

10. Windows and doors

Windows and doors

Set of brazed cutters with high speed steel tips (HSS) designed for professional machining of solid soft wood. Sets of brazed cutters with carbide (HM) tips and cutter heads with exchangeable inserts (HM) designed for professional machining of solid soft and hard wood, glued wood and other wood-based materials and plastics. They are used for machining flat surfaces and edge profiling to obtain a given window and door profile. We offer mainly sets as cutter heads with exchangeable inserts.

Single tools and sets are made from the highest quality high speed cutting steel in special heat treatment technology, which has been properly selected for the type of work, parameters and conditions prevailing during the machining, in order to guarantee proper work of the tool, both in standard and extreme conditions.

The tools are designed and manufactured with or without shear angle and optimized chip flow, mounted on sleeves or HSK shanks, designed for professional, very precise machining of solid wood and other wood-based materials. The HSK clamping construction guarantees reduced run-out tolerance. Thanks to using HSK system allowing also for production of arch windows, we obtain high precision and very high quality of the machined surface. The tools work in automatic production process on CNC machines.

All types of tools are manufactured on modern CNC machines of world-renowned producers, which guarantee high accuracy and precision of the produced tools. The construction and production remains in accordance with all points of safety standard EN/PN-847-1 concerning tools for mechanical woodworking.

The *Windows and doors* chapter includes only example types of brazed cutters, cutter heads and sets with basic dimensions. On special request, we can suggest, design and produce a proper tools for the required type of work, material, parameters and conditions during machining. Time of production of catalogue sets marked with "+" usually does not exceed 10-15 working days. Special windows, made on client's request are produced within 15-18 working days after agreeing all technical and sales details.

Orders should include:

- window type or window section drawing,
- drip cap type,
- machine or work scheme,
- diameters and base distances of tools for tenoning and profiling,
- base surfaces position,
- window sill groove position,
- gasket type,
- floating mullion type,
- machined material type,
- profile drawing with dimensions or profile sample – in case of single sets,
- other information relevant for designing and production process.

Drip cap and seal types can be found on pages 10.32-10.35 of the catalogue.



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Pictograms



solid dry softwood



solid dry hardwood



chipboard



glued wood



MDF



carbide



high-speed cutting steel



steel or aluminium body



HSK 85 clamping



flat surfaces



rebating



grooving



profiling



mechanical feed



quiet and steady work

- available / stock product
- + production time 9–15 working days.

Window batten cut-off



Set of tools with suitable number of cutting teeth, designed for window batten cut-off with profiling and pre-cutting window frame. The set includes profiling tools (HSS or HM) offered as brazed cutters or cutter heads with exchangeable inserts and cutting saw blades (HM). The set is offered on individual request.

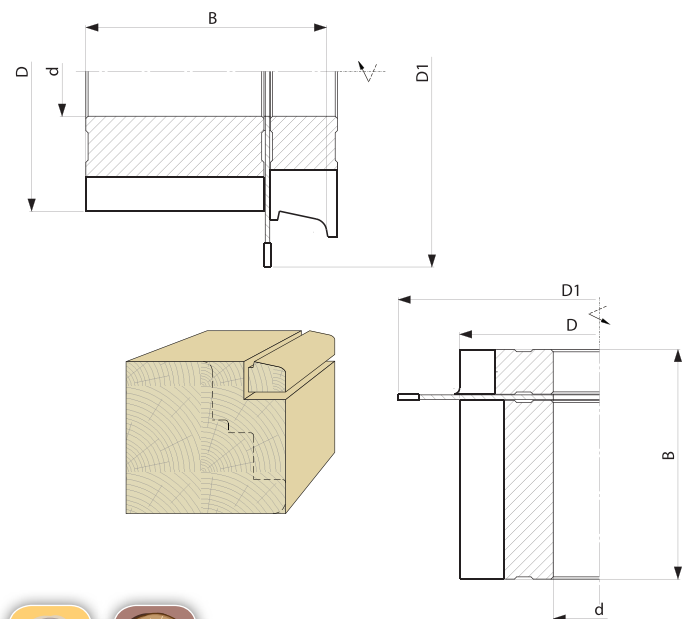
Orders should include:

- D – base diameter,
- D1 – cutting saw blade diameter,
- D – bore diameter,
- B – semi-finished product width,
- window batten dimensions.

Type of work: window batten cut-off.

Material:

-  solid softwood
-  solid hardwood



Window batten recovery



Set of tools with suitable number of cutting teeth, designed for window batten cut-off with profiling. The set is used as additional – cutting off set, when longitudinal, inner profile of window frame is used in one operation with window batten profile. The set includes profiling tools (HSS or HM) offered as brazed cutter or cutter head with exchangeable inserts and cutting saw blades (HM). The set is offered on individual request.

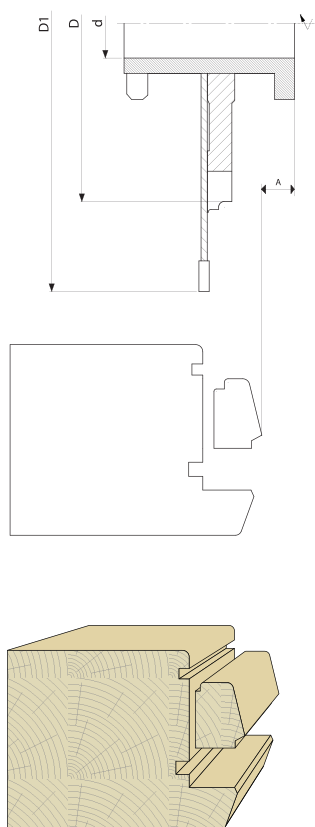
Orders should include:

- D – base diameter,
- D1 – cutting saw blade diameter,
- D – bore diameter,
- B – semi-finished product width,
- A – base – set position,
- window batten dimensions.

Type of work: window batten cut-off.

Material:

-  solid softwood
-  solid hardwood



Set of profile tools with suitable number of cutting teeth, designed for professional cutting of solid wood. The set is used for window batten finishing. The set includes profiling tools. The set is offered on individual request as brazed cutters or cutter heads. The set works on four-sided machines.

Orders should include:

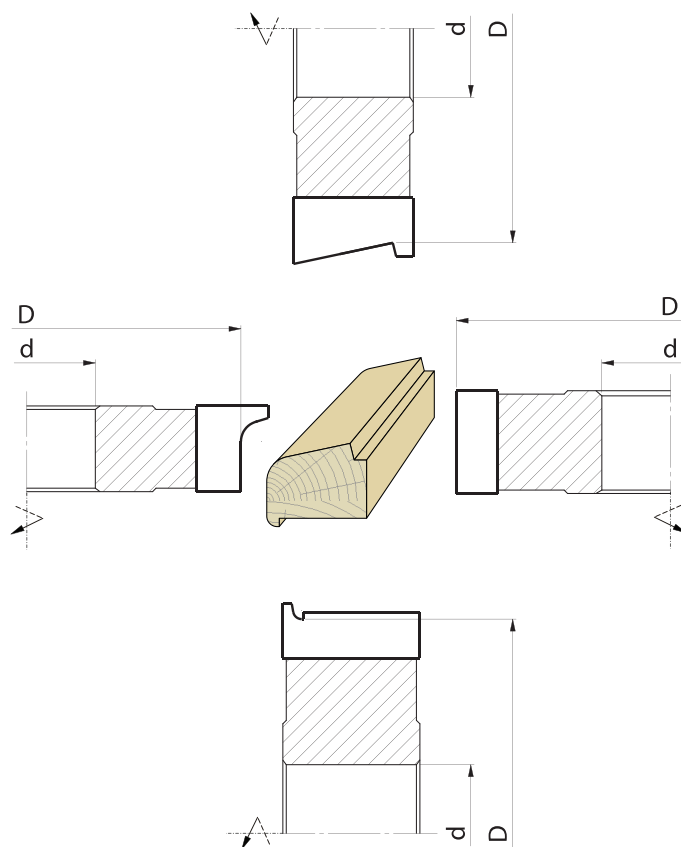
- D – base diameter,
- D – bore diameter,
- window batten dimensions.

Type of work: window batten finishing.

Material:

- HSS** solid softwood
HM solid hardwood

Direct cutting



ZFO-02

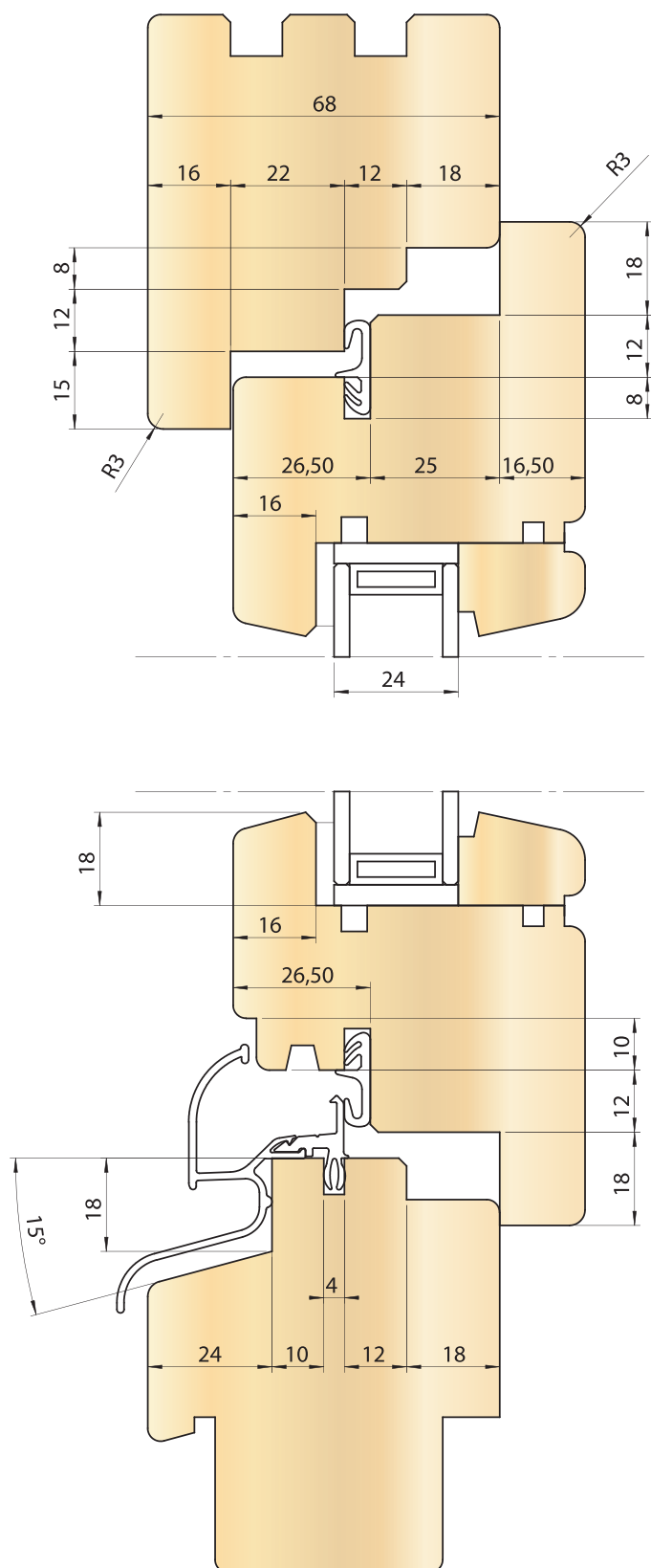
Set of brazed cutters, type **ZFO-02**, with four cutting teeth, designed for production of double-glass, single-sash windows 68 mm wide. The set includes 13 sets mounted on 100 mm long sleeves, without possibility to increase window sash and frame width.

List of sets

Basic set:

1. Internal longitudinal window sash profile made with window batten profile.
2. External longitudinal window sash profile.
3. Internal longitudinal side and top window frame profile.
4. Internal longitudinal bottom window frame profile.
5. Window batten cut-off.
6. Window sash tenon.
7. Window sash mortise.
8. Window frame bottom tenon.
9. Window frame top tenon.
10. Window frame mortise.
11. Drip cap profiling.
12. Window sill groove profile.
13. Floating mullion profile.

Standard sets can be extended with additional optional sets, depending on needs.



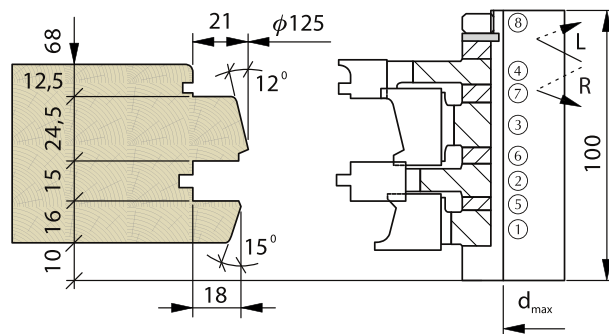
HSS

HM

Internal longitudinal window sash profile made in one operation with window batten profile (on a sleeve).

ZFO-02.01.00-2

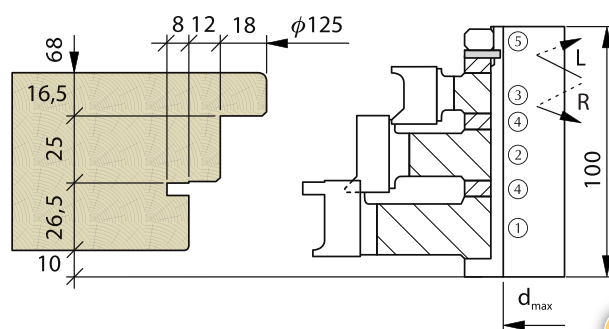
Catalogue number	D mm	B mm	d _{max} mm	z
1. ZFO-02.01.01-2	147	23	4	+
2. ZFO-02.01.02-2	177	15	4	+
3. ZFO-02.01.03-2	142,6	31,5	4	+
4. ZFO-02.01.04-2	177	17,5	4	+
5. Distance ring	1 pc.	3		+
6. Distance ring	1 pc.	5		+
7. Distance ring	1 pc.	6		+
8. BOX sleeve		50		+



External longitudinal window sash profile (on a sleeve).
The set consists of 3 HSS brazed cutters.

ZFO-02.02.00-2

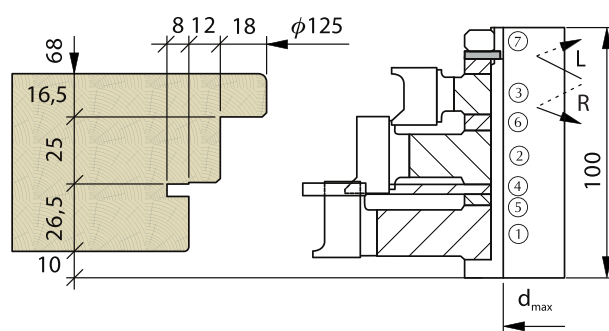
Catalogue number	D mm	B mm	d _{max} mm	z
1. ZFO-02.02.01-2	201	31,5	4	+
2. ZFO-02.02.02-2	167	28	4	+
3. ZFO-02.02.03-2	135	24,5	4	+
4. Distance ring	2 pcs.	9		+
5. BOX sleeve		50		+



External longitudinal window sash profile (on a sleeve).
The set consists of 3 HM brazed cutters.

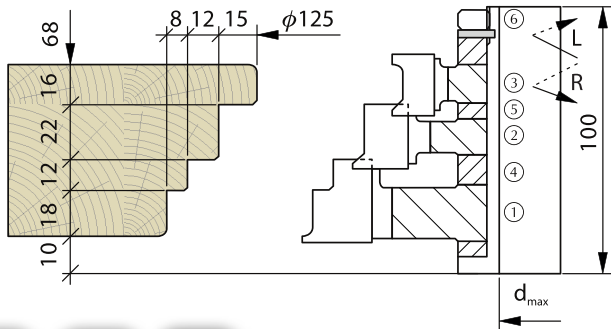
ZFO-02.02.00-2

Catalogue number	D mm	B mm	d _{max} mm	z
1. ZFO-020201Aw01L	195	31,5	4	+
2. ZFO-020202w01L	167	28	4	+
3. ZFO-020203w01P	135	24,5	4	+
4. ZFO-020204w01P	201	5	4	+
5. Distance ring	1 pc.	3,5		+
6. Distance ring	1 pc.	9,1		+
7. BOX sleeve		50		+



ZFO-02.03.00-2

Internal longitudinal side and top window frame profile (on a sleeve).

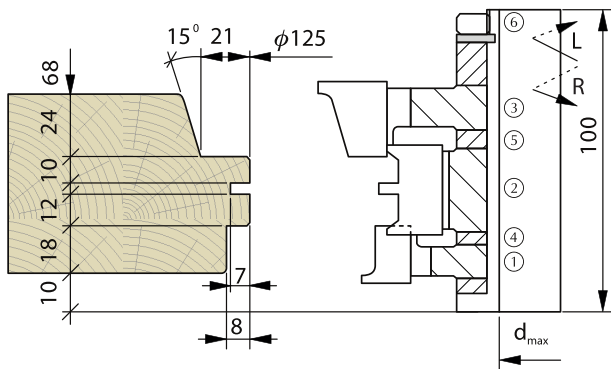


Catalogue number		D mm	B mm	d _{max} mm	z
1.	ZFO-02.03.01-2	205	35		4 +
2.	ZFO-02.03.02-2	161	25		4 +
3.	ZFO-02.03.03-2	135	24		4 +
4.	Distance ring	1 pc.	7		+
5.	Distance ring	1 pc.	4		+
6.	BOX sleeve			50	+



ZFO-02.04.00-2

Internal longitudinal bottom window frame profile (on a sleeve).

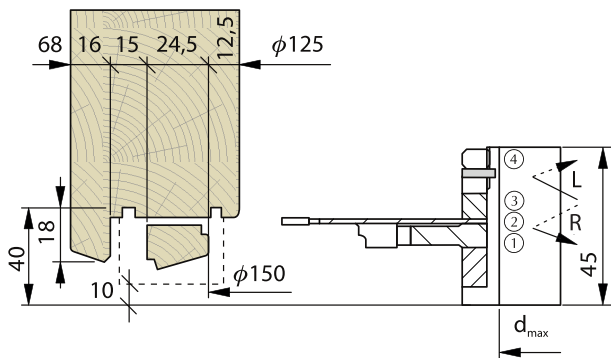


Catalogue number		D mm	B mm	d _{max} mm	z	
1.	ZFO-02.04.01-2	151	23		4	+
2.	ZFO-02.04.02-2	139	32		4	+
3.	ZFO-02.04.03-2	183	29		4	+
4.	Distance ring	1 pc.	4			+
5.	Distance ring	1 pc.	6			+
6.	BOX sleeve			50		+



ZFO-02.05.00-2

Window batten cut-off (on a sleeve).

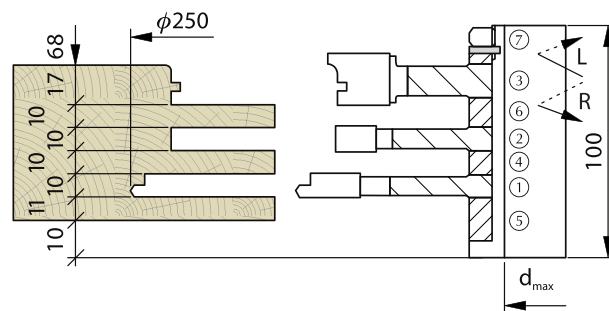


Catalogue number		D mm	B mm	d ^{max} mm	z
1.	ZF0-02.05.01-2	140	11,7		4 +
2.	PI-402 z=24	200	3		4 +
3.	Distance ring	1 pc.	10		+
5.	BOX sleeve			50	+

Window sash tenon (on a sleeve).

ZFO-02.06.00-2

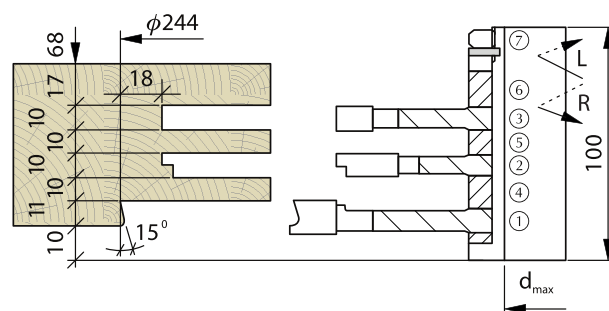
Catalogue number		D mm	B mm	d _{max} mm	z
1.	ZFO-02.06.01-2	250	10		4 +
2.	ZFO-02.06.02-2	214	10		4 +
3.	ZFO-02.06.03-3	224	22		4 +
4.	Distance ring	1 pc.	10		+
5.	Distance ring	1 pc.	17		+
6.	Distance ring	1 pc.	16		+
7.	BOX sleeve			50	+



Window sash mortise (on a sleeve).

ZFO-02.07.00-2

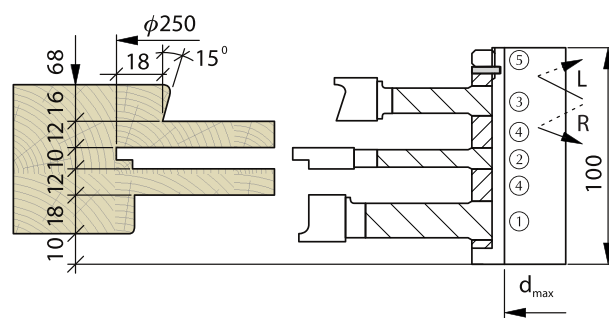
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1.	ZFO-02.07.01-2	254,4	16		4 +
2.	ZFO-02.07.02-2	214	10		4 +
3.	ZFO-02.07.03-2	214	10		4 +
4.	Distance ring	1 pc.	14		+
5.	Distance ring	1 pc.	10		+
6.	Distance ring	1 pc.	22		+
7.	BOX sleeve			50	+



Window frame bottom tenon (on a sleeve).

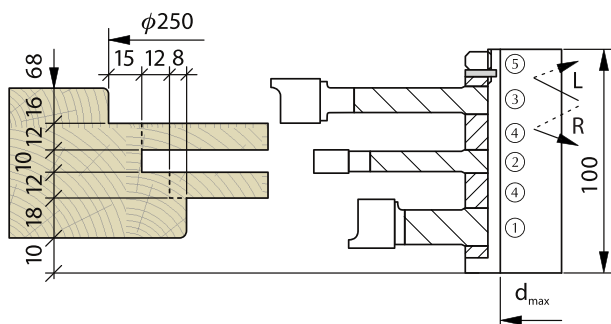
ZFO-02.08.00-2

Catalogue number		D mm	B mm	d _{max} mm	z
1.	ZFO-02.08.01-2	244	23		4 +
2.	ZFO-02.08.02-2	250	10		4 +
3.	ZFO-02.08.03-2	212	21		4 +
4.	Distance ring	2 pcs.	17		+
5.	BOX sleeve			50	+



ZFO-02.09.00-2

Window frame top tenon (on a sleeve).

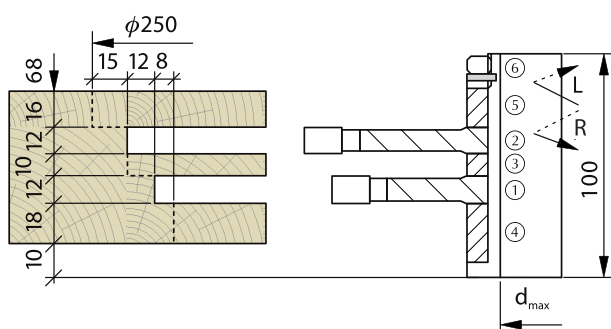


Catalogue number	D mm	B mm	d _{max} mm	z
1. ZFO-02.09.01-2	190	23	4	+
2. ZFO-02.09.02-2	220	10	4	+
3. ZFO-02.09.03-2	260	21	4	+
4. Distance ring	2 pcs.	17		+
5. BOX sleeve			50	+



ZFO-02.10.00-2

Window frame mortise (on a sleeve).

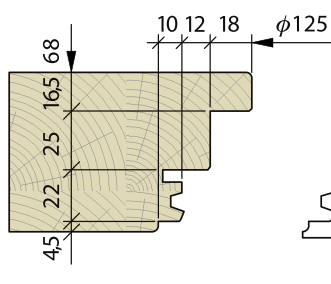


Catalogue number	D mm	B mm	d _{max} mm	z
1. ZFO-02.10.01-2	196	12	4	+
2. ZFO-02.10.02-2	220	12	4	+
3. Distance ring	1 pc.	10		+
4. Distance ring	1 pc.	23		+
5. Distance ring	1 pc.	21		+
6. BOX sleeve			50	+



ZFO-02.11.00-2

Drip cap profile.



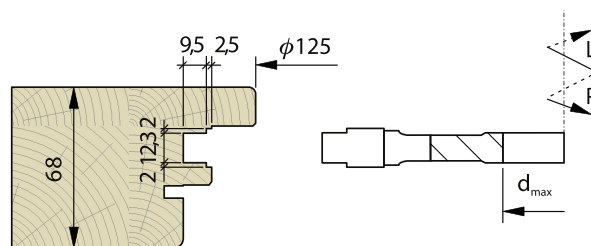
Catalogue number		D mm	B mm	d _{max} mm	z	
1.	ZFO-02.11.01-2	215	22,5	50	4	+



Window sill groove profile.

ZFO-02.12.00-2

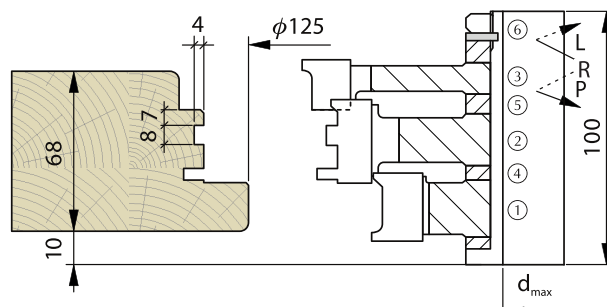
Catalogue number	D mm	B mm	d _{max} mm	z	
1. ZFO-02.12.01-2	185	16,3/12,3	50	4	+



Internal longitudinal profile of floating mullion (on a sleeve). The set consists of 3 HSS brazed cutters.

ZFO-02.13.00-2

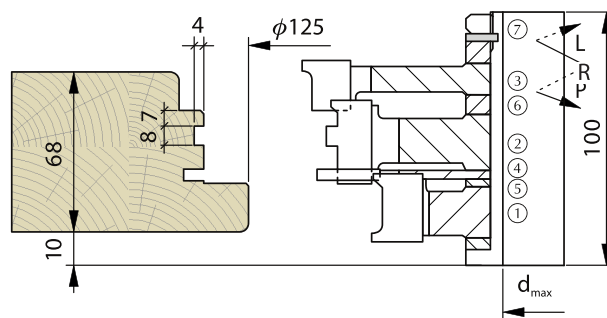
Catalogue number	D mm	B mm	d _{max} mm	z	
1. ZFO-02.00.13-2	135	29		4	+
2. ZFO-02.00.13-2	180	33,5		4	+
3. ZFO-02.00.13-2	195	21,5		4	+
4. Distance ring	1 pc.	6,4			+
5. Distance ring	1 pc.	9,1			+
6. BOX sleeve			50		+



Internal longitudinal profile of floating mullion (on a sleeve). The set consists of 3 HM brazed cutters.

ZFO-02.13.00-2

Catalogue number	D mm	B mm	d _{max} mm	z	
1. ZFO-021301w01L	135	29		4	+
2. ZFO-021302w01P	172	33,5		4	+
3. ZFO-021303w01P	195	21,5		4	+
4. ZFO-021304w01L	180	5		4	+
5. Distance ring	1 pc.	3,5			+
6. Distance ring	1 pc.	9,1			+
7. BOX sleeve			50		+



GO-01

Sets of cutter heads, type **GO-01**, with three cutting teeth for tenoning and two cutting teeth for profiling, designed for professional machining of solid wood. The sets are used for double-glass, single-sash windows 68 mm wide. The set includes 11 basic sets and 5 optional ones, mounted on 100 mm long sleeves.

Type of work: tenoning, internal and external window profiling.

Material: solid hardwood

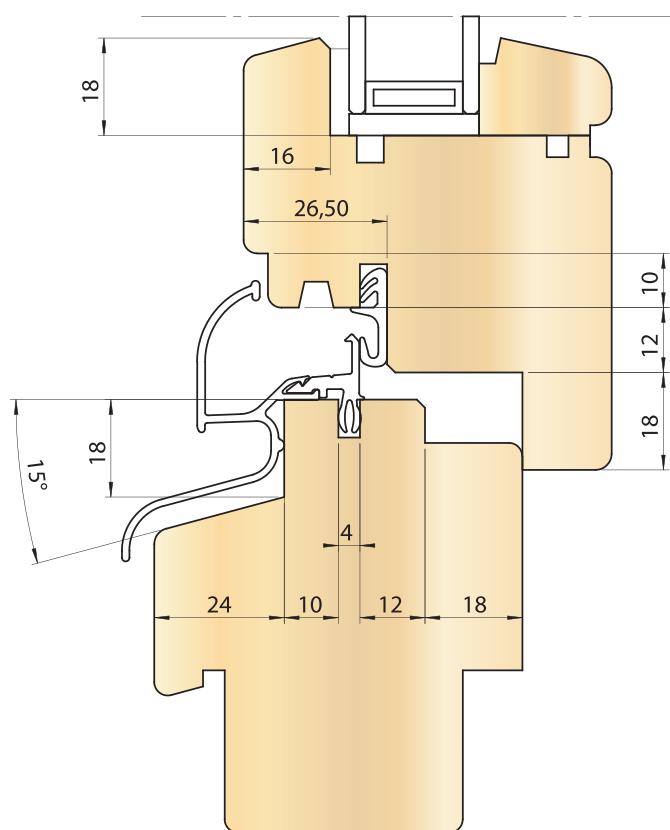
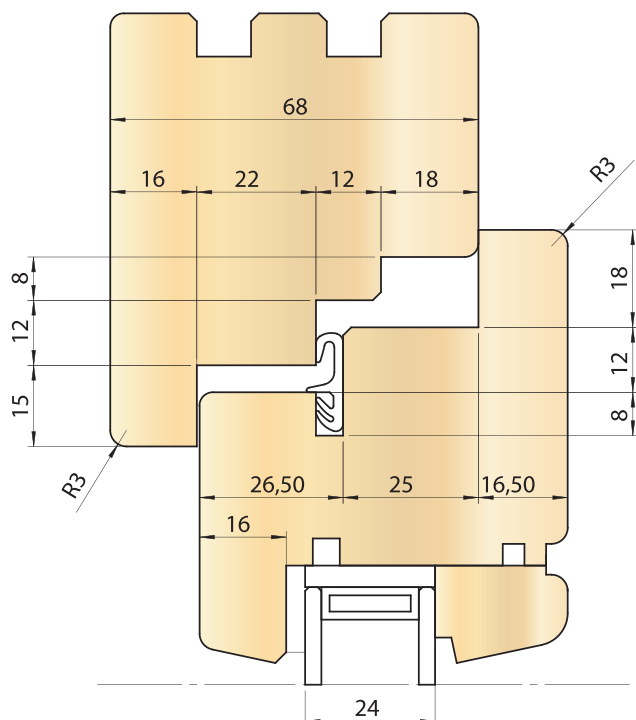
List of sets**Basic sets** (page 10.14):

1. Window frame mortise.
2. Window frame bottom tenon.
3. Window frame top tenon.
4. Window sash tenon.
5. Window sash mortise.
6. Internal longitudinal bottom window frame profile.
7. Internal longitudinal side and top window frame profile.
8. Internal longitudinal window sash profile.
9. External longitudinal window sash profile.
10. Drip cap profiling.
11. Window sill groove profiling.

Optional sets (page 10.15):

12. External longitudinal bottom window frame profile.
13. External longitudinal side and top window frame profile.
14. External longitudinal window sash profile with additional gasket.
15. Floating mullion profile.
16. Window batten profile.

Standard sets can be extended with additional optional sets, depending on needs.



Sets of brazed cutters, type **ZFO-02 Softline**, with four cutting teeth and sets of cutter heads, type **GO-01 Softline**, with three cutting teeth for tenoning and two cutting teeth for profiling, designed for professional machining of solid wood. The sets are used for double-glass, single-sash windows 68 mm wide. The set includes 11 basic sets and 5 optional ones, mounted on 100 mm long sleeves.

Type of work: tenoning, internal and external window profiling.

Material: solid wood

List of sets

Basic sets (page 10.14):

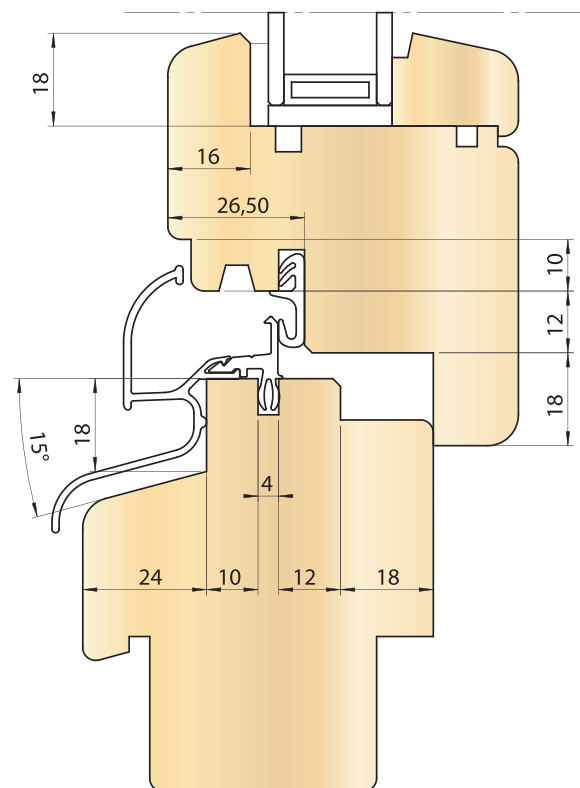
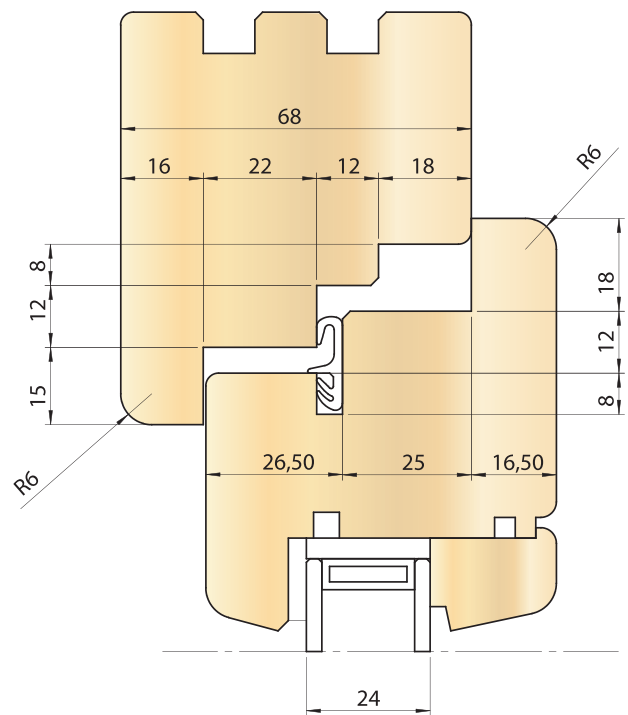
1. Window frame mortise.
2. Window frame bottom tenon.
3. Window frame top tenon.
4. Window sash tenon.
5. Window sash mortise.
6. Internal longitudinal bottom window frame profile.
7. Internal longitudinal side and top window frame profile.
8. Internal longitudinal window sash profile.
9. External longitudinal window sash profile.
10. Drip cap profiling.
11. Window sill groove profiling.

Optional sets (page 10.15):

12. External longitudinal bottom window frame profile.
13. External longitudinal side and top window frame profile.
14. External longitudinal window sash profile with additional gasket.
15. Floating mullion profile.
16. Window batten profile.

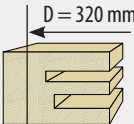
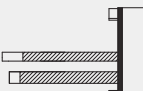
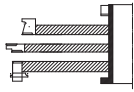
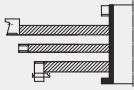
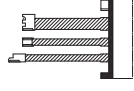
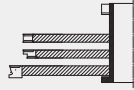
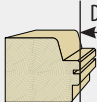


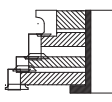

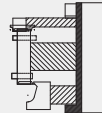

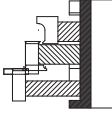

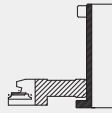

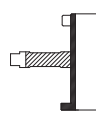
Standard sets can be extended with additional optional sets, depending on needs.

ZFO-02/GO-01 Softline



Basic set

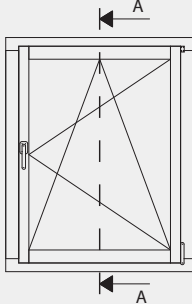

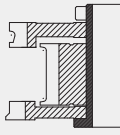

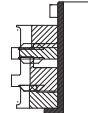

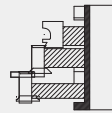
Basic set for production of double-glass, single-sash windows 68 mm wide for cutter heads GO-01 or GO-01 Softline with number of cutting teeth given in the chart and for brazed cutters ZFO-02 Softline with four cutting teeth ($z=4$).

Profile number	Profile	Name	Tool	z
1.		Window frame mortise		3
		Window frame bottom tenon		3
		Window frame top tenon		3
		Window sash tenon		3
		Window sash mortise		3
6.		Internal longitudinal bottom window frame profile		2
7.		Internal longitudinal side and top window frame profile		2
8.		Internal longitudinal window sash profile		2
9.		External longitudinal window sash profile		2
10.		Drip cap profiling		2
11.		Window sill groove profiling		2

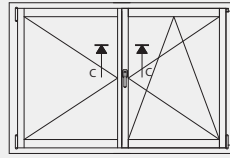

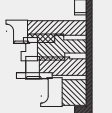
Optionally, it is possible to make window sill groove and drip cap in one operation with external longitudinal window sash profile, as window type GOD or GON.

Additional sets for cutter heads GO-01 or GO-01 Softline with number of cutting teeth given in the chart and for brazed cutters ZFO-02 Softline with four cutting teeth (z=4).

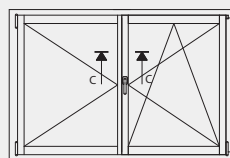

Additional sets

	Profile number	Profile	Name	Tool	z
	12.		D = 140 or 125 mm External longitudinal bottom window frame profile		2
	13.		External longitudinal side and top window frame profile		2
	14.		External longitudinal window sash profile with additional gasket		2

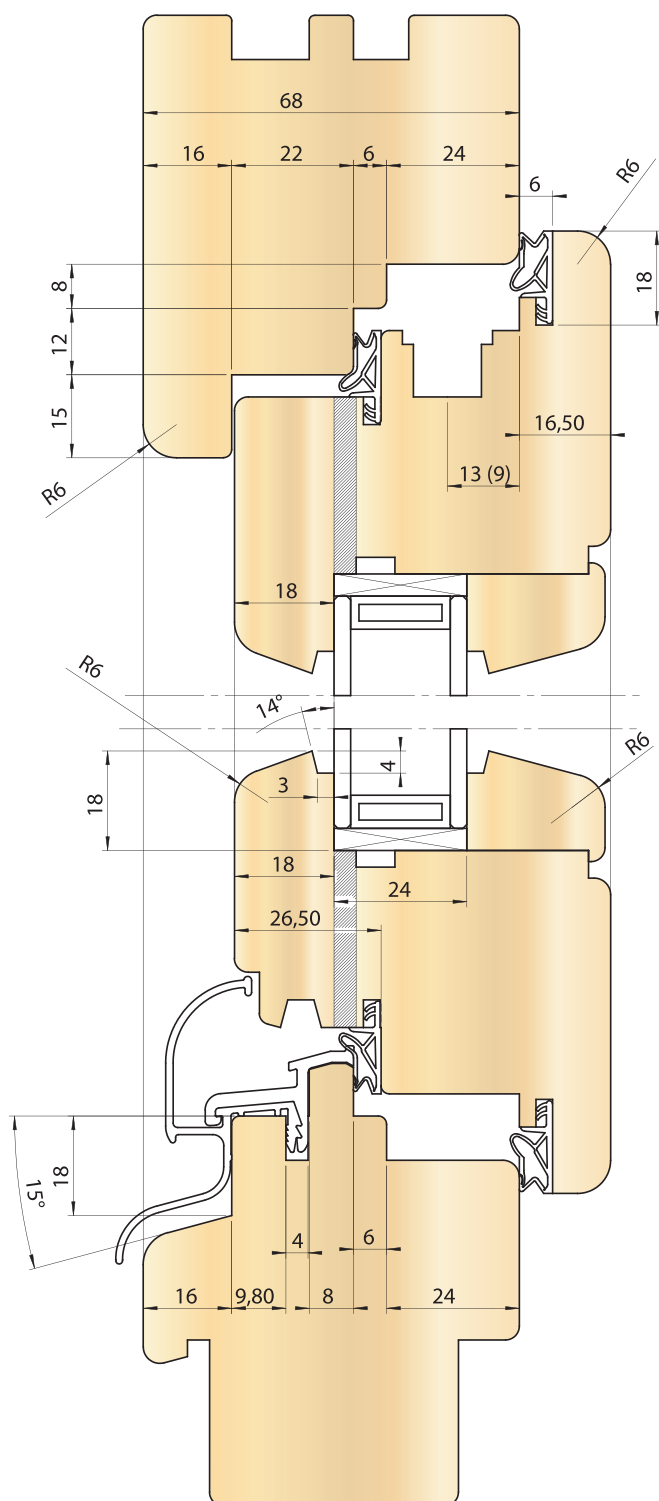
Floating mullion

	Profile number	Profile	Name	Tool	z
	15.		D = 140 or 125 mm Floating mullion profile		2

Window batten

	Profile number	Profile	Name	Tool	z
	16.		Window batten profile	Types of profiling on page 10.4	

GOD



Sets of cutter heads, type **GOD**, with three cutting teeth for tenoning and two cutting teeth for profiling, designed for professional machining of solid wood soft and hard. The basic set GOD 68 2U is used for production of windows 68 mm wide with two gaskets, including one optionally on internal window sash edge. The set GOD 68 2U can be easily and at little cost extended to width 78 mm (GOD 78 2U), 88 mm (GOD 88 2U) and 92 mm (GOD 98 2U). The abovementioned sets can be additionally extended to width 88 mm (GOD 88 3U), 92 mm (GOD 92 3U) and 98 mm (GOD 98 3U) with three gaskets including one optionally on internal window sash edge.

Sets of cutter heads or single cutter heads are mounted on sleeves of small height enabling for adjustment of the set together with the produced window width. The window profile corresponds with pressed aluminum drip cap. Window sill groove and drip cap profile are made in one operation together with external longitudinal window sash profile or optionally in separate operations. The set includes 9 basic sets and additionally 11 optional ones.

List of sets

Basic sets (page 10.17):

1. Window frame mortise.
2. Window frame bottom tenon.
3. Window frame top tenon.
4. Window sash tenon.
5. Window sash mortise.
6. Internal longitudinal bottom window frame profile.
7. Internal longitudinal side and top window frame profile.
8. Internal longitudinal window sash profile.
9. External longitudinal window sash profile.

Additional sets (page 10.18):

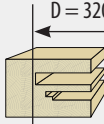
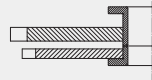
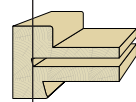
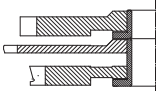
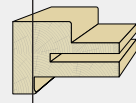
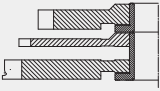
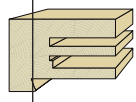
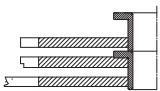
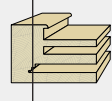

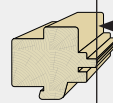
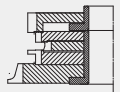
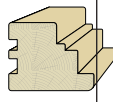
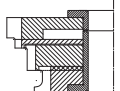
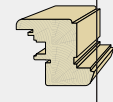
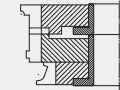
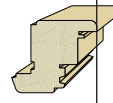
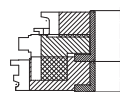
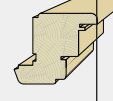
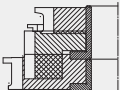
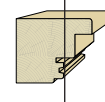
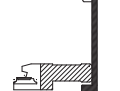
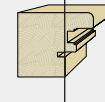
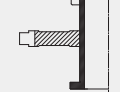
10. External bottom window frame profile.
11. External side and top window frame profile.
12. Floating mullion profile.
13. Fixed mullion longitudinal profile.
14. Top frame counterprofile.
15. Bottom frame counterprofile.
16. Window batten profile.
17. Internal tenoning sash counterprofile.
18. Muntin profile.
19. Internal tenoning sash counterprofile.
20. Internal profiling sash counterprofile.



Basic set of cutter head sets with given base diameter for universal GOD system for production of window 68 mm wide (GOD 68 2U).

With little additional cost and time, we easily expand the set to 78/88/92 (2U system) and 88/92/98 (3U system)

GOD basic set

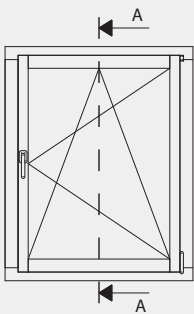
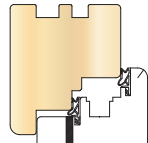
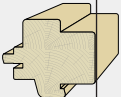
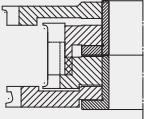
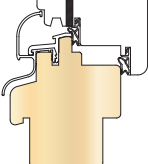
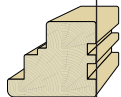
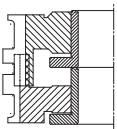
Profile number	Profile	Name	Tool	z
1.		Window frame mortise		3
2.		Window frame bottom tenon		3
3.		Window frame top tenon		3
4.		Window sash tenon		3
5.		Window sash mortise		3
6.		Internal longitudinal bottom window frame profile		2
7.		Internal longitudinal side and top window frame profile		2
8.		Internal longitudinal window sash profile		2
9.		External longitudinal window sash profile with drip cap and window sill groove		2
9a-1.		External longitudinal window sash profile*		2
9a-2.		Drip cap profiling*		2
9a-3.		Window sill groove profiling*		2

* Profiles made optionally in separate operations.

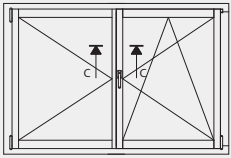
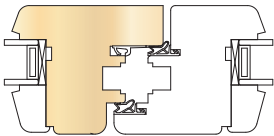
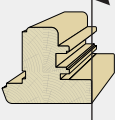
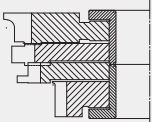
GOD additional sets

Additional sets with given base diameter for universal GOD system for production of supplemental profiles. Extending the window width to 78/88/92 (system 2U) and 88/92/98 (system 3U) requires retooling or buying additional tools.

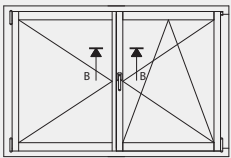
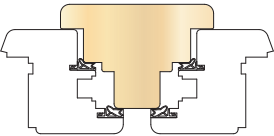

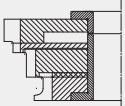

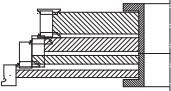
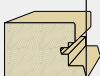
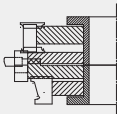
Window frame profiles

	Profile number	Profile	Name	Tool	z
	10.	 	D = 140 or 125 mm External bottom window frame profile		2
	11.	 	External top and side window frame profile		2

Floating mullion

	Profile number	Profile	Name	Tool	z
	12.	 	D = 140 or 125 mm Internal longitudinal profile of floating mullion		2

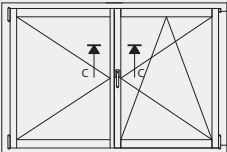
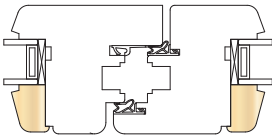

Fixed mullion

	Profile number	Profile	Name	Tool	z
	13.	 	D = 140 or 125 mm Fixed mullion longitudinal profile		2
	14.		D = 320 mm Top frame counterprofile		2
	15.		D = 140 or 125 mm Bottom frame counterprofile		2

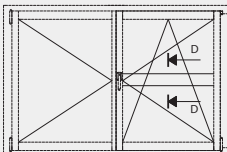
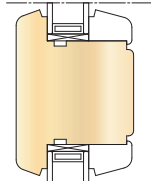
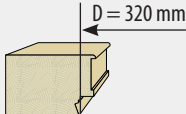
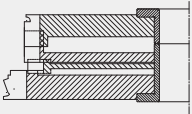




Additional sets with given base diameter for universal GOD system for production of supplemental profiles. Extending the window width to 78/88/92 (system 2U) and 88/92/98 (system 3U) requires retooling or buying additional tools.

GOD additional sets

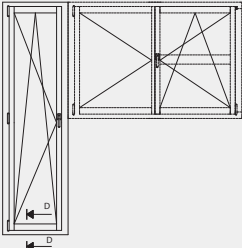
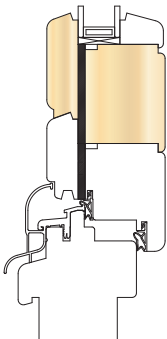
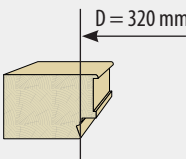
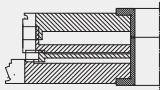
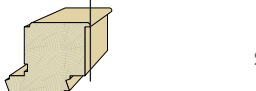
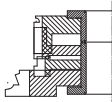
Window batten

	Profile number	Profile	Name	Tool	z
 	16.		Window batten profile	Types of profiling on page 10.4	

Muntin

	Profile number	Profile	Name	Tool	z
 	17.		Internal tenoning sash counterprofile		2
	18a.		Internal longitudinal counterprofile of structural muntin		4
	18b.		Internal longitudinal profile of structural muntin		4

Balcony

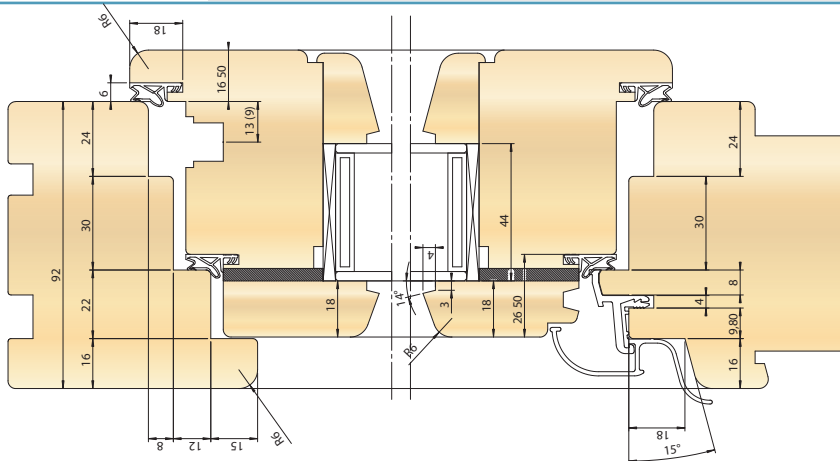
	Profile number	Profil	Nazwa	Tool	z
 	19.		Internal tenoning sash counterprofile		2
	20.		Internal profiling sash counterprofile		2

GOD system 2U

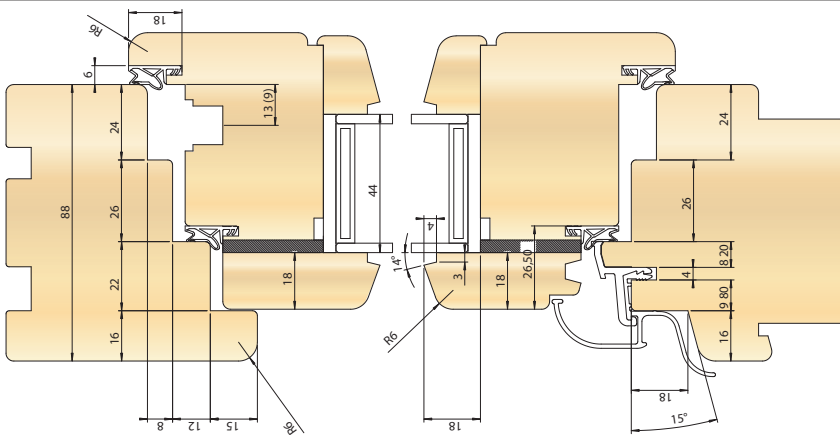
Universal system **GOD 2U** for production of windows 68/78/88/92 with two gaskets, including one optionally on internal window sash edge. The system is designed to enable production of windows of various width: 68 mm, 78 mm , 88 mm and 92 mm. This can be done easily and at little cost, by extending sets of cutter heads mounted on sleeves allowing for profiles width adjustment. In 2U system profiles double gasketing has been used which significantly increases widows' tightness.

GOD 2U – Universal system for production of window 68/78/88/92
extendable to various width easily and at little cost.

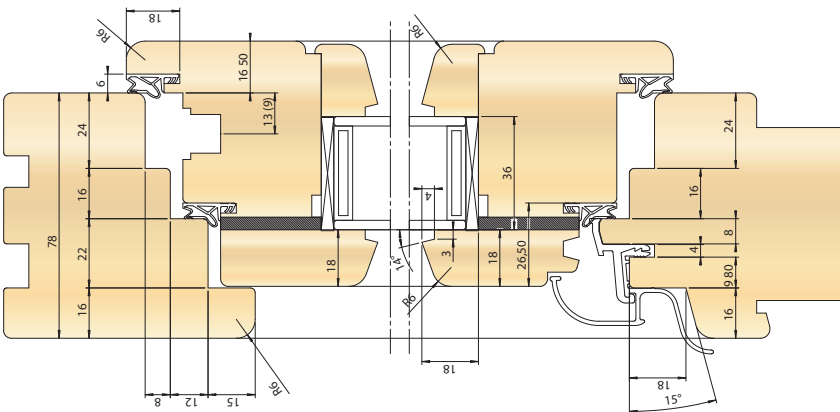
GOD 92 2U
width 92 mm



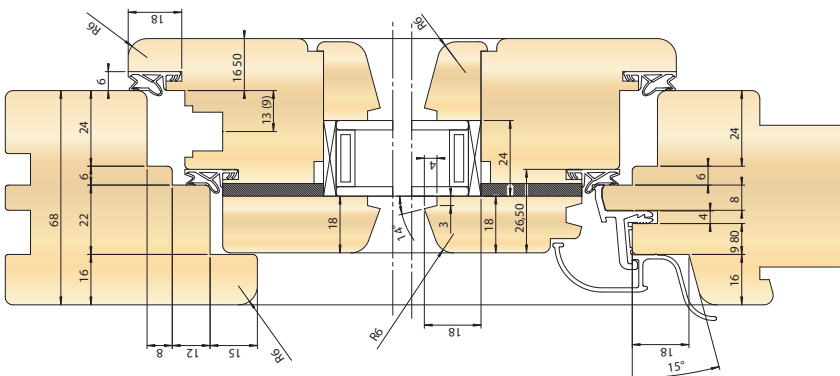
GOD 88 2U
width 88 mm



GOD 78 2U
width 78 mm

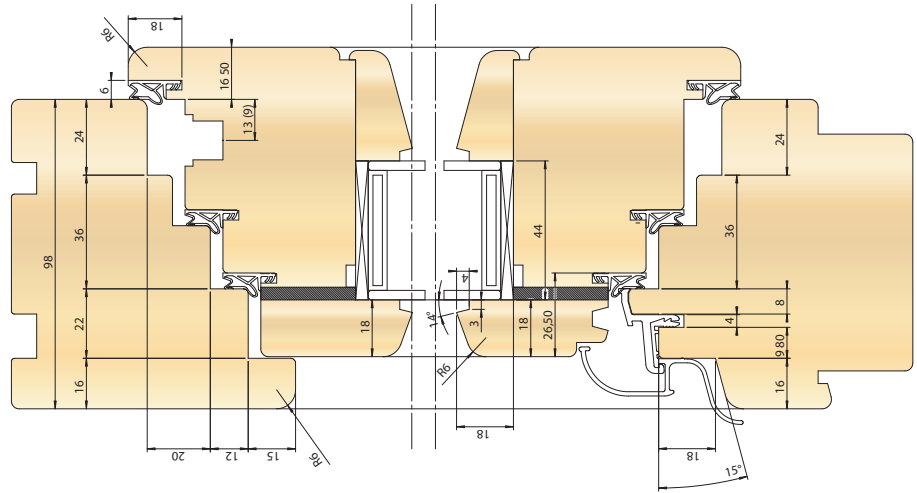


GOD 68 2U
width 68 mm

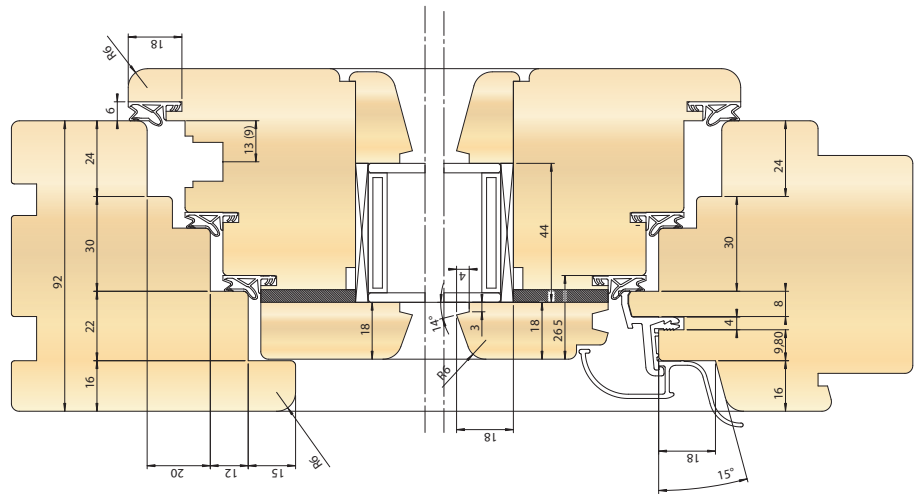


GOD system 3U

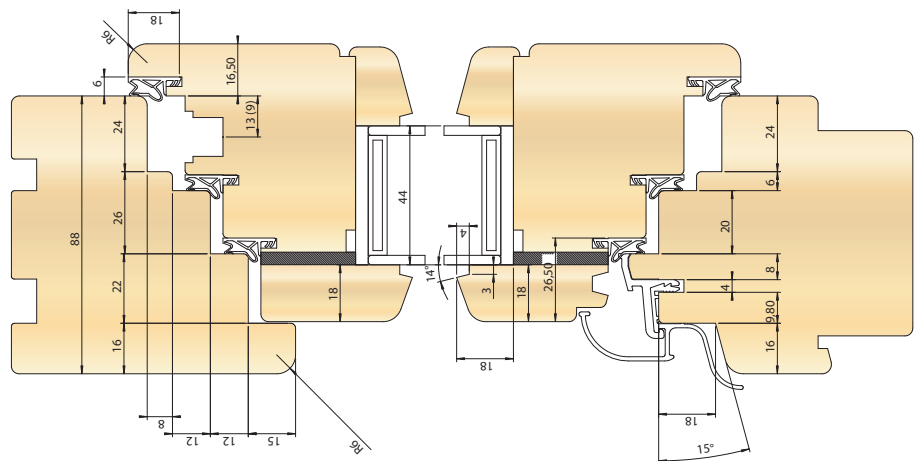
GOD 98 3U
width 98 mm



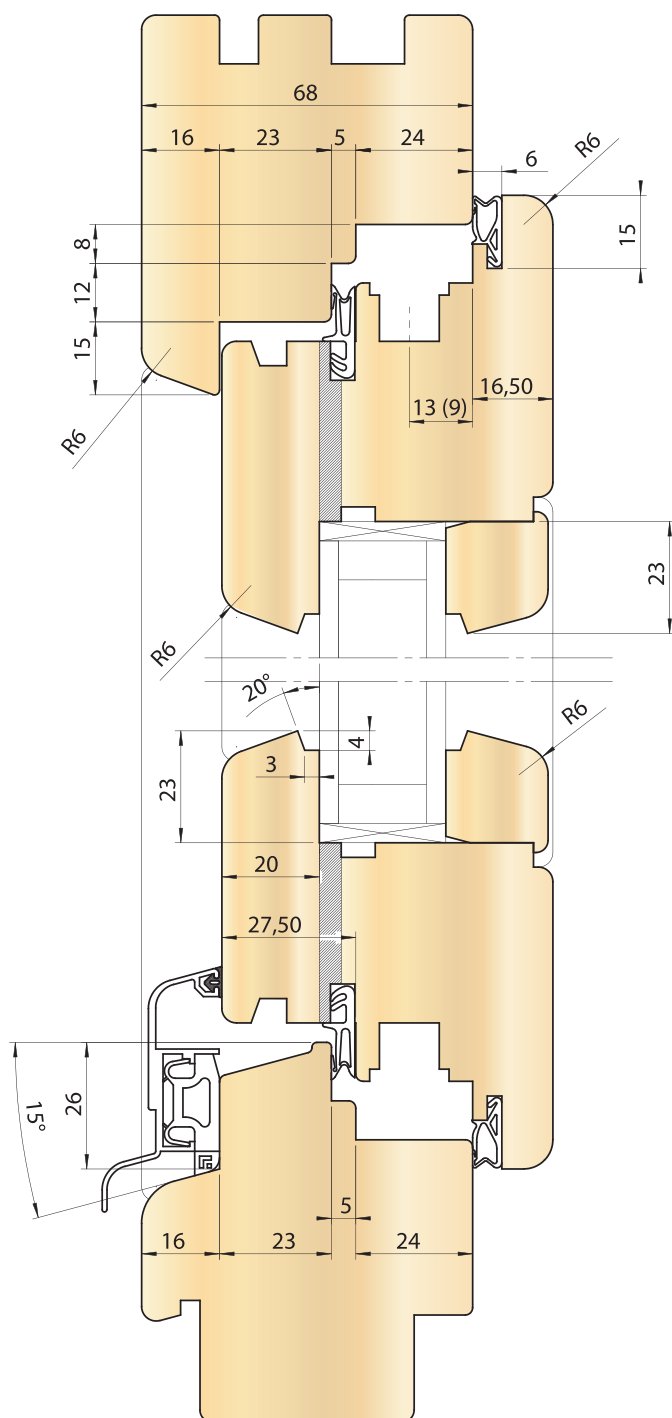
GOD 92 3U
width 92 mm



GOD 88 3U
width 88 mm



GON



Sets of cutter heads, type **GON**, with three cutting teeth for tenoning and two cutting teeth for profiling, designed for professional machining of solid wood soft and hard. The basic set GOD 68 2U is used for production of windows 68 mm wide with two gaskets, including one optionally on internal window sash edge. The set GON 68 2U can be easily and at little cost extended to width 78 mm (GON 78 2U), 88 mm (GON 88 2U). There is possibility to extend the abovementioned sets to width 88 mm (GON 88 3U) and 98 mm (GON 98 3U) with three gaskets including one optionally on internal window sash edge.

Sets of cutter heads or single cutter heads are mounted on sleeves of small height enabling for adjustment of the set with the produced window width. The window profile corresponds with bolt-on aluminum drip cap. Window sill groove and drip cap profile are made in one operation together with external longitudinal window sash profile or optionally in separate operations. The set includes 9 basic sets and additionally 11 optional ones.

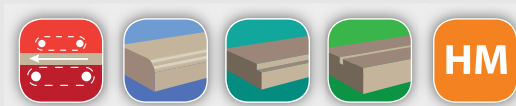
List of sets

Basic sets (page 10.23):

1. Window frame mortise.
2. Window frame bottom tenon.
3. Window frame top tenon.
4. Window sash tenon.
5. Window sash mortise.
6. Internal longitudinal bottom window frame profile.
7. Internal longitudinal side and top window frame profile.
8. Internal longitudinal window sash profile.
9. External longitudinal window sash profile.

Additional sets (page 10.24):

10. External bottom window frame profile.
11. External side and top window frame profile.
12. Floating mullion profile.
13. Fixed mullion longitudinal profile.
14. Top frame counterprofile.
15. Bottom frame counterprofile.
16. Window batten profile.
17. Internal tenoning sash counterprofile.
18. Muntin profile.
19. Internal tenoning sash counterprofile.
20. Internal profiling sash counterprofile.



Basic set of cutter head sets with given base diameter for universal **GON** system for production of window 68 mm wide (GON 68 2U).

With little additional cost and time, we easily expand the set to 78/88 (2U system) and 88/98 (3U system).

GON basic set

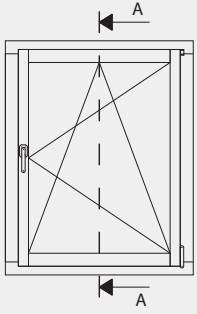
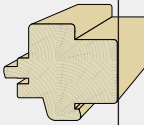
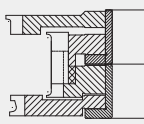
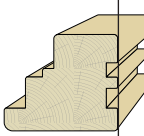
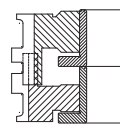
	Profile number	Profile	Name	Tool	z
	1.		Window frame mortise		3
	2.		Window frame bottom tenon		3
	3.		Window frame top tenon		3
	4.		Window sash tenon		3
	5.		Window sash mortise		3
	6.		Internal longitudinal bottom window frame profile		2
	7.		Internal longitudinal side and top window frame profile		2
	8.		Internal longitudinal window sash profile		2
	9.		External longitudinal window sash profile with drip cap and window sill groove		2
	9a-1.		External longitudinal window sash profile*		2
	9a-2.		Drip cap profiling*		2
	9a-3.		Window sill groove profiling*		2

* Profiles made optionally in separate operations.

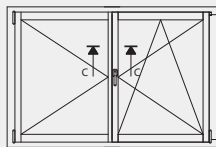
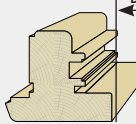
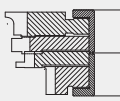
GON additional sets

Additional sets with given base diameter for universal **GON** system for production of supplemental profiles. Extending the window width to 78/88 (system 2U) and 88/98 (system 3U) requires retooling or buying additional tools.

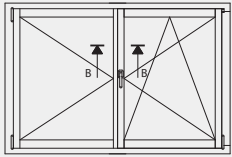

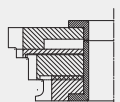
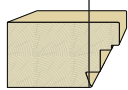
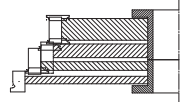
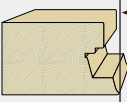
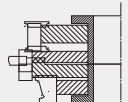
Window frame profiles

	Profile number	Profil	Nazwa	Tool	z
	10.	 D = 140 or 125 mm	External bottom window frame profile		2
	11.		External top and side window frame profile		2

Floating mullion

	Profile number	Profile	Name	Tool	z
	12.	 D = 140 or 125 mm	Internal longitudinal profile of floating mullion		2

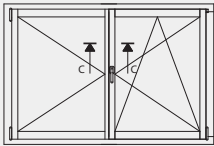
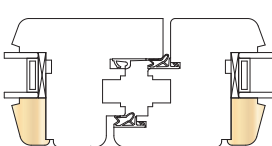

Fixed mullion

	Profile number	Profile	Name	Tool	z
	13.	 D = 140 or 125 mm	Fixed mullion longitudinal profile		2
	14.	 D = 320 mm	Top frame counterprofile		2
	15.	 D = 140 or 125 mm	Bottom frame counterprofile		2

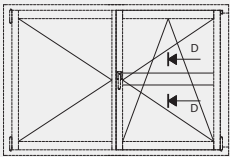
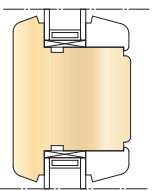
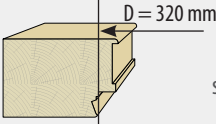
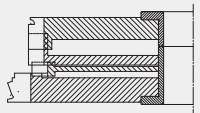

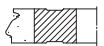


Each order is treated individually. Produce tools are adapted to client's needs, his technical requirements and machine park.

GON additional sets

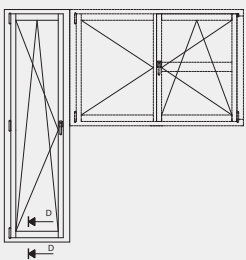
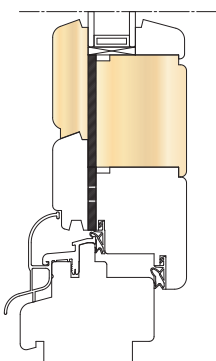
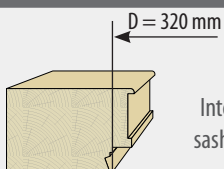
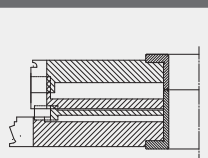
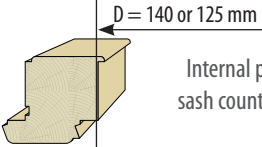
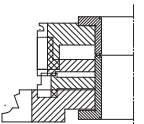
Window batten

	Profile number	Profile	Name	Tool	z
 	16.		Window batten profile	Types of profiling on page 10.4	

Muntin

	Profile number	Profile	Name	Tool	z
 	17.		Internal tenoning sash counterprofile		2
	18a.		Internal longitudinal counterprofile of structural muntin		4
	18b.		Internal longitudinal profile of structural muntin		4

Balcony

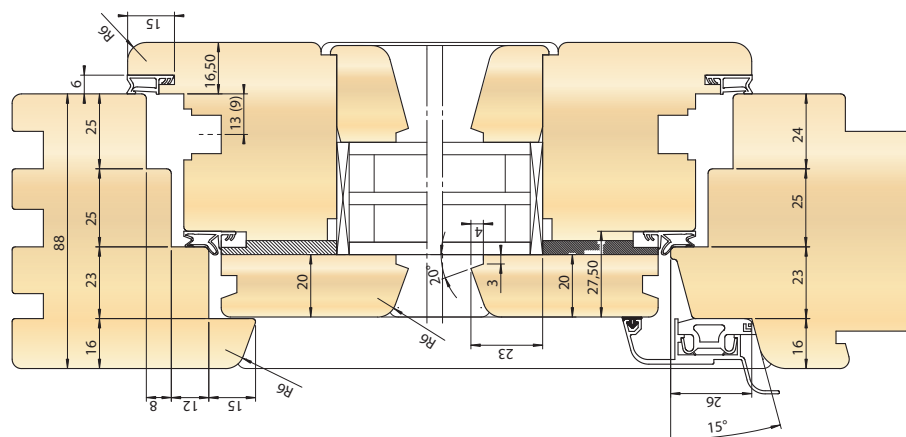
	Profile number	Profile	Name	Tool	z
 	19.		Internal tenoning sash counterprofile		2
	20.		Internal profiling sash counterprofile		2

GON system 2U

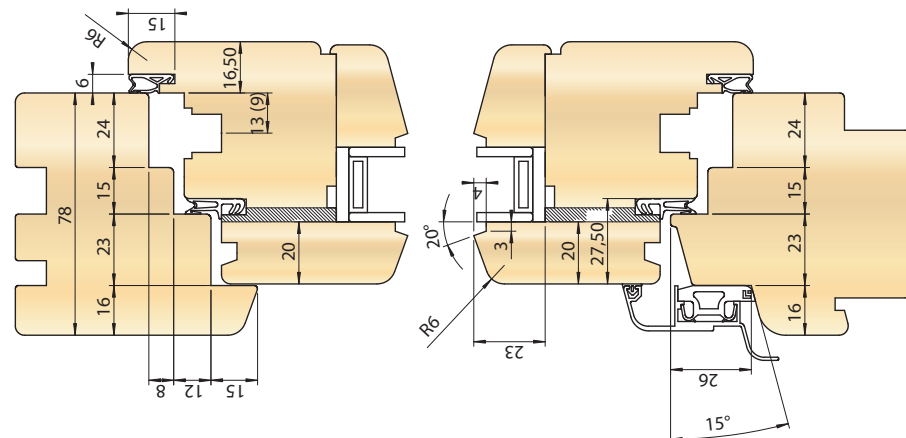
Universal **GON 2U** for production of windows 68/78/88 with two gaskets, including one optionally on internal window sash edge. The system is designed to enable production of windows of various width: 68 mm, 78 mm and 88 mm. This can be done easily and at little cost, by extending sets of cutter heads mounted on sleeves allowing for profiles width adjustment. In 2U system profiles double gasketing has been used which significantly increases windows' tightness.

GON 2U – Universal system for production of window 68/78/88 extendable to various width easily and at little cost.

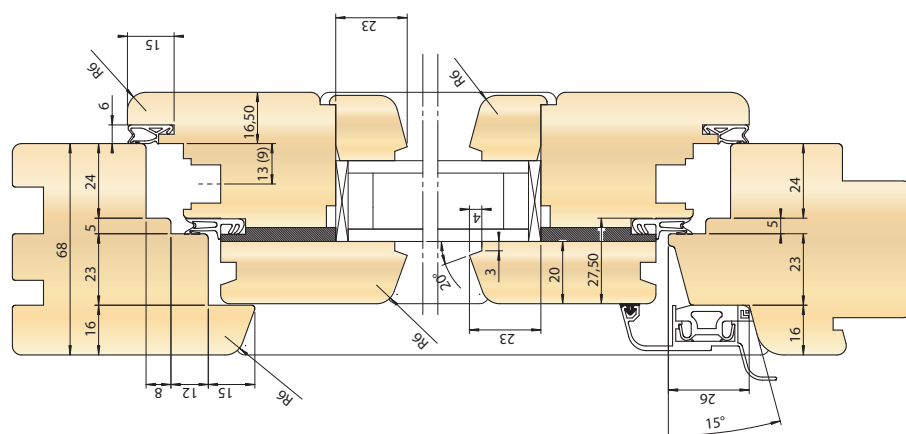
GON 88 2U width 88 mm



GON 78 2U width 78 mm



GON 68 2U width 68 mm

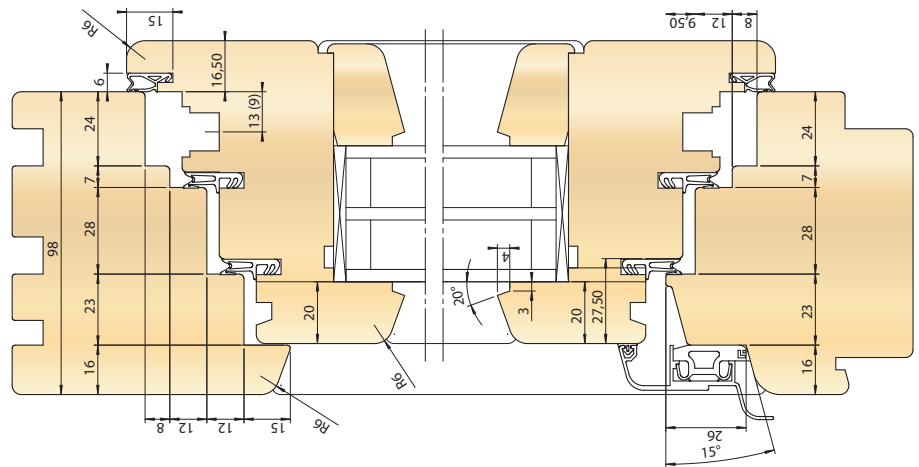


Universal **GON 3U** for production of windows 88/98 with three gaskets, including one optionally on internal window sash edge. The system is designed to enable production of windows of various width: 88 mm and 98 mm. This can be done easily and at little cost, by extending sets of cutter heads mounted on sleeves allowing for profiles width adjustment. In 3U system profiles triple gasketing has been used which significantly increases windows' tightness. 3U system can be used for windows 88 mm and wider.

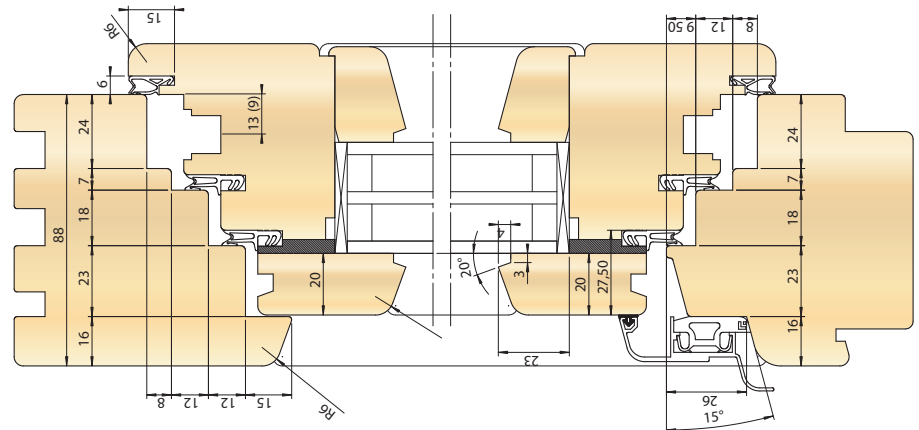
GON system 3U

GON 3U – Universal system for production of window 88/98 extendable to various width easily and at little cost.

GON system 3U width 98 mm



GON system 3U width 88 mm



GO-16

Sets of cutter heads, type **GO-16** with three cutting teeth for tenoning and two cutting teeth for profiling, designed for professional machining of solid wood. The sets are used for double-glass, single-sash windows 111 mm wide – SCANDINAVIAN type. The set includes 11 basic sets and 5 optional ones, mounted on sleeves L=140 mm for window frame and L=90 for window sash.

List of sets

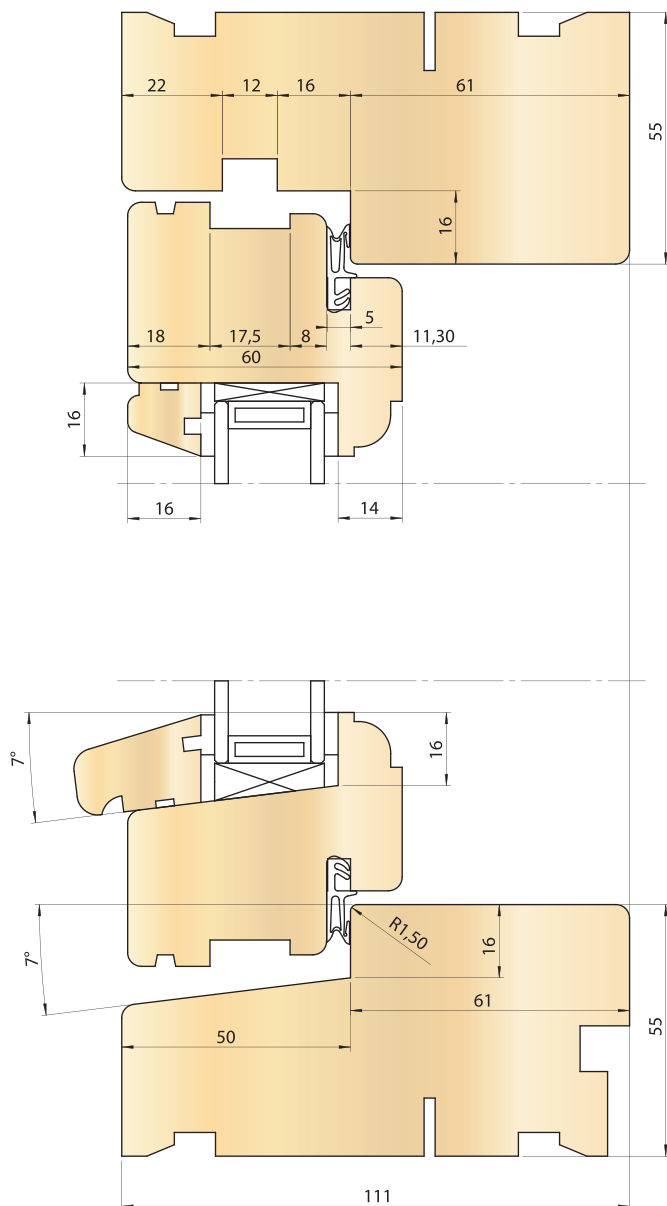
Basic sets (page 10.29):

1. Window frame mortise.
2. Window frame bottom tenon.
3. Window frame top tenon.
4. Window sash tenon.
5. Window sash bottom tenon.
6. Window sash top tenon.
7. Internal longitudinal bottom window frame profile.
8. Internal longitudinal top window frame profile.
9. Bottom internal longitudinal window sash profile.
10. Top and side internal longitudinal window sash profile.
11. External longitudinal window sash profile.

Optional sets (page 10.30):

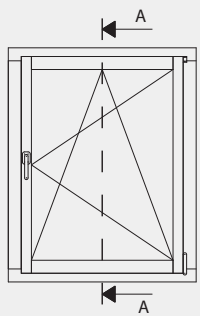
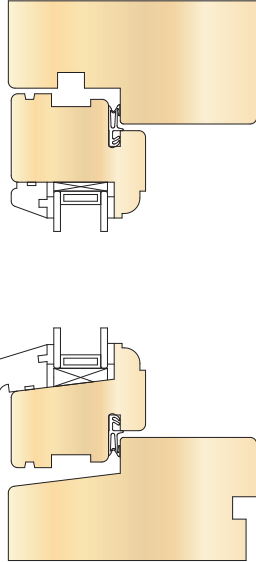
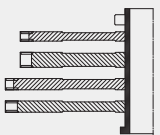
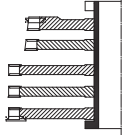
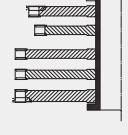
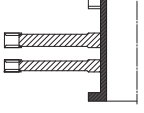
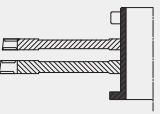
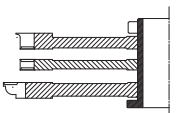
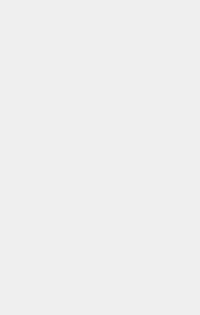

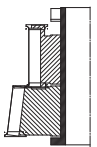
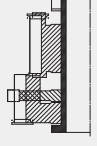
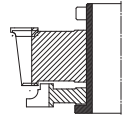
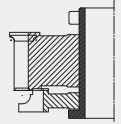
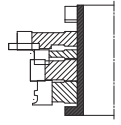
12. External longitudinal window frame profile.
13. Internal longitudinal side window frame profile.
14. Cutting for internal window sill.
15. Bottom window batten profile.
16. Top window batten profile.

Standard sets can be extended with additional optional sets, depending on needs.



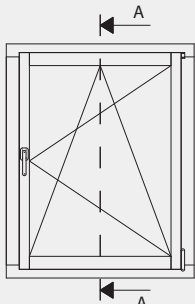

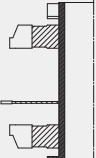
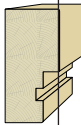
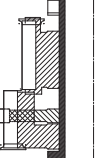
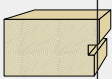
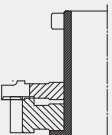
Basic set for production of double-glass, single-sash windows 111 mm wide for cutter heads GO-16 with number of cutting teeth given in the chart.

GO-16 basic set

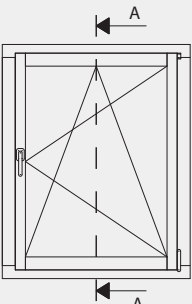


Profile number	Profile	Name	Tool	z
1. 2. 3. 4. 5. 6.	 	Window frame mortise		3
		Window frame bottom tenon		3
		Window frame top tenon		3
		Window sash tenon		3
		Window sash bottom tenon		3
		Window sash top tenon		3
7. 8. 9. 10 11	 	Internal longitudinal bottom window frame profile		2
		Internal longitudinal top window frame profile		2
		Bottom internal longitudinal window sash profile		2
		Top and side internal longitudinal window sash profile		2
		External longitudinal window sash profile		2

GO-16 additional sets

Additional sets for cutter heads GO-16 with number of cutting teeth given in the chart. Each order is treated individually. Produced tools are adapted to client's needs, his technical requirements and machine park.

	Profile number	Profile	Name	Tool	z
	12.		External longitudinal window frame profile		3
	13.		Internal longitudinal side window frame profile		3
	14.		Cutting for internal window sill		3

Window batten

	Profile number	Profile	Name	Tool	z
	15.		Bottom window batten profile		4
	16.		Top window batten profile		4

Sets of profile cutter heads with two cutting teeth, designed for professional machining of solid wood. The sets are used for making internal and external window frame and window sash profiles. The sets are mounted on HSK shanks and work on CNC machines.

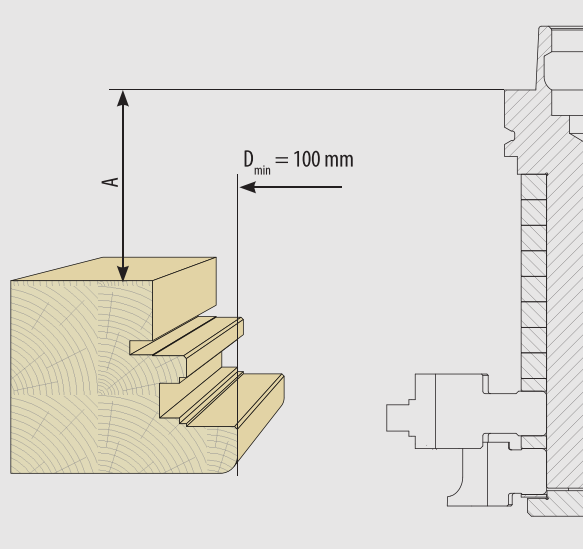
Minimum base diameter is $D_{\min} = 100$ mm (in special cases it is possible to use $D_{\min} = 80$ mm). The sets are offered on client's individual request.

Orders should include:

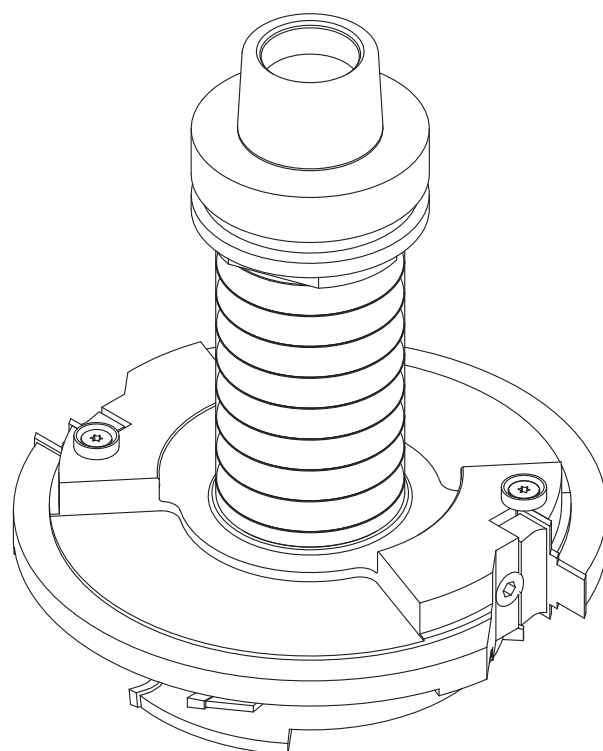
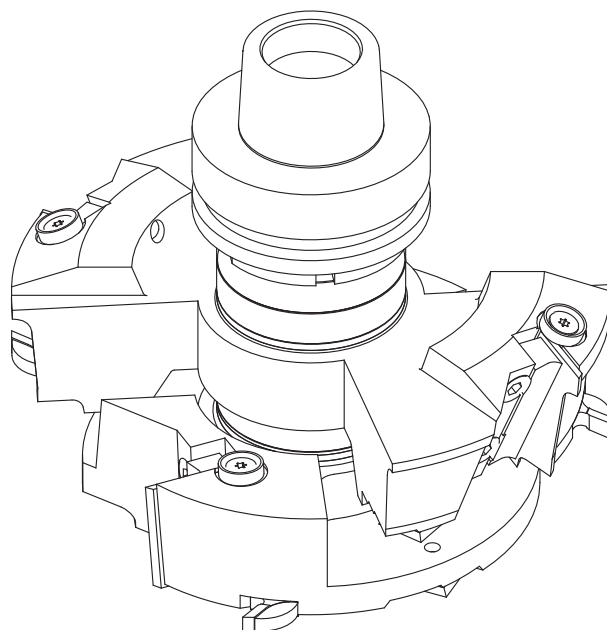
- machine or work scheme,
- maximum set weight installed on the spindle,
- base diameters of tools for profiling,
- A – base – set position,
- type of machined material,
- other information relevant for designing and production process.

Type of work: window profiles making.

Material: solid wood, hard and soft.



HSK sets



10

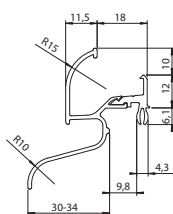
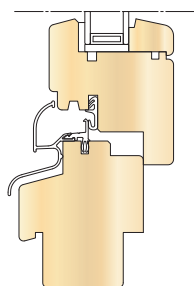


Drip caps GO-01/GOE

Aluminum pressed drip caps, type **GO**, installed in bottom window frame profile of ZFO-02, ZFO-02 Softline, GO-01, GO-01 Softline and **GOE** windows. Used with window frame with a cut in window sash.

Below are presented example drip cap types used with given window profile. When ordering set of cutters or cutter heads, please give drip cap type.

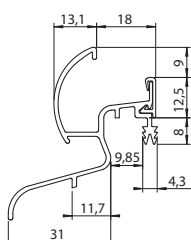
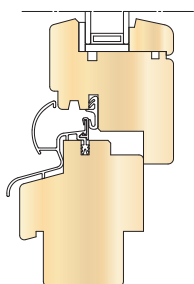
With cut in window sash



ALURON

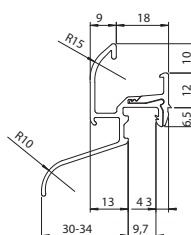
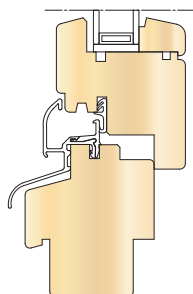
ATW 22 / 30

ATW 22 / 34



EFEKTOR

LPTOS 31 / 31 W



GUTMANN

Neckar 22 / 30 F-TXL

Neckar 22 / 34 F – TXL

Aluminum pressed drip caps, type **GOD**, installed in bottom window frame profile of GOD windows. Used with window frame with a cut in window sash. Used with two types of window frames with and without a cut in window sash. Below are presented example drip cap types used with given window profile. When ordering set of cutters or cutter heads, please give drip cap type.

Drip caps GOD

With cut in window sash

ALURON

ATW 22 / 21 / 18

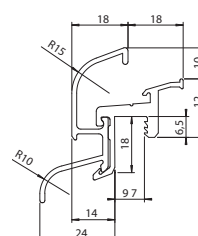
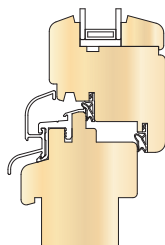
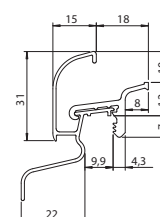
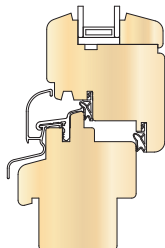
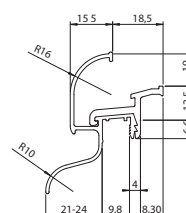
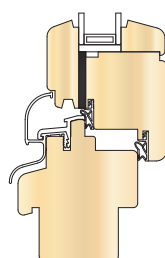
ATW 22 / 24 / 18

EFEKTOR

LPTOS 33 / 22 W

GUTMANN

Donau 22 / 24 F-TI



Without cut in window sash

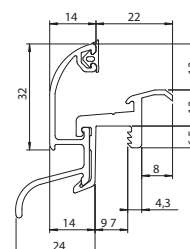
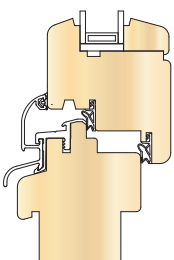
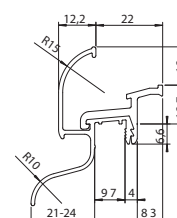
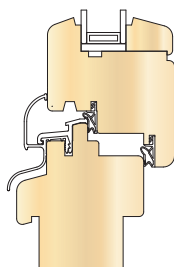
ALURON

ATW 22 / 21 / 22

ATW 22 / 24 / 22

GUTMANN

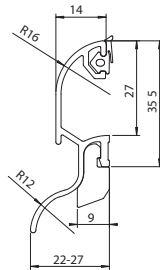
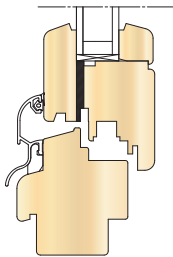
Main 22 / 24 F-TI



Drip caps GON

Aluminum bolt-on drip caps, type **GON**, installed in bottom window frame profile of GON windows. Used with window frame without a cut in window sash. Below are presented example drip cap types used with given window profile. When ordering set of cutters or cutter heads, please give drip cap type.

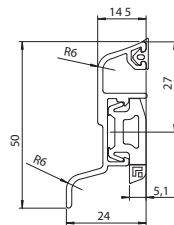
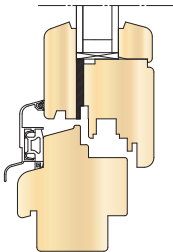
Without cut in window sash



ALURON

AWZ 14 / 22

AWZ 14 / 27

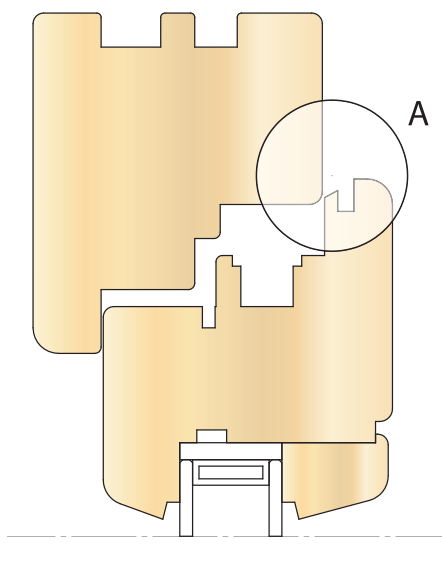


GUTMANN

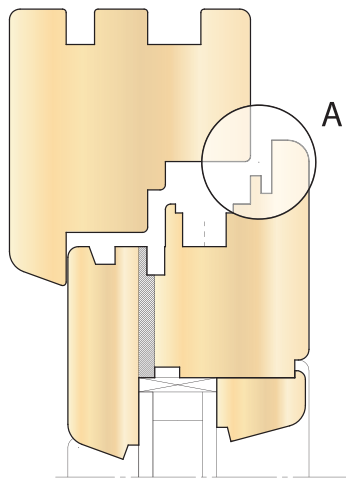
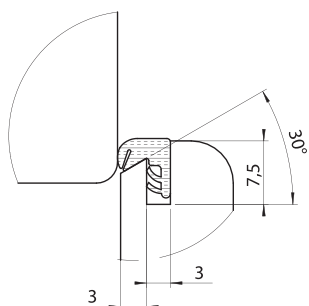
Spree 24 OF

Pressed gaskets, type **UK** designed for precise sealing of window profiles. When ordering sets for window production, please give type of gasket and profile type.

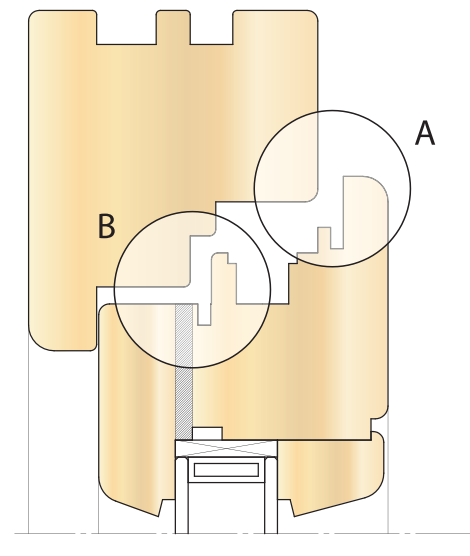
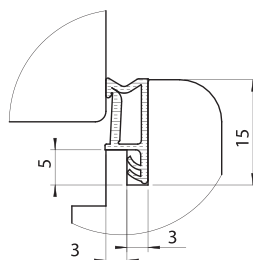
Gaskets



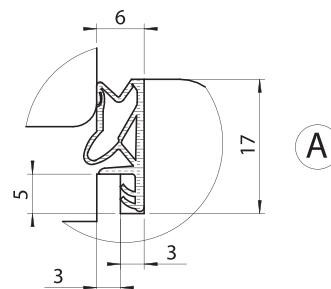
SP 33b



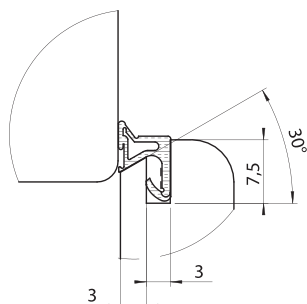
SP 103a



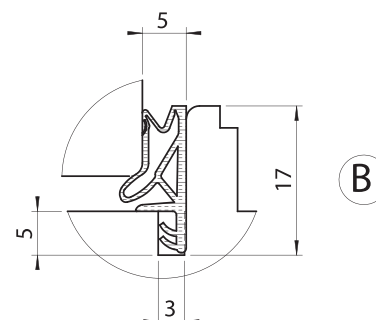
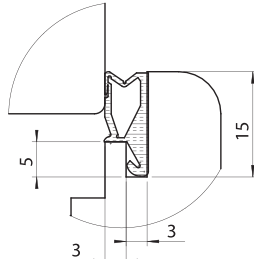
S 7503



SV 33



SV 103b

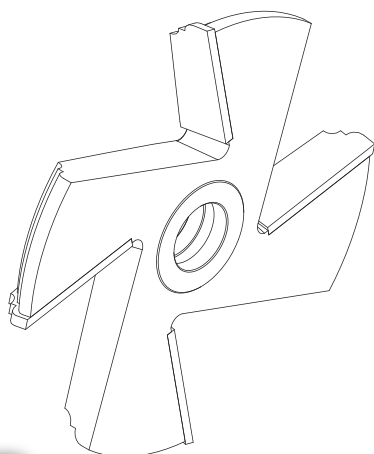


Universal, deformable gasket used for external and internal profiles of window frame. In case of optional gasket (element B) gasketing width is 5 mm.

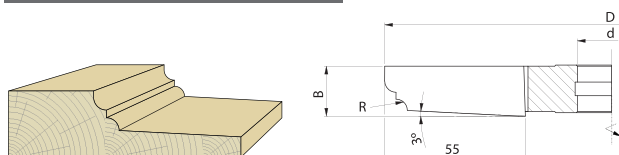
Brazed profile cutter with four cutting teeth and shear angle, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for panel raising.

Type of work: panel raising.

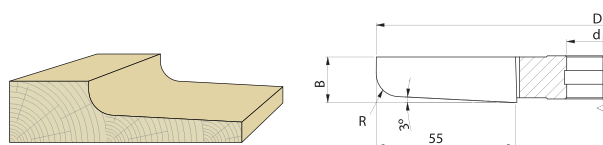
Material: solid wood, chipboard, MDF.



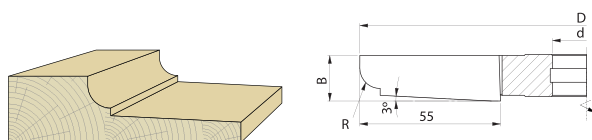
P-201 4.1 P or L



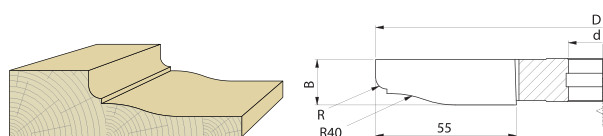
P-202 4.1 P or L



P-203 4.1 P or L



P-204 4.1 P or L



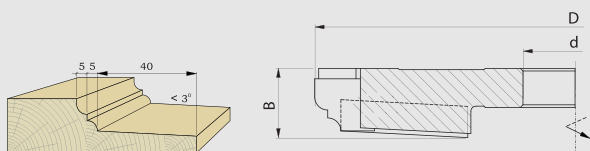
	D n _{max} d _{max} z	140 9000 30 4	160 6000 30 4	180 6000 40 4	200 6000 50 4
Profile	B mm	HSS	HM	HSS	HM
P201	22	+	+	+	+
P202, P203, P204	20	+	+	+	+

Catalogue number right		Catalogue number left		Type	D mm	d mm	R mm	z		n _{max}
P201S200P0001	+	P201S200L0001	+	P201	200	30	5	4	HSS	6000
P201W200P0001	+	P201W200L0001	+	P201	200	30	5	4	HM	6000
P202S200P0001	•	P202S200L0001	+	P202	200	30	10	4	HSS	6000
P202W200P0001	+	P202W200L0001	+	P202	200	30	20	4	HM	6000
P203S200P0001	•	P203S200L0001	+	P203	200	30	9	4	HSS	6000
P203W200P0001	+	P203W200L0001	+	P203	200	30	9	4	HM	6000
P204S200P0001	•	P204S200L0001	+	P204	200	30	5	4	HSS	6000
P204W200P0002	•	P204W200L0002	+	P204	200	30	5	4	HM	6000

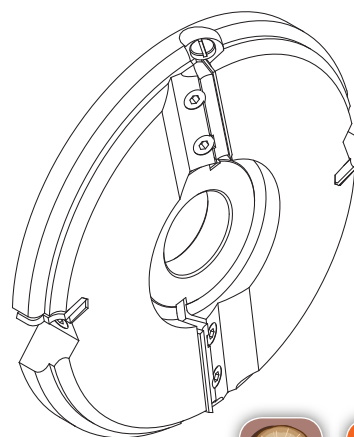
Profile cutter head type **GDP-01** with suitable number of cutting teeth and shear angle, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter head is used for panel raising.

Type of work: panel raising.

Material: solid wood, chipboard, MDF



GDP-01 P or L

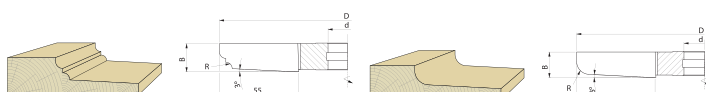


Catalogue number	Type	Profile	D mm	B mm	d mm	z		n _{max}	
GDP-0001P-0	GDP-01	GDP-01	200	26,6	40	2+2	HM	6000	+

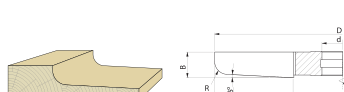
Spare parts for cutter head GDP-0001P-0

Cat. nr	Name	Dimensions		Cat. nr	Name	Dimensions	
N0000816	Straight knife	49,5x12x1,5		WHAK00149	Clamping wedge	46x11,5x6	
N0000939	Profile knife R/L	20x24,5x2		WHAS00011	Screw TOR 1011	M7x20	
N0000940	Profile knife R/L	20x24,5x2		WHAS00009	Screw TOR 1024	M5x7	
WHAK00150	Clamping wedge	17x11,5x5,5					

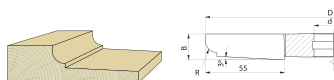
Other types of cutter heads for panel raising



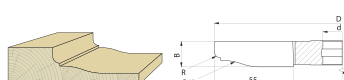
Profile P-201



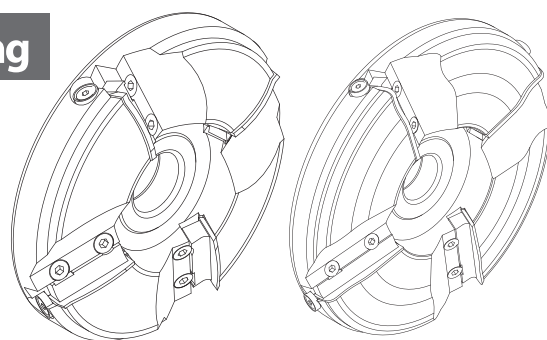
Profile P-202



Profile P-203



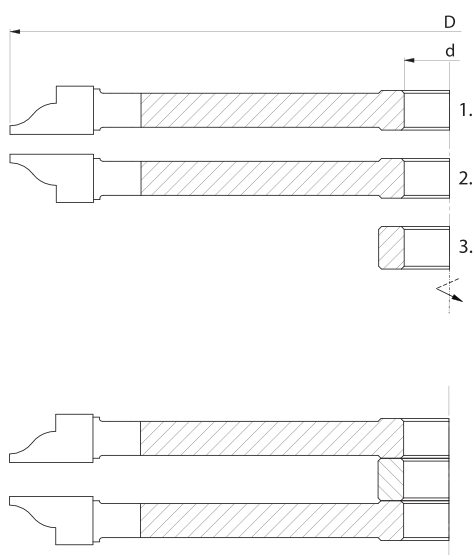
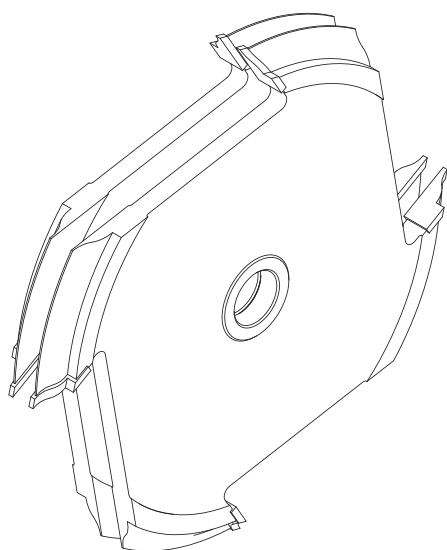
Profile P-204



D n d ^{max} z	140 9000 30 4		160 6000 30 4		180 6000 40 6		215 6000 40 6		250 4500 50 6		
	B mm	ST	AL	ST	AL	ST	AL	ST	AL	ST	AL
	26,6	+	+	+	+	+	+	+	+	+	+
	35,8	+	+	+	+	+	+	+	+	+	+
	36,5	+	+	+	+	+	+	+	+	+	+
37,5	+	+	+	+	+	+	+	+	+	+	+

Catalogue number	Type	Profile	D mm	B mm	d mm	z		n _{max}	
GDP-0065P-0	GDP-01	P-201	200	35	30	4	HM	6000	+
GDP-0034P-0	GDP-01	P-202	200	35,8	30	4	HM	6000	+
GDP-0011P-0	GDP-01	P-203	200	36,5	30	4	HM	6000	+
GDP-0005P-0	GDP-01	P-204	200	37,5	30	4	HM	6000	+

IL-A.00

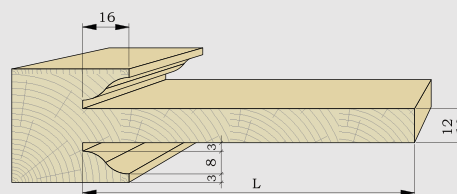


Set of profile brazed cutters type **IL-A.00** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon profiles with radius R10.

Type of work: door internal tenon profiling.

Material: solid wood, chipboard, MDF.

Nr	D mm	B mm	d _{max} mm	n _{max}	↺	
1.	310	17	40	4500	L	+
2.	310	17	40	4500	R	+
3.	60	15	40	Distance ring 1 pc.		+



D	148	160	180	280	310	330
n _{max}	9000	9000	6000	6000	4500	4500
d _{max}	40	40	40	50	60	60
z	4	4	4	4	4	4
Profile	HSS	HM	HSS	HM	HSS	HM
IL-A	+	+	+	+	+	+

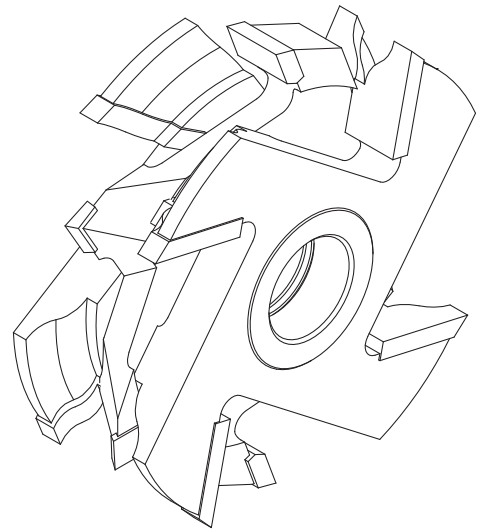
Catalogue number	Type	D mm	d mm	L mm	z		
ILA00S200-001	IL-A	200	30	70	4	HSS	+
ILA00W200-001	IL-A	200	30	70	4	HM	+
ILA00S310-001	IL-A	310	30	117	4	HSS	+
ILA00W310-001	IL-A	310	30	117	4	HM	+
ILA00S310-002	IL-A	310	40	117	4	HSS	+
ILA00W310-002	IL-A	310	40	117	4	HM	+

Set of profile brazed cutters type **IL-R.00** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon counterprofiles.

Type of work: door internal tenon counterprofiling.

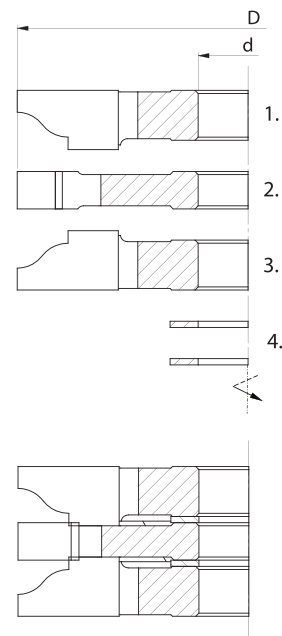
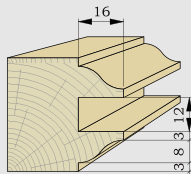
Material: solid wood, chipboard, MDF.

IL-R.00



Nr	D mm	B mm	d _{max} mm	n _{max}		
1.	108	19	30	9000	R	+
2.	108	12	30	9000	Symmetrical	+
3.	108	19	30	9000	L	+
4.	60	2	30	Distance ring 2 pcs.		+

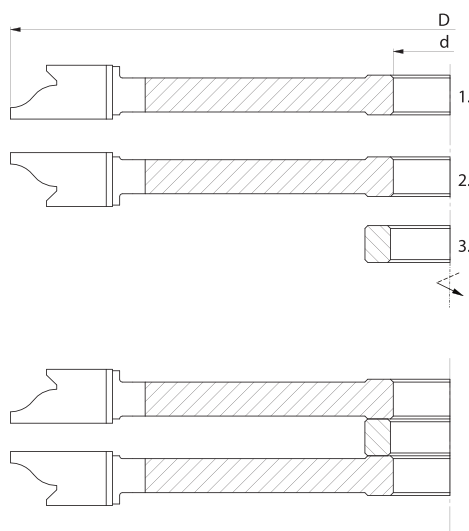
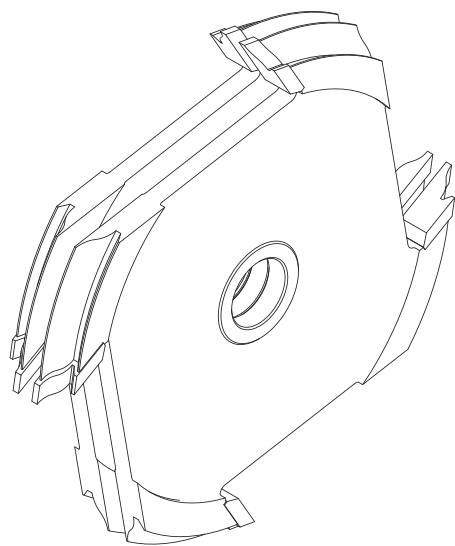
1.	148	19	50	9000	R	+
2.	148	12	50	9000	Symmetrical	+
3.	148	19	50	9000	L	+
4.	60	2	50	Distance ring 2 pcs.		+



D n _{max} d _{max} z	108 9000 50 4		148 9000 50 4	
	Profile	HSSHM	HSSHM	
	IL-R	+ +	+ +	

Catalogue number	Type	D mm	d mm	z		
ILR0100S108-002	IL-R	108	30	4	HSS	+
ILR0100W108-002	IL-R	108	30	4	HM	+
ILR0200S148-007	IL-R	148	30	4	HSS	+
ILR0200W148-009	IL-R	148	30	4	HM	+
ILR0200S148-008	IL-R	148	40	4	HSS	+
ILR0200S148-009	IL-R	148	50	4	HSS	+

IL-M.00

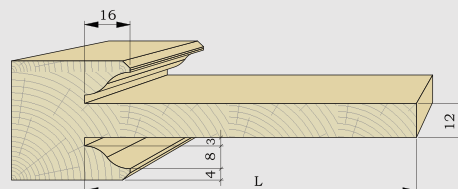


Set of profile brazed cutters type **IL-M.00** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon profiles.

Type of work: door internal tenon profiling.

Material: solid wood, chipboard, MDF.

Nr	D mm	B mm	d _{max} mm	n _{max}	↺	
1.	310	18	40	4500	L	+
2.	310	18	40	4500	R	+
3.	60	15	40	Distance ring 1 pc.		+



D	180	240	290	310
n _{max}	6000	6000	4500	4500
d _{max}	40	40	40	50
z	4	4	4	4
Profile	HSS	HM	HSS	HM
IL-M	+	+	+	+

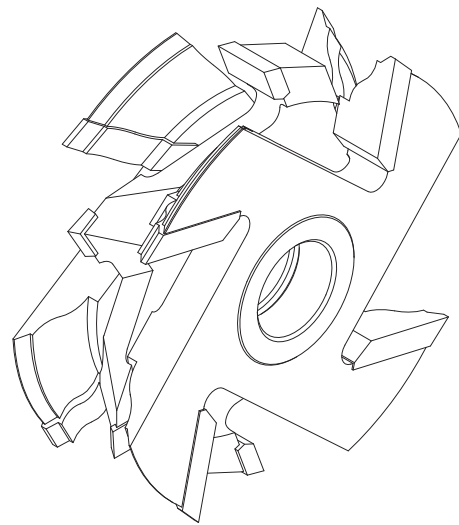
Catalogue number	Type	D mm	d mm	L mm	z	
ILM0400S180-01	IL-M	180	30	50	4	HSS +
ILM0100W180-01	IL-M	180	40	50	4	HM +
ILM0400S240-01	IL-M	240	30	80	4	HSS +
ILM0100W240-01	IL-M	240	30	80	4	HM +
ILM0400S310-01	IL-M	310	40	105	4	HSS +
ILM0100W310-01	IL-M	310	40	105	4	HM +

Set of profile brazed cutters type **IL-N.00** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon counterprofiles.

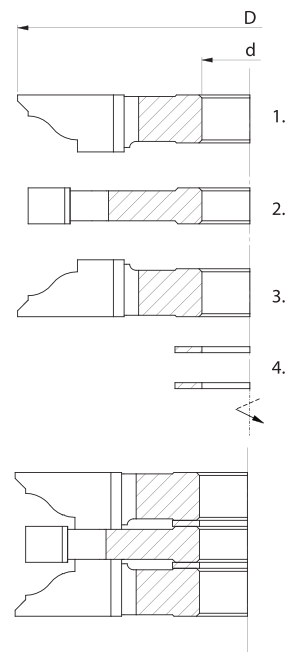
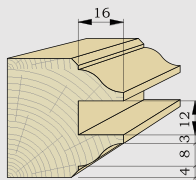
Type of work: door internal tenon counterprofiling.

Material: solid wood, chipboard, MDF

IL-N.00



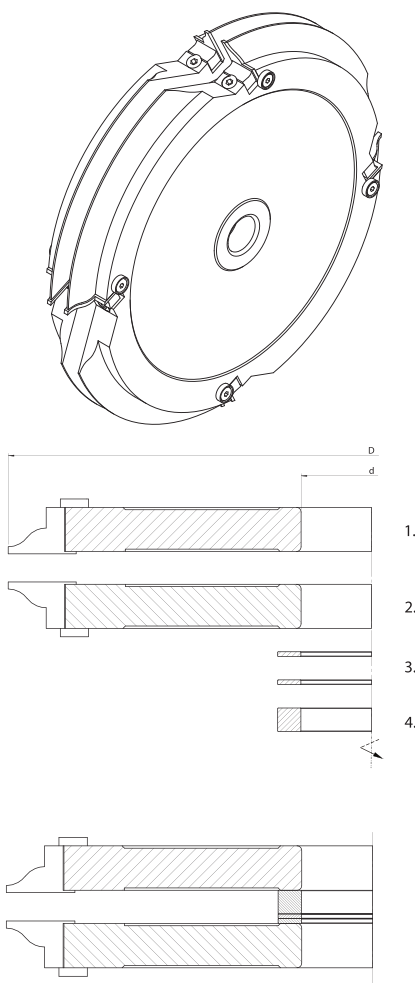
Nr	D mm	B mm	d _{max} mm	n _{max}	↗	
1.	155	19	30	6000	R	+
2.	148	12	30	6000	Symmetrical	+
3.	155	19	30	6000	L	+
4.	50	2	30	Distance ring 2 pcs.		+



D n _{max} d _{max} z	115 9000 30 4	120 9000 30 4	155 6000 40 4	180 6000 40 4
Profile	HSS	HM	HSS	HM
IL-N	+	+	+	+

Catalogue number	Type	D mm	d mm	z	
ILN0200S155-02	IL-N	155	30	4	HSS +
ILN0200W155-02	IL-N	155	30	4	HM +
ILN0200S155-03	IL-N	155	40	4	HSS +
ILN0200W155-01	IL-N	155	40	4	HM +

GD-01

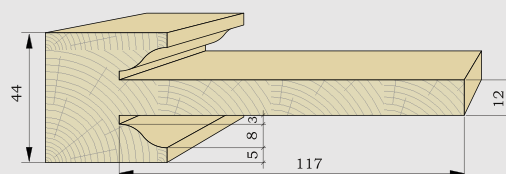


Set of profile cutter heads type **GD-01** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon profiles. Width regulated with spacers included in the set.

Type of work: door internal tenon profiling.

Material: solid wood, chipboard, MDF.

Nr	D mm	B mm	d _{max} mm	n _{max}	↙	
1.	310	19,8	50	4500	L	+
2.	310	19,8	50	4500	R	+
3.		2		Distance ring 2 pcs.		+
4.		10		Distance ring 1 pc.		+



D	148	160	180	280	310	330
n _{max}	9000	9000	6000	4500	4500	4500
d _{max}	50	40	40	50	60	60
z	4	4	4	4	4	4
Profile	ST	AL	ST	AL	ST	AL
GD-01	+	+	+	+	+	+

Catalogue number	Type	Body	D mm	d mm	z	n _{max}	
GD01-0001-00	GD-01	ST	310	30	4	HM	4500 +
GD01-0002-00	GD-01	ST	310	40	4	HM	4500 +
GD01-0003-00	GD-01	ST	310	50	4	HM	4500 +

Spare parts for cutter head GD-01

Cat. nr	Name	Dimensions		
N0000901 N0000900	Profile knife L/P	19,8x32x2		+
WHAK00034	Clamping wedge	17x10,9x9		+

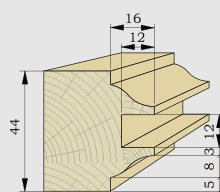
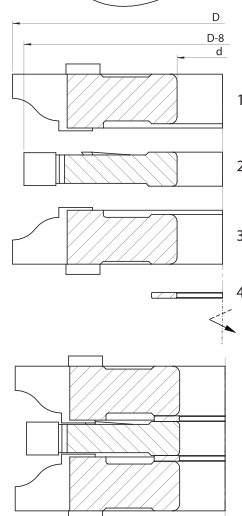
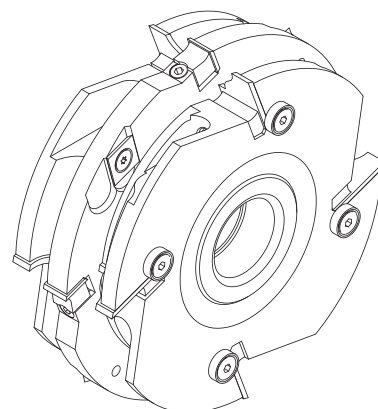
Cat. nr	Name	Dimensions		
WHAT00044	Locating sleeve	12x3,6x6,5		+
WHAS00011	Screw TOR 1011	M7x20		•
WHAS00006	Screw TOR 1128	M6x10		•

Set of profile cutter heads type **GD-02** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon counterprofiles. Width regulated with spacers included in the set.

Type of work: door internal tenon counterprofiling.

Material: solid wood, chipboard, MDF.

GD-02



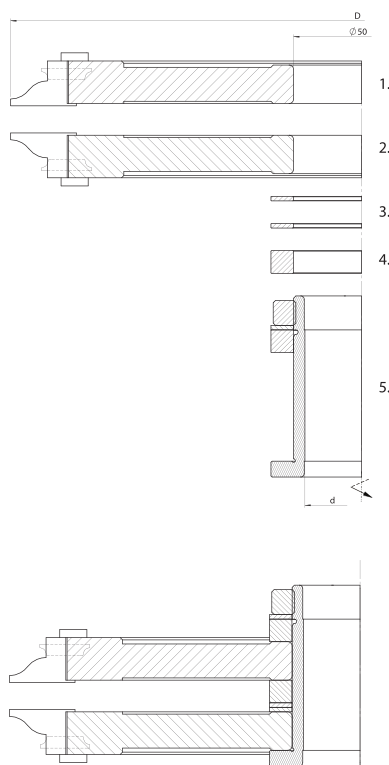
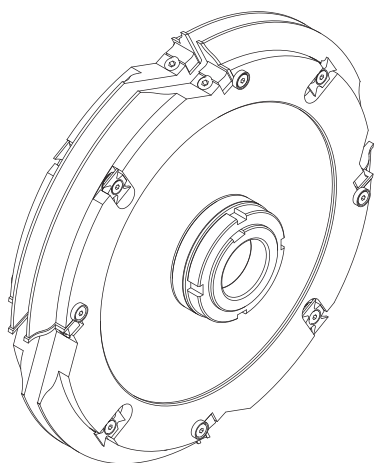
D	122	125	148	164
n _{max}	9000	9000	9000	6000
d _{max}	40	40	60	60
z	4	4	4	4
Profile	ST	AL	ST	AL
GD-02	+	+	+	+

Catalogue number	Type	Body	D mm	d mm	z	n _{max}
GD02-0001-00	GD-02	ST	148	30	4	9000
GD02-0002-00	GD-02	ST	148	40	4	9000
GD02-0003-00	GD-02	ST	148	50	4	9000
GD02-0005-00	GD-02	ST	148	60	4	9000

Spare parts for cutter head GD-02

Cat. nr	Name	Dimensions			Cat. nr	Name	Dimensions		
N0000803	Stright knife	11,6x12x1,5		•	WHAT00044	Locating sleeve	12x3,6x6,5		+
N0000935	Profile knife L/P	20x30x2		+	WHAS00006	Screw TOR 1128	M6x10		•
N0000936					WHAS00008	Screw TOR 1064	M5x6,5		•
N0000818	Spur	14x14x2		•	WHAW00005	Push screw	M8x16		•
WHAK00049	Clamping wedge	18x11,5x5,5		+	WHAS00007	Screw TOR 1262	M5x23		•
WHAK00026	Clamping wedge	10x10x9		+					

GD-03

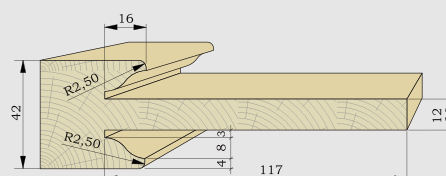


Set of profile cutter heads type **GD-03** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon profiles. Width regulated with spacers included in the set. The set mounted on a sleeve (for $d_{\max} = 40$ mm).

Type of work: door internal tenon profiling.

Material: solid wood, chipboard, MDF.

Nr	D mm	B mm	d_{\max}^* mm	n_{\max}		
1.	310	19,8	50	4500	L	+
2.	310	19,8	50	4500	R	+
3.	70	2	50	Distance ring 2 pcs.		+
4.	70	10	50	Distance ring 1 pc.		+
5.	50	80	Sleeve 1 pc.			+



Catalogue number	Type	Body	D mm	d mm	z		n_{\max}	
GD03-0001P-00	GD-03	ST	310	30	4	HM	4500	+
GD03-0002P-00	GD-03	ST	310	40	4	HM	4500	+

Spare parts for cutter head GD-03

Cat. nr	Name	Dimensions		
N0000874	Knife FKB-R	22x16x5		•
N0000901 N0000900	Profile knife L/P	19,8x32x2		+
WHAK00034	Clamping wedge	17x10,5x9		+
WHAT00044	Locating sleeve	12x3,6x6,5		+

Cat. nr	Name	Dimensions		
WHAS00011	Screw TOR 1011	M7x20		•
WHAS00006	Screw TOR 1128	M6x10		•
	Sleeve	50/dx80		+


* $d_{\max} = 50$ mm - for set without a sleeve. For set with a sleeve $d_{\max} = 40$ mm (45mm).

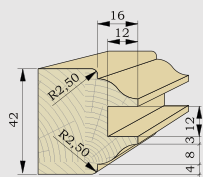
On request, we offer the set without a sleeve.

Set of profile cutter heads type **GD-04** with four cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for making door internal tenon counter-profiles. Width regulated with spacers included in the set. The set mounted on a sleeve (for $d_{\max} = 40$ mm).

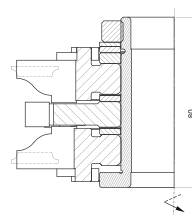
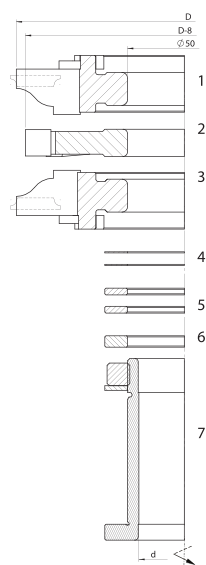
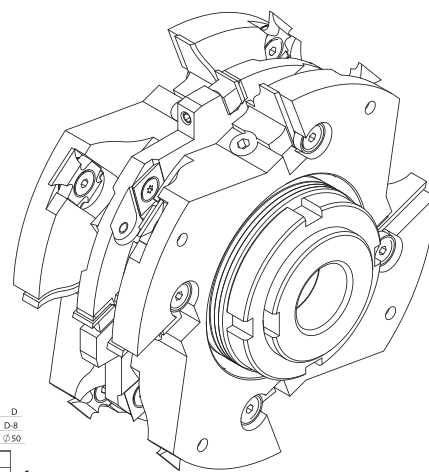
Type of work: door internal tenon counterprofiling.

Material: solid wood, chipboard, MDF.

Nr	D mm	B mm	d_{\max}^* mm	n_{\max}		
1.	148	26	50	9000	R	+
2.	140	12	50	9000		+
3.	148	26	50	9000	L	+
4.	70	0,5	50	Distance ring 2 pcs.		+
5.	70	3	50	Distance ring 3 pcs.		+
6.	70	5	50	Distance ring 1 pc.		
7.	50	80	Sleeve 1 pc.			+
















GD-04



D n_{\max} d_{\max} z	125 9000 30 4	132 9000 40 4	148 9000 50 4	150 9000 50 4
Profile	ST AL	ST AL	ST AL	ST AL
GD-04	+ +	+ +	+ +	+ +

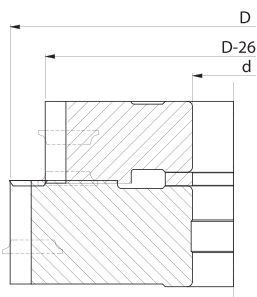
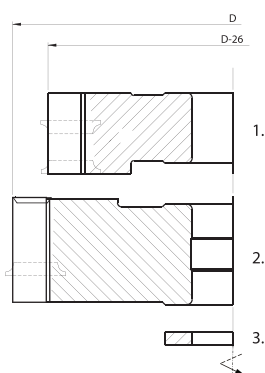
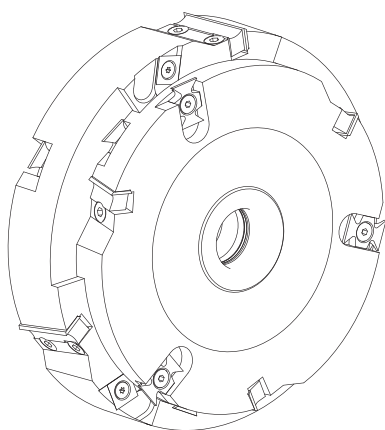
Catalogue number	Type	Body	D mm	d mm	z		n_{\max}	
GD04-0001P-00	GD-04	ST	148	30	4	HM	9000	+
GD04-0002P-00	GD-04	ST	148	40	4	HM	9000	+

Spare parts for cutter head GD-04

Cat. nr	Name	Dimensions			Cat. nr	Name	Dimensions		
N0000803	Straight knife	11,6x12x1,5		•	WHAT00044	Locating sleeve	12x3,6x6,5		+
N0000935	Profile knife	20x30x2		+	WHAS00008	Screw TOR 1064	M5x6,5		•
N0000936	L/P			•	WHAS00007	Screw TOR 1262	M5x23		•
N0000874	Knife FKB-R	16x22x5		•	WHAS00006	Screw TOR 1128	M6x10		•
N0000818	Spur	14x14x2		•	WHAS00011	Screw TOR 1011	M7x20		•
WHAK00010	Clamping wedge	18x10x9		+		Sleeve	50/dx80		+
WHAK00062	Clamping wedge	10x11,5x5,8		+					

* $d_{\max} = 50$ mm - for set without a sleeve. For set with a sleeve $d_{\max} = 40$ mm (45mm).

GD-10

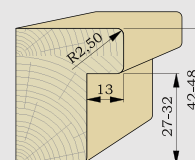


Set of profile cutter heads type **GD-10** with suitable number of cutting teeth, designed for professional machining of solid wood and wood-based materials such as chipboard, MDF and others. The cutter is used for rebating door internal profiles. Width regulated with spacers included in the set.

Type of work: door internal tenon profiling.








Material: solid wood, chipboard, MDF.

Nr	D mm	B mm	d _{max} mm	n _{max}	↺	
1.	200	40	60	6000	R	+
2.	174	20	60	6000	L	+
3.		6		Distance ring 1 pc.		+



Catalogue number	Type	Body	D mm	d mm	z		n _{max}	
GD10-0001P-00	GD-10	ST	200	30	3	HM	6000	+
GD10-0002P-00	GD-10	ST	200	40	3	HM	6000	+
GD10-0003P-00	GD-10	ST	200	50	3	HM	6000	+

Spare parts for cutter head GD-04

Cat. nr	Name	Dimensions			Cat. nr	Name	Dimensions		
N0000809	Straight knife	40x12x1,5		+	WHAK00034	Clamping wedge	17x10x9		+
N0000805	Straight knife	20x12x1,5		+	WHAS00011	Screw TOR 1011	M7x20		•
N0000874	Knife FKB-R	16x22x5		•	WHAS00006	Screw TOR 1128	M6x10		•
WHAK00009	Clamping wedge	37x10x9		+					