

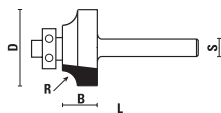


UPDATE 2022

dział 1

FREZ HM Z=2 Z PROMIENIEM I ŁOŻYSKIEM KOPIUJĄCYM

ART. B123



S Ø 6,4 (1/4")

B123.167.R

D

16,7

R

2

B

8

L

47



Z050.003.N



Z053.003.N



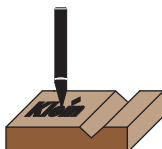
Z054.002.N



Z051.002.R

FREZ VHM DO RZEŻBIENIA I GRAWEROWANIA PROFIL "V" Z=1

ART. A109 - B109



- Suitable for engraving, signmaking and decorative features on wood, plastic, brass, aluminium, copper and different composite material
- To be used both on CNC and portable machines



S Ø 6

A109.510.R **NEW**

S Ø 6,4 (1/4")

B109.510.R **NEW**

D

0,1

α

30°

B

14

L

50

A109.525.R **NEW**

B109.525.R **NEW**

0,25

30°

14

50

A109.550.R **NEW**

B109.550.R **NEW**

0,5

30°

14

50

A109.600.R **NEW**

B109.600.R **NEW**

1

30°

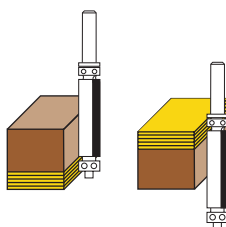
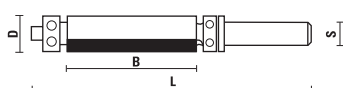
14

50

dział 2

FREZ HM KOPIUJĄCY DO WYRÓWNYWANIA Z ŁOŻYSKIEM DÓŁ/GÓRA Z=2

ART. E146 - G146



- Suitable for trimming with template on the upper and/or lower side
- Klein® trimming bits with straight cut are suitable for smooth and well-finished edges on melamine and veneered panels.



S Ø 12

E146.592.R **NEW**

S Ø 12,7 (1/2")

G146.592.R **NEW**

D

19

B

51

L

108



Z050.005.N
(łożysko górne)



Z050.012.N
(łożysko dolne)



Z053.002.N



Z054.002.N



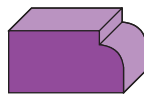
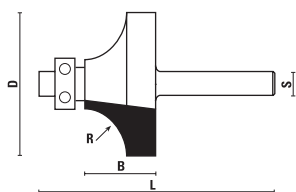
Z051.004.N



Z058.002.N

FREZ HM Z=2 Z PROMIENIEM I ŁOŻYSKIEM KOPIUJĄCYM DO DELRIN®

ART. C323



- Complete with Delrin® ball bearing to avoid marking and scratches
- Suitable for working composite material



S Ø 8	D	R	B	L
C323.167.R	16,7	2	8	47
C323.187.R	18,7	3	9,5	49
C323.190.R	19	3,2	10	48
C323.222.R	22,2	4,8	13	51
C323.254.R	25,4	6,4	13	51
C323.286.R	28,6	8	13	51
C323.318.R	31,8	9,5	16	56
C323.354.R	35,4	11	17	57
C323.380.R	38	12,7	19	57



Z050.100.N



Z054.002.N

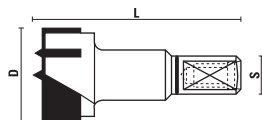


Z051.002.R

dział 5

WIERTŁO PUSZKOWE HW Z=2+2

ART. L140 - L141



For natural and pressed woods, chipboards, veneered and laminate coated panels and MDF

Obr. Prawe	Obr. SX/LH	D	L	S
L140.140.R NEW	L140.140.L NEW	14	57	10X26
L141.140.R NEW	L141.140.L NEW	14	70	10X26



Z051.302.R



Z059.001.L



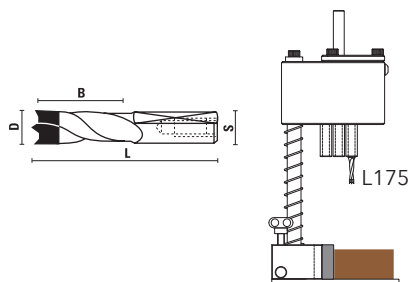
Z059.001.R



Su richiesta
On request
Z051.505.R

WIERTŁO DO GŁOWICY "CABINEO"

ART. L175



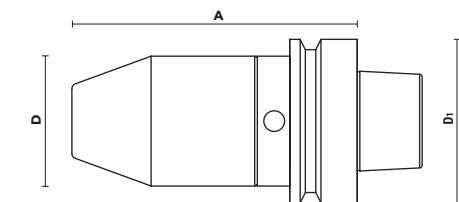
- 2 flutes drill bits
- To equip both Trimatic 22,4 and Trimatic Super 22,4 for Lamello Cabineo®
- Lh rotation
- Equip Trimatic 22,4 with one of the drill bits L175.050.L for "Cabineo 8" or L175.051.L for "Cabineo 12" to make ø 5 mm blind holes to fix Lamello Cabineo® connections



Art.	S	D	B	L
L175.050.L	Ø6x20	5	8	35
L175.051.L	Ø6x20	5	12	39

UCHWYT DO CNC HSK-63F AUTOSERRANTE

ART. T118



- For CNCdrilling operation
- The special one-piece design guarantees best precision and greater rigidity
- Supplied with key
- Concentricity < 0,02 mm
- **Capacity from 1 mm (1/16") to 13 mm (1/2")**

Art.	Typ	A	D	D1	Stretta/Capacity	Obr.
T118.915.N NEW	HSK-63F	110	50	63	1-13 mm	Pawe-Lewe

USEFUL INFORMATION

HOW TO CLAMP THE TOOL

- Do not clamp tapered shanks
 - Minimum clamping length is 20 mm and maximum is 29 mm
 - Use feed and RPM suitable for drilling

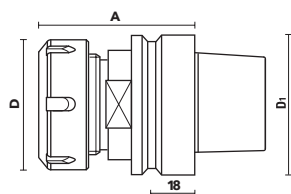
Griffe/Wedges Pianetto/Flat
 Utensile/Tool

- If possible use cylindrical shanks
 - If you use shank with flat, the clamping wedges are not allowed to touch the flat (see drawing)

How to clamp the tool with key

UCHWYT DO CNC HSK-63E

ART. T118

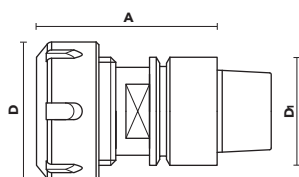


- Supplied with nut (without collet)
- Threaded nut DIN 6499
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools
- The hollow taper shank is produced according to DIN69893 for inserting the Balluff microchip

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
T118.985.N NEW	HSK-63E	77	50	63	Ø 2÷20 (Art. T119/ER32)	Z091.101.R z łożyskiem	Pawe-Lewe
T118.987.N NEW	HSK-63E	78	63	63	Ø 2÷30 (Art. T123/ER40)	Z091.102.R z łożyskiem	Pawe-Lewe

UCHWYT DO CNC HSK-40E

ART. T118



- Supplied with nut (without collet)
- Spare wrench art. Z052.401.N
- Threaded nut DIN 6499
- **Balanced to 25.000 RPM at G 2,5**
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools
- The hollow taper shank is produced according to DIN69893 for inserting the Balluff microchip

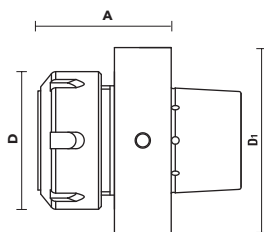
do maszyny: "SD"

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
T118.995.R	HSK-40E	70	50	40	Ø 2÷20 (Art.T119/ER32)	Z091.001.R	Prawe

UCHWYT DO CNC HSK-85 / COLLET CHUCKS

HSK-85

ART. T122



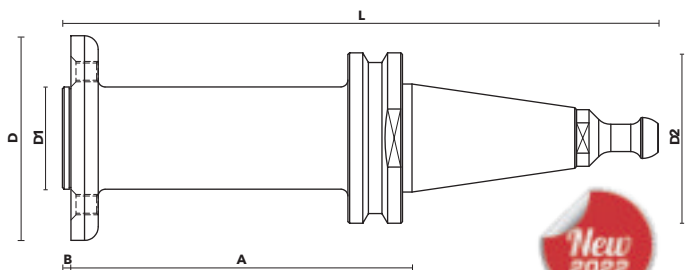
- Supplied with nut (without collet)
- Threaded nut DIN 6499
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools
- The hollow taper shank is produced according to DIN69893 for inserting the Balluff microchip

do maszyn **Weinig**

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
T132.982.R	HSK-85	61	63	85	Ø 2÷30 (Art.T123/ER40)	Z091.102.R z łożyskiem	Pawe-Lewe

UCHWYT DO CNC ISO 30 DO PIŁ TARCZOWYCH

ART. T128



- Nr. 4 pin holes 90°
- Complete with nr. 4 screws to fix the sawblade
- For mounting saw blades with 30 mm bore
- For mounting saw blades with diameter max 200 mm

do maszyny **Biesse**

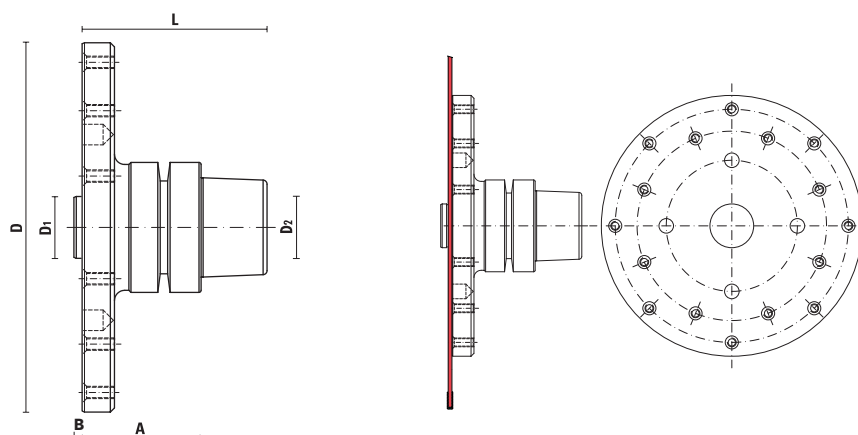
Art.	Typ	A	D	D1	D2	B	L
T128.150.R NEW	ISO30	110	60	30	50	2,5	174



Z051.014.R

UCHWYT DO CNC HSK63E DO PIŁ TARCZOWYCH - O DUŻEJ ŚREDNICY

ART. T128



- For mounting sawblades with 30 mm bore
- For mounting sawblades with diameter up to 850 mm
- Supplied complete with 16 counterscrews M6 for mounting saw blades (part number Z051.014.N)

do maszyny **Uniteam**

Articolo	Cono	A	D	D1	D2	B	L
T128.180.R	HSK-63E	57	179	30	63	4	89

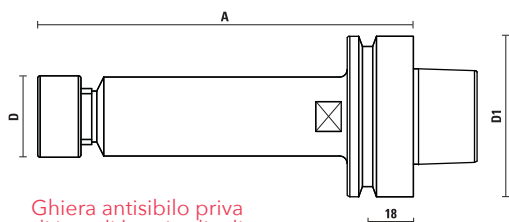


Z051.014.R

UCHWYTDO CNC HSK-63F ER16 - WYWAŻENIE G2,5

ART. TK118

KleinOVERLINE



Ghiera antisibilo priva di intagli longitudinali
No-noise nuts,
with ground contours

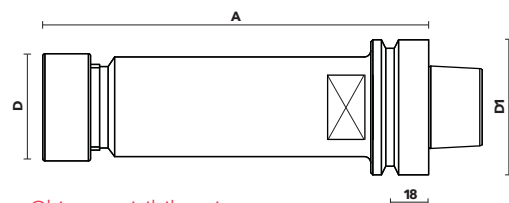
- **Balanced at grade G 2.5 to 36.000 RPM**
- **Noise and vibrations reduction**
- Supplied with nut (without collet)
- Threaded nut DIN 6499
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools.
- To be used with our torque wrench Z052.790.N
- Solid complete with certificate of balancing

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
TK118.900.R070	HSK-63F	70	32	63	Ø 2÷10 (Art. T127/ER16)	Z091.505.R	Prawe
TK118.900.R100	HSK-63F	100	32	63	Ø 2÷10 (Art. T127/ER16)	Z091.505.R	Prawe

UCHWYTDO CNC HSK-63F ER32 WYWAŻENIE G2,5

ART. TK118

KleinOVERLINE



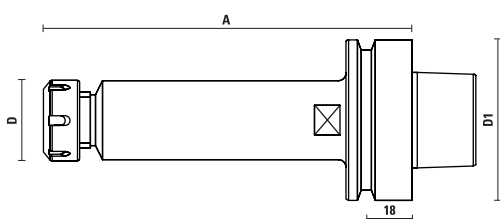
Ghiera antisibilo priva di intagli longitudinali
No-noise nuts,
with ground contours

- **Balanced at grade G 2.5 to 36.000 RPM**
- **Noise and vibrations reduction**
- Supplied with nut (without collet)
- Threaded nut DIN 6499
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools.
- To be used with our torque wrench Z052.793.N
- Sold complete with certificate of balancing

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
TK118.976.R100	HSK-63F	100	50	63	Ø 2÷20 (Art. T119/ER32)	Z091.501.R	Prawe

UCHWYT HSK-63F ER16 - WYWAŻENIE G2,5

ART. TJ118

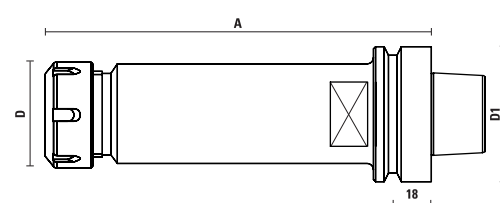


- **Balanced at grade G 2.5 to 36.000 RPM**
- Supplied with standard clamping nut
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools.
- Sold complete with certificate of balancing

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
TJ118.900.R070	HSK-63F	70	32	63	Ø 2÷10 (Art. T127/ER16)	Z091.105.R	Prawe
TJ118.900.R100	HSK-63F	100	32	63	Ø 2÷10 (Art. T127/ER16)	Z091.105.R	Prawe

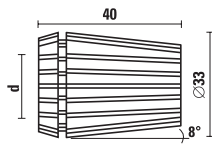
UCHWYTDO CNC HSK-63F ER32 - WYWAŻENIE G2,5

ART. TJ118

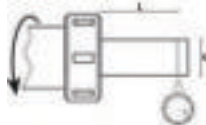


- **Balanced at grade G 2.5 to 36.000 RPM**
- Supplied with standard clamping nut
- The "A" measure will be determined with clamped tool shanks by using our spring collet DIN6499. The "A" measure may be subject to variations depending on the diameter of the clamped tools.
- Sold complete with certificate of balancing

Art.	Typ	A	D	D1	Koszyk	Nakrętka	Obr.
TJ118.976.R100	HSK-63F	100	50	63	Ø 2÷10 (Art. T119/ER32)	Z091.001.R	Prawe

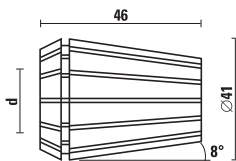
KOSZYK ER 32 - DIN 6499 - ULTRA PRECYZYJNY
ART. T119.UP


- Precision $\geq 0,005 \text{ mm}/0,0002'' \text{ inch}$
- Recommended for high speed RPM where great machining precision is required
- Nominal diameter
- To be used on all types of toolholders and standard nuts

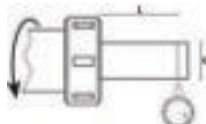


		Klein	NEW Klein
		Alta Precision Standard	Ultra Precision
D	L	Standard High Precision	Ultra Precision
Ø3 - Ø4 - Ø5	16	> 0,010	$\geq 0,005$
Ø6 - Ø9,5	25	> 0,010	$\geq 0,005$
Ø10 - Ø17	40	> 0,010	$\geq 0,005$
Ø18 - Ø26	50	> 0,010	$\geq 0,005$

Art.	d
T119.030.NUP	Ø 3
T119.040.NUP	Ø 4
T119.060.NUP	Ø 6
T119.080.NUP	Ø 8
T119.100.NUP	Ø 10
T119.120.NUP	Ø 12
T119.140.NUP	Ø 14
T119.160.NUP	Ø 16
T119.180.NUP	Ø 18
T119.200.NUP	Ø 20

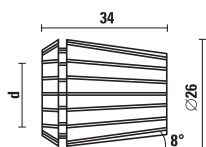
KOSZYK ER 40 - DIN 6499 - ULTRA PRECYZYJNY
ART. T123.UP


- Precision $\geq 0,005 \text{ mm}/0,0002'' \text{ inch}$
- Recommended for high speed RPM where great machining precision is required
- Nominal diameter
- To be used on all types of toolholders and standard nuts

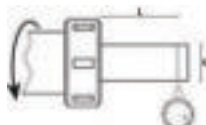


		Klein	NEW Klein
		Alta Precision Standard	Ultra Precision
D	L	Standard High Precision	Ultra Precision
Ø3 - Ø4 - Ø5	16	> 0,010	$\geq 0,005$
Ø6 - Ø9,5	25	> 0,010	$\geq 0,005$
Ø10 - Ø17	40	> 0,010	$\geq 0,005$
Ø18 - Ø26	50	> 0,010	$\geq 0,005$

Art.	d
T123.060.NUP	Ø 6
T123.080.NUP	Ø 8
T123.100.NUP	Ø 10
T123.120.NUP	Ø 12
T123.140.NUP	Ø 14
T123.160.NUP	Ø 16
T123.180.NUP	Ø 18
T123.200.NUP	Ø 20
T123.250.NUP	Ø 25

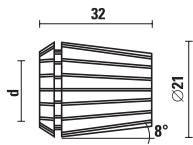
KOSZYK ER 25 - DIN 6499 - ULTRA PRECYZYJNY
ART. T125.UP


- Precision $\geq 0,005 \text{ mm}/0,0002'' \text{ inch}$
- Recommended for high speed RPM where great machining precision is required
- Nominal diameter
- To be used on all types of toolholders and standard nuts



		Klein	NEW Klein
		Alta Precision Standard	Ultra Precision
D	L	Standard High Precision	Ultra Precision
Ø3 - Ø4 - Ø5	16	> 0,010	$\geq 0,005$
Ø6 - Ø9,5	25	> 0,010	$\geq 0,005$
Ø10 - Ø17	40	> 0,010	$\geq 0,005$
Ø18 - Ø26	50	> 0,010	$\geq 0,005$

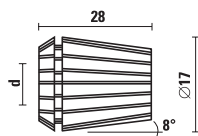
Art.	d
T125.060.NUP	Ø 6
T125.080.NUP	Ø 8
T125.100.NUP	Ø 10
T125.120.NUP	Ø 12

KOSZYK ER 20 - DIN 6499 - ULTRA PRECYZYJNY
ART. T126.UP


- Precision $\geq 0,005 \text{ mm}/0,0002'' \text{ inch}$
- Recommended for high speed RPM where great machining precision is required
- Nominal diameter
- To be used on all types of toolholders and standard nuts

Klein		NEW Klein	
Ultra Precision Standard		Ultra Precision	
D	L	Standard High Precision	Ultra Precision
Ø3 - Ø4 - Ø5	16	> 0,010	$\geq 0,005$
Ø6 - Ø9,5	25	> 0,010	$\geq 0,005$
Ø10 - Ø17	40	> 0,010	$\geq 0,005$
Ø18 - Ø26	50	> 0,010	$\geq 0,005$

Art.	d
T126.060.NUP	Ø 6
T126.080.NUP	Ø 8
T126.100.NUP	Ø 10
T126.120.NUP	Ø 12

KOSZYK ER 16 - DIN 6499 - ULTRA PRECYZYJNY
ART. T127.UP


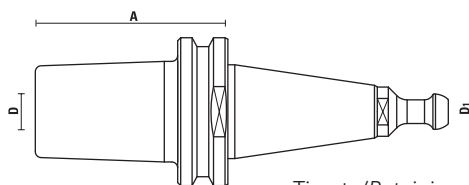
- Precision $\geq 0,005 \text{ mm}/0,0002'' \text{ inch}$
- Recommended for high speed RPM where great machining precision is required
- Nominal diameter
- To be used on all types of toolholders and standard nuts

Klein		NEW Klein	
Ultra Precision Standard		Ultra Precision	
D	L	Standard High Precision	Ultra Precision
Ø3 - Ø4 - Ø5	16	> 0,010	$\geq 0,005$
Ø6 - Ø9,5	25	> 0,010	$\geq 0,005$
Ø10 - Ø17	40	> 0,010	$\geq 0,005$
Ø18 - Ø26	50	> 0,010	$\geq 0,005$

Art.	d
T127.060.NUP	Ø 6
T127.080.NUP	Ø 8
T127.100.NUP	Ø 10

UCHWYT TERMO ISO 30
ART. T120


HotBlock®



- Tirante/Retaining pawl T118.891.R per macchina/for: **Biesse, Masterwood - Bulleri** (motori/for H.S.D.), **Hiteco** included
- Altri tiranti si possono montare su richiesta/Other Retaining pawl can be fitted on request

- Concentricity $\leq 0,003 \text{ mm}$
- High precision tool holders guaranteed by thermally induced shrink fit
- High rigidity and balance for heavy CNC working
- For HS, HW and PCD cutting tool
- **Balanced to 24.000 RPM at G 2,5**
- Right and left-hand rotation
- **Cutting tool shank must have tolerance h6 with cylindrical shank (no flats)**
- Sold complete with certificate of balancing

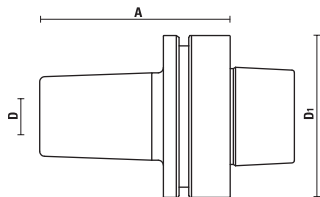
Art.	Typ	A	D1	D	Obr.
T120.320.N	ISO30	76	50	12	Dx-Sx /Rh-Lh
T120.360.N	ISO30	76	50	16	Dx-Sx /Rh-Lh
T120.400.N	ISO30	76	50	20	Dx-Sx /Rh-Lh

UCHWYT DO CNC TERMO HSK-63F

ART. T120



HotBlock®



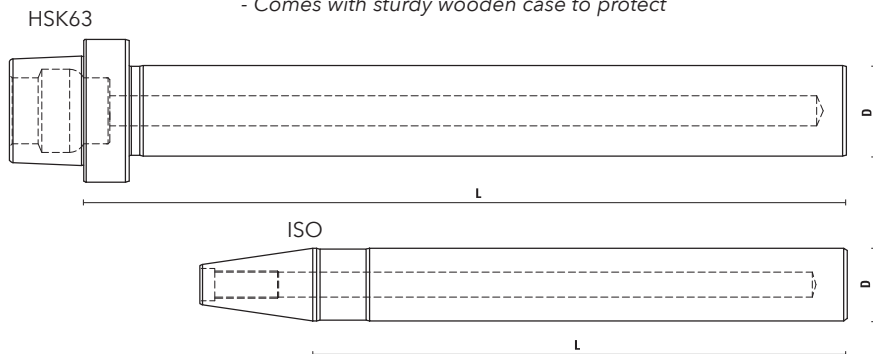
- **Concentricity $\leq 0,003\text{mm}$**
- **High precision** tool holders guaranteed by thermally induced shrink fit
- High rigidity and balance for heavy CNC working
- For HS and HW cutting tool
- **Balanced to 24.000 RPM at G 2,5**
- **Right and left-hand rotation**
- Cutting tool shank must have tolerance h6 with cylindrical shank (no flats)
- Sold complete with certificate of balancing

Art.	Typ	A	D1	D	Obr.
T120.564.N	HSK-63F	76	63	1/4" - (6,35 mm)	Dx-Sx /Rh-Lh
T120.595.N	HSK-63F	76	63	3/8" - (9,52 mm)	Dx-Sx /Rh-Lh

TRZPIEŃ KONTROLNY DO CNC

ART. T501

- **Maximum runout error 0,003 mm/3 micron/0.0001 inch**
- With certificate of calibration included
- Comes with sturdy wooden case to protect



Art.	Typ	D	L
T501.080.N	ISO30	32	235
T501.090.N	HSK63F	40	335
T501.095.N	HSK63E	40	335

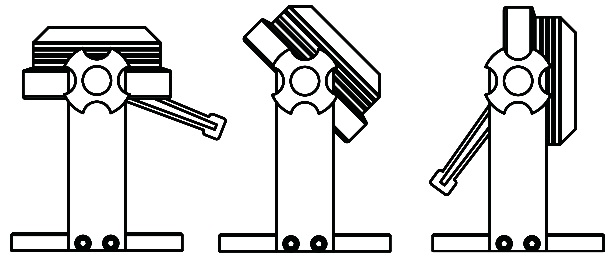
WHY USE THE PRECISION TEST BARS?

- Produced with accurate quality control system
- **Allows to inspect the electrospindle with extreme precision and identify any problems**
- **It is possible to check both concentricity, parallelism and alignments of the spindle of your CNC machine**
- Thanks to a regular use of our test bars, machine anomalies can be found with no risk of compromising the spindle, avoiding costly down time
- Especially lightened internally for greater efficiency.



SMONTACONI UNIVERSALE REGOLABILE / ADJUSTABLE
DEMOUNT DEVICES

ART. T139

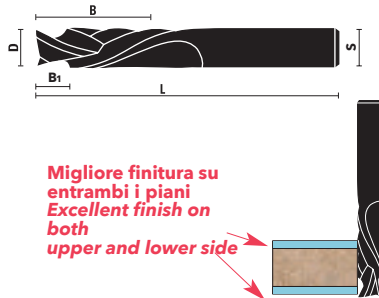


- The tool holder has to be blocked on the flange diameter which is made in special and durable steel
- Auto-locking roller bearing design for the fastest tool changes and no slippage.
- It is adjustable from 0° to 90°
- Wide range of tightening stand/locking devices available for HSK32, HSK40, HSK50, HSK63, ISO30 and ISO40 spindles.
- See complete range at page 7.41 of Catalog 19.A
- Easy to be mount near the machine thanks to four holes on the basement. NB: Tightening device must be fixed before using.



Art.	Machine/
T139.157.N	Machine ISO30 con flangia Ø 57 mm (Macchine Thermwood)/For ISO30 tool holder Ø 57 (Thermwood machines)

FRESE HW INTEGRALE A DOPPIA ELICA Z=2+2
SOLID CARBIDE MORTISE COMPRESSION Z=2+2
 ART. T156.M

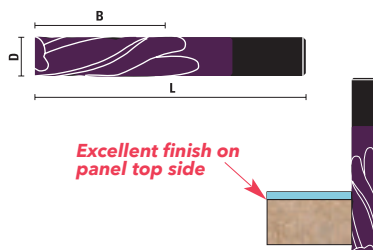


- Right-hand rotation
- Excellent finish on both upper and lower side of the panel
- These tools have a shorter up-cut section compared to standard compression bits. They are suitable for mortising, grooving, routing and dado
- For softwood and hardwood, chipboard, MDF, HF, double-sided melamine and laminated, plywood, plastic coated, mineral materials (CORIAN® ecc.)
- To be used on machining centres, CNC routers and point to point machines

Obr.Prawe	D	B	B1	L	S
T156.125.RM	12	25	5 (0,200")	80	12

FRESE HW INTEGRALE ELICA SINISTRA Z=2, RICOPERTE
SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=2 COATED
 ART. T152.KD

KleinDIA



- Right-hand rotation with "DOWN CUT SPIRAL"
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality
- To be used on machining centres, CNC routers and point to point machines
- For softwood and hardwood, chipboard, MDF, HF, plywood, plastic coated, mineral materials (CORIAN® ecc.)

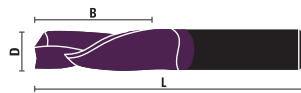
KleinDIA

UP TO
4/6X
 TOOL LIFE

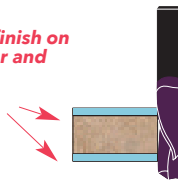
Obr.Prawe	D	B	L	Z
T152.030.RKD	3	12	50	2
T152.040.RKD	4	12	50	2
T152.050.RKD	5	17	50	2
T152.060.RKD	6	17	70	2
T152.080.RKD	8	22	80	2
T152.101.RKD	10	45	100	2

FRESE HW INTEGRALE A DOPPIA ELICA Z=1+1, RICOPERTE
SOLID CARBIDE COMPRESSION CUTTERS Z=1+1 COATED

ART. T155.KD



Excellent finish on both upper and lower side



- Right-hand rotation
- Excellent finish on both upper and lower side of the panel
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality
- For softwood and hardwood, chipboard, MDF, HF, double-sided melamine and laminated, plywood, plastic coated, mineral materials (CORIAN® ecc.)
- To be used on machining centres, CNC routers and point to point machines

KleinDIA UP TO 4/6X TOOL LIFE

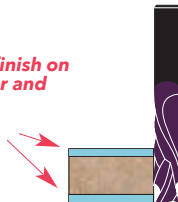
Obr.Prawe	D	B	L	Z
T155.061.RK	6	27	60	1+1

FRESE HW INTEGRALE A DOPPIA ELICA Z=2+2, RICOPERTE
SOLID CARBIDE COMPRESSION CUTTERS Z=2+2 COATED

ART. T156.KD



Excellent finish on both upper and lower side



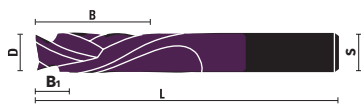
- Right-hand rotation
- Excellent finish on both upper and lower side of the panel
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality
- For softwood and hardwood, chipboard, MDF, HF, double-sided melamine and laminated, plywood, plastic coated, mineral materials (CORIAN® ecc.)
- To be used on machining centres, CNC routers and point to point machines

KleinDIA UP TO 4/6X TOOL LIFE

Obr.Prawe	D	B	L	Z
T156.080.RK	8	22	80	2+2

FRESE HW INTEGRALE A DOPPIA ELICA Z=2+2, RICOPERTE
SOLID CARBIDE MORTISE COMPRESSION Z=2+2 COATED

ART. T156.MKD



Migliore finitura su entrambi i piani
 Excellent finish on both upper and lower side

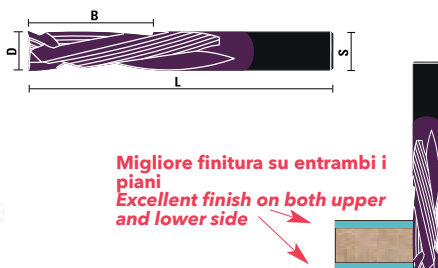


- Right-hand rotation
- Excellent finish on both upper and lower side of the panel
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality
- These tools have a shorter up-cut section compared to standard compression bits. They are suitable for mortising, grooving, routing and dado
- For softwood and hardwood, chipboard, MDF, HF, double-sided melamine and laminated, plywood, plastic coated, mineral materials (CORIAN® ecc.)
- To be used on machining centres, CNC routers and point to point machines

KleinDIA UP TO 4/6X TOOL LIFE

Obr.Prawe	D	B	B1	L	S
T156.095.RMK	3/8"	7/8"	0,200" (5 mm)	3"	3/8"
Φ156.096.RMK	3/8"	1-1/4"	0,200" (5 mm)	3"	3/8"
Φ156.125.RMK	12	25	5 mm (0,200")	80	12
Φ156.127.RMK	1/2"	7/8"	0,200" (5 mm)	3"	1/2"
Φ156.128.RMK	1/2"	1-1/4"	0,200" (5 mm)	3"	1/2"

FRESE HW INTEGRALE A COMPRESSIONE Z=3+3, KleinDIA[®]
RICOPERTE KleinDIA[®]
SOLID CARBIDE COMPRESSION CUTTERS Z=3+3 COATED
ART. T356.KD

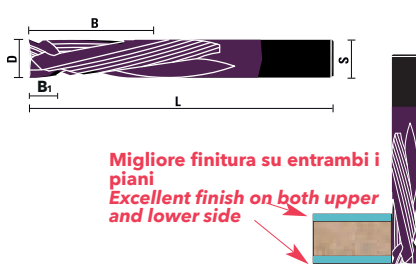


- Right-hand rotation
- Excellent finish on both upper and lower side of the panel
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality
- For softwood and hardwood, chipboard, MDF, HF, double-sided melamine and laminated, plywood, plastic coated, mineral materials (CORIAN[®] ecc.)
- To be used on machining centres, CNC routers and point to point machines

KleinDIA[®] UP TO 4/6X TOOL LIFE

Obr.Prawe	D	B	L	Z
T356.120.RK	12	32	80	3+3
T356.121.RK	12	42	100	3+3

FRESE HW INTEGRALE A COMPRESSIONE Z=3+3 KleinDIA[®]
RICOPERTE KleinDIA[®]
SOLID CARBIDE MORTISE COMPRESSION Z=3+3 COATED
ART. T356.MKD



- Right-hand rotation
- Excellent finish on both upper and lower side of the panel
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality
- These tools have a shorter up-cut section compared to standard compression bits. They are suitable for mortising, grooving, routing and dado
- For softwood and hardwood, chipboard, MDF, HF, double-sided melamine and laminated, plywood, plastic coated, mineral materials (CORIAN[®] ecc.)
- To be used on machining centres, CNC routers and point to point machines

KleinDIA[®] UP TO 4/6X TOOL LIFE

Obr.Prawe	D	B	B1	L	S
T356.095.RMK	3/8"	7/8"	0,200" (5 mm)	3"	3/8"
T356.096.RMK	3/8"	1-1/4"	0,200" (5 mm)	3"	3/8"
T356.127.RMK	1/2"	7/8"	0,200" (5 mm)	3"	1/2"
T356.128.RMK	1/2"	1-1/4"	0,200" (5 mm)	3"	1/2"

FRESE HW INTEGRALI PER INCASTRI "LAMELLO" KleinDIA[®]
RICOPERTE KleinDIA[®]
SOLID CARBIDE SPIRAL CUTTERS "LAMELLO" COATED



- Suitable for making the groove for Lamello P-System with CNC router with 3 and/or 5 axis
- RH rotation
- Polished and coated cutting edge for improved chip evacuation and less friction for excellent performance
- Longer tool life and greater cutting quality

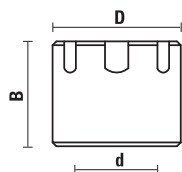


KleinDIA[®] UP TO 4/6X TOOL LIFE

Art.	D	B	L	S	Z
T169.098.RKD	9,8	23	80	12	2

NAKRĘTKA DO UCHWYTU ER 25 Mini

ART. Z091



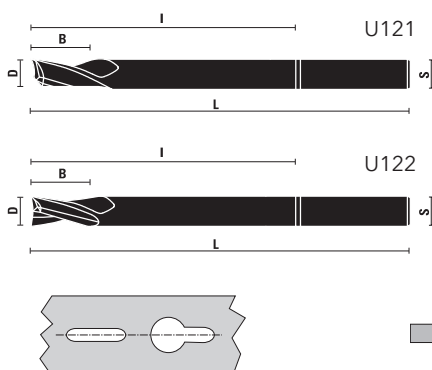
Art.	Tipo/Type	D	B	d	Obr.
Z091.403.L	ER 25 Mini	35	20	M 30x1	Sx/LH

dział 8

FRESE HW INTEGRALE ELICA DESTRA Z=1 - Z=2 TIPO LUNGO

SOLID CARBIDE SPIRAL BITS UP CUT Z=1 - Z=2 LONG TYPE

ART. U121 - U122



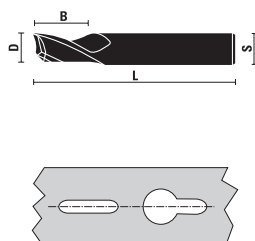
- **Right-hand rotation with "UP CUT SPIRAL"**
- Polished cutting edge for improved chip evacuation. Mirror finish
- Spiral 'O' flute sharpening
- Long version for **deep machining operations**
- Use on CNC and high speed machines
- Use with coolant /lubricant is recommended
- For working:
 - aluminium
 - fiberglass
 - plastic
 - phenolic
 - acrylic
 - PVC

Obr.Prawe	D	B/L	L	S	Z
U121.040.R	4	14/40	100	8	1
U121.050.R	5	18/50	100	8	1
U121.060.R	6	20/50	100	8	1
U121.080.R	8	20/70	100	8	1
U121.100.R	10	20/70	100	10	1
U121.120.R	12	35/70	100	12	1
U122.050.R	5	18/50	100	8	2
U122.080.R	8	20/70	100	8	2
U122.100.R	10	25/70	100	10	2

FRESE HW INTEGRALE ELICA DESTRA Z=1 - TIPO CORTO

SOLID CARBIDE SPIRAL BITS UP CUT Z=1 - SHORT TYPE

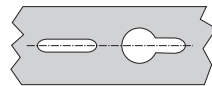
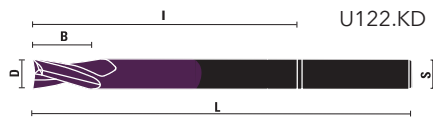
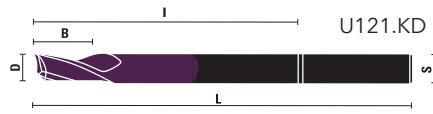
ART. U125



- **Right-hand rotation with "UP CUT SPIRAL"**
- Polished cutting edge for improved chip evacuation. Mirror finish
- Spiral 'O' flute sharpening
- Shorter cutting edge spiral version to **reduce vibration**, increase stability and have a better finish
- Use on CNC and high speed machines
- Use with coolant /lubricant is recommended
- For working:
 - aluminium
 - fiberglass
 - plastic
 - phenolic
 - acrylic
 - PVC

Obr.Prawe	D	B	L	S	Z
U125.040.R	4	8	50	6	1
U125.050.R	5	10	50	6	1
U125.060.R	6	12	50	6	1

FRESE HW INTEGRALE ELICA DESTRA Z=1 - Z=2 TIPO LUNGO, KleinDIA[®]
RICOPERTE
SOLID CARBIDE SPIRAL BITS UP CUT Z=1 - Z=2 LONG TYPE, COATED



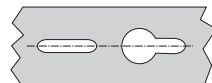
- **Right-hand rotation with "UP CUT SPIRAL"**
- **Longer tool life and greater cutting quality**
- Polished cutting edge for improved chip evacuation.
- Mirror finish
- Spiral 'O' flute sharpening
- Long version for **deep machining operations**
- Use on CNC and high speed machines
- Use with coolant /lubricant is recommended
- For working:
 - aluminium
 - fiberglass
 - plastic
 - phenolic
 - acrylic
 - PVC

KleinDIA[®] UP TO **4/6X** TOOL LIFE

Obr.Prawe	D	B/L	L	S	Z
U121.040.RK	4	14/40	100	8	1
U121.050.RK	5	18/50	100	8	1
U121.060.RK	6	20/50	100	8	1
U121.080.RK	8	20/70	100	8	1
U121.100.RK	10	20/70	100	10	1
U121.120.RK	12	35/70	100	12	1
D					
U122.050.RK	5	18/50	100	8	2
U122.080.RK	8	20/70	100	8	2
U122.100.RK	10	25/70	100	10	2
D					

FRESE HW INTEGRALE ELICA DESTRA Z=1 TIPO CORTO, KleinDIA[®]
RICOPERTE
SOLID CARBIDE SPIRAL BITS UP CUT Z=1 SHORT TYPE COATED

ART. U125.KD



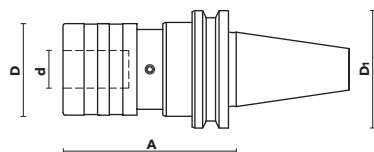
- **Right-hand rotation with "UP CUT SPIRAL"**
- **Longer tool life and greater cutting quality**
- Polished cutting edge for improved chip evacuation.
- Mirror finish
- Spiral 'O' flute sharpening
- Shorter cutting edge spiral version to **reduce vibration**, increase stability and have a better finish
- Use on CNC and high speed machines
- Use with coolant /lubricant is recommended
- For working:
 - aluminium
 - fiberglass
 - plastic
 - phenolic
 - acrylic
 - PVC

KleinDIA[®] UP TO **4/6X** TOOL LIFE

Obr.Prawe	D	B	L	S	Z
U125.040.RK	4	8	50	6	1
U125.050.RK	5	10	50	6	1
U125.060.RK	6	12	50	6	1
D					

UCHWYT DO CNC ISO 30 A CAMBIO RAPIDO
QUICK CHANGE ISO 30 TAPPING CHUCK

ART. UT118



- For making threads in aluminium machining
- With **axial compensation**
- To be used with bushes for tapping with outer diameter $D=19$ mm DIN 352, DIN 371, DIN 376
- **Supplied without pull stud**
- For tapping operation on CNC machines

Art.	Typ	A	d	D	D1
UT118.080. N	ISO30	74	19	39	50

AKCESORIA

TIRANTI PER CONI PORTAUTENSILI
RETAINING PAWLS FOR CONCENTRIC CHUCK

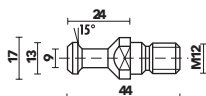
ART. T118

Gamma completa a pag. 7.39 del nostro Katalogo **19.A**
Full range at page 7.39 of our Catalog **19.A**



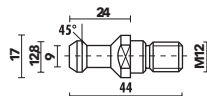
DIN69872

Art.
T118.791.R

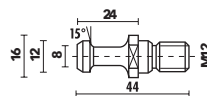


Silnik G. Colombo

Art.
T118.792.R

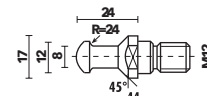


Art.
T118.793.R

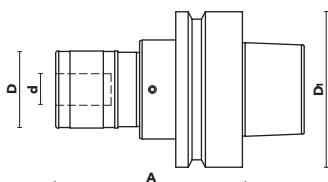


Silnik HSD/HITECO

Art.
T118.891.R



MASCHIATORI HSK63F A CAMBIO RAPIDO
QUICK CHANGE HSK63F TAPPING CHUCK

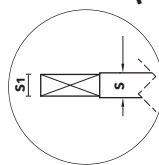
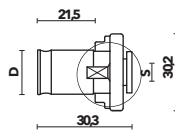


- For making threads in aluminium machining
- With **axial compensation**
- To be used with bushes for tapping with outer diameter $D=19$ mm DIN 352, DIN 371, DIN 376
- For tapping operation on CNC machines

Art.	Typ	A	d	D	D1
UT118.090. N	HSK63F	81	19	39	63

**BUSSOLE PORTAMASCHI A CAMBIO RAPIDO
 DIN 371**

QUICK CHANGE BUSHES FOR TAPPING (DIN 371)



Attacco utensile
 maschiatore
 Thread tap shank
 with square

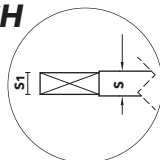
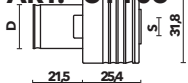
- Suitable for tapping of through holes
- **High precision**, suitable for processing aluminium
- For mounting taps ("M" series)

Art.	Filetto maschiatore/Thread	D	S= Attacco/Shank	S1= □ Quadri/Square	Obr.
UT100.030.N	M3,5	19	4	2,7	Pawe-Lewe
UT100.035.N	M4	19	4,5	3,15	Pawe-Lewe
UT100.040.N	M5	19	6	3,4	Pawe-Lewe
UT100.050.N	M6	19	6	4,9	Pawe-Lewe
UT100.060.N	M8	19	8	4,9	Pawe-Lewe
UT100.080.N	M10	19	10	6,2	Pawe-Lewe
UT100.100.N	M12	19	9	8	Pawe-Lewe
UT100.120.N				7	Pawe-Lewe

**BUSSOLE PORTAMASCHI A CAMBIO RAPIDO DIN 371 CON
 FRIZIONE**

**QUICK CHANGE BUSHES FOR TAPPING (DIN 371) WITH
 SAFETY CLUTCH**

ART. UT105



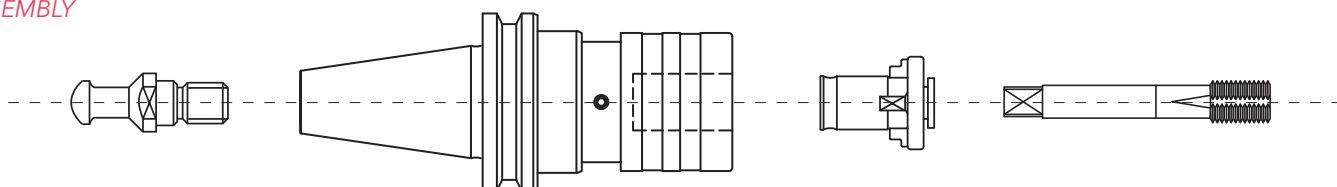
Attacco utensile
 maschiatore
 Thread tap shank
 with square

- Suitable for tapping of blind holes
- **High precision**, suitable for processing aluminium
- For mounting taps and prevents their breakage due to the safety clutch
- For mounting taps ("M" series)

Art.	Filetto maschiatore/Thread	D	S= Attacco/Shank	S1= □ Quadri/Square	Obr.
UT105.030.N	M3,5	19	4	2,7	Pawe-Lewe
UT105.035.N	M4	19	4,5	3,15	Pawe-Lewe
UT105.040.N	M5	19	6	3,4	Pawe-Lewe
UT105.050.N	M6	19	6	4,9	Pawe-Lewe
UT105.060.N	M8	19	8	4,9	Pawe-Lewe
UT105.080.N	M10	19	10	6,2	Pawe-Lewe
UT105.100.N	M12	19	9	8	Pawe-Lewe
UT105.120.N				7	Pawe-Lewe

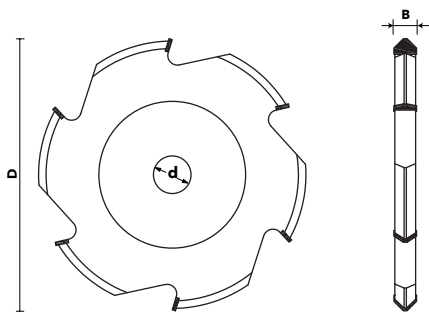
ESEMPIO DI
 ASSEMBLY

MONTAGGIO/EXAMPLE OF



FREZ HW DO ALUCOBOND® I KOMPOZYTÓW Z ALLUMINIUM

ART. YU120 - YU121



- Carbide tipped cutting edges
- For routing and folding on **ALUCOBOND®**, **ALUPANEL®**, **REYNOBOND®**, **DIBOND®**, **STACBOND®**
- Especially designed for scoring ACM (aluminium compaund material) with 90° and 135° angles (with flat bottoms) and rectangular groove for foldings up to 180°, thus allowing a simple hand bending operation of the panel without cracking
- For vertical panel saw and milling machine
- Complete range of router bits for ACM at page 8.08 (Catalog 19.A)

Art.	D	B	d	Z	α	R	D ₁
YU120.090.R	220	18	30	8	90°	-	3
YU120.135.R	220	18	30	8	135°	-	2
YU121.040.R	219	14	30	8	-	40	-

ADVANTAGES OF FOLDING AND ROUTING TECHNIQUE:

- Minimum investment
- Simple operating technique
- Low-cost manufacture of shaped parts like façade elements, frames, fascia claddings and roof edgings, corner pieces
- Good economy
- Tension-free folding, therefore no buckling in the corner

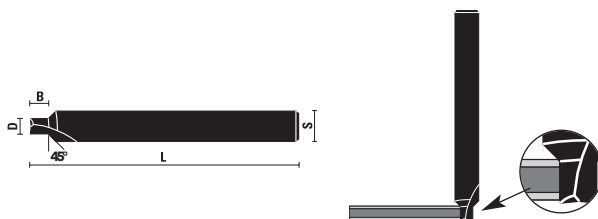
YU120.090.R

YU120.135.R

YU121.040.R

FREZ VHW MONOLIT DO ALUCOBOND® I KOMPOZYTÓW Z ALLUMINIUM

ART. U108



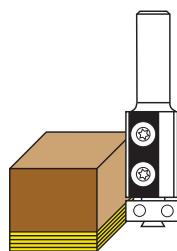
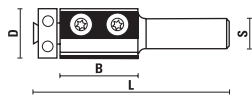
- Ideal for obtaining a smudge-free finish
- For routing on **ALUCOBOND®**, **ALUPANEL®**, **REYNOBOND®**, **DIBOND®** and **STACBOND®**

Art.	D	B	L	S	Z	Obr.
U108.050.R	5	4	70	8	2+1	Prawe

FRESE CON COLTELLINI HW PER REFILARE Z=2

HW INSERT FLUSH TRIMMING BITS Z=2

ART. W113 - WG114



- Lower ball bearing
- This item is sold complete with a torx key

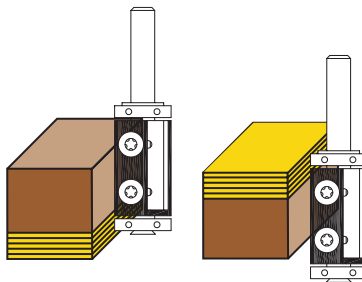
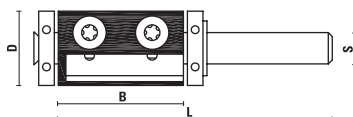
Art.	D	B	L	S
W113.160.R	16	30	70	8
WG114.190.R	19	30	80	12,7 (1/2")
NEW WG114.191.R	19	50	100	12,7 (1/2")

Z055.008.N (B=30)	Z055.010.N (B=50)	Z050.004.N (D=16)	Z050.006.N (D=19)	Z052.201.N	Z051.017.R (per cuscinetto) (for ball bearing)	Z051.021.R (per coltello) (for knives)

FRESE CON COLTELLINI HW PER REFILARE Z=2 CON CUSCINETTO SUPERIORE E INFERIORE

HW INSERT FLUSH TRIMMING BITS Z=2 WITH UPPER AND LOWER BALL BEARING

ART. W117 - W118 - WG118



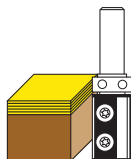
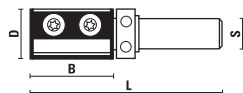
- This item is sold complete with a torx key
- Suitable for trimming with template on the upper and/or lower side

Obr.Prawe	D	B	L	S
W117.190.R	19	30	85	8
W118.191.R	19	50	110	12
NEW WG118.191.R	19	50	105	12,7 (1/2")

Z055.008.N (B=30)	Z055.010.N (B=50)	Z050.006.N (cuscinetto inf.) (lower ball bearing)	Z050.012.N (cuscinetto sup.) (upper ball bearing)	Z052.201.N	Z051.017.R (per cuscinetto) (for ball bearing)	Z051.010.R (per coltello) (for knives)

FRESE CON COLTELLINI HW PER RIFILARE Z=2 / HW INSERT FLUSH TRIMMING BITS Z=2

ART. WG116



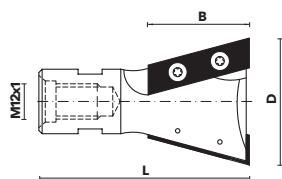
- Cuscinetto superiore
- Prodotto venduto comprensivo di chiave per il montaggio
- Upper ball bearing
- This item is sold complete with a torx key

Art.	D	B	L	S
WG116.190.R	19	30	80	12,7 (1/2")
NEW WG116.191.R	19	50	100	12,7 (1/2")

Z055.008.N (B=30)	Z055.010.N (B=50)	Z050.012.N	Z052.201.N	Z051.017.R (per cuscinetto) (for ball bearing)	Z051.010.R (per coltello) (for knives)

FREZY NA PŁYTKI HW DO MASZYNY HUNDEGGER

ART. W187



- Completo di chiave
- Complete with key

Art.	D	B	L	Z	S
W187.395.R	39,5	31,5	65,5	2	M12x1

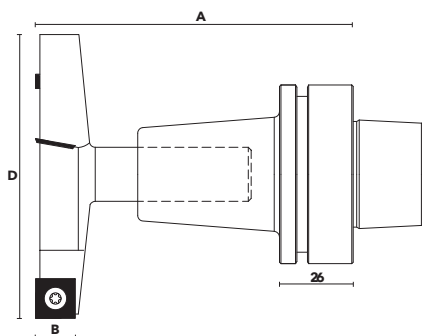
NEW

Z055.512.N
 Z052.201.N
 Z051.027.N

FRESE HW PER SPIANARE CON CONO HSK-63F A CALETTAMENTO

HW INSERT SPOILBOARD CUTTER INTEGRATED WITH HSK-63F

ART. W190



- **Ideale per la perfetta lavorazione di piani martiri macchina**
- Massima precisione grazie al fissaggio termico della fresa sul cono HSK63F
- Grado di equilibratura G 2,5 x 24.000 RPM
- Prodotto venduto comprensivo di coltelli intercambiabili 14x14x2 mm e chiave Z052.205.N
- **Suitable for surfacing spoilboard on CNC**
- Best accuracy and precision
- Balanced at G 2,5 to 24.000 RPM
- Sold complete with insert knives 14x14x2 and key

Art.	Typ	D	B	A	Z
W190.100.RHSK63F	HSK-63F	100	14	116	3
W190.101.RHSK63F	HSK-63F	101,6 (4")	14	112	3

NEW

Ricambi/Spare parts: Fresa/ Router **Ricambi/Spare parts:** Cono/ Collet

W190.100.R	100	T120.700.N	Ø 20	Per/For
W190.101.R	101,6 (4")	T120.695.N	Ø 19,5 (3/4")	W190.100.RHSK63F W190.101.RHSK63F

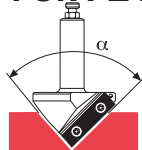
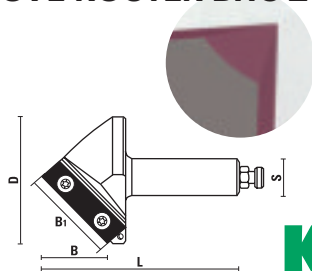
Z055.007.N
 Z052.205.N
 Z051.205.R

FRESE CON COLTELLINO HW PER FRESARE A "V" MATERIALI PLASTICI Z=1

RICOPERTE

HW INSERT V-GROOVE ROUTER BITS Z=1 FOR PLASTIC COATED

ART. W171.UKD



KleinDIA

UP TO
4/6X
TOOL LIFE

- Used on CNC routers and machining centres
- **Special grinding quality of the knives for working plastic with a better evacuation**
- **Coated insert knife for improved chip evacuation and less friction for excellent performance**
- This item is sold complete with a torx key

Obr.Prawe	D	α	B	B1	L	S
W171.670.RUK D	67	91°	33	46,5	97	20
W171.671.RUK D	67	90°	33	46,5	97	20

Z051.402.R
 Z052.201.N
 Z055.505.NKD

COLTELLINI REVERSIBILI HW RICOPERTI

ART. Z055.KD



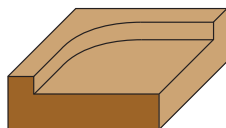
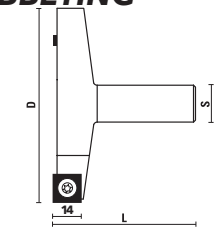
KleinDIA
Confezione da 10 pz./10 pcs.
set

Obr.Prawe	Descrizione/ Description	Per articolo/For item
Z055.505.NK D	48x22x1,5	W171.670.R/ W171.671.R

FRESE CON COLTELLINI HW PER SPIANARE PLANING AND RABBETING

/ HW INSERT ROUTER BITS FOR

ART. WE190



Prodotto venduto
 comprensivo
 di chiave per il montaggio
 This item is sold complete
 with a torx key

Angolo di taglio
10°
10° shear angle

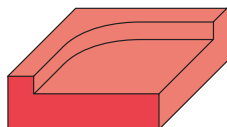
- Particolarmente indicato per **spianare larghe superfici di MDF** o produrre profondi scalini in una singola passata
- **Angolo di taglio 10°**
- Adatte per ogni tipo di legno
- Si usa su pantografi e su centri di lavoro CNC
- Rotazione destra
- Per migliori performance montare coltellini al diamante PKD
- Used for **surfacing MDF and particle board** and making deep rabbet
- **10° shear angle** for better performance
- Suitable for processing ever kind of wood
- To be used on machining centres and CNC routers
- Right-hand rotation
- For greater performance PCD knives can be mounted

Art.	D	B	L	Z	S
WE190.635. R	63,5(2-1/2")	14	70(2-3/4")	2	Ø12x45
Z051.020.R	Z055.007.N	Z052.103.N			

FRESE CON COLTELLINI HW PER MATERIALI PLASTICI PLASTIC MATERIAL

/ HW INSERT ROUTER BITS FOR

ART. WE190.RU



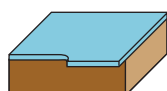
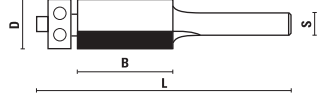
Prodotto venduto comprensivo di chiave per il montaggio
 This item is sold complete with a torx key

- Particolarmente indicate per **spianare larghe superfici di materiali plastici**
- Speciale coltellino raggiato (R=2) per una lavorazione meno aggressiva e senza rigature
- Used for **surfacing plastic board material** and making deep rabbet
- (also known as Flycutters - Spoilboard cutters)
- Special insert knives with radius (R=2) for smoother cuts and no risk of marks and scratch.

Art.	D	B	L	Z	S
WE190.635.R U	63,5(2-1/2")	14	70(2-3/4")	2	Ø12x45
Z051.020.R	Z055.107.N	Z052.103.N			

FRESE PKD A TAGLIANTI DIRITTI CON CUSCINETTO Z=2 / DP TRIMMING BITS WITH BALL BEARING Z=2

ART. XA119 - XB119 - XC119



DURAT.
30/50
 VOLTEMAG

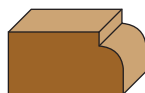
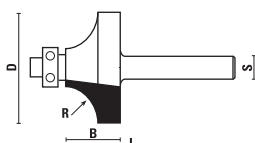
UP TO
30/50X
 OTOOL L

- Rotazione Dx
- Placchette in PKD per una elevatissima durata dell'utensile (fino 30/50 volte superiore alla fresa in HW) per performance eccellenti e un consistente risparmio di tempo e denaro
- Ideale per lavorare: alluminio, materiali composti, fibra di vetro, legno massiccio e tenero, MDF e plastica
- Rh rotation
- DP tips (polycrystalline diamond) last almost forever (up to 30/50 times longer than standard carbide bits) save time and money
- Excellent for trimming: aluminium, composites, fiberglass, hard and soft wood, MDF and plastic

S Ø 6	S Ø 6,4(1/4")	S Ø 8	D
XA119.127.R	XB119.127.R	XC119.127.R	12,7
Z050.003.N	Z053.002.N	Z054.002.N	Z051.002.R

FRESE PKD A RAGGIO CONCAVO CON CUSCINETTO Z=2 / DP ROUND OVER BITS WITH BALL BEARING Z=2

ART. XC123



DURAT.
30/50
 VOLTEMAG

UP TO
30/50X
 OTOOL L

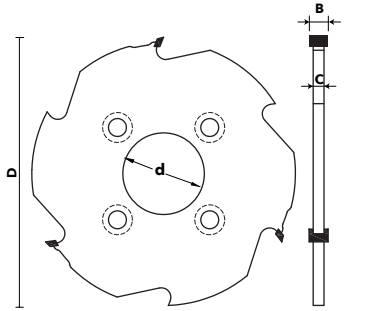
- Rotazione Dx
- Placchette in PKD per una elevatissima durata dell'utensile (fino 30/50 volte superiore alla fresa in HW) per performance eccellenti e un consistente risparmio di tempo e denaro
- Cuscinetto Delrin
- Ideale per lavorare: alluminio, materiali composti, fibra di vetro, legno massiccio e tenero, MDF e plastica
- Rh rotation
- DP tips (polycrystalline diamond) last almost forever (up to 30/50 times longer than standard carbide bits) save time and money
- Delrin ball bearing to avoid marking and scratches
- Excellent for corner: aluminium, composites, fiberglass, hard and soft wood, MDF and plastic

S Ø 8	D	R	
XC123.167.R	16,7	2	8 50
XC123.187.R	18,7	3	9,5 50
Z050.100.N	Z053.003.N	Z054.002.N	Z051.002.R

LAME CIRCOLARI IN PKD PER INCASTRI "LAMELLO"

DP GROOVE CUTTER FOR "LAMELLO" JOINTS

ART. XAH



DURATA UP TO
30/50 **30/50X**
VOLTEMAG ITOOL L

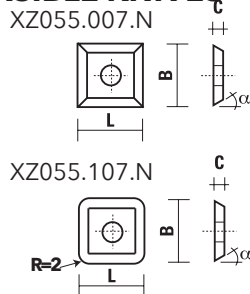
- Per l'alloggiamento dei biscotti "Lamello" su ogni tipo di legno
- **Placchette in PKD per una elevatissima durata dell'utensile (fino 30/50 volte superiore alla fresa in HW) per performance eccellenti e un consistente risparmio di tempo e denaro**
- Per sistema Lamello Zeta, Top 20, Top 21, Classic
- Avanzamento manuale (MAN)
- DP tips brazed cutter for making Lamello® grooves on any kind of wood
- **DP tips (polycrystalline diamond) last almost forever (up to 30/50 times longer than standard carbide bits) save time and money**

For hand milling machines
Art. D d B/c Z Fori t./P. holes
XAH100.206.22 100 22 3,96/2,83 4/4/36

COLTELLINI REVERSIBILI PKD A 4 TAGLIANTI

DP STANDARD REVERSIBLE KNIVES

ART. XZ055



Venduti singolarmente
Sold individually

DURATA UP TO
30/50 **30/50X**
VOLTEMAG ITOOL L

- **4Taglienti**
- **La durata è maggiore di circa 30/50 volte rispetto alla versione in HC05**
- Con 1 foro di fissaggio
- Coltellino riaffilabile
- **ATTENZIONE:** se si affila un coltellino su frese multitagliente assicurarsi di avere tutti i coltellini alla stessa altezza
- **4cutting edges**
- **Lifetime up to 30/50 times longer compared to the HC05 (HW) knives**
- 1 fixing hole
- Regrindable knives

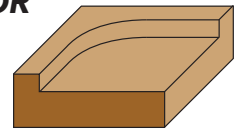
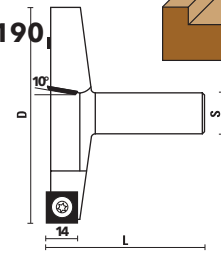
CAUTION: when sharpening a multicutter bit make sure that all the knives

XZ055.007.N at the same height 14 2 35°

FRESE CON COLTELLINI PKD PER SPIANARE

DP INSERT ROUTER BITS FOR PLANING AND RABBETING

ART. XW190 - XWG190



Angolo di taglio
10°
10° shear angle

DURATA UP TO
30/50 **30/50X**
VOLTEMAG ITOOL L

- Particolarmente indicato per **spianare larghe superfici di MDF** o produrre profondi scalini in una singola passata
- **Coltellino in PKD per una elevatissima durata dell'utensile (fino 30/50 volte superiore alla fresa in HW) per performance eccellenti e un consistente risparmio di tempo e denaro**
- **Angolo di taglio 10°**
- Adatte per ogni tipo di legno
- Si usa su pantografi e su centri di lavoro CNC
- Rotazione destra
- Chiave inclusa
- Used for **surfacing MDF and particle board** and making deep rabbet
- **DP insert knives (polycrystalline diamond) last almost forever (up to 30/50 times longer than standard carbide bits) save time and money**
- **10° shear angle** for better performance
- Suitable for processing ever kind of wood
- To be used on machining centres and CNC routers
- Right-hand rotation

Art. included	D	B	L	Z	S
XW190.100.R	100	14	80	3	Ø20x55
XW190.101.R	101,6(4")	14	76(3")	3	Ø19,05(3/4")x55



Z051.205.R



XZ055.007.N



Z052.205.N

XWG190.635.R	63,5(2-1/2")	14	70(2-3/4")	2	Ø12(1/2")x45
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Z051.020.R



XZ055.007.N

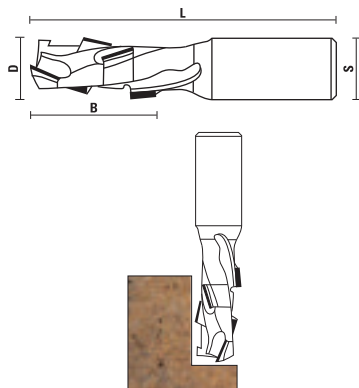


Z052.103.N

FRESE PKD / DP ROUTER

BITS

ART. X502 - X503



- Altezza placchetta PKD = 3 mm (riaffilabile 2/3 volte)
- Tagliante per forare in HW.
- 1+1 taglianti con geometria assiale per elevate prestazioni
- Ideale per la foratura e contornatura di legno duro massello, MDF impiallacciato e nobilitato, truciolare, hpl, trespas, materiali plastici...
- Si usano su centri di lavoro e pantografi CNC.
- PCD tip height = 3 mm (up to three-times regrindable)
- HW plunging tip.
- 1+1 flutes with axial angle for best performance
- Recommended for grooving, nesting and routing solid hard wood, veneered and laminated MDF, chipboard, hpl, trespas, plastic...
- Used on CNCrouter machines.

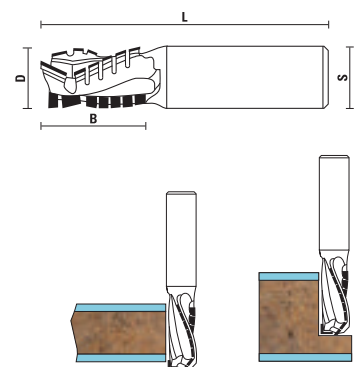
DURATA UP TO
30/50 **30/50X**
VOLTEMAG OTOOL L

Obr.	Prawe Obr.	D	B	L	S	Z	Plac./ Tips
X502.160.R	16		25	85	20x45	1+1	3+1
X502.183.R	NEW	18	53	113	20x50	1+1	6+1
X502.204.R		20	61	121	20x50	1+1	7+1
X502.205.R	NEW	20	70	130	20x50	1+1	8+1
X503.250.R	NEW	25	27	87	25x50	1+1	3+1
X503.251.R	NEW	25	36	95	25x50	1+1	4+1
X503.252.R	NEW	25	44	105	25x50	1+1	5+1
X503.253.R	NEW	25	53	113	25x50	1+1	6+1
X503.254.R	NEW	25	61	121	25x50	1+1	7+1
X503.255.R	NEW	25	70	130	25x50	1+1	8+1

FRESE PKD PER GRANDI ASPORTAZIONI / DP ROUTER BITS FOR

GREAT REMOVAL

ART. X505



- Tagliante per forare **PKD**
- Ideale per la foratura e contornatura di pannelli impiallacciati o bilaminati, e MDF
- La particolare costruzione dell'elica permette di ottenere in un'unica passata un' **OTTIMA** finitura nella parte superiore e inferiore
- **Alta velocità di avanzamento** (max. 20 m/min)
- Si usano su centri di lavoro e pantografi CNC
- Altezza **dente H= 4mm**
- **DP plunging tip**
- Recommended for grooving and routing veneered and double-sided laminated boards, also MDF
- Excellent finish on both sides of the workpiece thanks to the alternate shear angle
- **Higher feed rate** (max. 20.000 m/min)
- Used on CNC router machines
- **Tooth height H= 4mm**

DURATA UP TO
30/50 **30/50X**
VOLTEMAG OTOOL L

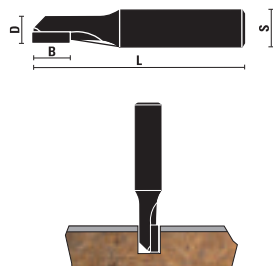
Obr.	Prawe Obr.	D	B	L	S	Z	Plac./ Tips
X505.203.R	NEW	20	45	105	20x50	3+3	17

FRESE PKD PER CANALI Z=1 / DP ROUTER

BITS

Z=1

ART. X510



- Tagliante con angolo negativo
- Rotazione Dx
- Corpo in **HW integrale**
- **2/3affilature**
- Fora e contorna pannelli di materiali compositi con superfici laccate o nobilitate
- Ottimi risultati su **materiali fenolici e HPL** (formica)
- *Special negative shear angle for best performance*
- *Right hand rotation*
- *Solid carbide tool body*
- **2/3times regrindable**
- For cutting and boring on panels of composite materials with lacquered or veneered surfaces
- Best results when working on **phenolic resins and HPL** (Formica plastic)

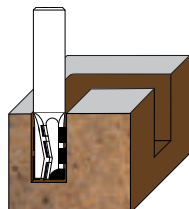
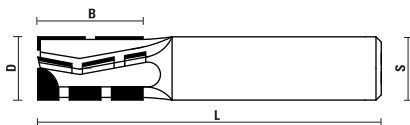
DURATA UP TO
30/50 **30/50X**
VOLTEMAG OTOOL L

Obr.	Prawe Obr.	D	B	L	S	Z
X510.120.R	NEW	12	20	70	12x35	1

FRESE PKD PER LAVORAZIONE NESTING / DP ROUTER BITS FOR NESTING

OPERATION

ART. X528



- Altezza placchetta PKD = 3mm(3affilature)
- Corpo fresa costruito con acciaio ad alta resistenza (Densimet[®])
- Ideale per **lavorazione Nesting** di pannelli in truciolare, compensato, impiallacciato e MDF
- **Tagliante per forare in PKD**
- Rotazione destra
- Da utilizzare su centri di lavoro e pantografi CNC
- È consigliabile l'utilizzo insieme alla ghiera "Tornado"[®] Art. T139

- DP tip height 3 mm(3**times** **regrindeable**)
- Sturdy tool body in high density metal (Densimet[®])
- Recommended for **Nesting operations** on chipboard, veneered and laminated MDF
- **DP plunging tip**
- To be used on CNC router machines
- For improved dust extraction use together with our Art. T139

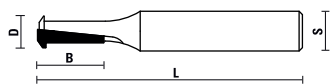
Tornado[®] UP TO chip & dust conveyor clamping nut
30/50 UP TO
VOLTEMAG 30/50X
OTOOL L

Obr.Prawe Obr.	D	B	L	S	Z	Placc./Tips
X528.140.R NEW	14	20	70	16x45	3+3	8
X528.141.R	14	25	75	16x45	3+3	10
X528.142.R NEW	14	30	80	16x45	3+3	12
X528.160.R	16	20	70	16x45	3+3	8
X528.161.R NEW	16	25	75	16x45	3+3	10
X528.162.R	16	30	80	16x45	3+3	12

FRESE PKD PER INCASTRI "LAMELLO"/ DP ROUTER BITS FOR

"LAMELLO"[®]

ART. X569



- Coltellino in PKD per una elevatissima durata dell'utensile (fino 30/50volte superiore alla fresa in HW) per performance eccellenti
- e un consistente risparmio di tempo e denaro
- Adatte per fare la sede del Lamello P-System con macchina CNC a 3 e/o 5 assi
- Rotazione destra
- **DP insert knives (polycrystalline diamond) last almost forever (up to 30/50times longer than standard carbide bits) save time and money**
- Suitable for making the groove for Lamello P-System with CNCrouter with 3 and/or 5 axis
- RH rotation

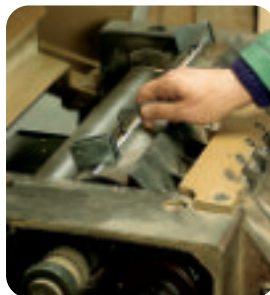
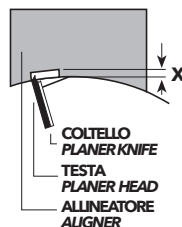
DURATA UP TO
30/50 UP TO
VOLTEMAG 30/50X
OTOOL L

Obr. DX/ RH Obr.	D	B	L	S	Z
X569.098.R	9,8	20	80	12	1

dział 11

ALLINEATORI MAGNETICI PER COLTELLI / MAGNETIC ALIGNERS FOR PLANER KNIVES

ART. Y200

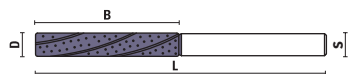


Klein magnetic aligners for planer knives have been specially designed for rapid knife positioning after sharpening. They are made of galvanized steel and feature permanent magnets. In just a few minutes, in a simple and precise way, problems of knife alignment after sharpening are solved. **No adjustments are required.** Simply position on cutterhead along the step where the knife is to be rested. All your knives will be parallel and positioned with the same working thickness.

Art.	ØTesta/Planer head	X
Y200.063.N	63	1
Y200.075.N	75	1
Y200.086.N	86	1

FRESE HW INTEGRALI ELICA SINISTRA RICOPERTE IN DIAMANTE
VHW SPIRAL CUTTER DOWNCUT WITH DIAMOND GRIT COATING

ART. XA183 - XB183



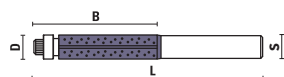
- **Polvere di Diamante elettrodepositata**
- **Ideale per il taglio di fibra di vetro, materiali compositi, materiali chimici e vetroresina**
- **Rotazione destra** con elica sinistra **"TIOSPINGENTE"**
- Speciale rivestimento in diamante
- Per pantografi manuali e CNC
- **Electro plated Diamonds**
- **Suitable for laminated, fiberglass, carbon fiber and composites material**
- **Right-hand rotation with "DOWN CUT SPIRAL"**
- With special diamond coating for longer tool life
- For working with portable router and CNC



S Ø 6	S Ø 6,4 (1/4")	D	B	L
XA183.063.R NEW	XB183.063.R	6,35 (1/4")	38	76
XA183.095.R NEW	XB183.095.R NEW	9,5 (3/8")	38	76

FRESE HW INTEGRALI A TAGLIANTI DIRITTI PER RIFILARE RICOPERTE IN DIAMANTE
VHW FLUSH TRIMMING BITS WITH DIAMOND GRIT COATING

ART. XA119 - XB119



- **Polvere di Diamante elettrodepositata**
- **Ideale per il taglio di fibra di vetro, materiali compositi, materiali chimici e vetroresina**
- Speciale rivestimento in diamante
- Per pantografi manuali e CNC
- Ideale per il taglio di fibra di vetro e materiali compositi
- **Electro plated Diamonds**
- **Suitable for laminated, fiberglass, carbon fiber and composites material**
- With special diamond coating for longer tool life
- For working with portable router and CNC
- Suitable for laminated, fiberglass, carbon fiber and composites material



S Ø 6	S Ø 6,4 (1/4")	D	B	L
XA119.064.R NEW	XB119.064.R NEW	6,35 (1/4")	19	59
XA120.064.R NEW	XB120.064.R NEW	6,35 (1/4")	25	64
XA120.095.R NEW	XB120.095.R NEW	9,5 (3/8")	25	67



Z050.100.N



Z053.003.N



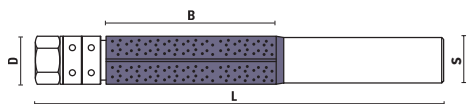
Z054.002.N



Z051.002.R

FRESE HW INTEGRALI A TAGLIANTI DIRITTI PER RIFILARE RICOPERTE IN DIAMANTE
VHW FLUSH TRIMMING BITS WITH DIAMOND GRIT COATING

ART. XE146 - XG146



- **Polvere di Diamante elettrodepositata**
- **Ideale per il taglio di fibra di vetro, materiali compositi, materiali chimici e vetroresina**
- Speciale rivestimento in diamante
- Per pantografi manuali e CNC
- Ideale per il taglio di fibra di vetro e materiali compositi
- **Electro plated Diamonds**
- **Suitable for laminated, fiberglass, carbon fiber and composites material**
- With special diamond coating for longer tool life
- For working with portable router and CNC
- Suitable for laminated, fiberglass, carbon fiber and composite material



S Ø 12	S Ø 12,7 (1/2")	D	B	L
XE146.127.R NEW	XG146.127.R	12,7 (1/2")	25	83
XE146.128.R NEW	XG146.128.R NEW	12,7 (1/2")	45	109
XE146.129.R NEW	XG146.129.R NEW	12,7 (1/2")	81	111



Z050.100.N



Z053.003.N



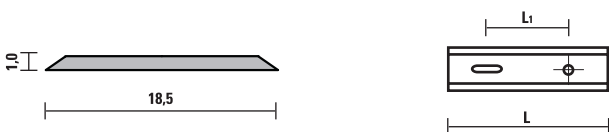
Z054.002.N



Z051.002.R

COLTELLI DA PIALLA "ESTA" UNIVERSALI UNIVERSAL TURNBLADES "ESTA"

ART. ZE10



- Coltello **rivestito con copertura antiossidante**
- **Tagliente lappato** per un'ottima finitura
- **HS 18%** per legni medio duri
- Per misure **comprese** tra L= 60 e L= 280 (confezioni da 20 pezzi)
- Per misure **comprese** tra L= 300 e L= 810 (confezioni da 12 pezzi)

- **Antioxidant treatment on knife body**
- **Polished cutting face** for an excellent finish quality
- **HS 18%** for medium hard wood
- **From L= 60 to L= 280 mm** (20 pcs packaging)
- **From L= 300 to L= 810 mm** (12 pcs packaging)

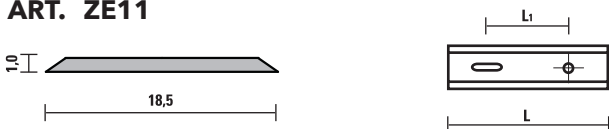
Art.	Qualità/Quality	L	L1	n. fori/holes	n. asole/slots	
ZE10.060HS	HS	60	45	1	1	
ZE10.100HS	HS	100	45	1	1	
ZE10.130HS	HS	130	45	1	2	
ZE10.200HS	HS	200	45	1	2	
ZE10.300HS	HS	300	100	1	2	
ZE10.400HS	HS	400	100	2	3	
ZE10.410HS	HS	410	100	2	3	
ZE10.430HS	HS	430	100	2	3	
ZE10.500HS	HS	500	100	1	4	
ZE10.520HS	HS	520	100	1	4	
ZE10.530HS	HS	530	100	1	4	
ZE10.630HS	HS	630	200	1	3	
ZE10.650HS	HS	650	200	1	3	
ZE10.810HS	HS	810	200	1	3	

Anche per macchine:
Holz-her, Hema, Protool
Also for machines:
Holz-her, Hema, Protool

Altre lunghezze su richiesta/Other dimensions available on request

COLTELLI DA PIALLA "ESTA" SPECIALI /SPECIAL TURNBLADES "ESTA"

ART. ZE11



- Coltello **rivestito con copertura antiossidante**
- **Tagliente lappato** per un'ottima finitura
- **HS 18%** per legni medio duri
- Per misure **comprese** tra L= 60 e L= 280 (confezioni da 20 pezzi)
- Per misure **comprese** tra L= 300 e L= 810 (confezioni da 12 pezzi)

- **Antioxidant treatment on knife body**
- **Polished cutting face** for an excellent finish quality
- **HS 18%** for medium hard wood
- **From L= 60 to L= 280 mm** (20 pcs packaging)
- **From L= 300 to L= 810 mm** (12 pcs packaging)

Articolo Item	Qualità Quality	L	L1	n. fori holes	n. asole slots	Macchina Machine	
ZE11.248HS	HS	248	130	1	1	Mafell	
ZE11.280HS	HS	280	130	1	1	Mafell	
ZE11.310HS	HS	310	70	1	3	Felder	
ZE11.311HS	HS	310	65-60-60-65	1	4	Hammer	
ZE11.320HS	HS	320	105	1	2	Mafell	
ZE11.350HS 4	HS	350	65-100-100-65	1	1	Holz-her Hema Protool	
ZE11.410HS	HS	410	70	1	5	Hammer	
ZE11.411HS	HS	410	100	1	4	Felder	
ZE11.510HS	HS	510	120	1	4	Felder	

Altre lunghezze su richiesta/Other dimensions available on request

Xtra[®]
cut

**UNA NUOVA FRONTIERA
 DEL TAGLIO**

**CUTTING TAKEN TO
 THE NEXT LEVEL**



La lama Klein viene tagliata esclusivamente con apparecchiature al laser. I fori e le sedi per la chiave vengono ripassati per ottenere la massima precisione (h7).

Laser cut saw blades. Bores and keyways are honed to ensure maximum precision (h7).

I tagli di silenziatura presentano una speciale geometria e sono riempiti con una resina sintetica che assicura maggiore stabilità e notevole riduzione delle vibrazioni in fase di lavoro.

No-noise and less vibration thanks to a special synthetic resin filled in the silent slots which have been cut with a distinct geometry. Stability is increased and vibrations are reduced.

La tensionatura ed equilibratura delle lame è effettuata con apparecchiature automatiche per eliminare le vibrazioni ed assicurare un'alta qualità di taglio.

Tensioning and balancing are operated with automatic machines for maximum performance, superior blade flatness, extended lifetime and exceptional finishing results.

Dentelli in metallo duro di qualità superiore prodotti da Ceratizit più performanti e duraturi. Dura fino al 30% in più.

Carbide tips original Ceratizit micrograin carbide last longer with sharp edge. Up to 30% longer lifetime.

UNA SOLUZIONE PER OGNI BISOGNO / A SOLUTION FOR EVERY NEED



IMPIALLACCIATI E LAMINATI
 VENEERED AND LAMINATES



MDF



TRUCIOLARI E PANNELLI CON
 RIVESTIMENTO PLASTICO
 PARTICLE BOARD AND
 PLASTIC LAMINATES



ALLUMINIO
 ALUMINIUM



ALUCOBOND[®]
 ACM

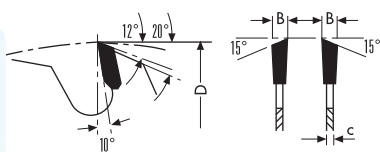


PVC

LAME HW CIRCOLARI UNIVERSALI "EXTRA CUT"

HW TRIMMING FINISHING "EXTRA CUT"

ART. CDT - CET



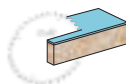
- WZ alternate top bevel teeth (ATB)
- Suitable for table saws and panels saws
- Suitable for particle board in stack
- ♪ = **no-noise and less vibration thanks to a special synthetic resin filled in the slots to increase the stability and reduce vibrations**
- HW grade: KCR05 (K01-C4)

Schema fori di trascinamento/Pin holes:
PH01 = 2/10/60 - **PH02** = 2/7/42 + 2/9,5/46,5 + 2/10/60

Xtra
cut



Per taglio legno impiallacciato su 1 lato
 For cutting single side veneer board



Per taglio pannello laminato su 1 lato
 For cutting single side laminated board



Per taglio pannello rivestito in plastica
 For cutting plastic coated materials



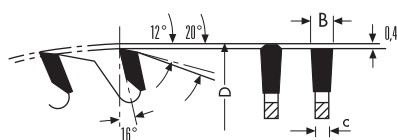
Per taglio MDF
 For cutting MDF

Art.	D	d	B/c	Z	Fori t./P. holes
CDT250.06030 ♪	250	30	3,2/2,2	60	PH02
CDT300.07230 ♪	300	30	3,2/2,2	72	PH02
CDT350.08430 ♪	350	30	3,5/2,5	84	PH02
CDT400.09630 ♪	400	30	4,0/2,8	96	PH02
CET250.08030 ♪	250	30	3,2/2,2	80	PH02
CET300.09630 ♪	300	30	3,2/2,2	96	PH02
CET350.10830 ♪	350	30	3,5/2,5	112	PH02
CET400.12030 ♪	400	30	4,0/2,8	120	PH02

LAME HW PER SEZIONATRICI A DENTE TRAPEZIOPIANO "EXTRA CUT"

HW PANEL SIZING SAWBLADES "EXTRA CUT"

ART. HCS



- Dente piatto-trapezoidale (FZ/TR)
- Per taglio di pannelli **impiallacciati e laminati su due lati, MDF, truciolare e materiale plastico**
- ♪ = **silenziose, antisibilo con speciale resina inserita nei tagli di silenziazione**
- Qualità HW: KCR05 (K01-C4)

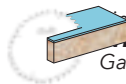
Schema fori di trascinamento:
PH04 = 2/14/110 + 2/7/110 + 4/9/100 + 4/19/120 + 2/9/130 (Selco-Gabbani-SCM)

- **FZ/TR triple chip teeth**
- For cutting double sided **veneer and laminate boards, MDF, particle board and plastic materials**
- ♪ = **no-noise with a special sound absorbing resin inside the silent slots**
- HW grade: KCR05 (K01-C4)

Xtra
cut



Per taglio legno impiallacciato su 1 lato
 For cutting single side veneer board



Per taglio pannello laminato su 1 lato
 For cutting single side laminated board



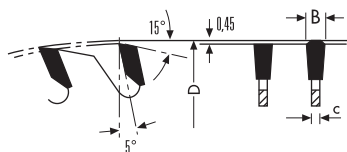
Per taglio materiale plastico
 For cutting plastic material



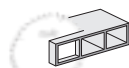
Per taglio MDF
 For cutting MDF

Art.	D	d	B/c	Z	Fori t./P. holes
HCS320.07265	320	65	4,4/3,2	72	Selco
HCS355.07265	355	65	4,4/3,2	72	Selco
HCS380.07265	380	65	4,4/3,2	72	Selco
HCS520.07270 ♪	520	70	4,8/3,5	72	Selco

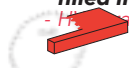
LAME CIRCOLARI HW PER ALLUMINIO "EXTRA CUT" HW SAWBLADES FOR ALUMINIUM "EXTRA CUT"



Xtra[®]
cut



Per taglio profili in alluminio
For cutting aluminium profile

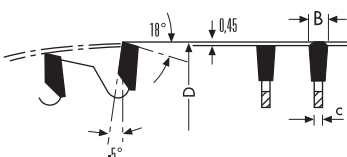


Per taglio PVC
For cutting PVC



Art.	D	d	B/c	Z	Fori t./P. holes
LA450.07330	450	30	3,8/3,2	72	2/11/63
LA450.07332	450	32	3,8/3,2	72	2/11/63
LA500.09730	500	30	4,0/3,2	96	2/11/63
LA500.09732	500	32	4,0/3,2	96	2/11/63
LA550.12130	550	30	4,2/3,6	120	2/11/63
LA550.12132	550	32	4,2/3,6	120	2/11/63
LA550.14130	550	30	4,2/3,6	140	2/11/63
LA550.14132	550	32	4,2/3,6	140	2/11/63
LA620.14040	620	40	4,4/3,8	140	2/11/63
LA650.14040	650	40	5,0/4,0	140	2/11/63

LAME CIRCOLARI HW PER ALLUMINIO "EXTRA CUT" HW SAWBLADES FOR ALUMINIUM "EXTRA CUT"



Xtra[®]
cut



Per taglio alluminio pieno
For cutting aluminium



Per taglio PVC
For cutting PVC



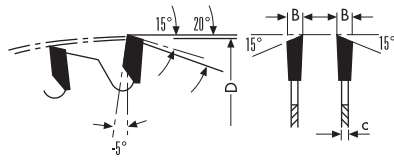
Art.	D	d	B/c	Z	Fori t./P. holes
LB500.12130	500	30	4,0/3,2	120	2/11/63
LB500.12132	500	32	4,0/3,2	120	2/11/63
LB650.14030	650	30	5,0/4,0	140	2/11/63

- Dente piatto-trapezoidale (FZ/TR) 5° positivo
- Per il taglio di profilati e tubolari dello spessore da 2a 5mm di alluminio, PVC e metalli non ferrosi
- Si usano su troncatrici e seghe da banco
- = silenziose, antisibilo con speciale resina inserita nei tagli di silenziazione per una maggiore stabilità e notevole riduzione delle vibrazioni in fase di lavoro
- Qualità HW: HC10 (K10-C3)
- FZ/TR triple chip teeth
- 5° positive hook angle
- For Alu, PVC and non-ferrous metals. For cutting aluminium profiles and extrusions with thickness of 2-5mm
- For table saws
- = no-noise and less vibration thanks to a special synthetic resin filled in the slots to increase the stability and reduce vibrations
- HW grade: HC10 (K10-C3)

- Dente piatto-trapezoidale (FZ/TR) 5° negativo
- Per il taglio di alluminio pieno, PVC e metalli non ferrosi
- Si usano su troncatrici e seghe da banco
- = silenziose, antisibilo con speciale resina inserita nei tagli di silenziazione per una maggiore stabilità e notevole riduzione delle vibrazioni in fase di lavoro
- Qualità HW: HC10 (K10-C3)
- FZ/TR triple chip teeth
- 5° negative hook angle
- For Alu, PVC and non-ferrous metals
- For table saws
- = no-noise and less vibration thanks to a special synthetic resin filled in the slots to increase the stability and reduce vibrations
- HW grade: HC10 (K10-C3)

LAME CIRCOLARI HW PER SEGHE PORTATILI / HW SAW BLADES FOR PORTABLE MACHINES

ART. AB



- Lame HW **altamente professionali**
- Dente alternato (WZ)
- Per il taglio del legno anche con **grappe o chiodi, plastica**
- Angolo 5° negativo
- Qualità HW: **HC10 (K10-C3)**
- Fine cut HW sawblades
- **WZ** alternate top bevel teeth
- For cutting **plastic materials** and **wood for construction with small metal parts**
- **5° negative** hook angle
- HW grade: **HC10 (K10-C3)**



Per taglio materiale plastico
 For cutting plastic materials



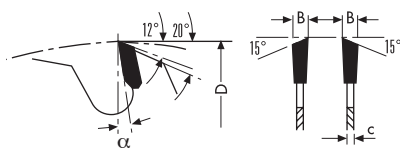
Per taglio legno con chiodi e grappe
 For cutting wood for construction with small metal parts

Per macchine **Festool**
 For **Festool** machine

Art.	D	d	B/c	Z	Fori t./Pin holes
AB260.06030 NEW	260	30	2,5/1,8	60	PH2

LAME CIRCOLARI UNIVERSALI HW / HW MULTI PURPOSE CIRCULAR SAWBLADES

ART. CB



- Dente alternato (WZ)
- Si usano su sega da banco e troncatrici
- Per taglio lungo e trasverso vena di **legni duri e teneri**, **pannelli impiallacciati su un lato, carta e compensato**
- = silenziose, antisibilo
- **WZ** alternate top bevel teeth
- Qualità HW: **KCR06 (K01-C4)**
- Suitable for table saws and panels saws
- For cutting along and across grain of **softwood and hardwood**, **single sided veneer-paper boards and plywood**
- = no-noise
- HW grade: **KCR06 (K01-C4)**
- Schema fori di trascinamento: **PH01** = 2/10/60 - **PH02** = 2/7/42 + 2/9,5/46,5 + 2/10/60
- Pin holes: **PH01** = 2/10/60 - **PH02** = 2/7/42 + 2/9,5/46,5 + 2/10/60



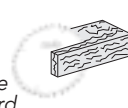
Per taglio lungo e trasverso vena di legni duri
 For cutting along and across grain of hardwood



Per taglio lungo e trasverso vena di legni teneri
 For cutting along and across grain of softwood



Per taglio legno impiallacciato su 1 lato
 For cutting single side veneer board



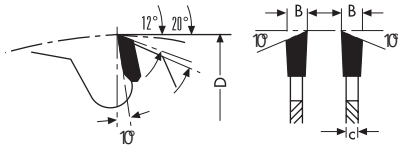
Per taglio carta e fibre minerali
 For cutting paper coated materials

Art.	D	d	B/c	Z	α	Fori t./P. holes
CB315.04830	315	30	3,2/2,2	48	10°	PH2
CBS300.04835 NEW	300	35	3,2/2,2	48	10°	PH02

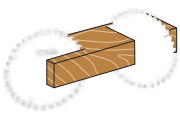
LAME CIRCOLARI HW DI GRANDE SPESSORE

HW THICK KERF SAWBLADES

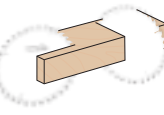
ART. CP



- Dente alternato (WZ)
- Si usano su sega da banco e troncatrici
- Per taglio lungo e trasverso vena di **legni teneri, duri ed esotici, pannelli truciolari e tamburati, pannelli impiallacciati e laminati da un lato**
- **Qualità HW: KCR06 (K01-C4)**
- Schema fori di trascinamento: **PH02= 2/7/42 + 2/9,5/46,5 + 2/10/60**
- **WZ** alternate top bevel teeth
- Suitable for table saws and panels saws
- Heavy-duty thick kerf and plate for better stability and longer cutting life
- For cutting along and across grain of all **natural woods, wooden boarding materials, also veneered or plastic coated one size**
- **HW grade: KCR06 (K01-C4)**
- Pin holes: **PH02=2/7/42 + 2/9,5/46,5 + 2/10/60**



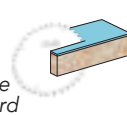
Per taglio lungo e trasverso vena di legni duri
For cutting along and across grain of hardwood



Per taglio lungo e trasverso vena di legni teneri
For cutting along and across grain of softwood



Per taglio legno impiallacciato su 1 lato
For cutting single side veneer board



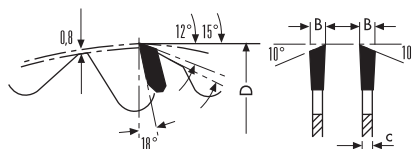
Per taglio pannello laminato su 1 lato
For cutting single side laminated board

Art.	D	d	B/c	Z	Fori t./P. holes
CP200.03630	200	30	4,0/2,8	36	PH02
CP250.04030	250	30	4,0/2,8	40	PH02
CP300.04830	300	30	4,0/2,8	48	PH02
CP300.07230	300	30	4,0/2,8	72	PH02

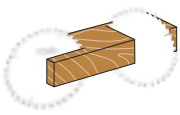
LAME CIRCOLARI UNIVERSALI HW

HW MULTI PURPOSE CIRCULAR SAWBLADES

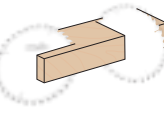
ART. DC



- Dente alternato (WZ), con limitatore di truciolo
- Per taglio lungo e trasverso vena di **legni teneri, duri ed esotici, pannelli truciolari e tamburati, pannelli impiallacciati e laminati da un lato**
- Si usano su seghe da banco e multilame
- ♪ =silenziose, antisibilo
- **Qualità HW: HC10 (K10-C3)**
- Schema fori di trascinamento: **PH02= 2/7/42 + 2/9,5/46,5 + 2/10/60**
- **WZ** alternate top bevel teeth
- Anti-kickback design
- For cutting along and across grain of all **natural woods, wooden boarding materials, also veneered or plastic coated one size**
- For table saws
- ♪ =no-noise
- **HW grade: HC10 (K10-C3)**
- Pin holes: **PH02=2/7/42 + 2/9,5/46,5 + 2/10/60**
- Per taglio legno impiallacciato su 1 lato
For cutting single side veneer board
- Per taglio pannello laminato su 1 lato
For cutting single side laminated board



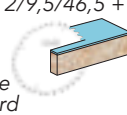
Per taglio lungo e trasverso vena di legni duri
For cutting along and across grain of hardwood



Per taglio lungo e trasverso vena di legni teneri
For cutting along and across grain of softwood



Per taglio legno impiallacciato su 1 lato
For cutting single side veneer board

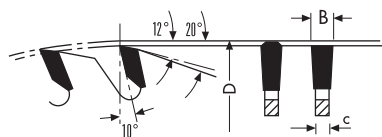


Per taglio pannello laminato su 1 lato
For cutting single side laminated board

Art.	D	d	B/c	Z	Fori t./P. holes
DC315.02830 ♪	315	30	3,2/2,2	28	PH02
DC350.03235 ♪ NE	350	35	3,5/2,5	32	PH02

LAME CIRCOLARI DI PRECISIONE HW / HW TRIMMING AND SIZING SAWBLADES

ART. FCS



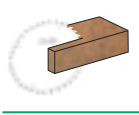
- Dente piatto trapezoidale (FZ/TR)
- Ideale per lavorazioni **ALUCOBOND®**
- Per taglio di pannelli **impiallacciati e laminati su due lati, MDF, truciolari a pacco** e pannelli con **rivestimento plastico**
- Si usano su seghe da banco
- Buona finitura, lunga durata di taglio
- ♪ =silenziose, antisibilo.
- **Qualità HW: KCR06 (K01-C4)**
- **FZ/TR** triple chip teeth trapezoidal
- For table saws
- Ideal for working **ALUCOBOND®**
- For cutting **hardwoods, double sided veneer and laminate board, MDF, hard paper and thermoplastic boards**
- Extra finish and long cutting life
- ♪ =no-noise
- **HW grade: KCR06 (K01-C4)**
- Schema fori di trascinamento: **PH02= 2/7/42 + 2/9,5/46,5 + 2/10/60**
- Pin holes: **PH02=2/7/42 + 2/9,5/46,5 + 2/10/60**



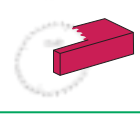
Per taglio pannello laminato su 2 lati
For cutting double side laminated board



Per taglio legno impiallacciato su 2 lati
For cutting double side veneer board



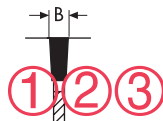
Per taglio MDF
For cutting MDF



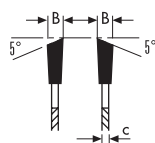
Per taglio Alucobond®
For cutting Alucobond®

Art.	D	d	B/c	Z	Fori t./Pin holes
FCS300.09635 ♪ NEW	300	35	3,2/2,2	96	PH02

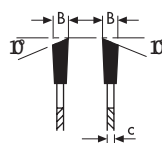
LAME CIRCOLARI HW PER CENTRI DI LAVORO HW SAWBLADES FOR CNC MACHINING CENTRES ART. FR



Dente piatto FZ
FZ flat teeth



Dente alternato WZ ,
WZ alternate top
bevel teeth 5°



Dente alternato WZ ,
WZ alternate top
bevel teeth 10°

- Per taglio lungo e trasverso vena di **legni teneri, duri ed esotici, pannelli truciolari e tamburati, pannelli impiallacciati e laminati da un lato**
- Da utilizzare su centri di lavoro
- Qualità HW: KCR06 (K01-C4)
- For cutting along and across grain of all **natural woods, wooden boarding materials, also veneered or plastic coated one size**
- To be used on CNCrouter machining centres
- HW grade: KCR06 (K01-C4)



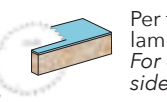
Per taglio lungo e trasverso vena di legni duri
For cutting along and across grain of hardwood



Per taglio lungo e trasverso vena di legni teneri
For cutting along and across grain of softwood



Per taglio legno impiallacciato su 1 lato
For cutting single side veneer board



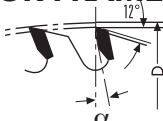
Per taglio pannello laminato su 1 lato
For cutting single side laminated board



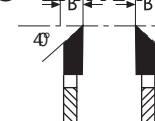
Art.	D	d	B/c	Z	Dis/ Draw.	Fori t./P. holes
FR120.03035	120	35	4,0/2,8	30	1	Biesse 6 fori/holes
FR125.03630	125	30	3,2/2,2	36	2	Homag 8 fori/holes
FR126.02430	125	30	4,0/3,0	24	3	Homag 8 fori/holes
FR140.03630	140	30	3,6/2,4	36	2	Biesse 6 fori/holes
FR150.03035	150	35	4,0/3,0	30	1	Biesse 2 fori/holes
FR180.05430	180	30	3,2/2,2	54	2	Homag 4 fori/holes
FR180.04235	180	35	4,0/2,8	42	2	Biesse 8 fori/holes
FR240.03440	240	40	3,2/2,2	34	2	Homag 8 fori/holes
FR300.02450	300	50	3,2/2,2	24	2	Biesse 7 fori/holes

LAME CIRCOLARI HW PER CORNICI "EXTRA CUT"

HW SAWBLADES FOR FRAMES "EXTRA CUT"



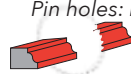
Xtra cut



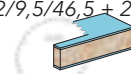
- Dente alternato (WZ)
- Eccellente finitura su tagli a 45°
- **no-noise, antisibilo con speciale resina inserita nei tagli di silenzatura per una maggiore stabilità e notevole riduzione delle vibrazioni in fase di lavoro**
- Per tagli molto delicati, **pannelli bilaminati**
- Qualità HW: KCR06 (K01-C4)
- Schema fori di trascinamento: PH02 = 2/7/42 + 2/9,5/46,5 + 2/10/60
- **WZ alternate top bevel teeth**
- Excellent finish on 45° cut
- **no-noise and less vibration thanks to a special synthetic resin filled in the slots to increase the stability and reduce vibrations**
- For difficult cutting
- HW grade: KCR06 (K01-C4)
- Pin holes: PH02 = 2/7/42 + 2/9,5/46,5 + 2/10/60



Per taglio cornici in legno
For cutting wood frames



Per taglio cornici in PVC
For cutting PVC frames



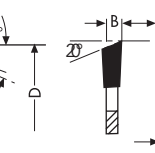
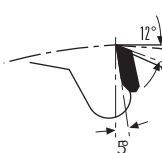
Per taglio pannello laminato su 2 lati
For cutting double side laminated board



Art.	D	d	B/c	α	Z	Fori t./P. holes
MMS250.08030	250	30	3,2/2,2	-2°	80	PH02
MMS350.10830	350	30	3,5/2,5	5°	108	PH02

LAME CIRCOLARI HW PER TRONCATRICI E OTTIMIZZATRICI

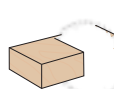
HW SAWBLADES FOR OPTIMIZING CROSSCUT SAW MACHINE



- Dente alternato (WZ)
- Si usano su macchine troncatrici veloci ed ottimizzatrici
- Per taglio trasverso vena di **legni teneri e duri**
- **Silenziose e antisibilo grazie alla speciale geometria dei tagli di silenzatura prodotti dal taglio laser sul corpo lama**
- Qualità HW: KCR06 (K01-C4)
- **WZ alternate top bevel teeth**
- For cutting across grain of all **natural woods**
- Suitable for optimizing cross cut saw machine and fast cut off of large boards
- **NO-NOISE sawblades thanks to a specific geometry of silent slots made with laser cutting**
- Per taglio trasverso vena di legni teneri
- HW grade: KCR06 (K01-C4)



Per taglio trasverso vena di legni duri
For cutting across grain to hardwood



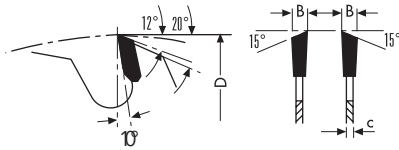
Per taglio trasverso vena di legni teneri
For cutting across grain to softwood



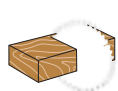
Art.	D	d	B/c	Z	Fori t./P. holes
MRS400.12030	400	30	4,6/3,5	120	2/10/60
MRS450.13230	450	30	4,6/3,5	132	2/10/60 +
2/15/63					
MRS500.14430	500	30	4,6/3,5	144	2/10/60 +
2/15/63					

LAME CIRCOLARI UNIVERSALI HW PER PORTALAMA HW TRIMMING FINISHING SAW BLADES FOR HSK63 ADAPTERS

ART. CDS/CES.X6F



- Dente alternato (WZ)
- Lama provvista di n. 6 fori svasati per il montaggio sul nostro portalamo per lavorazione su centro di lavoro CNC
- Per un'ottima finitura nel **taglio trasverso vena di legni duri ed esotici, pannelli impiallacciati, laminati su un lato e MDF**
- ♪ =silenziose, antisibilo
- **Qualità HW: KCR06 (K01-C4)**
- Schema fori di trascinamento: **PH02= 2/7/42 + 2/9,5/46,5 + 2/10/60**
- **WZ** alternate top bevel teeth
- With n° 6 countersunk holes for mounting on our HSK63 saw blade adapters (T128) aggregate
- For cutting **across grain of exotic and hardwood, for cutting double-sided veneer boards, single sided laminate boards, MDF and hard boards**
- ♪ =no-noise
- **HW grade: KCR06 (K01-C4)**
- Schema fori di trascinamento: **PH02= 2/7/42 + 2/9,5/46,5 + 2/10/60**
- Per taglio pannello impiallacciato su 1 lato
- For cutting single side laminated board
- Per taglio pannello rivestito in plastica
- For cutting plastic coated materials



Per taglio trasverso vena di legni duri
 For cutting across grain to hardwood



Per taglio legno impiallacciato su 1 lato
 For cutting single side veneer board



Per taglio pannello impiallacciato su 1 lato
 For cutting single side laminated board

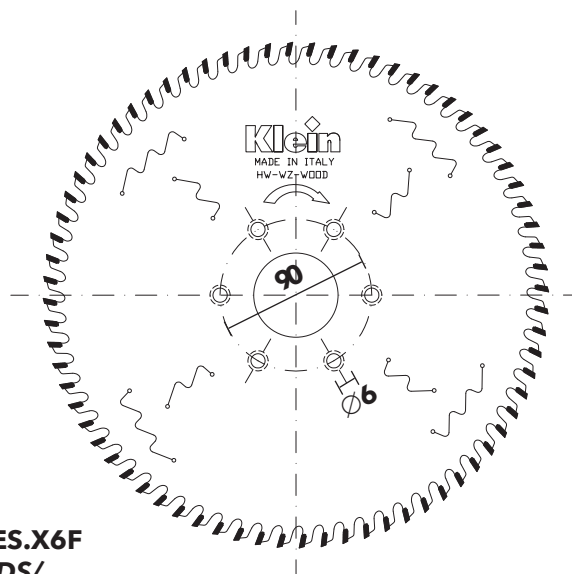
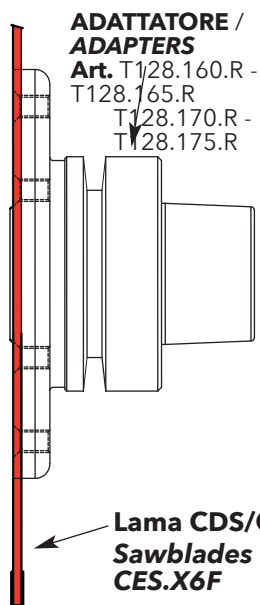


Per taglio pannello rivestito in plastica
 For cutting plastic coated materials



Art.	D	d	B/c	Z	Fori t./P. holes
CDS250.06030.X6F ♪	250	30	3,2/2,2	60	PH02 + 6/6/90
CDS300.07230.X6F ♪	300	30	3,2/2,2	72	PH02 + 6/6/90
CDS350.08430.X6F ♪	350	30	3,5/2,5	84	PH02 + 6/6/90
CES250.08030.X6F ♪	250	30	3,2/2,2	80	PH02 + 6/6/90
CES300.09630.X6F ♪	300	30	3,2/2,2	96	PH02 + 6/6/90
CES350.10830.X6F ♪	350	30	3,5/2,5	112	PH02 + 6/6/90

ESEMPIO DI MONTAGGIO: Adattatore HSK63 con lama inserita
EXAMPLE OF USE: HSK63 adapter with mounted Saw Blade



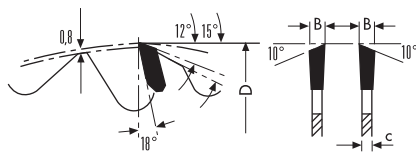
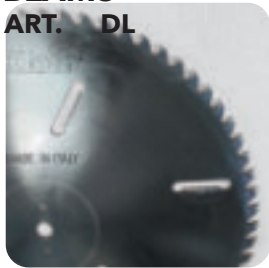
È possibile eseguire questo schema di foratura per il montaggio sul nostro portalamo anche su altre lame (lo spessore minimo del corpo lama per poter eseguire i fori è di 2,2 mm)
 It is possible to perform this drilling pattern for



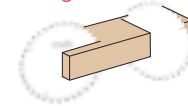
LAME CIRCOLARI HW PER TAGLIO TRAVI

HW SAWBLADES FOR CUTTING BEAMS

ART. DL



Per taglio lungo e trasverso vena di legni duri
 For cutting along and across grain of hardwood



Per taglio lungo e trasverso vena di legni teneri
 For cutting along and across grain of softwood

- Dente alternato (WZ)
- Con rasanti in HW per una migliore qualità di taglio
- Per taglio **legni teneri, duri, resinosi e lamellari**
- Da utilizzare su centri di lavoro CNC, multilama e impianti per segheria
- **Lame bilanciate per lavorare in perfetta stabilità**
- Possibilità di raggiungere elevate velocità di avanzamento (fino a 20/30/40 mt/min)
- Ideale per taglio verticale e orizzontale di travi, produzione tetti e carpenteria pesante in legno
- **Qualità HW: HC10 (K10-C3)**
- **WZ alternate top bevel teeth**
- **With HW rakers for better cutting quality**
- **For cutting softwood, hardwood, resinous wood and laminated**
- **To be used on CNC machining centres, multi-blade and sawmill equipment**
- **Balanced sawblades to work in perfect stability**
- **Possibility to reach high feed speeds (up to 20/30/40 mt/min)**
- **Ideal for vertical and horizontal cutting of beams, roof production and heavy wooden carpentry**
- **HW grade: HC10 (K10-C3)**

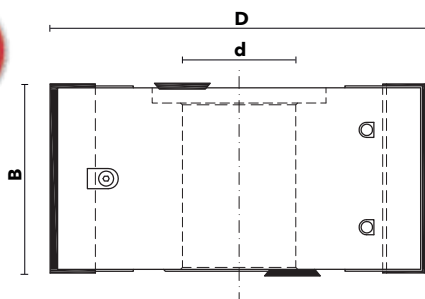


Art.	D	d	B/c	Z	Macchine/Machines
DL0735.0483	735	30	6,0/4,5	72+6	Hundegger
DL0735.07230	735	30	6,0/4,5	72+6	Hundegger
DL0760.0483	760	30	6,0/4,5	48+6	Hundegger
DL0760.07230	760	30	6,0/4,5	72+6	Hundegger
DL0800.07230	800	30	6,0/4,5	72+6	Hundegger
DL1000.0728	1000	80+8	8,5/6,0	72	Essetre
DL1200.09080	1200	80+8	9,5/7,0	90+12	Essetre

dział 13

TESTE PORTACOLTELLI HW PER BATTUTE Z=2+2 / HW INSERT RABBETING CUTTER HEADS

Z=2+2



- Testa per battute
- Costruita in lega leggera con coltelli reversibili HW e rasanti HW (Z=2+2)
- Avanzamento manuale (MAN)
- Completo di chiave per rasante e tassello
- Cutterhead for precision rebating straight cut, joints and groove
- Light alloy with reversible HW knives and spurs
- Manual feed (MAN)
- Complete with key for wedge and spur

Art.	D	d	B	Z	V
TGL100.50030	100	30	50	2	2
TGL120.50030	120	30	50	2	2

Ricambi/Spare parts:

Descrizione/Description	Dimensioni/Dimensions	Codice/Item
Coltello/Knife	50x25x1,5	Z055.010.N
Rasante/Spur	14x14x2	Z055.007.N
Vite rasante/Spur screw	M5x7 - T15	Z051.701.R
Tassello/Wedge	L=48	Z056.728.N
Vite tassello/Wedge	M8x20	Z051.813.R
Chiave/Key	T15	Z052.201.N
Chiave/Key	Esagono 4/Hexagon 4	Z052.003.N

