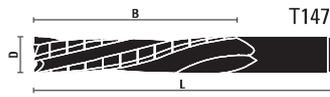
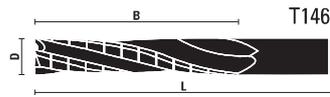


**SOLID CARBIDE SPIRAL CUTTERS Z=3**

ART. T146 - T147



- Right-hand rotation with "UP CUT SPIRAL" (art. T146)
- Left-hand rotation with "UP CUT SPIRAL" (art. T147)
- Discontinuous cutting edge
- To be used on machining centres, CNC routers and point to point machines

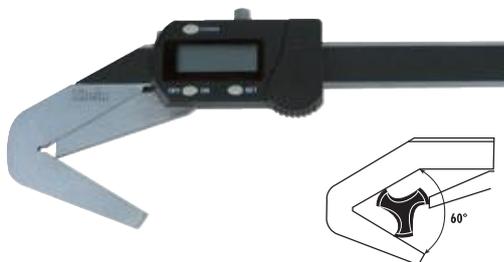
RH rotation	D	B	L	Z
T146.250.R <b>NEW</b>	25	140	200	3

LH rotation	D	B	L	Z
T147.250.L <b>NEW</b>	25	140	200	3

Router bits with diameter from 25 mm, are produced with shank for Seeger retaining rings



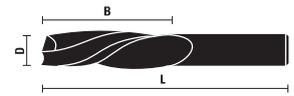
**THREE POINT DIGITAL CALIPER**



See page 15.03 for further information

**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=1**

ART. T151



Good finish on panel top side



- Right-hand rotation with "DOWN CUT SPIRAL"
- To be used on machining centres, CNC routers and point to point machines

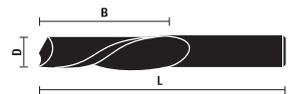
RH rotation	D	B	L	Z
T151.030.R	3	12	50	1
T151.040.R	4	12	50	1
T151.050.R	5	17	50	1
T151.060.R	6	17	70	1
T151.061.R	6	27	70	1
T151.080.R	8	22	80	1
T151.081.R	8	32	80	1
T151.100.R	10	32	80	1
T151.101.R	10	42	100	1
T151.120.R	12	32	90	1
T151.121.R	12	42	100	1
T151.122.R	12	52	110	1

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings



**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=1**

ART. T151



Good finish on bottom side



- Left-hand rotation with "UP CUT SPIRAL"
- To be used on machining centres, CNC routers and point to point machines

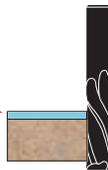
LH rotation	D	B	L	Z
T151.040.L	4	12	50	1
T151.061.L	6	27	60	1

**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=2**

ART. T152



Good finish on panel top side



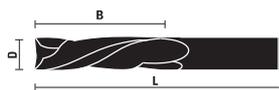
- Right-hand rotation with "DOWN CUT SPIRAL"

- To be used on machining centres, CNC routers and point to point machines

RH rotation	D	B	L	Z
T152.030.R	3	12	50	2
T152.040.R	4	12	50	2
T152.050.R	5	17	50	2
T152.060.R	6	17	70	2
T152.061.R	6	27	70	2
T152.080.R	8	22	80	2
T152.081.R	8	35	80	2
T152.100.R	10	35	80	2
T152.101.R	10	45	100	2
T152.110.R	11	35	80	2
T152.111.R	11	45	100	2
T152.120.R	12	35	90	2
T152.121.R	12	45	100	2
T152.122.R	12	55	110	2
T152.141.R	14	55	110	2
T152.160.R	16	45	100	2
T152.161.R	16	55	110	2
T152.180.R	18	55	115	2
T152.181.R	18	72	130	2
T152.200.R	20	55	115	2
T152.201.R	20	72	130	2

**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=2**

ART. T152



Good finish on bottom side



- Left-hand rotation with "UP CUT SPIRAL"

- To be used on machining centres, CNC routers and point to point machines

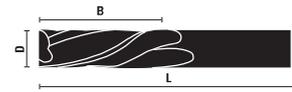
LH rotation	D	B	L	Z
T152.040.L	4	12	50	2
T152.060.L	6	17	60	2
T152.061.L	6	27	60	2
T152.080.L	8	22	80	2
T152.100.L	10	35	80	2
T152.120.L	12	35	80	2
T152.121.L	12	45	100	2
T152.141.L	14	55	110	2
T152.161.L	16	55	110	2
T152.181.L	18	72	120	2
T152.200.L	20	55	100	2
T152.201.L	20	72	120	2

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings



**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=3**

ART. T153



Good finish on panel top side



- Right-hand rotation with "DOWN CUT SPIRAL"

- To be used on machining centres, CNC routers and point to point machines

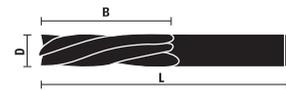
RH rotation	D	B	L	Z
T153.081.R	8	35	80	3
T153.100.R	10	35	80	3
T153.101.R	10	45	100	3
T153.120.R	12	35	85	3
T153.122.R	12	55	105	3
T153.140.R	14	45	100	3
T153.160.R	16	45	100	3
T153.161.R	16	55	110	3
T153.162.R	16	72	125	3
T153.180.R	18	55	115	3
T153.181.R	18	72	130	3
T153.200.R	20	55	115	3
T153.201.R	20	72	130	3

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings



**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE Z=3**

ART. T153



Good finish on bottom side



- Left-hand rotation with "UP CUT SPIRAL"

- To be used on machining centres, CNC routers and point to point machines

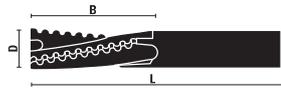
LH rotation	D	B	L	Z
T153.081.L	8	35	80	3
T153.100.L	10	35	80	3
T153.101.L	10	45	100	3
T153.120.L	12	35	80	3
T153.122.L	12	55	100	3
T153.140.L	14	45	100	3
T153.160.L	16	45	100	3
T153.161.L	16	55	100	3
T153.200.L	20	55	100	3
T153.201.L	20	72	120	3

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings



**SOLID CARBIDE SPIRAL CUTTERS, ROUGHING STYLE Z=3**

ART. T154



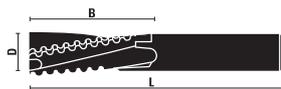
- Right-hand rotation with "DOWN CUT SPIRAL"
- Chip-breaker execution
- To be used on machining centres, CNC routers and point to point machines
- Suitable for roughing, they guarantee a high feed rate

RH rotation	D	B	L	Z
T154.080.R	8	22	80	3
T154.081.R	8	35	80	3
T154.100.R	10	35	80	3
T154.101.R	10	45	100	3
T154.120.R	12	35	83	3
T154.121.R	12	45	100	3
T154.122.R	12	55	105	3
T154.140.R	14	45	100	3
T154.160.R	16	45	100	3
T154.161.R	16	55	110	3
T154.162.R	16	72	125	3
T154.180.R	18	55	115	3
T154.181.R	18	72	130	3
T154.200.R	20	55	115	3
T154.201.R	20	72	130	3
T154.202.R	20	102	160	3

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings 

**SOLID CARBIDE SPIRAL CUTTERS, ROUGHING STYLE Z=3**

ART. T154



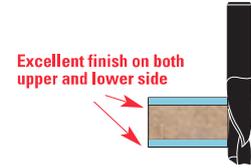
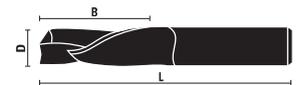
- Left-hand rotation with "UP CUT SPIRAL"
- Chip-breaker execution
- To be used on machining centres, CNC routers and point to point machines
- Suitable for roughing, they guarantee a high feed rate

LH rotation	D	B	L	Z
T154.081.L	8	35	80	3
T154.100.L	10	35	80	3
T154.120.L	12	35	80	3
T154.122.L	12	55	100	3
T154.140.L	14	45	100	3
T154.160.L	16	45	100	3
T154.161.L	16	55	100	3
T154.180.L	18	55	100	3
T154.200.L	20	55	100	3
T154.201.L	20	72	120	3
T154.250.L <b>NEW</b>	25	155	220	3

Router bits with diameter from 12 mm to 25 mm, are produced with shank for Seeger retaining rings 

**SOLID CARBIDE COMPRESSION CUTTERS Z=1+1**

ART. T155



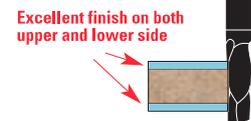
- Right-hand rotation with double flute, compression spiral
- To be used on machining centres, CNC routers and point to point machines

RH rotation	D	B	L	Z
T155.061.R	6	27	60	1+1
T155.080.R	8	22	80	1+1
T155.081.R	8	32	80	1+1
T155.100.R	10	32	80	1+1
T155.101.R	10	42	100	1+1
T155.120.R	12	42	100	1+1
T155.121.R	12	52	100	1+1
T155.127.R	12,7	32	78	1+1
T155.161.R	16	52	100	1+1

Router bits with diameter from 12 mm to 16 mm, are produced with shank for Seeger retaining rings 

**SOLID CARBIDE COMPRESSION CUTTERS Z=1+1**

ART. T155



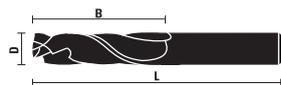
- Right-hand rotation with double flute, compression spiral
- To be used on machining centres, CNC routers and point to point machines

LH rotation	D	B	L	Z
T155.061.L	6	27	60	1+1
T155.081.L	8	32	80	1+1
T155.100.L	10	32	80	1+1
T155.120.L	12	42	100	1+1

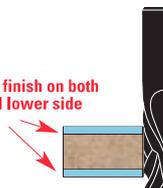
Router bits with diameter from 12 mm, are produced with shank for Seeger retaining rings 

**SOLID CARBIDE COMPRESSION CUTTERS Z=2+2**

ART. T156



Excellent finish on both upper and lower side



- Left-hand rotation with double flute, compression spiral  
 - To be used on machining centres, CNC routers and point to point machines

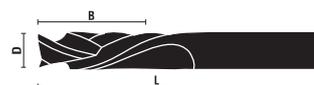
RH rotation	D	B	L	Z
T156.080.L	8	22	80	2+2
T156.081.L	8	32	80	2+2
T156.101.L	10	42	100	2+2
T156.120.L	12	42	100	2+2
T156.121.L	12	52	105	2+2
T156.161.L	16	52	110	2+2
T156.180.L	18	52	115	2+2
T156.200.L	20	52	115	2+2
T156.201.L	20	72	135	2+2

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings

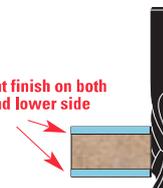


**SOLID CARBIDE COMPRESSION CUTTERS Z=2+2**

ART. T156



Excellent finish on both upper and lower side



- Right-hand rotation with double flute, compression spiral  
 - To be used on machining centres, CNC routers and point to point machines

RH rotation	D	B	L	Z
T156.080.R	8	22	80	2+2
T156.081.R	8	32	80	2+2
T156.100.R	10	32	80	2+2
T156.101.R	10	42	100	2+2
T156.120.R	12	42	100	2+2
T156.121.R	12	52	110	2+2
T156.127.R	12,7	32	78	2+2
T156.140.R	14	42	100	2+2
T156.141.R	14	52	110	2+2
T156.160.R	16	42	100	2+2
T156.161.R	16	52	110	2+2
T156.162.R	16	72	130	2+2
T156.180.R	18	52	115	2+2
T156.181.R	18	72	135	2+2
T156.182.R	18	102	165	2+2
T156.200.R	20	52	115	2+2
T156.201.R	20	72	135	2+2

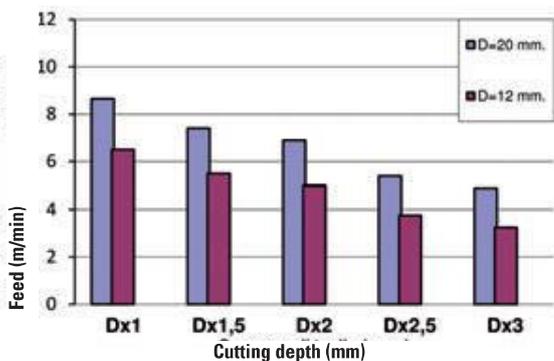
Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings



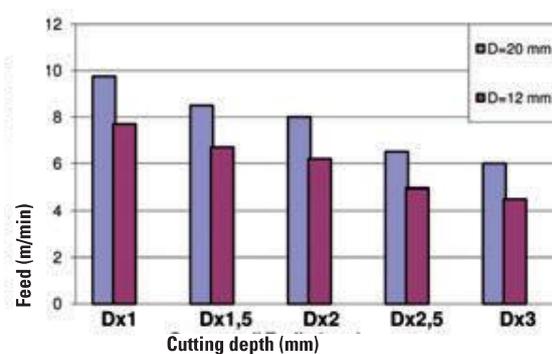
**HOW TO DETERMINE THE FEEDING SPEED RELATING TO THE DIAMETER:**

- Referring to item T156 with double flute, compression spiral, Z=2+2.  
 - RPM 18.000

**Hard wood**

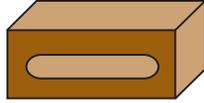
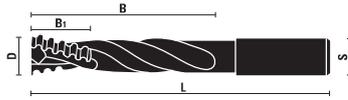


**Soft wood**



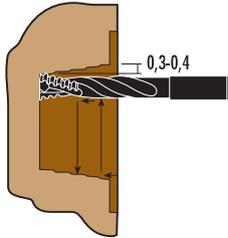
### SOLID CARBIDE SPIRAL CUTTERS Z=2 - Z=3

ART. T157



- Right-hand rotation with "UP CUT SPIRAL"
- Chip-breaker execution
- For locks and slot mortising

RH rotation	D	B1	B	L	S	Z
T157.140.R	14	20	95	155	14x45	2
T157.141.R	14	45	95	150	14x45	3
T157.160.R	16	25	115	175	16x45	2
T157.161.R	16	45	95	140	16x45	2
T157.162.R	16	50	100	150	16x45	3
T157.180.R	18	25	115	175	18x45	2
T157.181.R	18	50	100	150	18x45	3



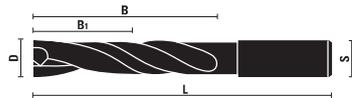
- USE EXAMPLE**
- $Z=2/Z=3$
  - $D=14\div18$  mm: RPM 12.000-20.000
  - Stepwise processing 0,3-0,4 mm
  - Can work deeply and have excellent chip evacuation

Router bits with diameter from 14 mm to 18 mm, are produced with shank for Seeger retaining rings



### SOLID CARBIDE SPIRAL CUTTERS Z=3 FOR LOCKS

ART. T177 - T178



- Without chip-breaker
- For locks and slot mortising
- T177.160.R right rotation and right hand twist (positive/up cut style)
- T177.160.L left rotation and left hand twist (positive/up cut style)
- T178.160.R right rotation and left hand twist (negative/down cut style)

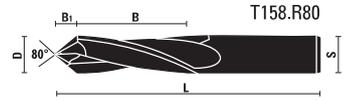
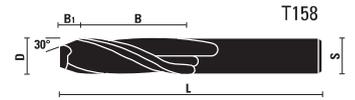
RH rotation	LH rotation	D	B1	B	L	S	Z
T177.160.R	T177.160.L	16	50	100	150	16x45	3
T178.160.R		16	50	100	150	16x45	3

Router bits with diameter from 16 mm, are produced with shank for Seeger retaining rings



### SOLID CARBIDE SPIRAL CUTTERS Z=2

ART. T158



- Right-hand rotation with "UP CUT SPIRAL"
- For spy holes
- For boring and routing

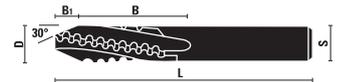
RH rotation	D	B1	B	L	S	Z
T158.140.R	14	8	42	100	14	2
T158.160.R	16	9	52	120	16	2
T158.180.R	18	10	52	120	18	2
T158.200.R	20	11	52	120	20	2
T158.080.R80 NEW	8	4,8	38	80	8	2
T158.100.R80 NEW	10	6	46	100	10	2
T158.120.R80 NEW	12	7,2	50	110	12	2
T158.160.R80 NEW	16	9,6	52	120	16	2

Router bits with diameter from 12 mm to 20 mm, are produced with shank for Seeger retaining rings



### SOLID CARBIDE SPIRAL CUTTERS Z=2

ART. T159



- Right-hand rotation with "UP CUT SPIRAL"
- Chip-breaker execution
- For spyholes on doors
- Through holes cutting

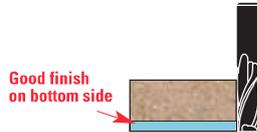
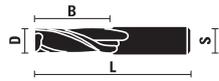
RH rotation	D	B1	B	L	S	Z
T159.160.R	16	9	52	120	16	2
T159.200.R	20	11	52	120	20	2

Router bits with diameter from 16 mm to 20 mm, are produced with shank for Seeger retaining rings



**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE S=6 Z=2**

ART. T160

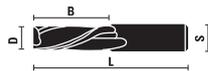


- Can also be used on portable routers
- Right-hand rotation with "UP CUT SPIRAL"

RH rotation	D	B	L	S	Z
T160.030.R	3	12	60	6	2
T160.035.R	3,5	14	60	6	2
T160.040.R	4	14	60	6	2
T160.045.R	4,5	16	60	6	2
T160.050.R	5	17	60	6	2

**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE S=6 Z=2**

ART. T161

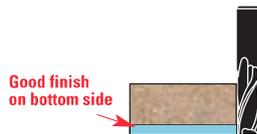


- Can also be used on portable routers
- Right-hand rotation with "DOWN CUT SPIRAL"

RH rotation	D	B	L	S	Z
T161.030.R	3	12	60	6	2
T161.035.R	3,5	14	60	6	2
T161.040.R	4	14	60	6	2
T161.045.R	4,5	16	60	6	2
T161.050.R	5	17	60	6	2

**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE S=8 Z=2**

ART. T162

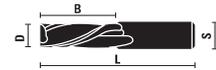


- Can also be used on portable routers
- Right-hand rotation with "UP CUT SPIRAL"

RH rotation	D	B	L	S	Z
T162.030.R	3	12	60	8	2
T162.040.R	4	14	60	8	2
T162.050.R	5	17	60	8	2
T162.060.R	6	22	70	8	2
T162.070.R	7	32	80	8	2

**SOLID CARBIDE SPIRAL CUTTERS, FINISH STYLE S=8 Z=2**

ART. T163

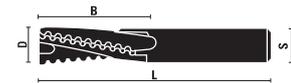


- Can also be used on portable routers
- Right-hand rotation with "DOWN CUT SPIRAL"

RH rotation	D	B	L	S	Z
T163.030.R	3	12	60	8	2
T163.040.R	4	14	60	8	2
T163.050.R	5	17	60	8	2
T163.060.R	6	22	70	8	2
T163.070.R	7	32	80	8	2

**SOLID CARBIDE SPIRAL CUTTERS, ROUGHING STYLE Z=2**

ART. T170



- Right-hand rotation with "UP CUT SPIRAL"
- Chip-breaker execution
- Z= 2 for the best chip removal

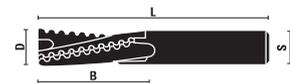
RH rotation	D	B	L	S	Z
T170.080.R	8	35	80	8	2
T170.100.R	10	35	80	10	2
T170.120.R	12	35	80	12	2
T170.121.R	12	45	90	12	2

Router bits with diameter from 12 mm, are produced with shank for Seeger retaining rings



**SOLID CARBIDE SPIRAL CUTTERS, ROUGHING STYLE Z=2**

ART. T171



- Right-hand rotation with "DOWN CUT SPIRAL"
- Chip-breaker execution
- Z= 2 for the best chip removal

RH rotation	D	B	L	S	Z
T171.080.R	8	35	80	8	2
T171.100.R	10	35	80	10	2
T171.120.R	12	35	80	12	2

Router bits with diameter from 12 mm, are produced with shank for Seeger retaining rings

