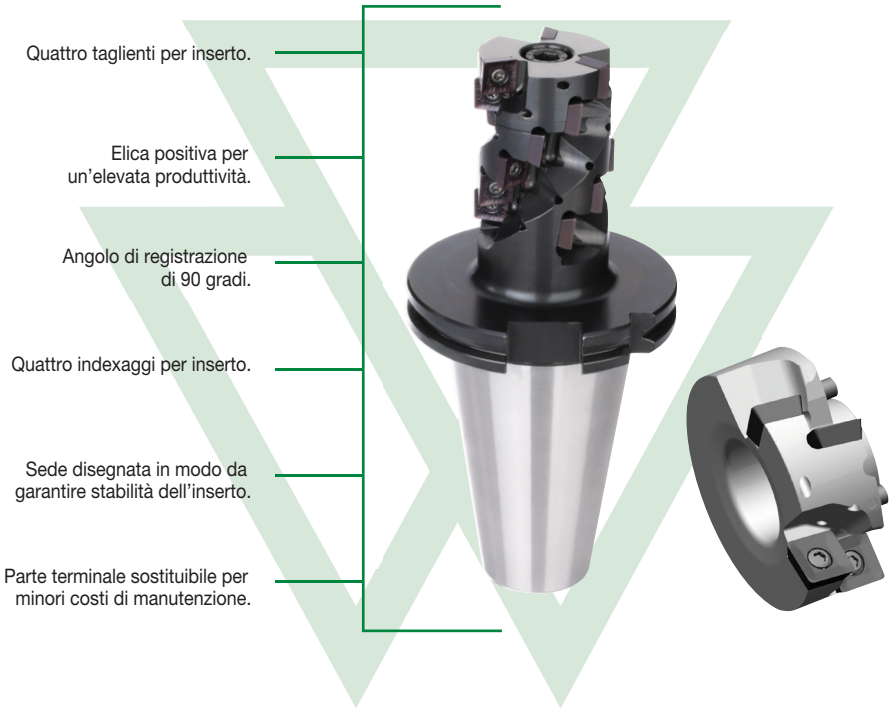
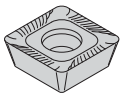
M390

Fresa elicoidale M390

La fresa elicoidale M390 ha una parte terminale sostituibile e un'elica positiva per garantire una buona evacuazione truciolo e prestazioni ottimali per costi di manutenzione ridotti.



INSERTI



-ML
Geometria positiva per lavorazione leggera o spallamento con profondità ridotte.

-MM
Prima scelta per lavorazione generale in tutti i materiali.

-MH
Prima scelta per lavorazioni pesanti in acciaio e ghisa.

PRIMA SCELTA ALTAMENTE PRODUTTIVA PER FRESATURA ELICOIDALE AD ALTA PRODUTTIVITÀ

PRODOTTO

SERIE

M390

RANGE DI DIAMETRO

50-80mm

TIPI DI STELO

Fresa elicoidale

SETTORE

ENERGY

GENERAL ENGINEERING

TRANSPORTATION

APPLICAZIONI

CONTORNATURA/ FRESATURA A SPALLAMENTO: TESTA QUADRATA

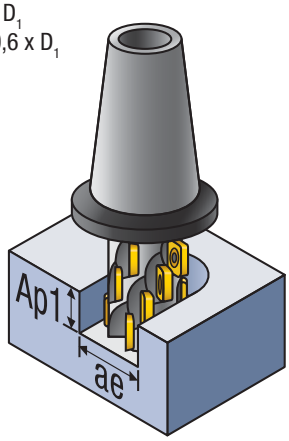
SPIANATURA

SCANALATURA: TESTA QUADRATA

RAPPORTI MASSIMI DI PROFONDITÀ DI TAGLIO (AP1) E AMPIEZZA DI TAGLIO (AE) BASATI SUL TIPO DI APPLICAZIONE.

SCANALATURA

ae = 1 x D_1
Ap1 max = 0,6 x D_1

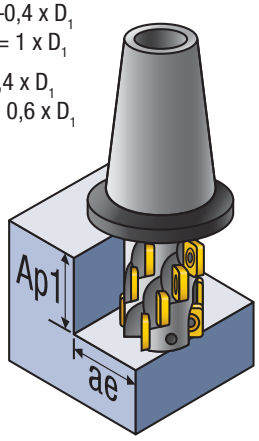


**Non consigliato per materiali "H" ISO.*

CONTORNATURA

ae = 0,25–0,4 x D_1
Ap1 max = 1 x D_1

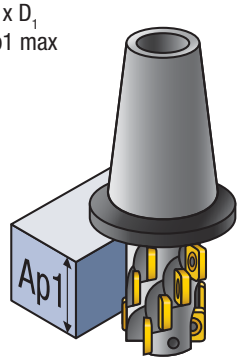
ae = >0,4 x D_1
Ap1 max = 0,6 x D_1



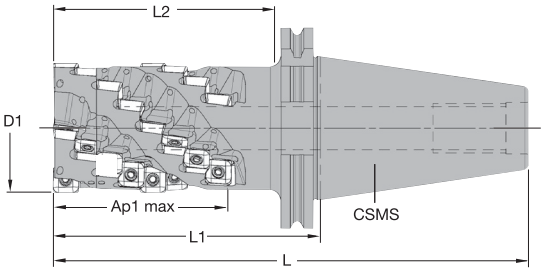
**Non consigliato per materiali "H" ISO.*

PROFILATURA

ae = <0,25 x D_1
Ap1 max = Ap1 max



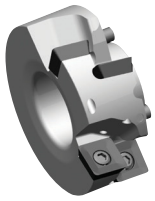
M390 • SD1204 integrale.. • Sistema metrico

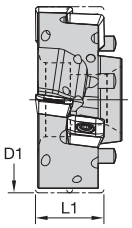


numero d'ordine	codice catalogo	D1	L	L1	L2	Ap1 max	Z	Z U	CSMS dimensioni sistema	max (giri/min)	refrigerante interno	kg
2021422	**12393041200**	50	207	105	82	64,0	12	3	DV50	14000	Yes	3,4
2021423	**12393041400**	63	232	130	107	85,0	24	4	DV50	12000	Yes	4,3
2021424	**12393041800**	80	262	160	137	117,0	45	5	DV50	10500	Yes	6,3

NOTA: Z = numero delle sedi inserto.
ZU = numero dei denti effettivi.

M390 • Parte terminale • Sistema metrico





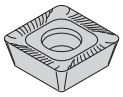
numero d'ordine	codice catalogo	D1	L1	Z U	Z	kg
2021428	**12393051200**	50	21	3	6	0,2
2021429	**12393051400**	63	21	4	8	0,3
2021430	**12393051800**	80	21	5	10	0,5

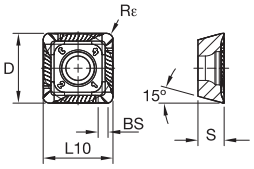
NOTA: Z = numero delle sedi inserto.
ZU = numero dei denti effettivi.

PER LE PARTI DI RICAMBIO, VISITARE I SITI: WIDIA.COM O WIDIANOVO.COM.

LE VITI DI MONTAGGIO NON SONO INCLUSE NELLA CONFEZIONE STANDARD.

M390 • SDMT-ML • SD1204…



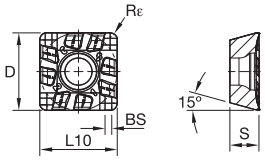


● prima scelta
○ scelta alternativa

P				●	●	●		●	●	●	○	●			
M				○	●			●	●	●	●	●			
K	●	●	○	○		●		○							
N	○							○				○			
S				●				●	○	○	●	●			
H								○			○				

codice catalogo	numero di taglienti	D	L10	S	BS	Rε	hm	THM-U	TN6520	TN6525	TN6540	TTM08	WK15CM	WP25PM	WP35CM	WP40PM	WS30PM	WS40PM
SDMT1204PDRML	4	12,70	12,70	4,77	1,10	1,20	0,08	-	3094667	-	3020185	-	5427423	-	-	-	-	6180319
SDMT1204PDRML	4	12,70	12,70	4,77	1,10	1,20	—	-	-	-	-	-	-	-	6842094	-	-	-

M390 • SDMX-MM • SD1204…

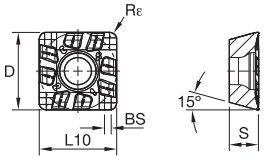


● prima scelta
○ scelta alternativa

P				●	●	●		●	●	●	○	●			
M				○	●			●	●	●	●	●			
K	●	●	○	○		●		○							
N	○							○				○			
S				●				●	○	○	●	●			
H								○			○				

codice catalogo ISO	numero di taglienti	D	L10	S	BS	Rε	hm	THM-U	TN6520	TN6525	TN6540	TTM08	WK15CM	WP25PM	WP35CM	WP40PM	WS30PM	WS40PM
SDMX120408RMM	4	12,70	12,70	4,76	1,93	0,80	0,10	-	-	3950588	3950589	-	-	-	-	-	5522490	-
SDMX120412RMM	4	12,70	12,70	4,76	1,50	1,20	0,10	-	-	-	3950597	-	-	-	-	-	5519572	-
SDMX120416RMM	4	12,70	12,70	4,76	1,50	1,60	0,10	-	4145063	-	4145065	-	-	-	-	-	-	-
SDMX120424RMM	4	12,70	12,70	4,76	0,60	2,40	0,10	-	-	-	4145072	-	-	-	-	-	-	-
SDMX120432RMM	4	12,70	12,70	4,76	—	3,20	0,10	-	-	-	4145094	-	-	-	-	-	-	-

M390 • SDMX-MH • SD1204…

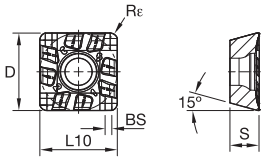


● prima scelta
○ scelta alternativa

	THM-U	TN6520	TN6525	TN6540	TTM08	WK15CM	WP25PM	WP35CM	WP40PM	WS30PM	WS40PM
P			●	●	●		●	●	●	○	●
M			○	●			●	●	●	●	●
K	●	●	○	○		●		○			
N	○						○				○
S				●			●	○	○	●	●
H							○			○	

codice catalogo ISO	numero di taglienti	D	L10	S	BS	Rε	hm	THM-U	TN6520	TN6525	TN6540	TTM08	WK15CM	WP25PM	WP35CM	WP40PM	WS30PM	WS40PM
SDMX120408RMH	4	12,70	12,70	4,76	1,93	0,80	0,14	–	–	–	3950592	–	5427427	–	–	–	–	–
SDMX120412RMH	4	12,70	12,70	4,76	1,54	1,20	0,14	–	3950614	3950601	3950603	–	5427428	–	–	–	–	–
SDMX120416RMH	4	12,70	12,70	4,76	1,50	1,60	0,14	–	–	–	3950607	–	–	–	–	–	–	–

M390 • SDMT-MH • SD1204…



● prima scelta
○ scelta alternativa

	THM-U	TN6520	TN6525	TN6540	TTM08	WK15CM	WP25PM	WP35CM	WP40PM	WS30PM	WS40PM
P			●	●	●		●	●	●	○	●
M			○	●			●	●	●	●	●
K	●	●	○	○		●		○			
N	○						○				○
S				●			●	○	○	●	●
H							○			○	

codice catalogo	numero di taglienti	D	L10	S	BS	Rε	hm	THM-U	TN6520	TN6525	TN6540	TTM08	WK15CM	WP25PM	WP35CM	WP40PM	WS30PM	WS40PM
SDMT1204PDRMH	4	12,70	12,70	4,81	1,10	1,20	0,14	–	–	3325040	3326330	–	5427422	–	–	–	–	–
SDMT1204PDRMH	4	12,70	12,70	4,81	1,10	1,20	—	–	–	–	–	–	–	–	6842068	–	–	–

Guida alla selezione degli inserti • M390

Gruppo materiali	Lavorazione leggera		Uso generico		Lavorazione pesante	
	Geometria	Qualità	Geometria	Qualità	Geometria	Qualità
P1–P2	.E..ML	TN6540	**.S..MM**	**TN6540**	.S..MH	TN6540
P3–P4	.E..ML	TN6540	**.S..MM**	**TN6540**	.S..MH	TN6540
P5–P6	.E..ML	TN6540	**.S..MM**	**TN6540**	.S..MH	TN6540
M1–M2	.E..ML	TN6540	**.S..MM**	**TN6540**	.S..MH	TN6540
M3	.E..ML	WP35CM	**.S..MM**	**WS30PM**	.S..MH	WP35CM
K1–K2	.E..ML	WK15CM	**.E..ML**	**WK15CM**	.S..MH	WK15CM
K3	.E..ML	WK15CM	**.S..MM**	**TN6525**	.S..MH	TN6525
N1–N2	–	–	**–**	**–**	–	–
N3	–	–	**–**	**–**	–	–
S1–S2	.E..ML	TN6540	**.S..MM**	**TN6540**	.S..MM	TN6540
S3	.E..ML	TN6540	**.S..MM**	**WS30PM**	.S..MM	TN6540
S4	.E..ML	TN6540	**.S..MM**	**WS30PM**	.S..MM	TN6540
H1	.S..MM	WS30PM	**.S..MM**	**WS30PM**	.S..MM	WS30PM

Velocità iniziali consigliate [m/min] • M390

Gruppo materiali		THM-U			TN6520			TN6525			TN6540			TTM08		
P	0	–	–	–	–	–	–	340	**265**	235	300	**235**	200	–	–	–
	1	–	–	–	–	–	–	340	**265**	235	300	**235**	200	230	**200**	190
	2	–	–	–	–	–	–	265	**210**	180	210	**160**	140	195	**170**	140
	3	–	–	–	–	–	–	235	**180**	155	180	**140**	115	180	**150**	125
	4	–	–	–	–	–	–	195	**140**	120	150	**110**	90	160	**130**	105
	5	–	–	–	–	–	–	260	**195**	165	200	**150**	125	–	–	–
	6	–	–	–	–	–	–	170	**135**	110	135	**100**	85	–	–	–
M	1	–	–	–	–	–	–	160	**100**	65	110	**65**	50	–	–	–
	2	–	–	–	–	–	–	100	**65**	40	65	**40**	35	–	–	–
	3	–	–	–	–	–	–	105	**65**	45	70	**40**	35	–	–	–
K	1	190	**170**	150	375	**265**	190	230	**205**	185	185	**170**	150	–	–	–
	2	–	–	–	325	**210**	160	180	**160**	150	145	**130**	115	–	–	–
	3	–	–	–	250	**190**	135	150	**135**	120	130	**120**	105	–	–	–
N	1	2000	**1200**	1000	–	–	–	–	–	–	–	–	–	–	–	–
	2	1365	**815**	665	–	–	–	–	–	–	–	–	–	–	–	–
	3	800	**500**	400	–	–	–	–	–	–	–	–	–	–	–	–
S	1	–	–	–	–	–	–	–	–	–	40	**30**	25	–	–	–
	2	–	–	–	–	–	–	–	–	–	20	**15**	10	–	–	–
	3	–	–	–	–	–	–	–	–	–	60	**35**	25	–	–	–
	4	–	–	–	–	–	–	–	–	–	50	**25**	20	–	–	–
H	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Gruppo materiali		WK15CM			WP25PM			WP35CM			WP40PM			WS30PM			WS40PM		
P	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1	–	–	–	330	**285**	270	455	**395**	370	295	**260**	245	–	–	–	280	**245**	230
	2	–	–	–	275	**240**	200	280	**255**	230	250	**215**	180	–	–	–	235	**205**	170
	3	–	–	–	255	**215**	175	255	**230**	205	230	**195**	160	–	–	–	215	**185**	150
	4	–	–	–	225	**185**	150	190	**175**	160	205	**170**	135	–	–	–	195	**160**	130
	5	–	–	–	185	**170**	150	260	**230**	210	170	**155**	135	–	–	–	160	**140**	130
	6	–	–	–	165	**125**	100	160	**135**	110	150	**115**	90	–	–	–	140	**110**	85
M	1	–	–	–	205	**180**	165	205	**185**	155	195	**170**	155	225	**200**	185	260	**190**	115
	2	–	–	–	185	**160**	130	185	**160**	140	175	**150**	125	205	**180**	145	230	**170**	105
	3	–	–	–	140	**120**	95	145	**130**	115	130	**115**	90	155	**135**	105	190	**140**	80
K	1	420	**385**	340	230	**205**	185	295	**265**	240	–	–	–	–	–	–	–	–	–
	2	335	**295**	275	180	**160**	150	235	**210**	190	–	–	–	–	–	–	–	–	–
	3	280	**250**	230	150	**135**	120	195	**175**	160	–	–	–	–	–	–	–	–	–
N	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1075	**945**	945
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	945	**875**	845
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	875	**760**	760
S	1	–	–	–	40	**35**	25	–	–	–	40	**35**	30	45	**40**	30	62	**45**	27
	2	–	–	–	40	**35**	25	–	–	–	40	**35**	30	45	**40**	30	55	**40**	26
	3	–	–	–	50	**40**	25	–	–	–	50	**40**	30	55	**45**	30	64	**46**	29
	4	–	–	–	70	**50**	35	66	**50**	33	65	**50**	35	85	**60**	40	90	**66**	42
H	1	–	–	–	120	**90**	70	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

*NOTA: Le velocità iniziali di PRIMA scelta sono in **grassetto**.*
Quando lo spessore medio del truciolo aumenta, è necessario diminuire la velocità.

Avanzamenti iniziali consigliati [mm] • M390

Lavorazione leggera	Uso generico	Lavorazione pesante

Geometria dell'inserto	Avanzamento per dente programmato (fz) in base alla % di ingaggio radiale (ae)															Geometria dell'inserto
	5%			10%			20%			30%			40–100%			
.F..ALP	0,12	0,23	0,46	0,08	0,17	0,33	0,06	0,13	0,25	0,06	0,11	0,22	0,05	0,10	0,20	.F..ALP
.E..ML	0,12	0,35	0,58	0,08	0,25	0,42	0,06	0,19	0,31	0,06	0,17	0,27	0,05	0,15	0,25	.E..ML
.S..MM	0,12	0,42	0,70	0,08	0,30	0,50	0,06	0,23	0,38	0,06	0,20	0,33	0,05	0,18	0,30	.S..MM
.S..MH	0,23	0,54	0,85	0,17	0,39	0,61	0,13	0,29	0,46	0,11	0,25	0,40	0,10	0,23	0,36	.S..MH

NOTA: Usare il valore di "lavorazione leggera" come velocità di avanzamento iniziale.

widia.com

WIDIA™

Serie M300

Frese elicoidali M300, M300+

La serie di frese elicoidali M300 è una gamma di utensili affidabili, per uso generico progettate per garantire alti tassi di rimozione di metallo e prestazioni stabili.

Ampia selezione di inserti per lavorare tutti i tipi di materiale.

Angolo dell'elica positivo per un'azione dolce di taglio.

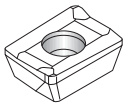
Ampio ingaggio del tagliente per alte prestazioni.

Refrigerante interno.

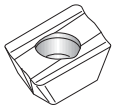
La parte terminale sostituibile e la possibilità di usare un anello spaziatore offre maggiore flessibilità.

INSERTI

M300+

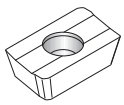


-ML
Geometria positive per applicazioni con lavorazioni leggere.

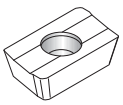


-MH
Prima scelta per applicazioni di sgrossatura o tagli interrotti, in particolare di acciaio e ghisa.

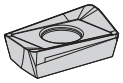
M300



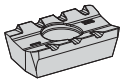
-ALP
Prima scelta per lavorare alluminio e materiali non ferrosi. Superficie levigata per ridurre il tagliente di riporto.



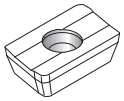
-AL
Prima scelta per lavorare alluminio e materiali non ferrosi.



-GE
Prima scelta per lavorazioni leggere di acciaio, acciaio inossidabile e ghisa.



-MR
Prima scelta per lavorazioni pesanti e per condizioni instabili.



-XP..16
Prima scelta per lavorazioni generali su acciaio e ghisa.

SOLUZIONE AFFIDABILE PER FRESATURA ELICOIDALE GENERICA

PRODOTTO

SERIE

M300

RANGE DI DIAMETRO

50–80mm

TIPI DI STELO

Frese elicoidali

SETTORE

ENERGY

GENERAL ENGINEERING

TRANSPORTATION

APPLICAZIONI

CONTORNATURA/ SPALLAMENTO: FONDO PIATTO

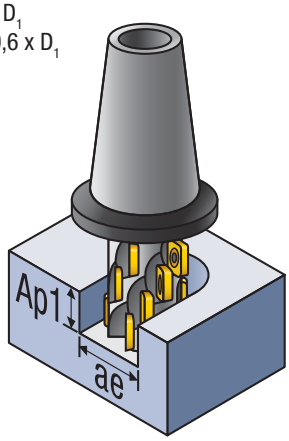
SPIANATURA

SCANALATURA: FONDO PIATTO

RAPPORTI MASSIMI DI PROFONDITÀ DI TAGLIO (AP1) E AMPIEZZA DI TAGLIO (AE) BASATI SUL TIPO DI APPLICAZIONE.

SCANALATURA

ae = 1 x D_1
Ap1 max = 0,6 x D_1

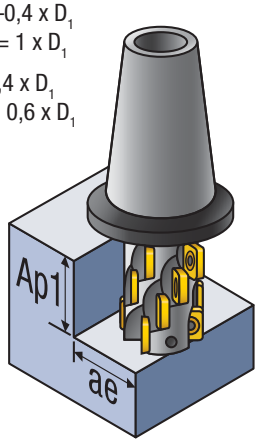


**Non consigliato per materiali "H" ISO.*

CONTORNATURA

ae = 0,25–0,4 x D_1
Ap1 max = 1 x D_1

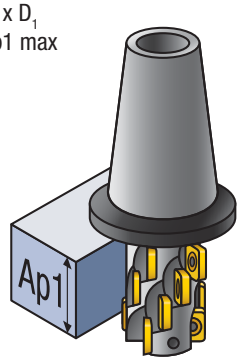
ae = >0,4 x D_1
Ap1 max = 0,6 x D_1



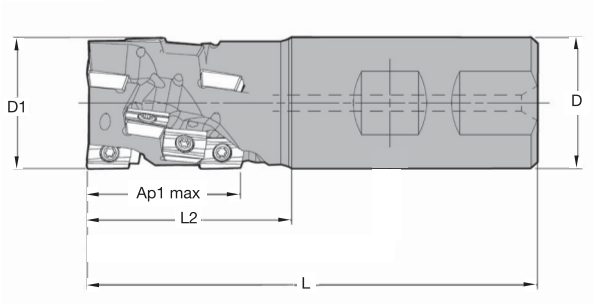
**Non consigliato per materiali "H" ISO.*

PROFILATURA

ae = <0,25 x D_1
Ap1 max = Ap1 max



M300+ • Stelo Weldon® • Sistema metrico



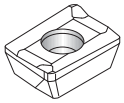
numero d'ordine	codice catalogo	D1	D	L	L2	Ap1 max	Z	Z U	max (giri/min)	refrigerante interno	kg
2021407	**12393001200**	25	25	96	40	28,0	6	2	26100	Yes	0,3
2021408	**12393001400**	32	32	110	50	37,0	12	3	23000	Yes	0,6
2021409	**12393001600**	40	32	120	60	46,0	15	3	20600	Yes	0,7

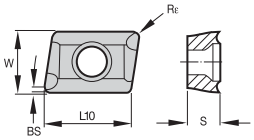
NOTA: I corpi fresa standard montano inserti con raggi di punta fino a 2mm senza bisogno di modifiche. Per istruzioni in merito alla modifica del corpo utensile, vedere pagina A114.

PER LE PARTI DI RICAMBIO, VISITARE I SITI: WIDIA.COM O WIDIANOVO.COM.

LE VITI DI MONTAGGIO NON SONO INCLUSE NELLA CONFEZIONE STANDARD.

M300+ • AONT-ML



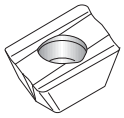


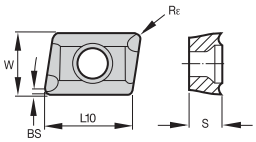
● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
AONT10T308ML	2	7,50	10,37	3,92	1,00	0,80	0,08	2031642	■	■	■	■	2957823	2957762	■	2957760	■	■	■	■	■	■	■

M300+ • AONT-MH





● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
AONT10T308MH	2	7,54	10,44	3,97	1,00	0,80	0,12	■	■	■	■	■	■	■	2957827	2957824	■	■	■	■	■	■	■

Guida alla selezione degli inserti • M300+

Gruppo materiali	Lavorazione leggera		Uso generico		Lavorazione pesante	
	Geometria	Qualità	Geometria	Qualità	Geometria	Qualità
P1–P2	XPHT-GE	WP40PM	**XPHT..**	**WP40PM**	XPHT..	WP40PM
P3–P4	XPHT-GE	TN6540	**XPHT..**	**WP40PM**	XPHT..	WP40PM
P5–P6	XPHT-GE	TN6540	**XPHT..**	**WP40PM**	XPHT..	WP40PM
M1–M2	XPHT-GE	TN6540	**XPHT..**	**TN6540**	XPHT-MR	TN6540
M3	XPHT-GE	TN6540	**XPHT..**	**WP40PM**	XPHT-MR	TN6540
K1–K2	XPHT-GE	TN6510	**XPHT..**	**TN6520**	XPHT-MR	WK15CM
K3	XPHT-GE	TN6510	**XPHT..**	**TN6540**	XPHT-MR	WK15CM
N1–N2	XPHT-ALP	TN6501	**XPHT-ALP**	**TN6501**	XPHT-ALP	TN6501
N3	XPHT-ALP	TN6501	**XPHT-ALP**	**TN6501**	XPHT-ALP	TN6501
S1–S2	XPHT-GE	TN6540	**XPHT..**	**TN6540**	XPHT-MR	TN6540
S3	XPHT-GE	WS30PM	**XPHT..**	**TN6540**	XPHT-MR	TN6540
S4	XPHT-GE	TN6540	**XPHT..**	**TN6540**	XPHT-MR	TN6540
H1	XPHT-GE	WS30PM	**XPHT..**	**TN6540**	XPHT-MR	TN6540

Velocità iniziali consigliate [m/min] • M300+

Gruppo materiali		THR			THM-U			TN6501			TN6502			TN6510			TN6520			TN6525			TN6540		
P	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	**265**	235	300	**235**	200
	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	**265**	235	300	**235**	200
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	265	**210**	180	210	**160**	140
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	235	**180**	155	180	**140**	115
	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	195	**140**	120	150	**110**	90
	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260	**195**	165	200	**150**	125
	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	170	**135**	110	135	**100**	85
M	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	160	**100**	65	110	**65**	50
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100	**65**	40	65	**40**	35
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	105	**65**	45	70	**40**	35
K	1	150	**135**	120	190	**170**	150	–	–	–	–	–	–	400	**290**	215	375	**265**	190	230	**205**	185	185	**170**	150
	2	185	**140**	120	–	–	–	–	–	–	–	–	–	350	**235**	170	325	**210**	160	180	**160**	150	145	**130**	115
	3	105	**75**	50	–	–	–	–	–	–	–	–	–	280	**215**	165	250	**190**	135	150	**135**	120	130	**120**	105
N	1	900	**600**	500	2000	**1200**	1000	2000	**1200**	1000	1075	**945**	875	–	–	–	–	–	–	–	–	–	–	–	–
	2	685	**465**	385	1365	**815**	665	1365	**815**	665	1075	**945**	875	–	–	–	–	–	–	–	–	–	–	–	–
	3	450	**280**	200	800	**500**	400	800	**500**	400	945	**875**	760	–	–	–	–	–	–	–	–	–	–	–	–
S	1	35	**25**	20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40	**30**	25
	2	25	**20**	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	**15**	10
	3	50	**40**	30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	60	**35**	25
	4	35	**25**	18	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	50	**25**	20
H	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Gruppo materiali		TTM08			WK15PM			WP35CM			WU20PM			TTI25			THM			WK15CM			WP40PM			WS30PM		
P	0	–	–	–	–	–	–	–	–	–	–	–	–	360	**300**	250	–	–	–	–	–	–	295	**260**	245	–	–	–
	1	230	**200**	190	–	–	–	455	**395**	370	330	**290**	270	360	**300**	250	–	–	–	–	–	–	295	**260**	245	–	–	–
	2	195	**170**	140	–	–	–	280	**255**	230	275	**250**	200	260	**210**	180	–	–	–	–	–	–	250	**215**	180	–	–	–
	3	180	**150**	125	–	–	–	255	**230**	205	255	**220**	175	260	**210**	180	–	–	–	–	–	–	230	**195**	160	–	–	–
	4	160	**130**	105	–	–	–	190	**175**	160	225	**190**	150	220	**180**	150	–	–	–	–	–	–	205	**170**	135	–	–	–
	5	–	–	–	–	–	–	260	**230**	210	185	**175**	150	265	**195**	165	–	–	–	–	–	–	170	**155**	135	–	–	–
	6	–	–	–	–	–	–	160	**135**	110	165	**130**	100	120	**90**	75	–	–	–	–	–	–	150	**115**	90	–	–	–
M	1	–	–	–	–	–	–	205	**185**	155	205	**180**	165	400	**260**	180	–	–	–	–	–	–	195	**170**	155	225	**200**	185
	2	–	–	–	–	–	–	185	**160**	140	185	**160**	130	270	**170**	120	–	–	–	–	–	–	175	**150**	125	205	**180**	145
	3	–	–	–	–	–	–	145	**130**	115	140	**120**	95	265	**175**	120	–	–	–	–	–	–	130	**115**	90	155	**135**	105
K	1	–	–	–	400	**290**	215	295	**265**	240	250	**220**	185	185	**155**	130	–	–	–	420	**385**	340	–	–	–	–	–	–
	2	–	–	–	350	**235**	170	235	**210**	190	200	**180**	150	150	**120**	105	–	–	–	335	**295**	275	–	–	–	–	–	–
	3	–	–	–	280	**215**	165	195	**175**	160	180	**150**	120	120	**105**	85	–	–	–	280	**250**	230	–	–	–	–	–	–
N	1	–	–	–	–	–	–	–	–	–	550	**470**	400	–	–	–	795	**695**	600	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	550	**470**	400	–	–	–	795	**695**	600	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	400	**350**	300	–	–	–	560	**485**	420	–	–	–	–	–	–	–	–	–
S	1	–	–	–	–	–	–	–	–	–	40	**35**	25	–	–	–	–	–	–	–	–	–	40	**35**	30	45	**40**	30
	2	–	–	–	–	–	–	–	–	–	40	**35**	25	–	–	–	–	–	–	–	–	–	40	**35**	30	45	**40**	30
	3	–	–	–	–	–	–	–	–	–	50	**40**	25	–	–	–	–	–	–	–	–	–	50	**40**	30	55	**45**	30
	4	–	–	–	–	–	–	66	**50**	33	70	**50**	35	–	–	–	–	–	–	–	–	–	65	**50**	35	85	**60**	40
H	1	–	–	–	–	–	–	–	–	–	110	**80**	70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

*NOTA: Le velocità iniziali di PRIMA scelta sono in **grassetto**.*
Quando lo spessore medio del truciolo aumenta, è necessario diminuire la velocità.

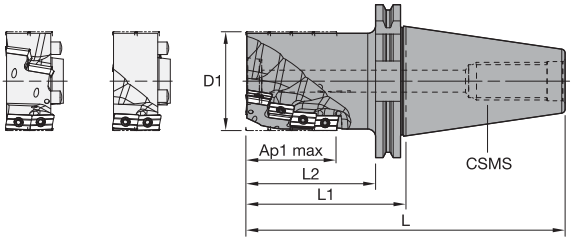
Avanzamenti iniziali consigliati [mm] • M300+

Lavorazione leggera	Uso generico	Lavorazione pesante

Geometria dell'inserto	Avanzamento per dente programmato (fz) in base alla % di ingaggio radiale (ae)															Geometria dell'inserto
	5%			10%			20%			30%			40–100%			
XPHT-ALP	0,12	**0,35**	0,58	0,08	**0,25**	0,42	0,06	**0,19**	0,31	0,06	**0,17**	0,27	0,05	**0,15**	0,25	XPHT-ALP
XPHT-GE	0,19	**0,47**	0,70	0,14	**0,34**	0,50	0,11	**0,26**	0,38	0,09	**0,22**	0,33	0,08	**0,20**	0,30	XPHT-GE
XPHT..	0,22	**0,56**	0,82	0,16	**0,40**	0,59	0,12	**0,30**	0,44	0,10	**0,26**	0,38	0,10	**0,24**	0,35	XPHT..
XPNT..	0,22	**0,56**	0,82	0,16	**0,40**	0,59	0,12	**0,30**	0,44	0,10	**0,26**	0,38	0,10	**0,24**	0,35	XPNT..
XPHT-MR	0,23	**0,59**	0,92	0,17	**0,43**	0,66	0,13	**0,32**	0,50	0,11	**0,28**	0,43	0,10	**0,25**	0,40	XPHT-MR

NOTA: Usare il valore di "lavorazione leggera" come velocità di avanzamento iniziale.

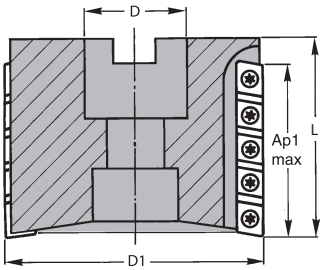
M300 • Monoblocco • Sistema metrico



numero d'ordine	codice catalogo	D1	L	L1	L2	Ap1 max	Z	Z U	CSMS dimensioni sistema	max (giri/min)	refrigerante interno	kg
2021419	**12393040200**	50	217	115	96	70,0	9	3	DV50	13090	Yes	3,7
2021420	**12393040400**	63	232	130	111	84,0	12	3	DV50	11690	Yes	4,3
2021421	**12393040800**	80	257	155	136	112,0	24	4	DV50	10360	Yes	6,0

NOTA: I corpi fresa standard montano inserti con raggi di punta fino a 2mm senza bisogno di modifiche.
Per istruzioni in merito alla modifica del corpo utensile, vedere pagina A114.
Z = numero delle sedi inserto.
ZU = numero dei denti effettivi.

M300 • Frese a manicotto • Sistema metrico



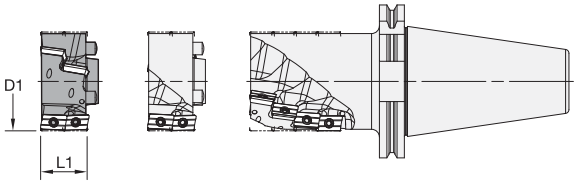
numero d'ordine	codice catalogo	D1	D	L	Ap1 max	Z	Z U	max (giri/min)	refrigerante interno	kg
2021434	**12393080200**	50	22	50	28,0	6	3	13090	No	0,4
2021437	**12393083200**	50	22	65	42,0	12	4	13090	No	0,5
2021435	**12393080400**	63	27	61	42,0	9	3	11690	No	0,8
2021438	**12393083400**	63	27	75	56,0	20	5	11690	No	1,0
2021436	**12393080600**	80	32	70	56,0	16	4	10360	No	1,5
2021439	**12393083600**	80	32	85	70,0	30	6	10360	No	2,0

NOTA: I corpi fresa standard montano inserti con raggi di punta fino a 2mm senza bisogno di modifiche.
Per istruzioni in merito alla modifica del corpo utensile, vedere pagina A114.
Z = numero delle sedi inserto.
ZU = numero dei denti effettivi.

PER LE PARTI DI RICAMBIO, VISITARE I SITI: WIDIA.COM O WIDIANOVO.COM.

LE VITI DI MONTAGGIO NON SONO INCLUSE NELLA CONFEZIONE STANDARD.

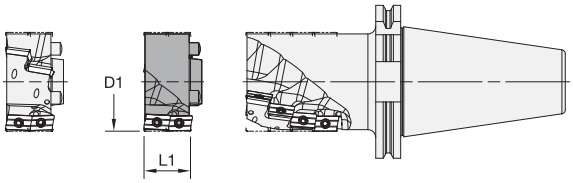
M300 • Parte terminale • Sistema metrico



numero d'ordine	codice catalogo	D1	L1	Z U	Z	kg
2021431	**12393060200**	50	29	3	6	0,3
2021432	**12393060400**	63	29	3	6	0,4
2021433	**12393060800**	80	29	4	8	0,7

NOTA: Z = numero delle sedi.
ZU = numero dei denti effettivi.

M300 • Prolunga • Sistema metrico



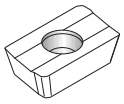
numero d'ordine	codice catalogo	D1	L1	Z U	Z	kg
2021425	**12393050200**	50	28	3	6	0,3
2021426	**12393050400**	63	28	3	6	0,3

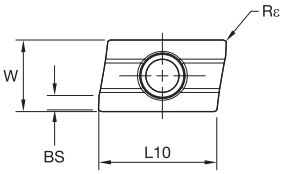
NOTA: È possibile aggiungere un anello distanziatore ad ogni corpo utensile integrale M300 con D1 corrispondente.
La vite a brugola gruppo standard deve essere sostituita con il seguente componente per la corretta lunghezza del bullone di montaggio:
50mm — utilizzare la vite con testa a brugola più lunga #12146030700 (M12 x 70).
63mm e 80mm — utilizzare la vite con testa a brugola più lunga #12146030800 (M16 x 70).
Z = numero delle sedi.
ZU = numero dei denti effettivi.

PER LE PARTI DI RICAMBIO, VISITARE I SITI: WIDIA.COM O WIDIANOVO.COM.

LE VITI DI MONTAGGIO NON SONO INCLUSE NELLA CONFEZIONE STANDARD.

M300 • XPHT-ALP



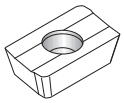


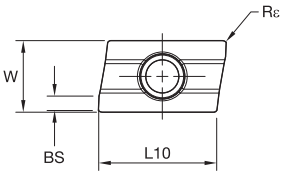
● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
XPHT160404ALP	2	9,80	15,67	4,66	1,70	0,40	0,08	-	2031794	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160408ALP	2	9,80	15,67	4,66	1,70	0,80	0,08	-	2031797	-	2964136	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160412ALP	2	9,80	15,67	4,66	1,40	1,20	0,08	-	2031799	-	-	-	-	-	-	-	-	-	-	-	-	-	-

M300 • XPHT-AL



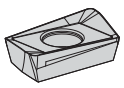


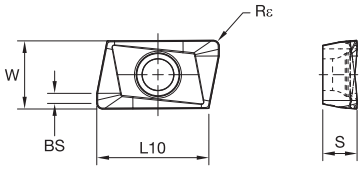
● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
XPHT160408AL	2	9,80	15,67	4,66	1,70	0,80	0,08	2031796	-	-	-	2963902	-	-	-	-	-	-	-	-	-	-	-
XPHT160412AL	2	9,80	15,67	4,66	1,40	1,20	0,08	2031798	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160416AL	2	9,80	15,67	4,66	0,90	1,60	0,08	2031801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160420AL	2	9,80	15,67	4,66	1,20	2,00	0,08	2031802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160425AL	2	9,80	15,67	4,66	1,20	2,50	0,08	2029067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160432AL	2	9,80	15,67	4,66	1,20	3,18	0,08	2031804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XPHT160440AL	2	9,80	15,67	4,66	1,20	4,00	0,08	2029073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

M300 • XPHT-GE



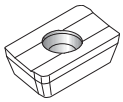


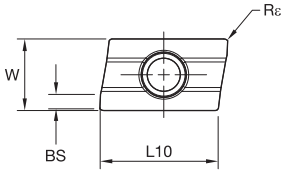
● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
XPHT160408ERGE	2	9,44	15,67	4,76	1,80	0,80	0,12	-	-	-	-	-	2964172	-	2964176	2964170	2405344	-	5427399	-	-	5519888	-
XPHT160412ERGE	2	9,44	15,67	4,76	1,50	1,20	0,12	-	-	-	-	-	-	2964173	2964175	2964179	-	-	5427420	-	-	-	-

M300 • XPHT



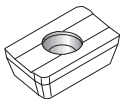


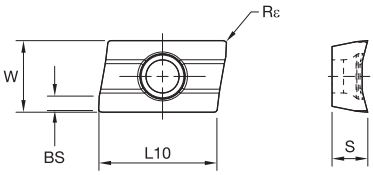
● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
XPHT160408	2	9,53	15,67	4,76	1,80	0,80	0,16	-	-	-	-	-	-	2964168	-	2964164	-	-	5427389	-	5645177	-	-
XPHT160412	2	9,53	15,67	4,76	1,50	1,20	0,16	2025362	-	2029049	-	-	2964169	2964167	2964180	2964165	2029048	2029050	5427396	-	5645178	-	-
XPHT160416	2	9,53	15,67	4,76	0,80	1,60	0,16	-	-	-	-	-	-	-	-	2964166	-	-	5427391	-	5645179	-	-
XPHT160420	2	9,53	15,67	4,76	0,50	2,00	0,16	-	-	-	-	-	-	-	-	-	-	-	5427398	-	5645210	-	-
XPHT160425	2	9,53	15,67	4,76	1,20	2,50	0,16	-	-	-	-	-	-	-	-	-	-	-	5427392	-	5645211	-	-
XPHT160432	2	9,53	15,67	4,76	1,20	3,17	0,16	-	-	-	-	-	-	-	-	-	-	-	-	-	5645212	-	-
XPHT160440	2	9,53	15,67	4,76	1,20	4,00	0,16	-	-	-	-	-	-	-	-	-	-	-	5427394	-	5645213	-	-

M300 • XPNT



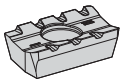


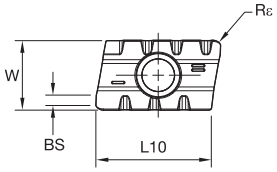
● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
XPNT160412	2	9,53	15,88	4,79	1,20	1,20	0,16	-	-	-	-	-	-	-	2964141	2964174	-	2029075	5427395	-	-	-	-

M300 • XPHT-MR





● prima scelta
○ scelta alternativa

	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
P								●	●	●	●		●	●	○	●
M								○	●	○			●	●	●	●
K	○	●	○			●	●	○	○	○		●	○			○
N	●	○	○	●	●											○
S			○						●				○	○	●	○
H															○	○

codice catalogo	numero di taglienti	W	L10	S	BS	Rε	hm	THM	THM-U	THR	TN6501	TN6502	TN6510	TN6520	TN6525	TN6540	TTI25	TTM08	WK15CM	WP35CM	WP40PM	WS30PM	WU20PM
XPHT160412MR	2	9,53	15,77	4,76	1,70	1,20	0,18	'	'	'	'	'	'	'	'	2964142	'	'	5427390	'	'	'	'

Guida alla selezione degli inserti • M300

Gruppo materiali	Lavorazione leggera		Uso generico		Lavorazione pesante	
	Geometria	Qualità	Geometria	Qualità	Geometria	Qualità
P1–P2	XPHT-GE	WP40PM	**XPHT..**	**WP40PM**	XPHT..	WP40PM
P3–P4	XPHT-GE	TN6540	**XPHT..**	**WP40PM**	XPHT..	WP40PM
P5–P6	XPHT-GE	TN6540	**XPHT..**	**WP40PM**	XPHT..	WP40PM
M1–M2	XPHT-GE	TN6540	**XPHT..**	**TN6540**	XPHT-MR	TN6540
M3	XPHT-GE	TN7535	**XPHT..**	**WP40PM**	XPHT-MR	TN7535
K1–K2	XPHT-GE	TN6510	**XPHT..**	**TN6520**	XPHT-MR	WK15CM
K3	XPHT-GE	TN6510	**XPHT..**	**TN7535**	XPHT-MR	WK15CM
N1–N2	XPHT-ALP	TN6501	**XPHT-ALP**	**TN6501**	XPHT-ALP	TN6501
N3	XPHT-ALP	TN6501	**XPHT-ALP**	**TN6501**	XPHT-ALP	TN6501
S1–S2	XPHT-GE	TN6540	**XPHT..**	**TN6540**	XPHT-MR	TN6540
S3	XPHT-GE	WS30PM	**XPHT..**	**TN6540**	XPHT-MR	TN6540
S4	XPHT-GE	TN6540	**XPHT..**	**TN6540**	XPHT-MR	TN6540
H1	XPHT-GE	WS30PM	**XPHT..**	**TN6540**	XPHT-MR	TN6540

Velocità iniziali consigliate [m/min] • M300

Gruppo materiali		THR			THM-U			TN6501			TN6502			TN6510			TN6520			TN6525			TN6540		
P	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	**265**	235	300	**235**	200
	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	**265**	235	300	**235**	200
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	265	**210**	180	210	**160**	140
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	235	**180**	155	180	**140**	115
	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	195	**140**	120	150	**110**	90
	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260	**195**	165	200	**150**	125
	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	170	**135**	110	135	**100**	85
M	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	160	**100**	65	110	**65**	50
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100	**65**	40	65	**40**	35
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	105	**65**	45	70	**40**	35
K	1	150	**135**	120	190	**170**	150	–	–	–	–	–	–	400	**290**	215	375	**265**	190	230	**205**	185	185	**170**	150
	2	185	**140**	120	–	–	–	–	–	–	–	–	–	350	**235**	170	325	**210**	160	180	**160**	150	145	**130**	115
	3	105	**75**	50	–	–	–	–	–	–	–	–	–	280	**215**	165	250	**190**	135	150	**135**	120	130	**120**	105
N	1	900	**600**	500	2000	**1200**	1000	2000	**1200**	1000	1075	**945**	875	–	–	–	–	–	–	–	–	–	–	–	–
	2	685	**465**	385	1365	**815**	665	1365	**815**	665	1075	**945**	875	–	–	–	–	–	–	–	–	–	–	–	–
	3	450	**280**	200	800	**500**	400	800	**500**	400	945	**875**	760	–	–	–	–	–	–	–	–	–	–	–	–
S	1	35	**25**	20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40	**30**	25
	2	25	**20**	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	**15**	10
	3	50	**40**	30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	60	**35**	25
	4	35	**25**	18	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	50	**25**	20
H	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Gruppo materiali		TTM08			WK15PM			WP35CM			WU20PM			TTI25			THM			WK15CM			WP40PM			WS30PM		
P	0	–	–	–	–	–	–	–	–	–	–	–	–	360	**300**	250	–	–	–	–	–	–	295	**260**	245	–	–	–
	1	230	**200**	190	–	–	–	455	**395**	370	330	**290**	270	360	**300**	250	–	–	–	–	–	–	295	**260**	245	–	–	–
	2	195	**170**	140	–	–	–	280	**255**	230	275	**250**	200	260	**210**	180	–	–	–	–	–	–	250	**215**	180	–	–	–
	3	180	**150**	125	–	–	–	255	**230**	205	255	**220**	175	260	**210**	180	–	–	–	–	–	–	230	**195**	160	–	–	–
	4	160	**130**	105	–	–	–	190	**175**	160	225	**190**	150	220	**180**	150	–	–	–	–	–	–	205	**170**	135	–	–	–
	5	–	–	–	–	–	–	260	**230**	210	185	**175**	150	265	**195**	165	–	–	–	–	–	–	170	**155**	135	–	–	–
	6	–	–	–	–	–	–	160	**135**	110	165	**130**	100	120	**90**	75	–	–	–	–	–	–	150	**115**	90	–	–	–
M	1	–	–	–	–	–	–	205	**185**	155	205	**180**	165	400	**260**	180	–	–	–	–	–	–	195	**170**	155	225	**200**	185
	2	–	–	–	–	–	–	185	**160**	140	185	**160**	130	270	**170**	120	–	–	–	–	–	–	175	**150**	125	205	**180**	145
	3	–	–	–	–	–	–	145	**130**	115	140	**120**	95	265	**175**	120	–	–	–	–	–	–	130	**115**	90	155	**135**	105
K	1	–	–	–	400	**290**	215	295	**265**	240	250	**220**	185	185	**155**	130	–	–	–	420	**385**	340	–	–	–	–	–	–
	2	–	–	–	350	**235**	170	235	**210**	190	200	**180**	150	150	**120**	105	–	–	–	335	**295**	275	–	–	–	–	–	–
	3	–	–	–	280	**215**	165	195	**175**	160	180	**150**	120	120	**105**	85	–	–	–	280	**250**	230	–	–	–	–	–	–
N	1	–	–	–	–	–	–	–	–	–	550	**470**	400	–	–	–	795	**695**	600	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	550	**470**	400	–	–	–	795	**695**	600	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	400	**350**	300	–	–	–	560	**485**	420	–	–	–	–	–	–	–	–	–
S	1	–	–	–	–	–	–	–	–	–	40	**35**	25	–	–	–	–	–	–	–	–	–	40	**35**	30	45	**40**	30
	2	–	–	–	–	–	–	–	–	–	40	**35**	25	–	–	–	–	–	–	–	–	–	40	**35**	30	45	**40**	30
	3	–	–	–	–	–	–	–	–	–	50	**40**	25	–	–	–	–	–	–	–	–	–	50	**40**	30	55	**45**	30
	4	–	–	–	–	–	–	66	**50**	33	70	**50**	35	–	–	–	–	–	–	–	–	–	65	**50**	35	85	**60**	40
H	1	–	–	–	–	–	–	–	–	–	110	**80**	70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

*NOTA: Le velocità iniziali di PRIMA scelta sono in **grassetto**.*
Quando lo spessore medio del truciolo aumenta, è necessario diminuire la velocità.

Avanzamenti iniziali consigliati [mm] • M300

Lavorazione leggera	Uso generico	Lavorazione pesante

Geometria dell'inserto	Avanzamento per dente programmato (fz) in base alla % di ingaggio radiale (ae)															Geometria dell'inserto
	5%			10%			20%			30%			40–100%			
XPHT-ALP	0,12	**0,35**	0,58	0,08	**0,25**	0,42	0,06	**0,19**	0,31	0,06	**0,17**	0,27	0,05	**0,15**	0,25	XPHT-ALP
XPHT-GE	0,19	**0,47**	0,70	0,14	**0,34**	0,50	0,11	**0,26**	0,38	0,09	**0,22**	0,33	0,08	**0,20**	0,30	XPHT-GE
XPHT..	0,22	**0,56**	0,82	0,16	**0,40**	0,59	0,12	**0,30**	0,44	0,10	**0,26**	0,38	0,10	**0,24**	0,35	XPHT..
XPNT..	0,22	**0,56**	0,82	0,16	**0,40**	0,59	0,12	**0,30**	0,44	0,10	**0,26**	0,38	0,10	**0,24**	0,35	XPNT..
XPHT-MR	0,23	**0,59**	0,92	0,17	**0,43**	0,66	0,13	**0,32**	0,50	0,11	**0,28**	0,43	0,10	**0,25**	0,40	XPHT-MR

NOTA: Usare il valore di "lavorazione leggera" come velocità di avanzamento iniziale.