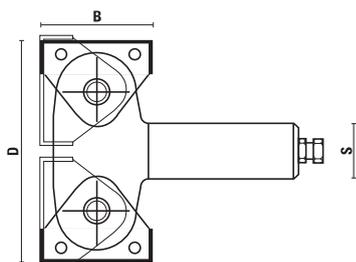


### HW INSERT VARI-ANGLE ROUTER CUTTERS 1° Z=2

ART. W168



- Adjustable 0° - 45° top
- Adjustable 0° - 90° bottom
- Adjustable by 1 degree

Item	D	B	Z	S
W168.085.R	85	40	2	25x55
W168.185.R	85	40	2	20x55



Z056.765.N



Z056.791.N



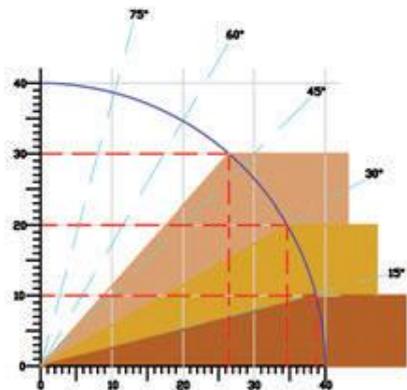
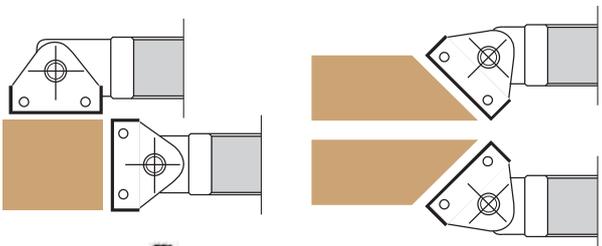
Z055.340.N



Z051.408.N  
Z051.409.N

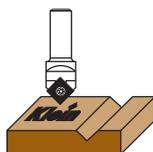
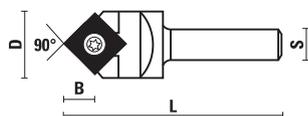


Z052.103.N  
Z052.104.N



### HW INSERT ROUTER BITS FOR ENGRAVINGS Z=1

ART. W170



Used on handportable machines, CNC routers and machining centres

Item	D	B	L	Z	S
W170.170.R	17	8,4	60	1	12



Z051.212.R



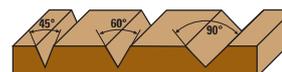
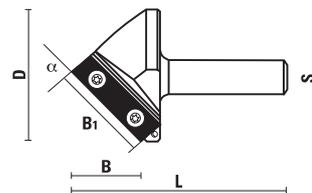
Z052.201.N



Z055.001.N

### HW INSERT ROUTER BITS FOR ENGRAVINGS Z=2

ART. W170



Used on handportable machines, CNC routers and machining centres

Item	D	α	B	B1	L	S
W170.210.R	21	45°	25	27	61	12
W170.260.R	26	60°	23	27	61	12
W170.380.R	38	90°	19	27	76	12



Z051.212.R



Z052.201.N



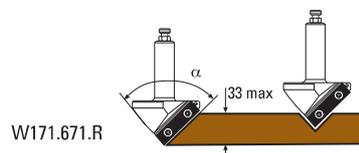
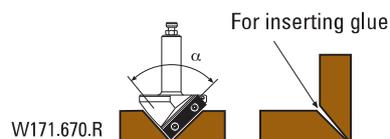
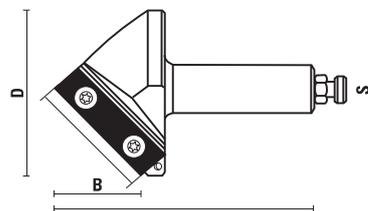
Z055.506.N  
(45°-60°)



Z055.507.N  
(30°)

### HW INSERT V-GROOVE ROUTER BITS Z=1

ART. W171



Used on CNC routers and machining centres

Item	D	B	B1	L	S	α
W171.670.R	67	33	46,5	97	20	91°
W171.671.R <b>NEW</b>	67	33	46,5	97	20	90°



Z051.402.R



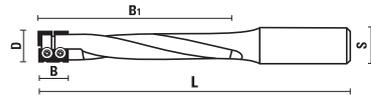
Z052.201.N



Z055.505.N

### HW INSERT ROUTER BITS FOR LOCKS Z=2

ART. W172 - W173



Used on CNC routers and machining centres

Item	D	B	B1	L	S
W172.160.R	16	16	115	170	16x55
W172.161.R	16	23	105	150	16x45
W172.180.R	18	16	115	170	16x55
W173.160.R	16	16	115	170	20x55
W173.161.R	16	23	115	170	20x55
W173.180.R	18	16	115	170	20x55



Z051.308.R



Z052.302.N



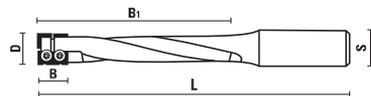
Z055.501.N  
Z055.502.N  
(16x7x1,5)



Z055.503.N  
Z055.504.N  
(23x7x1,5)

### HW INSERT ROUTER BITS FOR LOCKS Z=2 HEAVY METAL TOOL BODY

ART. W172 - W173



- Used on CNC routers and machining centres
- Heavy metal tool body
- Low-vibration machining
- Reduced risk of tool breakage

Item	D	B	B1	L	S
W172.160.RAP <b>NEW</b>	16	16	115	170	16x55



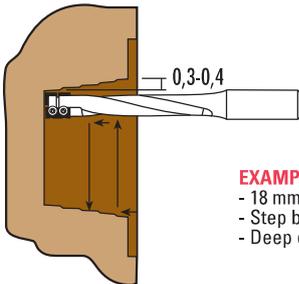
Z051.308.R



Z052.302.R



Z055.501.N  
Z055.502.N

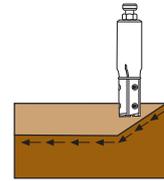
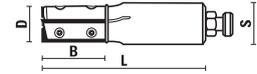


**EXAMPLE OF USE:**

- 18 mm: n. 12.000-20.000 min<sup>-1</sup>
- Step by step cutting 0,3-0,4 mm
- Deep cutting with excellent chip flow

### HW INSERT ROUTER BITS Z=3

ART. W174 - W175



- Extremely silent
- Improved balancing compared with traditional system
- Used on CNC routers and machining centres
- **NO CUTTING EDGE FOR BORING**

Item	Rotat.	D	B	L	S
W174.180.R	Dx	18	50	102	20
W174.180.L	Sx	18	50	102	20

W175.180.R	Dx	18	50	102	25
W175.180.L	Sx	18	50	102	25



Z051.404.R



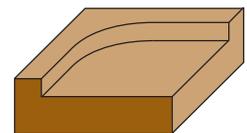
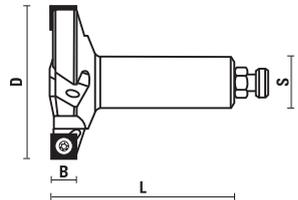
Z052.007.N



Z055.500.R  
Z055.500.L

### HW INSERT ROUTER BITS FOR PLANING AND RABBETING Z=2+2

ART. W176 - W177



- Ideal for removing material over large surface areas
- Used on CNC routers and machining centres

Item	D	B	L	S
W176.800.R	80	12	90	20

W177.800.R	80	12	90	25
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Z051.402.R



Z051.403.R



Z052.201.N



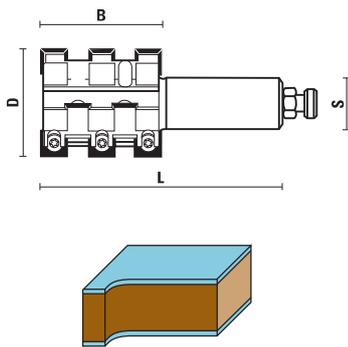
Z055.001.N  
knife



Z055.007.N  
spur

## HW INSERT ROUTER CUTTERS, ROUGHING Z=4

ART. W178 - W179



- Multi cutting flutes router cutter 12x12x1,5
- Used on CNC routers and machining centres

Item	D	B	L	S	Z
W178.500.R	50	56	113	20	4
W178.501.R	50	78	135	20	4

W179.500.R	50	56	113	25	4
W179.501.R	50	78	135	25	4



Z051.400.R



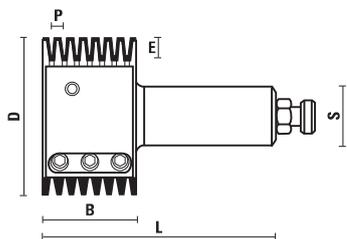
Z052.201.N



Z055.001.N

## HW INSERT FINGER JOINT ROUTER CUTTERS Z=2

ART. W180 - W181



Used on CNC routers and machining centres

Item	D	B	L	P	E	S
W180.700.R	70	40	100	5,4	8	20

W181.700.R	70	40	100	5,4	8	25
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Z051.401.R



Z052.003.N



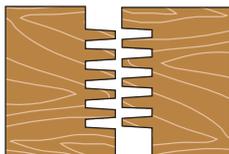
Z055.628.N



Z056.100.N

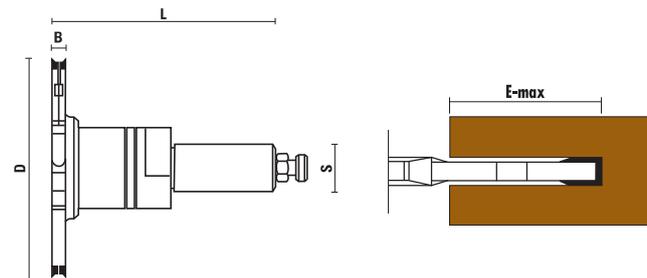


Z056.101.N



## HW INSERT ADJUSTABLE ROUTER CUTTERS FOR GROOVING

ART. W182 - W183



- Suitable for producing different thickness grooves
- Thickness adjustable in 0,1 mm steps by means of spacers
- Used on CNC routers and machining centres
- Can be produced with HSK or ISO30 shank on request

Item	D	B	L	S	E-max
W182.120.R	120	4÷15,5	140	20	33

W183.120.R	120	4÷15,5	140	25	33
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Z051.405.R



Z051.406.R



Z055.006.N



Z055.000.N



Z057.100.N



Z052.006.N



Z052.302.N



Z060.750.N



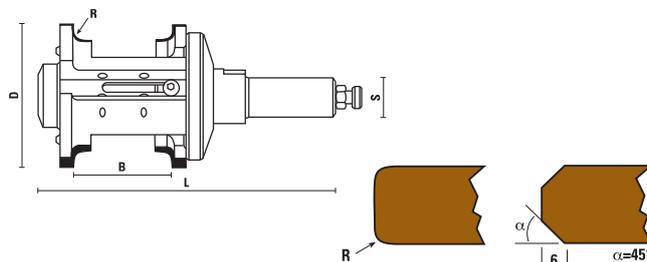
Z060.751.N



Z056.102.N

## HW INSERT ROUTER BITS FOR ROUNDING AND CHAMFERING Z=2

ART. W184 - W185



- For corner rounding and chamfering with single pass
- Different radii or 45° chamfers
- Adjustable for various wood thicknesses
- Used on CNC routers and machining centres

Item	D	R	B	L	S
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W184.903.R	90	3	18÷58	185	20
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W184.904.R	90	4	18÷58	185	20
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W184.905.R	90	5	18÷58	185	20
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W184.906.R	90	6	18÷58	185	20
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W184.908.R	90	8	20÷60	185	20
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W184.910.R	90	10	22÷62	185	20
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W184.945.R	90	45°	12÷62	185	20
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W185.903.R	90	3	18÷58	185	25
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W185.904.R	90	4	18÷58	185	25
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W185.905.R	90	5	18÷58	185	25
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W185.906.R	90	6	18÷58	185	25
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W185.908.R	90	8	20÷60	185	25
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W185.910.R	90	10	22÷62	185	25
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W185.945.R	90	45°	12÷62	185	25
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Z051.400.R



Z052.201.N



Z055.011.N



Z055.870.R/L  
Z055.871.R/L  
Z055.872.R/L  
Z055.873.R/L  
Z055.874.R/L  
Z055.875.R/L  
Z055.876.R/L