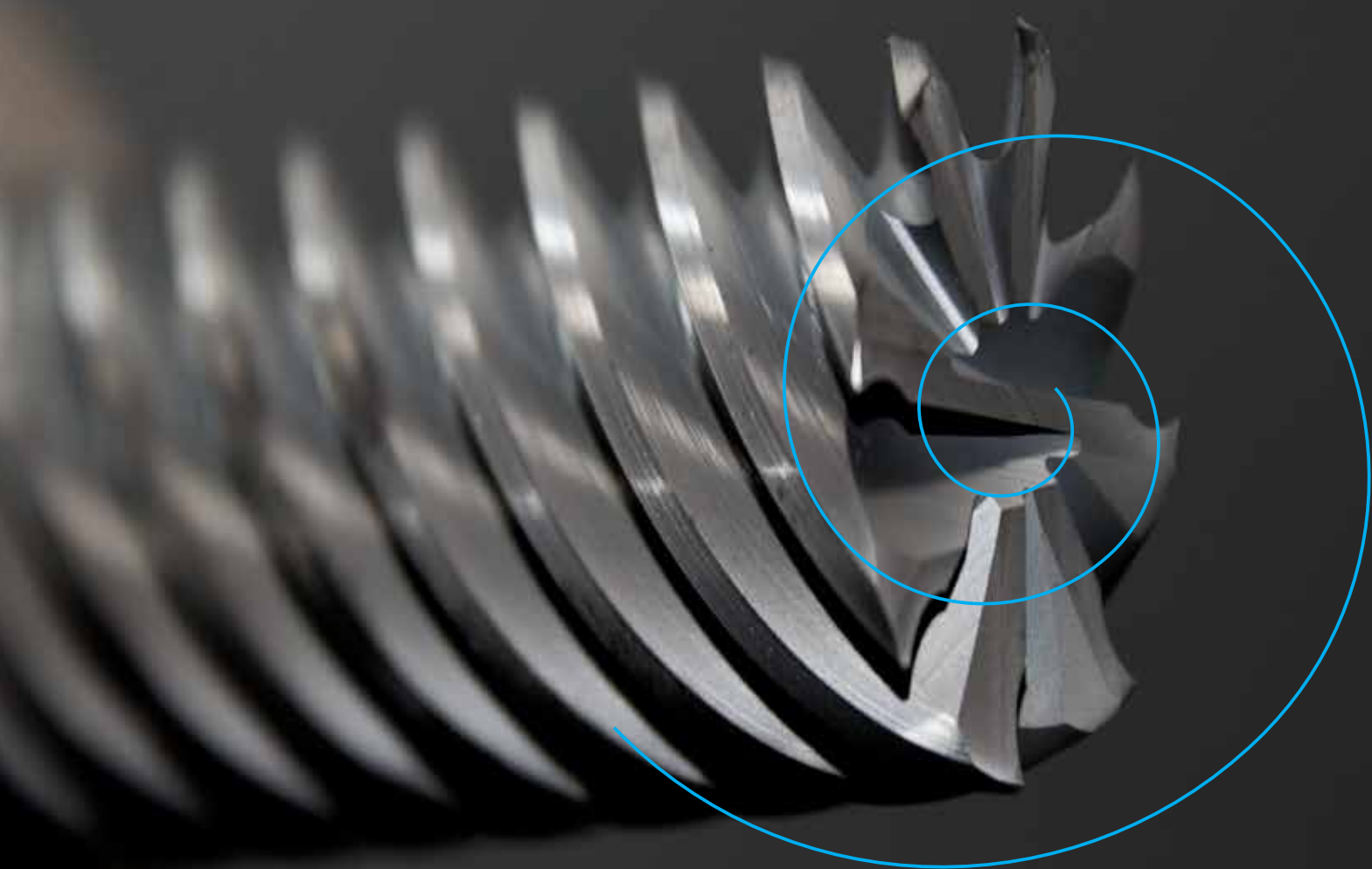




Fresatura e Foratura

Routing & Drilling

CATALOGO V2.1 -CATALOGUE V2.1



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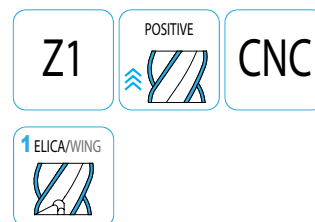
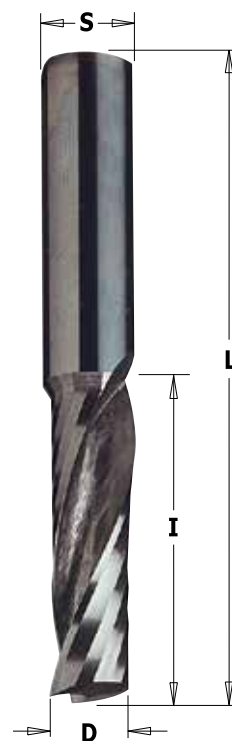
FRESATURA - *MILLING*

Fresa a taglienti elicoidali positivi in HW integrale

Solid carbide – UP spiral router cutters

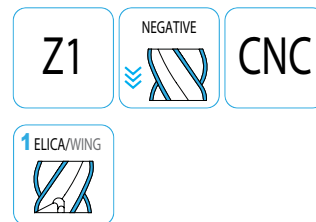
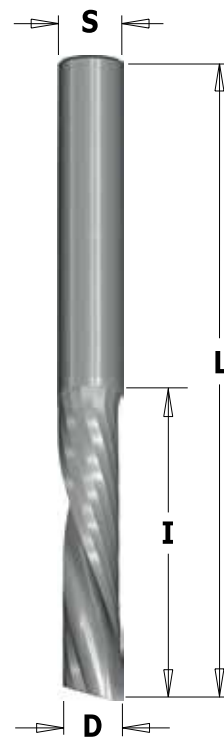
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5	22	60	5	Z1PL 0522R	Z1PL 0522L
6	22	60	6	Z1PL 0622R	Z1PL 0622L
8	22	63	8	Z1PL 0822R	Z1PL 0822L
8	32	80	8	Z1PL 0832R	Z1PL 0832L
10	32	80	10	Z1PL 1032R	Z1PL 1032L
10	42	100	10	Z1PL 1042R	Z1PL 1042L
12	32	80	12	Z1PL 1232R	Z1PL 1232L
12	42	100	12	Z1PL 1242R	Z1PL 1242L
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14	42	100	14	Z1PL 1442R	Z1PL 1442L
14	52	100	14	Z1PL 1452R	Z1PL 1452L
16	42	100	16	Z1PL 1642R	Z1PL 1642L
16	52	100	16	Z1PL 1652R	Z1PL 1652L
16	72	120	16	Z1PL 1672R	Z1PL 1672L
18	52	100	18	Z1PL 1852R	Z1PL 1852L
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18	102	150	18	Z1PL 18102R	Z1PL 18102L
20	52	100	20	Z1PL 2052R	Z1PL 2052L
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Z1NL

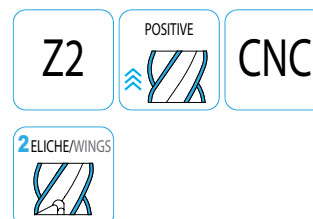
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6	22	60	6	Z1NL 0622R	Z1NL 0622L
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16	42	100	16	Z1NL 1642R	Z1NL 1642L
16	52	100	16	Z1NL 1652R	Z1NL 1652L
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20	72	120	20	Z1NL 2072R	Z1NL 2072L
20	102	150	20	Z1NL 20102R	Z1NL 20102L



Fresa a taglienti elicoidali positivi in HW integrale per legno
Solid carbide – UP spiral router cutters for wood

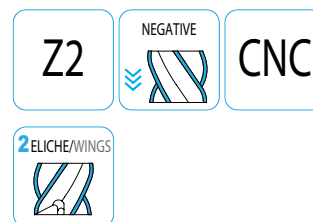
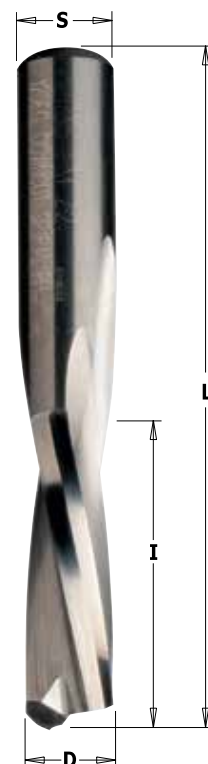
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6	22	60	6	Z2PL 0622R	Z2PL 0622L
6	27	60	6	Z2PL 0627R	Z2PL 0627L
8	22	63	8	Z2PL 0822R	Z2PL 0822L
8	32	80	8	Z2PL 0832R	Z2PL 0832L
8	42	100	8	Z2PL 0842R	Z2PL 0842L
10	32	80	10	Z2PL 1032R	Z2PL 1032L
10	42	100	10	Z2PL 1042R	Z2PL 1042L
10	52	100	10	Z2PL 1052R	Z2PL 1052L
12	32	80	12	Z2PL 1232R	Z2PL 1232L
12	42	100	12	Z2PL 1242R	Z2PL 1242L
12	52	100	12	Z2PL 1252R	Z2PL 1252L
14	32	80	14	Z2PL 1432R	Z2PL 1432L
14	42	100	14	Z2PL 1442R	Z2PL 1442L
14	52	100	14	Z2PL 1452R	Z2PL 1452L
16	42	100	16	Z2PL 1642R	Z2PL 1642L
16	52	100	16	Z2PL 1652R	Z2PL 1652L
16	62	106	16	Z2PL 1662R	Z2PL 1662L
16	72	120	16	Z2PL 1672R	Z2PL 1672L
18	52	100	18	Z2PL 1852R	Z2PL 1852L
18	72	120	18	Z2PL 1872R	Z2PL 1872L
18	102	150	18	Z2PL 18102R	Z2PL 18102L
20	52	100	20	Z2PL 2052R	Z2PL 2052L
20	72	120	20	Z2PL 2072R	Z2PL 2072L
20	102	150	20	Z2PL 20102R	Z2PL 20102L



Z2NL

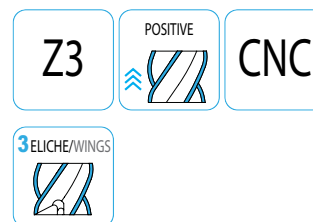
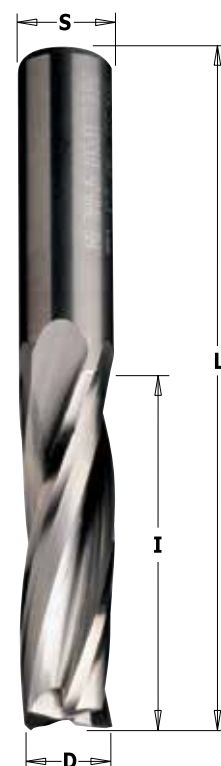
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6	22	60	6	Z2NL 0622R	Z2NL 0622L
6	27	60	6	Z2NL 0627R	Z2NL 0627L
8	22	63	8	Z2NL 0822R	Z2NL 0822L
8	32	80	8	Z2NL 0832R	Z2NL 0832L
10	32	80	10	Z2NL 1032R	Z2NL 1032L
10	42	100	10	Z2NL 1042R	Z2NL 1042L
10	52	100	10	Z2NL 1052R	Z2NL 1052L
12	32	80	12	Z2NL 1232R	Z2NL 1232L
12	42	100	12	Z2NL 1242R	Z2NL 1242L
12	52	100	12	Z2NL 1252R	Z2NL 1252L
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14	42	100	14	Z2NL 1442R	Z2NL 1442L
14	52	100	14	Z2NL 1452R	Z2NL 1452L
16	42	100	16	Z2NL 1642R	Z2NL 1642L
16	52	100	16	Z2NL 1652R	Z2NL 1652L
16	62	106	16	Z2NL 1662R	Z2NL 1662L
16	72	120	16	Z2NL 1672R	Z2NL 1672L
18	52	100	18	Z2NL 1852R	Z2NL 1852L
18	72	120	18	Z2NL 1872R	Z2NL 1872L
18	102	150	18	Z2NL 18102R	Z2NL 18102L



Fresa a taglienti elicoidali positivi in HW integrale per legno
Solid carbide – UP spiral router cutters for wood

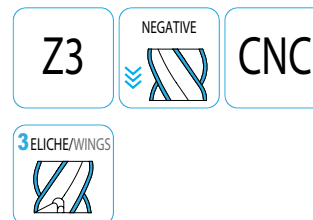
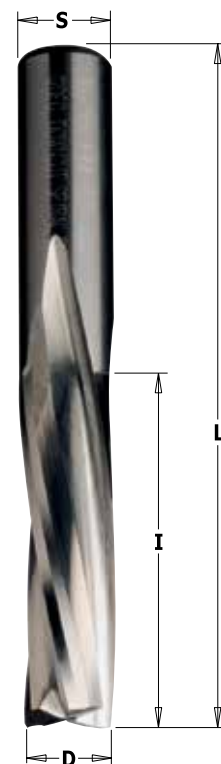
Z3PL

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8	32	80	8	Z3PL 0832R	Z3PL 0832L
8	42	100	8	Z3PL 0842R	Z3PL 0842L
10	32	80	10	Z3PL 1032R	Z3PL 1032L
10	42	100	10	Z3PL 1042R	Z3PL 1042L
10	52	100	10	Z3PL 1052R	Z3PL 1052L
12	32	80	12	Z3PL 1232R	Z3PL 1232L
12	42	100	12	Z3PL 1242R	Z3PL 1242L
12	52	100	12	Z3PL 1252R	Z3PL 1252L
14	32	80	14	Z3PL 1432R	Z3PL 1432L
14	42	100	14	Z3PL 1442R	Z3PL 1442L
14	52	100	14	Z3PL 1452R	Z3PL 1452L
16	42	100	16	Z3PL 1642R	Z3PL 1642L
16	52	100	16	Z3PL 1652R	Z3PL 1652L
16	62	106	16	Z3PL 1662R	Z3PL 1662L
16	72	120	16	Z3PL 1672R	Z3PL 1672L
18	52	100	18	Z3PL 1852R	Z3PL 1852L
18	72	120	18	Z3PL 1872R	Z3PL 1872L
18	102	150	18	Z3PL 18102R	Z3PL 18102L
20	52	100	20	Z3PL 2052R	Z3PL 2052L
20	72	120	20	Z3PL 2072R	Z3PL 2072L
20	102	150	20	Z3PL 20102R	Z3PL 20102L



Z3NL

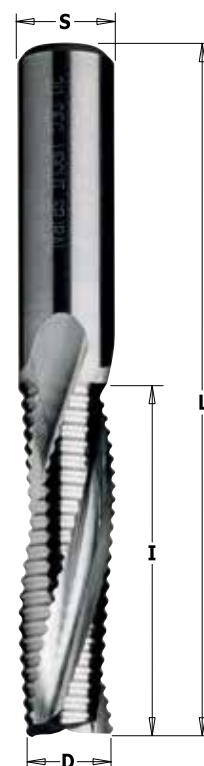
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8	42	100	8	Z3NL 0842R	Z3NL 0842L
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10	42	100	10	Z3NL 1042R	Z3NL 1042L
10	52	100	10	Z3NL 1052R	Z3NL 1052L
12	32	80	12	Z3NL 1232R	Z3NL 1232L
12	42	100	12	Z3NL 1242R	Z3NL 1242L
12	52	100	12	Z3NL 1252R	Z3NL 1252L
14	32	80	14	Z3NL 1432R	Z3NL 1432L
14	42	100	14	Z3NL 1442R	Z3NL 1442L
14	52	100	14	Z3NL 1452R	Z3NL 1452L
16	42	100	16	Z3NL 1642R	Z3NL 1642L
16	52	100	16	Z3NL 1652R	Z3NL 1652L
16	62	106	16	Z3NL 1662R	Z3NL 1662L
16	72	120	16	Z3NL 1672R	Z3NL 1672L
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18	72	120	18	Z3NL 1872R	Z3NL 1872L
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20	72	120	20	Z3NL 2072R	Z3NL 2072L
20	102	150	20	Z3NL 20102R	Z3NL 20102L



Fresa a taglienti elicoidali positivi in HW integrale con rompitruciolo per legno
Solid carbide – UP spiral router cutters for wood with chip breaker

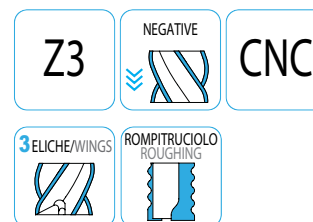
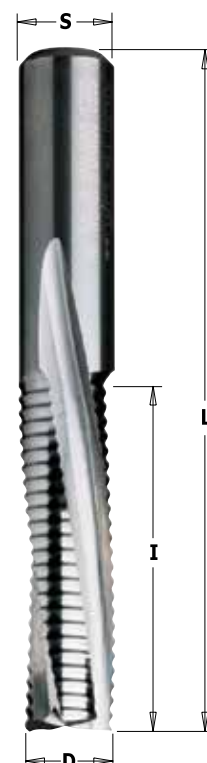
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8	42	100	8	Z3PR 0842R	Z3PR 0842L
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10	42	100	10	Z3PR 1042R	Z3PR 1042L
10	52	100	10	Z3PR 1052R	Z3PR 1052L
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12	42	100	12	Z3PR 1242R	Z3PR 1242L
12	52	100	12	Z3PR 1252R	Z3PR 1252L
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18	102	150	18	Z3PR 18102R	Z3PR 18102L
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20	102	150	20	Z3PR 20102R	Z3PR 20102L



Z3NR

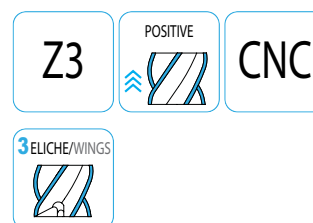
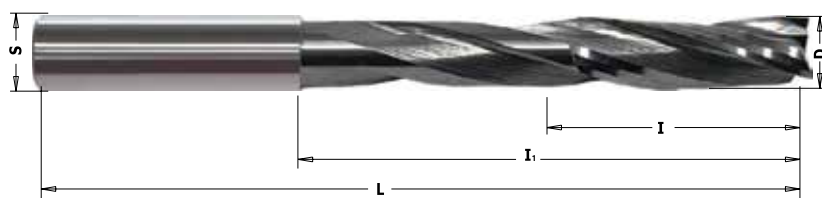
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6	35	80	6	Z3NR 0635R	Z3NR 0635L
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8	42	100	8	Z3NR 0842R	Z3NR 0842L
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10	42	100	10	Z3NR 1042R	Z3NR 1042L
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12	42	100	12	Z3NR 1242R	Z3NR 1242L
12	52	100	12	Z3NR 1252R	Z3NR 1252L
14	32	80	14	Z3NR 1432R	Z3NR 1432L
14	42	100	14	Z3NR 1442R	Z3NR 1442L
14	52	100	14	Z3NR 1452R	Z3NR 1452L
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16	52	100	16	Z3NR 1652R	Z3NR 1652L
16	62	106	16	Z3NR 1662R	Z3NR 1662L
16	72	120	16	Z3NR 1672R	Z3NR 1672L
18	52	100	18	Z3NR 1852R	Z3NR 1852L
18	72	120	18	Z3NR 1872R	Z3NR 1872L
18	102	150	18	Z3NR 18102R	Z3NR 18102L
20	52	100	20	Z3NR 2052R	Z3NR 2052L
20	72	120	20	Z3NR 2072R	Z3NR 2072L
20	102	150	20	Z3NR 20102R	Z3NR 20102L



Fresa a taglienti elicoidali positivi in HW integrale per sedi serrature
Solid carbide – UP spiral router cutters for HARDWARE SLOTS

Z3PLS

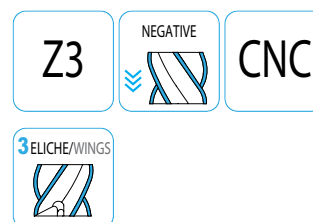
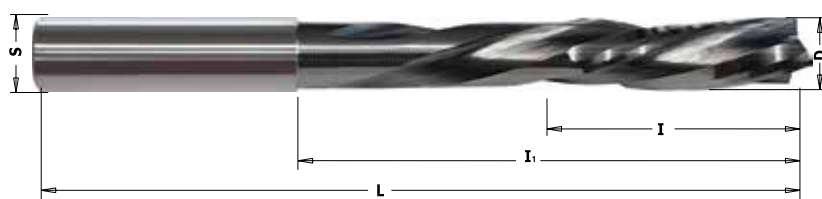
D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
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14	50-95	150	14	Z3PLS 14150R	Z3PLS 14150L
16	50-95	150	16	Z3PLS 16130R	Z3PLS 16130L
18	50-95	150	18	Z3PLS 18150R	Z3PLS 18150L
20	50-95	150	20	Z3PLS 20150R	Z3PLS 20150L



Fresa a taglienti elicoidali negativi in HW integrale per sedi serrature
Solid carbide – DOWN spiral router cutters for HARDWARE SLOTS

Z3NLS

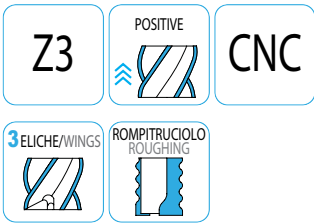
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14	50-95	150	14	Z3NLS 14150R	Z3NLS 14150L
16	50-95	150	16	Z3NLS 16130R	Z3NLS 16130L
18	50-95	150	18	Z3NLS 18150R	Z3NLS 18150L
20	50-95	150	20	Z3NLS 20150R	Z3NLS 20150L



Fresa a taglienti elicoidali positivi in HW integrale con rompitruciolo per sedi serrature
Solid carbide – UP spiral router cutters for HARDWARE SLOTS with chip breaker

Z3PRS

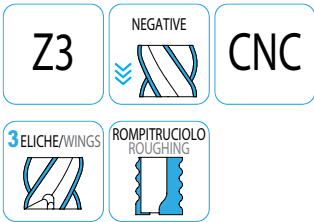
D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
12	40-80	130	12	Z3PRS 12130R	Z3PRS 12130L
14	50-95	150	14	Z3PRS 14150R	Z3PRS 14150L
16	50-95	150	16	Z3PRS 16130R	Z3PRS 16130L
18	50-95	150	18	Z3PRS 18150R	Z3PRS 18150L
20	50-95	150	20	Z3PRS 20150R	Z3PRS 20150L



Fresa a taglienti elicoidali positivi in HW integrale con rompitruciolo per sedi serrature
Solid carbide – DOWN spiral router cutters for HARDWARE SLOTS with chip breaker

Z3NRS

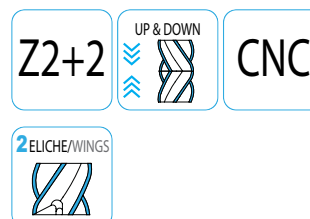
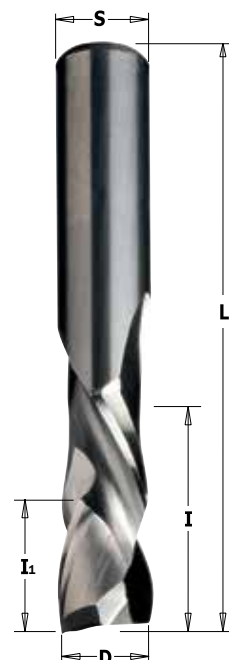
D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
12	40-80	130	12	Z3NRS 12130R	Z3NRS 12130L
14	50-95	150	14	Z3NRS 14150R	Z3NRS 14150L
16	50-95	150	16	Z3NRS 16130R	Z3NRS 16130L
18	50-95	150	18	Z3NRS 18150R	Z3NRS 18150L
20	50-95	150	20	Z3NRS 20150R	Z3NRS 20150L



Fresa a taglienti elicoidali in HW integrale – elica positiva e negativa per legno
Solid carbide – UP & DOWN spiral router cutters for wood

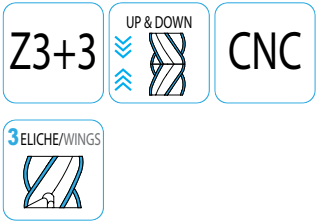
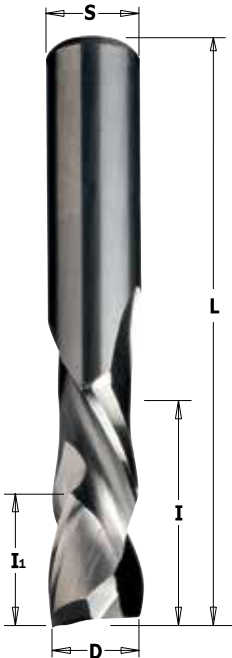
Z2UD

D mm	I mm	I1 mm	L mm	S mm	Code DX/RH	Code SX/LH
8	22	7	80	8	Z2UD 0822R	Z2UD 0822L
8	32	7	80	8	Z2UD 0832R	Z2UD 0832L
10	32	7	80	10	Z2UD 1032R	Z2UD 1032L
10	42	7	100	10	Z2UD 1042R	Z2UD 1042L
12	22	7	73	12	Z2UD 1222R	Z2UD 1222L
12	32	7	80	12	Z2UD 1232R	Z2UD 1232L
12	42	7	100	12	Z2UD 1242R	Z2UD 1242L
12	52	7	100	12	Z2UD 1252R	Z2UD 1252L
14	42	7	100	14	Z2UD 1442R	Z2UD 1442L
14	52	24	100	14	Z2UD 1452R	Z2UD 1452L
16	42	24	100	16	Z2UD 1642R	Z2UD 1642L
16	52	24	100	16	Z2UD 1652R	Z2UD 1652L
16	72	24	120	16	Z2UD 1672R	Z2UD 1672L
18	52	30	100	18	Z2UD 1852R	Z2UD 1852L
18	72	30	120	18	Z2UD 1872R	Z2UD 1872L
20	52	30	100	20	Z2UD 2052R	Z2UD 2052L
20	72	30	120	20	Z2UD 2072R	Z2UD 2072L



Z3UD

D mm	I mm	I1 mm	L mm	S mm	Code DX/RH	Code SX/LH
8	22	7	80	8	Z3UD 0822R	Z3UD 0822L
8	32	7	80	8	Z3UD 0832R	Z3UD 0832L
10	32	7	80	10	Z3UD 1032R	Z3UD 1032L
10	42	7	100	10	Z3UD 1042R	Z3UD 1042L
12	22	7	73	12	Z3UD 1222R	Z3UD 1222L
12	32	7	80	12	Z3UD 1232R	Z3UD 1232L
12	42	7	100	12	Z3UD 1242R	Z3UD 1242L
12	52	7	100	12	Z3UD 1252R	Z3UD 1252L
14	42	7	100	14	Z3UD 1442R	Z3UD 1442L
14	52	24	100	14	Z3UD 1452R	Z3UD 1452L
16	42	24	100	16	Z3UD 1642R	Z3UD 1642L
16	52	24	100	16	Z3UD 1652R	Z3UD 1652L
16	72	24	120	16	Z3UD 1672R	Z3UD 1672L
18	52	30	100	18	Z3UD 1852R	Z3UD 1852L
18	72	30	120	18	Z3UD 1872R	Z3UD 1872L
20	52	30	100	20	Z3UD 2052R	Z3UD 2052L
20	72	30	120	20	Z3UD 2072R	Z3UD 2072L





MANDRINI E PINZE - CHUCK & COLLETS

HK63

Mandrini HSK senza cuscinetto
HSK Chucks without bearing

S	D mm	d mm	L mm	L1 mm	Code DX/RH	Code SX/LH
ER32	50	3-20	73	25	HK63 S32R	HK63 S32L
ER32	50	3-20	73	25	*HK63 X32R	*HK63 X32L
ER40	63	3-20	78	25	HK63 S40R	HK63 S40L
ER40	63	3-20	78	25	*HK63 X40R	*HK63 X40L

* Inox /Stainless steel

Mandrini HSK con cuscinetto
HSK Chucks with bearing

S	D mm	d mm	L mm	L1 mm	Code
ER32	50	3-20	73	25	HK63 CU32
ER40	63	3-20	78	25	HK63 CU40

Per macchine / For use on the following machines:
Homag, Eima, IMA da 9/94, Dubus, Weeke, Biesse, SCM, Morbidelli e Masterwood.



IS30

S	D mm	d mm	L mm	L1 mm	Code DX/RH	Code SX/LH
ER32	50	3-20	50	47	IS30 S32R	IS30 S32L
ER40	63	3-20	57	47	IS30 S40R	IS30 S40L

*Tirante incluso a scelta nella scheda
*Retaining stud included, choose in the tab

*Tirante / Retaining stud mm	Code	Per macchine / For use on the following machines:	
Ø12-8	TI200	Biesse	
Ø 13-9	TI201	Biesse con motore Omlat engine, Bulleri, Busellato, CMS e IMA.	
Ø12,8-9	TI202	Alberti e Masterwood.	



ER**Ghiera senza cuscinetto**
Clamping nuts without bearing

S	Descrizione/ Description	Code DX/RH	Code SX/LH
ER32	Ghiera standard/Clamping Nut	ER32 G1R	ER32 G1L
ER40	Ghiera standard/Clamping Nut	ER40 G1R	ER40 G1R

**Ghiera con cuscinetto**
Clamping nuts with bearing

S	Descrizione/ Description	Code
ER32	Ghiera con cuscinetti/ Clamping Nut with bearing	ER32 G2
ER40	Ghiera con cuscinetti/ Clamping Nut with bearing	ER40 G2

**PI16**

B mm	Code	B mm	Code
2	PI16 0002	7	PI16 0007
3	PI16 0003	8	PI16 0008
4	PI16 0004	9	PI16 0009
5	PI16 0005	10	PI16 0010
6	PI16 0006		

ER16**PI20**

B mm	Code	B mm	Code	B mm	Code
2	PI20 0002	6,35	PI20 0635	11	PI20 0011
3	PI20 0003	7	PI20 0007	12	PI20 0012
4	PI20 0004	8	PI20 0008	12,7	PI20 0127
5	PI20 0005	9	PI20 0009		
6	PI20 0006	10	PI20 0010		

ER20

PI25

B mm	Code	B mm	Code	B mm	Code
3	PI25 0003	8	PI25 0008	14	PI25 0014
4	PI25 0004	9	PI25 0009	16	PI25 0016
5	PI25 0005	10	PI25 0010		
6	PI25 0006	12	PI25 0012		
6,35	PI25 0635	12,7	PI25 0127		



PI32

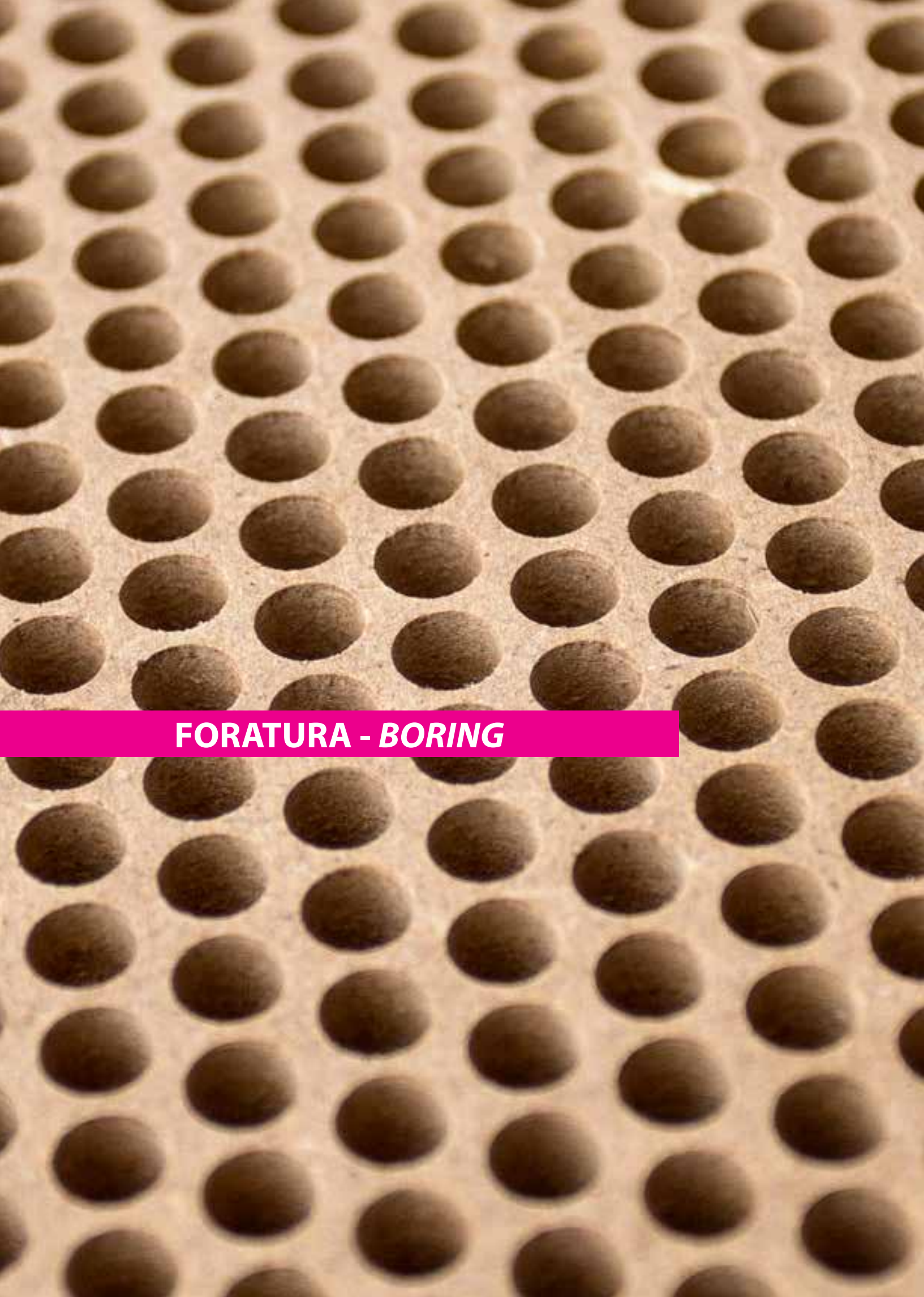
B mm	Code	B mm	Code	B mm	Code
3	PI32 0003	9	PI32 0009	15	PI32 0015
4	PI32 0004	9,52	PI32 0952	16	PI32 0016
5	PI32 0005	10	PI32 0010	17	PI32 0017
6	PI32 0006	11	PI32 0011	18	PI32 0018
6,35	PI32 0635	12	PI32 0012	19	PI32 0019
7	PI32 0007	12,7	PI32 0127	20	PI32 0020
8	PI32 0008	14	PI32 0014		



PI40

B mm	Code	B mm	Code	B mm	Code
3	PI40 0003	9,52	PI40 0952	19	PI40 0019
4	PI40 0004	10	PI40 0010	20	PI40 0020
5	PI40 0005	12	PI40 0012	25	PI40 0025
6	PI40 0006	12,7	PI40 0127		
6,35	PI40 0635	14	PI40 0014		
7	PI40 0007	16	PI40 0016		
8	PI40 0008	18	PI40 0018		



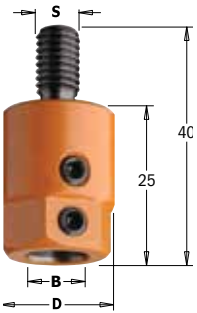


FORATURA - BORING

401

B mm	D mm	S mm		Code DX/RH	Code SX/LH
8	16	M8		401.080.R	401.080.L
10	19,5	M8		401.000.R	401.000.L

Adattabile alle macchine / For use on the following machines:
Nottmeyer (modelli precedenti / old models)



402

B mm	D mm	S mm		Code DX/RH	Code SX/LH
8	16	M10		402.080.R	402.080.L
10	19,5	M10		402.000.R	402.000.L

Adattabile alle macchine / For use on the following machines:
Ayen, Holzma, Knoevenagel, Mayer, Torwegge.



403

B mm	D mm	S mm		Code DX/RH	Code SX/LH
8	16	M10/30°		403.080.R	403.080.L
10	19,5	M10/30°		403.000.R	403.000.L

Adattabile alle macchine / For use on the following machines:
Alberti (modelli precedenti / old models)
Balestrini, Bilek, Busellato (modelli precedenti / old models)
Schleicher, Vitap (modelli precedenti / old models)



404

B mm	D mm	S mm		Code DX/RH	Code SX/LH
8	16	M8/20° 48'		404.080.R	404.080.L
10	19,5	M8/20° 48'		404.000.R	404.000.L

Adattabile alle macchine / For use on the following machines:
Balestrini, Bilek



Mandrini per punte ad attacco rapido per foratrici Adaptors

405

B mm	D mm	S mm		Code DX/RH	Code SX/LH
8	16	M10/11		405.080.R	405.080.L
10	19,5	M10/11		405.000.R	405.000.L

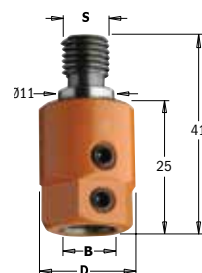
Adattabile alle macchine / For use on the following machines:

Biesse (modelli precedenti / old models)

Masterwood (Zangheri & Boschetti)

Morbidelli, Torwegge, Vitap (modelli nuovi / new models)

Weeke



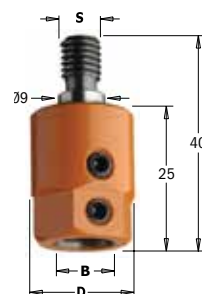
458

B mm	D mm	S mm		Code DX/RH	Code SX/LH
8	16	M8/9		458.080.R	458.080.L
10	19,5	M8/9		458.000.R	458.000.L

Adattabile alle macchine / For use on the following machines:

Masterwood (Zangheri & Boschetti)

Morbidelli, Nottmeyer (modelli nuovi / new models)



459

B mm	D mm	S mm		Code DX/RH	Code SX/LH
10	19,5	M10		459.000.R	459.000.L

Adattabile alle macchine / For use on the following machines:

Scheer



460.001

B mm	d mm	D mm		Code DX/RH	Code SX/LH
10	20	15		460.001.R	460.001.L

Adattabile alle macchine / For use on the following machines:

Biesse con mandrino ad attacco rapido /

For Biesse machines with quick drill change attachment



460.101

B mm	d mm	D mm		Code DX/SX - RH/LH
10	17,5	18		460.101.00

Adattabile alle macchine / For use on the following machines:
Vitap



460.201

B mm	d mm	D mm		Code DX/SX - RH/LH
10	19,5	20		460.201.00

Adattabile alle macchine / For use on the following machines:
Morbidelli



460.301

B mm	d mm	D mm		Code DX/SX - RH/LH
10	19,5	20		460.301.00

Adattabile alle macchine / For use on the following machines:
Masterwood, Maggi, Griggio



460.401

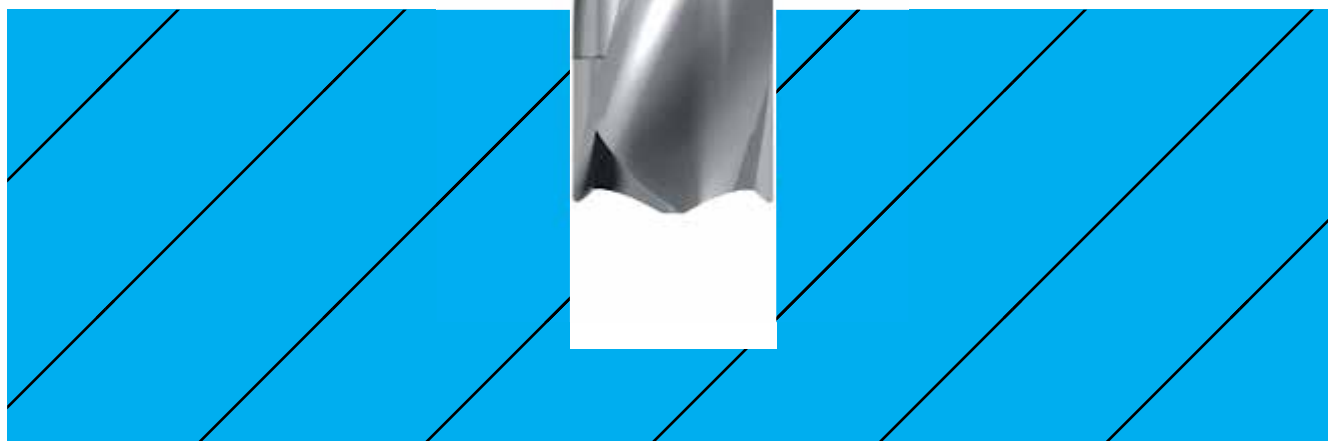
B mm	d mm	D mm		Code DX/SX - RH/LH
10	20	17		460.401.00

Adattabile alle macchine / For use on the following machines:
Weeke



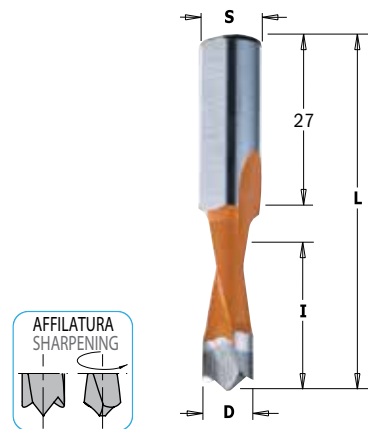


FORI CIECHI - *BLIND HOLES*



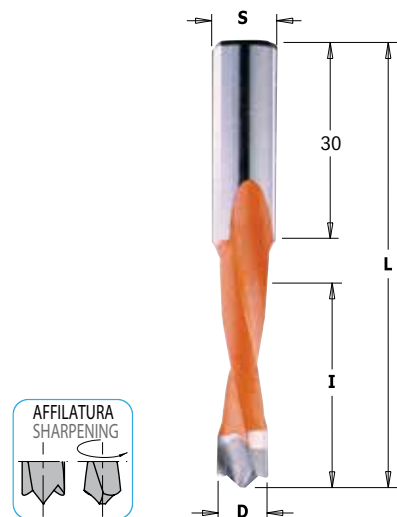
410.M

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	27	57,5	10x27	410.050.MR	410.050.ML
6	27	57,5	10x27	410.060.MR	410.060.ML
7	27	57,5	10x27	410.070.MR	410.070.ML
8	27	57,5	10x27	410.080.MR	410.080.ML
9	27	57,5	10x27	410.090.MR	410.090.ML
10	27	57,5	10x27	410.100.MR	410.100.ML



411.M

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	35	70	10x30	411.050.MR	411.050.ML
6	35	70	10x30	411.060.MR	411.060.ML
7	35	70	10x30	411.070.MR	411.070.ML
8	35	70	10x30	411.080.MR	411.080.ML
9	35	70	10x30	411.090.MR	411.090.ML
10	35	70	10x30	411.100.MR	411.100.ML



Caratteristiche tecniche / Technical Details:

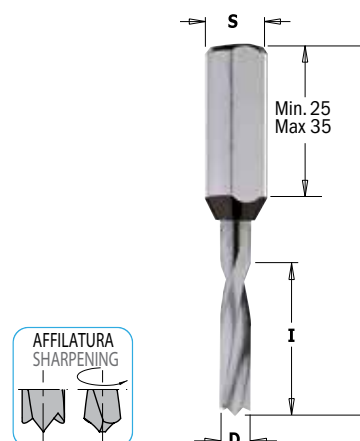
- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in metallo duro super micrograno / Extra-fine micrograin carbide spiral portion with centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 cutting edges Z2
- 2 incisori ad affilatura rinforzata V2 / 2 curved, negatively ground spurs V2
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

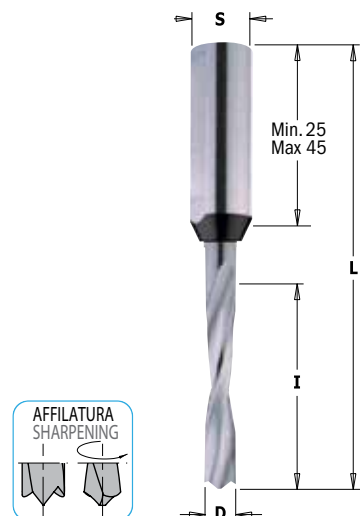
410.I

D mm	I mm	L mm	S mm	Code DX/ RH	Code SX/LH
1,3	5	57,5	10x30	410.013.I*	
2	12	57,5	10x27	410.020.IR	410.020.IL
3	9	57,5	10x35	410.530.IR	410.530.IL
3	18	57,5	10x25	410.030.IR	410.030.IL
4	20	57,5	10x25	410.040.IR	410.040.IL
5	22	57,5	10x27	410.050.IR	410.050.IL
6	22	57,5	10x27	410.060.IR	410.060.IL
6,35 (1/4")	22	57,5	10x27	410.064.IR	410.064.IL
8	22	57,5	10x25	410.080.IR	410.080.IL
10	22	57,5	10x25	410.100.IR	410.100.IL



411.I

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
1,3	5	70	10x45	411.013.20*	
2	12	70	10x40	411.020.IR	411.020.IL
3	18	70	10x40	411.030.IR	411.030.IL
4	27	70	10x28	411.040.IR	411.040.IL
5	30	70	10x28	411.050.IR	411.050.IL
6	30	70	10x27	411.060.IR	411.060.IL
6,35 (1/4")	30	70	10x30	411.064.IR	411.064.IL
8	35	70	10x25	411.080.IR	411.080.IL
10	35	70	10x25	411.100.IR	411.100.IL



*Punta ambidestra per foratura dei pannelli

Boring bit for preboring. Suitable for both right-hand and left-hand rotation

Caratteristiche tecniche / Technical Details:

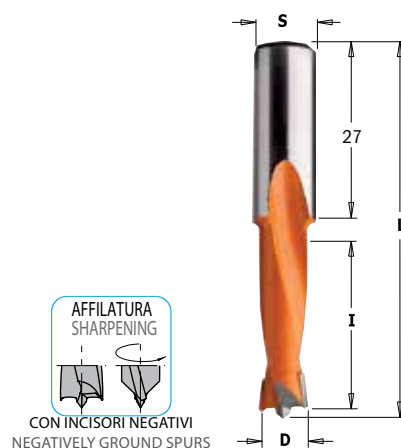
- Attacco in acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Corpo elicoidale in metallo duro super micrograno di qualità superiore / HWM spiral portion with centre point.
- Punta di centraggio 2 taglienti Z2 / 2 cutting edges Z2
- 2 incisori ad affilatura rinforzata V2 / 2 curved, negatively ground spurs V2
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

410

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
4	27	57,5	10x27	410.040.R	410.040.L
4,5	27	57,5	10x27	410.045.R	410.045.L
4,76	27	57,5	10x27	410.047.R	410.047.L
5	27	57,5	10x27	410.050.R	410.050.L
5,1	27	57,5	10x27	410.051.R	410.051.L
5,2	27	57,5	10x27	410.052.R	410.052.L
5,55	27	57,5	10x27	410.055.R	410.055.L
6	27	57,5	10x27	410.060.R	410.060.L
6,35	27	57,5	10x27	410.064.R	410.064.L
6,5	27	57,5	10x27	410.065.R	410.065.L
7	27	57,5	10x27	410.070.R	410.070.L
8	27	57,5	10x27	410.080.R	410.080.L
8,2	27	57,5	10x27	410.082.R	410.082.L
9	27	57,5	10x27	410.090.R	410.090.L
9,52	27	57,5	10x27	410.095.R	410.095.L
10	27	57,5	10x27	410.100.R	410.100.L
11	27	57,5	10x27	410.110.R	410.110.L
12	27	57,5	10x27	410.120.R	410.120.L
12,7	27	57,5	10x27	410.127.R	410.127.L
13	27	57,5	10x27	410.130.R	410.130.L
14	27	57,5	10x27	410.140.R	410.140.L
15	27	57,5	10x27	410.150.R	410.150.L
16	27	57,5	10x27	410.160.R	410.160.L



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

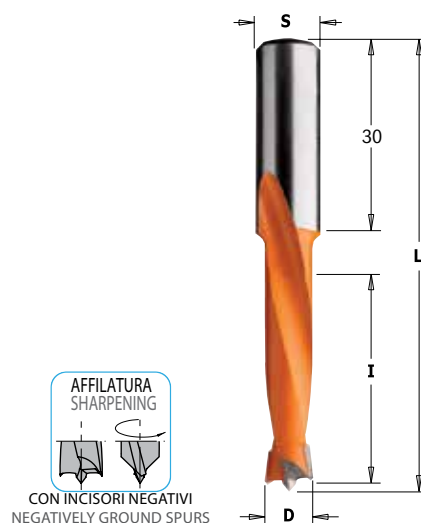
per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

Punte foratrici - fori ciechi **HW**

Dowel drills - blind holes **HW**

411

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
4	35	70	10x30	411.040.R	411.040.L
4,5	35	70	10x30	411.045.R	411.045.L
4,76	35	70	10x30	411.047.R	411.047.L
5	35	70	10x30	411.050.R	411.050.L
5,1	35	70	10x30	411.051.R	411.051.L
5,2	35	70	10x30	411.052.R	411.052.L
5,55	35	70	10x30	411.055.R	411.055.L
6	35	70	10x30	411.060.R	411.060.L
6,35	35	70	10x30	411.064.R	411.064.L
6,5	35	70	10x30	411.065.R	411.065.L
7	35	70	10x30	411.070.R	411.070.L
8	35	70	10x30	411.080.R	411.080.L
8,2	35	70	10x30	411.082.R	411.082.L
9	35	70	10x30	411.090.R	411.090.L
9,52	35	70	10x30	411.095.R	411.095.L
10	35	70	10x30	411.100.R	411.100.L
11	35	70	10x30	411.110.R	411.110.L
11,1	35	70	10x30	411.111.R	411.111.L
12	35	70	10x30	411.120.R	411.120.L
12,7	35	70	10x30	411.127.R	411.127.L
13	35	70	10x30	411.130.R	411.130.L
14	35	70	10x30	411.140.R	411.140.L
15	35	70	10x30	411.150.R	411.150.L
16	35	70	10x30	411.160.R	411.160.L



Caratteristiche tecniche / Technical Details:

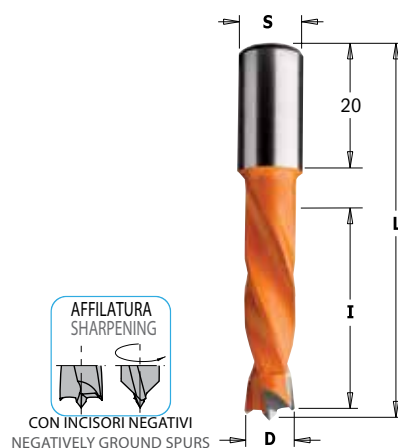
- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

408

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
4	26	57,5	10x20	408.040.R	408.040.L
5	30	57,5	10x20	408.050.R	408.050.L
6	30	57,5	10x20	408.060.R	408.060.L
6,35	30	57,5	10x20	408.064.R	408.064.L
7	30	57,5	10x20	408.070.R	408.070.L
8	30	57,5	10x20	408.080.R	408.080.L
9	30	57,5	10x20	408.090.R	408.090.L
9,52	30	57,5	10x20	408.095.R	408.095.L
10	30	57,5	10x20	408.100.R	408.100.L
11	30	57,5	10x20	408.110.R	408.110.L
12	30	57,5	10x20	408.120.R	408.120.L
12,7	30	57,5	10x20	408.127.R	408.127.L
13	30	57,5	10x20	408.130.R	408.130.L
14	30	57,5	10x20	408.140.R	408.140.L
15	30	57,5	10x20	408.150.R	408.150.L
16	30	57,5	10x20	408.160.R	408.160.L



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- 4 gole elicoidali / 4 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

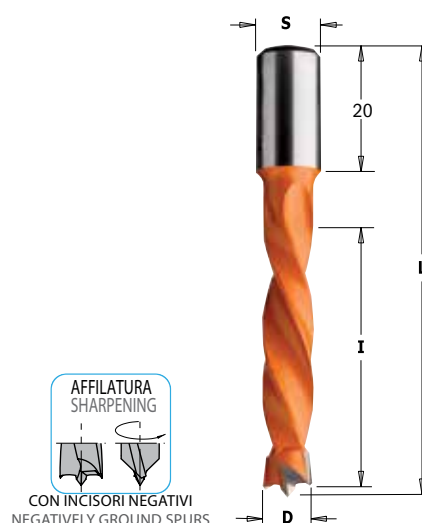
per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

Punte foratrici - fori ciechi **HW**

Dowel drills - blind holes **HW**

409

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
4	43	70	10x20	409.040.12	409.040.12
5	43	70	10x20	409.050.12	409.050.12
6	43	70	10x20	409.060.12	409.060.12
6,35	43	70	10x20	409.064.12	409.064.12
7	43	70	10x20	409.070.12	409.070.12
7,5	43	70	10x20	409.075.12	409.075.12
8	43	70	10x20	409.080.12	409.080.12
9	43	70	10x20	409.090.12	409.090.12
9,52	43	70	10x20	409.095.12	409.095.12
10	43	70	10x20	409.100.12	409.100.12
11	43	70	10x20	409.120.12	409.120.12
12	43	70	10x20	409.120.12	409.120.12
12,7	43	70	10x20	409.127.12	409.127.12
13	43	70	10x20	409.130.12	409.130.12
14	43	70	10x20	409.140.12	409.140.12
15	43	70	10x20	409.150.12	409.150.12
16	43	70	10x20	409.160.12	409.160.12



Caratteristiche tecniche / Technical Details:

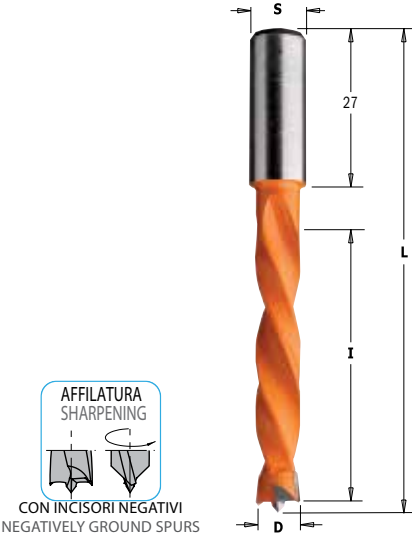
- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- 4 gole elicoidali / 4 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

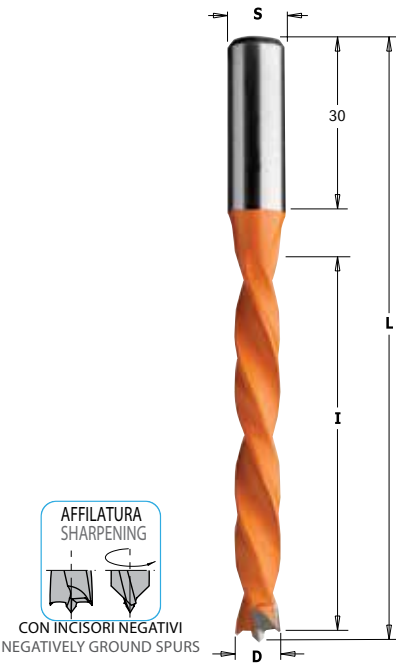
473

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	50	85	10x27	473.050.R	473.050.L
6	50	85	10x27	473.060.R	473.060.L
7	50	85	10x27	473.070.R	473.070.L
8	50	85	10x27	473.080.R	473.080.L
10	50	85	10x27	473.100.R	473.100.L
12	50	85	10x27	473.120.R	473.120.L



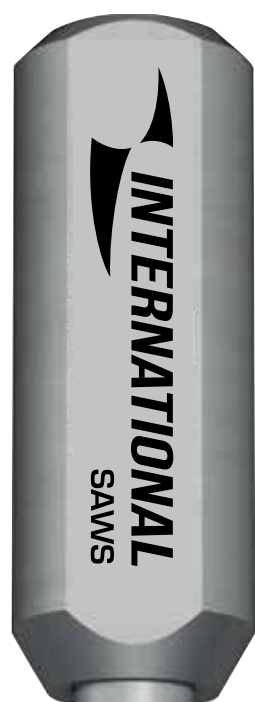
472

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	65	105	10x30	472.050.R	472.050.L
6	65	105	10x30	472.060.R	472.060.L
7	65	105	10x30	472.070.R	472.070.L
8	65	105	10x30	472.080.R	472.080.L
10	65	105	10x30	472.100.R	472.100.L
12	65	105	10x30	472.120.R	472.120.L

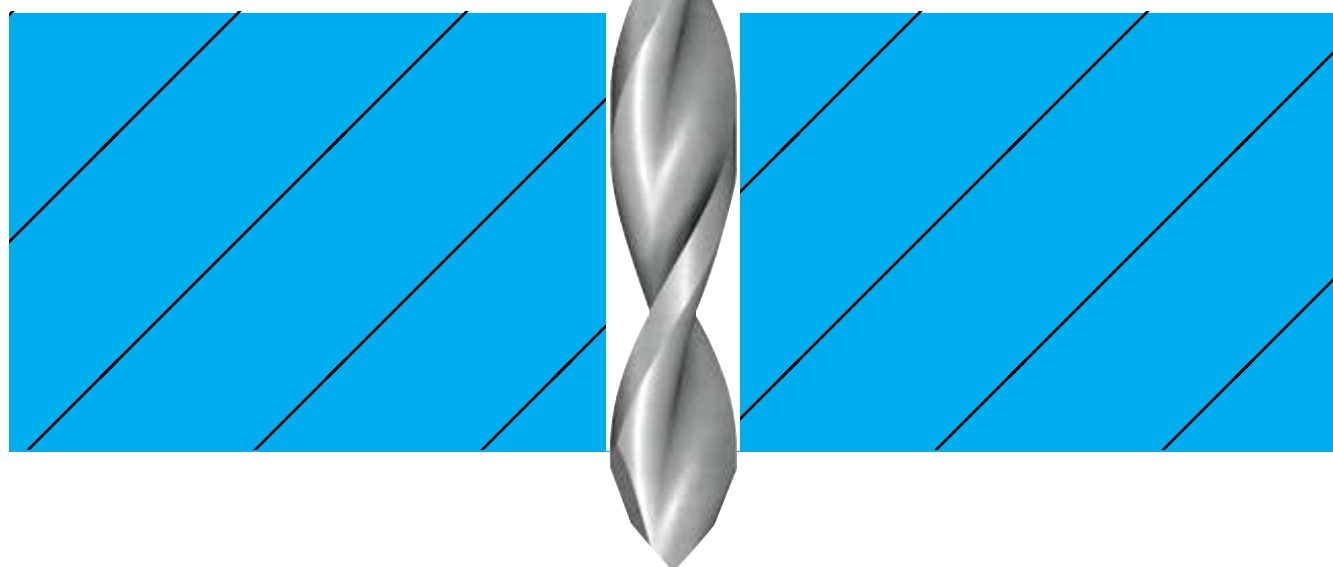


- Caratteristiche tecniche / Technical Details:**
- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
 - Cuspide in HW / HW head with precision balanced centre point.
 - Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
 - 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
 - 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
 - 4 gole elicoidali / 4 spiral flutes.
 - Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:
per fori ciechi su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.



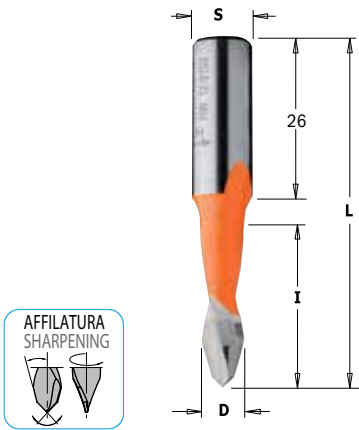
FORI PASSANTI - *THROUGH HOLES DRILL*



413.M

Per pannelli di spessore massimo 20mm
For panels maximum 20mm thickness

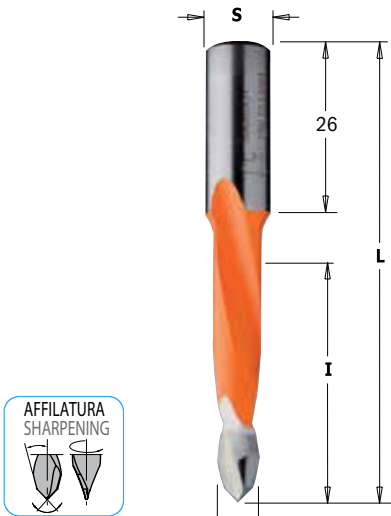
D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	27	57,5	10x26	413.050.MR	413.050.ML
8	27	57,5	10x26	413.080.MR	413.080.ML



414.M

Per pannelli di spessore massimo 30mm
For panels maximum 30mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	35	70	10x26	414.050.MR	414.050.ML
6	35	70	10x26	414.060.MR	414.060.ML
7	35	70	10x26	414.070.MR	414.070.ML
8	35	70	10x26	414.080.MR	414.080.ML
10	35	70	10x26	414.100.MR	414.100.ML



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in metallo duro super micrograno / Extra-fine micrograin carbide spiral portion with centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti a doppio angolo Z2 / 2 precision ground cutting edges double angle Z2
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

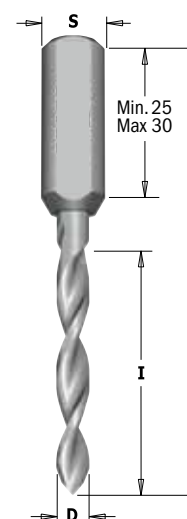
per fori passanti su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Punte foratrici - fori passanti **HW micrograno** Dowel drills - through holes **Hw extrafine - micrograne**

414.I

Per pannelli di spessore massimo 20-30mm
For panels maximum 20-30mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
3	27	70	10x30	414.030.IR	414.030.IL
4	35	70	10x26	414.040.IR	414.040.IL
5	35	70	10x26	414.050.IR	414.050.IL
6	35	70	10x26	414.060.IR	414.060.IL
8	35	70	10x26	414.080.IR	414.080.IL
10	35	70	10x27	414.100.IR	414.100.IL



Caratteristiche tecniche / Technical Details:

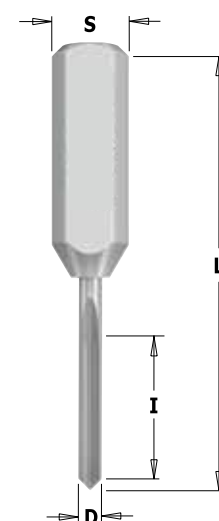
- Attacco in acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Corpo elicoidale in metallo duro super micrograno di qualità superiore / HWM spiral portion with centre point.
- 2 taglienti a doppio angolo Z2 / 2 precision ground cutting edges Z2 double angle
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori passanti su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling through holes in solid wood, wood composites, plastic and laminated materials.

482

D mm	I mm	L mm	S mm	CODE DX/SX -RH/LH
2	12	57,5	10x30	482.2057
2	12	70	10x42,5	482.2070
2,5	16	57,5	10x24	482.2557
2,5	16	70	10x35	482.2570
3	15	57,5	10x26	482.3057
3	25	70	10x26	482.3070
3,5	18	57,5	10x24	482.3557
3,5	18	70	10x36	482.3570
5	25	57,5	10x25	482.5057
5	35	70	10x25	482.5070



Caratteristiche tecniche / Technical Details:

- Metallo duro super micrograno di qualità superiore / Extra-fine micrograin carbide
- 1 tagliente Z1 / 2 cutting edge Z1
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori ciechi su legno massiccio e suoi derivati, laminati, rivestimenti plastici e melaminici. Da inserire su mandrini o adattatori nelle foratrici centri di lavoro, macchine punto/punto, pantografi a CNC.

For drilling blind holes on solid wood, wood composites, plastic and laminated materials. For use on machining centres, point to point machines, CNC routers and hand-held routers equipped with chucks or adaptors.

413

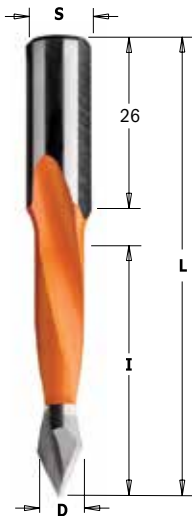
Per pannelli di spessore massimo 20mm
For panels maximum 20mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	27	57,5	10x26	413.050.R	413.050.L
6	27	57,5	10x26	413.060.R	413.060.L
8	27	57,5	10x26	413.080.R	413.080.L
10	27	57,5	10x26	413.100.R	413.100.L

414

Per pannelli di spessore massimo 25-30mm
For panels maximum 25-30mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
4	30	70	10x26	414.040.R	414.040.L
4,76	35	70	10x26	414.047.R	414.047.L
5	35	70	10x26	414.050.R	414.050.L
5,55	35	70	10x26	414.055.R	414.055.L
6	35	70	10x26	414.060.R	414.060.L
6,35	35	70	10x26	414.064.R	414.064.L
7	35	70	10x26	414.070.R	414.070.L
8	35	70	10x26	414.080.R	414.080.L
9	35	70	10x26	414.090.R	414.090.L
9,52	35	70	10x26	414.095.R	414.095.L
10	35	70	10x26	414.100.R	414.100.L
12	35	70	10x26	414.120.R	414.120.L
12,7	35	70	10x26	414.127.R	414.127.L



466

Per pannelli di spessore massimo 30-40mm
For panels maximum 30-40mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	44	77	10x26	466.050.R	466.050.L
6	44	77	10x26	466.060.R	466.060.L
8	44	77	10x26	466.080.R	466.080.L
10	44	77	10x26	466.100.R	466.100.L
12	44	77	10x26	466.120.R	466.120.L

Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 precision ground cutting edges Z2
- 2 gole elicoidali / 2 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori passanti su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Punte foratrici - fori passanti **HW** Dowel drills - through holes **HW**

474

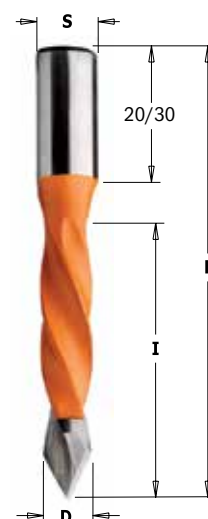
Per pannelli di spessore massimo 20-25mm
For panels maximum 20-25mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	30	57,5	10x20	474.050.R	474.050.L
8	30	57,5	10x20	474.080.R	474.080.L

475

Per pannelli di spessore massimo 30-35mm
For panels maximum 30-35mm thickness

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
4	40	70	10x20	475.040.R	475.040.L
5	40	70	10x20	475.050.R	475.050.L
6	40	70	10x20	475.060.R	475.060.L
7	40	70	10x20	475.070.R	475.070.L
8	40	70	10x20	475.080.R	475.080.L
9	40	70	10x20	475.090.R	475.090.L
10	40	70	10x20	475.100.R	475.100.L



481

Per pannelli di spessore massimo 60-65mm
For panels maximum 60-65mm thickness

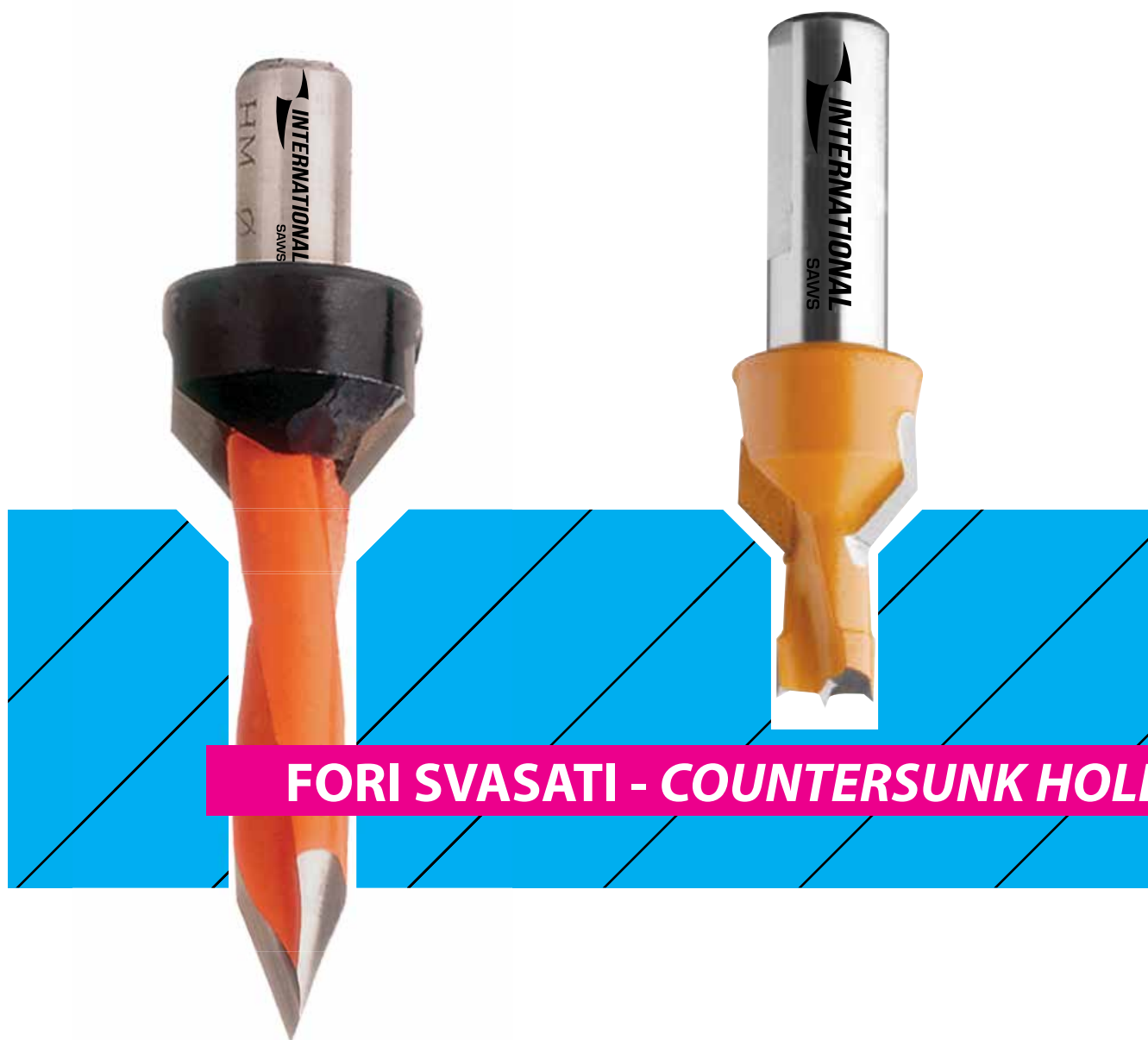
D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
5	70	115	10x30	481.050.R	481.050.L
6	70	115	10x30	481.060.R	481.060.L
8	70	115	10x30	481.080.R	481.080.L
10	70	115	10x30	481.100.R	481.100.L

Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E di colore nero e arancio / Spiral portion coated with orange or black P.T.F.E.
- 2 taglienti Z2 / 2 precision ground cutting edges Z2
- 4 gole elicoidali / 4 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per fori passanti su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.
Used on boring machines separately or with chucks for drilling through holes in solid wood, wood composites, plastic and laminated materials.



Svasatori per punte elicoidali **HW** Countersinks for dowel drills **HW**

415

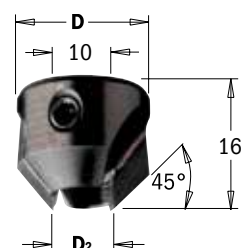
Per punte elicoidali con 2 gole
For 2 flutes dowel drills

D2 mm	D mm			Code DX/RH	Code SX/LH
5 ÷ 10	20			415.200.R	415.200.L
11 ÷ 12	22			415.220.R	415.220.L

Da installare sull'attacco della punta / For assembly on the shank of the drill

Da usare con i seguenti articoli / For use with the following parts:

410-411-413-414-466



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- 2 taglienti HW Z2 / 2 precision ground carbide tipped cutting edges Z2
- Estrema efficacia di fissaggio dello svasatore nell'attacco della punta mediante una vite con estremità conica.
/ Direct clamp on the shank of the drills

Impiego / Application:

Per lamare-smussare fori su legno massiccio e suoi derivati, anche laminati.

Used for chamfering and drilling in solid wood, wood composites, plastic and laminated materials.

416

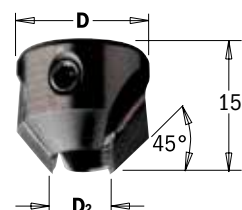
Per punte elicoidali con 4 gole
For 4 flutes dowel drills

D2 mm	D mm			Code DX/RH	Code SX/LH
4	16			416.040.R	416.040.L
5	16			416.050.R	416.050.L
6	16			416.060.R	416.060.L
7	16			416.070.R	416.070.L
8	18			416.080.R	416.080.L
9	18			416.090.R	416.090.L
10	20			416.100.R	416.100.L
12	20			416.120.R	416.120.L

Da installare sull'attacco della punta / For assembly on the shank of the drill

Da usare con i seguenti articoli / For use with the following parts:

402-403-405-458-459-460-408-409-472-473-474-475



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- 2 taglienti HW Z2 / 2 precision ground carbide tipped cutting edges Z2
- centratura ottimale ed estrema efficacia di fissaggio dello svasatore nelle gole dell'elica della punta, mediante 2 viti contrapposte, con estremità a coppa. / Direct clamp on the shank of the drills

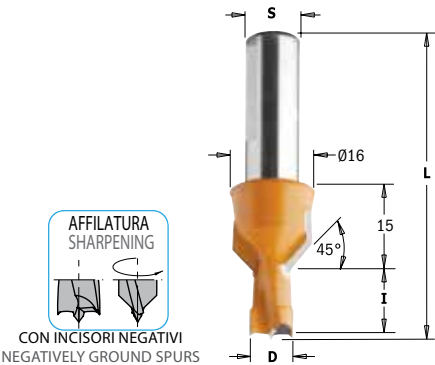
Impiego / Application:

Per lamare-smussare fori su legno massiccio e suoi derivati, anche laminati.

Used for chamfering and drilling in solid wood, wood composites, plastic and laminated materials.

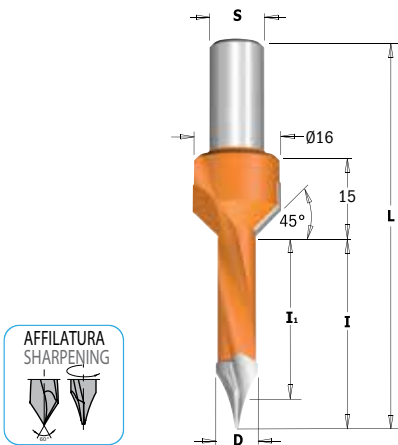
476-477

D mm	I mm	L mm	S mm	Code DX/RH	Code SX/LH
8	12	57,5	10	476.080.R	476.080.L
8	13	57,5	10	476.083.R	476.083.L
8	15	57,5	10	476.081.R	476.081.L
8	20	57,5	10	476.082.R	476.082.L
10	12	57,5	10	476.100.R	476.100.L
10	13	57,5	10	476.103.R	476.103.L
10	15	57,5	10	476.101.R	476.101.L
10	20	57,5	10	476.102.R	476.102.L
8	12	70	10	477.080.R	477.080.L
8	13	70	10	477.083.R	477.083.L
8	15	70	10	477.081.R	477.081.L
8	20	70	10	477.082.R	477.082.L
10	12	70	10	477.100.R	477.100.L
10	13	70	10	477.103.R	477.103.L
10	15	70	10	477.101.R	477.101.L
10	20	70	10	477.102.R	477.102.L



478

D mm	I mm	I1 mm	L mm	S mm	Code DX/RH	Code SX/LH
5	35	31	70	10	478.052.R	478.052.L
7	35	29,5	70	10	478.072.R	478.072.L
8	35	29	70	10	478.082.R	478.082.L
10	35	26,5	70	10	478.102.R	478.102.L



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Spiral portion coated with P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- 4 gole elicoidali / 4 spiral flutes.
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

per forare e svasare su legno massiccio e suoi derivati, su laminati e materiale plastico. Per lavorare ad alta velocità di avanzamento su centri di lavoro dotati di mandrini o adattatori.

Used for drilling and countersinking in solid wood, wood composites, plastic and laminated materials. Suitable for high performance speed on boring machines equipped with adaptors or chucks..

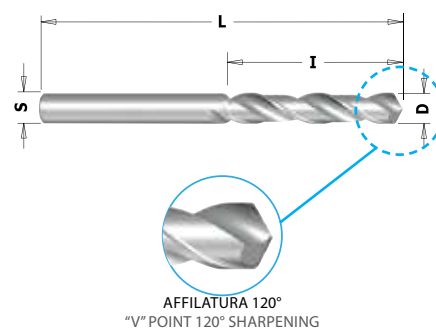
Punte elicoidali - HW micrograno

Solid carbide twist drills - HW extrafine - micrograne

463

Affilatura 120° fori passanti Sharpening 120° for through hole

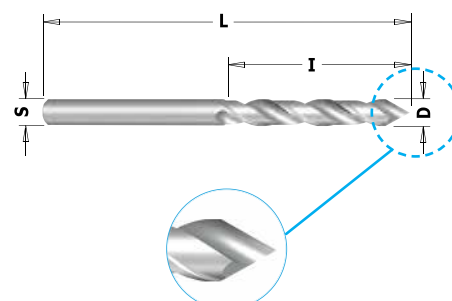
S=D mm	I mm	L mm		Code DX/RH	Code SX/LH
2	25	50		463.020.R	463.020.L
2,5	27	55		463.025.R	463.025.L
3	27	55		463.030.R	463.030.L
3,2	27	55		463.032.R	463.032.L
3,5	27	55		463.035.R	463.035.L
4	27	55		463.040.R	463.040.L
4,5	28	60		463.045.R	463.045.L
5	28	60		463.050.R	463.050.L



AFFILATURA 120°
"V" POINT 120° SHARPENING

Affilatura 60° fori passanti Sharpening 60° for through hole

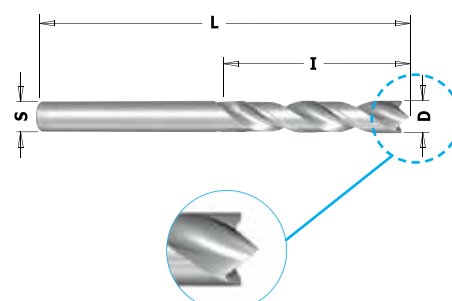
S=D mm	I mm	L mm		Code DX/RH	Code SX/LH
2,5	27	55		463.025.MR	463.025.ML
3	27	55		463.030.MR	463.030.ML
3,5	27	55		463.035.MR	463.035.ML
4	27	55		463.040.MR	463.040.ML



AFFILATURA 60°
"V" POINT 120° SHARPENING

Affilatura per fori ciechi Sharpening for blind hole

S=D mm	I mm	L mm		Code DX/RH	Code SX/LH
2,5	27	55		463.025.IR	463.025.IL
3	27	55		463.030.IR	463.030.IL
4	27	55		463.040.IR	463.040.IL
5	28	60		463.050.IR	463.050.IL



AFFILATURA CON INCISORI NEGATIVI
NEGATIVELY GROUND SPURS SHARPENING

Caratteristiche tecniche / Technical Details:

Metallo duro super micrograno di qualità superiore / Extra-fine micrograin carbide

- 2 taglienti HW Z2 / 2 precision ground carbide tipped cutting edges Z2

- 2 gole elicoidali / 2 spiral flutes.

- Attacco uguale al diametro di taglio (S=D) / Common shank and drilling diameter (S=D).

- 2 gole elicoidali / 2 spiral flutes.

Impiego / Application:

Per fori ciechi o passanti su legno massiccio e suoi derivati, anche laminati. Da inserire su mandrini o adattatori nelle foratrici.

Used in adapter bushings for drilling through or blind holes on solid wood, wood composites, plastic and laminated materials..

464

B mm	L mm	S mm		Code
2	38	10x20		464.020.00
2,5	38	10x20		464.025.00
3	38	10x20		464.030.00
3,2	38	10x20		464.032.00
3,5	38	10x20		464.035.00
4	38	10x20		464.040.00
4,5	38	10x20		464.045.00
5	38	10x20		464.050.00



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Super-strength steel.
- Rettifica di precisione - Attacco con piano di fissaggio / Precision relief - Parallel shank with driving flat and length adjusting screw.
- Rapidità e sicurezza nell'installazione della punta mediante una vite con estremità a coppa. / Quick and secure assembly on twist drills.

Impiego / Application:

Usare con punte elicoidali ad attacco uguale al diametro del foro del mandrino.
Da inserire su mandrini o adattatori nelle foratrici.
For use with twist drills with common shank and bushing diameter.
Used on boring machines equipped with adaptor chucks.

465

B mm	L mm	S mm		Code
2	23	10		465.020.00
2,5	23	10		465.025.00
3	23	10		465.030.00
3,2	23	10		465.032.00
3,5	23	10		465.035.00
4	23	10		465.040.00
4,5	23	10		465.045.00
5	23	10		465.050.00
6	23	10		465.060.00



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Super-strength steel.
- Rettifica di precisione - Piano di fissaggio / Precision relief - Shank with driving flat.
- Tagli assiali per il serraggio cilindrico della punta. / Axial cuttings for cylindrical drill clamps.

Impiego / Application:

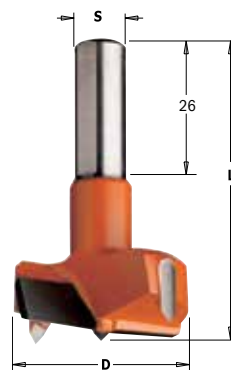
Da usare con punte elicoidali ad attacco uguale al diametro del foro della boccola.
Da inserire su mandrini o adattatori nelle foratrici.
Used with spiral boring bits with shank diametres equal to the bushing diameter.
Used on boring machines equipped with adaptors.

Punte per cerniere ad attacco rapido - HW

Hinge boring bits - HW

417

D mm	L mm	S mm		Code DX/RH	Code SX/LH
14	57,5	10x26		417.140.R	417.140.L
15	57,5	10x26		417.150.R	417.150.L
16	57,5	10x26		417.160.R	417.160.L
17	57,5	10x26		417.170.R	417.170.L
18	57,5	10x26		417.180.R	417.180.L
19	57,5	10x26		417.190.R	417.190.L
20	57,5	10x26		417.200.R	417.200.L
22	57,5	10x26		417.220.R	417.220.L
24	57,5	10x26		417.240.R	417.240.L
25	57,5	10x26		417.250.R	417.250.L
26	57,5	10x26		417.260.R	417.260.L
28	57,5	10x26		417.280.R	417.280.L
30	57,5	10x26		417.300.R	417.300.L
32	57,5	10x26		417.320.R	417.320.L
34	57,5	10x26		417.340.R	417.340.L
35	57,5	10x26		417.350.R	417.350.L
38	57,5	10x26		417.380.R	417.380.L
40	57,5	10x26		417.400.R	417.400.L
42	57,5	10x26		417.420.R	417.420.L
45	57,5	10x26		417.450.R	417.450.L
50	57,5	10x26		417.500.R	417.500.L
55	57,5	10x26		417.550.R	417.550.L
60	57,5	10x26		417.600.R	417.600.L



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Cutter portion coated with orange or black P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

Per fori ciechi su legno massiccio e suoi derivati, anche laminati. **Ideale per creare sedi cerniere.**

Da inserire su mandrini o adattatori nelle foratrici.

Ideal for hinges. Use on boring machines equipped with adaptors or chucks. Use for drilling accurate and clean-cut blind holes in solid wood, wood composites, plastic and laminated materials.

469

D mm	L mm	S mm		Code DX/RH	Code SX/LH
14	70	10x26		469.140.R	469.140.L
15	70	10x26		469.150.R	469.150.L
16	70	10x26		469.160.R	469.160.L
18	70	10x26		469.180.R	469.180.L
20	70	10x26		469.200.R	469.200.L
22	70	10x26		469.220.R	469.220.L
25	70	10x26		469.250.R	469.250.L
26	70	10x26		469.260.R	469.260.L
30	70	10x26		469.300.R	469.300.L
35	70	10x26		469.350.R	469.350.L
40	70	10x26		469.400.R	469.400.L
45	70	10x26		469.450.R	469.450.L
50	70	10x26		469.500.R	469.500.L
55	70	10x26		469.550.R	469.550.L
60	70	10x26		469.600.R	469.600.L



Caratteristiche tecniche / Technical Details:

- Realizzata con acciaio speciale ad alta resistenza / Premium quality super-strength steel.
- Cuspide in HW / HW head with precision balanced centre point.
- Rivestimento in resina fluorocarbonica P.T.F.E / Cutter portion coated with orange or black P.T.F.E.
- 2 taglienti Z2 / 2 HW precision ground cutting edges Z2
- 2 incisori ad affilatura negativa V2 / 2 negatively ground spurs V2
- Attacco con piano di fissaggio e vite per regolazione assiale / Parallel shank with driving flat and adjustable screw length

Impiego / Application:

Per fori ciechi su legno massiccio e suoi derivati, anche laminati. **Ideale per creare sedi cerniere.**
Da inserire su mandrini o adattatori nelle foratrici.

Ideal for hinges. Use on boring machines equipped with adaptors or chucks. Use for drilling accurate and clean-cut blind holes in solid wood, wood composites, plastic and laminated materials.



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FRESATURA