

Leitz Tooling Systems

CNC Catalog

2009





Raise your productivity to the next level

CNC Catalog

Survival in the rapidly changing global economy requires continuous improvement in production efficiency. No company, no matter its size, can survive using the same technology, processes and manpower which has worked in the past.

In order to survive and profit, we must all focus on our core competence, and partner with vendors whom can provide new technologies which improve our efficiency and productivity.

Leitz is known as a leading tooling manufacturer and service provider, but we go a step further; Leitz also provides our partner companies with full technical support, production advice and industry experience.

We invite you to take full advantage of our complete range of products and services; as a complete package or specifically tailored to meet your specific application requirements.

This catalog is the condensed version of the well known Leitz Lexicon 4. The reduced size and focus on common products will make this version much easier to use. Please remember that which you do not see here, very likely exists in the more complete Lexicon 4 version. If you do not find a solution which meets your expectations, please allow one of our experienced sales people tailor a solution to meet your specific needs.

Please refer to the back of this catalog for a complete listing of regional offices and contact information.

6. Drilling

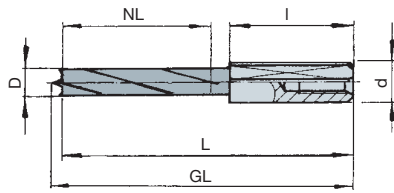
6.1 Dowel drills (Solid Carbide)

Shank 10 mm, solid carbide



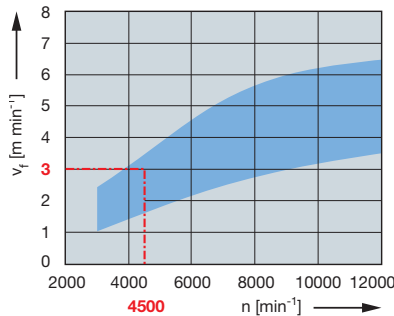
No. of teeth: Z2/V2
RPM: $n = 3000-12000 \text{ min}^{-1}$

Design Z2/V2 in solid tungsten carbide for extremely large regrinding area and increased feed speed, marathon design grind. Ideal for machining abrasive wood and composite materials as the solid tungsten carbide is more wear-resistant. Z3-design for higher feed speeds than Z2-design.



Design without heel

Diagram to determine the feed speed v_f depending on the RPM n of the spindle



HW-Dowel boring bit Z2/V2
WB 120-0-32, WB 120-0-33

Workpiece material:
Chipboard with coating,
abrasive wood, composites

Operation:
Boring

Correction factor for v_f :
Veneered = 0,8
Paper coated = 0,8
MDF, solid wood = 0,7
Chipboard, without coating = 1,3

Without heel

WB 120-0-11 * , WB 130-0-01 ** , WB 120-0-32 *, WB 120-0-33 ******

Class.	D mm	GL mm	L mm	NL mm	S mm	Z	ID Nr. LL	ID Nr. RL
**	5	57,5	56	25	10x26	3	034124	● 034125 ●
*	3	57,5	56	16	10x34	2	033610	● 033611 ●
***	5	57,5	56	25	10x27	2	033728	● 033729 ●
***	6	57,5	56	25	10x27	2	033730	● 033731 ●
***	8	57,5	56	25	10x27	2	033732	● 033733 ●
****	5	70	68,5	35	10x27	2	033496	● 033497 ●
****	6	70	68,5	35	10x27	2	033498	● 033499 ●
****	8	70	68,5	35	10x27	2	033500	● 033501 ●

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802 ●
Screw for S 10x27	M 5x10	Length adjustment	006378 ●

- available ex stock
- available at short notice

6. Drilling

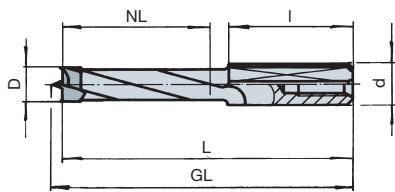
6.1 Dowel drills

Marathon-design



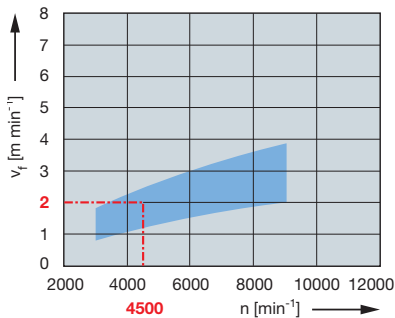
No. of teeth: Z2/V2
RPM: $n = 3000-9000 \text{ min}^{-1}$

Multiple performance compared to standard drills, Z2/V2. The round spur profile with shear cut, suitable for boring tear-free holes at high feed speeds. Ideal for machining panel materials coated with difficult surface coatings (e.g. thin decorative paper). High wear-resistant HW-quality, suitable for hardwood and wooden materials. Excellent chip clearance when deep boring from friction reducing tool body coatings. A loose countersink can be clamped on the shank WB 701-0-02.



Design without heel

Diagram to determine the feed speed v_f depending on the RPM n of the spindle



HW-Dowel drill, Marathon-design Z2/V2
WB 120-0-29, WB 120-0-30

Workpiece material:
Chipboard with coating

Operation:
Boring

Correction factor for v_f :
Veneered = 0,8
Paper coated = 0,8
MDF, solid wood = 0,7

Shank 8 mm WB 120-0-31 *

Class.	D	GL	L	NL	S	ID Nr.	ID Nr.
	mm	mm	mm	mm	mm	LL	RL
*	5	55,5	54	30	8x19	033724	033725
*	8	55,5	54	30	8x19	033726	033727

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802

Shank 10 mm WB 120-0-29 *

Class.	D	GL	L	NL	S	ID Nr.	ID Nr.
	mm	mm	mm	mm	mm	LL	RL
*	4	57,5	56	25	10x27	033714	033715
*	5	57,5	56	25	10x27	033716	033717
*	6	57,5	56	25	10x27	033718	033719
*	8	57,5	55,5	25	10x27	033720	033721
*	10	57,5	55,5	25	10x27	033722	033723

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802

Shank 10 mm WB 120-0-30 *

Class.	D	GL	L	NL	S	ID Nr.	ID Nr.
	mm	mm	mm	mm	mm	LL	RL
*	4	70	68,5	35	10x30	033482	033483
*	5	70	68,5	35	10x30	033484	033485
*	5,1	70	68,5	35	10x30	033492	033493
*	6	70	68,5	35	10x30	033486	033487
*	8	70	68,5	35	10x30	033488	033489
*	8,2	70	68,5	35	10x30	033494	033495
*	10	70	68,5	35	10x30	033490	033491

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802

- available ex stock
- available at short notice

6. Drilling

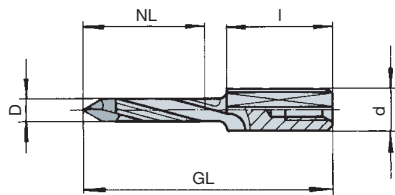
6.2 Through-hole drills (Solid Carbide)

Shank 10 mm



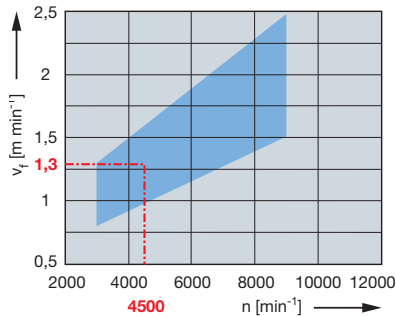
No. of teeth: Z2
 RPM: $n = 3000-9000 \text{ min}^{-1}$
 $n = 3000-12000 \text{ min}^{-1}$
 for solid tungsten
 carbide design

Optimised boring bit when there is insufficient spindle guide (by centering the boring bit during the exit stroke to prevent tear-outs at the edge of the hole when the boring bit leaves the workpiece) and for machining hard and softwood. A loose countersink can be clamped on the shank WB 701-0-03.



Design with heel

Diagram to determine the feed speed v_f depending on the RPM n of the spindle



HW-Through-hole boring bit WB 101-0-xx

Workpiece material:
 Chipboard with coating

Operation:
 Boring

Correction factor for v_f :
 Veneered = 0,8
 MDF = 0,7
 Chipboard, without coating = 1,3

Recommendation:
 For diameters below 5 mm use type
 WB 101-0-04 (page 586).

With heel WB 101-0-05 *

Class.	D mm	GL mm	NL mm	S mm	ID Nr. LL	ID Nr. RL
*	5	57,5	25	10x24	042630	042631
*	5,1	57,5	25	10x24	042632	042633
*	6	57,5	25	10x24	042636	042637
*	8	57,5	25	10x24	042638	042639

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802

With heel WB 101-0-06 *

Class.	D mm	GL mm	NL mm	S mm	ID Nr. LL	ID Nr. RL
*	5	77	44	10x24	042640	042641
*	5,1	77	44	10x24	042642	042643
*	5,2	77	44	10x24	042644	042645
*	6	77	44	10x24	042646	042647
*	8	77	44	10x24	042648	042649
*	10	77	44	10x24	042650	042651
*	12	77	44	10x24	042652	042653

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802

Design in solid tungsten carbide for extremely large regrinding area and increased feed speed, marathon design grind. Ideal for machining abrasive wood and composite materials as the solid tungsten carbide quality is wear-resistant.

Without heel WB 101-0-02 *, WB 101-0-07**

Class.	D mm	GL mm	NL mm	S mm	Z	ID Nr. LL	ID Nr. RL
*	5	57,5	25	10x27	2	034018	034019
*	6	57,5	25	10x27	2	034020	034021
*	8	57,5	25	10x27	2	034022	034023
**	5	70	25	10x27	2	034100	034101
**	6	70	25	10x27	2	034102	034103
**	8	70	25	10x27	2	034104	034105

Spare parts

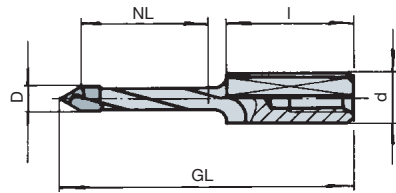
BEZ	ABM	BEM	ID Nr.
Screw	M 5x8	Length adjustment	006378

- available ex stock
- available at short notice

Marathon-design, shank 10 mm

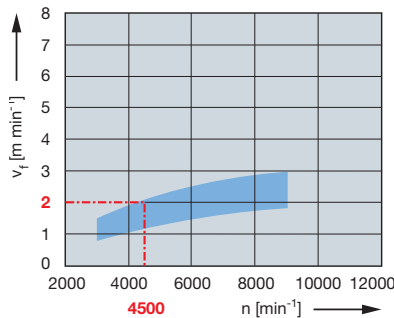


No. of teeth: Z2
 RPM: n = 3000-9000 min⁻¹
 (recommended n = 4500-9000 min⁻¹)



Design without heel

Diagram to determine the feed speed v_f depending on the RPM n of the spindle



Marathon-design for higher performance time and better cut quality compared to standard design. Special V-point-ground with 2 bevels. Shank 10 mm, Z2, GL = 57,5 mm or 70 mm.

WB 101-0-10 *

Class.	D	GL	NL	S	ID Nr.	ID Nr.
	mm	mm	mm	mm	LL	RL
*	5	57,5	25	10x25	033960 ●	033961 ●
*	8	57,5	25	10x25	033962 ●	033963 ●

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802 ●

WB 101-0-10 *

Class.	D	GL	NL	S	ID Nr.	ID Nr.
	mm	mm	mm	mm	LL	RL
*	5	70	35	10x25	033964 ●	033965 ●
*	8	70	35	10x25	033966 ●	033967 ●

Spare parts

BEZ	ABM	BEM	ID Nr.
Screw	M 5x10	Length adjustment	005802 ●

HW-Marathon-Through-hole drills Z2
 WB 101-0-10

Workpiece material:
 Chipboard with coating

Operation:
 Boring

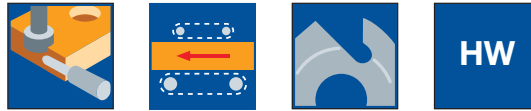
Correction factor for v_f :
 Veneered = 0,8
 MDF, solid wood = 0,7
 Chipboard, without coating = 1,3

6. Drilling

6.3 Hinge bring bits (Solid Carbide)

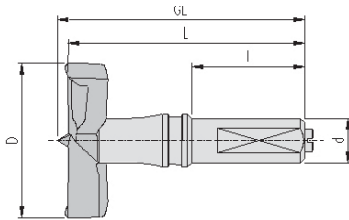


High performance hinge boring bit - solid carbide



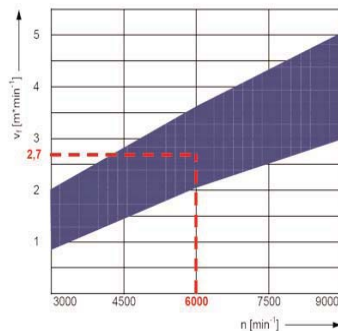
Number of teeth: Z2/V2
RPM: $n = 3000-9000 \text{ min}^{-1}$

Optimised for boring coated chip- and fibreboards. Ideal for machining solid wood due to spurs with an extreme shear cut. Significant improvement of quality and performance compared to brazed tip design.



Z2/V2 with centre point

Diagram to determine the feed speed v_f depending on the RPM n of the spindle



Hinge bring bit - solid carbide Z2/V2 WB 310-0-04

Material:
Plastic coated chipboard

Operation:
Boring

Correction factor for v_f :
veneered = 0,8
paper coated = 0,8
MDF, solid wood = 0,7
chipboard without coating = 1,3

WB 310-0 04

Class.	D mm	GL mm	S mm	ID No.		
				LL	RL	
*	20	57	10x26	34802	34803	●
*	25	57	10x26	34804	34805	●
*	30	57	10x26	34808	34809	●
*	35	57	10x26	34810	34811	●
*	20	70	10x26		34815	●
*	25	70	10x26		34817	●
*	30	70	10x26		34821	●
*	35	70	10x26		34823	●

Spare parts

BEZ	ABM	BEM	ID No.	
screw	M 5x10	length adjustment	005802	●

Advantages compared to standard design:

- wear resistant carbide
- 2 to 3 times of performance
- rugged during application even under extreme conditions

Marathon geometry

- better cutting edges
- lower feed forces
- 30 % higher feed speeds

Open construction

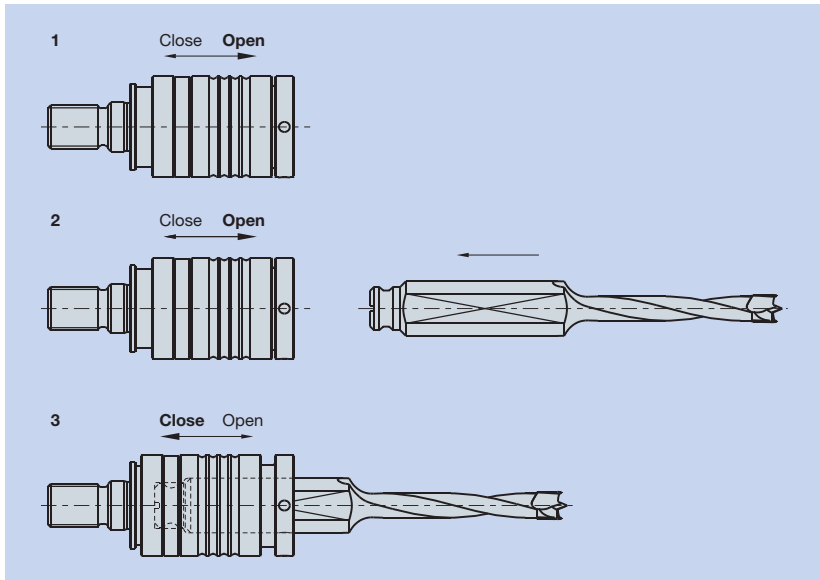
- better chip clearance

Service friendly

- spur and cutting edge can be sharpened in one step
- 6x resharpenable

3. Quick-change adaptor

A new system for mounting dowel drills, through-hole drills and hinge boring bits in the different makes of boring machine. The quick-change adaptor is a very quick and easy way to change the drills in the machine and without any tools.



Changing a drill.

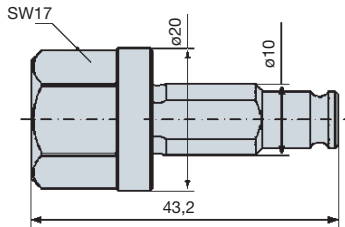
Application Data**Max. allowable RPM**

Maximum allowable RPM for drill adaptors (modification of the cutter spindle):

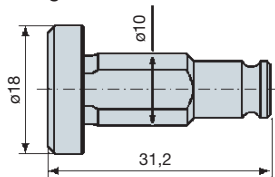
$$\eta_{\max} = 9.000 \text{ r.p.m.}$$

Conventional drill adaptors and quick-change adaptors can be used up to

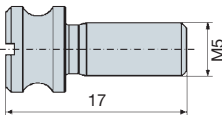
$$\eta_{\max} = 12.000 \text{ r.p.m.}$$



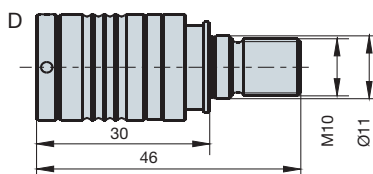
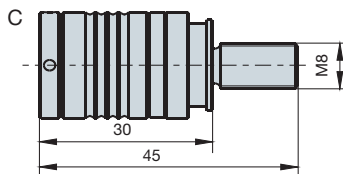
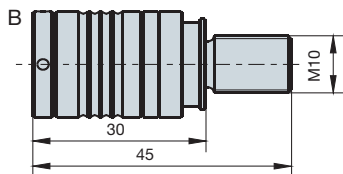
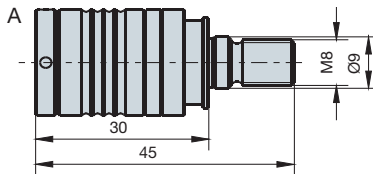
Fitting tool



Dust cover



Clamping + adjusting screw



Quick-change drill adaptor

The drills are clamped in the chuck by a special length setting screw (Id. 7408). Quick-change drill adaptors are ideal for quick and individual adjustment of the boring pattern. To protect the empty quick clamping chucks, seal with the dust cover. Note: to work correctly, the shanks need the correct shank and clamping flat tolerances. Only drills from the Leitz-programme guarantee reliability. RPM up to 12000 min⁻¹ (quick-change drill adaptor without drills must be sealed with the dust cover Id. 115521 to prevent unbalance.

PM 320-0-55 *, PM 320-0-56 **, PM 320-0-57 ***, PM 320-0-58 ****

Class.	Machine	GL mm	S	DRI	ID Nr.	
*	Nottmeyer (new machine type)	45	A	LL	033098	●
*	Nottmeyer (new machine type)	45	A	RL	033099	●
**	Alberti, Balestrini, Biesse Böttcher & Gessner Busellato, Goma, Grotefeld Hüllhorst, Holz-Her, Koch Morbidelli, Reimall, Torwegge Vitap (after year 4/91), Weeke	46	D	LL	033100	●
**	Alberti, Balestrini, Biesse Böttcher & Gessner Busellato, Goma, Grotefeld Hüllhorst, Holz-Her, Koch Morbidelli, Reimall, Torwegge Vitap (after year 4/91), Weeke	46	D	RL	033101	●
***	Lehbrink, Nottmeyer (old machine type)	45	C	LL	033102	●
***	Lehbrink, Nottmeyer (old machine type)	45	C	RL	033103	●
****	Ayen, Brandt, Holzma Knoevenagel Mayer Reichenbacher Torwegge Zubiola	45	B	LL	033104	●
****	Ayen, Brandt, Holzma Knoevenagel Mayer Reichenbacher Torwegge Zubiola	45	B	RL	033105	●

Accessories

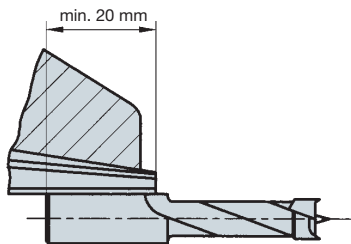
BEZ	ABM	ID Nr.	
Fitting tool	d10/D20/L43,2/SW17	115522	●
Dust cover	d10/D18/L31,2	115521	●
Clamping + adjusting screw	M 5x17	007408	●

- available ex stock
- available at short notice

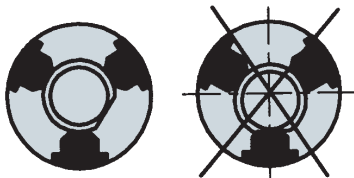
Adjustable drill chuck

**When clamping, please note:**

- minimum clamping length
l min = 20 mm
- maximum clamping length
l max = 29 mm



- Do not clamp conical shanks.
- Use cylindrical shanks, without clamping flats, grooves or notches.



- The clamping flat must not touch the clamping wedges.

Precise design with high concentricity < 0,02 mm. Special clamping mechanism prevents the tool shank slipping. Adjustable clamping range from 0,5-13 mm (SK30, ISO 30, SK40), 3-16 mm (HSK-E/-F63). Balanced tool body. Wear resistant, hardened clamping wedges. Suitable for left and right hand rotation. Only suitable for drills.

PM 330-0 *

Class.	Machine	D	d	S	A	Weight	ID Nr.
		mm	mm	mm	mm	kg	
*	MAKA Reichenbacher Weeke	53	0,5-13	SK30	94	1,3	037700 □
*	Biesse after year 9/92	53	0,5-13	SK30	94	1,3	037701 □
*	Alberti	53	0,5-13	SK30	94	1,3	037702 □
*	Morbidelli SCM	58	0,5-13	ISO30	102	1,4	037706 ●
*	Homag MAKA Reichenbacher SCM Stegherr	52	0,5-13	SK40	94	1,5	037704 ●
*	IMA after year 9/94 Dubus Eima Homag Weeke	52	3-16	HSK-F 63	100	1,6	037705 ●
*	CMS	52	3-16	HSK-E 63	100	1,7	037707 ●

Spare parts

BEZ	ABM	ID Nr.
Key	SW4	005451 ●

- available ex stock
- available at short notice

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

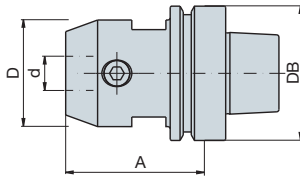
5.5.4 Weldon-chuck

Weldon-chuck for shanks with clamping flat



Chuck with bore for clamping shank tools with driving flat to DIN 1835.

Direction of rotation independant, so suitable for left and right hand rotation.
Maximum permittable RPM $n_{max.} = 24.000 \text{ min}^{-1}$.



Chuck HSK-F 63

HSK-F 63 as per DIN 69893, A = 75 mm PM 320-0-53 *

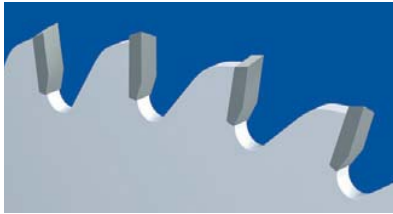
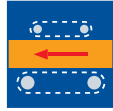
Class.	Fabr.	D	d	A	DB	Weight	ID Nr.
	Mach.	mm	mm	mm	mm	kg	
*	Homag, IMA,	50	16	75	63	1,20	673000 ●
*	Eima, Weeke, Dubus, Biesse, Morbidelli, SCM	50	20	75	63	1,20	673001 ●

1. Sawblades

1.4 Sizing Scoring sawblades



For cross cutting and sizing



Designed for cutting across grain and sizing solid woods, coated and veneered timber products and laminated woods respectively. For router machines with/without CNC-control and CNC machining centres.

WK 850-2 *, WK 850-2-03 **

Class.	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	ID Nr.
*	120	4,0	3,0	20	1/6/46	30	WZ	058226 ●
*	150	4,0	3,0	20		30	WZ	058227 ●
*	160	4,0	3,0	20	1/6/46	36	WZ	058228 ●
*	180	4,0	3,0	20	1/6/46	42	WZ	058229 ●
*	200	4,0	3,0	20	1/6/46	42	WZ	058230 ●
**	250	3,2	2,2	30		48	WZ	058202 ●

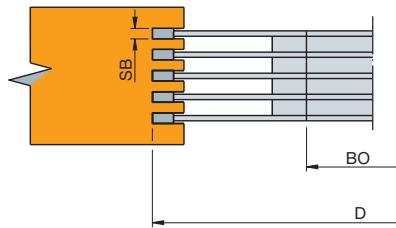
Grooving cutter



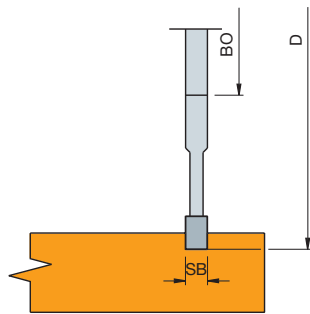
For grooving and scoring with or against feed in solid woods, uncoated, coated and veneered timber products. For spindle moulders, moulders and double-end tenoners.

WF 100-2-02 *

Class.	D mm	SB/TDI mm	BO mm	BO _{max.} mm	DKN mm	Z	n _{max.} min ⁻¹	ID Nr.	
*	120	4	20	30	6x25,6	12	14200	020308	●
*	120	5	20	30	6x25,6	12	14200	020309	●
*	120	10	20	30	6x25,6	12	14200	020100	●
*	125	1,5/0,8	30	50		12	13700	020145	●
*	125	1,8/1,0	30	50		12	13700	020146	●
*	125	2,0/1,2	30	50		12	13700	020147	●
*	125	2,2/1,2	30	50		12	13700	020148	●
*	125	2,5/1,4	30	50		12	13700	020149	●
*	125	3,0/2,0	30	50		12	13700	020150	●
*	125	3,5/2,2	30	50		12	13700	020151	●
*	125	4	30	50		12	13700	020152	●
*	125	4,5	30	50		12	13700	020153	●
*	125	5	30	50		12	13700	020191	●
*	125	6	30	50		12	13700	020192	●
*	125	7	30	50		12	13700	020193	●
*	125	8	30	50		12	13700	020194	●
*	125	9	30	50		12	13700	020195	●
*	125	10	30	50		12	13700	020196	●
*	150	3,0/2,0	30	60		12	11400	020154	●
*	150	3,5/2,2	30	60		12	11400	020155	●
*	150	4	30	60		12	11400	020156	●
*	150	4,5	30	60		12	11400	020157	●
*	150	5	30	60		12	11400	020158	●
*	150	6	30	60		12	11400	020159	●
*	150	7	30	60		12	11400	020160	●
*	150	8	30	60		12	11400	020161	●
*	150	9	30	60		12	11400	020162	●
*	150	10	30	60		12	11400	020163	●



Mounted as a set for lock corner joint



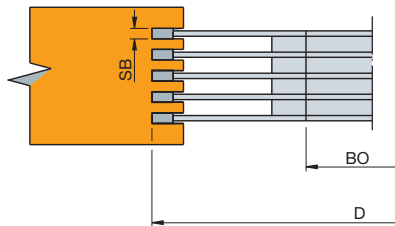
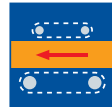
Cutting the groove for a back panel

For spacers TR 100-0 for use as sets see section knives/spare parts

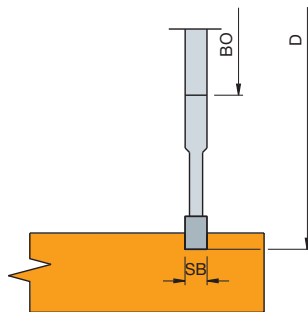
4. Tools with bore

4.1 Grooving

Grooving cutter



Mounted as a set for lock corner joint



Cutting the groove for a back panel

For grooving and scoring with or against feed in solid woods, uncoated, coated and veneered timber products. For spindle moulders, moulders and double-end tenoners.

WF 100-2-03 *

Class.	D	SB/TDI	BO	BO _{max.}	DKN	Z	n _{max.}	ID Nr.	
	mm	mm	mm	mm	mm		min ⁻¹		
*	150	1,5/0,8	30	60		18	11400	020164	●
*	150	1,8/1,0	30	60		18	11400	020165	●
*	150	2,0/1,2	30	60		18	11400	020166	●
*	150	2,2/1,2	30	60		18	11400	020167	●
*	150	2,5/1,4	30	60		18	11400	020168	●
*	150	3,0/2,0	30	60		18	11400	020169	●
*	150	4	30	60		18	11400	020170	●
*	150	5	30	60		18	11400	020171	●
*	150	6	30	60		18	11400	020172	●
*	150	8	30	60		18	11400	020173	●
*	150	10	30	60		18	11400	020174	●
*	180	2,0/1,2	30	70		18	9500	020202	●
*	180	2,5/1,4	30	70		18	9500	020203	●
*	180	3,0/2,0	30	70		18	9500	020204	●
*	180	3,5/2,2	30	70		18	9500	020205	●
*	180	4	30	60		18	9500	020197	●
*	180	5	30	60		18	9500	020198	●
*	180	6	30	60		18	9500	020199	●
*	180	8	30	60		18	9500	020200	●
*	180	10	30	60		18	9500	020201	●
*	200	2,0/1,2	35		10/45	18	8500	020299	●
*	200	2,2/1,2	35		10/45	18	8500	020300	●
*	200	2,5/1,4	35		10/45	18	8500	020301	●
*	200	3,0/2,0	35		10/45	18	8500	020302	●
*	200	4	35	80	10x45	18	8500	020303	●
*	200	5	35	80	10x45	18	8500	020304	●
*	200	6	35	80	10x45	18	8500	020305	●
*	200	8	35	80	10x45	18	8500	020306	●
*	200	10	35	80	10x45	18	8500	020307	●

For spacers TR 100-0 for use as sets see section knives/spare parts

- available ex stock
- available at short notice

5. Cutting tools with shank

5.1 Dia Spiral finishing router cutter



Diamaster NANO - HW solid design with nanocrystalline CVD-Diamond coating



Number of teeth: Z 3+3
RPM: n. max. = 36.000 min⁻¹

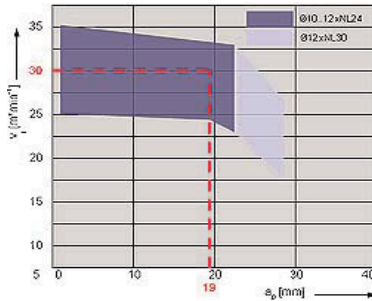
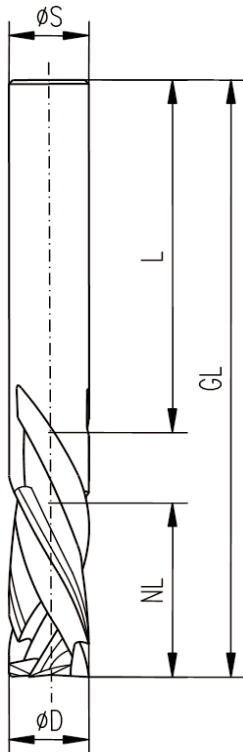


Diagram to determine the feed speed v_f depending on the spindle RPM



Router cutter for sizing to finish quality and grooving, HW-solid, Z 3+3, finishing, spiral cutting edges, mainly down spiral. Specially suitable for nesting applications.

WO 160 2 11

Class.	D mm	GL mm	NL mm	S mm	ID No.	Price
*	10	70	24	10x40	42130	
*	12	75	24	12x40	42131	
*	12	80	30	12x40	42132	
***	1/2"	100	40	1/2"x40	130060131	

Note* 1/2" version is 2+2 design**

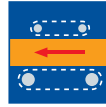
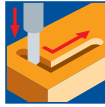
The advantages of Diamaster Nano:

- High stability of the tool body and low cutting forces for high cutting speeds
- High shear angle for edge finish quality
- Good chip removal from grooves
- Mainly down spiral to the vacuum clamping
- Reduced loss of vacuum from small groove

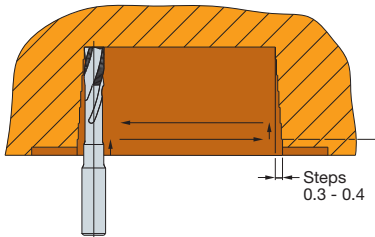
5. Cutting tools with shank

5.1 Grooving

Spiral roughing router cutter



Number of teeth: Z 2, Z 3
RPM: D 10 - 12 mm:
 n 18000 - 30000 min⁻¹
 D 14 - 18 mm:
 n 12000 - 20000 min⁻¹



Mortise slot producing

Spiral roughing router for slot mortises in doors of solid wood, MDF, particle board. Solid tungsten carbide, Z 3. Large cutting depths achieved by stepwise axial feed. The steep spiral cutting edge angle and a smaller shaft diameter between the cutting head and the shank improves chip removal. Door frames with aluminium or steel need to be premachined with suitable tools in this area (e. g. spiral roughing router with Z 2 and small cutting length).

HW-solid, for slot mortises WO 160-2 *

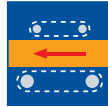
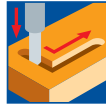
Class.	D	GL	NL	AL	S	Z	DRI	ID Nr.
	mm	mm	mm	mm	mm			
*	14	170	30	95	16x50	3	RL	042513 ●
*	14	190	30	120	16x50	3	RL	042514 ●
*	16	170	50	105	16x50	3	RL	042503 ●
*	16	179	30	120	16x58 [△]	3	RL	042768 ●
*	16	179	30	120	20x58 [△]	3	RL	042786 ●
*	16	205	30	135	20x50	3	RL	042517 ●
*	17	170	30	105	20x50	3	RL	042520 ●
*	17	190	30	120	20x50	3	RL	042521 ●
*	18	170	50	115	20x50	3	RL	042504 ●

[△] with cutting face for Homag/Weeke slot mortise aggregates

5. Cutting tools with shank

5.1 Grooving

Turnblade router cutter



Number of teeth: Z 2
RPM: n 14000 - 20000 min⁻¹

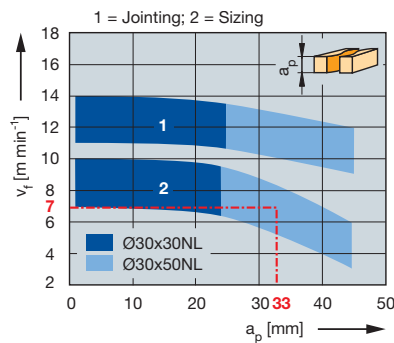


Diagram to determine feed speed v_f depending on grooving depth a_p
 1 = Jointing
 2 = Sizing

Turnblade router cutter, HW, Z 2

Workpiece material:
 Chipboard plastic coated
 Operation: Jointing, Sizing
 RPM: n 18000 min⁻¹
 Correction factor v_f :
 Machining across grain = 0,7; MDF = 0,8

Router cutter for sizing and jointing. HW turnblade knives, Z2, finishing, axial parallel cutting edge, with HW turnblade knife plunging tip. Suitable for machining MDF parts for painting or foil wrapping and for solid woods. Choice of HW cutting material to suit the workpiece.

(Spare knives available in other HW-qualities, see section spare parts)

WL 101-2 *

Class.	D	GL	NL	S	ID Nr.	ID Nr.
*	mm	mm	mm	mm	LL	RL
*	25	125	50	25x60	040857	040858
*	30	105	30	25x60		040854
*	30	125	50	25x60		040853

Spare parts

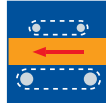
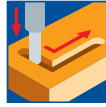
ART	ABM	ID Nr.
	mm	
Turnblade knife - peripheral cutting D 25/30 (VE 10 pieces)	50x12x1,5	006506
Turnblade knife - peripheral cutting D 30 (VE 10 pieces)	30x12x1,5	005161
Turnblade knife - plunging edge D 30 (VE 10 pieces)	12x12x1,5	005081
Turnblade knife - plunging edge D 25 (VE 10 pieces)	7,6x12x1,5	005080
Screw D 7 - plunging edge D 25/30	M 4x5	007037
Screw D 7 - peripheral cutting D 25	M 4x5	007037
Screw D 9 - peripheral cutting D 30	M 4x5	007038
Key	T 15	005457

VE = packing unit

5. Cutting tools with shank

5.1 Grooving

Router cutter Diamaster PRO



Number of teeth: Z 1+1
RPM: n 18000 - 36000 min⁻¹

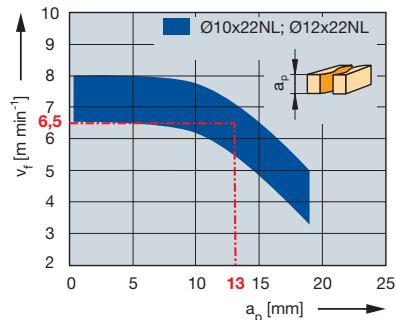


Diagram to determine feed speed v_f depending on grooving depth a_p ,
D 8 - 12 mm

Router cutter Diamaster PRO

Workpiece material:
Chipboard plastic coated
Operation: Sizing
RPM: n 18000 min⁻¹
Correction factor v_f : MDF = 0,8;
Chipboard = 1,1; Veneer across grain = 0,7

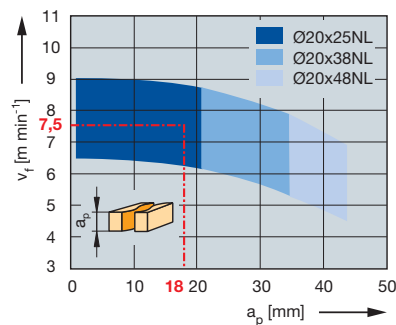


Diagram to determine feed speed v_f depending on grooving depth a_p ,
D 20 mm

Router cutter Diamaster PRO

Workpiece material:
Chipboard plastic coated
Operation: Sizing
RPM: n 18000 min⁻¹
Correction factor v_f : MDF = 0,8;
Chipboard = 1,1; Veneer across grain = 0,7

Z 1+1

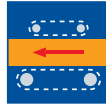
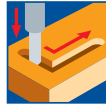
WO 140-2-50 *

Class.	D	D	GL	GL	NL	NL	S	S	ID Nr.
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	RL
*	12,7	1/2"	70	2 3/4"	22,23	7/8"	12,7x38	1/2"x1 1/2"	091296 ●
*	19,05	3/4"	110	4 3/8"	48	1 7/8"	19,05x50	3/4"x2"	091297 ●

5. Cutting tools with shank

5.1 Grooving

Router cutter Diamaster QUATTRO Z 2+2



Number of teeth: Z 2+2

RPM: n 16000 - 36000 min⁻¹

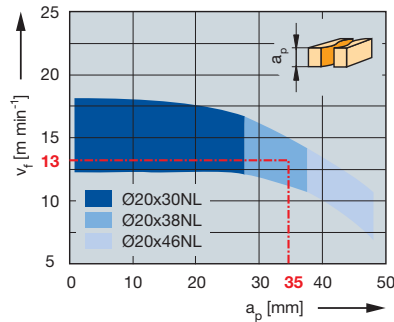


Diagram to determine feed speed v_f depending on grooving depth a_p , D 20 mm

Router cutter Diamaster QUATTRO, Z 2+2

Workpiece material:

Chipboard plastic coated

Operation: Sizing

RPM: n 18000 min⁻¹

Correction factor v_f : MDF = 0,6;

Paper coated = 0,8

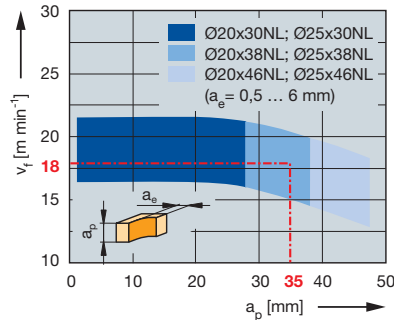


Diagram to determine feed speed v_f depending on grooving depth a_p , D 20 mm

Router cutter Diamaster QUATTRO, Z 2+2

Workpiece material:

Chipboard plastic coated

Operation: Jointing

RPM: n 18000 min⁻¹

Correction factor v_f : MDF = 0,9;

Paper coated = 0,8;

Veneer across grain = 0,8

High performance router cutter for sizing + pre-cutting, DP PLUS-tipped, Z2+2, finishing, with HW plunging tip. Suitable for machining coated timber and composite material workpieces at high feed speeds. Higher performance than Z1+1 DP routing tools.

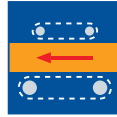
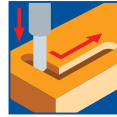
WO 140-2 *

Class.	D mm	GL mm	NL mm	S mm	ID Nr. LL	ID Nr. RL
*	20	90	28	20x50	091234 ●	091235 ●
*	20	100	28	25x60		091237 ●
*	20	100	38	20x50		091239 ●
*	20	110	38	25x60		091241 ●
*	20	110	48	20x50		091238 ●
*	20	120	48	25x60	091246 ●	091247 ●
*	25	100	28	25x60		091249 ●
*	25	110	38	25x60	091250 ●	091251 ●
*	25	110	48	20x50		091245 ●
*	25	120	48	25x60	091252 ●	091253 ●

2. Cutting tools with shank

2.2 Diamond router cutter program

Router cutter DiaMaster PRO Z(=Teeth)1+1



See p. 440
Leitz-Lexicon Edition 4

Number of teeth: Z (=Teeth) 1+1
RPM: n 18000 - 36000 min⁻¹

Router cutter for sizing + pre-cutting, DP PRO-tipped, Z (=Teeth) 1+1, finishing, with TC plunging tip, suitable for small and medium sized batches.

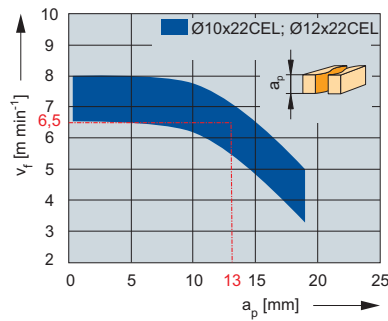


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 8 - 12 mm

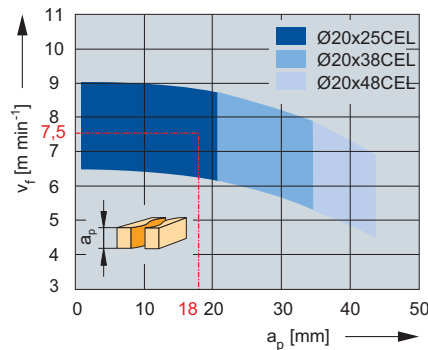


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 20 mm

Router cutter DiaMaster PRO

Workpiece material:
Chipboard plastic coated
Operation: Sizing
RPM: n 18000 min⁻¹
Correction factor v_f : MDF = 0,8;
Chipboard = 1,1; Veneer across grain = 0,7

Z(=Teeth) 1+1 WO 140-2-50 *

Class.	DIA mm	OAL mm	NL mm	S mm	ID No. LH	ID No. RH	
*	10	70	22	12x40		091264	●
*	12	70	22	12x45		091265	●
*	12	100	28	25x60		091266	●
*	14	90	28	16x50		091267	●
*	16	80	22	16x50		091268	●
*	16	95	22	25x60		091269	●
*	16	90	28	16x50	091271	091270	● ●
*	16	100	28	16x50		091272	●
*	16	95	35	20x50		091273	●
*	16	105	35	25x60		091274	●
*	16	115	43	25x60	091276	091275	● ●
*	18	90	28	20x50		091277	●
*	18	95	35	20x50		091278	●
*	18	105	35	25x60		091279	●
*	18	105	43	20x50	091281	091280	● ●
*	18	115	43	25x60		091282	●
*	20	90	28	16x50		091283	●
*	20	100	28	25x60	091285	091284	● ●
*	20	95	35	20x50		091286	●
*	20	105	35	25x60		091287	●
*	20	105	43	20x50	091289	091288	● ●
*	20	115	43	25x60		091290	●
*	20	110	48	20x50	091292	091291	● ●
*	20	120	48	25x60	091294	091293	● ●
*	20	125	53	25x60		091295	●

Z (=Teeth) 1+1 WO 140-2-50 *

Class.	DIA mm	DIA Inch	OAL mm	OAL Inch	CEL mm	CEL Inch	S DIA mm	S DIA Inch	ID No. RH	
*	12,7	1/2"	70	2 3/4"	22,23	7/8"	12,7x38	1/2"x1 1/2"	091296	●
*	19,05	3/4"	110	4 3/8"	48	1 7/8"	19,05x50	3/4"x2"	091297	●

- available ex stock
- available at short notice



2. Cutting tools with shank

2.2 Diamond router cutter program



Number of teeth: Z (=Teeth) 2+2
RPM:
 DIA 22 mm: n 16000 - 30000 min⁻¹

Router cutter DiaMaster PRO Z(=Teeth)2+2



See p. 441
 Leitz-Lexicon Edition 4

Router cutter for sizing and pre-cutting, DP PRO-tipped, Z (=Teeth) 2+2, finishing, with TC plunging tip, suitable for small and medium sized batches.

Z(=Teeth)2+2
 WO 140-2-50 *

	DIA mm	CEL mm	S DIA mm	ID No. RH	
*	22	28	20x50	091222	●
*	22	28	25x60	091224	●
*	22	38	20x50	091226	●
*	22	38	25x60	091228	●
*	22	48	20x50	091230	●
*	22	48	25x60	091232	●



Number of teeth: Z (=Teeth) 1+1,
 with shear angle
 n 16000 - 36000 min⁻¹

Router cutter DiaMaster PLUS Z(=Teeth)1+1



See p. 443
 Leitz-Lexicon Edition 4

Router cutter for sizing + pre-cutting, DP PLUS-tipped, Z (=Teeth) 1+1, finishing, with TC plunging tip. Alternate shear angle cutting edges for tear-free machining of veneer or plastic coated workpieces. Large resharpener area suitable for large batch production and machining of highly abrasive materials (HPL, CPL, GfK, CfK,...).

WO 140-2 *

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	ROT	ID No.	
*	12	90	24	16x50	RH	090174	●
*	16	90	28	16x50	RH	090183	●
*	16	90	28	20x60	RH	090188	●
*	18	110	48	20x60	RH	091101	●
*	20	100	28	25x60	RH	090162	●
*	20	110	38	25x60	RH	090163	●
*	20	120	48	25x60	RH	090164	●
*	20	130	58	25x60	RH	090167	●

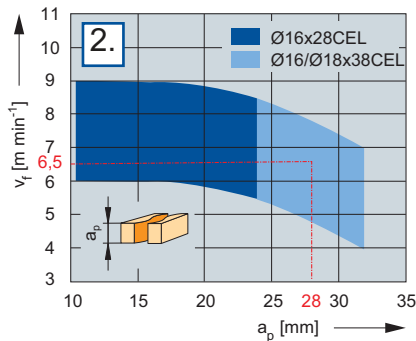
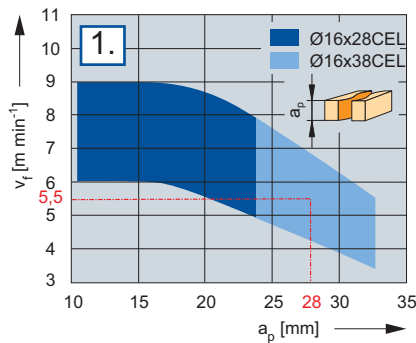
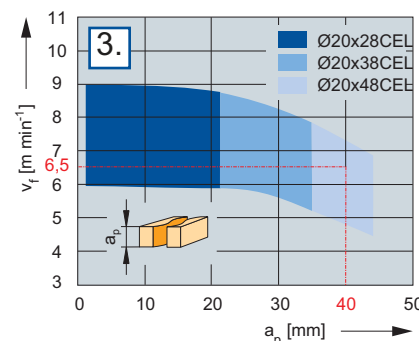


Diagram to determine feed speed v_f
 depending on grooving depth a_p ,
 DIA 16 mm, 18 mm, 20 mm



1. DiaMaster PLUS Z(=Teeth)1+1, D20

Workpiece material: Chipboard plastic coated
 Operation: Sizing
 RPM n 18000 min⁻¹

2. DiaMaster PLUS Z(=Teeth)1+1, D16-18

Workpiece material: Chipboard plastic coated
 Operation: Sizing
 RPM n 18000 min⁻¹

3. DiaMaster PLUS Z(=Teeth)1+1, D16

Workpiece material: Glulam
 Operation: Sizing
 RPM n 18000 min⁻¹

- available ex stock
- available at short notice



2. Cutting tools with shank

2.2 Diamond router cutter program



Number of teeth: Z (=Teeth) 2+2
RPM: n 16000 - 36000 min⁻¹

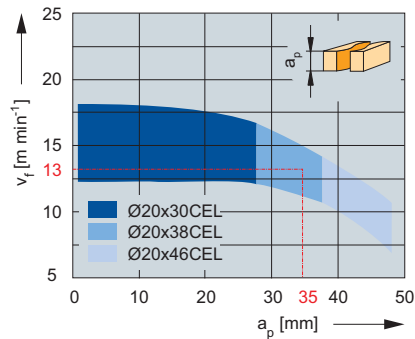


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 20 mm

Router cutter Diamaster QUATTRO, Z (=Teeth) 2+2

Workpiece material:

Chipboard plastic coated

Operation: Sizing

RPM: n 18000 min⁻¹

Correction factor v_f : MDF = 0,6;

Paper coated = 0,8

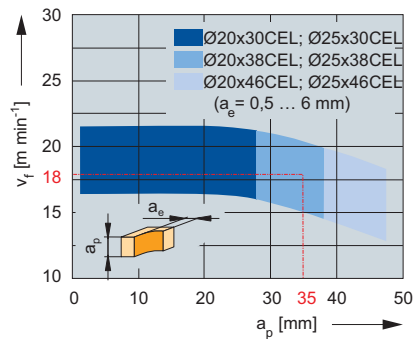


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 20 mm

Router cutter Diamaster QUATTRO, Z (=Teeth) 2+2

Workpiece material:

Chipboard plastic coated

Operation: Jointing

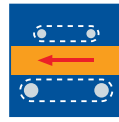
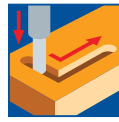
RPM: n 18000 min⁻¹

Correction factor v_f : MDF = 0,9;

Paper coated = 0,8;

Veneer across grain = 0,8

Router cutter DiaMaster QUATTRO Z(=Teeth)2+2



See p. 444
 Leitz-Lexicon Edition 4

High performance router cutter for sizing + pre-cutting, DP PLUS-tipped, Z (=Teeth) 2+2, finishing, with TC plunging tip. Suitable for machining coated timber and composite material workpieces at high feed speeds. Higher performance than Z (=Teeth) 1+1 DP routing tools.

WO 140-2 *

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	ID No. LH	ID No. RH
*	20	90	28	20x50	091234	● 091235 ●
*	20	100	28	25x60		● 091237 ●
*	20	100	38	20x50		● 091239 ●
*	20	110	38	25x60		● 091241 ●
*	20	110	48	20x50		● 091238 ●
*	20	120	48	25x60	091246	● 091247 ●
*	25	100	28	25x60		● 091249 ●
*	25	110	38	25x60	091250	● 091251 ●
*	25	110	48	20x50		● 091245 ●
*	25	120	48	25x60	091252	● 091253 ●

2. Cutting tools with shank

2.2 Diamond router cutter program



Number of teeth: Z (=Teeth) 3+3
RPM: n 16000 - 37000 min⁻¹

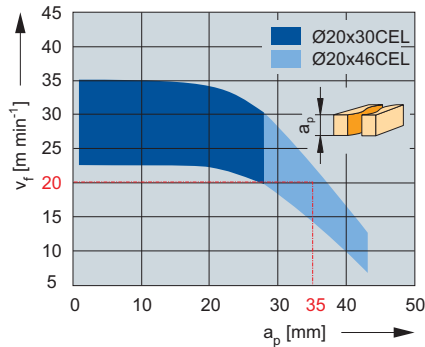


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 20 mm

Router cutter Diamaster PLUS, Z(=Teeth) 3+3

Workpiece material:
Chipboard plastic coated
Operation: Sizing
RPM: n 24000 min⁻¹
Correction factor v_f :
MDF = 0,8; Paper coated = 0,8

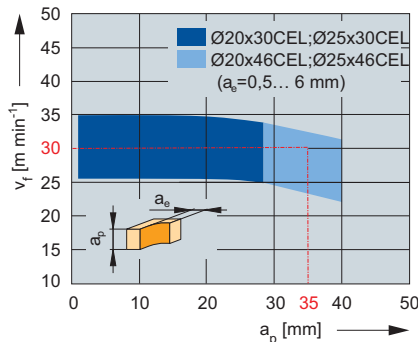


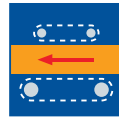
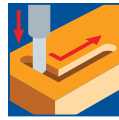
Diagram to determine feed speed v_f depending on grooving depth a_p , D 20 mm, 25 mm

Router cutter Diamaster PLUS, Z (=Teeth) 3+3

Workpiece material:
Chipboard plastic coated
Operation: Jointing
RPM: n 24000 min⁻¹
Correction factor v_f :
MDF = 0,9;
Paper coated = 0,8;
Veneer across grain = 0,8

Positioning tool relative to the workpiece

Router cutter DiaMaster PLUS Z(=Teeth)3+3



See p. 445
Leitz-Lexicon Edition 4

High performance router cutter for sizing + pre-cutting, DP PLUS-tipped, Z (=Teeth) 3+3, finishing, with DP-plunging tip. Suitable for machining coated timber and composite workpieces at high feed speeds. Higher performance than Z (=Teeth) 1+1 and Z (=Teeth) 2+2 DP routing tools. Negative twist to support the clamping of small workpieces.

WO 140-2 * With negative twist

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	ID No. LH	ID No. RH
*	18	100	24	25x60		091204 ●
*	20	90	24	20x50		091207 ●
*	20	100	24	25x60		091209 ●
*	20	105	30	25x60	091170 ●	091171 ●
*	20	110	38	25x60		091211 ●
*	20	110	46	20x50		091172 ●
*	20	120	46	25x60		091174 ●
*	25	100	24	25x60		091213 ●
*	25	95	30	20x50		091175 ●
*	25	105	30	25x60	091176 ●	091177 ●
*	25	110	38	25x60	091214 ●	091215 ●
*	25	120	46	25x60	091179 ●	091180 ●

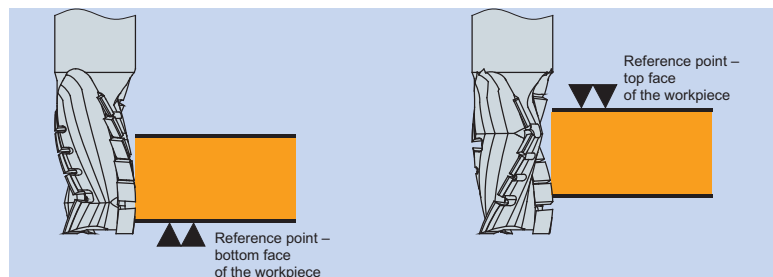
High performance router cutter for sizing + pre-cutting, DP PLUS-tipped, Z (=Teeth) 3+3, finishing, with DP-plunging tip. Suitable for machining coated timber and composite workpieces at high feed speeds. Higher performance than Z (=Teeth) 1+1 and Z (=Teeth) 2+2 DP routing tools. Positive twist for optimum chip removal into the extraction. Firm clamping necessary for small workpieces.

WO 140-2 * With positive twist

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	ID No. LH	ID No. RH
*	16	100	24	20x50		091254 ●
*	25	110	38	25x60	091216 ●	091217 ●
*	25	120	46	25x60	091218 ●	091219 ●

Tools with high negative shear angle

Tools with high positive shear angle



- available ex stock
- available at short notice



2. Cutting tools with shank

2.2 Diamond router cutter program



Number of teeth: $Z (=Teeth) 2 / Z (=Teeth) 1$
RPM: $n 16000 - 36000 \text{ min}^{-1}$

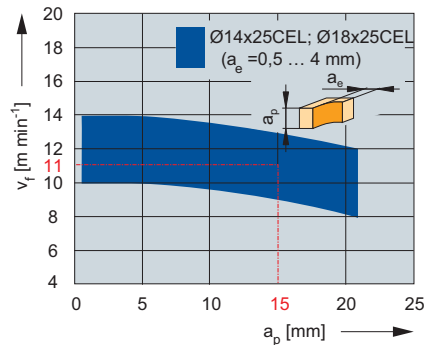


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 14 mm, 18 mm

Router cutter DiaMaster PRO $Z (=Teeth) 1, Z (=Teeth) 2$



See p. 442
 Leitz-Lexicon Edition 4

Router cutter for line-free sizing and grooving, DP PRO-tipped, $Z (=Teeth) 1$ or for $Z (=Teeth) 2$, finishing. Negative shear angle cutting edges (D10) for tear-free cutting when grooving and to support the clamping of small workpieces. Maximum chip removal 4 mm, for larger chip removal, pre-cutting is essential. Suitable for machining MDF parts for painting or foil wrapping and for solid woods. Teflon coated tool body to reduce resin and glue build up.

WO 140-2-50 *

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	T	ROT	ID No.
*	8	60	12	12x40	1	RL	090154 ●
*	10	70	12	12x40	2	RL	091158 ●
*	18	90	25	16x50	2	RL	091190 ●

Router cutter PRO, $Z (=Teeth) 2$

Workpiece material:
 Chipboard plastic coated
 Operation: Sizing
 RPM: $n 18000 \text{ min}^{-1}$
 Correction factor v_f : MDF = 0,9;
 Veneer across grain = 0,7



Number of teeth: $Z (=Teeth) 2$
RPM: for wood derived materials:
 $n 16000 - 36000 \text{ min}^{-1}$
 for plastics:
 $n 12000 - 18000 \text{ min}^{-1}$

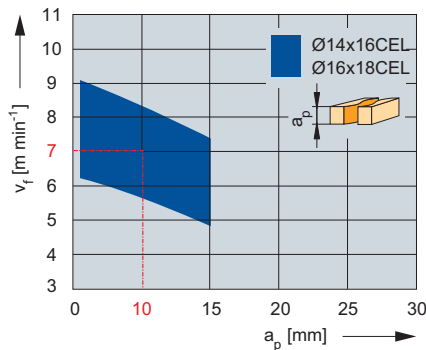


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 14 mm, 16 mm

Router cutter DiaMaster PLUS $Z (=Teeth) 2$



Router cutter for line-free sizing and grooving, DP PLUS-tipped, $Z (=Teeth) 2$, finishing. Short, stable cutting edge and suitable for grooving and sizing abrasive and hard materials (HPL, Trespa, GfK, CfK...). Negative shear angle cutting edges for tear-free cutting when grooving and to support the clamping of small workpieces. Maximum chip removal 4 mm, for larger chip removal, pre-cutting is essential. Suitable for machining MDF parts for painting or foil wrapping and for solid woods. Teflon coated tool body to reduce resin and glue build up.

WO 120-2-60 *

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	T	ROT	ID No.
*	14	80	16	20x50	2	RL	091157 ●
*	16	80	18	20x50	2	RL	091156 ●

Router cutter PLUS, $Z (=Teeth) 2$

Workpiece material:
 Duromers, Laminated materials (HPL, CPL), Fibre-reinforced plastics
 Operation: Sizing
 RPM: $n 12000 - 18000 \text{ min}^{-1}$



- available ex stock
- available at short notice

2. Cutting tools with shank

2.2 Diamond router cutter program Nesting



Number of teeth: Z (=Teeth) 3+3
RPM: n. max. = 36.000 min⁻¹

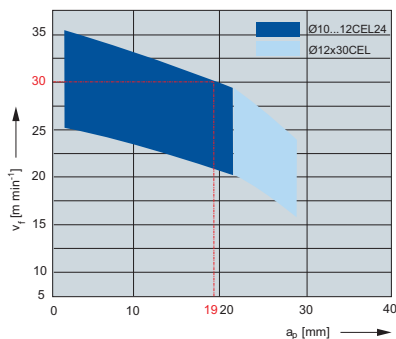


Diagram to determine feed speed v_f depending on grooving depth a_p ,
DIA 10 - 12 mm

DiaMaster NANO

Workpiece material:
plastic coated chipboards
Operation: Sizing
Correction factor v_f :
veneered = 0,8
paper coating = 0,8
MDF = 0,9

DiaMaster NANO - TC solid design with nanocrystalline CVD-Diamond coating



See p. 441b
Leitz-Lexicon Edition 4

Router cutter for sizing to finish quality and grooving, TC-solid, Z 3+3, finishing, spiral cutting edges, mainly down spiral. Specially suitable for nesting applications.

WO 160 2 11*

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	ID No.
*	10	70	24	10x40	42130 ●
*	12	75	24	12x40	42131 ●
*	12	80	30	12x40	42132 ●
*	1/2"	100	40	1/2"x40	130060131 ●

1/2" size only in Z2+2 design!!

The advantages of Diamaster Nano:

- High stability of the tool body and low cutting forces for high cutting speeds
- High shear angle for edge finish quality
- Good chip removal from grooves
- Mainly down spiral to the vacuum clamping
- Reduced loss of vacuum from small groove



Number of teeth: Z (=Teeth) 3+3
RPM: n. max. = 30.000 min⁻¹
Shank material: heavy metal

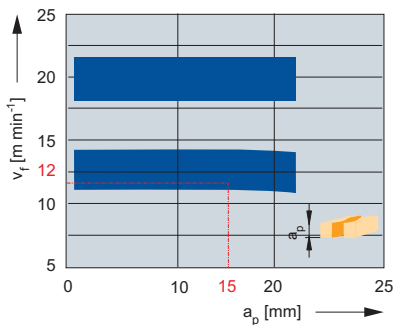


Diagram to determine feed speed v_f depending on grooving depth a_p ,
1= Jointing
2= Sizing

Router cutter DiaMaster PRO Z(=Teeth)3+3



See p. 441a
Leitz-Lexicon Edition 4

Router cutter for sizing and pre-cutting, particularly suitable for nesting. DP PRO-tipped, Z (=Teeth) 3+3 with DP cutting bit. Vibration dampened tool body made out of heavy metal. Large shear angle for reduced cutting forces and maximum edge quality. Increased stability of the tool body at high strain

WO 140-2-50*

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	ROT	ID No.
*	12	70	24	12x40	RH	091298 ●
*	12	80	30	12x40	RH	091299 ●

Router cutter Diamaster PRO, Z (=Teeth) 3+3

Workpiece material:
Chipboard plastic coated
Operation: Jointing, Sizing
RPM: n 18000 min⁻¹
Correction factor v_f : MDF = 0,8;
Chipboard = 1,1;
Veneer across grain = 0,7

- available ex stock
- available at short notice

2. Cutting tools with shank



Number of teeth: Z (=Teeth) 3
RPM: n 16000 - 36000 min⁻¹

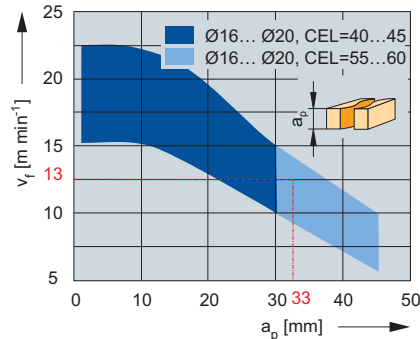


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 16-20 mm

Product line for the machining of compound materials, highly resin wood and other homogeneous materials. Roughing cutter is coated completely. Resharpener on the face.



Number of teeth: Z (=Teeth) 3
RPM: n 16000 - 36000 min⁻¹

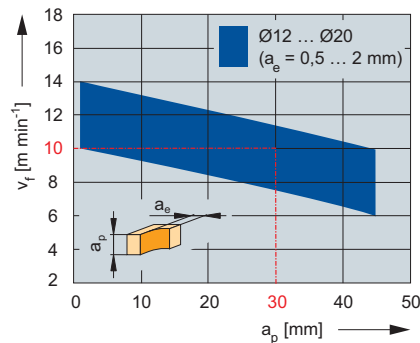
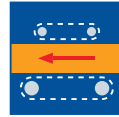
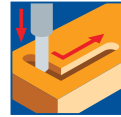


Diagram to determine feed speed v_f depending on grooving depth a_p , DIA 12 - 20 mm

Product line for the machining of compound materials, highly resin wood and other homogeneous materials. Roughing cutter is coated completely. Resharpener on the face.

2.3 Spiral router cutter program Marathon coated

Spiral roughing finishing cutter Z(=Teeth)3 Marathon-design



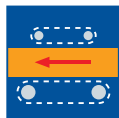
See p. 426a
 Leitz-Lexicon Edition 4

Router cutter with Marathon coating for sizing and grooving, solid TC, Z (=Teeth) 3, roughing, spiral cutting edges, nearly roughing quality, long design for machining large thicknesses.

WO 160 2 12

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	T mm	TWIST	ID No. RH	
*	12	80	35	12x40	3	UP	42270	●
*	12	90	42	12x40	3	UP	42271	●
*	14	110	50	14x55	3	UP	42272	●
*	16	100	40	16x55	3	UP	42273	●
*	16	110	55	16x55	3	UP	42274	●
*	20	120	60	20x55	3	UP	42275	●
*	20	130	75	20x50	3	UP	42276	●

Spiral finishing cutter solid HW Z(=Teeth)3 Marathon-design



Router cutter with Marathon coating for sizing and grooving, solid TC, Z (=Teeth) 3, finishing, spiral cutting edges, long design for machining large thicknesses with reduced feed speeds.

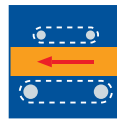
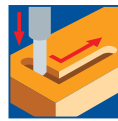
WO 160 2 10

Class.	DIA mm	OAL mm	CEL mm	S DIA mm	T mm	TWIST	ID No. RH	
*	12	80	35	12x40	3	UP	42790	●
*	14	110	50	14x55	3	UP	42791	●
*	16	110	55	16x55	3	UP	42792	●
*	20	120	60	20x55	3	UP	42793	●
*	20	130	75	20x50	3	UP	42794	●

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 100 Series



DIA	OAL	CEL	S DIA	ID No.	
1/4"	3"	1 1/4"	1/4"	737307359	●
3/8"	3"	3/4"	3/8"	737309244	●

Application: Grooving and Slotting
 Machine: CNC
 Material: Soft Wood, Hard Wood, Soft Plastic, Hard Plastic, Aluminum, Solid Surface

Wood - 110 Series

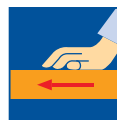
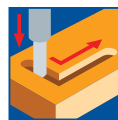


Solid Carbide Z(=Teeth)1 Flute Downcut Polished Flute

DIA	OAL	CEL	S DIA	ID No.	
1/8"	2"	1/2"	1/4"	737000127	●
1/4"	2"	5/8"	1/4"	737305858	●
1/4"	2 1/2"	7/8"	1/4"	737309062	●

Application: Grooving and Slotting
 Machine: CNC
 Material: Soft Wood, Hard Wood, Soft Plastic, Hard Plastic, Aluminum, Solid Surface

Wood - 120 Series



DIA	OAL	CEL	S DIA	ID No.	
1/8"	2 5/8"	3/8"	1/4"	737301545	●
3/16"	2 7/8"	5/8"	1/4"	737308572	●
1/4"	2 3/4"	3/4"	1/4"	737301794	●
1/4"	3 1/4"	3/4"	1/2"	737300673	●
5/16"	3"	3/4"	3/8"	737307579	●
5/16"	3 1/4"	3/4"	1/2"	737300665	●
5/16"	3 1/2"	1"	1/2"	737301797	●
3/8"	3 1/2"	1"	1/2"	737301385	●
3/8"	3 3/4"	1 1/4"	1/2"	737301799	●
3/4"	3 1/4"	1 1/4"	1/2"	737307159	●
1/2"	3"	1"	1/2"	737301386	□

Application: Profiling or Slotting
 Machine: Manual
 Material: Soft Wood, Hard Wood

- available ex stock
- available within 2 weeks

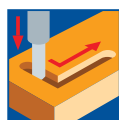
2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 130 Series



High Speed Steel Z(=Teeth)2 Flute Downcut Spiral



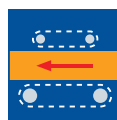
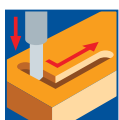
DIA	OAL	CEL	S DIA	ID No.	
1/8"	2 5/8"	5/16"	1/4"	737304159	●
1/4"	2 3/4"	3/4"	1/4"	737301479	●
1/4"	3"	1"	1/4"	737306168	●
1/2"	3 1/2"	1 1/2"	1/2"	737301800	●
3/4"	3 1/4"	1 1/4"	1/2"	737000566	●

Application: Profiling or Slotting
 Machine: Manual
 Material: Soft Wood, Hard Wood

Wood - 140 Series



Solid Carbide Z(=Teeth)2 Flute Upcut Spiral



DIA	OAL	CEL	S DIA	ID No.	
1/8"	2"	1/2"	1/4"	737000121	●
3/16"	2"	3/4"	1/4"	737000122	●
3/16"	2 1/2"	3/4"	1/4"	737300095	●
1/4"	2 1/2"	7/8"	1/4"	737000118	●
1/4"	2 1/2"	1"	1/4"	737000119	●
1/4"	3"	1 1/8"	1/4"	737000120	●
5/16"	3"	1 1/8"	5/16"	737000128	●
5/16"	3"	1 1/8"	1/2"	737000129	●
3/8"	3"	1 1/8"	3/8"	737000124	●
3/8"	3"	1 1/4"	3/8"	737000125	●
3/8"	3"	1 1/4"	1/2"	737000126	●
7/16"	3"	1"	1/2"	737302902	●
1/2"	3"	1 1/8"	1/2"	737000114	●
1/2"	3 1/2"	1 1/4"	1/2"	737300105	●
1/2"	3 1/2"	1 5/8"	1/2"	737000115	●
1/2"	4"	2 1/8"	1/2"	737000116	●
3/4"	4"	1 5/8"	3/4"	737000123	□
3/4"	4"	2 1/8"	3/4"	737300615	●

Application: Profiling or Slotting
 Machine: Manual or CNC
 Material: Soft Wood, Hard Wood, Composite Wood

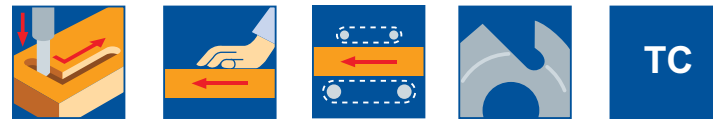
2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 150 Series



Solid Carbide Z(=Teeth)2 Flute Downcut Spiral



DIA	OAL	CEL	S	ID No.	
1/8"	2"	1/2"	1/4"	737000138	●
1/8"	2"	1/2"	1/4"	737300111	□
1/8"	2"	1/2"	1/8"	737304471	●
5/32"	2 1/2"	1/2"	1/4"	737308036	□
5/32"	2"	5/8"	1/4"	737306147	●
3/16"	2"	3/4"	1/4"	737000139	●
3/16"	2 1/2"	3/4"	1/4"	737307055	●
7/32"	2 1/2"	3/4"	1/4"	737000146	●
1/4"	2 1/2"	7/8"	1/4"	737000135	●
1/4"	2 1/2"	1"	1/4"	737000136	●
1/4"	2 1/2"	1"	1/4"	737000137	□
1/4"	3"	1 1/8"	1/4"	737300114	●
9/32"	2 1/2"	1"	5/16"	737301486	●
5/16"	3"	1 1/8"	5/16"	737000145	●
5/16"	3"	1 1/8"	1/2"	737300115	●
3/8"	3"	1"	3/8"	737000140	●
3/8"	3"	1 1/8"	3/8"	737000141	●
3/8"	3"	1 1/4"	3/8"	737000142	●
3/8"	3"	1 1/4"	3/8"	737300118	□
3/8"	3"	1 1/4"	1/2"	737000143	●
7/16"	3"	1"	1/2"	737300244	●
1/2"	3"	1 1/8"	1/2"	737000130	●
1/2"	3 1/2"	1 1/4"	1/2"	737000131	●
1/2"	3 1/2"	1 5/8"	1/2"	737000132	●
1/2"	3 1/2"	1 5/8"	1/2"	737000133	●
1/2"	3 1/2"	1 5/8"	1/2"	737300120	□
1/2"	4"	2 1/8"	1/2"	737000134	●
3/4"	4"	1 5/8"	3/4"	737300434	●
3/4"	4"	2 1/8"	3/4"	737300290	●

Application: Profiling or Slotting
 Machine: Manual or CNC
 Material: Soft Wood, Hard Wood, Composite Wood

Wood - 160 Series



Solid Carbide Z(=Teeth)2 Flute Heavy Duty Downcut Spiral



DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/2"	7/8"	1/4"	737301812	●
1/2"	3"	1 1/4"	1/2"	737305557	●

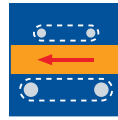
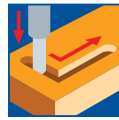
Application: Grooving and Slotting
 Machine: CNC
 Material: Soft Wood, Hard Wood, Composite Wood

- available ex stock
- available within 2 weeks

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 170 Series



UPCUT SPIRAL

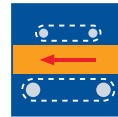
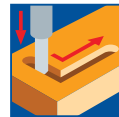
DIA	OAL	CEL	S DIA	ID No.	
3/8"	3 1/2"	1 1/8"	3/8"	737300449	●
1/2"	4"	1 5/8"	1/2"	737300297	●
3/4"	5"	2 1/8"	3/4"	737303016	●

DOWNCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
3/8"	3"	1 1/8"	3/8"	737300678	●
1/2"	1/2"	1 5/8"	1/2"	737300656	●
3/4"	4/5"	2 1/8"	3/4"	737300720	●

Application: Profiling or Slotting
 Machine: Manual or CNC
 Material: Soft Wood, Hard Wood, Composite Wood

Wood - 180 Series



UPCUT SPIRAL

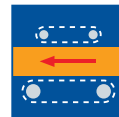
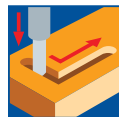
DIA	OAL	CEL	S DIA	ID No.	
3/8"	3 1/2"	1 1/8"	3/8"	737300167	●
1/2"	3 1/2"	1 1/8"	1/2"	737301365	●
1/2"	4"	1 1/5"	1/2"	737000112	●
3/4"	5"	2 1/8"	3/4"	737300127	●

DOWNCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
1/2"	3 1/2"	1 1/8"	1/2"	737300029	●
3/4"	5"		3/4"	737300128	●

Application: Profiling or Slotting
 Machine: Manual or CNC
 Material: Soft Wood, Hard Wood, Composite Wood

Wood - 190 Series



UPCUT SPIRAL

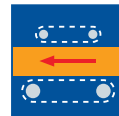
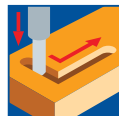
DIA	OAL	CEL	S DIA	ID No.	
3/8"	3"	1 1/8"	3/8"	737302216	□
1/2"	3 1/2"	1 5/8"	1/2"	737301817	●

DOWNCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
1/2"	3 1/2"	1 5/8"	1/2"	737303007	●
1/2"	4"	2 1/8"	1/2"	737306237	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Wood, Composite Wood

Wood - 200 Series



DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/2"	7/8"	1/4"	737000156	●
1/2"	3 1/2"	1 5/8"	1/2"	737000148	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Wood, Composite Wood

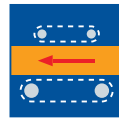
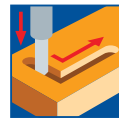
2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 210 Series



Solid Carbide Z(=Teeth)2+2 Compression



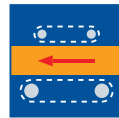
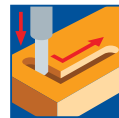
DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/2"	7/8"	1/4"	737300493	●
3/8"	3"	1 1/8"	3/8"	737000158	●
1/2"	3"	1"	1/2"	737000150	●
1/2"	3"	1 1/8"	1/2"	737000151	●
1/2"	3 1/2"	1 3/8"	1/2"	737000152	●
1/2"	4"	1 5/8"	1/2"	737000153	●
1/2"	4"	1 5/8"	1/2"	737303106	●
5/8"	5"	2 1/4"	5/8"	737300451	●
3/4"	4"	1 7/8"	3/4"	737303258	●
3/4"	5"	2 1/2"	3/4"	737300714	●

Application: Profiling
 Machine: CNC
 Material: Hard Wood, Composite Wood

Wood - 220 Series



Solid Carbide Z(=Teeth)2+2 Chipbreaker/Finisher Compression



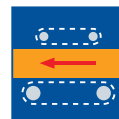
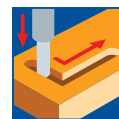
DIA	OAL	CEL	S DIA	ID No.	
3/8"	3"	7/8"	3/8"	737300472	●
3/8"	3"	1 1/8"	3/8"	737300437	●
5/8"	5"	2 1/4"	5/8"	737300660	●

Application: Profiling
 Machine: CNC
 Material: Hard Wood, Composite Wood

Wood - 230 Series



Solid Carbide Z(=Teeth)3+3 Compression



DIA	OAL	CEL	S DIA	ID No.	
3/8"	3"	1 1/8"	3/8"	737300502	●
1/2"	3"	1 1/8"	1/2"	737300185	●

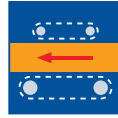
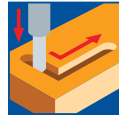
Application: Profiling
 Machine: CNC
 Material: Hard Wood, Composite Wood

- available ex stock
- available within 2 weeks

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 240 Series



Z (=Teeth) 1+1 Compression

DIA	OAL	CEL	Upcut Length	S DIA	ID No.	
1/4"	2 1/2"	7/8"	0,175"	1/4"	737300197	●
3/8"	3"	7/8"	0,188"	3/8"	737300034	●

Z (=Teeth) 2+2 Compression

DIA	OAL	CEL	Upcut Length	S DIA	ID No.	
1/4"	2 1/2"	7/8"	0,188"	1/4"	737303410	●
3/8"	3"	7/8"	0,188"	3/8"	737000159	●
1/2"	3"	7/8"	0,200"	1/2"	737300036	●
1/2"	3 1/2"	1 3/8"	0,200"	1/2"	737000155	●
1/2"	3 1/2"	1 3/8"	0,200"	1/2"	737300429	●

Z (=Teeth) 3+3 Compression

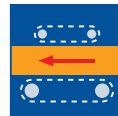
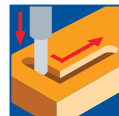
DIA	OAL	CEL	Upcut Length	S DIA	ID No.	
3/8"	3"	7/8"	0,200"	3/8"	737300427	●
1/2"	3"	7/8"	0,200"	1/2"	737300428	●
1/2"	3 1/2"	1 3/8"	0,200"	1/2"	737300411	●
3/4"	4"	2"	0,200"	3/4"	737301405	●

Z (=Teeth) 4+4 Compression

DIA	OAL	CEL	Upcut Length	S DIA	ID No.	
1/2"	3 1/2"	1 3/8"	0,200"	1/2"	737301816	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Wood, Composite Wood

Wood - 250 Series



Z (=Teeth) 1+1 Compression

DIA	OAL	CEL	S DIA	ID No.		
1/2"	3"	1 1/8"	1/2"	737307746	*	□

Z (=Teeth) 2+2 Compression

DIA	OAL	CEL	S DIA	ID No.	
3/8"	3"	7/8"	3/8"	737304397	* ●
1/2"	3"	7/8"	1/2"	737300013	* ●
1/2"	3"	1 1/8"	1/2"	737305475	●
1/2"	3 1/2"	1 1/8"	1/2"	737302096	●
1/2"	4"	1 5/8"	1/2"	737301578	●
3/4"	5"	2 1/4"	3/4"	737308644	●

Z (=Teeth) 3+3 Compression

DIA	OAL	CEL	S DIA	ID No.	
3/8"	3"	7/8"	3/8"	737301462	* ●

* Mortise Compression

Application: Profiling
 Machine: CNC
 Material: Hard Wood, Composite Wood

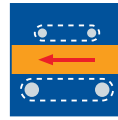
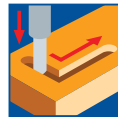
2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 260 Series



Solid Carbide Z(=Teeth)4+4 Compression



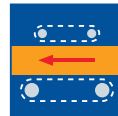
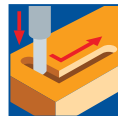
DIA	OAL	CEL	S DIA	ID No.	
1/2"	3 1/2"	1 3/8"	1/2"	737300186	●
1/2"	4"	1 5/8"	1/2"	737301519	●

Application: Profiling
 Machine: CNC
 Material: Hard Wood, Composite Wood

Wood - 270 Series



Solid Carbide Z(=Teeth)3 Flute Finisher



UPCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
1/4"	3"	7/8"	1/4"	737300053	●
3/8"	3"	5/8"	3/8"	737300055	●
3/8"	3"	1 1/8"	3/8"	737301815	●
1/2"	3 1/2"	1 1/8"	1/2"	737300056	●
1/2"	4"	1 5/8"	1/2"	737300062	●
3/4"	5"	2 1/8"	3/4"	737300058	●
3/4"	6"	3 1/8"	3/4"	737309240	●

DOWNCUT SPIRAL

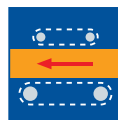
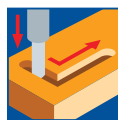
DIA	OAL	CEL	S DIA	ID No.	
1/2"	3 1/2"	1 1/8"	1/2"	737300541	●
1/2"	4"	1 5/8"	1/2"	737300024	●
1/2"	4 1/2"	2 1/8"	1/2"	737300063	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Soft Wood, Hard Wood, Soft Plastic, Hard Plastic, Solid Surface

Wood - 280 Series



Solid Carbide Z(=Teeth)2 Flute Chipbreaker Finisher



DOWNCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
1/2"	3"	1 1/8"	1/2"	737300540	●

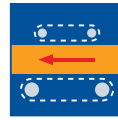
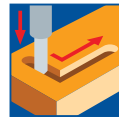
Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Wood, Composite Wood

- available ex stock
- available within 2 weeks

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Wood Series

Wood - 290 Series



UPCUT SPIRAL

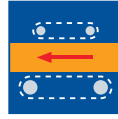
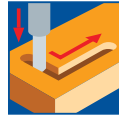
DIA	OAL	CEL	S DIA	ID No.
3/4"	4"	2 1/4"	3/4"	737300046 ●

DOWNCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.
3/8"	3"	1 1/8"	3/8"	737300679 ●
1/2"	3"	1 1/8"	1/2"	737300047 ●
1/2"	3 1/2"	1 5/8"	1/2"	737300177 ●

Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Wood, Composite Wood

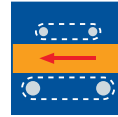
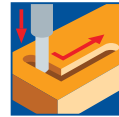
Wood - 300 Series



DIA	OAL	CEL	S DIA	ID No.
1/2"	3"	1"	1/2"	737300237 ●

Application: Profiling
 Machine: CNC
 Material: Soft Wood, Hard Wood, Composite Wood

Wood - 310 Series



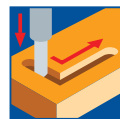
DIA	OAL	CEL	S DIA	ID No.
1/2"	4"	1 5/8"	1/2"	737307240 ●

Application: Profiling
 Machine: CNC
 Material: Soft Wood, Hard Wood, Composite Wood

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Plastic Series

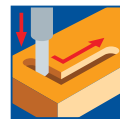
Plastic - 400 Series



DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 3/8"	1"	1/4"	737301778	●

Application: Profiling or Slotting
 Machine: Manual
 Material: Soft Plastic

Plastic - 410 Series

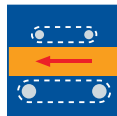
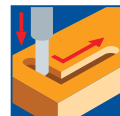


UPCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/8"	3/4"	1/4"	737306661	●

Application: Profiling or Slotting
 Machine: Manual
 Material: Soft Plastic, Hard Plastic

Plastic - 420 Series

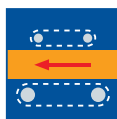
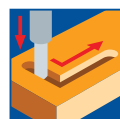


Solid Carbide Z(=Teeth)1 Straight O Flute

DIA	OAL	CEL	S DIA	ID No.	
1/8"	2"	1/2"	1/4"	737303096	●
3/16"	2"	3/8"	1/4"	737303101	●
3/16"	2"	5/8"	1/4"	737303482	●
3/16"	4"	1"	1/4"	737307219	●
1/4"	2 1/2"	3/4"	1/4"	737300511	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Soft Plastic, Hard Plastic

Plastic - 430 Series



Solid Carbide Z(=Teeth)2 Straight O Flute

DIA	OAL	CEL	S DIA	ID No.	
1/8"	2"	5/16"	1/4"	737304149	●
1/8"	2"	1/2"	1/4"	737300215	●
1/4"	2 1/2"	1"	1/4"	737300641	●
1/2"	4"	1 3/4"	1/2"	737302944	●

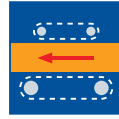
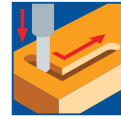
Application: Profiling or Slotting
 Machine: CNC
 Material: Soft Plastic, Hard Plastic

- available ex stock
- available within 2 weeks

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Plastic Series

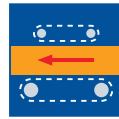
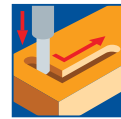
Plastic - 440 Series



DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/2"	3/4"	1/4"	737300510	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Plastic

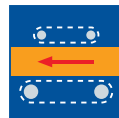
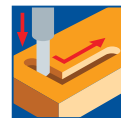
Plastic - 450 Series



DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/2"	3/4"	1/4"	737300617	●
3/8"	3"	1"	3/8"	737300425	●
1/2"	3 1/2"	1 1/8"	1/2"	737300339	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Soft Plastic, Hard Plastic

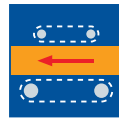
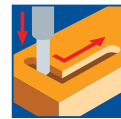
Plastic - 460 Series



HARD PLASTIC					SOFT PLASTIC						
DIA	OAL	CEL	S DIA	ID No.	DIA	OAL	CEL	S DIA	ID No.		
1/4"	2 1/2"	3/4"	1/4"	737300213	●	3/16"	2"	5/8"	1/4"	737307668	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Soft Plastic, Hard Plastic

Plastic - 470 Series



DOWNCUT SPIRAL					UPCUT SPIRAL						
DIA	OAL	CEL	S DIA	ID No.	DIA	OAL	CEL	S DIA	ID No.		
1/16"	2"	1/4"	1/4"	737302022	●	1/16"	2"	1/4"	1/4"	737300279	●
1/8"	2"	1/2"	1/4"	737300017	●	1/8"	2"	1/2"	1/4"	737302959	●
3/16"	2"	5/8"	1/4"	737300200	●	3/16"	2"	5/8"	1/4"	737300723	●
1/4"	2 1/2"	3/4"	1/4"	737300016	●	1/4"	2 1/2"	3/4"	1/4"	737300130	●
1/4"	3"	1 1/4"	1/4"	737300336	●						
3/8"	3"	1 1/8"	3/8"	737300203	●						

Application: Profiling or Slotting
 Machine: CNC
 Material: Soft Plastic, Hard Plastic

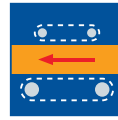
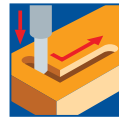
2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes Plastic Series / General Purpose

Plastic - 480 Series



Solid Carbide Z(=Teeth)2 Upcut O Flute



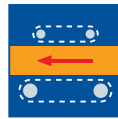
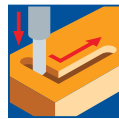
DIA	OAL	CEL	S DIA	ID No.	
1/4"	2 1/2"	3/4"	1/4"	737000227	●
1/2"	3 1/2"	1 1/8"	1/2"	737300333	●
1/2"	3 1/2"	1 5/8"	1/2"	737307529	●

Application: Grooving and Slotting
 Machine: CNC
 Material: Soft Plastic, Hard Plastic

Plastic - 490 Series



Solid Carbide Z(=Teeth)3 Flute Finisher



UPCUT SPIRAL

DIA	OAL	CEL	S DIA	ID No.	
1/4"	3"	7/8"	1/4"	737300053	●
3/8"	3"	5/8"	3/8"	737300055	●
3/8"	3"	1 1/8"	3/8"	737301815	●
1/2"	3 1/2"	1 1/8"	1/2"	737300056	●
1/2"	4"	1 5/8"	1/2"	737300062	●
3/4"	5"	2 1/8"	3/4"	737300058	●

DOWNCUT SPIRAL

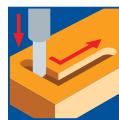
DIA	OAL	CEL	S DIA	ID No.	
1/2"	3 1/2"	1 1/8"	1/2"	737300541	●
1/2"	4"	1 5/8"	1/2"	737300024	●

Application: Profiling or Slotting
 Machine: CNC
 Material: Hard Plastic

Gen Purpose - 500 Series



High Speed Steel Z(=Teeth)1 Flute Downcut Spiral



DIA	OAL	CEL	S DIA	ID No.	
1/4"	3"	3/4"	1/4"	737305108	●

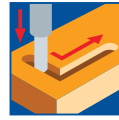
Application: Slotting
 Machine: Manual
 Material: Aluminum - Plywood Sandwich Panels

- available ex stock
- available at short notice

2. Cutting tools with shank

2.3 Spiral router cutter - Imperial Sizes General Purpose / Aluminum

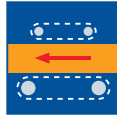
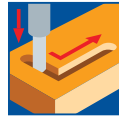
Gen Purpose - 510 Series



DIA	OAL	CEL	S DIA	ID No.	Style	
1/4"	1 1/2"	1/4"	1/4"	737300422	Flush	●
1/4"	1 1/2"	1/4"	1/4"	737300264	7° Bevel	●

Application: Trimming
Machine: Manual
Material: Laminate Countertops

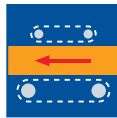
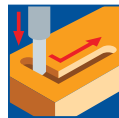
Aluminum - 520 Series



DIA	OAL	CEL	S DIA	ID No.	
1/8"	2"	1/4"	1/4"	737300624	●
1/8"	2"	1/2"	1/4"	737300546	●
3/16"	2"	5/8"	1/4"	737303051	●
1/4"	2"	3/8"	1/4"	737306803	●
1/4"	2 1/2"	3/4"	1/4"	737300515	●
1/4"	3"	1 1/4"	1/4"	737300545	●
3/8"	3"	1 1/8"	3/8"	737305360	●

Application: Grooving and Slotting
Machine: CNC
Material: Aluminum

Aluminum - 530 Series



DIA	OAL	CEL	S DIA	ID No.	
1/8"	2"	1/4"	1/8"	737307706	□
3/16"	2"	3/8"	3/16"	737304289	□
1/2"	5"	5/8"	1/2"	737309263	●

Application: Grooving and Slotting
Machine: CNC
Material: Aluminum

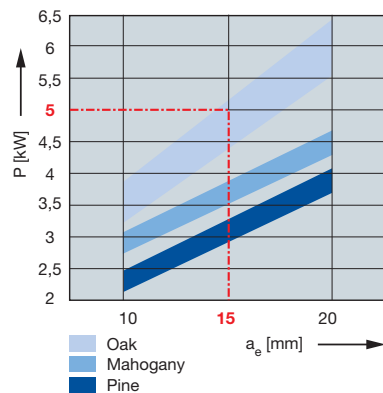
5. Cutting tools with shank

5.2 Jointing, rebating and bevelling

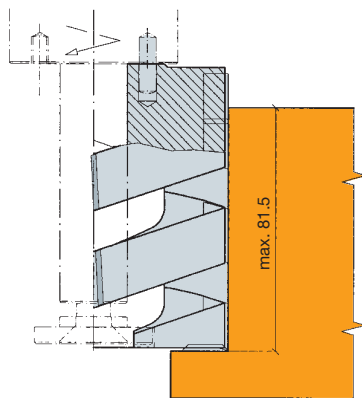
Copy shaping cutterset



Tool body: Aluminium
Number of teeth: Z 2/V 2
RPM: n max. 18000 min⁻¹



Power P depends on workpiece material and cutting depth a_e .
 Diagram for tool diameter D=80 mm, Z 2, workpiece thickness $a_p = 60$ mm at n 12000 min⁻¹ and v_f 4 m/min⁻¹



Rebating

Attention:

When ordering – only use the following cutter arbors

D	clamping length	d
80 mm	70 mm	20 mm
125 mm	80 mm	30 mm

For pre-cutting, jointing, copying and rebating. HW knives in turnblade design Z2, with shear angle in spiral arrangement for improved hogging and optimised chip removal. Staggered cut to reduce the cutting forces. Spurs for machining tear-free rebates in soft and hardwood. Ideal for deep hogging depths. Roughing quality for subsequent profiling or jointing. Choice of HW cutting materials quality to suit the workpiece. Constant diameter tool.

SL 499-2 *

Class.	Tool Type	ABM pcs.	AM	Z	V	ID Nr.
*	Cutterhead	HW; 80x80,7/83x20; Z2/2	12	2/2	2	407193 ●
*	Cutterhead mounted on cutter arbor		12	2/2	2	426047 □
*	Cutterhead	HW:125x81x30, Z2/2V4	12	2/2	4	407196 ●
*	Cutterhead mounted on cutter arbor		12	2/2	4	426050 □

Spare parts

ART	ABM mm	ID Nr.
Turnblade knife (VE 10 pcs.)	14,7x8x1,52	005070 ●
Spur (VE 10 pcs.)	14x14x2	005099 ●
Clamping wedge		009670 ●
Screw	M6x18,5	007818 ●
Screw	M5x8,5	007808 ●
Washer	D9x1,2	006747 ●
Key	T 25	117504 ●
Key	T 20	117503 ●
Setting gauge	0,3/0,8	005374 ●

VE = packing unit

Tool with HW-turnblade knives for solid wood.

Order example:

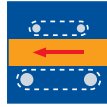
Tool set ID No. **426047** mounted on cutter arbor ID No. **042987**, HSK-F 63, A = 45 mm as per DIN 69893.

5. Cutting tools with shank

5.2 Jointing, rebating and bevelling

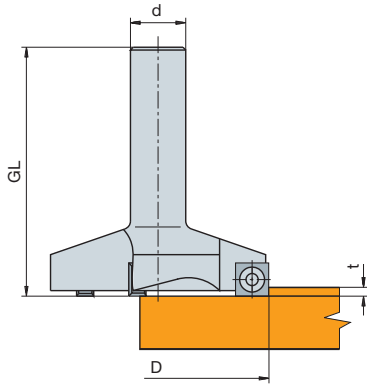


Planing cutter – turnblade design



Number of teeth: Z 3
RPM: n 8000 - 12000 min⁻¹

For planing workpiece surfaces and large rebate depths in one work step. HW turnblade knives Z3, with shear. Exchangeable cutting edges for machining solid wood, MDF or plastics. Choice of HW cutting material quality to suit the workpiece.

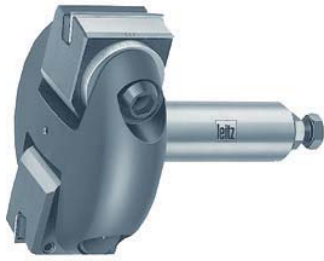


WL 400-2 *

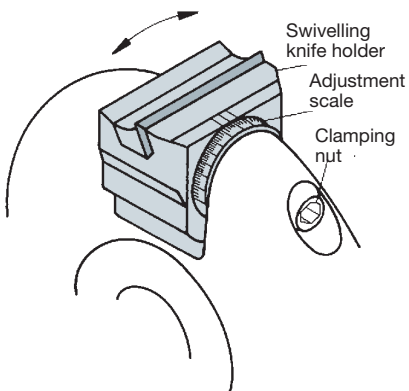
Class.	D	GL	NL	S	DRI	ID Nr.
	mm	mm	mm	mm		
*	80	90	12	20x50	RL	041550 ●
*	80	100	12	25x60	RL	041551 ●
*	50	80	12	1/2"x60	RL	130033007
*	100	90	12	3/4"x60	RL	130057336
*	180	90	12	3/4"x60	RL	130000000
ART				ABM		ID Nr.
Oval head screw				M4x6		006225 ●
Screw driver, Torx				T 15		005457 ●
Turnblade knife				HW: 12x12x1.5		005081 ●

5. Cutting tools with shank

5.2 Jointing, rebating and bevelling

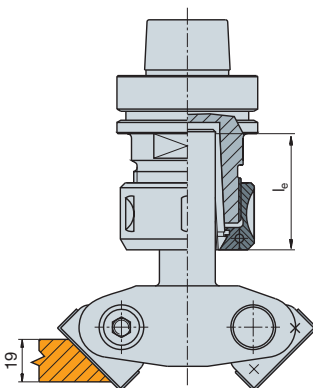


Number of teeth: Z 2
RPM: n. max 12000 min⁻¹



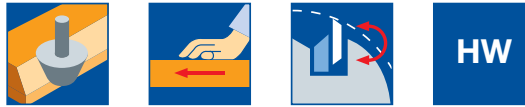
Bevelling cutterhead with swivelling knife holder

- 1 Swivelling knife holder
- 2 Adjustment scale
- 3 Clamping nut



Bevelling top edge

Bevelling cutterhead



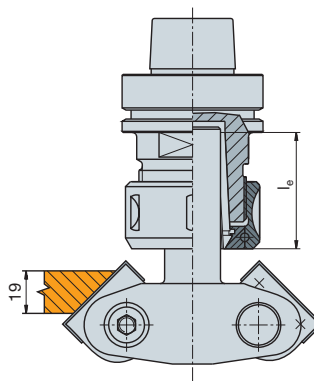
For jointing and bevelling with stepless adjustable bevel angle. HW turnblade knives Z2. Accurate, easy readable scale for precise and fast adjustment to the required bevel angle. The workpiece can be bevelled either from above or below. Swivel range from 0 - 85° allows panel raising. Choice of HW cutting material quality to suit the workpiece.

WP 341-1-01 *

Class.	D	GL	SB	S	ID Nr.
	mm	mm	mm	mm	
*	100	100	40	20x50	042852 ●
*	100	110	40	25x60	042850 ●

Spare parts

BEZ	ABM	BEM	VE	ID Nr.
	mm		pcs	
Turnblade knife	M6x12	ISK 3		006035 ●
Screw	HW; 40x12x1,5		10	005085 ●
Clamping wedge with pin	38x10,88x6			005348 ●
Key	SW 8			005437 ●
Key	SW 3			005433 ●



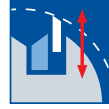
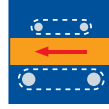
Bevelling bottom edge

- available ex stock
- available at short notice

5. Cutting tools with shank

5.3 Standard profiles 5.3.3 Multi-purpose cutterheads

Profile cutterhead-Radius/Bevelling profile



Router cutter with exchangeable knives to cut different radius edge profiles or bevel 45° on one tool body, ideal for profiles with a small internal radius.

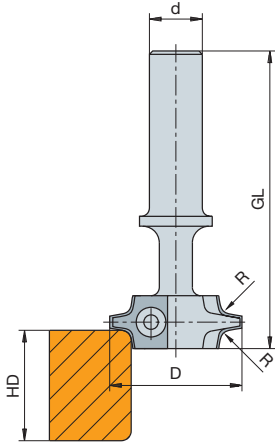
Cutterhead with knife set/radii profiles

AG 740-2 *

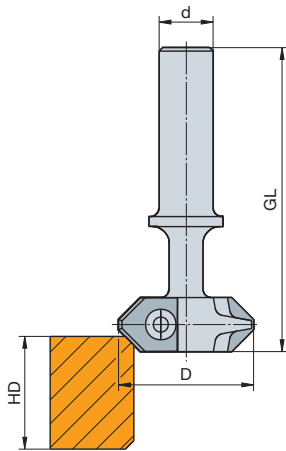
Class.	Tool Type	ID Nr.
*	1 Tool body + each 2 pcs. R2, R3, R4, R5-knife + wooden box D=40 mm, Shank 16x60 mm	043105 ●

Spare parts

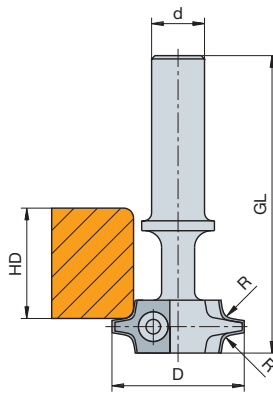
ART	ABM mm	R/Bevel mm	ID Nr.
Profile knife	16x17,5x2	2	005132 ●
Profile knife	16x17,5x2	3	005133 ●
Profile knife	16x17,5x2	4	005134 ●
Profile knife	16x17,5x2	5	005135 ●
Profile knife	16x17,5x2	45°	009525 ●
Screw	M 4x6		006225 ●
Key	T 15		005457 ●



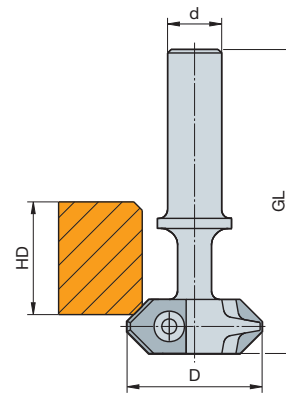
Edge rounding at top of workpiece



Edge beveling at top of workpiece



Edge rounding at bottom of workpiece



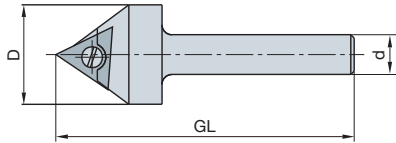
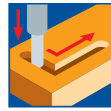
Edge beveling at bottom of workpiece

- available ex stock
- available at short notice

5. Cutting tools with shank

5.3.3 Multi-purpose cutterheads

Profile cutterhead



V-groove 68° in turnblade design

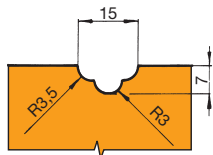
V-grooving cutter. HW turnblade Z2. V-groove 68°. Three edged turnblade knife. For finish cutting different interior profiles.

End milling, V-groover in turnblade design 68°, Z 1 WL 300-2 *

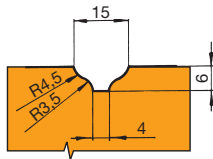
Class.	D	B	GL	S	ID Nr.
		mm	mm	mm	mm
*	30	15	90	12x40	042932 ●

Spare parts

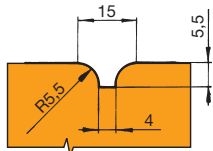
ART	ABM	ID Nr.
	mm	
Serrated blank knife	9x3x21,7	007490 ●
Clamping wedge	9x7x27,4	009584 ●
Size	SW 3	005433 ●
Sickle spanner		005498 ●
Profile knife 1	9x3x21,7	006945 ●
Profile knife 2	9x3x21,7	006946 ●
Profile knife 3	9x3x21,7	006947 ●
Profile knife 4	9x3x21,7	006948 ●
Profile knife 5	9x3x21,7	006949 ●
Profile knife 6	9x3x21,7	006950 ●
Turnblade knife	19x19x2	009528 ●
Screw	M 5x5	007381 ●



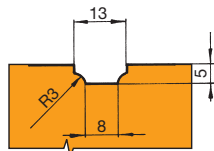
Profile 1



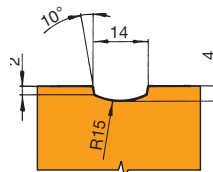
Profile 2



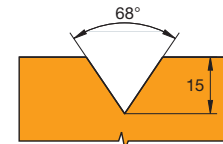
Profile 3



Profile 4



Profile 5



Profile 6

5. Cutting tools with shank

5.4 Tooling systems for special profiles

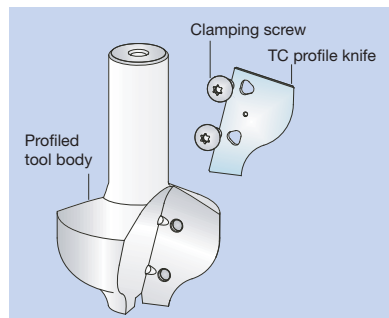
5.4.2 VariForm multi-purpose profile cutterhead

Application	Machining profiles.
Workpiece material (recommended cutting material)	Soft and hardwood (HW1). Chipboard and fibre materials (MDF, HF, etc.), uncoated, with plastic coating, with veneer, etc. (HW2). Plywood (HW2). Duro-plastics (HW2). Thermoplastics (HW1, HW2). Polymer plastics (Corian, Varicor, etc.) (HW2). Note: Two different grades of HW blanks available – HW1, HW2.
Machine	Router machines with / without CNC, CNC machining centres, Special machines with spindle for shank tools.
Operation	With and against feed, limited chip removal.
Technical features	VariForm profile cutterheads can be used for many different profile machining operations. 2 different designs available: a) with profiled tool body for single pieces and small batches production. b) with profiled cutter blanks for prototype and single piece production.
Application Data	RPM/feed speed Recommended cutting speeds v_c and feed speeds f_z for multi-purpose cutterheads.

	Cutterhead HW v_c [m/s]		Cutterhead HW f_z [mm]
Softwood	60-90	Solid wood along grain	0,3 -0,5
Hardwood	50-80	Solid wood across grain	0,25-0,35
Chipboard/MDF	60-80	Chipboard/MDF	0,3 -0,5
Plywood	60-80	Plywood	0,25-0,35
Plastic-coated board	40-60		

Clamping the workpiece	To avoid problems of cut quality it is essential to clamp the workpiece sufficiently. Insufficient clamping will reduce both the quality of cut and tool lifetime. Panels can be held in place with vacuum clamping, but sometimes additional mechanical clamping is required (e.g. when machining TRESPA, etc). Small and arched workpieces must be clamped with special fixtures.
-------------------------------	--

General information	Many profile shapes can be made with the profiled tool body design.
----------------------------	---

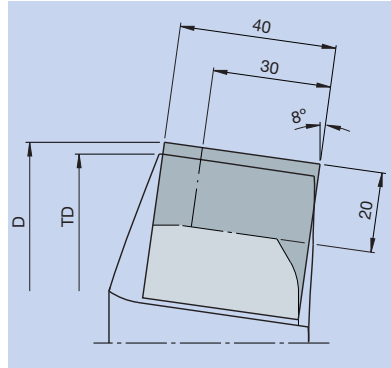


5. Cutting tools with shank

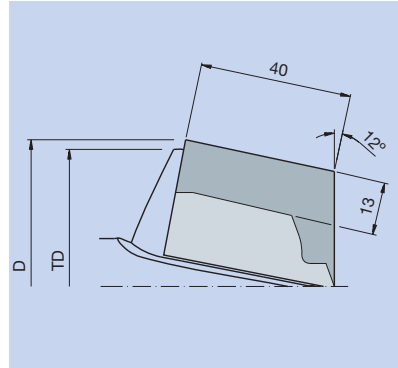
5.4 Tooling systems for special profiles 5.4.2 VariForm multi-purpose profile cutterhead

Profile area to be used

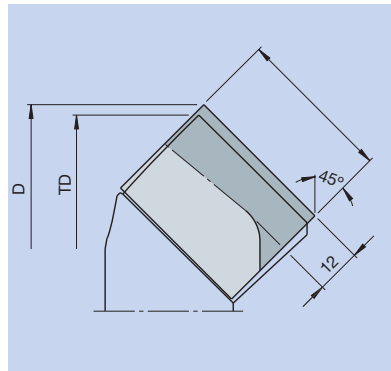
Design with tool body that can be profiled



Tool body, angled 8°,
right hand rotation,
large diameter to the top,
SB 30-50 mm.

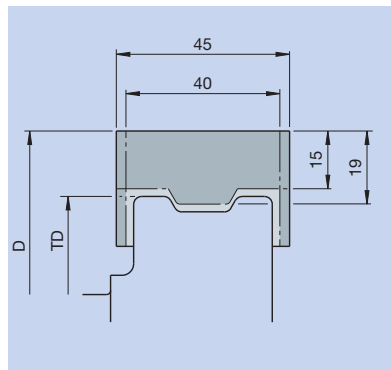


Tool body, angled 12°,
right hand rotation,
large diameter to the top,
SB 40 mm.

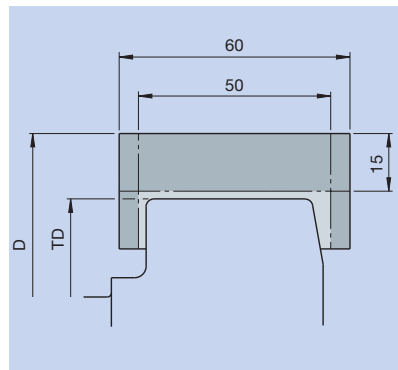


Tool body, angled 45°,
right hand rotation,
large diameter to the top,
SB 40 mm.

Design with backing plates



Tool body SB 40/45 mm.



Tool body SB 50/60 mm.

5. Cutting tools with shank

5.4 Tooling systems for special profiles

5.4.2 VariForm



Profil cutterhead VariForm



Number of teeth: Z 2

RPM:

D 105 mm: n max. 12000 min⁻¹
D 77 mm: n max. 14000 min⁻¹

Profile area:

See page 494

VariForm-system advantages:

- Knives can be sharpened 3 to 4 times.
- The modular construction allows you to use the same profile knives in different tool bodies on different machines.
- Profile flexibility and safety by matching the tool body to the depth of the profile.
- Precision and safety from the 3-point knife location.

Unprofiled tool body, 8° angled, mech. feed, Z2

D	TD	SB	shank	PTmax.	ID Nr.	ID Nr.
mm	mm	mm	mm	mm	LL	RL
100	97	30/8°	25x60	20	135420 ●	135421 ●
102	99	40/8°	25x60	20	135422 ●	135423 ●
105	101	50/8°	25x60	20	135424 ●	135425 ●

Tool body profiled to required profile. Without knives.

Blanks for tool body, 8° angled, HW

Knife height	SB	PTmax.	ID Nr.	ID Nr.
mm	mm	mm	Knives HW1	Knives HW2
40	30	20	636233 ●	636220 ●
40	40	20	636240 ●	636227 ●
40	50	20	636272 ●	636284 ●

Unprofiled tool body, 12° angled, mech. feed, Z2

D	TD	SB	shank	PTmax.	ID Nr.	ID Nr.
mm	mm	mm	mm	mm	LL	RL
77	72	40/12°	25x60	30	135428 ●	135429 ●

Tool body profiled to required profile. Without knives.

Blanks for tool body, 12° angled, HW

Knife height	SB	PT max.	ID Nr.	ID Nr.
mm	mm	mm	Knives HW1	Knives HW2
30	40	30	636252 ●	636253 ●

Unprofiled tool body, 45° angled, mech. feed, Z2

D	TD	SB	shank	PTmax.	ID Nr.	ID Nr.
mm	mm	mm	mm	mm	LL	RL
105	101	40/45°	25x60	35	135426 ●	135427 ●

Tool body profiled to required profile. Without knives.

Blanks for tool body, 45° angled, HW

Knife height	SB	PTmax.	ID Nr.	ID Nr.
mm	mm	mm	Knives HW1	Knives HW2
30	40	30	636238 ●	636225 ●

Spare parts

ART	ABM	ID Nr.
mm	mm	
Screw	M5x10x13,5	007383 ●
Key	T 25	005502 ●

- available ex stock
- available at short notice

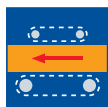
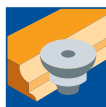
5. Cutting tools with shank

5.4 Tooling systems for special profiles

5.4.2 VariForm



Profil cutterhead VariForm



Number of teeth: Z 2

RPM:

D 110 mm: n max. 12000 min⁻¹

Profile area:

See page 494

VariForm-system advantages:

- Knives can be sharpened 3 to 4 times.
- The modular construction allows you to use the same profile knives in different tool bodies on different machines.
- Profile flexibility and safety by matching the tool body to the depth of the profile.
- Precision and safety from the 3-point knife location.

Tool body, mech. feed, Z 2

D	TD	SB	shank	PTmax.	ID Nr.
mm	mm	mm	mm	mm	RL
110	76	40/45	25x60	15	135400 ●
110	76	50/60	25x60	15	135401 ●

With clamping wedges, without backing plates and knives.

Blanks, HW

Knife height	SB	PTmax.	ID Nr.	ID Nr.
mm	mm	mm	Knife HW1	Knife HW2
40	40	15	636240 ●	636227 ●
40	45	15	636244 ●	636231 ●
40	50	15	636272 ●	636284 ●
40	60	15	636276 ●	636288 ●

Backing plates

Knife height	SB	PTmax.	ID Nr.
mm	mm	mm	
40	40	15	645000 ●
40	45	15	645001 ●
40	50	15	645002 ●
40	60	15	645003 ●

Spare parts

ART	ABM	for SB	ID Nr.
mm	mm	mm	
Clamping wedge	36314,7322,8	40/45	009761 ●
Clamping wedge	44314,7322,8	50/60	009762 ●
Screw	DIN 915, M10x2		006044 ●
Key	SW 5		117506 ●

5. Cutting tools with shank

5.4 Tool systems for special profiles

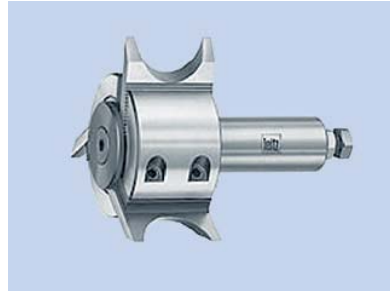
5.4.5 Serrated back cutterhead systems

Profile cutterhead with shank for back-serrated blanks

Ideal for machining small batches or prototypes as the profiled blanks can be produced quickly.

Knives can be resharpened and the serrated back to the profile knives allows them to be adjusted radially. The knife blanks can be profiled on both CNC and most standard profile grinding machines.

Serrated back knife cutterheads are the most used tool to machine special profiles. The tools shown below are suitable for different profiles. They are used for profiling in trade and industry on CNC router machines.



Features

1. Tool body made of steel.
2. Tool body can be clamped in a high concentric clamping system for a CNC router machine.
3. Suitable for high cutting speeds.
4. Knives located accurately by the serrated back profile.
5. Easy knife change possible on the machine.
6. Firmly clamped knives.

Technical features

Multi-purpose cutterhead for serrated back knives and the Micro-system consisting of an HW knife with micro serration and a backing plate.

Diameter	Tool body 63 mm. Cutting circle diameter 100 mm.
Cutting width	SB 40, 60 mm
Profile depth	PT = 16 mm (max.)
Number of teeth	Z = 2 and Z = 3
Diameter of tool body (D₀)	D ₀ = 68 mm
Feed	MEC – mechanical feed.
Cutting angle	20°
Knife clamping system	Wedge and clamping screws.
Shank	Ø 20 x 50 mm, Ø 25 x 60 mm
Application areas	Workpiece materials: Soft and hardwood, wood derived materials (plywood, particle board, MDF, HDF...) Plastics: Duro-plastics, thermoplastics, polymers (Corian, Varicor, ...), plastic compounds.
Machines	Router machines with or without CNC-control, CNC machining centres.

5. Cutting tools with shank

5.4 Tool systems for special profiles

5.4.5 Serrated back cutterhead systems

Cutting material

HS, HS Marathon, ST, HW.

Recommended cutting materials

	HS	ST	HS Marathon	HW	HW Micro-System
Softwood	◆	◆	◆	◆	◇
Hardwood		◇	◇	◆	◆
Plywood				◇	◆
Particle board				◇	◆
MDF				◇	◆
Polymeric plastics (Corian/Varicor)				◇	◆
HPL				◇	◆

◆ suitable ◇ conditional suitable

HS Marathon knives can increase the tool life by a factor of 7 depending on the application.

RPM

SB 60 mm, $n_{\max} = 10.000$ r.p.m.
SB 40 mm, $n_{\max} = 12.000$ r.p.m.

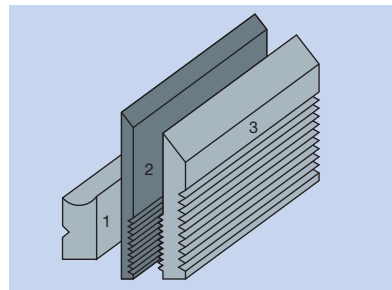
Recommended feeds and speeds

Solid wood, plywood – along grain; MDF, particle board:
Z2: $v_f = 6-10$ m/min; $n = 9.000-10.000$ min⁻¹
Z3: $v_f = 9-15$ m/min; $n = 9.000-10.000$ min⁻¹
Solid wood – across grain:
Z2: $v_f = 4,5-7$ m/min; $n = 9.000-10.000$ min⁻¹
Z3: $v_f = 6-9$ m/min; $n = 9.000-10.000$ min⁻¹

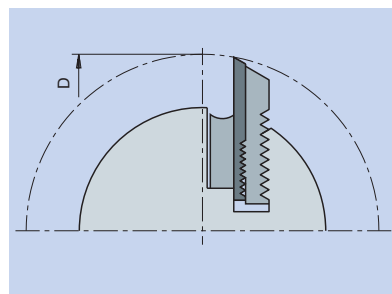
Construction information

- Axial knife location by tool body stop at tool the shank.
- Knife thickness of solid HS, ST and HW tipped knives: 6,0 mm.
- Knife thickness of micro-serrated HW knives: 2,5 mm, backing plates: 6,0 mm.
- Maximum diameter D = 100 mm must not be exceeded at any point of the knife. (max. PT = 16 mm).

Existing cutterheads can be modified to take the Micro-serrated system.



Set for micro-serrated tools consisting of:
1 Wedge
2 HW knife
3 Backing plate.



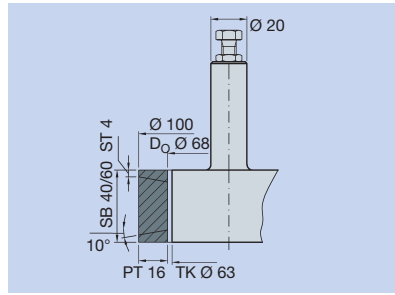
Tool with micro-serrated set.

5. Cutting tools with shank

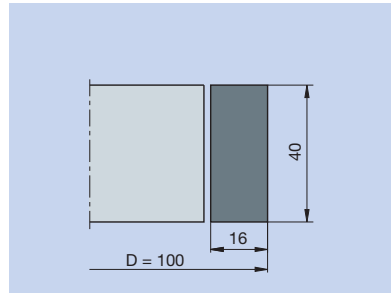
5.4 Tool systems for special profiles

5.4.5 Serrated back cutterhead systems

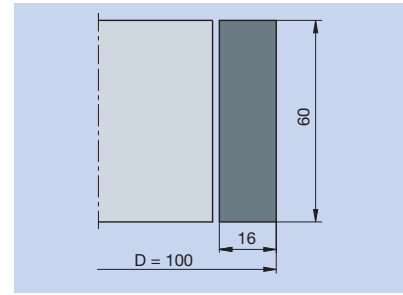
Profile area



Maximum usable profile area



Cutting width 40 mm.



Cutting width 60 mm.

Recommendation: Side clearance should be min. 10°. Cutter edge (ST) should be at least 4 mm.

Pitch of serrations

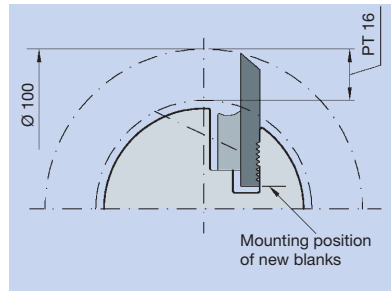
HS/HW blanks: 1,6 mm.
HW Micro system: 1,0 mm.

Safety warnings

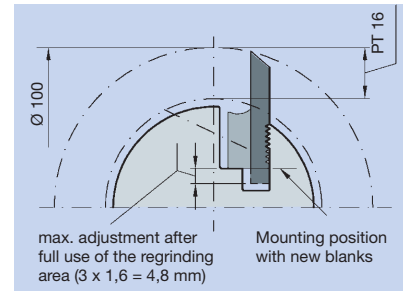
Maximum diameter D = 100 mm must not be exceeded at any point of the knife (max. PT = 16 mm).

Resharpener area

HS/HW blanks: 4,8 mm.
3 serrations of movement (3 x 1,6 mm = 4,8 mm).



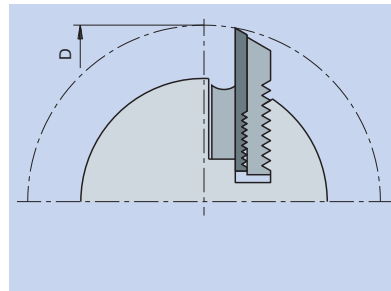
HS, HW and ST blank when new.



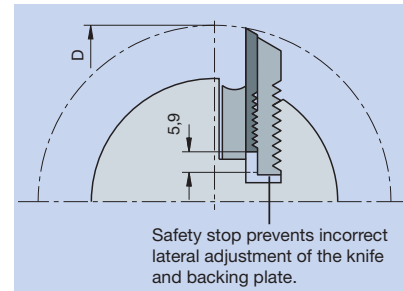
HS, HW and ST blank after full use of the resharpener area.

HW micro-serrated knives – Micro system

HHW Micro System: Resharpener area 5,9 mm.
5 serrations of movement (6 x 0,98 mm = 5,9 mm).



Micro-serrated knife when new.



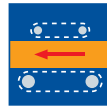
Mounting position after full use of the resharpener area.

5. Cutting tools with shank

5.4 Tooling systems for special profiles 5.4.5 Serrated back cutterhead systems



Profile cutterhead



Number of teeth: Z 2, Z 3
RPM: n max. 10000 min⁻¹
 for SB = 60
 n max. 12000 min⁻¹
 for SB = 40

WP 510-2-01 HW, Z 2, Z 3

D mm	D _k mm	SB mm	GL mm	S mm	Z	ID Nr. RL	
100	63	40	92	20x50	2	042896	●
100	63	40	100	25x60	2	042890	●
100	63	60	120	25x60	2	042892	●
100	63	40	100	25x60	3	042893	●
100	63	60	120	25x60	3	042895	●

Sales unit consists of cutterhead and clamping system, but without knives.

Spare parts for profiling standard blanks

ART	SB/ABM mm	ID Nr.	
Clamping wedge	40	009970	●
	60	009971	●
Screw	M 8 x 14	006073	●
Key	SW 4	005468	●

Blanks with thickness 6 mm

SB mm	H mm	DIK mm	QAL	ID Nr.	
40	41,5	6	HS-solid	007327	●
60	41,5	6	HS-solid	007328	●
40	41,5	6	ST-tipped	007763	●
60	41,5	6	ST-tipped	007764	●
40	41,5	6	HM-tipped	007486	●
60	41,5	6	HM-tipped	007487	●

Spare parts for micro-serrated knives

ART	SB/ABM mm	ID Nr.	
Clamping wedge MS	40	009771	●
Clamping wedge MS	60	009772	●
Screw	M 8 x 14	006073	●
Key	SW 4	005468	●

Blanks with micro-serrations

ART	SB mm	DIK mm	QAL	ID Nr.	
Backing plate	40	6		008181	●
Backing plate	60	6		008182	●
Blank-knife	40	2,5	HW	009423	●
Blank-knife	60	2,5	HW	009424	●

The micro-serrated knives and backing plates can only be used in the WP 510-2-01 cutterheads with the micro-serrated wedges.

- available ex stock
- available at short notice

5. Cutting tools with shank

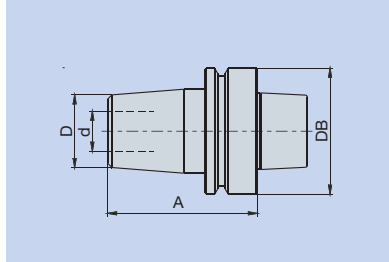
5.5 Clamping systems for shank tools

5.5.1 Shrink-fit

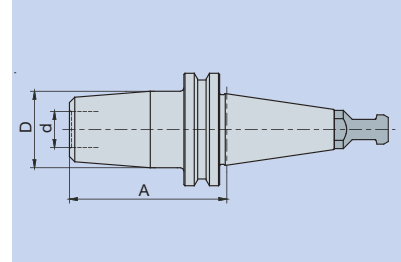
Application Shank tool clamping system with the highest concentric run out tolerance and tool stability.

Machine Router machines with/without CNC, CNC machining centres.
Special machines with spindle for shank tools.

Technical features



Shrink-fit chuck HSK-F 63.



Shrink-fit chuck SK 30.

D	Largest diameter of the chuck in the clamping area
d	Tool shank clamping diameter
DB	Diameter of chuck face
A	Chuck reference length to reference point (SK) or to reference surface (HSK)

Permissible shank tolerances

Tools clamped in shrink-fit chucks must have the following tool shank tolerances:

	Diameter of the shank	
	< 12 mm	≥ 12 mm
Tools mounted in Shrink-fit chucks	ISO h6	ISO g6

Application data

Maximum RPM

The maximum RPM for shrink-fit chucks: $n_{max} = 36.000$ r.p.m.

Operation

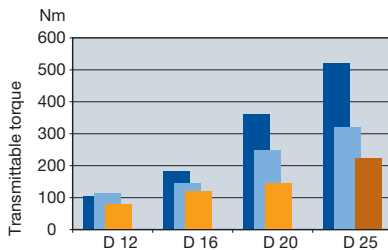
The diameter of the shrink-fit chuck bore is smaller than the shank diameter of the tool to be clamped in the chuck.
Induction heating expands the chuck bore allowing the tool to fit into the chuck.
An HF generator is used to heat the chuck.

Details of the HF-generators can be found on page 518.

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

5.5.1 Shrink-fit



■ ThermoGrip shrink-fit chuck

■ Collet DIN 6388-B25,
75 Nm Tightening torque

■ Collet DIN 6499-B32 (ER32),
75 Nm Tightening torque

■ Hydro clamping chuck

The metric dimension of collets and hydro-clamping chucks includes shank tolerance g7 or h6.

Leitz ThermoGrip® chucks are designed for clamping diameters $d \leq 10$ mm for a shank tolerance h6, for clamping diameters $d > 10$ mm for a shank tolerance g6.

Shrink-fit chuck ThermoGrip®

Tool clamping for high performance. Ideal for HSC-machining as balanced for RPMs up to 30.000 min⁻¹. Short, slim design for improved chip flow and extraction. For tungsten carbide and steel shanks. Clamping excentricity $e = 0.01$ mm. ThermoGrip has the highest stability and rigidity of all known shank clamping systems.

HSK-F 63 as per DIN 69893

PT 300-0 *

Class.	Fabr. Mach.	D mm	d mm	A mm	DB mm	STO	Weight kg	ID Nr.
*	Homag, IMA,	20	6	75	63	h6	0,8	037713 ●
*	Weeke, MAKKA,	20	8	75	63	h6	0,8	037714 ●
*	Reichenbacher,	25	10	75	63	h6	0,9	037715 ●
*	SCM, MKM	28	12	75	63	g6	0,9	037712 ●
*		28	14	75	63	g6	0,9	037716 ●
*		28	16	75	63	g6	0,9	037709 ●
*		36	18	75	63	g6	1,0	037718 ●
*		36	20	75	63	g6	1,0	037710 ●
*		36	25	75	63	g6	0,9	037711 ●

SK30, DIN 69871

PT 301-0 *

Class.	Fabr. Mach.	D mm	d mm	A mm	Length adj. mm	STO	Weight kg	ID Nr.
*	MAKA, Weeke	34	12	70	7	g6	0,7	670200 □
*	Reichenbacher	34	16	70	7	g6	0,7	670201 □
*	Reichenbacher	42	20	70	7	g6	0,8	670202 □
*	Reichenbacher	42	25	80	7	g6	1,0	670210 □

Class.	Fabr. Mach.	D mm	d mm	A mm	Length adj. mm	STO	Weight kg	ID Nr.
*	Biesse	34	12	70	7	g6	0,7	670203 □
*	from 9/92	34	16	70	7	g6	0,7	670204 □
*	from 9/92	42	20	70	7	g6	0,8	670205 □
*	from 9/92	42	25	80	7	g6	1,0	670211 □

SK40, DIN 69871

PT 301-0 *

Class.	Fabr. Mach.	D mm	d mm	A mm	Length adj. mm	STO	Weight kg	ID Nr.
*	MAKA, HOMAG,	34	12	70	7	g6	1,1	670206 □
*	Reichenbacher,	34	16	70	7	g6	1,1	670207 □
*	IMA, SCM	42	20	70	7	g6	1,2	670208 □
*		42	25	80	7	g6	1,2	670209 □

● available ex stock
□ available at short notice

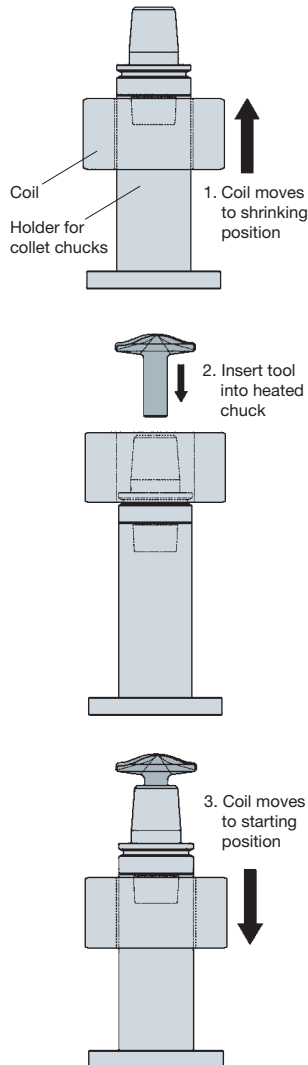
5. Cutting tools with shank

5.5 Clamping systems for cutting tools

5.5.1 Shrink-fit



Shrinking profile tools



Processor-controlled high frequency generator

Process-controlled high frequency generator for thermal clamping shank tools.

VN 799-0 *

Class.	Tool Type	Typ	for shank mm	ID Nr.
*	High frequency generator incl. coil and discs max. tool diameter 50 mm	ISG 3200	6 - 32	081904
*	High frequency generator incl. coil and cover discs	ISG 2200	6 - 25	081903

Accessories for ISG 2200/3200

ART	for shank mm	ID Nr.
Holder for collet chucks HSK-F 63		081932
Holder for collet chucks SK 40		081940
Holder for collet chucks SK 30/ISO 30		081941
Cooler	d12 - 16	081933
Cooler	d20 - 25	081934
Cooling plate for shrunk tools		081937 ●

Spare parts for clamping and unclamping profile tools with tool diameter > 50 mm, for type ISG 3200

ART	for shank mm	ID Nr.
Extension set for profile tools	20 - 25	081942
Holder for collet chucks profile tools HSK-F 63		081938 ●
Holder for collet chucks profile tools SK 40		081939 ●

Extension set Ident-number 81942 for ISG 3200 consisting of:

1. Special coil
2. Fence (with laser pointer)

Note: The collet chucks holder has to be ordered separately.

Spare parts for ISG 3000

ART	Typ	for clamping diameter mm	ID Nr.
Induction coil	ISGS 3000-2	12 - 20	081930
Induction coil	ISGS 3000-3	25	081931

Technical information:

- Fast clamping and unclamping of tungsten carbide and steel shanks.
- Cycle time 5-10 seconds.
- Short cooling time as localised warming and cooling system.
- ISG: 2200: 1 cooling location, 7,5 KW generator performance.
- ISG 3200: 4 cooling locations, 11 KW generator performance.
- Adjust the shrinking coils to the specific shank diameter simply by changing the cover discs.
- ISG 2200 only suitable for cylindrical shank tools.
- ISG 3200 also suitable for clamping and unclamping profile tools.
- For profile tools with tool diameters of more than 50 mm and shank diameters 20 and 25 mm extension set ID-number 81942 is required.
- Profile tools with a special induction coil.

5. Cutting tools with shank

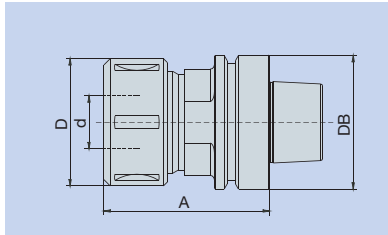
5.5 Clamping systems for shank tools

5.5.2 Collet chucks

Application Clamping system for shank tools.

Machine Router machines with/without CNC, CNC machining centres
Special machines with spindle for shank tools,
Router machines without automatic tool change,
Hand routers.

Technical features



Collet chuck HSK-F 63.

D	Largest diameter of the chuck in the clamping area
d	Tool shank clamping diameter
DB	Diameter of chuck face
A	Chuck reference length to reference point (SK) or to reference surface (HSK)

Permissible shank tolerances

Tools clamped in collet chucks must have the following tool shank tolerances:

	Diameter of the shank	
Tools mounted in Collet chucks	< 12 mm ISO g7	≥ 12 mm ISO g7

Collet nut clamping torque

The following torques are required for safe clamping of the tool in the collet chuck:

Collet nut thread	Spanner type	Clamping torque
M 30 x 1,5	SW 40/42	60 Nm
M 33 x 1,5	SW 40/42	60 Nm
M 40 x 1,5	SW 45/50	80 Nm
M 48 x 2	SW 58/62	100 Nm
M 50 x 2	SW 58/62	100 Nm

Application data

Maximum R.P.M

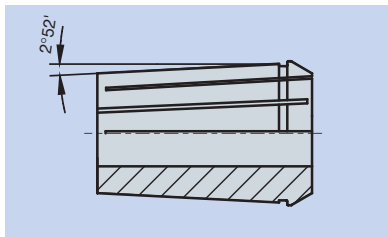
The maximum R.P.M. for collet chucks:

$n_{max} = 24.000$ r.p.m. (shank diameters up to 25 mm)

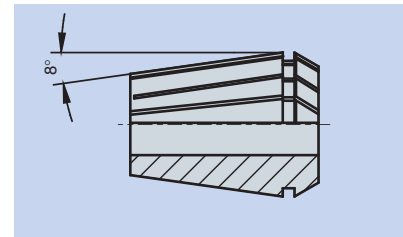
HSC Collet chucks (High Speed Cutting) have a max. RPM: $n_{max} = 36.000$ r.p.m.

Construction

Leitz collet chucks are available for the two designs of collet.



Collet taper angle 2°52': DIN 6388.



Collet taper angle 8°: DIN 6499.

Collets with a taper angle of 2°52', DIN 6388 are recommended.

5. Cutting tools with shank

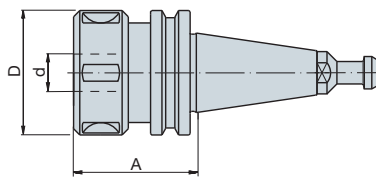
5.5 Clamping systems for cutting tools

5.5.2 Collet chuck

Collet chuck with steep taper SK 30 and SK 40



Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 20$ mm. Steep taper design to DIN 69871, without grooves or notches. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.



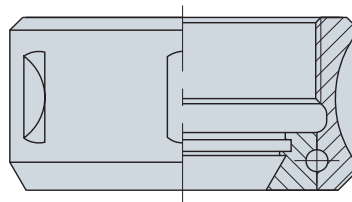
Collet chuck

SK 30/SK 40, A = 50 mm, clamping range 6-20 mm

PM 350-0-04 *

Class.	Fabr.	D	d	S	Weight	ID Nr.	ID Nr.
	Mach.	mm	mm		kg	LL	RL
*	Reichenbacher	50	6 - 20	SK 30	0,60	037427	● 037423 ●
*	Reichenbacher	50	6 - 20	SK 40	1,10		● 037424 ●
*	Biesse up to 9/92	50	6 - 20	SK 30	0,60	037903	● 037902 ●
*	Biesse from 9/92	50	6 - 20	SK 30	0,60		● 037904 ●

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet or sickle spanner.



Ball-bearing collet nut

SK 30, A = 63 mm, clamping range 6-20 mm

PM 350-0-04 *

Class.	Fabr.	D	d	S	Weight	ID Nr.	ID Nr.
	Mach.	mm	mm		kg	LL	RL
*	Maka, Weeke	50	6 - 20	SK 30	0,70	037907	● 037906 ●
*	Biesse from 9/92	50	6 - 20	SK 30	0,70	672000	● 672001 ●
	Masterwood from 1/99						
	Alberti	50	6 - 20	SK 30	0,70	037909	● 037908 ●

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet or sickle spanner.

Spare parts

ART	for d	ABM	ID Nr.
	mm/Inch	mm	
Collet nut			
RL, ball bearing, D-50 mm		M 40x1,5	005718 ●
Collet nut, LL			
ball bearing, D-50 mm		M 40x1,5	006631 ●
Sickle spanner			005491 ●
Collet	6		037439 ●
Collet	8		037440 ●
Collet	10		037441 ●
Collet	12		037442 ●
Collet	13		037443 ●
Collet	14		037444 ●
Collet	16		037445 ●
Collet	18		037446 ●
Collet	20		037447 ●
Collet	6,35 (1/4")		037509 ●
Collet	9,53 (3/8")		037510 ●
Collet	12,7 (1/2")		037511 ●
Collet	15,88 (5/8")		037507 ●
Collet	19,05 (3/4")		037506 ●
SK 40 Bolt with data chip Euchner			081600 ●
SK 40 Bolt with data chip Balluff			081601 ●

● available ex stock

□ available at short notice

5. Cutting tools with shank

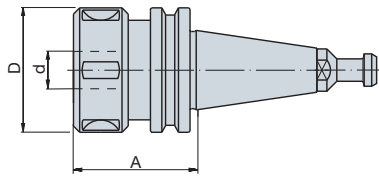
5.5 Clamping systems for cutting tools

5.5.2 Collet chuck

Collet chuck with steep taper SK 30



Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 25$ mm. Steep taper design to DIN 69871, without grooves or notches. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.



Collet chuck SK 30

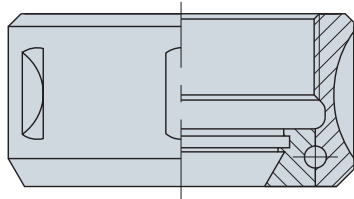
SK 30, A = 61 mm, 8° conical angle of collect, clamping range 6-26 mm PM 350-0-16 *

Class.	Fabr. Mach.	D mm	d mm	A mm	Weight kg	ID Nr. LL	ID Nr. RL
*	Reichenbacher	63	6 - 26	61	0,90	037965 ●	037964 ●
*	Biesse up to 9/92	63	6 - 26	61	0,90	037967 ●	037966 ●
*	Biesse from 9/92	63	6 - 26	61	0,90	037969 ●	037968 ●
	Masterwood from 1/99						

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet and hook wrench.

Spare parts

ART	for d A mm/Inch	BM mm	ID Nr.
Collet nut, RL, ball bearing, D-63 mm		M 50x1,5	006639 ●
Collet nut, LL, ball bearing, D-63 mm		M 50x1,5	006640 ●
Sickle spanner			005458 ●
Collet	6		037926 ●
Collet	8		037927 ●
Collet	10		037928 ●
Collet	12		037929 ●
Collet	14		037930 ●
Collet	16		037931 ●
Collet	20		037932 ●
Collet	25		037933 ●
Collet	6,35 (1/4")		037934 ●
Collet	9,53 (3/8")		037935 ●
Collet	12,7 (1/2")		037936 ●
Collet	15,88 (5/8")		037937 ●
Collet	19,05 (3/4")		037938 ●
Collet	25,4 (1")		037939 ●



Ball-bearing collet nut

5. Cutting tools with shank

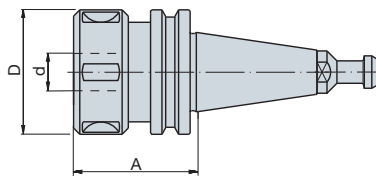
5.5 Clamping systems for cutting tools

5.5.2 Collet chuck

Collet chuck with steep taper SK30 und SK40



Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 25$ mm. Steep taper design to DIN 69871, without grooves or notches. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.



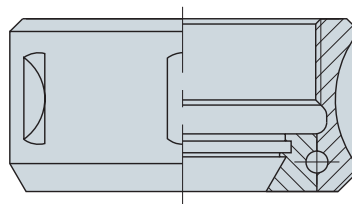
Collet chuck

SK 30, A = 70 mm, clamping range 6-25 mm

PM 350-0-05 *

Class.	Fabr.	D	d	A	Weight	ID Nr.	ID Nr.
*	Mach.	mm	mm	mm	kg	LL	RL
*	MAKA, Reichenbacher, Weeke	60	6 - 25	70	0,90	037425	037421
*	Alberti	60	6 - 25	70	0,90	037901	037900

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet and sickle spanner.



Ball-bearing collet nut

SK 40, A = 70 mm, clamping range 6-25 mm

PM 350-0-05 *

Class.	Fabr.	D	d	A	Weight	ID Nr.	ID Nr.
*	Mach.	mm	mm	mm	kg	LL	RL
*	MAKA, IMA, SCM, Reichenbacher, Stegherr	60	6 - 25	70	1,50	037426	037422

Sales unit consists of clamping chuck with collet nut and bolt, without collet and sickle spanner.

Spare parts

ART	for d	ABM	ID Nr.
	mm/Inch	mm	
Collet nut, RL, ball bearing, D-60 mm		M 48x2	005714
Collet nut, LL, ball bearing, D-60 mm		M 48x2	006632
Sickle spanner			005458
Collet	6		037429
Collet	8		037430
Collet	10		037431
Collet	12		037432
Collet	13		037433
Collet	14		037434
Collet	16		037435
Collet	18		037436
Collet	20		037437
Collet	25		037438
Collet	6,35 (1/4")		037495
Collet	9,53 (3/8")		037505
Collet	12,7 (1/2")		037496
Collet	15,88 (5/8")		037502
Collet	19,05 (3/4")		037497
Collet	25,4 (1")		037508
SK 40 Bolt with data chip Euchner			081600
SK 40 Bolt with data chip Balluff			081601

- available ex stock
- available at short notice

5. Cutting tools with shank

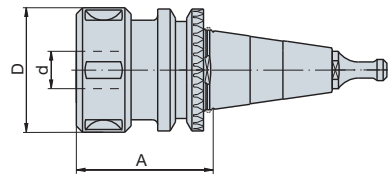
5.5 Clamping systems for cutting tools

5.5.2 Collet chuck

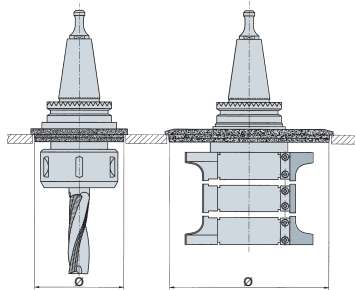


Collet chuck with steep taper ISO 30 for SCM and Morbidelli

Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 25$ mm. Steep taper design ISO 30, with serration. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.



Collet chuck ISO 30



Tool seatings for the Pick-Up-magazine, chuck and cutter arbor with aluminium-flanges.

All Leitz tool seatings for SCM/Morbidelli can be equipped with light-metal plates. With these, the collet chucks can be used on machines with 'Pick-up' magazines (type series 'Author 503/504'). Diameter of light-metal plates required.

PM 350-0-09 *, A = 55 mm, clamping range 6-20 mm

Class.	Fabr.	D	d	A	Weight	ID Nr.	ID Nr.
	Mach.	mm	mm	mm	kg	LL	RL
*	SCM, Morbidelli	50	6 - 20	55	0,60	037419	037418

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet and sickle spanners.

Spare parts

ART	for d	ABM	ID Nr.
	mm/Inch	mm	
Collet nut, RL, ball bearing, D-50 mm		M 40x1,5	005718
Collet nut, LL, ball bearing, D-50 mm		M 40x1,5	006631
Sickle spanner			005491
Collet	6		037439
Collet	8		037440
Collet	10		037441
Collet	12		037442
Collet	13		037443
Collet	14		037444
Collet	16		037445
Collet	18		037446
Collet	20		037447
Collet	6,35 (1/4")		037509
Collet	9,53 (3/8")		037510
Collet	12,7 (1/2")		037511
Collet	15,88 (5/8")		037507
Collet	19,05 (3/4")		037506

● available ex stock
□ available at short notice

5. Cutting tools with shank

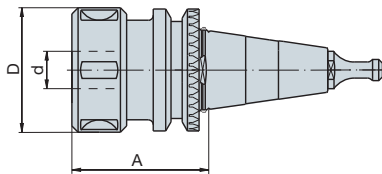
5.5 Clamping systems for cutting tools

5.5.2 Collet chuck

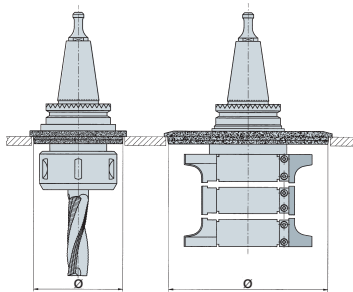


Collet chuck with steep taper ISO 30 for SCM and Morbidelli

Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 25$ mm. Steep taper design ISO 30, with serration. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.



Collet chuck ISO 30



Tool seatings for the Pick-Up-magazine, chuck and cutter arbor with aluminium-flanges.

All Leitz tool seatings for SCM/Morbidelli can be equipped with light-metal plates. With these, the collet chucks can be used on machines with 'Pick-up' magazines (type series 'Author 503/504'). Diameter of light-metal plates required.

PM 350-0-09 *, A = 70 mm, clamping range 6-25 mm

Class.	Fabr.	D	d	A	Weight	ID Nr.	ID Nr.
	Mach.	mm	mm	mm	kg	LL	RL
*	SCM, Morbidelli	60	6 - 25	70	0,90	037911	● 037910 ●

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet and sickle spanners.

Spare parts

ART	for d	ABM	ID Nr.
	mm/Inch	mm	
Collet nut, RL, ball bearing, D-60 mm		M 48x2	005714 ●
Collet nut, LL, ball bearing, D-60 mm		M 48x2	006632 ●
Sickle spanner			005458 ●
Collet	6		037429 ●
Collet	8		037430 ●
Collet	10		037431 ●
Collet	12		037432 ●
Collet	13		037433 ●
Collet	14		037434 ●
Collet	16		037435 ●
Collet	18		037436 ●
Collet	20		037437 ●
Collet	25		037438 ●
Collet	6,35 (1/4")		037495 ●
Collet	9,53 (3/8")		037505 ●
Collet	12,7 (1/2")		037496 ●
Collet	15,88 (5/8")		037502 ●
Collet	19,05 (3/4")		037497 ●
Collet	25,4 (1")		037508 ●

- available ex stock
- available at short notice

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

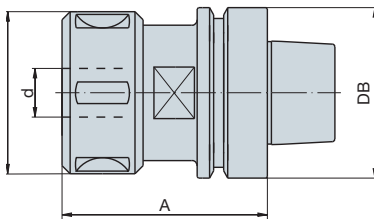
5.5.2 Collet chuck

Collet chuck with hollow taper shank HSK-F 63

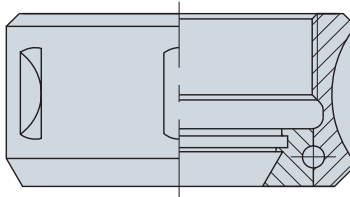


Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 25$ mm. Hollow taper design to DIN 69893. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.

**HSK-F 63 as per DIN 69893, A = 76 mm, clamping range 6-26 mm, short design, 8° tapex angle of the collet
PM 350-0-15 ***



Collet chuck HSK-F 63



Ball-bearing collet nut

Class.	Fabr.	D	d	A	DB	Weight	ID Nr.	ID Nr.
Mach.		mm	mm	mm	mm	kg	LL	RL
*	Biesse, Morbidelli, SCM, Busellato	63	6 - 26	76	63	1,00	037971	037970

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet and sickle spanners.

Spare parts

ART	for d	ABM	ID Nr.
	mm/Inch	mm	
Collet nut, RL, ball bearing, D-63 mm		M 50x1,5	006639 ●
Collet nut, LL, ball bearing, D-63 mm		M 50x1,5	006640 ●
Sickle spanner			005458 ●
Collet	6		037926 ●
Collet	8		037927 ●
Collet	10		037928 ●
Collet	12		037929 ●
Collet	14		037930 ●
Collet	16		037931 ●
Collet	20		037932 ●
Collet	25		037933 ●
Collet	6,35 (1/4")		037934 ●
Collet	9,53 (3/8")		037935 ●
Collet	12,7 (1/2")		037936 ●
Collet	15,88 (5/8")		037937 ●
Collet	19,05 (3/4")		037938 ●
Collet	25,4 (1")		037939 ●
Data chip Balluff		HSK-F 63	081309 ●

- available ex stock
- available at short notice

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

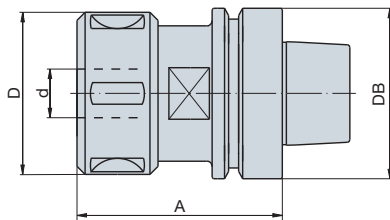
5.5.2 Collet chuck

Collet chuck with hollow taper shank HSK-F 63



Precision tool seating with collet for cylindrical shank tools. For shank diameters up to $d_{max.} = 25$ mm. Hollow taper design to DIN 69893. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.

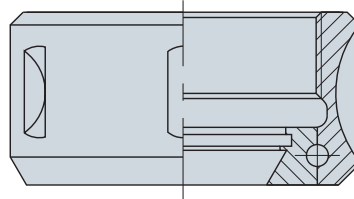
HSK-F 63 as per DIN 69893, short design, A = 78 mm, clamping range 6-25 mm PM 350-0-06 *



Collet chuck HSK-F 63

Class.	Fabr. Mach.	D mm	d mm	A mm	DB mm	Weight kg	ID Nr. LL	ID Nr. RL
*	Homag, Eima, IMA from 9/94, Dubus, Weeke, Morbidelli, SCM, Biesse, MKM	60	6 - 25	78	63	1,10	037413	● 037412 ●

HSK-F 63 as per DIN 69893, long design, A = 105 mm, clamping range 6-25 mm PM 350-0-06 *



Ball-bearing collet nut

Class.	Fabr. Mach.	D mm	d mm	A mm	DB mm	Weight kg	ID Nr. RL
*	Weeke	60	6 - 25	105	63	1,50	037924 ●

Spare parts

ART	for d mm/Inch	ABM mm	ID Nr.
Collet nut, RL, ball bearing, D-60 mm		M 48x2	005714 ●
Collet nut, LL, ball bearing, D-60 mm		M 48x2	006632 ●
Sickle spanner			005458 ●
Collet	6		037429 ●
Collet	8		037430 ●
Collet	10		037431 ●
Collet	12		037432 ●
Collet	13		037433 ●
Collet	14		037434 ●
Collet	16		037435 ●
Collet	18		037436 ●
Collet	20		037437 ●
Collet	25		037438 ●
Collet	6,35 (1/4")		037495 ●
Collet	9,53 (3/8")		037505 ●
Collet	12,7 (1/2")		037496 ●
Collet	15,88 (5/8")		037502 ●
Collet	19,05 (3/4")		037497 ●
Collet	25,4 (1")		037508 ●
Data chip Balluff		HSK-F 63	081309 ●

- available ex stock
- available at short notice

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

5.5.2 Collet chuck



Collet chuck with hollow taper shank, HSK-F 63 for HSC-machining

Precision tool seating with collet for cylindrical shank tools. Hollow taper design to DIN 69893. Precise centric running from hardened, ground, double slit collets. Low vibration from short design. Easy tool handling as collet opens automatically on loosening the collet nut. Ball bearing collet nut for increased clamping forces and improved running accuracy compared to a one-piece design. Tool body and collet nut fine balanced. Mounting stand VN 799-0 see section 8, adjusting devices.

HSK-F 63 as per DIN 69893, A = 65 mm

Clamping range up to 20 mm, n max. 30000 min⁻¹

PM 350-0-15 *

Table for max. projection of the tools:

shank diameter d	clamping range up to	
	16 mm	20 mm
20	–	2,2xd
12-16	2,2xd	3,0xd
6-10	3,0xd	3,0xd

Class.	Fabr. Mach.	D mm	d mm	A mm	DB mm	Weight kg	ID Nr. RL
*	Homag, Eima, IMA, Weeke, Dubus, Morbidelli, SCM, MKM	50	6 - 20	65	63	0,85	037989 ●

Sales unit consists of clamping chuck with ball-bearing collet nut, without collet and sickle spanners.

Spare parts

ART	for d mm/Inch	ABM mm	ID Nr.
Collet nut, RL, ball bearing, D-50 mm		M 40x1,5	005718 ●
Sickle spanner			005491 ●
Collet	6		037439 ●
Collet	8		037440 ●
Collet	10		037441 ●
Collet	12		037442 ●
Collet	13		037443 ●
Collet	14		037444 ●
Collet	16		037445 ●
Collet	18		037446 ●
Collet	20		037447 ●
Collet	6,35 (1/4")		037509 ●
Collet	9,53 (3/8")		037510 ●
Collet	12,7 (1/2")		037511 ●
Collet	15,88 (5/8")		037507 ●
Collet	19,05 (3/4")		037506 ●
Data chip Balluff		HSK-F 63	081309 ●

- available ex stock
- available at short notice

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

5.5.3 High-precision tool seating

Hydro clamping-chuck for shank tools



High-precision tool chuck for clamping shanks. For shank diameters up to $d_{max.} = 25$ mm. Reduced clamping diameter by special reducing sleeves. Direction of rotation independent, so suitable for left and right hand rotation. Axial tool safety by a special length adjusting screw. Easy to use clamping system. Tool seating fine balanced. Maximum permissible RPM $n_{max.} = 25.000$ min⁻¹.

Hydro chuck, clamping diameter 25 mm

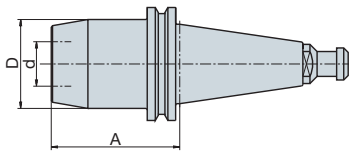
PH 350-0 *

Class.	Fabr.	D	d	A	S	Weight	ID Nr.
	Mach.	mm	mm	mm		kg	
*	MAKA, Reichenbacher, Weeke	70	25	63	SK 30	1,10	039085 ●
*	MAKA, Homag, Reichenbacher, SCM, Stegherr	50	25	78	SK 40	1,50	039080 ●
*	IMA (from 9/94), Homag, Eima, Weeke, Dubus, Morbidelli, SCM, Biese, MKM	50	25	85	HSK-F 63	1,10	039086 ●
*	SCM, Morbidelli	70	25	63	ISO 30	1,10	039087 ●

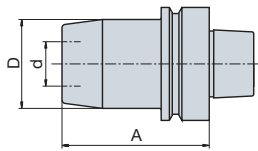
Sales unit consists of clamping chuck and clamping key.

Reducing sleeves, spare parts

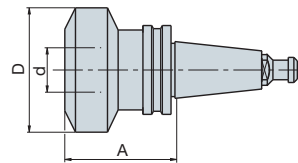
ART	ABM	ID Nr.
	mm	
Reducing sleeve	d = 12	039081 ●
Reducing sleeve	d = 14	039082 ●
Reducing sleeve	d = 16	039083 ●
Reducing sleeve	d = 20	039084 ●
Length adjustment screw S 20/25	d = 14,5/M 8x25	007069 ●
Length adjustment screw S 12/16	d = 11,7/M 6x20	007071 ●
Key	SW 5	005446 ●
SK 40 Bolt with data chip Euchner		081600 ●
SK 40 Bolt with data chip Balluff		081601 ●



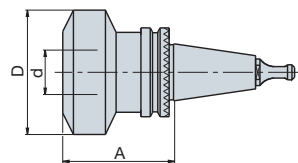
SK 40--hydro chuck



HSK-F 63--hydro chuck



SK 30--hydro chuck



ISO 30--hydro chuck

5. Cutting tools with shank

5.5 Clamping systems for cutting tools

5.5.5 Cutter arbor

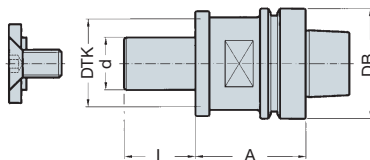
Cutter arbors with hollow taper shank HSK-F 63



Cutter arbor for mounting tools singly or as a set. Hollow taper design to DIN 69893. Safety device against twisting by screwing or pinning. When using conical spring washers with safety device against twisting cut-outs are required in the arbor. Mounting device VN 799-0 see section 8, adjusting devices. Note: For low-vibration use short design. The machine manufacturers' maximum weight and diameter restrictions must be followed.

Fabr. Mach.: **Homag Eima, IMA from 9/94, Dubus, Weeke, SCM, Morbidelli, Biesse, MKM**

HSK-F 63 as per DIN 69893, short design, A = 45 mm TI 501-0-07 *

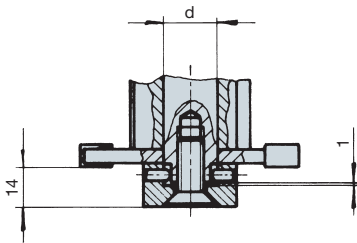


Class. I	d	A	DB	DTK	Weight	ID Nr.
mm	mm	mm	mm	mm	kg	
* 70	20	45	63	32	1,20	042987 ●
* 80	30	45	63	48	1,60	042988 ●

Cutter arbor HSK-F 63/HSK-B 63

Fabr. Mach.: **Homag Eima, IMA from 9/94, Dubus, Weeke, SCM, Morbidelli, Biesse, MKM**

HSK-F 63 as per DIN 69893, long design, A = 80 mm TI 501-0-07 *

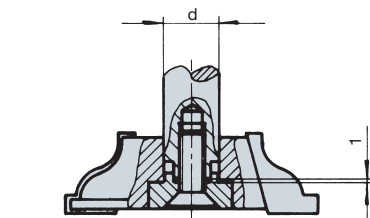


Class. I	d	A	DB	DTK	Weight	ID Nr.
mm	mm	mm	mm	mm	kg	
* 70	20	80	63	32	1,70	042847 ●
* 80	30	80	63	48	2,10	042951 ●

Clamping flange type A, with safety device against twisting see spare parts

Sales unit consists of cutter arbor with clamping flange (flat design) without spacers.

Spare parts



Clamping flange type B, with safety device against twisting see spare parts

ART	for d	ABM	ID Nr.
	mm	mm	
Washer without twisting safety, with clamping screw M 10	20		006733 ●
Washer with twisting safety, design A	20		006734 ●
Washer with twisting safety, design B	20		006735 ●
Washer without twisting safety, with clamping screw M 16	30		006736 ●
Washer with twisting safety, design A, with clamping screw	30		006737 ●
Washer with twisting safety, design B, with clamping screw	30		006738 ●
Washer without twisting safety, flat design with clamping screw M 10	20		006745 ●
Washer without twisting safety, flat design with clamping screw M 16	30		006746 ●
Spacer (without pinhole)		34x0,1x20	028400 ●
Spacer (without pinhole)		34x0,3x20	028401 ●
Spacer (without pinhole)		34x0,5x20	028402 ●
Spacer (without pinhole)		34x1,0x20	028403 ●
Spacer (without pinhole)		34x3,0x20	028404 ●
Spacer (without pinhole)		34x4,0x20	028405 ●
Spacer (without pinhole)		34x5,0x20	028406 ●
Data chip Balluff		HSK-F 63	081309 ●

- available ex stock
- available at short notice

8. Knives/Spare part

8.3.1 Setting device



8.3.1.5 Mounting stand

VN 799-0 *

Class.	ART	ID Nr.
*	Mounting stand for SK 30	079000 ●
*	Mounting stand for SK 40	079001 ●
*	Mounting stand for HSK-F 50	079002 ●
*	Mounting stand for HSK-F 63 and HSK-E 63	079003 ●
*	Mounting stand for SCM/Morbidelli ISO 30	079004 ●
*	Mounting stand for CMS ISO 30	079005 ●
*	Mounting stand for Alberti HSK-E 40	079006 ●

Application:

For mounting shank tools in collet chucks or for mounting tools on arbors for CNC machines.

- Reduced risk of injury whilst mounting tools.
- Quick clamping levers and fixing pins secure the clamped taper axially as well as against twisting.

- available ex stock
- available at short notice

5. Cutting tools with shank

5.4 Tooling systems for special profiles

5.4.4 ProfilCut

Tool examples

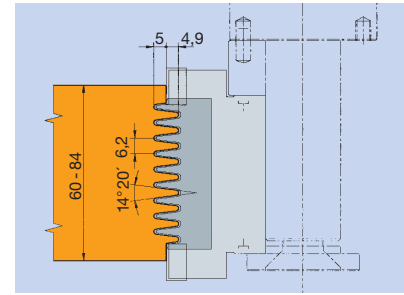
3. Glue joint profiles

Adjustable fit by adjustable knife seatings.

Suitable for:

- glue, finger- and mitre joints
- glue profiles with/without shoulder

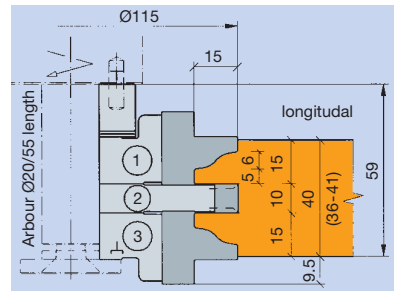
Special profiles



4. Interior profiles

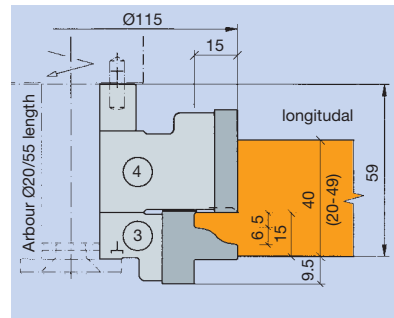
4.1 Interior door profiles

4.1.1 Length profile



Profile examples:

Two-sided profiles (ID. No. 126513).



Profile examples:

Rebated profiles (ID. No. 126514).

4.1.3 Counter profile

