

Master Precision and Quality



PRODUCT CATALOGUE

2013 Edition

vydona



MANUFACTURING, SELLING AND SERVICE OF WOOD-WORKING MACHINES AND SPECIAL TOOL SYSTEMS FOR WOOD, PLASTIC MATERIALS AND METAL

Since 2003 you have been able to experience tools from VYDONA, a Czech manufacturer of tools for cutting wood and plastics.

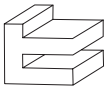
We offer manufacturing of standard tools and mainly special tools according to specific customer needs. We also offer sharpening, repairs, modifications and refurbishment of our tools as well as tools produced by other manufacturers.

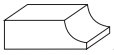
Our more than fifteen years of experience in this field is utilised for designing and manufacturing tools. We use the highest quality materials and the top manufacturing, inspection and testing equipment.

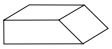
The production plant employs fully equipped workplaces. We provide complete solutions from ideas on paper to production and after-service; with a professional approach from the entire company to individual contracts.

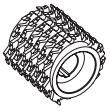
Development of a special tool is a complex process that requires close cooperation between you as the customer and us as the supplier. This is a prerequisite of achieving the best possible solution.

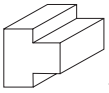
VYDONA... ONE COMPANY - ONE SCOPE

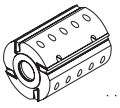

Grooving Cutters 3

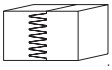

Semi-circular and quarter-circle cutters 4 - 5

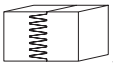

Chamfer cutters 6


Multi-vane spiral milling cutter head 7-8

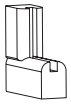

Rebating cutters 8


Planer cutter heads 9

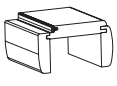

Jointing Cutters 10 - 11

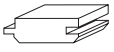

Ridge joint cutters 12 - 15


Resin streak cutters 16


Profile form cutter sets for doors 17 - 18


Cutters for door panels 19

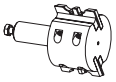

Cutters for frames and linings 20

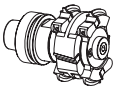

Tongue-and-Groove cutter sets 21

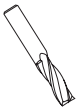

Cutter sets for windows 22 - 24

CONTENTS


Cutter set for entrance door 25


UNI - PROFI tool 26 - 27


Adjustable rounding (chamfering) set for folding 28


Shank cutters 29 - 30


DIA tools: 31 - 33

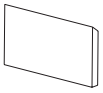

CNC chucks and collets 34 - 39

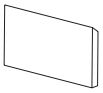

Safety cutter heads 40 - 42


Universal milling heads 43


Spacer rings and reducing bushes 44 - 45


Replaceable tool tips made of sintered carbide 46 - 53

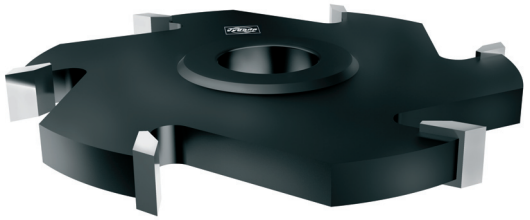

Knife blanks for cutter heads 54 - 57


Planing tools 57 - 60

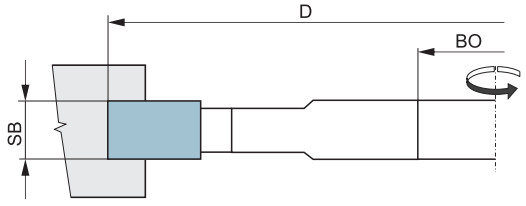

Spare parts 61 - 64


Technical information 65 - 67

NARROW GROOVING CUTTERS WITHOUT ROUGHENING TEETH

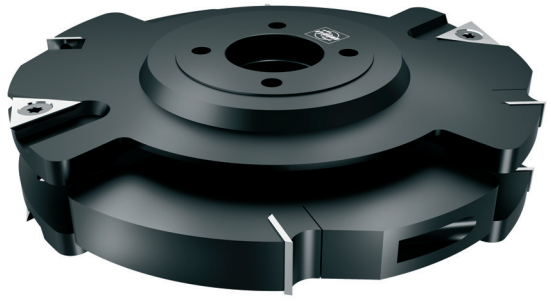


- HS tool tips with straight cutting edge
- HW tool tips with straight cutting edge
- intended for longitudinal or transversal grooving of wood
- power feed



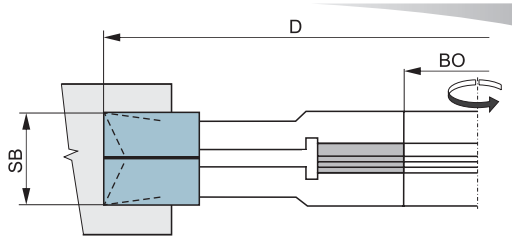
D mm	SB mm	BO mm	Z	ID No. HS	ID No. HW
150	4	30	6	**11004**	**11104**
150	5	30	6	**11005**	**11105**
150	6	30	6	**11006**	**11106**
150	8	30	6	**11008**	**11108**
150	10	30	6	**11010**	**11110**
150	12	30	6	**11012**	**11112**
150	14	30	6	**11014**	**11114**
150	16	30	6	**11016**	**11116**
150	20	30	6	**11020**	**11120**

ADJUSTABLE GROOVING CUTTERS WITH ROUGHENING TEETH



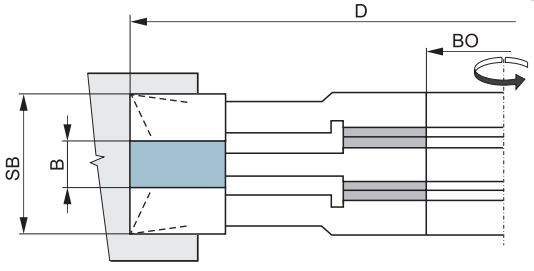
- HS tool tips
- intended for longitudinal or transversal milling or widening grooves in both hard and soft wood.

- HW soldered or replacement tool tips (VBD)
- intended for longitudinal or transversal milling or widening grooves in hard MDF and chipboard boards
- groove width can be adjusted with step of 0.1 mm using the spacer rings
- manual feed



SOLDERED TOOL TIPS

D mm	SB mm	B mm	BO mm	Z	ID No. HS	ID No. HW
150	4-7,5	-	30	4+4	**13004**	**13104**
150	8-15,5	-	30	4+4	**13075**	**13175**
150	16-30	15	30	2	**13015**	**13115**



REPLACEABLE TOOL TIPS (VBD)

D mm	SB mm	B mm	BO mm	Z	ID No. VBD
160	4-7,5	-	30	4+4	**13274**
160	8-15,5	-	30	4+4	**13275**
160	16-30	15	30	2	**13276**

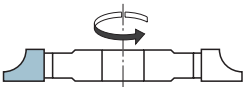
QUARTER-CIRCLE PROFILE MILLING CUTTERS, CONCAVE



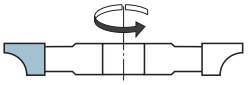
- HS tool tips
- HW tool tips
- intended for milling the edges of soft and hard wood
- power feed

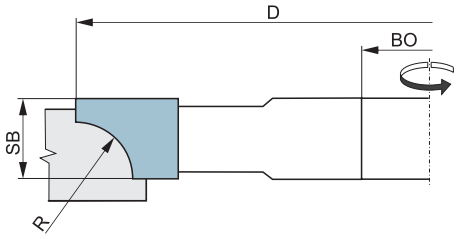
- rotation scheme should be specified in the PO

SCHEME I: BOTTOM STOCK REMOVAL (DOWN MILLING)



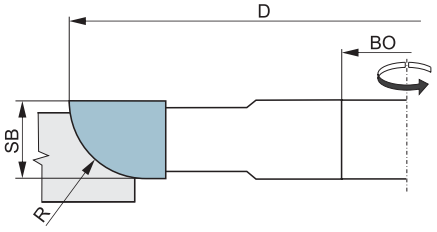
SCHEME II: UPPER STOCK REMOVAL (UP MILLING)





D mm	SB mm	BO mm	R	Z	ID No. HS	ID No. HW
120	10	30	4	3	**26004**	**26104**
120	11	30	5	3	**26005**	**26105**
120	12	30	6	3	**26006**	**26106**
120	14	30	8	3	**26008**	**26108**
120	18	30	10	3	**26010**	**26110**
120	20	30	12	3	**26012**	**26112**
120	23	30	15	3	**26015**	**26115**
140	28	30	20	3	**26020**	**26120**
150	33	30	25	3	**26025**	**26125**
160	38	30	30	3	**26030**	**26130**

QUARTER-CIRCLE PROFILE MILLING CUTTERS, CONVEX

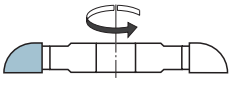


D mm	SB mm	BO mm	R	Z	ID No. HS	ID No. HW
120	5	30	4	3	**27004**	**27104**
120	6	30	5	3	**27005**	**27105**
120	7	30	6	3	**27006**	**27106**
120	9	30	8	3	**27008**	**27108**
120	11	30	10	3	**27010**	**27110**
120	13	30	12	3	**27012**	**27112**
120	16	30	15	3	**27015**	**27115**
140	21	30	20	3	**27020**	**27120**
150	26	30	25	3	**27025**	**27125**
160	31	30	30	3	**27030**	**27130**

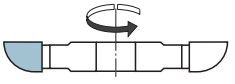
- HS tool tips
- HW tool tips
- intended for milling the edges of soft and hard wood
- power feed

- rotation scheme should be specified in the PO

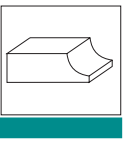
SCHEME I: BOTTOM STOCK REMOVAL (DOWN MILLING)

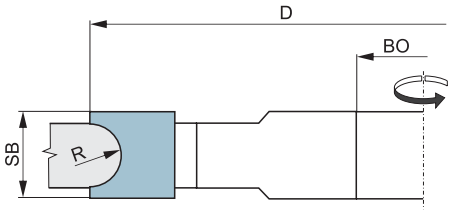


SCHEME II: UPPER STOCK REMOVAL (UP MILLING)



SEMI-CIRCULAR PROFILE MILLING CUTTERS, CONCAVE

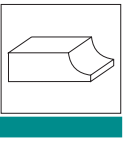


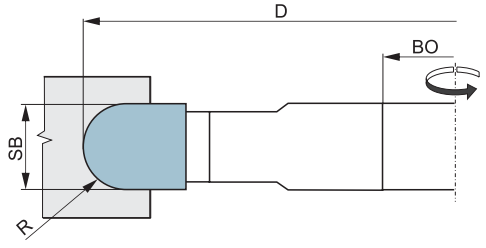


D mm	SB mm	BO mm	R	Z	ID No. HS	ID No. HW
120	18	30	4	3	**24004**	**24104**
120	20	30	5	3	**24005**	**24105**
120	22	30	6	3	**24006**	**24106**
120	25	30	7,5	3	**24008**	**24108**
120	30	30	10	3	**24010**	**24110**
120	35	30	12,5	3	**24013**	**24113**
120	40	30	15	3	**24015**	**24115**
140	45	30	17,5	3	**24018**	**24118**
140	50	30	20	3	**24020**	**24120**

- HS tool tips
- HW tool tips
- intended for rounding the edges of soft and hard wood.
- power feed

SEMI-CIRCULAR PROFILE MILLING CUTTERS, CONVEX

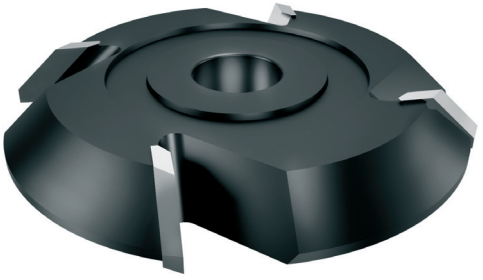




D mm	SB mm	BO mm	R	Z	ID No. HS	ID No. HW
120	8	30	4	3	**25004**	**25104**
120	10	30	5	3	**25005**	**25105**
120	12	30	6	3	**25006**	**25106**
120	15	30	7,5	3	**25008**	**25108**
120	20	30	10	3	**25010**	**25110**
120	25	30	12,5	3	**25013**	**25113**
120	30	30	15	3	**25015**	**25115**
140	35	30	17,5	3	**25018**	**25118**
140	40	30	20	3	**25020**	**25120**

- HS tool tips
- HW tool tips
- intended for profile making of soft and hard wood.
- power feed

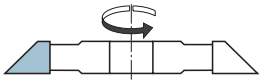
CHAMFER CUTTERS



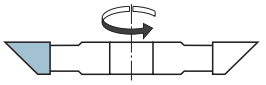
- HS tool tips
- HW tool tips
- intended for milling the edges of soft and hard wood
- power feed

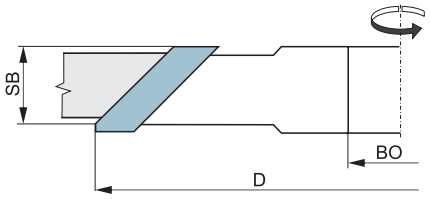
- rotation scheme should be specified in the PO

SCHEME I: BOTTOM STOCK REMOVAL (DOWN MILLING)



SCHEME II: UPPER STOCK REMOVAL (UP MILLING)





D mm	SB mm	BO mm	E °	Z	ID No. HS	ID No. HW
120	15	30	45	4	**28001**	**28101**
140	20	30	45	4	**28002**	**28102**
160	30	30	45	4	**28003**	**28103**

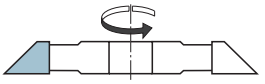
VBD CHAMFER CUTTERS



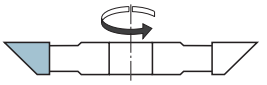
- HW replaceable tool tips for soft and hard wood

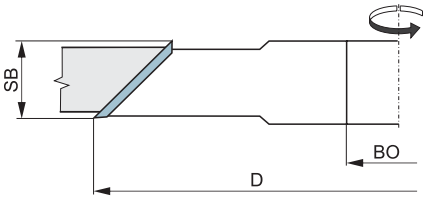
- rotation scheme should be specified in the PO

SCHEME I: BOTTOM STOCK REMOVAL (DOWN MILLING)



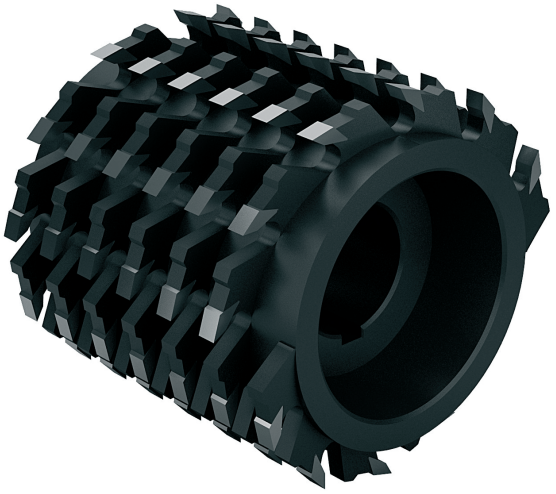
SCHEME II: UPPER STOCK REMOVAL (UP MILLING)





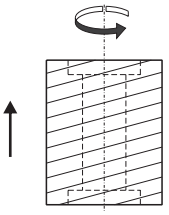
D mm	SB mm	BO mm	E °	Z	ID No. HW
125	9,5	30 (40)	45	4	**28201**

replaceable tool tips	Grade	ID No.
14x14x2	MG18	**239725**
14x14x2	KCR08	**359802**
14x14x2	SMG02	**332539**

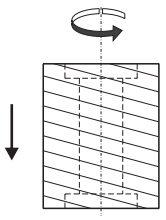


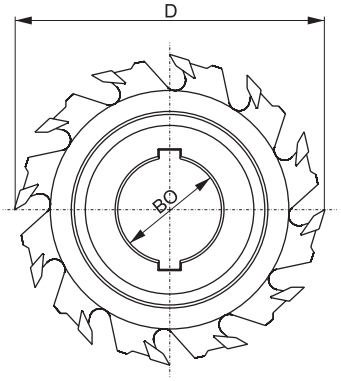
- 12-2 = 12 sets of teeth, double-threaded helix
- 16-2 = 16 sets of teeth, double-threaded helix
- 16-1 = 16 sets of teeth, single-threaded helix
- HW soldered tool tips
- the following specifications should be quoted in the PO:
  - D - diameter
  - SB - cutter width
  - BO - chucking diameter
  - number of sets of teeth and helix
  - ID No. 72001
  - groove for tongue
  - or modification of cartridge recess
  - rotation scheme

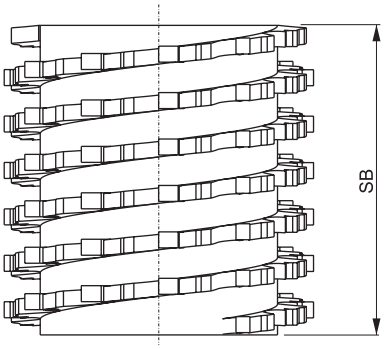
SCHEME I

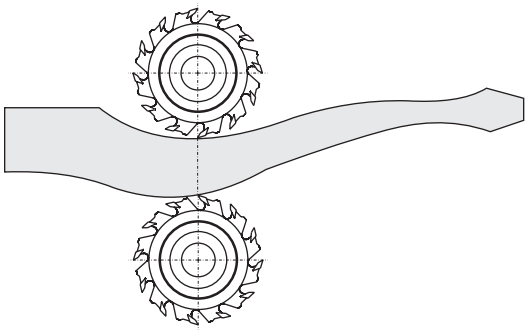


SCHEME II



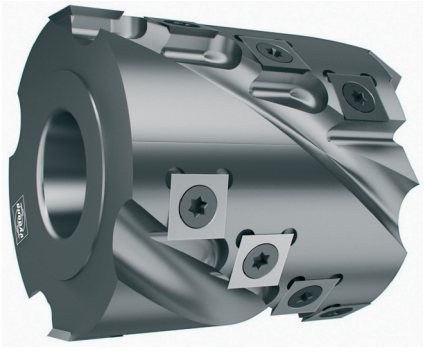






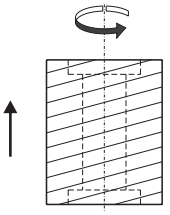
D mm	SB mm	BO mm	Z	ID No.
80/100/110	60	30/35/40	12-2/16-2/16-1	**D-SB-BO-Z-72001**
80/100/110	80	30/35/40	12-2/16-2/16-1	
80/100/110	100	30/35/40	12-2/16-2/16-1	
80/100/110	120	30/35/40	12-2/16-2/16-1	
80/100/110	130	30/35/40	12-2/16-2/16-1	
80/100/110	140	30/35/40	12-2/16-2/16-1	
80/100/110	150	30/35/40	12-2/16-2/16-1	
80/100/110	160	30/35/40	12-2/16-2/16-1	
80/100/110	170	30/35/40	12-2/16-2/16-1	
80/100/110	180	30/35/40	12-2/16-2/16-1	
120/125/140	60	30/35/40	12-2/16-2/16-1	
120/125/140	80	30/35/40	12-2/16-2/16-1	
120/125/140	100	30/35/40	12-2/16-2/16-1	
120/125/140	120	30/35/40	12-2/16-2/16-1	
120/125/140	130	30/35/40	12-2/16-2/16-1	
120/125/140	140	30/35/40	12-2/16-2/16-1	
120/125/140	150	30/35/40	12-2/16-2/16-1	
120/125/140	160	30/35/40	12-2/16-2/16-1	
120/125/140	170	30/35/40	12-2/16-2/16-1	
120/125/140	180	30/35/40	12-2/16-2/16-1	
120/125/140	200	30/35/40	12-2/16-2/16-1	
120/125/140	220	30/35/40	12-2/16-2/16-1	
120/125/140	230	30/35/40	12-2/16-2/16-1	

VBD MULTI-VANE SPIRAL MILLING CUTTER HEAD

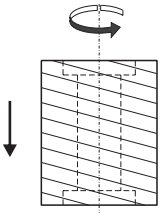


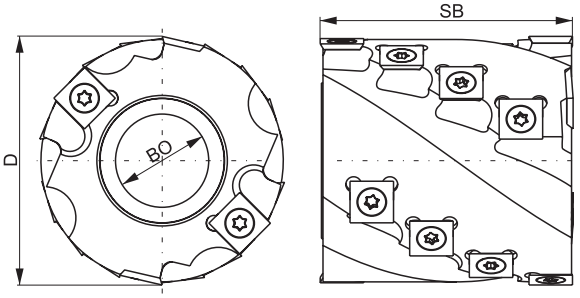
- HW replaceable tool tips
- rotation scheme should be specified in the PO

SCHEME I



SCHEME II





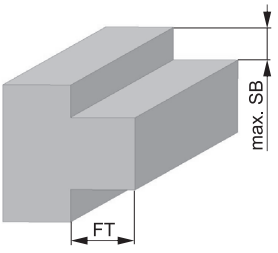
D mm	SB mm	BO mm	Z	ID No.
80	100	30	16+2	**15010**
100	60	30	18+3	**15020**
100	104	30	30+3	**15030**

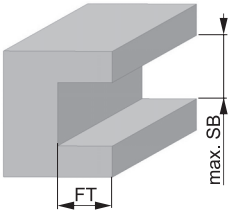
replaceable tool tips	ID No.
14x14x2	**359802**

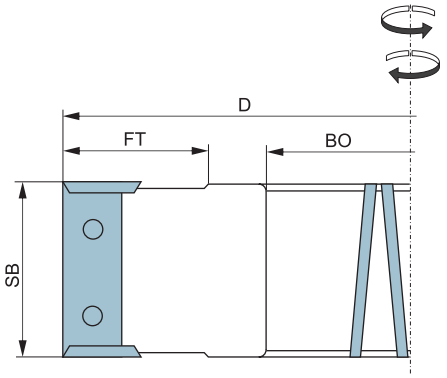
REBATING CUTTERS



- HW replaceable tool tips
- intended for milling flat surfaces and recesses.
- manual feed



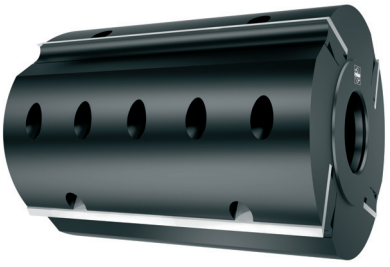




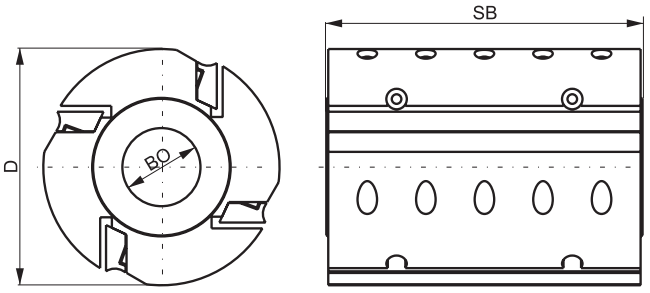
D mm	SB mm	BO mm	Z	ID No.
125	30	30/50	4 + 4	**14130**
125	50	30/50	4 + 4	**14150**

replaceable tool tips	ID No.
30x12x1,5	**358833**
50x12x1,5	**358835**
14x14x2	**359802**

HS/HW PLANER CUTTER HEAD



- planer cutter heads are made of steel (Fe) or fortified aluminium alloy (Al)
- they are equipped with planer tools 30x3xSB as standard
- the tools are made of high-speed steel 18%W
- HW planing tools by request



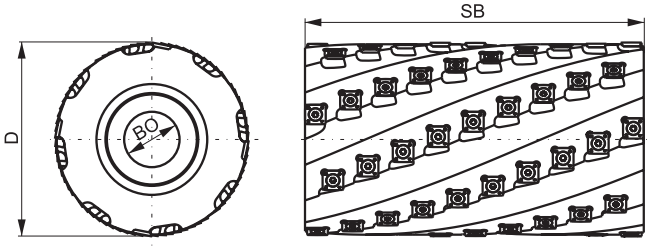
D mm	SB mm	BO mm	Z	ID No. Al	ID No. Fe
125	80	40	4	**73080**	**72080**
125	100	40	4	**73100**	**72100**
125	120	40	4	**73120**	**72120**
125	130	40	4	**73130**	**72130**
125	150	40	4	**73150**	**72150**
125	180	40	4	**73180**	**72180**
125	230	40	4	**73230**	**72230**
125	240	40	4	**73240**	**72240**

knife blanks for planer cutter head can be found on pages 57 to 59

VBD PLANER CUTTER HEAD

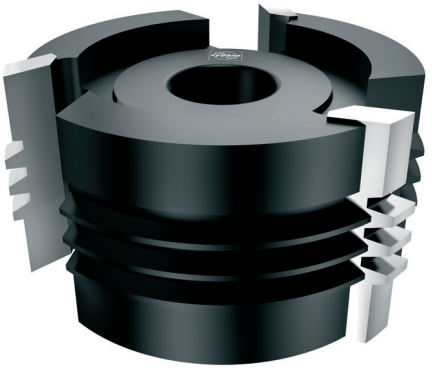


- the head body is made of fortified aluminium alloy
- sequential cut of the knives in the helix ensures smooth operation and significantly decreases machine load
- HW replaceable tool tips with rounded edges ensure high surface quality

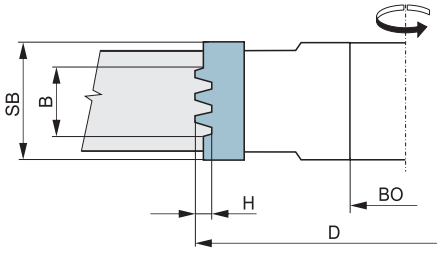


D mm	SB mm	BO mm	Z	ID No.
125	100	40	3	**75100**
125	130	40	3	**75130**
125	180	40	3	**75180**
125	230	40	3	**75230**
125	240	40	3	**75240**
140	230	40	4 (72)	**76230**
140	240	40	4 (76)	**76240**

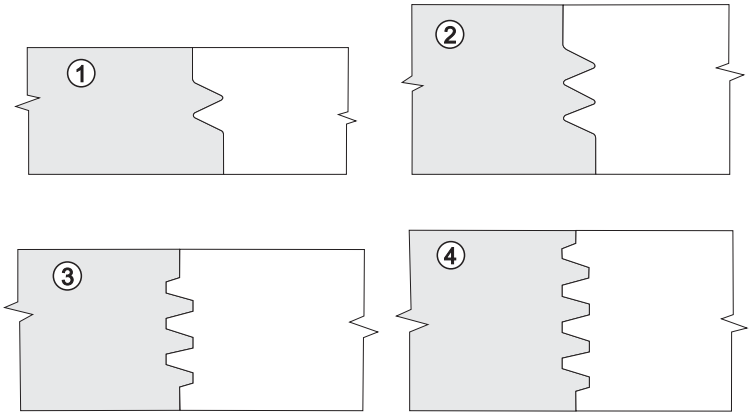
replaceable tool tips	ID No.
15x15x2,5	**11225484**

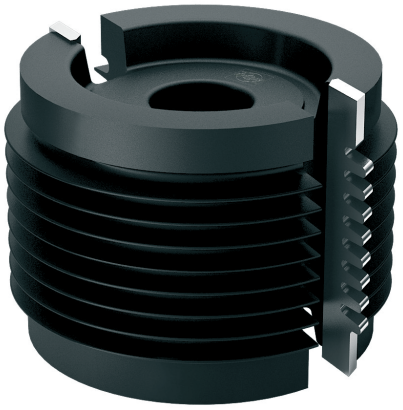


- HS tool tips
- HW tool tips
- intended for the side joints of soft and hard wood
- power feed

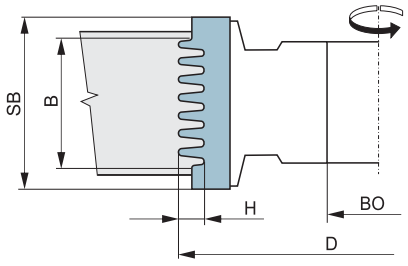


D mm	SB mm	BO mm	B mm	H mm	Z	PR No.	ID No. HS	ID No. HW
120	40	30	11,7	6	3	**1**	**21001**	**21101**
120	40	30	19,5	6	3	**2**	**21012**	**21112**
120	50	30	19,5	6	3	**2**	**21022**	**21122**
120	60	30	24	5	3	**3**	**21003**	**21103**
120	70	30	32	5	3	**4**	**21004**	**21104**

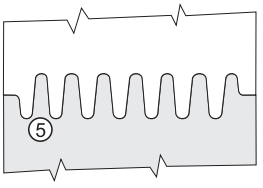




- HS tool tips
- HW tool tips
- intended for longitudinal jointing of slots and segments during manufacturing of arc windows made from soft and hard wood
- power feed

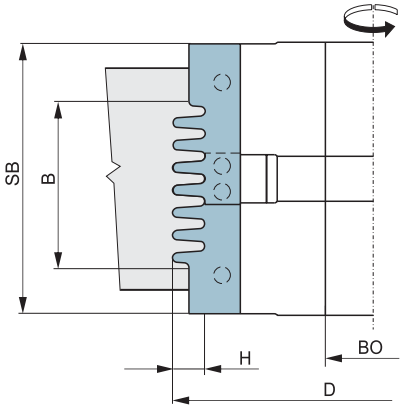


D mm	SB mm	BO mm	B mm	H mm	Z	PR No.	ID No. HS	ID No. HW
120	85	30	59	10	3-HS/2-HW	**5**	**21005**	**21105**

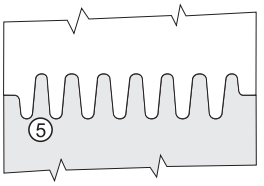




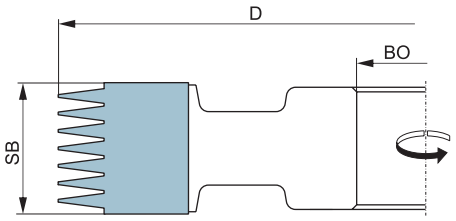
- adjustable jointing cutter
- HW Replaceable tool tips (VBD)
- intended for longitudinal jointing of slots and segments during manufacturing of arc windows made from soft and hard wood
- power feed

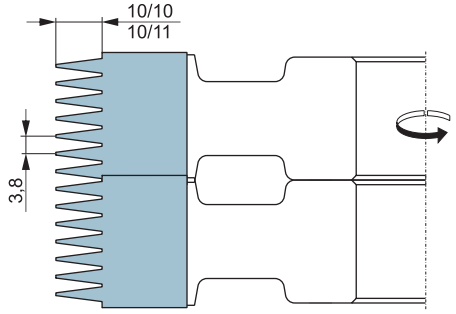


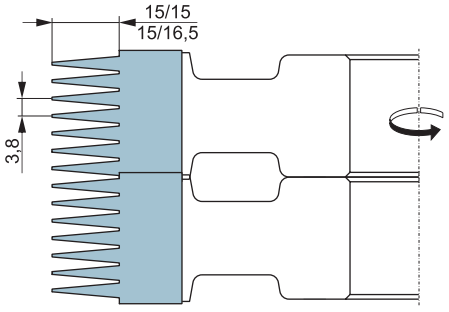
D mm	SB mm	BO mm	B mm	H mm	Z	PR No.	ID No. HW
125	70-98	30	37,8-65,8	10	2	**5**	**21106**

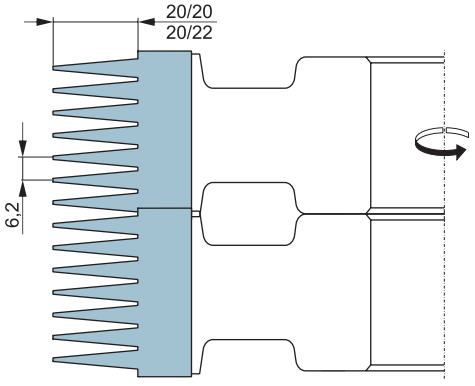












RIDGE JOINT CUTTERS - joint length 10 mm, spacing 3.8 mm				
D mm	SB mm	BO mm	Z	ID No. ZL 10/10
160	28,6	30-50	2/2	**021685**
250	28,6	30-50	3/3	**021691**

RIDGE JOINT CUTTERS - joint length 10 mm, spacing 3.8 mm				
D mm	SB mm	BO mm	Z	ID No. ZL 10/11
160	28,6	30-50	4	**021689**
250	28,6	30-50	4	**021692**

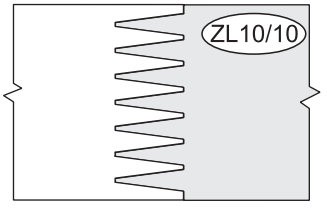
RIDGE JOINT CUTTERS - joint length 15 mm, spacing 3.8 mm				
D mm	SB mm	BO mm	Z	ID No. ZL 15/15
170	28,6	30-50	2/2	**021694**

RIDGE JOINT CUTTERS - joint length 15 mm, spacing 3.8 mm				
D mm	SB mm	BO mm	Z	ID No. ZL 15/16,5
170	28,6	30-50	4	**021696**

RIDGE JOINT CUTTERS - joint length 20 mm, spacing 6.2 mm				
D mm	SB mm	BO mm	Z	ID No. ZL 20/20
180	37	30-50	2/2	**021729**

RIDGE JOINT CUTTERS - joint length 20 mm, spacing 6.2 mm				
D mm	SB mm	BO mm	Z	ID No. ZL 20/22
180	37	30-50	4	**021730**

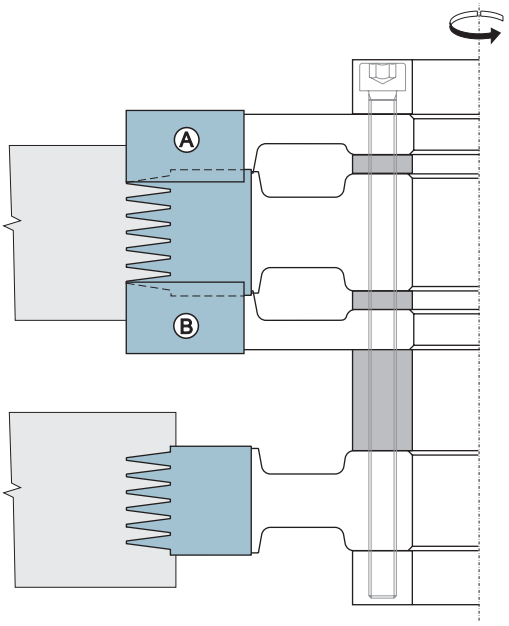
- HS tool tips
- for soft and hard wood
- used for manufacturing self-locking ridge joints of wooden glued members and block manufacturing
- longitudinal joints
- using wood residuals for manufacturing windows, glued laminated structures and furniture manufacturing
- on request it is possible to manufacture special joint shapes
- joint width according to the number of cutters,
- used separately or in sets
- power feed

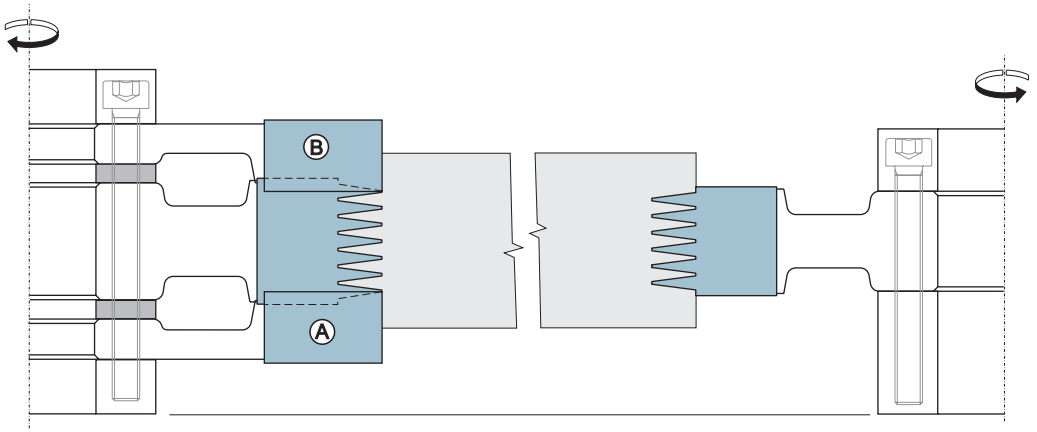


number of cutters for the specified joint width		
max. joint width with cutter width of 28.6 mm	**max. joint width** with cutter width of 37 mm	**number of cutters**
24	32	**1**
51	67	**2**
77	102	**3**
104	137	**4**
131	172	**5**
157	207	**6**
187	242	**7**
210	277	**8**
237	312	**9**
264	347	**10**

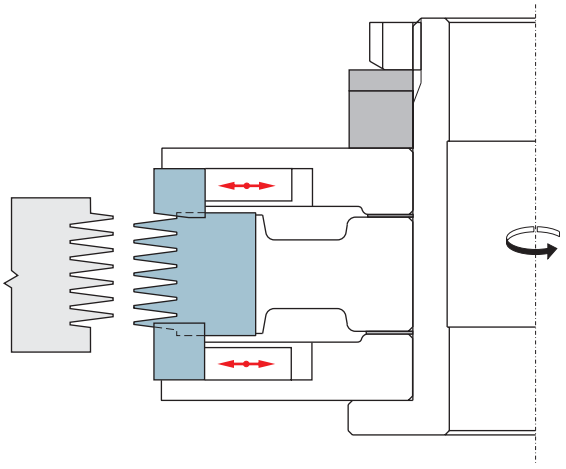
END CUTTERS

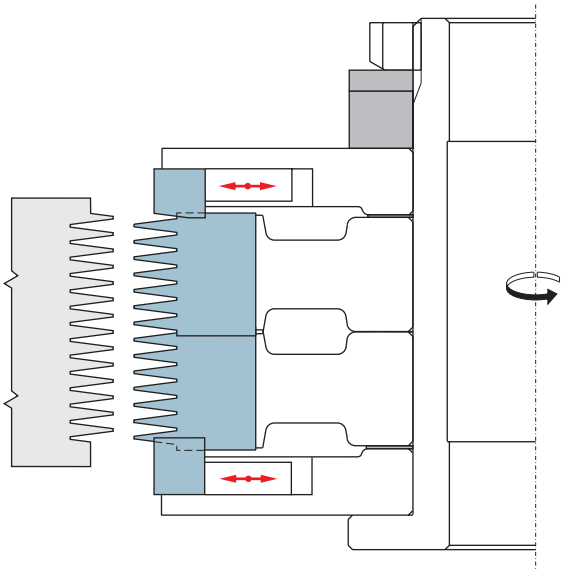
D mm	SB mm	BO mm	Z	PR No.	ID No. ZL 10/10	ID No. ZL 10/11
250	15	50	6	A	021732	021733
250	15	50	6	B	021734	021735

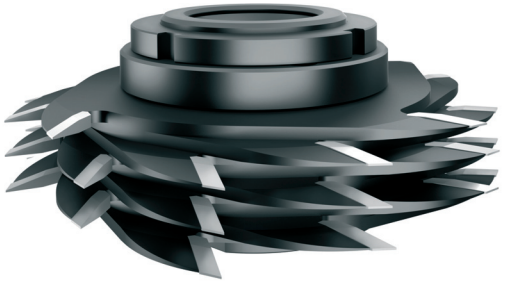




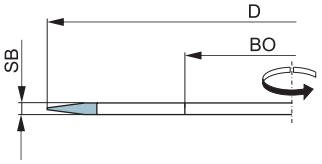
▶ further application examples





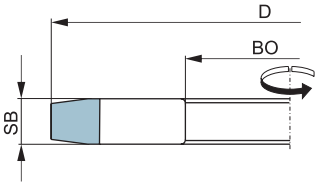


- HW tool tips
- for soft and hard wood
- used for manufacturing self-locking ridge joints of wooden glued members and block manufacturing
- longitudinal joints
- using wood residuals for manufacturing windows, glued laminated structures and furniture manufacturing
- on request it is possible to manufacture special joint shapes
- joint width according to the number of cutters in the set
- power feed



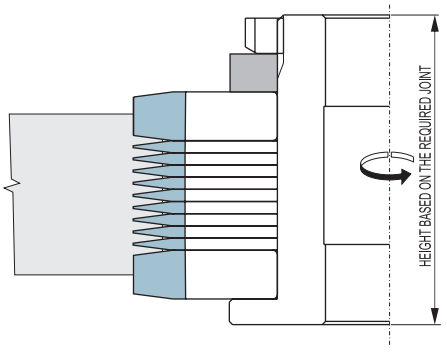
RIDGE JOINT CUTTERS - joint length 10/11 mm, spacing 3.8 mm

D mm	SB mm	BO mm	Z	ID No.
160	3,8	70	4	**021511**
250	3,8	70	6	**021513**



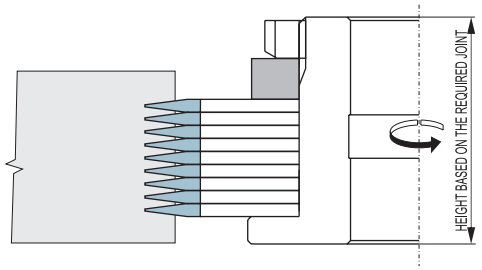
END CUTTERS

D mm	SB mm	BO mm	Z	ID No.
159,8	15,2	70	4	**021762**
249,7	15,2	70	6	**021764**



number of ridge cutters for the specified joint width with end cutters

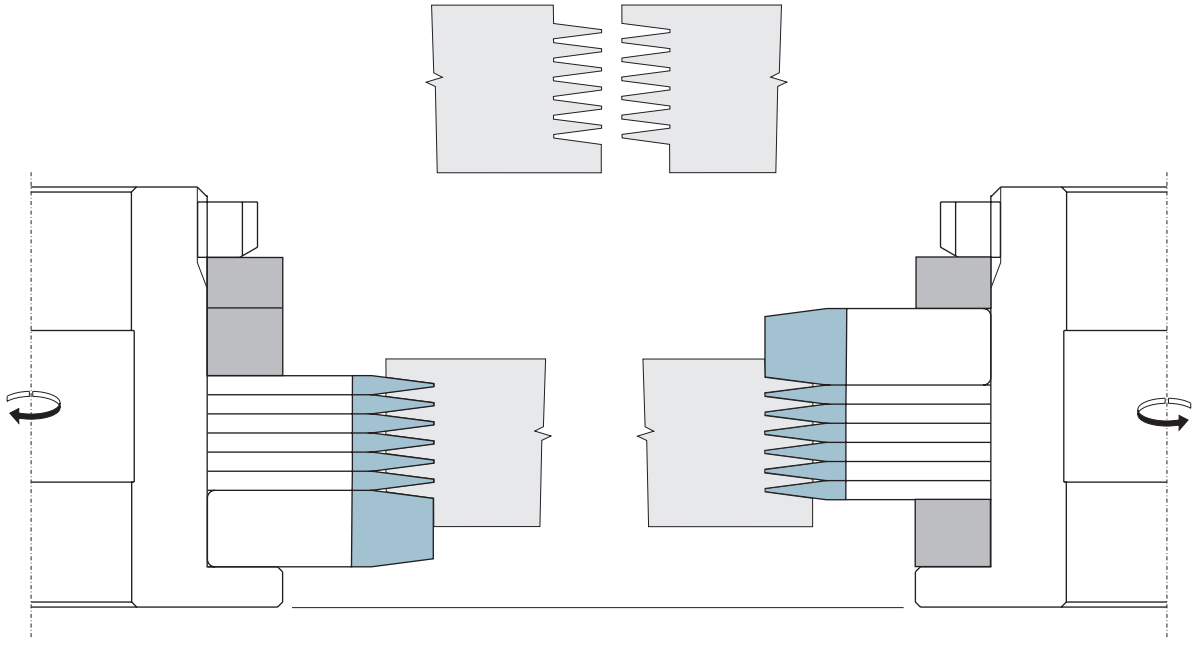
joint width mm min.	joint width mm max.	¨width with end cutters min.	¨width with end cutters max.	number of end cutters	number of ridge cutters
12	30	2,2	11,4	**2**	**2**
20	34	2,5	11,4	**2**	**3**
30	42	4	11,4	**2**	**5**
40	49,5	5	11,4	**2**	**7**
50	57	6	11,4	**2**	**9**
60	68,5	5,5	11,4	**2**	**12**
70	76	6,5	11,4	**2**	**14**
80	87,5	6	11,4	**2**	**17**
90	99	5,5	11,4	**2**	**20**

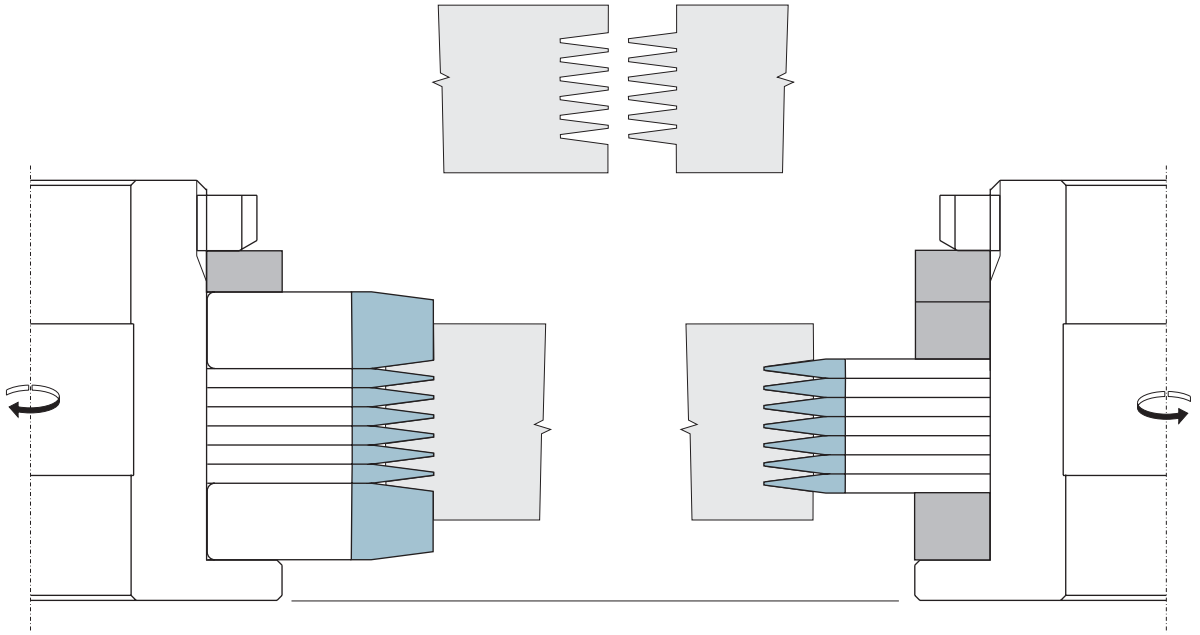


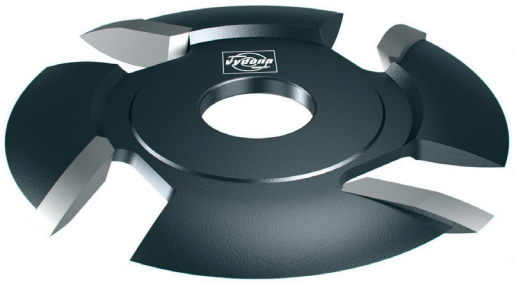
number of ridge cutters for the specified joint width without end cutters

joint width mm	number of ridge cutters
12	**4**
20	**6**
30	**9**
40	**12**
50	**14**
60	**17**
70	**19**
80	**22**
90	**25**
100	**27**

▶ examples

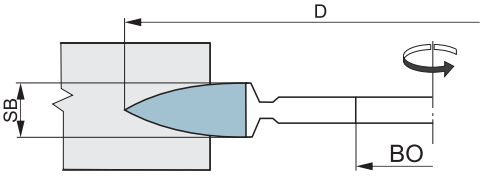


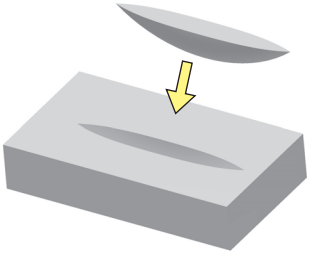


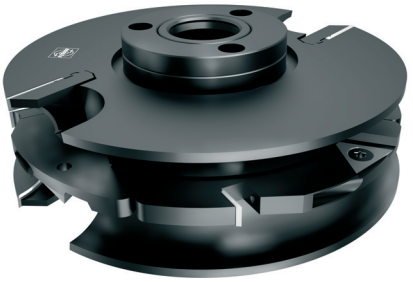


- 4 edge plates with alternatively tapered edges
- HW tool tips for hard wood
- HS tool tips for soft wood
- to make sockets for so-called trunks - resin streaks
- for specialty manual electric machines

D mm	SB mm	BO mm	Z	ID No. HS	ID No. HW
100	8	22	4	**47001**	**47101**

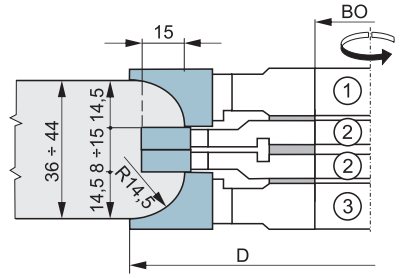


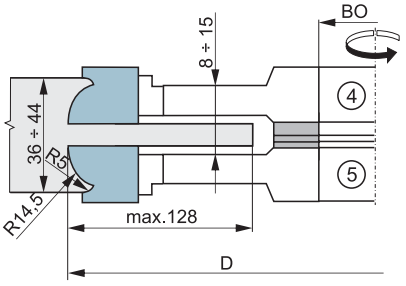




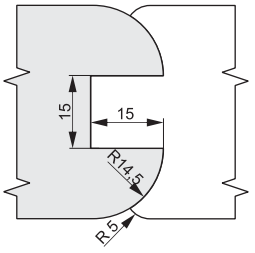
"DV4" cutter sets for doors

- HS tool tips for soft wood
- HW tool tips for hard wood
- intended for cutting profiles and counter-profiles on wooden doors
- adjustable using spacer rings
- power feed



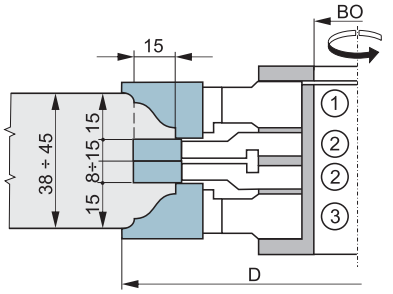


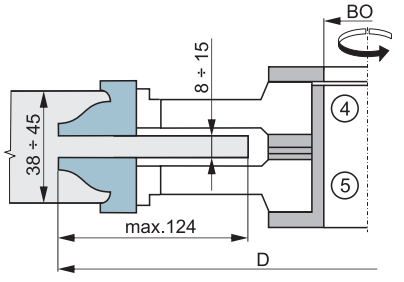
D mm	BO mm	Z	PR No.	ID No. HS	ID No. HW
160	30	2	**1**	**33004**	**33104**
156	30	4+4	**2**		
160	30	2	**3**		
320	30	2	**4**		
320	30	2	**5**		
set of spacer rings with a diameter of 60/30 - 7/5/4/3/2/1/0.5/0.2/0.1 mm					



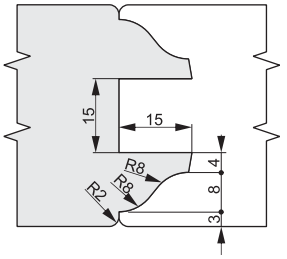
"DV1" cutter sets for doors

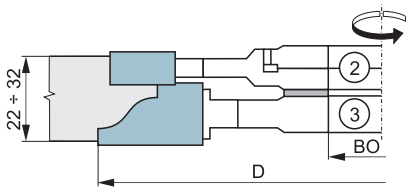
- HS tool tips
- HW soldered or replacement tool tips (VBD)
- intended for cutting profiles and counter-profiles on doors
- the joint creates a specified gap
- adjustable using spacer rings
- power feed

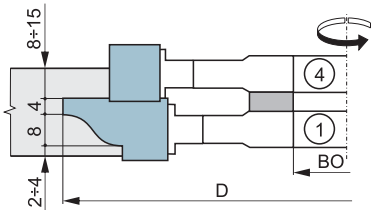


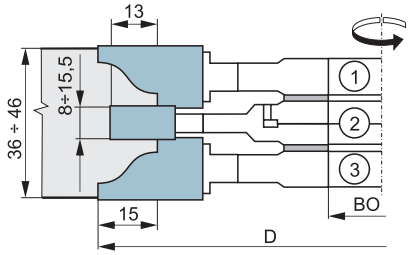


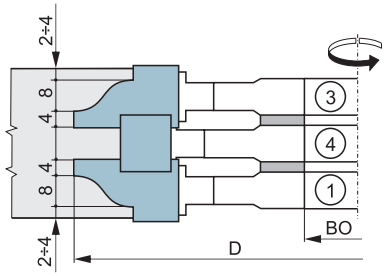
D mm	BO mm	Z	PR No.	ID No. HS	ID No. HW	ID No. VBD
156	40/30	2	**1**	**33001**	**33101**	**33201**
150	40/30	4+4	**2**			
156	40/30	2	**3**			
320	40/30	2	**4**			
320	40/30	2	**5**			
set of spacer rings with a diameter of 60/30 - 7/3/2/1/0,5/2x0,2/0,1 mm						
collets with the clamping diameter of 40/30 mm						

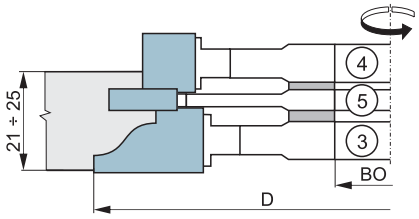


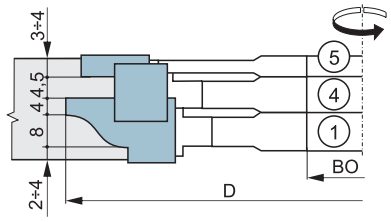


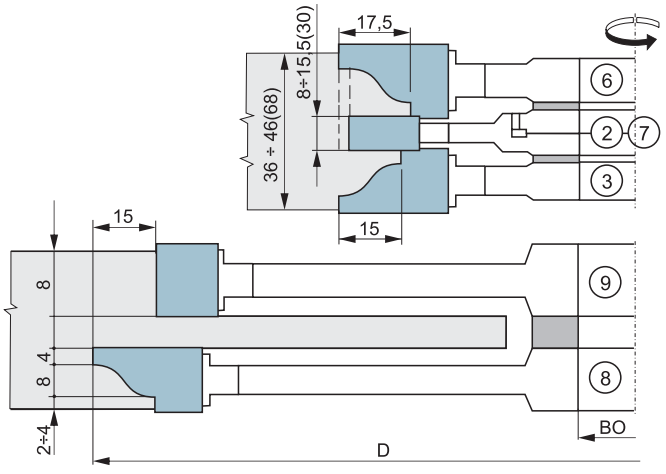












D mm	BO mm	Z	PR No.	ID No. HS	ID No. HW
154	30	2	**1**	**33003**	**33103**
150	30	4+4	**2**		
154	30	2	**3**		
128	30	2	**4**		
set of spacer rings with a diameter of 60/30 - 3/2/1/0.5/2x0.2/0.1 mm					

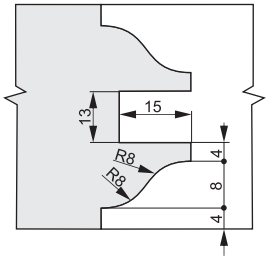
SPECIAL ORDER

D mm	BO mm	Z	PR No.	ID No. HS	ID No. HW
150	30	4	**5**	**33053**	**33153**
154	30	2	**6**	**33063**	**33163**
150	30	2	**7**	**33073**	**33173**
320	30	2	**8**	**33083**	**33183**
290	30	2	**9**	**33093**	**33193**

"DV3" cutter sets for doors

- HS tool tips
- intended for cutting profiles and counter-profiles on doors made of soft wood

- HW tool tips
- intended for cutting profiles and counter-profiles on doors made of hard wood
- the cutters are secured with dowels
- adjustable using spacer rings
- manual feed



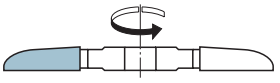


- HS tool tips
- intended for longitudinal milling of panelboards made of soft wood

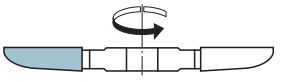
- HW tool tips
- intended for longitudinal and transversal milling of panelboards made of hard wood and transversal milling of soft wood
- manual feed

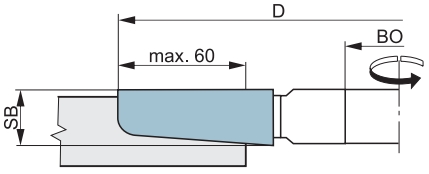
- rotation scheme should be specified in the PO

SCHEME I: BOTTOM STOCK REMOVAL (DOWN MILLING)

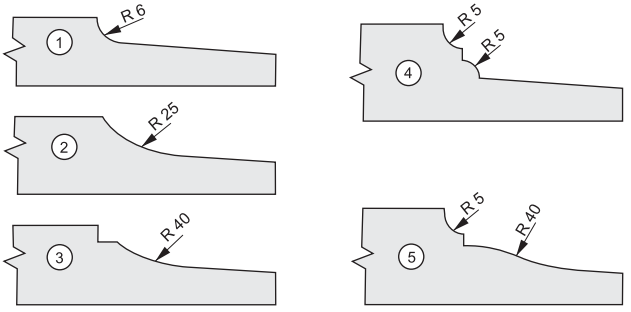


SCHEME II: UPPER STOCK REMOVAL (UP MILLING)





D mm	SB mm	BO mm	Z	PR No.	ID No. HS	ID No. HW
200	20	30	2+2	**1**	**48001**	**48101**
200	20	30	2+2	**2**	**48002**	**48102**
200	20	30	2+2	**3**	**48003**	**48103**
200	20	30	2+2	**4**	**48004**	**48104**
200	20	30	2+2	**5**	**48005**	**48105**

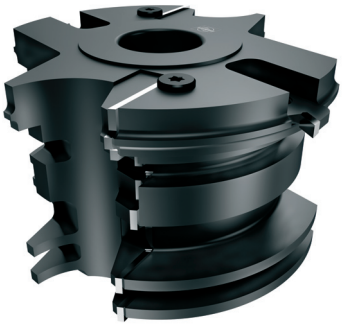




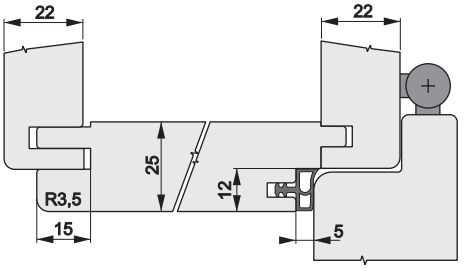
Cutters for door panels with VBD

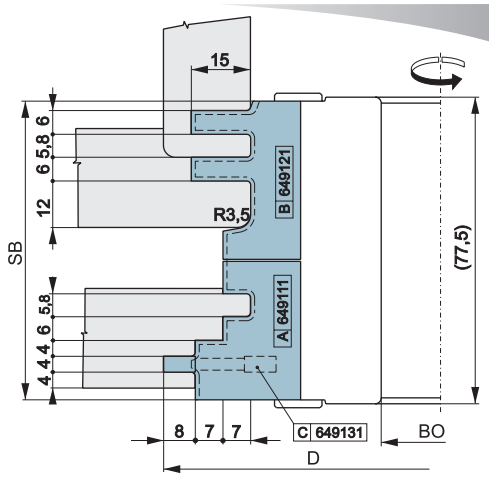
- HW replaceable tool tips
- shape and rotation direction according to the customer's requirements
- manual feed

DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS



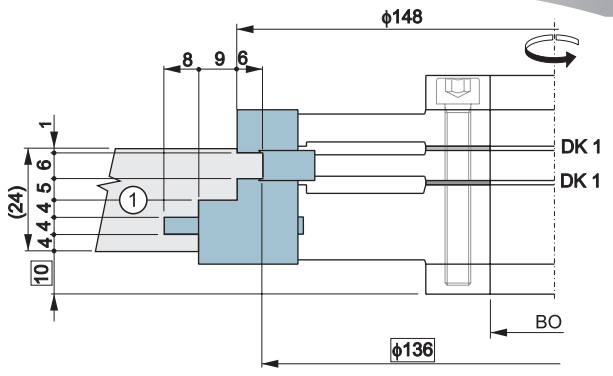
- HW replaceable tool tips
- intended for the manufacturing of door frames equipped with 12 mm seals

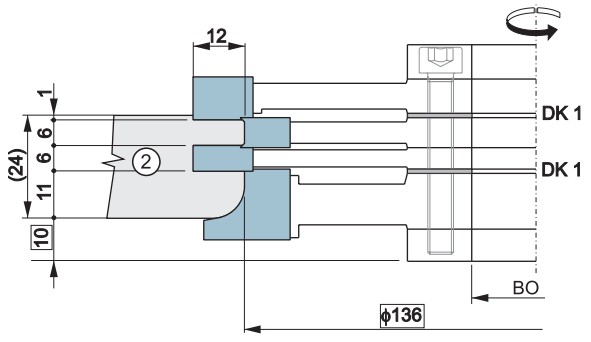


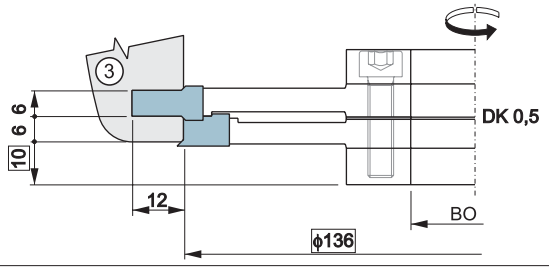


D mm	SB mm	BO mm	Z	ID No.
140	75,5	30	2	**49104**

replaceable tool tips		ID No.
A	35x30x2	**649111**
B	40x29x2	**649121**
C	32x4x3	**649131**

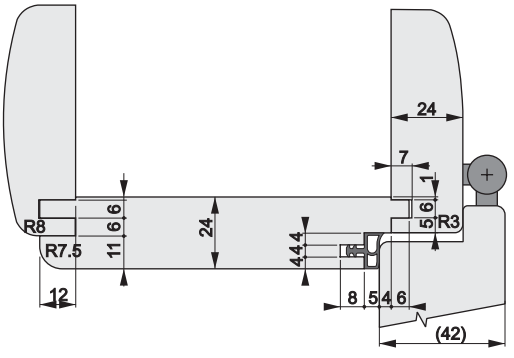


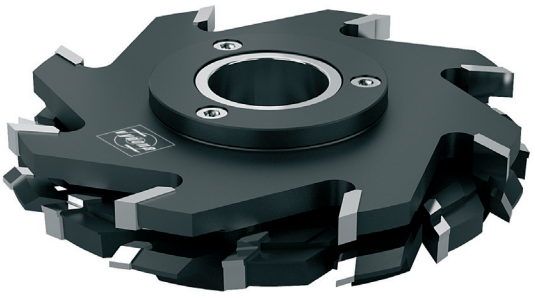


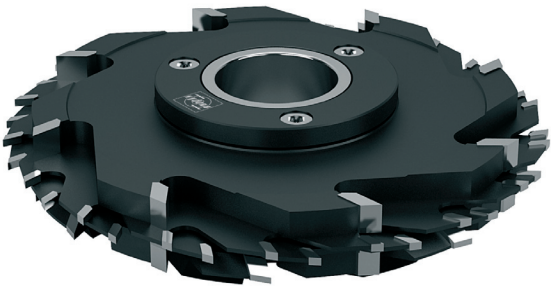


D mm	SB mm	BO mm	Z	PR No.	ID No.
182	35	30	2+2	**1**	**49101**
160	38	30	2+2	**2**	**49102**
160	14	30	2+2	**3**	**49103**

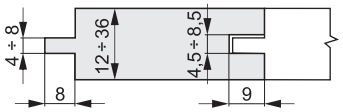
- HW soldered tool tips
- intended for the manufacturing of door frames equipped with 12 mm seals
- possibility of front panel manufacturing



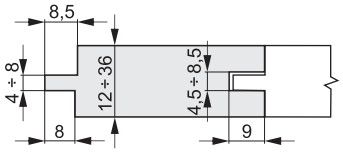




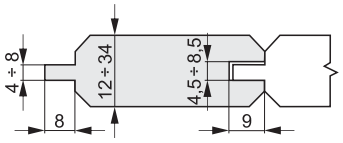
CF 500-502



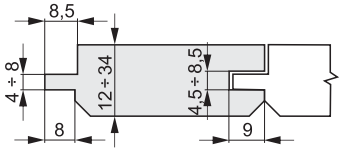
CF 501-502



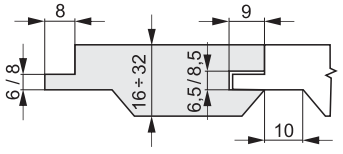
CF 503-504



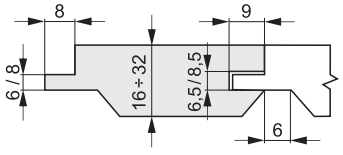
CF 505-506



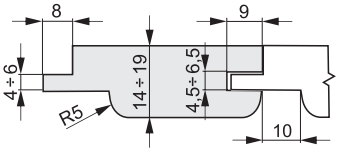
CF 507-508



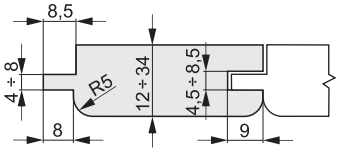
CF 509-508



CF 510-511

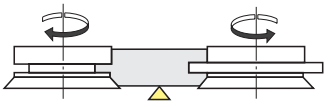


CF 512-511

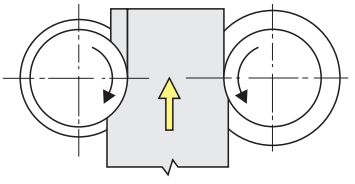


D mm	BO mm	Z	PR No.	ID No. HS	ID No. HW
160	30/40	4	**CF 500-502**	**35006**	**35106**
180	40	6		**35008**	**35108**
160	30/40	4	**CF 501-502**	**35026**	**35126**
180	40	6		**35028**	**35128**
160	30/40	4	**CF 503-504**	**35036**	**35136**
180	40	6		**35038**	**35138**
160	30/40	4	**CF 505-506**	**35056**	**35156**
180	40	6		**35058**	**35158**
160	30/40	4	**CF 507-508**	**35076**	**35176**
180	40	6		**35078**	**35178**
160	30/40	4	**CF 509-508**	**35096**	**35196**
180	40	6		**35098**	**35198**
160	30/40	4	**CF 510-511**	**35016**	**35116**
180	40	6		**35018**	**35118**
160	30/40	4	**CF 512-511**	**35046**	**35146**
180	40	6		**35048**	**35148**

- HS or HW tool tips
- intended for manufacturing joints Tongue-and-Groove made of both soft and hard wood
- intended for the four-side milling machine (planner)
- the cutters are secured with dowels
- adjustable set using spacer rings
- power feed
- standard version

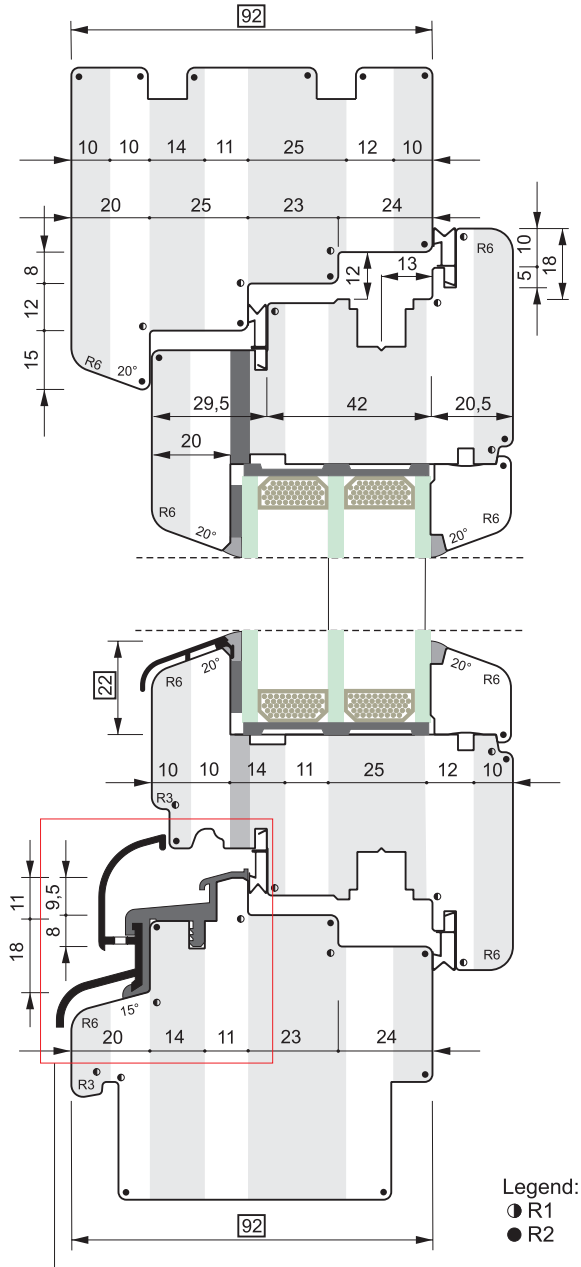


left tongue cutter front face right groove cutter

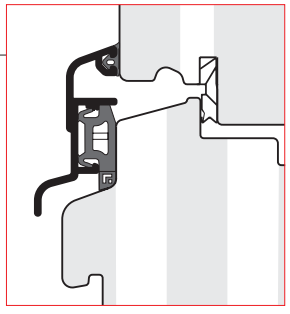


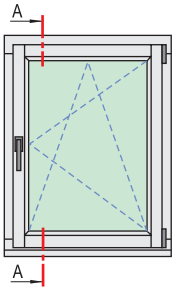
router bit set	ID No. SOLDERED	ID No. VBD
basic set	278000	178000

basic set
section A-A (version with 92 mm)



version for frame waterbar
SPREE, ALTO NOVA, BUG

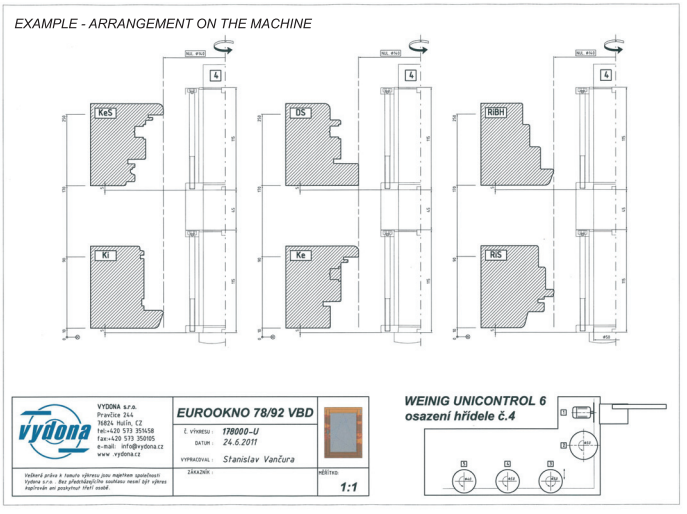




- we manufacture the packages in the following versions: soldered or with replaceable blades (VBD)
- HW tool tips are positioned at an axial angle, which allows continuous cutting to be achieved and thus a better machining quality
- using the basic package it is possible to build a single-casement or double-casement windows
- window bar with lock
- manufacturing of the middle joint of double-casement windows
- the set includes collets with clamping the diameter of 30 mm, 40 mm, or 50 mm
- they maintain zero line both in height and diameter - NUL. ϕ 140 profile - NUL. ϕ 320 dowel
- admitted lock gaps R6/R3
- cutting off slabs (4 pcs from the outer casement + 3 pcs from the inner frame)
- additional seals on the casement already in the standard version
- manufactured sets are tailored for the machine type where they are to be used
- adjustability follows the requirement of minimum tool-setting time without the need to disassemble individual parts
- the basic set can be extended by other milling sets

together with the window and door package the customer obtains the following:

- technical manual
- arrangement of the tools on the machine (spindle moulder, centres, CNC)
- proportioned cross-sections of windows and doors on 1:1 scale
- detailed drawings of individual packages on 1:1 scale
- detailed specifications of the replacement cutting blade
- detailed specification of the screws used



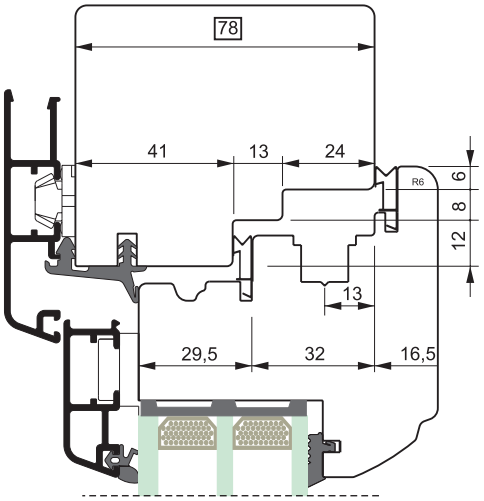
DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS

In the technical processing of the dimensional arrangement we cooperate with suppliers of aluminium lining and window components:

Roto GUTMANN DEVENTER STEMESEDER uniform sistemi per serramenti aluron SIEGENIA AUBI SOLUTIONS INSIDE bug

router bit set	ID No. VBD
basic set	190000

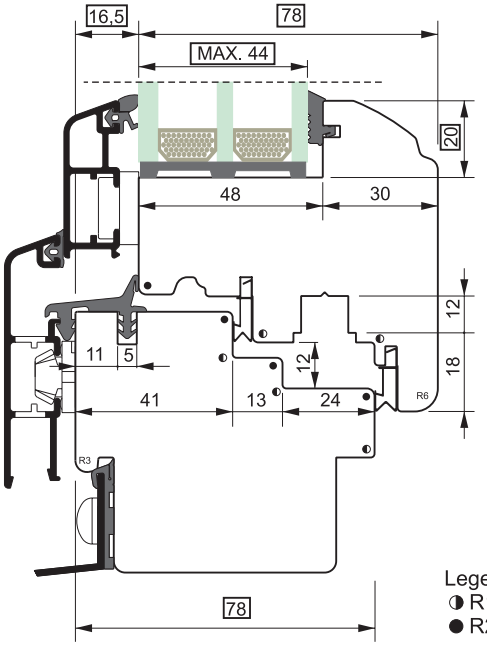
basic set
section A - A



- sets are manufactured with replaceable blades (VBD)
- HW tool tips are positioned at an axial angle, which allows continuous cutting to be achieved and thus a better machining quality
- using the basic package it is possible to build a single-casement or double-casement windows
- manufacturing of the middle joint of double-casement windows
- the set includes collets with clamping the diameter of 30 mm, 40 mm, or 50 mm
- they maintain zero line both in height and diameter - NUL. ϕ 140 profile - NUL. ϕ 320 dowel
- additional seals on the casement already in the standard version
- manufactured sets are tailored for the machine type where they are to be used
- the basic set can be extended by other milling sets

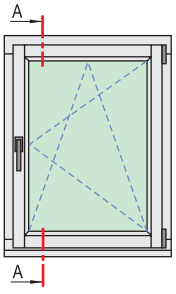
together with the window package the customer obtains the following:

- technical manual
- arrangement of the tools on the machine (spindle moulder, centres, CNC)
- proportioned cross-sections of windows on 1:1 scale
- detailed drawings of individual packages on 1:1 scale
- detailed specifications of the replacement cutting blade
- detailed specification of the screws used.



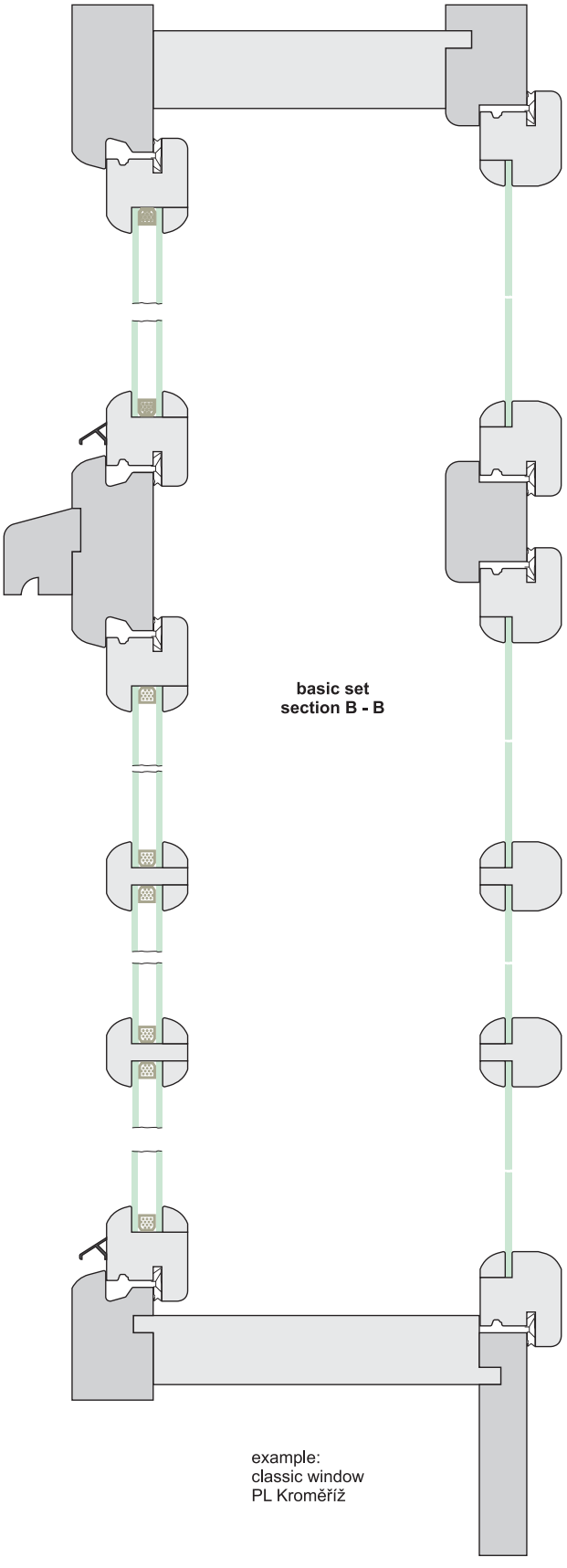
Legend:
◑ R1
● R2

DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS



In the technical processing of the dimensional arrangement we cooperate with suppliers of aluminium lining and window components:

basic set
section A - A



basic set
section B - B

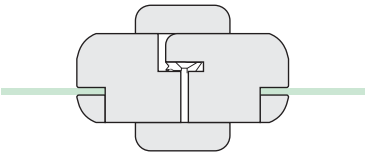
example:
classic window
PL Kroměříž

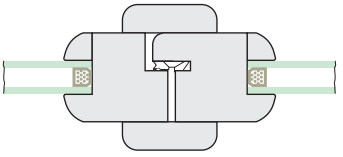
- for historic and protected landmark buildings
- sets are manufactured with replaceable blades (VBD) or soldered blades
- HW tool tips are positioned at an axial angle, which allows continuous cutting to be achieved and thus a better machining quality
- when designing the classic window based on the customer requirements
- the set includes collets with clamping the diameter of 30 mm, 40 mm, or 50 mm
- they maintain zero line both in height and diameter - NUL. ϕ 140 profile
  - NUL. ϕ 320 dowel
- manufactured sets are tailored for the machine type where they are to be used

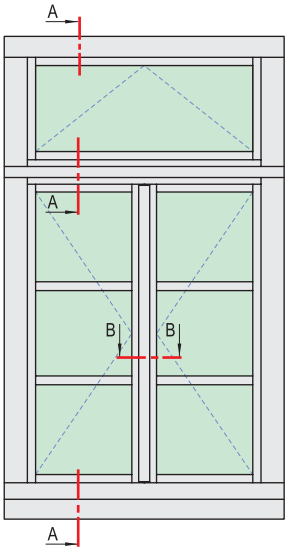
together with the window package the customer obtains the following:

- technical manual
- arrangement of the tools on the machine (spindle moulder, centres, CNC)
- proportioned cross-sections of window on 1:1 scale
- detailed drawings of individual packages on 1:1 scale
- detailed specifications of the replacement cutting blade
- detailed specification of the screws used

DESIGN AND MANUFACTURING
ACCORDING TO THE CUSTOMER'S
REQUIREMENTS

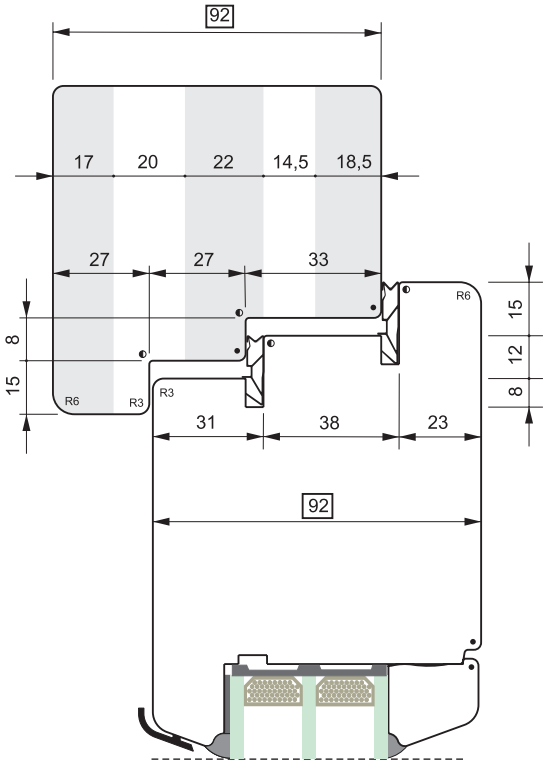


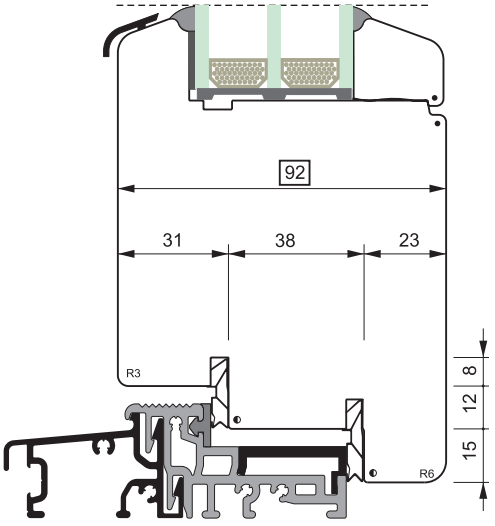


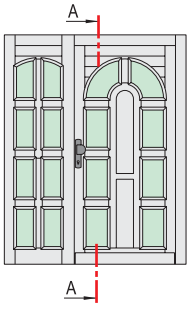


router bit set	ID No. VBD
basic set	392000

basic set
section A-A (version with 92 mm)







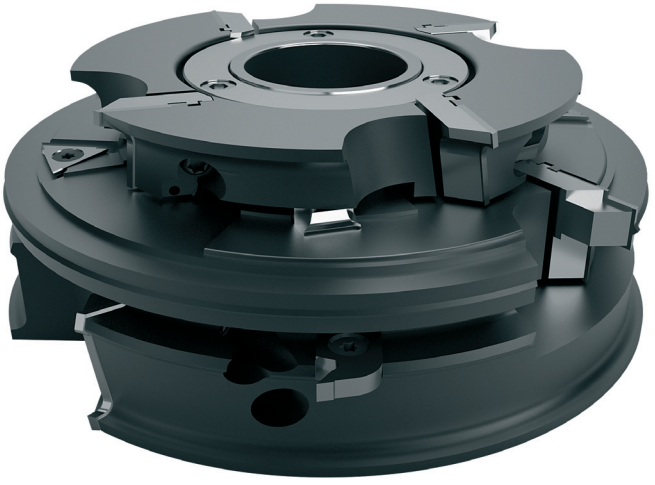
Legend:
◑ R1
● R2

- sets are manufactured with replaceable blades (VBD)
- HW tool tips are positioned at an axial angle, which allows continuous cutting to be achieved and thus a better machining quality
- using the basic package it is possible to build a single-casement or double-casement doors
- the set includes collets with clamping diameter of 30 mm, 40 mm, or 50 mm
- they maintain zero line both in height and diameter - NUL. ϕ 140 profile
  - NUL. ϕ 320 dowel
- manufactured sets are tailored for the machine type where they are to be used
- the basic set can be extended by other milling sets: middle post, inner frame, outer casement, dowel + frame spacer, frame counter-profile

together with the door package the customer obtains the following:

- technical manual
- arrangement of the tools on the machine (spindle moulder, centres, CNC)
- proportioned cross-sections of doors on 1:1 scale
- detailed drawings of individual packages on 1:1 scale
- detailed specifications of the replacement cutting blade
- detailed specification of the screws used

DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS



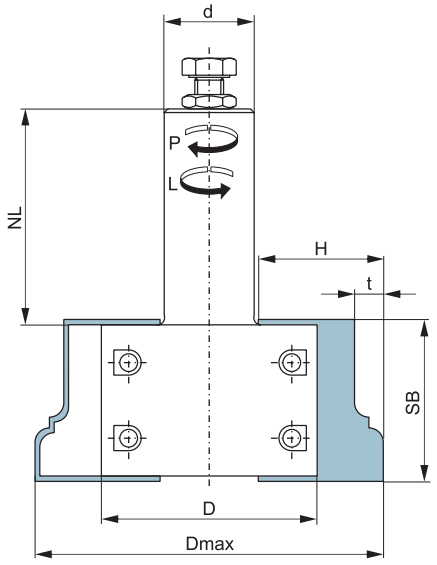
In technical processing we cooperate with suppliers of aluminium sills and door components:



- universal tool for CNC machining centres with HW profile knives
- intended for profiles of any type
- for machining of wooden massif and board materials
- KCR08 HW blade quality for universal purpose
- quick replacement of profile form cutter blades, safe and accurate positioned chucking
- power feed (MEC)
- steel tool carrier
- knives and back supports can be used also with a corresponding UNI-PROFI tool with chucking hole
- right or left rotation direction

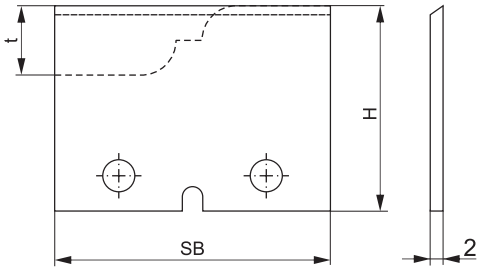
P - clockwise

L - counterclockwise



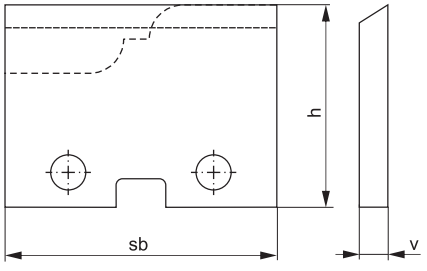
CARRIER WITH FEATHER

SB mm	d mm	NL mm	D mm	Z	ID No. L	ID No. P
40	25	60	71	2	**911020**	**901020**
60	25	60	71	2	**911010**	**901010**



HW KNIFE BLANK

SB mm	H mm	max t mm	Dmax mm	ID No.
40	20,5	2,7	80	**901026**
40	25,5	7,7	89,5	**901027**
40	30,5	12,7	99	**901028**
40	35,5	17,7	109	**901029**
60	25,5	7,7	89,5	**901037**
60	35,5	17,7	109	**901038**

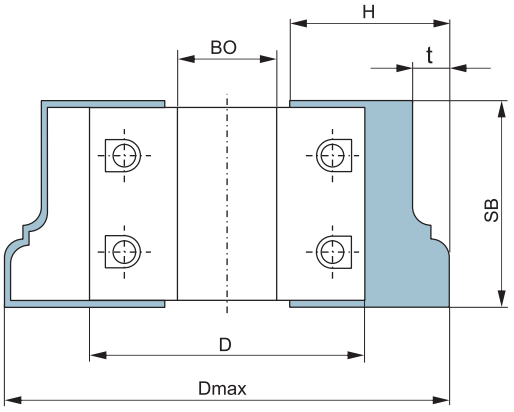


BACK KNIFE SUPPORT

sb mm	h mm	v mm	ID No.
38	27,5	6	**901022**
38	32,5	6	**901023**
38	37,5	6	**901024**
38	42,5	6	**901025**
58	32,5	6	**901034**
58	42,5	6	**901035**

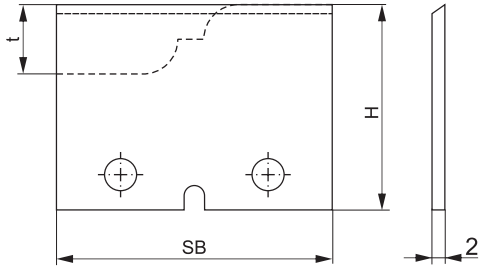


- universal tool for spindle moulders or profile planers
- intended for profiles of any type
- for machining of wooden massif and board materials
- KCR08 HW blade quality for universal purpose
- quick replacement of profile form cutter blades, safe and accurate positioned chucking
- power feed (MEC)
- steel tool carrier
- knives and back supports can be used also with a corresponding tool UNI - PROFI tool with chucking shank



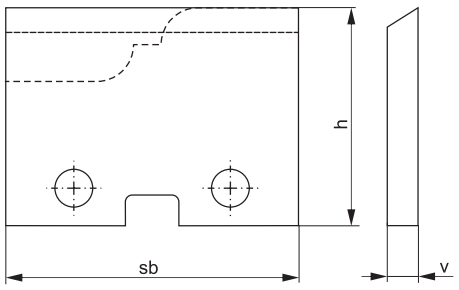
CARRIER WITH FEATHER

D mm	SB mm	BO mm	Z	ID No.
115	40	30/40	3	**901040**
115	60	30/40	3	**901030**



HW KNIFE BLANK

SB mm	H mm	max t mm	Dmax mm	ID No.
40	20,5	3,1	126	**901026**
40	25,5	8,1	135,5	**901027**
40	30,5	13,1	145	**901028**
40	35,5	18,1	155	**901029**
60	25,5	8,1	135,5	**901037**
60	35,5	18,1	155	**901038**



BACK KNIFE SUPPORT

sb mm	h mm	v mm	ID No.
38	27,5	6	**901022**
38	32,5	6	**901023**
38	37,5	6	**901024**
38	42,5	6	**901025**
58	32,5	6	**901034**
58	42,5	6	**901035**

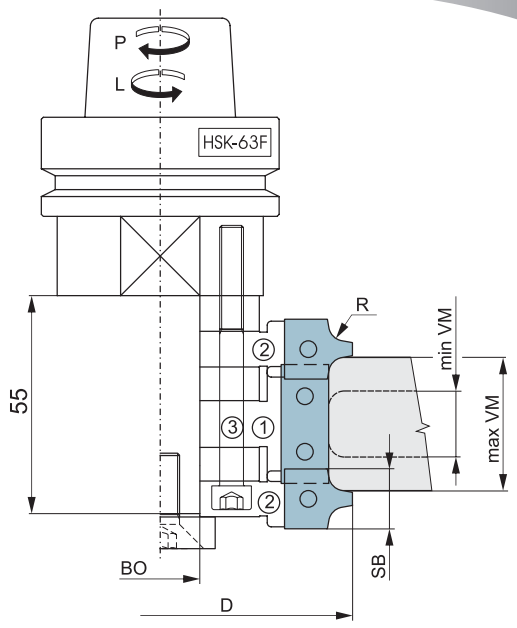
ADJUSTABLE ROUNDING (CHAMFERING) SET FOR REBATING



- intended for various combinations of chamfering and rounding operations on the CNC machining centres
- profile form knives for different chamfering and rounding may be set up on one head
- power feed (MEC)
- steel tool carrier
- right or left rotation direction

P - clockwise

L - counterclockwise



INDIVIDUAL CARRIERS (WITHOUT CHUCK AND KNIVES SETTING UP)

Number of carrier	Description	D mm	SB mm	BO mm	ID No.
1	Rebating head	85	30	20	**900051**
2	Rounding head	97	15,1	20	**900052**
3	Rebating head	85	50	20	**900061**

COMPLETE TOOL SETTING UP (WITHOUT CARRIER AND CHUCK)

Numbers of carriers	ID No.
2+1+2	**900050**
2+3+2	**900060**

Rounding radius **R** or chamfer **5x45°** should be quoted at placing the PO.

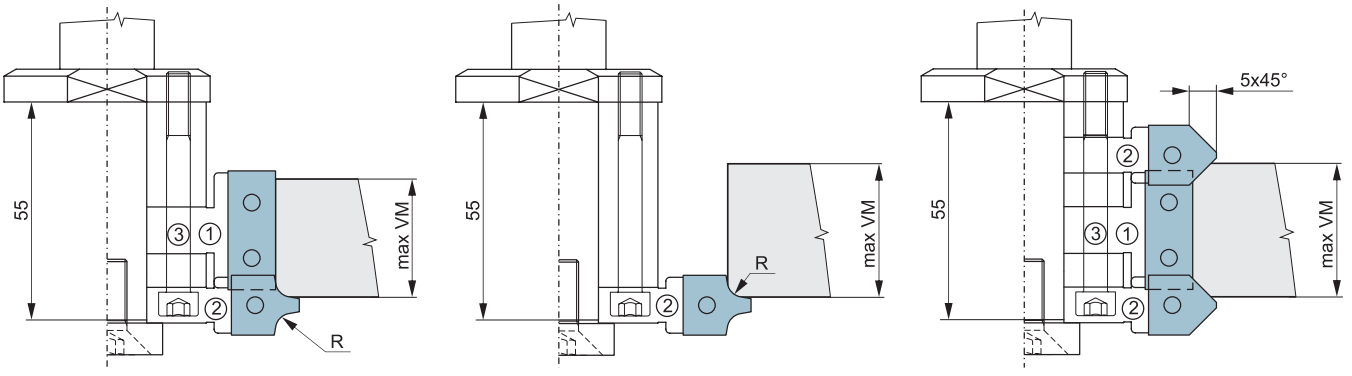
REPLACEMENT KNIVES

Profile of knife	Number of carrier	ID No.
R2	2	**900053**
R3	2	**900054**
R4	2	**900055**
R5	2	**900056**
5x45°	2	**900057**
30x12x1,5	1	**330524**
50x12x1,5	3	**330526**

MACHINING MATERIAL HEIGHT ACCORDING TO PROFILES

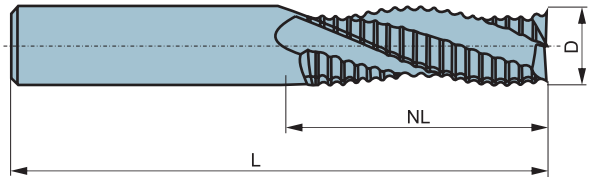
Numbers of carriers	2+1+2	2+3+2	2+1	2+3
max VM	28+2R	48+2R	28+R	48+R
min VM	12+R	32+2R	---	---

- further profile forming examples



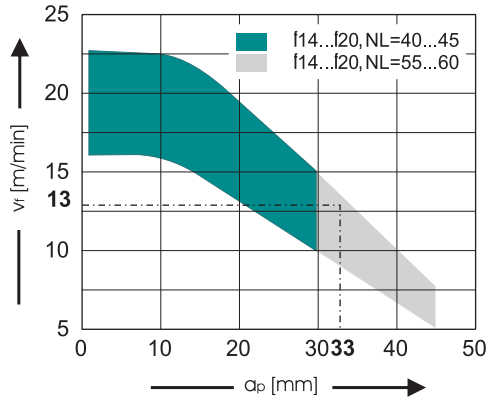


- HW Solid milling cutter
- intended for trimming and milling grooves
- suitable for hard wood, laminated materials, DDT and MDF
- rotation speed 18,000 rpm
- power feed



roughing cutters

D mm	L mm	NL mm	Z	helix	ID No.
6	60	20	3	PP	**101063**
6	70	20	3	PN	**102063**
8	80	32	3	PP	**101083**
8	90	32	3	PN	**102083**
10	100	52	3	PP	**101103**
10	110	52	3	PN	**102103**
12	100	52	3	PP	**101123**
12	110	52	3	PN	**102123**
14	100	52	3	PP	**101143**
14	110	52	3	PN	**102143**
16	100	52	3	PP	**101163**
16	110	52	3	PN	**102163**
18	100	52	3	PP	**101183**
18	110	52	3	PN	**102183**
20	100	52	3	PP	**101203**
20	110	52	3	PN	**102203**
20	120	72	3	PP	**101200**
20	135	72	3	PN	**102200**
25	130	72	3	PP	**101253**
25	150	72	3	PN	**102253**



- feed rate v_f
- working depth a_p
- correcting factor for feed rate v_f:
  soft wood = 1
  hard wood = 0.8
  chipboard = 1.2
  laminated chipboard = 0.9

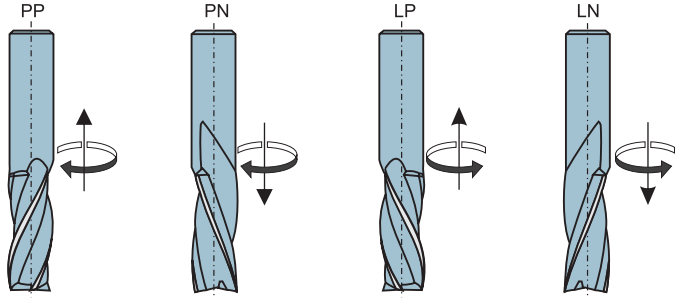


optional cutting edge coating
see page 63 for more information

DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS

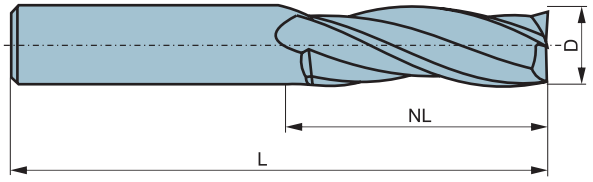


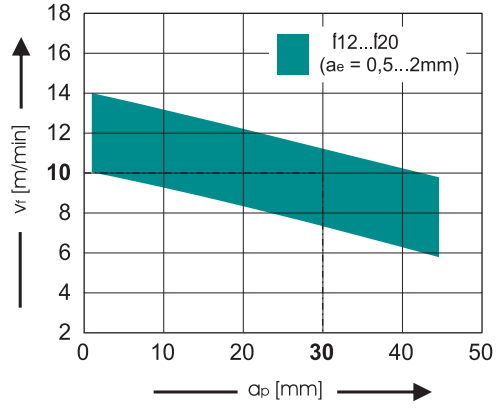
- PP = right positive helix, excellent cutting quality
  on the bottom side, upper chip disposal
- PN = right negative helix, excellent cutting quality
  on the upper side, lower chip disposal, cutting force acting from the table
- LP = left positive helix, excellent cutting quality
  on the bottom side, upper chip disposal
- LN = left negative helix, excellent cutting quality
  on the upper side, lower chip disposal, cutting force acting from the table





- HW Solid milling cutter
- suitable for milling the hard wood, laminated materials, DDT and MDF
- rotation speed 18,000 rpm
- power feed

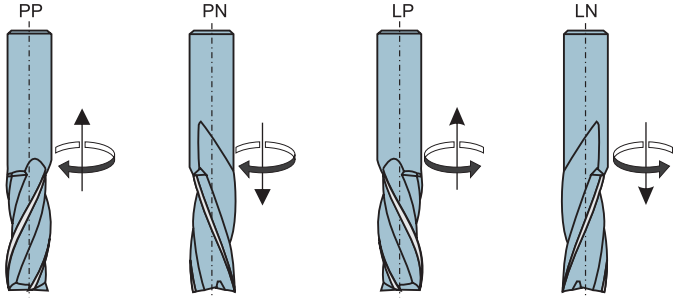




- feed rate v_f
- working depth a_p
- correcting factor for feed rate v_f:
  soft wood = 1
  hard wood = 0.9
  across the fibre machining = 0.7

finishing cutter					
D mm	L mm	NL mm	Z	helix	ID No.
4	50	15	2	PP	**201042**
4	60	15	2	PN	**202042**
5	50	17	2	PP	**201052**
5	60	17	2	PN	**202052**
6	60	22	2	PP	**201062**
6	70	22	2	PN	**202062**
8	80	32	2	PP	**201082**
8	90	32	2	PN	**202082**
10	80	32	2	PP	**201102**
10	90	32	2	PN	**202102**
8	80	32	3	PP	**201083**
8	90	32	3	PN	**202083**
10	80	32	3	PP	**201103**
10	90	32	3	PN	**202103**
10	100	52	3	PP	**231103**
10	110	52	3	PN	**232103**
12	100	52	3	PP	**201123**
12	110	52	3	PN	**202123**
14	100	52	3	PP	**201143**
14	110	52	3	PN	**202143**
16	100	52	3	PP	**201163**
16	110	52	3	PN	**202163**
18	100	52	3	PP	**201183**
18	110	52	3	PN	**202183**
20	100	52	3	PP	**201203**
20	110	52	3	PN	**202203**
20	120	72	3	PP	**201200**
20	135	72	3	PN	**202200**
25	130	72	3	PP	**201253**
25	150	72	3	PN	**202253**

- PP = right positive helix, excellent cutting quality
  on the bottom side, upper chip disposal
- PN = right negative helix, excellent cutting quality
  on the upper side, lower chip disposal, cutting force acting from the table
- LP = left positive helix, excellent cutting quality
  on the bottom side, upper chip disposal
- LN = left negative helix, excellent cutting quality
  on the upper side, lower chip disposal, cutting force acting from the table





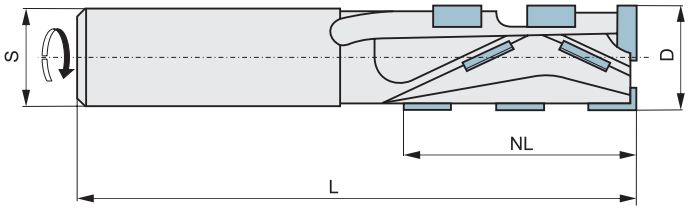




- dimensioning and grooving cutter for machining abrasive materials
- MDF, DTD, plastic materials, exotic woods and bonded materials
- used on routers and CNC machining centres
- cutting edge is made of helicoidally soldered PKD tips with HW or PKD boring bit
- single shear edge + boring bit = z1+1\
- double shear edge + boring bit = z2+1\for improved performance
- right or left rotation direction

P - clockwise

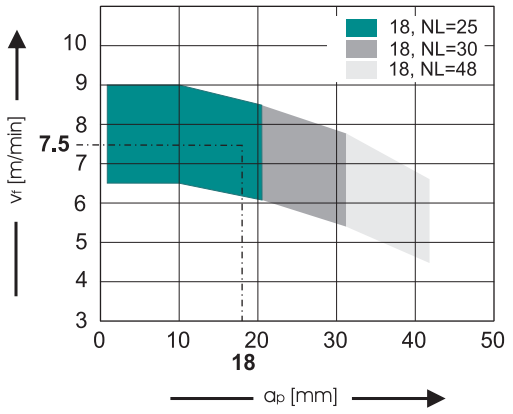
L - counterclockwise



D mm	L mm	NL mm	Z	S mm	ID No.
18	95	25	1+1	25x50	**182509510**
18	110	48	1+1	20x55	**184811010**
18	90	30	2+1	20x50	**183009020**

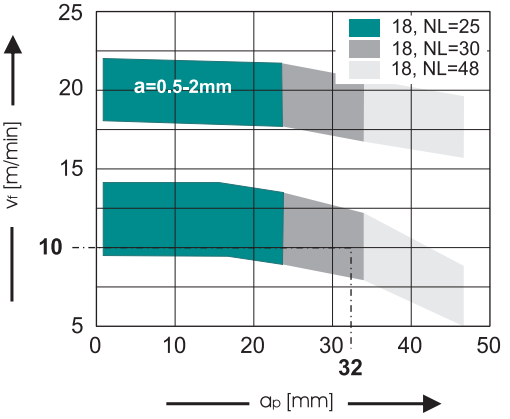
DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS

Z 1+1

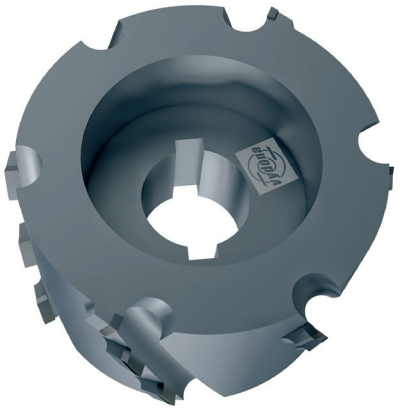


- feed rate v_f
- working depth a_p
- correcting factor for feed rate v_f:
  chipboard = 1.1
  MDF = 0.8

Z 2+1



- feed rate v_f
- working depth a_p
- correcting factor for feed rate v_f:
  chipboard = 1.1
  MDF = 0.7



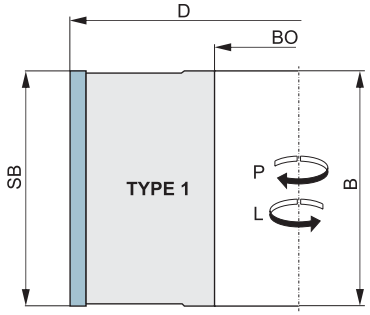
- to align edges of parts before banding, parallel or unparallel milling
- to machine chipboards or fibreboards (MDF, DTD, etc.), coated or uncoated by paper, plastic or veneer
- to machine glass or carbon fibre reinforced plastic materials
- the cutters are set up with soldered PKD edges tilted at alternating axial angle to achieve high-quality edges on both sides of the workpiece
- PKD blade height 3.5 mm
- intended for the following machines: Biesse, Brandt, Homag, Holz Her, IMA
- right or left rotation direction

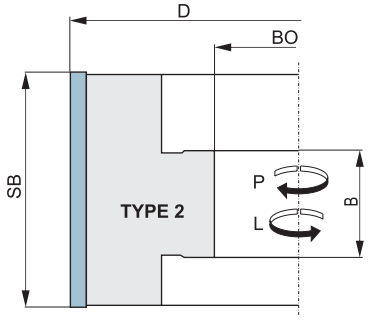
P - clockwise

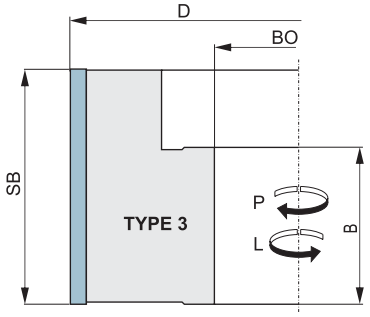
L - counterclockwise

D mm	SB mm	B mm	BO mm	ID No. P	ID No. L
80	30-65	acc. to the machine	30(20)DKN	on request	on request
100	34-83	acc. to the machine	30(20)DKN	on request	on request
125	34-63	acc. to the machine	30DKN	on request	on request

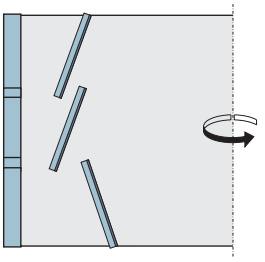
- tool shape and cartridge position



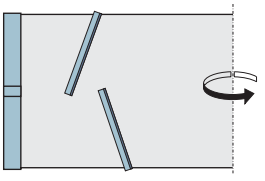




DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS



asymmetrical arrangement of cutting teeth



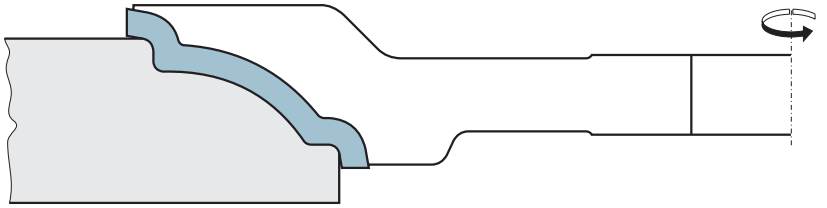
symmetrical arrangement of cutting teeth

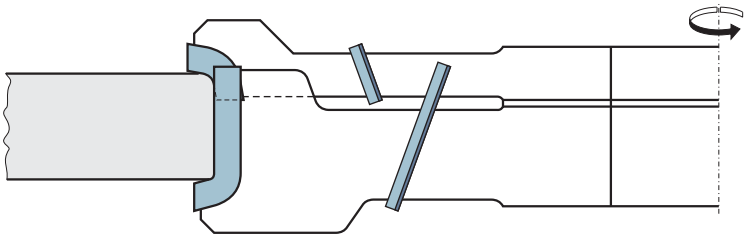


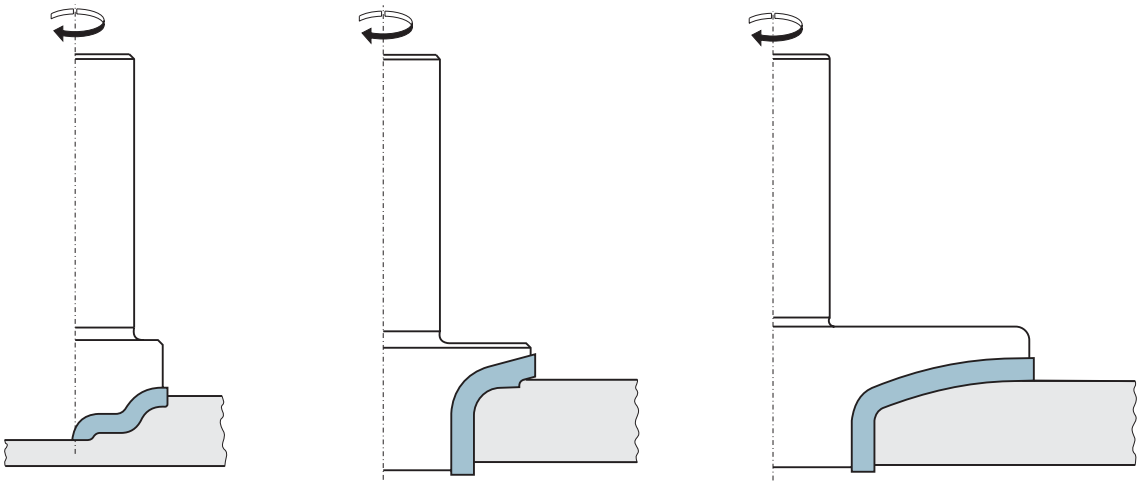
- tools are manufactured based on specific customer requirements
- to machine chipboards or fibreboards (MDF, DTD, etc.), coated or uncoated by paper, plastic or veneer
- to machine glass or carbon fibre reinforced plastic materials
- the cutters are set up with soldered PKD tips with the edge geometry to achieve high quality machining
- PKD blade height 4 mm
- structural tool arrangement in the set ensures required dimensions even after alignment for higher sharpness

DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS

- examples of tools with soldered PKD blade

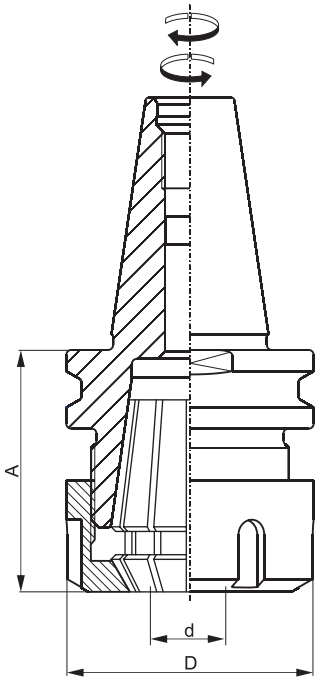








- spring collet chuck for shank tools used on CNC milling machines with automated tool changer
- clamping cone in accordance with DIN 69871-1
- hardened and ground version
- precisely balanced
- for ER type collets
- used for chucking shanks with 3 - 25 mm dia
- chucks are delivered including the clamping nut



chucks for ER 32 collets

A mm	d mm	D mm	ID No.
48,5	3 - 20	50	**900207**

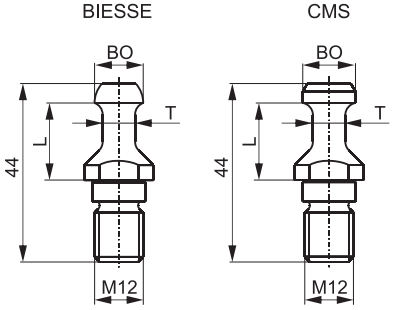
chucks for ER 40 collets

A mm	d mm	D mm	ID No.
58,5	4 - 25	63	**900209**

PULL PINS FOR ISO 30 CHUCKS

MACHINE TYPE	BO mm	T mm	L mm	ID No.
BIESSE	12	8	19	**900217**
CMS	13	9	19	**900219**



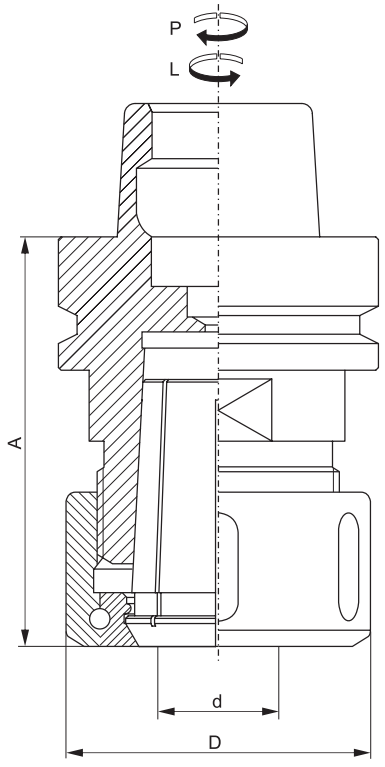




- spring collet chuck for shank tools used on CNC milling machines with automated tool changer
- cone clamping element in accordance with DIN 69893-6, type F
- hardened and ground version
- precisely balanced
- for OZ and ER type collets
- used for chucking shanks with 1 - 25 mm dia
- chucks are delivered including the clamping nut
- chucks are delivered also in left-hand version and in extended version (A = 115 mm)

P - clockwise

L - counterclockwise



chucks for CZ 25 collets

A mm	d mm	D mm	ID No.
76	3 - 25	60	**900101**
standard delivery with ball nut			

chucks for ER 16 collets

A mm	d mm	D mm	ID No.
70	1 - 10	28	**900103**
standard delivery with balanced nut			

chucks for ER 25 collets

A mm	d mm	D mm	ID No.
70	2 - 16	42	**900105**
standard delivery with balanced nut			

chucks for ER 32 collets

A mm	d mm	D mm	ID No.
72	3 - 20	50	**900107**
standard delivery with balanced nut			

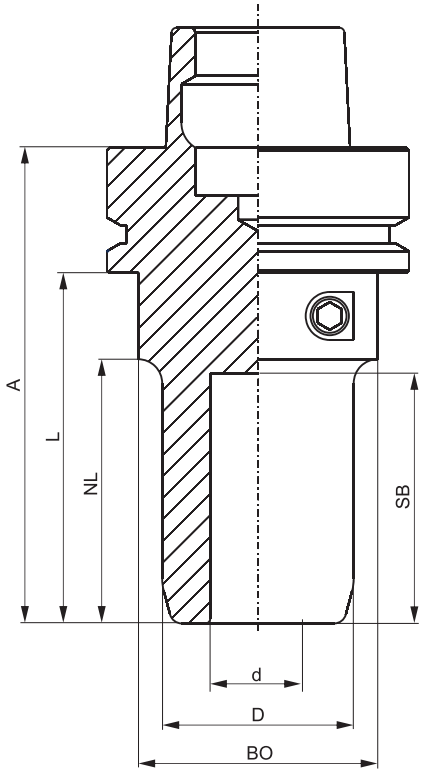
chucks for ER 40 collets

A mm	d mm	D mm	ID No.
76	3 - 25	63	**900109**
standard delivery with balanced nut			

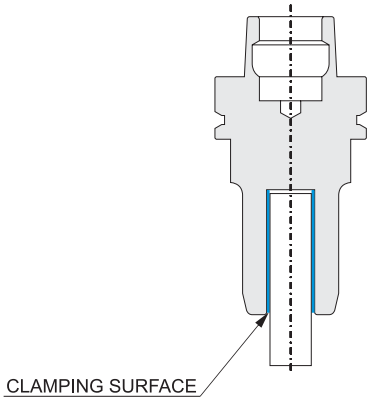


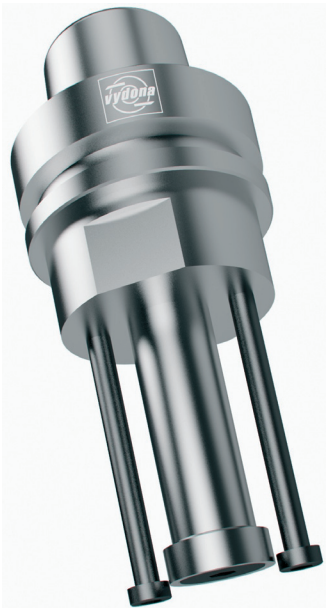
- HYDRO - GRIP G2 hydraulic chucks from the Swedish manufacturer ETP Transmission AB
- allows easy and fast chucking of shank tools on CNC milling machines with automated tool changer
- designed for clamping shanks with a tolerance of g6 (h6)
- solid and compact design
- the most slender version compared to similar chucks
- a safety feature prevents the tool from falling out when the chuck is not pressurized (the tool shank must be equipped with a thread according to ISO 4762)
- highly precise chuck with circular runout of 0.006 mm
- balanced for G 2.5 @ 25 000 rpm

ETP Transmission AB

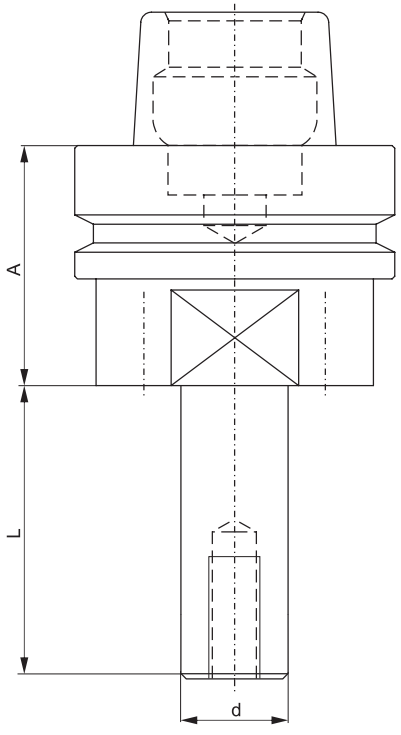


d mm	D mm	BO mm	NL mm	L mm	A mm	SB mm	ID No.
12	32	40	43	61	87	40	**701001**
16	38	40	43	61	87	40	**701002**
20	40	50	55	73	99	52	**701003**
25	45	50	59	77	103	56	**701004**



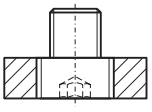


- tool clamping cutter arbor with chucking hole on CNC milling machines with automated tool changer
- cone clamping element in accordance with DIN 69893-6, type F
- hardened and ground version
- precisely balanced
- tool securing against rotation using screws or dowels
- chucks with 20 mm dia. are delivered including the clamping screw, version A
- chucks with 30 mm dia. should be ordered with a clamp B or C

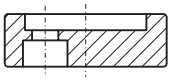


A mm	d mm	L mm	CLAMP TYPE	ID No.
45	20	55	A	**900121**
45	20	80	A	**900122**
45	30	55	B/C	**900123**
45	30	90	B/C	**900124**

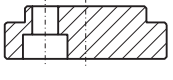
- type A clamp



- type B clamp



- type C clamp



individual clamps for spindles with 30 mm dia.	
CLAMP TYPE	ID No.
B	**901023**
C	**901024**

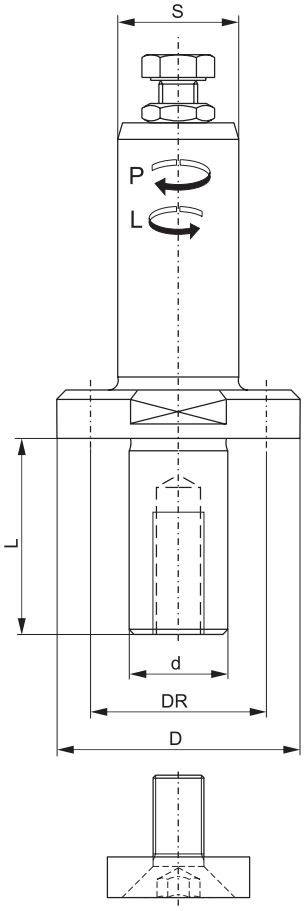
CNC COLLET CHUCK WITH BARREL SHANK



- collet chuck for tools with holes on CNC milling machines
- hardened and ground version
- precisely balanced
- tool securing against rotation using screws or dowels
- the chuck delivered including the adjusting screw, clamping screw and the corresponding key/spanner
- right or left rotation direction

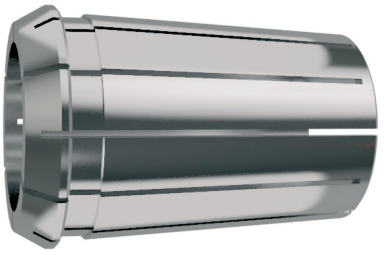
P - clockwise

L - counterclockwise

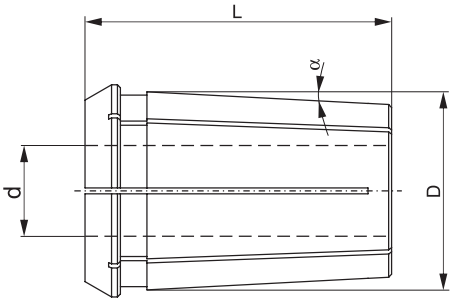


d mm	DR mm	D mm	L mm	S mm	ID No. P	ID No. L
20	35	50	55	25x60	**900131**	**900231**
20	35	50	70	25x60	**900132**	**900232**
30	45	60	25	25x60	**900133**	**900233**
30	45	60	40	25x60	**900134**	**900234**

OZ COLLETS



- for precise clamping tools with shank diameter of 2 to 25 mm
- hardened and ground version
- they are equipped with 12 grooves which ensure a high clamping force as well as high circular precision
- clamping tolerance of 0.5 mm (e.g. collet with a diameter of d = 25 mm allows clamping shanks with the diameter of 24.5 - 25 mm)
- delivered with clamping diameters as required

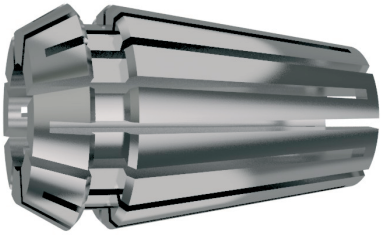


type OZ 25 - DIN 6388

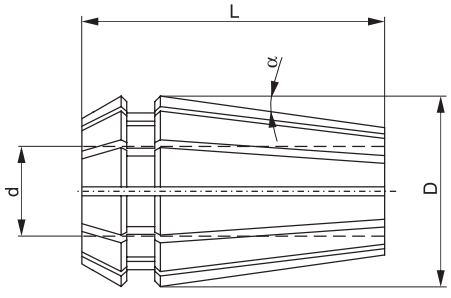
d mm	D mm	L mm	α °	ID No.
2 - 25	33,6	52	3	**9100xx**

xx = inner collet dia. **d**, quote at placing the purchase order

ER COLLETS



- for precise clamping tools with shank diameter of 1 to 25 mm
- intended for collet chucks with taper ratio of 8°
- hardened and ground version
- they are equipped with 16 grooves which ensure a high clamping force as well as high circular precision
- clamping tolerance of 1 mm (e.g. collet with a diameter of d = 25 mm allows clamping shanks with the diameter of 24-25 mm)
- range of supplied clamping diameters down to 1 mm



type ER 16 - DIN 6499

d mm	D mm	L mm	α °	ID No.
1 - 10	17	27	8	**9200xx**

type ER 25 - DIN 6499

d mm	D mm	L mm	α °	ID No.
2 - 16	26	34	8	**9300xx**

type ER 32 - DIN 6499

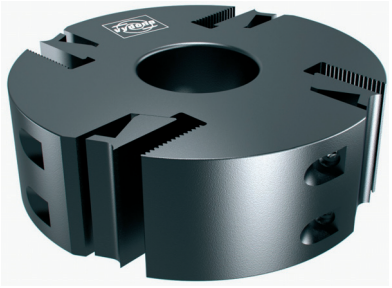
d mm	D mm	L mm	α °	ID No.
3 - 20	33	40	8	**9400xx**

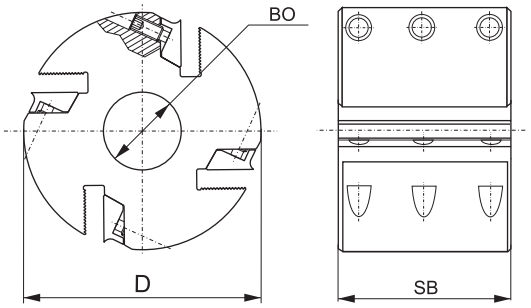
type ER 40 - DIN 6499

d mm	D mm	L mm	α °	ID No.
4 - 25	41	46	8	**9500xx**

xx = inner collet dia. **d**, quote at placing the purchase order

SAFETY CUTTERHEAD





D mm	SB mm	BO mm	Z	ID No.
122	40	40	4	**70240**
137	40	50	4	**70740**
122	60	40	4	**70260**
137	60	50	4	**70760**
122	80	40	4	**70280**
137	80	50	4	**70780**
122	100	40	4	**70210**
137	100	50	4	**70710**
122	130	40	4	**70213**
137	130	50	4	**70713**
122	150	40	4	**70215**
137	150	50	4	**70715**
122	180	40	4	**70218**
137	180	50	4	**70718**
122	230	40	4	**70223**
137	230	50	4	**70723**

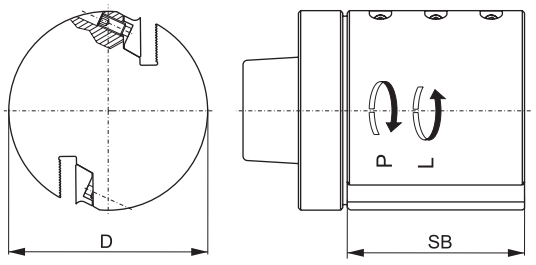
MANUFACTURING OF SPECIAL CUTTERS TO ORDER

safety head knife blanks can be found on pages 54 to 56

POWERLOCK SAFETY CUTTERHEAD



- for Weinig Powermat profile planers
- HSK63WE clamping cone
- we offer various solutions for planning and profile making using the PowerLock technology - monoblock, modular system (HSK adaptor and HSK arbors)

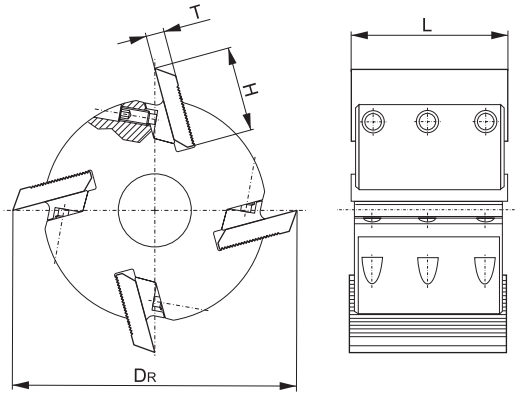


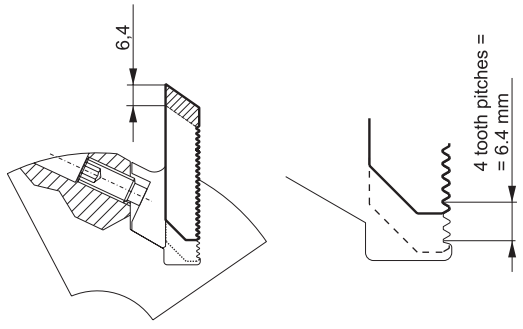
D mm	SB mm	Z	ID No. L	ID No. P
90	60	2	**601101**	**601201**
90	80	2	**601102**	**601202**
90	100	2	**601103**	**601203**
90	130	2	**601104**	**601204**
90	150	2	**601105**	**601205**
90	170	2	**601106**	**601206**
90	190	2	**601107**	**601207**
90	210	2	**601108**	**601208**
90	240	2	**601109**	**601209**
90	60	4	**601151**	**601251**
90	80	4	**601152**	**601252**
90	100	4	**601153**	**601253**
90	130	4	**601154**	**601254**
90	150	4	**601155**	**601255**
90	170	4	**601156**	**601256**
90	190	4	**601157**	**601257**
90	210	4	**601158**	**601258**
90	240	4	**601159**	**601259**

safety head knife blanks can be found on pages 54 to 56



- long lifetime of the profile making knives using the HS 18%W material
- safe and precise clamping of the knife due to precisely ground groves
- high flexibility of knife manufacturing is especially suitable for manufacturing verification and piece production





maximum depth of ground profile **PTmax** depending on the cutting diameter **DR** and the blank height **H**

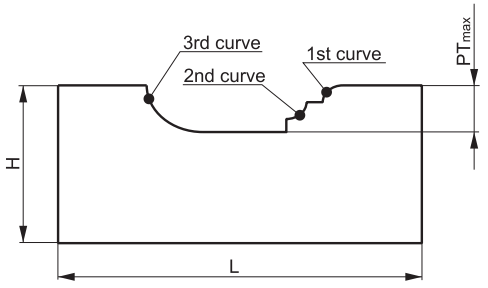
H mm	D mm	DR mm	T mm	PTmax mm
50	122	160	8	15
50	137	175	8	15
60	122	180	8	20
60	137	195	8	20
70	122	200	8	30
70	137	215	8	30

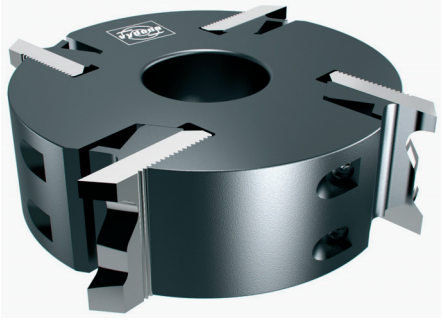
regrinding possibility max. 6.4 mm

HS knife blanks used for safety heads can be found on page 54

profile complexity

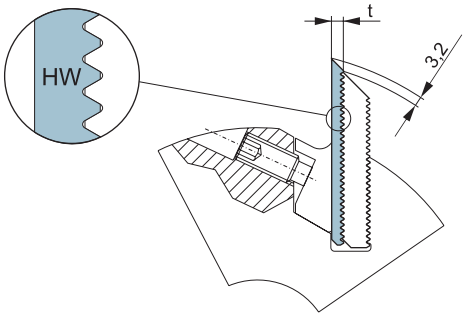
profile with 1 curve shape in depth of 7 mm	profile with 2 curve shapes in depth of 15 mm	profile with 3 curve shapes in the depth of **PTmax**
profile No. 1	**profile No. 2**	**profile No. 3**



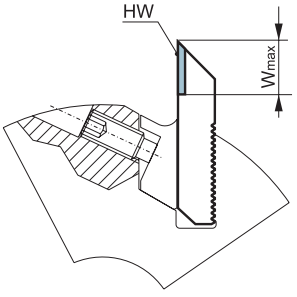


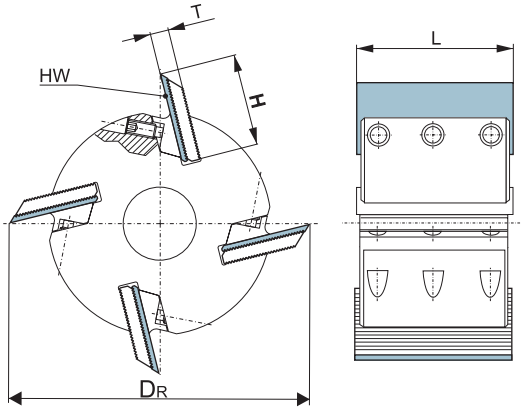
- high precision clamping is achieved by positioning in precise ground micro-grooving
- the highest quality of the machined surface is ensured by a fine-grain structure of the sintered carbide and precise knife position
- the highest sintered carbide quality, favourable prices and possibility of multiple sharpening cycles ensure high cost effectiveness

UNI PACK SYSTEM OF HW KNIFE



HW KNIFE WITH SOLDERED TIP





maximum depth of ground profile **PTmax** depending on the cutting diameter **DR** and the blank height **H**

H mm	D mm	DR mm	t mm	T mm	PTmax mm
38	122	135	3,2	10	only for planing
38	137	150	3,2	10	only for planing
50	122	160	3,2	10	12
50	137	175	3,2	10	12
60	122	180	3,2	10	23
60	137	195	3,2	10	23

cutting edge offset 3.2 mm above the support plate

maximum depth of ground profile **PTmax** depending on the cutting diameter **DR** and the blank height **H**

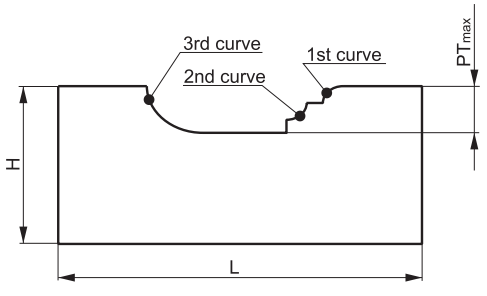
H mm	D mm	DR mm	T mm	PTmax mm
40	122	138	10	7
40	137	153	10	7
50	122	160	10	12
50	137	175	10	12
60	122	180	10	23
60	137	195	10	23

regrinding possibility max. 6.4 mm

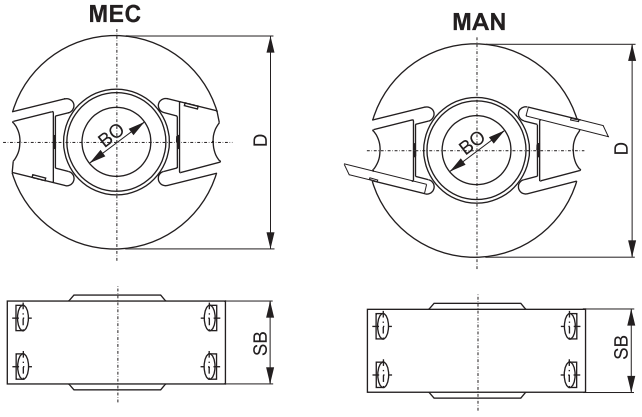
HW knife blanks used for safety heads can be found on pages 55 and 56

profile complexity

profile with 1 curve shape in depth of 7 mm	profile with 2 curve shapes in depth of 15 mm	profile with 3 curve shapes in the depth of **PTmax**
profile No. 1	**profile No. 2**	**profile No. 3**





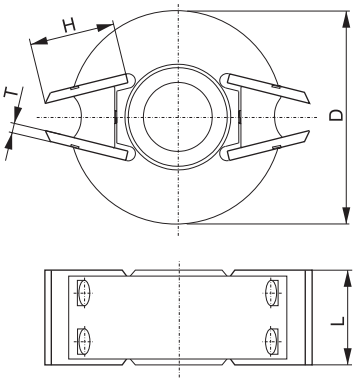


D mm	SB mm	BO mm	Z	construction	ID No.
100	40	30	2	steel	**71100**
120	40	30	2	steel	**71120**

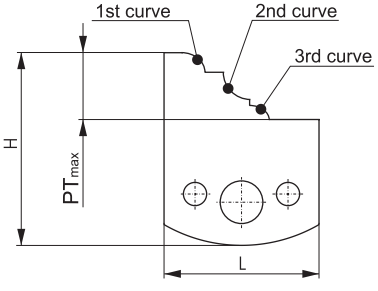
knife and stopper blanks for universal heads can be found on page 59

knife and stoppers for universal heads can be found on page 57

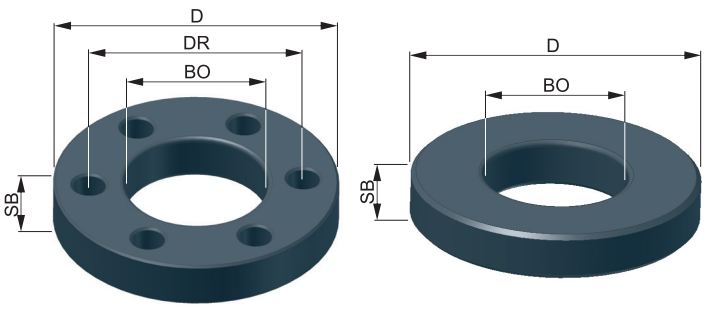
GRINDING CUSTOMER PROFILES IN HW KNIVES FOR UNIVERSAL CUTTER HEADS



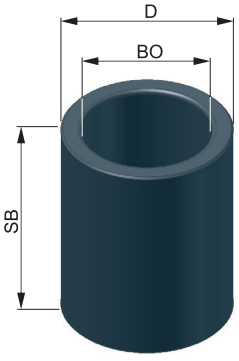
L mm	H mm	T mm	PT_{max} mm
40	48	4	18
50	50	4	18



profile complexity		
profile with 1 curve shape in depth of 6 mm	profile with 2 curve shapes in depth of 12 mm	profile with 3 curve shapes in the depth of PT_{max}
profile No. 1	**profile No. 2**	**profile No. 3**



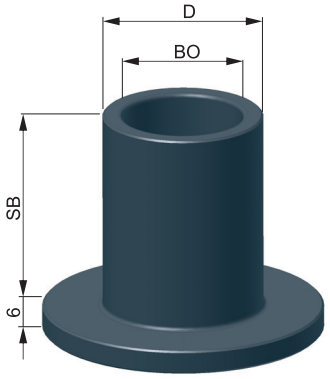
D/BO/DR / SB	50/30/--	60/30/45	60/32/47	65/35/50	70/40/55	80/50/65	90/60/75
0,1	**495001**	**496001**	**496201**	**496501**	**497001**	**498001**	**499001**
0,2	**495002**	**496002**	**496202**	**496502**	**497002**	**498002**	**499002**
0,3	**495003**	**496003**	**496203**	**496503**	**497003**	**498003**	**499003**
0,5	**495005**	**496005**	**496205**	**496505**	**497005**	**498005**	**499005**
1	**495010**	**496010**	**496210**	**496510**	**497010**	**498010**	**499010**
2	**495020**	**496020**	**496220**	**496520**	**497020**	**498020**	**499020**
3	**495030**	**496030**	**496230**	**496530**	**497030**	**498030**	**499030**
5	**495050**	**496050**	**496250**	**496550**	**497050**	**498050**	**499050**
8	**495080**	**496080**	**496280**	**496580**	**497080**	**498080**	**499080**
10	**495100**	**496100**	**496300**	**496600**	**497100**	**498100**	**499100**
15	**495150**	**496150**	**496350**	**496650**	**497150**	**498150**	**499150**
20	**495200**	**496200**	**496400**	**496700**	**497200**	**498200**	**499200**



D/BO / SB	30/25	35/30	40/30	40/35
11,8	**593011**	**593511**	**594011**	**594511**
16	**593016**	**593516**	**594016**	**594516**
25	**593025**	**593525**	**594025**	**594525**
30	**593030**	**593530**	**594030**	**594530**
35	**593035**	**593535**	**594035**	**594535**
40	**593040**	**593540**	**594040**	**594540**
60	**593060**	**593560**	**594060**	**594560**
80	**593080**	**593580**	**594080**	**594580**



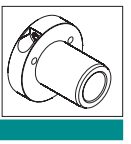
D/BO / SB	40/30	50/30	50/35	50/40	60/50
80	**792080**	**793080**	**793580**	**794080**	**795080**
100	**792010**	**793010**	**793510**	**794010**	**795010**
120	**792012**	**793012**	**793512**	**794012**	**795012**



D/BO / SB	35/30	40/30	40/35	50/35	50/40	60/30	60/35	60/40
6	**693506**	**694006**	**694506**	**695006**	**695506**	**696006**	**696506**	**697006**
12	**693512**	**694012**	**694512**	**695012**	**695512**	**696012**	**696512**	**697012**
20	**693520**	**694020**	**694520**	**695020**	**695520**	**696020**	**696520**	**697020**
25	**693525**	**694025**	**694525**	**695025**	**695525**	**696025**	**696525**	**697025**
30	**693530**	**694030**	**694530**	**695030**	**695530**	**696030**	**696530**	**697030**
40	**693540**	**694040**	**694540**	**695040**	**695540**	**696040**	**696540**	**697040**
50	**693550**	**694050**	**694550**	**695050**	**695550**	**696050**	**696550**	**697050**
60	**693560**	**694060**	**694560**	**695060**	**695560**	**696060**	**696560**	**697060**

MANUFACTURING OF SPECIAL ACCORDING TO CUSTOMER REQUIREMENTS

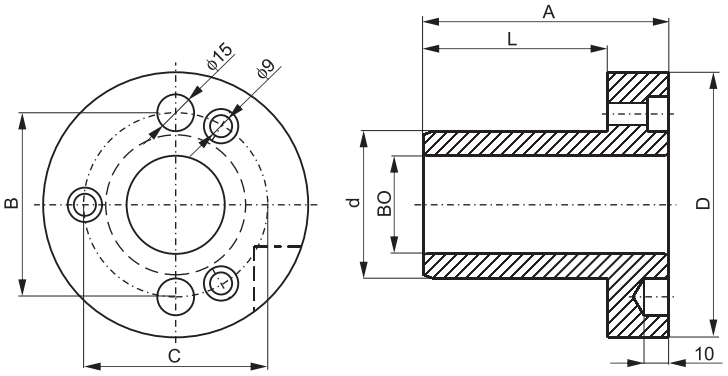
HYDRAULIC COLLETS



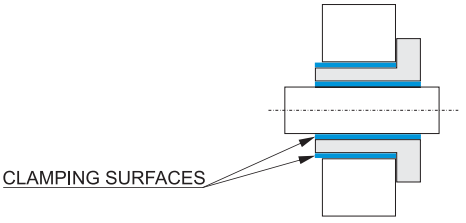


- highest quality HYDRO - GRIP CI sleeves of the Swedish company ETP Transmission
- for exchangeable tool clamping
- tools can be bolted to the sleeve collar
- several different tools can be clamped at the same time
- they are closed circuit sleeves and are pressurized by the hex head cap screw
- there is no pressure fluid leakage causing sleeve and workpiece contamination (as in the case of grease nipple)

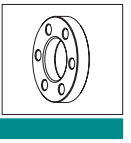
ETP Transmission AB

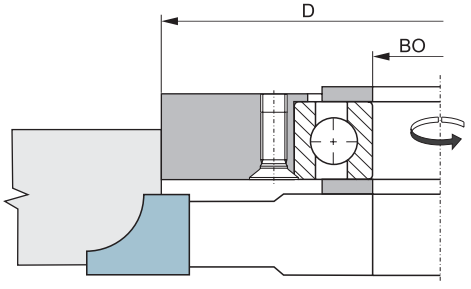


TYPE	BO mm	d mm	A mm	L mm	D mm	B mm	C mm	ID No.
CI-40/50-75	40	60	75	55	100	65	64	**700110**
CI-40/60-75	40	60	75	55	102	75	74	**700111**
CI-40/60-95	40	60	95	75	108	75	74	**700112**
CI-40/60-115	40	60	115	95	108	75	74	**700113**
CI-40/60-140	40	60	140	115	114	75	74	**700114**
CI-50/60-75	50	60	75	55	102	75	74	**700115**
CI-50/60-95	50	60	95	75	108	75	74	**700116**
CI-50/60-115	50	60	115	95	108	75	74	**700117**
CI-50/60-140	50	60	140	115	114	75	74	**700118**



THRUST RINGS WITH BEARING

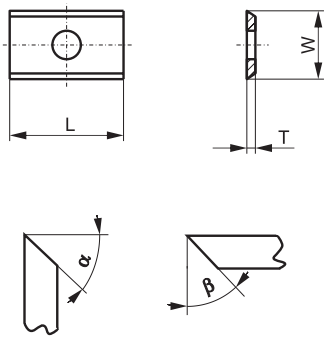




D mm	BO mm	ID No.
90	30	**890090**
95	30	**890095**
100	30	**890100**
105	30	**890105**
110	30	**890110**
115	30	**890115**
120	30	**890120**
125	30	**890125**
130	30	**890130**

- thrust rings for milling with former (tracer) template

DESIGN AND MANUFACTURING ACCORDING TO THE CUSTOMER'S REQUIREMENTS



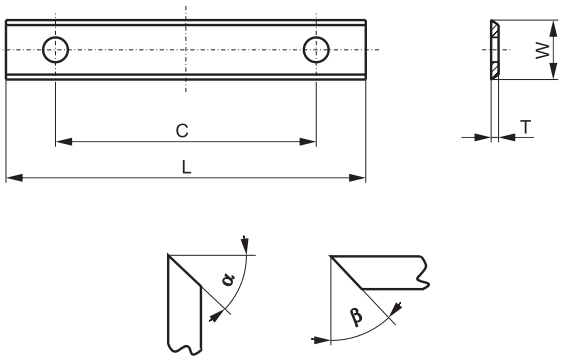
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
7,5	12	1,5	-	35	-	KCR08	**360013**	UNIVERSAL
9,6	12	1,5	-	35	-	KCR08	**360014**	
10,5	12	1,5	-	35	-	KCR08	**360015**	
11	12	1,5	-	35	-	KCR08	**360016**	
13	12	1,5	-	35	-	KCR08	**360017**	
15	12	1,5	-	35	-	KCR08	**360018**	
15,7	12	1,5	-	35	-	KCR08	**360019**	
17	12	1,5	-	35	-	KCR08	**360020**	
18	12	1,5	-	35	-	KCR08	**360021**	
19	12	1,5	-	35	-	KCR08	**360022**	
20	12	1,5	-	35	-	KCR08	**358831**	
24,7	12	1,5	-	35	-	KCR08	**360023**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
7,5	12	1,5	-	45	-	HE40	**359043**	LAPPED SOFT WOOD
9,6	12	1,5	-	45	-	HE40	**359044**	
15	12	1,5	-	45	-	HE40	**359045**	
20	12	1,5	-	45	-	HE40	**357973**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
7,5	12	1,5	-	45	-	MG18	**330520**	HARD WOOD
15	12	1,5	-	45	-	MG18	**330522**	
20	12	1,5	-	45	-	MG18	**330523**	
7,5	12	1,5	-	45	-	MG18	**330535**	LAPPED
9,6	12	1,5	-	45	-	MG18	**339051**	
15	12	1,5	-	45	-	MG18	**330537**	
20	12	1,5	-	45	-	MG18	**330538**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
7,5	12	1,5	-	35	-	MG06	**239661**	MDF
9,6	12	1,5	-	35	-	MG06	**239662**	
15	12	1,5	-	35	-	MG06	**239664**	
20	12	1,5	-	35	-	MG06	**239574**	
24,7	12	1,5	-	35	-	MG06	**358950**	
7,5	12	1,5	-	35	-	SMG02	**358954**	
9,6	12	1,5	-	35	-	SMG02	**358956**	
15	12	1,5	-	35	-	SMG02	**358308**	
20	12	1,5	-	35	-	SMG02	**330673**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
20	12	1,5	-	35	-	UMG04	**358633**	HDF DTD



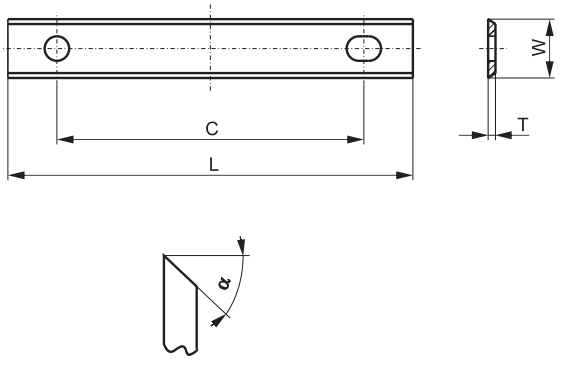
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
24,7	12	1,5	14	35	-	KCR08	**360024**	UNIVERSAL
30	12	1,5	14	35	-	KCR08	**358833**	
40	12	1,5	26	35	-	KCR08	**360025**	
50	12	1,5	26	35	-	KCR08	**358835**	
60	12	1,5	26	35	-	KCR08	**360026**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
30	12	1,5	14	45	-	HE40	**357974**	LAPPED SOFT WOOD
40	12	1,5	26	45	-	HE40	**359046**	
50	12	1,5	26	45	-	HE40	**357975**	
60	12	1,5	26	45	-	HE40	**359047**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
30	12	1,5	14	45	-	MG18	**330524**	HARD WOOD
40	12	1,5	26	45	-	MG18	**330525**	
50	12	1,5	26	45	-	MG18	**330526**	
60	12	1,5	26	45	-	MG18	**330527**	
30	12	1,5	14	45	-	MG18	**330539**	LAPPED
40	12	1,5	26	45	-	MG18	**330540**	
50	12	1,5	26	45	-	MG18	**330541**	
60	12	1,5	26	45	-	MG18	**330542**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
24,7	12	1,5	14	35	-	MG06	**358952**	MDF
30	12	1,5	14	35	-	MG06	**239575**	
40	12	1,5	26	35	-	MG06	**239667**	
50	12	1,5	26	35	-	MG06	**239576**	
60	12	1,5	26	35	-	MG06	**239577**	
30	12	1,5	14	35	-	SMG02	**330674**	
40	12	1,5	26	35	-	SMG02	**358316**	
50	12	1,5	26	35	-	SMG02	**330675**	
60	12	1,5	26	35	-	SMG02	**358317**	

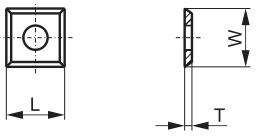
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
30	12	1,5	14	35	-	UMG04	**358634**	HDF DTD
50	12	1,5	26	35	-	UMG04	**358635**	



L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
80	13	2,2	60	35	-	KCR08	**360069**	UNIVERSAL
100	13	2,2	60	35	-	KCR08	**360084**	
120	13	2,2	60	35	-	KCR08	**360085**	
130	13	2,2	60	35	-	HC27	**359031**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
80	13	2,2	60	45	-	HE40	**359048**	LAPPED SOFT WOOD

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
80	13	2,2	60	45	-	MG18	**359052**	LAPPED HARD WOOD

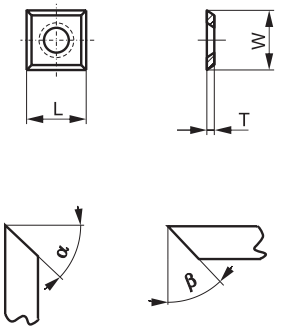


L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
10,5	10,5	1,5	-	35	-	KCR08	**360027**	UNIVERSAL
12	12	1,5	-	35	-	KCR08	**360030**	
17	17	2	-	35	-	KCR08	**360028**	
19	19	2	-	35	-	KCR08	**360029**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
12	12	1,5	-	45	-	HE40	**359049**	LAPPED SOFT WOOD

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
12	12	1,5	-	45	-	MG18	**330521**	HARD WOOD
12	12	1,5	-	45	-	MG18	**330536**	LAPPED HARD WOOD

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
12	12	1,5	-	35	-	MG06	**239663**	MDF
17	17	2	-	35	-	MG06	**333665**	
12	12	1,5	-	35	-	SMG02	**358314**	

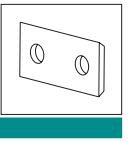


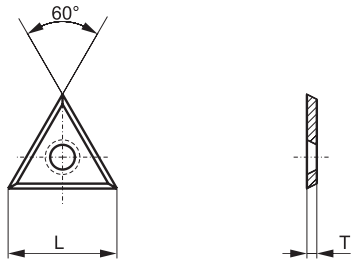
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
10,5	10,5	1,5	-	35	-	HC27	**331889**	UNIVERSAL
13,4	13,4	1,5	-	35	-	HC35	**332547**	
13,6	13,6	2	-	45	-	HC35	**239418**	
14	14	1,2	-	30	-	HC35	**330669**	
14	14	1,7	-	30	-	HC35	**331749**	
14	14	2	-	30	-	HC35	**330668**	
14	14	2	-	30	-	HC20	**332395**	
14	14	2	-	30	-	KCR08	**359802**	
14,3	14,3	2,5	-	35	-	HC20	**239421**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
14	14	2	-	30	-	HE40	**359050**	LAPPED SOFT WOOD

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
14	14	2	-	30	-	MG18	**239725**	HARD WOOD
14	14	2	-	30	-	MG18	**332257**	LAPPED HARD WOOD

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
14	14	2	-	30	30	MG06	**332538**	MDF
14	14	2	-	30	-	SMG02	**332539**	

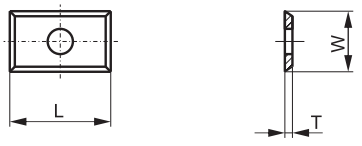




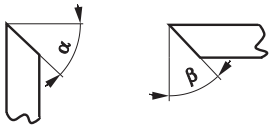
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
22	-	2	-	30	-	MG18	**239466**	UNIVERSAL



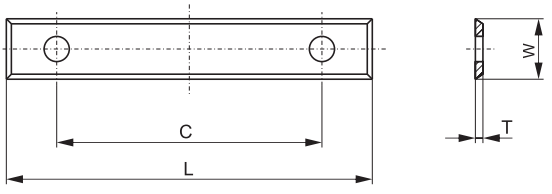
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
14	14	2	-	-	-	HC20	**359032**	UNIVERSAL
14	14	2,5	-	-	-	HC20	**332764**	
14	14	3	-	-	-	HC20	**359033**	
18	18	1,95	-	-	-	HC20	**330658**	
18	18	2,5	-	-	-	HC20	**330659**	
18	18	2,95	-	-	-	HC20	**331492**	
18	18	3,7	-	-	-	HC20	**239391**	
18	18	4	-	-	-	HC20	**331493**	



L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
9	12	1,5	-	35	15	HC05	**239376**	UNIVERSAL
10	12	1,5	-	35	15	HC05	**239374**	



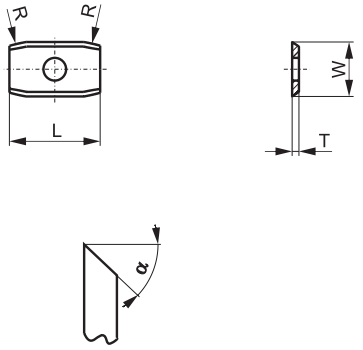
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
19,5	12	1,5	-	35	15	MG06	**359053**	MDF
19,5	12	1,5	-	35	-	SMG02	**359075**	



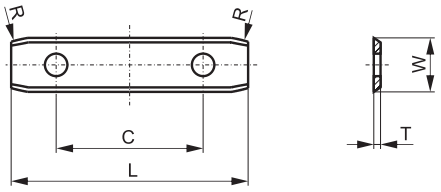
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
29	12	1,5	14	35	20	HC05	**330711**	UNIVERSAL
29,5	9	1,5	14	35	20	HC05	**331173**	
29,5	12	1,5	14	35	20	HC05	**331886**	
49,5	9	1,5	26	35	20	HC05	**359034**	
49,5	12	1,5	26	35	20	HC05	**331887**	
59,5	12	1,5	26	35	20	HC05	**359035**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
29,5	12	1,5	14	35	20	MG06	**359054**	MDF
29,5	9	1,5	14	35	20	MG06	**359055**	
49,5	9	1,5	26	35	20	MG06	**359056**	
49,5	12	1,5	26	35	20	MG06	**359057**	
59,5	12	1,5	26	35	20	MG06	**359058**	
29,5	12	1,5	14	35	-	SMG02	**359076**	
49,5	12	1,5	26	35	-	SMG02	**359077**	
59,5	12	1,5	26	35	-	SMG02	**359078**	

L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
29,5	12	1,5	14	35	20	UMG04	**359079**	HDF DTD
49,5	12	1,5	26	35	20	UMG04	**359080**	



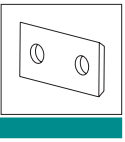
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
20	12	1,5	-	35	-	HC05	**359038**	UNIVERSAL

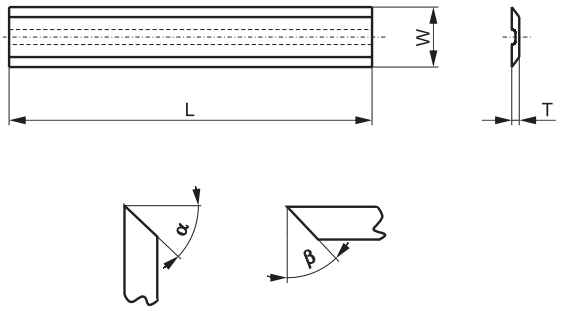


L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
30	12	1,5	14	35	-	HC05	**357890**	UNIVERSAL
50	12	1,5	26	35	-	HC05	**357892**	

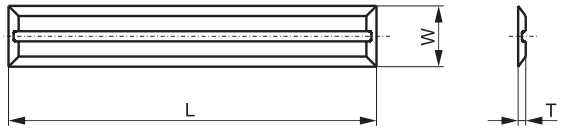


L mm	W mm	T mm	R mm	α°	β°	Grade	ID No.	Use
14	14	2	115	30	-	HC35	**359039**	UNIVERSAL
15	15	2,5	150	30	-	MG18	**11225484**	

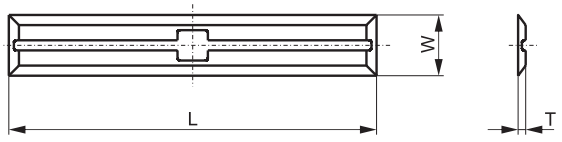




L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
10,5	5,5	1,1	-	35	-	HC05	**330662 BN**	UNIVERSAL
20	5,5	1,1	-	35	-	HC05	**330660 BN**	
30	5,5	1,1	-	35	-	HC05	**331568 BN**	
40	5,5	1,1	-	35	-	HC05	**330661 BN**	
50	5,5	1,1	-	35	-	HC05	**239396 BN**	
60	5,5	1,1	-	35	-	HC05	**359040 BN**	
82	5,5	1,2	-	35	-	HC35	**332270 BN**	

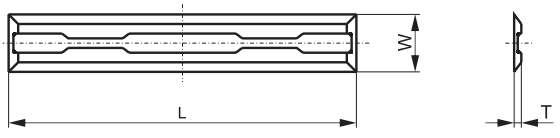


L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
12	5,5	1,1	-	35	20	HC05	**239398 RN**	UNIVERSAL

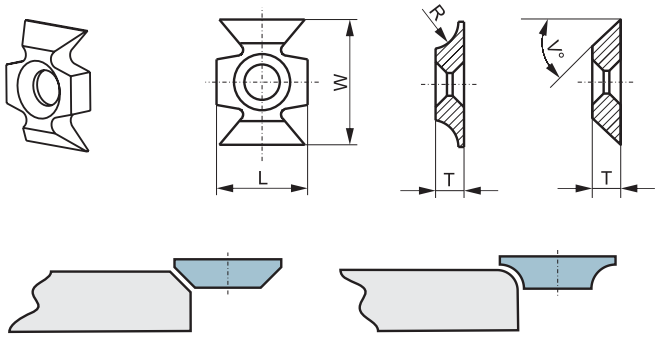


L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
20	4,1	1,1	-	35	20	HC05	**331404 RN**	UNIVERSAL
20	5,5	1,1	-	35	20	HC05	**331406 RN**	
25	5,5	1,1	-	35	20	HC05	**331408 RN**	
30	5,5	1,1	-	35	20	HC05	**331407 RN**	
40	5,5	1,1	-	35	20	HC05	**331381 RN**	
50	5,5	1,1	-	35	20	HC05	**331409 RN**	

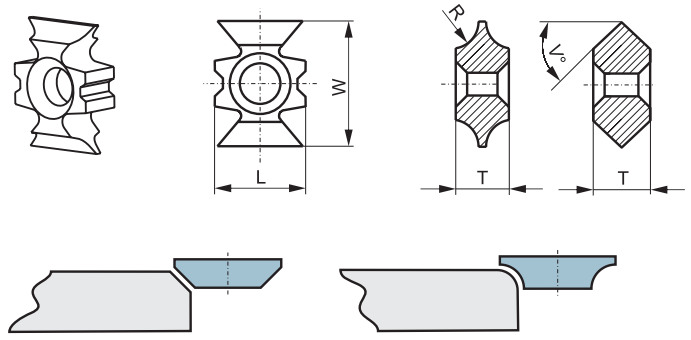
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
20	4,1	1,1	-	35	-	MG06	**359060**	MDF
20	5,5	1,1	-	35	-	MG06	**359061**	
25	5,5	1,1	-	35	-	MG06	**359062**	
30	5,5	1,1	-	35	-	MG06	**332194**	
40	5,5	1,1	-	35	-	MG06	**359063**	
50	5,5	1,1	-	35	-	MG06	**332193**	



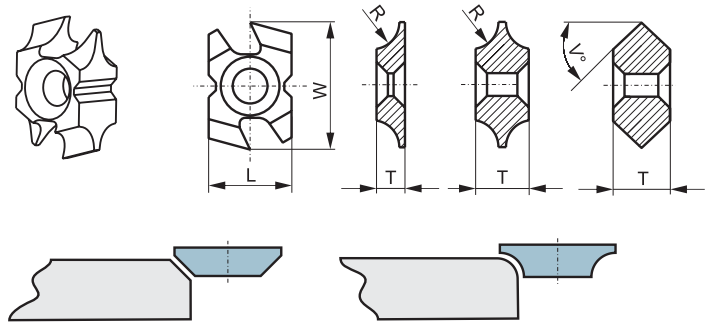
L mm	W mm	T mm	C mm	α°	β°	Grade	ID No.	Use
56	5,5	1,1	-	35	-	HC35	**333440**	UNIVERSAL
75,5	5,5	1,1	-	35	-	HC35	**330664**	
78	5,5	1,1	-	35	-	HC35	**331436**	
80,5	5,9	1,2	-	40	-	HC35	**330666**	
82	5,5	1,1	-	35	-	HC35	**330665**	
92	5,5	1,2	-	35	-	HC35	**332144**	
102	5,5	1,2		35		HC35	**239410**	



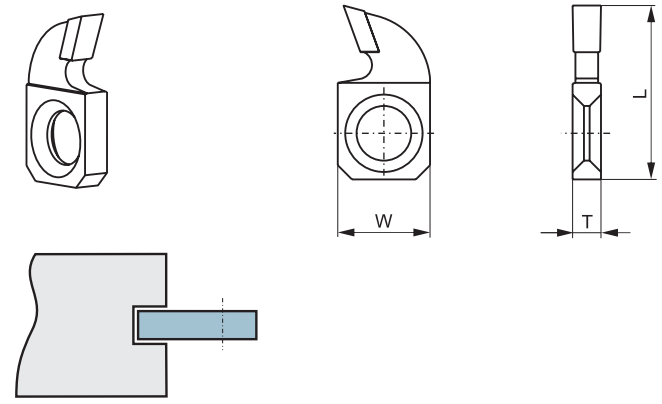
L mm	W mm	T mm	R mm	V	Typ	Grade	ID No.	Use
16	22	5		45°	TKM	HC20	**330575**	UNIVERSAL
16	22	5	1		TKM	HC20	**359041**	
16	22	5	1,5		TKM	HC20	**330576**	
16	22	5	2		TKM	HC20	**330577**	
16	22	5	2,5		TKM	HC20	**330579**	
16	22	5	3		TKM	HC20	**330578**	
16	22	5	4		TKM	T10MG	**032299**	
16	22	5	5		TKM	HC20	**333980**	
16	22	5	6		TKM	HC20	**359042**	



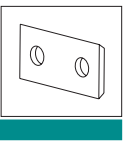
L mm	W mm	T mm	R mm	V	Typ	Grade	ID No.	Use
15	20	8		45°	TKM 11/0	T10MG	**032304**	UNIVERSAL
15	22,3	7,3	1		TKM 13/0	T10MG	**032312**	
15	22,3	9	1		TKM 13/1	T10MG	**032313**	
15	20	7	1,5		TKM 12/4	T10MG	**032310**	
15	18,3	7,3	2		TKM 12/3	T10MG	**032309**	
15	20	7,3	2		TKM 12/3	T10MG	**032308**	
15	20	9	3		TKM 12/1	T10MG	**032307**	
15	22,3	9	3		TKM 12/0	T10MG	**032306**	
15	22,3	10	3		TKM 12/5	T10MG	**032311**	

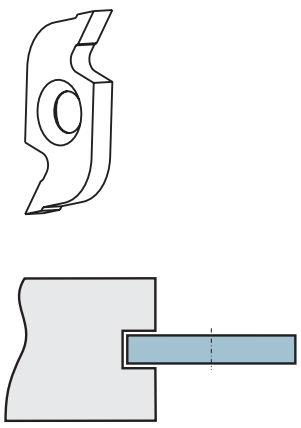


L mm	W mm	T mm	R mm	V	Typ	Grade	ID No.	Use
15	23	8		45°	TKM 21/0	T10MG	**032316**	UNIVERSAL
15	23	7	1,5		TKM 22/4	T10MG	**032322**	
15	23	7,3	2		TKM 22/3	T10MG	**032320**	
15	23	9	3		TKM 22/0	T10MG	**032318**	
15	23	9	3		TKM 22/5	T10MG	**032323**	
15	23	9	3		TKM 22/1	T10MG	**032319**	
15	25,7	7,3	5		TKM 24/0	T10MG	**032327**	
15	25,7	7,3	5		TKM 24/1	T10MG	**032326**	

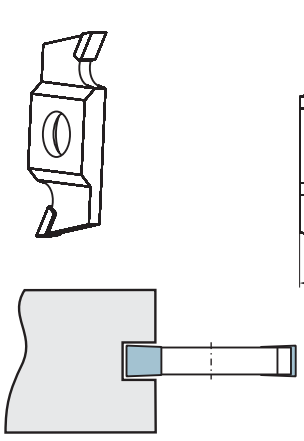


L mm	W mm	T mm		Grade	ID No.	Use
24,5	13	5/4		HC20	**357834**	UNIVERSAL
24,5	13	5/5		HC20	**358124**	

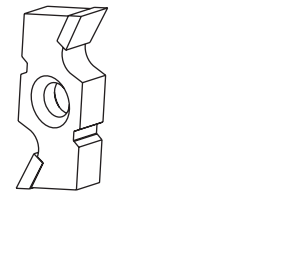




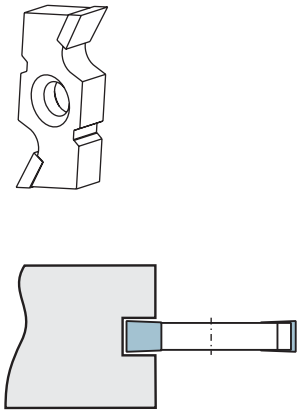
L mm	W mm	T mm	Grade	ID No.	Use
34	16	3,2	HC35	**239830**	UNIVERSAL
34	16	4	HC35	**239831**	
34	16	5	HC27	**239832**	
36	13	3,5	HC27	**239425**	
40	13	5,5	HC27	**239566**	
ϕ25	22	4,6/2,8	HC20	**239567**	



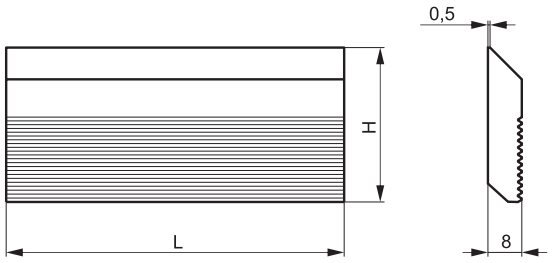
L mm	W mm	T mm	ID No. L	ID No. P	Use
35,2	15	3	**139833**	**139834**	UNIVERSAL



L mm	W mm	T mm	ID No. L	ID No. P	Use
44	18	3,2	**239833**	**239834**	UNIVERSAL
44	18	4	**239835**	**239836**	

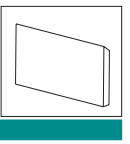


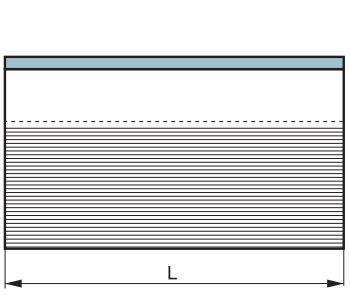
L mm	W mm	T mm	ID No.	Use
44	18	5	**239837**	UNIVERSAL
44	18	6	**239838**	
44	18	6,5	**239839**	
46	18	8	**239840**	



L mm	H mm	ID No. HS 18%W
30	40	**7118304**
30	50	**7118305**
30	60	**7118306**
30	70	**7118307**
40	40	**7118404**
40	50	**7118405**
40	60	**7118406**
40	70	**7118407**
50	40	**7118504**
50	50	**7118505**
50	60	**7118506**
50	70	**7118507**
60	40	**7118604**
60	50	**7118605**
60	60	**7118606**
60	70	**7118607**
70	40	**7118704**
70	50	**7118705**
70	60	**7118706**
70	70	**7118707**
80	40	**7118804**
80	50	**7118805**
80	60	**7118806**
80	70	**7118807**
100	40	**7118104**
100	50	**7118105**
100	60	**7118106**
100	70	**7118107**
130	40	**7118134**
130	50	**7118135**
130	60	**7118136**
130	70	**7118137**
150	40	**7118154**
150	50	**7118155**
150	60	**7118156**
150	70	**7118157**
180	40	**7118184**
180	50	**7118185**
180	60	**7118186**
180	70	**7118187**
210	40	**7118214**
210	50	**7118215**
210	60	**7118216**
210	70	**7118217**
230	40	**7118234**
230	50	**7118235**
230	60	**7118236**
230	70	**7118237**

HW BLANKS FOR SAFETY MILLING CUTTER HEADS WITH SOLDERED HW TOOL TIPS

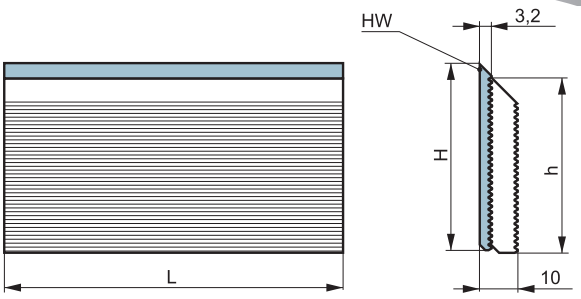




- the steel blank with back grooving and soldered tool tip made of sintered carbide
- a cost-effective system for safety milling cutter heads with a significant increase of the knife lifetime

L mm	H mm	ID No. Wmax 14 mm	ID No. Wmax 20 mm	ID No. Wmax 25 mm
40	40	**103230**	**103249**	
60	40	**103231**	**103250**	
80	40	**103232**	**103251**	
100	40	**103233**	**103252**	
130	40	**103234**	**103253**	
150	40	**103235**	**103254**	
180	40	**103236**	**103255**	
200	40	**103237**	**103256**	
230	40	**103238**	**103257**	
260	40	**103239**	**103258**	
310	40	**103240**	**103259**	
640	40	**103241**	**103260**	
40	50	**103242**	**030254**	
60	50	**030255**	**103261**	
80	50	**030256**	**103262**	
100	50	**030257**	**103263**	
130	50	**030258**	**103264**	
150	50	**103243**	**103265**	
180	50	**030260**	**103266**	
200	50	**103244**	**103267**	
230	50	**103245**	**103268**	
260	50	**030262**	**103269**	
310	50	**103246**	**103270**	
560	50	**103247**	**103271**	
640	50	**103248**	**103272**	
40	60		**030267**	**103300**
60	60		**030268**	**103301**
80	60		**103273**	**030269**
100	60		**103274**	**030270**
130	60		**103275**	**030271**
150	60		**030272**	**103302**
180	60		**030273**	**103303**
200	60		**103296**	**103304**
230	60		**103297**	**103305**
260	60		**030275**	**103306**
310	60		**103298**	**103307**
560	60		**103299**	**103308**
640	60		**030277**	**103309**

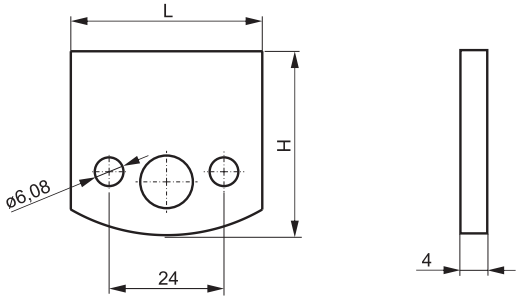
UNI PACK SYSTEM HW KNIFE BLANKS FOR SAFETY MILLING CUTTER HEADS



- HW blank with back grooving and two-side grooved steel support
- a cost-effective system for safety milling cutter heads with a significant increase of the knife lifetime
- HW blank quality levels MG18 and T10MG for hard wood
- T04F quality for universal use
- T03SMG quality for machining MDF material
- the grooving system is designed for rotation speed of 12,000 rpm

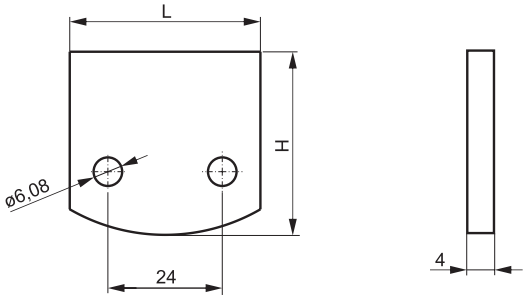
L mm	H mm	h mm	ID No. MG18	ID No. T10MG	ID No. T04F	ID No. T03SMG	ID No. support
40	38	35		**743933**	**724082**	**724080**	**724090**
50	38	35		**743934**	**743924**	**743925**	**743957**
60	38	35		**743935**	**724115**	**724113**	**724123**
80	38	35		**743936**	**724148**	**724146**	**724156**
100	38	35		**743937**	**723949**	**723947**	**723957**
120	38	35		**743938**	**723982**	**723980**	**723990**
130	38	35		**743939**	**724016**	**724014**	**724024**
150	38	35		**743940**	**724049**	**724047**	**724057**
170	38	35		**743962**	**743961**	**743960**	**745837**
180	38	35	**733010**				**733020**
230	38	35	**733011**				**733021**
240	38	35	**733012**				**733022**
40	50	47		**743941**	**724093**	**724091**	**724101**
50	50	47		**743942**	**743927**	**743928**	**743958**
60	50	47		**743943**	**724126**	**724124**	**724134**
80	50	47		**743944**	**724159**	**724157**	**724167**
100	50	47		**743945**	**723960**	**723985**	**723968**
120	50	47		**743946**	**723993**	**723991**	**724001**
130	50	47		**743947**	**724027**	**724025**	**724035**
150	50	47		**743948**	**724060**	**724058**	**724068**
170	50	47		**743966**	**743965**	**743964**	**745838**
180	50	47	**733013**				**733023**
230	50	47	**733014**				**733024**
240	50	47	**733015**				**733025**
40	60	57		**743949**	**724104**	**724102**	**724112**
50	60	57		**743950**	**743931**	**743932**	**743959**
60	60	57		**743951**	**724137**	**724135**	**724145**
80	60	57		**743952**	**724170**	**724168**	**724178**
100	60	57		**743953**	**723971**	**723969**	**723979**
120	60	57		**743954**	**724004**	**724002**	**724012**
130	60	57		**743955**	**724038**	**724036**	**724046**
150	60	57		**743956**	**724071**	**724069**	**724079**
170	60	57		**743970**	**743969**	**743968**	**745839**
180	60	57	**733016**				**733026**
230	60	57	**733017**				**733027**
240	60	57	**733018**				**733028**

HS KNIFE BLANKS FOR UNIVERSAL MILLING CUTTER HEADS



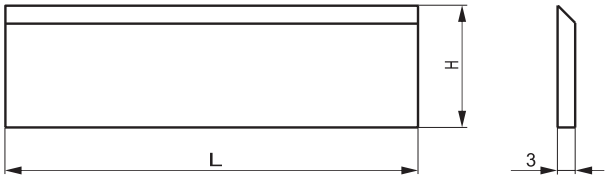
L mm	H mm	ID No. HS 18%W
40	48	611840
50	50	611850

STOPPER BLANKS FOR UNIVERSAL MILLING CUTTER HEADS

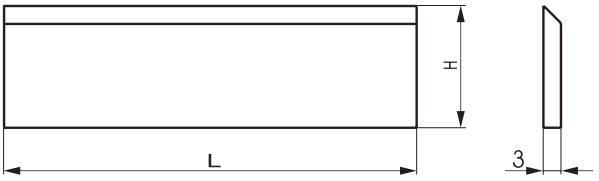


L mm	H mm	ID No.
38	47	613847
48	49	614849

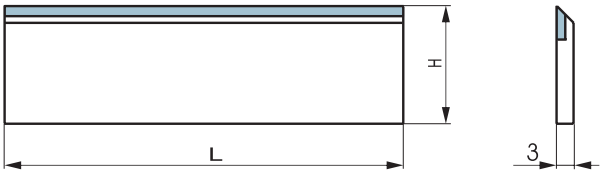
HS STANDARD PLANING TOOLS



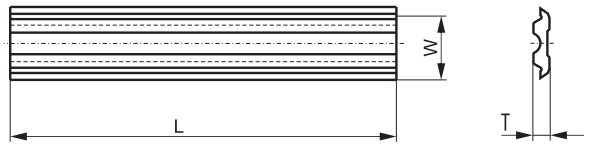
L mm	H mm	ID No. HLS 13%Cr	ID No. HSS 18%W
60	30	8113603	8118603
60	35	8113605	8118605
80	30	8113803	8118803
80	35	8113805	8118805
100	30	8113103	8118103
100	35	8113105	8118105
120	30	8113123	8118123
120	35	8113125	8118125
130	30	8113133	8118133
130	35	8113135	8118135
150	30	8113153	8118153
150	35	8113155	8118155
160	30	8113163	8118163
160	35	8113165	8118165
170	30	8113173	8118173
170	35	8113175	8118175
180	30	8113183	8118183
180	35	8113185	8118185
210	30	8113213	8118213
210	35	8113215	8118215



L mm	H mm	ID No. HLS 13%Cr	ID No. HSS 18%W
230	30	**8113233**	**8118233**
230	35	**8113235**	**8118235**
240	30	**8113243**	**8118243**
240	35	**8113245**	**8118245**
250	30	**8113253**	**8118253**
250	35	**8113255**	**8118255**
260	30	**8113263**	**8118263**
260	35	**8113265**	**8118265**
300	30	**8113303**	**8118303**
300	35	**8113305**	**8118305**
310	30	**8113313**	**8118313**
310	35	**8113315**	**8118315**
350	30	**8113353**	**8118353**
350	35	**8113355**	**8118355**
400	30	**8113403**	**8118403**
400	35	**8113405**	**8118405**
410	30	**8113413**	**8118413**
410	35	**8113415**	**8118415**
450	30	**8113453**	**8118453**
450	35	**8113455**	**8118455**
500	30	**8113503**	**8118503**
500	35	**8113505**	**8118505**
510	30	**8113513**	**8118513**
510	35	**8113515**	**8118515**
530	30	**8113533**	**8118533**
530	35	**8113535**	**8118535**
600	30	**8113703**	**8118703**
600	35	**8113705**	**8118705**
610	30	**8113613**	**8118613**
610	35	**8113615**	**8118615**
640	30	**8113643**	**8118643**
640	35	**8113645**	**8118645**
710	30	**8113713**	**8118713**
710	35	**8113715**	**8118715**
810	30	**8113813**	**8118813**
810	35	**8113815**	**8118815**
910	30	**8113913**	**8118913**
910	35	**8113915**	**8118915**
1010	30	**8113113**	**8118113**
1010	35	**8113115**	**8118115**
1050	30	**8113143**	**8118143**
1050	35	**8113145**	**8118145**
1220	30	**8113193**	**8118193**
1220	35	**8113195**	**8118195**

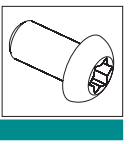


L mm	H mm	ID No.
60	30	**027277**
80	30	**027278**
100	30	**027279**
110	30	**027280**
120	30	**027281**
130	30	**027282**
150	30	**027283**
170	30	**027284**
180	30	**027285**
190	30	**027322**
210	30	**027286**
230	30	**027287**
240	30	**027323**
260	30	**027288**
310	30	**027289**
320	30	**027290**
330	30	**027291**
360	30	**027292**
410	30	**027293**
450	30	**027294**
460	30	**027295**
510	30	**027296**
610	30	**027297**
630	30	**027298**
640	30	**027299**
710	30	**027300**
740	30	**027301**
810	30	**027302**
310	35	**027303**
320	35	**027304**
330	35	**027305**
360	35	**027306**
400	35	**027307**
410	35	**027308**
450	35	**027309**
460	35	**027310**
500	35	**027311**
510	35	**027312**
600	35	**027313**
610	35	**027314**
630	35	**027315**
635	35	**027316**
640	35	**027317**
700	35	**027318**
710	35	**027319**
740	35	**027320**
810	35	**027321**

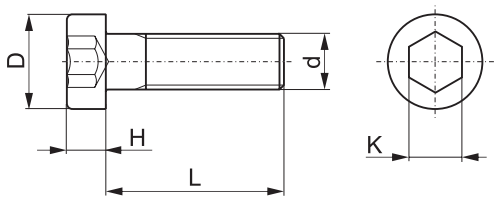


- used only in TERSA system planing heads
- sintered carbide quality T10MG for hard wood
- HS version for soft wood

L mm	H mm	T mm	ID No. HW	ID No. HS
60	10	2,3	**100847**	**100395**
75	10	2,3	**104212**	**107545**
80	10	2,3	**100848**	**100396**
90	10	2,3	**104398**	**107546**
95	10	2,3	**104211**	**107547**
100	10	2,3	**055509**	**100397**
110	10	2,3	**100849**	**100398**
115	10	2,3	**105071**	**104630**
120	10	2,3	**100851**	**100399**
125	10	2,3	**104022**	**107548**
130	10	2,3	**055510**	**100400**
135	10	2,3	**103823**	**103821**
140	10	2,3	**104766**	**104613**
145	10	2,3	**104210**	**107549**
150	10	2,3	**100852**	**100401**
160	10	2,3	**103943**	**102716**
170	10	2,3	**100853**	**100402**
180	10	2,3	**100854**	**100403**
185	10	2,3	**105070**	**102774**
190	10	2,3	**104399**	**104808**
200	10	2,3	**105698**	**104243**
210	10	2,3	**100855**	**100404**
220	10	2,3	**104589**	**104566**
230	10	2,3	**055511**	**100405**
235	10	2,3	**103824**	**101718**
240	10	2,3	**104043**	**101720**
250	10	2,3	**100856**	**100406**
260	10	2,3	**100857**	**100407**
265	10	2,3	**104573**	**104326**
270	10	2,3	**101673**	**102982**
280	10	2,3	**100858**	**100408**
300	10	2,3	**100859**	**100409**
310	10	2,3	**055512**	**100410**
320	10	2,3	**107550**	**104687**
330	10	2,3	**100861**	**100411**
350	10	2,3	**100862**	**100412**
360	10	2,3	**100863**	**100413**
400	10	2,3	**100864**	**100414**
410	10	2,3	**055513**	**100415**
415	10	2,3	**107551**	**105267**
420	10	2,3	**100865**	**100416**
430	10	2,3	**055514**	**100417**
450	10	2,3	**100866**	**100418**
500	10	2,3	**100867**	**100419**
510	10	2,3	**055515**	**100420**
520	10	2,3	**055516**	**100421**
530	10	2,3	**100868**	**100422**
540	10	2,3	**100869**	**100423**
600	10	2,3	**104720**	**103994**
610	10	2,3	**055517**	**100424**
630	10	2,3	**055518**	**100425**
635	10	2,3	**102179**	**103912**
640	10	2,3	**100870**	**100426**
650	10	2,3	**055519**	**100427**

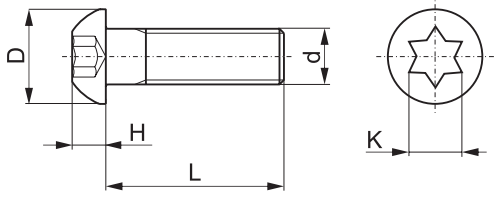


- hex socket head screw with low head
- DIN 6912



d mm	L mm	D mm	H mm	K mm	ID No.
M4x0,7	10	6,8	2,8	2,5	**710000**
M4x0,7	12	6,8	2,8	2,5	**710001**
M4x0,7	16	6,8	2,8	2,5	**710002**
M4x0,7	20	6,8	2,8	2,5	**710003**
M4x0,7	25	6,8	2,8	2,5	**710004**
M4x0,7	30	6,8	2,8	2,5	**710005**
M4x0,7	35	6,8	2,8	2,5	**710006**
M4x0,7	40	6,8	2,8	2,5	**710007**
M5x0,8	8	8,4	3,4	3	**710008**
M5x0,8	10	8,4	3,4	3	**710009**
M5x0,8	12	8,4	3,4	3	**710010**
M5x0,8	16	8,4	3,4	3	**710011**
M5x0,8	20	8,4	3,4	3	**710012**
M5x0,8	25	8,4	3,4	3	**710013**
M5x0,8	30	8,4	3,4	3	**710014**
M5x0,8	35	8,4	3,4	3	**710015**
M5x0,8	40	8,4	3,4	3	**710016**
M5x0,8	45	8,4	3,4	3	**710017**
M5x0,8	50	8,4	3,4	3	**710018**
M5x0,8	55	8,4	3,4	3	**710019**
M5x0,8	60	8,4	3,4	3	**710020**
M5x0,8	70	8,4	3,4	3	**710021**
M5x0,8	80	8,4	3,4	3	**710022**
M5x0,8	90	8,4	3,4	3	**710023**
M5x0,8	100	8,4	3,4	3	**710024**
M6x1	10	9,8	4	5	**710025**
M6x1	12	9,8	4	5	**710026**
M6x1	16	9,8	4	5	**710027**
M6x1	20	9,8	4	5	**710028**
M6x1	25	9,8	4	5	**710029**
M6x1	30	9,8	4	5	**710030**
M6x1	35	9,8	4	5	**710031**
M6x1	40	9,8	4	5	**710032**
M6x1	45	9,8	4	5	**710033**
M6x1	50	9,8	4	5	**710034**
M6x1	55	9,8	4	5	**710035**
M6x1	60	9,8	4	5	**710036**
M6x1	65	9,8	4	5	**710037**
M6x1	70	9,8	4	5	**710038**
M6x1	75	9,8	4	5	**710039**
M6x1	80	9,8	4	5	**710040**
M6x1	90	9,8	4	5	**710041**
M6x1	95	9,8	4	5	**710042**
M6x1	100	9,8	4	5	**710043**
M6x1	110	9,8	4	5	**710044**

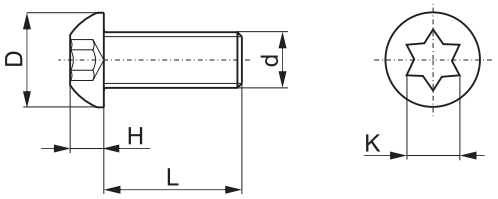
- round TORX head screw



d mm	L mm	D mm	H mm	K	ID No.
M4x0,7	5	7,6	2,2	TX20	**710047**
M4x0,7	6	7,6	2,2	TX20	**710048**
M4x0,7	8	7,6	2,2	TX20	**710049**
M4x0,7	10	7,6	2,2	TX20	**710050**
M4x0,7	12	7,6	2,2	TX20	**710051**
M4x0,7	14	7,6	2,2	TX20	**710052**
M4x0,7	16	7,6	2,2	TX20	**710053**
M4x0,7	20	7,6	2,2	TX20	**710054**
M4x0,7	25	7,6	2,2	TX20	**710055**

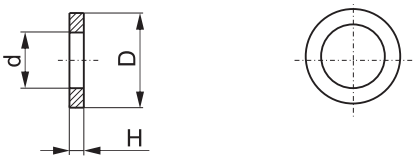
▶ round TORX head screw

d mm	L mm	D mm	H mm	K	ID No.
M6x1	16	9	3,5	TX25	**710056**
M6x1	18	9	3,5	TX25	**710057**
M6x1	20	9	3,5	TX25	**710058**



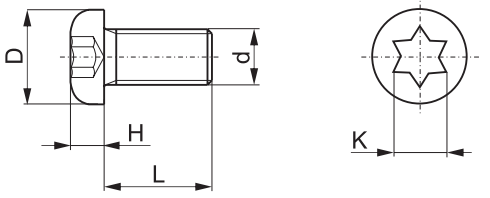
▶ 710056, 710057, 710058 washers

d mm	D mm	H mm	ID No.
6	9	1	**710059**



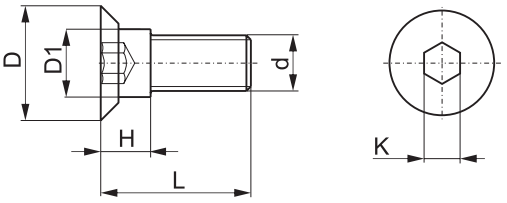
▶ round TORX head screw

d mm	L mm	D mm	H mm	K	ID No.
M3,5x0,6	6	5,9	2,4	TX15	**710062**



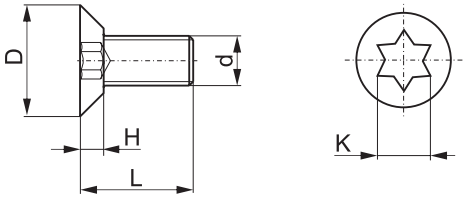
▶ countersunk socket head screw

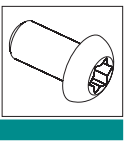
d mm	L mm	D mm	D1 mm	H mm	K mm	ID No.
M5x0,8	13,5	9,5	6	4,9	3	**710076**



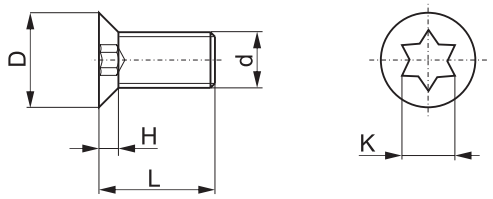
▶ countersunk TORX head screw with relieved head

d mm	L mm	D mm	H mm	K	ID No.
M5x0,8	8,5	8,8	1,8	TX20	**710064**
M6x0,5	4,8	8,9	1,7	TX20	**710065**



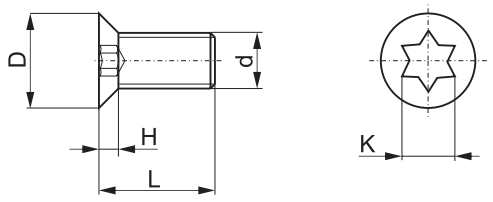


- countersunk TORX head screw



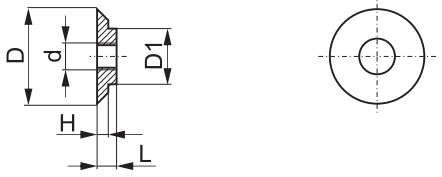
d mm	L mm	D mm	H mm	K	ID No.
M4x0,7	10	7,5	2,3	TX15	**710063**
M6x1	10	9,8	2,6	TX20	**710066**
M6x1	12	9,8	2,6	TX20	**710067**
M6x1	14	9,8	2,6	TX20	**710068**
M6x1	16	9,8	2,6	TX20	**710069**
M6x1	20	9,8	2,6	TX20	**710070**
M6x1	25	9,8	2,6	TX20	**710071**
M6x1	30	9,8	2,6	TX20	**710072**

- countersunk TORX head screw
- used in combination with 710082, 710083, 710084 nuts



d mm	L mm	D mm	H mm	K	ID No.
M4x0,5	3,2	6	1,5	TX10	**710077**
M4x0,5	4,3	6	1,5	TX10	**710060**
M4x0,5	6,3	6	1,5	TX10	**710061**

- M4 countersunk nut
- used in combination with 710060, 710061, 710077 screws



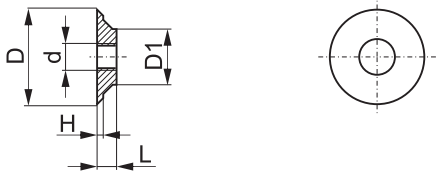
d mm	L mm	D mm	D1 mm	H mm	ID No.
M4x0,5	1,6	9,9	8,4	0,6	**710082**

- M4 countersunk nut
- used in combination with 710060, 710061, 710077 screws



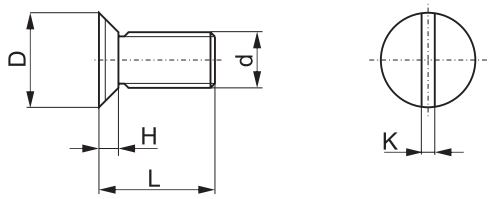
d mm	L mm	D mm	ID No.
M4x0,5	1,7	11,8	**710083**

- M4 countersunk nut
- used in combination with 710060, 710061, 710077 screws



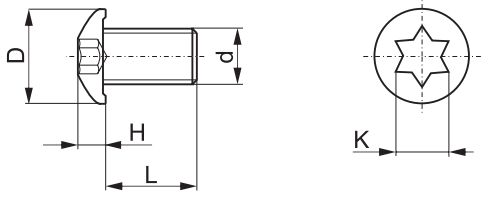
d mm	L mm	D mm	D1 mm	H mm	ID No.
M4x0,5	2,2	11,8	8,4	0,7	**710084**

countersunk slotted head screw



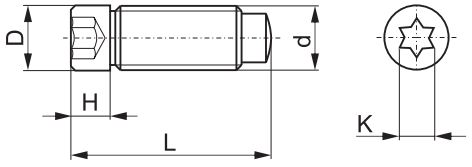
d mm	L mm	D mm	H mm	K mm	ID No.
M5x0,8	6	9	2	1	**710085**

round TORX head screw



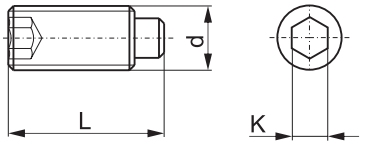
d mm	L mm	D mm	H mm	K	ID No.
M4x0,7	4	9	2,3	TX15	**710079**
M4x0,7	6	9	2,3	TX15	**710080**
M4x0,7	9	9	2,3	TX15	**710081**

set screw with pin and TORX stem



d mm	L mm	D mm	H mm	K	ID No.
M4x0,7	20	3,8	5	TX8	**710075**
M5x0,8	20	4,8	5	TX15	**710074**
M6x1	20	5,8	5	TX20	**710073**

hex head set screw



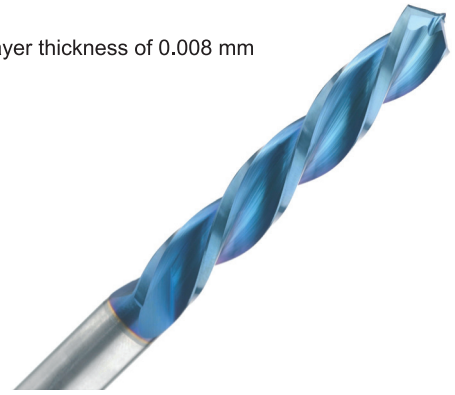
d mm	L mm	K mm	ID No.
M8x1	20	5	**710045**
M10x1	20	6	**710046**

1. Tool coating

Selected cutting tools, knives and tool tips can be equipped with an abrasion-resistive coating. A high-quality physical coating patent technology SPUTTERN is used. This system ensures low internal stress of the coating layer and thus a high adhesion to the tool surface as well as a high hardness of the tool. The coating surface is perfectly smooth and free of droplets.

- physical coatings (PVD) based on: TiAlN with hardness of 3700 HV and the layer thickness of 0.003 to 0.0045 mm
  TiN with hardness of 2300 HV and the layer thickness of 0.003 mm
  TiB2 with hardness of 4000 HV and the layer thickness of 0.0045 mm
- diamond coatings with hardness of 10000 HV and layer thickness of 0.008 mm





2. Classification of tools by the cutter feed type

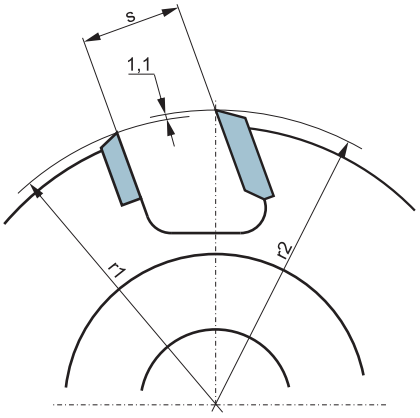
Vydona tools are designed to ensure the operator's safety at milling.
The cutter design is based on two types of working feeds at milling which can be split into two groups:

- milling with manual feed (**MAN**)
- milling with power feed (**MEC**)

2.1 Manual feed tools

Manual field tools are designed so that the workpiece kickbacks are limited.
This was achieved by the following design modifications:

- Limited tooth pitch " s ". It is defined as the maximum distance between the chip limiter and the cutting blade depending on the tool diameter.
- Difference between the cutting and limiting radii "r2 - r1" that should be less than 1.1 mm.



Manual feed tools are marked by "MAN" (MANUAL FEED) on the cutter body.

2.2 Power feed tools

Power feed is a term for tools on which the workpieces are machine driven (using the feed device).

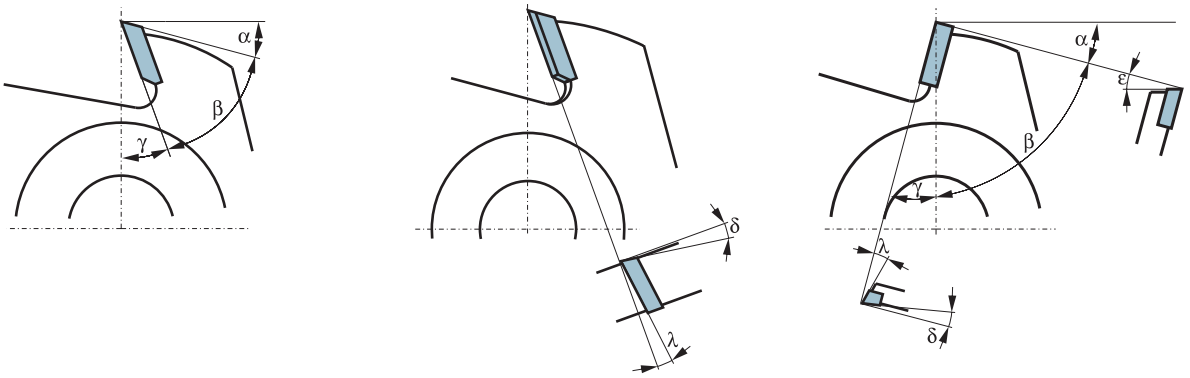
These tools are not limited by the tooth pitch or kickback limiters, but they fulfil all the necessary safety precautions.

Power feed tools are marked by "MEC" (MECHANICAL FEED) on the cutter body.

3. Cutting edge geometry and milling direction

3.1 Cutting edge geometry

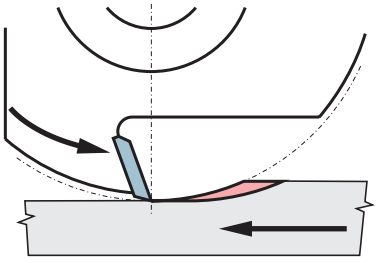
α = cutting clearance angle
β = tip angle
γ = rake angle
δ = side cut angle
ε = chamfer angle
λ = edge angle



3.2 Milling dependent on the cutter rotation and workpiece feed

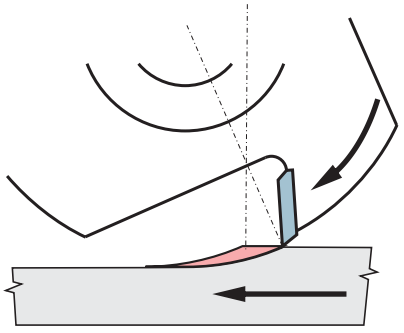
a) Standard milling (up-cut)

Cutter rotates counter to feeding direction. Chip cross-section slowly increases from zero to the maximum thickness. A disadvantage is that the tool tip slides on the machined surface at the beginning of cutting and gets abraded, heated and worn. It then enters the workpiece, which deteriorates the machining quality and the total lifetime of the tool edge. The resulting cutting force is directed out of the workpiece. This situation is unfavourable when milling against fibres. This milling strategy is used mainly for tools with manual feed (MAN).



b) Parallel milling (down-cut)

The cutter rotates in the feeding direction. The tooth edges slowly cut to the maximum chip thickness and end on the machined surface. Surfaces machined in this way are smoother and the tool cutting edge achieves a longer lifetime, since the edge moves away from the workpiece. One of disadvantages of parallel milling are surges induced by the teeth when they get engaged. This requires a rigid structure of cutters and feed devices. This milling strategy is used only for tools with powered feed.

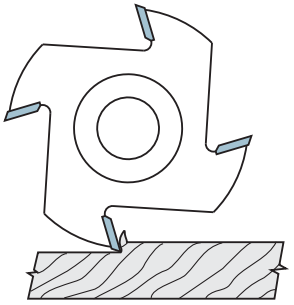


3. Cutting edge geometry and milling direction

3.3 Milling strategy depending on the fibre direction in wood

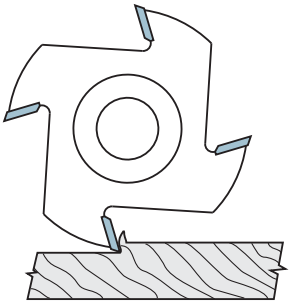
a) Milling along fibres

This strategy is simple and the final surface is very neat even at high cutting speeds.



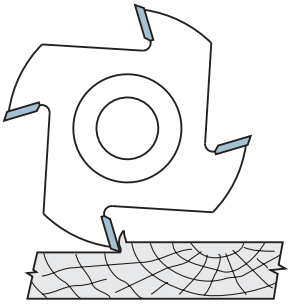
b) Milling against fibres

This milling strategy is very difficult, because the fibres are lifted. It should be avoided, e.g. by changing the rotation direction and the milling strategy (as in parallel or unparallel milling).



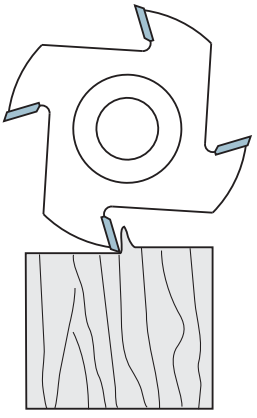
c) Cross-fibre milling

Simple milling that results in wavy and rough surface.



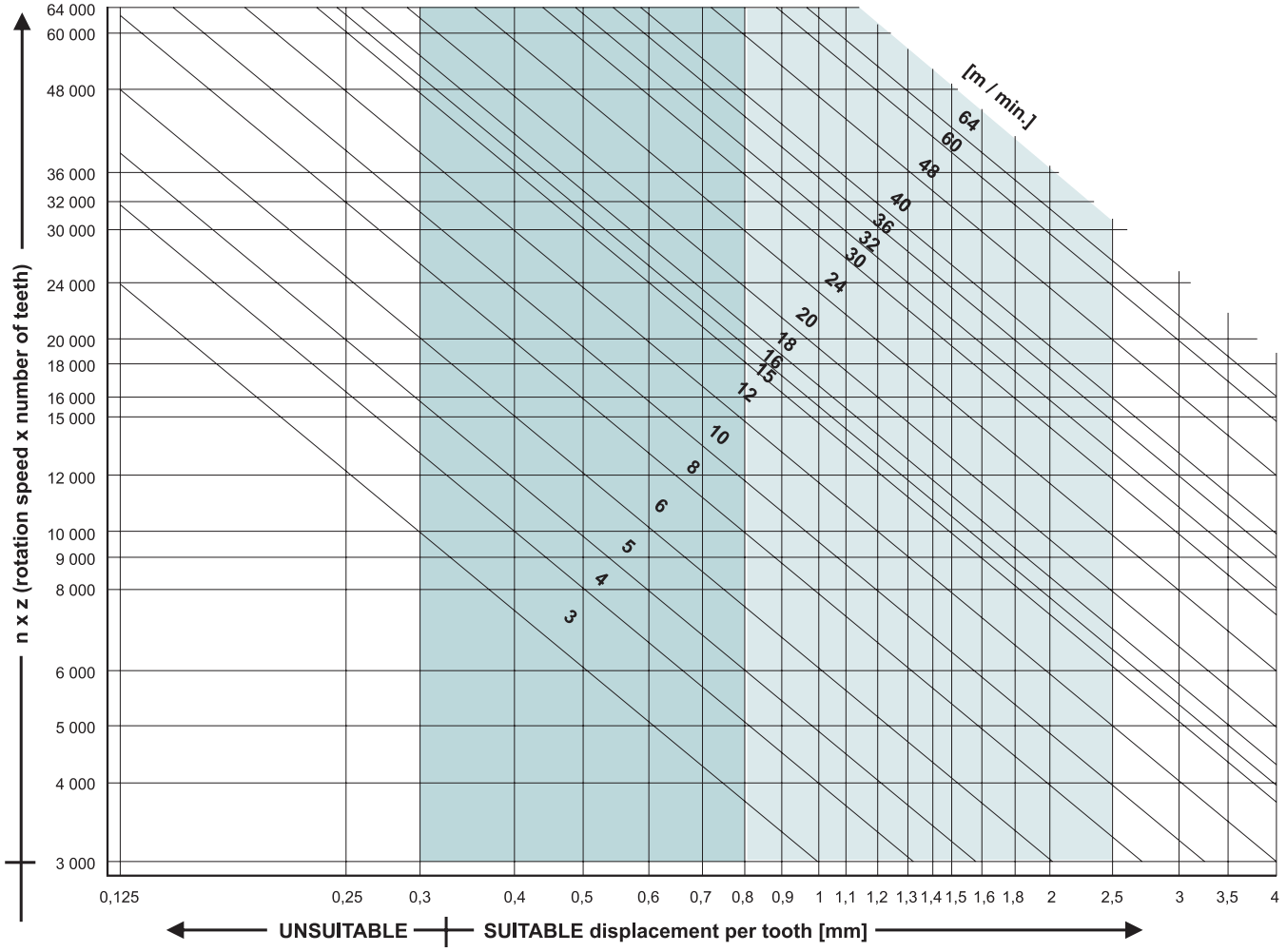
d) Milling end of fibres

With this milling strategy the fibres are cut vertically and they are chipped when the cutter moves out of the material. Milling on the machine is problematic and only slow milling speeds are used.

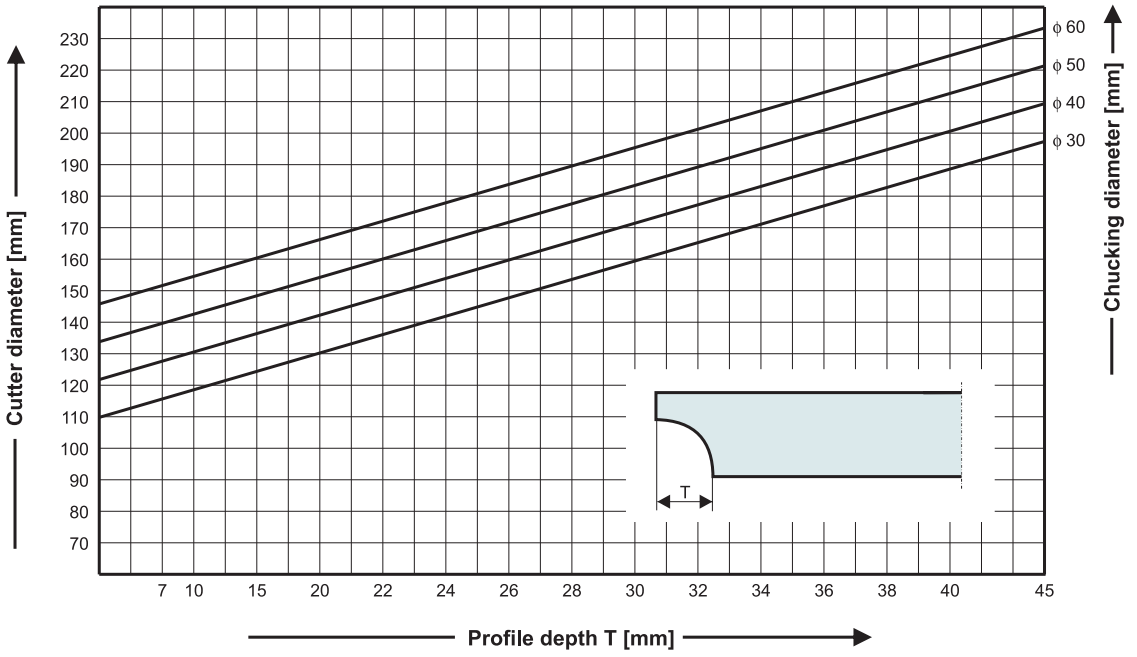


4. Milling feed scheme depending on the number of teeth and rotation speed

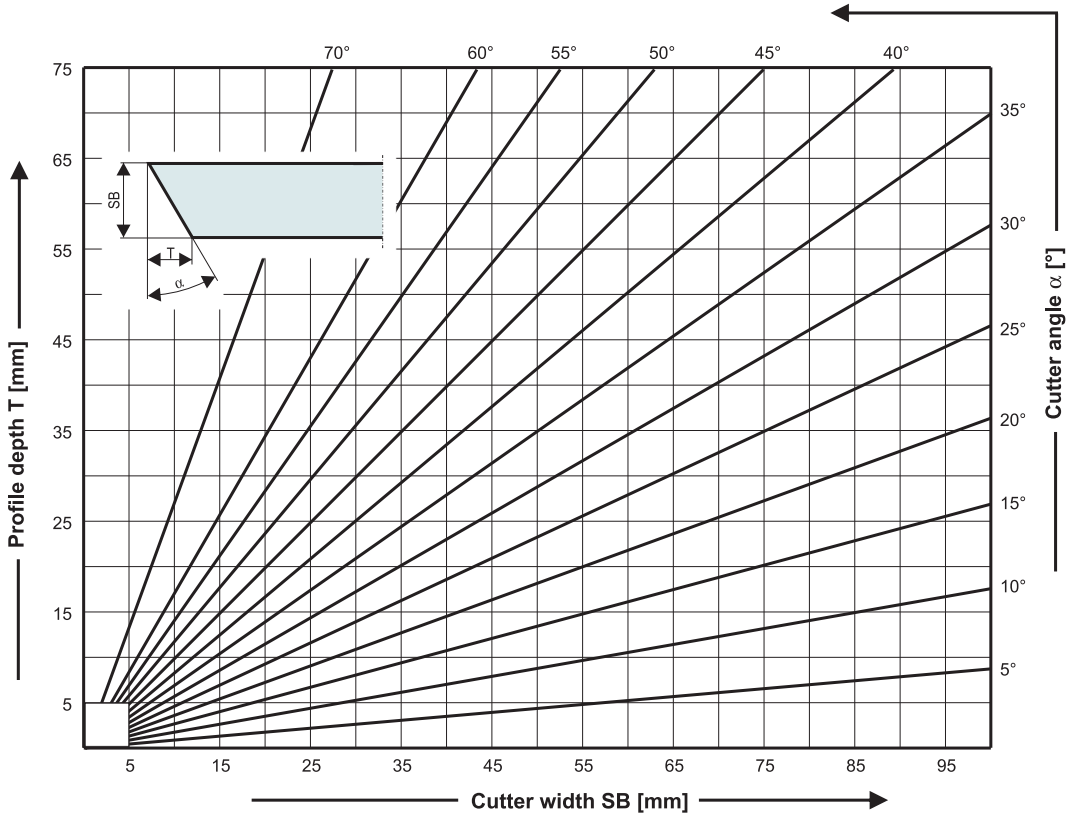
feed mm	surface quality
0,3 - 0,8	smooth surface
0,8 - 2,5	medium smooth surface
2,5 - 4,0	coarse surface



5. Scheme of minimum cutter diameter for specified profile depth

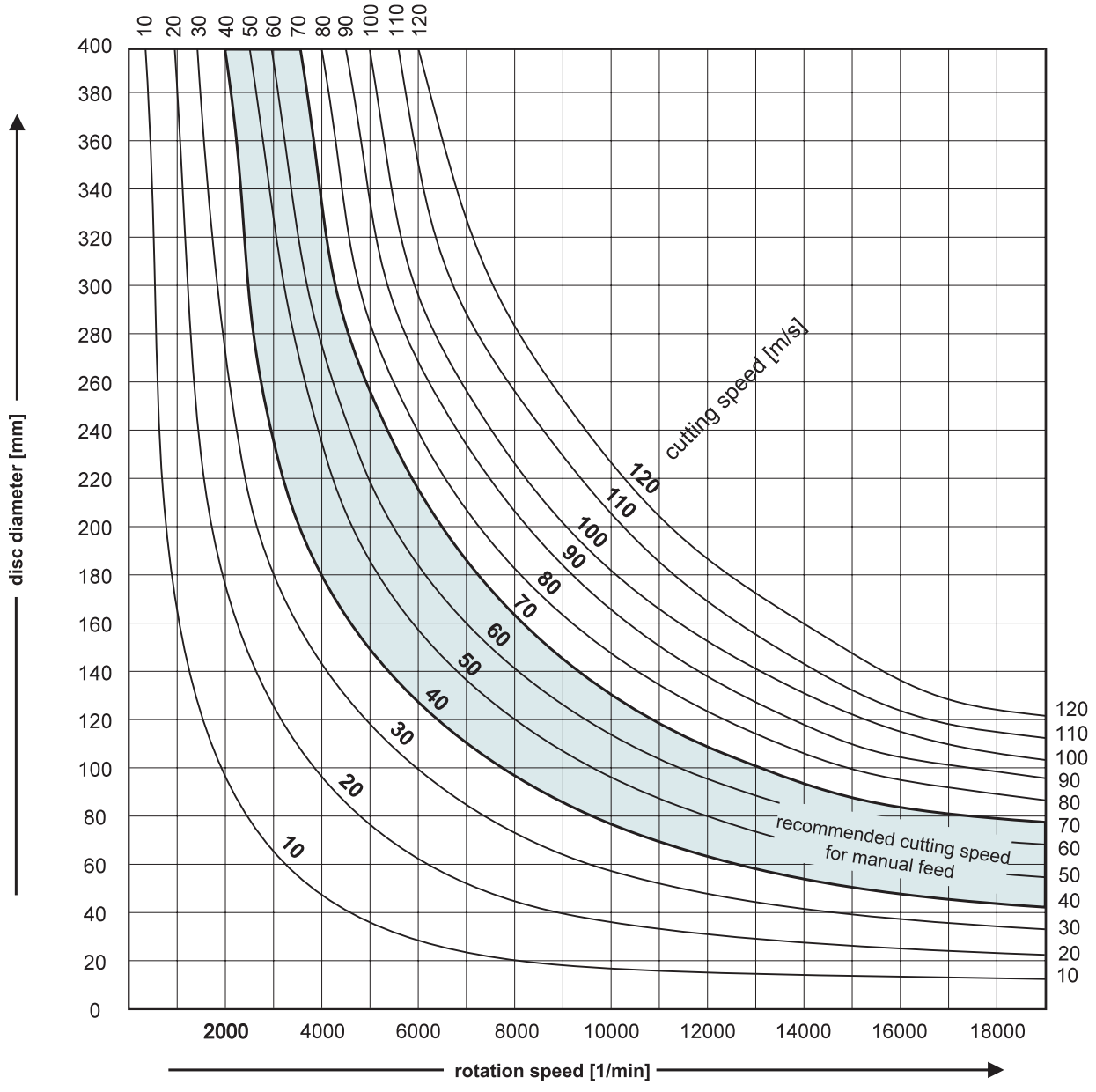


6. Scheme showing the profile depth at a specified angle and width of cutter



7. Recommended cutting speed depending on the tool diameter and rotation speed

machined material	HS cutter m/s	HW cutter m/s	HW saw m/s
soft wood	50-80	60-90	70-100
hard wood	40-60	50-80	70-90
chipboard	-	60-80	60-80
coated chipboard	-	60-80	60-80



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TECHNICAL SPECIFICATIONS

Machined material

Machining strategy

Feed speed [m/min] ☐ MEC ☐ MAN

Machine HW ☐ ☐ HS ☐

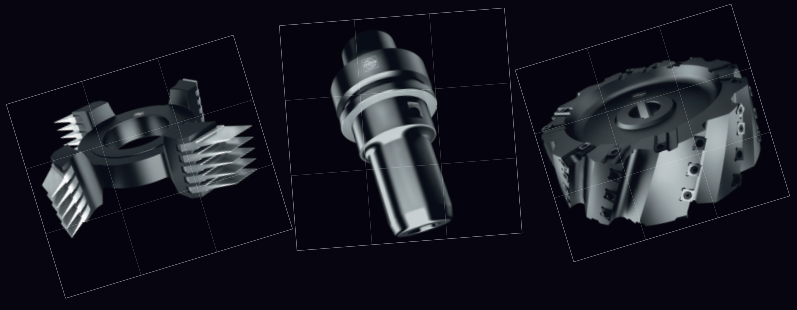
Rotation speed [1/min]

Number of teeth

Cutting blade

NOTES





Precisely Ground Shapes



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