

HNGX fresa ...SD

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* F1	M1	R1
P	**HNGX 0604 ANEN**	1PC9 4FCT	**2,5**	210-290	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	HNGX 0905 ANEN	1PC9 4FCT	**5,0**	210-290	**0.10-0.20**	0.15-0.25	**0.20-0.30**
M	**HNGX 0604 ANEN**	4MC9 4MHI	**2,5**	100-220	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	HNGX 0905 ANEN	4MC9 4MHI	**5,0**	100-220	**0.10-0.20**	0.15-0.25	**0.20-0.30**
K	**HNGX 0604 ANEN**	2KC9 3KCC	**2,5**	100-220	**0.05-0.15**	0.10-0.20	**0.15-0.25**
	HNGX 0905 ANEN	2KC9 3KCC	**5,0**	100-220	**0.10-0.20**	0.15-0.25	**0.20-0.30**
S	**HNGX 0604 ANEN**	3SCC	**2,5**	30-60	**0.05-0.15**	0.06-0.18	-
	HNGX 0905 ANEN	3SCC	**5,0**	30-60	**0.05-0.15**	0.10-0.20	-

ODHT/ODHW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R2	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	ODHT 050408X EN	2FD 2FUS 2FUSP 2FST	2,5	130-320	0.08-0.25	-
		3MCC 3MUSP 3MST	2,5	120-250	0.08-0.25	-
		4KUSP 4KST	2,5	105-220	0.08-0.25	-
	ODHT 060508X EN	2FD 2FUS 2FUSP 2FST	3,0	130-320	0.08-0.30	-
		3MCC 3MUSP 3MST	3,0	120-250	0.08-0.30	-
		4KUSP 4KST	3,0	105-220	0.08-0.30	-
	ODHW 050408 TN	2FD 2FUS 2FUSP 2FST	2,5	130-320	-	0.08-0.25
		4KUSP 4KST	2,5	105-220	-	0.08-0.25
	ODHW 060508 TN	2FD 2FUS 2FUSP 2FST	3,0	130-320	-	0.08-0.30
		4KUSP 4KST	3,0	105-220	-	0.08-0.30
M	ODHT 050408X EN	2FD 2FHI	2,5	100-240	0.08-0.22	-
		3MCC 3MHI	2,5	800-200	0.08-0.22	-
		4KHI	2,5	60-175	0.08-0.22	-
	ODHT 060508X EN	2FD 2FHI	3,0	100-240	0.08-0.25	-
		3MCC 3MHI	3,0	800-200	0.08-0.25	-
		4KHI	3,0	60-175	0.08-0.25	-
	ODHW 050408 TN	2FD	2,5	100-240	-	0.08-0.22
	ODHW 060508 TN	2FD	3,0	100-240	-	0.08-0.25
K	ODHT 050408X EN	2FD 2KCC	2,5	95-185	0.08-0.22	-
		3MCC	2,5	75-150	0.08-0.22	-
	ODHT 060508X EN	2FD 2KCC	3,0	95-185	0.08-0.25	-
		3MCC	3,0	75-150	0.08-0.25	-
	ODHW 050408 TN	2FD 2KCC	2,5	95-185	-	0.08-0.22
	ODHW 060508 TN	2FD 2KCC	3,0	95-185	-	0.08-0.25

OFEX

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R2
P	OFEX 05T308 EN	2FD 2FUS 2FUSP 2FST	4,0	150-300	0.05-0.25
		3MCC 3MUSP 3MST	4,0	120-280	0.05-0.25
		4KUSP 4KST	4,0	100-260	0.08-0.25
M	OFEX 05T308 EN	2FD 2FHI	4,0	100-270	0.05-0.25
		3MCC 3MHI	4,0	90-230	0.05-0.25
		4KHI	4,0	85-190	0.05-0.25
K	OFEX 05T308 EN	2FD 2KCC	4,0	110-210	0.05-0.26
		3MCC	4,0	100-170	0.05-0.27

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel*
M = Acciaio Inossidabile / *Stainless steel*
K = Ghisa / *Cast iron*
N = Leghe Leggere / *Non ferrous metals*
S = Leghe resistenti al calore / *Superalloys*
H = Materiali Temprati / *Hardened steel*

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

OFHN/OFHR

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* ME	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	OFHN 070412 TN	2FD	4,0	110-300	-	0.05-0.25
	OFHR 070408 EN	2FD	4,0	110-300	0.05-0.25	-
	OFHR 070412 EN	2FD	4,0	110-300	0.05-0.25	-
M	OFHN 070412 TN	2FD	4,0	85-175	-	0.05-0.25
	OFHR 070408 EN	2FD	4,0	85-175	0.05-0.25	-
	OFHR 070412 EN	2FD	4,0	85-175	0.05-0.25	-
K	OFHN 070412 TN	2FD 2KCC	4,0	80-175	-	0.05-0.25
	OFHR 070408 EN	2FD 2KCC	4,0	80-175	0.05-0.25	-
	OFHR 070412 EN	2FD 2KCC	4,0	80-175	0.05-0.25	-

SEHN

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	SEHN 1203AF TN	2FD	5,0	110-300	0.05-0.40
		3MCC	5,0	90-230	0.05-0.40
	SEHN 1204AF TN	2FD	5,0	110-300	0.05-0.40
		3MCC	5,0	90-230	0.05-0.40
M	SEHN 1203AF TN	2FD	5,0	100-220	0.05-0.35
		3MCC	5,0	80-170	0.05-0.35
	SEHN 1204AF TN	2FD	5,0	100-220	0.05-0.35
		3MCC	5,0	80-170	0.05-0.35
K	SEHN 1203AF TN	2FD 2KCC	5,0	80-155	0.05-0.35
		3MCC	5,0	70-130	0.05-0.35
	SEHN 1204AF TN	2FD 2KCC	5,0	80-155	0.05-0.35
		3MCC	5,0	70-130	0.05-0.35

SEHT/SEHW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R2	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	SEHT 1204AF TN	2FD 2FUS 2FUSP 2FST	4,0	110-300	**0.05-0.40**	-
		3MCC 3MUSP 3MST	4,0	95-250	**0.05-0.40**	-
	SEHW 1204AF TN	2FD 2FUS 2FUSP 2FST	4,0	110-300	-	0.05-0.40
		3MCC 3MUSP 3MST	4,0	95-250	-	0.05-0.40
	SEHW 150408 TN	2FD 2FUS 2FUSP 2FST	4,0	110-300	-	0.05-0.40
		3MUSP 3MST	4,0	95-250	-	0.05-0.40
	SEHW 1504AF TN	2FD 2FUS 2FUSP 2FST	4,0	110-300	-	0.05-0.40
		3MUSP 3MST	4,0	95-250	-	0.05-0.40
	SEHW 1505AF SN	3MCC 3MUSP 3MST	4,0	95-250	-	0.05-0.40
M	SEHT 1204AF TN	2FD 2FHI	4,0	85-230	**0.05-0.40**	-
		3MCC 3MHI	4,0	75-195	**0.05-0.40**	-
	SEHW 1204AF TN	2FD 2FHI	4,0	85-230	-	0.05-0.40
		3MCC 3MHI	4,0	75-195	-	0.05-0.40
	SEHW 150408 TN	2FD 2FHI	4,0	85-230	-	0.05-0.40
	SEHW 1504AF TN	2FD 2FHI	4,0	85-230	-	0.05-0.40
	SEHW 1505AF SN	3MCC	4,0	75-195	-	0.05-0.40
K	SEHT 1204AF TN	2FD 2KCC	4,0	80-180	**0.05-0.40**	-
		3MCC	4,0	70-150	**0.05-0.40**	-
	SEHW 1204AF TN	2FD 2KCC	4,0	80-180	-	0.05-0.40
		3MCC	4,0	70-150	-	0.05-0.40
	SEHW 150408 TN	2FD 2KCC	4,0	80-180	-	0.05-0.40
	SEHW 1504AF TN	2FD 2KCC	4,0	80-180	-	0.05-0.40
	SEHW 1505AF SN	3MCC	4,0	70-150	-	0.05-0.40

SEKT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R2
P	SEKT 13T3 AG SN	2FD 2FUS 2FST	5,0	110-300	**0.08-0.45**
		3MCC 3MUSP 3MST	5,0	95-270	**0.08-0.45**
		4KUSP 4KST	5,0	75-250	**0.08-0.45**
M	SEKT 13T3 AG SN	2FD	5,0	85-230	**0.08-0.45**
		3MCC	5,0	70-195	**0.08-0.45**
K	SEKT 13T3 AG SN	2FD 2KCC	5,0	80-175	**0.08-0.45**
		3MCC	5,0	70-150	**0.08-0.45**

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel*
M = **Acciaio Inossidabile** */ Stainless steel*
K = **Ghisa** */ Cast iron*
N = **Leghe Leggere** */ Non ferrous metals*
S = **Leghe resistenti al calore** */ Superalloys*
H = **Materiali Temprati** */ Hardened steel*

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

SNMX/SNEX

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*			
					F1	M1	R1	N1
P	SN...X 1206 ANEN	3FCRT 4FHI2 1PC9 2PCR 3FCT	4,00	100-290	0.05-0.30	0.10-0.35	-	-
P	SN...X 1206 ANSN	3FCRT 4FHI2 2PCR	4,00	100-290	0.05-0.30	0.10-0.35	0.10-0.40	-
P	SN...X 1206 ZNEN	4FHI2 1PC9 2PCR	5,00	100-290	0.05-0.30	0.10-0.35	-	-
M	SN...X 1206 ANEN	3FCRT 4FHI2 4MC9	4,00	120-220	0.05-0.20	0.10-0.35	-	-
M	SN...X 1206 ANSN	3FCRT 4FHI2 4MC9	4,00	120-220	0.05-0.20	0.10-0.35	0.10-0.40	-
M	SN...X 1206 ZNEN	4FHI2 4MC9	5,00	120-220	0.05-0.20	0.10-0.35	-	-
K	SN...X 1206 ANEN	3FCRT 4FHI2 2KC9 3KCC	4,00	120-220	0.10-0.20	0.10-0.30	-	-
K	SN...X 1206 ANSN	3FCRT 4FHI2 2KC9 3KCC	4,00	120-220	0.10-0.20	0.10-0.30	0.20-0.40	-
K	SN...X 1206 ZNEN	4FHI2 2KC9 3KCC	5,00	120-220	0.10-0.20	0.10-0.30	0.20-0.40	-
S	SN...X 1206 ANEN	3SCC	4,00	30-60	0.10-0.20	0.10-0.30	-	-
S	SN...X 1206 ZNEN	3SCC	5,00	30-60	-	0.10-0.30	-	-
N	SNEX 1206 ANFN	2F 2FAL	3,00	300-1100	-	-	-	0.10-0.30

SPKN

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*
					Piano / *Flat*
P	SPKN 1203 ED TL/R	2FD	4,0	95-270	0.10-0.35
P	SPKN 1504 ED TR	2FD	5,0	95-270	0.10-0.45
M	SPKN 1203 ED TL/R	2FD	4,0	70-200	0.10-0.30
M	SPKN 1504 ED TR	2FD	5,0	70-201	0.10-0.40
K	SPKN 1203 ED TL/R	2FD 2FCC	4,0	70-185	0.10-0.30
K	SPKN 1504 ED TR	2FD 2FCC	5,0	70-185	0.10-0.40

SPMT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*
					M2
P	SPMT 1204... SN	2FD	4,0	115-290	0.08-0.30
P		3MCC 3MST	4,0	100-250	0.08-0.30
M	SPMT 1204... SN	2FD	4,0	85-200	0.08-0.30
M		3MCC	4,0	70-170	0.08-0.30
K	SPMT 1204... SN	2FD 2KCC	4,0	85-170	0.08-0.30
K		3MCC	4,0	70-140	0.08-0.30

TEHN

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*
					Piano / *Flat*
P	TEHN 2204PE TR	2FD	8,0	90-250	0.05-0.25
P		3MCC	8,0	75-220	0.05-0.25
M	TEHN 2204PE TR	2FD	8,0	105-195	0.05-0.25
M		3MCC	8,0	95-170	0.05-0.25
K	TEHN 2204PE TR	2FD 2KCC	8,0	105-160	0.05-0.25
K		3MCC	8,0	90-145	0.05-0.25

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*


HMW
hard metal working


THINK

ALTO AVANZAMENTO

INSERTS AND MILLING CUTTERS - HIGH-FEED

Inserti / *Inserts*

LXMP...06

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
													●		◡												
	**LXMP 06T3 ER MM**	9,00	6,40	3,73	0,8	0	F/M						√		√												
	**LXMP 06T3 ER PM**	9,00	6,40	3,73	0,8	0	F/M						√		√												

Frese / *Milling cutters*

LX06C

CODICE / *CODE*	ØD	L	L1	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
LX06C16Z2	16	**50**	150	**16**	2	**VT27**	TX08	**LXMP 0603...**
LX06C20Z3	20	**50**	150	**20**	3	**VT27**	TX08	**LXMP 0603...**
LX06C25Z4	25	**50**	150	**25**	4	**VT27**	TX08	**LXMP 0603...**
LX06C32Z5	32	**60**	200	**32**	5	**VT27**	TX08	**LXMP 0603...**

Applicazione / *Application*

● Taglio continuo / *Stable* ◡ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

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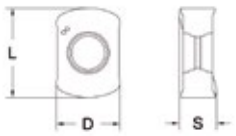
NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			●	●	●					●				
			√	√	√					√				
			√	√						√				

Disegni tecnici / *Technical drawings*

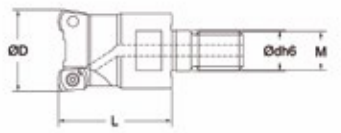


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
LXMP 06	LX06C / LX06F

Parametri di taglio / *Cutting parameters* *pag. 100*

Frese / *Milling cutters*

LX06F



CODICE / *CODE*	ØD	L	M	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
LX06F16Z2	16	**25**	8	**8,5**	2	**VT150**	TX08	**LXMP0603...**
LX06F20Z3	20	**30**	10	**10,5**	3	**VT150**	TX08	**LXMP0603...**
LX06F25Z4	25	**35**	12	**12,5**	4	**VT150**	TX08	**LXMP0603...**
LX06F32Z4	32	**40**	16	**17**	4	**VT150**	TX08	**LXMP0603...**
LX06F32Z5	32	**40**	16	**17**	5	**VT150**	TX08	**LXMP0603...**
LX06F35Z4	35	**43**	16	**17**	4	**VT150**	TX08	**LXMP0603...**
LX06F35Z5	35	**43**	16	**17**	5	**VT150**	TX08	**LXMP0603...**
LX06F40Z6	40	**43**	16	**17**	6	**VT150**	TX08	**LXMP0603...**
LX06F42Z6	42	**43**	16	**17**	6	**VT150**	TX08	**LXMP0603...**

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

JDMT / JDMW...12-14

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
JDMT 12-14 R1													●		◡								●				
	**JDMT 120420 ZD SR R1**	-	12,00	4,76	2,00	15	M/R						√		√								●				
	JDMT 140520 ZD SR R1	-	14,00	5,56	2,00	15	M/R						√		√								●				
JDMW 12-14																											
	**JDMW 120420 ZD SR**	-	12,00	4,76	2,00	15	M/R						√		√								●				
	JDMW 140520 ZD SR	-	14,00	5,56	2,00	15	M/R						√		√								●				

Applicazione / *Application*

● Taglio continuo / *Stable* ◡ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
JDMT	-
JDMW 12-14	-

Parametri di taglio / *Cutting parameters* *pag. 100*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

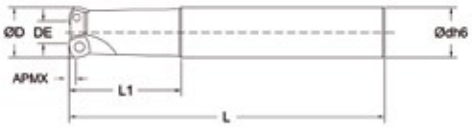
Inserti / *Inserts*

SXMT/SDMT... 09-12-15

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
																				✚	✚					◥	
	**SXMT 09T307 ER F1**	9,00	9,00	3,50	0,70	15	F/M													√	√					●	
	SXMT 120512 ER F1	12,70	12,70	5,56	1,20	15	F/M													√	√					●	
	**SDMT 120512 TR M1**	12,70	12,70	5,56	1,20	15	M/R																				
	SDMT 150512 TR M1	15,83	15,83	5,56	1,20	15	M/R																				

Frese / *Milling cutters*

SXHA09-12C



CODICE / *CODE*	ØD	DE	L	L1	Ødh6	APMX	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SXHA09C25Z3	25	**25**	110	**60**	25	**1**	3	**VT152**	TX09	**SXMT09T3...ER F1**
SXHA09C25Z3-200	25	**25**	200	**50**	25	**1**	3	**VT152**	TX09	**SXMT09T3...ER F1**
SXHA09C32Z4	32	**32**	190	**140**	32	**1**	4	**VT152**	TX09	**SXMT09T3...ER F1**
SXHA09C32Z5	32	**32**	190	**140**	32	**1**	5	**VT152**	TX09	**SXMT09T3...ER F1**
SXHA09C35Z5	35	**35**	190	**140**	35	**1**	5	**VT152**	TX09	**SXMT09T3...ER F1**
SXHA12C32Z2	32	**32**	250	**70**	32	**2**	2	**VT153**	TX15	**SXMT1205... TR F1**
SXHA12C32Z3	32	**32**	250	**70**	32	**2**	3	**VT153**	TX15	**SXMT1205... TR F1**

Applicazione / *Application*

● Taglio continuo */ Stable* ◥ Taglio generico */ General* ✚ Taglio interrotto */ Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel* **M** = **Acciaio Inossidabile** */ Stainless steel* **K** = **Ghisa** */ Cast iron* **N** = **Leghe Leggere** */ Non ferrous metals* **S** = **Leghe resistenti al calore** */ Superalloys* **H** = **Materiali Temprati** */ Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■	■										
			●	●						●				
			√	√						√				
			√	√						√				

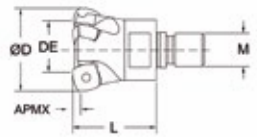
Disegni tecnici / *Technical drawings*

INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
SD 09 F1	SDHA09F / SDHA09C / SDHA09M
SD 12 F1	SDHA12F / SDHA12C / SDHA12M
SD 12 M1	SDHF12F / SDHF12C / SDHF12M
SD 15 M1	SDHF15M

Parametri di taglio / *Cutting parameters* *pag. 100*

Frese / *Milling cutters*

SXHA09-12F



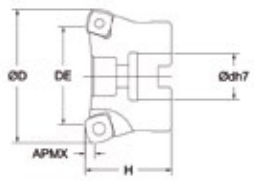
CODICE / *CODE*	ØD	DE	L	M	APMX	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SXHA09F25Z3	25	**25**	33	**12**	1	**3**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09F32Z4	32	**32**	40	**16**	1	**4**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09F32Z5	32	**32**	40	**16**	1	**5**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09F35Z4	35	**35**	40	**16**	1	**4**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09F35Z5	35	**35**	40	**16**	1	**5**	VT152	**TX09**	SXMT09T3...ER F1
SXHA12F32Z2	32	**32**	40	**16**	2	**2**	VT153	**TX15**	SXMT1205... TR F1
SXHA12F32Z3	32	**32**	40	**16**	2	**3**	VT153	**TX15**	SXMT1205... TR F1
SXHA12F35Z3	35	**35**	40	**16**	2	**3**	VT153	**TX15**	SXMT1205... TR F1
SXHA12F42Z4	42	**42**	52	**16**	2	**4**	VT153	**TX15**	SXMT1205... TR F1

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

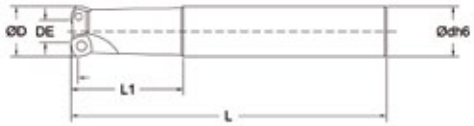
F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

SXHA09-12M



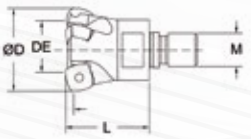
CODICE / *CODE*	ØD	DE	H	Ødh7	APMX	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SXHA09M40Z5	40	**40**	40	**16**	1	**5**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M42Z5	42	**42**	40	**22**	1	**5**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M50Z6	50	**50**	40	**22**	1	**6**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M50Z7	50	**50**	40	**22**	1	**7**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M52Z5	52	**52**	40	**22**	1	**5**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M52Z7	52	**52**	40	**22**	1	**7**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M63Z5	63	**63**	40	**22**	1	**5**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M63Z8	63	**63**	40	**22**	1	**8**	VT152	**TX09**	SXMT09T3...ER F1
SXHA09M63Z9	63	**63**	40	**22**	1	**9**	VT152	**TX09**	SXMT09T3...ER F1
SXHA12M50Z5	50	**50**	40	**22**	2	**5**	VT153	**TX15**	SXMT1205...ER F1
SXHA12M52Z5	52	**52**	40	**22**	2	**5**	VT153	**TX15**	SXMT1205...ER F1
SXHA12M63Z6	63	**63**	40	**22**	2	**6**	VT153	**TX15**	SXMT1205...ER F1
SXHA12M80Z6	80	**80**	50	**27**	2	**6**	VT153	**TX15**	SXMT1205...ER F1
SXHA12M80Z8	80	**80**	50	**27**	2	**8**	VT153	**TX15**	SXMT1205...ER F1
SXHA12M100Z10	100	**100**	50	**32**	2	**10**	VT153	**TX15**	SXMT1205...ER F1
SXHA12M125Z10	125	**125**	63	**40**	2	**11**	VT153	**TX15**	SXMT1205...ER F1

SDHF12C



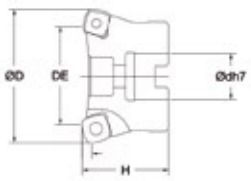
CODICE / *CODE*	ØD	DE	L	L1	Ødh6	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SDHF12C32Z2	32	**16**	160	**70**	32	**2**	VT151	**TX15**	SDMT1205... TR M1
SDHF12C32Z2-200	32	**16**	200	**70**	32	**2**	VT151	**TX15**	SDMT1205... TR M1
SDHF12C35Z3	35	**19**	200	**70**	32	**3**	VT151	**TX15**	SDMT1205... TR M1
SDHF12C40Z3	40	**24**	200	**70**	32	**3**	VT151	**TX15**	SDMT1205... TR M1

SDHF12F



CODICE / *CODE*	ØD	DE	L	M	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SDHF12F35Z3	35	**17**	40	**16**	3	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12F40Z3	40	**24**	40	**16**	3	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12F40Z4	40	**24**	40	**16**	4	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12F42Z4	42	**24**	40	**16**	4	**VT151**	TX15	**SDMT1205... TR M1**

SDHF12-15M



CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SDHF12M42Z4	42	**24**	45	**16**	4	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12M52Z5	52	**34**	50	**22**	5	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12M66Z5	66	**48**	50	**27**	5	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12M80Z6	80	**62**	70	**27**	6	**VT151**	TX15	**SDMT1205... TR M1**
SDHF12M100Z8	100	**82**	70	**32**	8	**VT151**	TX15	**SDMT1205... TR M1**
SDHF15M63Z4	63	**42**	40	**22**	4	**VT151**	TX15	**SDMT1505... TR M1**
SDHF15M80Z5	80	**59**	50	**27**	5	**VT151**	TX15	**SDMT1505... TR M1**
SDHF15M100Z6	100	**79**	50	**32**	6	**VT151**	TX15	**SDMT1505... TR M1**
SDHF15M125Z7	125	**104**	63	**40**	7	**VT151**	TX15	**SDMT1505... TR M1**

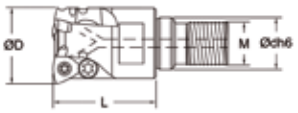
Inserti / *Inserts*

WPMT / WPMW...06-08

CODICE / *CODE*	L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
WPMT 06-08 M2		(mm)										●		◥												
 **WPMT 06X415 ZSR M2**	-	9,52	4,20	1,50	11	M/R						√		√												
WPMT 080615 ZSR M2	-	12,70	6,35	1,50	11	M/R						√		√												
WPMW 06-08																										
 **WPMW 06X415 ZSR**	-	9,52	4,20	1,50	11	M/R						√		√												
WPMW 080615 ZSR	-	12,70	6,35	1,50	11	M/R						√		√												

Frese / *Milling cutters*

WP06F



CODICE / *CODE*	ØD	DE	L	M	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
WP06F25Z2	25	**25**	36	**12**	2	**VT65**	TX15	**WP...06X415**
WP06F35Z3	35	**35**	41	**16**	3	**VT65**	TX15	**WP...06X415**
WP06F42Z4	42	**42**	41	**16**	4	**VT65**	TX15	**WP...06X415**

Applicazione / *Application*

● Taglio continuo */ Stable* ◥ Taglio generico */ General* ✚ Taglio interrotto */ Unstable*

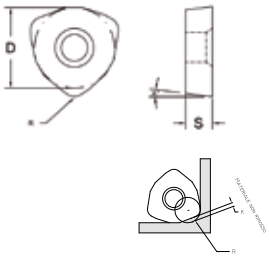
Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel* **M** = **Acciaio Inossidabile** */ Stainless steel* **K** = **Ghisa** */ Cast iron* **N** = **Leghe Leggere** */ Non ferrous metals* **S** = **Leghe resistenti al calore** */ Superalloys* **H** = **Materiali Temprati** */ Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

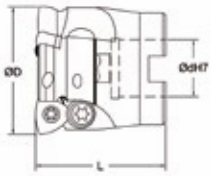


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
WP...06	WP06F
WP... 08	WP08M

Parametri di taglio / *Cutting parameters* *pag. 101*

Frese / *Milling cutters*

WP08M



CODICE / *CODE*	ØD	DE	H	Ødh7	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
WP08M52Z3	52	**52**	50	**22**	3	**VT96**	TX20	**WP...080615**
WP08M66Z4	66	**66**	50	**27**	4	**VT96**	TX20	**WP...080615**
WP08M80Z5	80	**80**	63	**27**	5	**VT96**	TX20	**WP...080615**
WP08M100Z6	100	**100**	63	**32**	6	**VT96**	TX20	**WP...080615**

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Lavorazione / ***Operation***

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M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

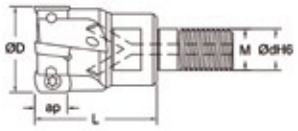
Inserti / *Inserts*

XPHW...10

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
												●			◥												
	**XPHW 100308 SR**	10,00	6,35	3,18	0,80	11	F/M					√			●											
	XPHW 100312 SR	10,00	6,35	3,18	1,20	11	F/M					√			●											

Frese / *Milling cutters*

XP10F



CODICE / *CODE*	ØD	DE	L	M	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
XP10F16Z2	16	**16**	23	**8**	2	**VM2506**	TX8	**XP...1003...**
XP10F20Z3	20	**20**	30	**10**	3	**VM2575**	TX8	**XP...1003...**
XP10F25Z4	25	**25**	35	**12**	4	**VM2575**	TX8	**XP...1003...**
XP10F32Z5	32	**32**	42	**16**	5	**VM2575**	TX8	**XP...1003...**

Applicazione / ***Application***

● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / ***Workpiece material***

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW® HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
XPHW 10	XP10F

Parametri di taglio / *Cutting parameters* *pag. 101*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

LXMP

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* PM	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* MM
P	**LXMP 06 T3 ER**	2FUS 2FUSP 2FST	**1,0**	60-210	**0.1-0.8**	-
M	**LXMP 06 T3 ER**	2FHI	**1,0**	120-230	-	0.1-0.8
H	**LXMP 06 T3 ER**	1HHD	**1,0**	30-80	**0.1-0.5**	-

JDMT/JDMW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* R1	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	**JDMT 120420 ZD SR**	2FD 2FUS	**2,0**	80-200	**0.5-2.3**	-
	JDMT 120420 ZD SR	3MUSP 3MST 3MCC	**2,0**	80-160	**0.5-2.3**	-
	JDMT 140520 ZD SR	2FD 2FUS	**2,0**	80-200	**0.8-3.0**	-
	JDMT 140520 ZD SR	3MUSP 3MST 3MCC	**2,0**	80-160	**0.8-3.0**	-
M	**JDMT 120420 ZD SR**	2FD 2FUS	**1,6**	80-160	**0.5-2.3**	-
	JDMT 120420 ZD SR	3MUSP 3MST 3MCC	**1,6**	70-140	**0.5-2.3**	-
	JDMT 140520 ZD SR	2FD 2FUS	**1,6**	80-160	**0.8-3.0**	-
	JDMT 140520 ZD SR	3MUSP 3MST 3MCC	**1,6**	70-140	**0.8-3.0**	-
K	**JDMT 120420 ZD SR**	2FD 2FUS	**2,0**	80-160	**0.5-2.3**	-
	JDMT 120420 ZD SR	3MUSP 3MST 3MCC	**2,0**	70-140	**0.5-2.3**	-
	JDMT 140520 ZD SR	2FD 2FUS	**2,0**	80-160	**0.8-3.0**	-
	JDMT 140520 ZD SR	3MUSP 3MST 3MCC	**2,0**	70-140	**0.8-3.0**	-
P	**JDMW 120420 ZD SR**	2FD 2FUS	**2,0**	80-200	-	0.5-2.3
	JDMW 120420 ZD SR	3MUSP 3MST 3MCC	**2,0**	80-160	-	0.5-2.3
	JDMW 140520 ZD SR	2FD 2FUS	**2,0**	80-200	-	0.8-3.0
	JDMW 140520 ZD SR	3MUSP 3MST 3MCC	**2,0**	80-160	-	0.8-3.0
M	**JDMW 120420 ZD SR**	2FD 2FUS	**1,6**	-	-	0.5-2.3
	JDMW 120420 ZD SR	3MUSP 3MST 3MCC	**1,6**	-	-	0.5-2.3
	JDMW 140520 ZD SR	2FD 2FUS	**1,6**	-	-	0.8-3.0
	JDMW 140520 ZD SR	3MUSP 3MST 3MCC	**1,6**	-	-	0.8-3.0
K	**JDMW 120420 ZD SR**	2FD 2FUS	**2,0**	-	-	0.5-2.3
	JDMW 120420 ZD SR	3MUSP 3MST 3MCC	**2,0**	-	-	0.5-2.3
	JDMW 140520 ZD SR	2FD 2FUS	**2,0**	-	-	0.8-3.0
	JDMW 140520 ZD SR	3MUSP 3MST 3MCC	**2,0**	-	-	0.8-3.0

SDMT/SXMT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* M1	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* F1
P	**SDMT 120512 TR**	2FUS 2FUSP	**2,0**	80-220	**0.5-2.0**	-
	SDMT 150512 TR	2FUS 2FUSP	**3,0**	80-220	**0.5-3.0**	-
M	**SDMT 120512 TR**	2FHI	**2,0**	60-160	**0.5-2.0**	-
	SDMT 150512 TR	2FHI	**3,0**	60-160	**0.5-3.0**	-
	SXMT 09T307 ER	4MC9 4MHI	**1,5**	60-160	-	0.5-1.0
	SXMT 120512 ER	4MC9 4MHI	**2,0**	60-160	-	0.5-2.0
S	**SXMT 09T307 ER**	3SCC	**1,5**	30-60	-	0.5-1.0
	SDMT 120512 ER	3SCC	**2,0**	30-60	-	0.5-2.0

WPMT/WPMW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* M2	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	WPMT 06X415 ZSR	2FD 2FUS 2FUSP	1,0	80-200	0.6-1.4	-
	WPMT 06X415 ZSR	3MUSP 3MCC	1,0	80-180	0.6-1.4	-
	WPMT 080615 ZSR	2FD 2FUS 2FUSP	1,2	80-200	0.8-1.8	-
	WPMT 080615 ZSR	3MUSP 3MCC	1,2	80-180	0.8-1.8	-
M	WPMT 06X415 ZSR	2FHI	1,0	70-160	0.6-1.2	-
	WPMT 06X415 ZSR	3MHI	1,0	70-140	0.6-1.4	-
	WPMT 080615 ZSR	2FHI	1,2	70-160	0.8-1.6	-
	WPMT 080615 ZSR	3MHI	1,2	70-140	0.8-1.6	-
K	WPMT 06X415 ZSR	2FD 2KCC	1,0	70-160	0.6-1.4	-
	WPMT 06X415 ZSR	3MCC	1,0	70-150	0.6-1.4	-
	WPMT 080615 ZSR	2FD 2KCC	1,2	70-160	0.8-1.6	-
	WPMT 080615 ZSR	3MCC	1,2	70-1500	0.8-1.6	-
P	WPMW 06X415 ZSR	2FD 2FUS 2FUSP	1,0	80-200	-	0.6-1.4
	WPMW 06X415 ZSR	3MUSP 3MCC	1,0	80-180	-	0.6-1.4
	WPMW 080615 ZSR	2FD 2FUS 2FUSP	1,2	80-200	-	0.8-1.8
	WPMW 080615 ZSR	3MUSP 3MCC	1,2	80-180	-	0.8-1.8
M	WPMW 06X415 ZSR	2FHI	1,0	70-160	-	0.6-1.2
	WPMW 06X415 ZSR	3MHI	1,0	70-140	-	0.6-1.4
	WPMW 080615 ZSR	2FHI	1,2	70-160	-	0.8-1.6
	WPMW 080615 ZSR	3MHI	1,2	70-140	-	0.8-1.6
K	WPMW 06X415 ZSR	2FD 2KCC	1,0	70-160	-	0.6-1.4
	WPMW 06X415 ZSR	3MCC	1,0	70-150	-	0.6-1.4
	WPMW 080615 ZSR	2FD 2KCC	1,2	70-160	-	0.8-1.6
	WPMW 080615 ZSR	3MCC	1,2	70-1500	-	0.8-1.6

XPHW

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Piano / *Flat*
P	XPHW 100312 SR	1FD	0.5-1.5	200-300	0.2-1.0
	XPHW 100312 SR	3MCC	0.5-1.5	120-200	0.2-1.1
M	XPHW 100312 SR	1FD	0.5-1.2	130-180	0.2-1.2
	XPHW 100312 SR	3MCC	0.5-1.2	100-160	0.2-1.3
K	XPHW 100312 SR	1FD	0.5-1.5	145-200	0.2-1.4
	XPHW 100312 SR	3MCC	0.5-1.5	110-170	0.2-1.5

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel*
M = Acciaio Inossidabile / *Stainless steel*
K = Ghisa / *Cast iron*
N = Leghe Leggere / *Non ferrous metals*
S = Leghe resistenti al calore / *Superalloys*
H = Materiali Temprati / *Hardened steel*


THINK

COPIATURA

INSERTS AND MILLING CUTTERS - COPY MILLING

RD...05-07-10-12-16

CODICE / *CODE*		(mm) D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
RDET																										
	RDET 1003 MO S	10,00	3,18	5,00	15	SF/M						√		√								●				
	RDET 10T3 MO S	10,00	3,97	5,00	15	SF/M						√		√								●				
	RDET 12T3 MO S	12,00	3,97	5,00	15	SF/M						√		√								●				
RDEW																										
	RDEW 0501MO E	5,00	1,51	2,50	15	SF/M							●			√	●									
RDHT																										
	RDHT 1003 MO E R2	10,00	3,18	5,00	15	SF/M						√		●								●				
	RDHT 1003 MO F R2	10,00	3,18	5,00	15	SF/M		●			●															
	RDHT 1003 MO S R2	10,00	3,18	5,00	15	SF/M						√		√								●				
	RDHT 10T3 MO E R2	10,00	3,97	5,00	15	SF/M						√		●								●				
	RDHT 10T3 MO F R2	10,00	3,97	5,00	15	SF/M		●			●															
	RDHT 10T3 MO S R2	10,00	3,97	5,00	15	SF/M						√		√								●				
	RDHT 12T3 MO E R2	12,00	3,97	6,00	15	M					√	√		√								●				
	RDHT 12T3 MO S R2	12,00	3,97	6,00	15	M					√	√		√								●				
	RDHT 1605 MO S R5	16,00	5,56	8,00	15	R								●												
RDHW																										
	RDHW 0702 MO E	7,00	2,38	3,50	15	F						√										●				
	RDHW 0702 MO F	7,00	2,38	3,50	15	F		●	●																	
	RDHW 1003 MO E	10,00	3,18	5,00	15	SF/M						●														
	RDHW 1003 MO S	10,00	3,18	5,00	15	SF/M						√		√								●				
	RDHW 10T3 MO E	10,00	3,97	5,00	15	SF/M						●														
	RDHW 10T3 MO S	10,00	3,97	5,00	15	SF/M						√		√								●				
	RDHW 12T3 MO S	12,00	3,97	6,00	15	M						●		●								●				
	RDHW 1605 MO S	16,00	5,56	8,00	15	R								●												
RDMT																										
	RDMT 10T3 MO E R3	10,00	3,97	5,00	15	SF/M							√		●	√	●	●					●		●	
	RDMT 1204 MO E R3	12,00	4,76	6,00	15	SF/M							√			●	●		●				●		●	
	RDMT 1604 MO S R1	16,00	4,76	8,00	15	R						√										●				
RDMW																										
	RDMW 1003 MO E	10,00	3,18	5,00	15	SF/M						●										●				
	RDMW 1003 MO S	10,00	3,18	5,00	15	SF/M						√										●				
	RDMW 10T3 MO E	10,00	3,18	5,00	15	SF/M						●										●				
	RDMW 10T3 MO S	10,00	3,18	5,00	15	SF/M						√										●				
	RDMW 1204 MO S	12,00	4,76	6,00	15	M						√		√								●				
	RDMW 1604 MO S	16,00	4,76	6,00	15	R						√										●				
	RDMW 1605 MO S	16,00	4,76	6,00	15	R						√										●				

Applicazione / *Application*

● Taglio continuo / *Stable* — ✓ Taglio generico / *General* — ✚ Taglio interrotto / *Unstable*

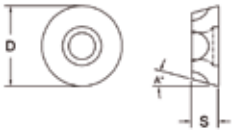
Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*

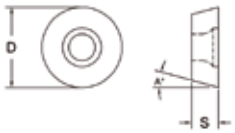
NEW CAPSULE LINE														Note / *Remarks*
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	
◡	◡	✚	●	●	●	◡	◡			●	◡			
			●			●				●	●			
			●			●				●	●			
			●			●				●	●			
		√												
			√			●	●			√	●			
●														
			●			√	●			●	●			
			√			●	●			●	●			
●														
			●			√	●			●	●			
			●			●				√	●			
			●			●				●	●			
						●	●							
			●							●				
●	●													
										●				
			●							●	●			
										●				
			●							●	●			
			●							●	●			
						●	●				●			
		√												
		√												
					√					●				
			●							●				
			●							●				
			●							●				
			●							●				
			●	●	●	●	●			●	●			
			●	●	●					●				
			●	●	●					●				

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Disegni tecnici / *Technical drawings*



RDHT R5



RDET
RDEW
RDHT R2
RDHW
RDMT
RDMW

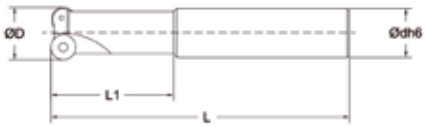
INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
RDEW 0501MO	RD05C
RDHT 07-10 / RDHW 07-10 RDMT 07-10 / RDMW 07-10	RD07-10F / ERD07-10WL
RDHT 12-16 / RDHW 12-16 RDMT 12-16 / RDMW 12-16	RD124 / RD12-16F / RD12-16M

Parametri di taglio / *Cutting parameters* *pag. 116-117*

Lavorazione / ***Operation***

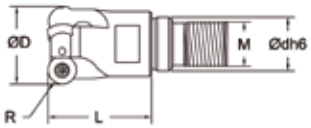
F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

RD05C



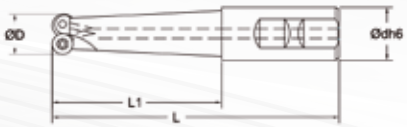
CODICE / *CODE*	ØD	Ødh6	L	L1	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RD05C10Z2	10	**16**	120	**40**	2	**VT155**	TX06	**RD...0501...**
RD05C12Z2	12	**16**	120	**40**	2	**VT155**	TX06	**RD...0501...**

RD07-10F



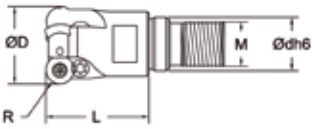
CODICE / *CODE*	ØD	M	L	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RD07F15Z2	15	**8**	23	**2**	VT15	**TX07**	RD...0702MO...
RD07F16Z2	16	**8**	23	**2**	VT15	**TX07**	RD...0702MO...
RD07F16Z3	16	**8**	23	**3**	VT15	**TX07**	RD...0702MO...
RD07F20Z3	20	**10**	30	**3**	VT15	**TX07**	RD...0702MO...
RD07F20Z4	20	**10**	30	**4**	VT15	**TX07**	RD...0702MO...
RD07F25Z5	25	**12**	35	**5**	VT15	**TX07**	RD...0702MO...
RD07F32Z5	32	**16**	43	**5**	VT15	**TX07**	RD...0702MO...
RD10F20Z2	20	**10**	30	**2**	VT45	**TX15**	RD...1003MO...
RD10F25Z3	25	**12**	35	**3**	VT45	**TX15**	RD...1003MO...
RD10F32Z3	32	**16**	43	**3**	VT45	**TX15**	RD...1003MO...
RD10F32Z4	32	**16**	43	**4**	VT45	**TX15**	RD...1003MO...
RD10F35Z3	35	**16**	43	**3**	VT45	**TX15**	RD...1003MO...
RD10F35Z4	35	**16**	43	**4**	VT45	**TX15**	RD...1003MO...
RD10F35Z5	35	**16**	43	**5**	VT45	**TX15**	RD...1003MO...
RD10F40Z4	40	**16**	43	**4**	VT45	**TX15**	RD...1003MO...
RD10F42Z5	42	**16**	43	**5**	VT45	**TX15**	RD...1003MO...

RD07-10WL



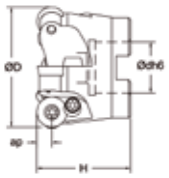
CODICE / *CODE*	ØD	Ødh6	L	L1	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RD07WL16Z2	16	**20**	140	**90**	2	**VT15**	TX07	**RD...0702MO...**
RD10WL20Z2	20	**25**	160	**104**	2	**VT45**	TX15	**RD...1003MO...**
RD10WL25Z2	25	**25**	160	**104**	2	**VT45**	TX15	**RD...1003MO...**

RD12-16F



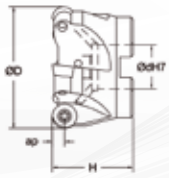
CODICE / *CODE*	ØD	M	L	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RD12F24Z2	24	12	35	2	VT45	TX15	RD...12T3MO...
RD12F32Z3	32	16	43	3	VT45	TX15	RD...12T3MO...
RD12F35Z3	35	16	43	3	VT45	TX15	RD...12T3MO...
RD12F40Z4	40	16	43	4	VT45	TX15	RD...12T3MO...
RD12F42Z4	42	16	43	4	VT45	TX15	RD...12T3MO...
RD16F32Z2	32	16	43	2	VT108	TX20	RD...1604MO...

RD12-16M



CODICE / *CODE*	ØD	Ødh7	H	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RD12M40Z4	40	16	40	4	VT45	TX15	RD...12T3MO...
RD12M50Z5	50	22	50	5	VT45	TX15	RD...12T3MO...
RD12M52Z5	52	22	50	5	VT45	TX15	RD...12T3MO...
RD12M63Z6	63	22	50	6	VT45	TX15	RD...12T3MO...
RD12M66Z6	66	27	50	6	VT45	TX15	RD...12T3MO...
RD12M80Z7	80	27	50	7	VT45	TX15	RD...12T3MO...
RD16M50Z4	50	22	50	4	VT108	TX20	RD...1604MO...
RD16M52Z4	52	22	50	4	VT108	TX20	RD...1604MO...
RD16M66Z5	66	27	50	5	VT108	TX20	RD...1604MO...
RD16M80Z6	80	27	50	6	VT108	TX20	RD...1604MO...
RD16M100Z7	100	32	55	7	VT108	TX20	RD...1604MO...
RD16M125Z8	125	40	63	8	VT108	TX20	RD...1604MO...
RD16M160Z9	160	40	55	9	VT108	TX20	RD...1604MO...

RD124M



CODICE / *CODE*	ØD	Ødh7	H	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RD124M40Z4	40	16	40	4	VT77	TX15	RD...1204MO...
RD124M50Z4	50	22	40	4	VT77	TX15	RD...1204MO...
RD124M52Z5	52	22	40	5	VT77	TX15	RD...1204MO...
RD124M63Z5	63	27	50	5	VT77	TX15	RD...1204MO...
RD124M80Z6	80	27	50	6	VT77	TX15	RD...1204MO...
RD124M100Z7	100	32	55	7	VT77	TX15	RD...1204MO...

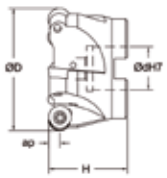
Inserti / *Inserts*

RPMT...12

CODICE / *CODE*		D (mm)	S (mm)	R (mm)	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
												●		◥												
	**RPMT 1204 MO S R2**	12,00	4,76	6,00	11	M						√		√												
	**RPMT 1204 MO S R3**	12,00	4,76	6,00	11	M						√		√												

Frese / *Milling cutters*

RP12M



CODICE / *CODE*	ØD	Ødh7	H	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
RP12M40Z4	40	16	40	4	VT77	TX15	RP...1204MO...
RP12M50Z4	50	22	40	4	VT77	TX15	RP...1204MO...
RP12M52Z5	52	22	40	5	VT77	TX15	RP...1204MO...
RP12M63Z5	63	27	50	5	VT77	TX15	RP...1204MO...
RP12M80Z6	80	27	50	6	VT77	TX15	RP...1204MO...
RP12M100Z7	100	32	55	7	VT77	TX15	RP...1204MO...

Applicazione / *Application*

● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

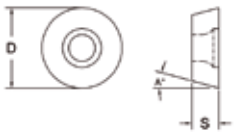
Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* **M** = Acciaio Inossidabile / *Stainless steel* **K** = Ghisa / *Cast iron* **N** = Leghe Leggere / *Non ferrous metals* **S** = Leghe resistenti al calore / *Superalloys* **H** = Materiali Temprati / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE													
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■	■	■	■	■							
			●	●	●	◡	◡							
			●	√	●	●	●							
			●	√	●	●	●							

Disegni tecnici / *Technical drawings*



INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
RPMT 12	RP12M

Parametri di taglio / *Cutting parameters* *pag. 117*

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

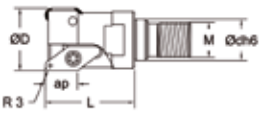
Inserti / *Inserts*

VCGT...22

CODICE / *CODE*		(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
	**VCGT 220530 F RX**	22,10	12,70	5,56	3,00	7,00	F/M		√																	

Frese / *Milling cutters*

VC22F



CODICE / *CODE*	ØD	M	L	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
VC22F32Z2	32	**16**	48	**2**	VT108	**TX20**	VC...2205...
VC22F42Z3	42	**16**	48	**3**	VT108	**TX20**	VC...2205...

Applicazione / *Application*

● Taglio continuo / *Stable* ◥ Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

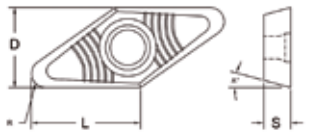
Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
■														
√														
●														

Disegni tecnici / *Technical drawings*

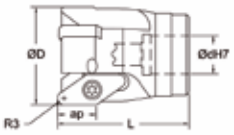


INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
VCGT	VC22F / VC22M

Parametri di taglio / *Cutting parameters* *pag. 117*

Frese / *Milling cutters*

VC22M



CODICE / *CODE*	ØD	Ødh7	H	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
VC22M42Z3	42	**16**	57	**3**	VT108	**TX20**	VC...2205...
VC22M52Z3	52	**22**	57	**3**	VT108	**TX20**	VC...2205...
VC22M66Z4	66	**27**	57	**4**	VT108	**TX20**	VC...2205...
VC22M80Z4	80	**27**	57	**4**	VT108	**TX20**	VC...2205...
VC22M100Z5	100	**32**	55	**5**	VT108	**TX20**	VC...2205...
VC22M125Z6	125	**40**	55	**6**	VT108	**TX20**	VC...2205...

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

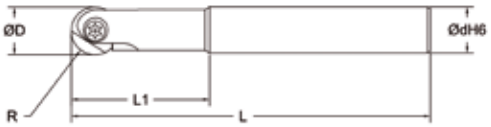
Inserti / *Inserts*

WAR...

CODICE / *CODE*		L	L	S	R	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
		(mm)																								
	WAR 1203	12,00	-	3,00	-	F/M				√	●															
	WAR 1604	16,00	-	4,00	-	F/M				√	●															
	WAR 2005	20,00	-	5,00	-	F/M				√	●															
	WAR 2506	25,00	-	6,00	-	F/M				√	●			√												
	WAR 3207 S	32,00	-	7,00	-	F/M				√	●			√												

Frese / *Milling cutters*

WARC



CODICE / *CODE*	ØD	Ødh6	R	L	L1	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
WARC12Z1	12	**12**	6	**140**	35	**VTX35**	TX10	**WAR 12**
WARC16Z1	16	**16**	8	**170**	45	**VTX40**	TX15	**WAR 16**
WARC20Z1	20	**20**	10	**180**	55	**VTX50**	TX20	**WAR 20**
WARC25Z1	25	**25**	12,5	**200**	60	**VTX60**	TX30	**WAR 25**
WARC32Z1	32	**32**	16	**200**	60	**VTX80**	TX30	**WAR 32**

Applicazione / *Application*

● Taglio continuo / *Stable* ● Taglio generico / *General* ✚ Taglio interrotto / *Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** / *Steel* **M** = **Acciaio Inossidabile** / *Stainless steel* **K** = **Ghisa** / *Cast iron* **N** = **Leghe Leggere** / *Non ferrous metals* **S** = **Leghe resistenti al calore** / *Superalloys* **H** = **Materiali Temprati** / *Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE														
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*

Disegni tecnici / *Technical drawings*

INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
WAR	WARC

Parametri di taglio / *Cutting parameters* *pag. 118*

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

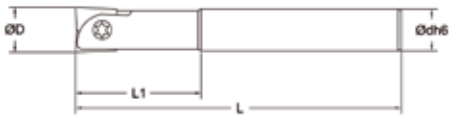
Inserti / *Inserts*

WPB...

	CODICE / *CODE*	(mm) L	D	S	R	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
										●	●															
	**WPB 0805 N**	9,5	8,00	2,00	0,50	F/M				√	●															
	WPB 0810 N	9,5	8,00	2,00	1,00	F/M				√	●															
	WPB 1005 N	11,5	10,00	2,50	0,50	F/M				√	●															
	WPB 1010 N	11,5	10,00	2,50	1,00	F/M				√	●															
	WPB 1210 N	13,5	12,00	2,50	1,00	F/M				√	●															
	WPB 1610 N	16	16,00	3,00	1,00	F/M				√	●															
	WPB 1613 N	16	16,00	3,00	1,30	F/M				√	●															
	WPB 2010 N	19	20,00	3,00	1,00	F/M				√	●															
	WPB 2016 N	19	20,00	3,00	1,60	F/M				√	●															
	WPB 2520 N	23,5	25,00	4,00	2,00	F/M				√	●															

Frese / *Milling cutters*

WPBVC



CODICE / *CODE*	ØD	Ødh6	L	L1	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
WPBVC0808Z1	8	**8**	120	**40**	VTK08	**TX08**	WPB 8
WPBVC0810Z1	8	**10**	120	**30**	VTK08	**TX08**	WPB 8
WPBVC1010Z1	10	**10**	120	**40**	VTK10	**TX15**	WPB 10
WPVVC1012Z1	10	**12**	150	**35**	VTK10	**TX15**	WPB 10
WPBVC1212Z1	12	**12**	160	**50**	VTK12	**TX20**	WPB 12
WPBVC1616Z1	16	**16**	175	**53**	VTK16	**TX20**	WPB 16
WPBVC2020Z1	20	**20**	190	**61**	VTK20	**TX20**	WPB 20
WPBVC2525Z1	25	**25**	190	**70**	VTK25	**TX30**	WPB 25
WPBVC3232Z1	32	**32**	210	**80**	VTK32	**TX30**	WPB 32

Applicazione / *Application*

● Taglio continuo */ Stable* ◥ Taglio generico */ General* ✚ Taglio interrotto */ Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel* **M** = **Acciaio Inossidabile** */ Stainless steel* **K** = **Ghisa** */ Cast iron* **N** = **Leghe Leggere** */ Non ferrous metals* **S** = **Leghe resistenti al calore** */ Superalloys* **H** = **Materiali Temprati** */ Hardened steel*

A Brand of X-Metal HMW HARD METAL WORKING

NEW CAPSULE LINE													
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
													●	
													●	
													●	
													●	
													●	
													●	
													●	
													●	
													●	
													●	

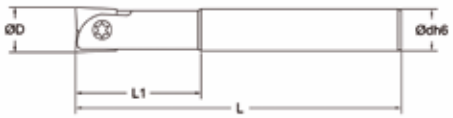
Disegni tecnici / *Technical drawings*

INSERTI *INSERTS*	FRESE *MILLING CUTTERS*
WPB	WPBVC / WPBVCD / WPBVF

Parametri di taglio / *Cutting parameters* *pag. 118*

Frese / *Milling cutters*

WPBVCD



CODICE / *CODE*	ØD	Ødh6	L	L1	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
WPBVCD0808Z1	8	**8**	100	**30**	VTK08	**TX08**	WPB 8
WPBVCD1010Z1	10	**10**	120	**35**	VTK10	**TX15**	WPB 10
WPBVCD1212Z1	12	**12**	160	**50**	VTK12	**TX20**	WPB 12
WPBVCD1616Z1	16	**16**	175	**55**	VTK16	**TX20**	WPB 16
WPBVCD2020Z1	20	**20**	190	**75**	VTK20	**TX20**	WPB 20

WPBVF

CODICE / *CODE*	ØD	M	L	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
WPBVF12Z1	12	**6**	20	**VTK12**	TX15	**WPB 12**
WPBVF16Z1	16	**8**	25	**VTK16**	TX20	**WPB 16**
WPBVF20Z1	20	**10**	30	**VTK20**	TX20	**WPB 20**
WPBVF25Z1	25	**12**	35	**VTK25**	TX25	**WPB 25**
WPBVF32Z1	32	**16**	45	**VTK32**	TX30	**WPB 32**

√ = **In stock** ● = **A richiesta** / Upon request Δ = **A richiesta** / Upon request **Ordine minimo 100 pz** / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

RD

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*				
					Piano / *Flat*	R1	R2	R3	R5
P	RDEW 0501 MO E	3FCRT 4FHI2 2PCR 3FCT	0.1-1.5	80-220	0.05-0.63	-	-	-	0.10-0.40
P	RDHW 0702 MO T	2FD 2FUS	0.1-2.0	80-220	0.15-0.68	-	-	-	0.20-0.30
P	RDHW 1003 MO E	1FD	0.1-2.5	80-220	0.10-1.26	-	-	-	0.30-0.60
P	RDHW 10T3 MO T	2FD 3MCC 2FUS	0.1-2.5	80-220	0.10-1.51	-	-	-	-
P	RDHW 12T3 MO T	2FD 3MCC 2FUS	0.1-3.0	80-220	0.1-1.65	-	-	-	-
P	RDHW 1605 MO S	3MCC 3MUSP 3MST	0.1-4.0	80-220	0.15-2.54	-	-	-	-
P	RDHT 1003 MO F	1FD	0.1-2.5	80-220	-	-	0.05-0.90	-	-
P	RDHT 1003 MO S	2FD 3MCC 2FUS 3MUSP 3MST	0.1-2.5	80-220	-	-	0.10-1.50	-	-
P	RDHT 10T3 MO F	1FD	0.1-2.5	80-220	-	-	0.05-0.90	-	-
P	RDHT 10T3 MO S	2FD 3MCC 2FUS 3MUSP 3MST	0.1-2.5	80-220	-	-	0.10-1.50	-	-
P	RDHT 12T3 MO F	1FD	0.1-3.0	80-220	-	-	0.10-1.10	-	-
P	RDHT 12T3 MO E	1FD 2FD 3MCC 2FUS 3MUSP	0.1-3.0	80-220	-	-	0.10-1.65	-	-
P	RDHT 1605 MO S	3MCC 3MUSP 3MST	0.1-4.0	80-220	-	-	-	0.15-2.54	-
P	RDMT 10T3 MO E	3FCRT 4FHI2 1PC9 2PCR 3FCT 4FCT	0.1-2.5	80-220	-	-	0.10-1.50	-	-
P	RDMT 1204 MO E	3FCRT 4FHI2 2PCR 4FCT	0.1-3.0	80-220	-	-	0.10-1.65	-	-
P	RDMT 1604 MO S	2FD 2FST 4KUSP 4KST	0.1-4.0	80-220	-	0.15-2.54	-	-	-
P	RDMT 1605 MO S	2FD 2FST 4KUSP 4KST	0.1-4.0	80-220	-	0.15-2.54	-	-	-
P	RDMW 1003 MO T	1FD 2FD 2FUS	0.1-2.5	80-220	0.10-1.51	-	-	-	-
P	RDMW 12T3 MO T	1FD 2FD 3MCC 2FUS 2FUSP 2FST 3MUSP 3MST	0.1-3.0	80-220	0.1-1.65	-	-	-	-
P	RDMW 1204 MO T	1FD 2FD 3MCC 2FUS 2FUSP 2FST 3MUSP 3MST	0.1-3.0	80-220	0.1-1.65	-	-	-	-
P	RDMW 1604 MO T	1FD 2FD 3MCC 2FUS 2FUSP 2FST 3MUSP 3MST	0.1-4.0	80-220	0.15-2.54	-	-	-	-
M	RDEW 0501 MO E	3FCRT 4FHI2	0.1-1.5	80-180	0.05-0.63	-	-	-	0.10-0.40
M	RDHW 0702 MO T	2FD 2FHI	0.1-2.0	80-180	0.15-0.68	-	-	-	0.20-0.30
M	RDHW 1003 MO E	1FD 2FHI	0.1-2.5	80-180	0.10-1.51	-	-	-	0.30-0.60
M	RDHW 10T3 MO T	2FD 3MCC 2FHI 3MHI	0.1-2.5	80-180	0.10-1.51	-	-	-	-
M	RDHW 12T3 MO T	2FD 3MCC 2FHI 3MHI	0.1-3.0	80-180	0.1-1.65	-	-	-	-
M	RDHW 1605 MO S	3MCC 3MHI	0.1-4.0	80-180	0.15-2.54	-	-	-	-
M	RDHT 1003 MO F	1FD	0.1-2.5	80-180	-	-	0.05-0.90	-	-
M	RDHT 1003 MO S	2FD 3MCC 2FHI 3MHI	0.1-2.5	80-180	-	-	0.10-1.50	-	-
M	RDHT 10T3 MO F	1FD	0.1-2.5	80-180	-	-	0.05-0.90	-	-
M	RDHT 10T3 MO S	2FD 3MCC 2FHI 3MHI	0.1-2.5	80-180	-	-	0.10-1.50	-	-
M	RDHT 12T3 MO F	1FD	0.1-3.0	80-180	-	-	0.10-1.10	-	-
M	RDHT 12T3 MO E	1FD 2FD 3MCC 2FHI 3MHI	0.1-3.0	80-180	-	-	0.10-1.65	-	-
M	RDHT 1605 MO S	3MCC	0.1-4.0	80-180	-	-	-	0.15-2.54	-
M	RDMT 10T3 MO E	3FCRT 4FHI2 4MC9	0.1-2.5	80-180	-	-	0.10-1.50	-	-
M	RDMT 1204 MO E	3FCRT 4FHI2 4MC9	0.1-3.0	80-180	-	-	0.10-1.65	-	-
M	RDMT 1604 MO S	2FD	0.1-4.0	80-180	-	0.15-2.54	-	-	-
M	RDMT 1605 MO S	2FD	0.1-4.0	80-180	-	0.15-2.54	-	-	-
M	RDMW 1003 MO T	1FD 2FD 2FHI	0.1-2.5	80-180	0.10-1.51	-	-	-	-
M	RDMW 12T3 MO T	1FD 2FD 3MCC 2FHI 3MHI	0.1-3.0	80-180	0.1-1.65	-	-	-	-
M	RDMW 1204 MO T	1FD 2FD 3MCC 2FHI 3MHI	0.1-3.0	80-180	0.1-1.65	-	-	-	-
M	RDMW 1604 MO T	1FD 2FD 3MCC 2FHI 3MHI	0.1-4.0	80-180	0.15-2.54	-	-	-	-

RD

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*				
					Piano / *Flat*	R1	R2	R3	R5
K	**RDEW 0501 MO E**	3FCRT 4FHI2	**0.1-1.5**	100-220	**0.05-0.63**	-	-	-	-
	RDHW 0702 MO T	2FD 2KCC	**0.1-2.0**	100-220	**0.15-0.68**	-	-	-	-
	RDHW 1003 MO E	1FD	**0.1-2.5**	100-220	**0.10-1.51**	-	-	-	-
	RDHW 10T3 MO T	2FD 3MCC 2KCC	**0.1-2.5**	100-220	**0.10-1.51**	-	-	-	-
	RDHW 12T3 MO T	2FD 3MCC 2KCC	**0.1-3.0**	100-220	**0.1-1.65**	-	-	-	-
	RDHW 1605 MO S	3MCC	**0.1-4.0**	100-220	**0.15-2.54**	-	-	-	-
	RDHT 1003 MO F	1FD	**0.1-2.5**	100-220	-	-	**0.05-0.90**	-	-
	RDHT 1003 MO S	2FD 3MCC 2KCC	**0.1-2.5**	100-220	-	-	**0.10-1.50**	-	-
	RDHT 10T3 MO F	1FD	**0.1-2.5**	100-220	-	-	**0.05-0.90**	-	-
	RDHT 10T3 MO S	2FD 3MCC 2KCC	**0.1-2.5**	100-220	-	-	**0.10-1.50**	-	-
	RDHT 12T3 MO F	1FD	**0.1-3.0**	100-220	-	-	**0.10-1.10**	-	-
	RDHT 12T3 MO E	1FD 2FD 3MCC 2KCC	**0.1-3.0**	100-220	-	-	**0.10-1.65**	-	-
	RDHT 1605 MO S	3MCC	**0.1-4.0**	100-220	-	-	-	0.15-2.54	-
	RDMT 10T3 MO E	3FCRT 4FHI2 3KCC	**0.1-2.5**	100-220	-	-	**0.10-1.50**	-	-
	RDMT 1204 MO E	3FCRT 4FHI2 3KCC	**0.1-3.0**	100-220	-	-	**0.10-1.65**	-	-
	RDMT 1604 MO S	2FD 2KCC	**0.1-4.0**	100-220	-	0.15-2.54	-	-	-
	RDMT 1605 MO S	2FD 2KCC	**0.1-4.0**	100-220	-	0.15-2.54	-	-	-
	RDMW 1003 MO T	1FD 2FD 2KCC	**0.1-2.5**	100-220	**0.10-1.51**	-	-	-	-
	RDMW 12T3 MO T	1FD 2FD 3MCC 2KCC	**0.1-3.0**	100-220	**0.1-1.65**	-	-	-	-
	RDMW 1204 MO T	1FD 2FD 3MCC 2KCC	**0.1-3.0**	100-220	**0.1-1.65**	-	-	-	-
	RDMW 1604 MO T	1FD 2FD 3MCC 2KCC	**0.1-4.0**	100-220	**0.15-2.54**	-	-	-	-
S	**RDMT 10T3 MO E**	3SCC	**0.1-2.0**	60-120	-	-	**0.05-0.30**	-	-
	RDMT 1204 MO E	3SCC	**0.1-2.5**	60-120	-	-	**0.10-0.40**	-	-

RP

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*	
					R2	R3
P	**RPMT 1204 MO S**	2FD 2FUS 2FUSP 2FST	**6,0**	110-250	**0.17-0.42**	0.20-0.45
	RPMT 1204 MO S	3MCC 3MUSP 3MST	**6,0**	95-220	**0.17-0.42**	0.20-0.45
	RPMT 1204 MO S	4KUSP 4KST	**6,0**	90-200	**0.17-0.42**	0.20-0.45
M	**RPMT 1204 MO S**	2FD	**6,0**	105-180	**0.17-0.42**	0.20-0.45
	RPMT 1204 MO S	3MCC	**6,0**	90-155	**0.17-0.42**	0.20-0.45
K	**RPMT 1204 MO S**	2FD 2KCC	**6,0**	110-165	**0.17-0.42**	0.20-0.45
	RPMT 1204 MO S	3MCC	**6,0**	95-140	**0.17-0.42**	0.20-0.45

VCGT

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER*
					RX
P	**VCGT 2205 F**	1F 1FAL	**8,0**	500-2000	**0.15-0.35**

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel*
M = **Acciaio Inossidabile** */ Stainless steel*
K = **Ghisa** */ Cast iron*
N = **Leghe Leggere** */ Non ferrous metals*
S = **Leghe resistenti al calore** */ Superalloys*
H = **Materiali Temprati** */ Hardened steel*

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

WAR

	INSERTO *INSERT*	GRADI *GRADES*	ap (mm)	ae (mm) raccomandata *recommended*	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* Tutti / *All*
P	**WAR 12**	3MCC	**0.3-0.6**	0,30	**310-440**	0.30-0.60
	WAR 16	3MCC	**0.3-0.6**	0,40	**310-440**	0.30-0.60
	WAR 20	3MCC	**0.3-0.6**	0,50	**310-440**	0.50-0.80
	WAR 25	3MCC	**0.3-0.6**	0,60	**310-440**	0.50-0.80
	WAR 30	3MCC	**0.3-0.6**	0,75	**310-440**	0.70-1.00
K	**WAR 12**	0FD 1FD	**0.2-0.6**	0.25-0.3	**310-410**	0.10-0.50
	WAR 16	0FD 1FD	**0.2-0.6**	0.3-0.4	**310-410**	0.10-0.50
	WAR 20	0FD 1FD	**0.2-0.6**	0.4-0.5	**310-410**	0.30-0.70
	WAR 25	0FD 1FD	**0.2-0.6**	0.5-0.6	**310-410**	0.30-0.70
	WAR 30	0FD 1FD	**0.2-0.6**	0.6-0.75	**310-410**	0.50-1.00
H	**WAR 12**	0FD 1FD	**0.1-0.3**	0,24	**110-190**	0.10-0.40
	WAR 16	0FD 1FD	**0.1-0.3**	0,32	**110-190**	0.10-0.40
	WAR 20	0FD 1FD	**0.1-0.3**	0,40	**110-190**	0.20-0.60
	WAR 25	0FD 1FD	**0.1-0.3**	0,50	**110-190**	0.20-0.60
	WAR 30	0FD 1FD	**0.1-0.3**	0,60	**110-190**	0.20-0.80

WPB N

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm) Sgrossatura *Roughing*	ap max (mm) Finitura *Finishing*	ap max (mm)	Vc (m/min)	ROMPITRUCIOLO / *CHIPBREAKER* N Fz max (mm) Sgrossatura / *Roughing*	ROMPITRUCIOLO / *CHIPBREAKER* N Fz (mm) Finitura / *Finishing*
P	**WPB 0805**	0FD 1FD	**0,5**	0,2	**0.1-0.3**	140-200	**0,25**	0.10-0.15
	WPB 0810	0FD 1FD	**1,0**	0,2	**0.1-0.3**	140-200	**0,25**	0.10-0.15
	WPB 1005	0FD 1FD	**0,5**	0,3	**0.1-0.3**	140-200	**0,30**	0.15-0.20
	WPB 1010	0FD 1FD	**1,0**	0,3	**0.1-0.3**	140-200	**0,30**	0.15-0.20
	WPB 1210	0FD 1FD	**1,0**	0,3	**0.1-0.3**	140-200	**0,35**	0.20-0.25
	WPB 1610	0FD 1FD	**1,0**	0,3	**0.1-0.3**	140-200	**0,40**	0.20-0.25
	WPB 1613	0FD 1FD	**1,3**	0,3	**0.1-0.3**	140-200	**0,40**	0.20-0.25
	WPB 2010	0FD 1FD	**1,0**	0,4	**0.1-0.3**	140-200	**0,45**	0.20-0.25
	WPB 2016	0FD 1FD	**1,6**	0,5	**0.1-0.3**	140-200	**0,45**	0.20-0.25
	WPB 2520	0FD 1FD	**2,0**	0,5	**0.1-0.3**	140-200	**0,50**	0.20-0.30
K	**WPB 0805**	0FHS	**0,5**	0,2	**0.1-0.3**	140-200	**0,25**	0.08-0.15
	WPB 0810	0FHS	**1,0**	0,2	**0.1-0.3**	140-200	**0,25**	0.08-0.15
	WPB 1005	0FHS	**0,5**	0,3	**0.1-0.3**	140-200	**0,30**	0.10-0.20
	WPB 1010	0FHS	**1,0**	0,3	**0.1-0.3**	140-200	**0,30**	0.10-0.20
	WPB 1210	0FHS	**1,0**	0,3	**0.1-0.3**	140-200	**0,35**	0.12-0.25
	WPB 1610	0FHS	**1,0**	0,3	**0.1-0.3**	140-200	**0,40**	0.15-0.25
	WPB 1613	0FHS	**1,3**	0,3	**0.1-0.3**	140-200	**0,40**	0.15-0.25
	WPB 2010	0FHS	**1,0**	0,4	**0.1-0.3**	140-200	**0,45**	0.18-0.25
	WPB 2016	0FHS	**1,6**	0,5	**0.1-0.3**	140-200	**0,45**	0.18-0.25
	WPB 2520	0FHS	**2,0**	0,5	**0.1-0.3**	140-200	**0,50**	0.20-0.30

Materiale da lavorare / *Workpiece material*

P = Acciaio / *Steel* — **M** = Acciaio Inossidabile / *Stainless steel* — **K** = Ghisa / *Cast iron* — **N** = Leghe Leggere / *Non ferrous metals* — **S** = Leghe resistenti al calore / *Superalloys* — **H** = Materiali Temprati / *Hardened steel*


THINK

SCANALATURA

INSERTS AND MILLING CUTTERS - SLOTTING

Inserti / *Inserts*

SNHX...11-12

	CODICE / *CODE*	(mm) L	D	S	R	A°	Lavorazione / *Operation*	GRADI / *GRADES* 0F	1F	2F	0FD	1FD	2FD	3FCRT	3MCC	1PC9	2PCR	3FCT	4FCT	4MC9	4MHI	2KC9	2KCC	3KCC	1HHD	3SCC	1C
													●														
	**SNHX 1102XX TA**	11,00	11,00	2,38	-	0	M						√														
	SNHX 1103XX TA	11,00	11,00	2,70	-	0	M						√														
	SNHX 1203XX TA	12,70	12,70	3,18	-	0	M						√														
	SNHX 1204XX TA	12,70	12,70	4,00	-	0	M						√														
	SNHX 12045XX TA	12,70	12,70	4,50	-	0	M						√														
	SNHX 1205XX TA	12,70	12,70	5,40	-	0	M						√														
	SNHX 1207XX TA	12,70	12,70	7,00	-	0	M						√														

Frese / *Milling cutters*

SN11D

CODICE / *CODE*	ØD	Ødh7	h	b	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SN11D6304Z8	63	22	14	4	8	VTX35	TX09	SNHX1102...
SN11D6305Z8	63	22	14	5	8	VTX35A	TX09	SNHX1103...
SN11D8004Z8	80	22	22	4	8	VTX35	TX09	SNHX1102...
SN11D8005Z8	80	22	22	5	8	VTX35A	TX09	SNHX1103...
SN11D10004Z12	100	27	25	4	12	VTX35	TX09	SNHX1102...
SN11D10005Z12	100	27	25	5	12	VTX35A	TX09	SNHX1103...
SN11D12504Z12	125	40	31	4	12	VTX35	TX09	SNHX1102...
SN11D12505Z12	125	40	31	5	12	VTX35A	TX09	SNHX1103...

Applicazione / *Application*

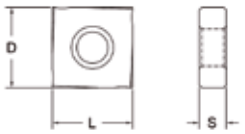
● Taglio continuo */ Stable* ◥◤ Taglio generico */ General* ✚ Taglio interrotto */ Unstable*

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel* **M** = **Acciaio Inossidabile** */ Stainless steel* **K** = **Ghisa** */ Cast iron* **N** = **Leghe Leggere** */ Non ferrous metals* **S** = **Leghe resistenti al calore** */ Superalloys* **H** = **Materiali Temprati** */ Hardened steel*

NEW CAPSULE LINE													
1FAL	2FAL	4FHI2	2FUS	2FUSP	2FST	3MUSP	3MST	4KUSP	4KST	2FHI	3MHI	4KHI	0FHS	Note / *Remarks*
			■											
			●											
			●											
			●											
			●											
			●											
			●											
			●											
			●											

Disegni tecnici / *Technical drawings*

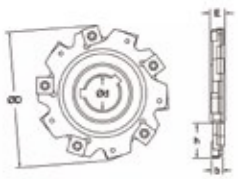


INSERTI *INSERTS*	**FRESE** *MILLING CUTTERS*
SNHX 11	SN11D
SNHX 12	SN12D

Parametri di taglio / *Cutting parameters* *pag. 124*

Frese / *Milling cutters*

SN12D



CODICE / *CODE*	ØD	ØD1	Ødh7	H	H1	Z	VITE *SCREW*	CHIAVE *KEY*	INSERTO *INSERT*
SN12D1004Z10	100	**40,7**	27	**4**	12	**10**	-	**TX15**	SNHX..12..
SN12D1254Z12	125	**50,5**	40	**4**	12	**12**	-	**TX15**	SNHX..12..
SN12D16012Z16	160	**66,7**	40	**4**	12	**16**	-	**TX15**	SNHX..12..
SN12D10012Z10	100	**45**	27	**5**	12	**10**	-	**TX15**	SNHX..12..
SN12D1255Z12	125	**58**	40	**5**	12	**12**	-	**TX15**	SNHX..12..
SN12D1605Z16	160	**68**	40	**5**	12	**16**	-	**TX15**	SNHX..12..
SN12D1006Z10	100	**45**	27	**6**	12	**10**	-	**TX15**	SNHX..12..
SN12D1256Z12	125	**58**	40	**6**	12	**12**	-	**TX15**	SNHX..12..
SN12D1007Z10	100	**45**	27	**7**	12	**10**	-	**TX15**	SNHX..12..
SN12D1257Z12	125	**52**	40	**7**	12	**12**	-	**TX15**	SNHX..12..
SN12D1008Z10	100	**45**	27	**8**	12	**10**	-	**TX15**	SNHX..12..
SN12D1258Z12	125	**58**	40	**8**	12	**12**	-	**TX15**	SNHX..12..

√ = **In stock**

● = **A richiesta** / Upon request

Δ = **A richiesta** / Upon request
Ordine minimo 100 pz / MOQ 100 pcs

Lavorazione / ***Operation***

F = **Finitura** / Finishing
SF = **Semifinitura** / Semi-finishing
M = **Media** / Medium
R = **Sgrossatura** / Roughing
H = **Sgrossatura pesante** / Heavy roughing

PARAMETRI DI TAGLIO - *CUTTING PARAMETERS*

SNHX

	INSERTO *INSERT*	GRADI *GRADES*	ap max (mm)	Vc (m/min)	Fz (mm/z) ROMPITRUCIOLO / *CHIPBREAKER* TA
P	**SNHX....**	2FD 2FUS	**larghezza inserto** *insert width*	120-275	**0.1-0.4**
M	**SNHX....**	2FD 2FHI	**larghezza inserto** *insert width*	78-185	**0.1-0.5**
K	**SNHX....**	2FD	**larghezza inserto** *insert width*	70-150	**0.1-0.6**

Materiale da lavorare / *Workpiece material*

P = **Acciaio** */ Steel*
M = **Acciaio Inossidabile** */ Stainless steel*
K = **Ghisa** */ Cast iron*
N = **Leghe Leggere** */ Non ferrous metals*
S = **Leghe resistenti al calore** */ Superalloys*
H = **Materiali Temprati** */ Hardened steel*

NOTE - *REMARKS*


THINK

ETAL

MAKE INSE

METAL
THINK MAKE INSERT

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