F.U.L. S.r.L.

Beyond tooling limits

CATALOGO 2019

UTENSILI PROFESSIONALI

TOOLS FOR INDUSTRIAL APPLICATIONS

PROFI-WERKZEUGE

OUTILS PROFESSIONNELS

HERRAMENTA PROFESIONALES

Utensile specifico per eseguire fori ciechi in legni naturali, pannelli truciolari, multistrati ,ecc.	EN	Tool designed to drill blind holes in natural wood, chipboards panels, plywood, etc
	DE	Spezialwerkzeug zur Durchfürung von Blindohrungen in Naturholz, Spanholz und Multiplexplatten
	FR	Outil spécifique pour ouvrir des trous boranes dans des bois naturels.
	ES	Utensilio especifico para realizar agujeros ciegos en madera natural,panels de aglomerado, panels MDF ecc .
Utensile specifico per eseguire fori passanti in legni naturali, pannelli truciolari, multistrati ,ecc.	EN	Tool designed to drill through holes in natural wood, chipboards panels, plywood, etc.
	DE	Spezialwerkzeug zur Durchfürung von Durchgangsbohrungen in Naturholz, Spanholz und Multiplexplatten
	FR	Outil spécifique pour ouvrir des trous de passage dans des bois naturels.
	ES	Utensilio especifico para realizar agujeros pasantes en madera natural,panels de aglomerado, panels MDF ecc .
Gambo con piano di serraggio.	EN	Shank with clamping flat.
	DE	Werkzeug mit Aufhängevorrichhtung und Befestigungsplatte.
	FR	Outil equipé de fixation avec plan de fixation
	ES	Mango con plano de apriete
Tagliente con elica traente: migliore finitura sulla superfice inferiore del legno lavorato.	EN	Up cut spiral: better finish on lower side of worked panel.
	DE	Druckspirale für eine bessere Ausarbeitung der unteren Holzoberfläche.
	FR	Hélice propulsive
	ES	Corte con hélice a derecha:mejor acabado en la superfice inferior del material elaborado
Tagliente con elica spingente: migliore finitura sulla superfice superiore del legno lavorato.	EN	Down cut spiral: better finish on upper side of worked panel.
	DE	Zugspirale für eine bessere Ausarbeitung der oberen Holzoberfläche.
	FR	Hélice tractive
	ES	Corte con hélice a izquierda:mejor acabado en la superfice superior del material elaborado
Tagliente con elica traente e spingente: finitura ottimizzata su entrambe le superfici del legno lavorato.	EN	"Compression"cut spiral: better finish on both sides of worked panel.
	DE	Druck - Zug - spirale: optimale Ausarbeitung der beiden unteren und oberen Holzoberflächen.
	FR	Hélice tractive - propulsive
	ES	Corte con hélice positiva y negativa: acabado optimizado en ambas superfices del material elaborado
HP Utensile ad alte prestazioni HP+ Utensile ad altissime prestazioni	EN	High performance tool
	DE	Hochleistungswerkzeug
	FR	Outil performant
	ES	Herramienta de alto rendimento
Utensile con incisore negativo per superfinitura.	EN	Chip free negative spurs action.
	DE	Prägewerkzeug mit negativem Schliff.
	FR	Inciseur avec affutage négatif.
	ES	Utensilio con incisor negativo para superacabado
Utensile con incisore tondo rinforzato.	EN	Tool with round reinforced spur
	DE	Rundschneider und destärkt
	FR	Inciseur avec affutage rond.
	ES	Incisor tondo con renfuerzo
Utensile dotato di vite di regolazione sulla lunghezza totale	EN	Tool with length adjusting screw.
	DE	Werkzeug mit Einstellschraube für die Gesamtlänge.
	FR	Outil equipé de vis re reglage de la longeur totale.
	ES	Utensilio dotato de tornillo de regulaciòn del largo total
Numero dei taglienti (+1 = Tagliente in testa)	EN	Numbers of flutes (+1= Means plunge cut).
	DE	Anzhal der Schneiden (+1= Kopfschneide).
	FR	Nombre de tranchants (+1= Tranchant en tête).
	ES	Nùmero de los cortes (+1= Corte en la punta)
Z = Numero dei taglientI V = Numero degli incisori	EN	(Z) Numbers of flutes - (V) Numbers of spurs.
	DE	(Z) Anzhal der Schneiden - (V) Vorschneider.
	FR	(Z) Nombre de tranchants - (V) Inciseur.
	ES	(Z) Nùmero de cortes - (V) Nùmero de los incisor
Rivestimento plastico anti-aderente	EN	Non stick coating.
	DE	Werkzeug mit Antihaft-Kunststoffüberzug.
	FR	Outil avec revetement en plastique anti-adhésion.
	ES	Revestimiento plàstico antiadherente
Carburo di tungsteno in qualità micrograna: altissima tenacità e resistenza all'usura	EN	Micrograin hardmetal: highest toughness combined with superior wear resistance.
	DE	Qualität Hartmetall mit Feinkörnung: sehr hohe Festigkeit-und Verschleiß-Wiederstand
	FR	Carbure de tungstene micrograin a haute tenue de coupe
	ES	Carburo de tungsteno de calidad micrograno: altisima tenacidad y resistencia al desgaste
Rotazione sinistrorsa (antioraria). Rotazione destrorsa o oraria	EN	Left hand or anti-clockwise rotation. / Right hand or clockwise rotation.
	DE	Linksdrehung. / Rechtsdrehung.
	FR	Outil à rotation gauche. / Outil à rotation droite
	ES	Rotaciòn a izquierda (Antihoraria) / Rotaciòn a derecha (Horaria)
Rotazione sinistrorsa (antioraria) fornita su richiesta. Rotazioni fornite su richiesta	EN	Left hand rotation supplied only on request.
	DE	Linksdrehung auf Anfrage.
	FR	Rotation gauche sur demande.
	ES	Rotaciòn a izquierda (Antihoraria) servida bajo pedido
Utensile specifico per sgrossatura.	EN	Tool designed for rough working.
	DE	Spezial-Schruppwerkzeug.
	FR	Outil spécifique pour les operations de degrossinage.
	ES	Utensilio especifico para desbaste
Utensile specifico per finitura	EN	Tool designed for finish working.
	DE	Spezial-Schlichtwerkzeug.
	FR	Outil spécifique pour les operations de finition.
	ES	Utensilio especifico para acabado
Utensile adatto a lavorazioni CNC	EN	Tool suitable for CNC working
	DE	Werkzeuge für CNC - Maschinen
	FR	Outil indiqué pour CCN
	ES	Utensilio adaptado para trabajos en CNC
Utensile DIAMANTE	EN	PCD Tool diamond
	DE	PKD Werkzeuge
	FR	Outil diamant
	ES	herramienta diamante

PRODUCTION

PROFILO AZIENDALE

COMPANY PROFILE

PROFIL DE LA SOCIÉTÉ

PROFIL EMPRESARIAL

Dinamica attività nata dallo spirito imprenditoriale di Ennio Rossi, coniugando la professione di dirigente presso una grande azienda metalmeccanica e la passione per la tecnologia applicata alla sviluppo di nuove metodologie di lavoro. Nel 1970, l'azienda nasce senza essere la costola di nessun altra entità. Da subito fu chiaro che lo sbocco naturale era il mercato internazionale, ben consci che questo avrebbe comportato la necessità di confrontarsi con realtà produttive altamente competitive e ben radicate nel mercato. Tutto ciò servì solo ad acuire ed accrescere l'inventiva per applicare nuovi metodi e processi produttivi non convenzionali per rendere l'utensile prodotto sempre più competitivo, sia dal punto di vista economico che tecnologico. Oggi la gestione manageriale è passata dalle mani del fondatore ai figli: Stefano, Alberto e Fabrizio che attualmente gestiscono i comparti amministrativo, commerciale e tecnico.

A dynamic company founded through Ennio Rossi's entrepreneurial spirit, combining the profession of director in a large engineering company and the passion for technology applied to the development of new working methods. In 1970, the company was established as a totally autonomous entity. It became immediately apparent that the natural outlet was the international market, well conscious of the fact that this would mean facing up to highly competitive production processes with a strong hold on the market. All this only served to intensify and increase inventiveness in applying unconventional new methods and production processes, to make tool products even more competitive, both from an economic and technological point of view. Nowadays, company management has passed from its founder to his sons Stefano, Alberto and Fabrizio who currently run the administrative, commercial and technical departments.

Die dynamische Aktivität der Firma FUL entstand durch den Unternehmergeist von Ennio Rossi. Als Direktor einer metallverarbeitenden Firma trug er durch seine Leidenschaft für die Technologie zur Entwicklung und Anwendung von neuen Arbeitsmethoden bei. 1970 entstand die Firma selbsttändig, ohne jegliche Hilfe anderer. Man erkannte sofort, dass ihre natürliche Entwicklung in der Durchsetzung auf dem internationalen Markt lag, selbst wenn dies durch harte Konfrontation mit anderen auf dem Markt seit langer Zeit fest verwurzelten Konkurrenzunternehmen geschehen musste Diese Herausforderung diente dazu, die Erfindungsgabe zu schärfen und zu vermehren, und somit neue Methoden und produktive Prozesse zu entwickeln, die das Werkzeug preislich und technisch konkurrenzfähig machten. Heute ist die Geschäftsführung vom Gründer auf die Söhne übergegangen: Stefano, Alberto und Fabrizio leiten zur Zeit die verwaltungs, wirtschaftlichen und technischen Abteilungen.

Activité dynamique née du sens des affaires d'Ennio Rossi, en conjuguant le métier de dirigeant dans une grande entreprise métallurgique et la passion pour la technologie appliquée au développement de nouvelles méthodologies de travail. En 1970, l'entreprise voit le jour sans aucun lien avec aucune autre société. Dès le départ, il fut clair que le débouché naturel était le marché international, bien conscient du fait que cela aurait entraîné la nécessité de faire face à des fabricants très compétitifs et bien implantés sur le marché. Tout ceci ne servit qu'à aviver et à développer la créativité pour mettre en œuvre de nouvelles méthodes et processus de production non conventionelles de façon à rendre l'outil produit de plus en plus compétitif, aussi bien sur le plan économique que technologique. Aujourd'hui, la gestion managériale est passée du fondateur à ses enfants Stefano, Alberto et Fabrizio, qui gèrent à l'heure actuelle les services administratifs, commerciaux et techniques.

Actividad dinámica nacida del espíritu empresarial de Ennio Rossi, conjugando la profesión de ejecutivo en una grande empresa del sector mecánico y la pasión para la tecnología aplicada al desarrollo de nuevas metodologías de trabajo. En 1970, nace la empresa sin ser la costilla de ninguna otra entidad. En seguida se vio que la salida natural era el mercado internacional, sabiendo bien que esto conllevaría la necesidad de medirse con realidades productivas altamente competitivas y bien asentadas en el mercado. Todo esto sirvió para avivar y acrecentar la inventiva, para aplicar nuevos métodos y procesos productivos no convencionales al fin de que la herramienta fabricada fuera siempre más competitiva, sea desde el punto de vista económico sea tecnológico. Hoy en día la gestión directiva ha pasado de las manos del fundador a los hijos Stefano, Alberto y Fabrizio que en la actualidad dirigen los sectores administrativo, comercial y técnico.

F.U.L. S.r.L.

F.U.L. S.r.L.

F.U.L. S.r.L.

F.U.L. S.r.L.

WORKINGSPACE

	INDUSTRIAL ALL	HIGH PERFORMANCE HP	HIGH PERFORMANCE PLUS HP+	DIAMANTE
LEGNO *SOFTWOOD*	★★★★★	★★★★★	★★★	
LEGNO DURO *HARDWOOD*	★★★★	★★★★★	★★★★★	
TRUCIOLARE *CHIPBOARD*	★★	★★★★	★★★★★	★★★★★
MDF	★	★★★	★★★★★	★★★★★
HDF	★	★★★	★★★★★	★★★★★

CONTENTS

ITALIANO
ENGLISH
DEUTSCH
FRANÇAIS
ESPAÑOL

F.U.L. S.r.L.

F.U.L. S.r.L.

F O R A T U R A

DRILLING

BOHREN

FORAGE

PERFORACIÓN

50A HW Punta componibile per fori ciechi 4 eliche

TCT dowel drill bits
4 spirals

HW Dübelbohrer
mit rückenfuhrung

HW Mèches à percer
4 hélices

HW Broca para
agujero ciego
4 hélices

ØD	L	ØS	l	DX-RH	SX-LH
4	55.5	8	30	50A.040.R	50A.040.L
5	55.5	8	30	50A.050.R	50A.050.L
6	55.5	8	30	50A.060.R	50A.060.L
7	55.5	8	30	50A.070.R	50A.070.L
8	55.5	8	30	50A.080.R	50A.080.L
9	55.5	8	30	50A.090.R	50A.090.L
10	55.5	8	30	50A.100.R	50A.100.L
11	55.5	8	30	50A.110.R	50A.110.L
12	55.5	8	30	50A.120.R	50A.120.L

1V.020 Optional

1V.009

3000 ÷ 6000 rpm

F = 1 ÷ 4 mt/min

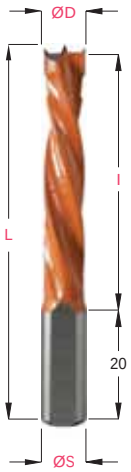
50B HW Punta componibile per fori ciechi 4 eliche

TCT dowel drill bits
4 spirals

HW Dübelbohrer
mit rückenfuhrung

HW Mèches à percer
4 hélices

HW Broca para
agujero ciego
4 hélices



ØD	L	ØS	l	DX-RH	SX-LH
4	67	8	43	50B.040.R	50B.040.L
5	67	8	43	50B.050.R	50B.050.L
6	67	8	43	50B.060.R	50B.060.L
7	67	8	43	50B.070.R	50B.070.L
8	67	8	43	50B.080.R	50B.080.L
9	67	8	43	50B.090.R	50B.090.L
10	67	8	43	50B.100.R	50B.100.L
11	67	8	43	50B.110.R	50B.110.L
12	67	8	43	50B.120.R	50B.120.L

1V.020 Optional

1V.009

3000 ÷ 6000 rpm

F = 1 ÷ 4 mt/min

HW Punta componibile per fori ciechi 2 eliche

50L

TCT dowel drill bits
2 spirals

HW Dübelbohrer

HW Mèches à percer
2 hélices

HW Broca para
agujero ciego
2 hélices

	L	ØS	l	DX-RH	SX-LH
4	57.5	10	25	50L.040.R	50L.040.L
5	57.5	10	25	50L.050.R	50L.050.L
6	57.5	10	25	50L.060.R	50L.060.L
6.35 (1/4")	57.5	10	25	50L.063.R	50L.063.L
7	57.5	10	25	50L.070.R	50L.070.L
8	57.5	10	25	50L.080.R	50L.080.L
8.2	57.5	10	25	50L.082.R	50L.082.L
9	57.5	10	25	50L.090.R	50L.090.L
9.5 (3/8")	57.5	10	25	50L.095.R	50L.095.L
10	57.5	10	25	50L.100.R	50L.100.L
11	57.5	10	25	50L.110.R	50L.110.L
12	57.5	10	25	50L.120.R	50L.120.L
12.7 (1/2")	57.5	10	25	50L.127.R	50L.127.L
13	57.5	10	25	50L.130.R	50L.130.L
14	57.5	10	25	50L.140.R	50L.140.L
15	57.5	10	25	50L.150.R	50L.150.L
16	57.5	10	25	50L.160.R	50L.160.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

1V.020
Optional

1V.009

HW Punta componibile per fori ciechi 4 eliche

50F

TCT dowel drill bits
4 spirals

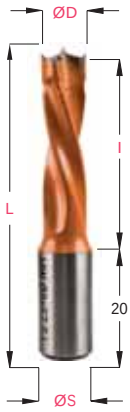
HW Dübelbohrer
mit rückenfuhrung

HW Mèches à percer
4 hélices

HW Broca para
agujero ciego
4 hélices

ØD	L	ØS	l	DX-RH	SX-LH
4	57.5	10	30	50F.040.R	50F.040.L
5	57.5	10	30	50F.050.R	50F.050.L
5.5	57.5	10	30	50F.055.R	50F.055.L
6	57.5	10	30	50F.060.R	50F.060.L
6.35 (1/4")	57.5	10	30	50F.063.R	50F.063.L
7	57.5	10	30	50F.070.R	50F.070.L
8	57.5	10	30	50F.080.R	50F.080.L
8.2	57.5	10	30	50F.082.R	50F.082.L
9	57.5	10	30	50F.090.R	50F.090.L
9.5 (3/8")	57.5	10	30	50F.095.R	50F.095.L
10	57.5	10	30	50F.100.R	50F.100.L
10.5	57.5	10	30	50F.105.R	50F.105.L
11	57.5	10	30	50F.110.R	50F.110.L
12	57.5	10	30	50F.120.R	50F.120.L
12.7 (1/2")	57.5	10	30	50F.127.R	50F.127.L
13	57.5	10	30	50F.130.R	50F.130.L
14	57.5	10	30	50F.140.R	50F.140.L
15	57.5	10	30	50F.150.R	50F.150.L
16	57.5	10	30	50F.160.R	50F.160.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

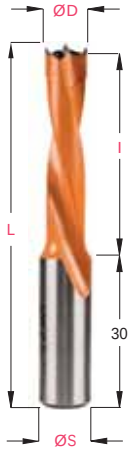


1V.020
Optional

1V.009

50M HW Punta componibile per fori ciechi 2 eliche

TCT dowel drill bits 2 spirals | HW Dübelbohrer | HW Mèches à percer 2 hélices | HW Broca para agujero ciego 2 hélices



ØD	L	ØS	I	DX-RH	SX-LH
4	70	10	35	50M.040.R	50M.040.L
5	70	10	35	50M.050.R	50M.050.L
5.5	70	10	35	50M.055.R	50M.055.L
6	70	10	35	50M.060.R	50M.060.L
6.35 (1/4”)	70	10	35	50M.063.R	50M.063.L
7	70	10	35	50M.070.R	50M.070.L
8	70	10	35	50M.080.R	50M.080.L
8.2	70	10	35	50M.082.R	50M.082.L
9	70	10	35	50M.090.R	50M.090.L
9.5 (3/8”)	70	10	35	50M.095.R	50M.095.L
10	70	10	35	50M.100.R	50M.100.L
11	70	10	35	50M.110.R	50M.110.L
12	70	10	35	50M.120.R	50M.120.L
12.7 (1/2”)	70	10	35	50M.127.R	50M.127.L
13	70	10	35	50M.130.R	50M.130.L
14	70	10	35	50M.140.R	50M.140.L
15	70	10	35	50M.150.R	50M.150.L
16	70	10	35	50M.160.R	50M.160.L

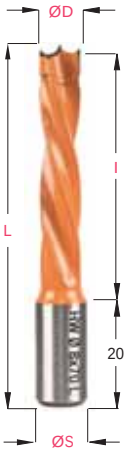
3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional

1V.009

50G HW Punta componibile per fori ciechi 4 eliche

TCT dowel drill bits 4 spirals | HW Dübelbohrer mit rückenfuhrung | HW Mèches à percer 4 hélices | HW Broca para agujero ciego 4 hélices



ØD	L	ØS	I	DX-RH	SX-LH
4	70	10	43	50G.040.R	50G.040.L
5	70	10	43	50G.050.R	50G.050.L
5.5	70	10	43	50G.055.R	50G.055.L
6	70	10	43	50G.060.R	50G.060.L
6.35 (1/4”)	70	10	43	50G.063.R	50G.063.L
7	70	10	43	50G.070.R	50G.070.L
7.5	70	10	43	50G.075.R	50G.075.L
8	70	10	43	50G.080.R	50G.080.L
8.2	70	10	43	50G.082.R	50G.082.L
9	70	10	43	50G.090.R	50G.090.L
9.5 (3/8”)	70	10	43	50G.095.R	50G.095.L
10	70	10	43	50G.100.R	50G.100.L
10.5	70	10	43	50G.105.R	50G.105.L
11	70	10	43	50G.110.R	50G.110.L
12	70	10	43	50G.120.R	50G.120.L
12.7 (1/2”)	70	10	43	50G.127.R	50G.127.L
13	70	10	43	50G.130.R	50G.130.L
14	70	10	43	50G.140.R	50G.140.L
15	70	10	43	50G.150.R	50G.150.L
16	70	10	43	50G.160.R	50G.160.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional

1V.009

HW Punta componibile per fori ciechi 2 eliche

50X

TCT dowel drill bits
2 spirals

HW Dübelbohrer

HW Mèches à percer
2 hélices

HW Broca para
agujero ciego
2 hélices

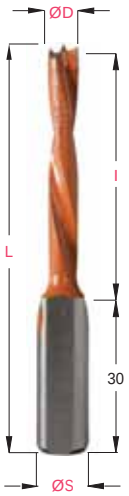
ØD	L	ØS	I	DX-RH	SX-LH
5	77	10	42	50X.050.R	50X.050.L
5.5	77	10	42	50X.055.R	50X.055.L
6	77	10	42	50X.060.R	50X.060.L
7	77	10	42	50X.070.R	50X.070.L
8	77	10	42	50X.080.R	50X.080.L
9	77	10	42	50X.090.R	50X.090.L
10	77	10	42	50X.100.R	50X.100.L
12	77	10	42	50X.120.R	50X.120.L

1V.020 Optional

1V.009

3000 ÷ 6000 rpm

F = 1 ÷ 4 mt/min



HW Punta componibile per fori ciechi 4 eliche

50C

TCT dowel drill bits
4 spirals

HW Dübelbohrer
mit rückenfuhrung

HW Mèches à percer
4 hélices

HW Broca para
agujero ciego
4 hélices

ØD	L	ØS	I	DX-RH	SX-LH
5	85	10	53	50C.050.R	50C.050.L
6	85	10	53	50C.060.R	50C.060.L
7	85	10	53	50C.070.R	50C.070.L
8	85	10	53	50C.080.R	50C.080.L
10	85	10	53	50C.100.R	50C.100.L
12	85	10	53	50C.120.R	50C.120.L

1V.020 Optional

1V.009

3000 ÷6000 rpm

F= 1 ÷ 3 mt/min

HW Punta componibile per fori ciechi 4 eliche

52D

TCT dowel drill bits
4 spirals

HW Dübelbohrer
mit rückenfuhrung

HW Mèches à percer
4 hélices

HW Broca para
agujero ciego
4 hélices

ØD	L	ØS	I	DX-RH	SX-LH
5	90	10	55	52D.050.R	52D.050.L
6	90	10	55	52D.060.R	52D.060.L
7	90	10	55	52D.070.R	52D.070.L
8	90	10	55	52D.080.R	52D.080.L
10	90	10	55	52D.100.R	52D.100.L
12	90	10	55	52D.120.R	52D.120.L

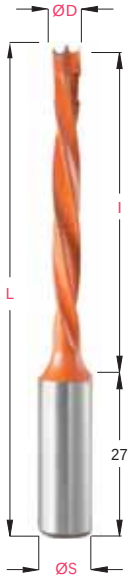
1V.020 Optional

1V.009

3000 ÷6000 rpm

F= 1 ÷ 3 mt/min

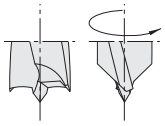
52C HW Punta componibile per fori ciechi 4 eliche



TCT dowel drill bits 4 spirals | HW Dübelbohrer mit rückenfuhrung | HW Mèches à percer 4 hélices | HW Broca para agujero ciego 4 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	105	10	70	52C.050.R	52C.050.L
6	105	10	70	52C.060.R	52C.060.L
7	105	10	70	52C.070.R	52C.070.L
8	105	10	70	52C.080.R	52C.080.L
10	105	10	70	52C.100.R	52C.100.L
12	105	10	70	52C.120.R	52C.120.L

1V.020 Optional — 1V.009 — 3000 ÷ 6000 rpm — F = 1 ÷ 3 mt/min



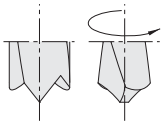
Z 2 + V 2 | L | R | CNC | PTFE

60L HW Punta Speciale per fori ciechi 2 eliche HP

TCT fast feed dowel drill bits 2 spirals | HW Spezialdübelbohrer | HW Mèche hélicoïdales special trou borgne 2 hélices | HW Broca especial para a gujero ciego 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	57.5	10	27	60L.050.R	60L.050.L
6	57.5	10	27	60L.060.R	60L.060.L
7	57.5	10	27	60L.070.R	60L.070.L
8	57.5	10	27	60L.080.R	60L.080.L
9	57.5	10	27	60L.090.R	60L.090.L
10	57.5	10	27	60L.100.R	60L.100.L
12	57.5	10	27	60L.120.R	60L.120.L

1V.020 Optional — 1V.009 — 4000 ÷ 8000 rpm — F = 1 ÷ 4 mt/min



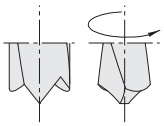
HP | MICRO | L | R | CNC | PTFE | Z 2 + V 2

60M HW Punta Speciale per fori ciechi 2 eliche HP

TCT fast feed dowel drill bits 2 spirals | HW Spezialdübelbohrer | HW Mèche hélicoïdales special trou borgne 2 hélices | HW Broca especial para a gujero ciego 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	70	10	35	60M.050.R	60M.050.L
6	70	10	35	60M.060.R	60M.060.L
7	70	10	35	60M.070.R	60M.070.L
8	70	10	35	60M.080.R	60M.080.L
9	70	10	35	60M.090.R	60M.090.L
10	70	10	35	60M.100.R	60M.100.L
12	70	10	35	60M.120.R	60M.120.L

1V.020 Optional — 1V.009 — 4000 ÷ 8000 rpm — F= 1 ÷ 4 mt/min



HP | MICRO | L | R | CNC | PTFE | Z 2 + V 2

HW Punta per cerniera con centrino

14A

TCT Hinge boring bit | HW Beschlagbohrer | HW Mèche à façonner | HW Broca para Herrajes

Z 2 + V 2 | L | R | CNC | PTFE

ØD	L	ØS	DX-RH	SX-LH
15	57.5	10	14A.150.R	14A.150.L
16	57.5	10	14A.160.R	14A.160.L
17	57.5	10	14A.170.R	14A.170.L
18	57.5	10	14A.180.R	14A.180.L
20	57.5	10	14A.200.R	14A.200.L
22	57.5	10	14A.220.R	14A.220.L
24	57.5	10	14A.240.R	14A.240.L
25	57.5	10	14A.250.R	14A.250.L
26	57.5	10	14A.260.R	14A.260.L
28	57.5	10	14A.280.R	14A.280.L
30	57.5	10	14A.300.R	14A.300.L
32	57.5	10	14A.320.R	14A.320.L
34	57.5	10	14A.340.R	14A.340.L
35	57.5	10	14A.350.R	14A.350.L
36	57.5	10	14A.360.R	14A.360.L
38	57.5	10	14A.380.R	14A.380.L
40	57.5	10	14A.400.R	14A.400.L

3000 ÷ 6000 rpm | F = 1 ÷ 2.5 mt/min | 1V.020 Optional | 1V.009

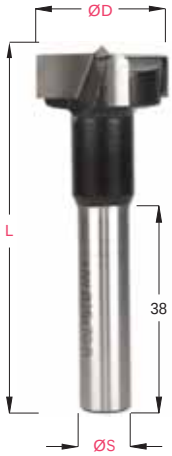

HW Punta per cerniera con centrino

14F

TCT Hinge boring bit | HW Beschlagbohrer | HW Mèche à façonner | HW Broca para Herrajes

Z 2 + V 2 | L | R | CNC | PTFE

ØD	L	ØS	DX-RH	SX-LH
15	70	10	14F.150.R	14F.150.L
16	70	10	14F.160.R	14F.160.L
17	70	10	14F.170.R	14F.170.L
18	70	10	14F.180.R	14F.180.L
20	70	10	14F.200.R	14F.200.L
22	70	10	14F.220.R	14F.220.L
24	70	10	14F.240.R	14F.240.L
25	70	10	14F.250.R	14F.250.L
26	70	10	14F.260.R	14F.260.L
28	70	10	14F.280.R	14F.280.L
30	70	10	14F.300.R	14F.300.L
32	70	10	14F.320.R	14F.320.L
34	70	10	14F.340.R	14F.340.L
35	70	10	14F.350.R	14F.350.L
36	70	10	14F.360.R	14F.360.L
38	70	10	14F.380.R	14F.380.L
40	70	10	14F.400.R	14F.400.L



3000 ÷ 6000 rpm | F = 1 ÷ 2.5 mt/min | 1V.020 Optional | 1V.009


14B HW Punta per cerniera con centrino Z=3 +V3

TCT Hinge boring bit with centre point	HW Beschlagbohrer mit zentrierspitze	Mèche à façonner interchangeable	HW Broca para Herrajes intercambiable

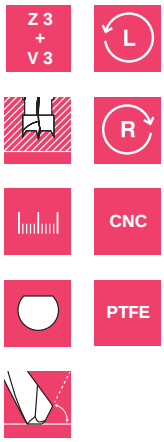
ØD	L	ØS	DX-RH	SX-LH
25	57.5	10	14B.250.R	14B.250.L
26	57.5	10	14B.260.R	14B.260.L
30	57.5	10	14B.300.R	14B.300.L
35	57.5	10	14B.350.R	14B.350.L
40	57.5	10	14B.400.R	14B.400.L

1V.020 Optional

1V.009

3000 ÷ 6000 rpm

F = 1 ÷ 3.5 mt/min



14H HW Punta per cerniera senza centrino Z=3 +V3

TCT Hinge boring bit without centre point	HW Beschlagbohrer ohne zentrierspitze	HW Mèche à façonner	HW Broca para Herrajes

ØD	L	ØS	DX-RH	SX-LH
25	57.5	10	14H.250.R	14H.250.L
26	57.5	10	14H.260.R	14H.260.L
30	57.5	10	14H.300.R	14H.300.L
35	57.5	10	14H.350.R	14H.350.L
40	57.5	10	14H.400.R	14H.400.L

1V.020 Optional

1V.009

3000 ÷ 6000 rpm

F = 1 ÷ 3.5 mt/min

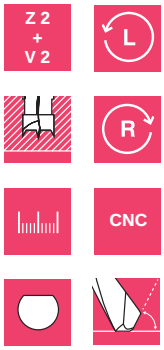
14E HW Punta per cerniera a coltellini intercambiabili con centrino

HW Disposable knives hinge boring bit	HW wendeplatten Beschlagbohrer	HW Mèches à percer avec coteaux	HW Broca para herrajes cuchillas reversibles

ØD	L	ØS	DX-RH	SX-LH
25	57.5	10	14E.250.R	14E.250.L
26	57.5	10	14E.260.R	14E.260.L
30	57.5	10	14E.300.R	14E.300.L
35	57.5	10	14E.350.R	14E.350.L
40	57.5	10	14E.400.R	14E.400.L

3000 ÷ 6000 rpm

F = 1 ÷ 2.5 mt/min

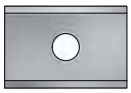


1R.001

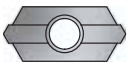
1V.020
OPTIONAL

1V.014

1V.009



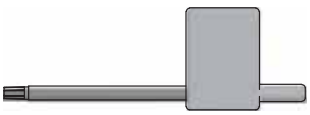
	ØD
1N .250	25
1N .260	26
1N .300	30
1N .350	35
1N .400	40



1P.000

1V.003

1V.002



1Z.000

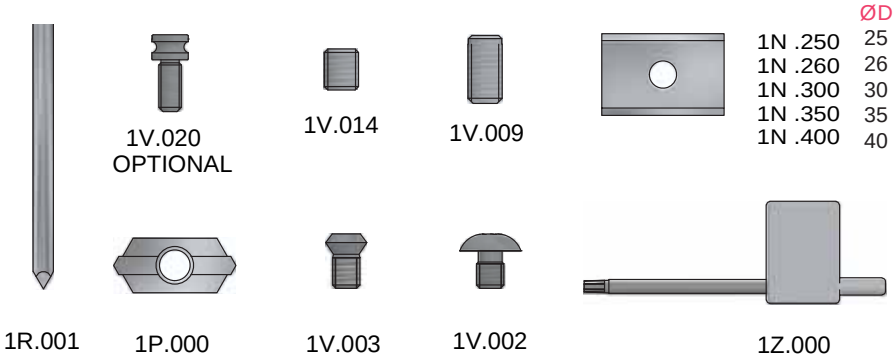
HW Punta per cerniera a coltellini intercambiabili con centrino

14 I

HW Insert knives hinge boring bits | HW Wendeplatten beschlagbohrer | HW Mèche à façonner interchangeable | HW Broca para Herrajes intercambiable

ØD	L	ØS	DX-RH	SX-LH
25	70	10	14I.250.R	14I.250.L
26	70	10	14I.260.R	14I.260.L
30	70	10	14I.300.R	14I.300.L
35	70	10	14I.350.R	14I.350.L
40	70	10	14I.400.R	14I.400.L

3000 ÷ 6000 rpm F = 1 ÷ 3.5 mt/min



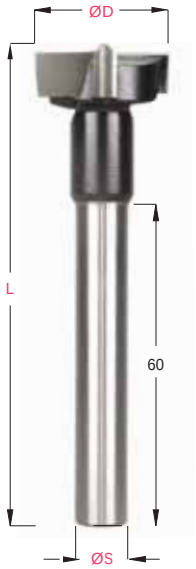
HW Punta per trapano

14D

TCT Hinge boring bit | HW Beschlagbohrer | HW Mèche à façonner | HW Broca para Herrajes

ØD	L	ØS	DX-RH
15	90	10	14D.150
16	90	10	14D.160
17	90	10	14D.170
18	90	10	14D.180
20	90	10	14D.200
22	90	10	14D.220
24	90	10	14D.240
25	90	10	14D.250
26	90	10	14D.260
28	90	10	14D.280
30	90	10	14D.300
32	90	10	14D.320
34	90	10	14D.340
35	90	10	14D.350
36	90	10	14D.360
38	90	10	14D.380
40	90	10	14D.400
45	90	10	14D.450
50	90	10	14D.500
55	90	10	14D.550
60	90	10	14D.600

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min



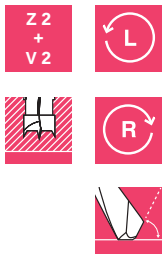
HW Punte foro cieco (gambo filettato)

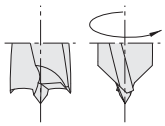
50P

TCT Threaded shank dowel drill bits | HW Dübelbohrer mit Gewindeschaft | HW Mèches à percer queue filetée | HW Broca con mango roscado

ØD	I	ØS	DX-RH	SX-LH
5	30	M 10 x 1,5	50P.050.RB	50P.050.LB
5	40	M 10 x 1,5	50P.050.RC	50P.050.LC
5	50	M 10 x 1,5	50P.050.RD	50P.050.LD
6	30	M 10 x 1,5	50P.060.RB	50P.060.LB
6	40	M 10 x 1,5	50P.060.RC	50P.060.LC
6	50	M 10 x 1,5	50P.060.RD	50P.060.LD
8	30	M 10 x 1,5	50P.080.RB	50P.080.LB
8	40	M 10 x 1,5	50P.080.RC	50P.080.LC
8	50	M 10 x 1,5	50P.080.RD	50P.080.LD
10	30	M 10 x 1,5	50P.100.RB	50P.100.LB
10	40	M 10 x 1,5	50P.100.RC	50P.100.LC
10	50	M 10 x 1,5	50P.100.RD	50P.100.LD
12	30	M 10 x 1,5	50P.120.RB	50P.120.LB
12	40	M 10 x 1,5	50P.120.RC	50P.120.LC
12	50	M 10 x 1,5	50P.120.RD	50P.120.LD

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min

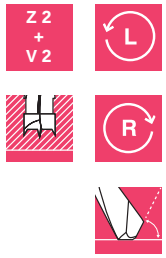


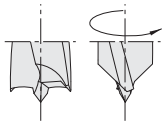


50PS

ØD	I	ØS	DX-RH	SX-LH
5	30	M 10 x 1,5	50PS.050.RB	50PS.050.LB
5	40	M 10 x 1,5	50PS.050.RC	50PS.050.LC
5	50	M 10 x 1,5	50PS.050.RD	50PS.050.LD
6	30	M 10 x 1,5	50PS.060.RB	50PS.060.LB
6	40	M 10 x 1,5	50PS.060.RC	50PS.060.LC
6	50	M 10 x 1,5	50PS.060.RD	50PS.060.LD
8	30	M 10 x 1,5	50PS.080.RB	50PS.080.LB
8	40	M 10 x 1,5	50PS.080.RC	50PS.080.LC
8	50	M 10 x 1,5	50PS.080.RD	50PS.080.LD
10	30	M 10 x 1,5	50PS.100.RB	50PS.100.LB
10	40	M 10 x 1,5	50PS.100.RC	50PS.100.LC
10	50	M 10 x 1,5	50PS.100.RD	50PS.100.LD
12	30	M 10 x 1,5	50PS.120.RB	50PS.120.LB
12	40	M 10 x 1,5	50PS.120.RC	50PS.120.LC
12	50	M 10 x 1,5	50PS.120.RD	50PS.120.LD

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min

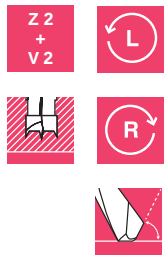


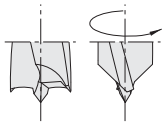


50R

ØD	I	ØS	DX-RH	SX-LH
5	30	M 10 x 1,5	50R.050.RB	50R.050.LB
5	40	M 10 x 1,5	50R.050.RC	50R.050.LC
5	50	M 10 x 1,5	50R.050.RD	50R.050.LD
6	30	M 10 x 1,5	50R.060.RB	50R.060.LB
6	40	M 10 x 1,5	50R.060.RC	50R.060.LC
6	50	M 10 x 1,5	50R.060.RD	50R.060.LD
8	30	M 10 x 1,5	50R.080.RB	50R.080.LB
8	40	M 10 x 1,5	50R.080.RC	50R.080.LC
8	50	M 10 x 1,5	50R.080.RD	50R.080.LD
10	30	M 10 x 1,5	50R.100.RB	50R.100.LB
10	40	M 10 x 1,5	50R.100.RC	50R.100.LC
10	50	M 10 x 1,5	50R.100.RD	50R.100.LD
12	30	M 10 x 1,5	50R.120.RB	50R.120.LB
12	40	M 10 x 1,5	50R.120.RC	50R.120.LC
12	50	M 10 x 1,5	50R.120.RD	50R.120.LD

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min

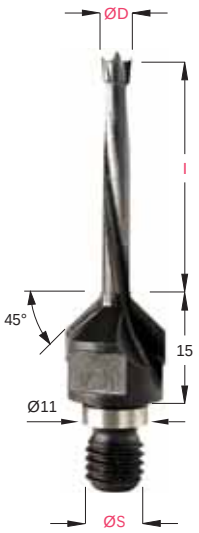




HW Punta foro cieco (gambo filettato)

50RS

TCT Threaded shank dowel drill bits | HW Dübelbohrer mit Gewindeschaft | HW Mèches à percer queue filetée | HW Broca con mango roscado



ØD	l	ØS	DX-RH	SX-LH
5	30	M 10 x 1,5	50RS.050.RB	50RS.050.LB
5	40	M 10 x 1,5	50RS.050.RC	50RS.050.LC
5	50	M 10 x 1,5	50RS.050.RD	50RS.050.LD
6	30	M 10 x 1,5	50RS.060.RB	50RS.060.LB
6	40	M 10 x 1,5	50RS.060.RC	50RS.060.LC
6	50	M 10 x 1,5	50RS.060.RD	50RS.060.LD
8	30	M 10 x 1,5	50RS.080.RB	50RS.080.LB
8	40	M 10 x 1,5	50RS.080.RC	50RS.080.LC
8	50	M 10 x 1,5	50RS.080.RD	50RS.080.LD
10	30	M 10 x 1,5	50RS.100.RB	50RS.100.LB
10	40	M 10 x 1,5	50RS.100.RC	50RS.100.LC
10	50	M 10 x 1,5	50RS.100.RD	50RS.100.LD
12	30	M 10 x 1,5	50RS.120.RB	50RS.120.LB
12	40	M 10 x 1,5	50RS.120.RC	50RS.120.LC
12	50	M 10 x 1,5	50RS.120.RD	50RS.120.LD

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min

Z 2 + V 2

L

R

HW Svasatore per punta componibile

50S

TCT Countersink for drill bits | HW Aufstecksenker | HW Fraisoirs | HW Avellanador

ØD	Ød	L	DX-RH	SX-LH
14	4	12	50S.040.R	50S.040.L
14	5	12	50S.050.R	50S.050.L
16	6	14	50S.060.R	50S.060.L
16	6.35	14	50S.063.R	50S.063.L
16	7	14	50S.070.R	50S.070.L
16	8	16	50S.080.R	50S.080.L
18	9	16	50S.090.R	50S.090.L
20	9.5	16	50S.095.R	50S.095.L
20	10	18	50S.100.R	50S.100.L
20	11	18	50S.110.R	50S.110.L
20	12	18	50S.120.R	50S.120.L

Z = 2

L

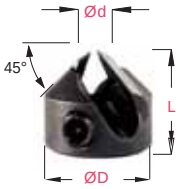
R

Per punte / For drills / Für Bohrer / Pour mèches / Para broca
50A - 50B - 50C - 50F - 50G - 50K - 52C

HW Svasatore per punta componibile

50T

TCT Countersink for drill bits | HW Aufstecksenker | HW Fraisoirs | HW Avellanador



ØD	Ød	L	DX-RH	SX-LH
20	4-10	15	50T.000.R	50T.000.L
22	12	16	50T.001.R	50T.001.L

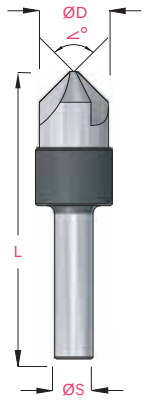
Z = 2

L

R

Per punte / For drills / Für Bohrer / Pour mèches / Para broca
50L - 50M - 50N - 50Q - 50W - 50X - 60L - 60M - 70L - 70M

21B HW Svasatore attacco cilindrico

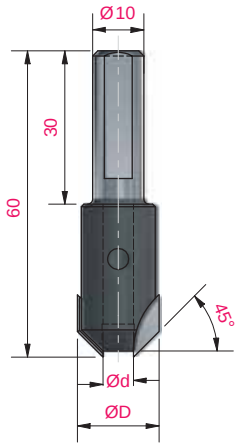


Solid carbide Countersink	VHM Aufstecksenker	HW Fraisoirs (Monobloc)	HW Avellanador

ØD	L	ØS	l	A	Part Number
18	75	10	8	90°	21B.900.R

- Per realizzare svasature a 90°
- 3 Taglienti resistenti per una migliore qualità di finitura
- Superiore resistenza e maggiore durata ad elevate velocità di rotazione rispetto all'acciaio HSS
- Indicato per lavorazioni su legno, derivati, materiali non ferrosi e metallo

50S.0010 Porta punta con svasatore

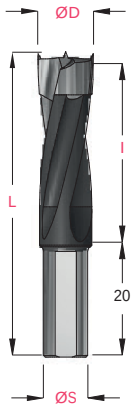


Bushing	Aufnahmen für	Mandrins pour mèches	Portabrocas

Ød	ØD	DX - RH	SX - LH
3	16	50S.0010.030.R	50S.0010.030.L
3,5	16	50S.0010.035.R	50S.0010.035.L
4	16	50S.0010.040.R	50S.0010.040.L
4,5	16	50S.0010.045.R	50S.0010.045.L
5	16	50S.0010.050.R	50S.0010.050.L
5,5	16	50S.0010.055.R	50S.0010.055.L
6	16	50S.0010.060.R	50S.0010.060.L

51A HW Punta componibile per fori ciechi 4 eliche

TCT dowel drill bits 4 spirals	HW Dübelbohrer mit rückenfuhrung	HW Mèches à percer 4 hélices	HW Broca para agujero ciego 4 hélices



ØD	L	ØS	l	DX-RH	SX-LH
4	57,5	8	30	51A.040.R	51A.040.L
5	57,5	8	30	51A.050.R	51A.050.L
6	57,5	8	30	51A.060.R	51A.060.L
7	57,5	8	30	51A.070.R	51A.070.L
8	57,5	8	30	51A.080.R	51A.080.L
9	57,5	8	30	51A.090.R	51A.090.L
10	57,5	8	30	51A.100.R	51A.100.L
11	57,5	8	30	51A.110.R	51A.110.L
12	57,5	8	30	51A.120.R	51A.120.L

1V.020 Optional

1V.009

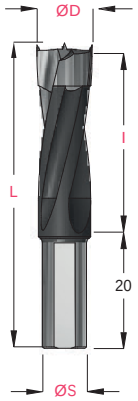
HW Punta componibile per fori ciechi 4 eliche

51B

TCT dowel drill bits 4 spirals | HW Dübelbohrer mit rückenfuhrung | HW Mèches à percer 4 hélices | HW Broca para agujero ciego 4 hélices

Z 2 + V 2 · L · R · CNC · PTFE

ØD	L	ØS	I	DX-RH	SX-LH
4	70	8	43	51B.040.R	51B.040.L
5	70	8	43	51B.050.R	51B.050.L
6	70	8	43	51B.060.R	51B.060.L
7	70	8	43	51B.070.R	51B.070.L
8	70	8	43	51B.080.R	51B.080.L
9	70	8	43	51B.090.R	51B.090.L
10	70	8	43	51B.100.R	51B.100.L
11	70	8	43	51B.110.R	51B.110.L
12	70	8	43	51B.120.R	51B.120.L



1V.020 Optional

1V.009

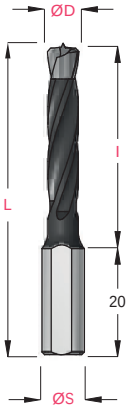
Punta componibile per fori ciechi - macchine "Mafell" 4 eliche

54B

TCT Dowel drill bits for Mafell | HW Spezialdubelbohrer für Mafell | HW mèches à percer pour Mafell | HW Broca para agujero ciego por Mafell

Z = 2 · L · R · CNC · PTFE

ØD	L	ØS	I	Part Number
4	58	8	30	54B.040.R
5	58	8	30	54B.050.R
6	58	8	30	54B.060.R
8	58	8	30	54B.080.R
10	58	8	30	54B.100.R
12	58	8	30	54B.120.R
14	58	8	30	54B.140.R
16	58	8	30	54B.160.R



3000 ÷ 6000 rpm

F = 1 ÷ 4 mt/min

1V.020 Optional

1V.009

Punta a spirale singola tipo "Lewis" gambo esagonale

53A

Hexagonal shank auger bits, Lewis type, for professional use | Profi-Schwanger Bohrer | Mèche a bois à spirale unique pour perçage professionnel | Broca mango hexagonal tipo Lewis para cortes professionnels

Z 1 · R

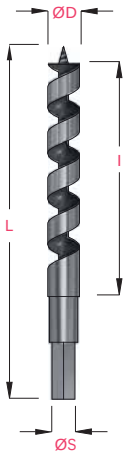
Acciaio WS Z1-Steel WS Z=1
Stahl WS Z=1-Acier WS Z=1
Acrero WS Z1

ØD	L	ØS	I	DX-RH
6	155	6	90	53A.060.R
8	155	8	90	53A.080.R
10	155	10	90	53A.100.R
12	155	10	90	53A.120.R
14	155	10	90	53A.140.R
16	155	10	90	53A.160.R
18	155	13	90	53A.180.R
20	155	13	90	53A.200.R
22	155	13	90	53A.220.R
24	155	13	90	53A.240.R

Per forature travi in legno
For drilling wood beams and plankings
Fur prazise bohren in weich und hartholz eimbinder sowie fur stir-holz
Percage en tous les bois, poutre de bois
Para taladrar vigas de madera

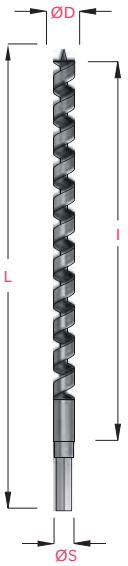
Centrino autoavvitante
Self screwing center
Selbsttätiges Deckchen
Center visseuse automatique

Grande capacità di evacuazione truciolo
Large chip evacuation capacity
Große Späneabfuhrkapazität
Grande capacité d'évacuation ds copeaux
Gran capacidad de sacar vruitas



53C Punta a spirale singola tipo “Lewis” gambo esagonale

Hexagonal shank auger bits, Lewis type, for professional use | Profi-Schwanger Bohrer | Mèche a bois à spirale unique pour perçage professionnel | Broca para madera tipo Lewis para cortes professionnels



ØD	L	ØS	I	DX-RH
6	300	6	220	53C.060.R
8	300	8	220	53C.080.R
9	300	9	220	53C.090.R
10	300	10	220	53C.100.R
11	300	10	220	53C.110.R
12	300	10	220	53C.120.R
13	300	10	220	53C.130.R
14	300	10	220	53C.140.R
15	300	10	220	53C.150.R
16	300	10	220	53C.160.R
18	300	13	220	53C.180.R
20	300	13	220	53C.200.R
22	300	13	220	53C.220.R
24	300	13	220	53C.240.R
25	300	13	220	53C.250.R
26	300	13	220	53C.260.R
28	300	13	220	53C.280.R
30	300	13	220	53C.300.R
32	300	13	220	53C.320.R

R Z1

Acciaio WS Z1
Steel WS Z=1
Stahl WS Z=1
Acier WS Z=1
Acrero WS Z1

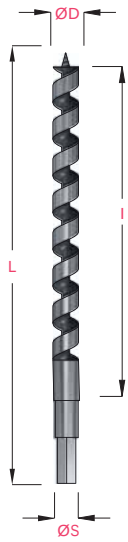
Per forature travi in legno
For drilling wood beams and plankings
Fur prazise bohren in weich und hartholz eimbinder sowie fur stir-holz
Percage en tous les bois, poutre de bois
Para taladrar vigas de madera

Grande capacità di evacuazione truciolo
Large chip evacuation capacity
Große Späneabfuhrkapazität
Grande capacité d’évacuation ds copeaux
Gran capacidad de sacar vruitas

Centrino autoavvitante
Self screwing center
Selbsttätiges Deckchen
Center visseuse automatique

53B Punta a spirale singola tipo “Lewis” gambo esagonale

Hexagonal shank auger bits, Lewis type, for professional use | Profi-Schwanger Bohrer | Mèche a bois à spirale unique pour perçage professionnel | Broca para madera tipo Lewis para cortes professionnels



ØD	L	ØS	I	DX-RH
6	235	6	160	53B.060.R
8	235	8	160	53B.080.R
10	235	10	160	53B.100.R
12	235	10	160	53B.120.R
14	235	10	160	53B.140.R
16	235	10	160	53B.160.R
18	235	13	160	53B.180.R
20	235	13	160	53B.200.R
22	235	13	160	53B.220.R
24	235	13	160	53B.240.R

R Z1

Acciaio WS Z1
Steel WS Z=1
Stahl WS Z=1
Acier WS Z=1
Acrero WS Z1

Per forature travi in legno
For drilling wood beams and plankings
Fur prazise bohren in weich und hartholz eimbinder sowie fur stir-holz
Percage en tous les bois, poutre de bois
Para taladrar vigas de madera

Grande capacità di evacuazione truciolo
Large chip evacuation capacity
Große Späneabfuhrkapazität
Grande capacité d’évacuation ds copeaux
Gran capacidad de sacar vruitas

Centrino autoavvitante
Self screwing center
Selbsttätiges Deckchen
Center visseuse automatique

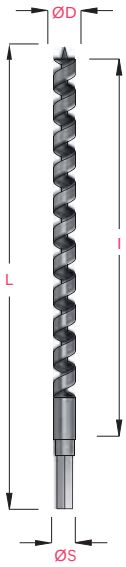
Punta a spirale singola tipo “Lewis” gambo esagonale

53D

Hexagonal shank auger bits, Lewis type, for professional use | Profi-Schwanger Bohrer | Mèche a bois à spirale unique pour perçage professionnel | Broca para madera tipo Lewis para cortes professionnels

Z 1

ØD	L	ØS	l	DX-RH
6	460	6	360	53D.060.R
8	460	8	360	53D.080.R
10	460	10	360	53D.100.R
12	460	10	360	53D.120.R
13	460	10	360	53D.130.R
14	460	10	360	53D.140.R
16	460	10	360	53D.160.R
18	460	13	360	53D.180.R
20	460	13	360	53D.200.R
22	460	13	360	53D.220.R
24	460	13	360	53D.240.R
25	460	13	360	53D.250.R
26	460	13	360	53D.260.R
28	460	13	360	53D.280.R
30	460	13	360	53D.300.R
32	460	13	360	53D.320.R
35	460	13	360	53D.350.R
40	460	13	360	53D.400.R



Acciaio WS Z1 / Steel WS Z=1 / Stahl WS Z=1 / Acier WS Z=1 / Acrero WS Z1

Per forature travi in legno
For drilling wood beams and plankings / Fur prazise bohren in weich und hartholz leimbinder sowie fur stir-holz / Percage en tous les bois, poutre de bois / Para taladrar vigas de madera

Grande capacità di evacuazione truciolo
Large chip evacuation capacity / Große Späneabfuhrkapazität /
Grande capacité d’évacuation des copeaux / Gran capacidad de sacar vruitas

Centrino autoavvitante
Self screwing center / Selbsttätiges Deckchen / Center visseuse automatique

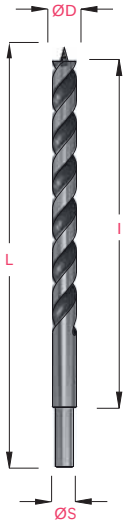
Punta elicoidale serie lunga ad elevato scarico con punta guida a centrare

53F

High performing woodworking drills | Profil Holzspiralbohrer | Forets à bois super professionel | Brocas para madera de alta calidad

Z 2

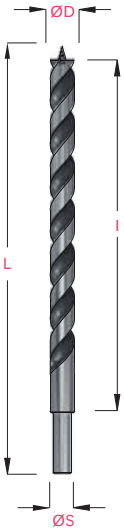
ØD	L	ØS	l	DX-RH
6	245	6	160	53F.060.R
8	245	8	160	53F.080.R
10	245	10	160	53F.100.R
12	245	10	160	53F.120.R
14	245	10	160	53F.140.R
16	245	10	160	53F.160.R
18	245	10	160	53F.180.R
20	245	10	160	53F.200.R
22	245	13	160	53F.220.R
24	245	13	160	53F.240.R



Acciaio WS Z2 / Steel WS Z=2 / Stahl WS Z=2 / Acier WS Z=2 / Acrero WS Z2

53G Punta elicoidale serie lunga ad elevato scarico con punta guida a centrare

High performing woodworking drills | Profil Holzspiralbohrer | Forets à bois super professionel | Brocas para madera de alta calidad



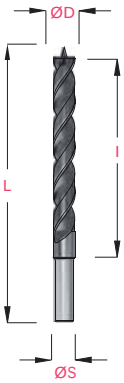
ØD	L	ØS	l	DX-RH
6	400	6	160	53G.060.R
8	400	8	160	53G.080.R
10	400	10	160	53G.100.R
12	400	10	250	53G.120.R
14	400	10	250	53G.140.R
16	400	10	250	53G.160.R
18	400	10	250	53G.180.R
20	400	10	250	53G.200.R
22	400	13	250	53G.220.R
24	400	13	250	53G.240.R

R Z 2

Acciaio WS Z2 / Steel WS Z=2 / Stahl WS Z=2 / Acier WS Z=2 / Acrero WS Z2

53H Punta elicoidale con punta guida a centrare

High performing woodworking drills | Profil Holzspiralbohrer | Forets à bois super professionel | Brocas para madera de alta calidad



ØD	ØD inch	L	ØS	l	DX-RH
3	1/8	61	3	33	53H.030.R
4	5/32	75	4	43	53H.040.R
5	3/16	86	5	52	53H.050.R
6	15/64	93	6	57	53H.060.R
7	9/32	109	7	69	53H.070.R
8	5/16	117	8	75	53H.080.R
9	11/32	125	9	81	53H.090.R
10	3/8	133	10	87	53H.100.R
11	7/16	142	10	94	53H.110.R
12	15/32	151	10	101	53H.120.R
13	1/2	151	10	101	53H.130.R
14	9/16	160	10	108	53H.140.R
15	19/32	169	10	114	53H.150.R
16	5/8	178	10	120	53H.160.R
18	23/32	191	10	130	53H.180.R
20	3/4	205	13	140	53H.200.R
22	7/8	210	13	140	53H.220.R
24	15/16	215	13	140	53H.240.R
26	1.1/32	215	13	140	53H.260.R
28	1.1/8	220	13	140	53H.280.R
30	1.3/16	220	13	140	53H.300.R

R Z 2

Acciaio WS Z2 / Steel WS Z=2 / Stahl WS Z=2 / Acier WS Z=2 / Acrero WS Z2

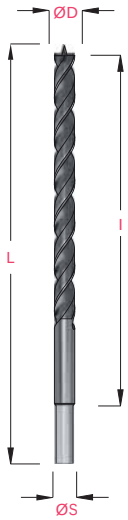
Punta elicoidale serie lunga con punta guida a centrare

53L

High performing woodworking drills | Profil Holzspiralbohrer | Forets à bois super professionel | Brocas para madera de alta calidad

Z 2 R

ØD	L	ØS	l	DX-RH
6	245	6	160	53L.060.R
7	245	7	160	53L.070.R
8	245	8	160	53L.080.R
9	245	9	160	53L.090.R
10	245	10	160	53L.100.R
11	245	10	160	53L.110.R
12	245	10	160	53L.120.R
13	245	10	160	53L.130.R
14	245	10	160	53L.140.R
15	245	10	160	53L.150.R
16	245	10	160	53L.160.R
18	245	10	160	53L.180.R
20	245	10	160	53L.200.R
22	245	13	160	53L.220.R
24	245	13	160	53L.240.R



Acciaio WS Z2 / Steel WS Z=2 / Stahl WS Z=2 / Acier WS Z=2 / Acrero WS Z2

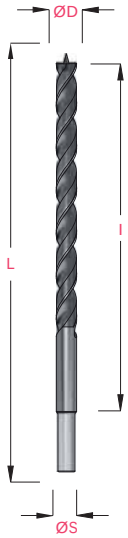
Punta elicoidale serie lunga con punta guida a centrare

53M

High performing woodworking drills | Profil Holzspiralbohrer | Forets à bois super professionel | Brocas para madera de alta calidad

Z 2 R

ØD	L	ØS	l	DX-RH
6	400	6	230	53M.060.R
8	400	8	230	53M.080.R
10	400	10	230	53M.100.R
12	400	10	230	53M.120.R
13	400	10	230	53M.130.R
14	400	10	230	53M.140.R
15	400	10	230	53M.150.R
16	400	10	230	53M.160.R
18	400	10	230	53M.180.R
20	400	10	230	53M.200.R
22	400	13	230	53M.220.R
24	400	13	230	53M.240.R
26	400	13	230	53M.260.R
28	400	13	230	53M.280.R
30	400	13	230	53M.300.R

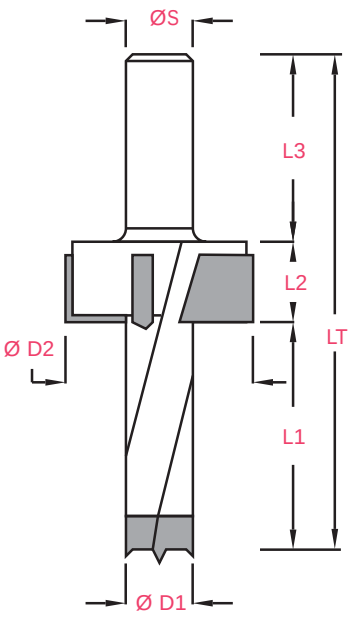


Acciaio WS Z2 / Steel WS Z=2 / Stahl WS Z=2 / Acier WS Z=2 / Acrero WS Z2

52F HW Punte a gradino

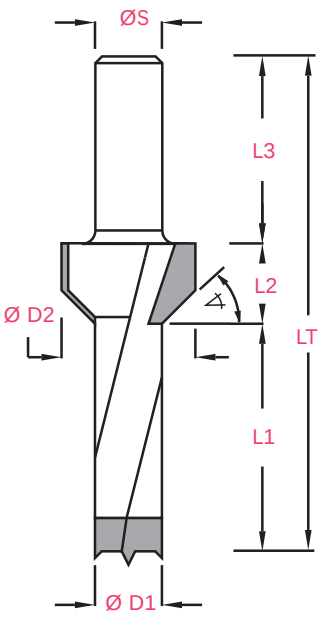
TCT/Solid carbide counterbore/countersink drills | HW Stufenspiralbohrer | HW Mèches étagés | HW Broca escalonada

Misure su richiesta
Sizes upon request
Größe auf anfrage
Mesure sur demande
Medidas bajo pedido



52F.001.R/L

ØS
Ø D1
Ø D2
L1
L2
L3
LT



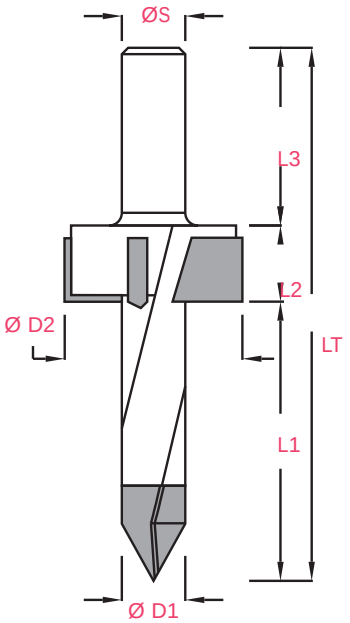
52F.002.R/L

ØS
Ø D1
Ø D2
L1
L2
L3
LT
∢

52N HW Punte a gradino

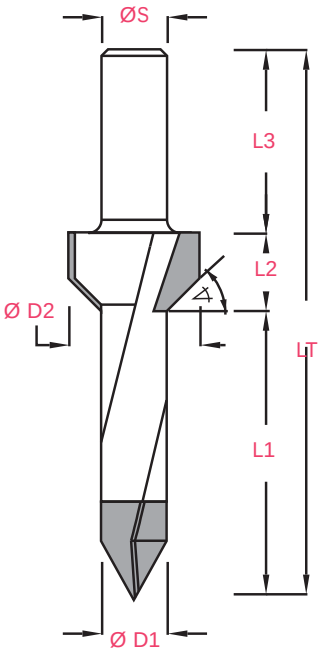
TCT/Solid carbide counterbore/countersink drills | HW Stufenspiralbohrer | HW Mèches étagés | HW Broca escalonada

Misure su richiesta
Sizes upon request
Größe auf anfrage
Mesure sur demande
Medidas bajo pedido



52N.001.R/L

ØS
Ø D1
Ø D2
L1
L2
L3
LT



52N.002.R/L

ØS
Ø D1
Ø D2
L1
L2
L3
LT
∢

HW Punta componibile per fori passanti 2 eliche

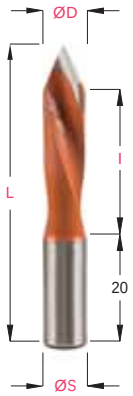
50J

TCT "V" Point drill bits 2 spirals | HW Durchgangslochbohrer | HW mèches à percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	55.5	8	25	50J.050.R	50J.050.L
6	55.5	8	25	50J.060.R	50J.060.L
8	55.5	8	25	50J.080.R	50J.080.L
10	55.5	8	25	50J.100.R	50J.100.L

3000 ÷ 6000 rpm — F = 1 ÷ 2.5 mt/min

1V.020 Optional — 1V.009



HW Punta componibile per fori passanti 2 eliche

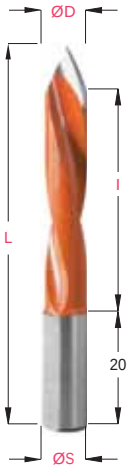
50Z

TCT "V" Point drill bits 2 spirals | HW Durchgangslochbohrer | HW mèches à percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	67	8	35	50Z.050.R	50Z.050.L
6	67	8	35	50Z.060.R	50Z.060.L
8	67	8	35	50Z.080.R	50Z.080.L
10	67	8	35	50Z.100.R	50Z.100.L

3000 ÷ 6000 rpm — F = 1 ÷ 2.5 mt/min

1V.020 Optional — 1V.009



HW Punta componibile per fori passanti 2 eliche

50N

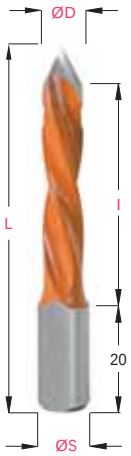
TCT "V" Point drill bits 2 spirals | HW Durchgangslochbohrer | HW mèches à percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
4	58	10	25	50N.040.R	50N.040.L
5	58	10	25	50N.050.R	50N.050.L
6	58	10	25	50N.060.R	50N.060.L
6.35 (1/4")	58	10	25	50N.063.R	50N.063.L
7	58	10	25	50N.070.R	50N.070.L
8	58	10	25	50N.080.R	50N.080.L
9	58	10	25	50N.090.R	50N.090.L
10	58	10	25	50N.100.R	50N.100.L
12	58	10	25	50N.120.R	50N.120.L

3000 ÷ 6000 rpm — F = 1 ÷ 2.5 mt/min

1V.020 Optional — 1V.009

50H HW Punta componibile per fori passanti 4 eliche

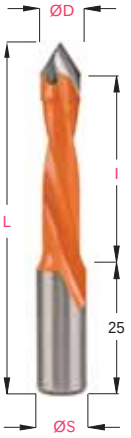


TCT "V" Point drill bits 4 spiral | HW Durchgangslochbohrer mit rückenfuhrung | HW Mèches À Percer 4 hélices | HW Broca Para Agujero Pasante 4 hélices

ØD	L	ØS	I	DX-RH	SX-LH
5	58	10	30	50H.050.R	50H.050.L
6	58	10	30	50H.060.R	50H.060.L
6.35 (1/4")	58	10	30	50H.063.R	50H.063.L
7	58	10	30	50H.070.R	50H070.L
8	58	10	30	50H.080.R	50H.080.L
9	58	10	30	50H.090.R	50H.090.L
10	58	10	30	50H.100.R	50H.100.L
11	58	10	30	50H.110.R	50H.110.L
12	58	10	30	50H.120.R	50H.120.L

3000 ÷ 6000 rpm — F = 1 ÷ 2.5 mt/min — 1V.009 — 1V.020 Optional

50Q HW Punta componibile per fori passanti 2 eliche

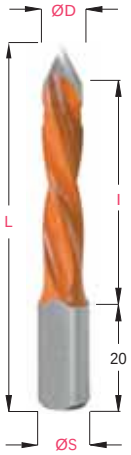


TCT "V" Point drill bits 2 spirals | HW Durchgangslochbohrer | HW Mèches À Percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	I	DX-RH	SX-LH
4	70	10	35	50Q.040.R	50Q.040.L
5	70	10	35	50Q.050.R	50Q.050.L
6	70	10	35	50Q.060.R	50Q.060.L
6.35 (1/4")	70	10	35	50Q.063.R	50Q.063.L
7	70	10	35	50Q.070.R	50Q.070.L
8	70	10	35	50Q.080.R	50Q.080.L
9	70	10	35	50Q.090.R	50Q.090.L
10	70	10	35	50Q.100.R	50Q.100.L
12	70	10	35	50Q.120.R	50Q.120.L

3000 ÷ 6000 rpm — F = 1 ÷ 2.5 mt/min — 1V.020 Optional — 1V.009

50K HW Punta componibile per fori passanti 4 eliche



TCT "V" Point drill bits 4 spirals | HW Durchgangslochbohrer mit rückenfuhrung | HW Mèches À Percer 4 hélices | HW Broca Para Agujero Pasante 4 hélices

ØD	L	ØS	I	DX-RH	SX-LH
5	70	10	40	50K.050.R	50K.050.L
6	70	10	40	50K.060.R	50K.060.L
6.35 (1/4")	70	10	40	50K.063.R	50K.063.L
7	70	10	40	50K.070.R	50K.070.L
8	70	10	40	50K.080.R	50K.080.L
9	70	10	40	50K.090.R	50K.090.L
10	70	10	40	50K.100.R	50K.100.L
11	70	10	40	50K.110.R	50K.110.L
12	70	10	40	50K.120.R	50K.120.L

3000 ÷ 6000 rpm — F = 1 ÷ 2.5 mt/min — 1V.020 Optional — 1V.009

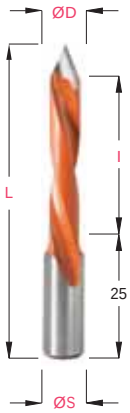
HW Punta componibile per fori passanti 2 eliche

50W

TCT "V" Point drill bits 2 spirals	HW Durchgangslochbohrer	HW Mèches À Percer 2 hélices	HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	77	10	40	50W.050.R	50W.050.L
6	77	10	40	50W.060.R	50W.060.L
8	77	10	40	50W.080.R	50W.080.L
10	77	10	40	50W.100.R	50W.100.L
12	77	10	40	50W.120.R	50W.120.L

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min 1V.020 Optional 1V.009



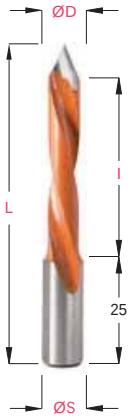
HW Punta componibile per fori passanti 2 eliche

50Y

TCT "V" Point drill bits 2 spirals	HW Durchgangslochbohrer	HW Mèches À Percer 2 hélices	HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	85	10	48	50Y.050.R	50Y.050.L
6	85	10	48	50Y.060.R	50Y.060.L
8	85	10	48	50Y.080.R	50Y.080.L
10	85	10	48	50Y.100.R	50Y.100.L
12	85	10	48	50Y.120.R	50Y.120.L

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min 1V.020 Optional 1V.009



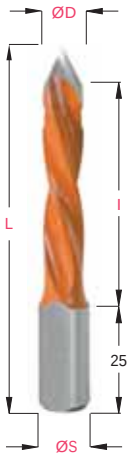
HW Punta componibile per fori passanti 4 eliche

52H

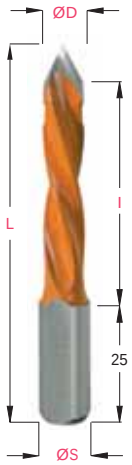
TCT "V" Point drill bits 4 spirals	HW Durchgangslochbohrer mit rückenfuhrung	HW Mèches À Percer 4 hélices	HW Broca Para Agujero Pasante 4 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	85	10	48	52H.050.R	52H.050.L
6	85	10	48	52H.060.R	52H.060.L
8	85	10	48	52H.080.R	52H.080.L
10	85	10	48	52H.100.R	52H.100.L
12	85	10	48	52H.120.R	52H.120.L

3000 ÷ 6000 rpm F = 1 ÷ 2.5 mt/min 1V.020 Optional 1V.009



51K HW Punta per fori passanti 4 eliche



TCT "V" Point drill bits 4 spirals | HW Durchgangslochbohrer mit rückenfuhrung | HW Mèches À Percer 4 hélices | HW Broca Para Agujero Pasante 4 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	90	10	53	51K.050.R	51K.050.L
6	90	10	53	51K.060.R	51K.060.L
8	90	10	53	51K.080.R	51K.080.L
10	90	10	53	51K.100.R	51K.100.L
12	90	10	53	51K.120.R	51K.120.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009

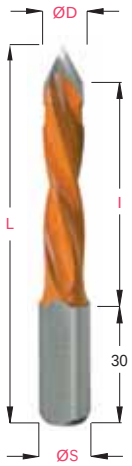

52Y HW Punta per fori passanti 2 eliche

TCT "V" Point drill 2 bits spirals | HW Durchgangslochbohrer mit rückenfuhrung | HW Mèches À Percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	105	10	70	52Y.050.R	52Y.050.L
6	105	10	70	52Y.060.R	52Y.060.L
8	105	10	70	52Y.080.R	52Y.080.L
10	105	10	70	52Y.100.R	52Y.100.L
12	105	10	70	52Y.120.R	52Y.120.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009


53K HW Punta per fori passanti 4 eliche



TCT "V" Point drill bits 4 spirals | HW Durchgangslochbohrer mit rückenfuhrung | HW Mèches À Percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	115	10	80	53K.050.R	53K.050.L
6	115	10	80	53K.060.R	53K.060.L
8	115	10	80	53K.080.R	53K.080.L
10	115	10	80	53K.100.R	53K.100.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009

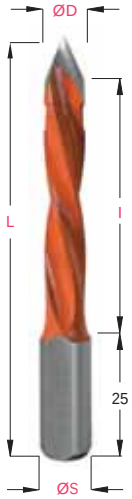

HW Punta componibile per fori passanti 4 eliche

52K

TCT Through Bore Drill Bits 4 spirals | HW Durchgangslochbohrer mit rückenfuhrung | HW Mèches À Percer 4 hélices | HW Broca Para Agujero Pasante 4 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	105	10	70	52K.050.R	52K.050.L
6	105	10	70	52K.060.R	52K.060.L
8	105	10	70	52K.080.R	52K.080.L
10	105	10	70	52K.100.R	52K.100.L
12	105	10	70	52K.120.R	52K.120.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009



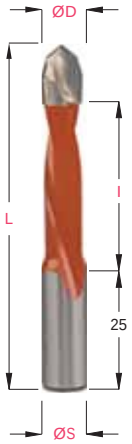
HW Punta componibile per fori passanti 2 eliche HP

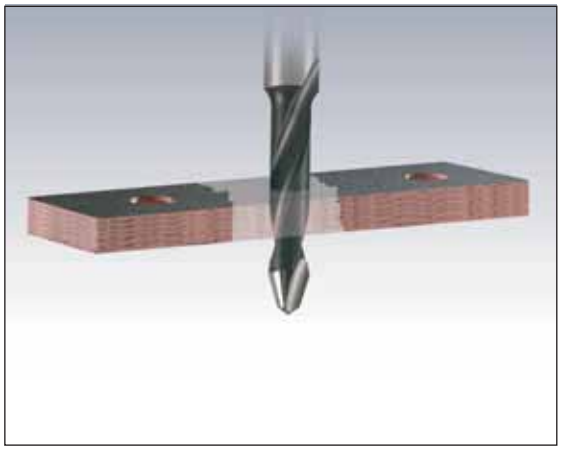
61Q

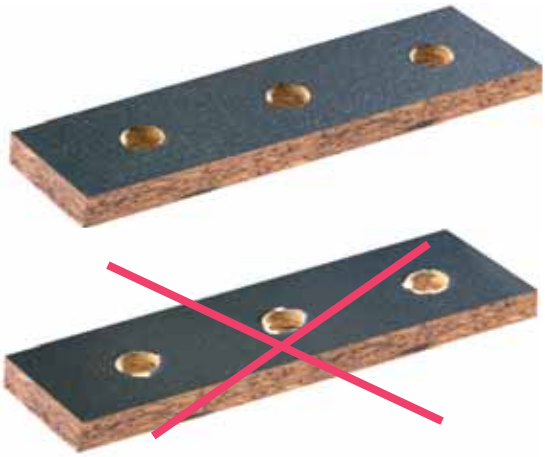
Through Bore Drill Bits 2 spirals TCT fast feed | HW Durchgangslochbohrer | HW Mèches À Percer 2 hélices | HW Broca Para Agujero Pasante 2 hélices

ØD	L	ØS	l	DX-RH	SX-LH
5	70	10	40	61Q.050.R	61Q.050.L
6	70	10	40	61Q.060.R	61Q.060.L
7	70	10	40	61Q.070.R	61Q.070.L
8	70	10	40	61Q.080.R	61Q.080.L
10	70	10	40	61Q.100.R	61Q.100.L

4000 ÷ 8000 rpm F = 1 ÷ 6 mt/min 1V.020 Optional 1V.009

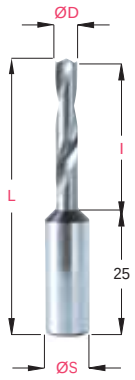






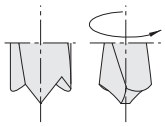
70F HW Integrale punta speciale per fori ciechi HP+

Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego



ØD	L	ØS	I	DX-RH	SX-LH
3	57.5	10X25	27	70F.030.R	70F.030.L
4	57.5	10X25	27	70F.040.R	70F.040.L
5	57.5	10X25	27	70F.050.R	70F.050.L
6	57.5	10X25	27	70F.060.R	70F.060.L
8	57.5	10X25	27	70F.080.R	70F.080.L
10	57.5	10X25	27	70F.100.R	70F.100.L

Gambo senza anello 4000 ÷ 8000 rpm F = 1 ÷ 4 mt/min



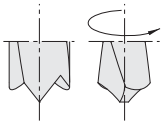
1V.020 Optional 1V.009

70L HW Integrale punta speciale per fori ciechi HP+

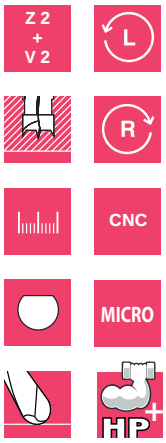
Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

ØD	L	ØS	I	DX-RH	SX-LH
3	57.5	10X30	22	70L.030.R	70L.030.L
4	57.5	10X30	22	70L.040.R	70L.040.L
5	57.5	10X30	22	70L.050.R	70L.050.L
6	57.5	10X30	22	70L.060.R	70L.060.L
8	57.5	10X30	22	70L.080.R	70L.080.L
10	57.5	10X30	22	70L.100.R	70L.100.L

4000 ÷ 8000 rpm F = 1 ÷ 4 mt/min

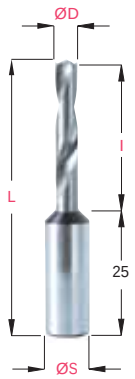


1V.020 Optional 1V.009



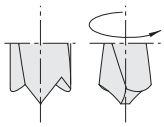
70G HW Integrale punta speciale per fori ciechi HP+

Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego



ØD	L	ØS	I	DX-RH	SX-LH
3	70	10X25	40	70G.030.R	70G.030.L
4	70	10X25	40	70G.040.R	70G.040.L
5	70	10X25	40	70G.050.R	70G.050.L
6	70	10X25	40	70G.060.R	70G.060.L
8	70	10X25	40	70G.080.R	70G.080.L
10	70	10X25	40	70G.100.R	70G.100.L

Gambo senza anello 4000 ÷ 8000 rpm F = 1 ÷ 4 mt/min



1V.020 Optional 1V.009

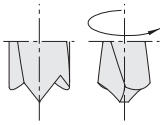
HW Integrale punta speciale per fori ciechi HP+ — 70M

Z 2 + V 2 | L | R | CNC | MICRO | HP+

Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

ØD	L	ØS	I	DX-RH	SX-LH
3	70	10X30	35	70M.030.R	70M.030.L
4	70	10X30	35	70M.040.R	70M.040.L
5	70	10X30	35	70M.050.R	70M.050.L
6	70	10X30	35	70M.060.R	70M.060.L
8	70	10X30	35	70M.080.R	70M.080.L
10	70	10X30	35	70M.100.R	70M.100.L

4000 ÷ 8000 rpm — F = 1 ÷ 4 mt/min — 1V.020 Optional — 1V.009



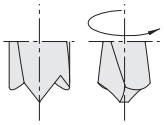
HW Integrale punta speciale per fori ciechi HP+ — 70X

Z 2 + V 2 | L | R | CNC | MICRO | HP+

Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

ØD	L	ØS	I	DX-RH	SX-LH
3	77	10X30	42	70X.030.R	70X.030.L
4	77	10X30	42	70X.040.R	70X.040.L
5	77	10X30	42	70X.050.R	70X.050.L
6	77	10X30	42	70X.060.R	70X.060.L
8	77	10X30	42	70X.080.R	70X.080.L
10	77	10X30	42	70X.100.R	70X.100.L

4000 ÷ 8000 rpm — F = 1 ÷ 4 mt/min — 1V.020 Optional — 1V.009



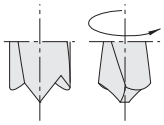
HW Integrale punta speciale per fori ciechi HP+ — 70C

Z 2 + V 2 | L | R | CNC | MICRO | HP+

Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

ØD	L	ØS	I	DX-RH	SX-LH
3	85	10X30	50	70C.030.R	70C.030.L
4	85	10X30	50	70C.040.R	70C.040.L
5	85	10X30	50	70C.050.R	70C.050.L
6	85	10X30	50	70C.060.R	70C.060.L
8	85	10X30	50	70C.080.R	70C.080.L
10	85	10X30	50	70C.100.R	70C.100.L

4000 ÷ 8000 rpm — F = 1 ÷ 4 mt/min — 1V.020 Optional — 1V.009



72C HW Integrale punta speciale per fori ciechi HP+

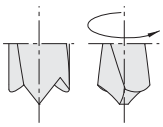
Solid carbide special dowell drill bits | VHM Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

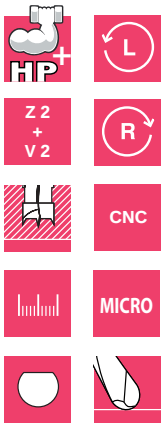
ØD	L	ØS	l	DX-RH	SX-LH
3	105	10X30	70	72C.030.R	72C.030.L
4	105	10X30	70	72C.040.R	72C.040.L
5	105	10X30	70	72C.050.R	72C.050.L
6	105	10X30	70	72C.060.R	72C.060.L
8	105	10X30	70	72C.080.R	72C.080.L
10	105	10X30	70	72C.100.R	72C.100.L

4000 ÷ 8000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional

1V.009





74M HW Integrale punta speciale per fori ciechi HP+ - affilatura piana

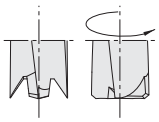
Solid carbide special dowell drill bits Flat head | VHM Spezialdubelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

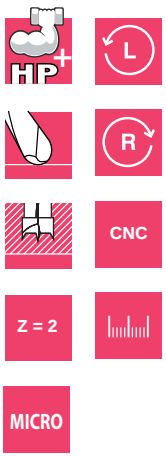
ØD	L	ØS	l	DX-RH	SX-LH
4	70	10X30	30	74M.040.R	74M.040.L
5	70	10X30	30	74M.050.R	74M.050.L
6	70	10X30	30	74M.060.R	74M.060.R
8	70	10X30	30	74M.080.R	74M.080.L

6000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional

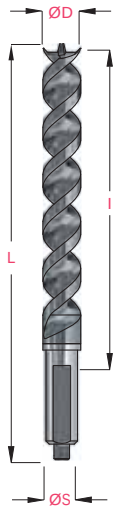
1V.009





73M-73C HW Punta componibile integrale foro cieco HP+

HW Jobber drill bits | VHM Vollhartmetall Spiralbohrer | HW Monobloc mèches à percer | Broca MD integral



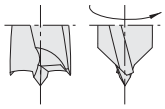
ØD	L	ØS	l	DX-RH	SX-LH
3	105	10X25	70	73M.030.R	-
3,5	105	10X25	70	73M.035.R	-
4,5	105	10X25	70	73M.045.R	-
6	105	10X25	70	73M.060.R	73M.060.L
8	105	10X25	70	73M.080.R	73M.080.L
10	105	10X25	70	73M.100.R	73M.100.L
12	105	10X25	70	73M.120.R	73M.120.L

ØD	L	ØS	l	DX-RH	SX-LH
6	130	10X30	90	73C.060.R	73C.060.L
6,5	130	10X30	90	73C.065.R	73C.065.L
8	130	10X30	90	73C.080.R	73C.080.L
10	130	10X30	90	73C.100.R	73C.100.L
12	130	10X30	90	73C.120.R	73C.120.L

F = 1 ÷ 4 mt/min

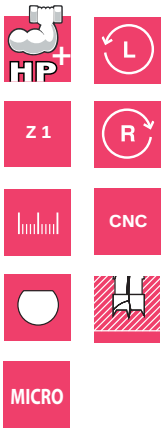
1V.020 Optional

1V.009



HW Integrale punta speciale per fori ciechi HP+

72L-72M



HW Solid carbide special dowell drill bits | HW Spezialdübelbohrer | HW Monobloc mèches à percer | HW Integral Broca para agujero ciego

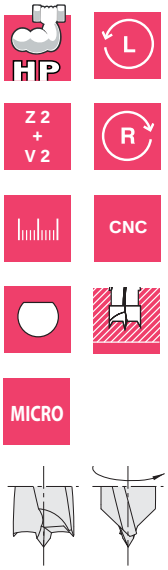
ØD	L	ØS	l	DX-RH
1,5	57,5	10	5	72L.015
1,5	70	10	5	72M.015
2	57,5	10	5	72L.020
2	70	10	5	72M.020
2,5	57,5	10	5	72L.025
2,5	70	10	5	72M.025

1V.020 Optional

1V.009

HW Punta componibile integrale foro cieco HP

52V



Solid carbide Jobber drill bits | VHM Vollhartmetall Spiralbohrer | HW Monobloc mèches à percer | Broca MD integral

ØD	L	ØS	l	DX-RH	SX-LH
2	49	2	16	52V.020.R	52V.020.L
2.5	55	2.5	27	52V.025.R	52V.025.L
3	55	3	27	52V.030.R	52V.030.L
3.2	55	3.2	27	52V.032.R	52V.032.L
3.5	55	3.5	27	52V.035.R	52V.035.L
4	55	4	27	52V.040.R	52V.040.L
5	55	5	27	52V.050.R	52V.050.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

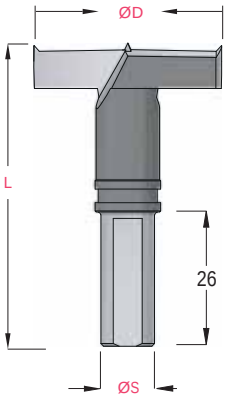
HW Integrale punta per cerniere Z= 2+V2 HP+

15A-15F

Solid carbide hinge boring bit | VHM beschlagbohrer | Monobloc | HW Integral

ØD	L	ØS	DX-RH	SX-LH
15	57	10	15A.150.R	15A.150.L
20	57	10	15A.200.R	15A.200.L
25	57	10	15A.250.R	15A.250.L
30	57	10	15A.300.R	15A.300.L
35	57	10	15A.350.R	15A.350.L

ØD	L	ØS	DX-RH	SX-LH
15	70	10	15F.150.R	15F.150.L
20	70	10	15F.200.R	15F.200.L
25	70	10	15F.250.R	15F.250.L
30	70	10	15F.300.R	15F.300.L
35	70	10	15F.350.R	15F.350.L



3000 ÷ 6000 rpm

F = 1 ÷ 4 mt/min

1V.020 Optional

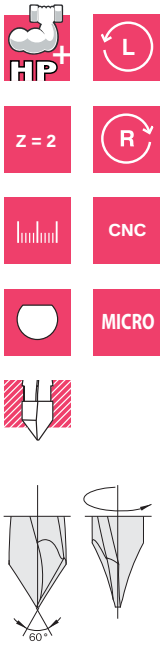
1V.009

Incisore arrotondato per una eccellente finiutura
Elevatissima resistenza anche in condizioni estreme
Per fori cerniera di massima precisione e qualità
Ideale per legni duri e teneri truciolare MDF
laminati e rivestimenti plastici

72Y HW Integrale punta speciale per fori passanti HP+

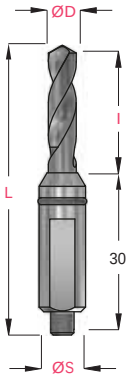
Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

ØD	L	ØS	I	DX-RH	SX-LH
3	105	10X30	70	70Y.030.R	70Y.030.L
4	105	10X30	70	70Y.040.R	70Y.040.L
5	105	10X30	70	70Y.050.R	70Y.050.L
6	105	10X30	70	70Y.060.R	70Y.060.L
8	105	10X30	70	70Y.080.R	70Y.080.L
10	105	10X30	70	70Y.100.R	70Y.100.L
4000 ÷ 8000 rpm		F = 1 ÷ 4 mt/min		1V.020 Optional	1V.009



70N-T HW Integrale punta speciale per fori passanti HP+

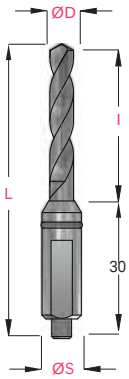
Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante



ØD	L	ØS	I	DX-RH	SX-LH
4	57,5	10X30	27	70N.040.R-T	70N.040.L-T
5	57,5	10X30	27	70N.050.R-T	70N.050.L-T
6	57,5	10X30	27	70N.060.R-T	70N.060.L-T
6,4	57,5	10X30	27	70N.064.R-T	70N.064.L-T
8	57,5	10X30	27	70N.080.R-T	70N.080.L-T
10	57,5	10X30	27	70N.100.R-T	70N.100.L-T
3000 ÷ 6000 rpm		F = 1 ÷ 4 mt/min		1V.020 Optional	1V.009

70V HW Integrale punta speciale per fori passanti HP+

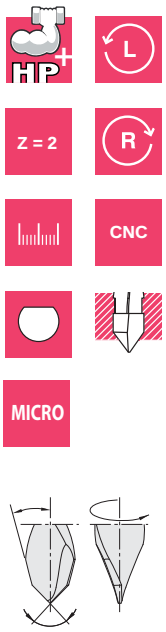
Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante



ØD	L	ØS	I	DX-RH	SX-LH
4	70	10X30	35	70V.040.R	70V.040.L
5	70	10X30	35	70V.050.R	70V.050.L
6	70	10X30	35	70V.060.R	70V.060.L
6,4	70	10X30	35	70V.064.R	70V.064.L
7	70	10X30	35	70V.070.R	70V.070.L
8	70	10X30	35	70V.080.R	70V.080.L
10	70	10X30	35	70V.100.R	70V.100.L
3000 ÷ 6000 rpm		F = 1 ÷ 4 mt/min		1V.020 Optional	1V.009

HW Punta speciale per fori passanti HP+

71Q



Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohrer | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

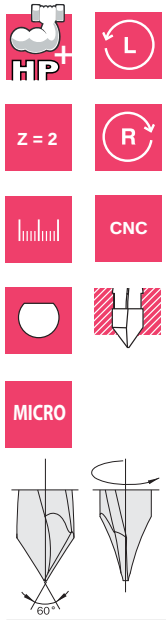
ØD	L	ØS	l	DX-RH	SX-LH
3	70	10	35	71Q.030.R	71Q.030.L
4	70	10	35	71Q.040.R	71Q.040.L
5	70	10	35	71Q.050.R	71Q.050.L
6	70	10	35	71Q.060.R	71Q.060.L
8	70	10	35	71Q.080.R	71Q.080.L

4000 ÷ 6000 rpm F = 1 ÷ 6 mt/min

1V.020 Optional 1V.009

HW Integrale punta speciale per fori passanti HP+

70N

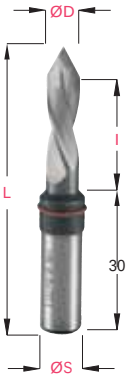


Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

ØD	L	ØS	l	DX-RH	SX-LH
3	57,5	10X30	22	70N.030.R	70N.030.L
4	57,5	10X30	22	70N.040.R	70N.040.L
5	57,5	10X30	22	70N.050.R	70N.050.L
6	57,5	10X30	22	70N.060.R	70N.060.L
8	57,5	10X30	22	70N.080.R	70N.080.L
10	57,5	10X30	22	70N.100.R	70N.100.L

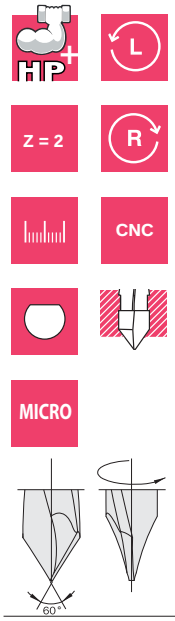
3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional 1V.009



HW Integrale punta speciale per fori passanti HP+

70K

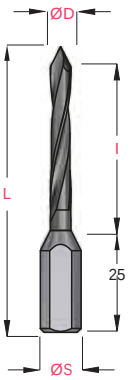


Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

ØD	L	ØS	l	DX-RH	SX-LH
3	70	10X25	40	70K.030.R	70K.030.L
4	70	10X25	40	70K.040.R	70K.040.L
5	70	10X25	40	70K.050.R	70K.050.L
6	70	10X25	40	70K.060.R	70K.060.L
8	70	10X25	40	70K.080.R	70K.080.L
10	70	10X25	40	70K.100.R	70K.100.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional 1V.009

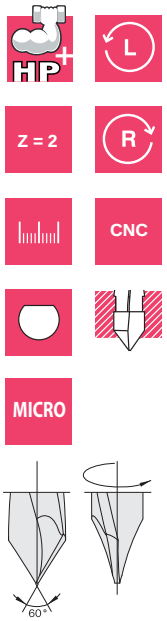


70Q HW Integrale punta speciale per fori passanti HP+

Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

ØD	L	ØS	l	DX-RH	SX-LH
3	70	10X30	35	70Q.030.R	70Q.030.L
4	70	10X30	35	70Q.040.R	70Q.040.L
5	70	10X30	35	70Q.050.R	70Q.050.L
6	70	10X30	35	70Q.060.R	70Q.060.L
8	70	10X30	35	70Q.080.R	70Q.080.L
10	70	10X30	35	70Q.100.R	70Q.100.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009

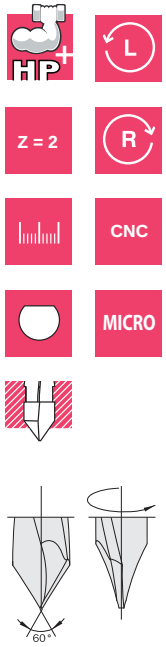



70W HW Integrale punta speciale per fori passanti HP+

Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

ØD	L	ØS	l	DX-RH	SX-LH
3	77	10X30	42	70W.030.R	70W.030.L
4	77	10X30	42	70W.040.R	70W.040.L
5	77	10X30	42	70W.050.R	70W.050.L
6	77	10X30	42	70W.060.R	70W.060.L
8	77	10X30	42	70W.080.R	70W.080.L
10	77	10X30	42	70W.100.R	70W.100.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009

70Y HW Integrale punta speciale per fori passanti HP+

Solid carbide special through hole drill bits | VHM Spezialdurchgangsbohre | HW Monobloc mèches à percer | HW Integral broca para agujero pasante

ØD	L	ØS	l	DX-RH	SX-LH
3	85	10X30	50	70Y.030.R	70Y.030.L
4	85	10X30	50	70Y.040.R	70Y.040.L
5	85	10X30	50	70Y.050.R	70Y.050.L
6	85	10X30	50	70Y.060.R	70Y.060.L
8	85	10X30	50	70Y.080.R	70Y.080.L
10	85	10X30	50	70Y.100.R	70Y.100.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min 1V.020 Optional 1V.009

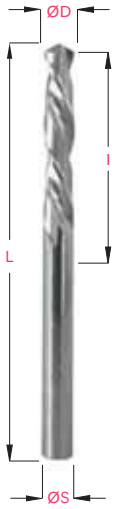

HW Punta componibile integrale foro passante HP+

50V

Solid carbide Jobber drill bits | VHM Spiralbohrer | HW Monobloc mèches à percer | Broca MD integral

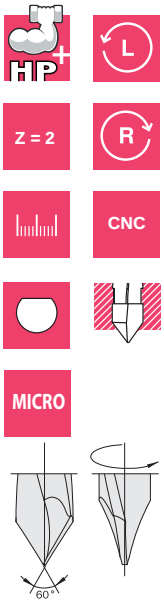
ØD	L	ØS	l	DX-RH	SX-LH
2	49	2	16	50V.020.R	50V.020.L
2,5	55	2.5	27	50V.025.R	50V.025.L
3	55	3	27	50V.030.R	50V.030.L
3,2	55	3.2	27	50V.032.R	50V.032.L
3,5	55	3.5	27	50V.035.R	50V.035.L
4	55	4	27	50V.040.R	50V.040.L
5	55	5	27	50V.050.R	50V.050.L

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min



HW Punta componibile integrale foro passante HP+

73Y

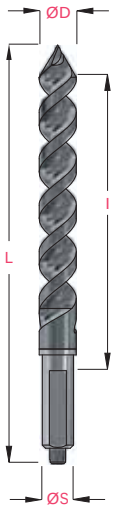


Solid carbide Jobber drill bit | VHM Spiralbohrer | HW Monobloc mèches à percer | Broca MD integral

ØD	L	ØS	l	DX-RH	SX-LH
6	130	10X30	90	73Y.060.R	
7	130	10X30	90	73Y.070.R	
8	160	10X30	120	73Y.080.R	
9	160	10X30	120	73Y.090.R	
10	160	10X30	120	73Y.100.R	
12	160	10X30	120	73Y.120.R	

3000 ÷ 6000 rpm F = 1 ÷ 4 mt/min

1V.020 Optional 1V.009



HW Integrale punta componibile ambidestra HP+

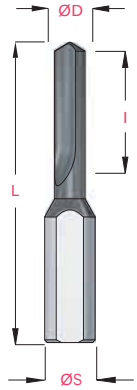
80M-L

Solid carbide spotting drills dual rotation | VHM | HW Monobloc | MD Integral

ØD	L	ØS	l	Part Number
2	70	10	12	80M.020
2,5	70	10	15	80M.025
3	70	10	24	80M.030
3,5	70	10	30	80M.035
4	70	10	32	80M.040
5	70	10	35	80M.050
6	70	10	35	80M.060
8	70	10	35	80M.080

ØD	L	ØS	l	Part Number
2	57,5	10	12	80L.020
2,5	57,5	10	15	80L.025
3	57,5	10	16	80L.030
3,5	57,5	10	18	80L.035
4	57,5	10	20	80L.040
5	57,5	10	25	80L.050
6	57,5	10	25	80L.060
8	57,5	10	25	80L.080

1V.020 Optional 1V.009



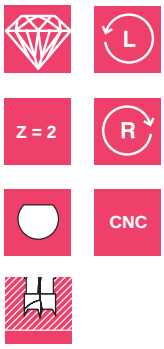
3000 ÷ 6000 rpm

F = 1 ÷ 4 mt/min

270A Punta foratrice in Diamante per fori ciechi Z2

PCD Dowel drill Bit Z2	PKD Dübelbohrer	Mèche de perceuse pour trous borgnes Z2	Broca DIA para taladrar ciego Z2

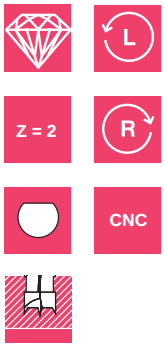
ØD	L	ØS	I	DX-RH	SX-LH
5	57,5	10	40	270A.050.A	270A.050.AL
6	57,5	10	40	270A.060.A	270A.060.AL
7	57,5	10	40	270A.070.A	270A.070.AL
8	57,5	10	40	270A.080.A	270A.080.AL
10	57,5	10	40	270A.100.A	270A.100.AL
12	57,5	10	40	270A.120.A	270A.120.AL



270B Punta foratrice in Diamante per fori ciechi Z2

PCD Dowel drill Bit Z2	PKD Dübelbohrer	Mèche de perceuse pour trous borgnes Z2	Broca DIA para taladrar ciego Z2

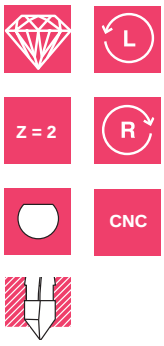
ØD	L	ØS	I	DX-RH	SX-LH
5	70	10	40	270B.050.B	270B.050.BL
6	70	10	40	270B.060.B	270B.060.BL
7	70	10	40	270B.070.B	270B.070.BL
8	70	10	40	270B.080.B	270B.080.BL
10	70	10	40	270B.100.B	270B.100.BL
12	70	10	40	270B.120.B	270B.120.BL

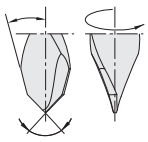


280A Punta foratrice in Diamante per fori passanti Z2

PCD "V" point Drill Bit Z2	PKD Durchgangsbohrer Z2	PCD Mèche de perceuse pour trous débouchants Z2	Broca DIA para taladrar agujero pasante Z2

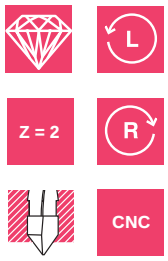
ØD	L	ØS	I	DX-RH	SX-LH
5	57.5	10	28	280A.050.A	280A.050.AL
6	57.5	10	28	280A.060.A	280A.060.AL
7	57.5	10	28	280A.070.A	280A.070.AL
8	57.5	10	28	280A.080.A	280A.080.AL
10	57.5	10	28	280A.100.A	280A.100.AL
12	57.5	10	28	280A.120.A	280A.120.AL





Punta foratrice in Diamante per fori passanti Z2

280B

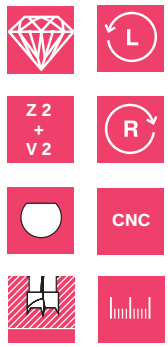


PCD "V" point Drill Bit Z2	PKD Durchgangsbohrer Z2	PCD Mèche de perceuse pour trous débouchants Z2	Broca DIA para taladrar agujero pasante Z2

ØD	L	ØS	I	DX-RH	SX-LH
5	70	10	40	280B.050.B	280B.050.BL
6	70	10	40	280B.060.B	280B.060.BL
7	70	10	40	280B.070.B	280B.070.BL
8	70	10	40	280B.080.B	280B.080.BL
10	70	10	40	280B.100.B	280B.100.BL
12	70	10	40	280B.120.B	280B.120.BL

Punta per cerniera in Diamante per fori ciechi Z2+2

290A



1V.020 Optional

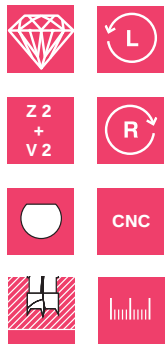
1V.009

PCD Dowel drill Bit Z2+2	PKD Beschlagbohrer Z2+2	PCD Mèche de perceuse pour trous borgnes Z2+2	Broca DIA para taladrar agujero ciego Z2+2

ØD	L	ØS	I	DX-RH	SX-LH
12	57.5	10	28	290A.120.A	290A.120.AL
14	57.5	10	28	290A.140.A	290A.140.AL
15	57.5	10	28	290A.150.A	290A.150.AL
16	57.5	10	28	290A.160.A	290A.160.AL
18	57.5	10	28	290A.180.A	290A.180.AL
20	57.5	10	28	290A.200.A	290A.200.AL
22	57.5	10	28	290A.220.A	290A.220.AL
25	57.5	10	28	290A.250.A	290A.250.AL
26	57.5	10	28	290A.260.A	290A.260.AL
30	57.5	10	28	290A.300.A	290A.300.AL
35	57.5	10	28	290A.350.A	290A.350.AL
40	57,5	10	28	290A.400.A	290A.400.AL

Punta per cerniera in Diamante per fori ciechi Z2+2

290B



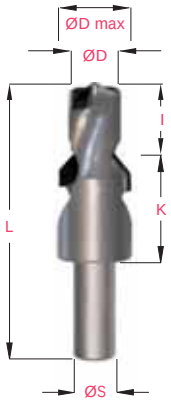
1V.020 Optional

1V.009

PCD Dowel drill Bit Z2+2	PKD Sacklochbohrer Z2+2	PCD Mèche de perceuse pour trous borgnes Z2+2	Broca DIA para taladrar agujero ciego Z2+2

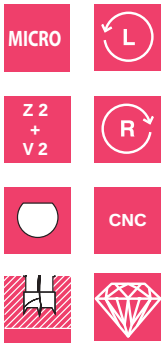
ØD	L	ØS	I	DX-RH	SX-LH
12	70	10	40	290B.120.B	290B.120.BL
14	70	10	40	290B.140.B	290B.140.BL
15	70	10	40	290B.150.B	290B.150.BL
16	70	10	40	290B.160.B	290B.160.BL
18	70	10	40	290B.180.B	290B.180.BL
20	70	10	40	290B.200.B	290B.200.BL
22	70	10	40	290B.220.B	290B.220.BL
25	70	10	40	290B.250.B	290B.250.BL
26	70	10	40	290B.260.B	290B.260.BL
30	70	10	40	290B.300.B	290B.300.BL
35	70	10	40	290B.350.B	290B.350.BL
40	70	10	40	290B.400.B	290B.400.BL

272A Punta foratrice in Diamante per fori ciechi con svasatore Z2+2

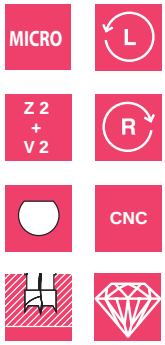


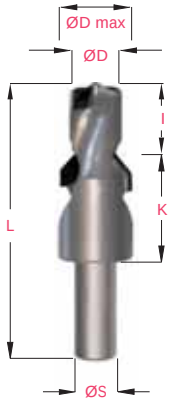
PCD Dowel drill Bit Z2+2 with countersink | PKD Sacklochbohrer mit Senker Z2+2 | PCD Mèche de perceuse pour trous borgnes avec fraise à chambrer Z2+2 | Broca DIA para taladrar agujero ciego Z2+2 con avellanador

ØD	ØD max	L	ØS	I	K	Part Number
8	14	57,5	10	8	24,5	272A.080.A
8	14	57,5	10	10	22,5	272A.080.B
8	14	57,5	10	12	20,5	272A.080.C
8	14	57,5	10	13	19,5	272A.080.D
8	14	57,5	10	14	18,5	272A.080.E
8	14	57,5	10	15	17,5	272A.080.F
8	14	57,5	10	18	14,5	272A.080.G
8	14	57,5	10	20	12,5	272A.080.H
10	16	57,5	10	10	22,5	272A.100.B
10	16	57,5	10	11	21,5	272A.100.BA
10	16	57,5	10	12	20,5	272A.100.C
10	16	57,5	10	13	19,5	272A.100.D
10	16	57,5	10	15	17,5	272A.100.F
10	16	57,5	10	18	14,5	272A.100.G
10	16	57,5	10	20	12,5	272A.100.H
12	18	57,5	10	10	22,5	272A.120.B
12	18	57,5	10	13	19,5	272A.120.D
12	18	57,5	10	15	17,5	272A.120.F
12	18	57,5	10	18	14,5	272A.120.G
12	18	57,5	10	20	12,5	272A.120.H



PCD Dowel drill Bit Z2+2 with countersink | PKD Sacklochbohrer mit Senker Z2+2 | PCD Mèche de perceuse pour trous borgnes avec fraise à chambrer Z2+2 | Broca DIA para taladrar agujero ciego Z2+2 con avellanador





ØD	ØD max	L	ØS	I	K	Part Number
8	14	70	10	8	37	272B.080.A
8	14	70	10	10	35	272B.080.B
8	14	70	10	12	33	272B.080.C
8	14	70	10	13	32	272B.080.D
8	14	70	10	14	31	272B.080.E
8	14	70	10	15	30	272B.080.F
8	14	70	10	18	27	272B.080.G
8	14	70	10	20	25	272B.080.H
8	14	70	10	21	24	272B.080.I
8	14	70	10	22	23	272B.080.L
8	14	70	10	25	20	272B.080.M
8	14	70	10	30	15	272B.080.N
10	16	70	10	10	35	272B.100.B
10	16	70	10	11	34	272B.100.BA
10	16	70	10	12	33	272B.100.C
10	16	70	10	13	32	272B.100.D
10	16	70	10	15	30	272B.100.F
10	16	70	10	18	27	272B.100.G
10	16	70	10	20	25	272B.100.H
10	16	70	10	25	20	272B.100.M
10	16	70	10	30	15	272B.100.N
12	18	70	10	10	35	272B.120.B
12	18	70	10	13	32	272B.120.D
12	18	70	10	15	30	272B.120.F
12	18	70	10	18	27	272B.120.G
12	18	70	10	20	25	272B.120.H
12	18	70	10	25	20	272B.120.M
12	18	70	10	30	15	272B.120.N

F.U.L. S.r.L.

F R E S A T U R A

MILLING (ROUTING)

FRASEN

FRAISAGE

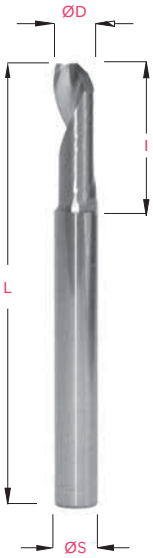
FRASADO

300A Fresa HW integrale Z1elica DX taglio DX Finitura a specchio

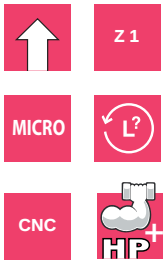
ALLUMINIO
PLASTICA

ALUMINIUM
PLASTIC

Z1 Solid carbide
RH rotation up cut end
mill Mirror finish



ØD	L	ØS	l	Part Number
1,5	40	3	6	300 A.015
2	40	2	10	300 A.020
2	40	3	8	300 A.020.A
2	50	6	6	300 A.020.B
2,5	50	6	8	300 A.025
3	40	3	10	300 A.030
3	50	6	10	300 A.030.A
3,5	50	6	10	300 A.035
4	50	4	12	300 A.040
4	50	6	12	300 A.040.A
4,5	50	6	12	300 A.045
5	50	5	14	300 A.050
5	50	6	14	300 A.050.A
5,5	50	6	14	300 A.055
6	50	6	14	300 A.060
6	60	6	20	300 A.060.A
6	75	6	35	300 A.060.B
8	63	8	25	300 A.080
10	72	10	25	300 A.100
12	83	12	25	300 A.120



Applicazione:
Alluminio: OTTIMA
Plastica: BUONA

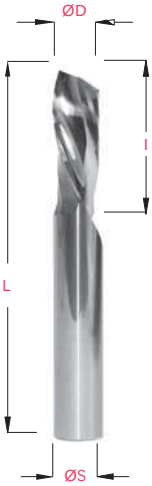
Application:
Aluminium: BEST
Plastic: GOOD

300B Fresa HW integrale Z1elica SX taglio DX Finitura a specchio

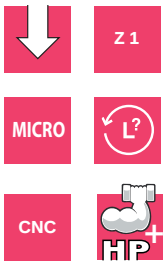
ALLUMINIO
PLASTICA

ALUMINIUM
PLASTIC

Z1 Solid carbide RH
rotation down cut end
mill Mirror finish



ØD	L	ØS	l	Part Number
1,5	40	3	6	300 B.015
2	40	2	10	300 B.020
2	40	3	8	300 B.020.A
2	50	6	6	300 B.020.B
2,5	50	6	8	300 B.025
3	40	3	10	300 B.030
3	50	6	10	300 B.030.A
3,5	50	6	10	300 B.035
4	50	4	12	300 B.040
4	50	6	12	300 B.040.A
4,5	50	6	12	300 B.045
5	50	5	14	300 B.050
5	50	6	14	300 B.050.A
5,5	50	6	14	300 B.055
6	50	6	14	300 B.060
6	60	6	20	300 B.060.A
6	75	6	35	300 B.060.B
8	63	8	25	300 B.080
10	72	10	25	300 B.100
12	83	12	25	300 B.120



Applicazione:
Alluminio: OTTIMA
Plastica: BUONA

Application:
Aluminium: BEST
Plastic: GOOD

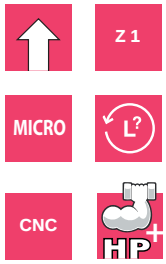
Fresa HW integrale Z1elica DX taglio DX Finitura a specchio

310A

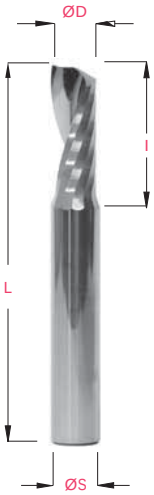
Z1 Solid carbide RH rotation up cut end mill Mirror finish

ALLUMINIO PLASTICA

ALUMINIUM PLASTIC



ØD	L	ØS	l	Part Number
1,5	40	3	6	310 A.015
2	40	3	6	310 A.020
2	40	2	10	310 A.020.A
2	60	6	12	310 A.020.B
2,5	40	2,5	6	310 A.025
3	40	3	12	310 A.030
3	60	6	10	310 A.030.A
3	60	6	12	310 A.030.B
3	60	6	15	310 A.030.D
4	40	4	15	310 A.040
4	60	6	15	310 A.040.A
5	50	5	16	310 A.050
5	60	6	16	310 A.050.A
6	60	6	20	310 A.060
6	60	6	30	310 A.060.A
6	75	6	35	310 A.060.B
8	63	8	22	310 A.080
8	100	8	40	310 A.080.A
10	72	10	25	310 A.100
12	83	12	30	310 A.120
14	83	14	30	310 A.140
16	92	16	35	310 A.160
18	92	18	35	310 A.180
20	104	20	40	310 A.200



Applicazione:
Alluminio: BUONA
Plastica: OTTIMA

Application:
Aluminium: GOOD
Plastic: BEST

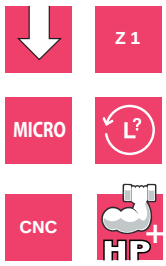
Fresa HW integrale Z1elica SX taglio DX Finitura a specchio

310B

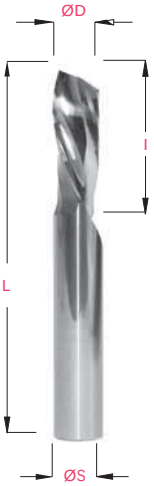
Z1 Solid carbide RH rotation down cut end mill Mirror finish

ALLUMINIO PLASTICA

ALUMINIUM PLASTIC



ØD	L	ØS	l	Part Number
1,5	40	3	6	310 B.015
2	40	3	6	310 B.020
2	40	2	10	310 B.020.A
2	60	6	12	310 B.020.B
2,5	40	2,5	6	310 B.025
3	40	3	12	310 B.030
3	60	6	10	310 B.030.A
3	60	6	12	310 B.030.B
3	60	6	15	310 B.030.D
4	40	4	15	310 B.040
4	60	6	15	310 B.040.A
5	50	5	16	310 B.050
5	60	6	16	310 B.050.A
6	60	6	20	310 B.060
6	60	6	30	310 B.060.A
6	75	6	35	310 B.060.B
8	63	8	22	310 B.080
8	100	8	40	310 B.080.A
10	72	10	25	310 B.100
12	83	12	30	310 B.120
14	83	14	30	310 B.140
16	92	16	35	310 B.160
18	92	18	35	310 B.180
20	104	20	40	310 B.200



Applicazione:
Alluminio: BUONA
Plastica: OTTIMA

Application:
Aluminium: GOOD
Plastic: BEST

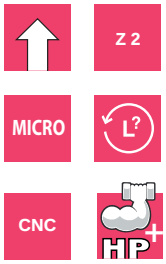
320A Fresa HW integrale Z2 elica 30°DX taglio DX Finitura a specchio

ALLUMINIO
PLASTICA
TITANIO

ALUMINIUM
PLASTIC
TITANIUM

Z2 Solid carbide RH rotation 30° helix up cut end mill Mirror finish

ØD	L	ØS	l	Part Number
2	50	6	6	320 A.020
3	40	3	12	320 A.030
3	50	6	12	320 A.030.A
4	40	4	14	320 A.040
4	50	6	14	320 A.040.A
5	50	5	16	320 A.050
6	50	6	18	320 A.060
8	63	8	20	320 A.080
10	72	10	25	320 A.100
12	83	12	30	320 A.120
16	92	16	35	320 A.160
20	104	20	45	320 A.200



Applicazione:
Alluminio: OTTIMA
Plastica: BUONA
Titanio: BUONA

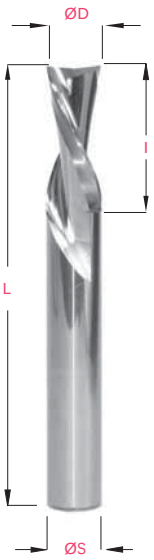
Application:
Aluminium: BEST
Plastic: GOOD
Titanium: GOOD

320B Fresa HW integrale Z2 elica 30°SX taglio DX Finitura a specchio

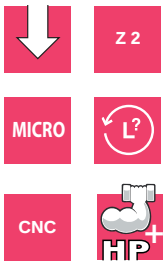
ALLUMINIO
PLASTICA
TITANIO

ALUMINIUM
PLASTIC
TITANIUM

Z2 Solid carbide RH rotation 30° helix down cut end mill Mirror finish



ØD	L	ØS	l	Part Number
2	40	2	6	320 B.020
2	50	6	6	320 B.020.A
2,5	40	2,5	7	320 B.025
3	40	3	12	320 B.030
3	50	6	12	320 B.030.A
4	40	4	14	320 B.040
5	50	5	16	320 B.050
6	50	6	18	320 B.060
8	63	8	20	320 B.080
10	72	10	25	320 B.100
12	83	12	30	320 B.120
16	92	16	35	320 B.160
20	104	20	45	320 B.200



Applicazione:
Alluminio: OTTIMA
Plastica: BUONA
Titanio: BUONA

Application:
Aluminium: BEST
Plastic: GOOD
Titanium: GOOD

Fresa HW integrale Z3 elica 30° DX taglio DX Finitura a specchio

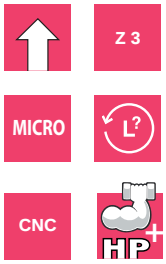
330A

ALLUMINIO
PLASTICA
TITANIO

ALUMINIUM
PLASTIC
TITANIUM

Z3 Solid carbide RH rotation 30° helix up cut end mill Mirror finish

ØD	L	ØS	l	Part Number
2	50	6	6	330 A.020
3	40	3	12	330 A.030
3	50	6	12	330 A.030.A
4	40	4	14	330 A.040
5	50	5	16	330 A.050
6	50	6	18	330 A.060
8	63	8	20	330 A.080
10	72	10	25	330 A.100
12	83	12	30	330 A.120
16	92	16	35	330 A.160
20	104	20	45	330 A.200



Applicazione:
Alluminio: BUONA
Plastica: BUONA
Titanio: BUONA

Application:
Aluminium: GOOD
Plastic: GOOD
Titanium: GOOD

Fresa HW integrale Z3 elica 30° SX taglio DX Finitura a specchio

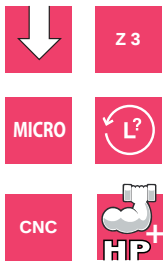
330B

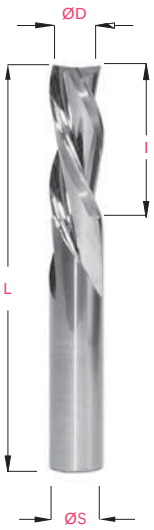
ALLUMINIO
PLASTICA
TITANIO

ALUMINIUM
PLASTIC
TITANIUM

Z3 Solid carbide RH rotation 30° helix down cut end mill Mirror finish

ØD	L	ØS	l	Part Number
2	50	6	6	330 B.020
2,5	40	2,5	7	330 B.025
3	40	3	12	330 B.030
3	50	6	12	330 B.030.A
4	40	4	14	330 B.040
5	50	5	16	330 B.050
6	50	6	18	330 B.060
8	63	8	20	330 B.080
10	72	10	25	330 B.100
12	83	12	30	330 B.120
16	92	16	35	330 B.160
20	104	20	45	330 B.200





Applicazione:
Alluminio: BUONA
Plastica: BUONA
Titanio: BUONA

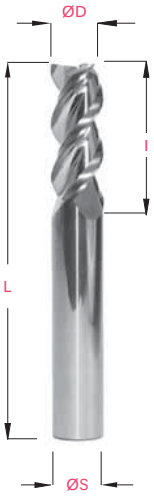
Application:
Aluminium: GOOD
Plastic: GOOD
Titanium: GOOD

340A Fresa HW integrale Z3 elica 45° DX taglio DX Divisione irregolare Finitura a specchio

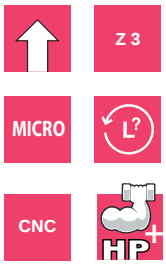
ALLUMINIO
PLASTICA
TITANIO

ALUMINIUM
PLASTIC
TITANIUM

Z3 Solid carbide RH rotation 45° helix up cut end mill Irregular flute division Mirror finish



ØD	L	ØS	l	Part Number
4	57	6	13	340 A.040
5	57	6	15	340 A.050
6	57	6	18	340 A.060
7	63	8	20	340 A.070
8	63	8	20	340 A.080
9	72	10	22	340 A.090
10	72	10	25	340 A.100
12	83	12	30	340 A.120
14	83	14	30	340 A.140
16	92	16	35	340 A.160
18	92	18	35	340 A.180
20	104	20	45	340 A.200



Applicazione:
Alluminio: BUONA
Plastica: BUONA
Titanio: BUONA

Application:
Aluminium: GOOD
Plastic: GOOD
Titanium: GOOD

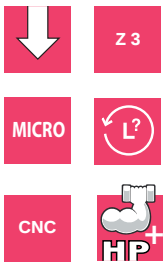
350A Fresa raggiata HW integrale Z3 elica 30° DX taglio DX Divisione irregolare Finitura a specchio

ALLUMINIO
PLASTICA
TITANIO

ALUMINIUM
PLASTIC
TITANIUM

Z3 Solid carbide ball nose RH rotation 30° helix up cut end mill Irregular flute division Mirror finish

ØD	L	ØS	l	Part Number
3	57	6	10	350 A.030
4	57	6	13	350 A.040
5	57	6	15	350 A.050
6	57	6	18	350 A.060
7	63	8	20	350 A.070
8	63	8	20	350 A.080
9	72	10	22	350 A.090
10	72	10	25	350 A.100
12	83	12	30	350 A.120
14	83	14	30	350 A.140
16	92	16	35	350 A.160
18	92	18	35	350 A.180
20	104	20	40	350 A.200



Applicazione:
Alluminio: BUONA
Plastica: BUONA
Titanio: BUONA

Application:
Aluminium: GOOD
Plastic: GOOD
Titanium: GOOD

Fresa HW Integrale per vetroresina taglienti frontali Finitura a specchio

360A

FIBRA DI VETRO

FIBERGLASS

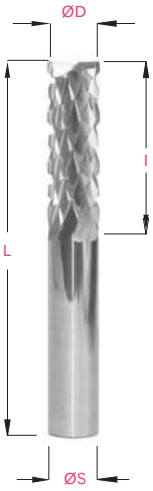
Solid carbide rotating burr for fiberglass
0° plunge cut Mirror finish

Z 1

MICRO

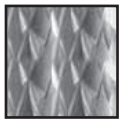
CNC

ØD	L	ØS	l	Part Number	Part Number	Part Number
2	40	2	7	360 A.020.F	360 A.020.M	360 A.020.G
2	50	6	7	360 A.020.F.A	360 A.020.M.A	360 A.020.G.A
3	40	3	10	360 A.030.F	360 A.030.M	360 A.030.G
3	50	6	12	360 A.030.F.A	360 A.030.M.A	360 A.030.G.A
4	40	4	15	360 A.040.F	360 A.040.M	360 A.040.G
4	50	6	20	360 A.040.F.A	360 A.040.M.A	360 A.040.G.A
5	50	5	16	360 A.050.F	360 A.050.M	360 A.050.G
5	75	6	25	360 A.050.F.A	360 A.050.M.A	360 A.050.G.A
6	50	6	18	360 A.060.F	360 A.060.M	360 A.060.G
6	75	6	35	360 A.060.F.A	360 A.060.M.A	360 A.060.G.A
8	63	8	25	360 A.080.F	360 A.080.M	360 A.080.G
8	100	8	40	360 A.080.F.A	360 A.080.M.A	360 A.080.G.A
10	72	10	30	360 A.100.F	360 A.100.M	360 A.100.G
12	83	12	32	360 A.120.F	360 A.120.M	360 A.120.G
16	92	16	36	360 A.160.F	360 A.160.M	360 A.160.G
20	104	20	40	360 A.200.F	360 A.200.M	360 A.200.G

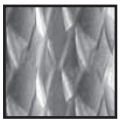


Applicazione:
Fibra di vetro:
OTTIMA

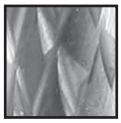
Application:
Fiberglass:
BEST



F
Fine



M
Medio
Medium



G
Grosso
Coarse

Fresa HW Integrale per vetroresina punta a 135°Finitura a specchio

370A

FIBRA DI VETRO

FIBERGLASS

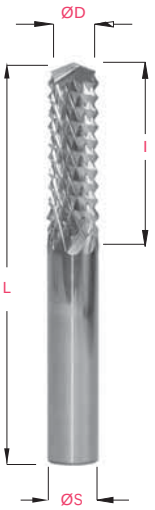
Solid carbide rotating burr for fiberglass 135° plunge cut Mirror finish

Z 1

MICRO

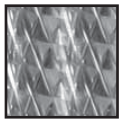
CNC

ØD	L	ØS	l	Part Number	Part Number	Part Number
2	40	2	7	370 A.020.F	370 A.020.M	370 A.020.G
2	50	6	7	370 A.020.F.A	370 A.020.M.A	370 A.020.G.A
3	40	3	10	370 A.030.F	370 A.030.M	370 A.030.G
3	50	6	12	370 A.030.F.A	370 A.030.M.A	370 A.030.G.A
4	40	4	15	370 A.040.F	370 A.040.M	370 A.040.G
4	50	6	20	370 A.040.F.A	370 A.040.M.A	370 A.040.G.A
5	50	5	16	370 A.050.F	370 A.050.M	370 A.050.G
5	75	6	25	370 A.050.F.A	370 A.050.M.A	370 A.050.G.A
6	50	6	18	370 A.060.F	370 A.060.M	370 A.060.G
6	75	6	35	370 A.060.F.A	370 A.060.M.A	370 A.060.G.A
8	63	8	25	370 A.080.F	370 A.080.M	370 A.080.G
8	100	8	40	370 A.080.F.A	370 A.080.M.A	370 A.080.G.A
10	72	10	30	370 A.100.F	370 A.100.M	370 A.100.G
12	83	12	32	370 A.120.F	370 A.120.M	370 A.120.G
16	92	16	36	370 A.160.F	370 A.160.M	370 A.160.G
20	104	20	40	370 A.200.F	370 A.200.M	370 A.200.G

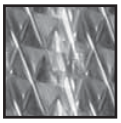


Applicazione:
Fibra di vetro:
OTTIMA

Application:
Fiberglass:
BEST



F
Fine



M
Medio
Medium

G
Grosso
Coarse

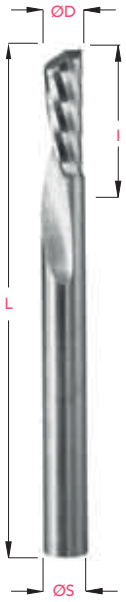
19D HW Fresa integrale elicoidale per alluminio Z=1 Positiva

HW Solid carbide UP CUT spiral router bit for aluminium | VHM Bohrnutenfräser für Aluminium | Fraise HW monobloc pour alu | HW fresa integral para aluminio

ØD	L	ØS	l/H	Part Number
3	50	3	12	19D.030
4	60	4	12	19D.040
4	80	4	20	19D.040.A
5	60	5	20	19D.050
5	70	8	20	19D.050.A
6	60	6	20	19D.060
6	70	8	20	19D.060.A
7	80	8	25	19D.070.C
8	60	8	20	19D.080
8	80	8	20	19D.080.A
8	100	8	20/75	19D.080.B
8	80	8	25	19D.080.C
10	75	10	25	19D.100
10	100	10	22/75	19D.100.A
10	80	10	32	19D.100.C
10	120	10	25	19D.100.D
12	100	12	35/75	19D.120
16	100	12	35/75	19D.160

18000 ÷ 24000 rpm F = 3 ÷ 9 mt/min

19G HW Fresa integrale elicoidale per alluminio Z=1 Negativa



HW Solid carbide DOWN CUT spiral router bit for aluminium | VHM Bohrnutenfräser für Aluminium | Fraise HW monobloc pour alu | HW fresa integral para aluminio

ØD	L	ØS	l/H	Part Number
3	50	3	12	19G.030
4	60	4	12	19G.040
5	60	5	20	19G.050
5	70	8	20	19G.050.A
6	60	6	20	19G.060
6	70	8	20	19G.060.A
8	60	8	20	19G.080
8	80	8	20	19G.080.A
8	100	8	20/75	19G.080.B
10	75	10	25	19G.100
10	100	10	25/75	19G.100.A
12	100	12	35/75	19G.120

18000 ÷ 24000 rpm F = 3 ÷ 9 mt/min

HW Fresa integrale elicoidale per alluminio Z=1 Positiva

9D

HW Solid carbide UP CUT spiral router bit for aluminium	VHM Bohrnutenfräser für Aluminium	Fraise HW monobloc pour alu	HW fresa integral para aluminio

MICRO

Z 1

CNC

ØD	L	ØS	l	Part Number
3	50	3	12	9D.030
4	50	4	12	9D.040
5	50	5	17	9D.050
6	60	6	17	9D.060
6	60	6	27	9D.060.A
8	80	8	22	9D.080
8	80	8	32	9D.080.A
10	80	10	32	9D.100
10	100	10	42	9D.100.A
12	80	12	32	9D.120
12	100	12	42	9D.120.A
12	100	12	52	9D.120.B

18000 ÷ 24000 rpm F = 3 ÷ 9 mt/min

HW Fresa integrale elicoidale per alluminio Z=1 Negativa

9G

HW Solid carbide DOWN CUT spiral router bit	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

MICRO

Z 1

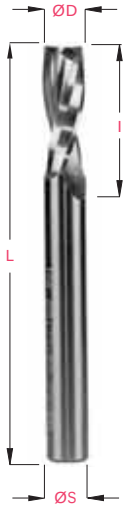
CNC

ØD	L	ØS	l	Part Number
3	50	3	12	9G.030
4	50	4	12	9G.040
5	50	5	17	9G.050
6	60	6	17	9G.060
6	60	6	27	9G.060.A
8	80	8	22	9G.080
8	80	8	32	9G.080.A
10	80	10	32	9G.100
10	100	10	42	9G.100.A
12	80	12	32	9G.120
12	100	12	42	9G.120.A
12	100	12	52	9G.120.B

18000 ÷ 24000 rpm F = 3 ÷ 9 mt/min

9E HW Fresa integrale elicoidale Z=2 Positiva

HW Solid carbide UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral



ØD	L	ØS	l	Part Number
3	50	3	12	9E.030
4	50	4	12	9E.040
5	50	5	17	9E.050
6	60	6	17	9E.060
6	60	6	27	9E.060.A
8	80	8	22	9E.080
8	80	8	32	9E.080.A
10	80	10	32	9E.100
10	100	10	42	9E.100.A
10	100	10	52	9E.100.B
12	80	12	32	9E.120
12	100	12	42	9E.120.A
12	100	12	52	9E.120.B
14	100	14	42	9E.140
14	100	14	52	9E.140.A
16	100	16	42	9E.160
16	100	16	52	9E.160.A
16	120	16	72	9E.160.B
18	100	18	52	9E.180
18	120	18	72	9E.180.A
18	150	18	102	9E.180.B
20	100	20	52	9E.200
20	120	20	72	9E.200.A
20	120	20	102	9E.200.B
25	150	25	102	9E.250

18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

HW Fresa integrale elicoidale Z=2 Negativa

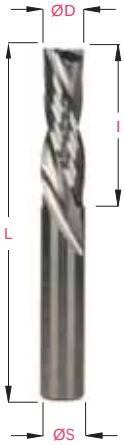
HW Solid carbide DOWN CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

MICRO

Z = 2

CNC

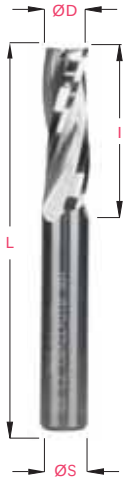
ØD	L	ØS	l	Part Number
3	50	3	12	9H.030
4	50	4	12	9H.040
5	50	5	17	9H.050
6	60	6	17	9H.060
6	60	6	27	9H.060.A
8	80	8	22	9H.080
8	80	8	32	9H.080.A
10	80	10	32	9H.100
10	100	10	42	9H.100.A
10	100	10	52	9H.100.B
12	80	12	32	9H.120
12	100	12	42	9H.120.A
12	100	12	52	9H.120.B
14	100	14	42	9H.140
14	100	14	52	9H.140.A
16	100	16	42	9H.160
16	100	16	52	9H.160.A
16	120	16	72	9H.160.B
18	100	18	52	9H.180
18	120	18	72	9H.180.A
18	150	18	102	9H.180.B
20	100	20	52	9H.200
20	120	20	72	9H.200.A
20	150	20	102	9H.200.B
25	150	25	102	9H.250



18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

9F HW Fresa integrale elicoidale Z=3 Positiva

HW Solid carbide UP CUT spiral router bit	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral



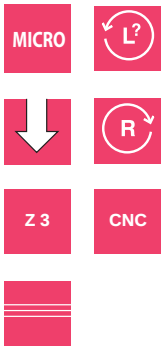
ØD	L	ØS	l	Part Number
8	80	8	22	9F.080
8	80	8	32	9F.080.A
8	80	8	42	9F.080:B
10	80	10	32	9F.100
10	100	10	42	9F.100.A
12	80	12	32	9F.120
12	100	12	42	9F.120.A
12	100	12	52	9F.120.B
14	100	14	42	9F.140
14	100	14	52	9F.140.A
16	100	16	42	9F.160
16	100	16	52	9F.160.A
16	120	16	72	9F.160.B
18	100	18	52	9F.180
18	120	18	72	9F.180.A
18	150	18	102	9F.180.B
20	100	20	52	9F.200
20	120	20	72	9F.200.A
20	150	20	102	9F.200.B
25	150	25	102	9F.250

18000 ÷ 24000 rpm F = 6 ÷ 14 mt/min

9I HW Fresa integrale elicoidale Z=3 Negativa

HW Solid carbide DOWN CUT spiral router bit	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

ØD	L	ØS	l	Part Number
8	80	8	22	9I.080
8	80	8	32	9I.080.A
10	80	10	32	9I.100
10	100	10	42	9I.100.A
12	80	12	32	9I.120
12	100	12	42	9I.120.A
12	100	12	52	9I.120.B
14	100	14	42	9I.140
14	100	14	52	9I.140.A
16	100	16	42	9I.160
16	100	16	52	9I.160.A
16	120	16	72	9I.160.B
18	100	18	52	9I.180
18	120	18	72	9I.180.A
18	150	18	102	9I.180.B
20	100	20	52	9I.200
20	120	20	72	9I.200.A
20	150	20	102	9I.200.B
25	150	25	102	9I.250



18000 ÷ 24000 rpm F = 6 ÷ 14 mt/min

Fresa HW integrale elicolidale per forare e fresare

9J

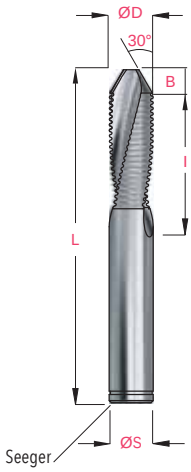
HW Solid carbide spiral router bit	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

MICRO

Z 2

CNC

ØD	L	ØS	I	B	DX-RH
16	120	16	52	9	9J.160
20	120	20	52	11	9J.200



Rotazione destra con elica destra "TIPO TRAENTE"
RH rotation, upcut / Rechtslauf und Rechtsdrall "mit ziehendem Schnitt"
Rotation droite avec hélice droite "type tirant"/ giro a derecha helicoidal a izquierda

Esecuzione con rompitruciolo
With chipbreakers / Ausführung mit Spanbrecher
Version avec brise-copeaux / ejecucion con rompevirutasanca Titolo

Per foro spia sulle porte
For door spy holes / für Türspionbohrungen
Pour trous du judas / para aguiero destinado al encaste de la mirilla de la puerta

Per forare e sfinestrare
For drills and cutouts / für Bohrungen und Ausschnitte
Pour percer et réaliser les oculus / para taladrar y abrir ventana

Per frese da Ø16 a Ø20 si esegue sede per anello di ritegno - (Seeger)
Cutters Ø16 to Ø20 come with groove for retaining ring
Für Fräser Ø16 bis Ø20 mit Nutbearbeitung für Sicherungsring
Pour fraises diam. 16 à 20 on réalise le logement pour l'anneau Seeger
Con asiento para seeger Ring

HW Fresa integrale elicoidale con rompitruciolo Z=3 Positiva

9N

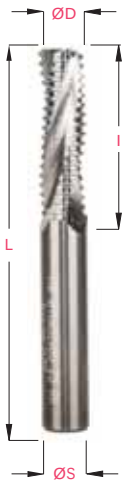
HW Solid carbide UP CUT roughing spiral router bit	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

MICRO

Z 3

CNC

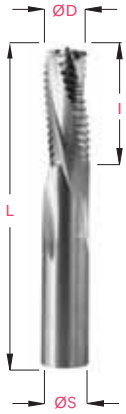
ØD	L	ØS	I	Part Number
8	80	8	22	9N.080
8	80	8	32	9N.080.A
8	80	8	42	9N.080.B
10	80	10	32	9N.100
10	100	10	42	9N.100.A
10	100	10	52	9N.100.B
12	80	12	32	9N.120
12	100	12	42	9N.120.A
12	100	12	52	9N.120.B
14	100	14	42	9N.140
14	100	14	52	9N.140.A
16	100	16	42	9N.160
16	100	16	52	9N.160.A
16	120	16	72	9N.160.B
18	100	18	52	9N.180
18	120	18	72	9N.180.A
18	150	18	102	9N.180.B
20	100	20	52	9N.200
20	120	20	72	9N.200.A
20	150	20	102	9N.200.B
25	150	25	102	9N.250



18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min

9L HW Fresa integrale elicoidale con rompitruciolo Z=3 Negativa

HW Solid carbide DOWN CUT roughing spiral router bit	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral



ØD	L	ØS	l	Part Number
8	80	8	22	9L.080
8	80	8	32	9L.080.A
10	80	10	32	9L.100
10	100	10	42	9L.100.A
12	80	12	32	9L.120
12	100	12	42	9L.120.A
12	100	12	52	9L.120.B
14	100	14	42	9L.140
14	100	14	52	9L.140.A
16	100	16	42	9L.160
16	100	16	52	9L.160.A
16	120	16	72	9L.160.B
18	100	18	52	9L.180
18	120	18	72	9L.180.A
18	150	18	102	9L.180.B
20	100	20	52	9L.200
20	120	20	72	9L.200.A
20	150	20	102	9L.200.B
25	150	25	102	9L.250

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min

9M HW Fresa Up-Down integrale elicoidale - positiva/negativa Z2+2

Solid carbide compression spiral router bit	VHM-Spiralfräser Rechtsdrall (positive Spirale) / Linksdrall (negative Spirale)	Fraise HW hélicoïdale intégrale upcut/downcut positive/négative	Hw Fresa Up-Down Integral Helicoidal - Positivo/Negativo

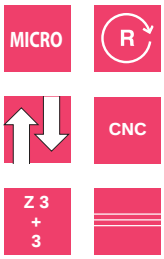
ØD	L	ØS	l	Part Number
6	60	6	17	9M.060
6	60	6	27	9M.060.A
8	80	8	22	9M.080
8	80	8	32	9M.080.A
10	80	10	32	9M.100
10	100	10	42	9M.100.A
12	100	12	42	9M.120
12	100	12	52	9M.120.A
14	100	14	42	9M.140
14	100	14	52	9M.140.A
16	100	16	42	9M.160
16	100	16	52	9M.160.A
18	100	18	52	9M.180
18	120	18	72	9M.180.A
20	100	20	52	9M.200
20	120	20	72	9M.200.A

18000 ÷ 24000 rpm F = 5 ÷ 14 mt/min

HW Fresa Up-Down integrale elicoidale - positiva/negativa Z3+3

9R

Solid carbide compression spiral router bits	VHM -Spiralfräser Rechtsdrall (positive Spirale) / Linksdrall (negative Spirale)	Fraise HW hélicoïdale intégrale upcut/downcut positive/négative	Hw Fresa Up-Down Integral Helicoidal - Positivo/Negativo

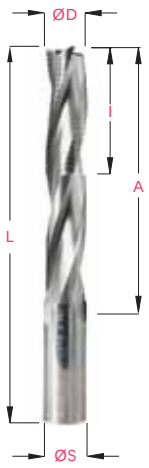


ØD	L	ØS	l	Part Number
12	100	12	42	9R.120
12	100	12	52	9R.120.A
14	100	14	42	9R.140
14	100	14	52	9R.140.A
16	100	16	42	9R.160
16	100	16	52	9R.160.A
18	100	18	52	9R.180
18	120	18	72	9R.180.A
20	100	20	52	9R.200
20	120	20	72	9R.200.A

18000 ÷ 24000 rpm F = 5 ÷ 14 mt/min

6

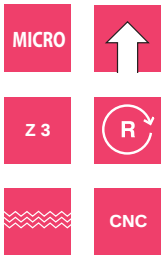
9P HW Fresa integrale elicoidale - positiva con rompitruciolo Z=3



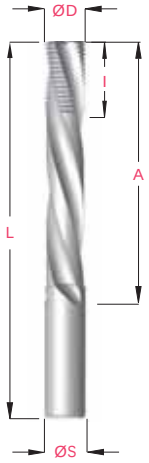
HW Solid carbide UP CUT roughing spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

ØD	L	ØS	I	A	Part Number
14	150	14	45	95	9P.140
16	150	16	45	95	9P.160
16	175	16	25	115	9P.160.A
18	150	18	45	95	9P.180
18	175	16	25	115	9P.180.A

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min



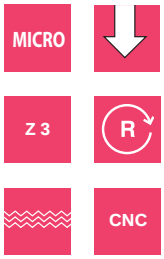
9Q HW Fresa integrale elicoidale negativa con rompitruciolo Z=3



HW Solid carbide DOWN CUT roughing spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

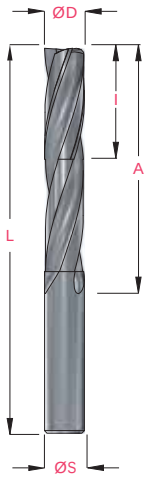
ØD	L	ØS	I	A	Part Number
14	150	14	45	95	9Q.140
16	150	16	45	95	9Q.160
16	175	16	25	115	9Q.160.A
18	150	18	45	95	9Q.180
18	175	16	25	115	9Q.180.A

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min



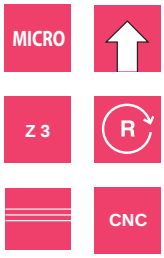
9S HW Fresa integrale elicoidale - positiva Z=3

HW Solid carbide UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral



ØD	L	ØS	I	A	Part Number
14	150	14	45	95	9S.140
16	150	16	45	95	9S.160
16	175	16	25	115	9S.160.A
18	150	18	45	95	9S.180
18	175	16	25	115	9S.180.A

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min



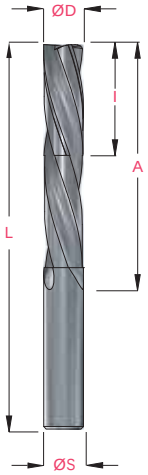
HW Fresa integrale elicoidale negativa Z=3

9W

HW Solid carbide spiral DOWN CUT router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

ØD	L	ØS	I	A	Part Number
14	150	14	45	95	9W.140
16	150	16	45	95	9W.160
16	175	16	25	115	9W.160.A
18	150	18	45	95	9W.180
18	175	16	25	115	9W.180.A

18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min



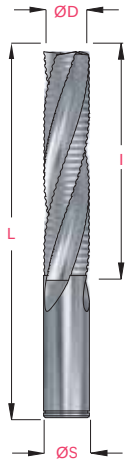
Fresa HM integrale elicoidale positiva Z=3

9V

HW Solid carbide UP CUT roughing spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

ØD	L	ØS	I	Part Number	Part Number
20	130	20	52	9V.200	9V.200.L
25	200	25	130	9V.250	9V.250.L

18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min



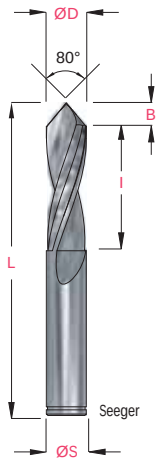
Fresa HW integrale per forare e fresare Z=2

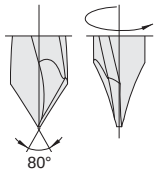
9Y

HW Solid carbide 80° chamfer UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

ØD	L	ØS	I	B	Part Number
8	80	8	38	4.8	9Y.080
10	100	10	46	6	9Y.100
12	110	12	50	7.2	9Y.120
16	120	16	52	9.6	9Y.160

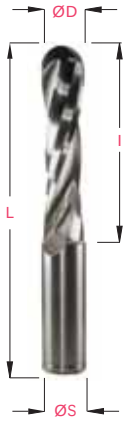
18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min





9B Fresa HW integrale raggiata Z=2

HW Solid carbide ball nose UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

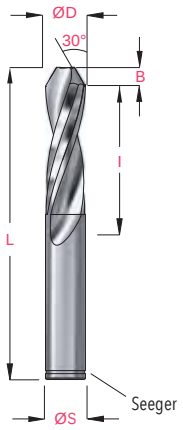


ØD	R	I	L	ØS	Part Number
3	1,5	12	40	3	9B.030
3	1,5	12	50	3	9B.030.A
4	2	12	50	4	9B.040
5	2,5	18	50	5	9B.050
6	3	18	60	6	9B.060
6	3	27	60	6	9BB.060
8	4	22	80	8	9B.080
8	4	32	80	8	9B.080.A
8	4	32	100	8	9BB.080.B
10	5	22	80	10	9B.100
10	5	32	80	10	9B.100.A
10	5	42	100	10	9BB.100
12	6	27	80	12	9B.120
12	6	32	80	12	9B.120.A
12	6	42	100	12	9B.120.B
12	6	52	110	12	9BB.120
14	7	42	100	14	9B.140
14	7	52	100	14	9B.140.A
16	8	32	90	16	9B.160
16	8	52	100	16	9B.160.A
16	8	72	140	16	9BB.160
18	9	52	100	18	9B.180
18	9	72	120	18	9B.180.A
18	9	102	150	18	9B.180.B
20	10	55	110	20	9B.200
20	10	72	140	20	9BB.200
20	10	102	150	20	9BB.200.A
25	12,5	102	150	20	9B.250

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min

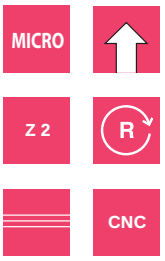
9Z Fresa HW integrale per forare e fresare Z=2

HW Solid carbide 60° chamfer UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral



ØD	L	ØS	I	B	Part Number
14	100	14	42	8	9Z.140
16	120	16	52	9	9Z.160
18	120	16	52	10	9Z.180
20	120	18	52	11	9Z.200

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min



Fresa HW integrale per macchina “OMEC F8”

13A

HW Solid carbide spiral router bit for OMEC F8	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

ØD	L	ØS	I	A	B	Part Number
14	60	14	16	10°	45°	13A.140.R

18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

Z = 2

CNC

HW fresa a taglio inclinato per canali Z=3

21A

HW Solid carbide grooving	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

ØD	L	ØS	I	∠°	DX - RH
14	75	10	45	45	21A.450.R
14	75	10	45	60	21A.600.R
14	75	10	45	90	21A.900.R

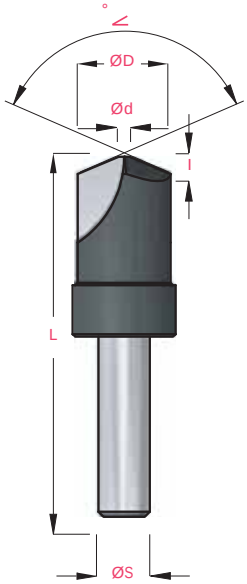
18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

Z 3

CNC

6

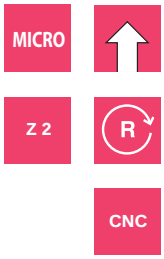
22A Frese HW per lavorazione alucobond Z=2

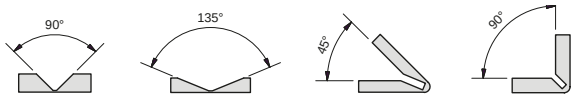


HW Solid carbide cutter for alucobond	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

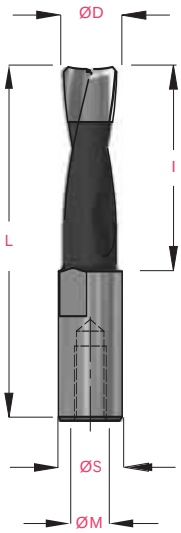
ØD	Ød	L	ØS	l	∠°	DX - RH
18	3	60	10	8	90	22A.090
18	2	60	10	3.3	135	22A.135

Fresatura per piegare fogli "ALUCOBOND" 18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min





54A Frese per macchine Festool modello Domino



TCT Router bit for Festool Domino	VHM Vollhartmetallfräser	HW Mèches helic. pour defonceuse	HW Fresas helicoidales integral

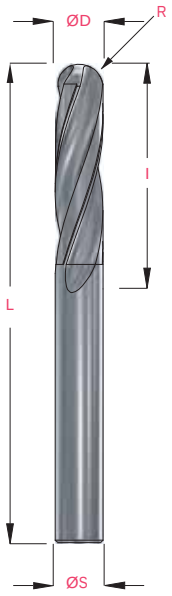
ØD	ØS	ØM	l	L	Part Number
4	10	M6x0.75	11	38	54A.040.R
5	10	M6x0.75	20	49	54A.050.R
6	10	M6x0.75	28	49	54A.060.R
8	10	M6x0.75	28	49	54A.080.R
8	14	M8x1	50	90	54AA.080.R
10	10	M6x0.75	28	49	54A.100.R
10	14	M8x1	70	90	54AA.100.R
12	14	M8x1	70	90	54AA.120.R
14	14	M8x1	70	90	54AA.140.R

HW fresa integrale elicoidale raggiata Z=3

9K

HW Solid carbide ball nose UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral

ØD	L	ØS	l	R	PART NUMBER
8	80	8	22	4	9K.080
8	80	8	32	4	9K.080.A
10	80	10	32	5	9K.100
10	100	10	42	5	9K.100.A
12	80	12	32	6	9K.120
12	100	12	42	6	9K.120.A
12	100	12	52	6	9K.120.B
14	100	14	42	7	9K.140
14	100	14	52	7	9K.140.A
16	100	16	42	8	9K.160
16	100	16	52	8	9K.160.A
16	120	16	72	8	9K.160.B
18	100	18	52	9	9K.180
18	120	18	72	9	9K.180.A
18	150	18	102	9	9K.180.B
20	100	20	52	10	9K.200
20	120	20	72	10	9K.200.A
20	150	20	102	10	9K.200.B
25	150	20	102	12,5	9K.250

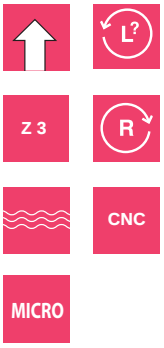


18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

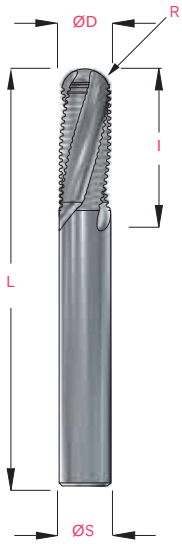
HW fresa integrale elicoidale raggiata con rompitruciolo Z=3

9X

HW Solid carbide ball nose roughing UP CUT spiral router bit | VHM Vollhartmetallfräser | HW Mèches helic. pour defonceuse | HW Fresas helicoidales integral



ØD	L	ØS	l	R	Part Number
8	80	8	22	4	9X.080
8	80	8	32	4	9X.080.A
10	80	10	32	5	9X.100
10	100	10	42	5	9X.100.A
12	80	12	32	6	9X.120
12	100	12	42	6	9X.120.A
12	100	12	52	6	9X.120.B
14	100	14	42	7	9X.140
14	100	14	52	7	9X.140.A
16	100	16	42	8	9X.160
16	100	16	52	8	9X.160.A
16	120	16	72	8	9X.160.B
18	100	18	52	9	9X.180
18	120	18	72	9	9X.180.A
18	150	18	102	9	9X.180.B
20	100	20	52	10	9X.200
20	120	20	72	10	9X.200.A
20	150	20	102	10	9X.200.B
25	150	20	102	12.5	9X.250



18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

HW Fresa a taglienti diritti Z2 + 1

TCT Straight router bit with plunge tip | HW Nutfräser | HW Mèches a defoncer | HW Fresa de pantografo

*HM integrale
Solid carbide
VHM
Monobloc
MD integral

ØD	L	l	ØS = 12	ØS = 12,7
3*	55	8	8A.030	8A.030.F
4*	55	10	8A.040	8A.040.F
5*	60	15	8A.050	8A.050.F
6*	60	18	8A.060	8A.060.F
6*	65	25	8A.060.A	8A.060.A.F
8	65	25	8A.080.A	8A.080.A.F
8	70	30	8A.080.B	8A.080.B.F
10	65	25	8A.100.A	8A.100.A.F
10	70	30	8A.100.B	8A.100.B.F
10	75	35	8A.100.C	8A.100.C.F
10	80	40	8A.100.D	8A.100.D.F
12	65	25	8A.120.A	8A.120.A.F
12	80	40	8A.120.D	8A.120.D.F
12	108	50	8A.120.E	8A.120.E.F
14	65	25	8A.140.A	8A.140.A.F
14	80	40	8A.140.D	8A.140.D.F
15	65	25	8A.150.A	8A.150.A.F
15	80	40	8A.150.D	8A.150.D.F
16	65	25	8A.160.A	8A.160.A.F
16	80	40	8A.160.D	8A.160.D.F
18	65	25	8A.180.A	8A.180.A.F
18	80	40	8A.180.D	8A.180.D.F
20	65	25	8A.200.A	8A.200.A.F
20	80	40	8A.200.D	8A.200.D.F
22	65	25	8A.220.A	8A.220.A.F
22	80	40	8A.220.D	8A.220.D.F
24	65	25	8A.240.A	8A.240.A.F
24	80	40	8A.240.D	8A.240.D.F
25	65	25	8A.250.A	8A.250.A.F
25	80	40	8A.250.D	8A.250.D.F
26	65	25	8A.260.A	8A.260.A.F
26	80	40	8A.260.D	8A.260.D.F
28	65	25	8A.280.A	8A.280.A.F
30	65	25	8A.300.A	8A.300.A.F
30	80	40	8A.300.D	8A.300.D.F
35	65	25	8A.350.A	8A.350.A.F
35	80	40	8A.350.D	8A.350.D.F

Z 2 + 1 | R | CNC | PTFE

18000 ÷ 24000 rpm F = 4 - 8MEC

HW Fresa a taglienti diritti Z2+1

35A

TCT Straight router bit with plunge tip | HW Nutfräser | HW Mèches a defoncer | HW Fresa de pantografo

Z 2 + 1 | R | CNC | PTFE

ØD	L	ØS	I	Part Number
3 *	55	8	10	35A.030
4 *	55	8	12	35A.040
5 *	55	8	13	35A.050
6 *	55	8	15	35A.060
8	70	8	20	35A.080
8	90	8	30	35A.080.A
10	70	8	20	35A.100
10	90	8	40	35A.100.A
12	70	8	20	35A.120
12	90	8	40	35A.120.A
14	70	8	20	35A.140
15	70	8	20	35A.150
16	70	8	20	35A.160
16	90	8	40	35A.160.A
18	70	8	20	35A.180
18	90	8	40	35A.180.A
20	70	8	20	35A.200
20	90	8	40	35A.200.A
22	70	8	20	35A.220
24	70	8	20	35A.240
25	70	8	20	35A.250
26	70	8	20	35A.260
28	70	8	20	35A.280
30	70	8	20	35A.300

*HM integrale
Solid carbide
VHM
Monobloc
MD integral

18000 ÷ 24000 rpm F = 6 - 8MEC

HW Fresa a taglienti diritti Z2+1

8AA

TCT Straight router bit with plunge tip | HW Nutfräser | HW Mèches a defoncer | HW Fresa de pantografo

R | Z 2 + 1 | CNC | PTFE

ØD	L	ØS	I	Part Number	ØD	L	ØS	I	Part Number
8	60	12X1	25	8AA.080.A	18	92	12X1	60	8AA.180.E
8	65	12X1	30	8AA.080.B	20	60	12X1	25	8AA.200.A
10	60	12X1	25	8AA.100.A	20	75	12X1	40	8AA.200.D
10	65	12X1	30	8AA.100.B	20	92	12X1	60	8AA.200.E
10	75	12X1	40	8AA.100.D	22	60	12X1	25	8AA.220.A
12	60	12X1	25	8AA.120.A	22	75	12X1	40	8AA.220.D
12	75	12X1	40	8AA.120.D	24	60	12X1	25	8AA.240.A
12	92	12X1	60	8AA.120.E	24	75	12X1	40	8AA.240.D
14	60	12X1	25	8AA.140.A	25	60	12X1	25	8AA.250.A
14	75	12X1	40	8AA.140.D	25	75	12X1	40	8AA.250.D
15	60	12X1	25	8AA.150.A	26	60	12X1	25	8AA.260.A
15	75	12X1	40	8AA.150.D	28	60	12X1	25	8AA.280.A
16	60	12X1	25	8AA.160.A	30	60	12X1	25	8AA.300.A
16	75	12X1	40	8AA.160.D	30	75	12X1	40	8AA.300.D
16	92	12X1	60	8AA.160.E	35	60	12X1	25	8AA.350.A
18	60	12X1	25	8AA.180.A	35	75	12X1	40	8AA.350.D
18	75	12X1	40	8AA.180.D					

10A HW Fresa a taglienti diritti Z=2+1

TCT Straight router bit with plunge tip | HW Nutfräser | HW Mèches a defoncer | HW Fresa de pantografo

*HM integrale
Solid carbide
VHM
Monobloc
MD integral

ØD	L	ØS	I	Part Number
3*	65	10	10	10A.030
4*	65	10	10	10A.040
5*	65	10	12	10A.050
6*	65	10	15	10A.060
7*	65	10	17	10A.070
8	70	10	25	10A.080
9	70	10	25	10A.090
10	70	10	25	10A.100
12	70	10	25	10A.120
14	70	10	25	10A.140
15	70	10	25	10A.150
16	70	10	25	10A.160
18	70	10	25	10A.180
20	70	10	25	10A.200
22	70	10	25	10A.220
24	70	10	25	10A.240
25	70	10	25	10A.250
26	70	10	25	10A.260
30	70	10	25	10A.300
35	70	10	25	10A.350

Z 2 + 1 | R | CNC | PTFE

10B HW Fresa a taglienti diritti Z=2+1

TCT Straight router bit with plunge tip | HW Nutfräser | HW Mèches a defoncer | HW Fresa de pantografo

ØD	L	ØS	I	Part Number
3	87	10	10	10B.030
4	87	10	12	10B.040
5	87	10	12	10B.050
6	87	10	15	10B.060
8	87	10	40	10B.080
10	87	10	40	10B.100
12	87	10	40	10B.120
14	87	10	40	10B.140
15	87	10	40	10B.150
16	87	10	40	10B.160
18	87	10	40	10B.180
20	87	10	40	10B.200

Z 2 + 1 | R | CNC | PTFE

HW Fresa a raggio concavo

32AA

TCT Ovolo cutter | HW Radius-Fräser | HW Mèches profilées | HW Fresas de perfil para fresadora

Z 2 | R | PTFE | CNC

ØD	R	ØS	I	Part Number
24	6	12	12	32AA.060
28	8	12	12	32AA.080
32	10	12	14	32AA.100
36	12	12	19	32AA.120
42	15	12	21	32AA.150
52	20	12	26	32AA.200
52	20	12.7	26	32AA.200.A.F
63	25	12	32	32AA.250
63	25	12.7	32	32AA.250.A.F

HW Fresa a raggio concavo

42AA

TCT Ovolo cutter | HW Radius-Fräser | HW Mèches profilées | HW Fresas de perfil para fresadora

Z 2 | R | PTFE | CNC

ØD	R	ØS	I	Part Number
28	8	M12X1	13	42AA.080
32	10	M12X1	15	42AA.100
36	12	M12X1	19	42AA.120
42	15	M12X1	21	42AA.150
52	20	M12X1	25	42AA.200

HW Fresa a raggio concavo

32AC

TCT rounding over cutter | HW Radius-Fräser | HW Mèches profilées | HW Fresas de perfil para fresadora

Z 2 | R | PTFE | CNC

ØD	R	ØS	I	Part Number
29	8	12X50	13	32AC.080
33	10	12X50	15	32AC.100
37	12	12X50	19	32AC.120
43	15	12X50	21	32AC.150
53	20	12X50	25	32AC.200

42AC HW Fresa a raggio concavo

TCT Rounding over cutter | HW Radius-Fräser | HW Mèches profilées | HW Fresas de perfil para fresadora

ØD	R	ØS	I	Part Number
25	6	M12X1	12	42AC.060
29	8	M12X1	13	42AC.080
33	10	M12X1	15	42AC.100
37	12	M12X1	19	42AC.120
43	15	M12X1	21	42AC.150
53	20	M12X1	25	42AC.200
63	25	M12X1	31	42AC.250

Z = 2 | R | CNC | PTFE

33AA HW Fresa a raggio convesso

TCT Cove cutter | HW Rhohkehlfräser | HW Mèches profilées | HW Fresas de perfil para fresadora

ØD	R	ØS	I	Part Number
16	8	12X50	18	33AA.080
20	10	12X50	18	33AA.100
24	12	12X50	18	33AA.120
30	15	12X50	18	33AA.150

Z = 2 | R | PTFE

43AA HW Fresa a raggio convesso

TCT Cove cutter | HW Rhohkehlfräser | HW Mèches profilées | HW Fresas de perfil para fresadora

ØD	R	ØS	I	Part Number
16	8	M12X1	15	43AA.080
20	10	M12X1	12	43AA.100
24	12	M12X1	16	43AA.120
30	15	M12X1	16	43AA.150
40	20	M12X1	25	43AA.200

Z = 2 | R | CNC | PTFE

HW Fresa a raggio convesso

33AC

TCT Cove cutter | HW Rhohkehlfräser | HW Mèches profilées | HW Fresas de perfil para fresadora

Z = 2 | R | CNC | PTFE

ØD	R	ØS	I	Part Number
29	8	12X50	18	33AC.080
33	10	12X50	18	33AC.100
37	12	12X50	18	33AC.120
43	15	12X50	18	33AC.150

HW Fresa a raggio convesso

43AC

TCT Cove cutter | HW Rhohkehlfräser | HW Mèches profilées | HW Fresas de perfil para fresadora

Z = 2 | R | CNC | PTFE

ØD	R	ØS	I	Part Number
25	6	M12X1	12	43AC.060
29	8	M12X1	12	43AC.080
33	10	M12X1	12	43AC.100
37	12	M12X1	16	43AC.120
43	15	M12X1	16	43AC.150
53	20	M12X1	23	43AC.200

HW Fresa a mezzo tondo

32AD

TCT Staff bead | HW Rhohkehlfräser | HW Mèches profilées | HW Fresas de perfil para fresadora

Z = 2 | R | PTFE

ØD	R	I	ØS=12	ØS=12,7
22	4	16	32AD.040	32AD.040.F
25	5	19	32AD.050	32AD.050.F
27	6	22	32AD.060	32AD.060.F
31	8	25	32AD.080	32AD.800.F
35	10	30	32AD.100	32AD.100.F
39	12	34	32AD.120	32AD.120.F
45	15	42	32AD.150	32AD.150.F

42AD HW Fresa a raggio concavo

TCT Staff bead | HW Radius-Fräser | HW Mèches profilées | HW Fresas de perfil para fresadora

ØD	R	ØS	I	Part Number
25	6	M12X1	22	42AD.060
31	8	M12X1	26	42AD.080
35	10	M12X1	31	42AD.100
40	12	M12X1	35	42AD.120
45	15	M12X1	41	42AD.150

Z = 2 | R | CNC | PTFE

11B Fresa multitaglio per Hundegger

TCT Spiral cutter for Hundegger | Mehrschneidenfräser für Hundegger-Maschinen | Fraise multi-dent pour machine Hundegger | fresa multicorte para Hundegger

ØD	I	ØS	Z	L	Rot	For Finishing Part Number	For Roughing Part Number
30	90	28	3	160	DX - RH	11B.300	11B.RT.300
30	120	28	3	190	DX - RH	11B.300.A	11B.RT.300.A
30	150	28	3	220	DX - RH	11B.300.B	11B.RT.300.B
40	90	28	4	160	DX - RH	11B.400	11B.RT.400
40	120	28	4	190	DX - RH	11B.400.A	11B.RT.400.A
40	150	28	4	220	DX - RH	11B.400.B	11B.RT.400.B
40	180	28	4	255	DX - RH	11B.400.C	11B.RT.400.C
50	90	28	4	160	DX - RH	11B.500	11B.RT.500
50	120	28	4	190	DX - RH	11B.500.A	11B.RT.500.A
50	150	28	4	220	DX - RH	11B.500.B	11B.RT.500.B
50	180	28	4	255	DX - RH	11B.500.C	11B.RT.500.C
50	220	28	4	295	DX - RH	11B.500.D	11B.RT.500.D

Z 3 Z 4 | R | CNC | PTFE | MICRO

KSS Punta per mortasatrice

102A

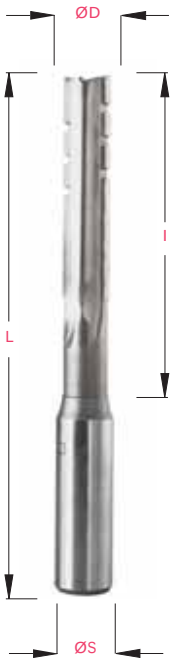
KSS Mortise bit | KSS Langlochfräsbohrer | KSS Mèches à martaiser | KSS Broca para escoplear

Z 2

R

L

ØD	L	ØS	I	DX-RH	SX-LH
6	115	13X50	45	102A.060	102A.060.L
7	115	13X50	45	102A.070	102A.070.L
8	125	13X50	50	102A.080	102A.080.L
9	125	13X50	50	102A.090	102A.090.L
10	135	13X50	55	102A.100	102A.100.L
11	135	13X50	55	102A.110	102A.110.L
12	145	13X50	65	102A.120	102A.120.L
13	145	13X50	65	102A.130	102A.130.L
14	155	13X50	75	102A.140	102A.140.L
15	155	13X50	75	102A.150	102A.150.L
16	155	13X50	75	102A.160	102A.160.L
18	170	13X50	85	102A.180	102A.180.L
20	170	13X50	85	102A.200	102A.200.L
22	170	13X50	85	102A.220	102A.220.L
24	170	13X50	85	102A.240	102A.240.L



KSS Punta per mortasatrice

102B

KSS Mortise bit | KSS Langlochfräsbohrer | KSS Mèches à martaiser | KSS Broca para escoplear

Z 2

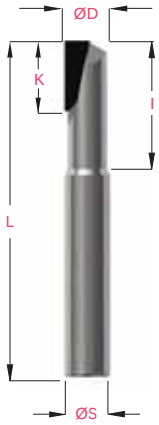
R

L

ØD	L	ØS	I	DX-RH	SX-LH
6	115	16X50	45	102B.060	102B.060.L
7	115	16X50	45	102B.070	102B.070.L
8	125	16X50	50	102B.080	102B.080.L
9	125	16X50	50	102B.090	102B.090.L
10	135	16X50	55	102B.100	102B.100.L
11	135	16X50	55	102B.110	102B.110.L
12	145	16X50	65	102B.120	102B.120.L
13	145	16X50	65	102B.130	102B.130.L
14	155	16X50	75	102B.140	102B.140.L
15	155	16X50	75	102B.150	102B.150.L
16	155	16X50	75	102B.160	102B.160.L
18	170	16X50	85	102B.180	102B.180.L
20	170	16X50	85	102B.200	102B.200.L
22	170	16X50	85	102B.220	102B.220.L
24	170	16X50	85	102B.240	102B.240.L

231A Fresa diamante tagliente dritto Z1 con corpo HW

PCD shank cutter straight cut Z1 HM body | Diamant-Fräser mit gerader Schneidkante Z1 mit HM-Körper | Fraise diamantée coupe droite Z1 avec corps en HW | Fresa DIA de corte recto Z1 cuerpo Hw

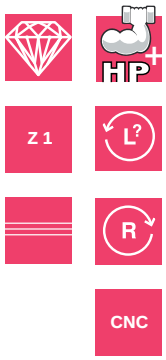


ØD	L	ØS	I	K	Part Number
5	60	6	18	10	231A.050
6	60	6	18	12	231A.060
8	70	8	24	12	231A.080
8	70	8	24	20	231A.080.A
10	75	10	28	15	231A.100
10	75	10	28	20	231A.100.A
12	75	12	28	20	231A.120

231AN Fresa Diamante Tagliente Negativo Z1 con Corpo HW

PCD Shank Cutter Downcut Z1 Hm Body | Diamant-Fräser mit negativer Spirale Z1 mit HM-Körper | Fraise diamantée coupe négative Z1 avec corps en HW | Fresa DIA de corte negativo Z1 cuerpo Hw

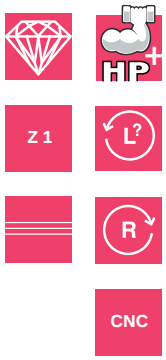
ØD	L	ØS	I	K	Part Number
6	60	6	19	12	231AN.060
8	70	8	23	12	231AN.080
8	70	8	23	15	231AN.080.A
10	75	10	28	15	231AN.100
12	75	12	28	20	231AN.120



231B Fresa Diamante Tagliente Dritto Z2 con Corpo HW

PCD Shank Cutter Straight Cut Z2 HM Body | Diamant-Fräser mit gerader Schneidkante Z2 mit HM-Körper | Fraise diamantée coupe droite Z2 avec corps en HW | Fresa DIA de corte recto Z2 cuerpo HW

ØD	L	ØS	I	K	Part Number
8	70	8	24	12	231B.080
8	70	8	24	15	231B.080.A
10	75	10	28	15	231B.100
10	75	10	28	20	231B.100.A
12	75	12	28	20	231B.120

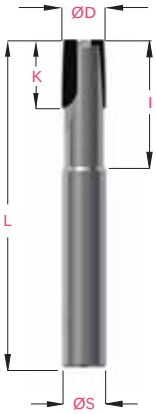


Fresa diamante tagliente negativo Z2 con corpo HW

231BN

PCD Shank Cutter Downcut Z2 Hm Body	Diamant-Fräser mit negativer Spirale Z2 mit HM-Körper	Fraise diamantée coupe négative Z2 avec corps en HW	Fresa DIA de corte negativo Z2 cuerpo HW

ØD	L	ØS	I	K	Part Number
8	70	8	24	12	231BN.080
8	70	8	24	15	231BN.080.A
10	75	10	28	15	231BN.100
10	75	12	28	15	231BN.100.A
10	75	10	28	20	231BN.100.B
12	75	12	28	20	231BN.120

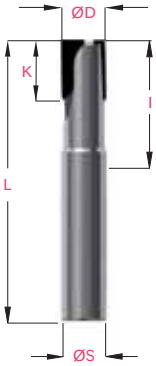


Fresa diamante tagliente alternato positivo/negativo Z2 con corpo HW

230BNP

Pcd Shank Cutter Compression Z2 Hm Bod	Diamant-Fräser mit abwechselnd positiver/ negativer Spirale Z2 mit HM-Körper	Fraise diamantée coupe alternée positive/ négative Z2, corps en HW	Fresa DIA de corte alterno positivo/negativo Z2 cuerpo HW

ØD	L	ØS	I	K	Part Number
8	70	8	24	15	230BNP.080
10	75	10	24	15	230BNP.100
12	75	12	24	15	230BNP.120
12	75	12	24	20	230BNP.120.A



Fresa elicoidale in diamante Z1+1 corpo in acciaio PCD H2,5 mm

240A

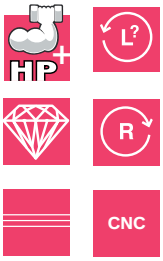
PCD spiral shank cutter Z1+1 Steel body PCD H=2,5 mm	Diamant-Spiralfräser Z1+1 mit Stahlkörper PKD H2,5 mm	Fraise hélicoïdale diamant Z1+1, corps en acier PCD H2,5 mm	Fresa helicoidal DIA Z1+1 cuerpo en acero Pcd H2,5 mm

ØD	L	ØS	I	Part Number	ØD	L	ØS	I	Part Number
10	75	10	25	240A.100	16	103	20	43	240A.160.C
10	75	12	25	240A.100.A	18	85	20	25	240A.180.A
12	75	12	25	240A.120.A	18	94	20	34	240A.180.B
12	84	12	34	240A.120.B	18	103	20	43	240A.180.C
12	93	12	43	240A.120.C	20	85	20	25	240A.200.A
16	85	16	25	240A.160	20	94	20	35	240A.200.B
16	85	20	25	240A.160.A	20	103	20	43	240A.200.C
16	94	16	34	240A.160.D	20	112	20	52	240A.200.D
16	94	20	34	240A.160.B	20	121	20	61	240A.200.E
16	103	16	43	240A.160.E					

235A Fresa elicoidale in diamante Z1+1 corpo in acciaio PCD H2,5 mm

PCD spiral shank cutter Z1+1 Steel body PCD H=2,5 mm | Diamant-Spiralfräser Z1+1 mit Stahlkörper PKD H2,5 mm | Fraise hélicoïdale diamant Z1+1, corps en acier PCD H2,5 mm | Fresa helicoidal DIA Z1+1 cuerpo en acero Pcd H2,5 mm

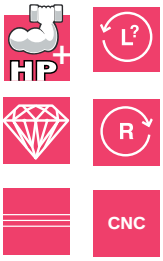
ØD	L	ØS	I	K	Part Number
8	75	8	34	27	235A.080
8	80	8	39	35	235A.080.A
8	90	8	49	44	235A.080.B
10	75	10	34	27	235A.100
10	80	10	39	35	235A.100.A
10	90	10	49	44	235A.100.B
12	80	12	34	27	235A.120
12	90	12	39	35	235A.120.A
12	90	12	49	44	235A.120.B



244A Fresa elicoidale in diamante Z2+2 corpo in acciaio PCD H2,5 mm

PCD spiral shank cutter Z2+2 Steel body PCD H=2,5 mm | Diamant-Spiralfräser Z2+2 mit Stahlkörper PKD H2,5 mm | Fraise hélicoïdale diamant Z2+2, corps en acier PCD H2,5 mm | Fresa helicoidal DIA Z1+2 cuerpo en acero Pcd H2,5 mm

ØD	L	ØS	I	Part Number
12	75	12	25	244A.120
12	84	12	35	244A.120.A
16	85	16	25	244A.160.G
16	85	20	25	244A.160.A
16	94	16	34	244A.160.H
16	94	20	34	244A.160.B
18	85	20	25	244A.180.A
18	94	20	34	244A.180.B
18	103	20	43	244A.180.C
20	85	20	25	244A.200.A
20	94	20	34	244A.200.B
20	103	20	43	244A.200.C
20	112	20	52	244A.200.D



Fresa elicoidale in diamante Z2+2 assiale 30° corpo in acciaio PCD h4,5 mm

251A

PCD Spiral Shank Cutter Z2+2 Cutting Angle 30° Steel Body PCD H=4,5 mm | Diamant-Spiralfräser Z2+2 mit Achswinkel 30° Stahlkörper PKD H4,5 mm | Fraise hélicoïdale diamant Z2+2, angle d'axe 30°, corps en acier PCD H4,5 mm | Fresa helicoidal DIA Z2+2 axsial 30° cuerpo en acero Pcd H4,5 mm

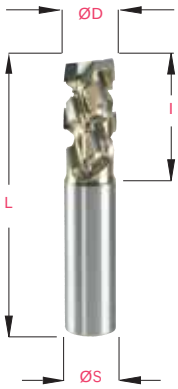
ØD	L	ØS	l	Part Number
18	85	20	26	251A.180
20	85	20	26	251A.200
20	91	20	31	251A.200.A
20	96	20	36	251A.200.B
20	101	20	43	251A.200.C
20	107	20	47	251A.200.D
22	85	20	26	251A.220.A
22	96	20	36	251A.220.B
22	101	20	43	251A.220.C
22	107	20	47	251A.220.D
22	117	20	57	251A.220.E
25	106	25	43	251A.250.A
25	112	25	47	251A.250.B
25	117	25	52	251A.250.C
25	122	25	57	251A.250.D
25	128	25	63	251A.250.E
25	133	25	68	251A.250.F

Fresa elicoidale in diamante Z2+2 assiale 20° corpo in acciaio PCD h3 mm

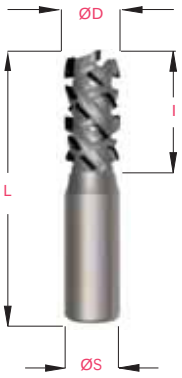
250A

PCD Spiral Shank Cutter Z2+2 Cutting Angle 30° Steel Body PCD H=4,5 mm | Diamant-Spiralfräser Z2+2 mit Achswinkel 30° Stahlkörper PKD H4,5 mm | Fraise hélicoïdale diamant Z2+2, angle d'axe 30°, corps en acier PCD H4,5 mm | Fresa helicoidal DIA Z2+2 axsial 30° cuerpo en acero Pcd H4,5 mm

ØD	L	LT	Z	H	DX-RH	SX-LH
18	22,5	85	1HM+8DP	3	250A.180.A	250A.180.AL
18	28	90	1HM+10DP	3	250A.180.B	250A.180.BL
18	33,5	95	1HM+12DP	3	250A.180.C	250A.180.CL
20	22,5	85	1HM+8DP	3	250A.200.A	250A.200.AL
20	28	90	1HM+10DP	3	250A.200.B	250A.200.BL
20	33,5	95	1HM+12DP	3	250A.200.C	250A.200.CL
20	39	100	1HM+14DP	3	250A.200.D	250A.200.DL
20	44,5	105	1HM+16DP	3	250A.200.E	250A.200.EL
20	50	110	1HM+18DP	3	250A.200.F	250A.200.FL
20	56	115	1HM+20DP	3	250A.200.G	250A.200.GL
20	61	120	1HM+22DP	3	250A.200.H	250A.200.HL
25	22,5	85	1HM+8DP	3	250A.250.A	250A.250.AL
25	28	90	1HM+10DP	3	250A.250.B	250A.250.BL
25	33,5	95	1HM+12DP	3	250A.250.C	250A.250.CL
25	39	100	1HM+14DP	3	250A.250.D	250A.250.DL
25	44,5	105	1HM+16DP	3	250A.250.E	250A.250.EL
25	50	110	1HM+18DP	3	250A.250.F	250A.250.FL
25	56	115	1HM+20DP	3	250A.250.G	250A.250.GL
25	61	120	1HM+22DP	3	250A.250.H	250A.250.HL



260A Fresa elicoidale in diamante Z2+2 assiale 45° corpo in acciaio PCD H4,5 mm



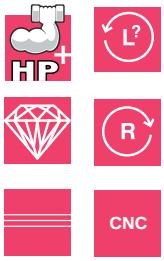
PCD helicoidal shank cutter Z2+2 cutting angle 45° steel body PCD H4,5 mm

Diamant-Spiralfräser Z2+2 mit Achswinkel 45° Stahlkörper PKD H4,5 mm

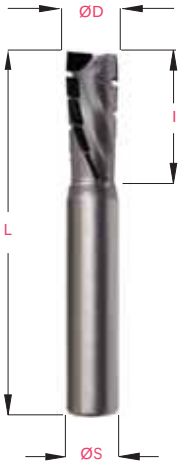
Fraise hélicoïdale diamant Z2+2, angle d'axe 45°, corps en acier PCD H4,5 mm

Fresa helicoidal DIA Z2+2 axsial 45° cuerpo en acero Pcd H4,5 mm

ØD	L	ØS	l	Part Number
20	86	20	26	260A.200.B
20	95	20	35	260A.200.C
20	104	20	44	260A.200.D
22	86	20	26	260A.220.B
22	95	20	35	260A.220.C
22	104	20	44	260A.220.D
22	113	20	53	260A.220.E
25	91	25	26	260A.250.C
25	100	25	35	260A.250.E
25	109	25	44	260A.250.G
25	118	25	53	260A.250.I
25	127	25	62	260A.250M
25	136	25	71	260A.250.N



200A Fresa elicoidale in diamante Z2+2 corpo in acciaio PCD H3,5 mm



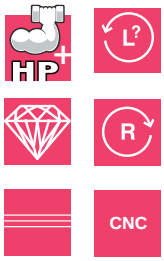
PCD spiral shank cutter Z2+2 Steel body PCD H=3,5 mm

Diamant-Spiralfräser Z2+2 mit Stahlkörper PKD H3,5 mm

Fraise hélicoïdale diamant Z2+2, corps en acier PCD H3,5 mm

Fresa helicoidal DIA Z2+2 cuerpo en acero PCD H3,5 mm

ØD	L	ØS	l	Part Number
10	64	12	18	200A.100
12	64	12	18	200A.120
12	71	12	25	200A.120.A
12	74	12	28	200A.120.B



Fresa Nesting Elicoidale In Diamante Z3+3 Corpo In Densimet, Prevalentemente Negativa

245A

PCD helicoidal shank cutter for nesting Z3+3 HDM body PCD H3,5 mm, mainly negative

Diamant-Spiralfräser für Nesting Z3+3 Körper aus Densimet, mit meist negativer Spirale

Fraise Nesting hélicoïdale diamant Z3+3, corps en Densimet, à prévalence négative

Fresa Nesting helicoidal DIA Z3+3 cuerpo en densimet Pcd H4,5 mm predominantemente negat.

ØD	L	ØS	l	Part Number
12	70	12	21	245A.120.A
12	75	12	25	245A.120.B
12	75	12	27	245A.120.F
12	75	12	32	245A.120.G
14	85	16	27	245A.140.A
14	85	16	32	245A.140.B
16	90	16	37	245A.160.C

Fresa nesting elicoidale in diamante Z3+3 corpo in Densimet, prevalentemente negativa

220A

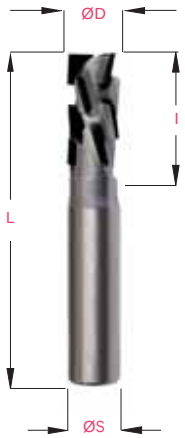
PCD Spiral Shank Cutter For Nesting Z3+3 Hdm Body PCD H3,5 Mm, Mainly Downcut

Diamant-Spiralfräser für Nesting Z3+3 Körper aus Densimet, mit meist negativer Spirale

Fraise Nesting hélicoïdale diamant Z3+3, corps en Densimet, à prévalence négative

Fresa Nesting helicoidal DIA Z3+3 cuerpo en densimet Pcd H4,5 mm predominant. negattva

ØD	L	ØS	l	Part Number
12	65	12	19	220A.120
12	70	12	24	220A.120.A
12	75	12	29	220A.120.B
14	85	16	29	220A.140
14	91	16	35	220A.140.A



1A HW Fresa a taglienti diritti a fissaggio meccanico

Replacement tip straight router bit	HW Wendeplattenoberfräser	HW Mèches avec couteaux interc.	HW cabezal de pantógrafo

ØD	L	ØS	I	Part Number
15	50	6	20	1A.150.A
15	50	6.35	20	1A.150.B
15	70	8	20	1A.150.C
15	70	12	20	1A.150.E
16	50	6	20	1A.160.A
16	50	6.35	20	1A.160.B
16	70	8	20	1A.160.C
16	70	12	20	1A.160.E
18	50	6	20	1A.180.A
18	50	6.35	20	1A.180.B
18	70	8	20	1A.180.C
18	70	12	20	1A.180.E
20	50	6	20	1A.200.A
20	50	6.35	20	1A.200.B
20	70	8	20	1A.200.C
20	70	12	20	1A.200.E
22	50	6	20	1A.220.A
22	50	6.35	20	1A.220.B
22	70	8	20	1A.220.C
22	70	12	20	1A.220.E

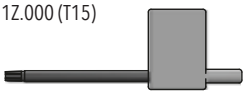
Z 2 + 1

R

CNC

1N.121 (12x12x1.5) 1V.002 18000 ÷ 24000 rpm F = 3÷ 9 mt/min

1Z.000 (T15)



2B HW Fresa a taglienti diritti a fissaggio meccanico

Replacement tip straight router bit	HW Wendeplattenoberfräser	HW Mèches avec couteaux interc.	HW cabezal de pantógrafo

ØD	L	ØS	I	Part Number
16	105	12	50	2B.160.R
16	105	20	50	2B.161.R
18	105	12	50	2B.180.R
18	105	20	50	2B.181.R
20	105	12	50	2B.200.R
20	105	20	50	2B.201.R
22	105	12	50	2B.220.R
22	105	20	50	2B.221.R

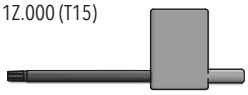
Z 2 + 1

R

CNC

1N.401 (40x12x1.5) 1V.002 18000 ÷ 24000 rpm F = 3 ÷ 9 mt/min

1N.411 (40x12x1.5) 1Z.000 (T15)



HW Fresa a taglienti diritti a fissaggio meccanico Z=1

Replacement tip straight router bit 1 flute | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 1

R

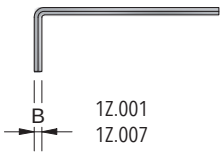
CNC

ØD	L	ØS	l	Part Number
8	63	6	20	2C.080.A
8	63	6,35	20	2C.080.B
8	63	8	20	2C.080.C
8	68	10	20	2C.080.D
8	68	12	20	2C.080.E
8	68	12,7	20	2C.080.F
10	63	6	20	2C.100.A
10	63	6,35	20	2C.100.B
10	63	8	20	2C.100.C
10	68	10	20	2C.100.D
10	68	12	20	2C.100.E
10	68	12,7	20	2C.100.F
12	63	6	20	2C.120.A
12	63	6,35	20	2C.120.B
12	63	8	20	2C.120.C
12	68	10	20	2C.120.D
12	68	12	20	2C.120.E
12	68	12,7	20	2C.120.F
12,7	74	12,7	30	2C.127.F
14	59	6	20	2C.140.A
14	59	6,35	20	2C.140.B
14	59	8	20	2C.140.C
14	74	10	30	2C.140.D
14	74	12	30	2C.140.E
14	74	12,7	30	2C.140.F
14	94	10	50	2C.141.D
14	94	12	50	2C.141.E
14	94	12,7	50	2C.141.F
15	59	6	20	2C.150.A
15	59	6,35	20	2C.150.B
15	59	8	20	2C.150.C
15	74	10	30	2C.150.D
15	74	12	30	2C.150.E
15	74	12,7	30	2C.150.F

ØD	L	ØS	l	Part Number
16	59	6	20	2C.160.A
16	59	6,35	20	2C.160.B
16	59	8	20	2C.160.C
16	74	10	30	2C.160.D
16	74	12	30	2C.160.E
16	74	12,7	30	2C.160.F
16	94	10	50	2C.161.D
16	94	12	50	2C.161.E
16	94	12,7	50	2C.161.F
18	59	6	20	2C.180.A
18	59	6,35	20	2C.180.B
18	59	8	20	2C.180.C
18	74	10	30	2C.180.D
18	74	12	30	2C.180.E
18	74	12,7	30	2C.180.F
18	94	10	50	2C.181.D
18	94	12	50	2C.181.E
18	94	12,7	50	2C.181.F
20	59	6	20	2C.200.A
20	59	6,35	20	2C.200.B
20	59	8	20	2C.200.C
20	74	10	30	2C.200.D
20	74	12	30	2C.200.E
20	74	12,7	30	2C.200.F
20	94	10	50	2C.201.D
20	94	12	50	2C.201.E
20	94	12,7	50	2C.201.F
22	59	6	20	2C.220.A
22	59	6,35	20	2C.220.B
22	59	8	20	2C.220.C
22	74	10	20	2C.220.D
22	74	12	20	2C.220.E
22	74	12,7	20	2C.220.F

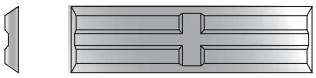
18000 ÷ 24000 rpm

F = 2 ÷ 6 mt/min



1Z.001
1Z.007

1V.016 Ø 8÷13.9
1V.017 Ø 14÷22



1P.220 (20x5.5x1.1) Ø 8÷12
1P.221 (20x10x1.5) Ø 14÷22
1P.230 (30x6.5x1.1) Ø 12,7
1P.231 (30x10x1.5) Ø 14÷22
1P.251 (50x10x1.5) Ø 14÷22

2F HW Fresa a taglienti diritti UP-DOWN a fissaggio meccanico

Replacement tip straight router bit	HW Wendeplattenoberfräser	HW Mèches avec couteaux interc.	HW cabezal de pantógrafo

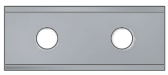
ØD	L	ØS	I	Part Number
20	120	20	58	2F.200

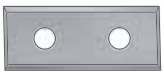
14000-18000 rpm F =4-12 mt/min

Z 2 + 1

R

CNC


1N.301 (30X12X1.5)

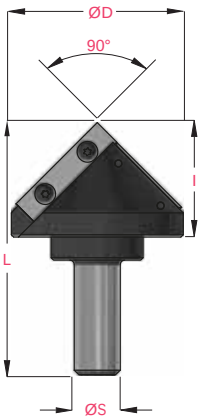

1N.311 (30X12X1.5)


1N.096 (9.6X12X1.5)


1V.002


1Z.000(T15)

3B Fresa per smussi e cave - 90° Z2 a fissaggio meccanico



Replacement tip 90° "V"groove	HW Wendeplattenoberfräser	HW Mèches avec couteaux interc.	HW cabezal de pantógrafo

ØD	L	ØS	I	Part Number
48	97	20	37	3B.480
60	102	20	42	3B.600
75	110	20	50	3B.750

Z 2

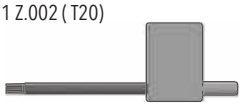
R

CNC

1 V.025

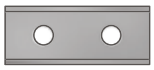
1 V.024

1 Z.002 (T20)



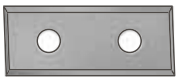
1N.201 (20x12x1.5)

1N.301 (30x12x1.5)



1N.401 (40x12x1.5)

1N.311 (30x12x1.5)



1N.411 (40x12x1.5)

1N.511 (50x12x1.5)

Part Number	SIZE	KNIFE REF.	Part Number	SIZE	KNIFE REF.
3B.480	20x12x1.5	1N.201	3B.480	M4x8	1V.025
3B.480	30x12x1.5	1N.311	3B.480	M4x6	1V.024
3B.600	30x12x1.5	1N.301	3B.600	M4x8	1V.025
3B.600	40x12x1.5	1N.411	3B.600	M4x6	1V.024
3B.750	40x12x1.5	1N.401	3B.750	M4x8	1V.025
3B.750	50x12x1.5	1N.511	3B.750	M4x6	1V.024

HM Fresa a taglienti diritti a fissaggio meccanico

1AA

Replacement tip straight router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 2 + 1

R

ØD	L	ØS	l	Part Number
15	65	M12X1	20	1AA.150
16	65	M12X1	20	1AA.160
18	65	M12X1	20	1AA.180
20	65	M12X1	20	1AA.200
22	65	M12X1	20	1AA.220

1N.121 (12X12X1.5)

1V.002

1Z.000(T15)

HM Fresa a taglienti diritti a fissaggio meccanico

1E

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 2

R

ØD	L	ØS	l	Part Number
19	45	6	12	1E.190.A
19	45	6.35	12	1E.190.B
19	54	8	12	1E.190.C

18000 rpm

1N.121 (12X12X1.5)

1V.002

1Z.000(T15)

HM Fresa a taglienti inclinati a fissaggio meccanico

1B

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 2

R

ØD	L	ØS	∠°	Part Number
24	45	6	22°	1B.220.A
24	45	6,35	22°	1B.220.B
24	55	8	22°	1B.220.C
26	45	6	30°	1B.300.A
26	45	6,35	30°	1B.300.B
26	55	8	30°	1B.300.C
28	45	6	45°	1B.450.A
28	45	6,35	45°	1B.450.B
28	55	8	45°	1B.450.C

18000 rpm

1N.121 (12X12X1.5)

1V.002

1Z.000(T15)

8

1C HM Fresa a taglienti diritti a fissaggio meccanico

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 2 R

ØD	L	ØS	I	Part Number
19	55	6	12	1C.190.A
19	55	6.35	12	1C.190.B
19	70	8	12	1C.190.C
19	70	12	12	1C.190.E

18000 rpm

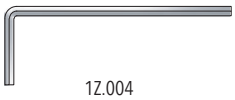
6264 ZZ | 1N 121 (12x12x1,5) | LV.002 | 1V.006 | 1Z.000 (T15) | 1Z.004

1G HM Fresa a taglienti diritti a fissaggio meccanico

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 2 R

ØD	L	ØS	I	Part Number
19	75	6	30	1G.190.A
19	75	6.35	30	1G.190.B
19	90	8	30	1G.190.C
19	90	12	30	1G.190.E
19	100	12	50	1G.191.E



1Z.004

18000 rpm

626 ZZ | 1V.002 | 1V.006 | 1Z.000 (T15) | 1N 501 (50x12x1,5) | 1N 301 (30x12x1,5)

1H HM Fresa a taglienti diritti a fissaggio meccanico

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

Z 2 R

ØD	L	ØS	I	Part Number
19	90	8	30	1H.190.C
19	90	12	30	1H.190.E
19	100	12	50	1H.191.E

18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

626 ZZ | 1V.002 | 1Z.000 (T15) | 1S.001 | 1N 501 (50x12x1,5) | 1N 301 (30x12x1,5)

HM Fresa a taglienti diritti a fissaggio meccanico

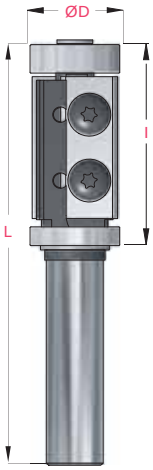
2H

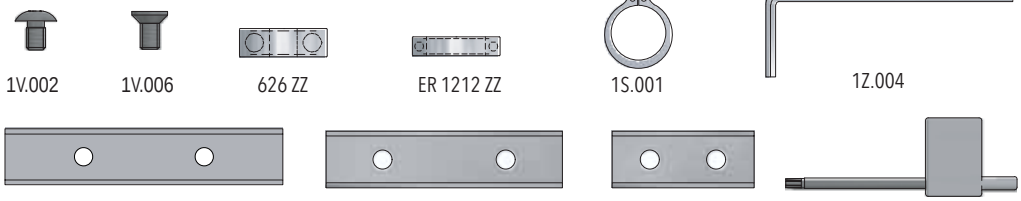
Z 2 | R

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

ØD	l	L	ØS=8	ØS=12	ØS=12,7
19	20	75	2H.199.C		
19	30	90	2H.190.C		
19	30	90			2H.190.F
19	50	110		2H.191.E	2H.191.F
19	60	120		2H.192.E	2H.192.F

18000 rpm





1V.002 | 1V.006 | 626 ZZ | ER 1212 ZZ | 1S.001 | 1Z.004

1N 601 (60x12x1,5) | 1N 501 (50x12x1,5) | 1N 301 (30x12x1,5) | 1Z.000 (T15)

HM Fresa a taglienti diritti a fissaggio meccanico

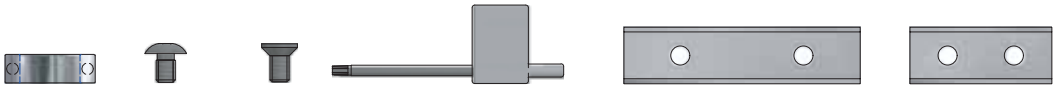
1GG

Z 2 | R

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

ØD	L	ØS	l	Part Number
19	75		30	1GG.190
19	95		50	1GG.191

18000 rpm



626 ZZ | 1V.002 | 1V.006 | 1Z.000 (T15) | 1N 501 (50x12x1,5) | 1N 301 (30x12x1,5)

HM Fresa a taglienti inclinati a fissaggio meccanico

1D

Z 2 | R

Replacement tip router bit | HW Wendeplattenoberfräser | HW Mèches avec couteaux interc. | HW cabezal de pantógrafo

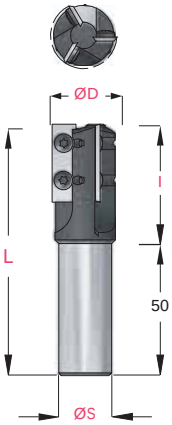
ØD	L	ØS	∠°	Part Number
24	55	6	22°	1D.220.A
24	55	6,35	22°	1D.220.B
24	70	8	22°	1D.220.C
26	55	6	30°	1D.300.A
26	55	6,35	30°	1D.300.B
26	70	8	30°	1D.300.C
28	55	6	45°	1D.450.A
28	55	6,35	45°	1D.450.B
28	70	8	45°	1D.450.C

18000 rpm

624 ZZ | 625 ZZ | 1N 121 (12x12x1,5) | 1V.002 | 1V.006 | 1Z.000 (T15)

8

6A.2530 HM Fresa a taglienti diritti a fissaggio meccanico



Solid carbide straight flute cutter with mechanical fixing | VHM-Fräser mit geraden Schneiden mit mechanischer Befestigung | Fraise HW tranchants droits à fixation mécanique | HW fresa de pantógrafo de fijación mecánica

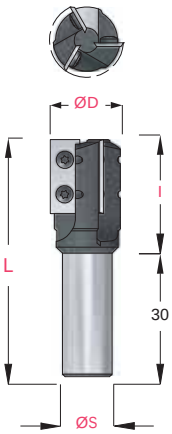
ØD	L	ØS	l	ROT	Part Number
25	95	20	29,5	DX-RH	6A.2530

Z 3

1N.319 (29,5x9x1.5) 1 V.023 14000 ÷ 18000 rpm F = 4 ÷ 12 mt/min

1Z.000 (T15)

6A.3030 HM Fresa a taglienti diritti a fissaggio meccanico



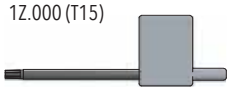
Solid carbide straight flute cutter with mechanical fixing | VHM-Fräser mit geraden Schneiden mit mechanischer Befestigung | Fraise HW tranchants droits à fixation mécanique | HW fresa de pantógrafo de fijación mecánica

ØD	L	ØS	l	ROT	Part Number
30	96	20	30	DX-RH	6A.3030

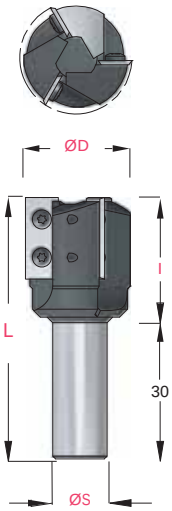
Z 3

1N.311 (30x12x1.5) 1 V.002 14000 ÷ 18000 rpm F = 4 ÷ 12 mt/min

1Z.000 (T15)



6A.4030 HM Fresa a taglienti diritti a fissaggio meccanico



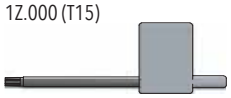
Solid carbide straight flute cutter with mechanical fixing | VHM-Fräser mit geraden Schneiden mit mechanischer Befestigung | Fraise HW tranchants droits à fixation mécanique | HW fresa de pantógrafo de fijación mecánica

ØD	L	ØS	l	ROT	Part Number
40	96	20	30	DX-RH	6A.4030

Z 3

1N.311 (30x12x1.5) 1 V.002 14000 ÷ 18000 rpm F = 4 ÷ 12 mt/min

1Z.000 (T15)



Fresa a fissaggio meccanico per macchine CNC lavorazione tetti

Replacement tip router cutter | Fräser mit mechanischer Befestigung für CNC-Holzbearbeitungsmaschinen für Dachlatten | Fraise à fixation mécanique pour machines à commande numérique pour l'usinage de toits | fresa con cortador de fijación mecánica para máquinas CNC (trabajar vigas)

Z 3

R

CNC

ØD	L	ØS	I	ROT	Part Number
40	160	28	88	DX - RH	11A.400
40	185	28	113	DX - RH	11A.400.A
40	210	28	138	DX - RH	11A.400.B
40	235	28	163	DX - RH	11A.400.C
40	270	28	188	DX - RH	11A.400.D
40	305	28	213	DX - RH	11A.400.E
50	160	28	88	DX - RH	11A.500
50	185	28	113	DX - RH	11A.500.A
50	210	28	138	DX - RH	11A.500.B
50	235	28	163	DX - RH	11A.500.C
50	270	28	188	DX - RH	11A.500.D
50	305	28	213	DX - RH	11A.500.E

18000 ÷ 24000 rpm F = 3 ÷ 12 mt/min

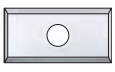
COLTELLI - KNIVES				VITI - SCREW	
Part Number	Dimension	Ref.	Quantity	Dimension	Ref.
11A.400	19.5x10x1.5	1N.195	9+1	M4x5	1V.026
11A.400.A	19.5x10x1.5	1N.195	12+1	M4x5	1V.026
11A.400.B	19.5x10x1.5	1N.195	15+1	M4x5	1V.026
11A.400.C	19.5x10x1.5	1N.195	18+1	M4x5	1V.026
11A.400.D	19.5x10x1.5	1N.195	21+1	M4x5	1V.026
11A.400.E	19.5x10x1.5	1N.195	24+1	M4x5	1V.026
11A.500	20x12x1.5	1N.201	9	M4x6	1V.024
	19.8x12x1.5 - Di Testa	1N.198	1	M4x6	1V.024
11A.500.A	20x12x1.5	1N.201	12	M4x6	1V.024
	19.8x12x1.5 - Di Testa	1N.198	1	M4x6	1V.024
11A.500.B	20x12x1.5	1N.201	15	M4x6	1V.024
	19.8x12x1.5 - Di Testa	1N.198	1	M4x6	1V.024
11A.500.C	20x12x1.5	1N.201	18	M4x6	1V.024
	19.8x12x1.5 - Di Testa	1N.198	1	M4x6	1V.024
11A.500.D	20x12x1.5	1N.201	21	M4x6	1V.024
	19.8x12x1.5 - Di Testa	1N.198	1	M4x6	1V.024
11A.500.E	20x12x1.5	1N.201	24	M4x6	1V.024
	19.8x12x1.5 - Di Testa	1N.198	1	M4x6	1V.024


1 Z.002 (T 20)

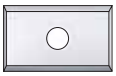

1 T.001

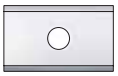

1V.024


1V.026


1N.195

A RICHIESTA PER "HUNDEGGER"
GAMBO ØS = 30


1N.198


1N.201

4A Fresa a fissaggio meccanico 90° Z=1

Replacement tip 90° "V" groove	Fräser mit mechanischer Befestigung 90° Z=1	Fraise à fixation mécanique 90° Z=1	Fresa con cortador de fijación mecánica de 90° Z=1

ØD	L	ØS	∠°	Part Number
	92	10	90°	4A.450

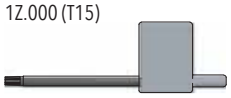
Z 1

R

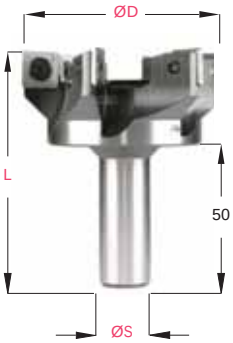
1 N.222 (22x22x2)

1 V.006

1Z.000 (T15)



5A Fresa a fissaggio meccanico Z=6



Replacement tip trepanning and surfacing 6 wing	Fräser mit mechanischer Befestigung Z=6	Fraise à fixation mécanique Z=6	Fresa con cortador de fijación mecánica Z=6

ØD	L	ØS	ROT	Part Number
80	92	20	DX-RH	5A.8014

14000 ÷ 18000 rpm F = 4 ÷ 12 mt/min

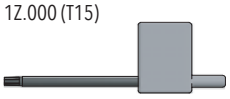
Z 6

R

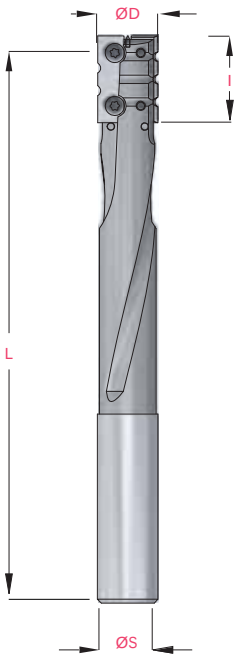
CNC

1 N.141420 (14x14x2)

1Z.000 (T15)



7A Fresa ad inserti per cava serratura corpo acciaio speciale



Router cutter with knives forlock slot body with special steel			

ØD	L	ØS	I	ROT	Part Number
16	150	16	23	DX-RH	7A.016.R

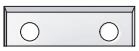
14000 ÷ 18000 rpm F = 4 ÷ 12 mt/min

Z 2 + 1

R

CNC

1N.023.A (23x7x1.5)

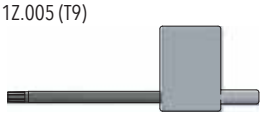


1N.023.B (23x7x1.5)

1N.023.C (23x7x1.5)

1V.028

1Z.005 (T9)



Fresa a fissaggio meccanico ø 50

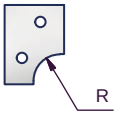
16A

Z 2

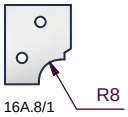
CNC

Replacement tip ovolo cutter | Radiusfräser mit mechanischer Befestigung | Fraise á bout hémisphérique à fixation mécanique | fresa con radio de fijación mecánica

ØD	L	ØS	R	Part Number
50	100	20	3	16A.030
50	100	20	4	16A.040
50	100	20	5	16A.050
50	100	20	6	16A.060
50	100	20	7	16A.070
50	100	20	8	16A.080
50	100	20	9	16A.090
50	100	20	10	16A.100

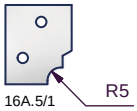


**Optional



16A.8/1

*Optional



16A.5/1

1 V.025

1Z.002 (T20)

SIZE	R	Part Number	SIZE	R	Part Number
30x25x2	3	16A.3	30x25x2	7	16A.7
30x25x2	4	16A.4	30x25x2	8	16A.8
30x25x2	5	16A.5	30x25x2	8**	16A.8/1
30x25x2	5*	16A.5/1	30x25x2	9	16A.9
30x25x2	6	16A.6	30x25x2	10	16A.10

Fresa raggiata a fissaggio meccanico ø 60

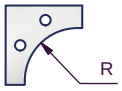
17A

Z 2

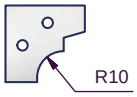
CNC

Replacement tip ovolo cutter | Radiusfräser mit mechanischer Befestigung | Fraise á bout hémisphérique à fixation mécanique | fresa con radio de fijación mecánica

ØD	L	ØS	R	Part Number
60	100	20	10	17A.100
60	100	20	11	17A.110
60	100	20	12	17A.120
60	100	20	13	17A.130
60	100	20	14	17A.140
60	100	20	15	17A.150
60	100	20	16	17A.160
60	100	20	17	17A.170
60	100	20	18	17A.180
60	100	20	19	17A.190
60	100	20	20	17A.200



*Optional



**Optional

***Optional

1 V.025

1Z.002 (T20)

SIZE	R	PartNumber	SIZE	R	Part Number
30x30x2	10	17A.10	30x30x2	15	17A.7
30x30x2	10*	17A.10/1	30x30x2	15***	17A.15/1
30x30x2	11	17A.11	30x30x2	16	17A.16
30x30x2	12	17A.12	30x30x2	17	17A.17
30x30x2	12.5**	17A.12.5	30x30x2	18	17A.18
30x30x2	13	17A.13	30x30x2	19	17A.19
30x30x2	14	17A.14	30x30x2	20	17A.20

18A Fresa raggiata a fissaggio meccanico

Replacementn tip staff beading	Radiusfräser mit mechanischer Befestigung	Fraise á bout hémisphérique à fixation mécanique	fresa con radio de fijación mecánica

ØD	L	ØS	I	Rpm - Max	PartNumber
60	95	20	25	14000	18A.600
70	105	20	30	12000	18A.700
90	125	20	50	10000	18A.900
100	135	20	60	10000	18A.1000

18000 ÷ 24000 rpm F = 6 ÷ 24 mt/min

Z 2 R CNC

19A Fresa multiprofilo a fissaggio meccanico

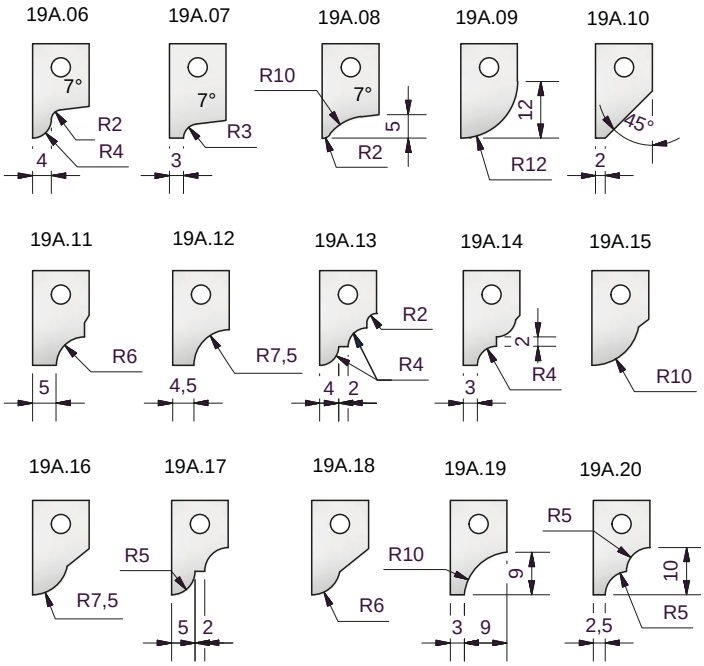
Rolacement tip multi-profile cutter	Multiprofilfräser	Fraise multiprofil à fixation mécanique	fresa multiperfil de fijación mecánica

ØD	L	ØS	I	Part Number
24	95	20	25	19A.240

1 V.024 1Z.002 (T20)

14000 ÷ 18000 rpm F = 4 ÷ 12 mt/min

Z 2 R CNC



Fresa con coltellini HW reversibili per smussi ad inclinazione variabile da -45° a + 90°

20A

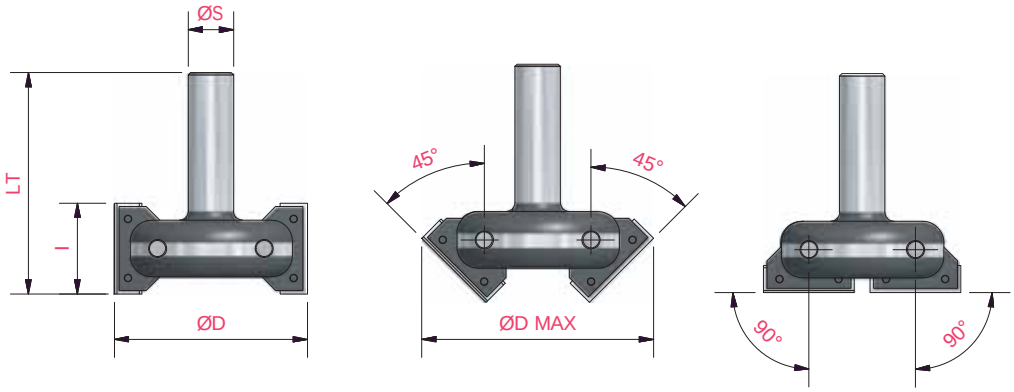
Replacement tip vari angle block

Z 2

R

CNC

ØD	ØD MAX.	I	LT	ØS	ROT	Part Number
85	100	40	100	20	DX - RH	20A.850



1N 401

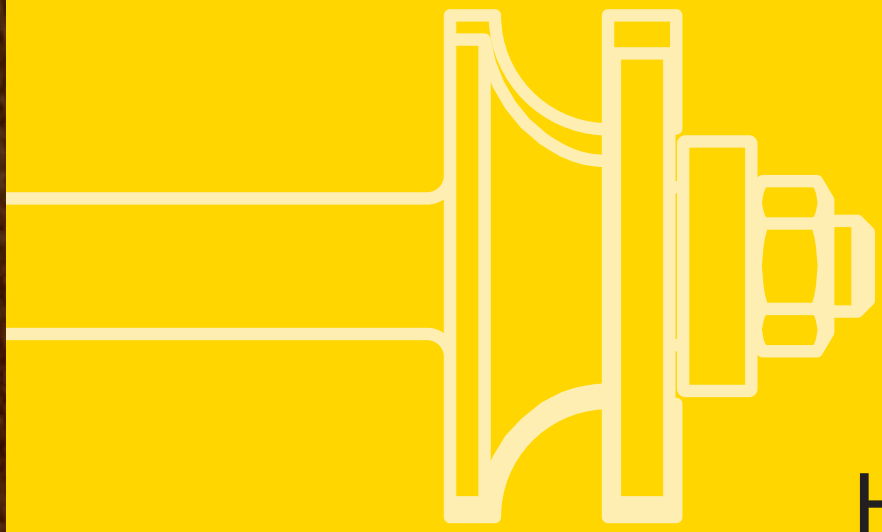
1Z.003

1V.029

1L.001

8

F.U.L. S.r.L.



H O B B Y

DIY

H0 Frese per elettrofresatrici portatili Z2+1

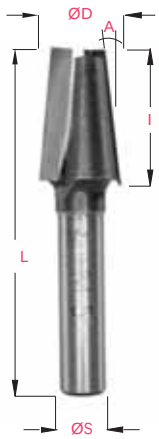
Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD		l	L	ØS=6	ØS=6,35	ØS=8
2	*	6	50	H0.020.A	H0.020.B	
3	*	8	50	H0.030.A	H0.030.B	H0.030.C
4	*	10	50	H0.040.A	H0.040.B	H0.040.C
5	*	15	50	H0.050.A	H0.050.B	H0.050.C
6	*	18	50	H0.060.A	H0.060.B	H0.060.C
6	*	25	60	H0.061.A	H0.061.B	H0.061.C
7		20	50	H0.070.A	H0.070.B	H0.070.C
8		20	50	H0.080.A	H0.080.B	H0.080.C
8		30	60	H0.081.A	H0.081.B	H0.081.C
9		20	50	H0.090.A	H0.090.B	H0.090.C
10		20	50	H0.100.A	H0.100.B	H0.100.C
10		30	50	H0.101.A	H0.101.B	H0.101.C
11		20	50	H0.110.A	H0.110.B	H0.110.C
12		20	50	H0.120.A	H0.120.B	H0.120.C
12		30	60	H0.121.A	H0.121.B	H0.121.C
13		20	50	H0.130.A	H0.130.B	H0.130.C
14		20	50	H0.140.A	H0.140.B	H0.140.C
15		20	50	H0.150.A	H0.150.B	H0.150.C
16		20	50	H0.160.A	H0.160.B	H0.160.C
18		20	50	H0.180.A	H0.180.B	H0.180.C
20		20	50	H0.200.A	H0.200.B	H0.200.C
22		20	50	H0.220.A	H0.220.B	H0.220.C
24		20	50	H0.240.A	H0.240.B	H0.240.C
25		20	50	H0.250.A	H0.250.B	H0.250.C

*HM integrale
Solid carbide
VHM
Monobloc
MD integral

H1 Frese per elettrofresatrici portatili Z2

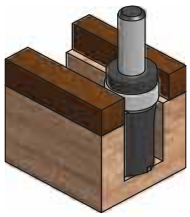
Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



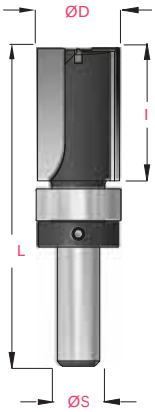
A	ØD	l	ØS=6	ØS=8
5	11	18	H1.050.A	H1.050.C

Frese per elettrofresatrici portatili Z2+1

H01



Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



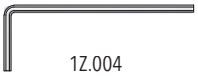
ØD	I	L	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
12,7	20	60	H01.127.A	H01.127.B			
12,7	25	65		H01.128.B			
13	20	60	H01.130.A				
15	31,7	70	H01.150.A				
16	20	60			H01.160.C		
19	20	60	H01.190.A	H01.190.B	H01.190.C		
19	25	65	H01.191.A	H01.191.B		H01.191.E	H01.191.F
19	38	82				H01.192.E	H01.192.F
19	50	92				H01.193.E	H01.193.F


1S.002


1V.006


626 ZZ


ER 1212 ZZ


1Z.004

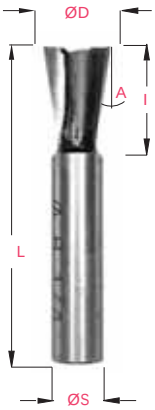
Ref.		
H01.127.A	R188ZZ	1W.001
H01.127.B	R188ZZ	1W.002
H01.128.B	R188ZZ	1W.002
H01.130.A	686ZZ	1W.001
H01.150.A	696ZZ	1W.001
H01.160.C	688ZZ	1W.003
H01.190.A	626ZZ	1W.001
H01.190.B	R4AZZ	1W.002

Ref.		
H01.190.C	698ZZ	1W.003
H01.191.A	626ZZ	1W.001
H01.191.B	R4AZZ	1W.002
H01.191.E	ER1212ZZ	1W.004
H01.191.F	ER1212ZZ	1W.005
H01.192.E	ER1212ZZ	1W.004
H01.192.F	ER1212ZZ	1W.005
H01.193.E	ER1212ZZ	1W.004
H01.193.F	ER1212ZZ	1W.005

Frese per elettrofresatrici portatili Z2

H2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



ØD	I	L	A	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
8	9	40	9°	H2.080.A		H2.080.C		
9,5	9,5	42	9°	H2.095.A	H2.095.B	H2.095.C		
11	10	40	9°	H2.110.A		H2.110.C		
12,7	12,7	50	14°	H2.127.A	H2.127.B	H2.127.C	H2.127.E	H2.127.F
14	15	45	10°	H2.140.A		H2.140.C		
16	22	63	7°				H2.160.E	H2.160.F
19	22	63	7°	H2.190.A		H2.190.C		

Frese per elettrofresatrici portatili Z2

H3

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	A	L	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
15	18	22°	47	H3.220.A	H3.220.B	H3.220.C		
16	14	60°	45	H3.600.A	H3.600.B	H3.600.C		
16	14	60°	55				H3.601.E	H3.601.F
25,4	14	90°	65				H3.900.E	H3.900.F

H5 Frese per elettrofresatrici portatili Z2

Router bits for electric routers	Shaftfräser für Handoberfräsmaschinen	Mèches pour defonseuse portative	Fresas para electrofresadoras portatiles

ØD	I	A	L	ØS=6	ØS=8	ØS=12	ØS=12,7
6	8	45°	45	H5.451.A	H5.451.C		
9,5	11	45°	45	H5.452.A	H5.452.C		
12,7	13	45°	45	H5.453.A	H5.453.C		
19	13	45°	45	H5.450.A	H5.450.C		
19	13	45°	55			H5.454.E	H5.454.F
30	18	45°	48	H5.455.A	H5.455.C		
38	19	45°	63		H5.456.C		
38	19	45°	70			H5.457.E	H5.457.F

H6 Frese per elettrofresatrici portatili Z2

Router bits for electric routers	Shaftfräser für Handoberfräsmaschinen	Mèches pour defonseuse portative	Fresas para electrofresa-doras portatiles

ØD	I	A	L	ØS=6	ØS=6,35	ØS=8
12	12	22°	42	H6.220.A	H6.220.B	H6.220.C
12	12	30°	42	H6.300.A	H6.300.B	H6.300.C
12	12	45°	42	H6.450.A	H6.450.B	H6.450.C

H7 Frese per elettrofresatrici portatili Z2

Router bits for electric routers	Shaftfräser für Handoberfräsmaschinen	Mèches pour defonseuse portative	Fresas para electrofresadoras portatiles

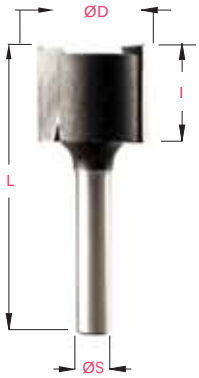
ØD	I	A	L	ØS=6	ØS=6,35	ØS=8
24	14	10°	44	H7.100.A	H7.100.B	H7.100.C
24	14	15°	44	H7.150.A	H7.150.B	H7.150.C
24	12	30°	42	H7.300.A	H7.300.B	H7.300.C
24	9	45°	40	H7.450.A	H7.450.B	H7.450.C

Frese per elettrofresatrici portatili Z2

H8

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	L	ØS=6	ØS=6,35	ØS=8
19	12,7	45	H8.190.A	H8.190.B	H8.190.C



Frese per elettrofresatrici portatili Z1+1

H10

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	L	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
6	15		H10.060.A	H10.060.B	H10.060.C		
8	19		H10.080.A	H10.080.B	H10.080.C		
12,7	31					H10.127.E	H10.127.F
12,7	50					H10.128.E	H10.128.F

Frese per elettrofresatrici portatili Z2

H11

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

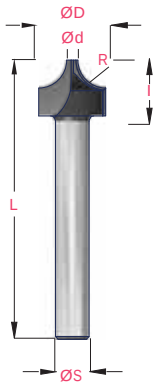
ØD	l	R	L	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
3,2	10	1,6	45	H11.016.A	H11.016.B	H11.016.C		
6	11	3	42	H11.030.A	H11.030.B	H11.030.C		
6	26	3	70	H11.031.A				
8	13	4	43	H11.040.A	H11.040.B	H11.040.C		
8	32	4	80			H11.041.C		
9,5	25	4,8	65				H11.048.E	H11.048.F
10	15	5	45	H11.050.A	H11.050.B	H11.050.C		
12	16	6	46	H11.060.A	H11.060.B	H11.060.C		
12,7	32	6,4	75				H11.064.E	H11.064.F
14	16	7	46	H11.070.A	H11.070.B	H11.070.C		
16	16	8	46	H11.080.A	H11.080.B	H11.080.C		
16	16	8	56				H11.081.E	H11.081.F
16	32	8	75				H11.082.E	H11.082.F
19	32	9,5	75				H11.095.E	H11.095.F
20	20	10	50	H11.100.A	H11.100.B	H11.100.C		
20	20	10	60				H11.101.E	H11.101.F
22	32	11	75				H11.110.E	H11.110.F
24	16	12	46			H11.120.C		
24	16	12	56				H11.121.E	H11.121.F
25,4	32	12,7	75				H11.127.E	H11.127.F
30	16	15	46			H11.150.C		
30	16	15	56				H11.151.E	H11.151.F
40	23	20	63				H11.200.E	H11.200.F

H13 Frese per elettrofresatrici portatili Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

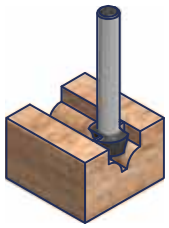
ØD	l	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
12	10	3	H13.030.A	H13.030.B	H13.030.C		
14	10	4	H13.040.A	H13.040.B	H13.040.C		
16	10	5	H13.050.A	H13.050.B	H13.050.C		
18	12	6	H13.060.A	H13.060.B	H13.060.C	H13.060.E	
24	12	6				H13.061.E	
22	12	8	H13.080.A	H13.080.B	H13.080.C	H13.080.E	
28	12	8				H13.081.E	
26	14	10	H13.100.A		H13.100.C	H13.100.E	
32	14	10				H13.101.E	
30	19	12			H13.120.C	H13.120.E	
36	19	12				H13.121.E	
42	21	15				H13.150.E	
52	26	20				H13.200.E	H13.200.F
63	32	25				H13.250.E	H13.250.F

H13/01 Frese per elettrofresatrici portatili Z2

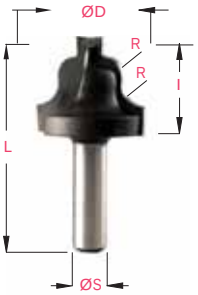


Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	Ød	l	R	L	ØS=6	ØS=8
8	2	10	3	50	H13/01.030.A	H13/01.030.C
10	2	10	4	50	H13/01.040.A	H13/01.040.C
12	2	10	5	50	H13/01.050.A	H13/01.050.C



H15 Frese per elettrofresatrici portatili Z2



Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

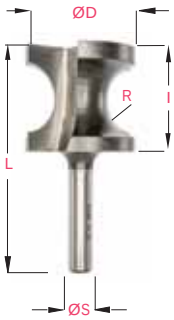
ØD	l	R	ØS=6	ØS=6,35	ØS=8
19	13	3	H15.030.A	H15.030.B	H15.030.C
23	19	4	H15.040.A	H15.040.B	H15.040.C
28	19	5	H15.050.A	H15.050.B	H15.050.C
33	30	6	H15.060.A	H15.060.B	H15.060.C

Frese per elettrofresatrici portatili Z2

H18

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
19	12	3	H18.030.A	H18.030.B	H18.030.C	H18.030.E	H18.030.F
22	16	4	H18.040.A	H18.040.B	H18.040.C	H18.040.E	H18.040.F
25	19	5	H18.050.A	H18.050.B	H18.050.C	H18.050.E	H18.050.F
27	22	6	H18.060.A	H18.060.B	H18.060.C	H18.060.E	H18.060.F
31	25	8	H18.080.A	H18.080.B	H18.080.C	H18.080.E	H18.080.F
35	30	10	H18.100.A	H18.100.B	H18.100.C	H18.100.E	H18.100.F
39	34	12				H18.120.E	H18.120.F
45	42	15				H18.150.E	H18.150.F



Frese per elettrofresatrici portatili

H19

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	R	L	ØS=6		ØS=8	
				H19.060.A		H19.060.C	

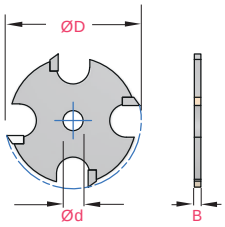
626 ZZ

Frese per elettrofresatrici portatili

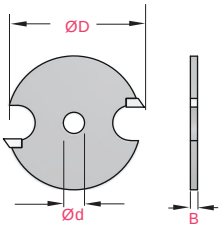
H21

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	Ød	B	Part Number
47,6	6	1,5	H21.015.A
47,6	6	1,8	H21.018.A
47,6	6	2	H21.020.A
47,6	6	2,2	H21.022.A
47,6	6	2,5	H21.025.A
47,6	6	2,8	H21.028.A
47,6	6	3	H21.030.A
47,6	6	3,2	H21.032.A
47,6	6	3,5	H21.035.A
47,6	6	4	H21.040.A
47,6	6	5	H21.050.A
47,6	6	6	H21.060.A



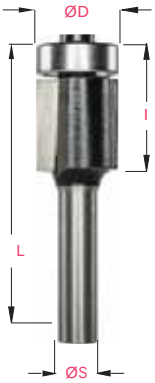
H22



Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	Ød	B	Part Number
40	6	1,5	H22.015.A
40	6	1,8	H22.018.A
40	6	2	H22.020.A
40	6	2,2	H22.022.A
40	6	2,5	H22.025.A
40	6	2,8	H22.028.A
40	6	3	H22.030.A
40	6	3,2	H22.032.A
40	6	3,5	H22.035.A
40	6	4	H22.040.A
40	6	5	H22.050.A
40	6	6	H22.060.A

H23 Frese per elettrofresatrici portatili Z2



Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	L	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12 ,7
9,5	12,7	55	H23.095.A	H23.095.B	H23.095.C		
9,5	25,4	68	H23.096.A	H23.096.B	H23.096.C		
12,7	12,7	57	H23.127.A	H23.127.B	H23.127.C		
12,7	25,4	67	H23.128.A	H23.128.B	H23.128.C		
12,7	25,4	75				H23.127.E	H23.127.F
12,7	38	90				H23.128.E	H23.128.F
12,7	50,8	103				H23.129.E	H23.129.F
13	15	55	H23.130.A	H23.130.B	H23.130.C		
13	25	67	H23.133.A				
13	30	70	H23.131.A	H23.131.B	H23.131.C		
13	40	80			H23.132.C		
16	15	55	H23.160.A	H23.160.B			
19	15	57	H23.190.A	H23.190.B	H23.190.C		
19	25	63	H23.191.A	H23.191.B	H23.191.C		
19	40	82			H23.192.C		
19	25	75				H23.193.E	H23.193.F
19	40	90				H23.194.E	H23.194.F
19	50,8	104				H23.195.E	H23.195.F


1V. 005


1V. 008


625 ZZ - 626 ZZ - R166 ZZ

Frese per elettrofresatrici portatili Z2

H24

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	A	L	ØS=6	ØS=8	ØS=12	ØS=12,7
15°	19	12		H24.150.A	H24.150.C		
15°	24,5	22				H24.151.E	H24.151.F
22,5°	31	22				H24.225.E	H24.225.F
25°	23	11		H24.251.A	H24.251.C		
30°	15	10		H24.300.A	H24.300.C		
30°	38,5	22				H24.301.E	H24.301.F
45°	32	10		H24.450.A	H24.450.C		
45°	39	13		H24.451.A	H24.451.C		
45°	45	18				H24.452.E	H24.452.F
45°	53	20				H24.453.E	H24.453.F
45°	65	26				H24.454.E	H24.454.F

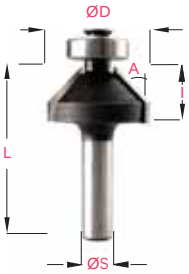

624 ZZ


1V. 008

Frese per elettrofresatrici portatili Z2

H25

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



ØD	I	A	L	ØS=6	ØS=6,5	ØS=8	
28	12	45°		H25.450.A	H25.450.B	H25.450.C	


1V. 007


625 ZZ

Frese per elettrofresatrici portatili Z2

H26

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
26	12	4	H26.040.A	H26.040.B	H26.040.C	H26.040.E	H26.040.F
28,5	11	4,8	H26.048.A	H26.048.B	H26.048.C	H26.048.E	H26.048.F
35	10	6,4	H26.064.A	H26.064.B	H26.064.C	H26.064.E	H26.064.F


1V. 005


1V. 008


624 ZZ - 626 ZZ - R166 ZZ

H28 Frese per elettrofresatrici portatili Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12 ,7
17	10	1,6	H28.016.A	H28.016.B	H28.016.C		
18	10	2	H28.020.A	H28.020.B	H28.020.C		
19	10	3	H28.030.A	H28.030.B	H28.030.C		
19	10	3,2		H28.032.B			
21	10	4	H28.040.A	H28.040.B	H28.040.C		
22	10	4,8		H28.048.B			
23	10	5	H28.050.A	H28.050.B	H28.050.C		
25	12	6	H28.060.A	H28.060.B	H28.060.C	H28.060.E	
26	12,7	6,35		H28.063.B			H28.063.F
29	12	8	H28.080.A	H28.080.B	H28.080.C	H28.080.E	
32	15	9,5		H28.095.B		H28.095.E	H28.095.F
33	15	10	H28.100.A	H28.100.B	H28.100.C	H28.100.E	
38	20	12,7				H28.127.E	H28.127.F
37	19	12	H28.120.A	H28.120.B	H28.120.C	H28.120.E	
43	21	15			H28.150.C	H28.150.E	
45	23	16				H28.160.E	H28.160.F
51	26	19				H28.190.E	H28.190.F
53	26	20			H28.200.C	H28.200.E	
57	28	22				H28.220.E	H28.220.F
63	32	25				H28.250.E	
63	32	25,4				H28.254.E	H28.254.F

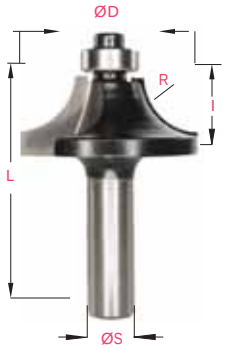

1V. 005


1V. 008


624 ZZ - 626 ZZ - R166 ZZ

H29 Frese per elettrofresatrici portatili Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



ØD	I	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12 ,7
17	10	1,6	H29.016.A	H29.016.B	H29.016.C		
18	10	2	H29.020.A	H29.020.B	H29.020.C		
19	10	3	H29.030.A	H29.030.B	H29.030.C		
19	10	3,2		H29.032.B			
21	10	4	H29.040.A	H29.040.B	H29.040.C		
22	10	4,8		H29.048.B			
23	10	5	H29.050.A	H29.050.B	H29.050.C		
25	12	6	H29.060.A	H29.060.B	H29.060.C	H29.060.E	
26	12,7	6,35		H29.063.B			H29.063.F
29	12	8	H29.080.A	H29.080.B	H29.080.C	H29.080.E	
32	15	9,5		H29.095.B		H29.095.E	H29.095.F
33	15	10	H29.100.A	H29.100.B	H29.100.C	H29.100.E	
38	20	12,7				H29.127.E	H29.127.F
37	19	12	H29.120.A	H29.120.B	H29.120.C	H29.120.E	
43	21	15			H29.150.C	H28.150.E	
45	23	16				H29.160.E	H29.160.F
51	26	19				H29.190.E	H29.190.F
53	26	20			H29.200.C	H29.200.E	
57	28	22				H29.220.E	H29.220.F
63	32	25				H29.250.E	
63	32	25,4				H29.254.E	H29.254.F


1V. 007


625 ZZ

Frese per elettrofresatrici portatili Z2

H30

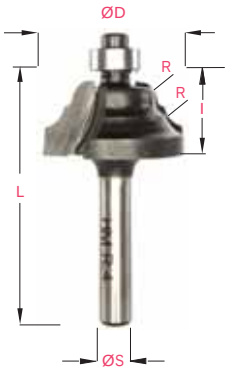
Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
29	13	4	H30.040.A	H30.040.B	H30.040.C	H30.040.E	H30.040.F
38	18	6,35	H30.063.A	H30.063.B	H30.063.C	H30.063.E	H30.063.F


1V. 005


1V. 008


624 ZZ - 626 ZZ - R166 ZZ



Frese per elettrofresatrici portatili Z2

H33

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
21	12	4	H33.040.A		H33.040.C		
22,2	12	4,8		H33.048.B			H33.048.F
23	12	5	H33.050.A		H33.050.C		
25	12	6	H33.060.A		H33.060.C		
25,4	12	6,35		H33.063.B			H33.063.F
29	12	8	H33.080.A		H33.080.C	H33.080.E	
31,7	12	9,5		H33.095.B			H33.095.F
33	12	10	H33.100.A		H33.100.C	H33.100.E	
37	16	12	H33.120.A		H33.120.C	H33.120.E	
38,1	15,5	12,7		H33.127.B			H33.127.F
43	17	15				H33.150.E	
53	23	20				H33.200.E	


1V. 007

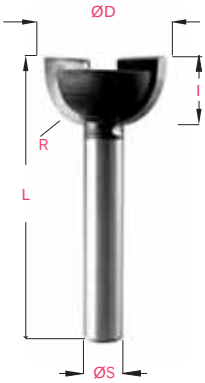

625 ZZ

Frese per elettrofresatrici portatili Z2

H34

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
25	12	10	H34.100.A		H34.100.C		



H35 Frese per elettrofresatrici portatili Z2

Router bits for electric routers	Shaftfräser für Handoberfräsmaschinen	Mèches pour defonseuse portative	Fresas para electrofresadoras portatiles

ØD	I	R	ØS=8		ØS=12		
44	25	8-4	H35.080.C		H35.080.E		

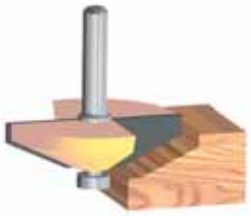
H36 Frese per elettrofresatrici portatili Z2

Router bits for electric routers	Shaftfräser für Handoberfräsmaschinen	Mèches pour defonseuse portative	Fresas para electrofresadoras portatiles

ØD	I	A	ØS=6	ØS=6,35	ØS=8
41	12	25°	H36.250.A	H36.250.B	H36.250.C


1V. 008


MR104 ZZ



H37 Frese per elettrofresatrici portatili Z2

Router bits for electric routers	Shaftfräser für Handoberfräsmaschinen	Mèches pour defonseuse portative	Fresas para electrofresadoras portatiles

ØD	I	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
29	20	4	H37.040.A	H37.040.B	H37.040.C	H37.040.E	H37.040.F
37	20	6	H37.060.A	H37.060.B	H37.060.C	H37.060.E	H37.060.F


1V. 008


624 ZZ

Frese per elettrofresatrici portatili Z2

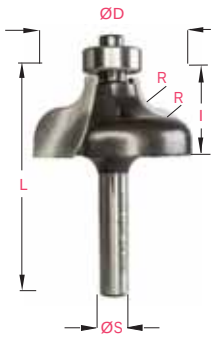
H38

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
29	12	4	H38.040.A	H38.040.B	H38.040.C	H38.040.E	H38.040.F
37	18	6	H38.060.A	H38.060.B	H38.060.C	H38.060.E	H38.060.F


1V. 008


624 ZZ



Frese per elettrofresatrici portatili Z2

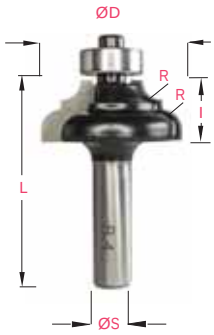
H39

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	l	R	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
29	12	4	H39.040.A	H39.040.B	H39.040.C	H39.040.E	H39.040.F
37	18	6	H39.060.A	H39.060.B	H39.060.C	H39.060.E	H39.060.F


1V. 008


624 ZZ



Frese per elettrofresatrici portatili Z2

H40

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

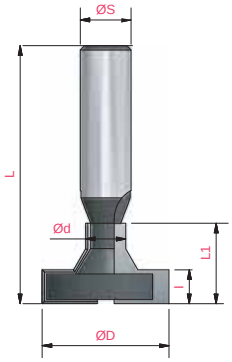
ØD	l	R	ØS=6		ØS=8		
25	12	4	H40.250.A		H40.250.C		
33	12	6	H40.330.A		H40.330.C		
43	12	4			H40.400 .C		


1V. 008

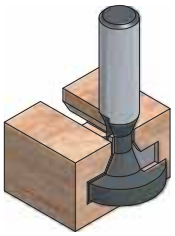

624 ZZ

H41 Frese per elettrofresatrici portatili per scanalatura T Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

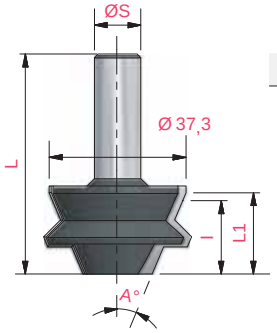


ØD	Ød	I	L1	L	ØS=12	ØS=12,7
28	11	8,5	13,5	60	H41.280.E	H41.280.F
30	9,5	8	17,5	60	H41.300.E	H41.300.F
34,9	12,7	9,5	22	63	H41.349.E	H41.349.F

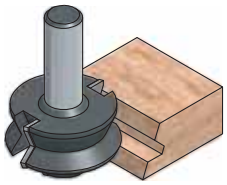


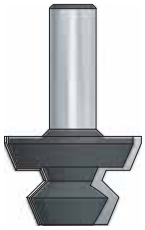
H42 Frese per elettrofresatrici portatili per scanalatura T

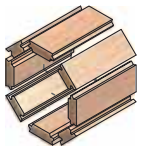
Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

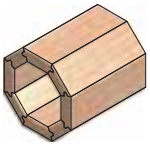


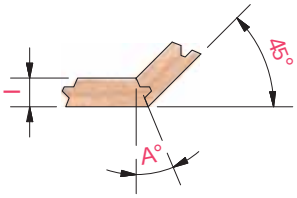
ØD	Ød	I	L1	L	ØS=12	ØS=12,7
37,3	9.5÷19	22,2	60	22,5	H42.373.E	H42.373.F

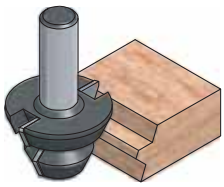






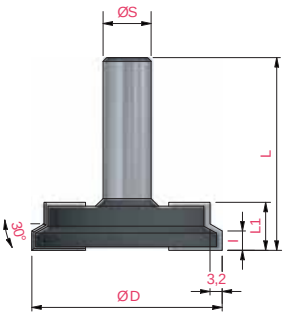




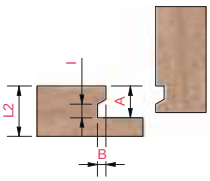


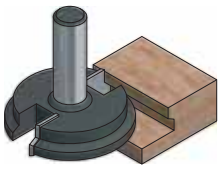
H43 Frese per elettrofresatrici portatili per scanalatura T Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



ØD	I	L1	L2	A	B	L	ØS=6	ØS=6,35	ØS=8	ØS=12	ØS=12,7
25,4	4	12,7	9.5 ÷ 16	8	3,2	54			H43.254.C	H43.254.E	H43.254.F
31,7	6	12,7	16 ÷ 25.4	12	3,2	44,5	H43.317.A	H43.317.B	H43.317.C		
50,8	6	12,7	16 ÷ 25.4	12	3,2	50,8				H43.508.E	H43.508.F



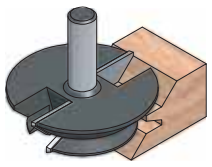


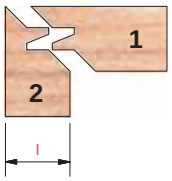
Frese per elettrofresatrici portatili per scanalatura T Z2

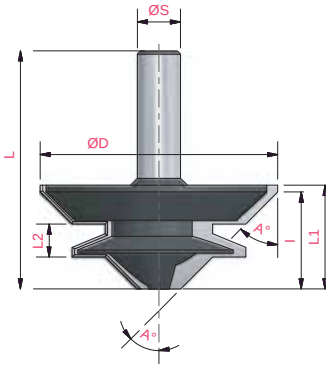
H44

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

ØD	I	A°	L1	L2	L	ØS=12	ØS=12,7
50,8	9.5 ÷19	45°	22,2	5,4	60	H44.508.E	H44.508.F
70	15 ÷28.5	45°	31,7	9,7	70	H44.700.E	H44.700.F





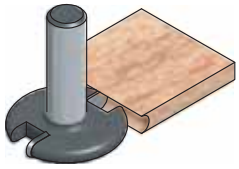


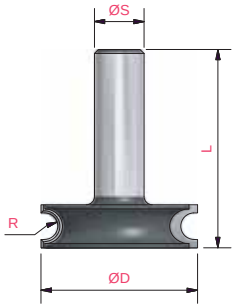
Frese per elettrofresatrici portatili per scanalatura T Z2

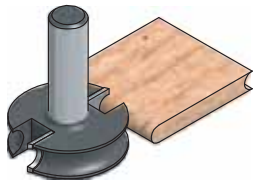
H45

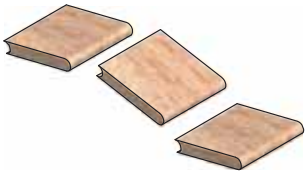
Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

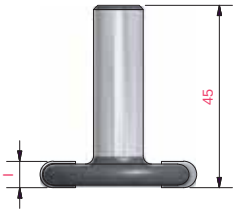
R	ØD	L	I	ØS=12	ØS=12,7
3,2	38	48	6,4	H45.320.E	H45.320.F









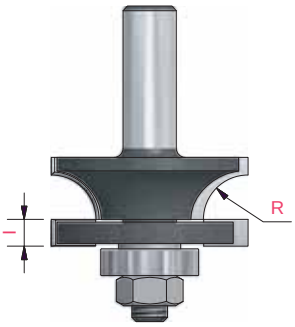


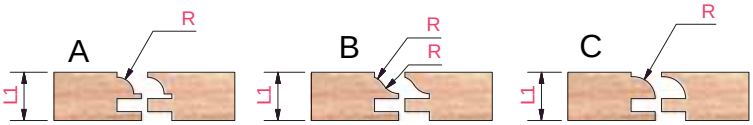
Frese per elettrofresatrici portatili per scanalatura T Z2

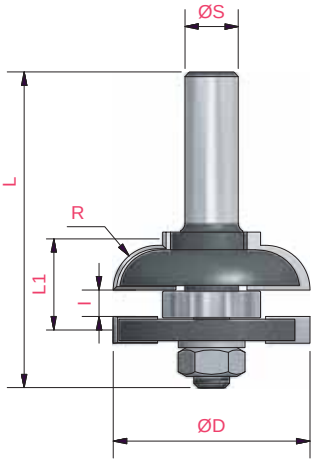
H46

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

TIPO	ØD	L	L1	I	R	S=12	S=12,7
A	44,4	71	18 ÷ 22	6	6	H46.441.E	H46.441.F
B	44,4	71	18 ÷ 22	6	8	H46.442.E	H46.442.F
C	44,4	71	18 ÷ 22	6	10	H46.443.E	H46.443.F







H46.001

608 ZZ

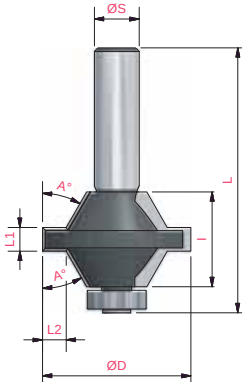
Rondella ø 8
Din 934

M8 - Din 934

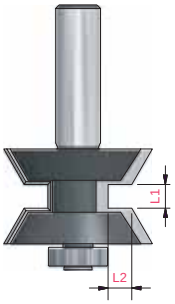
9

H47 Frese per elettrofresatrici portatili per scanalatura T Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles

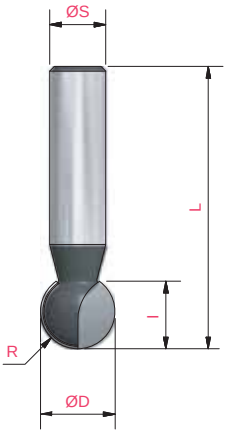


ØD	I	A	L1	L	ØS=12	ØS=12,7
40	25,4	30°	6,35	75	H47.400.E	H47.400.F

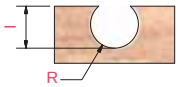


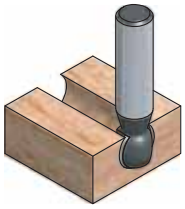
H48 Frese per elettrofresatrici portatili per scanalatura T Z2

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



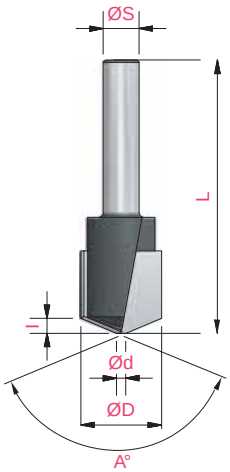
R	ØD	I	L	ØS=8	ØS=12	ØS=12.7
6,35	12,7	11	57	H48.063.C		
8	16	14	60	H48.080.C	H48.080.E	H48.080.F
9,5	19	17,5	63	H48.095.C	H48.095.E	H48.095.F
12,7	25,4	23,5	70		H48.127.E	H48.127.F



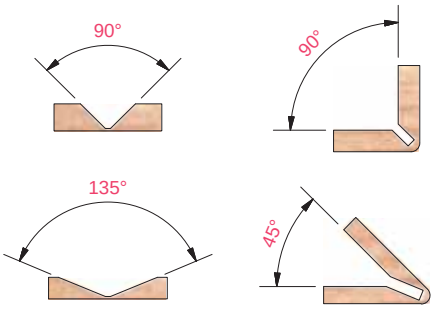


H50 Frese per elettrofresatrici portatili per scanalatura T Z2 - Alucobond

Router bits for electric routers | Shaftfräser für Handoberfräsmaschinen | Mèches pour defonseuse portative | Fresas para electrofresadoras portatiles



ØD	Ød	A°	L	L1	LT	Part Number
18	3	90°	10	8	60	H50.090
18	2	135°	10	3,3	60	H50.135



F.U.L. S.r.L.

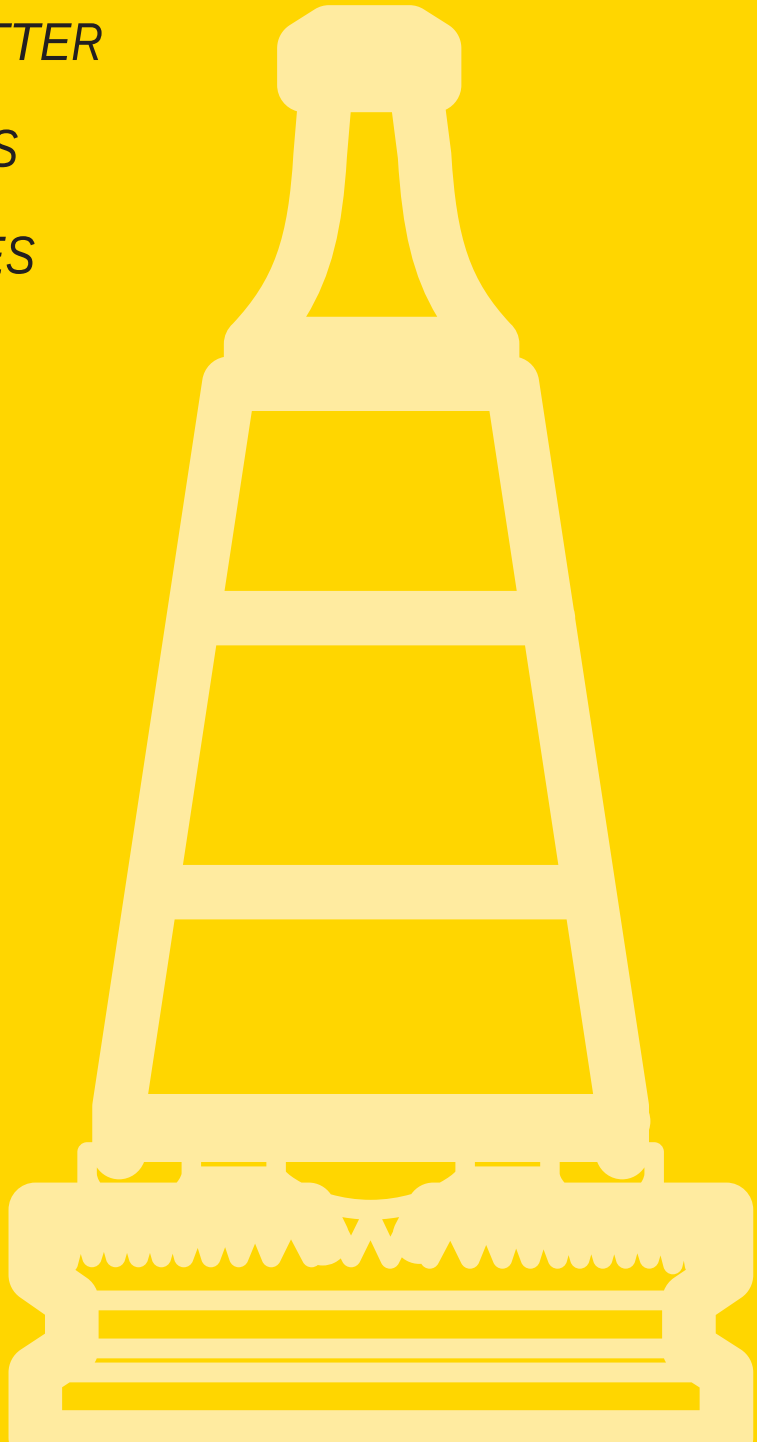
M A N D R I N I

CHUCKS

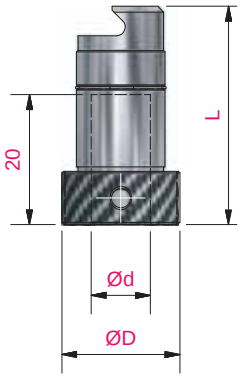
SPANNFUTTER

MANDRINS

MANDRILES



0130 Mandrini porta punta per cambio rapido

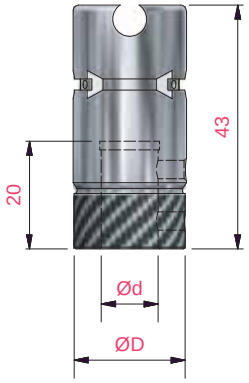


Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	L	DX - RH	SX - LH
10	20	37	0130.100.R	0130.100.L
10	20	30	0130.101.R	0130.101.L

"BIESSE"

0131 Mandrini porta punta per cambio rapido

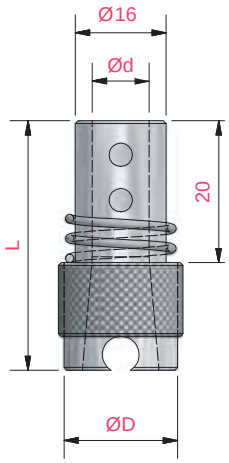


Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	DX - RH	SX - LH
10	20	0131.100.R	
10	16	0131.101.R rib.	
M10	20	0131.102.R	0131.102.L fil.

"MORBIDELLI"

0131.500 Mandrini porta punta per cambio rapido



Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	L	Part Number
10	20	44	0131.500

"MORBIDELLI"
con molla di estrazione

Mandrini porta punta per cambio rapido

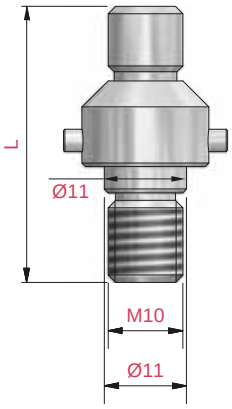
0131.600

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

L	DX - RH	SX - LH
37	0131.600.R	0131.600.L

Adattatore per utilizzo di mandrini a cambio rapido
per macchine MORBIDELLI - SCM con attacco filettato m10/11
si usa con art. 0131.100.r e/o art. 0131.500.R

Adapter to be used on MORBIDELLI - SCM machines
with threaded shank drill holderes



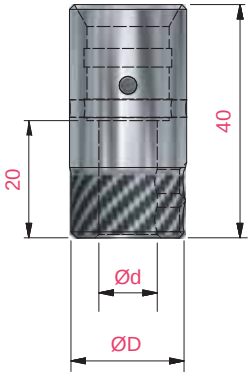
Mandrini porta punta per cambio rapido

0132

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	DX - RH
10	20	0132.100.R

"MASTERWOOD"
"MAGGI"
"GRIGGIO"



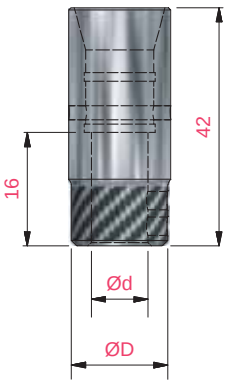
Mandrini porta punta per cambio rapido

0133

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

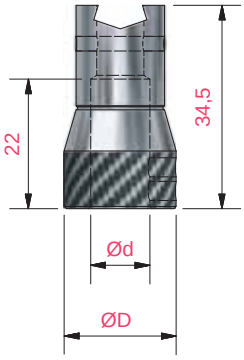
Ød	ØD	DX - RH
10	18	0133.100.R

"VITAP"



0134 Mandrini porta punta per cambio rapido

Quick change drill holder | Schnellwechselfutter | Mandrin de réductions pour mèches à tourillons | Mandriles para brocas con cambio rapido

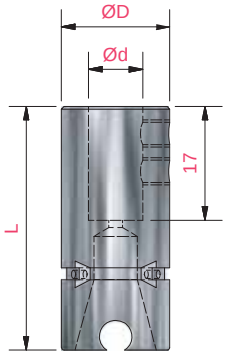


Ød	ØD	DX - RH
10	19	0134.100.R

"BUSELLATO"

0135.100 Mandrini porta punta per cambio rapido

Quick change drill holder | Schnellwechselfutter | Mandrin de réductions pour mèches à tourillons | Mandriles para brocas con cambio rapido

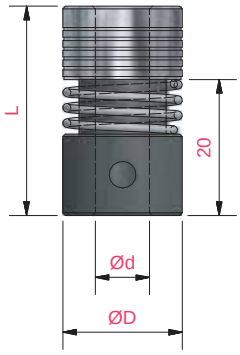


Ød	ØD	L	Part Number
10	20	45	0135.100.R

"DETEL"

0136.100 Mandrini porta punta per cambio rapido

Quick change drill holder | Schnellwechselfutter | Mandrin de réductions pour mèches à tourillons | Mandriles para brocas con cambio rapido



Ød	ØD	L	Part Number
10	22	38,5	0136.100.R

"GRASS"

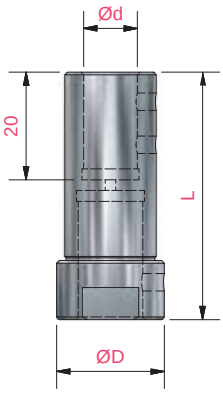
Mandrini porta punta per cambio rapido

0140

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	L	DX - RH
10	20	46	0140.100.R
10	20	56	0140.101.R
10	20	66	0140.102.R

"WEEKE"



Mandrini porta punta per cambio rapido

0150

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	XL	Part Number
10	18	17,5	0150.100.N

vite di fissaggio: 1V.011

Mandrini porta punta per cambio rapido

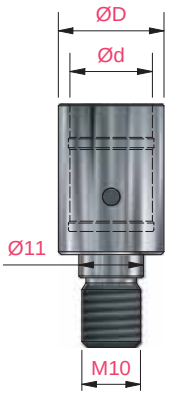
0151

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	DX - RH	SX - LH
14	18	0151.100.R	0151.100.L

"AYEN"
"HOLZMA"

0152 Mandrini porta punta per cambio rapido



Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

L	DX - RH	SX - LH
22,5	0152.100.R	0152.100.L

"MORBIDELLI"
"BIESSE"
"WEEKE"
"BUSELLATO"
"TORWEGGE"

0153 Mandrini porta punta per cambio rapido

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

L	DX - RH	SX - LH
22,5	0153.100.R	0153.100.L

"VITAP"
"ALBERTI"

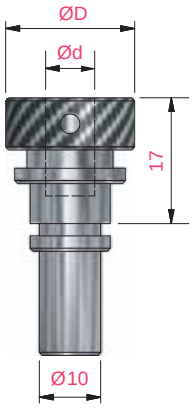
0154 Mandrini porta punta per cambio rapido

Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	DX - RH	SX - LH
14	18	0154.100.R	0154.100.L

"NOTTMEYER"

0160.100.N Mandrini per cambio automatico "BIESSE"



Quick change drill holder	Schnellwechselfutter	Mandrin de réductions pour mèches à tourillons	Mandriles para brocas con cambio rapido

Ød	ØD	L	Part Number
10	21	42	0160.100.N

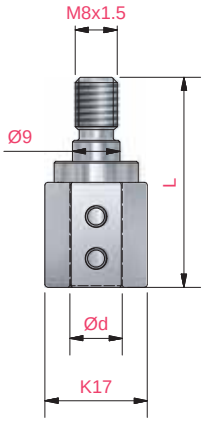
"BIESSE"

Mandrini per punta componibile

0012

Drill Holder | Spannfutter | Mandrins pour mèches à elément | Portabrocas

Ød	L	DX - RH	SX - LH
8	40	0012.080.R	0012.080.L
10	40	0012.100.R	0012.100.L

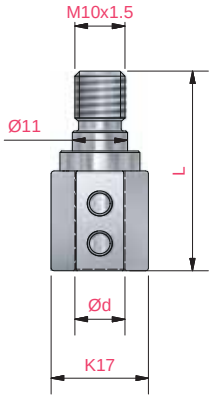


Mandrini per punta componibile

0013

Drill Holder | Spannfutter | Mandrins pour mèches à elément | Portabrocas

Ød	L	DX - RH	SX - LH
8	40	0013.080.R	0013.080.L
10	40	0013.100.R	0013.100.L

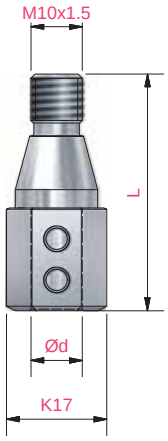


Mandrini per punta componibile

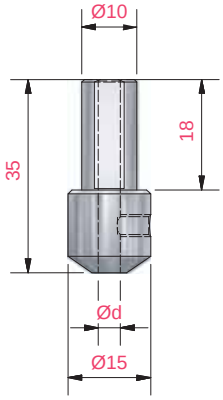
0014

Drill Holder | Spannfutter | Mandrins pour mèches à elément | Portabrocas

Ød	L	DX - RH	SX - LH
8	46	0014.080.R	0014.080.L
10	46	0014.100.R	0014.100.L



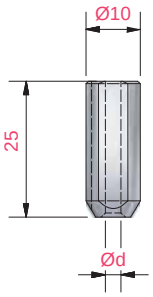
0010 Bussole e riduzioni per punte integrali



Bushing and chucks for jobber drills	Aufnahmen für spiralbohrer	Mandrins pour mèches à percer	Portabrocas
Ød		Part Number	
2		0010.020	
2.5		0010.025	
3		0010.030	
3.2		0010.032	
3.5		0010.035	
4		0010.040	
5		0010.050	

CNC

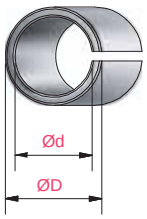
0011 Bussole e riduzioni per punte integrali



Bushing and chucks for jobber drills	Aufnahmen für spiralbohrer	Mandrins pour mèches à percer	Portabrocas
Ød		Part Number	
2		0011.020	
2.5		0011.025	
3		0011.030	
3.2		0011.032	
3.5		0011.035	
4		0011.040	
5		0011 .050	

CNC

0008 Mandrini



Chucks	Spannfutter	Mandrins	Mandriles
Ød	ØD	L	Part Number
6	8		0008.001
6	9,5		0008.002
6	10		0008.003
6	12		0008.004
6,35	12,7		0008.005
8	9,5		0008.006
8	10		0008.007
8	12		0008.008
9,5	12		0008.009
10	12		0008.010

Mandrino CNC MK2

0080

Chucks | Spannfutter | Mandrins | Mandriles

Rot	Cono Taper	ØD	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	C.M.2/FIL M20	50	85	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.R)	0080.100.R
DX-RH	C.M.2/FIL M30	50	70	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.R)	0080.200.R
SX-LH	C.M.2/FIL M30	50	70	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.L)	0080.200.L
DX-RH	C.M.2/FIL M30	50	70	Ø2÷20 (ER32) (0070)	Din 6499 (0077.101.R) c/cusc.	0080.202.R
DX-RH	C.M.3/FIL M30	50	70	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.R)	0080.300.R
SX-LH	C.M.3/FIL M30	50	70	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.L)	0080.300.L
DX-RH	C.M.3/FIL M30	50	70	Ø2÷20 (ER32) (0070)	Din 6499 (0077.101.R) c/cusc.	0080.302.R

Mandrino CNC attacco Ø 20 / Ø 25

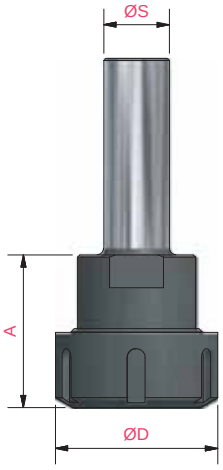
0080

Chucks | Spannfutter | Mandrins | Mandriles

Rot	ØD	ØS	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	20	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.R)	0080.400.R
DX-RH	50	20	Ø2÷20 (ER32) (0070)	Din 6499 (0077.101.R) c/cuscinetto	0080.402.R
DX-RH	50	25	Ø2÷20 (ER32) (0070)	Din 6499 (0077.001.R)	0080.600.R
DX-RH	50	25	Ø2÷20 (ER32) (0070)	Din 6499 (0077.101.R) c/cuscinetto	0080.602.R

Viene fornito completo di ghiera (senza pinza)
o con ghiera antisvitamento (con cuscinetto)

Chuck prices include pull stud



Mandrino CNC Attacco ISO 30 Flangia Conica

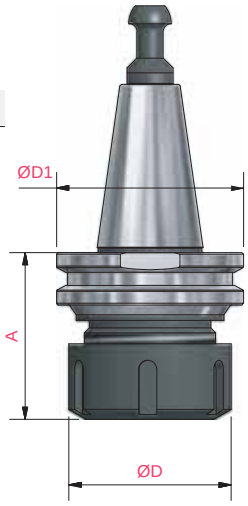
0080

Chucks | Spannfutter | Mandrins | Mandriles

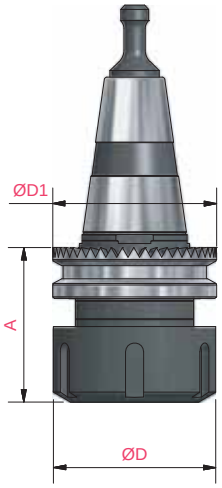
Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	57	58	Ø2÷20(ER32) (0070)	Din 6499 (0077.001.R)	0080.680.R

Viene fornito completo di ghiera e tirante (senza pinza)
Tirante 0081.891 per macchine "THERMWOOD"

Chuck prices include pull stud
Pull stud 0081.891 for "THERMWOOD"



0080 Mandrino CNC Attacco ISO 30 - Flangia Dentata



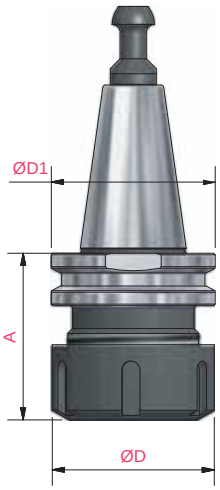
Chucks	Spannfutter	Mandrins	Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	49	55	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.700.R
DX-RH	50	49	55	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.702.R
DX-RH	60	49	71	Ø3÷25 (E0C 25) (0072)	DIN 6499 (0077.202.R)	0080.701.R
DX-RH	60	49	71	Ø3÷25 (E0C 25) (0072)	DIN 6499 (0077.203.R) c/cusc.	0080.711.R

Viene fornito completo di ghiera e tirante (senza pinza)
o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud

Tirante 0081.790 per macchine "MORBIDELLI - SCM"
Pull stud 0081.790 for "MORBIDELLI - SCM"

0080 Mandrino CNC Attacco ISO 30



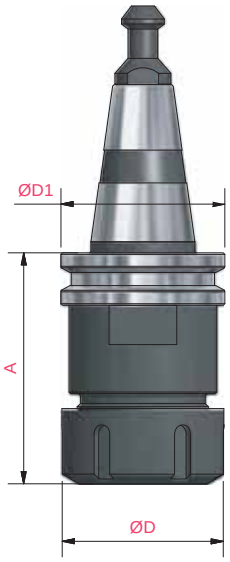
Chucks	Spannfutter	Mandrins	Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	50	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.800.R
SX-LH	50	50	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.L)	0080.800.L
DX-RH	50	50	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.802.R
DX-RH	63	50	60	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.830.R
SX-LH	63	50	60	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.L)	0080.830.L
DX-RH	63	50	60	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.832.R

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud

Tirante 0081.791 per macchine : BIESSE (dopo il 09/09/92) MASTERWOOD - BULLERI (Motori H.S.D.)
Pull stud 0081.791 for : BIESSE (after 09/09/92) MASTERWOOD - BULLERI (Motori H.S.D.)

0080 Mandrino CNC Attacco ISO 30 - Tipo Prolungato



Chucks	Spannfutter	Mandrins	Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.804.R
SX-LH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.L)	0080.804.L
DX-RH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.806.R
DX-RH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.834.R
SX-LH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.L)	0080.834.L
DX-RH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.836.R

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud

Tirante 0081.791 per macchine : BIESSE (dopo il 09/09/92) MASTERWOOD - BULLERI (Motori H.S.D.)
Pull stud 0081.791 for : BIESSE (after 09/09/92) MASTERWOOD - BULLERI (Motori H.S.D.)

Chucks | Spannfutter | Mandrins | Mandriles

Tirante 0081.792 per macchine : ALBERTI - VITAP - MASTERWOOD (Motori G. Colombo)
Pull stud 0081.792 for : ALBERTI - VITAP - MASTERWOOD (Motors G. Colombo)

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.810.R
LX-SH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.L)	0080.810.L
DX-RH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.812.R *
DX-RH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.814.R
LX-SH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.L)	0080.814.L
DX-RH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.816.R *

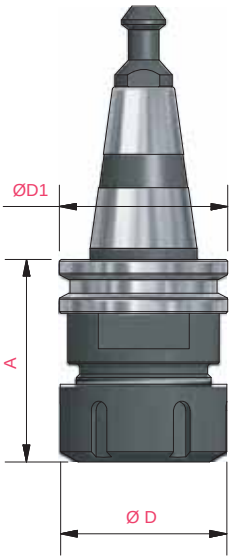
Tirante 0081.791 per macchine : BUSELLATO - WEEKE - IMA - MAKA - COSMEC - REICHENBACHER
Pull stud 0081.791 for : BUSELLATO - WEEKE - IMA - MAKA - COSMEC - REICHENBACHER

DX-RH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.820.R
LX-SH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.L)	0080.820.L
DX-RH	50	50	68	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.822.R *
DX-RH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.824.R
LX-SH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.L)	0080.824.L
DX-RH	63	50	68	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.826.R

Tirante 0081.794 per macchine : CMS - Flangia Ø 46
Pull stud 0081.794 for : CMS - Flangia Ø 46

DX-RH	50	46	52	Ø3÷20 (ETS32) (0073)	DIN 6499 (0077.301.R)	0080.880.R
DX-RH	50	46	52	Ø3÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.881.R
DX-RH	63	46	52	Ø4÷25 (ETS40) (0074)	DIN 6499 (0077.302.R)	0080.882.R
DX-RH	63	46	52	Ø4÷25 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.883.R

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud



*lock nut bearing

Mandrino CNC Attacco ISO 30 0080

Chucks | Spannfutter | Mandrins | Mandriles

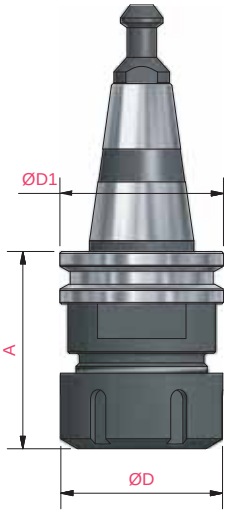
Tirante 0081.791 per macchine : BUSELLATO - WEEKE - IMA - MAKA - COSMEC - REICHENBACHER
Pull stud 0081.791 for : BUSELLATO - WEEKE - IMA - MAKA - COSMEC - REICHENBACHER

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	60	50	68	Ø3÷25 (EOC25) (0072)	DIN 6499 (0077.202.R)	0080.828.R
DX-RH	60	50	68	Ø3÷25 (EOC25) (0072)	DIN 6499 (0077.203.R) c/cusc.	0080.829.R *

Tirante 0081.791 per macchine : BIESSE (dopo il 09/09/92) MASTERWOOD - BULLERI (Motori H.S.D.)
Pull stud 0081.791 for : BIESSE (after 09/09/92) MASTERWOOD - BULLERI (Motors H.S.D.)

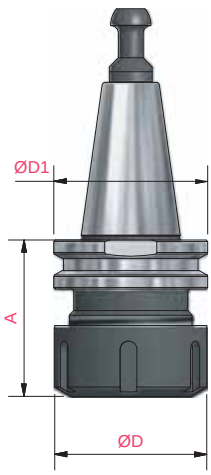
DX-RH	60	50	68	Ø3÷25 (EOC25) (0072)	DIN 6499 (0077.202.R)	0080.838.R
DX-RH	60	50	68	Ø3÷25 (EOC25) (0072)	DIN 6499 (0077.203.R) c/cusc.	0080.839.R *

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud



*lock nut bearing

0080 Mandrino CNC Attacco ISO 30



Chucks	Spannfutter	Mandrins	Mandriles

Tirante 0081.791 per ELETTROMANDRINI ELTE - Pull stud 0081.791 for ELETTROMANDRINI ELTE

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	58	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.845.R
DX-RH	50	58	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.846.R *
DX-RH	63	58	56	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.847.R
DX-RH	63	58	56	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.848.R *

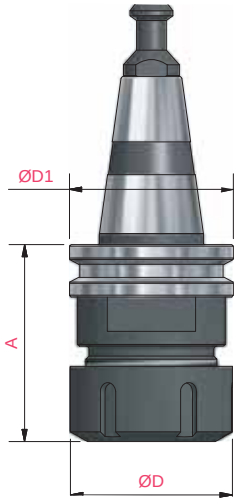
Tirante 0081.793 per macchine ESSETEAM (Flangia non fresata) - Pull stud 0081.793 for ESSETEAM

DX-RH	50	58	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.861.R
DX-RH	50	58	50	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.862.R*
DX-RH	63	58	56	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.864.R
DX-RH	63	58	56	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.866.R *

**lock nut bearing*

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud

0080 Mandrino CNC Attacco ISO 40



Chucks	Spannfutter	Mandrins	Mandriles

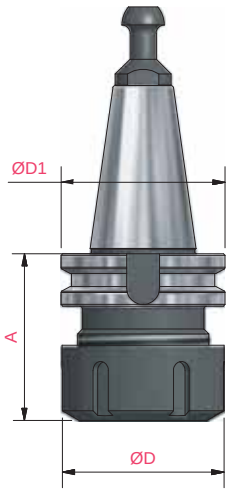
Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	63,5	73	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.850.R
DX-RH	50	63,5	73	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.852.R*
DX-RH	63	63,5	73	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.870.R
DX-RH	63	63,5	73	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.872.R*

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud

Tirante 0081.893 per macchine : WEEKE - IMA - MAKA - REICHENBACHER - STREGHERR
Pull stud 0081.893 for : WEEKE - IMA - MAKA - REICHENBACHER - STREGHERR

**lock nut bearing*

0080 Mandrino CNC Cono BT30 - BT35 - BT40



Chucks	Spannfutter	Mandrins	Mandriles

Rot	Tipo	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	BT30	50	46	60	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.910.R*
DX-RH	BT30	63	46	70	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.912.R*
DX-RH	BT35	50	53	69	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.920.R*
DX-RH	BT35	63	53	60	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.102.R) c/cusc.	0080.922.R*
DX-RH	BT40	50	63	65	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.930.R*

Viene fornito completo di ghiera e tirante (senza pinza) o con ghiera antisvitamento (con cuscinetto)
Chuck prices include pull stud

Tirante 0081.895 per macchine : BT30 SHODA - Pull stud 0081.895 for : BT30 SHODA
Tirante 0081.896 per macchine : BT35 HEIAN - Pull stud 0081.896 for : BT35 HEIAN
Tirante 0081.897 per macchine : BT40 SHODA - Pull stud 0081.897 for : BT40 SHODA

**lock nut bearing*

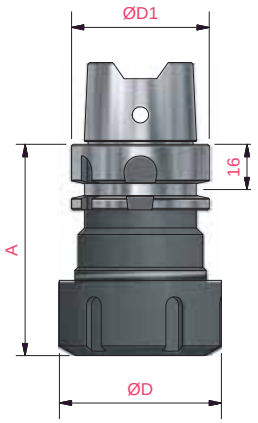
Mandrino CNC Cono HSK 40A

0080

Chucks	Spannfutter	Mandrins	Mandriles

Rot	ØD	ØD1	A	Pinza/Collect	Ghiera/Nut	Part Number
DX-RH	50	40	65	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.950.R

Viene fornito completo di ghiera e controghiera (senza pinza)
Per macchine : "CENTAURO"



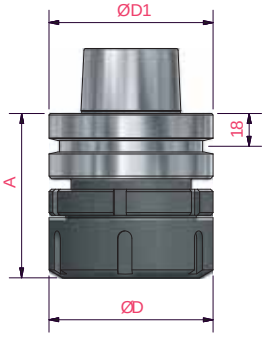
Mandrino CNC Cono HSK 63F

0080

Chucks	Spannfutter	Mandrins	Mandriles

Rot	ØD	ØD1	A	Pinza/Collect	Ghiera/Nut		
DX-RH	63	63	71	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0078	0080.953.R

Viene fornito completo di ghiera e controghiera (senza pinza)
Per macchine : "ESSETRE"

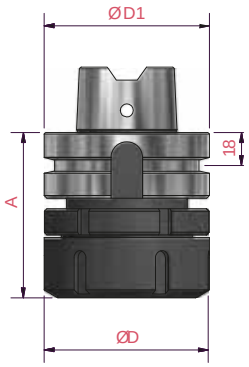


Mandrino CNC Cono HSK 63A

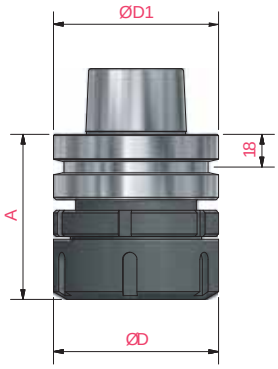
0080

Chucks	Spannfutter	Mandrins	Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Controghiera	Part Number
DX-RH	63	63	71	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0078	0080.956.R



0080 Mandrino CNC Cono HSK 63F

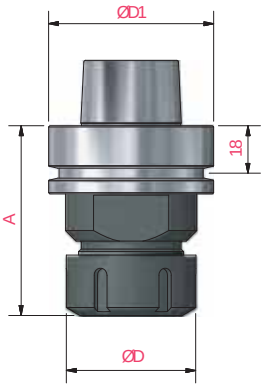


Chucks | Spannfutter | Mandrins | Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Controghiera	Part Number
DX-RH	63	63	79	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0078	0080.959.R

Viene fornito completo di ghiera e controghiera (senza pinza) Per macchine : "UNITEAM"

0080 Mandrino CNC Cono HSK Tipo "F"



Chucks | Spannfutter | Mandrins | Mandriles

Rot	Cono	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	HSK 50 F	50	50	73	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.966.R
DX-RH	HSK 50 F	50	50	76	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.968.R
DX-RH	HSK 50 F	60	50	78	Ø3÷26 (EOC25) (0072)	DIN 6499 (0077.202.R)	0080.974.R
DX-RH	HSK 63 F	42	63	70	Ø3÷16 (ER25) (0067)	DIN 6499 (0077.003.R)	0080.975.R
DX-RH	HSK 63 F	50	63	75	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.976.R
SX-LH	HSK 63 F	50	63	75	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.L)	0080.976.L
DX-RH	HSK 63 F	50	63	76	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.101.R) c/cusc.	0080.978.R
DX-RH	HSK 63 F	63	63	75	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.980.R
SX-LH	HSK 63 F	63	63	75	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.L)	0080.980.L
DX-RH	HSK 63 F	63	63	78	Ø2÷30 (ER40) (0071)	DIN 6499 (0077) c/cusc.	0080.982.R
DX-RH	HSK 63 F	60	63	78	Ø3÷26 (EOC25) (0072)	DIN 6499 (0077.202.R)	0080.983.R
DX-RH	HSK 63 F	60	63	78	Ø3÷26 (EOC25) (0072)	DIN 6499 (0077.203.R) c/cusc.	0080.984.R
DX-RH	HSK 63 F	60	63	115	Ø3÷26 (EOC25) (0072)	DIN 6499 (0077.203.R) c/cusc.	0080.994.R

Viene fornito completo di ghiera (senza pinza)

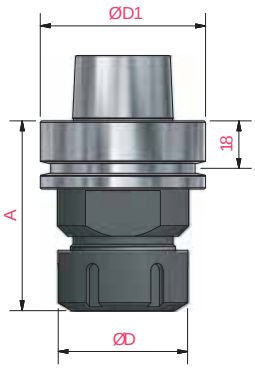
Mandrino CNC Cono HSK 63E

0080

Chucks | Spannfutter | Mandrins | Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	50	63	76	Ø2÷20 (ER32) (0070)	DIN 6499 (0077.001.R)	0080.985.R
DX-RH	50	63	76	Ø2÷30 (ETS32) (0073)	DIN 6499 (0077.301.R)	0080.986.R
DX-RH	63	63	76	Ø2÷30 (ER40) (0071)	DIN 6499 (0077.002.R)	0080.987.R
DX-RH	63	63	76	Ø4÷25 (ETS40) (0074)	DIN 6499 (0077.302.R)	0080.988.R

Viene fornito completo di ghiera (senza pinza)
Per macchine : "UNITEAM"



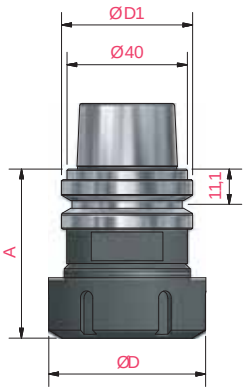
Mandrino CNC Cono HSK 50E 40

0080

Chucks | Spannfutter | Mandrins | Mandriles

Rot	ØD	ØD1	A	Pinza/Collet	Ghiera/Nut	Part Number
DX-RH	60	50	75	Ø3÷26 (EOC25) (0072)	DIN 6499 (0077.203.R) c/cusc.	0080.996.R

Viene fornito completo di ghiera (senza pinza)



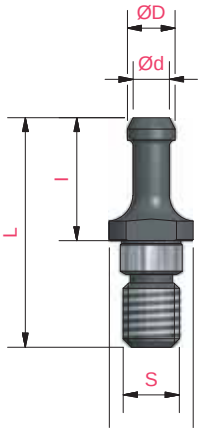
Tiranti per Coni Portautensili

0081.790

Pull | Schäfte für Spannfutter | Queue pour mandrin | Tirante para mandril

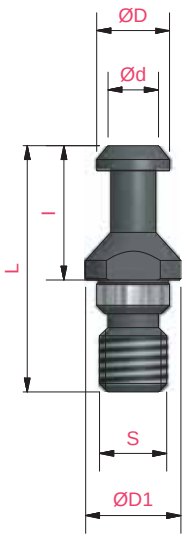
Tipo/Type	S	Ød	ØD	ØD1	l	L	DX-RH
ISO 30	M10	6,5	8,5	15	22	42,5	0081.790.R

Per macchine - For machines:
"MORBIDELLI - SCM"



10

0081 Tiranti per Coni Portautensili

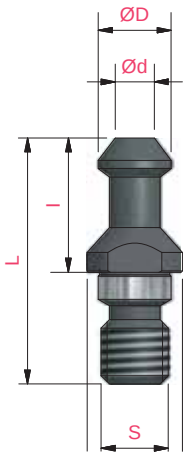


Pull	Schäfte für Spannfutter	Queue pour mandrin	Tirante para mandril

Tipo/Type	S	Ød	ØD	ØD1	I	L	DX-RH
ISO 30	M10	9	13	17	24	44	0081.791.R
ISO 40	M16	14	19	23	26	54	0081.893.R

Per macchine - For machines:
"BUSELLATO - WEEKE - IMA - BULLERI
MAKA - COSMEC - REICHENBACHER - ELTE "

0081.792 Tiranti per Coni Portautensili

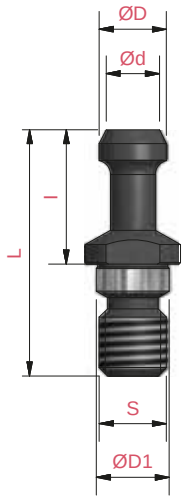


Pull	Schäfte für Spannfutter	Queue pour mandrin	Tirante para mandril

Tipo/Type	S	Ød	ØD	ØD1	I	L	DX-RH
ISO 30	M12	9	12,8	17	24	44	0081.792.R

Per macchine - For machines:
"ALBERTI - VITAP - MASTERWOOD"

0081.793 Tiranti per Coni Portautensili



Pull	Schäfte für Spannfutter	Queue pour mandrin	Tirante para mandril

Tipo/Type	S	Ød	ØD	ØD1	I	L	DX-RH
ISO 30	M12	8	12	16	24	44	0081.793.R

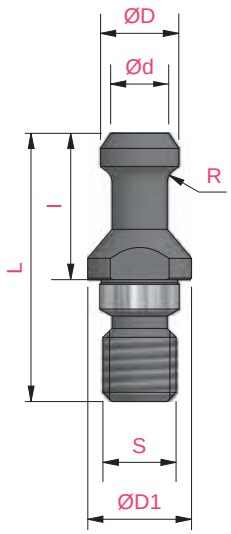
Per macchine - For machines:
"ESSETEAM "

Tiranti per Coni Portautensili

0081.794

		Pull		Schäfte für Spannfutter		Queue pour mandrin	Tirante para mandril
Tipo/Type	S	Ød	ØD	ØD1	R	I	L	DX-RH
ISO 30	M12	9	12,8	17	2,4	24	44	0081.794.R

Per macchine - For machines:
"CMS "

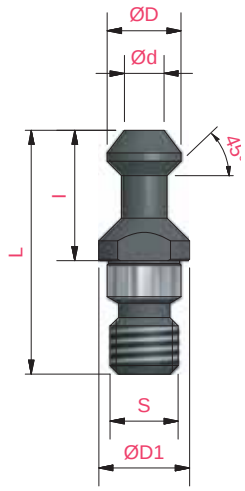


Tiranti per Coni Portautensili

0081.795

		Pull		Schäfte für Spannfutter		Queue pour mandrin	Tirante para mandril
Tipo/Type	S	Ød	ØD	ØD1	I	L	DX-RH
ISO 30	M12	9	13	17	23	44	0081.795.R

Per macchine - For machines:
"BELOTTI "

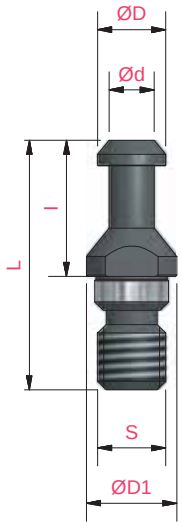


Tiranti per Coni Portautensili

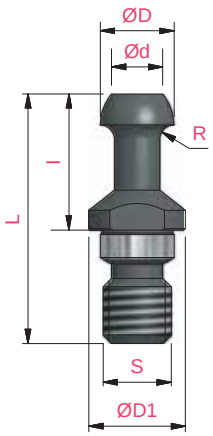
0081.890

		Pull		Schäfte für Spannfutter		Queue pour mandrin	Tirante para mandril
Tipo/Type	S	Ød	ØD	ØD1	I	L	DX-RH
ISO 30	M12	9	13	17	24	44	0081.890.R

Per macchine - For machines:
"BIESSE"



0081.891 Tiranti per Coni Portautensili

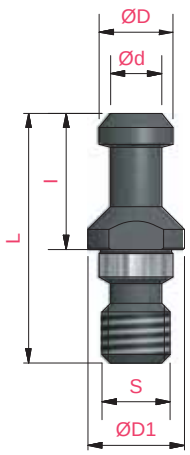


Pull	Schäfte für Spannfutter	Queue pour mandrin	Tirante para mandril

Tipo/Type	S	Ød	ØD	ØD1	R	I	L	DX-RH
ISO 30	M12	8	12	17	3,2	24	44	0081.891.R

Per macchine - For machines:
"BIESSE - MASTERWOOD - BULLERI - TERMWOOD"

0081.894 Tiranti per Coni Portautensili

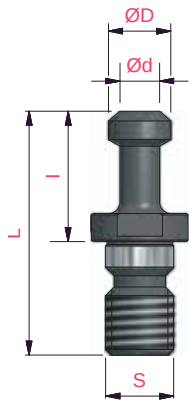


Pull	Schäfte für Spannfutter	Queue pour mandrin	Tirante para mandril

Tipo/Type	S	Ød	ØD	ØD1	I	L	DX-RH
BT 30	M12	9	13	17	24	44	0081.894.R

Per macchine - For machines:
"KOMO"

0081.895 Tiranti per Coni Portautensili



Pull	Schäfte für Spannfutter	Queue pour mandrin	Tirante para mandril

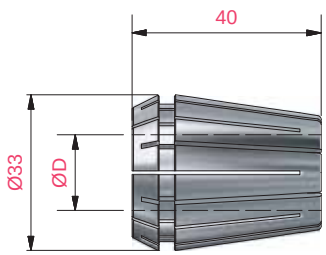
Tipo/Type	S	Ød	ØD	I	L	DX-RH
BT 30	M12	7	11	23,5	43	0081.895.R
BT 35	M12	8,5	13	28	48	0081.896.R
BT 40	M16	10	15	35	60	0081.897.R

Per macchine - For machines:
"BT 30 - BT 40 SHODA - BT 35 HEIAN"

Pinze ER 32

0070

Collets | Schäfte für Spannfutter | Pinces | Pinzas

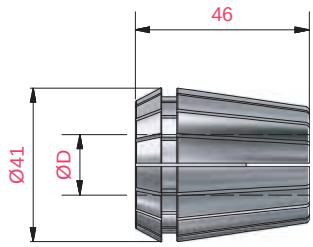


ØD	Part Number	ØD	Part Number
2 - 1	0070.020	11 - 10	0070.110
3 - 2	0070.030	12 - 11	0070.120
3,2 - (1/8")	0070.032	12,7 - (1/2")	0070.127
4 - 3	0070.040	13 - 12	0070.130
4,8 - (3/16")	0070.048	14 - 13	0070.140
5 - 4	0001.050	15 - 14	0070.150
6 - 5	0070.060	15,9 - (5/8")	0070.159
6-4 - 1/4")	0070.064	16 - 15	0070.160
7 - 6	0070.070	17 - 16	0070.170
7-9 - (5/16")	0070.079	18 - 17	0070.180
8 - 7	0070.080	19 - 18	0070.190
9 - 8	0070.090	19,1 - 3/4")	0070.191
9,5 - (3/8")	0070.095	20 - 19	0070.200
10 - 9	0070.100		

Pinze ER 40

0071

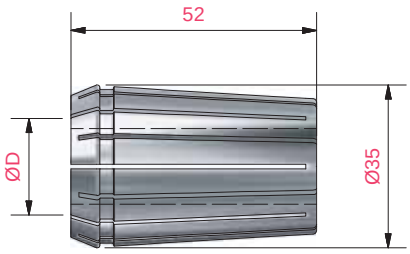
Collets | Schäfte für Spannfutter | Pinces | Pinzas



ØD	Part Number	ØD	Part Number
3 - 2	0071.030	15 - 14	0071.150
4 - 3	0071.040	15,9 - 5/8")	0071.159
4,8 - (3/16")	0071.048	16 - 15	0071.160
5 - 4	0071.050	17 - 16	0071.170
6 - 5	0071.060	18 - 17	0071.180
6-4 - (1/4")	0071.064	19 - 18	0071.190
7 - 6	0071.070	19,1 - 3/4")	0071.191
7-9 - (5/16")	0071.079	20 - 19	0071.200
8 - 7	0071.080	21 - 20	0071.210
9 - 8	0071.090	22 - 21	0071.220
9,5 - (3/8")	0071.095	23 - 22	0071.230
10 - 9	0071.100	24 - 23	0071.240
11 - 10	0071.110	25 - 24	0071.250
12 - 11	0071.120	25,4 - (1")	0071.254
12,7 - (1/2")	0071.127	26 - 25	0071.260
13 - 12	0071.130	28 - 27	0071.280
14 - 13	0071.140	30 - 29	0071.300

0072 Pinze EOC 25

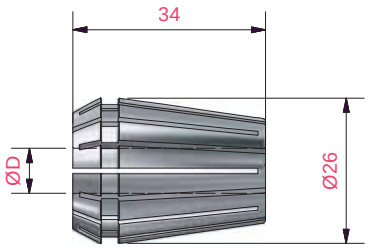
Collets | Schäfte für Spannfutter | Pinces | Pinzas



ØD	Part Number	ØD	Part Number
2 - 1,5	0072.020	12 - 11,5	0072.120
3 - 2,5	0072.030	13 - 12,5 - (1/2")	0072.130
4 - 3,5	0072.040	14 - 13,5	0072.140
5 - 4,5	0072.050	15,9 - (5/8")	0072.159
6 - 5,5	0072.060	16 - 15,5	0072.160
6-4 - (1/4")	0072.064	18 - 17,5	0072.180
7 - 6,5	0072.070	19,1 - (3/4")	0072.191
8 - 7,5	0072.080	20 - 19,5	0072.200
9,5 - (3/8")	0072.095	22 - 21,5	0072.220
10 - 9,5	0072.100	25 - 24,5	0072.250
11 - 10,5	0072.110	25,4 - (1")	0072.254

0067 Pinze ER 25

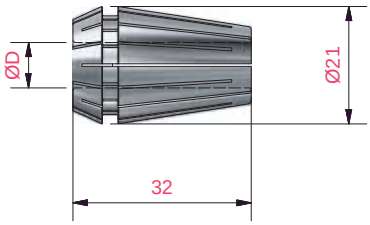
Collets | Schäfte für Spannfutter | Pinces | Pinzas



ØD	Part Number	ØD	Part Number
3 - 2	0067.030	9,5 - (3/8")	0067.095
3,2 - (1/8")	0067.032	10 - 9	0067.100
4 - 3	0067.040	11 - 10	0067.110
4,8 - (3/16")	0067.048	12 - 11	0067.120
5 - 4	0067.050	12,7 - (1/2")	0067.127
6 - 5	0067.060	13 - 12	0067.130
6-4 - (1/4")	0067.064	14 - 13	0067.140
7 - 6	0067.070	15 - 14	0067.150
7-9 - (5/16")	0067.079	15,9 - (5/8")	0067.159
8 - 7	0067.080	16 - 15	0067.160
9 - 8	0067.090		

0068 Pinze ER 20

Collets | Schäfte für Spannfutter | Pinces | Pinzas



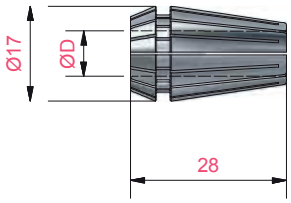
ØD	Part Number	ØD	Part Number
3 - 2	0068.030	9,5 - (3/8")	0068.095
3,2 - (1/8")	0068.032	10 - 9	0068.100
4 - 3	0068.040	11 - 10	0068.110
5 - 4	0068.050	12 - 11	0068.120
6 - 5	0068.060	12,7 - (1/2")	0068.127
6-4 - (1/4")	0068.064	13 - 12	0068.130
8 - 7	0068.080		
9 - 8	0068.090		

Pinze ER 16

0069

Collets | Schäfte für Spannfutter | Pinces | Pinzas

ØD	Part Number	ØD	Part Number
2 - 1	0069.020	6-4 - (1/4")	0069.064
3 - 2	0069.030	7 - 6	0069.070
3,2 - (1/8")	0069.032	8 - 7	0069.080
4 - 3	0069.040	9 - 8	0069.090
5 - 4	0069.050	9,5 - (3/8")	0069.095
6 - 5	0069.060	10 - 9	0069.100

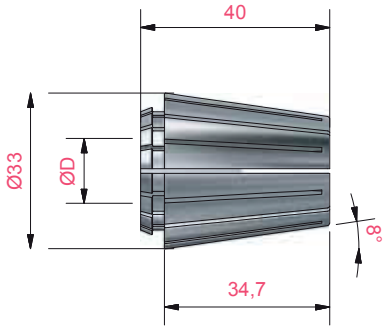


Pinze ETS 32

0073

Collets | Schäfte für Spannfutter | Pinces | Pinzas

ØD	Part Number	ØD	Part Number
3 - 2	0073.030	12 - 11	0073.120
4 - 3	0073.040	13 - 12	0073.130
5 - 4	0073.050	14 - 13	0073.140
6 - 5	0073.060	16 - 15	0073.160
7 - 6	0073.070	18 - 17	0073.180
8 - 7	0073.080	20 - 19	0073.200
10 - 9	0073.100		

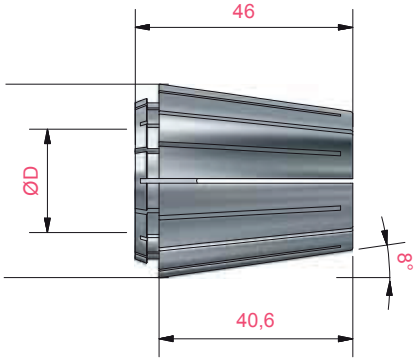


Pinze ETS 40

0074

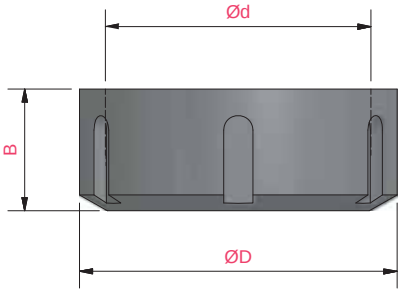
Collets | Schäfte für Spannfutter | Pinces | Pinzas

ØD	Part Number	ØD	Part Number
4	0074.040	13 - 12	0074.130
5	0074.050	14 - 13	0074.140
6	0074.060	15 - 16	0074.160
7	0074.070	18	0074.180
8 - 7	0074.080	20	0074.200
10 - 9	0074.100	25	0074.250
12 - 11	0074.120		



0077 Ghiera

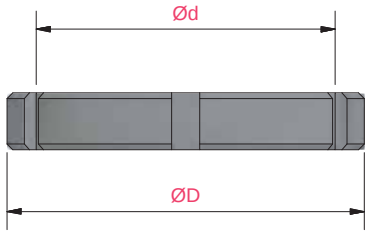
Lock Nut | Nutmutter | Ecrons | Tuercas



ØD	B	Ød	Tipo/Type	Dx	Sx
42	20	M32 x 1,5	Per Pinza ER 25	0077.003.R	
50	23	M40 x 1,5	Per Pinza ER 32	0077.001.R	0077.001.L
63	25	M50 x 1,5	Per Pinza ER 40	0077.002.R	0077.002.L
50	23	M40 x 1,5	Per Pinza ER 32 c/cuscinetto	0077.101.R	
63	25	M50 x 1,5	Per Pinza ER 40 c/cuscinetto	0077.102.R	
60	30	M48 x 2	Per Pinza DIN 6388 EOC25	0077.202.R	0077.202.L
60	30	M48 x 2	Per Pinza DIN 6388 EOC25 c/cuscinetto	0077.203.R	
50	23	M40 x 1,5	Per Pinza ETS 32	0077.301.R	
63	50	M50 x 1,5	Per Pinza ETS 40	0077.302.R	

0078 Ghiera

Nut | Nutmutter | Ecrons | Tuercas



ØD	B	Ød	Dx
63	10	M50 x 1,5	0078.000.R

Per Art. 0080.953 - 0080.956 - 0080.959

R I C A M B I

SPARE PARTS

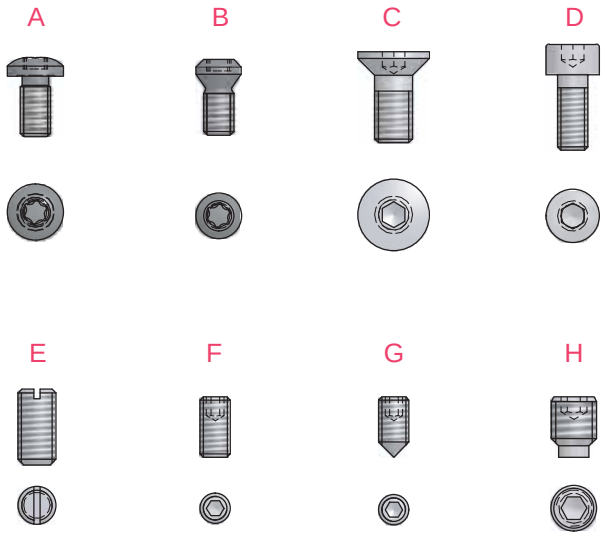
ERSATZTEILE

PARTS DE RECHANGES

RECAMBIOS

1V Ricambi viti

Screws | Ersatzteile | Parts de rechange | Recambios

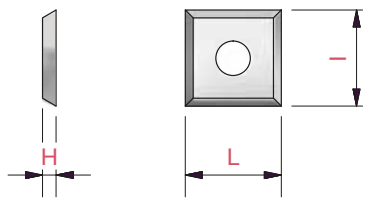


ØD	Tipo/Type	Part Number
M3,5x5	A	1V.018
M3x5.5	A	1V.028
M4x5	A	1V.026
M4x6	A	1V.002
M4x6	A	1V.024
M4x8	A	1V.023
M4x5	B	1V.003
M3x10	C	1V.005
M4x8	C	1V.006
M4x12	C	1V.007
M5x10	C	1V.027
M3x10	D	1V.008
M5x10	E	1V.009
M2,5x2,5	F	1V.016
M4x4	F	1V.017
M4x5	F	1V.010
M5x5	F	1V.011
M6x5	F	1V.012
M3x3	G	1V.022
M4x6	G	1V.013
M5x6	G	1V.014
M6x6	G	1V.015
M6x8	H	1V.029

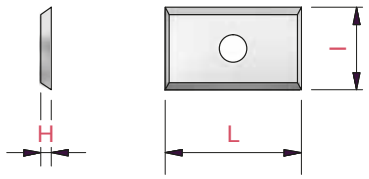
Ricambi coltelli

Knife | Wendeplatten | Parts de rechange | Recambios

A



B

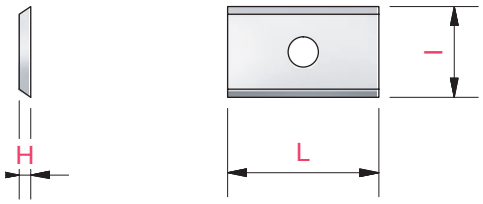


Tipo/Type	L	I	L	Part Number
A	12	12	1.5	1N.121
A	14	14	2	1N.141420
B	19,5	10	1.5	1N.195
B	19,8	10	1.5	1N.198

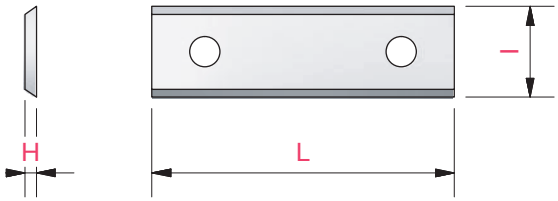
Ricambi coltelli

Knife | Wendeplatten | Parts de rechange | Recambios

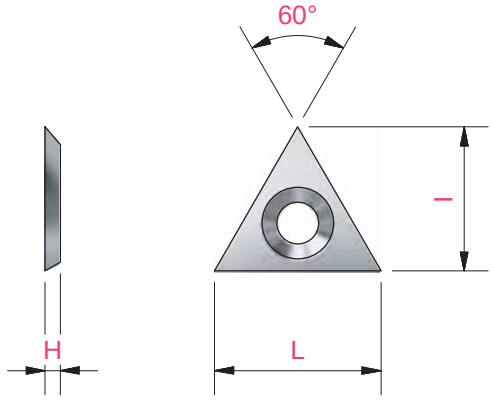
A



B



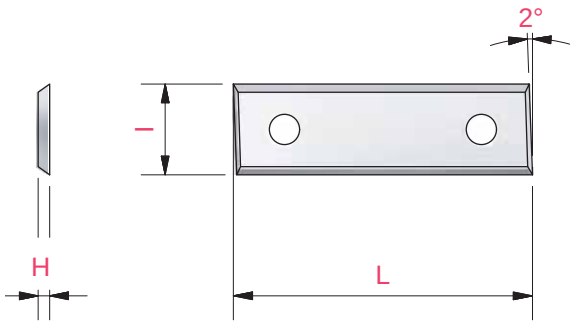
Tipo/Type	L	I	L	Part Number
A	15	12	1,5	1N.151
A	20	12	1,5	1N.201
A	9,6	12	1,5	1N.096
A	7,6	12	1,5	1N.071
B	30	12	1,5	1N.301
B	40	12	1,5	1N.401
B	50	12	1,5	1N.501
B	60	12	1,5	1N.601
A	10	12	1,5	1N.250
A	11	12	1,5	1N.260
A	13	12	1,5	1N.300
A	15	12	1,5	1N.340
A	15,7	12	1,5	1N.350
A	18	12	1,5	1N.400



L	I	H	Part Number
22	19	2	1N.222

Placchette Z4

Knife | Wendeplatten | Parts de rechange | Recambios

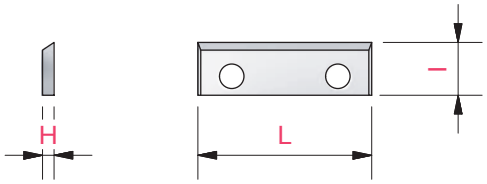


L	I	H	Part Number
30	9	1,5	1N.319
30	12	1,5	1N.311
40	12	1,5	1N.411
50	9	1,5	1N.519
50	12	1,5	1N.511
24	10	1,5	1N.241

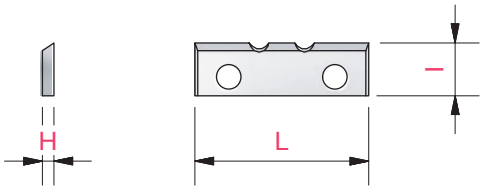
Ricambi coltelli

Knife | Wendeplatten | Parts de rechange | Recambios

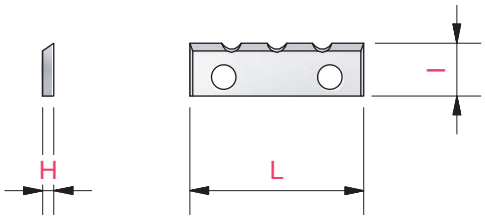
A



B



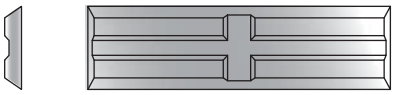
C



Tipo/Type	L	I	L	Part Number
A	23	7	1,5	1N.023.A
B	23	7	1,5	1N.023.B
C	23	7	1,5	1N.023.C

Ricambi coltelli 2C-VERSOFIX

Knife for item 2C | Wendeplatten | Pieces de rechange | Recambios



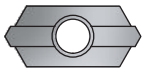
	L	I	L	Part Number
	20	5,5	1,1	1P.220
	20	10	1,5	1P.221
	30	6,5	1,1	1P.230
	30	10	1,5	1P.231
	50	10	1,5	1P.251

Ricambi per punta per cerniera a coltellini

Spare parts forreplacement tip minge bit	Ersatzteile	Parts de rechange	Recambios

1R.001

				Part Number
				1R.001



1P.000

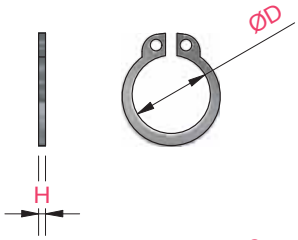
				Part Number
				1P.000

Chiavi di Bloccaggio/Seeger

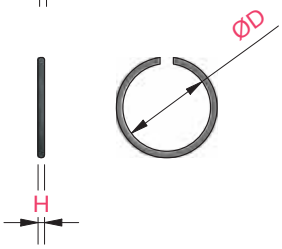
Spare parts	Ersatzteile	Pieces de rechange	Recambios

			Part Number
T9			1Z.005
T15			1Z.000
T20			1Z.002

B			Part Number
1,3			1Z.001
1,5			1Z.006
2			1Z.007
2,5			1Z.004
3			1Z.003

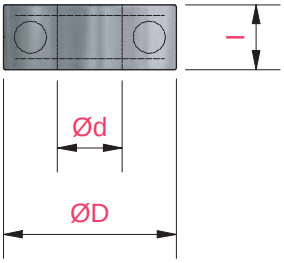


Tipo/Type	ØD	H	Part Number
Din 471	12	1	1S.001



Tipo/Type	ØD	H	Part Number
DIN 7993	28	2	1T.001

Ball berings | Kugellager | Parts de rechange | Recambios



ØD	Ød	l	Part Number
9,52	4,76	3,17	R166 ZZ
10	3	4	623 ZZ
10	4	4	MR104 ZZ
12,7	4,96	4,97	R3 ZZ
12,7	6,35	4,75	R188 ZZ
13	4	5	624 ZZ
13	5	4	695 ZZ
13	6	5	686 ZZ
15	6	5	696 ZZ
16	5	5	625 ZZ
16	8	5	688 ZZ
19	6	6	626 ZZ
19	6,35	7	R4A ZZ
19	8	6	698 ZZ
19	12,7	3,96	ER 1212 ZZ
22	8	7	608 ZZ