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# FILETTATURA

THREADING / GEWINDEDREHEN / FILETAGE / ROSCADO


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	MASCHIATURA	
	TAPPING	
	SCHNEIDSCHRAUBE	
	TAPEMENT	
	ATERRAJADURA	







Pag. 607

	FRESE A FILETTARE	
	THREADING MILLS	
	GEWINDEFÄSER	
	FRAISES A FILETER	
	FRESAS PARA FILETEAR	







Pag. 687

	UTENSILI PER FILETTATURA	
	TOOLS FOR THREADING	
	WERKZEUGE ZUM GEWINDEDREHEN	
	OUTILS POUR FILETAGE	
	HERRAMIENTAS PARA ROSCADO	

Pag. 705

	UTENSILI ISO 26623-1 PER FILETTATURA ESTERNA ED INTERNA	
	ISO 26623-1 EXTERNAL AND INTERNAL THREADING TOOLS	
	ISO 26623-1 AUSSEN- UND INNENGEWINDE-DREHWERKZEUGE	
	OUTILS ISO 26623-1 POUR FILETAGE EXTERNE ET INTERNE	
	HERRAMIENTAS ISO 26623-1 PARA ROSCADO EXTERIOR E INTERIOR	

Pag. 713

	INSERTI PER FILETTATURA	
	THREADING INSERTS	
	WENDEPLATTEN ZUM GEWINDESCHNEIDEN	
	PLAQUÉTTES DE FILETAGE	
	PLAQUITAS DE ROSCADO	

Pag. 717

INDICAZIONI DI LETTURA  
READING INSTRUCTIONS  
HINWEISE ZUR ABLESUNG  
INDICATIONS DE LECTURE

MSA40TVP M.  
M. S. 52

INDICAZIONE (KEY)	M	D	L	H	D	Z
1	22	4.1	25.8	9	48	2,5 3,0
2	22	4.1	25.8	9	48	2,5 3,0
3	22	4.1	25.8	9	48	2,5 3,0
4	22	4.1	25.8	9	48	2,5 3,0
5	22	4.1	25.8	9	48	2,5 3,0
6	22	4.1	25.8	9	48	2,5 3,0
7	22	4.1	25.8	9	48	2,5 3,0

PARAMETRI - PARAMETERS

MATERIALI - MATERIALS	Pag. 1050	Vc	1050
Al. Aluminio - Aluminium	*	*	*
IN ACCIAIO - IN STEEL	*	*	*
IN INOX - IN STAINLESS STEEL	*	*	*

FMSR

INDICAZIONE (KEY)	M	D	L	H	D	Z
1	22	4.1	25.8	9	48	2,5 3,0
2	22	4.1	25.8	9	48	2,5 3,0
3	22	4.1	25.8	9	48	2,5 3,0
4	22	4.1	25.8	9	48	2,5 3,0
5	22	4.1	25.8	9	48	2,5 3,0
6	22	4.1	25.8	9	48	2,5 3,0
7	22	4.1	25.8	9	48	2,5 3,0
8	22	4.1	25.8	9	48	2,5 3,0
9	22	4.1	25.8	9	48	2,5 3,0

PARAMETRI DI TAGLIO PAIA - TOOL CUTTING PARAMETERS

GRUPPI DI MATERIALE - MATERIAL GROUPS

ANRL M. S. 52 - SIRL

INDICAZIONE (KEY)	M	D	L	H	D	Z
1	22	4.1	25.8	9	48	2,5 3,0
2	22	4.1	25.8	9	48	2,5 3,0
3	22	4.1	25.8	9	48	2,5 3,0
4	22	4.1	25.8	9	48	2,5 3,0
5	22	4.1	25.8	9	48	2,5 3,0
6	22	4.1	25.8	9	48	2,5 3,0
7	22	4.1	25.8	9	48	2,5 3,0
8	22	4.1	25.8	9	48	2,5 3,0
9	22	4.1	25.8	9	48	2,5 3,0
10	22	4.1	25.8	9	48	2,5 3,0
11	22	4.1	25.8	9	48	2,5 3,0
12	22	4.1	25.8	9	48	2,5 3,0
13	22	4.1	25.8	9	48	2,5 3,0
14	22	4.1	25.8	9	48	2,5 3,0
15	22	4.1	25.8	9	48	2,5 3,0
16	22	4.1	25.8	9	48	2,5 3,0
17	22	4.1	25.8	9	48	2,5 3,0
18	22	4.1	25.8	9	48	2,5 3,0
19	22	4.1	25.8	9	48	2,5 3,0

PARAMETRI DI TAGLIO PAIA - TOOL CUTTING PARAMETERS

GRUPPI DI MATERIALE - MATERIAL GROUPS



























- 1 = ARTICOLO + GAMMA
- 2 = DESCRIZIONE ARTICOLO
- 3 = CARATTERISTICHE TECNICHE (PAG 610 - 688)
- 4 = ELENCO ARTICOLI
- 5 = MISURE, DATI, INDICAZIONI
- 6 = MATERIALI LAVORABILI
- 7 = VELOCITÀ DI TAGLIO Vc SECONDO I GRUPPI DI MATERIALE
- 8 = ULTERIORI DATI TECNICI E CONSIGLI D'USO
- 9 = TOLLERANZE COSTRUTTIVE
- 10 = LAVORAZIONI CONSIGLIATE
- 11 = INSERTI
- 12 = SISTEMA DI BLOCCAGGIO
- 13 = INSERTI DISPONIBILI
- 14 = GRANDEZZE INSERTI CONSIGLIATI
- 15 = RICAMBI IN DOTAZIONE
- 16 = ACCESSORI E RICAMBI OPZIONALI A RICHIESTA
- 17 = SCHEMA DI MONTAGGIO
- 18 = DATI TECNICI E CONSIGLI D'USO
- 19 = NOTE E AVVERTIMENTI


























- 
- 1 = ITEM + RANGE
  - 2 = ITEM DESCRIPTION
  - 3 = TECHNICAL FEATURES (PAGE 610 - 688)
  - 4 = ITEM LIST
  - 5 = MEASURES, DATA, INDICATIONS
  - 6 = MACHINING MATERIALS
  - 7 = Vc CUTTING SPEED, ACCORDING TO MATERIAL GROUPS
  - 8 = FURTHER TECHNICAL DATA AND SUGGESTIONS
  - 9 = CONSTRUCTIVE TOLERANCE
  - 10 = RECOMMENDED MACHINING TYPES
  - 11 = INSERTS
  - 12 = CLAMPING SYSTEM
  - 13 = AVAILABLE INSERTS
  - 14 = RECOMMENDED INSERTS SIZES
  - 15 = SPARE PARTS EQUIPMENT
  - 16 = OPTIONAL ACCESORIES AND SPARE PARTS ON REQUEST
  - 17 = ASSEMBLY DIAGRAM
  - 18 = TECHNICAL DATA AND SUGGESTIONS
  - 19 = NOTES AND WARNINGS

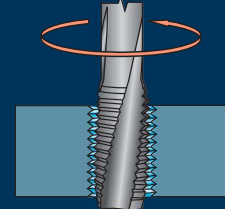
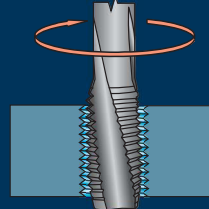
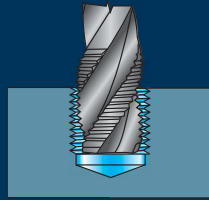
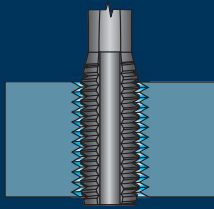
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- 1 = ARTIKEL + PALETTE
  - 2 = ARTIKELBESCHREIBUNG
  - 3 = TECHNISCHE HAUPTMERKMALE (SEITE 610 - 688)
  - 4 = AUFLISTUNG DER ARTIKEL
  - 5 = ABMESSUNGEN, DATEN, HINWEISE
  - 6 = MATERIALGRUPPEN ANWENDUNG
  - 7 = SCHNITTGESCHWINDIGKEIT Vc, JE NACH MATERIALGRUPPEN
  - 8 = WEITERE TECHNISCHE DATEN UND TIPPS
  - 9 = KONSTRUKTIONSTOLERANZEN
  - 10 = EMPFOHLENE BEARBEITUNGEN
  - 11 = WENDEPLATTEN
  - 12 = SPANNSYSTEM
  - 13 = LIEFERBARE WENDESCHNEIDPLATTEN
  - 14 = EMPFOHLENE PLATTENGRÖßEN
  - 15 = ZUBEHÖREERSATZTEILE
  - 16 = OPTIONALZUBEHÖR UND -ERSATZTEILE AUF ANFRAGE
  - 17 = MONTAGEPLAN
  - 18 = TECHNISCHE DATEN UND TIPPS
  - 19 = ANMERKUNGEN UND HINWEISE





















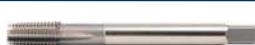


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- 1 = ARTICLE + GAMME
  - 2 = DESCRIPTION ARTICLES
  - 3 = CARACTERISTIQUES TECHNIQUES (PAGE 610 - 688)
  - 4 = LISTE DES ARTICLES
  - 5 = DIMENSIONS, DONNÉES, INDICATIONS
  - 6 = MATERIAUX USINABLE
  - 7 = VITESSE DE COUPE Vc, SELÓN LES GROUPES DE MATERIAL
  - 8 = ULTRÉRIEURES DONNÉES TECHNIQUES ET CONSEILLES D'USAGE
  - 9 = TOLÉRANCE CONSTRUCTIVES
  - 10 = USINAGES CONSEILLÉS
  - 11 = PLAQUÉTTES
  - 12 = SYSTÈME DE BLOCAGE
  - 13 = PLAQUETTES DISPONIBLES
  - 14 = DIMENSIONES DE LES PLAQUETTES CONSEILLÉES
  - 15 = RECHANGE EN DOTATION
  - 16 = ACCESSOIRES ET RECHANGE OPTIONNEL SUR DEMANDE
  - 17 = SCHÉMA DE MONTAGE
  - 18 = DONNÉES TECHNIQUES ET CONSEILLES D'USAGE
  - 19 = NOTES ET AVERTISSEMENTS



			ART.	DIMENSIONE FILETTO THREAD SIZE	LUNGHEZZA FILETTO THREAD LENGTH	ANGOLO ELICA ANGLE FLUTES	MATERIALE MATERIAL	Materiali - Materials Pag. 1063						Pag.
								P	M	K	N	S	H	
<b>FILETTATURA (M) - THREAD (M)</b>														
	VP		MSA107..VP M..	2-52	3xD	0°	HSSE	●			○		612	
	VP		MSA407..VP M..	2-52	2,5xD	40°	HSSE	●			○		613	
	TIN		MSA107..TN M..	2-30	3xD	0°	HSSE	●					614	
	TIN		MSA407..TN M..	2-30	2,5xD	40°	HSSE	●					615	
	TT		MSU02007..STN M..	3-24	3xD	0°	PM3	●	●	○	●		616	
	TT		MSU15007..STN M..	3-30	3xD	45°	PM3	●	●	○	●		617	
	TT		MSU15007..STNW M..	6-30	3,5xD	45°	PM3	●	●	○	●		618	
	TIN		MSA20XLTC.. M..	4-16	3xD	0°	HSSE	●			○		619	
	TICN		MSA40XLTC.. M..	4-16	2,5xD	40°	HSSE	●			○		620	
	TIALN + C		MSR207..TL M..	3-16	3xD	0°	PM3	●			○		621	
	TIALN + C		MSR307..TB M..	3-16	1,5xD	15°	PM3	●			○		622	
	TIALN + C		MSR407..TL M..	3-16	2,5xD	40°	PM3	○	●		○		623	
	TIALN + C		MSI207..TB M..	3-24	3xD	0°	HSSV3	●		●			624	
	TIALN + C		MSI407..TB M..	3-16	3,5xD	48°	HSSV3	●		●			625	
	SNS		MSG107..SNS M..	3-24	3xD	0°	HSSE				●	○	626	
	TIALN		MSG01007..TL M..	4-24	3xD	0°	PM3				●	○	627	
	TIALN		MSG01007..TLW M..	6-24	3,5xD	0°	PM3				●	○	628	
	TIALN		MSG18007..TL M..	6-24	3xD	0°	PM3				●	○	629	
	TIALN		MSG18007..TLW M..	6-24	3,5xD	0°	PM3				●	○	630	
	VX		MSN107..VP M..	3-16	3xD	0°	HSSE					●	631	
	VX		MSN407..VP M..	3-16	3xD	45°	HSSE					●	632	
	TICN		MST807..TC M..	3-16	3xD	15°	PM3					●	633	
	TICN		MST307..TC M..	3-16	1,5xD	15°	PM3					●	634	
	TIN		MSA507..TN M..	3-16	3xD	-	PM3	●	○	●		●	635	

			ART.	DIMENSIONE FILETTO THREAD SIZE	LUNGHEZZA FILETTO THREAD LENGTH	ANGOLO ELICA ANGLE FLUTES	MATERIALE MATERIAL	Materiali - Materials Pag. 1063						Pag.
								P	M	K	N	S	H	
<b>FILETTATURA (M) - THREAD (M)</b>														
		TIN	 MSA607..TN M..	3-16	3xD	-	PM3	●	○	●	●	●	636	
<b>FILETTATURA (M) / GAMBO h6 - THREAD (M) / h6 SHANK</b>														
	NEW		 MSG0100NITBW-h6 M..	6-20	3,5xD	0°	PM3	●		●			638	
<b>FILETTATURA (MF) - THREAD (MF)</b>														
		VP	 MSA217..VP MF..	4-24	3xD	0°	HSEE	●			○		640	
		VP	 MSA417..VP MF..	4-24	2,5xD	40°	HSEE	●			○		641	
	NEW	TT	 MSU020174STN MF..	8-24	3xD	0°	PM3	●	●	●	●	●	642	
	NEW	TT	 MSU150174STN MF..	8-24	3xD	45°	PM3	●	●	●	●	○	643	
	NEW	TT	 MSU150174STNW MF..	8-24	3,5xD	45°	PM3	●	●	●	●	○	644	
		TIALN C	 MSI2174TB MF..	8-24	3xD	0°	HSSV3	●		●			645	
		TIALN C	 MSI4174TB MF..	8-24	3xD	48°	HSSV3	○		●			646	
		SNS	 MSG117..SNS MF..	8-30	3xD	0°	HSSV3			●	○		647	
		TIALN	 MSG010174TL MF..	8-24	3xD	0°	PM3			●	○		648	
		TIALN	 MSG010174TLW MF..	8-24	3,5xD	0°	PM3			●	○		649	
<b>FILETTATURA (UNC) - THREAD (UNC)</b>														
		VP	 MSA2376VP UNC..	1/4-1"	3xD	0°	HSSV3	●			○		652	
		VP	 MSA4376VP UNC..	1/4-1"	2,5xD	40°	HSSV3	●			○		653	
	NEW	TT	 MSU02037..STN UNC..	4-1"	3xD	0°	PM3	●	●	●	●	●	654	
	NEW	TT	 MSU15037..STN UNC..	4-1"	3xD	45°	PM3	●	●	●	●	○	655	
	NEW	TT	 MSU15037..STNW UNC..	1/4-1"	3,5xD	45°	PM3	●	●	●	●	○	656	
		TIALN C	 MSI02037..TB UNC..	1/4-5/8	3xD	0°	HSSV3	●		●			657	
		TIALN C	 MSI16037..TB UNC..	1/4-5/8	3,5xD	48°	HSSV3	●		●			658	
		SNS	 MSG1376SNS UNC..	5/16-1"	3xD	0°	HSSE			●	○		659	



			ART.	DIMENSIONE FILETTO THREAD SIZE	LUNGHEZZA FILETTO THREAD LENGTH	ANGOLO ELICA ANGLE FLUTES	MATERIALE MATERIAL	Materiali - Materials Pag. 1063						Pag.	
								P	M	K	N	S	H		
<b>FILETTATURA (UNF) - THREAD (UNF)</b>															
		VP		MSA2474VP UNF..	1/4-1"	3xD	0°	HSSE	●			○			662
		VP		MSA4474VP UNF..	1/4-1"	2,5xD	40°	HSSE	●			○			663
		NEW TT		MSU02047..STN UNF..	4-1"	3xD	0°	PM3	●	●	●	●			664
		NEW TT		MSU15047..STN UNF..	4-1"	3xD	45°	PM3	●	●	●	○			665
		NEW TT		MSU15047..STNW UNF..	1/4-1"	3,5xD	45°	PM3	●	●	●	○			666
		TIALN + C		MSI02047..TB UNF..	1/4-5/8	3xD	0°	HSSV3	●		●				667
		TIALN + C		MSI16047..TB UNF..	1/4-5/8	3,5xD	48°	HSSV3	●		●				668
		SNS		MSG1474SNS UNF..	1/4-1"	3xD	0°	HSSE				●	○		669
<b>FILETTATURA (GAS) - THREAD (GAS)</b>															
		VP		MSA2256VP G..	1/8-1"	3xD	0°	HSSE	●			○			672
		VP		MSA4256VP G..	1/8-1"	2,5xD	40°	HSSE	●			○			673
		NEW TT		MSU020256STN G..	1/8-3/4	3xD	0°	PM3	●	●	●	●			674
		NEW TT		MSU150256STN G..	1/8-1"	3xD	45°	PM3	●	●	●	○			675
		NEW TT		MSU150256STNW G..	1/8-1"	3,5xD	45°	PM3	●	●	●	○			676
		TIALN + C		MSI020256TB G..	1/8-3/4	3xD	0°	HSSV3	●		●				677
		TIALN + C		MSI160256TB G..	1/8-1"	3,5xD	48°	HSSV3	●		●				678
		SNS		MSG1256SNS G..	1/8-1"	3xD	0°	HSSE				●	○		679
<b>FILETTATURA (NPT/NPTF) - THREAD (NPT/NPTF)</b>															
		I		MSA15LNBR NPT..	1/8-1"	-	0°	HSSE	●						682
		I		MSA16LNBR NPTF..	1/8-1"	-	0°	HSSE	●						683
<b>DISTRUGGI MASCHI - TAP DESTROYING TOOL</b>															
		TIN		SKR01M..	3,3-17,5	-	0°	-	-	-	-	-	-	-	686

# SIMBOLOGIA - SYMBOL - SYMBOLE - SYMBOLES

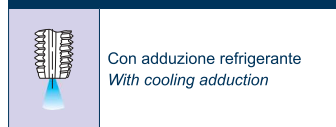
## RIVESTIMENTI - COATED - BESCHICHTUNG - RECOUVREMENT

RIVESTIM. COATED <b>SNS</b>	<b>TiCN:</b> Indicata per la filettatura di materiali abrasivi (Ghisa Grigia) e su bronzo a truciolo corto. Autolubrificante. tenacità alta con coefficiente d'attrito molto basso (0,1) <b>TiCN:</b> Suitable for thread cutting of abrasive materials. (Grey cast iron) and on bronzes at short shaving. Self lubricating. High toughness with very low coefficient of friction (0,1)	RIVESTIM. COATED <b>VP</b>	<b>Vaporizzazione:</b> Lo strato di Ossido di Ferro è molto tenace e favorisce, con la sua porosità, la lubrificazione trattenendo l'olio da taglio. Si evita così il grippaggio, a bassa/media velocità. <b>Steam tempering:</b> The layer of Iron Oxide is very tough and its porosity improves lubrication, holding the cutting oil. This avoids seizures at low to medium speeds.
RIVESTIM. COATED <b>TiCN</b>	<b>TiCN:</b> Durezza: 3000HV; t°max:450°C; Coeff.Attrito: 0,3 Maggiore resistenza all'usura rispetto al TiN, indicato per lavorazioni con elevato sviluppo di calore. Adatto alla lavorazione di ghisa a medio-alte velocità. <b>TiCN:</b> Hardness: 3000HV; max t°:450 °C; friction coefficient: 0,3. Better resistance to usin comparison to TiN, suitable for working with higher heat development. Suitable for working with cast iron at medium to high speeds.	RIVESTIM. COATED <b>VX</b>	<b>Vaporizzazione Super:</b> Evoluzione della classica vaporizzazione. Trova applicazione su alluminio a basso contenuto di silicio, acciai dolci e materiali teneri. <b>Super vaporization:</b> Evolution of traditional vaporization. Suitable for low-silicon aluminium, mild steel and soft materials.
RIVESTIM. COATED <b>TiAlN+C</b>	<b>TiAlN + Carbon:</b> Rivestimento adatto allo scorrimento del truciolo, resistente all'usura e all'ossidazione, adatto per la lavorazione di acciaio inox e alluminio con alto contenuto di silicio, consigliato per maschiatura di fori ciechi profondi. <b>TiAlN + Carbon:</b> Coating ideal for the chip to slide over, wear and oxidation resistant, suitable for machining stainless steel and aluminium with a high silicon content, recommended for tapping deep blind holes.	RIVESTIM. COATED <b>TiN</b>	<b>TiN:</b> Durezza: 2500HV; t°max:500°C; Coeff.Attrito: 0,4 Quindi alta resistenza all'usura con velocità di taglio sensibilmente più alte e miglior produzione e risultati. <b>TiN:</b> Hardness: 2500HV; max t°:500 °C; friction coefficient: 0,4. Therefore high resistance to use at slightly higher cutting speeds and better production and results.
RIVESTIM. COATED <b>TiAlN</b>	<b>TiAlN:</b> Rivestimento resistente all'usura e all'ossidazione, adatto per lavorazioni di materiali abrasivi (ghisa), lavorazioni a secco e per alte velocità di taglio. <b>TiAlN:</b> Wear and oxidation resistant coating suitable for machining abrasive materials (cast iron), dry machining and for high cutting speeds.	RIVESTIM. COATED <b>TT</b>	<b>TiN + TiAlN:</b> Nuovo rivestimento resistente all'usura (favorisce lo scorrimento del truciolo), adatto per lavorazioni di acciai basso legati, consigliato per maschiatura compensata. <b>TiN + TiAlN:</b> New wear resistant coating (makes it easier for the chip to slide over), suitable for machining low-alloy steels, recommended for offset tapping

## IMBOCCO - CHAMFER - ANSCHNITT - ENTREE

<b>2-3 FILL</b>	2,5 - 3 Filetti d'imbocco. 2,5 - 3 Lead-in threads	<b>4-5 FILL</b>	4 - 5 Filetti d'imbocco. 4 - 5 Lead-in threads
<b>1,5-2 FILL</b>	1,5 - 2 Filetti d'imbocco. (Imbocco corto) 1,5 - 2 Lead-in threads (Short Lead-in)		

## ADDUZIONE REFRIGERANTE - COOLING ADDUCTION KÜHLMITTELZUFUHR - AMENEE REFRIGERANT



Con adduzione refrigerante  
With cooling adduction

## CLASSE - CLASS - KLASSE - CLASSE

<b>HSSE</b>	Acciaio HSSE con 5% di Cobalto impiegato per materiali da lavorare con R ≤ 800 N/mm² HSSE steel with 5% of Cobalt used for materials to work with R ≤ 800 N/mm²	<b>HSSV3</b>	Acciaio HSSV3 con alta percentuale di vanadio impiegato per materiali da lavorare con R<1000 N/mm² HSSV3 steel with high percentage of vanadium used for materials to be machined with R<1000 N/mm²
<b>PM3</b>	Acciaio PM sinterizzato ad alto contenuto di Vanadio e Cobalto impiegato per materiali da lavorare con R>1000 N/mm² Sintered PM steel of a high Vanadium and cobalt content used for materials to work with R>1000 N/mm²		

## TOLLERANZE - TOLERANCE - TOLERANZEN - TOLÉRANCE

<b>TOLL 6HX</b>	Tolleranza 6HX 6HX Tolerance	<b>TOLL 2BX</b>	Tolleranza 2BX 2BX Tolerance
<b>TOLL ISO2 6H</b>	Tolleranza ISO2 6H ISO2 6H Tolerance	<b>TOLL ISO 228</b>	Tolleranza ISO228 ISO228 Tolerance
<b>TOLL 2B</b>	Tolleranza 2B 2B Tolerance	<b>TOLL ISO 228°X°</b>	Tolleranza ISO 228°X° ISO 228°X° Tolerance

## TIPO DI FORI DA LAVORARE - TYPE OF HOLES TO BE MACHINED ZU BEARBEITENDE BOHRUNGSTYPEN - TYPE DE TROUS A USINER

	Foro Cieco/Passante Dead/Through hole		Foro Passante Through hole
	Foro Cieco Dead hole		Foro Passante/Cieco profondo Through/Deep dead hole
	Foro Cieco profondo Deep dead hole		

## ANGOLO ELICA - FLUTES DEGREES - SPIRALWINKEL - ANGLE HELICE

	15°		15° - elica sinistra 15° - left helix
	40°		45°
	48°		0°
	0° - Imbocco corretto 0° - Correct lead-in		0° - GAS Conico (NPT/NPTF) 0° - GAS Tapered (NPT/NPTF)

## CONICITÀ - TAPER KONUS - CONICITÉ

	Conicità Taper
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## APPLICAZIONE CONSIGLIATA - RECOMMENDED APPLICATION EMPFOHLENE ANWENDUNG - APPLICATION CONSEILLÉE

	Maschiatura rigida sincronizzata Synchronized rigid tapping		Calettamento Termico Shrinking Fit
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# FILETTATURA METRICA ISO PASSO GROSSO (M)

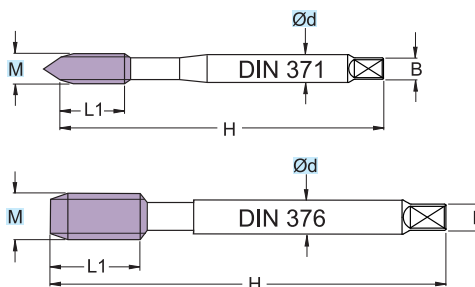
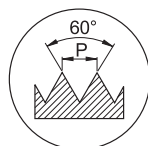
ISO METRIC COARSE SCREW THREAD (M)  
GEWINDESCHNEIDEN - METRISCHE ISO GROBGEWINDE (M)  
FILETAGE METRIQUE ISO PAS GROS (M)  
ROSCA MÉTRICA ISO DE PASO GRUESO (M)

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**MSA1071VP M..**  
**MSA1076VP M..**

M 2 - 52



RIVESTIM. COATED <b>VP</b>	<b>HSSE</b>
	<b>4-5 FILL</b>
	<b>TOLL ISO2 6H</b>

DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSA1071VP M2	2	0,4	2,8	9	45	2,1	1,6
MSA1071VP M3	3	0,5	3,5	10	56	2,7	2,5
MSA1071VP M4	4	0,7	4,5	13	63	3,4	3,3
MSA1071VP M5	5	0,8	6	13	70	4,9	4,2
MSA1071VP M6	6	1	6	16	80	4,9	5
MSA1071VP M8	8	1,25	8	18	90	6,2	6,8
MSA1071VP M10	10	1,5	10	20	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSA1076VP M12	12	1,75	9	25	110	7	10,3
MSA1076VP M14	14	2	11	28	110	9	12
MSA1076VP M16	16	2	12	28	110	9	14
MSA1076VP M18	18	2,5	14	33	125	11	15,5
MSA1076VP M20	20	2,5	16	33	140	12	17,5
MSA1076VP M22	22	2,5	18	33	140	14,5	19,5
MSA1076VP M24	24	3	18	39	160	14,5	21
MSA1076VP M27	27	3	20	39	160	16	24
MSA1076VP M30	30	3,5	22	46	180	18	26,5
MSA1076VP M33	33	3,5	25	46	180	20	29,5
MSA1076VP M36	36	4	28	50	200	22	32
MSA1076VP M39	39	4	32	50	200	24	35
MSA1076VP M42	42	4,5	32	55	200	24	37,5
MSA1076VP M45	45	4,5	36	60	220	29	40,5
MSA1076VP M48	48	5	36	65	250	29	43
MSA1076VP M52	52	5	40	65	250	32	47

**PARAMETRI - PARAMETERS**

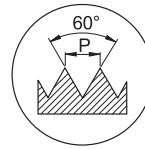
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

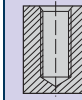
**MSA4071VP M..**  
**MSA4076VP M..**

M 2 - 52

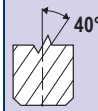


RIVESTIM.  
 COATED  
**VP**

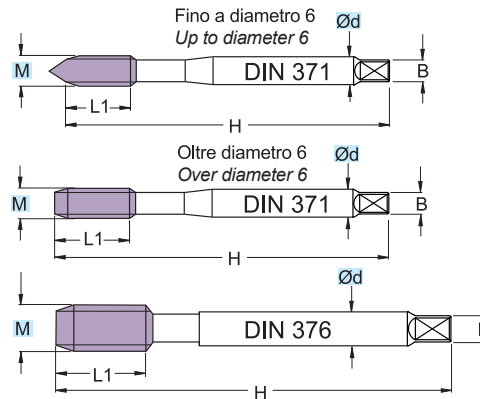
**HSSE**



**2-3  
 FILL**



**TOLL  
 ISO2  
 6H**



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA4071VP M2	2	0,4	2,8	9	45	2,1	1,6	
MSA4071VP M3	3	0,5	3,5	5	56	2,7	2,5	
MSA4071VP M4	4	0,7	4,5	7	63	3,4	3,3	
MSA4071VP M5	5	0,8	6	8	70	4,9	4,2	
MSA4071VP M6	6	1	6	10	80	4,9	5	
MSA4071VP M8	8	1,25	8	13	90	6,2	6,8	
MSA4071VP M10	10	1,5	10	15	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA4076VP M12	12	1,75	9	18	110	7	10,3	
MSA4076VP M14	14	2	11	20	110	9	12	
MSA4076VP M16	16	2	12	20	110	9	14	
MSA4076VP M18	18	2,5	14	25	125	11	15,5	
MSA4076VP M20	20	2,5	16	25	140	12	17,5	
MSA4076VP M22	22	2,5	18	25	140	14,5	19,5	
MSA4076VP M24	24	3	18	30	160	14,5	21	
MSA4076VP M27	27	3	20	30	160	16	24	
MSA4076VP M30	30	3,5	22	35	180	18	26,5	
MSA4076VP M33	33	3,5	25	35	180	20	29,5	
MSA4076VP M36	36	4	28	40	200	22	32	
MSA4076VP M39	39	4	32	40	200	24	35	
MSA4076VP M42	42	4,5	32	40	200	24	37,5	
MSA4076VP M45	45	4,5	36	50	220	29	40,5	
MSA4076VP M48	48	5	36	50	250	29	43	
MSA4076VP M52	52	5	40	50	250	32	47	

**PARAMETRI - PARAMETERS**

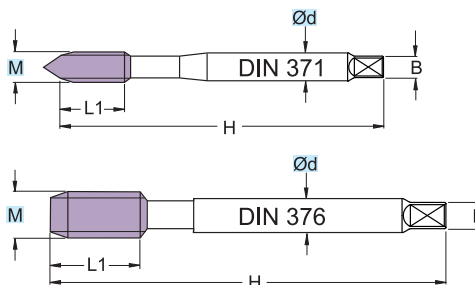
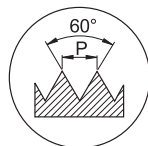
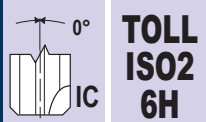
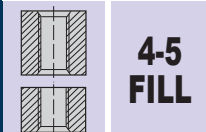
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**MSA1071TN M..**  
**MSA1076TN M..**

M 2 - 30



RIVESTIM. COATED  
**TIN** **HSSE**



DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSA1071TN M2	2	0,4	2,8	9	45	2,1	1,6
MSA1071TN M3	3	0,5	3,5	10	56	2,7	2,5
MSA1071TN M4	4	0,7	4,5	13	63	3,4	3,3
MSA1071TN M5	5	0,8	6	13	70	4,9	4,2
MSA1071TN M6	6	1	6	16	80	4,9	5
MSA1071TN M8	8	1,25	8	18	90	6,2	6,8
MSA1071TN M10	10	1,5	10	20	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSA1076TN M12	12	1,75	9	25	110	7	10,3
MSA1076TN M14	14	2	11	28	110	9	12
MSA1076TN M16	16	2	12	28	110	9	14
MSA1076TN M18	18	2,5	14	33	125	11	15,5
MSA1076TN M20	20	2,5	16	33	140	12	17,5
MSA1076TN M22	22	2,5	18	33	140	14,5	19,5
MSA1076TN M24	24	3	18	39	160	14,5	21
MSA1076TN M27	27	3	20	39	160	16	24
MSA1076TN M30	30	3,5	22	46	180	18	26,5

**PARAMETRI - PARAMETERS**

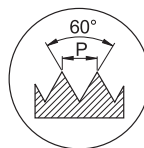
MATERIALI - MATERIALS Pag. 1063			Vc m/min
P	ACCIAIO - STEEL	●	20-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
M	ACCIAIO INOX - STAINLESS STEEL		
K	GHISA - CAST IRON		
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
H	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSA4071TN M..**  
**MSA4076TN M..**

M 2 - 30

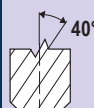


RIVESTIM.  
 COATED  
**TIN**

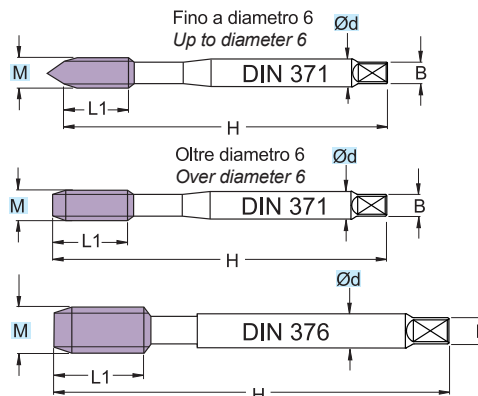
**HSSE**



**2-3  
 FILL**



**TOLL  
 ISO2  
 6H**



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA4071TN M2	2	0,4	2,8	9	45	2,1	1,6	
MSA4071TN M3	3	0,5	3,5	5	56	2,7	2,5	
MSA4071TN M4	4	0,7	4,5	7	63	3,4	3,3	
MSA4071TN M5	5	0,8	6	8	70	4,9	4,2	
MSA4071TN M6	6	1	6	10	80	4,9	5	
MSA4071TN M8	8	1,25	8	13	90	6,2	6,8	
MSA4071TN M10	10	1,5	10	15	100	8	8,5	

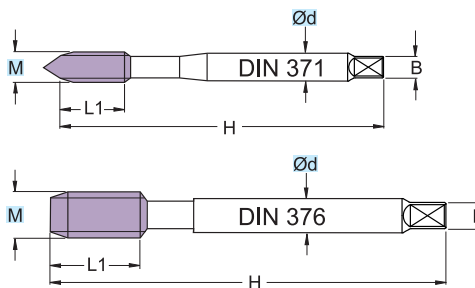
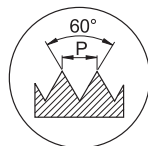
DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA4076TN M12	12	1,75	9	18	110	7	10,3	
MSA4076TN M14	14	2	11	20	110	9	12	
MSA4076TN M16	16	2	12	20	110	9	14	
MSA4076TN M18	18	2,5	14	25	125	11	15,5	
MSA4076TN M20	20	2,5	16	25	140	12	17,5	
MSA4076TN M22	22	2,5	18	25	140	14,5	19,5	
MSA4076TN M24	24	3	18	30	160	14,5	21	
MSA4076TN M27	27	3	20	30	160	16	24	
MSA4076TN M30	30	3,5	22	35	180	18	26,5	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	20-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**MSU020071STN M..**  
**MSU020076STN M..**

M 3 - 24



RIVESTIM. COATED <b>TT</b>	<b>PM3</b>
	<b>4-5 FILL</b>
	<b>TOLL 6HX</b>

DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSU020071STN M3	3	0,5	3,5	10	56	2,7	2,5
MSU020071STN M4	4	0,7	4,5	13	63	3,4	3,3
MSU020071STN M5	5	0,8	6	13	70	4,9	4,2
MSU020071STN M6	6	1	6	16	80	4,9	5
MSU020071STN M8	8	1,25	8	18	90	6,2	6,8
MSU020071STN M10	10	1,5	10	20	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSU020076STN M12	12	1,75	9	25	110	7	10,3
MSU020076STN M14	14	2	11	28	110	9	12
MSU020076STN M16	16	2	12	28	110	9	14
MSU020076STN M18	18	2,5	14	33	125	11	15,5
MSU020076STN M20	20	2,5	16	33	140	12	17,5
MSU020076STN M22	22	2,5	18	33	140	14,5	19,5
MSU020076STN M24	24	3	18	39	160	14,5	21

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	●	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

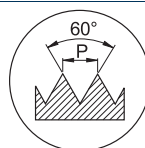


Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED



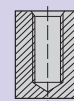
**MSU150071STN M..**  
**MSU150076STN M..**

M 3 - 30

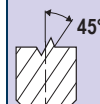


RIVESTIM.  
 COATED  
**TT**

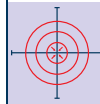
**PM3**



**2-3  
 FILL**

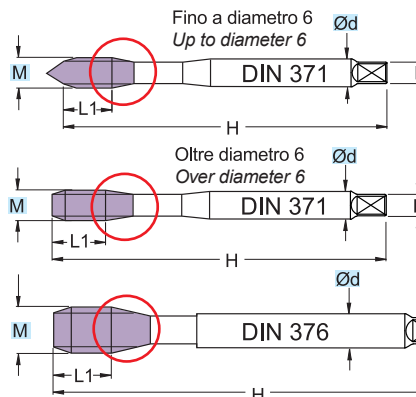


**TOLL  
 6HX**



**SINCRO**

○ = RASTREMAZIONE - TAPER



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSU150071STN M3	3	0,5	3,5	5	56	2,7	2,5	
MSU150071STN M4	4	0,7	4,5	7	63	3,4	3,3	
MSU150071STN M5	5	0,8	6	8	70	4,9	4,2	
MSU150071STN M6	6	1	6	10	80	4,9	5	
MSU150071STN M8	8	1,25	8	13	90	6,2	6,8	
MSU150071STN M10	10	1,5	10	15	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSU150076STN M12	12	1,75	9	18	110	7	10,3	
MSU150076STN M14	14	2	11	20	110	9	12	
MSU150076STN M16	16	2	12	20	110	9	14	
MSU150076STN M18	18	2,5	14	25	125	11	15,5	
MSU150076STN M20	20	2,5	16	25	140	12	17,5	
MSU150076STN M22	22	2,5	18	25	140	14,5	19,5	
MSU150076STN M24	24	3	18	30	160	14,5	21	
MSU150076STN M27	27	3	20	30	160	16	24	
MSU150076STN M30	30	3,5	22	35	180	18	26,5	

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

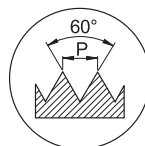
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



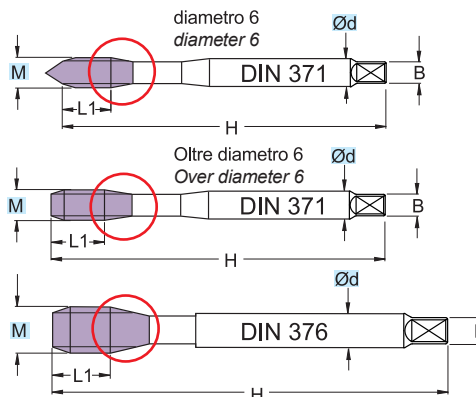
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150071STNW M..**  
**MSU150076STNW M..**

M 6 - 30



○ = RASTREMAZIONE - TAPER



RIVESTIM. COATED <b>TT</b>	<b>PM3</b>
	<b>2-3 FILL</b>
	<b>TOLL 6HX</b>
	<b>SINCRO</b>

DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSU150071STNW M6	6	1	6	10	80	4,9	5
MSU150071STNW M8	8	1,25	8	13	90	6,2	6,8
MSU150071STNW M10	10	1,5	10	15	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSU150076STNW M12	12	1,75	9	18	110	7	10,3
MSU150076STNW M14	14	2	11	20	110	9	12
MSU150076STNW M16	16	2	12	20	110	9	14
MSU150076STNW M18	18	2,5	14	25	125	11	15,5
MSU150076STNW M20	20	2,5	16	25	140	12	17,5
MSU150076STNW M22	22	2,5	18	25	140	14,5	19,5
MSU150076STNW M24	24	3	18	30	160	14,5	21
MSU150076STNW M27	27	3	20	30	160	16	24
MSU150076STNW M30	30	3,5	22	35	180	18	26,5

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCROZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

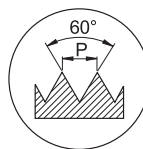
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



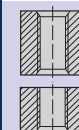
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSA20XLTC M..**

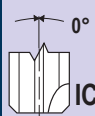
M 4 - 16



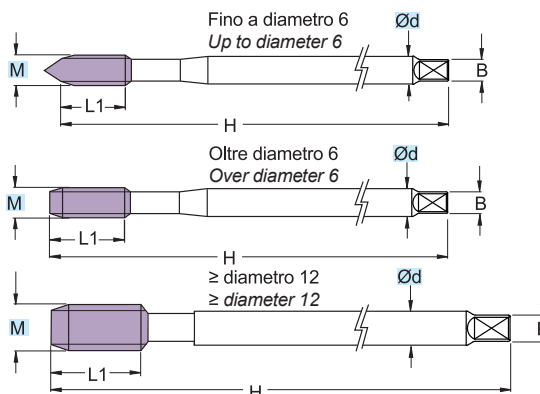
RIVESTIM. COATED  
**TICN**  
**HSSE**



**4-5 FILL**



**TOLL ISO2 6H**



ART.	(mm)						
	M	P	Ød	L1	H	B	Preforo Prebore
MSA20XLTC M4	4	0,7	4,5	12	125	3,4	3,3
MSA20XLTC M5	5	0,8	6	14	140	4,9	4,2
MSA20XLTC M6	6	1	6	18	160	4,9	5
MSA20XLTC M8	8	1,25	8	20	180	6,2	6,8
MSA20XLTC M10	10	1,5	10	20	180	8	8,5

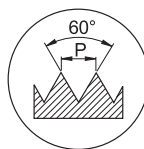
ART.	(mm)						
	M	P	Ød	L1	H	B	Preforo Prebore
MSA20XLTC M12	12	1,75	9	24	225	7	10,3
MSA20XLTC M14	14	2	11	26	225	9	12
MSA20XLTC M16	16	2	12	32	225	9	14

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	20-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON	○	15-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**MSA40XLTC M..**

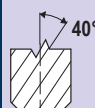
M 4 - 16



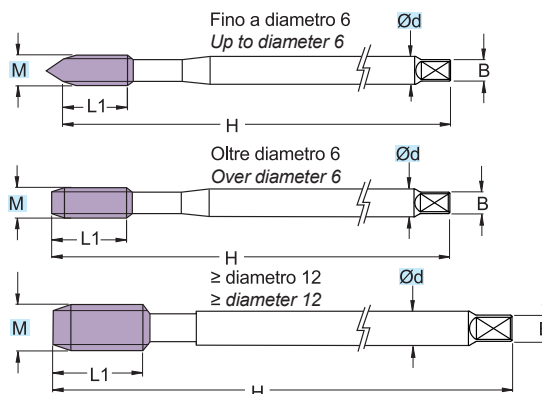
RIVESTIM. COATED  
**TICN** **HSSE**



**2-3 FILL**



**TOLL ISO2 6H**



ART.	(mm)						
	M	P	Ød	L1	H	B	Preforo Prebore
MSA40XLTC M4	4	0,7	4,5	7	125	3,4	3,3
MSA40XLTC M5	5	0,8	6	8	140	4,9	4,2
MSA40XLTC M6	6	1	6	10	160	4,9	5
MSA40XLTC M8	8	1,25	8	13	180	6,2	6,8
MSA40XLTC M10	10	1,5	10	16	180	8	8,5

ART.	(mm)						
	M	P	Ød	L1	H	B	Preforo Prebore
MSA40XLTC M12	12	1,75	9	23	225	7	10,3
MSA40XLTC M14	14	2	11	23	225	9	12
MSA40XLTC M16	16	2	12	23	225	9	14

**PARAMETRI - PARAMETERS**

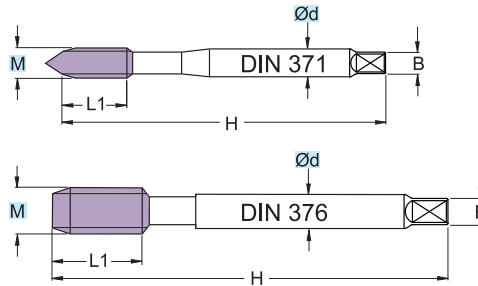
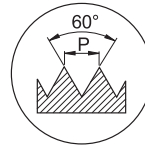
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	20-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON	○	15-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSR2071TL M..**  
**MSR2076TL M..**

M 3 - 24



**M**

RIVESTIM. COATED  
**TIALN+C**

**PM3**

**4-5 FILL**

0°  
 IC  
**TOLL 6HX**

DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSR2071TL M3	3	0,5	3,5	10	56	2,7	2,5	
MSR2071TL M4	4	0,7	4,5	13	63	3,4	3,3	
MSR2071TL M5	5	0,8	6	13	70	4,9	4,2	
MSR2071TL M6	6	1	6	16	80	4,9	5	
MSR2071TL M8	8	1,25	8	18	90	6,2	6,8	
MSR2071TL M10	10	1,5	10	20	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSR2076TL M12	12	1,75	9	25	110	7	10,3	
MSR2076TL M14	14	2	11	28	110	9	12	
MSR2076TL M16	16	2	12	28	110	9	14	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL		
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON	○	15-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

Rm 1200+1400 N/mm<sup>2</sup>, 38+45 HRC

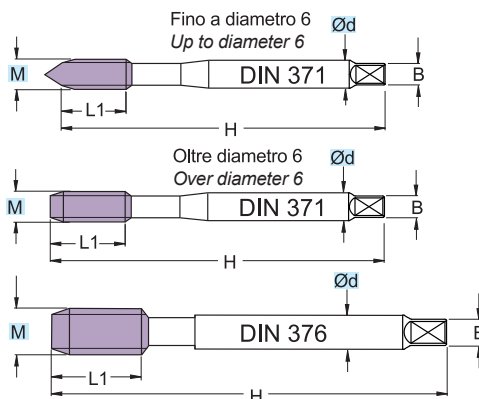
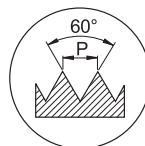
**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED



**MSR3071TB.. M..**  
**MSR3076TB.. M..**

M 3 - 16



RIVESTIM. COATED <b>TIALN+C</b>	<b>PM3</b>
	<b>2-3 FILL</b>
<b>15°</b>	<b>TOLL 6HX</b>

DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSR3071TB M3	3	0,5	3,5	5	56	2,7	2,5	
MSR3071TB M4	4	0,7	4,5	7	63	3,4	3,3	
MSR3071TB M5	5	0,8	6	8	70	4,9	4,2	
MSR3071TB M6	6	1	6	10	80	4,9	5	
MSR3071TB M8	8	1,25	8	13	90	6,2	6,8	
MSR3071TB M10	10	1,5	10	15	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSR3076TB M12	12	1,75	9	18	110	7	10,3	
MSR3076TB M14	14	2	11	20	110	9	12	
MSR3076TB M16	16	2	12	20	110	9	14	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL		
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON	○	15-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

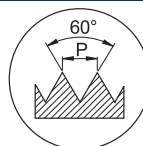
Rm ≤ 1400 N/mm<sup>2</sup>, ≤ 45 HRC



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

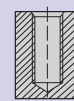
**MSR4071TL M..**  
**MSR4076TL M..**

M 3 - 16

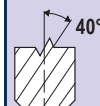


RIVESTIM.  
 COATED  
**TIALN+C**

**PM3**

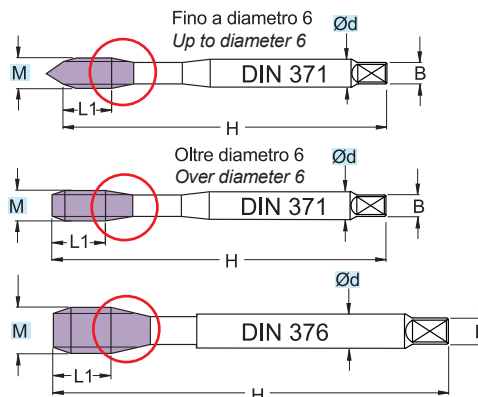


**2-3 FILL**



**TOLL 6HX**

○ = RASTREMAZIONE - TAPER



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSR4071TL M3	3	0,5	3,5	5	56	2,7	2,5	
MSR4071TL M4	4	0,7	4,5	7	63	3,4	3,3	
MSR4071TL M5	5	0,8	6	8	70	4,9	4,2	
MSR4071TL M6	6	1	6	10	80	4,9	5	
MSR4071TL M8	8	1,25	8	13	90	6,2	6,8	
MSR4071TL M10	10	1,5	10	15	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSR4076TL M12	12	1,75	9	18	110	7	10,3	
MSR4076TL M14	14	2	11	20	110	9	12	
MSR4076TL M16	16	2	12	20	110	9	14	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS		Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	○		15-20
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●		5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL			
<b>K</b>	GHISA - CAST IRON	○		15-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM			
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY			
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL			

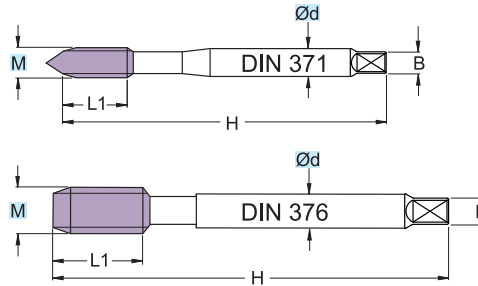
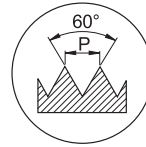
Rm ≤ 1200 N/mm<sup>2</sup>, ≤ 38 HRC



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

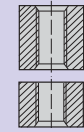
**MSI2071TB M..**  
**MSI2076TB M..**

M 3 - 24

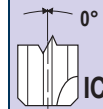


RIVESTIM.  
COATED  
**TIALN+C**

**HSSV3**



**4-5  
FILL**



**TOLL  
6HX**

DIN 371		(mm)						
ART.	M	P	Ød	L1	H	B	Preforo Prebore	
MSI2071TB M3	3	0,5	3,5	10	56	2,7	2,5	
MSI2071TB M4	4	0,7	4,5	13	63	3,4	3,3	
MSI2071TB M5	5	0,8	6	13	70	4,9	4,2	
MSI2071TB M6	6	1	6	16	80	4,9	5	
MSI2071TB M8	8	1,25	8	18	90	6,2	6,8	
MSI2071TB M10	10	1,5	10	20	100	8	8,5	

DIN 376		(mm)						
ART.	M	P	Ød	L1	H	B	Preforo Prebore	
MSI2076TB M12	12	1,75	9	25	110	7	10,3	
MSI2076TB M14	14	2	11	28	110	9	12	
MSI2076TB M16	16	2	12	28	110	9	14	
MSI2076TB M18	18	2,5	14	33	125	11	15,5	
MSI2076TB M20	20	2,5	16	33	140	12	17,5	
MSI2076TB M22	22	2,5	18	33	140	14,5	19,5	
MSI2076TB M24	24	3	18	39	160	14,5	21	

**PARAMETRI - PARAMETERS**

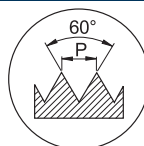
MATERIALI - MATERIALS Pag. 1063			Vc m/min
P	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
M	ACCIAIO INOX - STAINLESS STEEL	●	6-15
K	GHISA - CAST IRON		
N	ALLUMINIO E SUE LEGHE - ALUMINIUM		
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
H	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

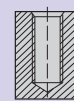
**MSI4071TB M..**  
**MSI4076TB M..**

M 3 - 24

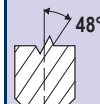


RIVESTIM.  
 COATED  
**TIALN+C**

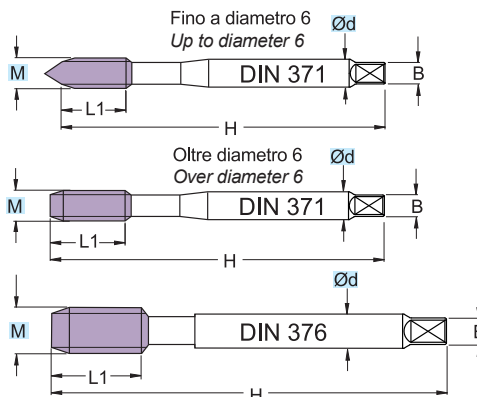
**HSSV3**



**2-3  
 FILL**



**TOLL  
 6HX**



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSI4071TB M3	3	0,5	3,5	5	56	2,7	2,5	
MSI4071TB M4	4	0,7	4,5	7	63	3,4	3,3	
MSI4071TB M5	5	0,8	6	8	70	4,9	4,2	
MSI4071TB M6	6	1	6	10	80	4,9	5	
MSI4071TB M8	8	1,25	8	13	90	6,2	6,8	
MSI4071TB M10	10	1,5	10	15	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSI4076TB M12	12	1,75	9	18	110	7	10,3	
MSI4076TB M14	14	2	11	20	110	9	12	
MSI4076TB M16	16	2	12	20	110	9	14	
MSI4076TB M18	18	2,5	14	25	125	11	15,5	
MSI4076TB M20	20	2,5	16	25	140	12	17,5	
MSI4076TB M22	22	2,5	18	25	140	14,5	19,5	
MSI4076TB M24	24	3	18	30	160	14,5	21	

**PARAMETRI - PARAMETERS**

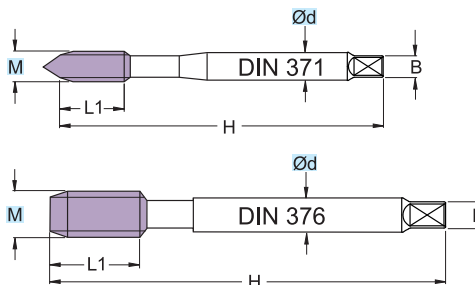
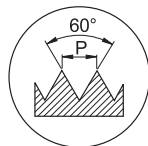
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	8-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

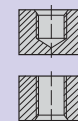
**MSG1071SNS M..**  
**MSG1076SNS M..**

M 3 - 24

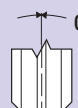


RIVESTIM.  
 COATED  
**SNS**

**HSSE**



**2-3  
 FILL**



**TOLL  
 6HX**

DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSG1071SNS M3	3	0,5	3,5	10	56	2,7	2,5	
MSG1071SNS M4	4	0,7	4,5	13	63	3,4	3,3	
MSG1071SNS M5	5	0,8	6	13	70	4,9	4,2	
MSG1071SNS M6	6	1	6	16	80	4,9	5,0	
MSG1071SNS M8	8	1,25	8	18	90	6,2	6,8	
MSG1071SNS M10	10	1,5	10	20	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSG1076SNS M12	12	1,75	9	25	110	7	10,3	
MSG1076SNS M14	14	2	11	28	110	9	12,0	
MSG1076SNS M16	16	2	12	28	110	9	14,0	
MSG1076SNS M18	18	2,5	14	33	125	11	15,5	
MSG1076SNS M20	20	2,5	16	33	140	12	17,5	
MSG1076SNS M22	22	2,5	18	33	140	14,5	19,5	
MSG1076SNS M24	24	3	18	39	160	14,5	21	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 15-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	

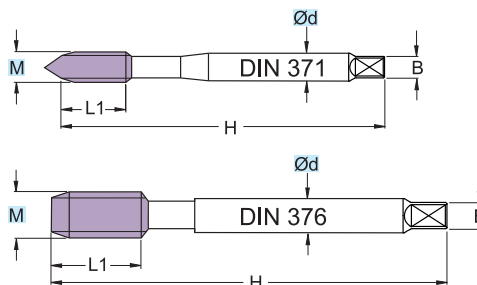
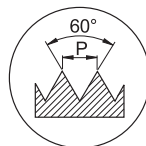


Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED



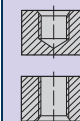
**MSG010071TL M..**  
**MSG010076TL M..**

M 4 - 24

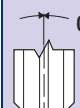


RIVESTIM.  
 COATED  
**TIALN**

**PM3**



**2-3  
 FILL**



**TOLL  
 6HX**

**DIN 371** (mm)

ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSG010071TL M4	4	0,7	4,5	13	63	3,4	3,3
MSG010071TL M5	5	0,8	6	13	70	4,9	4,2
MSG010071TL M6	6	1	6	16	80	4,9	5
MSG010071TL M8	8	1,25	8	18	90	6,2	6,8
MSG010071TL M10	10	1,5	10	20	100	8	8,5

**DIN 376** (mm)

ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSG010076TL M12	12	1,75	9	25	110	7	10,3
MSG010076TL M14	14	2	11	28	110	9	12
MSG010076TL M16	16	2	12	28	110	9	14
MSG010076TL M18	18	2,5	14	33	125	11	15,5
MSG010076TL M20	20	2,5	16	33	140	12	17,5
MSG010076TL M22	22	2,5	18	33	140	14,5	19,5
MSG010076TL M24	24	3	18	39	160	14,5	21

**PARAMETRI - PARAMETERS**

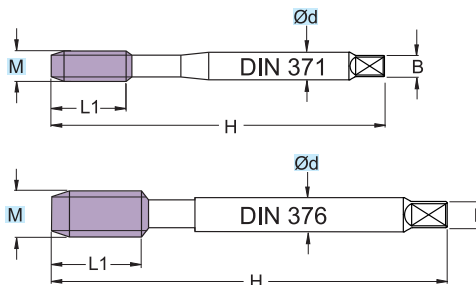
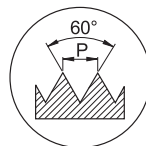
MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 20-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

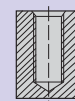
**MSG010071TLW M..**  
**MSG010076TLW M..**

M 6 - 24

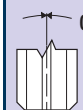


RIVESTIM.  
 COATED  
**TIALN**

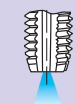
**PM3**



**2-3  
 FILL**



**TOLL  
 6HX**



DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSG010071TLW M6	6	1	6	16	80	4,9	5
MSG010071TLW M8	8	1,25	8	18	90	6,2	6,8
MSG010071TLW M10	10	1,5	10	20	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSG010076TLW M12	12	1,75	9	25	110	7	10,3
MSG010076TLW M14	14	2	11	28	110	9	12
MSG010076TLW M16	16	2	12	28	110	9	14
MSG010076TLW M18	18	2,5	14	33	125	11	15,5
MSG010076TLW M20	20	2,5	16	33	140	12	17,5
MSG010076TLW M22	22	2,5	18	33	140	14,5	19,5
MSG010076TLW M24	24	3	18	39	160	14,5	21

**PARAMETRI - PARAMETERS**

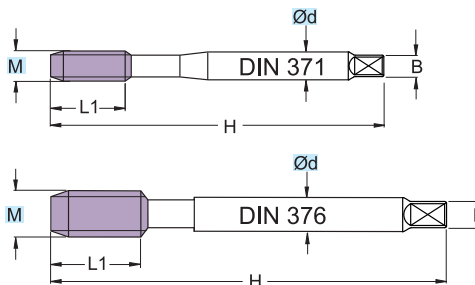
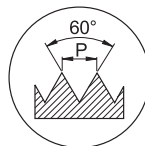
MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 20-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSG180071TL M..**  
**MSG180076TL M..**

M 6 - 24



RIVESTIM. COATED <b>TIALN</b>	<b>PM3</b>
 <b>1,5-2 FILL</b>	
 <b>TOLL 6HX</b>	

DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSG180071TL M6	6	1	6	16	80	4,9	5	
MSG180071TL M8	8	1,25	8	18	90	6,2	6,8	
MSG180071TL M10	10	1,5	10	20	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSG180076TL M12	12	1,75	9	25	110	7	10,3	
MSG180076TL M14	14	2	11	28	110	9	12	
MSG180076TL M16	16	2	12	28	110	9	14	
MSG180076TL M18	18	2,5	14	33	125	11	15,5	
MSG180076TL M20	20	2,5	16	33	140	12	17,5	
MSG180076TL M22	22	2,5	18	33	140	14,5	19,5	
MSG180076TL M24	24	3	18	39	160	14,5	21	

**PARAMETRI - PARAMETERS**

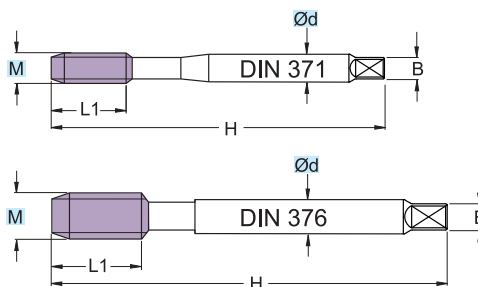
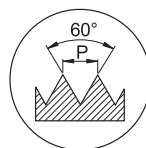
MATERIALI - MATERIALS Pag. 1063		V <sub>c</sub> m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 20-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



V<sub>c</sub> = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSG180071TLW M..**  
**MSG180076TLW M..**

M 6 - 24



RIVESTIM. COATED <b>TIALN</b>	<b>PM3</b>
	<b>1,5-2 FILL</b>
	<b>TOLL 6HX</b>

DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSG180071TLW M6	6	1	6	16	80	4,9	5
MSG180071TLW M8	8	1,25	8	18	90	6,2	6,8
MSG180071TLW M10	10	1,5	10	20	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MSG180076TLW M12	12	1,75	9	25	110	7	10,3
MSG180076TLW M14	14	2	11	28	110	9	12
MSG180076TLW M16	16	2	12	28	110	9	14
MSG180076TLW M18	18	2,5	14	33	125	11	15,5
MSG180076TLW M20	20	2,5	16	33	140	12	17,5
MSG180076TLW M22	22	2,5	18	33	140	14,5	19,5
MSG180076TLW M24	24	3	18	39	160	14,5	21

**PARAMETRI - PARAMETERS**

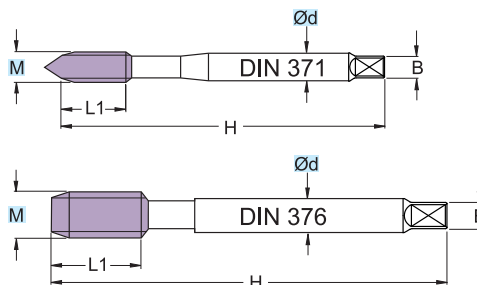
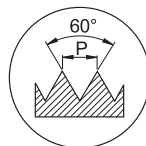
MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 15-25
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

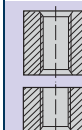
**MSN1071VP.. M..**  
**MSN1076VP.. M..**

M 3 - 16

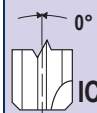


RIVESTIM.  
 COATED  
**VX**

**HSSE**



**4-5  
 FILL**



**TOLL  
 ISO2  
 6H**

DIN 371 (mm)								
ART.	M	P	Ød	L1	H	B	Preforo Prebore	Z
MSN1071VP M3	3	0,5	3,5	10	56	2,7	2,5	2
MSN1071VP M4	4	0,7	4,5	13	63	3,4	3,3	2
MSN1071VP M5	5	0,8	6	13	70	4,9	4,2	2
MSN1071VP M6	6	1	6	16	80	4,9	5	2
MSN1071VP M8	8	1,25	8	18	90	6,2	6,8	2
MSN1071VP M10	10	1,5	10	20	100	8	8,5	2

DIN 376 (mm)								
ART.	M	P	Ød	L1	H	B	Preforo Prebore	Z
MSN1076VP M12	12	1,75	9	25	110	7	10,3	3
MSN1076VP M14	14	2	11	28	110	9	12	3
MSN1076VP M16	16	2	12	28	110	9	14	3

**PARAMETRI - PARAMETERS**

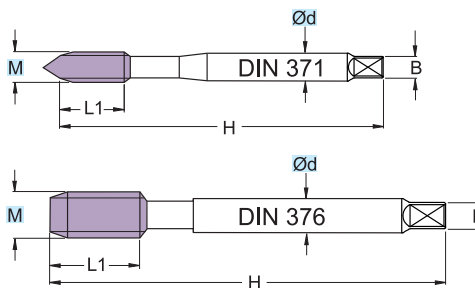
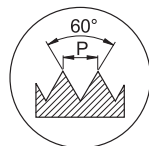
MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	● 10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSN4071VP.. M..**  
**MSN4076VP.. M..**

M 3 - 16



RIVESTIM. COATED <b>VX</b>	<b>HSSE</b>
  	<b>2-3 FILL</b>
 <b>45°</b>	<b>TOLL ISO2 6H</b>

DIN 371		(mm)						
ART.	M	P	Ød	L1	H	B	Preforo Prebore	Z
MSN4071VP M3	3	0,5	3,5	10	56	2,7	2,5	2
MSN4071VP M4	4	0,7	4,5	13	63	3,4	3,3	2
MSN4071VP M5	5	0,8	6	13	70	4,9	4,2	2
MSN4071VP M6	6	1	6	16	80	4,9	5	2
MSN4071VP M8	8	1,25	8	18	90	6,2	6,8	2
MSN4071VP M10	10	1,5	10	20	100	8	8,5	2

DIN 376		(mm)						
ART.	M	P	Ød	L1	H	B	Preforo Prebore	Z
MSN4076VP M12	12	1,75	9	25	110	7	10,3	3
MSN4076VP M14	14	2	11	28	110	9	12	3
MSN4076VP M16	16	2	12	28	110	9	14	3

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	● 10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	

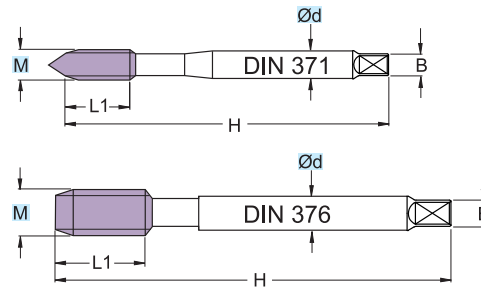
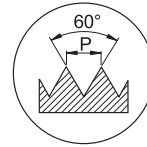


Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED



**MST8071TC.. M..**  
**MST8076TC.. M..**

M 3 - 16



RIVESTIM. COATED <b>TICN</b>	<b>PM3</b>
	<b>4-5 FILL</b>
	<b>TOLL 6HX</b>

DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MST8071TC M3	3	0,5	3,5	10	56	2,7	2,5	
MST8071TC M4	4	0,7	4,5	13	63	3,4	3,3	
MST8071TC M5	5	0,8	6	13	70	4,9	4,2	
MST8071TC M6	6	1	6	16	80	4,9	5	
MST8071TC M8	8	1,25	8	18	90	6,2	6,8	
MST8071TC M10	10	1,5	10	20	100	8	8,5	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MST8076TC M12	12	1,75	9	25	110	7	10,3	
MST8076TC M16	16	2	12	28	110	9	14	

**PARAMETRI - PARAMETERS**

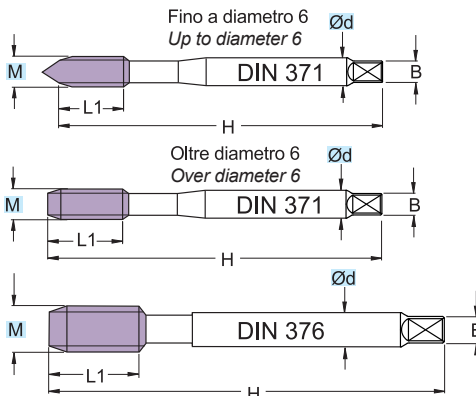
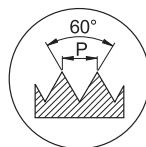
MATERIALI - MATERIALS		Pag. 1063	Vc m/min
<b>P</b>	ACCIAIO - STEEL		
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL (DUPLEX)	○	6-8
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	●	5-10
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MST3071TC M..**  
**MST3076TC M..**

M 3 - 16



RIVESTIM. COATED <b>TICN</b>	<b>PM3</b>
  	<b>2-3 FILL</b>
	<b>TOLL 6HX</b>

DIN 371 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MST3071TC M3	3	0,5	3,5	5	56	2,7	2,5
MST3071TC M4	4	0,7	4,5	7	63	3,4	3,3
MST3071TC M5	5	0,8	6	8	70	4,9	4,2
MST3071TC M6	6	1	6	10	80	4,9	5
MST3071TC M8	8	1,25	8	13	90	6,2	6,8
MST3071TC M10	10	1,5	10	15	100	8	8,5

DIN 376 (mm)							
ART.	M	P	Ød	L1	H	B	Preforo Prebore
MST3076TC M12	12	1,75	9	18	110	7	10,3
MST3076TC M16	16	2	12	20	110	9	14

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL		
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL (DUPLEX)	○	6-8
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	●	5-10
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

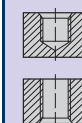
**MSA5071TN M..**  
**MSA5076TN M..**

Senza canaline di lubrificazione  
 Without lubrication channels



RIVESTIM.  
 COATED  
**TIN**

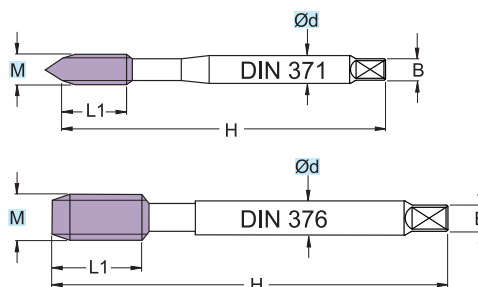
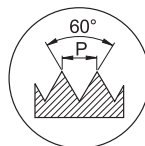
**PM3**



**2-3  
 FILL**

**TOLL  
 6HX**

M 3 - 16



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA5071TN M3	3	0,5	3,5	10	56	2,7	2,8	
MSA5071TN M4	4	0,7	4,5	13	63	3,4	3,7	
MSA5071TN M5	5	0,8	6	13	70	4,9	4,65	
MSA5071TN M6	6	1	6	16	80	4,9	5,55	
MSA5071TN M8	8	1,25	8	18	90	6,2	7,40	
MSA5071TN M10	10	1,5	10	20	100	8	9,30	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA5076TN M12	12	1,75	9	25	110	7	11,2	
MSA5076TN M14	14	2	11	28	110	9	13,1	
MSA5076TN M16	16	2	12	28	110	9	15,1	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	25-40
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	○	15-20
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-20
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	●	35-45
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	●	15-20
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

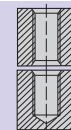
**MSA6071TN M..**  
**MSA6076TN M..**

Con canaline di lubrificazione  
 With lubrication channels

**M**

RIVESTIM.  
 COATED  
**TIN**

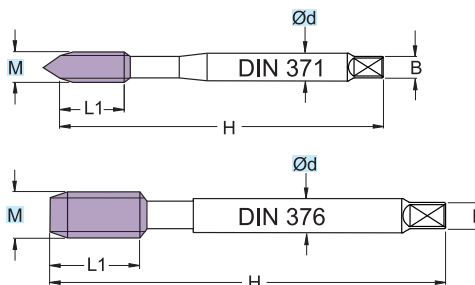
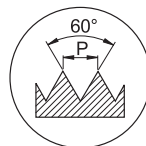
**PM3**



**2-3  
 FILL**

**TOLL  
 6HX**

M 3 - 16



DIN 371		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA6071TN M3	3	0,5	3,5	10	56	2,7	2,8	
MSA6071TN M4	4	0,7	4,5	13	63	3,4	3,7	
MSA6071TN M5	5	0,8	6	13	70	4,9	4,65	
MSA6071TN M6	6	1	6	16	80	4,9	5,55	
MSA6071TN M8	8	1,25	8	18	90	6,2	7,40	
MSA6071TN M10	10	1,5	10	20	100	8	9,30	

DIN 376		(mm)						Preforo Prebore
ART.	M	P	Ød	L1	H	B		
MSA6076TN M12	12	1,75	9	25	110	7	11,2	
MSA6076TN M14	14	2	11	28	110	9	13,1	
MSA6076TN M16	16	2	12	28	110	9	15,1	

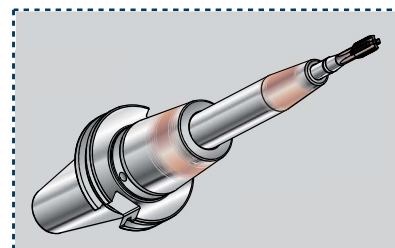
**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	25-40
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	○	10-15
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	35-45
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	●	15-20
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

# MASCHI PER CALETTAMENTO TERMICO CON GAMBO h6

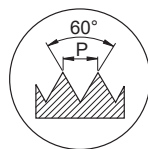


TAPS FOR SHRINKING ON WITH h6 SHANK  
GEWINDESCHNEIDER FÜR SCHRUMPFUTTER, MIT SCHAFT h6  
TARAUDS POUR CALAGE THERMIQUE AVEC TIGE h6  
TERRAJAS PARA EMPALME TÉRMICO CON VÁSTAGO h6

**MSG0100NITBW-h6..**

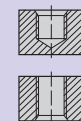
M 6 - 20

**NEW**

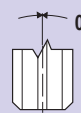


RIVESTIM.  
 COATED  
**TIALN+C**

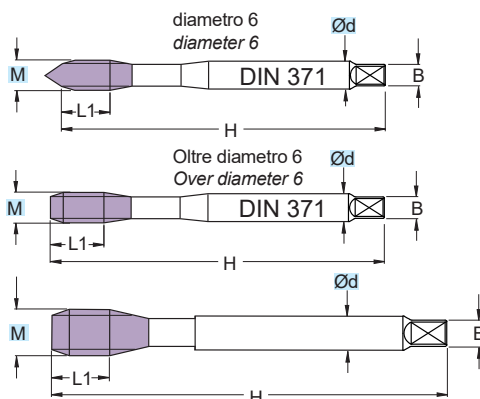
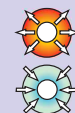
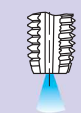
**PM3**



**2-3  
 FILL**



**TOLL  
 6HX**



DIN 371		(mm)						h6	Preforo Prebore
ART.	M	P	Ød	L1	H	B			
MSG0100NITBW-h6 M6	6	1	6	10	80	4,9		5,0	
MSG0100NITBW-h6 M8	8	1,25	8	13	90	6,2		6,8	
MSG0100NITBW-h6 M10	10	1,5	10	15	100	8		8,5	

	(mm)						h6	Preforo Prebore
	M	P	Ød	L1	H	B		
MSG0100NITBW-h6 M12 G10	12	1,75	10	18	110	8		10,3
MSG0100NITBW-H6 M14	14	2	12	20	110	9		12,0
MSG0100NITBW-H6 M16 G12	16	2	12	20	110	9		14,0
MSG0100NITBW-h6 M18 G14	18	2,5	14	25	125	11		15,5
MSG0100NITBW-h6 M20 G16	20	2,5	16	25	140	12		17,5

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063		VDI 3323 GR.	HB Rm <sup>1)</sup> HRC <sup>2)</sup>	Vc m/min
<b>P</b>	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300	
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350	
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325	
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240	● 20-25
<b>M</b>	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14,1-14,2	180-230	
<b>K</b>	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	● 20-25
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	● 20-25
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	● 25-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	
	RAME E SUE LEGHE - COPPER	26-28	90-110	
	NON METALLICI - PLASTICS	29-30	/	
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320	
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 <sup>1)</sup>	
<b>H</b>	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 <sup>2)</sup>	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED





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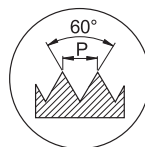
# FILETTATURA METRICA ISO PASSO FINE (MF)

ISO METRIC FINE SCREW THREAD (MF)  
GEWINDESCHNEIDEN - METRISCHE ISO FEINGEWINDE (MF)  
FILETAGE METRIQUE ISO PAS FIN (MF)  
ROSCA MÉTRICA ISO DE PASO FINO (MF)

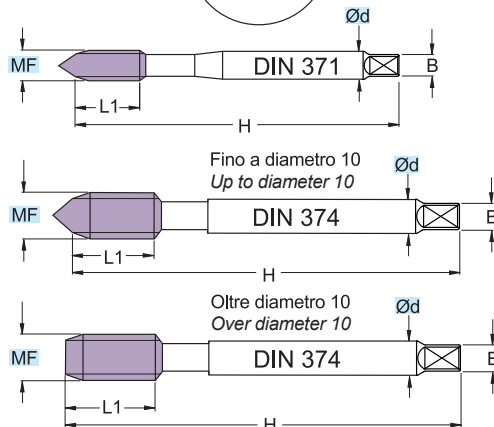
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**MSA2171VP MF..**  
**MSA2174VP MF..**

MF 4 - 24



RIVESTIM. COATED <b>VP</b>	<b>HSSE</b>
	<b>4-5 FILL</b>
	<b>TOLL ISO2 6H</b>



DIN 371		(mm)						Preforo Prebore
ART.	MF	P	Ød	L1	H	B		
MSA2171VP MF4X0,5	4	0,5	4,5	13	63	3,4	3,5	
MSA2171VP MF5X0,5	5	0,5	6	13	70	4,9	4,5	
MSA2171VP MF6X0,75	6	0,75	6	16	80	4,9	5,25	
MSA2171VP MF8X1	8	1	8	18	90	6,2	7	
MSA2171VP MF10X1	10	1	10	15	90	8	9	
MSA2171VP MF10X1,25	10	1,25	10	20	100	8	8,75	

DIN 374		(mm)						Preforo Prebore
ART.	MF	P	Ød	L1	H	B		
MSA2174VP MF6X0,75	6	0,75	4,5	16	80	3,4	5,25	
MSA2174VP MF8X1	8	1	6	18	90	4,9	7	
MSA2174VP MF10X1	10	1	7	15	90	5,5	9	
MSA2174VP MF10X1,25	10	1,25	7	20	100	5,5	8,75	
MSA2174VP MF12X1	12	1	9	22	100	7	11	
MSA2174VP MF12X1,25	12	1,25	9	22	100	7	10,75	
MSA2174VP MF12X1,5	12	1,5	9	22	100	7	10,5	
MSA2174VP MF14X1	14	1	11	22	100	9	13	
MSA2174VP MF14X1,25	14	1,25	11	22	100	9	12,75	
MSA2174VP MF14X1,5	14	1,5	11	22	100	9	12,5	
MSA2174VP MF16X1	16	1	12	22	100	9	15	
MSA2174VP MF16X1,5	16	1,5	12	22	100	9	14,5	
MSA2174VP MF18X1	18	1	14	25	110	11	17	
MSA2174VP MF18X1,5	18	1,5	14	25	110	11	16,5	
MSA2174VP MF20X1	20	1	16	25	125	12	19	
MSA2174VP MF20X1,5	20	1,5	16	25	125	12	18,5	
MSA2174VP MF22X1	22	1	18	25	125	14,5	21	
MSA2174VP MF22X1,5	22	1,5	18	25	125	14,5	20,5	
MSA2174VP MF24X1	24	1	18	25	140	14,5	23	
MSA2174VP MF24X1,5	24	1,5	18	25	140	14,5	22,5	
MSA2174VP MF24X2	24	2	18	25	140	14,5	22	

**PARAMETRI - PARAMETERS**

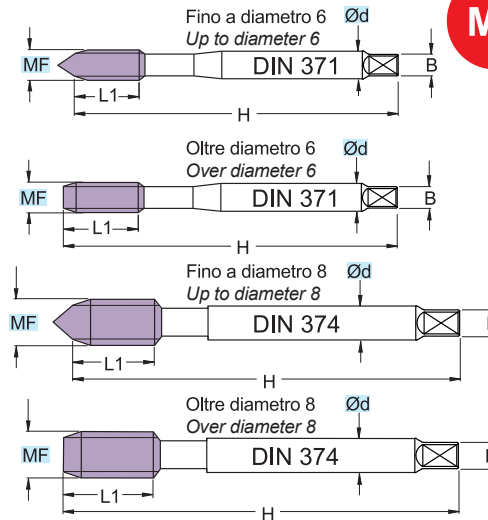
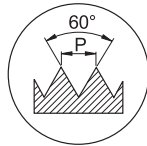
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSA4171VP MF..**  
**MSA4174VP MF..**

MF 4 - 24



RIVESTIM. COATED <b>VP</b>	<b>HSSE</b>
	<b>2-3 FILL</b>
	<b>TOLL ISO2 6H</b>

DIN 371		(mm)						Preforo Prebore
ART.	MF	P	Ød	L1	H	B		
MSA4171VP MF4X0,5	4	0,5	4,5	7	63	3,4	3,5	
MSA4171VP MF5X0,5	5	0,5	6	8	70	4,9	4,5	
MSA4171VP MF6X0,75	6	0,75	6	10	80	4,9	5,25	
MSA4171VP MF8X1	8	1	8	13	90	6,2	7	
MSA4171VP MF10X1	10	1	10	15	90	8	9	
MSA4171VP MF10X1,25	10	1,25	10	15	100	8	8,75	

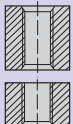

DIN 374		(mm)						Preforo Prebore
ART.	MF	P	Ød	L1	H	B		
MSA4174VP MF8X1	8	1	6	13	90	4,9	7	
MSA4174VP MF10X1	10	1	7	15	90	5,5	9	
MSA4174VP MF10X1,25	10	1,25	7	15	100	5,5	8,75	
MSA4174VP MF12X1	12	1	9	13	100	7	11	
MSA4174VP MF12X1,25	12	1,25	9	13	100	7	10,75	
MSA4174VP MF12X1,5	12	1,5	9	13	100	7	10,5	
MSA4174VP MF14X1	14	1	11	15	100	9	13	
MSA4174VP MF14X1,25	14	1,25	11	15	100	9	12,75	
MSA4174VP MF14X1,5	14	1,5	11	15	100	9	12,5	
MSA4174VP MF16X1	16	1	12	15	100	9	15	
MSA4174VP MF16X1,5	16	1,5	12	15	100	9	14,5	
MSA4174VP MF18X1	18	1	14	17	110	11	17	
MSA4174VP MF18X1,5	18	1,5	14	17	110	11	16,5	
MSA4174VP MF20X1	20	1	16	17	125	12	19	
MSA4174VP MF20X1,5	20	1,5	16	17	125	12	18,5	
MSA4174VP MF22X1	22	1	18	25	125	14,5	21	
MSA4174VP MF22X1,5	22	1,5	18	25	125	14,5	20,5	
MSA4174VP MF24X2	24	2	18	25	140	14,5	22	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

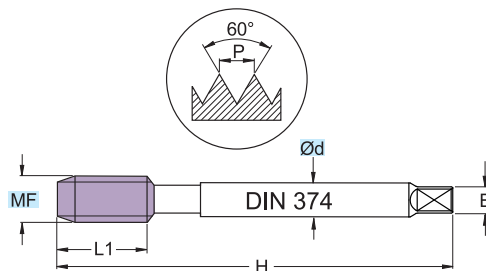
**MSU020174STN MF..**

**MF**

RIVESTIM. COATED <b>TT</b>	<b>PM3</b>
	<b>4-5 FILL</b>
	<b>TOLL 6HX</b>

MF 8 - 24

**NEW**



ART.	DIN 374 (mm)							Preforo Prebore
	MF	P	Ød	L1	H	B		
MSU020174STN MF8X1	8	1	6	18	90	4,9	7	
MSU020174STN MF10X1	10	1	7	15	90	5,5	9	
MSU020174STN MF10X1,25	10	1,25	7	20	100	5,5	8,75	
MSU020174STN MF12X1,25	12	1,25	9	22	100	7	10,75	
MSU020174STN MF12X1,5	12	1,5	9	22	100	7	10,5	
MSU020174STN MF14X1,5	14	1,5	11	22	100	9	12,5	
MSU020174STN MF16X1,5	16	1,5	12	22	100	9	14,5	
MSU020174STN MF18X1,5	18	1,5	14	25	110	11	16,5	
MSU020174STN MF20X1,5	20	1,5	16	25	125	12	18,5	
MSU020174STN MF22X1,5	22	1,5	18	25	125	14,5	20,5	
MSU020174STN MF24X1,5	24	1,5	18	25	140	14,5	22,5	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	●	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

 **PAG. 1034**

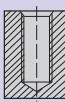
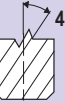

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

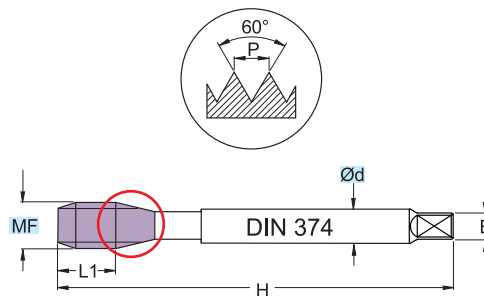
**MSU150174STN MF..**

MF 8 - 24

**NEW**





**MF**

RIVESTIM. COATED <b>TT</b>	<b>PM3</b>
	<b>2-3 FILL</b>
	<b>TOLL 6HX</b>
	<b>SINCRO</b>



○ = RASTREMAZIONE - TAPER

ART.	DIN 374 (mm)							Preforo Prebore
	MF	P	Ød	L1	H	B		
MSU150174STN MF8X1	8	1	6	13	90	4,9	7	
MSU150174STN MF10X1	10	1	7	15	90	5,5	9	
MSU150174STN MF10X1,25	10	1,25	7	15	100	5,5	8,75	
MSU150174STN MF12X1	12	1	9	13	100	7	11	
MSU150174STN MF12X1,25	12	1,25	9	13	100	7	10,75	
MSU150174STN MF12X1,5	12	1,5	9	13	100	7	10,5	
MSU150174STN MF14X1,5	14	1,5	11	15	100	9	12,5	
MSU150174STN MF16X1,5	16	1,5	12	15	100	9	14,5	
MSU150174STN MF18X1,5	18	1,5	14	17	110	11	16,5	
MSU150174STN MF20X1,5	20	1,5	16	17	125	12	18,5	
MSU150174STN MF22X1,5	22	1,5	18	18	125	14,5	20,5	
MSU150174STN MF24X1,5	24	1,5	18	20	140	14,5	22,5	

-  PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
-  FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
-  FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
-  POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

 **PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150174STNW MF..**

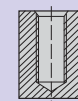
MF 8 - 24

**NEW**

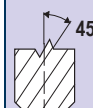
**MF**

RIVESTIM.  
COATED  
**TT**

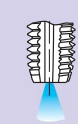
**PM3**



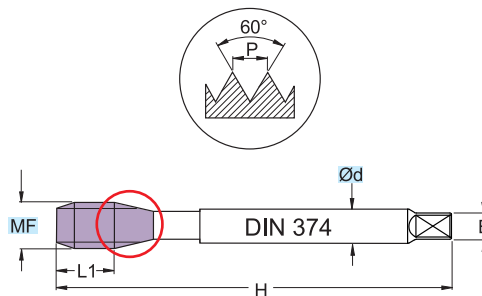
**2-3  
FILL**



**TOLL  
6HX**



**SINCRO**



○ = RASTREMAZIONE - TAPER

ART.	DIN 374 (mm)		Ød	L1	H	B	Preforo Prebore
	MF	P					
MSU150174STNW MF8X1	8	1	6	13	90	4,9	7
MSU150174STNW MF10X1	10	1	7	15	90	5,5	9
MSU150174STNW MF10X1,25	10	1,25	7	15	100	5,5	8,75
MSU150174STNW MF12X1	12	1	9	13	100	7	11
MSU150174STNW MF12X1,25	12	1,25	9	13	100	7	10,75
MSU150174STNW MF12X1,5	12	1,5	9	13	100	7	10,5
MSU150174STNW MF14X1,5	14	1,5	11	15	100	9	12,5
MSU150174STNW MF16X1,5	16	1,5	12	15	100	9	14,5
MSU150174STNW MF18X1,5	18	1,5	14	17	110	11	16,5
MSU150174STNW MF20X1,5	20	1,5	16	17	125	12	18,5
MSU150174STNW MF22X1,5	22	1,5	18	18	125	14,5	20,5
MSU150174STNW MF24X1,5	24	1,5	18	20	140	14,5	22,5

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

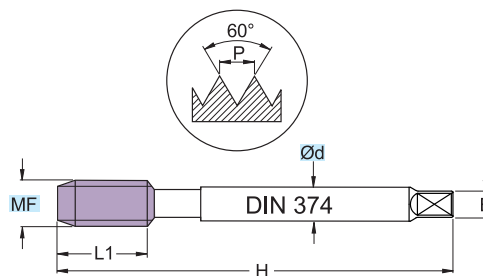
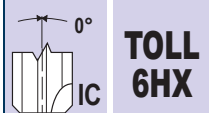
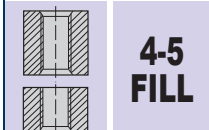
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSI2174TB MF..**

MF 8 - 24



RIVESTIM.  
 COATED  
**TIALN+C**  
**HSSV3**



DIN 374		(mm)						Preforo Prebore
ART.	MF	P	Ød	L1	H	B		
MSI2174TB MF8X1	8	1	6	18	90	4,9	7	
MSI2174TB MF10X1	10	1	7	15	90	5,5	9	
MSI2174TB MF10X1,25	10	1,25	7	20	100	5,5	8,75	
MSI2174TB MF12X1,25	12	1,25	9	22	100	7	10,75	
MSI2174TB MF12X1,5	12	1,5	9	22	100	7	10,5	
MSI2174TB MF14X1,5	14	1,5	11	22	100	9	12,5	
MSI2174TB MF16X1,5	16	1,5	12	22	100	9	14,5	
MSI2174TB MF18X1,5	18	1,5	14	25	110	11	16,5	
MSI2174TB MF20X1,5	20	1,5	16	25	125	12	18,5	
MSI2174TB MF22X1,5	22	1,5	18	25	125	14,5	20,5	
MSI2174TB MF24X1,5	24	1,5	18	25	140	14,5	22,5	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	25-40
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED





**MSI4174TB MF..**

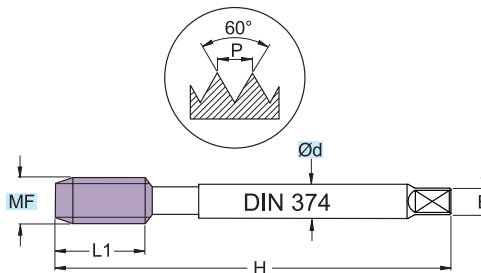
MF 8 - 24



RIVESTIM. COATED  
**TIALN+C**  
**HSSV3**

  
**2-3 FILL**

  
**TOLL 6HX**



ART.	DIN 374 (mm)							Preforo Prebore
	MF	P	Ød	L1	H	B		
MSI4174TB MF8X1	8	1	6	13	90	4,9	7	
MSI4174TB MF10X1	10	1	7	15	90	5,5	9	
MSI4174TB MF10X1,25	10	1,25	7	15	100	5,5	8,75	
MSI4174TB MF12X1	12	1	9	13	100	7	11	
MSI4174TB MF12X1,25	12	1,25	9	13	100	7	10,75	
MSI4174TB MF12X1,5	12	1,5	9	13	100	7	10,5	
MSI4174TB MF14X1,5	14	1,5	11	15	100	9	12,5	
MSI4174TB MF16X1,5	16	1,5	12	15	100	9	14,5	
MSI4174TB MF18X1,5	18	1,5	14	17	110	11	16,5	
MSI4174TB MF20X1,5	20	1,5	16	17	125	12	18,5	
MSI4174TB MF22X1,5	22	1,5	18	18	125	14,5	20,5	
MSI4174TB MF24X1,5	24	1,5	18	20	140	14,5	22,5	

**PARAMETRI - PARAMETERS**

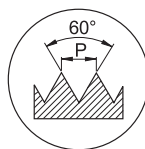
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	25-40
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	8-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

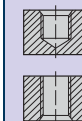
**MSG1171SNS MF..**  
**MSG1174SNS MF..**

MF 8 - 30

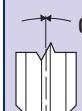


RIVESTIM.  
 COATED  
**SNS**

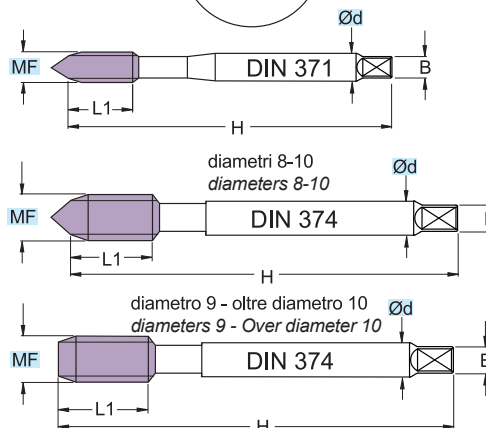
**HSSE**



**2-3  
 FILL**



**TOLL  
 6HX**



DIN 371 (mm)							
ART.	MF	P	Ød	L1	H	B	Preforo Prebore
MSG1171SNS MF8X1	8	1	8	18	90	6,2	7
MSG1171SNS MF10X1	10	1	10	15	90	8	9
MSG1171SNS MF10X1,25	10	1,25	10	20	100	8	8,75

DIN 374 (mm)							
ART.	MF	P	Ød	L1	H	B	Preforo Prebore
MSG1174SNS MF8X1	8	1	6	18	90	4,9	7
MSG1174SNS MF9X1	9	1	7	18	90	5,5	9
MSG1174SNS MF10X1	10	1	7	15	90	5,5	9
MSG1174SNS MF10X1,25	10	1,25	7	20	100	5,5	8,75
MSG1174SNS MF12X1	12	1	9	22	100	7	11
MSG1174SNS MF12X1,25	12	1,25	9	22	100	7	10,75
MSG1174SNS MF12X1,5	12	1,5	9	22	100	7	10,5
MSG1174SNS MF14X1	14	1	11	22	100	9	13
MSG1174SNS MF14X1,25	14	1,25	11	22	100	9	12,75
MSG1174SNS MF14X1,5	14	1,5	11	22	100	9	12,5
MSG1174SNS MF16X1,5	16	1,5	12	22	100	9	14,5
MSG1174SNS MF18X1,5	18	1,5	14	25	110	11	16,5
MSG1174SNS MF20X1,5	20	1,5	16	25	125	12	18,5
MSG1174SNS MF22X1,5	22	1,5	18	25	125	14,5	20,5
MSG1174SNS MF24X1,5	24	1,5	18	25	140	14,5	22,5
MSG1174SNS MF27X1,5	27	1,5	20	25	140	16	25,5
MSG1174SNS MF27X2	27	2	20	25	140	16	25
MSG1174SNS MF30X1,5	30	1,5	22	28	150	18	28,5
MSG1174SNS MF30X2	30	2	22	28	150	18	28

**PARAMETRI - PARAMETERS**

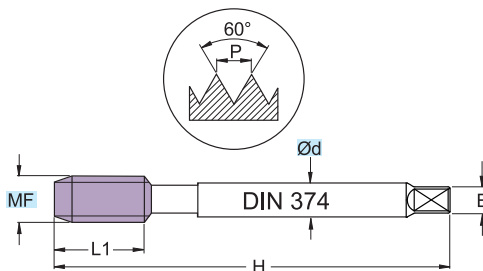
MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 15-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSG010174TL MF..**

MF 8 - 24



RIVESTIM. COATED <b>TIALN</b>	<b>PM3</b>
	<b>2-3 FILL</b>
	<b>TOLL 6HX</b>

ART.	DIN 374 (mm)							Preforo Prebore
	MF	P	Ød	L1	H	B		
MSG010174TL MF 8X1	8	1	6	18	90	4,9	7	
MSG010174TL MF 10X1	10	1	7	15	90	5,5	9	
MSG010174TL MF 10X1,25	10	1,25	7	20	100	5,5	8,75	
MSG010174TL MF 12X1,25	12	1,25	9	22	100	7	10,75	
MSG010174TL MF 12X1,5	12	1,5	9	22	100	7	10,5	
MSG010174TL MF 14X1,5	14	1,5	11	22	100	9	12,5	
MSG010174TL MF 16X1,5	16	1,5	12	22	100	9	14,5	
MSG010174TL MF 18X1,5	18	1,5	14	25	110	11	16,5	
MSG010174TL MF 20X1,5	20	1,5	16	25	125	12	18,5	
MSG010174TL MF 22X1,5	22	1,5	18	25	125	14,5	20,5	
MSG010174TL MF 24X1,5	24	1,5	18	25	140	14,5	22,5	

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 20-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



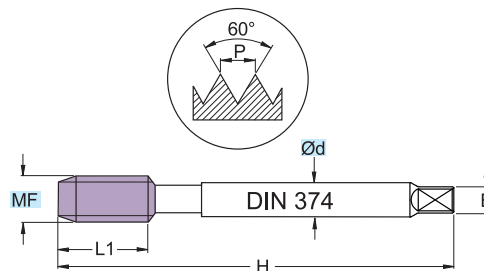
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSG010174TLW MF..**

MF 8 - 24



RIVESTIM. COATED <b>TIALN</b>	<b>PM3</b>
	<b>2-3 FILL</b>
	<b>TOLL 6HX</b>



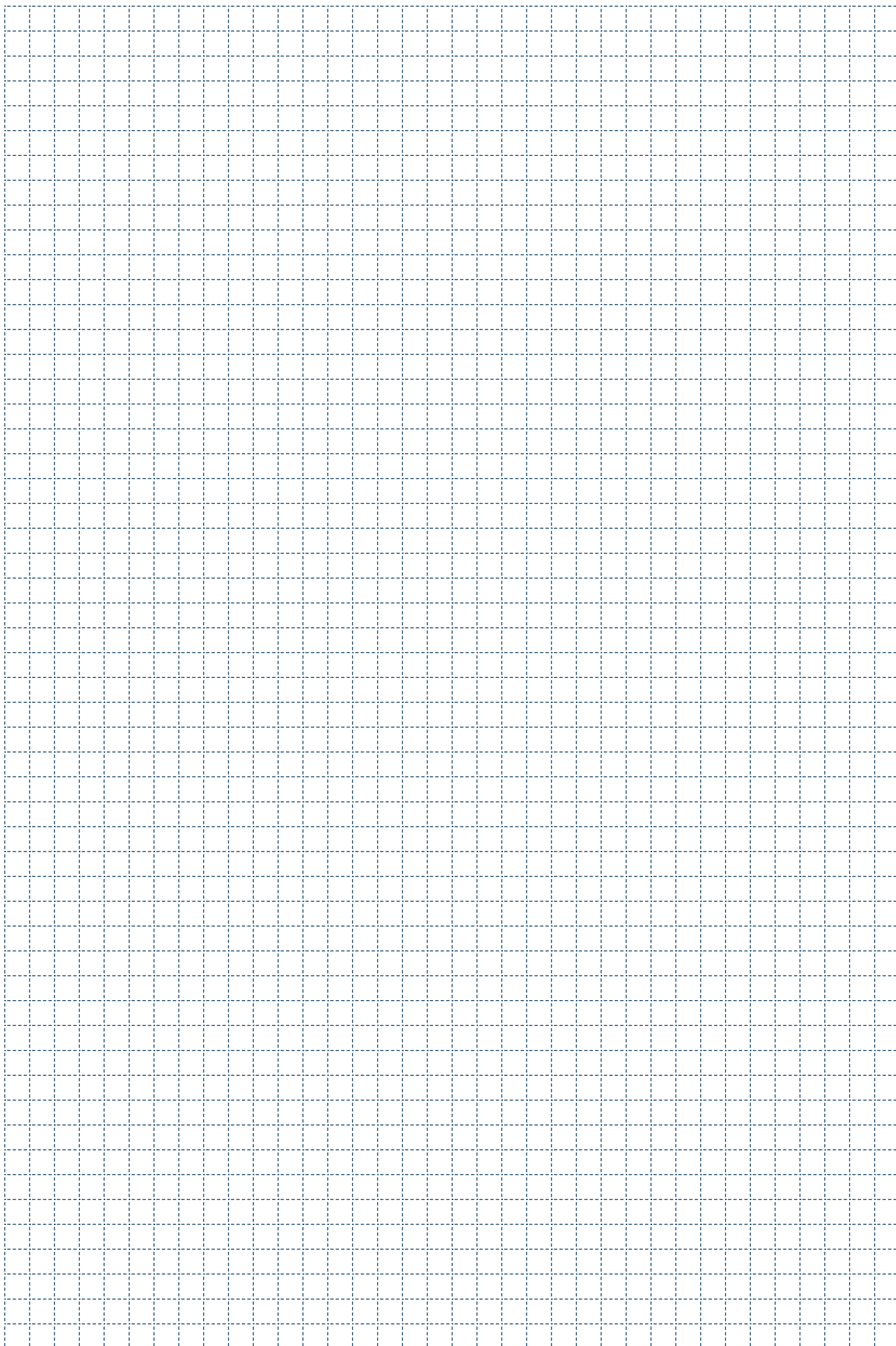
ART.	DIN 374 (mm)						Preforo Prebore
	MF	P	Ød	L1	H	B	
MSG010174TLW MF 8X1	8	1	6	18	90	4,9	7
MSG010174TLW MF 10X1	10	1	7	15	90	5,5	9
MSG010174TLW MF 10X1,25	10	1,25	7	20	100	5,5	8,75
MSG010174TLW MF 12X1,25	12	1,25	9	22	100	7	10,75
MSG010174TLW MF 12X1,5	12	1,5	9	22	100	7	10,5
MSG010174TLW MF 14X1,5	14	1,5	11	22	100	9	12,5
MSG010174TLW MF 16X1,5	16	1,5	12	22	100	9	14,5
MSG010174TLW MF 18X1,5	18	1,5	14	25	110	11	16,5
MSG010174TLW MF 20X1,5	20	1,5	16	25	125	12	18,5
MSG010174TLW MF 22X1,5	22	1,5	18	25	125	14,5	20,5
MSG010174TLW MF 24X1,5	24	1,5	18	25	140	14,5	22,5

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 20-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED





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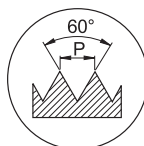
# FILETTATURA AMERICANA (UNC)

US STANDARD SCREW THREAD (UNC)  
GEWINDESCHNEIDEN - (UNC) GEWINDE  
FILETAGE AMERICAIN (UNC)  
ROSCA AMERICANA UNIFICADA DE PASO NORMAL (UNC)

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**MSA2376VP UNC..**

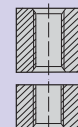
UNC 1/4 - 1"



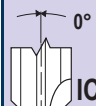
**UNC**

RIVESTIM.  
COATED  
**VP**

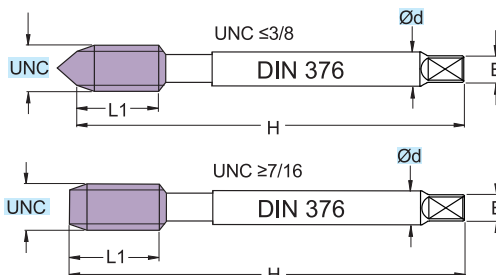
**HSSE**



**4-5  
FILL**



**TOLL  
2B**



**DIN 376**

(mm)

ART.	UNC(")	P/tpi	$\varnothing d$	L1	H	B	Preforo Prebore
MSA2376VP UNC1/4-20	1/4	20	4,5	16	80	3,4	5,1
MSA2376VP UNC5/16-18	5/16	18	6	18	90	4,9	6,6
MSA2376VP UNC3/8-16	3/8	16	7	20	100	5,5	8,0
MSA2376VP UNC7/16-14	7/16	14	8	20	100	6,2	9,4
MSA2376VP UNC1/2-13	1/2	13	9	25	110	7	10,8
MSA2376VP UNC9/16-12	9/16	12	11	28	110	9	12,2
MSA2376VP UNC5/8-11	5/8	11	12	28	110	9	13,5
MSA2376VP UNC3/4-10	3/4	10	14	32	125	11	16,5
MSA2376VP UNC7/8-9	7/8	9	18	32	140	14,5	19,5
MSA2376VP UNC1-8	1"	8	18	36	160	14,5	22,25

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

**PARAMETRI - PARAMETERS**

**MATERIALI - MATERIALS** Pag. 1063

**Vc** m/min

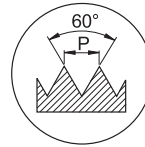
	MATERIALI - MATERIALS		Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

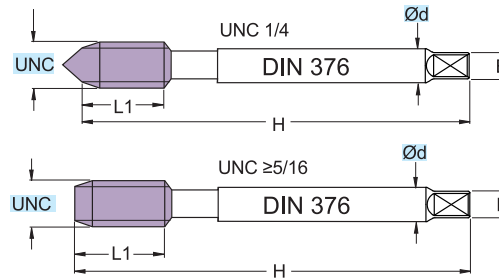
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSA4376VP UNC..**

UNC 1/4 - 1"



RIVESTIM. COATED <b>VP</b>	<b>HSSE</b>
	<b>2-3 FILL</b>
	<b>TOLL 2B</b>



DIN 376		(mm)						
ART.	UNC(*)	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSA4376VP UNC1/4-20	1/4	20	4,5	10	80	3,4	5,1	
MSA4376VP UNC5/16-18	5/16	18	6	13	90	4,9	6,6	
MSA4376VP UNC3/8-16	3/8	16	7	15	100	5,5	8,0	
MSA4376VP UNC7/16-14	7/16	14	8	15	100	6,2	9,4	
MSA4376VP UNC1/2-13	1/2	13	9	18	110	7	10,8	
MSA4376VP UNC9/16-12	9/16	12	11	20	110	9	12,2	
MSA4376VP UNC5/8-11	5/8	11	12	20	110	9	13,5	
MSA4376VP UNC3/4-10	3/4	10	14	25	125	11	16,5	
MSA4376VP UNC7/8-9	7/8	9	18	25	140	14,5	19,5	
MSA4376VP UNC1-8	1"	8	18	30	160	14,5	22,25	

↑

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

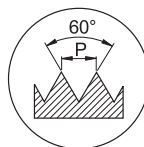
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED



**MSU020371STN UNC..**  
**MSU020376STN UNC..**

UNC 4 - 1"

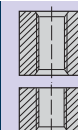
**NEW**



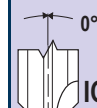
**UNC**

RIVESTIM.  
 COATED  
**TT**

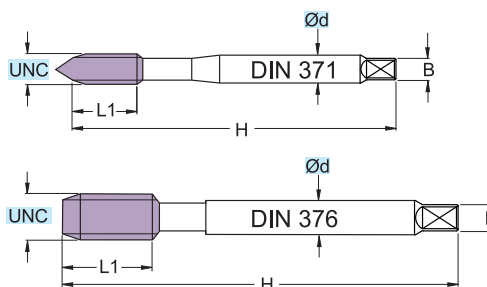
**PM3**



**4-5 FILL**



**TOLL 2BX**



DIN 371		(mm)						
ART.	UNC(")	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSU020371STN UNC 4-40	4	40	3,5	10	56	2,7	2,35	
MSU020371STN UNC 5-40	5	40	3,5	10	56	2,7	2,65	
MSU020371STN UNC 6-32	6	32	4	11	56	3	2,85	
MSU020371STN UNC 8-32	8	32	4,5	13	63	3,4	3,5	
MSU020371STN UNC 10-24	10	24	6	13	70	4,9	3,9	
MSU020371STN UNC 1/4-20	1/4	20	7	16	80	5,5	5,1	
MSU020371STN UNC 5/16-18	5/16	18	8	18	90	6,2	6,6	
MSU020371STN UNC 3/8-16	3/8	16	10	20	100	8	8,0	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

DIN 376		(mm)						
ART.	UNC(")	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSU020376STN UNC 7/16-14	7/16	14	8	20	100	6,2	9,4	
MSU020376STN UNC 1/2-13	1/2	13	9	25	110	7	10,8	
MSU020376STN UNC 9/16-12	9/16	12	11	28	110	9	12,2	
MSU020376STN UNC 5/8-11	5/8	11	12	28	110	9	13,5	
MSU020376STN UNC 3/4-10	3/4	10	14	32	125	11	16,5	
MSU020376STN UNC 7/8-9	7/8	9	18	32	140	14,5	19,5	
MSU020376STN UNC 1"-8	1"	8	18	36	160	14,5	22,25	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	●	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

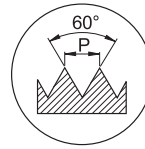
**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150371STN UNC..**  
**MSU150376STN UNC..**

UNC 4 - 1"

**NEW**



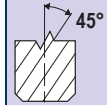
**UNC**

RIVESTIM.  
 COATED  
**TT**

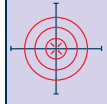
**PM3**



**2-3  
 FILL**

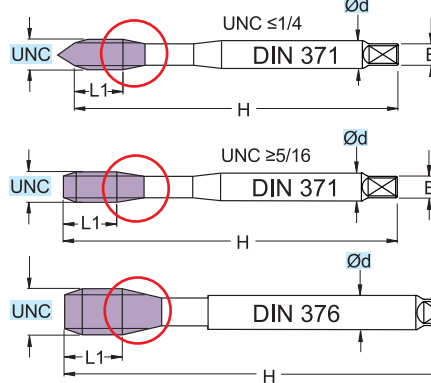


**TOLL  
 2BX**



**SINCRO**

○ = RASTREMAZIONE - TAPER



DIN 371		(mm)					
ART.	UNC(")	P/tpi	Ød	L1	H	B	Preforo Prebore
MSU150371STN UNC 4-40	4	40	3,5	5	56	2,7	2,35
MSU150371STN UNC 5-40	5	40	3,5	5	56	2,7	2,65
MSU150371STN UNC 6-32	6	32	4	7	56	3	2,85
MSU150371STN UNC 8-32	8	32	4,5	7	63	3,4	3,5
MSU150371STN UNC 10-24	10	24	6	8	70	4,9	3,9
MSU150371STN UNC 1/4-20	1/4	20	7	10	80	5,5	5,1
MSU150371STN UNC 5/16-18	5/16	18	8	13	90	6,2	6,6
MSU150371STN UNC 3/8-16	3/8	16	10	15	100	8	8,0

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUCES

DIN 376		(mm)					
ART.	UNC(")	P/tpi	Ød	L1	H	B	Preforo Prebore
MSU150376STN UNC 7/16-14	7/16	14	8	15	100	6,2	9,4
MSU150376STN UNC 1/2-13	1/2	13	9	18	110	7	10,8
MSU150376STN UNC 9/16-12	9/16	12	11	20	110	9	12,2
MSU150376STN UNC 5/8-11	5/8	11	12	20	110	9	13,5
MSU150376STN UNC 3/4-10	3/4	10	14	25	125	11	16,5
MSU150376STN UNC 7/8-9	7/8	9	18	25	140	14,5	19,5
MSU150376STN UNC 1"-8	1"	8	18	30	160	14,5	22,25

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUCES

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

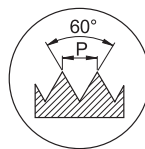
PAG. 1034

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150371STNW UNC..**  
**MSU150376STNW UNC..**

UNC 1/4 - 1"

**NEW**

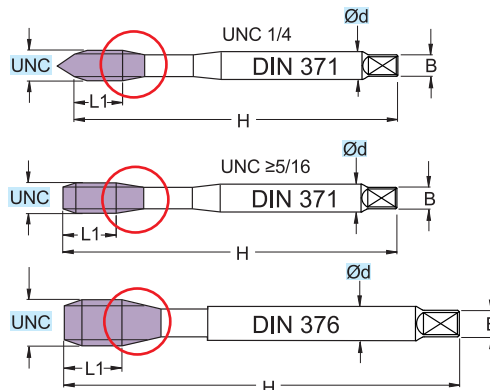


**UNC**

RIVESTIM. COATED <b>TT</b>	<b>PM3</b>
	<b>2-3 FILL</b>
	<b>TOLL 2BX</b>
	<b>SINCRO</b>



○ = RASTREMAZIONE - TAPER



DIN 371		(mm)						Preforo Prebore
ART.	UNC(")	P/tpi	Ød	L1	H	B		
MSU150371STNW UNC 1/4-20	1/4	20	7	10	80	5,5	5,1	
MSU150371STNW UNC 5/16-18	5/16	18	8	13	90	6,2	6,6	
MSU150371STNW UNC 3/8-16	3/8	16	10	15	100	8	8,0	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

DIN 376		(mm)						Preforo Prebore
ART.	UNC(")	P/tpi	Ød	L1	H	B		
MSU150376STNW UNC 7/16-14	7/16	14	8	15	100	6,2	9,4	
MSU150376STNW UNC 1/2-13	1/2	13	9	18	110	7	10,8	
MSU150376STNW UNC 9/16-12	9/16	12	11	20	110	9	12,2	
MSU150376STNW UNC 5/8-11	5/8	11	12	20	110	9	13,5	
MSU150376STNW UNC 3/4-10	3/4	10	14	25	125	11	16,5	
MSU150376STNW UNC 7/8-9	7/8	9	18	25	140	14,5	19,5	
MSU150376STNW UNC 1"-8	1"	8	18	30	160	14,5	22,25	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

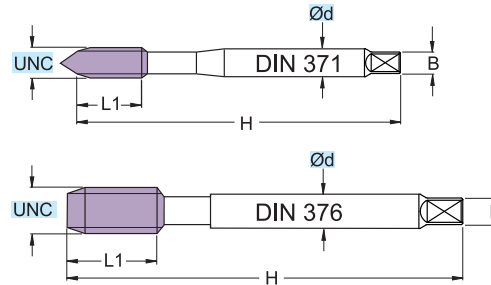
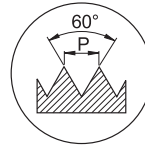
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSI020371TB UNC..**  
**MSI020376TB UNC..**

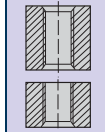
UNC 1/4 - 5/8



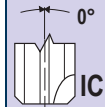
**UNC**

RIVESTIM.  
 COATED  
**TIALN+C**

**HSSV3**



**4-5  
 FILL**



**TOLL  
 2BX**

DIN 371		(mm)						Preforo Prebore
ART.	UNC(*)	P/tpi	Ød	L1	H	B		
MSI020371TB UNC 1/4-20	1/4	20	7	16	80	5,5	5,1	
MSI020371TB UNC 5/16-18	5/16	18	8	18	90	6,2	6,6	
MSI020371TB UNC 3/8-16	3/8	16	10	20	100	8	8,0	

↑

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

DIN 376		(mm)						Preforo Prebore
ART.	UNC(*)	P/tpi	Ød	L1	H	B		
MSI020376TB UNC 7/16-14	7/16	14	8	20	100	6,2	9,4	
MSI020376TB UNC 1/2-13	1/2	13	9	25	110	7	10,8	
MSI020376TB UNC 9/16-12	9/16	12	11	28	110	9	12,2	
MSI020376TB UNC 5/8-11	5/8	11	12	28	110	9	13,5	

↑

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

**PARAMETRI - PARAMETERS**

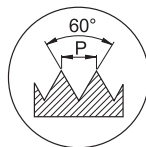
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

PAG. 1034

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

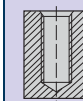
**MSI160371TB UNC..**  
**MSI160376TB UNC..**

UNC 1/4 - 5/8

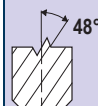


RIVESTIM.  
 COATED  
**TIALN+C**

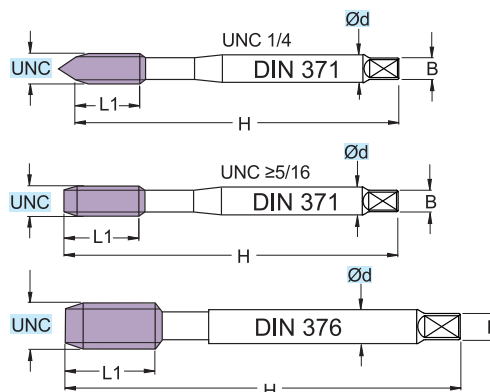
**HSSV3**



**2-3 FILL**



**TOLL 2BX**



DIN 371		(mm)						Preforo Prebore
ART.	UNC(°)	P/tpi	Ød	L1	H	B		
MSI160371TB UNC 1/4-20	1/4	20	7	10	80	5,5	5,1	
MSI160371TB UNC 5/16-18	5/16	18	8	13	90	6,2	6,6	
MSI160371TB UNC 3/8-16	3/8	16	10	15	100	8	8,0	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

DIN 376		(mm)						Preforo Prebore
ART.	UNC(°)	P/tpi	Ød	L1	H	B		
MSI160376TB UNC 7/16-14	7/16	14	8	15	100	6,2	9,4	
MSI160376TB UNC 1/2-13	1/2	13	9	18	110	7	10,8	
MSI160376TB UNC 9/16-12	9/16	12	11	20	110	9	12,2	
MSI160376TB UNC 5/8-11	5/8	11	12	20	110	9	13,5	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

**PARAMETRI - PARAMETERS**

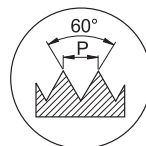
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	8-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

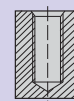
**MSG1376SNS UNC..**

UNC 5/16 - 1"

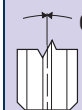


RIVESTIM.  
 COATED  
**SNS**

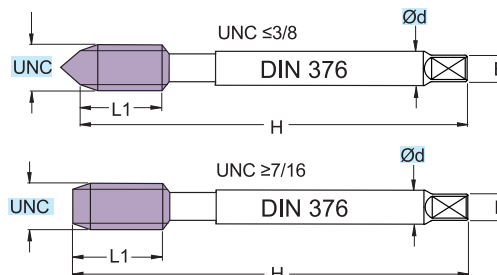
**HSSE**



**2-3  
 FILL**



**TOLL  
 2BX**



DIN 376		(mm)						
ART.	UNC(*)	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSG1376SNS UNC5/16-18	5/16	18	6	18	90	4,9	6,6	
MSG1376SNS UNC3/8-16	3/8	16	7	20	100	5,5	8,0	
MSG1376SNS UNC7/16-14	7/16	14	8	20	100	6,2	9,4	
MSG1376SNS UNC1/2-13	1/2	13	9	25	110	7	10,8	
MSG1376SNS UNC9/16-12	9/16	12	11	28	110	9	12,2	
MSG1376SNS UNC5/8-11	5/8	11	12	28	110	9	13,5	
MSG1376SNS UNC3/4-10	3/4	10	14	32	125	11	16,5	
MSG1376SNS UNC7/8-9	7/8	9	18	32	140	14,5	19,5	
MSG1376SNS UNC1-8	1"	8	18	36	160	14,5	22,25	

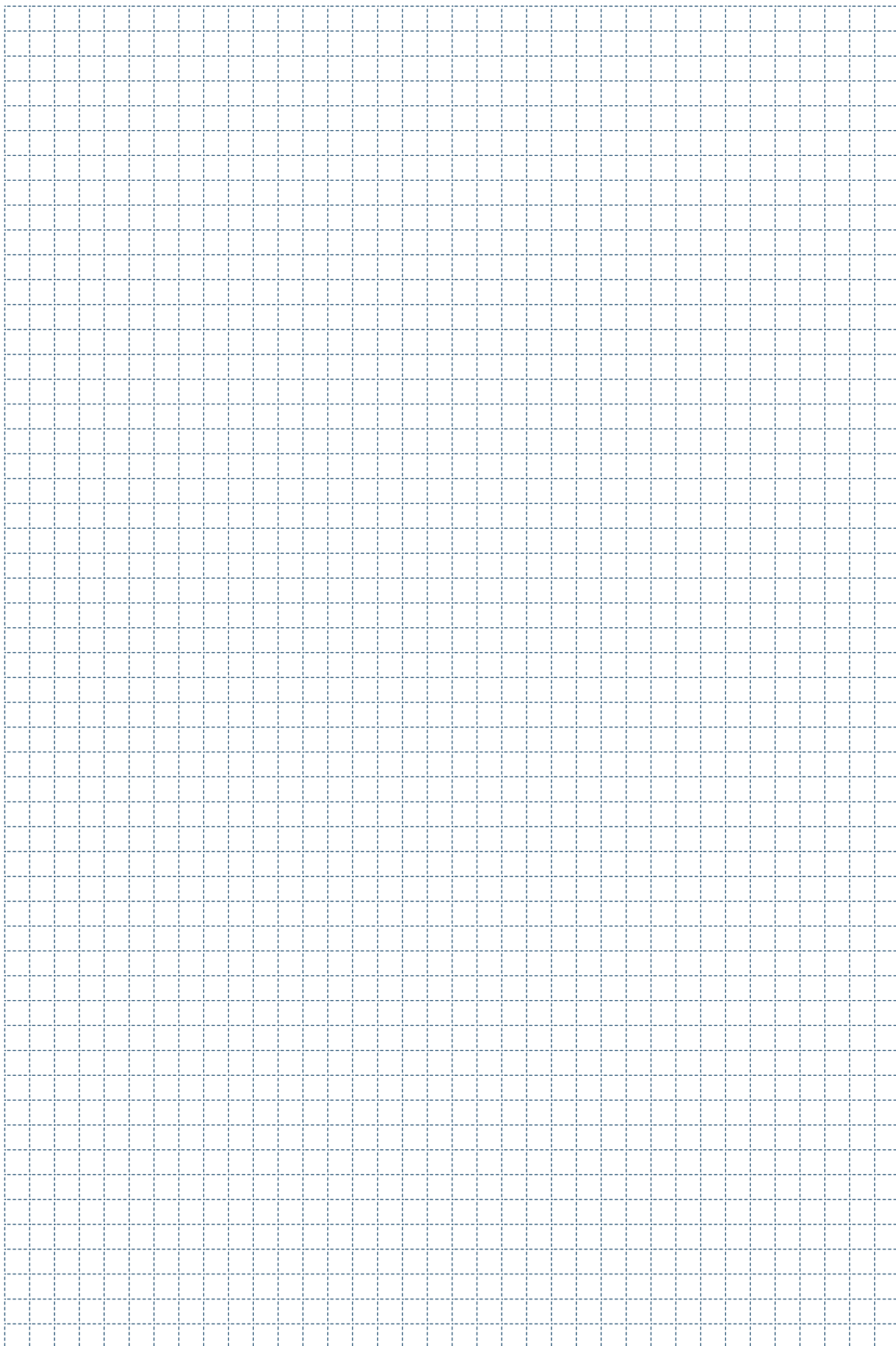
↑

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063		V <sub>c</sub> m/min
<b>P</b>	ACCIAIO - STEEL	
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	● 15-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○ 25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	

V<sub>c</sub> = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED





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# FILETTATURA AMERICANA (UNF)

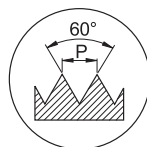
US STANDARD SCREW THREAD (UNF)  
GEWINDESCHNEIDEN - (UNF) GEWINDE  
FILETAGE AMERICAIN (UNF)  
ROSCA AMERICANA UNIFICADA DE PASO FINO (UNF)

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**MSA2474VP UNF..**

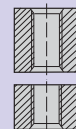
UNF 1/4 - 1"



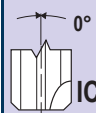
**UNF**

RIVESTIM.  
COATED  
**VP**

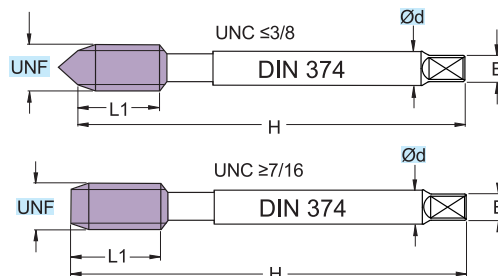
**HSSE**



**4-5  
FILL**



**TOLL  
2B**



**DIN 374**

(mm)

ART.	UNF(°)	P/tpi	$\varnothing d$	L1	H	B	Preforo Prebore
MSA2474VP UNF1/4-28	1/4	28	4,5	16	80	3,4	5,5
MSA2474VP UNF5/16-24	5/16	24	6	18	90	4,9	6,9
MSA2474VP UNF3/8-24	3/8	24	7	15	90	5,5	8,5
MSA2474VP UNF7/16-20	7/16	20	8	20	100	6,2	9,9
MSA2474VP UNF1/2-20	1/2	20	9	20	100	7	11,5
MSA2474VP UNF9/16-18	9/16	18	11	22	100	9	12,9
MSA2474VP UNF5/8-18	5/8	18	12	22	100	9	14,5
MSA2474VP UNF3/4-16	3/4	16	14	25	110	11	17,5
MSA2474VP UNF7/8-14	7/8	14	18	25	125	14,5	20,4
MSA2474VP UNF1-12	1"	12	18	28	140	14,5	23,25

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

**PARAMETRI - PARAMETERS**

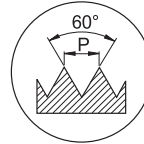
MATERIALI - MATERIALS Pag. 1063		Vc m/min
<b>P</b>	ACCIAIO - STEEL	●
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	
<b>K</b>	GHISA - CAST IRON	
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL	

**PAG. 1034**

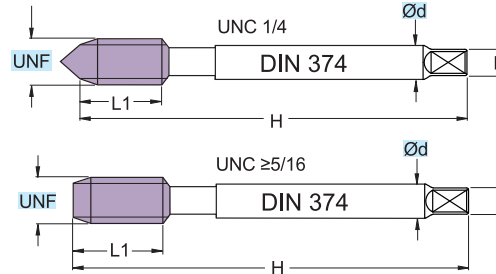
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSA4474VP UNF..**

UNF 1/4 - 1"



RIVESTIM. COATED <b>VP</b>	<b>HSSE</b>
	<b>2-3 FILL</b>
	<b>TOLL 2B</b>



DIN 374		(mm)						
ART.	UNF(°)	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSA4474VP UNF1/4-28	1/4	28	4,5	10	80	3,4	5,5	
MSA4474VP UNF5/16-24	5/16	24	6	13	90	4,9	6,9	
MSA4474VP UNF3/8-24	3/8	24	7	15	90	5,5	8,5	
MSA4474VP UNF7/16-20	7/16	20	8	15	100	6,2	9,9	
MSA4474VP UNF1/2-20	1/2	20	9	13	100	7	11,5	
MSA4474VP UNF9/16-18	9/16	18	11	15	100	9	12,9	
MSA4474VP UNF5/8-18	5/8	18	12	15	100	9	14,5	
MSA4474VP UNF3/4-16	3/4	16	14	17	110	11	17,5	
MSA4474VP UNF7/8-14	7/8	14	18	18	125	14,5	20,4	
MSA4474VP UNF1-12	1"	12	18	22	140	14,5	23,25	

↑

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUCES

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

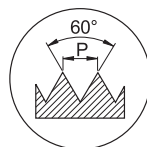


Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

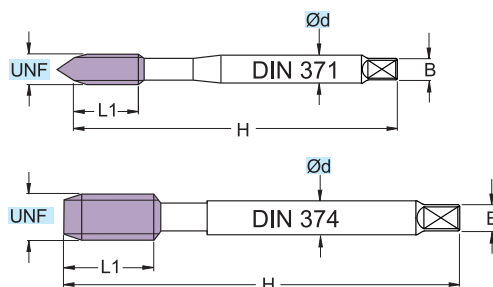
**MSU020471STN UNF..**  
**MSU020474STN UNF..**

UNF 4 - 1"

**NEW**



RIVESTIM. COATED <b>TT</b>	<b>PM3</b>
	<b>4-5 FILL</b>
	<b>TOLL 2BX</b>



DIN 371		(mm)						Preforo Prebore
ART.	UNF(°)	P/tpi	Ød	L1	H	B		
MSU020471STN UNF 4-48	4	48	3,5	10	56	2,7	2,4	
MSU020471STN UNF 6-40	6	40	4	11	56	3	2,95	
MSU020471STN UNF 8-36	8	36	4,5	13	63	3,4	3,5	
MSU020471STN UNF 10-32	10	32	6	13	70	4,9	4,1	
MSU020471STN UNF 1/4-28	1/4	28	7	16	80	5,5	5,5	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

DIN 374		(mm)						Preforo Prebore
ART.	UNF(°)	P/tpi	Ød	L1	H	B		
MSU020474STN UNF 5/16-24	5/16	24	6	18	90	4,9	6,9	
MSU020474STN UNF 3/8-24	3/8	24	7	15	90	5,5	8,5	
MSU020474STN UNF 7/16-20	7/16	20	8	20	100	6,2	9,9	
MSU020474STN UNF 1/2-20	1/2	20	9	20	100	7	11,5	
MSU020474STN UNF 9/16-18	9/16	18	11	22	100	9	12,9	
MSU020474STN UNF 5/8-18	5/8	18	12	22	100	9	14,5	
MSU020474STN UNF 3/4-16	3/4	16	14	25	110	11	17,5	
MSU020474STN UNF 7/8-14	7/8	14	18	25	125	14,5	20,4	
MSU020474STN UNF 1"-12	1"	12	18	28	140	14,5	23,25	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	●	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

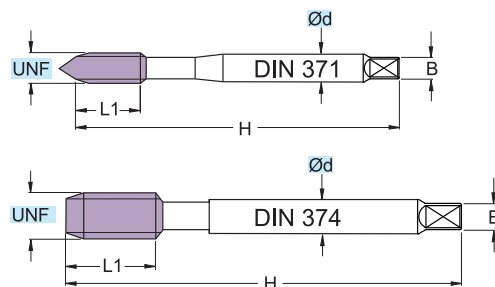
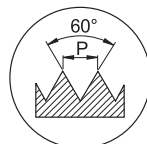


Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150471STN UNF..**  
**MSU150474STN UNF..**

UNF 4 - 1"

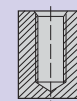
**NEW**



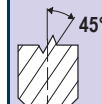
**UNF**

RIVESTIM.  
 COATED  
**TT**

**PM3**



**2-3 FILL**



**TOLL 2BX**



**SINCRO**

DIN 371		(mm)						Preforo Prebore
ART.	UNF(")	P/tpi	Ød	L1	H	B		
MSU150471STN UNF 4-48	4	48	3,5	5	56	2,7	2,4	
MSU150471STN UNF 6-40	6	40	4	7	56	3	2,95	
MSU150471STN UNF 8-36	8	36	4,5	7	63	3,4	3,5	
MSU150471STN UNF 10-32	10	32	6	8	70	4,9	4,1	
MSU150471STN UNF 1/4-28	1/4	28	7	10	80	5,5	5,5	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

DIN 374		(mm)						Preforo Prebore
ART.	UNF(")	P/tpi	Ød	L1	H	B		
MSU150474STN UNF 5/16-24	5/16	24	6	13	90	4,9	6,9	
MSU150474STN UNF 3/8-24	3/8	24	7	15	90	5,5	8,5	
MSU150474STN UNF 7/16-20	7/16	20	8	15	100	6,2	9,9	
MSU150474STN UNF 1/2-20	1/2	20	9	13	100	7	11,5	
MSU150474STN UNF 9/16-18	9/16	18	11	15	100	9	12,9	
MSU150474STN UNF 5/8-18	5/8	18	12	15	100	9	14,5	
MSU150474STN UNF 3/4-16	3/4	16	14	17	110	11	17,5	
MSU150474STN UNF 7/8-14	7/8	14	18	18	125	14,5	20,4	
MSU150474STN UNF 1"-12	1"	12	18	22	140	14,5	23,25	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

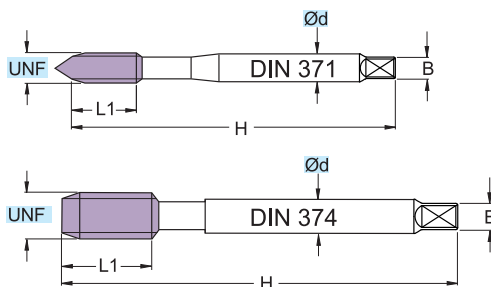
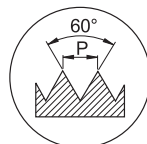
PAG. 1034

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150471STNW UNF..**  
**MSU150474STNW UNF..**

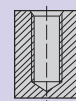
UNF 1/4 - 1"

**NEW**

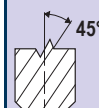


RIVESTIM.  
 COATED  
**TT**

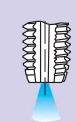
**PM3**



**2-3 FILL**



**TOLL 2BX**



**SINCRO**

DIN 371		(mm)						
ART.	UNF(")	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSU150471STNW UNF 1/4-28	1/4	28	7	10	80	5,5	5,5	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

DIN 374		(mm)						
ART.	UNF(")	P/tpi	Ød	L1	H	B	Preforo Prebore	
MSU150474STNW UNF 5/16-24	5/16	24	6	13	90	4,9	6,9	
MSU150474STNW UNF 3/8-24	3/8	24	7	15	90	5,5	8,5	
MSU150474STNW UNF 7/16-20	7/16	20	8	15	100	6,2	9,9	
MSU150474STNW UNF 1/2-20	1/2	20	9	13	100	7	11,5	
MSU150474STNW UNF 9/16-18	9/16	18	11	15	100	9	12,9	
MSU150474STNW UNF 5/8-18	5/8	18	12	15	100	9	14,5	
MSU150474STNW UNF 3/4-16	3/4	16	14	17	110	11	17,5	
MSU150474STNW UNF 7/8-14	7/8	14	18	18	125	14,5	20,4	
MSU150474STNW UNF 1"-12	1"	12	18	22	140	14,5	23,25	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

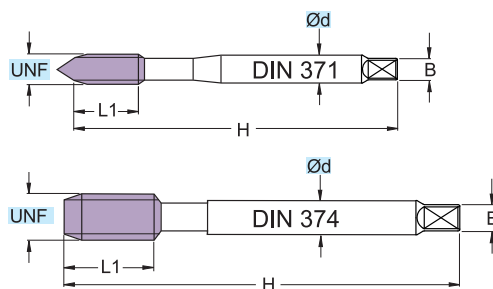
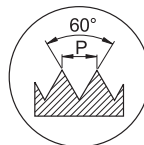
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

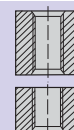
**MSI020471TB UNF..**  
**MSI020474TB UNF..**

UNF 1/4 - 5/8

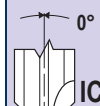


RIVESTIM.  
 COATED  
**TIALN+C**

**HSSV3**



**4-5  
 FILL**



**TOLL  
 2BX**

DIN 371 (mm)							
ART.	UNF(*)	P/tpi	Ød	L1	H	B	Preforo Prebore
MSI020471TB UNF 1/4-28	1/4	28	7	16	80	5,5	5,5

DIN 374 (mm)							
ART.	UNF(*)	P/tpi	Ød	L1	H	B	Preforo Prebore
MSI020474TB UNF 5/16-24	5/16	24	6	18	90	4,9	6,9
MSI020474TB UNF 3/8-24	3/8	24	7	15	90	5,5	8,5
MSI020474TB UNF 7/16-20	7/16	20	8	20	100	6,2	9,9
MSI020474TB UNF 1/2-20	1/2	20	9	20	100	7	11,5
MSI020474TB UNF 9/16-18	9/16	18	11	22	100	9	12,9
MSI020474TB UNF 5/8-18	5/8	18	12	22	100	9	14,5



P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

**PARAMETRI - PARAMETERS**

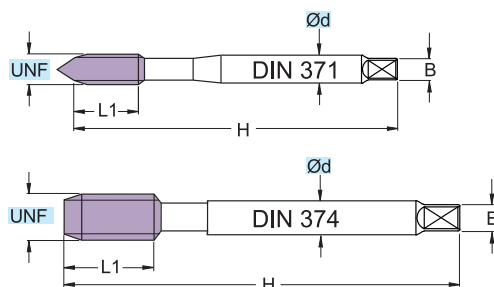
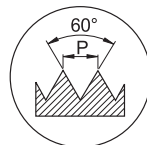
MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSI160471TB UNF..**  
**MSI160474TB UNF..**

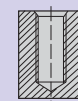
UNF 1/4 - 5/8



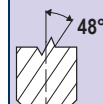
**UNF**

RIVESTIM.  
 COATED  
**TIALN+C**

**HSSV3**



**2-3  
 FILL**



**TOLL  
 2BX**

DIN 371		(mm)						Preforo Prebore
ART.	UNF(°)	P/tpi	Ød	L1	H	B		
MSI160471TB UNF 1/4-28	1/4	28	7	10	80	5,5	5,5	

DIN 374		(mm)						Preforo Prebore
ART.	UNF(°)	P/tpi	Ød	L1	H	B		
MSI160474TB UNF 5/16-24	5/16	24	6	13	90	4,9	6,9	
MSI160474TB UNF 3/8-24	3/8	24	7	15	90	5,5	8,5	
MSI160474TB UNF 7/16-20	7/16	20	8	15	100	6,2	9,9	
MSI160474TB UNF 1/2-20	1/2	20	9	13	100	7	11,5	
MSI160474TB UNF 9/16-18	9/16	18	11	15	100	9	12,9	
MSI160474TB UNF 5/8-18	5/8	18	12	15	100	9	14,5	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

**PARAMETRI - PARAMETERS**

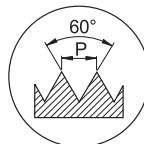
MATERIALI - MATERIALS Pag. 1063			V <sub>c</sub> m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	8-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

V<sub>c</sub> = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSG1474SNS UNF..**

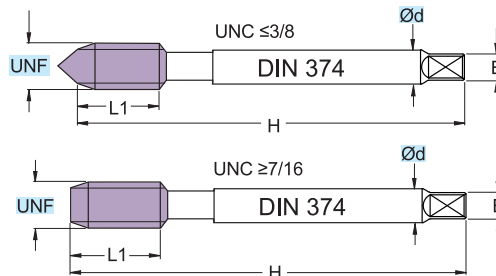
UNF 1/4 - 1"



RIVESTIM. COATED  
**SNS**  
**HSSE**

**2-3 FILL**

**TOLL 2BX**



DIN 374		(mm)						Preforo Prebore
ART.	UNF(*)	P/tpi	$\varnothing d$	L1	H	B		
MSG1474SNS UNF1/4-28	1/4	28	4,5	16	80	3,4	5,5	
MSG1474SNS UNF5/16-24	5/16	24	6	18	90	4,9	6,9	
MSG1474SNS UNF3/8-24	3/8	24	7	15	90	5,5	8,5	
MSG1474SNS UNF7/16-20	7/16	20	8	20	100	6,2	9,9	
MSG1474SNS UNF1/2-20	1/2	20	9	20	100	7	11,5	
MSG1474SNS UNF9/16-18	9/16	18	11	22	100	9	12,9	
MSG1474SNS UNF5/8-18	5/8	18	12	22	100	9	14,5	
MSG1474SNS UNF3/4-16	3/4	16	14	25	110	11	17,5	
MSG1474SNS UNF7/8-14	7/8	14	18	25	125	14,5	20,4	
MSG1474SNS UNF1-12	1"	12	18	28	140	14,5	23,25	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

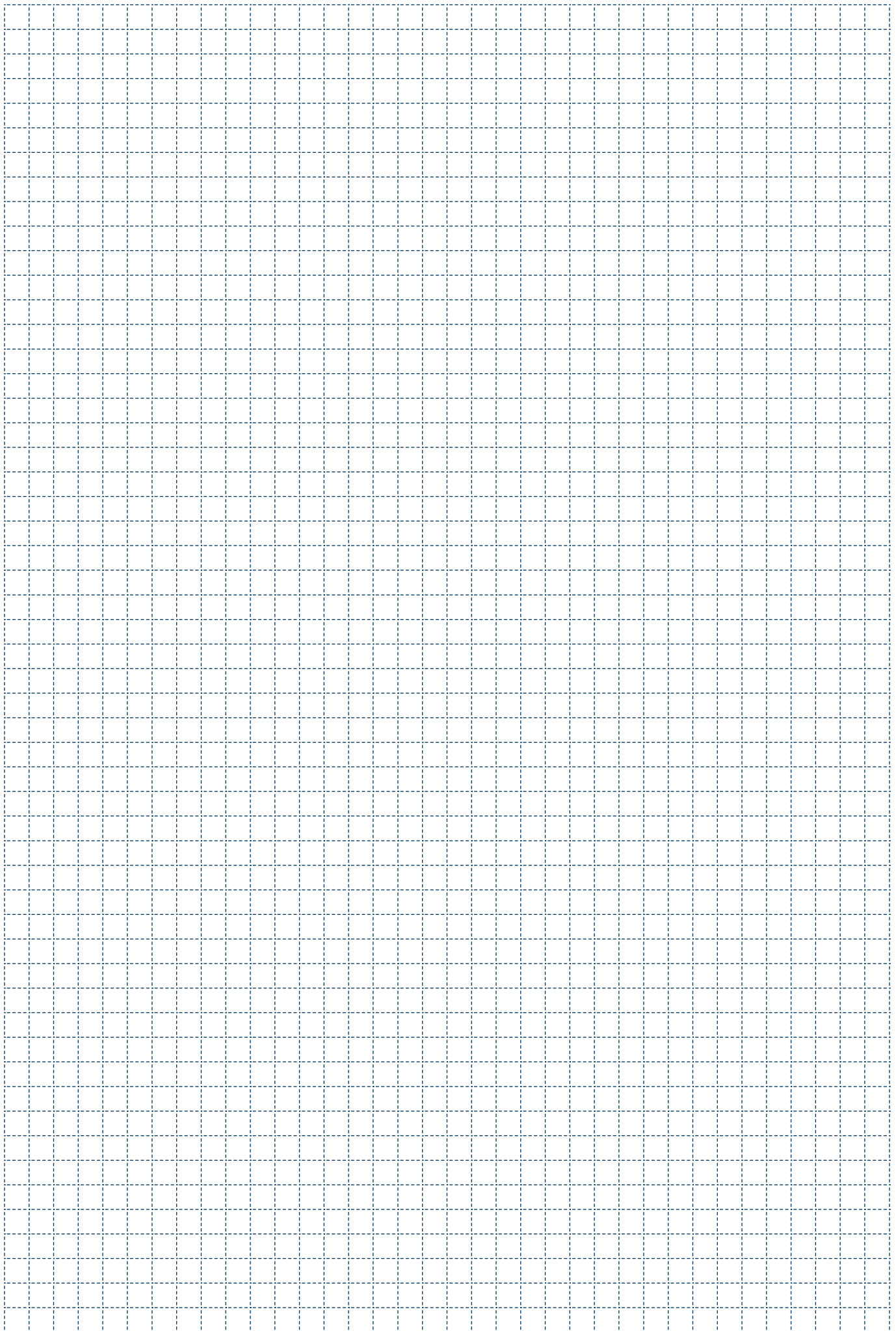
**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS		Pag. 1063	Vc	m/min
<b>P</b>	ACCIAIO - STEEL			
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL			
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL			
<b>K</b>	GHISA - CAST IRON	●		15-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○		25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY			
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL			

PAG. 1034

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED







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# FILETTATURA GAS CILINDRICA

CYLINDRICAL SCREW THREAD (GAS)  
GEWINDESCHNEIDEN - (GAS) GEWINDE  
FILETAGE (GAS) CYLINDRIQUE  
MACHOS DE MAQUINA - ROSCA (GAS)

---

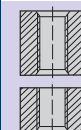
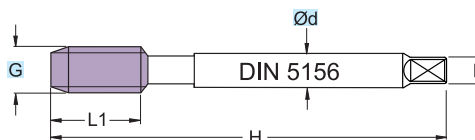
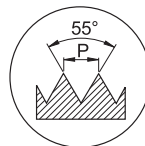
# MSA2256VP G..



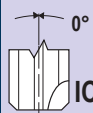
RIVESTIM.  
COATED  
**VP**

**HSSE**

G 1/8 - 1"



**4-5  
FILL**



**TOLL  
ISO  
228**

**DIN 5156**

(mm)

ART.	G(“)	P/tpi	Ød	L1	H	B	Preforo Prebore
MSA2256VP G1/8-28	1/8	28	7	15	90	5,5	8,8
MSA2256VP G1/4-19	1/4	19	11	22	100	9	11,8
MSA2256VP G3/8-19	3/8	19	12	22	100	9	15,25
MSA2256VP G1/2-14	1/2	14	16	25	125	12	19
MSA2256VP G3/4-14	3/4	14	20	25	140	16	24,5
MSA2256VP G1-11	1"	11	25	30	160	20	30,75



- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

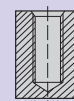
# MSA4256VP G..

G 1/8 - 1"

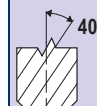


RIVESTIM.  
COATED  
**VP**

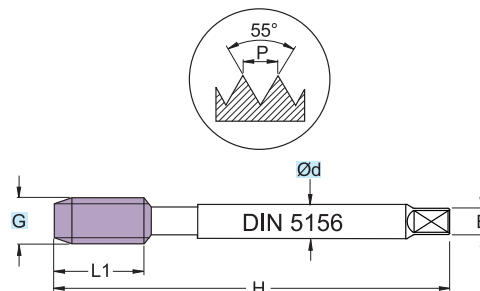
**HSSE**



**2-3  
FILL**



**TOLL  
ISO  
228**



DIN 5156		(mm)						Preforo Prebore
ART.	G(")	P/tpi	Ød	L1	H	B		
MSA4256VP G1/8-28	1/8	28	7	15	90	5,5	8,8	
MSA4256VP G1/4-19	1/4	19	11	15	100	9	11,8	
MSA4256VP G3/8-19	3/8	19	12	15	100	9	15,25	
MSA4256VP G1/2-14	1/2	14	16	18	125	12	19	
MSA4256VP G3/4-14	3/4	14	20	20	140	16	24,5	
MSA4256VP G1-11	1"	11	25	24	160	20	30,75	



- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUCES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	10-15
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	10-20
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU020256STN G..**

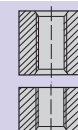
G 1/8 - 3/4

**NEW**

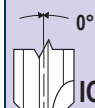
**GAS**

RIVESTIM.  
 COATED  
**TT**

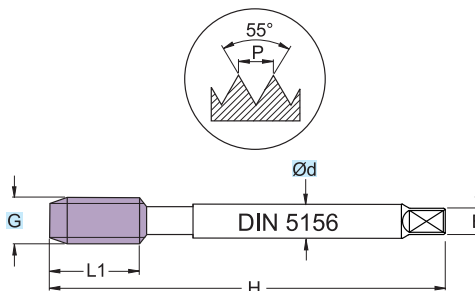
**PM3**



**4-5  
 FILL**



**TOLL  
 ISO  
 228"X"**



DIN 5156		(mm)						Preforo Prebore
ART.	G(")	P/tpi	Ød	L1	H	B		
MSU020256STN G1/8-28	1/8	28	7	15	90	5,5	8,8	
MSU020256STN G1/4-19	1/4	19	11	22	100	9	11,8	
MSU020256STN G3/8-19	3/8	19	12	22	100	9	15,25	
MSU020256STN G1/2-14	1/2	14	16	25	125	12	19	
MSU020256STN G3/4-14	3/4	14	20	25	140	16	24,5	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	●	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150256STN G..**

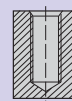
G 1/8 - 1"

**NEW**

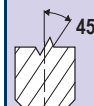
**GAS**

RIVESTIM.  
COATED  
**TT**

**PM3**



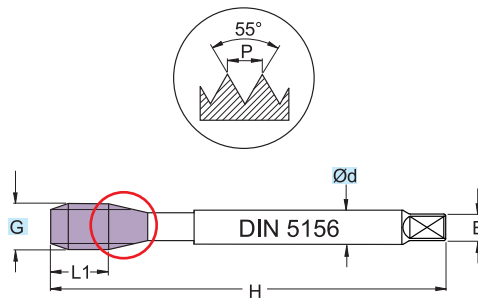
**2-3 FILL**



**TOLL ISO 228"X"**



**SINCRO**



○ = RASTREMAZIONE - TAPER

**DIN 5156**

(mm)

ART.	G(")	P/tpi	Ød	L1	H	B	Preforo Prebore
MSU150256STN G1/8-28	1/8	28	7	15	90	5,5	8,8
MSU150256STN G1/4-19	1/4	19	11	15	100	9	11,8
MSU150256STN G3/8-19	3/8	19	12	15	100	9	15,25
MSU150256STN G1/2-14	1/2	14	16	18	125	12	19
MSU150256STN G3/4-14	3/4	14	20	20	140	16	24,5
MSU150256STN G1"-11	1"	11	25	24	160	20	30,75

- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUCES

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

**MSU150256STNW G..**

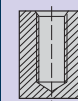
G 1/8 - 1"

**NEW**

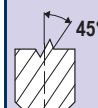
**GAS**

RIVESTIM.  
COATED  
**TT**

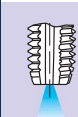
**PM3**



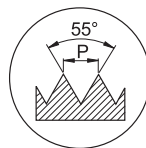
**2-3  
FILL**



**TOLL  
ISO  
228"X"**



**SINCRO**



○ = RASTREMAZIONE - TAPER



DIN 5156		(mm)						Preforo Prebore
ART.	G(")	P/tpi	Ød	L1	H	B		
MSU150256STNW G1/8-28	1/8	28	7	15	90	5,5	8,8	
MSU150256STNW G1/4-19	1/4	19	11	15	100	9	11,8	
MSU150256STNW G3/8-19	3/8	19	12	15	100	9	15,25	
MSU150256STNW G1/2-14	1/2	14	16	18	125	12	19	
MSU150256STNW G3/4-14	3/4	14	20	20	140	16	24,5	
MSU150256STNW G1"-11	1"	11	25	24	160	20	30,75	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

- PER MAGGIORI PRESTAZIONI SI CONSIGLIA MASCHIATURA SINCRONIZZATA
- FOR HIGHER PERFORMANCE WE RECOMMEND SYNCHRONIZED TAPPING
- FÜR HÖHERE LEISTUNGEN EMPFIEHLT SICH SYNCHRONISIERTES GEWINDESCHNEIDEN
- POUR PLUS DE PERFORMANCES IL EST CONSEILLE UN TARAUDAGE SYNCHRONISE

**PARAMETRI - PARAMETERS**

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-30
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL	●	5-12
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON	●	10-20
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○	20-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

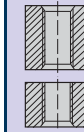
# MSI020256TB G..

G 1/8 - 3/4

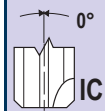


RIVESTIM.  
 COATED  
**TIALN+C**

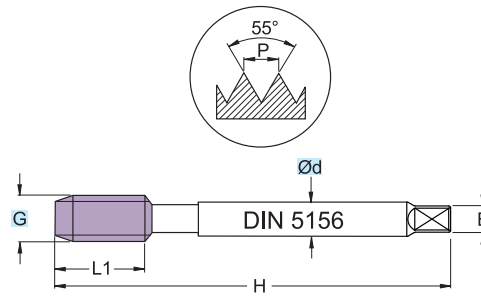
**HSSV3**



**4-5  
 FILL**



**TOLL  
 ISO  
 228"X"**



DIN 5156		(mm)					
ART.	G(°)	P/tpi	Ød	L1	H	B	Preforo Prebore
MSI020256TB G 1/8-28	1/8	28	7	15	90	5,5	8,8
MSI020256TB G 1/4-19	1/4	19	11	22	100	9	11,8
MSI020256TB G 3/8-19	3/8	19	12	22	100	9	15,25
MSI020256TB G 1/2-14	1/2	14	16	25	125	12	19
MSI020256TB G 3/4-14	3/4	14	20	25	140	16	24,5



- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	6-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED



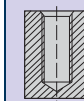
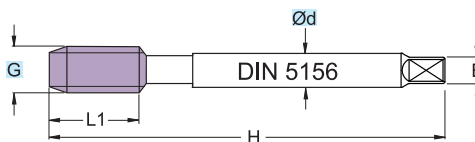
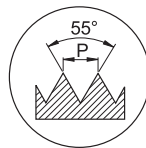
# MSI160256TB G..

**GAS**

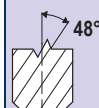
RIVESTIM.  
 COATED  
**TIALN+C**

**HSSV3**

G 1/8 - 1"



**2-3 FILL**



**TOLL ISO 228°X"**

DIN 5156		(mm)						Preforo Prebore
ART.	G(")	P/tpi	Ød	L1	H	B		
MSI160256TB G 1/8-28	1/8	28	7	15	90	5,5	8,8	
MSI160256TB G 1/4-19	1/4	19	11	15	100	9	11,8	
MSI160256TB G 3/8-19	3/8	19	12	15	100	9	15,25	
MSI160256TB G 1/2-14	1/2	14	16	18	125	12	19	
MSI160256TB G 3/4-14	3/4	14	20	20	140	16	24,5	
MSI160256TB G 1-11	1"	11	25	24	160	20	30,75	



- P/tpi = FILETTI PER POLLICE
- P/tpi = THREADS FOR INCH-SIZES
- P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- P/tpi = FILETS POUR POUÇES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	15-35
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL	●	8-15
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

**PAG. 1034**

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

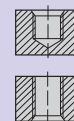
# MSG1256SNS G..

G 1/8 - 1"

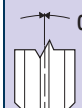


RIVESTIM.  
 COATED  
**SNS**

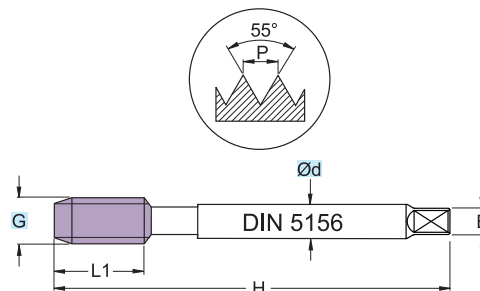
**HSSE**



**2-3  
 FILL**



**TOLL  
 ISO  
 228"X"**



DIN 5156		(mm)						Preforo Prebore
ART.	G(")	P/tpi	Ød	L1	H	B		
MSG1256SNS G1/8-28	1/8	28	7	15	90	5,5	8,8	
MSG1256SNS G1/4-19	1/4	19	11	22	100	9	11,8	
MSG1256SNS G3/8-19	3/8	19	12	22	100	9	15,25	
MSG1256SNS G1/2-14	1/2	14	16	25	125	12	19	
MSG1256SNS G3/4-14	3/4	14	20	25	140	16	24,5	
MSG1256SNS G1-11	1"	11	25	30	160	20	30,75	

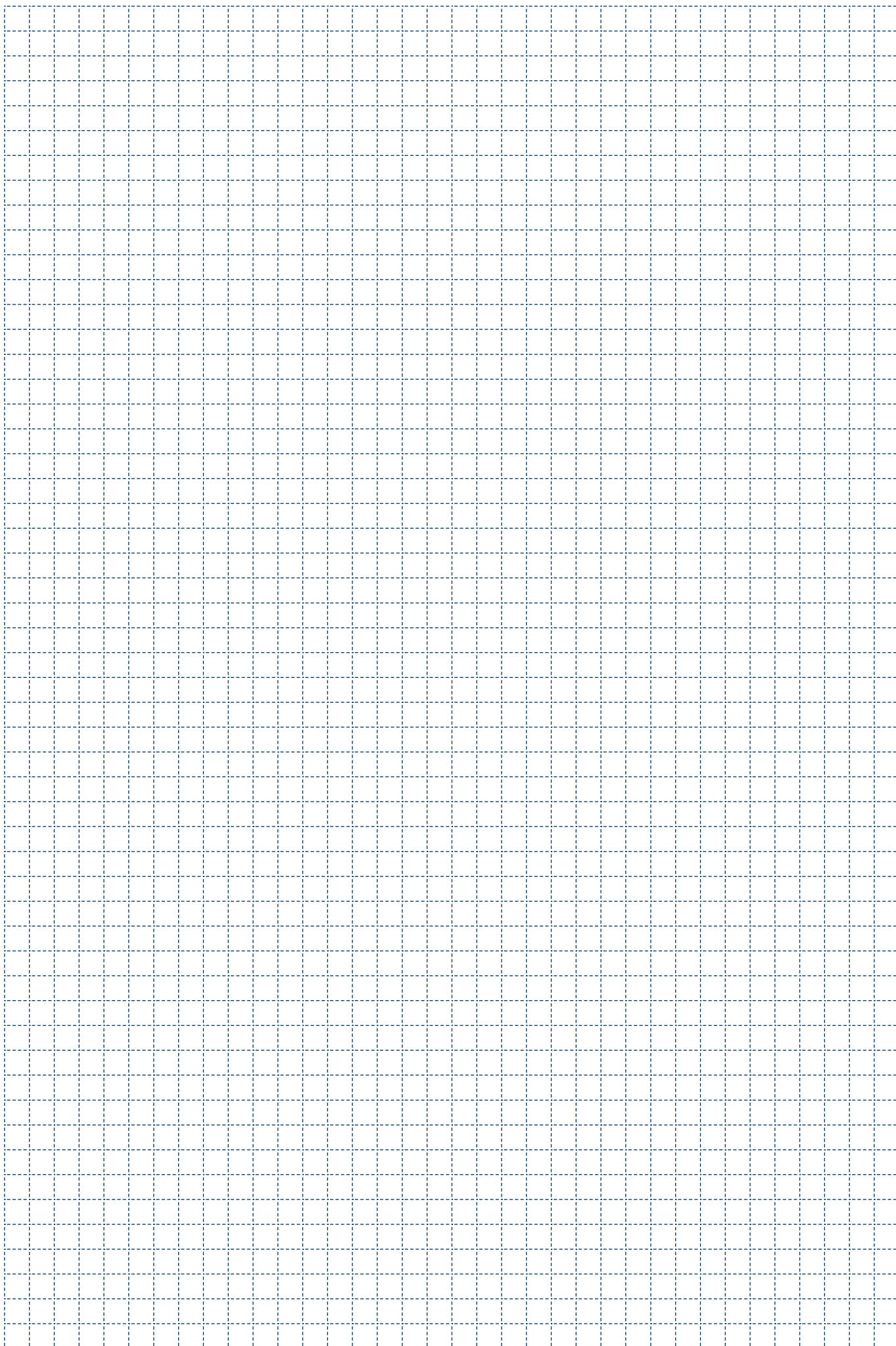
P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS		Pag. 1063	Vc	m/min
<b>P</b>	ACCIAIO - STEEL			
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL			
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL			
<b>K</b>	GHISA - CAST IRON	●		15-30
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM	○		25-30
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY			
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL			



Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED





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# FILETTATURA NPT CONICA 1:16 AMERICANA

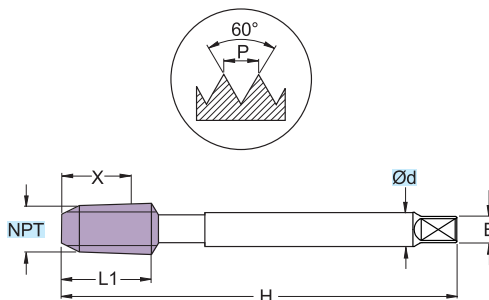
AMERICAN TAPERED PIPE THREAD (NPT), TAPER 1:16  
AMERIKANISCHES KONISCHES (NPT)-GEWINDE 1:16  
FILETAGE (NPT) CONIQUE 1:16 AMERICAIN  
ROSCA (NPT) CÓNICA 1:16 AMERICANA

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# MSA15LNBR..

**NPT**

NPT 1/8 - 1"



	<b>HSSE</b>
	<b>2-3 FILL</b>
	<b>1:16</b>

ART.	(mm)								Preforo Prebore
	NPT(*)	P/tpi	Ød	L1	H	B	X		
MSA15LNBR NPT1/8-27	1/8	27	7	13	90	5,5	9,3	*8,5	
MSA15LNBR NPT1/4-18	1/4	18	11	20	100	9	13,5	*11	
MSA15LNBR NPT3/8-18	3/8	18	12	20	110	9	13,9	*14,5	
MSA15LNBR NPT1/2-14	1/2	14	16	26	125	12	18,1	*17,9	
MSA15LNBR NPT3/4-14	3/4	14	20	26	140	16	18,6	*23,2	
MSA15LNBR NPT1"-11,5	1"	11,5	25	32	160	20	22,3	*29	

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

SI CONSIGLIA DI PREPARARE IL FORO CON ALESATORE CONICO  
 PREPARATION OF THE BORE WITH STRAIGHT REAMER RECOMMENDED  
 VORBEREITUNG DER BOHRUNG MIT KEGEL-REIBHALE EMPFOHLEN  
 IL EST CONSEILLÉ DE PRÉPARER LE TROU À L'AIDE D'UN ALÉSOIR CONIQUE

\* DIAMETRI DI FORATURA CILINDRICI  
 \* CILYNDRIC HOLE  
 \* ZYLINDRISCHE BOHRUNGSDURCHMESSER  
 \* DIAMETRES DE PERCAGE CYLINDRIQUES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	3-7
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

PAG. 1034

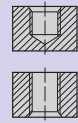
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

# MSA16LNBR..

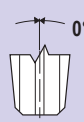
NPTF 1/8 - 1"



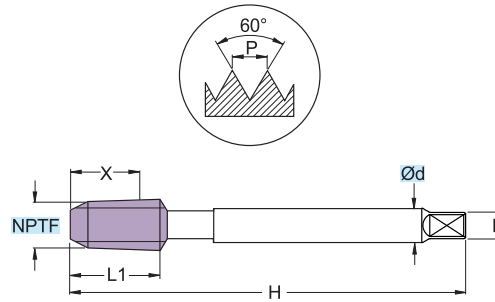
HSSE



2-3  
 FILL



1:16



(mm)

ART.	NPTF(°)	P/tpi	Ød	L1	H	B	X	Preforo Prebore
MSA16LNBR NPTF1/8-27	1/8	27	7	13	90	5,5	9,3	*8,5
MSA16LNBR NPTF1/4-18	1/4	18	11	20	100	9	13,5	*11
MSA16LNBR NPTF3/8-18	3/8	18	12	20	110	9	13,9	*14,5
MSA16LNBR NPTF1/2-14	1/2	14	16	26	125	12	18,1	*17,9
MSA16LNBR NPTF3/4-14	3/4	14	20	26	140	16	18,6	*23,2
MSA16LNBR NPTF1"-11,5	1"	11,5	25	32	160	20	22,3	*29

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

SI CONSIGLIA DI PREPARARE IL FORO CON ALESATORE CONICO  
 PREPARATION OF THE BORE WITH STRAIGHT REAMER RECOMMENDED  
 VORBEREITUNG DER BOHRUNG MIT KEGEL-REIBHALE EMPFOHLEN  
 IL EST CONSEILLÉ DE PRÉPARER LE TROU À L'AIDE D'UN ALÉSOIR CONIQUE

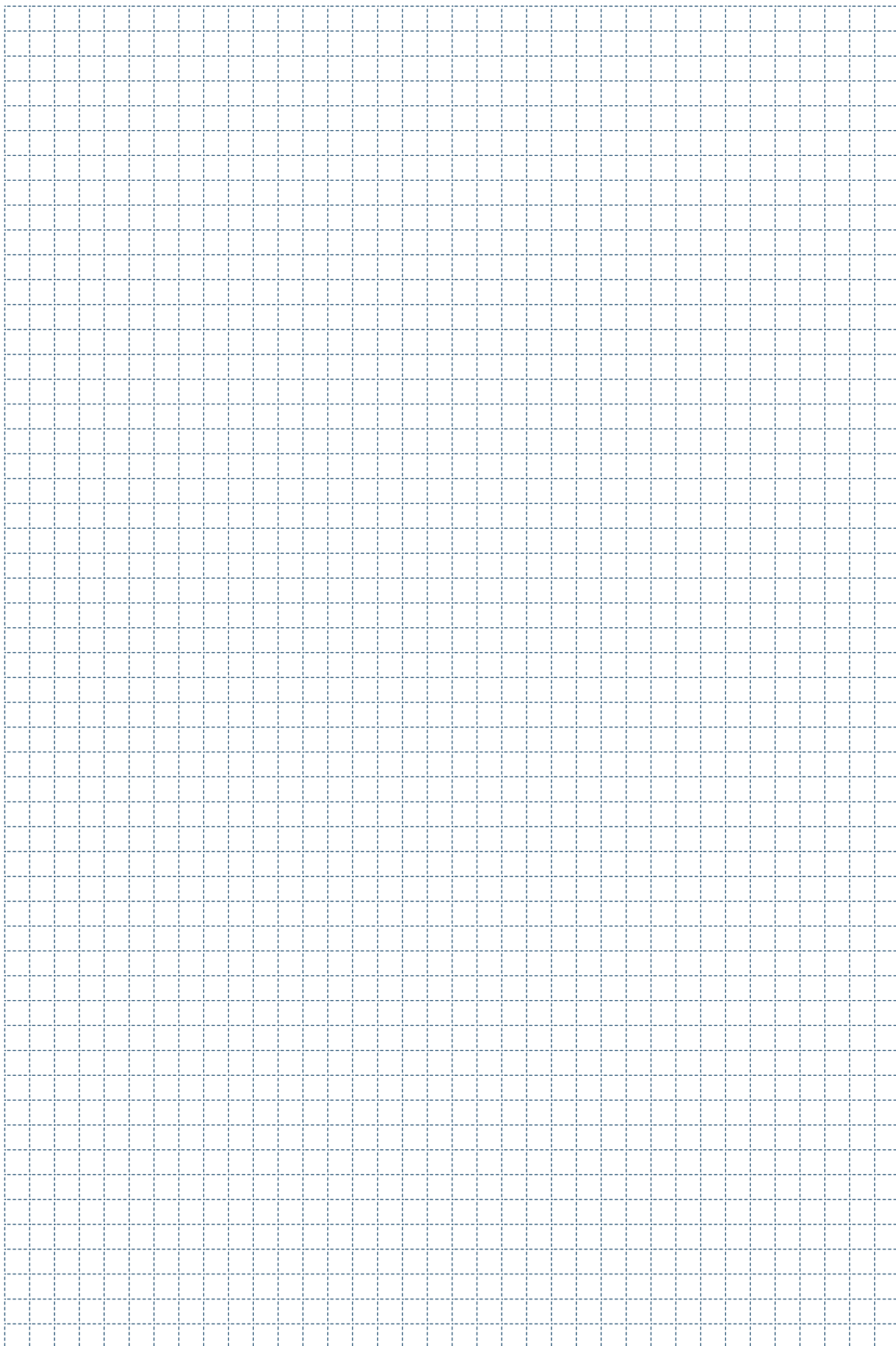
\* DIAMETRI DI FORATURA CILINDRICI  
 \* CILYNDRIC HOLE  
 \* ZYLINDRISCHE BOHRUNGSDURCHMESSER  
 \* DIAMETRES DE PERCAGE CYLINDRIQUES

## PARAMETRI - PARAMETERS

MATERIALI - MATERIALS Pag. 1063			Vc m/min
<b>P</b>	ACCIAIO - STEEL	●	3-7
	ACCIAIO AD ALTA RESISTENZA - HIGH-RESISTANCE STEEL		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL		
<b>K</b>	GHISA - CAST IRON		
<b>N</b>	ALLUMINIO E SUE LEGHE - ALUMINIUM		
<b>S</b>	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY		
<b>H</b>	MAT. DURI E TEMPRATI - HARD AND HARDENED MATERIAL		

PAG. 1034

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED





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# DISTRUGGI MASCHI

TAP DESTROYING TOOL  
WERKZEUGE ZUM ENTFERNEN VON ABGEBROCHENEN GEWINDEBOHRERN  
DESTRUCTEUR DE MALES  
EXTRACTOR DE TACOS

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# SKR

$\varnothing D = 3,3 - 17,5$

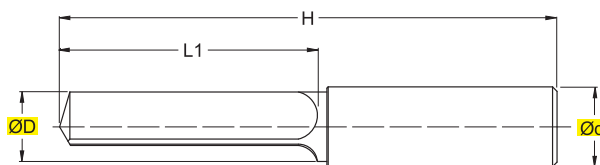
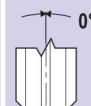
## GENERICO / ALL PURPOSE

$V_c = 120 \div 150 \text{ m/min}$

$f_n = 0,03 \div 0,05 \text{ mm/giro} - \text{mm/rev.}$

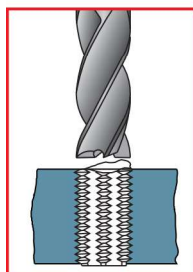
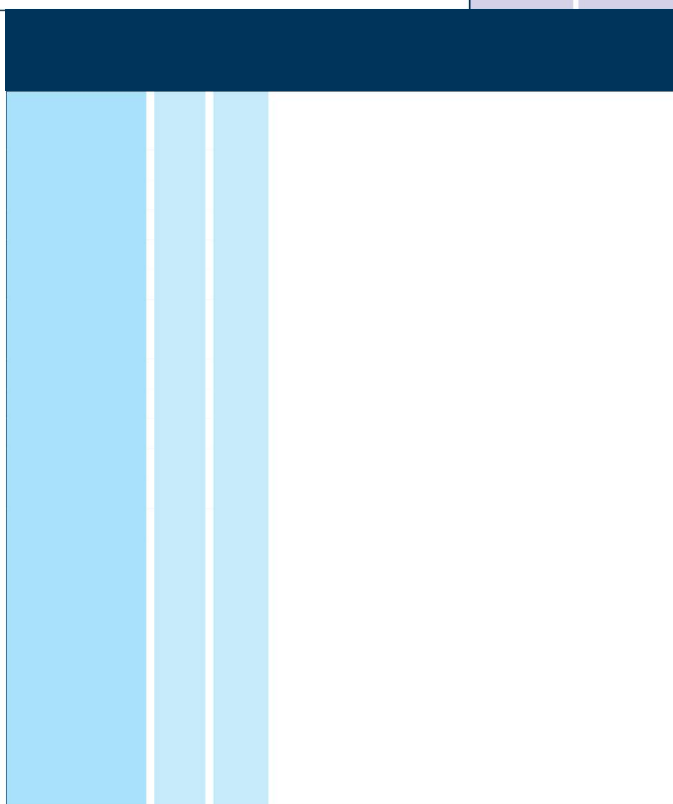
RIVESTIM.  
COATED

TIN



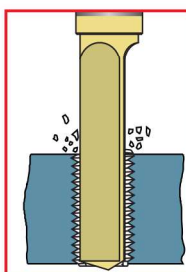
TOLLERANZE	D	d
TOLLERANCE RANGE	h11	h6

ART.	$\varnothing D$	$\varnothing d$	H	L1	Z	Filetto Thread
SKR01M04	3,3	6	50	15	3	M4
SKR01M05	4,2	6	50	15	3	M5
SKR01M06	5,0	6	50	15	3	M6
SKR01M08	6,8	8	60	20	3	M8
SKR01M10	8,5	10	70	25	3	M10
SKR01M12	10,2	12	75	30	3	M12
SKR01M14	12,0	12	75	30	3	M14
SKR01M16	14,0	14	100	40	3	M16
SKR01M18	15,5	16	100	40	3	M18
SKR01M20	17,5	18	100	50	3	M20



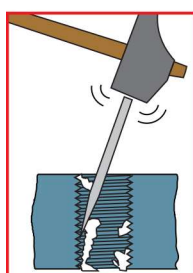
**Fase 1.** Con una fresa M.D.I. cercare di pareggiare il piano di rottura del maschio.

**Step 1.** With an HM mill try to level off the tap breakage plane.



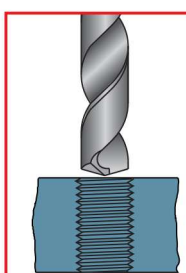
**Fase 2.** Cominciare la perforazione con il DGM. La refrigerazione può anche essere ad acqua.

**Step 2.** Begin the hole with the DGM. Water cooling can also be used.



**Fase 3.** È importante eliminare le scaglie di acciaio rimanenti sulle pareti del filetto. Utilizzare un qualsiasi utensile appuntito.

**Step 3.** It is important to remove the steel flakes left on the sides of the thread. Use any pointed tool.



**Fase 4.** Si consiglia di ripassare il foro con una punta M.D.I. del diametro di pre-foro.

**Step 4.** The hole should be re-machined with a HM bit with a diameter corresponding to the pre-hole.

		ART.	ANGOLO ELICA ANGLE FLUTES	ØD	Z	MATERIALE MATERIAL	Materiali - Materials Pag. 1063							Pag.
							P	M	K	N	S	H	G	
<b>MICROFRESE A FILETTARE - MICRO-THREADING MILLS</b>														
	TIALN		FMMSR2...N	10°	0,9-15	3/5	MG	●	○	●	○	○	○	690
	TIALN		FMMSR3...N	10°	1,05-5,95	3	MG	●	○	●	○	○	○	691
	TIALN		FMUSR2...N	10°	1,45-14,40	3/4	MG	●	○	●	○	○	○	692
	TIALN		FMUSR3...N	10°	1,15-6	3	MG	●	○	●	○	○	○	693
<b>FRESE A FILETTARE - THREADING MILLS</b>														
	TIALN		FMSR ... N	10°	3,1-20	3/5	MG	●	○	●	○	○	○	696
	TIALN		FMSR ... F	10°	4-20	3/5	MG	●	○	●	○	○	○	697
	TIALN		FGSR ... N	10°	8-20	3/5	MG	●	○	●	○	○	○	698
	TIALN		FUSR ... N	10°	4,5-20	3/5	MG	●	○	●	○	○	○	699
	TIALN		FTSR ... N	10°	5,9-19,6	3/5	MG	●	○	●	○	○	○	700
			FMAN ... F	10°	4-20	3/5	MG				●			701
			FGAN ... F	10°	8-20	3/5	MG				●			702
			FUAN ... F	10°	4,5-20	3/5	MG				●			703
			FTAN ... F	10°	5,9-19,6	3/5	MG				●			704

# SIMBOLOGIA - SYMBOL - SYMBOLE - SYMBOLES

## RIVESTIMENTI - COATED - BESCHICHTUNG - RECOUVREMENT

RIVESTIM. COATED	<b>TiAIN:</b> Elevata durezza e resistenza al calore, basso coefficiente di attrito, si può usare con refrigerante oppure a secco con aria.		
<b>TIALN</b>	<b>TiAIN:</b> High degree of hardness and heat resistance, low friction coefficient; it can be used with coolant or with air and no coolant		

## ANGOLO ELICA - FLUTES DEGREES - SPIRALWINKEL - ANGLE HELICE

	■ 10°				
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## LUNGHEZZA FRESA - MILLS LENGHT - FRAESERLÄNGE - LONGUEUR FRAISES

<b>2xD</b>	- 2 volte il diametro - Two times the diameter - Zweimal den Durchmesser - 2 fois le diametre	<b>3xD</b>	- 3 volte il diametro - Three times the diameter - Dreimal den Durchmesser - 3 fois le diametre				
------------	--	------------	--	--	--	--	--

## SIMBOLI GENERALI - GENERAL SYMBOLS - ALLGEMEINE SYMBOLE - SYMBOLES GÉNÉRAUX

<b>MG</b>	- Micrograno 0,7 µm (K 20) - Micrograin 0,7 µm (K 20) - Feinstkorn 0,7 µm (K 20) - Microgrenu 0,7 µm (K 20)		
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# MICROFRESE A FILETTARE

MICRO-THREADING MILLS / MIKROGEWINDEFÄSER / MICRO-FRAISES A FILETER /  
MICROFRESAS PARA FILETEAR

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# FMMSR2 ... N

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

D	d
e8	h6

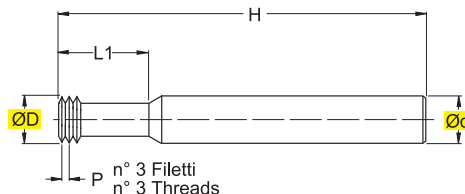
RIVESTIM.  
 COATED  
**TIALN**

**2xD**



**MG**

$\varnothing D = 0,90-15,00$



> PER FILETTATURE ISO 60°  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> FOR ISO 60° THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	P/mm	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød						
FMMSR2 0090.025 N	0,90	3	39	3,0	3	0,25	0,95	M1,2
FMMSR2 0155.040 N	1,55	6	54	4,5	3	0,40	1,60	M2
FMMSR2 0165.045 N	1,65	6	54	5,0	3	0,45	1,75	M2,2
FMMSR2 0195.045 N	1,95	6	54	5,5	3	0,45	2,05	M2,5
FMMSR2 0235.050 N	2,35	6	54	6,5	3	0,50	2,50	M3
FMMSR2 0275.060 N	2,75	6	54	7,5	3	0,60	2,90	M3,5
FMMSR2 0310.070 N	3,10	6	54	9,0	3	0,70	3,30	M4
FMMSR2 0340.075 N	3,40	6	54	10,5	3	0,75	3,70	M4,5
FMMSR2 0380.080 N	3,80	6	54	12,5	3	0,80	4,20	M5
FMMSR2 0465.100 N	4,65	6	54	14,0	3	1,00	5,00	M6
FMMSR2 0595.125 N	5,95	6	54	18,0	3	1,25	6,80	M8
FMMSR2 0780.150 N	7,80	8	64	23,0	3	1,50	8,50	M10
FMMSR2 0900.175 N	9,00	10	73	26,0	3	1,75	10,20	M12
FMMSR2 1180.200 N	11,80	12	80	35,0	4	2,00	14,00	M16
FMMSR2 1500.250 N	15,00	16	100	43,0	5	2,50	17,50	M20

PARAMETRI DI TAGLIO A PAG. 1036  
 CUTTING DATA ON PAGE 1036  
 SCHNITTPARAMETER AUF SEITE 1036  
 PARAMETRES DE COUPE PAGE 1036

# FMMSR3 ... N

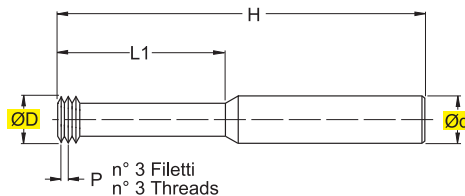
GENERICO / ALL PURPOSE

TOLLERANZE	D	d
TOLERANCE RANGE	e8	h6

RIVESTIM.  
COATED  
**TIALN** **3xD**

 **MG**





$\varnothing D = 1,05 - 5,95$



> PER FILETTATURE ISO 60°  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> FOR ISO 60° THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	P/mm	Preforo d. Prebore	Filetto eseguibile Thread type
	$\varnothing D$	$\varnothing d$						
FMMSR3 0105.030 N	1,05	3	39	4,0	3	0,30	1,10	M1,4
FMMSR3 0120.035 N	1,20	3	39	5,0	3	0,35	1,25	M1,6
FMMSR3 0155.040 N	1,55	3	39	6,0	3	0,40	1,60	M2
FMMSR3 0195.045 N	1,95	6	54	7,5	3	0,45	2,05	M2,5
FMMSR3 0235.050 N	2,35	6	54	9,5	3	0,50	2,50	M3
FMMSR3 0310.070 N	3,10	6	54	12,5	3	0,70	3,30	M4
FMMSR3 0340.075 N	3,40	6	54	14,0	3	0,75	3,70	M4,5
FMMSR3 0380.080 N	3,80	6	54	16,0	3	0,80	4,20	M5
FMMSR3 0465.100 N	4,65	6	54	20,0	3	1,00	5,00	M6
FMMSR3 0595.125 N	5,95	6	54	24,0	3	1,25	6,80	M8

 PARAMETRI DI TAGLIO A PAG. 1036  
 CUTTING DATA ON PAGE 1036  
 SCHNITTPARAMETER AUF SEITE 1036  
 PARAMETRES DE COUPE PAGE 1036

# FMUSR2 ... N

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

D	d
e8	h6

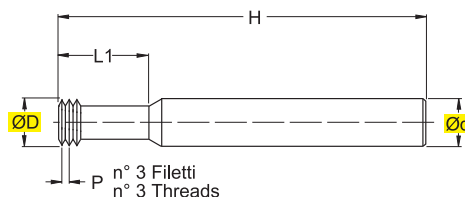
RIVESTIM.  
 COATED  
**TIALN**

**2xD**



**MG**

$\varnothing D = 1,45 - 14,40$



> PER FILETTATURE UN 60° (UNC-UNF)  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> UN 60° (UNC-UNF) THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	P/tpi	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød						
FMUSR2 0145.072 N	1,45	6	54	3,7	3	72	1,60	N°.1 UNF
FMUSR2 0140.064 N	1,40	6	54	3,8	3	64	1,50-1,90	N°.1 UNC-N°.2 UNF
FMUSR2 0165.056 N	1,65	6	54	4,4	3	56	1,80-2,10	N°.2 UNC-N°.3 UNF
FMUSR2 0190.048 N	1,90	6	54	5,2	3	48	2,10-2,40	N°.3 UNC-N°.4 UNF
FMUSR2 0210.040 N	2,10	6	54	6,3	3	40	2,30	N°.4 UNC
FMUSR2 0245.040 N	2,45	6	54	7,0	3	40	2,60-3,00	N°.5 UNC-N°.6 UNF
FMUSR2 0330.036 N	3,30	6	54	9,0	3	36	3,50	N°.8 UNF
FMUSR2 0255.032 N	2,55	6	54	7,1	3	32	2,85	N°.6 UNC
FMUSR2 0320.032 N	3,20	6	54	9,5	3	32	3,50	N°.8 UNC
FMUSR2 0370.032 N	3,70	6	54	10,5	3	32	4,10	N°.10 UNF
FMUSR2 0420.028 N	4,20	6	54	11,0	3	28	4,70	N°.12 UNF
FMUSR2 0500.028 N	5,00	6	54	14,5	3	28	5,50	1/4" UNF
FMUSR2 0350.024 N	3,50	6	54	10,6	3	24	3,90-4,50	N°.10 UNC-N°.12 UNC
FMUSR2 0660.024 N	6,60	8	64	17,0	3	24	6,90-8,50	5/16" UNF-3/8" UNF
FMUSR2 0475.020 N	4,75	6	54	14,0	3	20	5,20	1/4" UNC
FMUSR2 0800.020 N	8,00	8	64	25,0	3	20	9,90	7/16" UNF
FMUSR2 0600.018 N	6,00	6	54	17,0	3	18	6,60	5/16" UNC
FMUSR2 1200.018 N	12,00	12	80	35,0	4	18	14,50	5/8" UNF
FMUSR2 0670.016 N	6,70	8	64	22,0	3	16	8,00	3/8" UNC
FMUSR2 0770.014 N	7,70	8	64	25,0	3	14	9,40	7/16" UNC
FMUSR2 0920.013 N	9,20	10	73	27,5	4	13	10,75	1/2" UNC
FMUSR2 1050.012 N	10,50	12	80	31,5	4	12	12,25	9/16" UNC
FMUSR2 1140.011 N	11,40	12	80	34,5	4	11	13,50	5/8" UNC
FMUSR2 1440.010 N	14,40	16	100	41,5	4	10	16,50	3/4" UNC



P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

PARAMETRI DI TAGLIO A PAG. 1036  
 CUTTING DATA ON PAGE 1036  
 SCHNITTPARAMETER AUF SEITE 1036  
 PARAMETRES DE COUPE PAGE 1036



# FMUSR3 ... N

GENERICO / ALL PURPOSE

TOLLERANZE TOLERANCE RANGE	D	d
	e8	h6

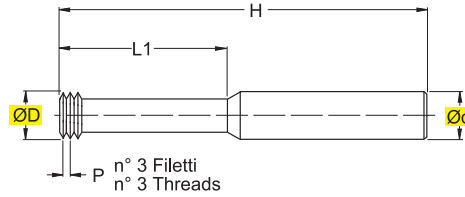
RIVESTIM.  
COATED  
**TIALN**

**3xD**



**MG**

$\varnothing D = 1,15 - 6,00$



> PER FILETTATURE UN 60° (UNC-UNF)  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

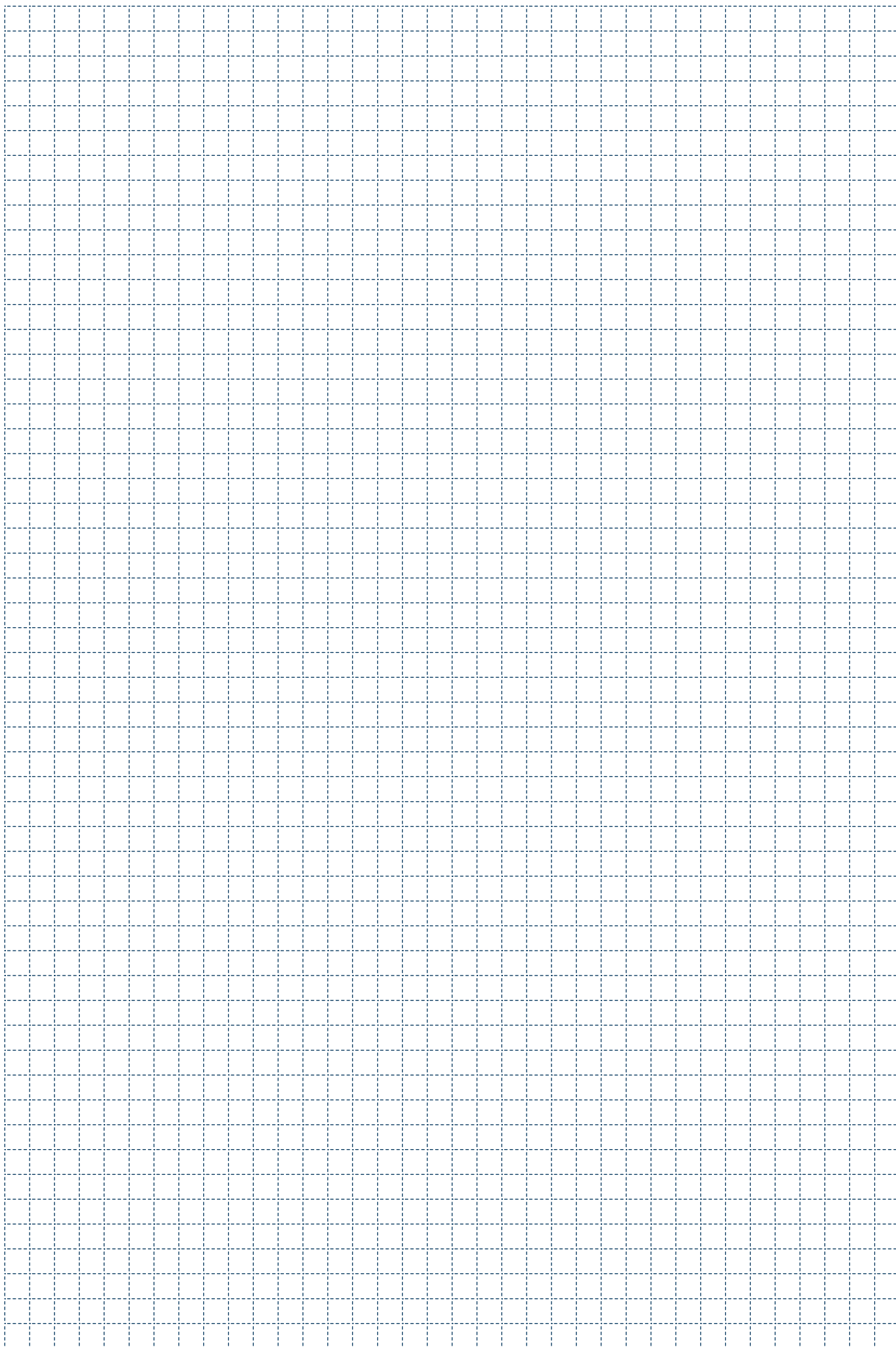
> UN 60° (UNC-UNF) THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	P/tpi	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød						
FMUSR3 0115.080 N	1,15	6	54	4,0	3	80	1,30	N°.0 UNF
FMUSR3 0145.072 N	1,45	3	39	6,0	3	72	1,60	N°.1 UNF
FMUSR3 0165.056 N	1,65	6	54	6,6	3	56	1,80-2,10	N°.2 UNC-N°.3 UNF
FMUSR3 0210.040 N	2,10	6	54	8,0	3	40	2,30	N°.4 UNC
FMUSR3 0245.040 N	2,45	6	54	9,6	3	40	2,60-3,00	N°.5 UNC-N°.6 UNF
FMUSR3 0255.032 N	2,55	6	54	10,5	3	32	2,85	N°.6 UNC
FMUSR3 0320.032 N	3,20	6	54	12,5	3	32	3,50	N°.8 UNC
FMUSR3 0370.032 N	3,70	6	54	15,0	3	32	4,10	N°.10 UNF
FMUSR3 0500.028 N	5,00	6	54	19,0	3	28	5,50	1/4" UNF
FMUSR3 0660.024 N	6,60	8	64	24,0	3	24	6,90-8,50	5/16" UNF-3/8" UNF
FMUSR3 0475.020 N	4,75	6	54	19,0	3	20	5,20	1/4" UNC
FMUSR3 0600.018 N	6,00	6	54	23,0	3	18	6,60	5/16" UNC

P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUCES

PARAMETRI DI TAGLIO A PAG. 1036  
 CUTTING DATA ON PAGE 1036  
 SCHNITTPARAMETER AUF SEITE 1036  
 PARAMETRES DE COUPE PAGE 1036







---

# FRESE A FILETTARE

THREADING MILLS / GEWINDEFÄSER / FRAISES A FILETER /  
FRESAS PARA FILETEAR

---

# FMSR ... N

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

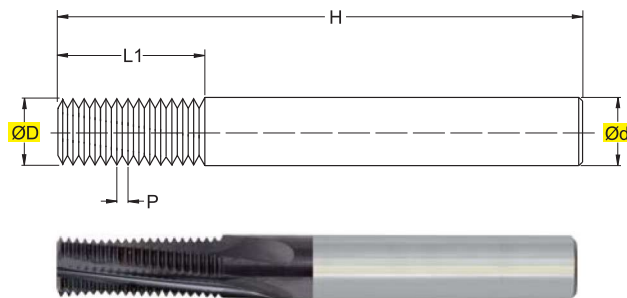
D	d
e8	h6

RIVESTIM.  
 COATED  
**TIALN**



**MG**

$\varnothing D = 3,10 - 20$



> PER FILETTATURE ISO 60°  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> FOR ISO 60° THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	Filetti utili Thread usefull	P/mm	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød							
FMSR 031.070 N	3,1	6	55	8	3	11	0,70	3,3	M4
FMSR 040.080 N	4,0	6	55	12	3	15	0,80	4,2	M5
FMSR 045.075 N	4,5	6	55	12	3	16	0,75	8,3	MF9
FMSR 045.100 N	4,5	6	55	12	3	12	1,00	5-6	M6-M7
FMSR 060.075 N	6,0	6	55	15	3	20	0,75	7,2	MF8
FMSR 060.100 N	6,0	6	55	15	3	15	1,00	7	MF8
FMSR 060.125 N	6,0	6	55	15	3	12	1,25	6,8-7,8-8,8	M8-M9-MF10
FMSR 080.075 N	8,0	8	66	20	3	26	0,75	9,2-11,2	MF10-MF12
FMSR 080.100 N	8,0	8	66	20	3	20	1,00	9-11	MF10-MF12
FMSR 080.125 N	8,0	8	66	20	3	16	1,25	9	MF10
FMSR 080.150 N	8,0	8	66	20	3	13	1,50	8,5-9,5-10,5	M10-M11-MF12
FMSR 080.175 N	8,0	8	66	20	4	11	1,75	10,2	M12
FMSR 100.100 N	10,0	10	80	25	4	25	1,00	11	MF12
FMSR 100.125 N	10,0	10	80	25	4	20	1,25	12,8	MF14
FMSR 100.150 N	10,0	10	80	25	4	16	1,50	12,5	MF14
FMSR 100.200 N	10,0	10	80	25	4	12	2,00	12	M14
FMSR 120.100 N	12,0	12	82	30	4	30	1,00	13	MF14
FMSR 120.150 N	12,0	12	82	30	4	20	1,50	14,5	MF16
FMSR 120.200 N	12,0	12	82	30	4	15	2,00	14	M16
FMSR 140.100 N	14,0	14	100	35	4	35	1,00	15	MF16
FMSR 140.150 N	14,0	14	100	35	4	23	1,50	16,5	MF18
FMSR 140.200 N	14,0	14	100	35	4	17	2,00	16	MF18
FMSR 140.250 N	14,0	14	100	35	4	14	2,50	15,5	M18
FMSR 160.100 N	16,0	16	100	40	5	40	1,00	17-19	MF18-MF20
FMSR 160.150 N	16,0	16	100	40	5	26	1,50	18,5-20,5	MF20-MF22
FMSR 160.200 N	16,0	16	100	40	5	20	2,00	18-20	MF20-MF22
FMSR 160.250 N	16,0	16	100	40	5	16	2,50	17,5-19,5	M20-M22
FMSR 200.100 N	20,0	20	110	40	5	40	1,00	21>	MF22>
FMSR 200.150 N	20,0	20	110	40	5	26	1,50	22,5>	MF24>
FMSR 200.200 N	20,0	20	110	40	5	20	2,00	22>	MF24>
FMSR 200.300 N	20,0	20	110	40	5	13	3,00	21>	MF24>

PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037

# FMSR ... F

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

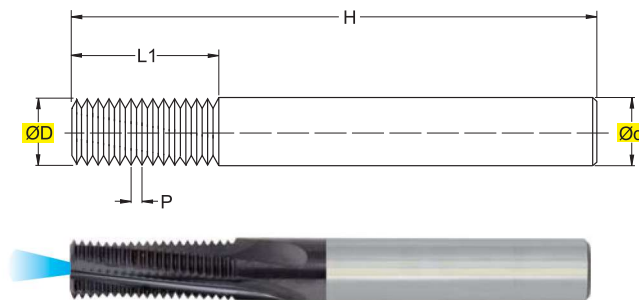
D	d
e8	h6

RIVESTIM.  
 COATED  
**TIALN**



**MG**

$\varnothing D = 4 - 20$



> PER FILETTATURE ISO 60°  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> FOR ISO 60° THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	Filetti utili Thread useful	P/mm	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød							
FMSR 040.080 F	4,0	6	55	12	3	15	0,80	4,2	M5
FMSR 045.075 F	4,5	6	55	12	3	16	0,75	8,3	MF9
FMSR 045.100 F	4,5	6	55	12	3	12	1,00	5-6	M6-M7
FMSR 060.075 F	6,0	6	55	15	3	20	0,75	7,2	MF8
FMSR 060.100 F	6,0	6	55	15	3	15	1,00	7	MF8
FMSR 060.125 F	6,0	6	55	15	3	12	1,25	6,8-7,8-8,8	M8-M9-MF10
FMSR 080.075 F	8,0	8	66	20	3	26	0,75	9,2-11,2	MF10-MF12
FMSR 080.100 F	8,0	8	66	20	3	20	1,00	9-11	MF10-MF12
FMSR 080.125 F	8,0	8	66	20	3	16	1,25	9	MF10
FMSR 080.150 F	8,0	8	66	20	3	13	1,50	8,5-9,5-10,5	M10-M11-MF12
FMSR 080.175 F	8,0	8	66	20	4	11	1,75	10,2	M12
FMSR 100.100 F	10,0	10	80	25	4	25	1,00	11	MF12
FMSR 100.125 F	10,0	10	80	25	4	20	1,25	12,8	MF14
FMSR 100.150 F	10,0	10	80	25	4	16	1,50	12,5	MF14
FMSR 100.200 F	10,0	10	80	25	4	12	2,00	12	M14
FMSR 120.100 F	12,0	12	82	30	4	30	1,00	13	MF14
FMSR 120.150 F	12,0	12	82	30	4	20	1,50	14,5	MF16
FMSR 120.200 F	12,0	12	82	30	4	15	2,00	14	M16
FMSR 140.100 F	14,0	14	100	35	4	35	1,00	15	MF16
FMSR 140.150 F	14,0	14	100	35	4	23	1,50	16,5	MF18
FMSR 140.200 F	14,0	14	100	35	4	17	2,00	16	MF18
FMSR 140.250 F	14,0	14	100	35	4	14	2,50	15,5	M18
FMSR 160.100 F	16,0	16	100	40	5	40	1,00	17-19	MF18-MF20
FMSR 160.150 F	16,0	16	100	40	5	26	1,50	18,5-20,5	MF20-MF22
FMSR 160.200 F	16,0	16	100	40	5	20	2,00	18-20	MF20-MF22
FMSR 160.250 F	16,0	16	100	40	5	16	2,50	17,5-19,5	M20-M22
FMSR 200.100 F	20,0	20	110	40	5	40	1,00	21>	MF22>
FMSR 200.150 F	20,0	20	110	40	5	26	1,50	22,5>	MF24>
FMSR 200.200 F	20,0	20	110	40	5	20	2,00	22>	MF24>
FMSR 200.300 F	20,0	20	110	40	5	13	3,00	21>	MF24>

PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037

# FGSR ... N

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

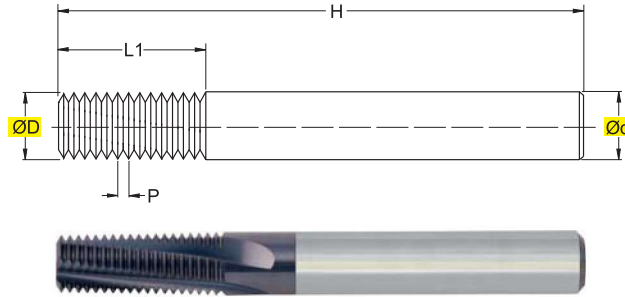
D	d
e8	h6

RIVESTIM.  
 COATED  
**TIALN**



**MG**

$\varnothing D = 8 - 20$



> PER FILETTATURE WHITWORTH 55° GAS  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> FOR WHITWORTH 55° GAS THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	Filetti utili Thread useful	P/tpi	Preforo d. Prebore	Filetto eseguibile Thread type
	$\varnothing D$	$\varnothing d$							
FGSR 080.028 N	8	8	66	20	3	22	28	8,7	1/8"
FGSR 100.019 N	10	10	80	25	4	18	19	11,8	1/4"
FGSR 140.019 N	14	14	100	35	4	26	19	15,25	3/8"
FGSR 160.014 N	16	16	100	40	5	22	14	19	1/2"
FGSR 200.014 N	20	20	110	40	5	22	14	21-24,5-28,25	5/8"-3/4"-7/8"
FGSR 200.011 N	20	20	110	40	5	17	11	30,75	1">



P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037



# FUSR ... N

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

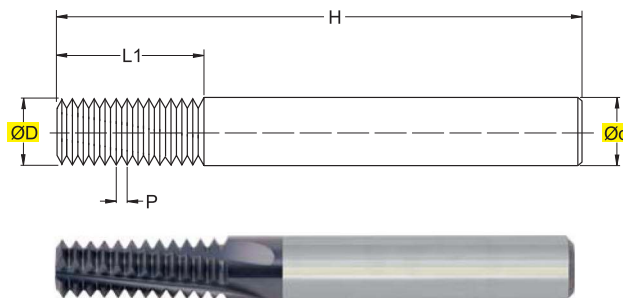
D	d
e8	h6

RIVESTIM.  
 COATED  
**TIALN**



**MG**

$\varnothing D = 4,5 - 20$



- > PER FILETTATURE UN 60° (UNC-UNF)
- > ATTACCO DIN 6535 HA
- > RIVESTIMENTO TIALN

- > UN 60° (UNC-UNF) THREAD
- > SHANK DIN 6535 HA
- > TIALN COATED

ART.	ØD (mm)	Ød (mm)	H (mm)	L1 (mm)	Z	Filetti utili Thread useful	P/tpi	Preforo d. Prebore	Filetto eseguibile Thread type
FUSR 045.020 N	4,5	6	55	12	3	9	20	5,2	UNC 1/4"
FUSR 045.028 N	4,5	6	55	12	3	13	28	5,5	UNF 1/4"
FUSR 055.018 N	5,5	6	55	15	3	10	18	6,6	UNC 5/16"
FUSR 055.024 N	5,5	6	55	15	3	14	24	6,9	UNF 5/16"
FUSR 075.016 N	7,5	8	66	20	3	12	16	8,5	UNC 3/8"
FUSR 080.014 N	8,0	8	66	20	3	11	14	9,4	UNC 7/16"
FUSR 080.020 N	8,0	8	66	20	3	15	20	9,9	UNF 7/16"
FUSR 080.024 N	8,0	8	66	20	3	18	24	8,5	UNF 3/8"
FUSR 100.012 N	10,0	10	80	25	4	11	12	12,2	UNC 9/16"
FUSR 100.013 N	10,0	10	80	25	4	12	13	10,8	UNC 1/2"
FUSR 100.018 N	10,0	10	80	25	4	21	18	12,9-14,5	UNF 9/16"-5/8"
FUSR 100.020 N	10,0	10	80	25	4	19	20	11,5	UNF 1/2"
FUSR 120.018 N	12,0	12	82	30	4	21	18	12,9-14,5	UNF 9/16"-5/8"
FUSR 120.011 N	12,0	12	82	30	4	13	11	13,6	UNC 5/8"
FUSR 155.016 N	15,5	16	100	40	5	25	16	17,5	UNF 3/4"
FUSR 155.010 N	15,5	16	100	40	5	15	10	16,5	UNC 3/4"
FUSR 155.014 N	15,5	16	100	40	5	22	14	20,5	UNF 7/8"
FUSR 180.009 N	18,0	18	110	40	5	15	9	19,5	UNF 7/8"
FUSR 180.014 N	18,0	18	110	40	5	22	14	19,5	UNC 7/8"
FUSR 200.008 N	20,0	20	110	40	5	12	8	23,25	UNF 1"
FUSR 200.012 N	20,0	20	110	40	5	18	12	22,25	UNC 1"

↑

- 🇮🇹 P/tpi = FILETTI PER POLLICE
- 🇬🇧 P/tpi = THREADS FOR INCH-SIZES
- 🇩🇪 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- 🇫🇷 P/tpi = FILETS POUR POUÇES

- 🇮🇹 PARAMETRI DI TAGLIO A PAG. 1037
- 🇬🇧 CUTTING DATA ON PAGE 1037
- 🇩🇪 SCHNITTPARAMETER AUF SEITE 1037
- 🇫🇷 PARAMETRES DE COUPE PAGE 1037

# FTSR ... N

GENERICO / ALL PURPOSE

TOLLERANZE  
 TOLERANCE RANGE

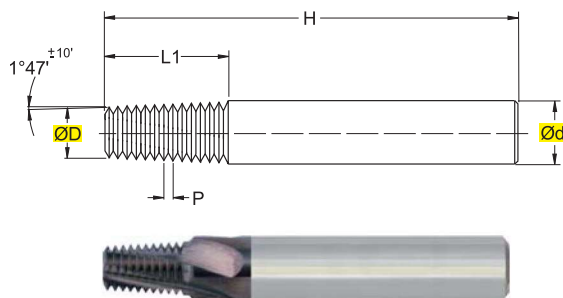
D	d
	h6

RIVESTIM.  
 COATED  
**TIALN**



**MG**

$\varnothing D = 5,9 - 19,6$



> PER FILETTATURE NPTCONICHE 60°  
 > ATTACCO DIN 6535 HA  
 > RIVESTIMENTO TIALN

> FOR 60° TAPERED NPT-NPTF THREAD  
 > SHANK DIN 6535 HA  
 > TIALN COATED

ART.	(mm)		H	L1	Z	Filetti utili Thread useful	P	Preforo d. Prebore	Filetto eseguibile Thread type
	$\varnothing D$	$\varnothing d$							
FTSR 059.27° N	5,90	8	55	9,88	3	10	27	6,3	1/16"
FTSR 076.27° N	7,65	8	55	9,88	3	10	27	8,5	1/8"
FTSR 101.18° N	10,15	12	75	14,82	4	10	18	11,1	1/4"
FTSR 111.18° N	11,15	12	75	14,82	4	10	18	14,5	3/8"
FTSR 142.14° N	14,25	16	80	19,05	4	10	14	18-23	1/2"-3/4"
FTSR 196.11° N	19,60	20	90	23,19	5	12	11 1/2	29-44-56	1"-1 1/2-2"

PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037

# FMAN ... F

ALLUMINIO / ALUMINIUM

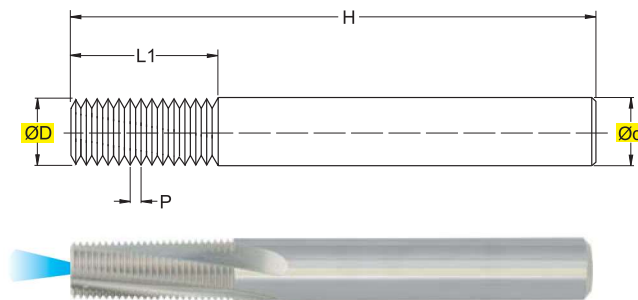
TOLLERANZE  
 TOLERANCE RANGE

D	d
e8	h6



MG

ØD = 4 - 20



> PER FILETTATURE ISO 60°  
 > ATTACCO DIN 6535 HA

> FOR ISO 60° THREAD  
 > SHANK DIN 6535 HA

ART.	ØD (mm)	Ød (mm)	H (mm)	L1 (mm)	Z	Filetti utili Thread useful	P/mm	Preforo d. Prebore	Filetto eseguibile Thread type
FMAN 040.080 F	4,0	6	55	12	3	15	0,80	4,2	M5
FMAN 045.075 F	4,5	6	55	12	3	16	0,75	8,3	MF9
FMAN 045.100 F	4,5	6	55	12	3	12	1,00	5-6	M6-M7
FMAN 060.075 F	6,0	6	55	15	3	20	0,75	7,2	MF8
FMAN 060.100 F	6,0	6	55	15	3	15	1,00	7	MF8
FMAN 060.125 F	6,0	6	55	15	3	12	1,25	6,8-7,8-8,8	M8-M9-MF10
FMAN 080.075 F	8,0	8	66	20	3	26	0,75	9,2-11,2	MF10-MF12
FMAN 080.100 F	8,0	8	66	20	3	20	1,00	9-11	MF10-MF12
FMAN 080.125 F	8,0	8	66	20	3	16	1,25	9	MF10
FMAN 080.150 F	8,0	8	66	20	3	13	1,50	8,5-9,5-10,5	M10-M11-MF12
FMAN 080.175 F	8,0	8	66	20	4	11	1,75	10,2	M12
FMAN 100.100 F	10,0	10	80	25	4	25	1,00	11	MF12
FMAN 100.125 F	10,0	10	80	25	4	20	1,25	12,8	MF14
FMAN 100.150 F	10,0	10	80	25	4	16	1,50	12,5	MF14
FMAN 100.200 F	10,0	10	80	25	4	12	2,00	12	M14
FMAN 120.100 F	12,0	12	82	30	4	30	1,00	13	MF14
FMAN 120.150 F	12,0	12	82	30	4	20	1,50	14,5	MF16
FMAN 120.200 F	12,0	12	82	30	4	15	2,00	14	M16
FMAN 140.100 F	14,0	14	100	35	4	35	1,00	15	MF16
FMAN 140.150 F	14,0	14	100	35	4	23	1,50	16,5	MF18
FMAN 140.200 F	14,0	14	100	35	4	17	2,00	16	MF18
FMAN 140.250 F	14,0	14	100	35	4	14	2,50	15,5	M18
FMAN 160.100 F	16,0	16	100	40	5	40	1,00	17-19	MF18-MF20
FMAN 160.150 F	16,0	16	100	40	5	26	1,50	18,5-20,5	MF20-MF22
FMAN 160.200 F	16,0	16	100	40	5	20	2,00	18-20	MF20-MF22
FMAN 160.250 F	16,0	16	100	40	5	16	2,50	17,5-19,5	M20-M22
FMAN 200.100 F	20,0	20	110	40	5	40	1,00	21>	MF22>
FMAN 200.150 F	20,0	20	110	40	5	26	1,50	22,5>	MF24>
FMAN 200.200 F	20,0	20	110	40	5	20	2,00	22>	MF24>
FMAN 200.300 F	20,0	20	110	40	5	13	3,00	21>	MF24>

PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037



# FGAN ... F

ALLUMINIO / ALUMINIUM

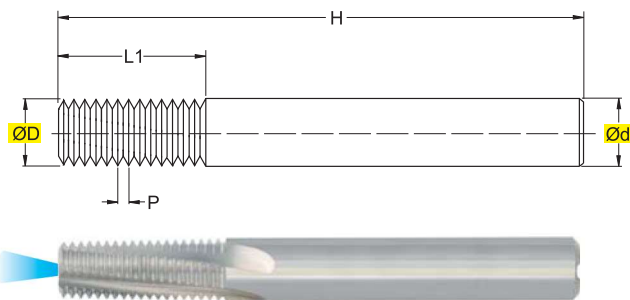
TOLLERANZE  
 TOLERANCE RANGE

D	d
e8	h6



MG

$\varnothing D = 8 - 20$



> PER FILETTATURE WHITWORTH 55° GAS  
 > ATTACCO DIN 6535 HA

> FOR WHITWORTH 55° GAS THREAD  
 > SHANK DIN 6535 HA

ART.	(mm)		H	L1	Z	Filetti utili Thread useful	P/tpi	Preforo d. Prebore	Filetto eseguibile Thread type
	$\varnothing D$	$\varnothing d$							
FGAN 080.028 F	8	8	66	20	3	22	28	8,7	1/8"
FGAN 100.019 F	10	10	80	25	4	18	19	11,8	1/4"
FGAN 140.019 F	14	14	100	35	4	26	19	15,25	3/8"
FGAN 160.014 F	16	16	100	40	5	22	14	19	1/2"
FGAN 200.014 F	20	20	110	40	5	22	14	21-24,5-28,25	5/8"-3/4"-7/8"
FGAN 200.011 F	20	20	110	40	5	17	11	30,75	1">



P/tpi = FILETTI PER POLLICE  
 P/tpi = THREADS FOR INCH-SIZES  
 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN  
 P/tpi = FILETS POUR POUÇES

PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037

# FUAN ... F

ALLUMINIO / ALUMINIUM

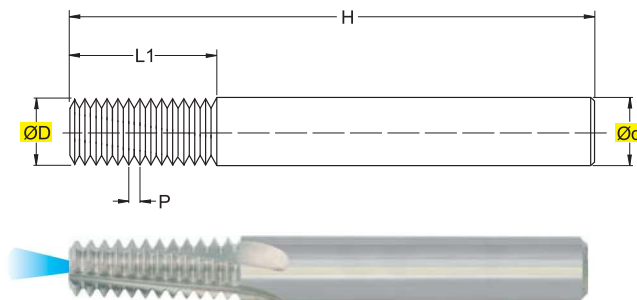
TOLLERANZE  
 TOLERANCE RANGE

D	d
e8	h6



MG

$\varnothing D = 4,5 - 20$



> PER FILETTATURE UN 60° (UNC-UNF)  
 > ATTACCO DIN 6535 HA

> UN 60° (UNC-UNF) THREAD  
 > SHANK DIN 6535 HA

ART.	(mm)					Filetti utili Thread useful	P/tpi	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød	H	L1	Z				
FUAN 045.020 F	4,5	6	55	12	3	9	20	5,2	UNC 1/4"
FUAN 045.028 F	4,5	6	55	12	3	13	28	5,5	UNF 1/4"
FUAN 055.018 F	5,5	6	55	15	3	10	18	6,6	UNC 5/16"
FUAN 055.024 F	5,5	6	55	15	3	14	24	6,9	UNF 5/16"
FUAN 075.016 F	7,5	8	66	20	3	12	16	8,5	UNC 3/8"
FUAN 080.014 F	8,0	8	66	20	3	11	14	9,4	UNC 7/16"
FUAN 080.020 F	8,0	8	66	20	3	15	20	9,9	UNF 7/16"
FUAN 080.024 F	8,0	8	66	20	3	18	24	8,5	UNF 3/8"
FUAN 100.012 F	10,0	10	80	25	4	11	12	12,2	UNC 9/16"
FUAN 100.013 F	10,0	10	80	25	4	12	13	10,8	UNC 1/2"
FUAN 100.018 F	10,0	10	80	25	4	21	18	12,9-14,5	UNF 9/16"-5/8"
FUAN 100.020 F	10,0	10	80	25	4	19	20	11,5	UNC 1/2"
FUAN 120.018 F	12,0	12	82	30	4	21	18	12,9-14,5	UNF 9/16"-5/8"
FUAN 120.011 F	12,0	12	82	30	4	13	11	13,6	UNC 5/8"
FUAN 155.016 F	15,5	16	100	40	5	25	16	17,5	UNF 3/4"
FUAN 155.010 F	15,5	16	100	40	5	15	10	16,5	UNC 3/4"
FUAN 155.014 F	15,5	16	100	40	5	22	14	20,5	UNF 7/8"
FUAN 180.009 F	18,0	18	110	40	5	15	9	19,5	UNF 7/8"
FUAN 180.014 F	18,0	18	110	40	5	22	14	19,5	UNC 7/8"
FUAN 200.008 F	20,0	20	110	40	5	12	8	23,25	UNF 1"
FUAN 200.012 F	20,0	20	110	40	5	18	12	22,25	UNC 1"

↑

- 🇮🇹 P/tpi = FILETTI PER POLLICE
- 🇬🇧 P/tpi = THREADS FOR INCH-SIZES
- 🇩🇪 P/tpi = GEWINDE FÜR ZOLLABMESSUNGEN
- 🇫🇷 P/tpi = FILETS POUR POUÇES

- 🇮🇹 PARAMETRI DI TAGLIO A PAG. 1037
- 🇬🇧 CUTTING DATA ON PAGE 1037
- 🇩🇪 SCHNITTPARAMETER AUF SEITE 1037
- 🇫🇷 PARAMETRES DE COUPE PAGE 1037

# FTAN ... F

ALLUMINIO / ALUMINIUM

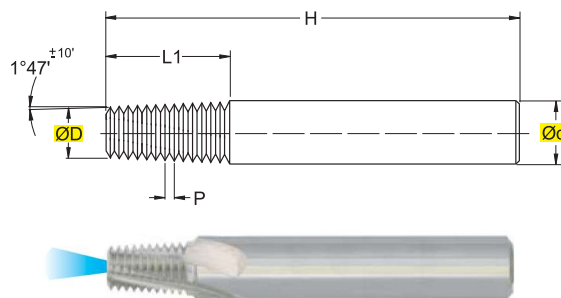
TOLLERANZE  
 TOLERANCE RANGE

D	d
	h6



MG

ØD = 5,9 - 19,6




> PER FILETTATURE NPT CONICHE 60°  
 > ATTACCO DIN 6535 HA

> FOR 60° TAPERED NPT-NPTF THREAD  
 > SHANK DIN 6535 HA

ART.	(mm)		H	L1	Z	Filetti utili Thread useful	P	Preforo d. Prebore	Filetto eseguibile Thread type
	ØD	Ød							
FTAN 059.27" F	5,90	8	55	9,88	3	10	27	6,3	1/16"
FTAN 076.27" F	7,65	8	55	9,88	3	10	27	8,5	1/8"
FTAN 101.18" F	10,15	12	75	14,82	4	10	18	11,1	1/4"
FTAN 111.18" F	11,15	12	75	14,82	4	10	18	14,5	3/8"
FTAN 142.14" F	14,25	16	80	19,05	4	10	14	18-23	1/2"-3/4"
FTAN 196.11" F	19,60	20	90	23,19	5	12	11 1/2	29-44-56	1"-1"3/4-1"1/2-2"

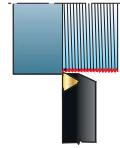
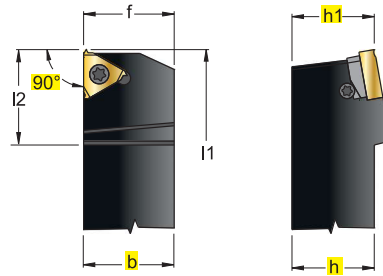
PARAMETRI DI TAGLIO A PAG. 1037  
 CUTTING DATA ON PAGE 1037  
 SCHNITTPARAMETER AUF SEITE 1037  
 PARAMETRES DE COUPE PAGE 1037



S 		S 			
SER/L Pag.706		ANR/L Pag.707			
					
	<b>16ER/EL</b> <b>22ER/EL</b>		<b>11IR/IL</b> <b>16IR/IL</b> <b>22IR/IL</b>		
□ 16x16 - 32x32		∅Dmin 12			
		SIR/L Pag.707			
			 		
			<b>06IR/IL</b> <b>08IR/IL</b>		
		∅Dmin 6	<b>08U IR/IL</b>		

**SER/L**

∅ 16x16 - 32x32



16ER/EL  
22ER/EL



**S**



In figura utensile destro - Right-hand shown



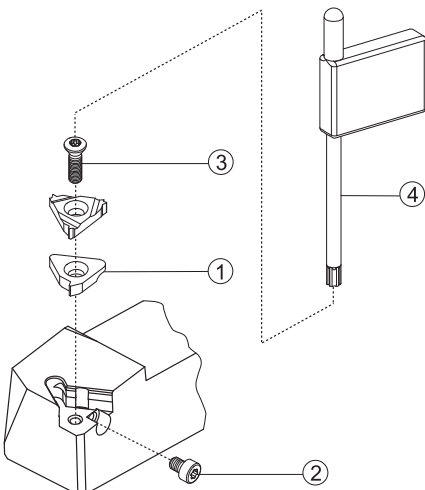
B

M

INSERTI - INSERTS  
PAG. 726

ART.	(mm)							Nm	16ER/EL	1	2	3	4	5
	R	L	h=h1	b	f	l1	l2							
SER/L 1616 H 16			16	16	16	100	25	1,8+2,0	16ER/EL	U16ER/IR	VS16T	S16T	5510	
SER/L 2020 K 16			20	20	20	125	27	1,8+2,0						
SER/L 2525 M 16			25	25	25	150	29	1,8+2,0						
SER/L 3225 P 16			32	25	25	170	29	1,8+2,0						
SER/L 2525 M 22			25	25	25	150	29	2,5+3,0	22ER/EL	U22ER/IR	VS22T	S22T	5520	
SER/L 3232 P 22			32	32	32	170	29	2,5+3,0						

PER UTENSILE R MONTARE INSERTO ..ER.. , PER UTENSILE L MONTARE INSERTO ..EL..  
 FOR R TOOL FIT INSERT ..ER.. , FOR L TOOL FIT INSERT ..EL..  
 FÜR DAS WERKZEUG R DIE WENDEPLATTE ..ER.. EINSETZEN; FÜR DAS WERKZEUG L DIE WENDEPLATTE ..EL..  
 DANS LE CAS DE L'OUTIL R MONTER LA PLAQUETTE ..ER.. , DANS LE CAS DE L'OUTIL L MONTER LA PLAQUETTE ..EL..



VELOCITÀ DI TAGLIO Vc  
 Vc, CUTTING SPEED  
 Vc, SCHNITTGESCHWINDIGKEIT  
 Vc, VITESSE DE COUPE



PAG. 722

DETTAGLIO RICAMBI  
 SPARE PARTS DETAILS  
 DETAILS ZU DEN ERSATZTEILEN  
 DÉTAIL DE PIÈCES DE RECHANGE

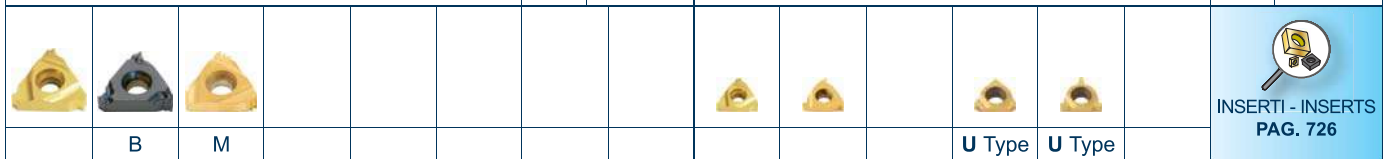
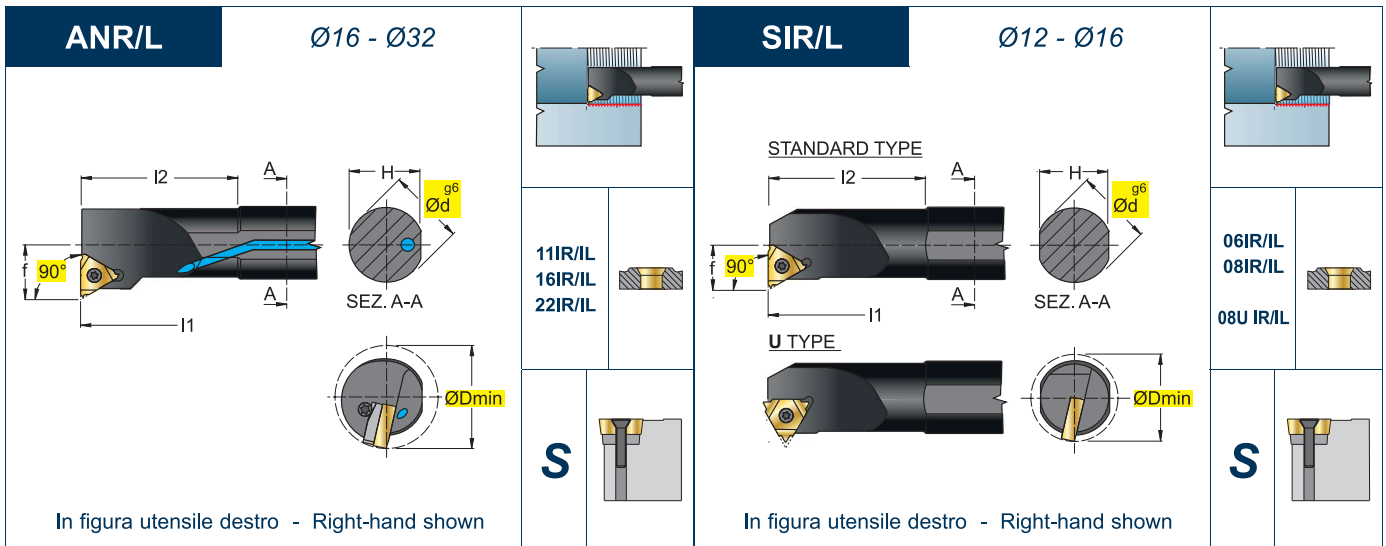


PAG. 967

DATI TECNICI E CONSIGLI  
 TECHNICAL DATA AND SUGGESTIONS  
 TECHNISCHE DATEN UND EMPFEHLUNGEN  
 DONNÉES TECHNIQUES ET CONSEILS



PAG. 1040

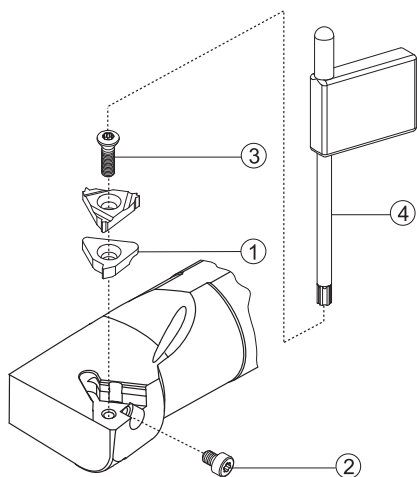


ART.	(mm)								Nm	Insert	Inserts			
	ØDmin	Ød	f	H	l1	l2	1	2			3	4		
ANR/L 0010 K 11	12	16	6,6	15,25	125	24,65	1,0±1,2	11IR/IL	-	-	12254P	5507P		
ANR/L 0013 L 11	15	16	8,2	15,25	140	32,00	1,0±1,2	11IR/IL	-	-	12254P	5507P		
ANR/L 0016 M 16	19	16	10,6	15,25	150	40,00	3,0±3,5	16IR/IL	-	-	123511P	5515P		
ANR/L 0020 Q 16	24	20	14,0	19	180	50,00	1,8±2,0	16IR/IL	U16IR/ER	VS16T	S16T	5510		
ANR/L 0025 R 16	29	25	16,3	24	200	55,00	1,8±2,0	16IR/IL	U16IR/ER	VS16T	S16T	5510		
ANR/L 0032 S 16	36	32	19,6	31	250	55,00	1,8±2,0	16IR/IL	U16IR/ER	VS16T	S16T	5510		
ANR/L 0020 Q 22	27	20	15,6	19	180	50,00	2,5±3,0	22IR/IL	-	-	S22T	5620		
ANR/L 0025 R 22	32	25	17,4	24	200	60,00	2,5±3,0	22IR/IL	U22IR/ER	VS22T	S22T	5620		
ANR/L 0032 S 22	39	32	21,5	31	250	60,00	2,5±3,0	22IR/IL	U22IR/ER	VS22T	S22T	5620		

PER UTENSILE R MONTARE INSERTO ..IR.. , PER UTENSILE L MONTARE INSERTO ..IL..  
 FOR R TOOL FIT INSERT ..IR.. , FOR L TOOL FIT INSERT ..IL..  
 FÜR DAS WERKZEUG R DIE WENDEPLATTE ..IR.. EINSETZEN; FÜR DAS WERKZEUG L DIE WENDEPLATTE ..IL..  
 DANS LE CAS DE L'OUTIL R MONTER LA PLAQUETTE ..IR.. , DANS LE CAS DE L'OUTIL L MONTER LA PLAQUETTE ..IL..

SIR/L 0005 H06	6,0	12	4,3	11	100	12	0,5±0,6	06IR/IL	-	-	122042	5606
SIR/L 0007 K08	7,8	16	5,3	14	125	18	0,5±0,6	08IR/IL	-	-	12205	5606
SIR/L 0008 K08U	9,0	16	6,6	14	125	21	0,5±0,6	08U IR/IL	-	-	12205	5606

PER UTENSILE R MONTARE INSERTO ..IR.. , PER UTENSILE L MONTARE INSERTO ..IL..  
 FOR R TOOL FIT INSERT ..IR.. , FOR L TOOL FIT INSERT ..IL..  
 FÜR DAS WERKZEUG R DIE WENDEPLATTE ..IR.. EINSETZEN; FÜR DAS WERKZEUG L DIE WENDEPLATTE ..IL..  
 DANS LE CAS DE L'OUTIL R MONTER LA PLAQUETTE ..IR.. , DANS LE CAS DE L'OUTIL L MONTER LA PLAQUETTE ..IL..



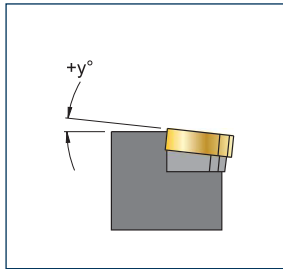
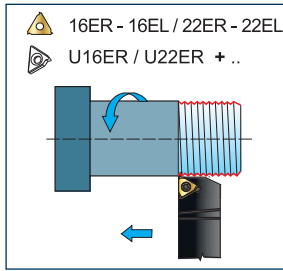
- VELOCITÀ DI TAGLIO Vc  
 Vc. CUTTING SPEED  
 Vc. SCHNITTGESCHWINDIGKEIT  
 Vc. VITESSE DE COUPE
- DETTAGLIO RICAMBI  
 SPARE PARTS DETAILS  
 DETAILS ZU DEN ERSATZTEILEN  
 DÉTAIL DE PIÈCES DE RECHANGE
- DATI TECNICI E CONSIGLI  
 TECHNICAL DATA AND SUGGESTIONS  
 TECHNISCHE DATEN UND EMPFEHLUNGEN  
 DONNÉES TECHNIQUES ET CONSEILS

**Vc** **PAG. 722**

**PAG. 967**

**PAG. 1040**

### FILETTATURA DESTRA / UTENSILE ESTERNO DESTRO - RIGHT THREADING / EXTERNAL RIGHT TOOL



cod. SER 1616 H16

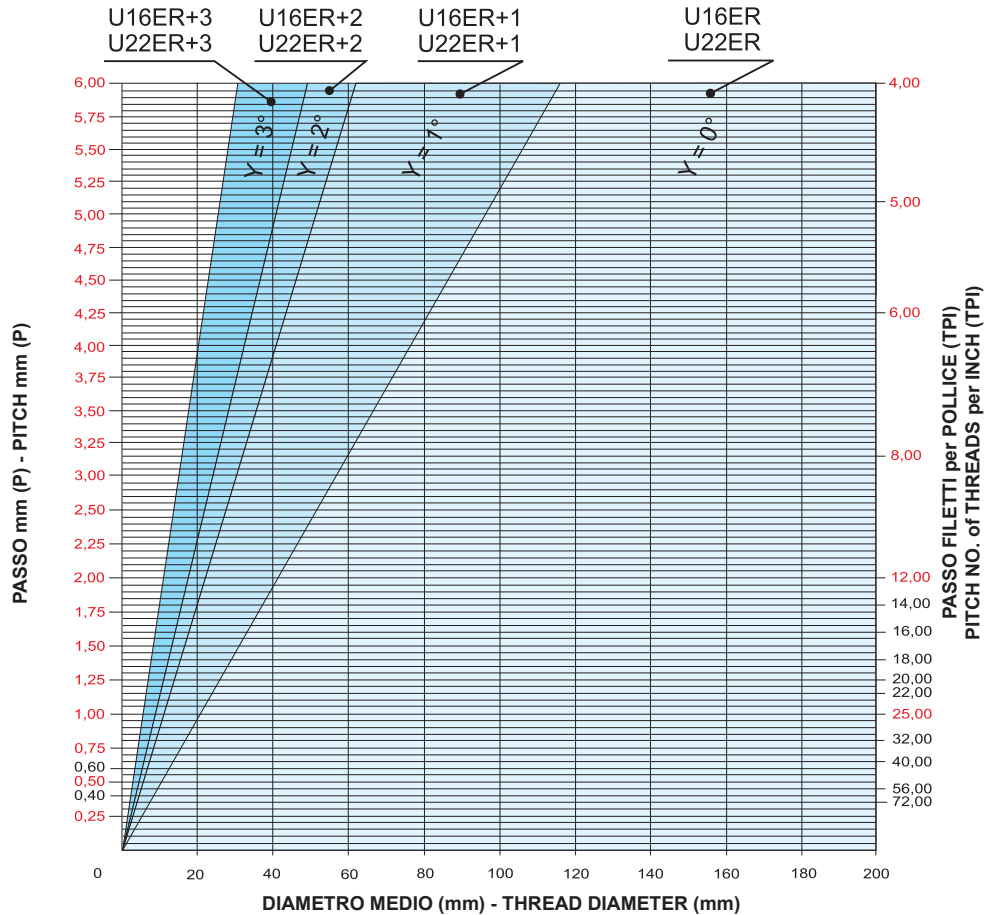
cod. SER 2020 K16

cod. SER 2525 M16

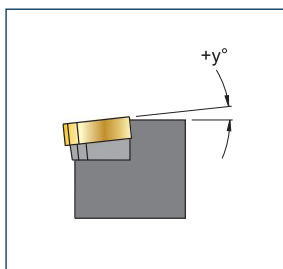
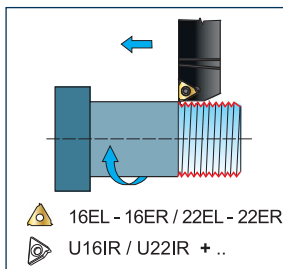
cod. SER 3225 P16

cod. SER 2525 M22

cod. SER 3232 P22



### FILETTATURA SINISTRA / UTENSILE ESTERNO SINISTRO - LEFT THREADING / EXTERNAL LEFT TOOL



cod. SEL 1616 H16

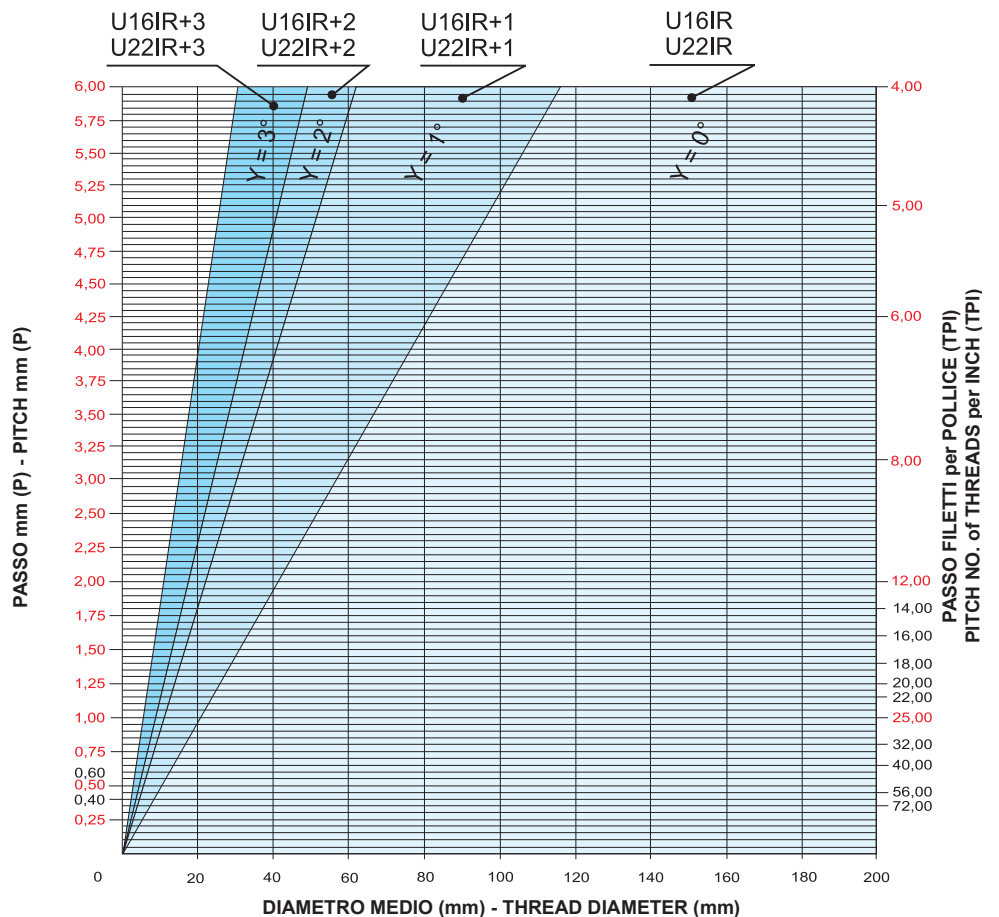
cod. SEL 2020 K16

cod. SEL 2525 M16

cod. SEL 3225 P16

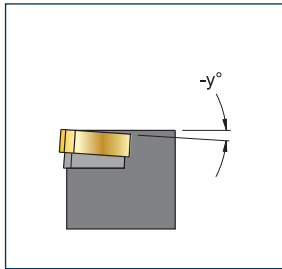
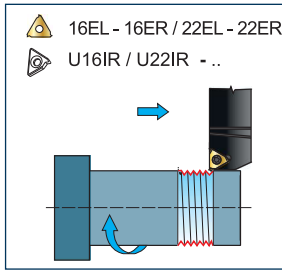
cod. SEL 2525 M22

cod. SEL 3232 P22

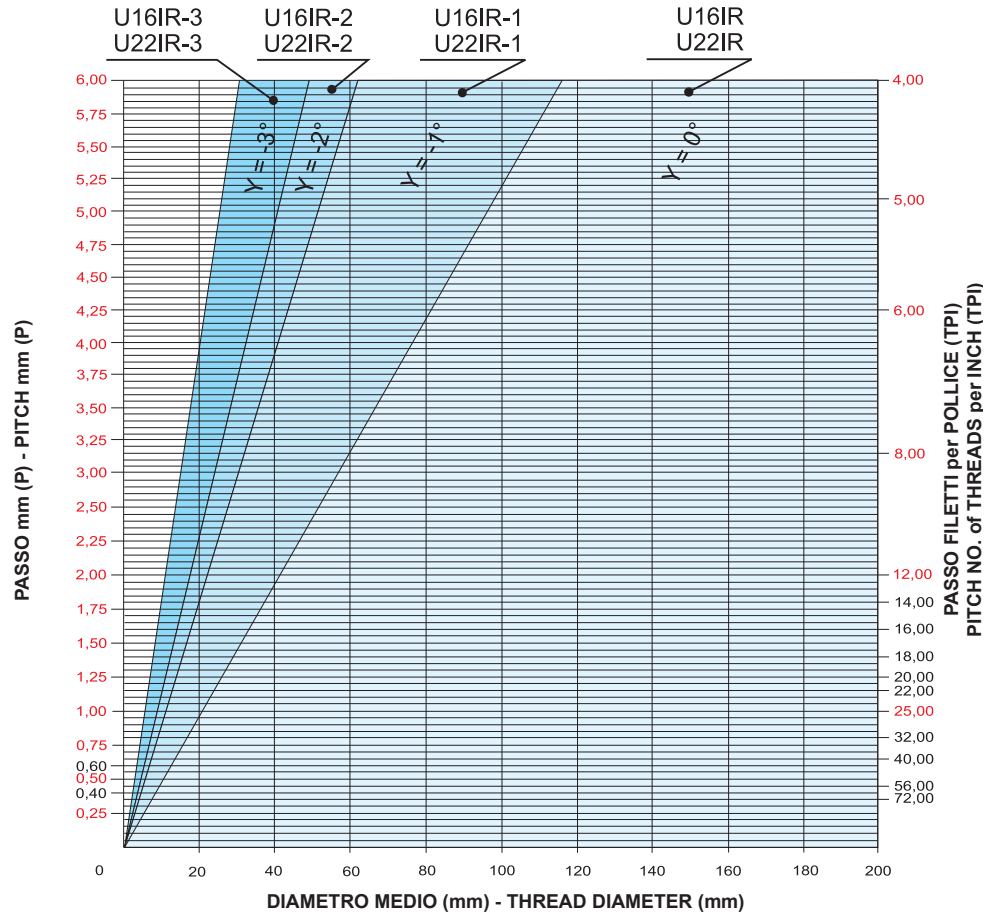




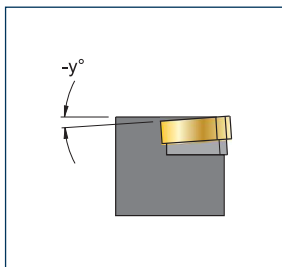
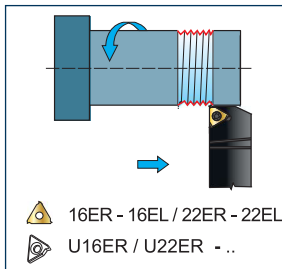
**FILETTATURA DESTRA / UTENSILE ESTERNO SINISTRO - RIGHT THREADING / EXTERNAL LEFT TOOL**



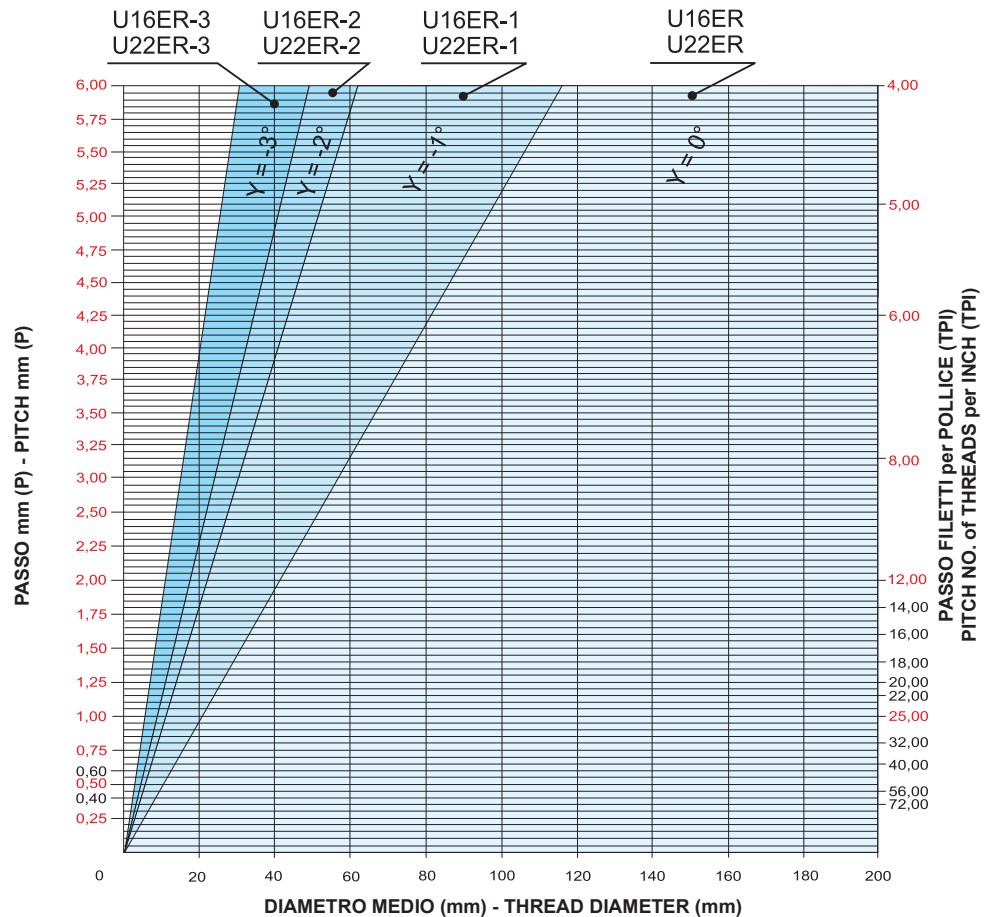
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- cod. SEL 2020 K16
- cod. SEL 2525 M16
- cod. SEL 3225 P16
- cod. SEL 2525 M22
- cod. SEL 3232 P22



**FILETTATURA SINISTRA / UTENSILE ESTERNO DESTRO - LEFT THREADING / EXTERNAL RIGHT TOOL**

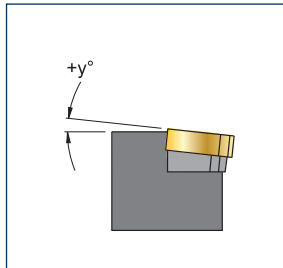
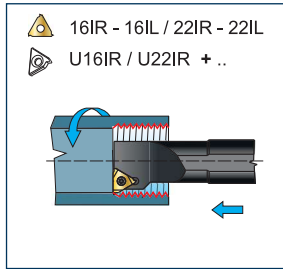


- cod. SER 1616 H16
- cod. SER 2020 K16
- cod. SER 2525 M16
- cod. SER 3225 P16
- cod. SER 2525 M22
- cod. SER 3232 P22

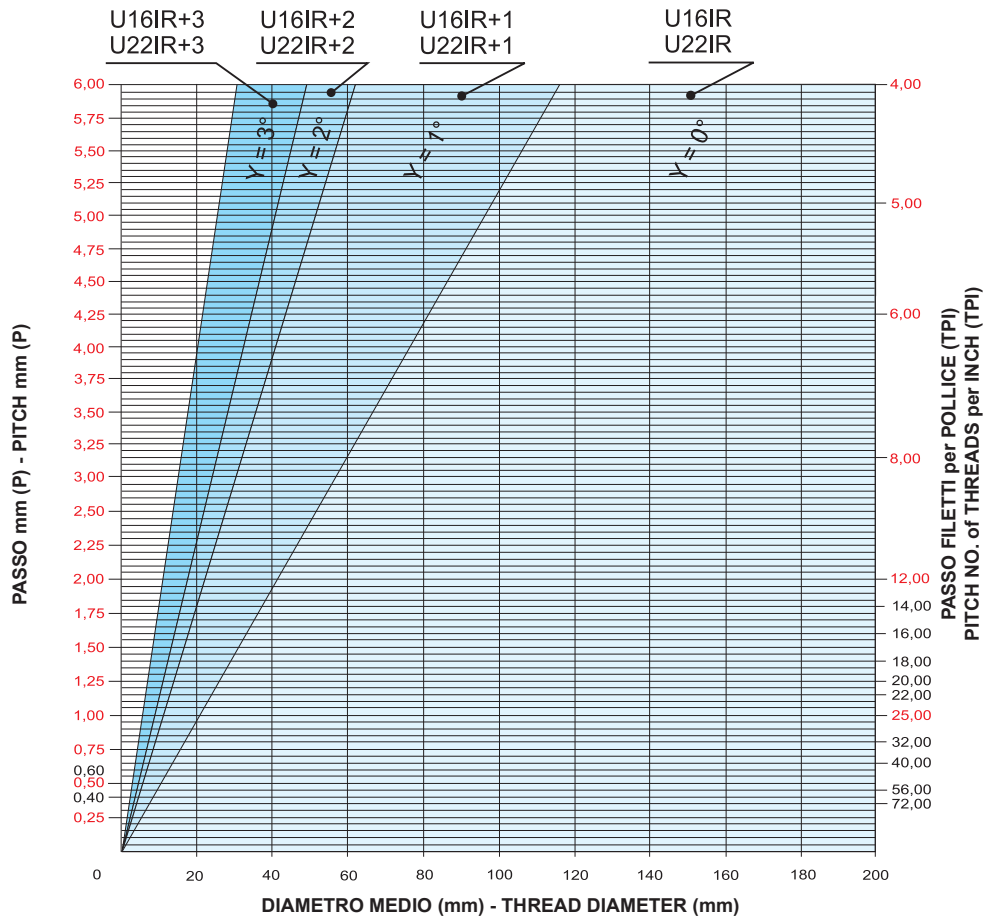




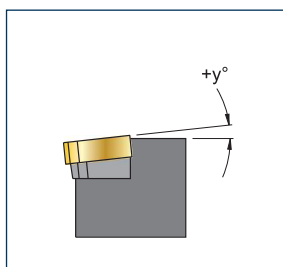
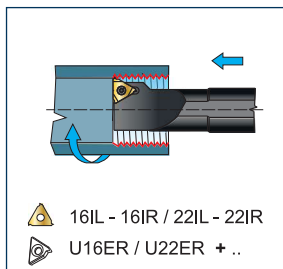
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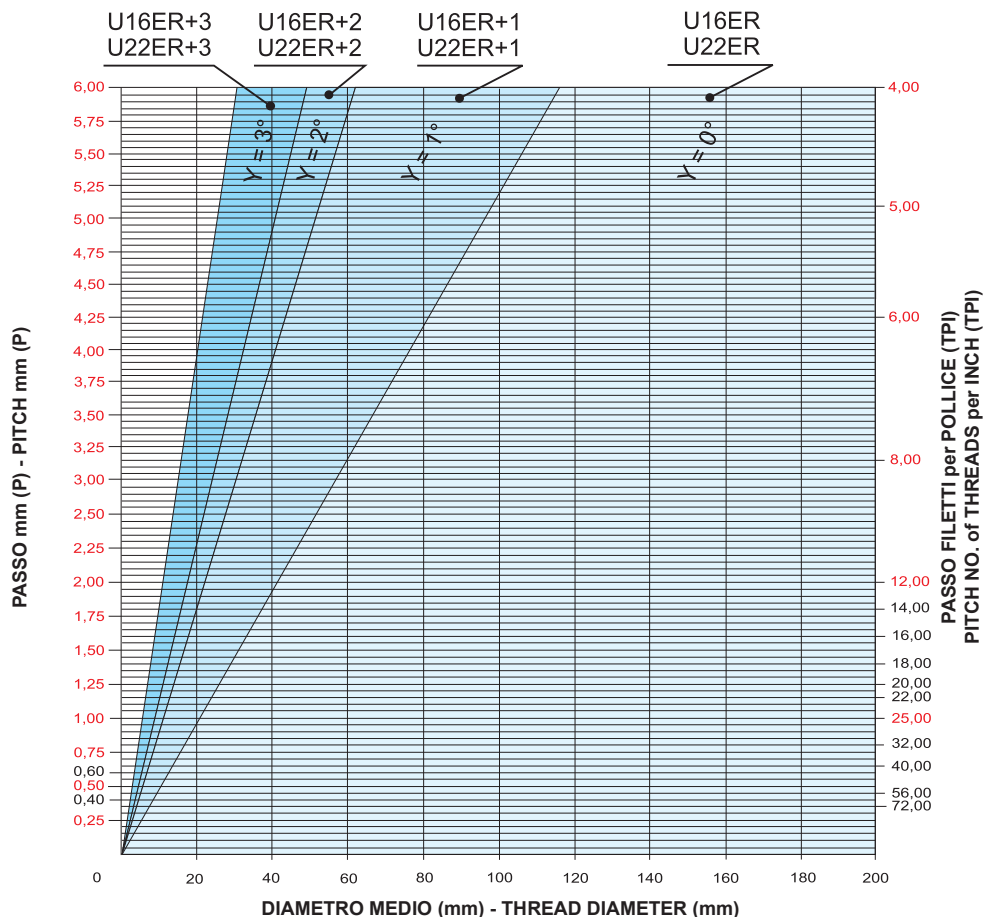
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- cod. ANR 0020 Q16
- cod. ANR 0025 R16
- cod. ANR 0032 S16
- cod. ANR 0020 Q22
- cod. ANR 0025 R22
- cod. ANR 0032 S22



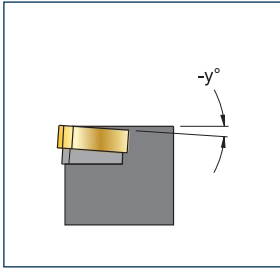
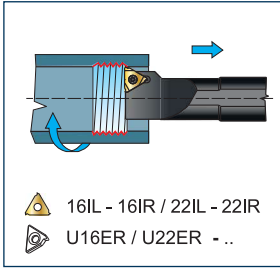
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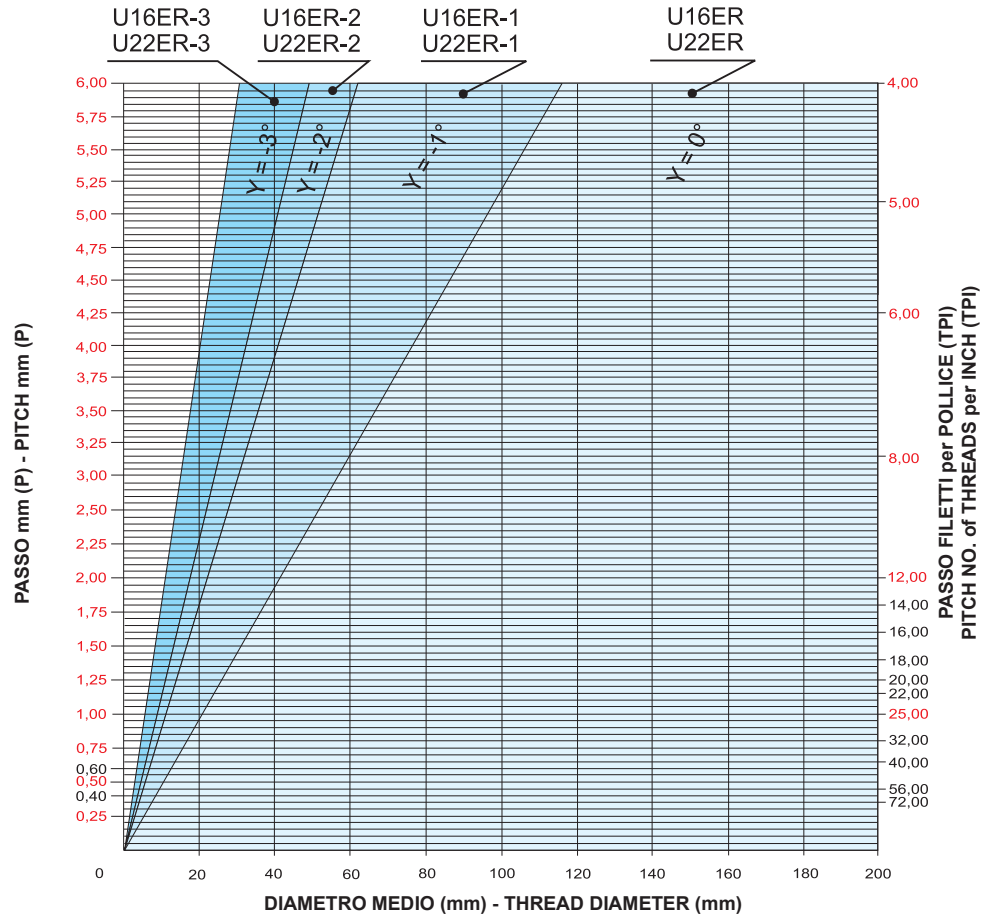
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- cod. ANL 0020 Q16
- cod. ANL 0025 R16
- cod. ANL 0032 S16
- cod. ANL 0020 Q22
- cod. ANL 0025 R22
- cod. ANL 0032 S22



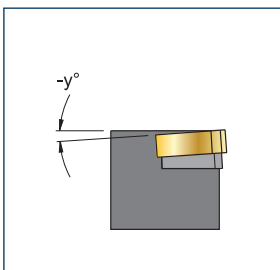
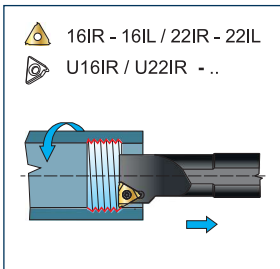
**FILETTATURA DESTRA / UTENSILE INTERNO SINISTRO - RIGHT THREADING / INTERNAL LEFT TOOL**



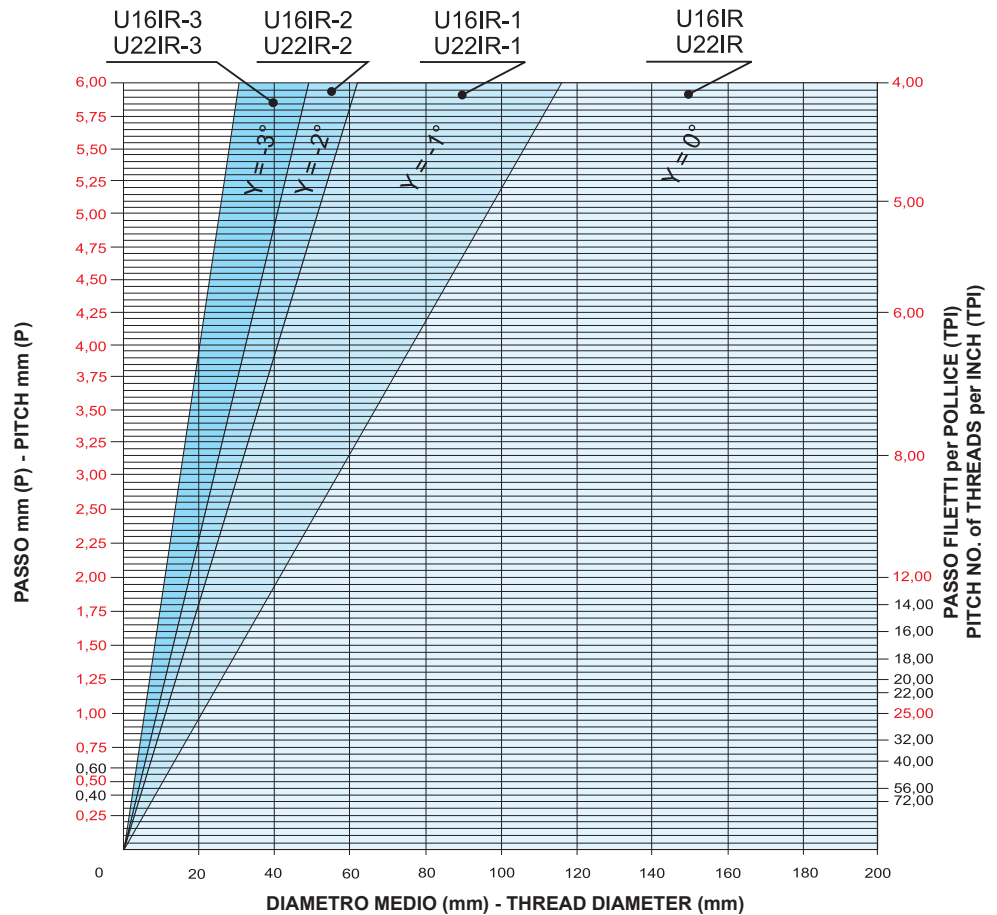
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- cod. ANL 0020 Q16
- cod. ANL 0025 R16
- cod. ANL 0032 S16
- cod. ANL 0020 Q22
- cod. ANL 0025 R22
- cod. ANL 0032 S22

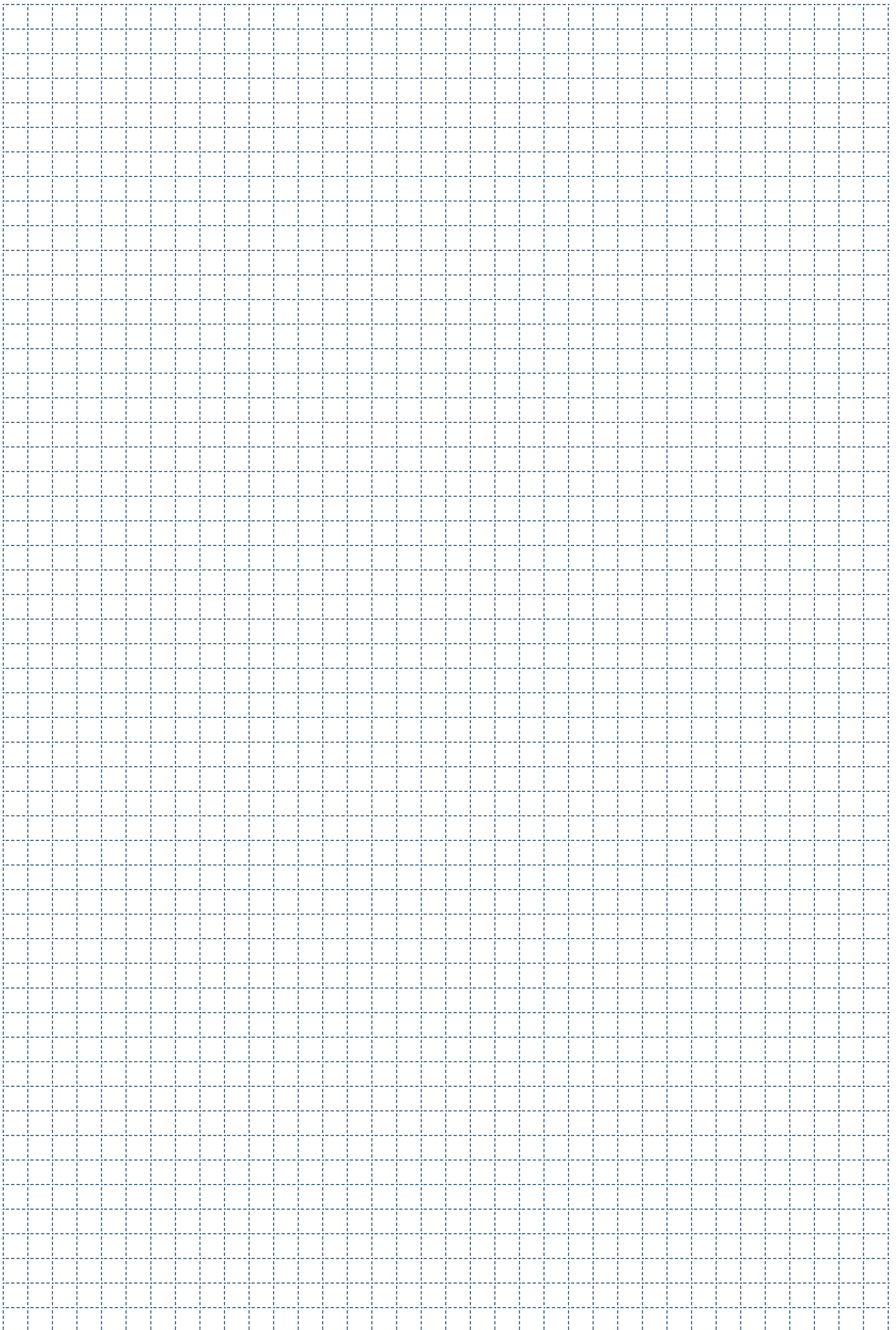


**FILETTATURA SINISTRA / UTENSILE INTERNO DESTRO - LEFT THREADING / INTERNAL RIGHT TOOL**



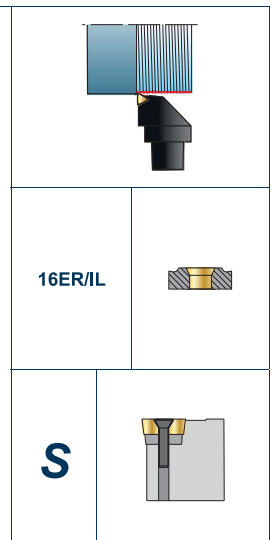
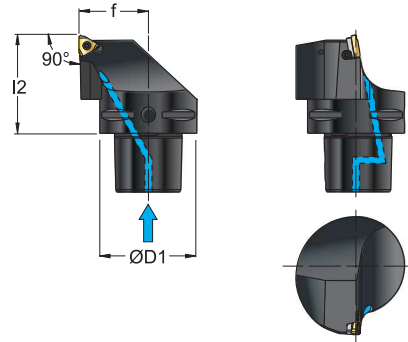
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- cod. ANR 0032 S22



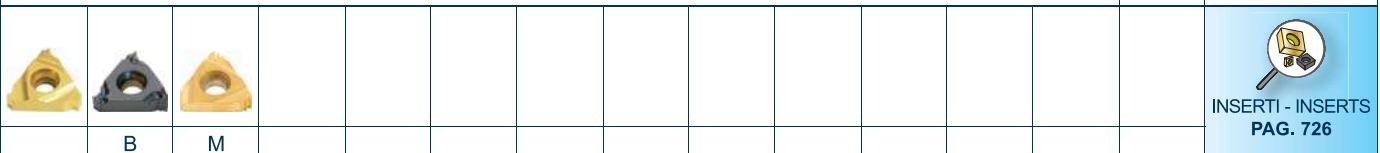


S 					
<b>SC.. SER/L</b> Pag.714					
					
	<b>16ER/EL</b>				
<i>PSC40 - PSC50 - PSC63</i>					
<b>SC.. ANR/L</b> Pag.715					
					
	<b>16IR/IL</b>				
<i>PSC40 - PSC50 - PSC63</i>					

**SC.. SER/L**

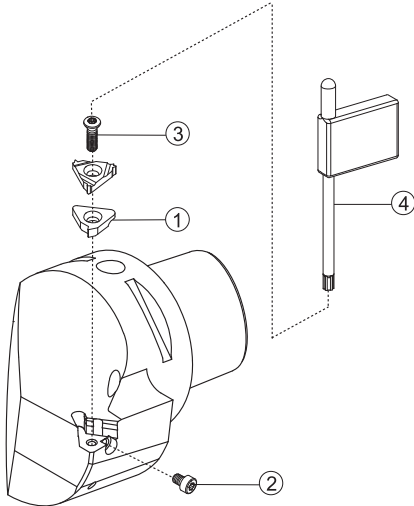


In figura utensile destro - Right-hand shown

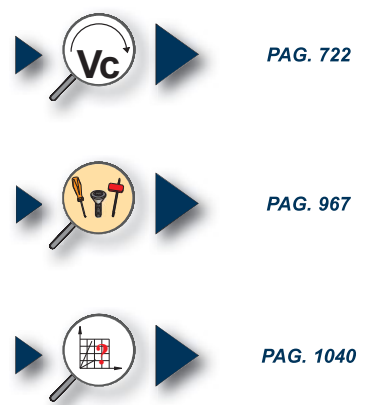


ART.			(mm)			Nm		<table border="1"> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>○</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					1	2	3	4	○					
			1	2	3			4	○													
			ØD1	f	l2																	
SC40 SER/L 27050-16		PSC40	40	27	50	1,8+2,0	16ER/EL	U16ER/IR	VS16T	S16T	5510											
SC50 SER/L 35060-16		PSC50	50	35	60	1,8+2,0																
SC63 SER/L 45065-16		PSC63	63	45	65	1,8+2,0																

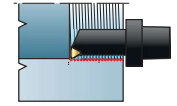
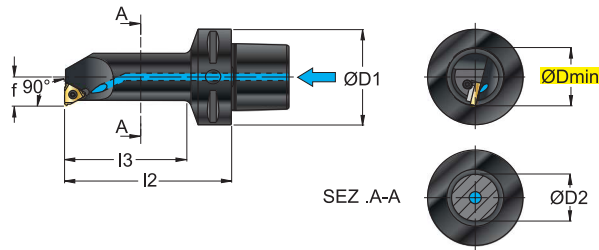
PER UTENSILE R MONTARE INSERTO ..ER.. , PER UTENSILE L MONTARE INSERTO ..EL..  
 FOR R TOOL FIT INSERT ..ER.. , FOR L TOOL FIT INSERT ..EL..  
 FÜR DAS WERKZEUG R DIE WENDEPLATTE ..ER.. EINSETZEN; FÜR DAS WERKZEUG L DIE WENDEPLATTE ..EL..  
 DANS LE CAS DE L'OUTIL R MONTER LA PLAQUETTE ..ER.. , DANS LE CAS DE L'OUTIL L MONTER LA PLAQUETTE ..EL..



- VELOCITÀ DI TAGLIO Vc
  - Vc, CUTTING SPEED
  - Vc, SCHNITTGESCHWINDIGKEIT
  - Vc, VITESSE DE COUPE
- 
- DETTAGLIO RICAMBI
  - SPARE PARTS DETAILS
  - DETAILS ZU DEN ERSATZTEILEN
  - DÉTAIL DE PIÈCES DE RECHANGE
- 
- DATI TECNICI E CONSIGLI
  - TECHNICAL DATA AND SUGGESTIONS
  - TECHNISCHE DATEN UND EMPFEHLUNGEN
  - DONNÉES TECHNIQUES ET CONSEILS



**SC.. ANR/L**



16IR/IL



**S**

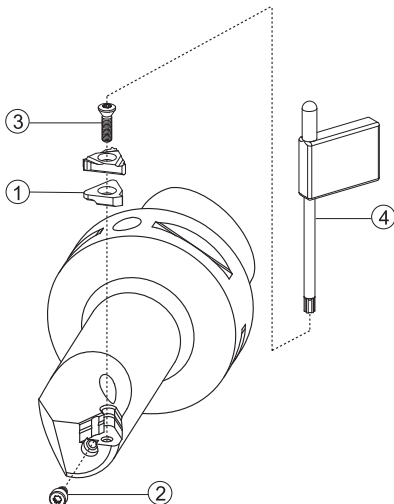


In figura utensile destro - Right-hand shown

																	INSERTI - INSERTS PAG. 726
B	M																

ART.			(mm)									1	2	3	4	
			ØDmin	ØD1	ØD2	f	I2	I3	Nm							
SC40 ANR/L 17090-16		PSC40	32	40	25	17	90	65	1,8±2,0	16IR/IL	U16IR/ER	VS16T	S16T	5510		
SC50 ANR/L 17090-16		PSC50	32	50	25	17	90	65	1,8±2,0							
SC63 ANR/L 20110-16		PSC63	39	63	31	20	110	78	1,8±2,0							

PER UTENSILE R MONTARE INSERTO ..IR.. , PER UTENSILE L MONTARE INSERTO ..IL..  
 FOR R TOOL FIT INSERT ..IR.. , FOR L TOOL FIT INSERT ..IL..  
 FÜR DAS WERKZEUG R DIE WENDEPLATTE ..IR.. EINSETZEN; FÜR DAS WERKZEUG L DIE WENDEPLATTE ..IL..  
 DANS LE CAS DE L'OUTIL R MONTER LA PLAQUETTE ..IR.. , DANS LE CAS DE L'OUTIL L MONTER LA PLAQUETTE ..IL..



VELOCITÀ DI TAGLIO Vc  
 Vc. CUTTING SPEED  
 Vc. SCHNITTGESCHWINDIGKEIT  
 Vc. VITESSE DE COUPE



PAG. 722

DETTAGLIO RICAMBI  
 SPARE PARTS DETAILS  
 DETAILS ZU DEN ERSATZTEILEN  
 DÉTAIL DE PIÈCES DE RECHANGE



PAG. 967

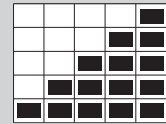
DATI TECNICI E CONSIGLI  
 TECHNICAL DATA AND SUGGESTIONS  
 TECHNISCHE DATEN UND EMPFEHLUNGEN  
 DONNÉES TECHNIQUES ET CONSEILS



PAG. 1040

# SCELTA VELOCE QUICK PICK

Tenacità +  
Toughness -



- METODO PER LA SCELTA VELOCE DEL GRADO DI METALLO DURO PIÙ IDONEO. CONTARE IL NUMERO DI RETTANGOLI COLORATI
- METHOD FOR A QUICK CHOICE OF THE MOST SUITABLE SOLID CARBIDE GRADE. COUNT THE NUMBER OF COLORED RECTANGLES
- METHODE ZUR RASCHEN AUSWAHL DER GEEIGNETSTEN HARTMETALLSORTE. DIE ANZAHL DER BUNTEN RECH TECKEZAHLN
- METHODE POUR CHOISIR RAPIDEMENT LE DEGRÉ LE PLUS APPROPRIÉ DU METAL DUR. COMPTER LES RECTANGLES EN COULEURS
- METODO PARA LA ELECCION RAPIDA DE EL GRADO MAS ADECUADO DE METAL DURO. CONTAR LOS NUMEROS DE RECTANGULOS COLORAEDOS

- GRADO MOLTO RESISTENTE ALL'USURA, SOLO PER FINITURA, LAVORAZIONI AD ALTE VELOCITÀ DI TAGLIO E CONDIZIONI MOLTO RIGIDE E STABILI  
 - GRADE WITH HIGH RESISTANCE TO WEAR; ONLY FOR FINISHING, MACHINING AT HIGH CUTTING SPEEDS, AND VERY RIGID AND STABLE CONDITIONS

- GRADO CON ALTA RESISTENZA ALL'USURA, DISCRETA TENACITÀ PER LAVORAZIONI A VELOCITÀ MEDIO ALTE ED AVANZAMENTI MEDI, IN CONDIZIONI NORMALI  
 - GRADE WITH HIGH RESISTANCE TO WEAR, GOOD TOUGHNESS, FOR MEDIUM-HIGH MACHINING AND MEDIUM FEED UNDER NORMAL CONDITIONS

- GRADO CON BUONA RESISTENZA ALL'USURA UNITA A BUONA TENACITÀ, PER LAVORAZIONI GENERICHE IN CONDIZIONI NORMALI  
 - GRADE WITH GOOD RESISTANCE TO WEAR; COMBINED WITH A GOOD DEGREE OF TOUGHNESS, FOR GENERAL MACHINING UNDER NORMAL CONDITIONS

- GRADO CON OTTIMA TENACITÀ PER LAVORAZIONI MEDIO PESANTI O IN CONDIZIONI POCO STABILI  
 - GRADE WITH EXCELLENTE TOUGHNESS, FOR MEDIUM HEAVY MACHINING OR MACHINING UNDER CONDITIONS OF LOW STABILITY

- GRADO CON ECCEZIONALE TENACITÀ PER LAVORAZIONI PESANTI CON BASSE VELOCITÀ DI TAGLIO, ALTI AVANZAMENTI O IN CONDIZIONI SFAVOREVOLI  
 - GRADE WITH EXCELLENTE TOUGHNESS, FOR HEAVY MACHINING WITH LOW CUTTING SPEEDS, HIGH FEED, OR UNDER UNFAVORABLE CONDITIONS

# GUIDA FACILE EASY GUIDE

16ER 1.25 ISO F7030	F	●	P	Vc = 90-160 m/min
	M	●	M	Vc = 70-130 m/min
	R	●	K	Vc = 80-130 m/min
		○	N	Vc = 300-800 m/min
		●	S	Vc = 40-100 m/min
		○	H	Vc = 20-50 m/min



16ER 1.25 ISO - F7030

P20-P40/M20-M30/K20-K30



- GUIDA ALL'USO DELL'INSERTO. PRESENTE ANCHE SU OGNI ETICHETTA
- GUIDE FOR THE USE OF THE INSERT. ALSO LISTED ON EACH LABEL
- LEITFADEN ZUR VERWENDUNG DER WENDEPLATTE, AUCH AUF JEDEM AUFKLEBER VORHANDEN
- INSTRUCTIONS POUR L'UTILISATION DE LA PLAQUETTE. SE TROUVANT EGALEMENT SUR CHAQUE ETIQUETTE
- GUIA POR EL UTILIZO DE LA PLAQUITA, PRESENTE TAMBIEN EN CADA ETIQUETA

GR. VDI 3323	6	P
	14.1	M
	16	K
	21	N
	33	S
	38	H
MATERIALI MATERIALS		
Pag. 1063		



- = ACCIAIO BASSO LEGATO HB 180
- = ACCIAIO INOSSIDABILE AUSTENITICO HB 180
- = GHISA GRIGIA HB 260
- = LEGHE DI ALLUMINIO HB 60
- = LEGHE RESISTENTI AL CALORE (INCONEL) HB 250
- = ACCIAIO TEMPRATO HRC 55



- LOW STEEL ALLOY
- AUSTENITIC STAINLESS STEEL HB 180
- GRAY CAST IRON HB 260
- ALUMINUM ALLOYS HB 60
- HEAT RESISTANT ALLOYS (INCONEL) HB 250
- TEMPERED STEEL HRC 55

- |   |                                       |                                 |
|---|---------------------------------------|---------------------------------|
| F | = FINITURA, LAVORAZIONI LEGGERE       | - FINISHING, LIGHT MACHINING    |
| M | = LAVORAZIONI MEDIE, IMPIEGO GENERICO | - MEDIUM MACHINING, GENERAL USE |
| R | = SGROSSATURA, LAVORAZIONI PESANTI    | - ROUGHING, HEAVY MACHINING     |

- |            |                             |                           |
|------------|-----------------------------|---------------------------|
| fn (mm)    | = AVANZAMENTO PER TORNITURA | - FEED FOR TOURNING       |
| fz (mm/z)  | = AVANZAMENTO PER FRESATURA | - FEED FOR MILLING        |
| Vc (m/min) | = VELOCITÀ DI TAGLIO        | - CUTTING SPEED           |
| ●          | = APPLICAZIONE CONSIGLIATA  | - RECOMMENDED APPLICATION |
| ○          | = APPLICAZIONE POSSIBILE    | - POSSIBLE APPLICATION    |



# INSERTI PER FILETTATURA


THREADING INSERTS / WENDEPLATTEN ZUM GEWINDESCHNEIDEN  
PLAQUÉTTES DE FILETAGE / PLAQUITAS DE FILETADURA







	COME SCEGLIERE I PARAMETRI DI LAVORO	Pag. 719
	PANORAMICA QUALITÀ DI FILETTATURA	Pag. 721
	IMPIEGO DELLE QUALITÀ DI FILETTATURA	Pag. 721
	VELOCITÀ DI TAGLIO DELLE QUALITÀ DI FILETTATURA	Pag. 722
	PARAMETRI DI TAGLIO	Pag. 723
	CATALOGO DISPONIBILITÀ INSERTI	Pag. 726

	HOW TO CHOOSE CUTTING DATA	Pag. 719
	GENERAL VIEW OF THE THREADING GRADE	Pag. 721
	APPLICATION OF THE THREADING GRADE	Pag. 721
	CUTTING SPEED OF THREADING GRADES	Pag. 722
	CUTTING DATA	Pag. 723
	INSERTS STOCK CATALOGUE	Pag. 726

	EINSTELLUNG DER SCHNITTDATEN	Pag. 719
	GEWINDESCHNEIDEN-ÜBERSICHT	Pag. 721
	EINSATZ DER GEWINDESCHNEIDEN	Pag. 721
	SCHNITTGESCHWINDIGKEIT DER GEWINDEQUALITÄTEN	Pag. 722
	SCHNITTPARAMETER	Pag. 723
	WENDEPLATTENBESTAND-KATALOG	Pag. 726

	COMMENT CHOISIR LES PARAMETRES DE SERVICE	Pag. 719
	VUE D' ENSEMBLE QUALITÉ DE FILETAGE	Pag. 721
	UTILISATION DE LES QUALITÉS DE FILETAGE	Pag. 721
	VITESSE DE COUPE DE LA QUALITÉ DE PLAQUETTES DE FILETAGE	Pag. 722
	PARAMETRES DE COUPE	Pag. 723
	CATALOGUE DE DISPONIBILITÉ PLAQUETTES	Pag. 726

**COME SCEGLIERE I PARAMETRI DI LAVORO**  
**HOW TO CHOOSE CUTTING DATA**  
**EINSTELLUNG DER SCHNITTDATEN**  
**COMMENT CHOISIR LES PARAMETRES DE SERVICE**

**FASE 1 - PHASE 1**

SCelta GR. VDI IN FUNZIONE DEL MATERIALE  
 CHOICE OF VDI GR. DEPENDING ON MATERIAL  
 WAHL VDI-SORTE JE NACH WERKSTOFF  
 CHOIX GR. VDI EN FONCTION DU MATERIEL

UNI	WISTOFF	DIN	AISI	BS	AFNOR	JIS	Ac1.1	mc	VDI 3323 GR.
<b>ACCIAIO NON LEGATO RICOTTO</b> <b>ANNEALED NOT-ALLOY STEEL</b>									
<b>C &lt; 0,15% 125 HB</b>									
CF 10 SPb 20	1.0722	10 SPb 20	11 L 08	-	10 Pbf 2	-	-	1350	0,22
CF 9 SMh 28	1.0715	9 SMh 28	12 L 13	230 M 07	S 250	-	-	1350	0,22
CF 8 SMh 36	1.0706	8 SMh 36	12 L 15	240 M 07	S 300	-	-	1350	0,22
CF 9 SMhPo 28	1.0718	9 SMhPo 28	12 L 13	-	S 200 Pb	-	-	1350	0,22
CF 9 SMhPo 36	1.0707	9 SMhPo 36	12 L 14	-	S 300 Pb	-	-	1350	0,22
C 15; C 16	1.0401	C 15	1015	080 M 15	AF 7 C 12; XC 18	S15	-	1450	0,22
C 20; C 21	1.0402	C 22	1020	090 A 20	AF 42 C 20	S20	-	1450	0,22
C 25	1.1141	CA 15	1015	080 M 15	XC 16; XC 18	S25	-	1450	0,22
<b>ACCIAIO NON LEGATO RICOTTO</b> <b>ANNEALED NOT-ALLOY STEEL</b>									
<b>C 0,15-0,55% 180 HB</b>									
C 35	-	35 Mn 6	1330	150 M 28	20 M 5	-	-	1450	0,22
C 45	-	45 Mn 5	1140	212 M 36	35 MF 4	-	-	1450	0,22
C 36	-	40 Mn 4	1039	150 M 36	35 M 5	-	-	1450	0,22
C 53	-	53 Mn 4	1045	080 M 46	AF 65 C 45	-	-	1450	0,22
<b>ACCIAIO NON LEGATO RICOTTO</b> <b>ANNEALED NOT-ALLOY STEEL</b>									
<b>C 0,15-0,55% 250 HB</b>									
C 36	-	36 Mn 6	1330	150 M 28	20 M 5	-	-	1600	0,22
C 45	-	45 Mn 5	1140	212 M 36	35 MF 4	-	-	1600	0,22
C 36	-	40 Mn 4	1039	150 M 36	35 M 5	-	-	1600	0,22
C 53	-	53 Mn 4	1045	080 M 46	AF 65 C 45	-	-	1600	0,22
<b>ACCIAIO NON LEGATO RICOTTO</b> <b>ANNEALED NOT-ALLOY STEEL</b>									
<b>C &gt; 0,55% 300 HB</b>									
C 36 KU	1.1545	C 105 W 1	W 110	-	Y1 105	SK3	-	1600	0,24
C 35	1.0935	C 125 W	W 112	-	Y2 120	SK2	-	1700	0,24
C 50	1.0901	C 80	1096	070 M 55	CC 55	SK5	-	1700	0,24
C 50	1.1214	CA 101	1096	080 A 62	CC 55	SK4	-	1700	0,24
C 50	1.1203	CA 85	1096	070 M 55	XC 55	SK6C	-	1700	0,24
C 50	1.1221	CA 60	1080	080 A 62	XC 55	SK6C	-	1700	0,24
C 50	1.5710	36 NCr 6	3136	640 A 35	35 NC 6	SNC236	-	1600	0,24
C 50	1.5720	38 MnSi 4	-	-	-	SNC238	-	1600	0,24
<b>ACCIAIO DEBOLMENTE LEGATO RICOTTO</b> <b>ANNEALED LOW ALLOY STEEL</b>									
<b>180 HB</b>									
107 WC 5	1.2419	105 WC 6	L 3	BL 3	Y 100 C 8	SK52; SK53	-	1700	0,24
14 CM4-5	1.7380	13 CM4-9 10	A 182-F22	1501-622 D-31	10 CD 9, 10	-	-	1700	0,24
14 N 6	1.7715	14 Mov 6 3	A 182-F11	1501-620 D-21	15 CD 9, 10	-	-	1700	0,24
16 NiC 11	1.5732	14 NiC 14	3415	655 M 13	14 NC 11	SNC415H9	-	1700	0,24
16 NiC 11	1.5657	14 NiC 14	3310/3314	832 M 15	12 C 3	SNC415H1	-	1700	0,24
16 NiC 11	1.7015	15 C 3	5015	523 M 15	12 C 3	SCH415H1	-	1700	0,24

**FASE 2 - PHASE 2**

SCelta INSERTO IN FUNZIONE DEL MATERIALE  
 CHOICE OF INSERT DEPENDING ON MATERIAL  
 WAHL DER WENDEPLATTE JE NACH WERKSTOFF  
 CHOIX PLAQUETTE EN FONCTION DU MATERIEL

ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO
11ER 0,35 ISO	11	8,35	60°	0,35					
11ER 0,40 ISO	11	8,35	60°	0,40					
11ER 0,45 ISO	11	8,35	60°	0,45					
11ER 0,50 ISO	11	8,35	60°	0,50					
11ER 0,60 ISO	11	8,35	60°	0,60					
11ER 0,75 ISO	11	8,35	60°	0,75					
11ER 0,90 ISO	11	8,35	60°	0,90					
11ER 1,25 ISO	11	8,35	60°	1,25					
11ER 1,60 ISO	11	8,35	60°	1,60					
11ER 2,00 ISO	11	8,35	60°	2,00					
11ER 2,50 ISO	11	8,35	60°	2,50					
11ER 3,15 ISO	11	8,35	60°	3,15					
11ER 4,00 ISO	11	8,35	60°	4,00					
11ER 5,00 ISO	11	8,35	60°	5,00					
11ER 6,30 ISO	11	8,35	60°	6,30					
11ER 8,00 ISO	11	8,35	60°	8,00					
11ER 10,00 ISO	11	8,35	60°	10,00					
11ER 12,50 ISO	11	8,35	60°	12,50					
11ER 16,00 ISO	11	8,35	60°	16,00					
11ER 20,00 ISO	11	8,35	60°	20,00					
11ER 25,00 ISO	11	8,35	60°	25,00					
11ER 31,50 ISO	11	8,35	60°	31,50					
11ER 40,00 ISO	11	8,35	60°	40,00					
11ER 50,00 ISO	11	8,35	60°	50,00					
11ER 63,00 ISO	11	8,35	60°	63,00					
11ER 80,00 ISO	11	8,35	60°	80,00					
11ER 100,00 ISO	11	8,35	60°	100,00					
11ER 125,00 ISO	11	8,35	60°	125,00					
11ER 160,00 ISO	11	8,35	60°	160,00					
11ER 200,00 ISO	11	8,35	60°	200,00					
11ER 250,00 ISO	11	8,35	60°	250,00					
11ER 315,00 ISO	11	8,35	60°	315,00					
11ER 400,00 ISO	11	8,35	60°	400,00					
11ER 500,00 ISO	11	8,35	60°	500,00					
11ER 630,00 ISO	11	8,35	60°	630,00					
11ER 800,00 ISO	11	8,35	60°	800,00					
11ER 1000,00 ISO	11	8,35	60°	1000,00					
11ER 1250,00 ISO	11	8,35	60°	1250,00					
11ER 1600,00 ISO	11	8,35	60°	1600,00					
11ER 2000,00 ISO	11	8,35	60°	2000,00					
11ER 2500,00 ISO	11	8,35	60°	2500,00					
11ER 3150,00 ISO	11	8,35	60°	3150,00					
11ER 4000,00 ISO	11	8,35	60°	4000,00					
11ER 5000,00 ISO	11	8,35	60°	5000,00					
11ER 6300,00 ISO	11	8,35	60°	6300,00					
11ER 8000,00 ISO	11	8,35	60°	8000,00					
11ER 10000,00 ISO	11	8,35	60°	10000,00					

**COME SCEGLIERE I PARAMETRI DI LAVORO**  
**HOW TO CHOOSE CUTTING DATA**  
**EINSTELLUNG DER SCHNITTDATEN**  
**COMMENT CHOISIR LES PARAMETRES DE SERVICE**

**FASE 3 - PHASE 3**

SCELTA DEI PARAMETRI DI TAGLIO  
 CHOICE OF CUTTING PARAMETERS  
 WAHL DER SCHNEIDPARAMETER  
 TRIAGE DES PARAMETRES DE COUPE

**Parametri di taglio**  
 Cutting data  
 Schneidparameter  
 Paramètres de coupe

NUMERO DI PASSATE E PROFONDITÀ DI AVANZAMENTO NUMBER OF RINGS AND FEED DEPTH  
 ANZAHL DER GÄNGE UND VORSCHUSTIEFE NOMBRE DE PASSES ET PROFONDEUR D'AVANCE

Utilizzare un valore medio e un buon punto di partenza  
 Choisir la valeur moyenne et un bon point de départ  
 Verwenden Sie einen Mittelwert und einen guten Startwert  
 Utilisez une valeur moyenne et un bon point de départ

**Filletture profilo finito. External ISO metric finis. External ISO metric threads**

Passo / Pitch (mm)	4,5	4,8	5,0	5,5	6,0	6,5	7,0	7,5	8,0	9,0	1,0	1,25	1,5	1,75	2,0	2,5	3,0	3,5	4,0	4,5	5,0	
Prof. tot. / total depth (mm)	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15
Passata / Step 1 (mm)	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15

**FASE 4 - PHASE 4**

SCELTA DI VC IN FUNZIONE DEL GR. VDI  
 CHOICE OF VC DEPENDING ON VDI GR.  
 WAHL VC JE NACH WERKSTOFF  
 CHOIX DE VC EN FONCTION DU GR. VDI

IMPIEGO DELLE QUALITÀ DI FILETTATURA APPLICATION OF THE THREADING GRADE  
 ERSATZ GEWINNSCHIEDEN UTILISATION DE LES QUALITÉS DE FILETAGE

MATERIALE - MATERIAL MATERIALIEN - MATERIAUX PAG. 1059  
 QUICK PICK PAG. 712

INDICAZIONI - USO INDICATIONS - USE

GRADO TENACE PER ALTE VELOCITÀ DI TAGLIO IDEALE PER UNA VASTA GAMMA DI MATERIALI  
 DEGRÉ TENACE POUR DE HAUTES VITESSES DE COUPE IDEAL POUR UNE VASTE GAMME DE MATERIAUX

TOUGH QUALITY FOR HIGH CUTTING SPEEDS IDEAL FOR A WIDE RANGE OF MATERIALS  
 DAUERE SORTIE FÜR HOHE SCHNITTSCHWINDigkeiten IDEAL FÜR EINE BREITE MATERIALPALETTE

INDICAZIONI - USO INDICATIONS - USE

GRADO TENACE PER ALTE VELOCITÀ DI TAGLIO IDEALE PER UNA VASTA GAMMA DI MATERIALI  
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TOUGH QUALITY FOR HIGH CUTTING SPEEDS IDEAL FOR A WIDE RANGE OF MATERIALS  
 DAUERE SORTIE FÜR HOHE SCHNITTSCHWINDigkeiten IDEAL FÜR EINE BREITE MATERIALPALETTE

**VC (m/min) in funzione del GR. VDI**

VDI GR.	HB Rm	F1025	F7030	F7040
1	125	80-160	90-150	110-210
2	160	100-180	110-190	130-240
3	200	120-200	130-210	150-270
4	250	150-250	160-240	180-300
5	300	180-300	190-270	210-330
6	350	200-350	210-300	240-360
7	400	220-400	230-330	270-390
8	450	250-450	260-360	300-420
9	500	280-500	290-390	330-450
10	550	300-550	310-420	360-480
11	600	320-600	330-450	390-510
12	650	350-650	360-480	420-540
13	700	380-700	390-510	450-570
14	750	400-750	410-540	480-600
15	800	420-800	430-570	510-630
16	850	450-850	460-600	540-660
17	900	480-900	490-630	570-690
18	950	500-950	510-660	600-720
19	1000	520-1000	530-690	630-750
20	1050	550-1050	560-720	660-780
21	1100	580-1100	590-750	690-810
22	1150	600-1150	610-780	720-840
23	1200	620-1200	630-810	750-870
24	1250	650-1250	660-840	780-900
25	1300	680-1300	690-870	810-930
26	1350	700-1350	710-900	840-960
27	1400	720-1400	730-930	870-990
28	1450	750-1450	760-960	900-1020
29	1500	780-1500	790-990	930-1050
30	1550	800-1550	810-1020	960-1080



**ITALY** PANORAMICA QUALITÀ FILETTATURA  
**UK** GENERAL VIEW OF THE THREADING GRADE  
**GERMANY** GEWINDESCHNEIDEN-ÜBERSICHT  
**FRANCE** VUE D' ENSEMBLE QUALITÉ DE FILETAGE  
**SPAIN** VISTA GENERAL DE LA CALIDAD DE ROSCADO

DIN ISO 513	P ACCIAI STEELS STAHL ACIERS						M ACCIAI INOSSIDABILI STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE				K GHISE, NON FERROSI CAST IRON, NONFERROUS GRAUGUSS, NICHTEISENMA FONTE GRISE, PAS FERREUX						
	01	10	20	30	40	50	10	20	30	40	01	10	20	30	40		
HC	F7415						F7415 <b>NEW</b>										
	F1025																
	F7030						F7030				F7030						
	F7040						F7040				F7040						
TENACITÀ - TOUGHNESS - ZÄHIGKEIT - TÉNACITÉ						TENACITÀ - TOUGHNESS - ZÄHIGKEIT - TÉNACITÉ				TENACITÀ - TOUGHNESS - ZÄHIGKEIT - TÉNACITÉ							
RESISTENZA ALL'USURA - RESISTANCE TO WEAR VERSCHLEISSFESTIGKEIT - RÉSISTANCE À L'USURE						RESISTENZA ALL'USURA - RESISTANCE TO WEAR VERSCHLEISSFESTIGKEIT - RÉSISTANCE À L'USURE				RESISTENZA ALL'USURA - RESISTANCE TO WEAR VERSCHLEISSFESTIGKEIT - RÉSISTANCE À L'USURE							
AVANZAMENTO - FEED - VORSCHUB - AVANCE						AVANZAMENTO - FEED - VORSCHUB - AVANCE				AVANZAMENTO - FEED - VORSCHUB - AVANCE							
VELOCITÀ - SPEED - GESCHWINDIGKEIT - VITESSE						VELOCITÀ - SPEED - GESCHWINDIGKEIT - VITESSE				VELOCITÀ - SPEED - GESCHWINDIGKEIT - VITESSE							
HT	CERMET						HW	METALLO DURO NON RICOPERTO UNCOATED CARBIDE UNBESCHICHTETES HARTMETALL MÉTAL DUR PAS RECOUVERT				HC	METALLO DURO RICOPERTO COATED CARBIDE BESCHICHTETES HARTMETALL MÉTAL DUR RECOUVERT				

**ITALY** IMPIEGO DELLE QUALITÀ DI FILETTATURA      **UK** APPLICATION OF THE THREADING GRADE  
**GERMANY** EINSATZ GEWINDESCHNEIDEN      **FRANCE** UTILISATION DE LES QUALITÉS DE FILETAGE

SAU	DIN ISO 513	MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX PAG. 1063							QUICK PICK PAG. 716	INDICAZIONI - USO
		P	M	K	N	S	H			
F7030	HC	P20-40	●	●	●	○	●	○	 Tenacità + ↑ Toughness - ↓	 INDICAZIONI - USO
	PVD	M25-35 K20-30								
<b>INDICATIONS - USE</b>			<b>GEBRAUCHSANWEISUNGEN</b>					<b>INDICATION - USAGE</b>		
- SUB-MICROGRAIN GRADE WITH MULTILAYER PVD COATING - SUITABLE FOR MEDIUM TO HIGH CUTTING SPEED ON STAINLESS STEEL, EXOTIC AND DIFFICULT MATERIALS			- SUB-MIKROKORN-SORTE MIT PVD-MEHRSCICHTBESCHICHTUNG - FÜR MITTLERE BIS HOHE SCHNITTGESCHWINDIGKEIT BEI INOX-STAHLEN, EXOTISCHEN UND KOMPLIZIERTEN MATERIALIEN GEEIGNET					- QUALITÉ SUB-MICROGRAIN REVETUEE EN PVD MULTICOUCHES - INDICÉE POUR MOYEN ET ELEVÉ VITESSE DE COUPE SUR ACIERS INOXIDABLES, MATERIAUX EXOTICS ET MATERIAUX DIFFICILES		
F7415 <b>NEW</b>	HC	P10-20	○	●					 Tenacità + ↑ Toughness - ↓	 INDICAZIONI - USO
	PVD	M10-20								
<b>INDICATIONS - USE</b>			<b>GEBRAUCHSANWEISUNGEN</b>					<b>INDICATION - USAGE</b>		
- SUB-MICROGRAIN GRADE WITH TRIPLE LAYER PVD COATING - EXTENDED DURABILITY, HIGH RESISTANCE TO WEAR			- SUB-MIKROKORN-SORTE MIT PVD-DREISCHICHTBESCHICHTUNG - GUTE LEBENSDAUER, HOHE VERSCHLEISSFESTIGKEIT					- QUALITÉ SOUS-MICROGRAIN REVETUEE EN PVD TRIPLE-COUCHE - BONNE DUREE, HAUTE RESISTANCE A L'USURE		
F1025	HC	P15-35	●						 Tenacità + ↑ Toughness - ↓	 INDICAZIONI - USO
	PVD									
<b>INDICATIONS - USE</b>			<b>GEBRAUCHSANWEISUNGEN</b>					<b>INDICATION - USAGE</b>		
- GRADE FOR TREATED AND HARDENED STEEL (25 HRC AND OVER) - SUITABLE FOR MEDIUM TO LOW CUTTING SPEED			- SORT E FÜR BEHANDELTEN UND GEHÄRTETEN STAHL (AB 25HRC) - FÜR MITTLERE BIS GERINGE SCHNITTGESCHWINDIGKEIT GEEIGNET					- QUALITÉ POUR ACIERS AVEC TRAITÉES ET DURCISSEES (25 HRC ET PLUS) - INDICÉE POUR MOYEN BAS VITESSE DE COUPE		



IMPIEGO DELLE QUALITÀ DI FILETTATURA



APPLICATION OF THE THREADING GRADE



EINSATZ GEWINDESCHNEIDEN



UTILISATION DE LES QUALITÉS DE FILETAGE

SAU	DIN ISO 513	MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX PAG. 1063						QUICK PICK PAG. 716	 INDICAZIONI - USO
		P	M	K	N	S	H		
		ACCIAI STEELS STAHL ACIER	ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	GHSA CAST IRON GRAUGUSS	MATNON FERROSI NON FERROUS MAT. NICHTEISENMATERIALIEN MAT. FERREUX	MATDIFFICILI DIFFICULT MATERIALIEN SCHWIERIGE MATERIALIEN MAT. DIFFICILES	MATERIALI DURI HARD MATERIALS HARTE MATERIALIEN MATERIAUX DURS	 Tenacità + Toughness -	 
F7040	HC P30-50 M20-40 PVD K25-40	●	○	●	●	○	○	  	- GRADO TENACE PER ALTE VELOCITÀ DI TAGLIO - IDEALE PER UNA VASTA GAMMA DI MATERIALI
INDICATIONS - USE - TOUGH QUALITY FOR HIGH CUTTING SPEEDS - IDEAL FOR A WIDE RANGE OF MATERIALS			GEBRAUCHSANWEISUNGEN - ZÄHE SORTE FÜR HOHE SCHNITTGESCHWINDIGKEITEN - IDEAL FÜR EINE BREITE MATERIALPALETTE				INDICATION - USAGE - DEGRE TENACE POUR DE HAUTES VITESSES DE COUPE - IDEAL POUR UNE VASTE GAMME DE MATERIAUX		



VELOCITÀ DI TAGLIO DELLE QUALITÀ DI FILETTATURA



CUTTING SPEED OF THREADING GRADE



SCHNITTGESCHWINDIGKEIT DER GEWINDEQUALITÄTEN



VITESSE DE COUPE DE LA QUALITÉ DES PLAQUETTES DE FILETAGE

MATERIAL PAG 1063	VDI 3323 GR.	HB HRC Rm	F7030	F7415 NEW	F1025	F7040	MATERIAL PAG 1063	VDI 3323 GR.	HB HRC Rm	F7030	F7415 NEW	F7040	MATERIAL PAG 1063	VDI 3323 GR.	HB HRC Rm	F7030	F7040			
P	1	125	90-160	110-210	80-160	20-100	M	14.1	180	70-130	110-160	30-90	K	15	180	80-130	30-90			
	2	180	90-160	110-210	80-160	20-100		14.2	230-260	70-130	110-160	30-90		16	260	80-130	30-90			
	3	250	90-160	110-210	80-160	20-100									17	160	80-130	30-90		
	4	220	90-160	110-210	80-160	20-100										18	250	80-130	30-90	
	5	300	90-160	110-210	80-160	20-100										19	130	80-130	30-90	
	6	180	80-150	90-140	80-120	30-80										20	230	80-130	30-90	
	7-8	250-300	80-150	90-140	80-120	30-80														
	9	350	80-150	90-140	80-120	30-80														
	10	200	80-120	90-140	50-100	50-80														
	11	350	80-120	70-90	50-100	50-80														
	12	200	100-140	70-90	80-140	50-100														
	13	330	100-140	70-90	80-140	50-100														

MATERIAL PAG 1063	VDI 3323 GR.	HB HRC Rm	F7030	F7040
N 21	60	300-800	20-200	
N 22	100	300-800	20-200	
N 23	75	300-800	20-200	
N 24	90	300-800	20-200	
N 25	130	300-800	20-200	
N 26	110	300-800	20-200	
N 27	90	300-800	20-200	
N 28	100	300-800	20-200	
N 29		300-800	20-200	
N 30		300-800	20-200	

MATERIAL PAG 1063	VDI 3323 GR.	HB HRC Rm	F7030	F7040
S 31	200	40-100	15-30	
S 32	280	40-100	15-30	
S 33	250	40-100	15-30	
S 34	350	40-100	15-30	
S 35	320	40-100	15-30	
S 36	Rm 400	40-100	15-30	
S 37	Rm 1050	40-100	15-30	

MATERIAL PAG 1063	VDI 3323 GR.	HB HRC Rm	F7030	F7040
H 38	55 HRC	20-50	15-30	
H 39	60 HRC	20-50	15-30	
H 40	400	20-50	15-30	
H 41	55 HRC	20-50	15-30	



NUMERO DI PASSATE E PROFONDITÀ DI AVANZAMENTO



NUMBER OF RUNS AND FEED DEPTH



ANZAHL DER GÄNGE UND VORSCHUBTIEFE



NOMBRE DE PASSES ET PROFONDEUR D'AVANCE

1. Per molte applicazioni utilizzare un valore medio è un buon punto di partenza
2. Per materiali tenaci si deve adottare il numero più alto di passate
3. Come regola generale minori passate sono da preferirsi a maggiore velocità

1. For many applications use an average value and a good starting point
2. In the case of tough materials you will have to use a greater number of runs
3. As a general rule, less runs are to be preferred to a higher speed

### Filettature profilo finito/parziale ISO metriche esterne External ISO metric finished/partial profile threads

Passo / Pitch (mm)	6,0	5,5	5,0	4,5	4,0	3,5	3,0	2,5	2,0	1,75	1,5	1,25	1,0	0,80	0,75	0,50
Prof.tot. / total depth (mm)	3,54	3,25	2,96	2,65	2,33	2,05	1,78	1,48	1,17	1,05	0,85	0,75	0,60	0,49	0,46	0,31
Passata / Step 1 (mm)	0,46	0,43	0,42	0,37	0,34	0,32	0,28	0,26	0,23	0,22	0,20	0,17	0,17	0,17	0,16	0,10
2	0,43	0,40	0,40	0,34	0,31	0,30	0,26	0,25	0,21	0,20	0,18	0,17	0,15	0,14	0,13	0,08
3	0,35	0,33	0,32	0,28	0,24	0,24	0,21	0,18	0,17	0,15	0,15	0,14	0,11	0,11	0,10	0,07
4	0,30	0,26	0,26	0,23	0,21	0,19	0,16	0,15	0,15	0,13	0,13	0,10	0,09	0,07	0,07	0,06
5	0,26	0,22	0,22	0,21	0,18	0,17	0,14	0,13	0,12	0,10	0,11	0,09	0,08	–	–	–
6	0,22	0,20	0,20	0,19	0,15	0,15	0,13	0,12	0,11	0,09	0,08	0,08	–	–	–	–
7	0,20	0,18	0,17	0,16	0,14	0,14	0,12	0,11	0,10	0,08	–	–	–	–	–	–
8	0,19	0,17	0,16	0,15	0,13	0,13	0,11	0,10	0,08	0,08	–	–	–	–	–	–
9	0,18	0,16	0,16	0,14	0,12	0,12	0,10	0,10	–	–	–	–	–	–	–	–
10	0,16	0,15	0,15	0,13	0,12	0,11	0,10	0,08	–	–	–	–	–	–	–	–
11	0,15	0,14	0,14	0,12	0,11	0,10	0,09	–	–	–	–	–	–	–	–	–
12	0,15	0,14	0,14	0,12	0,10	0,08	0,08	–	–	–	–	–	–	–	–	–
13	0,14	0,13	0,12	0,11	0,10	–	–	–	–	–	–	–	–	–	–	–
14	0,13	0,12	0,10	0,10	0,08	–	–	–	–	–	–	–	–	–	–	–
15	0,12	0,12	–	–	–	–	–	–	–	–	–	–	–	–	–	–
16	0,10	0,10	–	–	–	–	–	–	–	–	–	–	–	–	–	–

### Filettature profilo finito/parziale ISO metriche interne Internal ISO metric finished/partial profile threads

Passo / Pitch (mm)	6,0	5,5	5,0	4,5	4,0	3,5	3,0	2,5	2,0	1,75	1,5	1,25	1,0	0,80	0,75	0,50
Prof.tot. / total depth (mm)	3,54	3,25	2,96	2,65	2,33	2,05	1,78	1,48	1,17	1,05	0,85	0,75	0,60	0,49	0,46	0,31
Passata / Step 1 (mm)	0,46	0,43	0,42	0,37	0,34	0,32	0,28	0,26	0,23	0,22	0,20	0,17	0,17	0,17	0,16	0,10
2	0,43	0,40	0,40	0,34	0,31	0,30	0,26	0,25	0,21	0,20	0,18	0,17	0,15	0,14	0,13	0,08
3	0,35	0,33	0,32	0,28	0,24	0,24	0,21	0,18	0,17	0,15	0,15	0,14	0,11	0,11	0,10	0,07
4	0,30	0,26	0,26	0,23	0,21	0,19	0,16	0,15	0,15	0,13	0,13	0,10	0,09	0,07	0,07	0,06
5	0,26	0,22	0,22	0,21	0,18	0,17	0,14	0,13	0,12	0,10	0,11	0,09	0,08	–	–	–
6	0,22	0,20	0,20	0,19	0,15	0,15	0,13	0,12	0,11	0,09	0,08	0,08	–	–	–	–
7	0,20	0,18	0,17	0,16	0,14	0,14	0,12	0,11	0,10	0,08	–	–	–	–	–	–
8	0,19	0,17	0,16	0,15	0,13	0,13	0,11	0,10	0,08	0,08	–	–	–	–	–	–
9	0,18	0,16	0,16	0,14	0,12	0,12	0,10	0,10	–	–	–	–	–	–	–	–
10	0,16	0,15	0,15	0,13	0,12	0,11	0,10	0,08	–	–	–	–	–	–	–	–
11	0,15	0,14	0,14	0,12	0,11	0,10	0,09	–	–	–	–	–	–	–	–	–
12	0,15	0,14	0,14	0,12	0,10	0,08	0,08	–	–	–	–	–	–	–	–	–
13	0,14	0,13	0,12	0,11	0,10	–	–	–	–	–	–	–	–	–	–	–
14	0,13	0,12	0,10	0,10	0,08	–	–	–	–	–	–	–	–	–	–	–
15	0,12	0,12	–	–	–	–	–	–	–	–	–	–	–	–	–	–
16	0,10	0,10	–	–	–	–	–	–	–	–	–	–	–	–	–	–

### Filettature Whitworth esterne/interne External/internal Whitworth threads

Passo / Pitch TPI	5	6	7	8	9	10	11	12	14	16	18	19	20	26	28
Prof.tot. / total depth (mm)	3,44	2,90	2,50	2,17	1,93	1,76	1,58	1,45	1,20	1,13	1,01	0,96	0,92	0,72	0,69
Passata / Step 1 (mm)	0,45	0,38	0,37	0,32	0,30	0,29	0,28	0,28	0,24	0,24	0,23	0,22	0,21	0,19	0,18
2	0,43	0,36	0,35	0,30	0,28	0,27	0,26	0,26	0,22	0,22	0,22	0,22	0,21	0,18	0,17
3	0,38	0,30	0,29	0,24	0,23	0,22	0,22	0,22	0,18	0,19	0,19	0,18	0,17	0,15	0,14
4	0,32	0,26	0,25	0,21	0,20	0,19	0,19	0,18	0,15	0,16	0,16	0,14	0,14	0,12	0,12
5	0,28	0,22	0,22	0,19	0,18	0,17	0,16	0,16	0,13	0,13	0,13	0,12	0,11	0,08	0,08
6	0,25	0,21	0,19	0,17	0,15	0,15	0,14	0,14	0,11	0,11	0,08	0,08	0,08	–	–
7	0,22	0,19	0,18	0,15	0,14	0,14	0,13	0,13	0,09	0,08	–	–	–	–	–
8	0,20	0,17	0,16	0,14	0,13	0,13	0,12	0,08	0,08	–	–	–	–	–	–
9	0,19	0,16	0,15	0,13	0,12	0,12	0,08	–	–	–	–	–	–	–	–
10	0,18	0,15	0,14	0,12	0,12	0,08	–	–	–	–	–	–	–	–	–
11	0,17	0,14	0,12	0,12	0,08	–	–	–	–	–	–	–	–	–	–
12	0,15	0,14	0,08	0,08	–	–	–	–	–	–	–	–	–	–	–
13	0,12	0,12	–	–	–	–	–	–	–	–	–	–	–	–	–
14	0,10	0,10	–	–	–	–	–	–	–	–	–	–	–	–	–





NUMERO DI PASSATE E PROFONDITÀ DI AVANZAMENTO



NUMBER OF RUNS AND FEED DEPTH



ANZAHL DER GÄNGE UND VORSCHUBTIEFE



NOMBRE DE PASSES ET PROFONDEUR D'AVANCE

## Filettature UN esterne UN external threads

Passo / Pitch TPI	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
Prof.tot. / total depth (mm)	3,29	2,71	2,33	2,08	1,84	1,66	1,52	1,39	1,29	1,19	1,05	0,94	0,84	0,70	0,60	0,53
Passata / Step 1 (mm)	0,43	0,36	0,35	0,30	0,28	0,27	0,27	0,27	0,25	0,23	0,22	0,23	0,20	0,19	0,17	0,17
2	0,40	0,34	0,33	0,28	0,26	0,26	0,25	0,26	0,24	0,22	0,21	0,21	0,19	0,17	0,15	0,15
3	0,36	0,27	0,26	0,25	0,21	0,20	0,20	0,20	0,18	0,17	0,16	0,16	0,15	0,14	0,11	0,13
4	0,31	0,23	0,22	0,21	0,20	0,17	0,19	0,18	0,17	0,15	0,14	0,14	0,12	0,12	0,09	0,08
5	0,26	0,22	0,21	0,18	0,17	0,16	0,16	0,15	0,14	0,13	0,13	0,12	0,10	0,08	0,08	–
6	0,23	0,20	0,19	0,16	0,15	0,15	0,14	0,13	0,12	0,11	0,11	0,08	0,08	–	–	–
7	0,20	0,18	0,17	0,14	0,14	0,14	0,12	0,12	0,11	0,10	0,08	–	–	–	–	–
8	0,19	0,16	0,15	0,13	0,12	0,12	0,11	0,08	0,08	0,08	–	–	–	–	–	–
9	0,19	0,15	0,14	0,12	0,12	0,11	0,08	–	–	–	–	–	–	–	–	–
10	0,18	0,14	0,12	0,12	0,11	0,08	–	–	–	–	–	–	–	–	–	–
11	0,17	0,13	0,11	0,11	0,08	–	–	–	–	–	–	–	–	–	–	–
12	0,15	0,12	0,08	0,08	–	–	–	–	–	–	–	–	–	–	–	–
13	0,12	0,11	–	–	–	–	–	–	–	–	–	–	–	–	–	–
14	0,10	0,10	–	–	–	–	–	–	–	–	–	–	–	–	–	–

## Filettature UN interne UN internal threads

Passo / Pitch TPI	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
Prof.tot. / total depth (mm)	2,99	2,46	2,13	1,88	1,66	1,49	1,36	1,25	1,14	1,06	0,93	0,84	0,76	0,64	0,56	0,49
Passata / Step 1 (mm)	0,42	0,35	0,34	0,30	0,28	0,27	0,27	0,27	0,25	0,23	0,22	0,23	0,20	0,18	0,17	0,17
2	0,38	0,33	0,32	0,28	0,26	0,25	0,23	0,23	0,20	0,18	0,18	0,17	0,16	0,15	0,14	0,14
3	0,33	0,25	0,24	0,22	0,19	0,18	0,18	0,18	0,15	0,14	0,14	0,14	0,13	0,13	0,09	0,10
4	0,27	0,21	0,21	0,18	0,16	0,15	0,15	0,15	0,13	0,13	0,12	0,12	0,10	0,10	0,08	0,08
5	0,23	0,18	0,17	0,15	0,14	0,13	0,13	0,13	0,12	0,11	0,10	0,10	0,09	0,08	0,08	–
6	0,20	0,16	0,15	0,13	0,13	0,12	0,11	0,11	0,11	0,10	0,09	0,08	0,08	–	–	–
7	0,18	0,15	0,14	0,12	0,12	0,11	0,11	0,10	0,10	0,09	0,08	–	–	–	–	–
8	0,17	0,14	0,13	0,11	0,11	0,10	0,10	0,08	0,08	0,08	–	–	–	–	–	–
9	0,16	0,13	0,12	0,11	0,10	0,10	0,08	–	–	–	–	–	–	–	–	–
10	0,15	0,12	0,12	0,10	0,09	0,08	–	–	–	–	–	–	–	–	–	–
11	0,14	0,12	0,11	0,10	0,08	–	–	–	–	–	–	–	–	–	–	–
12	0,14	0,11	0,08	0,08	–	–	–	–	–	–	–	–	–	–	–	–
13	0,12	0,11	–	–	–	–	–	–	–	–	–	–	–	–	–	–
14	0,10	0,10	–	–	–	–	–	–	–	–	–	–	–	–	–	–

## Inserti Multidento esterni External multitooth inserts

Tipo / Type	ISO metrica - ISO metric					Whitworth	NPT
	3M	2M	3M	2M	3M	2M	2M
Passo / Pitch (mm)	1,0	1,5	1,5	2,0	2,0	–	–
TPI (filetti per pollice / threads per inch)	–	–	–	–	–	11	11,5
Prof.tot. / total depth (mm)	0,65	0,93	0,93	1,25	1,25	1,58	1,76
Passata / Step 1 (mm)	0,36	0,43	0,56	0,57	0,75	0,73	0,59
2	0,29	0,30	0,37	0,40	0,50	0,50	0,50
3	–	0,20	–	0,28	–	0,35	0,37
4	–	–	–	–	–	–	0,30

## Inserti Multidento interni Internal multitooth inserts

Tipo / Type	ISO metrica - ISO metric					Whitworth	NPT
	3M	2M	3M	2M	3M	2M	2M
Passo / Pitch (mm)	1,0	1,5	1,5	2,0	2,0	–	–
TPI (filetti per pollice / threads per inch)	–	–	–	–	–	11	11,5
Prof.tot. / total depth (mm)	0,60	0,85	0,85	1,17	1,17	1,58	1,76
Passata / Step 1 (mm)	0,33	0,38	0,51	0,51	0,70	0,73	0,59
2	0,27	0,27	0,34	0,38	0,47	0,50	0,50
3	–	0,20	–	0,28	–	0,35	0,37
4	–	–	–	–	–	–	0,30



NUMERO DI PASSATE E PROFONDITÀ DI AVANZAMENTO



NUMBER OF RUNS AND FEED DEPTH



ANZAHL DER GÄNGE UND VORSCHUBTIEFE



NOMBRE DE PASSES ET PROFONDEUR D'AVANCE

### Filettature NPT esterne/interne External/internal NPT threads

Passo / Pitch TPI	8	11,5	14	18	27
<b>Prof.tot. / total depth (mm)</b>	2,54	1,76	1,45	1,12	0,75
<b>Passata / Step 1 (mm)</b>	0,28	0,25	0,24	0,22	0,19
2	0,25	0,22	0,22	0,18	0,15
3	0,22	0,18	0,17	0,15	0,13
4	0,19	0,16	0,15	0,14	0,11
5	0,18	0,16	0,14	0,13	0,09
6	0,18	0,14	0,13	0,12	0,08
7	0,17	0,14	0,12	0,10	–
8	0,17	0,12	0,10	0,08	–
9	0,16	0,12	0,10	–	–
10	0,16	0,10	0,08	–	–
11	0,14	0,09	–	–	–
12	0,13	0,08	–	–	–
13	0,12	–	–	–	–
14	0,11	–	–	–	–
15	0,08	–	–	–	–

### Filettature Tonde DIN 405 esterne External DIN 405 Round threads

Passo / Pitch TPI	4	6	8	10
<b>Prof.tot. / total depth (mm)</b>	3,43	2,23	1,73	1,40
<b>Passata / Step 1 (mm)</b>	0,44	0,33	0,29	0,26
2	0,40	0,29	0,26	0,25
3	0,34	0,25	0,21	0,23
4	0,32	0,23	0,19	0,20
5	0,28	0,20	0,18	0,16
6	0,26	0,18	0,16	0,12
7	0,24	0,16	0,14	0,10
8	0,22	0,15	0,12	0,08
9	0,20	0,14	0,10	–
10	0,19	0,12	0,08	–
11	0,17	0,10	–	–
12	0,15	0,08	–	–
13	0,12	–	–	–
14	0,10	–	–	–

### Filettature Tonde DIN 405 interne Internal DIN 405 Round threads

Passo / Pitch TPI	4	6	8	10
<b>Prof.tot. / total depth (mm)</b>	3,59	2,44	1,66	1,49
<b>Passata / Step 1 (mm)</b>	0,46	0,38	0,26	0,27
2	0,43	0,34	0,22	0,26
3	0,40	0,30	0,21	0,25
4	0,35	0,25	0,19	0,22
5	0,30	0,21	0,18	0,18
6	0,26	0,19	0,16	0,13
7	0,24	0,17	0,14	0,10
8	0,22	0,16	0,12	0,08
9	0,20	0,14	0,10	–
10	0,19	0,12	0,08	–
11	0,17	0,10	–	–
12	0,15	0,08	–	–
13	0,12	–	–	–
14	0,10	–	–	–

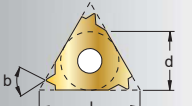
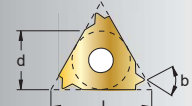
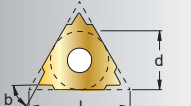
### Filettature TR esterne External TR threads

Passo / Pitch TPI	6,0	5,0	4,0	3,0	2,0	1,5
<b>Prof.tot. / total depth (mm)</b>	3,66	2,89	2,38	1,83	1,33	0,97
<b>Passata / Step 1 (mm)</b>	0,37	0,34	0,31	0,27	0,25	0,23
2	0,35	0,33	0,28	0,25	0,24	0,22
3	0,32	0,27	0,24	0,21	0,20	0,18
4	0,29	0,25	0,20	0,17	0,17	0,14
5	0,27	0,23	0,19	0,15	0,14	0,12
6	0,25	0,21	0,18	0,13	0,13	0,08
7	0,23	0,20	0,16	0,13	0,11	–
8	0,22	0,20	0,15	0,12	0,09	–
9	0,22	0,18	0,15	0,12	–	–
10	0,20	0,16	0,15	0,10	–	–
11	0,18	0,15	0,14	0,10	–	–
12	0,17	0,14	0,13	0,08	–	–
13	0,17	0,13	0,10	–	–	–
14	0,16	0,10	–	–	–	–
15	0,14	–	–	–	–	–
16	0,12	–	–	–	–	–






### Filettature TR interne Internal TR threads

Passo / Pitch TPI	6,0	5,0	4,0	3,0	2,0	1,5
<b>Prof.tot. / total depth (mm)</b>	3,65	2,89	2,38	1,85	1,34	0,98
<b>Passata / Step 1 (mm)</b>	0,37	0,34	0,31	0,27	0,25	0,23
2	0,34	0,33	0,28	0,25	0,24	0,22
3	0,32	0,27	0,24	0,22	0,21	0,19
4	0,29	0,25	0,20	0,17	0,17	0,14
5	0,27	0,23	0,19	0,15	0,14	0,12
6	0,25	0,21	0,18	0,14	0,13	0,08
7	0,23	0,20	0,16	0,13	0,11	–
8	0,22	0,20	0,15	0,12	0,09	–
9	0,22	0,18	0,15	0,12	–	–
10	0,20	0,16	0,15	0,10	–	–
11	0,18	0,15	0,14	0,10	–	–
12	0,17	0,14	0,13	0,08	–	–
13	0,17	0,13	0,10	–	–	–
14	0,16	0,10	–	–	–	–
15	0,14	–	–	–	–	–
16	0,12	–	–	–	–	–



			<b>HW</b>		<b>HC</b>												
...ER ... / ...IL ...	...EL ... / ...IR ...	...U ...	NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS												
ART.	COD.	l	d	b	P(mm)												

**PROFILO PARZIALE b = 60°  
PARTIAL - PROFILE b = 60°**

	11ER A60	11EL A60	11	6,35	60°	0,5+1,5													
	16ER A60	16EL A60	16,5	9,52	60°	0,5+1,5													
	16ER G60	16EL G60	16,5	9,52	60°	1,75+3,0													
	16ER AG60	16EL AG60	16,5	9,52	60°	0,5+3,0													
	22ER N60	22EL N60	22	12,7	60°	3,5+5,0													
	06IR A60	06IL A60	6,9	3,97	60°	0,5+1,25													
	08IR A60	08IL A60	8,2	4,76	60°	0,5+1,5													
	08U IR U60	08U IL U60	8,2U	4,76U	60°	1,75+2,0													
	11IR A60	11IL A60	11	6,35	60°	0,5+1,5													
	16IR A60	16IL A60	16,5	9,52	60°	0,5+1,5													
	16IR G60	16IL G60	16,5	9,52	60°	1,75+3,0													
	16IR AG60	16IL AG60	16,5	9,52	60°	0,5+3,0													
	22IR N60	22IL N60	22	12,7	60°	3,5+5,0													

**MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX**

<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER																		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																		
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																		
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																		
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISSANTES À LA CHALEUR																		
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																		

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW  
● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW  
○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

...ER B ...		...IR B ...		HW		HC																
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																
ART.	COD.			l	d	b	P(mm)	F7030														
<b>PROFILO PARZIALE DI PRECISIONE RETTIFICATO CON ROMPITRUCIOLO SINTERIZZATO b = 60°</b>																						
<b>PARTIAL PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER b = 60°</b>																						
<p>..ER ..</p>		16ER B A60		16,5	9,52	60°	0,5+1,5															
		16ER B G60		16,5	9,52	60°	1,75+3,0															
		16ER B AG60		16,5	9,52	60°	0,5+3,0															
<p>..IR ..</p>		16IR B A60		16,5	9,52	60°	0,5+1,5															
		16IR B G60		16,5	9,52	60°	1,75+3,0															
		16IR B AG60		16,5	9,52	60°	0,5+3,0															
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX								F7030														
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER							●														
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE							●														
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE							●														
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM							○														
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISSANTES À LA CHALEUR							●														
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS							○														

						HW		HC									
						NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS									
...ER ... / ...IL ...		...EL ... / ...IR ...		...U ...			R	L			R	L	R	L			
ART.		COD.		l	d	b	P(mm)			F7030	F7030		F1025	F1025	F7040	F7040	
<b>PROFILO PARZIALE b = 55° PARTIAL - PROFILE b = 55°</b>																	
	11ER A55	11EL A55	11	6,35	55°	0,5+1,5											
	16ER A55	16EL A55	16,5	9,52	55°	0,5+1,5											
	16ER G55	16EL G55	16,5	9,52	55°	1,75+3,0											
	16ER AG55	16EL AG55	16,5	9,52	55°	0,5+3,0											
	22ER N55	22EL N55	22	12,7	55°	3,5+5,0											
	06IR A55	06IL A55	6,9	3,97	55°	0,5+1,25											
	08IR A55	08IL A55	8,2	4,76	55°	0,5+1,5											
	08U IR U55	08U IL U55	8,2U	4,76U	55°	1,75+2,0											
	11IR A55	11IL A55	11	6,35	55°	0,5+1,5											
	16IR A55	16IL A55	16,5	9,52	55°	0,5+1,5											
	16IR G55	16IL G55	16,5	9,52	55°	1,75+3,0											
	16IR AG55	16IL AG55	16,5	9,52	55°	0,5+3,0											
22IR N55	22IL N55	22	12,7	55°	3,5+5,0												
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																	
P	ACCIAIO - STEEL - STAHL - ACIER																
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISSANTES À LA CHALEUR																
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																

...ER B ...		...IR B ...		HW		HC																				
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																				
ART.	COD.			l	d	b	P(mm)	F7030																		
<b>PROFILO PARZIALE DI PRECISIONE RETTIFICATO CON ROMPITRUCIOLO SINTERIZZATO b = 55° PARTIAL PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER b = 55°</b>																										
 ..ER ..	16ER B G55			16,5	9,52	55°	1,75+3,0																			
	16ER B AG55			16,5	9,52	55°	0,5+3,0																			
	16IR B G55			16,5	9,52	55°	1,75+3,0																			
	16IR B AG55			16,5	9,52	55°	0,5+3,0																			
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																										
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER													●												
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE													●												
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE													●												
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM													○												
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR													●												
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS													○												

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW  
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW  
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

...ER ... ISO		...EL ... ISO		HW				HC								
				NON RIVESTITI CEMENTED CARBIDE GRADES				RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS								
				R	L	R	L	R	L	R	L					
ART.		COD.	l	d	b	P(mm)	F7030	F7030	F7415	F7415	F1025	F1025				
<b>PROFILO FINITO b = 60° (ISO) FULL - PROFILE b = 60° (ISO)</b>																
	11ER 0,35 ISO	11EL 0,35 ISO	11	6,35	60°	0,35										
	11ER 0,40 ISO	11EL 0,40 ISO	11	6,35	60°	0,40										
	11ER 0,45 ISO	11EL 0,45 ISO	11	6,35	60°	0,45										
	11ER 0,50 ISO	11EL 0,50 ISO	11	6,35	60°	0,50										
	11ER 0,60 ISO	11EL 0,60 ISO	11	6,35	60°	0,60										
	11ER 0,70 ISO	11EL 0,70 ISO	11	6,35	60°	0,70										
	11ER 0,75 ISO	11EL 0,75 ISO	11	6,35	60°	0,75										
	11ER 0,80 ISO	11EL 0,80 ISO	11	6,35	60°	0,80										
	11ER 1,00 ISO	11EL 1,00 ISO	11	6,35	60°	1,00										
	11ER 1,25 ISO	11EL 1,25 ISO	11	6,35	60°	1,25										
	11ER 1,50 ISO	11EL 1,50 ISO	11	6,35	60°	1,50										
	11ER 1,75 ISO	11EL 1,75 ISO	11	6,35	60°	1,75										
	16ER 0,35 ISO	16EL 0,35 ISO	16,5	9,52	60°	0,35										
	16ER 0,40 ISO	16EL 0,40 ISO	16,5	9,52	60°	0,40										
	16ER 0,45 ISO	16EL 0,45 ISO	16,5	9,52	60°	0,45										
	16ER 0,50 ISO	16EL 0,50 ISO	16,5	9,52	60°	0,50										
	16ER 0,60 ISO	16EL 0,60 ISO	16,5	9,52	60°	0,60										
	16ER 0,70 ISO	16EL 0,70 ISO	16,5	9,52	60°	0,70										
	16ER 0,75 ISO	16EL 0,75 ISO	16,5	9,52	60°	0,75										
	16ER 0,80 ISO	16EL 0,80 ISO	16,5	9,52	60°	0,80										
	16ER 1,00 ISO	16EL 1,00 ISO	16,5	9,52	60°	1,00										
	16ER 1,25 ISO	16EL 1,25 ISO	16,5	9,52	60°	1,25										
	16ER 1,50 ISO	16EL 1,50 ISO	16,5	9,52	60°	1,50										
	16ER 1,75 ISO	16EL 1,75 ISO	16,5	9,52	60°	1,75										
	16ER 2,00 ISO	16EL 2,00 ISO	16,5	9,52	60°	2,00										
	16ER 2,50 ISO	16EL 2,50 ISO	16,5	9,52	60°	2,50										
	16ER 3,00 ISO	16EL 3,00 ISO	16,5	9,52	60°	3,00										
	16ER 3,50 ISO	16EL 3,50 ISO	16,5	9,52	60°	3,50										
22ER 3,50 ISO	22EL 3,50 ISO	22	12,7	60°	3,50											
22ER 4,00 ISO	22EL 4,00 ISO	22	12,7	60°	4,00											
22ER 4,50 ISO	22EL 4,50 ISO	22	12,7	60°	4,50											
22ER 5,00 ISO	22EL 5,00 ISO	22	12,7	60°	5,00											
22ER 5,50 ISO	22EL 5,50 ISO	22	12,7	60°	5,50											
22ER 6,00 ISO	22EL 6,00 ISO	22	12,7	60°	6,00											
<b>MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX</b>																
P	ACCIAIO - STEEL - STAHL - ACIER															
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE															
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE															
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM															
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR															
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS															

 ...IR ... ISO		 ...IL ... ISO		 ...U ... ISO		HW NON RIVESTITI CEMENTED CARBIDE GRADES		HC RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS								
ART.		COD.		l	d	b	P(mm)	R	L	R	L	R	L	R	L	
								F7030	F7030	F7415	F7415	F1025	F1025	F7040	F7040	
<b>PROFILO FINITO b = 60° (ISO)</b>																
<b>FULL - PROFILE b = 60° (ISO)</b>																
 ..IR..	06IR 0,50 ISO	06IL 0,50 ISO	6,9	3,97	60°	0,50										
	06IR 0,75 ISO	06IL 0,75 ISO	6,9	3,97	60°	0,75										
	06IR 1,00 ISO	06IL 1,00 ISO	6,9	3,97	60°	1,00										
 ..IL..	08IR 0,50 ISO	08IL 0,50 ISO	8,2	4,76	60°	0,50										
	08IR 0,75 ISO	08IL 0,75 ISO	8,2	4,76	60°	0,75										
	08IR 1,00 ISO	08IL 1,00 ISO	8,2	4,76	60°	1,00										
	08IR 1,25 ISO	08IL 1,50 ISO	8,2	4,76	60°	1,25										
	08IR 1,50 ISO	08IL 1,75 ISO	8,2	4,76	60°	1,50										
 ..U..	08U IR 2,00 ISO	08U IL 2,00 ISO	8,2U	4,76U	60°	2,00										
	11IR 0,35 ISO	11IL 0,35 ISO	11	6,35	60°	0,35										
	11IR 0,40 ISO	11IL 0,40 ISO	11	6,35	60°	0,40										
	11IR 0,45 ISO	11IL 0,45 ISO	11	6,35	60°	0,45										
	11IR 0,50 ISO	11IL 0,50 ISO	11	6,35	60°	0,50										
	11IR 0,60 ISO	11IL 0,60 ISO	11	6,35	60°	0,60										
	11IR 0,70 ISO	11IL 0,70 ISO	11	6,35	60°	0,70										
	11IR 0,75 ISO	11IL 0,75 ISO	11	6,35	60°	0,75										
	11IR 0,80 ISO	11IL 0,80 ISO	11	6,35	60°	0,80										
	11IR 1,00 ISO	11IL 1,00 ISO	11	6,35	60°	1,00										
	11IR 1,25 ISO	11IL 1,25 ISO	11	6,35	60°	1,25										
	11IR 1,50 ISO	11IL 1,50 ISO	11	6,35	60°	1,50										
	11IR 1,75 ISO	11IL 1,75 ISO	11	6,35	60°	1,75										
	11IR 2,00 ISO	11IL 2,00 ISO	11	6,35	60°	2,00										
	11IR 2,50 ISO	11IL 2,50 ISO	11	6,35	60°	2,50										
	16IR 0,35 ISO	16IL 0,35 ISO	16,5	9,52	60°	0,35										
	16IR 0,40 ISO	16IL 0,40 ISO	16,5	9,52	60°	0,40										
	16IR 0,45 ISO	16IL 0,45 ISO	16,5	9,52	60°	0,45										
	16IR 0,50 ISO	16IL 0,50 ISO	16,5	9,52	60°	0,50										
	16IR 0,60 ISO	16IL 0,60 ISO	16,5	9,52	60°	0,60										
	16IR 0,70 ISO	16IL 0,70 ISO	16,5	9,52	60°	0,70										
	16IR 0,75 ISO	16IL 0,75 ISO	16,5	9,52	60°	0,75										
	16IR 0,80 ISO	16IL 0,80 ISO	16,5	9,52	60°	0,80										
	16IR 1,00 ISO	16IL 1,00 ISO	16,5	9,52	60°	1,00										
	16IR 1,25 ISO	16IL 1,25 ISO	16,5	9,52	60°	1,25										
	16IR 1,50 ISO	16IL 1,50 ISO	16,5	9,52	60°	1,50										
	16IR 1,75 ISO	16IL 1,75 ISO	16,5	9,52	60°	1,75										
	16IR 2,00 ISO	16IL 2,00 ISO	16,5	9,52	60°	2,00										
	16IR 2,50 ISO	16IL 2,50 ISO	16,5	9,52	60°	2,50										
	16IR 3,00 ISO	16IL 3,00 ISO	16,5	9,52	60°	3,00										
	16IR 3,50 ISO	16IL 3,50 ISO	16,5	9,52	60°	3,50										
	22IR 3,50 ISO	22IL 3,50 ISO	22	12,7	60°	3,50										
	22IR 4,00 ISO	22IL 4,00 ISO	22	12,7	60°	4,00										
	22IR 4,50 ISO	22IL 4,50 ISO	22	12,7	60°	4,50										
	22IR 5,00 ISO	22IL 5,00 ISO	22	12,7	60°	5,00										
	22IR 5,50 ISO	22IL 5,50 ISO	22	12,7	60°	5,50										
	22IR 6,00 ISO	22IL 6,00 ISO	22	12,7	60°	6,00										
<b>MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX</b>																
P	ACCIAIO - STEEL - STAHL - ACIER															
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE															
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE															
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM															
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR															
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS															

DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES /  NEW  
 APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE /  NEW  
 APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

...ER B ... ISO		...IR B ... ISO		HW			HC																	
				NON RIVESTITI CEMENTED CARBIDE GRADES			RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																	
ART.	COD.			l	d	b	P(mm)	F7030																
PROFILO DI PRECISIONE RETTIFICATO CON ROMPIRUCIOLO SINTERIZZATO b = 60° (ISO)													PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER b = 60° (ISO)											
 ..ER ..	16ER B 0,80 ISO			16,5	9,52	60°	0,80																	
	16ER B 1,00 ISO			16,5	9,52	60°	1,00																	
	16ER B 1,25 ISO			16,5	9,52	60°	1,25																	
	16ER B 1,50 ISO			16,5	9,52	60°	1,50																	
	16ER B 1,75 ISO			16,5	9,52	60°	1,75																	
	16ER B 2,00 ISO			16,5	9,52	60°	2,00																	
	16ER B 2,50 ISO			16,5	9,52	60°	2,50																	
	16ER B 3,00 ISO			16,5	9,52	60°	3,00																	
 ..IR ..	16IR B 1,00 ISO			16,5	9,52	60°	1,00																	
	16IR B 1,25 ISO			16,5	9,52	60°	1,25																	
	16IR B 1,50 ISO			16,5	9,52	60°	1,50																	
	16IR B 1,75 ISO			16,5	9,52	60°	1,75																	
	16IR B 2,00 ISO			16,5	9,52	60°	2,00																	
	16IR B 2,50 ISO			16,5	9,52	60°	2,50																	
	16IR B 3,00 ISO			16,5	9,52	60°	3,00																	
	MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX													F7030										
P	ACCIAIO - STEEL - STAHL - ACIER													●										
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE													●										
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE													●										
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM													○										
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISSANTÉS À LA CHALEUR													●										
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS													○										

...ER ... ISO ..M		... IR ... ISO ..M						HW		HC													
								NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS													
ART.	COD.			l	d	b	Z	P (mm)															
<b>PROFILO FINITO b = 60° (ISO) MULTIDENTE FULL - PROFILE b = 60° (ISO) MULTITOOTH</b>																							
 ..ER ..	16ER 1,00 ISO 3M			16,5	9,52	60°	3	1,00															
	16ER 1,50 ISO 2M			16,5	9,52	60°	2	1,50															
	22ER 1.50 ISO 3M			22	12,7	60°	3	1,50															
	22ER 2.00 ISO 2M			22	12,7	60°	2	2,00															
	22ER 2.00 ISO 3M			22	12,7	60°	3	2,00															
 ..IR ..	16IR 1,00 ISO 3M			16,5	9,52	60°	3	1,00															
	16IR 1,50 ISO 2M			16,5	9,52	60°	2	1,50															
	22IR 1,50 ISO 3M			22	12,7	60°	3	1,50															
	22IR 2,00 ISO 2M			22	12,7	60°	2	2,00															
	22IR 2,00 ISO 3M			22	12,7	60°	3	2,00															
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																							
P	ACCIAIO - STEEL - STAHL - ACIER																						
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																						
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																						
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																						
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉISTANTES À LA CHALEUR																						
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																						



...ER ... UN		...EL ... UN		HW				HC								
				NON RIVESTITI CEMENTED CARBIDE GRADES				RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS								
ART.	COD.			l	d	b	P (Fill'')	R	L	R	L					
UNIFICATO b = 60° UN UNIFIED b = 60° UN																
	11ER 72 UN	11EL 72 UN	11	6,35	60°	72										
	11ER 64 UN	11EL 64 UN	11	6,35	60°	64										
	11ER 56 UN	11EL 56 UN	11	6,35	60°	56										
	11ER 48 UN	11EL 48 UN	11	6,35	60°	48										
	11ER 44 UN	11EL 44 UN	11	6,35	60°	44										
	11ER 40 UN	11EL 40 UN	11	6,35	60°	40										
	11ER 36 UN	11EL 36 UN	11	6,35	60°	36										
	11ER 32 UN	11EL 32 UN	11	6,35	60°	32										
	11ER 28 UN	11EL 28 UN	11	6,35	60°	28										
	11ER 27 UN	11EL 27 UN	11	6,35	60°	27										
11ER 24 UN	11EL 24 UN	11	6,35	60°	24											
11ER 20 UN	11EL 20 UN	11	6,35	60°	20											
11ER 18 UN	11EL 18 UN	11	6,35	60°	18											
11ER 16 UN	11EL 16 UN	11	6,35	60°	16											
11ER 14 UN	11EL 14 UN	11	6,35	60°	14											
	16ER 72 UN	16EL 72 UN	16,5	9,52	60°	72										
	16ER 64 UN	16EL 64 UN	16,5	9,52	60°	64										
	16ER 56 UN	16EL 56 UN	16,5	9,52	60°	56										
	16ER 48 UN	16EL 48 UN	16,5	9,52	60°	48										
	16ER 44 UN	16EL 44 UN	16,5	9,52	60°	44										
	16ER 40 UN	16EL 40 UN	16,5	9,52	60°	40										
	16ER 36 UN	16EL 36 UN	16,5	9,52	60°	36										
	16ER 32 UN	16EL 32 UN	16,5	9,52	60°	32										
	16ER 28 UN	16EL 28 UN	16,5	9,52	60°	28										
	16ER 27 UN	16EL 27 UN	16,5	9,52	60°	27										
	16ER 24 UN	16EL 24 UN	16,5	9,52	60°	24										
	16ER 20 UN	16EL 20 UN	16,5	9,52	60°	20										
	16ER 18 UN	16EL 18 UN	16,5	9,52	60°	18										
	16ER 16 UN	16EL 16 UN	16,5	9,52	60°	16										
	16ER 14 UN	16EL 14 UN	16,5	9,52	60°	14										
	16ER 13 UN	16EL 13 UN	16,5	9,52	60°	13										
16ER 12 UN	16EL 12 UN	16,5	9,52	60°	12											
16ER 11,5 UN	16EL 11,5 UN	16,5	9,52	60°	11,5											
16ER 11 UN	16EL 11 UN	16,5	9,52	60°	11											
16ER 10 UN	16EL 10 UN	16,5	9,52	60°	10											
16ER 9 UN	16EL 9 UN	16,5	9,52	60°	9											
16ER 8 UN	16EL 8 UN	16,5	9,52	60°	8											
22ER 7 UN	22EL 7 UN	22	12,7	60°	7											
22ER 6 UN	22EL 6 UN	22	12,7	60°	6											
22ER 5 UN	22EL 5 UN	22	12,7	60°	5											
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																
P	ACCIAIO - STEEL - STAHL - ACIER															
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE															
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE															
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM															
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR															
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATÉRIAUX DURS ET TREMPÉS															



...ER B ... UN		...IR B ... UN		HW			HC									
				NON RIVESTITI CEMENTED CARBIDE GRADES			RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS									

ART.	COD.	l	d	b	P (Fill <sup>m</sup> )			F7030												
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**PROFILO DI PRECISIONE RETTIFICATO CON ROMPIRUCIOLO SINTERIZZATO, UNIFICATO b = 60° UN**  
**PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER, UNIFIED b = 60° UN**

	16ER B 24 UN	16,5	9,52	60°	24																
	16ER B 20 UN	16,5	9,52	60°	20																
	16ER B 18 UN	16,5	9,52	60°	18																
	16ER B 16 UN	16,5	9,52	60°	16																
	16ER B 14 UN	16,5	9,52	60°	14																
	16ER B 13 UN	16,5	9,52	60°	13																
	16ER B 12 UN	16,5	9,52	60°	12																
	16ER B 11 UN	16,5	9,52	60°	11																
	16ER B 10 UN	16,5	9,52	60°	10																
	16ER B 9 UN	16,5	9,52	60°	9																
16ER B 8 UN	16,5	9,52	60°	8																	
	16IR B 24 UN	16,5	9,52	60°	24																
	16IR B 20 UN	16,5	9,52	60°	20																
	16IR B 18 UN	16,5	9,52	60°	18																
	16IR B 16 UN	16,5	9,52	60°	16																
	16IR B 14 UN	16,5	9,52	60°	14																
	16IR B 12 UN	16,5	9,52	60°	12																
	16IR B 10 UN	16,5	9,52	60°	10																
	16IR B 8 UN	16,5	9,52	60°	8																

MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX

P	ACCIAIO - STEEL - STAHL - ACIER																			
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																			
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																			
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																			
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR																			
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																			

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW  
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW  
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

...ER ... W		...EL ... W		HW		HC					
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS					
						R	L	R	L	R	L
						F7030	F7030	F7415	F7415	F1025	F1025

**PROFILO FINITO b = 55° (WITHWORTH)  
FULL - PROFILE b = 55° (WITHWORTH)**

ART.	COD.	l	d	b	P (Fill"/)												
	11ER 72 W	11EL 72 W	11	6,35	55°	72											
	11ER 60 W	11EL 60 W	11	6,35	55°	60											
	11ER 56 W	11EL 56 W	11	6,35	55°	56											
	11ER 48 W	11EL 48 W	11	6,35	55°	48											
	11ER 40 W	11EL 40 W	11	6,35	55°	40											
	11ER 36 W	11EL 36 W	11	6,35	55°	36											
	11ER 32 W	11EL 32 W	11	6,35	55°	32											
	11ER 28 W	11EL 28 W	11	6,35	55°	28											
	11ER 26 W	11EL 26 W	11	6,35	55°	26											
	11ER 24 W	11EL 24 W	11	6,35	55°	24											
	11ER 22 W	11EL 22 W	11	6,35	55°	22											
	11ER 20 W	11EL 20 W	11	6,35	55°	20											
	11ER 19 W	11EL 19 W	11	6,35	55°	19											
	11ER 18 W	11EL 18 W	11	6,35	55°	18											
	11ER 16 W	11EL 16 W	11	6,35	55°	16											
	11ER 14 W	11EL 14 W	11	6,35	55°	14											
	16ER 72 W	16EL 72 W	16,5	9,52	55°	72											
	16ER 60 W	16EL 60 W	16,5	9,52	55°	60											
	16ER 56 W	16EL 56 W	16,5	9,52	55°	56											
16ER 48 W	16EL 48 W	16,5	9,52	55°	48												
16ER 40 W	16EL 40 W	16,5	9,52	55°	40												
16ER 36 W	16EL 36 W	16,5	9,52	55°	36												
16ER 32 W	16EL 32 W	16,5	9,52	55°	32												
16ER 28 W	16EL 28 W	16,5	9,52	55°	28												
16ER 26 W	16EL 26 W	16,5	9,52	55°	26												
16ER 24 W	16EL 24 W	16,5	9,52	55°	24												
16ER 22 W	16EL 22 W	16,5	9,52	55°	22												
16ER 20 W	16EL 20 W	16,5	9,52	55°	20												
16ER 19 W	16EL 19 W	16,5	9,52	55°	19												
16ER 18 W	16EL 18 W	16,5	9,52	55°	18												
16ER 16 W	16EL 16 W	16,5	9,52	55°	16												
16ER 14 W	16EL 14 W	16,5	9,52	55°	14												
16ER 12 W	16EL 12 W	16,5	9,52	55°	12												
16ER 11 W	16EL 11 W	16,5	9,52	55°	11												
16ER 10 W	16EL 10 W	16,5	9,52	55°	10												
16ER 9 W	16EL 9 W	16,5	9,52	55°	9												
16ER 8 W	16EL 8 W	16,5	9,52	55°	8												
22ER 7 W	22EL 7 W	22	12,7	55°	7												
22ER 6 W	22EL 6 W	22	12,7	55°	6												
22ER 5 W	22EL 5 W	22	12,7	55°	5												

MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX

<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER																
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR																
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																

● DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / **NEW**  
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE  
 □ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / **NEW**  
 ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
 MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

							HW		HC							
							NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS							
...IR ... W		...IL ... W		...U ... W			R	L	R	L	R	L	R	L		
ART.		COD.		l	d	b	P (Fill/°)	F7030	F7030	F7415 NEW	F7415	F1025	F1025	F7040	F7040	
<b>PROFILO FINITO b = 55° (WITHWORTH) FULL - PROFILE b = 55° (WITHWORTH)</b>																
<p>..IR ..</p> <p>..IL ..</p> <p>..U ..</p>	06IR 26 W	06IL 26 W	6,9	3,97	55°	26										
	06IR 22 W	06IL 22 W	6,9	3,97	55°	22										
	06IR 20 W	06IL 20 W	6,9	3,97	55°	20										
	06IR 18 W	06IL 18 W	6,9	3,97	55°	18										
	08IR 28 W	08IL 28 W	8,2	4,76	55°	28										
	08IR 24 W	08IL 24 W	8,2	4,76	55°	24										
	08IR 20 W	08IL 20 W	8,2	4,76	55°	20										
	08IR 19 W	08IL 19 W	8,2	4,76	55°	19										
	08IR 18 W	08IL 18 W	8,2	4,76	55°	18										
	08IR 16 W	08IL 16 W	8,2	4,76	55°	16										
	08U IR 14 W	08U IL 14 W	8,2U	4,76U	55°	14										
	08U IR 12 W	08U IL 12 W	8,2U	4,76U	55°	12										
	08U IR 11 W	08U IL 11 W	8,2U	4,76U	55°	11										
	11IR 72 W	11IL 72 W	11	6,35	55°	72										
	11IR 60 W	11IL 60 W	11	6,35	55°	60										
	11IR 56 W	11IL 56 W	11	6,35	55°	56										
	11IR 48 W	11IL 48 W	11	6,35	55°	48										
	11IR 40 W	11IL 40 W	11	6,35	55°	40										
	11IR 36 W	11IL 36 W	11	6,35	55°	36										
	11IR 32 W	11IL 32 W	11	6,35	55°	32										
	11IR 28 W	11IL 28 W	11	6,35	55°	28										
	11IR 26 W	11IL 26 W	11	6,35	55°	26										
	11IR 24 W	11IL 24 W	11	6,35	55°	24										
	11IR 22 W	11IL 22 W	11	6,35	55°	22										
	11IR 20 W	11IL 20 W	11	6,35	55°	20										
	11IR 19 W	11IL 19 W	11	6,35	55°	19										
	11IR 18 W	11IL 18 W	11	6,35	55°	18										
	11IR 16 W	11IL 16 W	11	6,35	55°	16										
	11IR 14 W	11IL 14 W	11	6,35	55°	14										
	11IR 12 W	11IL 12 W	11	6,35	55°	12										
	11IR 11 W	11IL 11 W	11	6,35	55°	11										
	16IR 72 W	16IL 72 W	16,5	9,52	55°	72										
	16IR 60 W	16IL 60 W	16,5	9,52	55°	60										
	16IR 56 W	16IL 56 W	16,5	9,52	55°	56										
	16IR 48 W	16IL 48 W	16,5	9,52	55°	48										
	16IR 40 W	16IL 40 W	16,5	9,52	55°	40										
	16IR 36 W	16IL 36 W	16,5	9,52	55°	36										
	16IR 32 W	16IL 32 W	16,5	9,52	55°	32										
	16IR 28 W	16IL 28 W	16,5	9,52	55°	28										
	16IR 26 W	16IL 26 W	16,5	9,52	55°	26										
	16IR 24 W	16IL 24 W	16,5	9,52	55°	24										
	16IR 22 W	16IL 22 W	16,5	9,52	55°	22										
	16IR 20 W	16IL 20 W	16,5	9,52	55°	20										
	16IR 19 W	16IL 19 W	16,5	9,52	55°	19										
	16IR 18 W	16IL 18 W	16,5	9,52	55°	18										
	16IR 16 W	16IL 16 W	16,5	9,52	55°	16										
	16IR 14 W	16IL 14 W	16,5	9,52	55°	14										
	16IR 12 W	16IL 12 W	16,5	9,52	55°	12										
	16IR 11 W	16IL 11 W	16,5	9,52	55°	11										
	16IR 10 W	16IL 10 W	16,5	9,52	55°	10										
	16IR 9 W	16IL 9 W	16,5	9,52	55°	9										
	16IR 8 W	16IL 8 W	16,5	9,52	55°	8										
	22IR 7 W	22IL 7 W	22	12,7	55°	7										
	22IR 6 W	22IL 6 W	22	12,7	55°	6										
	22IR 5 W	22IL 5 W	22	12,7	55°	5										
<b>MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX</b>																
P	ACCIAIO - STEEL - STAHL - ACIER															
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE															
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE															
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM															
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISSANTES À LA CHALEUR															
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS															

...ER B ... W		...IR B ... W		HW		HC													
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS													
ART.	COD.			l	d	b	P (Fill")												

**PROFILO DI PRECISIONE RETTIFICATO CON ROMPITRUCIOLO SINTERIZZATO b = 55° (WITHWORTH)**  
**PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER b = 55° (WITHWORTH)**

 ..ER ..	<b>16ER B 19 W</b>	16,5	9,52	55°	19															
	<b>16ER B 16 W</b>	16,5	9,52	55°	16															
	<b>16ER B 14 W</b>	16,5	9,52	55°	14															
	<b>16ER B 11 W</b>	16,5	9,52	55°	11															
	<b>16ER B 10 W</b>	16,5	9,52	55°	10															
 ..IR ..	<b>16IR B 19 W</b>	16,5	9,52	55°	19															
	<b>16IR B 16 W</b>	16,5	9,52	55°	16															
	<b>16IR B 14 W</b>	16,5	9,52	55°	14															
	<b>16IR B 11 W</b>	16,5	9,52	55°	11															
	<b>16IR B 10 W</b>	16,5	9,52	55°	10															

MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																	F7030													
P	ACCIAIO - STEEL - STAHL - ACIER																	●												
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																	●												
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																	●												
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																	○												
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR																	●												
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																	○												

...ER ... W ..M		...IR ... W ..M						HW		HC				
								NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS				
ART.	COD.			l	d	b	Z	P (Fill <sup>m</sup> )	F7030	F1025				
<b>PROFILO FINITO b = 55° (WITHWORTH) MULTIDENTE FULL - PROFILE b = 55° (WITHWORTH) MULTITOOTH</b>														
 ..ER ..	16ER 14 W 2M	16,5	9,52	55°	2	14			<input type="checkbox"/>				<input type="checkbox"/>	
	22ER 14 W 3M	22	12,7	55°	3	14			<input type="checkbox"/>				<input type="checkbox"/>	
	22ER 11 W 2M	22	12,7	55°	2	11			<input type="checkbox"/>				<input type="checkbox"/>	
 ..IR ..	16IR 14 W 2M	16,5	9,52	55°	2	14			<input type="checkbox"/>				<input type="checkbox"/>	
	22IR 14 W 3M	22	12,7	55°	3	14			<input type="checkbox"/>				<input type="checkbox"/>	
	22IR 11 W 2M	22	12,7	55°	2	11			<input type="checkbox"/>				<input type="checkbox"/>	
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX									F7030	F1025				
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM								<input type="checkbox"/>				<input type="checkbox"/>	
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS								<input type="checkbox"/>				<input type="checkbox"/>	

...ER ... NPT ...IL ... NPT		...EL ... NPT ...IR ... NPT		HW				HC				
				NON RIVESTITI CEMENTED CARBIDE GRADES				RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS				
ART.	COD.	l	d	b	P (Fill")	R	L	R	L	R	L	
NPT b = 60°						F7030	F7030	F1025	F1025	F7040	F7040	
	11ER 27 NPT	11EL 27 NPT	11	6,35	60°	27						
	11ER 18 NPT	11EL 18 NPT	11	6,35	60°	18						
	11ER 14 NPT	11EL 14 NPT	11	6,35	60°	14						
	16ER 27 NPT	16EL 27 NPT	16,5	9,52	60°	27						
	16ER 18 NPT	16EL 18 NPT	16,5	9,52	60°	18						
	16ER 14 NPT	16EL 14 NPT	16,5	9,52	60°	14						
	16ER 11.5 NPT	16EL 11.5 NPT	16,5	9,52	60°	11,5						
	16ER 8 NPT	16EL 8 NPT	16,5	9,52	60°	8						
	06IR 27 NPT	06IL 27 NPT	6,9	3,97	60°	27						
	08IR 27 NPT	08IL 27 NPT	8,2	4,76	60°	27						
	08IR 18 NPT	08IL 18 NPT	8,2	4,76	60°	18						
	11IR 27 NPT	11IL 27 NPT	11	6,35	60°	27						
	11IR 18 NPT	11IL 18 NPT	11	6,35	60°	18						
	11IR 14 NPT	11IL 14 NPT	11	6,35	60°	14						
	16IR 27 NPT	16IL 27 NPT	16,5	9,52	60°	27						
	16IR 18 NPT	16IL 18 NPT	16,5	9,52	60°	18						
	16IR 14 NPT	16IL 14 NPT	16,5	9,52	60°	14						
	16IR 11.5 NPT	16IL 11.5 NPT	16,5	9,52	60°	11,5						
	16IR 8 NPT	16IL 8 NPT	16,5	9,52	60°	8						
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX												
P	ACCIAIO - STEEL - STAHL - ACIER											
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE											
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE											
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM											
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉISTANTES À LA CHALEUR											
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS											

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW  
● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
EMPFÖHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW  
○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE



...ER B ... NPT		...IR B ... NPT		HW		HC														
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS														
ART.	COD.			l	d	b	P (Fill <sup>m</sup> )	F7030												
PROFILO DI PRECISIONE RETTIFICATO CON ROMPIRUCIOLO SINTERIZZATO NPT b = 60° PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER NPT b = 60°																				
 ..ER ..	16ER B 18 NPT			16,5	9,52	60°	18													
	16ER B 14 NPT			16,5	9,52	60°	14													
	16ER B 11.5 NPT			16,5	9,52	60°	11,5													
	16ER B 8 NPT			16,5	9,52	60°	8													
 ..IR ..	16IR B 18 NPT			16,5	9,52	60°	18													
	16IR B 14 NPT			16,5	9,52	60°	14													
	16IR B 11.5 NPT			16,5	9,52	60°	11,5													
	16IR B 8 NPT			16,5	9,52	60°	8													
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX								F7030												
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER																			
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																			
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																			
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																			
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISSANTES À LA CHALEUR																			
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																			

...ER ... NPT ...M		...IR ... NPT ...M		HW		HC																
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOURVETS																
ART.	COD.			l	d	b	Z	P (Fill <sup>m</sup> )	F7030					F1025								
NPT b = 60° MULTIDENTE NPT b = 60° MULTITOOTH																						
	22ER 11.5 NPT 2M			22	12,7	60°	2	11,5						<input type="checkbox"/>								
	22IR 11.5 NPT 2M			22	12,7	60°	2	11,5						<input type="checkbox"/>								
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX									F7030					F1025								
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER								<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>							
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE								<input checked="" type="checkbox"/>						<input type="checkbox"/>							
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE								<input checked="" type="checkbox"/>						<input type="checkbox"/>							
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM								<input type="checkbox"/>						<input type="checkbox"/>							
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR								<input checked="" type="checkbox"/>						<input type="checkbox"/>							
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS								<input type="checkbox"/>						<input type="checkbox"/>							

■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ NEW  
● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION-  
EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE

□ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ NEW  
○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION -  
MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

...ER ... BSPT ...IL ... BSPT		...EL ... BSPT ...IR ... BSPT		HW				HC						
				NON RIVESTITI CEMENTED CARBIDE GRADES				RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS						
ART.		COD.		l	d	b	P (Fill <sup>m</sup> )	R	L	R	L	R	L	
								F7030	F7030	F1025	F1025	F7040	F7040	
<b>BSPT b = 55°</b>														
	16ER 28 BSPT	16EL 28 BSPT	16,5	9,52	55°	28								
	16ER 19 BSPT	16EL 19 BSPT	16,5	9,52	55°	19								
	16ER 14 BSPT	16EL 14 BSPT	16,5	9,52	55°	14								
	16ER 11 BSPT	16EL 11 BSPT	16,5	9,52	55°	11								
	06IR 28 BSPT	06IL 28 BSPT	6,9	3,97	55°	28								
	08IR 28 BSPT	08IL 28 BSPT	8,2	4,76	55°	28								
	08IR 19 BSPT	08IL 19 BSPT	8,2	4,76	55°	19								
	11IR 28 BSPT	11IL 28 BSPT	11	6,35	55°	28								
	11IR 19 BSPT	11IL 19 BSPT	11	6,35	55°	19								
	11IR 14 BSPT	11IL 14 BSPT	11	6,35	55°	14								
	11IR 11 BSPT	11IL 11 BSPT	11	6,35	55°	11								
	16IR 28 BSPT	16IL 28 BSPT	16,5	9,52	55°	28								
	16IR 19 BSPT	16IL 19 BSPT	16,5	9,52	55°	19								
	16IR 14 BSPT	16IL 14 BSPT	16,5	9,52	55°	14								
	16IR 11 BSPT	16IL 11 BSPT	16,5	9,52	55°	11								
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX														
P	ACCIAIO - STEEL - STAHL - ACIER													
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE													
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE													
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM													
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR													
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS													

...ER B ... BSPT		...IR B ... BSPT		HW				HC											
				NON RIVESTITI CEMENTED CARBIDE GRADES				RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS											
ART.	COD.			l	d	b	P (Fill")	F7030											
<b>PROFILO DI PRECISIONE RETTIFICATO CON ROMPITRUCIOLO SINTERIZZATO BSPT b = 55° PRECISION GROUND PROFILE WITH SINTERED CHIP-BREAKER BSPT b = 55°</b>																			
 ..ER ..	16ER B 19 BSPT			16,5	9,52	55°	19												
	16ER B 14 BSPT			16,5	9,52	55°	14												
	16ER B 11 BSPT			16,5	9,52	55°	11												
 ..IR ..	16IR B 14 BSPT			16,5	9,52	55°	14												
	16IR B 11 BSPT			16,5	9,52	55°	11												
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX								F7030											
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER																		
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																		
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																		
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																		
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR																		
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																		

						HW		HC							
						NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS							
...ER ... TR / ...IL ... TR		...EL ... TR / ...IR ... TR		...U ... TR				R	L		R	L	R	L	
ART.		COD.		l	d	b	P(mm)	F7030	F7030		F1025	F1025	F7040	F7040	
<b>TRAPEZOIDALE b = 30° TRAPEZ b = 30°</b>															
<p>..ER ..</p> <p>..EL ..</p>	16ER 1.5 TR	16EL 1,50 TR	16,5	9,52	30°	1,50									
	16ER 2 TR	16EL 2 TR	16,5	9,52	30°	2,00									
	16ER 3 TR	16EL 3 TR	16,5	9,52	30°	3,00									
	16ER 4 TR	16EL 4 TR	16,5	9,52	30°	4,00									
	22ER 4 TR	22EL 4 TR	22	12,7	30°	4,00									
	22ER 5 TR	22EL 5 TR	22	12,7	30°	5,00									
22ER 6 TR	22EL 6 TR	22	12,7	30°	6,00										
<p>..IR ..</p> <p>..IL ..</p>	08IR 1.5 TR	08IL 1.5 TR	8,2	4,76	30°	1,50									
	08U IR 2 TR	08U IL 2 TR	8,2U	4,76U	30°	2,00									
	16IR 2 TR	16IL 2 TR	11	6,35	30°	2,00									
	16IR 3 TR	16IL 3 TR	11	6,35	30°	3,00									
	16IR 4 TR	16IL 4 TR	11	6,35	30°	4,00									
	22IR 4 TR	22IL 4 TR	22	12,7	30°	4,00									
22IR 5 TR	22IL 5 TR	22	12,7	30°	5,00										
22IR 6 TR	22IL 6 TR	22	12,7	30°	6,00										
<p>..U ..</p>															
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX															
P	ACCIAIO - STEEL - STAHL - ACIER														
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE														
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE														
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM														
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR														
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS														

...ER ... RD ...IL ... RD		...EL ... RD ...IR ... RD		HW		HC							
				NON RIVESTITI CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS							
ART.	COD.	l	d	b	P (Fill/°)	R	L	R	L	R	L		
TONDO b = 30° (DIN 405) ROUND b = 30° (DIN 405)													
	16ER 10 RD	16EL 10 RD	16,5	9,52	30°	10							
	16ER 8 RD	16EL 8 RD	16,5	9,52	30°	8							
	16ER 6 RD	16EL 6 RD	16,5	9,52	30°	6							
	22ER 6 RD	22EL 6 RD	22	12,7	30°	6							
	22ER 4 RD	22EL 4 RD	22	12,7	30°	4							
	16IR 10 RD	16IL 10 RD	16,5	9,52	30°	10							
	16IR 8 RD	16IL 8 RD	16,5	9,52	30°	8							
	16IR 6 RD	16IL 6 RD	16,5	9,52	30°	6							
	22IR 6 RD	22IL 6 RD	22	12,7	30°	6							
	22IR 4 RD	22IL 4 RD	22	12,7	30°	4							
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX													
P	ACCIAIO - STEEL - STAHL - ACIER												
M	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE												
K	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE												
N	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM												
S	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR												
H	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS												

...ER ... MJ		...IR ... MJ		HW			HC																		
				NON RIVESTITI CEMENTED CARBIDE GRADES			RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS																		
ART.	COD.			l	d	b	P(mm)																		
<b>MJ b = 60° (ISO 5855)</b>																									
 ..ER ..	<b>16ER 1.0 MJ</b>			16,5	9,52	60°	1,00																		
	<b>16ER 1.25 MJ</b>			16,5	9,52	60°	1,25																		
	<b>16ER 1.5 MJ</b>			16,5	9,52	60°	1,50																		
	<b>16ER 2,0 MJ</b>			16,5	9,52	60°	2,00																		
 ..IR ..	<b>11IR 1.0 MJ</b>			11	6,35	60°	1,00																		
	<b>11IR 1.25 MJ</b>			11	6,35	60°	1,25																		
	<b>11IR 1.5 MJ</b>			11	6,35	60°	1,50																		
	<b>11IR 2,0 MJ</b>			11	6,35	60°	2,00																		
	<b>16IR 1.0 MJ</b>			16,5	9,52	60°	1,00																		
	<b>16IR 1.25 MJ</b>			16,5	9,52	60°	1,25																		
	<b>16IR 1.5 MJ</b>			16,5	9,52	60°	1,50																		
	<b>16IR 2,0 MJ</b>			16,5	9,52	60°	2,00																		
MATERIALE - MATERIAL - MATERIALIEN - MATÉRIAUX																									
<b>P</b>	ACCIAIO - STEEL - STAHL - ACIER																								
<b>M</b>	ACCIAIO INOX - STAINLESS STEEL - ROSTFREIER STAHL - ACIER INOXYDABLE																								
<b>K</b>	GHISA - CAST IRON - GRAUGUSS - FONTE GRISE																								
<b>N</b>	LEGHE DI ALLUMINIO - ALUMINIUM ALLOYS - ALUMINIUM-LEGIERUNGEN - ALLIAGES D'ALUMINIUM																								
<b>S</b>	LEGHE RESISTENTI AL CALORE - HEAT RESISTANT ALLOYS - WÄRMEBESTÄNDIGE LEGIERUNGEN - ALLIAGES RÉSISTANTES À LA CHALEUR																								
<b>H</b>	MATERIALI DURI E TEMPRATI - HARD AND HARDENED MATERIAL - HARTE UND GEHÄRTETE MATERIALIEN - MATERIAUX DURS ET TREMPÉS																								