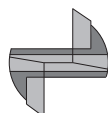
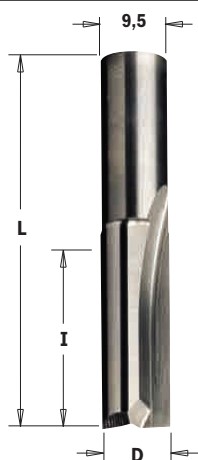


Solid carbide router cutters



HW plunge centre tip

112

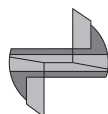


D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
3	10	37	9,5	112.030.11	
4	10	37	9,5	112.040.11	
5	12	39	9,5	112.050.11	
6	14	41	9,5	112.060.11	
7	16	43	9,5	112.070.11	
8	18	48	9,5	112.080.11	
8	30	60	9,5	112.081.11	
9	20	52	9,5	112.090.11	
10*	22	52	9,5	112.100.11	
10*	35	65	9,5	112.101.11	
11*	26	52	9,5	112.110.11	
12*	26	52	9,5	112.120.11	

* Super strength steel
2 precision ground HW cutting edges [Z2]

TECHNICAL DETAILS:
- Premium quality HWM
- 2 radial relief cutting edges [Z2]

Router cutters



HW plunge centre tip

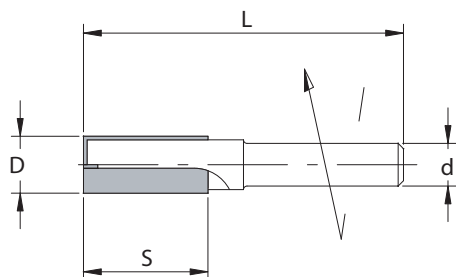
113



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
12	26	52	12	113.120.11	
12	40	70	12	113.121.11	
13	26	52	12	113.130.11	
14	28	56	12	113.140.11	
14	40	72	12	113.141.11	
15	32	60	12	113.150.11	
16	32	60	12	113.160.11	
16	40	72	12	113.161.11	
17	35	64	12	113.170.11	
18	35	64	12	113.180.11	
19	38	68	12	113.190.11	
20	38	68	12	113.200.11	
22	40	72	12	113.220.11	
24	40	72	12	113.240.11	
25	40	72	12	113.250.11	
26	42	74	12	113.260.11	
28	42	74	12	113.280.11	
30	42	74	12	113.300.11	

TECHNICAL DETAILS:
- Super strength steel
- 2 precision ground HW cutting edges and 1 HW plunge centre tip [Z2+1]

APPLICATION: used for grooving, jointing and routing on solid wood, wood composites, plastic materials and laminates.



APPLICAZIONE/APPLICATION:

Esecuzione di fresature, incastri e canali.
Cutting and grooving router bit

MACCHINA/MACHINE:

Pantografo CNC, pantografi manuali/CNC router, manual routers.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION:

Esecuzione con taglienti in HW integrale micrograno fino al d. 10. Oltre in HW riportato.
Con due taglienti diritti e taglio di testa per forare. Giri 16.000-30.000 min⁻¹.
Manufactured by micrograin solid carbide up to d. 10. From d. 12 made with brazed HW.
Produced with 2 straight cutting edges plus end cut for plunging.
RPM 16.000-30.000 min⁻¹.

HW

Z=2

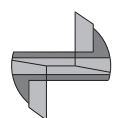
Art. 4165 - d=9,5x20 mm

Codice Code	D D	S S	L L	Cod. Prezzo Price Code
4165.030.008 *	3	8	38	M04
4165.040.010 *	4	10	39	M04
4165.050.012 *	5	12	41	M04
4165.060.016 *	6	16	43	C05
4165.070.018 *	7	18	45	E05
4165.080.020 *	8	20	48	G05
4165.090.022 *	9	22	52	B06
4165.100.024 *	10	24	52	D06
4165.100.035 *	10	35	65	M06
4165.110.024	11	24	52	H06

Art. 4170 - d=12x20 mm

Codice Code	D D	S S	L L	Cod. Prezzo Price Code
4170.120.026	12	26	52	H06
4170.120.040 *	12	40	70	G11
4170.130.026	13	26	52	L06
4170.140.028	14	28	56	L06
4170.150.030	15	30	60	G07
4170.160.032	16	32	60	H07
4170.180.035	18	35	64	D08
4170.200.038	20	38	68	M08
4170.220.040	22	40	72	C09
4170.240.040	24	40	72	F09
4170.250.040	25	40	72	M09

* HW integrale/Solid carbide



HW plunge centre tip

TECHNICAL DETAILS:

- Premium quality HWM
- 2 radial relief cutting edges [Z2]
- 1 HW [Z1] plunge centre tip

APPLICATION: for grooving, jointing and routing on solid wood, wood composites, plastic materials and laminates.



175

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
• 4	10	65	10	175.040.11	
• 5	12	65	10	175.050.11	
• 6	14	65	10	175.060.11	
• 7	17	65	10	175.070.11	
• 8	20	65	10	175.080.11	
• 9	23	65	10	175.090.11	
10	25	70	10	175.100.11	
12	25	70	10	175.120.11	
14	25	70	10	175.140.11	
15	25	70	10	175.150.11	
16	25	70	10	175.160.11	
18	25	70	10	175.180.11	
20	25	70	10	175.200.11	
22	25	70	10	175.220.11	
24	25	70	10	175.240.11	
25	25	70	10	175.250.11	
26	25	70	10	175.260.11	
30	25	70	10	175.300.11	
35	25	70	10	175.350.11	

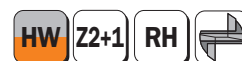
• HWM

176



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
10	40	87	10	176.100.11	
12	40	87	10	176.120.11	
14	40	87	10	176.140.11	
15	40	87	10	176.150.11	
16	40	87	10	176.160.11	
18	40	87	10	176.180.11	
20	40	87	10	176.200.11	

177

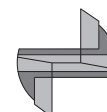


D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
10	35	90	12	177.100.11	
12	35	90	12	177.120.11	
12	50	100	12	177.121.11	
14	35	90	12	177.140.11	
16	35	90	12	177.160.11	
16	60	110	12	177.161.11	
18	35	90	12	177.180.11	
18	60	110	12	177.181.11	
20	35	90	12	177.200.11	
22	35	90	12	177.220.11	
24	35	90	12	177.240.11	
25	35	90	12	177.250.11	
26	35	90	12	177.260.11	
28	35	90	12	177.280.11	
30	35	90	12	177.300.11	
35	35	90	12	177.350.11	

TECHNICAL DETAILS:

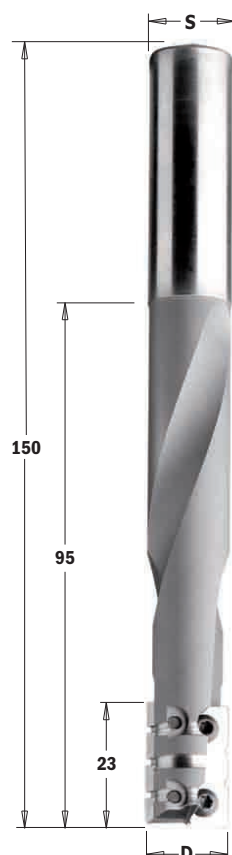
- Super strength steel
- 2 precision ground HW cutting edges and 1 HW plunge centre tip [Z2+1]

APPLICATION: used for grooving, jointing and general routing operation on solid wood, wood composites, plastics and laminates. Can be used on machining centres, CNC routers and hand-held routers.



HW plunge centre tip

Spiral bits with insert knives and chip-breaker for locksets



662

INSERT CARBIDE Z2R RH

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation
16	23/95*	150	16	662.160.11

Spare parts

23x7x1.5mm 2-RT HW-HC knives	790.230.2R
23x7x1.5mm 3-RT HW-HC knives	790.230.3R
M3x4mm T9 Torx screw	990.082.00
T9 Torx key	991.069.00

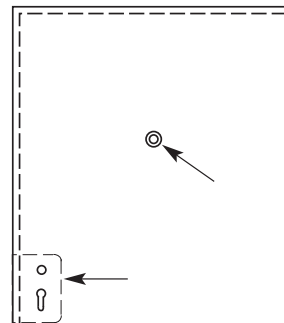
* The 95mm length is achieved in 3-4 passes.

TECHNICAL DETAILS:

- Super strength steel (heavy-duty material)
- 2 cutting edges [Z2R]
- Chip-breaker teeth

APPLICATION: used for ripping, template routing, panel sizing and any routing application on solid wood, or wood composites. Can be used at a high feed speed on well-clamped workpieces.

Can be used on machining centres, point to point machines, CNC routers and hand-held routers equipped with chucks or adaptors.



Straight router cutters with insert knives



653

INSERT CARBIDE Z1+1 RH

D mm	I mm	L mm	S mm	Spare knives		ORDER NO. Right-hand rotation
				side	top	
16	28,3	91,5	20	790.283.12	790.075.00	653.661.11
16	48,3	111,5	20	790.483.12	790.075.00	653.662.11
18	48,3	111,5	20	790.483.12	790.075.00	653.681.11
20	48,3	111,5	20	790.483.12	790.096.00	653.701.11

Spare parts

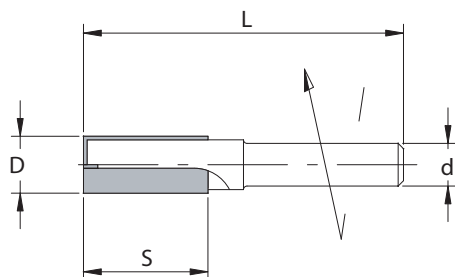
7,5x12x1,5mm knife	790.075.00
9,6x12x1,5mm knife	790.096.00
28,3x12x1,5mm knife	790.283.12
48,3x12x1,5mm knife	790.483.12
M3,5x3,5mm Torx screw	990.072.00
M4x3,5mm Torx screw	990.074.00
M4x6mm Torx screw	990.075.00
T15 Torx key	991.061.00

TECHNICAL DETAILS:

- Super strength steel
- 2 cutting edges [Z1+1]

APPLICATION: straight router bit with one replaceable plunging knife and one side knife fixed by special Torx screws. The body is precise balanced. For finishing and routing, plunge cutting and grooving in boards materials (laminated chipboards, MDF) and hardwood.

For use on CNC machining centres.



APPLICAZIONE/APPLICATION:

Esecuzione di fresature, incastri e canali.
Cutting and grooving router bit

MACCHINA/MACHINE:

Pantografo CNC, pantografi manuali/CNC router, manual routers.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION:

Esecuzione con taglienti in HW integrale micrograno fino al d. 10. Oltre in HW riportato.
Con due taglienti diritti e taglio di testa per forare. Giri 16.000-30.000 min⁻¹.
Manufactured by micrograin solid carbide up to d. 10. From d. 12 made with brazed HW.
Produced with 2 straight cutting edges plus end cut for plunging.
RPM 16.000-30.000 min⁻¹.

HW

Z=2

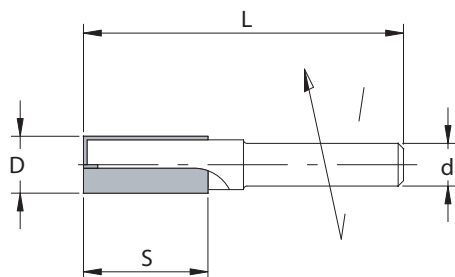
Art. 4155 - d=6 mm

Codice Code	D D	S S	L L	Cod. Prezzo Price Code
4155.030.011 *	3	11	51	D04
4155.040.011 *	4	11	51	D04
4155.050.011 *	5	11	51	D04
4155.050.016 *	5	16	55	H04
4155.060.019 *	6	19	51	D04
4155.060.025 *	6	25	57	G04
4155.070.019 *	7	19	51	F04
4155.080.019 *	8	19	51	F04
4155.080.025 *	8	25	57	M04
4155.080.032 *	8	32	63	B05
4155.090.019	9	19	51	D04
4155.100.019	10	19	51	L04
4155.100.025	10	25	57	B05
4155.100.032	10	32	63	C05
4155.110.019	11	19	51	M04
4155.120.019	12	19	51	M04
4155.120.025	12	25	57	C05
4155.120.032	12	32	63	E05
4155.130.019	13	19	51	A05
4155.140.019	14	19	51	A05
4155.150.019	15	19	51	C05
4155.150.025	15	25	57	F05
4155.150.032	15	32	63	H05
4155.160.019	16	19	51	C05
4155.160.025	16	25	57	F05
4155.160.032	16	32	63	H05
4155.180.019	18	19	51	F05
4155.200.019	20	19	51	F05

Art. 4160 - d=8 mm

Codice Code	D D	S S	L L	Cod. Prezzo Price Code
4160.030.011 *	3	11	51	D04
4160.040.011 *	4	11	51	D04
4160.050.011 *	5	11	51	D04
4160.050.016 *	5	16	55	H04
4160.060.019 *	6	19	51	D04
4160.060.025 *	6	25	57	G04
4160.070.019 *	7	19	51	F04
4160.080.019 *	8	19	51	F04
4160.080.025 *	8	25	57	M04
4160.080.032 *	8	32	63	B05
4160.090.019	9	19	51	D04
4160.100.019	10	19	51	L04
4160.100.025	10	25	57	B05
4160.100.032	10	32	63	C05
4160.110.019	11	19	51	M04
4160.120.019	12	19	51	M04
4160.120.025	12	25	57	C05
4160.120.032	12	32	63	E05
4160.130.019	13	19	51	A05
4160.140.019	14	19	51	A05
4160.140.025	14	25	57	F05
4160.150.019	15	19	51	C05
4160.160.019	16	19	51	C05
4160.160.025	16	25	57	F05
4160.160.032	16	32	63	H05
4160.180.019	18	19	51	F05
4160.200.019	20	19	51	F05

* HW integrale/Solid carbide



APPLICAZIONE/APPLICATION:

Esecuzione di fresature, incastri e canali.
Cutting and grooving router bit

MACCHINA/MACHINE:

Pantografo CNC, pantografi manuali/CNC router, manual routers.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION:

Esecuzione con taglienti in HW integrale micrograno fino al d. 10. Oltre in HW riportato.
Con due taglienti diritti e taglio di testa per forare. Giri 16.000-30.000 min⁻¹.
Manufactured by micrograin solid carbide up to d. 10. From d. 12 made with brazed HW.
Produced with 2 straight cutting edges plus end cut for plunging.
RPM 16.000-30.000 min⁻¹.

HW

Z=2

Art. 4145 - d=10 mm

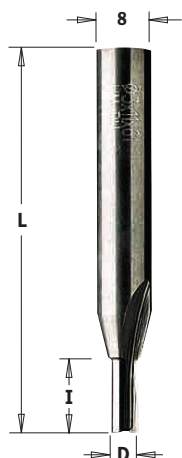
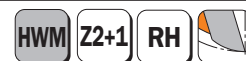
Codice Code	D D	S S	L L	Cod. Prezzo Price Code
4145.040.013 *	4	13	49	C05
4145.050.015 *	5	15	49	C05
4145.060.016 *	6	16	53	E05
4145.070.020 *	7	20	55	A06
4145.080.023 *	8	23	60	D06
4145.100.023 *	10	23	70	G06
4145.100.040 *	10	40	87	E07
4145.120.023	12	23	70	F06
4145.120.040	12	40	87	D07
4145.140.023	14	23	70	H06
4145.140.040	14	40	87	H07
4145.150.023	15	23	70	B07
4145.160.023	16	23	70	C07
4145.160.045	16	45	87	D08
4145.180.023	18	23	70	E07
4145.180.045	18	45	87	M08
4145.200.023	20	23	70	H07
4145.200.045	20	45	87	C09
4145.220.023	22	23	70	E08
4145.240.023	24	23	70	M08

Art. 4150 - d=12 mm

Codice Code	D D	S S	L L	Cod. Prezzo Price Code
4150.100.035	10	35	90	B07
4150.120.035	12	35	90	C07
4150.120.045	12	45	90	B09
4150.140.035	14	35	90	H07
4150.140.050	14	50	100	E11
4150.160.035	16	35	90	A08
4150.160.050	16	50	100	B12
4150.180.035	18	35	90	E08
4150.180.050	18	50	100	F12
4150.200.035	20	35	90	B09
4150.200.050	20	50	100	B13
4150.220.035	22	35	90	D09
4150.240.035	24	35	90	F09

* HW integrale/Solid carbide

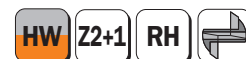
Solid carbide router cutters


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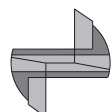
D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
3	10	55	8	174.030.11	
4	10	55	8	174.040.11	
5	12	55	8	174.050.11	
6	14	55	8	174.060.11	
7	20	55	8	174.070.11	

TECHNICAL DETAILS:
 - Premium quality HWM
 - 2 radial relief cutting edges [Z2]

Router cutters


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D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
8	20	55	8	174.080.11	
NEW 8	30	70	8	174.081.11	
NEW 8	40	90	8	174.082.11	
9	20	55	8	174.090.11	
10	20	60	8	174.100.11	
NEW 10	30	70	8	174.102.11	
10	40	90	8	174.101.11	
11	20	60	8	174.110.11	
12	20	60	8	174.120.11	
NEW 12	30	70	8	174.122.11	
12	40	90	8	174.121.11	
13	20	60	8	174.130.11	
14	20	60	8	174.140.11	
NEW 14	30	70	8	174.142.11	
14	40	90	8	174.141.11	
15	20	60	8	174.150.11	
16	20	70	8	174.160.11	
NEW 16	30	70	8	174.162.11	
16	40	90	8	174.161.11	
18	20	70	8	174.180.11	
18	30	70	8	174.181.11	
18	40	80	8	174.182.11	
19	20	70	8	174.190.11	
20	20	70	8	174.200.11	
20	30	70	8	174.201.11	
NEW 20	40	90	8	174.202.11	
22	20	70	8	174.220.11	
NEW 22	30	70	8	174.221.11	
NEW 22	40	90	8	174.222.11	
24	20	70	8	174.240.11	
NEW 24	30	70	8	174.241.11	
NEW 24	40	90	8	174.242.11	
25	20	70	8	174.250.11	
26	20	70	8	174.260.11	
NEW 26	30	70	8	174.261.11	
28	20	70	8	174.280.11	
NEW 28	30	70	8	174.281.11	
29	20	70	8	174.290.11	
30	20	70	8	174.300.11	



HW plunge centre tip

TECHNICAL DETAILS:
 - Super strength steel
 - 2 precision ground HW cutting edges
 and 1 HW plunge centre tip [Z2+1]

APPLICATION: used for drilling, grooving or jointing on solid wood and wood composites.
 Can be used on machining centres, CNC routers and hand-held routers equipped with chucks or adaptors.

Router cutters for drywall openings



136



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
14	50	90	12	136.140.11	
16	50	90	12	136.160.11	
18	50	90	12	136.180.11	

TECHNICAL DETAILS:

- Super strength steel
- 2 alternating precision ground HW [Z1+1]

APPLICATION: ideal for cutting openings for electrical boxes and similar operation on solid wood, wood composites, plastics and laminates. Can be used on machining centres, CNC routers and hand-held routers equipped with chucks or adaptors.

Saw blades

Tools with bore
& Knives

Router Bits
& Sets

CNC Router Cutter
& Chucks

Industrial
Dowel Drills

Bits for Hand
Power Tools

Spare Parts

Power Tools
& Accessories

Display Cabinets

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Spoilboard surfacing router cutters with insert knives



663.001.11



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	
80	12	90	20	663.001.11	

Spare parts

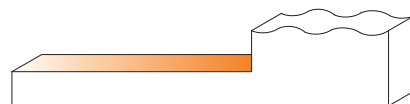
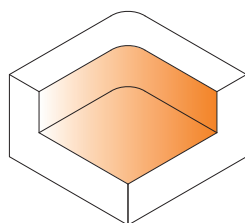
12x12x1,5mm knife	790.120.00
M4x6mm Torx T15 screw	990.075.00
T15 Torx key	991.061.00
14x14x2mm knife	790.140.00
M6x10mm TCEI screw	990.083.00
3mm allen key	991.067.00

TECHNICAL DETAILS:

- Super strength steel
- 2 cutting edges [Z2]
- 2 scores knives [V2]

APPLICATION: new router bit for CNC router ideal for fast removal of material over a large surface area leaving an improved finish at the bottom of the cut. Used on soft and hardwood, particle board and MDF. The cutter uses 4-sided inserts.

Cost effective solution compared to brazed router bits and solid carbide spiral bits.



Drawings are 1:2 scale