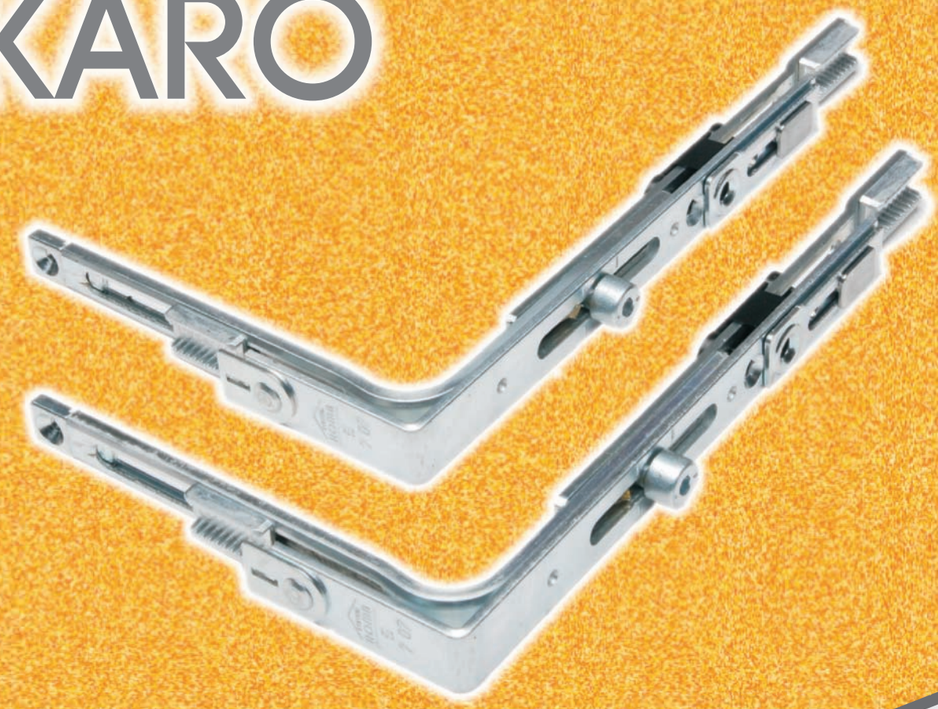
PRODUCT CATALOGUE

2008

KARO



KARO CATALOGUE 2008

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Gk Grupa Kęty

ROMB SYSTEM

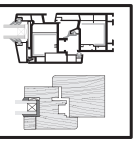
Dear Customer,

Our company is a Polish Enterprise with a long-lasting experience in manufacturing high quality construction hardware.
Since June 2007 Metalplast Karo Złotów has been a part of the KĘTY Capital Group which gives us new perspectives in product and market development.
In 2008 the new Investor will invest in new technologies 4 M PLN.
It is the ambition of our Engineers and Dealers to meet your requirements regarding supplies of the products included in this edition of the catalogue.
We wish to inform you that our offer comprise not only products but we are also open for the cooperation concerning solving technical problems.
We have a well organized Development and Services Department, friendly computer software for hardware selection as well as we provide technical and technological assistance for loyal partners including training and furnishing assembling posts.
In the nearest future we will present a new partner programme for all those who will relate their future to our company.
We ensure that next catalogues will be even richer in our product offer facilitating completing deliveries for the proper execution of your contracts.
An additional asset of our proposal is a well equipped Laboratory with all the appropriate PCA (Polish Accreditation Centre) certifications that allows us to control the quality of our products while being an additional advantage of our offer - it is open for our partners.
We invite you to systematically visit our website www.metalplast-karo.pl, where you can address your comments, needs, ideas of improvements, questions as well as constantly monitor the life of KARO division companies.
I would like to assure all our national and foreign customers who visit us more and more often and give positive opinions of our products that Our Partners' SUCCESS is Our SUCCESS, that is why we will continue to work for you in order to achieve the maximum level of mutual contentment and satisfaction with cooperation.

With best regards,

President of the Management Board

Krzysztof Zięba



Peripheral hardware of ROMB, ROMB 2000 *and* ROMB 3000 *systems*

GENERAL CHARACTERISTICS OF THE PRODUCT

Hardware sets fitted on the girth of sash and frame of windows or balcony doors, depending on their function, allow:

- turning (opening) or tilting the same sash of a window or balcony door (turn / tilt hardware)
- turning (opening) a sash (turn hardware)
- tilting a sash (tilt hardware)

Turn / tilt sashes enable optimal ventilation of rooms, as a turned sash makes it possible to quickly ventilate a room, while a tilted sash facilitates non-stop ventilation.

Turn / tilt plus turn hardware in double windows makes it possible to tilt or turn one of the sashes and only turn the other sash.

Turn / tilt hardware with enhanced resistance to burglary fitted in double windows have, in comparison to standard hardware, the following, additional anti-burglary devices:

- a handle with a cylinder lock,
- a blockage of a handle turning,
- “U1” or ”U2” type corners with inbuilt anti-unhingement deadbolts
- reinforced anti-burglary striker-plates,
- anti-drill shield for the drive mechanism.

Sets of turn / tilt, turn, tilt and turn / tilt plus turn hardware for PVC-U windows and balcony doors are created and assembled in accordance with **„Metalplast KARO Złotów S.A. hardware catalogue".**

DESIGNATION AND SCOPE OF USE

Designation

ROMB and ROMB 2000 turn / tilt, turn, tilt and turn / tilt plus turn hardware is designated to be used with windows and balcony doors made of PVC-U profiles or wooden windows used in construction industry.

ROMB 3000 turn / tilt anti-burglary reinforced hardware is to be used with windows and balcony doors made of PVC-U or wood, is sufficiently resistant to burglaries and used in construction industry.

Scope of use

Turn / tilt hardware when fitted in windows or balcony doors allows turning or single-stage tilting the sash in various ventilation configurations, depending on your needs.

Turn hardware when fitted in windows or balcony doors allows closing and turning (opening) window sashes.

Tilt hardware when fitted in windows allows closing and tilting the sashes.

Turn / tilt plus turn hardware, when fitted in double windows, allows tilting or turning (opening) the turn / tilt sash and turning (opening) the turn sash.

Turn / tilt hardware ordered with micro-ventilation allows setting the slit size to ca $6^{\pm 1}$ mm to ensure the inflow of the air into the room. The hardware should be used especially in windows designated for rooms with gravity ventilation.

The hardware in its turn / tilt version has the possibility of additional application of the drive gear blockade. The blockade acts as a safeguard against mishandling of the hardware in an opened sash.

At the customer’s request, turn / tilt, turn and turn / tilt plus turn hardware with a lowered handle (however not below 1/3 Hw) can be fitted in windows to be used by the disabled persons. This solution makes it easier to operate the hardware from a wheelchair.

USAGE CONDITIONS

Maximum weight of sashes

The maximum weight of window sashes than can be fitted with a set of hardware is specified according to the load capacity of the weakest element of a given set and amounts to 80 kg, 100 kg and 130 kg.

Dimensions of sashes

The minimum and maximum width and height of window sashes to notch are specified according to tables 1 and 2. Terminal sash dimensions determining the dimensions of elements and subassemblies of „**ROMB**" and „**ROMB 2000**" hardware are provided in table 1, and of „**ROMB 3000**" hardware characterised by reinforced anti-burglary resistance in table 2.

Table 1 - **ROMB, ROMB 2000, ROMB TwO** and **ROMB 55**

Sw- width of sash to notch [mm]	Hw - height of sash to notch [mm]
RU with handle in fixed position	
290 - 1600	360-2400
RU with handle in central position	
290 - 1600	505-2400
R with handle in fixed position	
290 - 1450	360 - 2400
R with handle in central position	
290-1450	505 - 2400
R with drive gear strip „S"	
290-800	340-2400
U with drive gear strip „UC"	
470-1700	to 800
U with drive gear strip „M"	
530-1680	505 -1450
window w/o post with drive gear strip „M"	
290-1450	590 -2400
window w/o post with footing "BM" and connector "BM", drive gear "B".	
290-1450	590 -2400

Table 2 - **ROMB 3000**

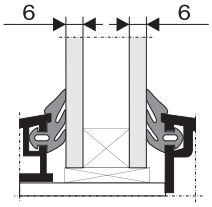
Sw - width of sash to notch [mm]	Hw - height of sash to notch [mm]
RU with handle in fixed position	
290 - 1200	360-2400
RU with handle in central position	
290 - 1200	505-2400

DESIGN GUIDELINES

The weight of glass panes should be specified according to the data from glass panes producers (1 m^2 of glass pane 1 mm thick = 2,5 kg - see table 3) - example - Fig.1, and in case of glass panes produced in Poland according to PN-B-13079:1997.

Table 3

Glass pane thickness [mm]	Weight of 1 m^2 of glass pane [kg]
28	70
24	60
20	50
16	40
12	30
8	20



Thickness of the glass pane: 12 mm

Fig. 1 - Example of a combined glass pane

The below presented diagrams show the dependance of glass pane weight on sash dimensions in the notch.
On the basis of these diagrams, admissible sash dimensions to notch are determined in relation to the maximum sash weight.

Diagram 1 - admissible dimensions of sashes weighing up to 80 kg.

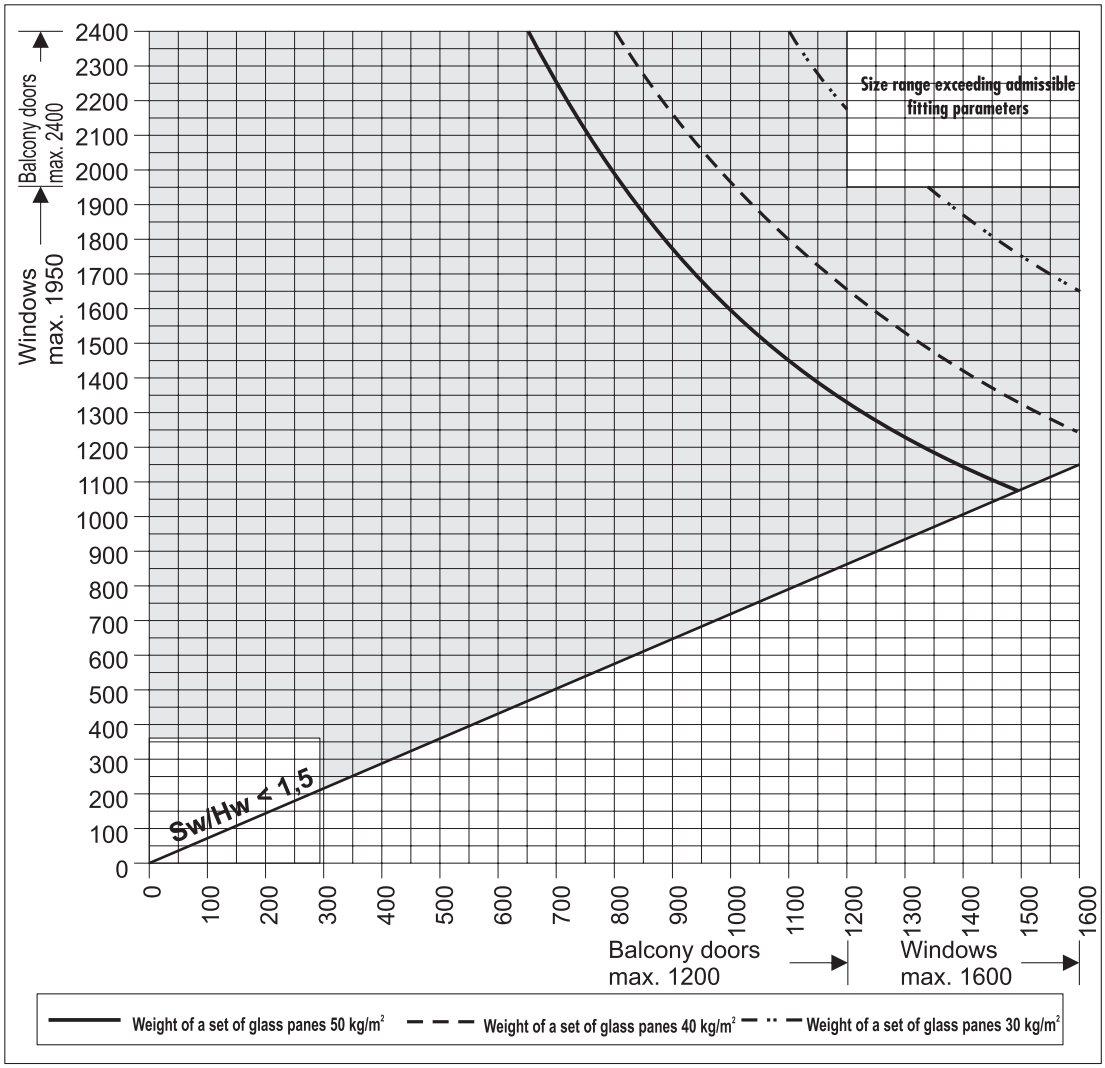


Diagram 2 - Admissible dimensions of sashes weighing up to 100 kg.

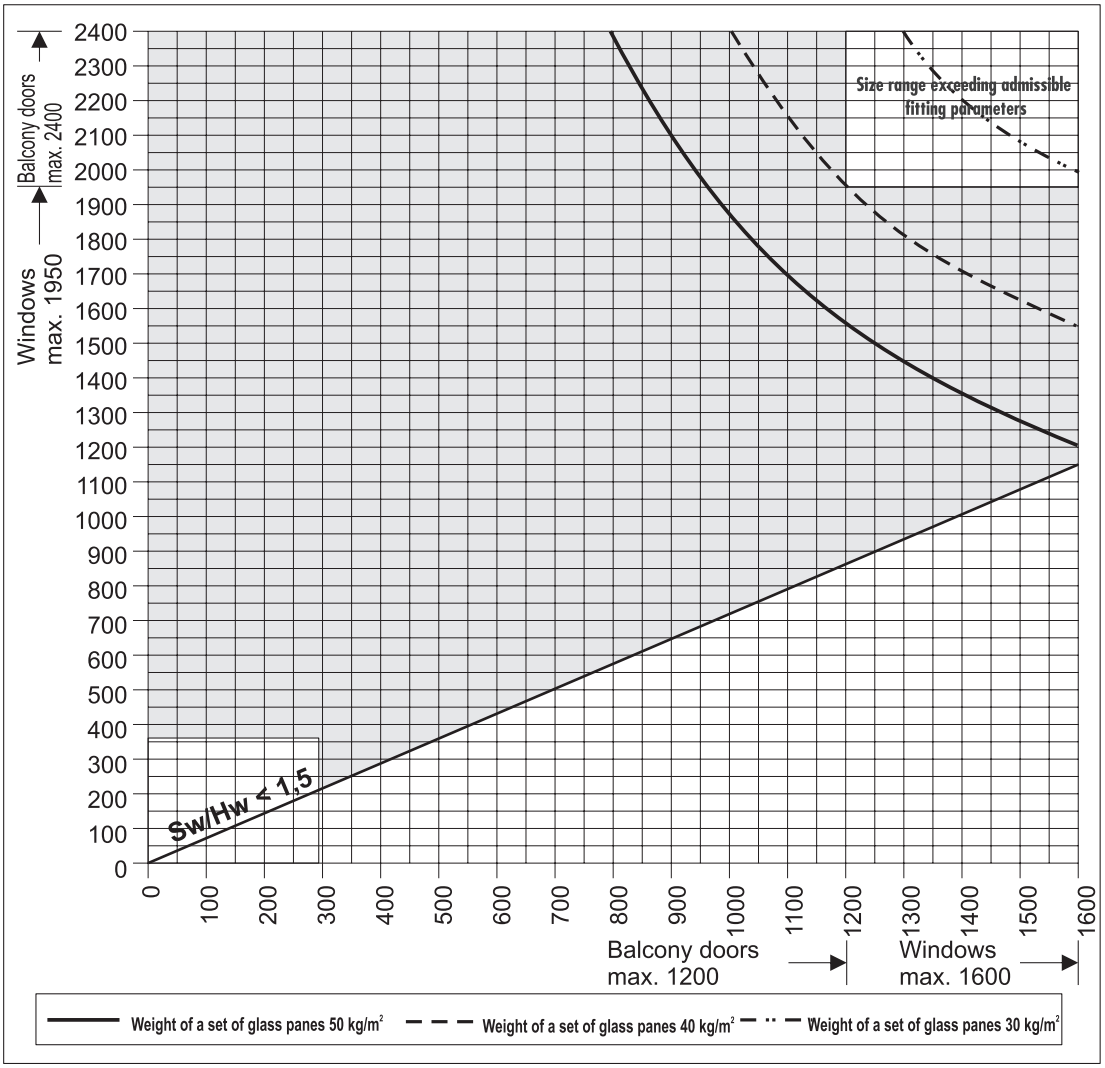
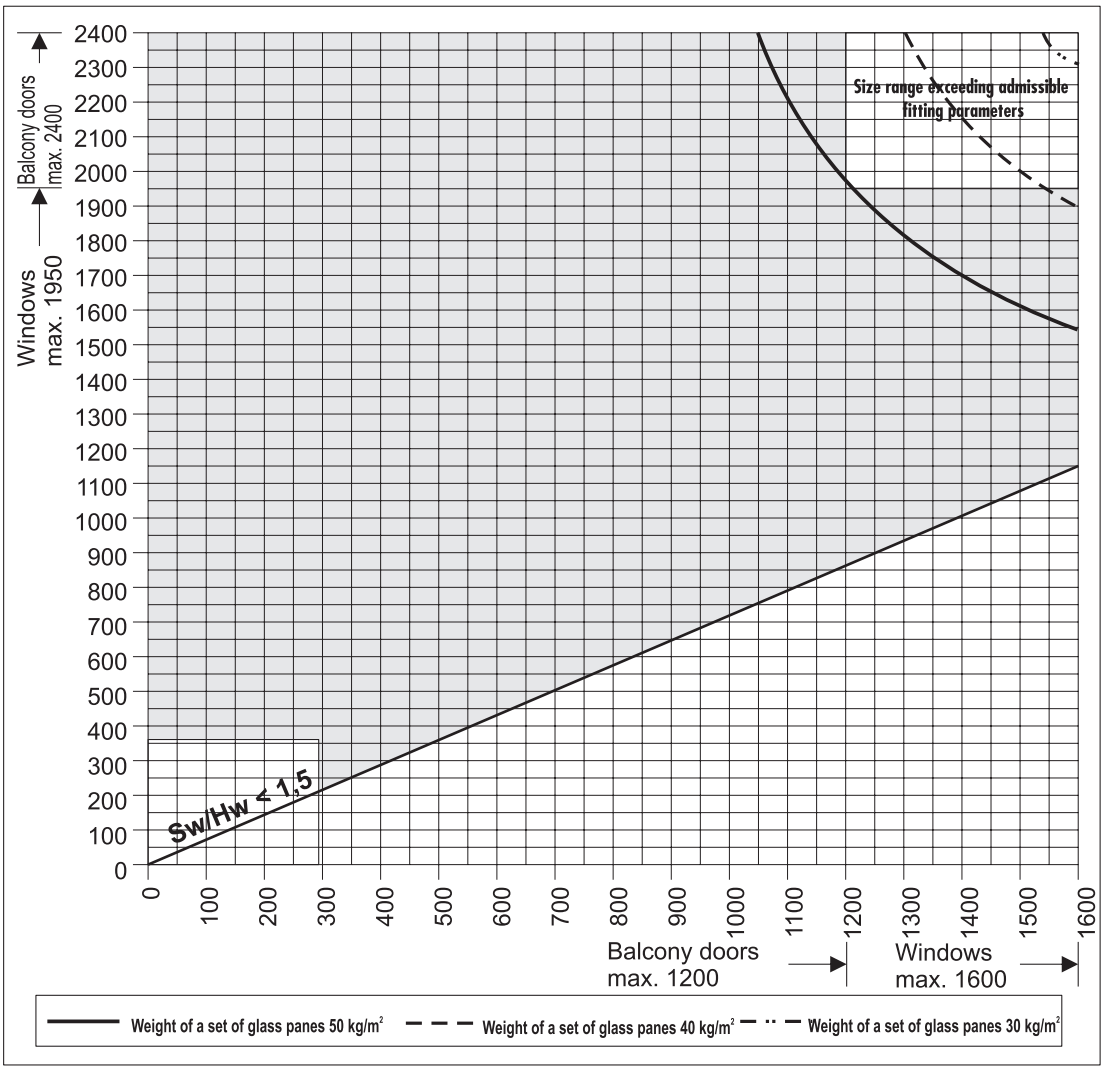


Diagram 3 - admissible dimensions of sashes weighing up to 130 kg.



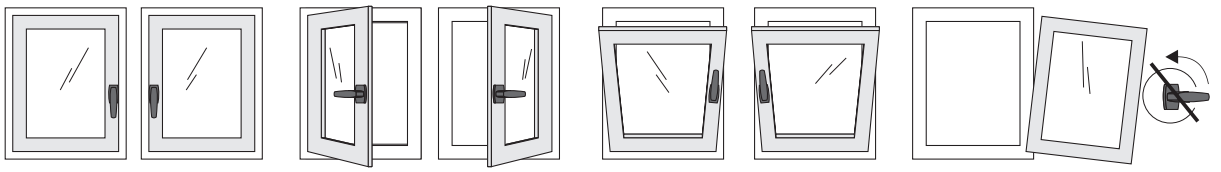
NOTE:
windows and balcony doors producers are not authorised to decrease the number of locking points resulting from the construction of hardware and specified in this catalogue.

USAGE INCONSISTENT WITH DESIGNATION

Usage inconsistent with designation takes place especially when :

- obstacles blocking the usage that is consistent with designation are placed within the window's operational area
- window or balcony door sashes are pressed against the frame inconsistently with designation or in an uncontrolled way (e.g. forced by wind) so that hardware, frame material or other window or balcony door elements are damaged or destroyed, or such action results in a damage
- additional loads apply to window or balcony door sashes
- somebody places their hand between the frame and the sash while closing the window or balcony door (danger of injury)

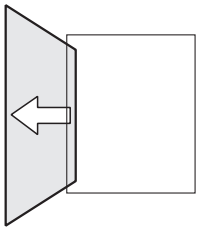
CORRECT USAGE OF ROMB SYSTEM HARDWARE



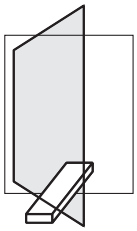
Do not turn the handle upwards when sash is opened

SAFETY OF USE

No additional load may apply on the sash

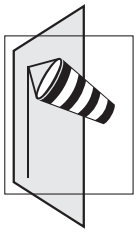


Window sash should not be pressed against the frame

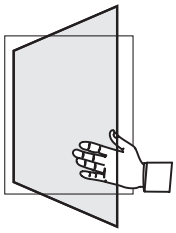


No objects should be placed between the sash and the frame

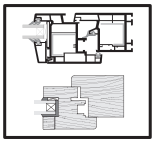
If children have access to the window, make sure a handle with a lock is fitted



The sash should not be left opened in case of strong wind



Injury may occur if the sash is shut forcibly. Hands should not be placed between the sash and the frame while closing the window.



TECHNICAL DATA OF PERIPHERAL HARDWARE SYSTEMS ROMB, ROMB 2000 and ROMB 3000

Peripheral hardware systems **ROMB**, **ROMB 2000** and **ROMB 3000** are used for closing, turning and tilting window sashes. Operating functions are performed with the handle. Hardware elements are fitted in window and frame stiles. The hardware may be used in wooden and PVC-U windows.

TECHNICAL DATA:

Max weight of sash.....	80 kg; 100 kg; 130 kg
Groove (hardware) width.....	16 mm
Distance from handle axis to front.....	15 mm; 7,5 mm
Deadbolt height from front.....	8 mm
Deadbolt throw.....	2×17mm
Spacing of holes for handle screws.....	43 mm

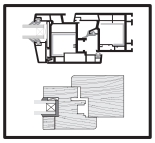
NOTE: dependance Sw / Hw < 1,5 should be observed
The hardware is equipped with a blockade that eliminates the possibility of displacement of the handle into “turned” position when the sash is tilted (blockade in stay). It is possible to fit a drive gear blockade that prevents moving the hardware from “turned” into “tilted” position when the sash is opened.

ROMB hardware for windows w/o post. The hardware is used for closing and turning window sashes. Operating functions are performed with the lever. Hardware elements are fitted in window and frame stiles. The hardware can be used in wooden and PVC-U windows.

TECHNICAL DATA:

Max weight of sash.....	80 kg; 100 kg (130 kg - heavy version)
Groove (hardware) width.....	16 mm
Locking slider throw.....	8 mm

In order to facilitate selecting and assembling hardware, we recommend using **OKNO 1.0** hardware selection computer programme (or **Stolcad** hardware selection programme with an overlay for "**ROMB**" hardware). Any comments on this catalogue and our products may be adressed to our marketing department: **phone +48 672650416 e-mail: romb@gk-kety.com.pl**



„Metalplast KARO Złotów" S.A. has implemented and maintained a quality management system based on the requirements of the international standards of the series : ***ISO 9001 - 2000.***

The system includes:
- development of the products construction
- production
- control and research
- use, exploitation and servicing
- warranty and complaints handling

The factory has been also accredited a research laboratory according to ***PN EN ISO/IEC 17025:2001*** standard, which ensures comprehensive testing of produced goods.

PREFERENCES REGARDING PUBLIC PROCUREMENT TENDERS

ROMB, **ROMB 2000** and **ROMB 3000** hardware systems are Polish domestic products, the use of which gives preferences when taking part in public procurement tenders in accordance with the *Council of Ministers Regulation of 28.12.1994* ***(Official Journal No 140, item 776).***

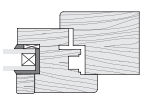
Our products have the required technical specifications and always updated examinations. Thus, the produced goods' conformity with reference documentation is assured, which in turn allows us to place the construction industry mark on **ROMB**, **ROMB 2000** and **ROMB 3000** hardware.

„Metalplast KARO Złotów" S.A. continually improves the hardware's parameters and functions, with successive improvements and modernizations of **ROMB** systems as a result.

MARKING USED IN THE CATALOGUE:

RU - Turn / tilt windows
U - Tilt windows
R - Turn windows
Dr - Wooden windows
Tw - PVC-U windows
Sw - Sash width measured in notches
Hw - Sash height measured in notches
Wzg - Upper hinge bracket
Wzd - Lower hinge bracket
Szg - Upper hinge leaf
Szd - Lower hinge leaf
L - Left
P - Right

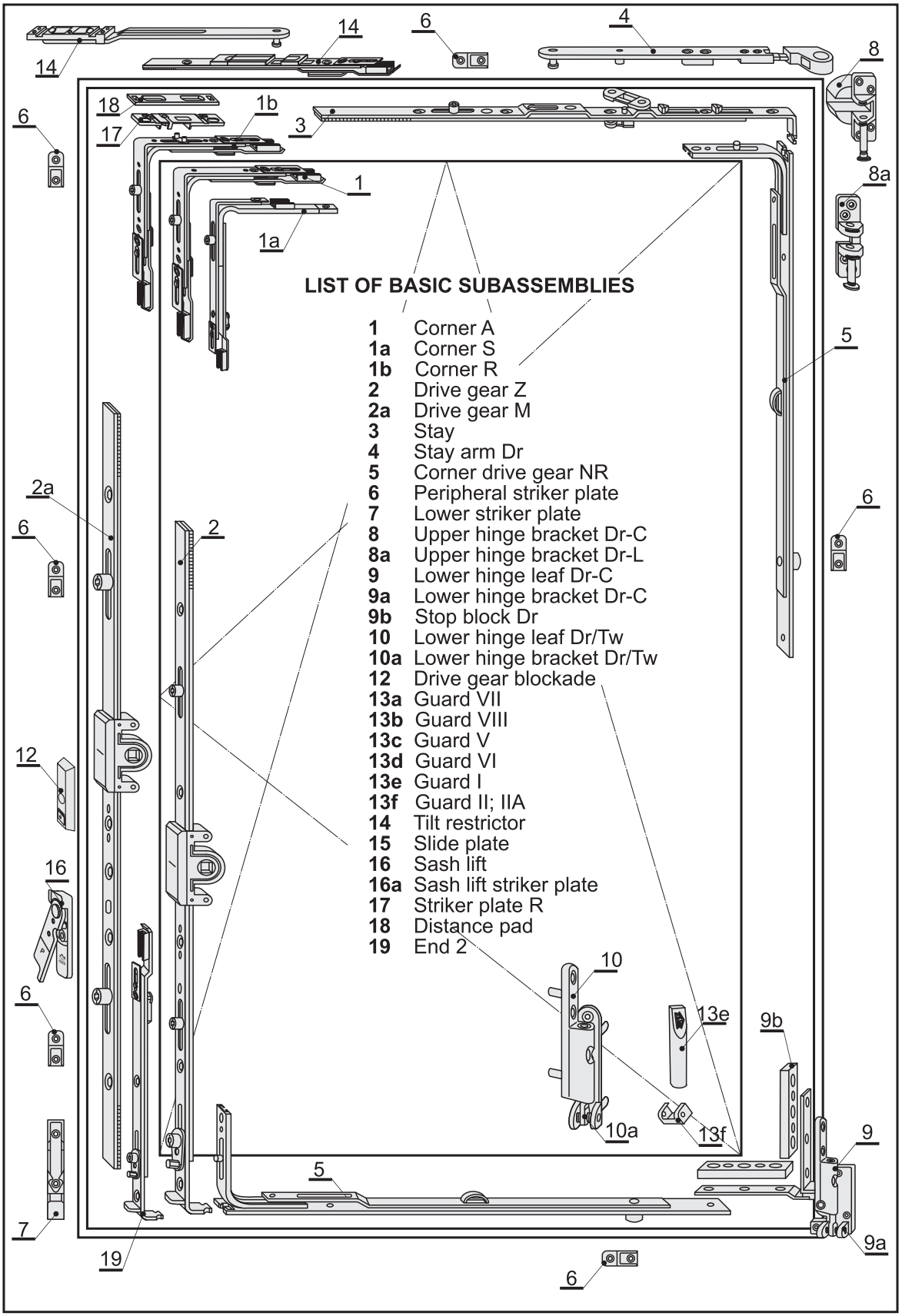
- symbol denoting the use of a subassembly in PVC-U windows.



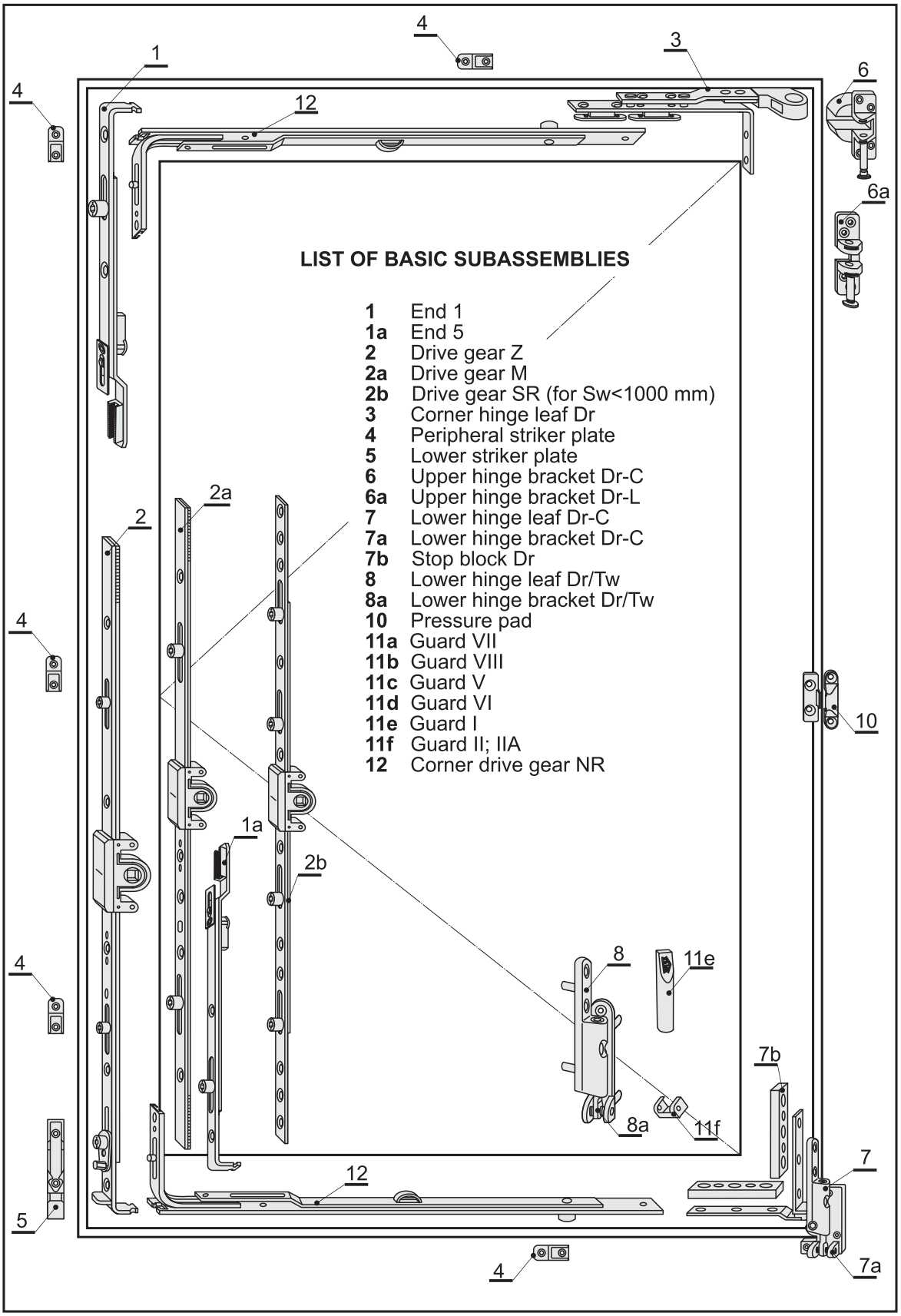
- symbol denoting the use of a subassembly in wooden windows.

- symbol denoting the use of a subassembly in aluminium windows.

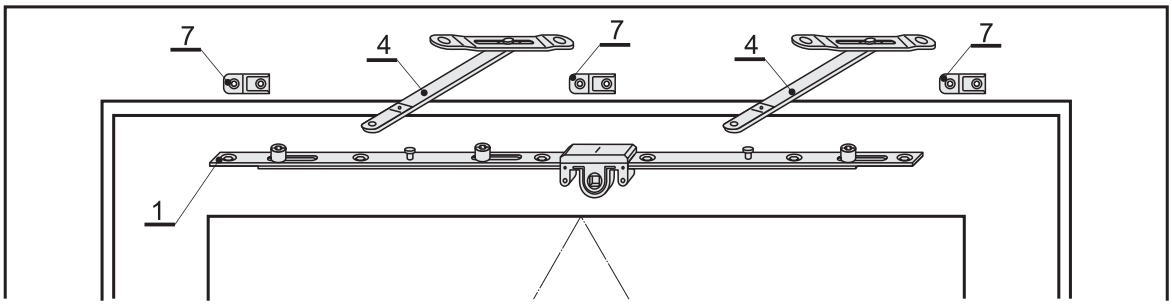
PERIPHERAL HARDWARE ROMB
FOR WOODEN WINDOWS Dr
TURN-TILT VERSION RU

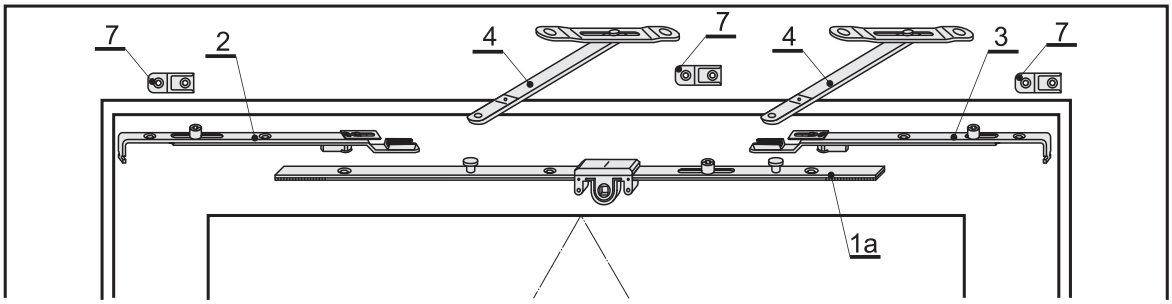


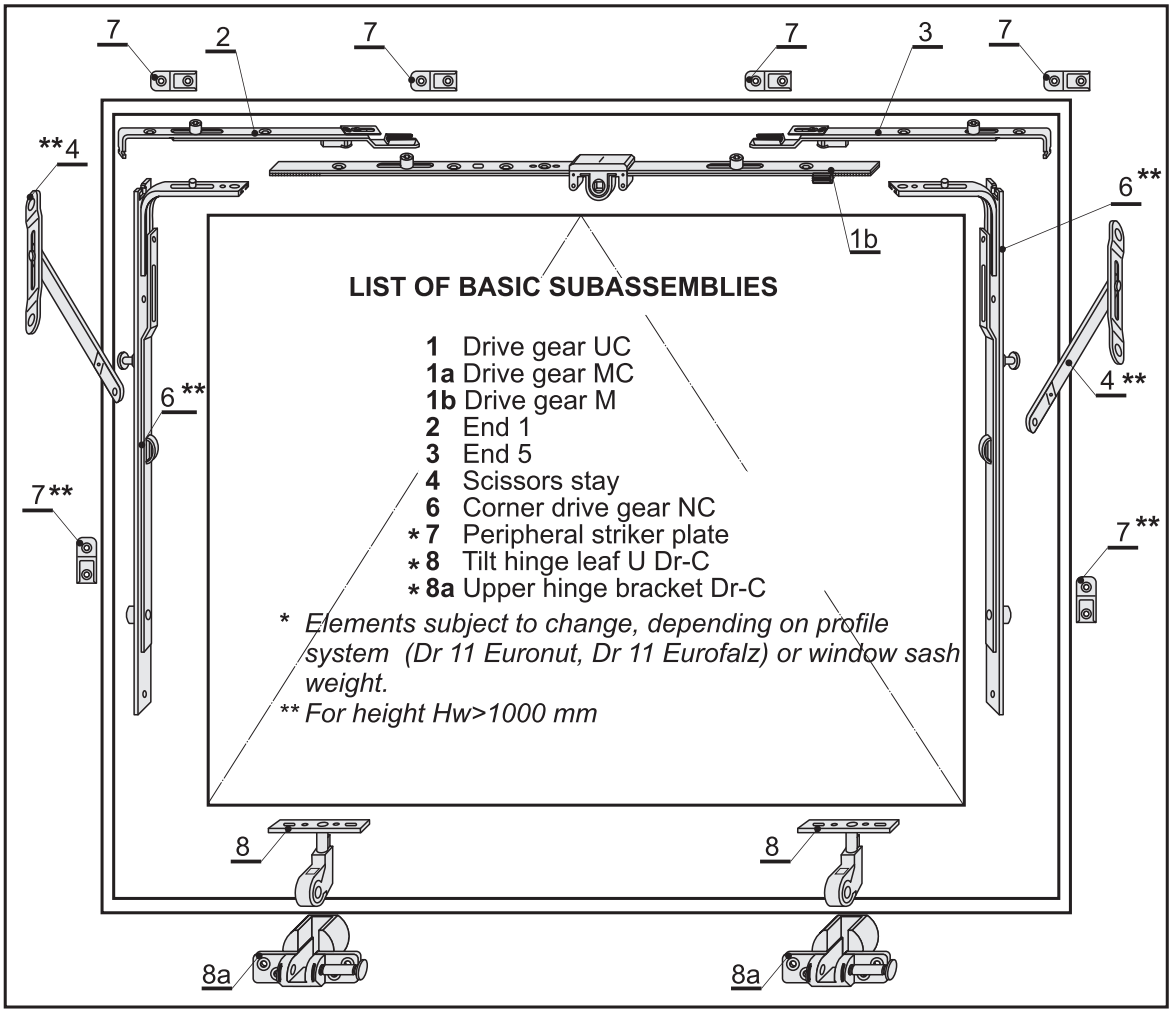
PERIPHERAL HARDWARE ROMB
FOR WOODEN WINDOWS Dr
TURN VERSION R



PERIPHERAL HARDWARE ROMB
FOR WOODEN WINDOWS Dr
TILT VERSION U







LIST OF BASIC SUBASSEMBLIES

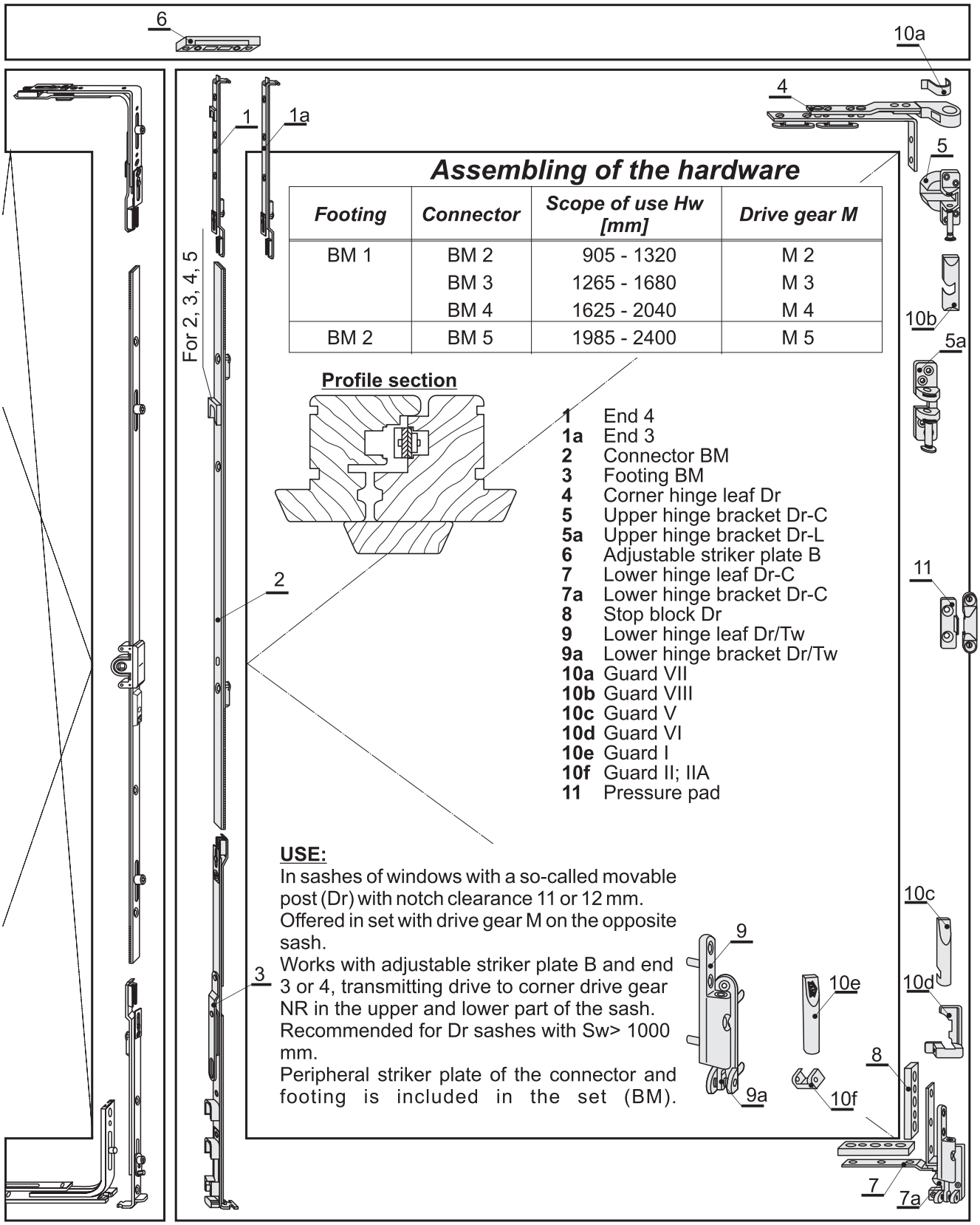
1 Drive gear UC
1a Drive gear MC
1b Drive gear M
2 End 1
3 End 5
4 Scissors stay
6 Corner drive gear NC
* **7** Peripheral striker plate
* **8** Tilt hinge leaf U Dr-C
* **8a** Upper hinge bracket Dr-C

* *Elements subject to change, depending on profile system (Dr 11 Euronut, Dr 11 Eurofalz) or window sash weight.*

** *For height Hw>1000 mm*

PERIPHERAL HARDWARE ROMB
RU AND R FOR DOUBLE WINDOWS W/O POST DR

VERSION WITH HANDLE IN CENTRAL POSITION



Assembling of the hardware

Footing	Connector	Scope of use Hw [mm]	Drive gear M
BM 1	BM 2	905 - 1320	M 2
	BM 3	1265 - 1680	M 3
	BM 4	1625 - 2040	M 4
BM 2	BM 5	1985 - 2400	M 5

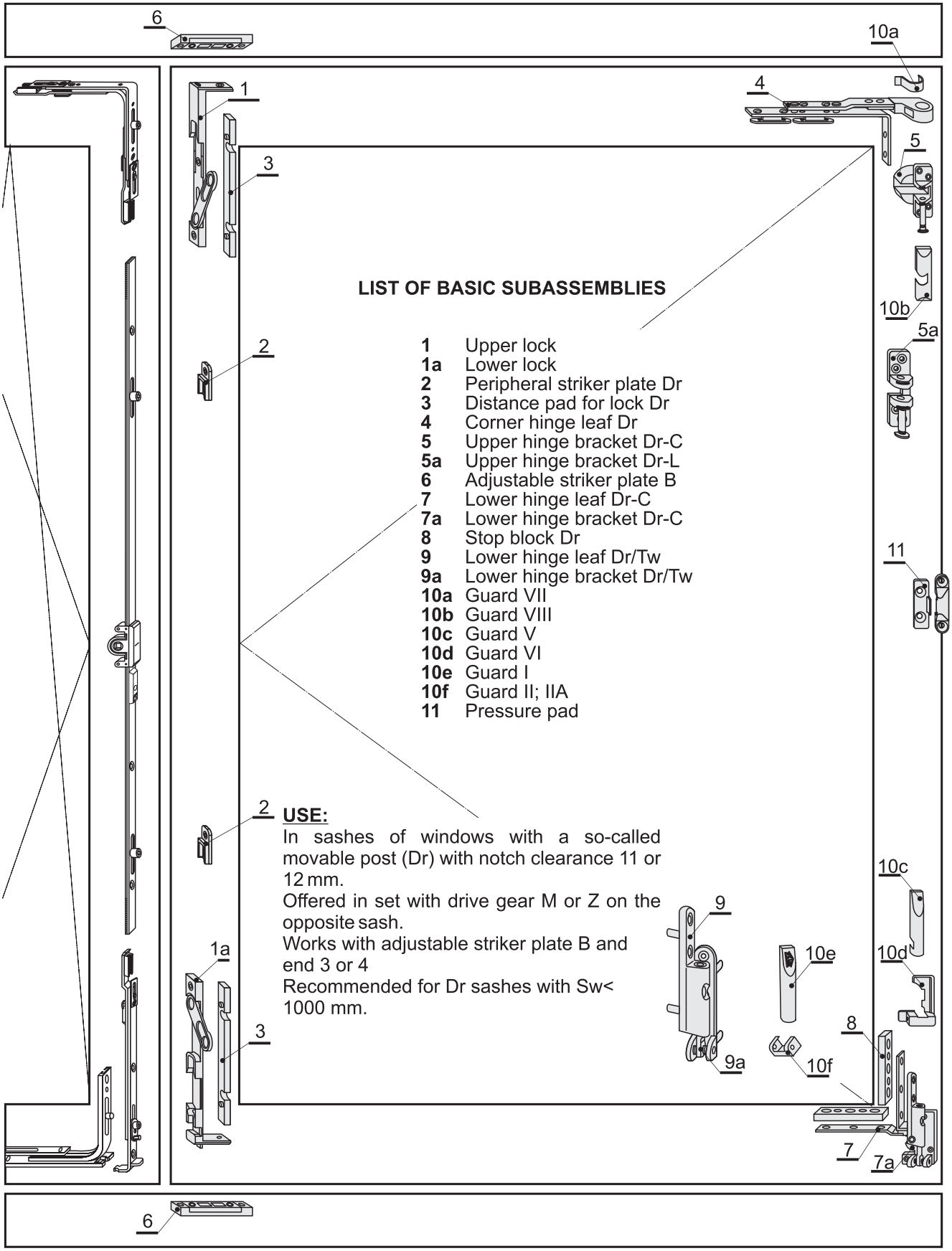
Profile section

1 End 4
1a End 3
2 Connector BM
3 Footing BM
4 Corner hinge leaf Dr
5 Upper hinge bracket Dr-C
5a Upper hinge bracket Dr-L
6 Adjustable striker plate B
7 Lower hinge leaf Dr-C
7a Lower hinge bracket Dr-C
8 Stop block Dr
9 Lower hinge leaf Dr/Tw
9a Lower hinge bracket Dr/Tw
10a Guard VII
10b Guard VIII
10c Guard V
10d Guard VI
10e Guard I
10f Guard II; IIA
11 Pressure pad

USE:
In sashes of windows with a so-called movable post (Dr) with notch clearance 11 or 12 mm.
Offered in set with drive gear M on the opposite sash.
Works with adjustable striker plate B and end 3 or 4, transmitting drive to corner drive gear NR in the upper and lower part of the sash.
Recommended for Dr sashes with Sw> 1000 mm.
Peripheral striker plate of the connector and footing is included in the set (BM).

PERIPHERAL HARDWARE ROMB
RU AND R FOR DOUBLE WINDOWS
W/O POST Dr

VERSION WITH HANDLE IN CENTRAL POSITION

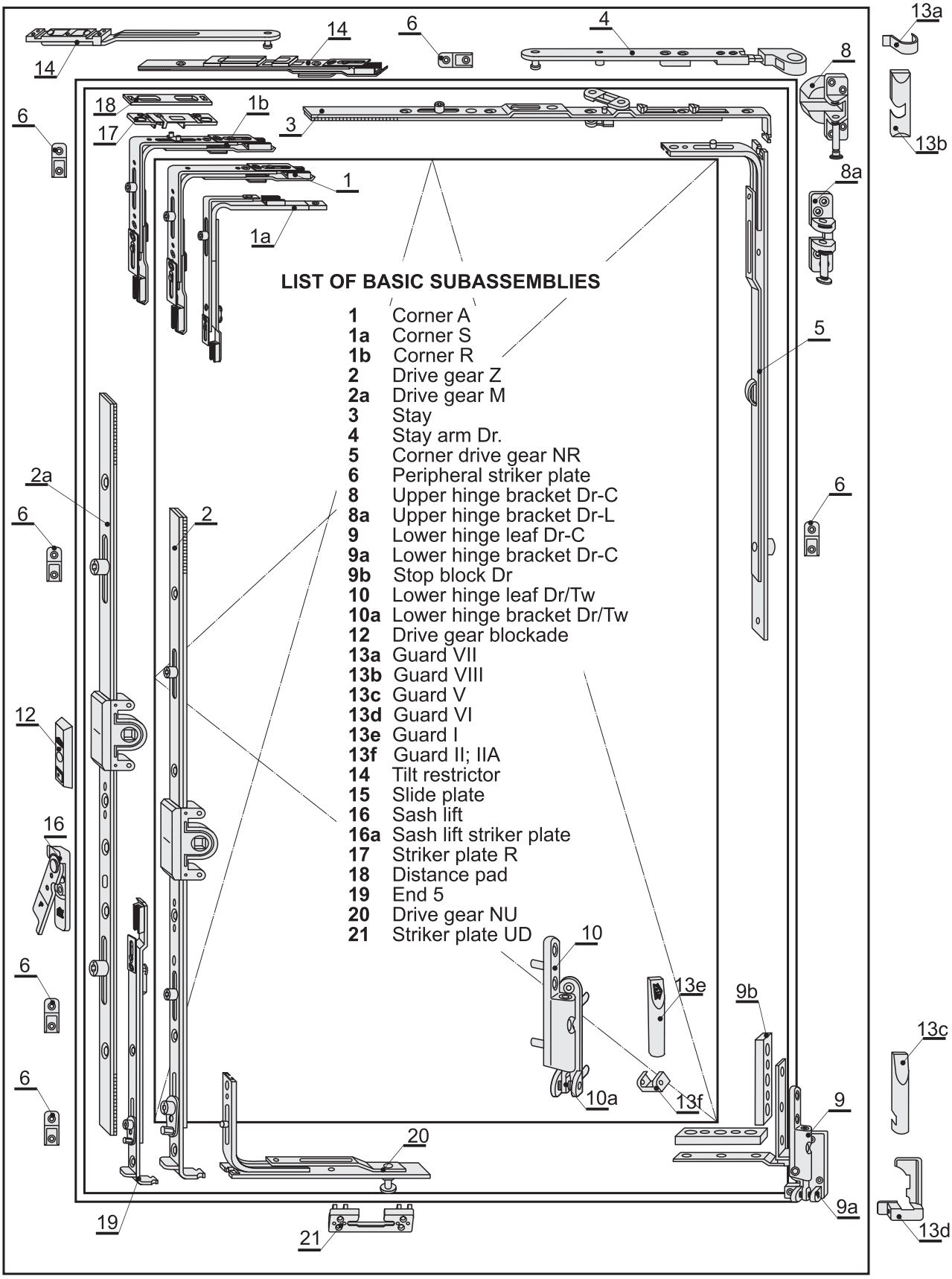


LIST OF BASIC SUBASSEMBLIES

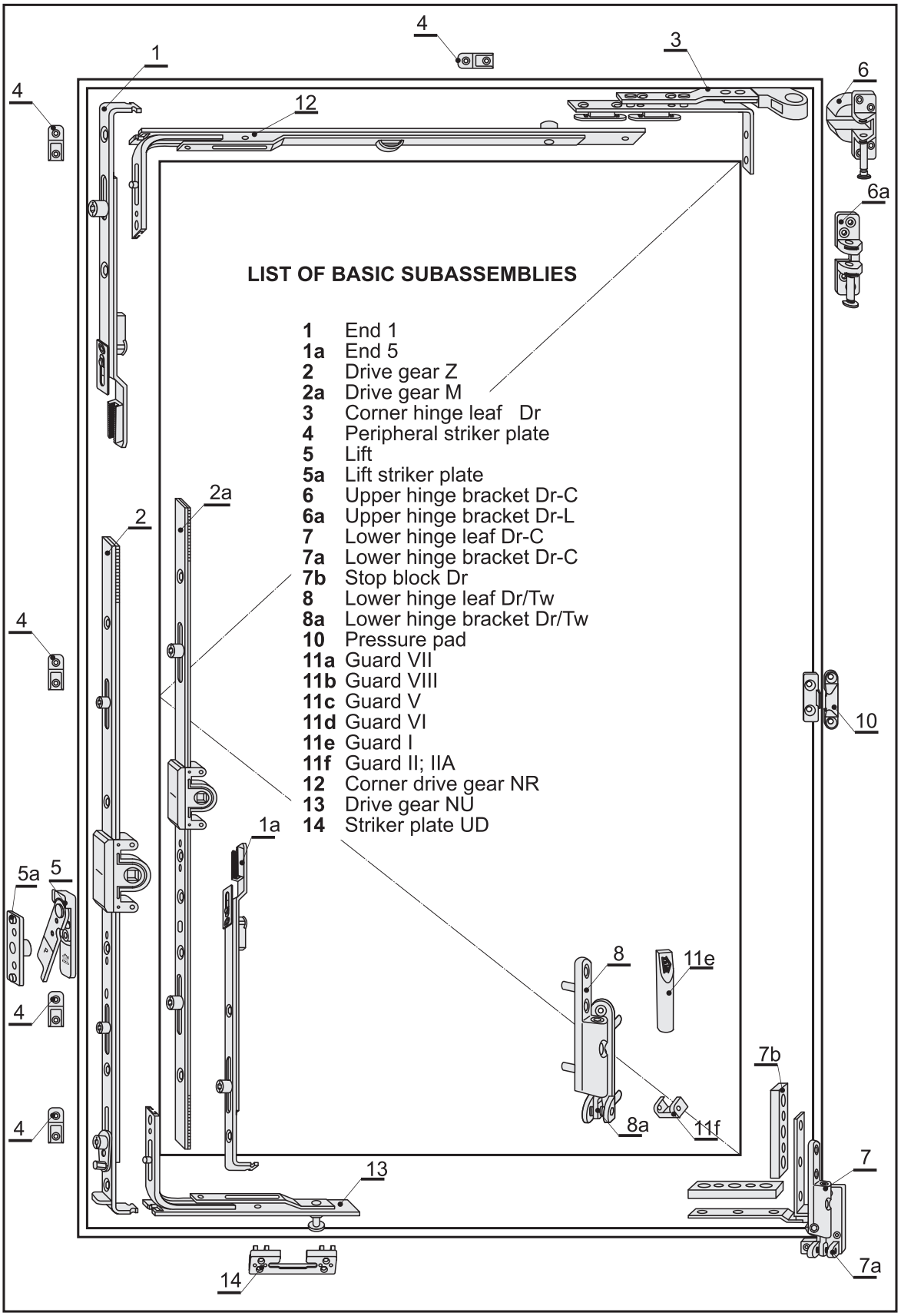
1 Upper lock
1a Lower lock
2 Peripheral striker plate Dr
3 Distance pad for lock Dr
4 Corner hinge leaf Dr
5 Upper hinge bracket Dr-C
5a Upper hinge bracket Dr-L
6 Adjustable striker plate B
7 Lower hinge leaf Dr-C
7a Lower hinge bracket Dr-C
8 Stop block Dr
9 Lower hinge leaf Dr/Tw
9a Lower hinge bracket Dr/Tw
10a Guard VII
10b Guard VIII
10c Guard V
10d Guard VI
10e Guard I
10f Guard II; IIA
11 Pressure pad

USE:
In sashes of windows with a so-called movable post (Dr) with notch clearance 11 or 12 mm.
Offered in set with drive gear M or Z on the opposite sash.
Works with adjustable striker plate B and end 3 or 4
Recommended for Dr sashes with Sw< 1000 mm.

PERIPHERAL HARDWARE ROMB 2000
FOR WOODEN WINDOWS Dr
TURN / TILT VERSION RU



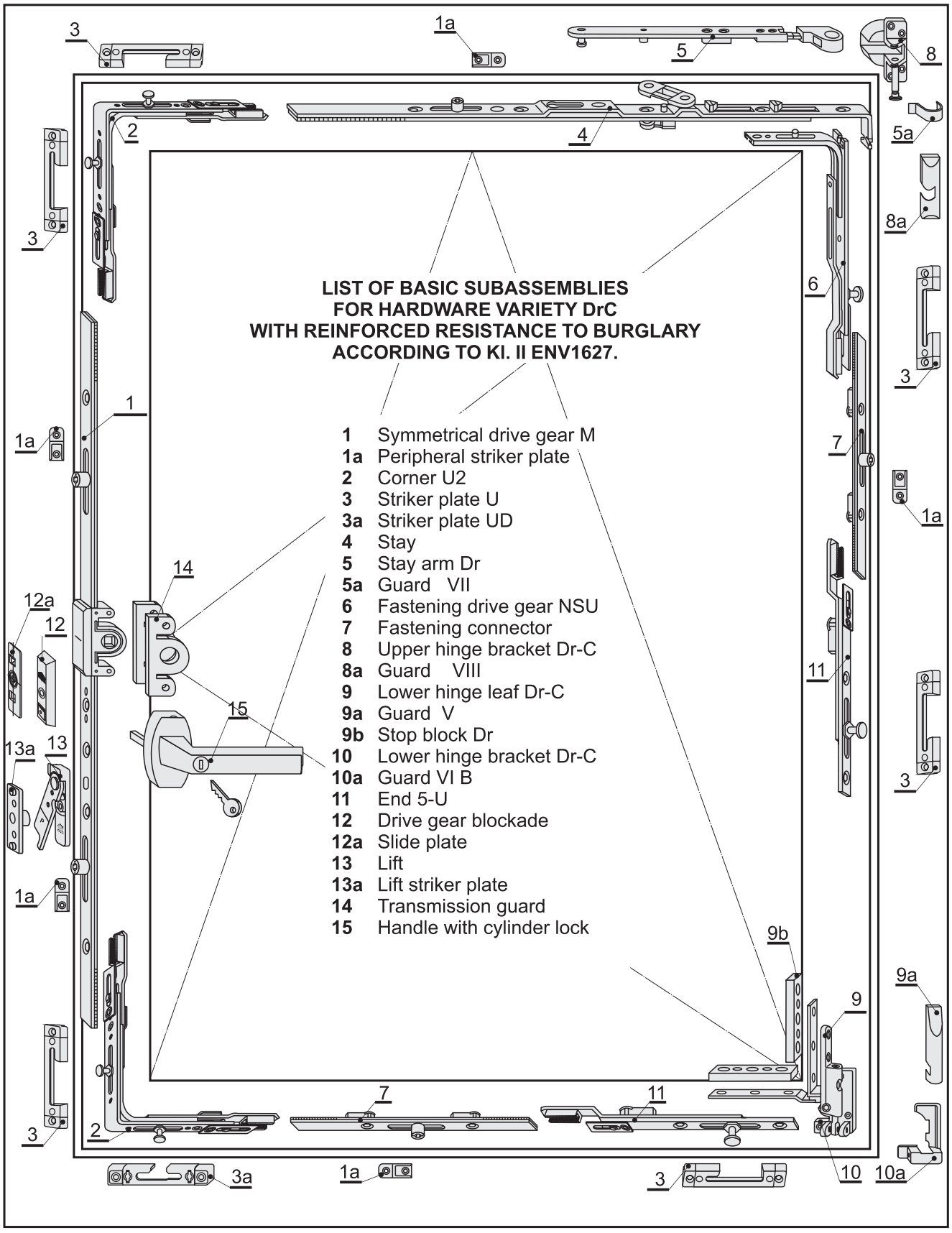
PERIPHERAL HARDWARE ROMB 2000
FOR WOODEN WINDOWS Dr
TURN VERSION R



LIST OF BASIC SUBASSEMBLIES

1 End 1
1a End 5
2 Drive gear Z
2a Drive gear M
3 Corner hinge leaf Dr
4 Peripheral striker plate
5 Lift
5a Lift striker plate
6 Upper hinge bracket Dr-C
6a Upper hinge bracket Dr-L
7 Lower hinge leaf Dr-C
7a Lower hinge bracket Dr-C
7b Stop block Dr
8 Lower hinge leaf Dr/Tw
8a Lower hinge bracket Dr/Tw
10 Pressure pad
11a Guard VII
11b Guard VIII
11c Guard V
11d Guard VI
11e Guard I
11f Guard II; IIA
12 Corner drive gear NR
13 Drive gear NU
14 Striker plate UD

PERIPHERAL HARDWARE ROMB 3000
FOR WOODEN WINDOWS Dr
RU VERSION WITH DRIVE GEAR M



LIST OF BASIC SUBASSEMBLIES
FOR HARDWARE VARIETY DrC
WITH REINFORCED RESISTANCE TO BURGLARY
ACCORDING TO KI. II ENV1627.

1	Symmetrical drive gear M
1a	Peripheral striker plate
2	Corner U2
3	Striker plate U
3a	Striker plate UD
4	Stay
5	Stay arm Dr
5a	Guard VII
6	Fastening drive gear NSU
7	Fastening connector
8	Upper hinge bracket Dr-C
8a	Guard VIII
9	Lower hinge leaf Dr-C
9a	Guard V
9b	Stop block Dr
10	Lower hinge bracket Dr-C
10a	Guard VI B
11	End 5-U
12	Drive gear blockade
12a	Slide plate
13	Lift
13a	Lift striker plate
14	Transmission guard
15	Handle with cylinder lock

PERIPHERAL HARDWARE ROMB S5
GENERAL INFORMATION

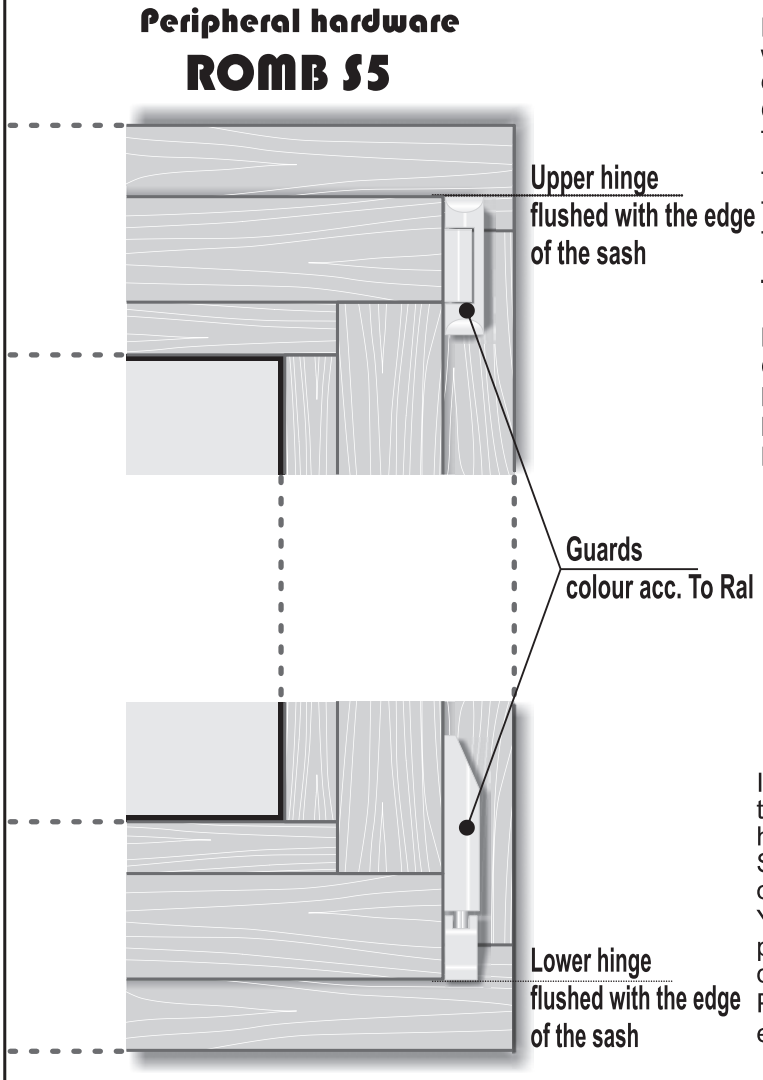
PERIPHERAL HARDWARE S5 is used for closing, turning (opening) and tilting sashes in wooden windows. Operating functions are performed with the handle that can be used in 4 or 8 positions depending on the needs. Particular elements of the hardware are fitted in window and frame stiles.

TECHNICAL DATA:

Max weight of sash.....100 kg
Groove (hardware) width..... 16 mm
Distance from handle axis to front.....15 mm (7,5 mm)
Deadbolt height from front..... 8 mm
Deadbolt throw..... 2×17 mm
Spacing of holes for screws in the handle..... 43 mm
Notch clearance..... 12 mm

NOTE: dependance Sw / Hw < 1,5 should be observed

The hardware features a blockade eliminating the possibility of displacement of the handle into “turned” position when the sash is tilted (blockade in stay). The construction of the hardware enables to fit a drive gear blockade that prevents moving the hardware from “turned” into “tilted” position while the sash is turned.
For window sashes weighing more than 60 kg a sash lift should be used.



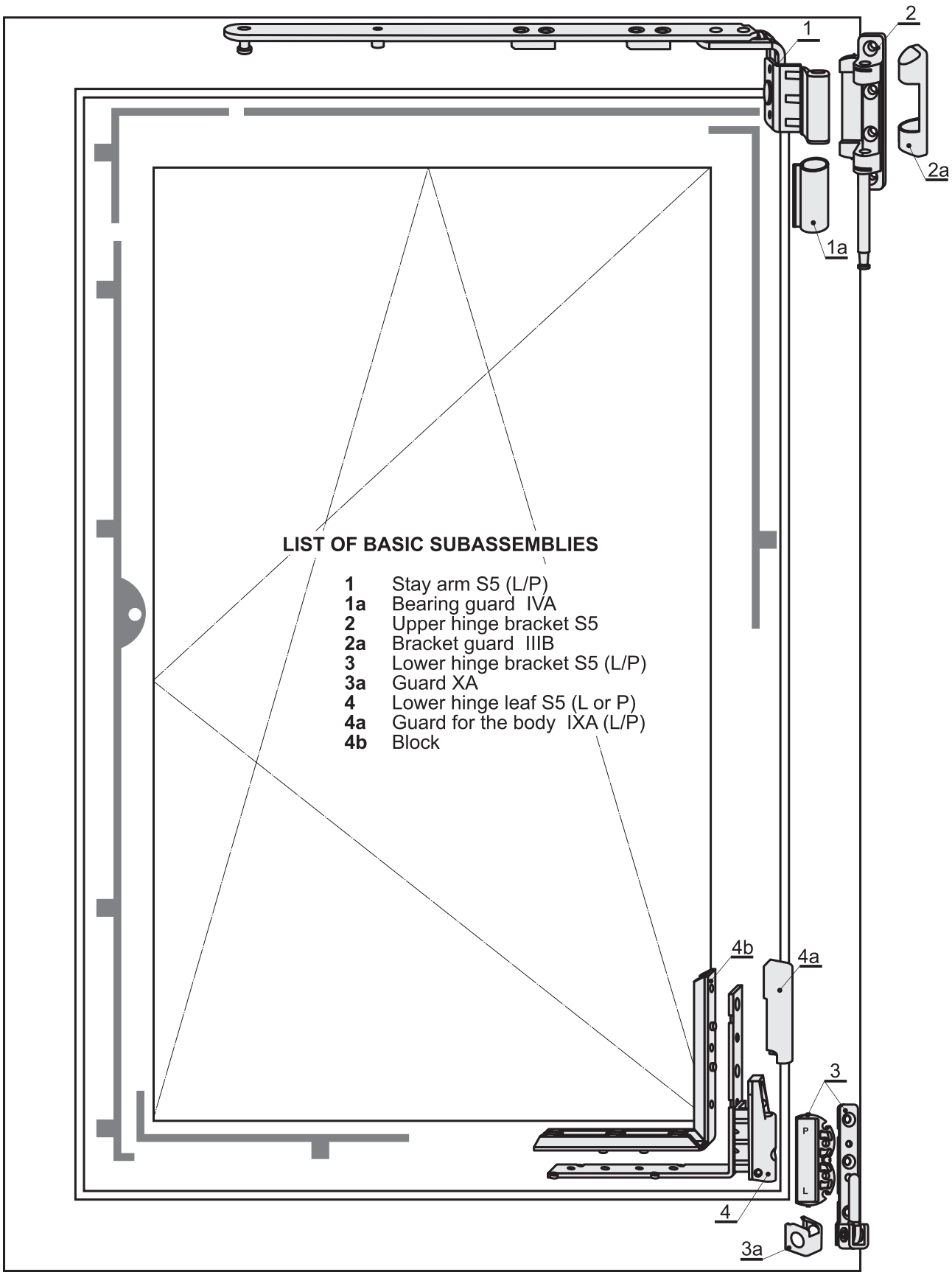
Peripheral hardware **S5** can be used for wooden windows with movable post, where it serves to close and turn window sashes.
Operating functions are performed with a lever.
The hardware is offered in sets:
- drive gear B in windows with drive gear Z
- footing BM + connector BM with drive gear M
- supplementary version (with locks)

TECHNICAL DATA:

Max. weight of sash.....	100	kg
Groove (hardware) width.....	16	mm
Locking slider throw.....	17	mm
Lock height from front.....	8	mm
Notch clearance.....	12	mm

In order to facilitate selecting and assembling of the hardware, we recommend using OKNO 1.0 hardware selection computer programme (or Stolcad hardware selection programme with an overlay for ROMB hardware).
Your comments on this catalogue and our products may be directed to our marketing department:
Phone: +48 67 265 04 16
e-mail: romb@gk-kety.com.pl

PERIPHERAL HARDWARE S5
TURN / TILT VERSION RU

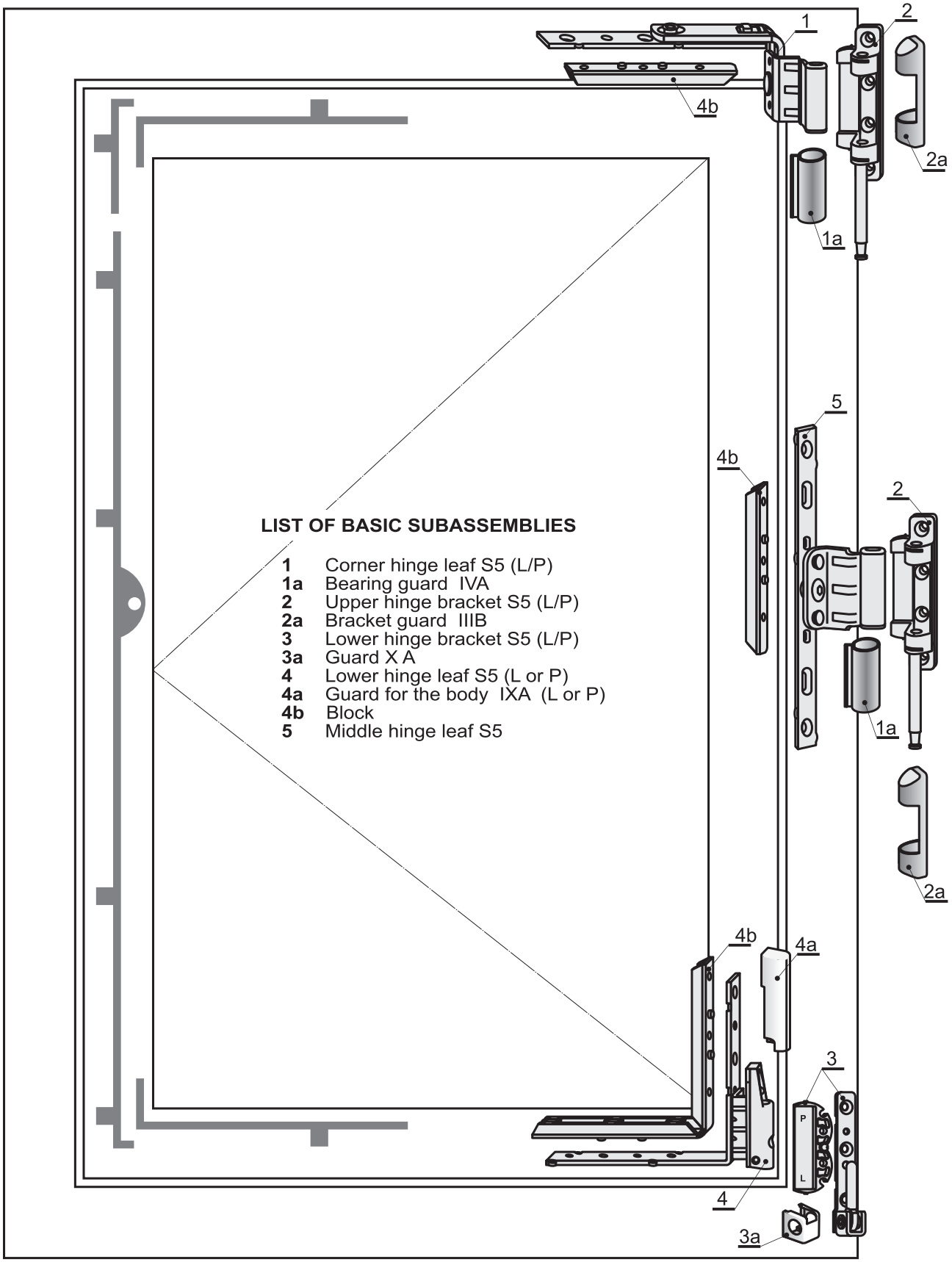


LIST OF BASIC SUBASSEMBLIES

1	Stay arm S5 (L/P)
1a	Bearing guard IVA
2	Upper hinge bracket S5
2a	Bracket guard IIIB
3	Lower hinge bracket S5 (L/P)
3a	Guard XA
4	Lower hinge leaf S5 (L or P)
4a	Guard for the body IXA (L/P)
4b	Block

Other elements of the hardware like in ROMB hardware; max sash weight up to 100 kg

PERIPHERAL HARDWARE ROMB S5
TURN VERSION R

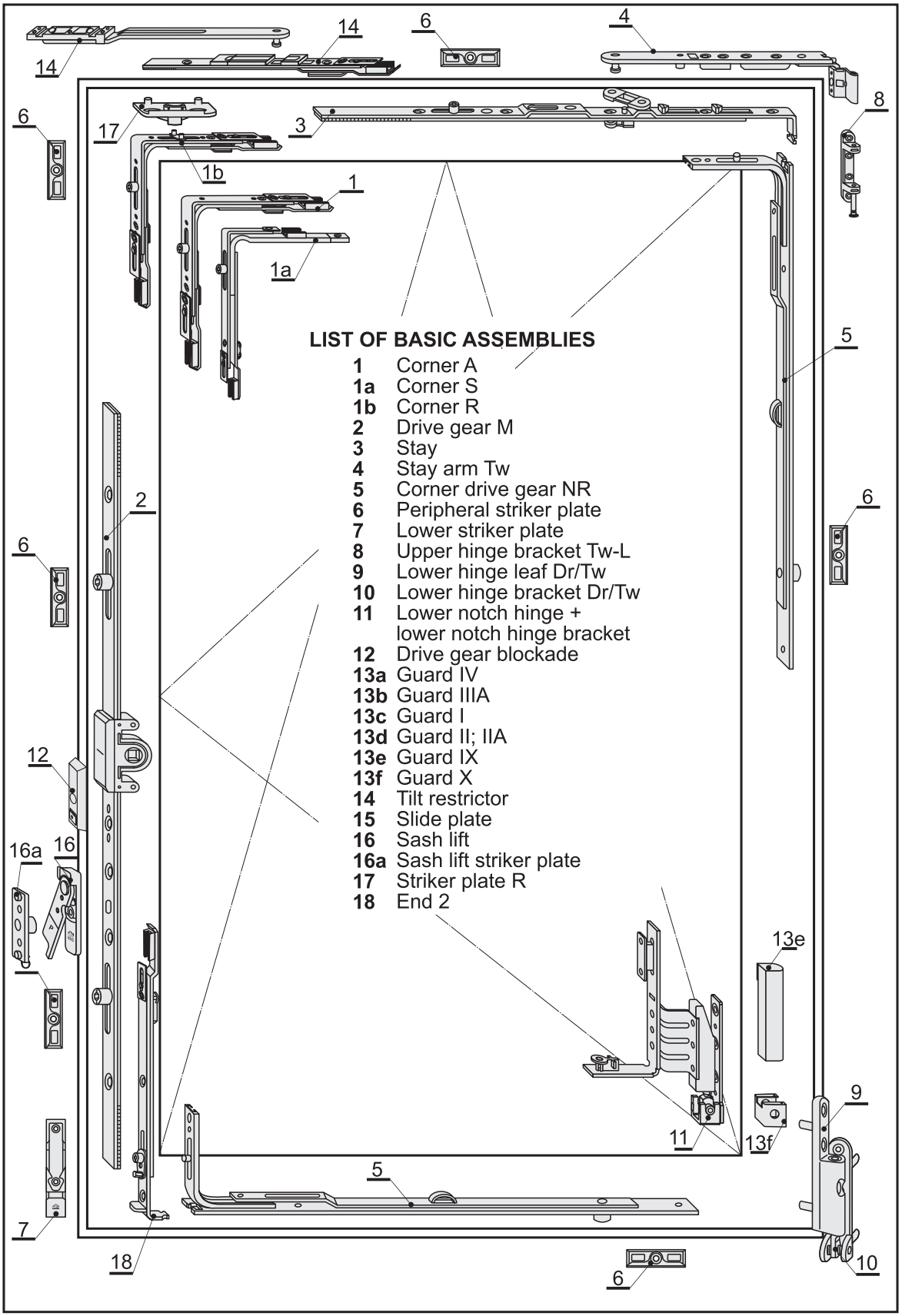


LIST OF BASIC SUBASSEMBLIES

1	Corner hinge leaf S5 (L/P)
1a	Bearing guard IVA
2	Upper hinge bracket S5 (L/P)
2a	Bracket guard IIIB
3	Lower hinge bracket S5 (L/P)
3a	Guard X A
4	Lower hinge leaf S5 (L or P)
4a	Guard for the body IXA (L or P)
4b	Block
5	Middle hinge leaf S5

Other elements of the hardware like in ROMB hardware; max weight of the sash up to100 kg

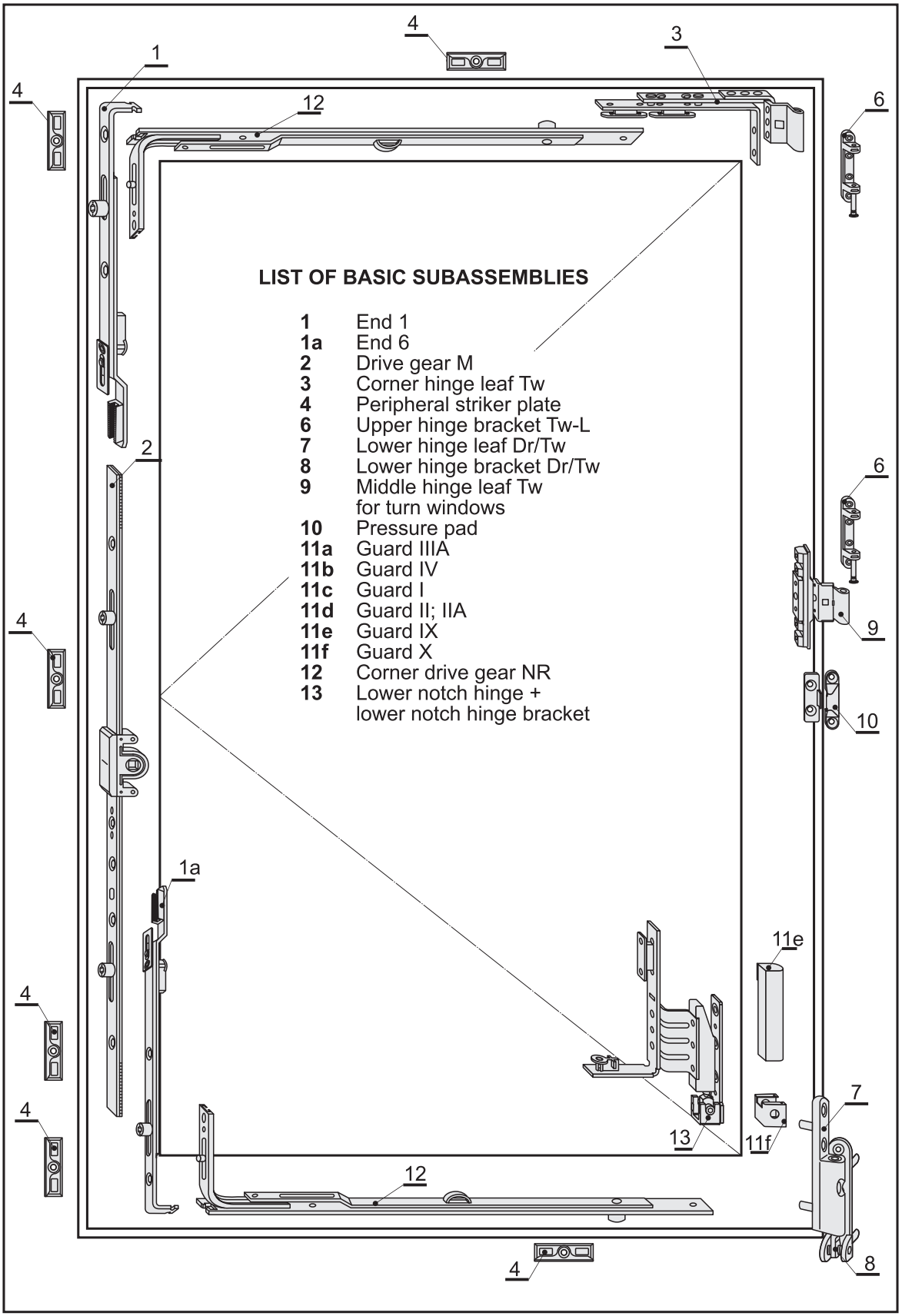
PERIPHERAL HARDWARE ROMB
FOR PVC-U WINDOWS Tw
TURN / TILT VERSION RU



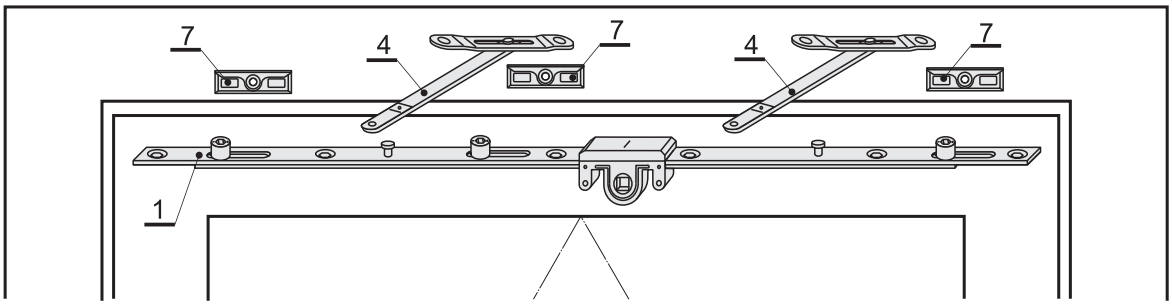
LIST OF BASIC ASSEMBLIES

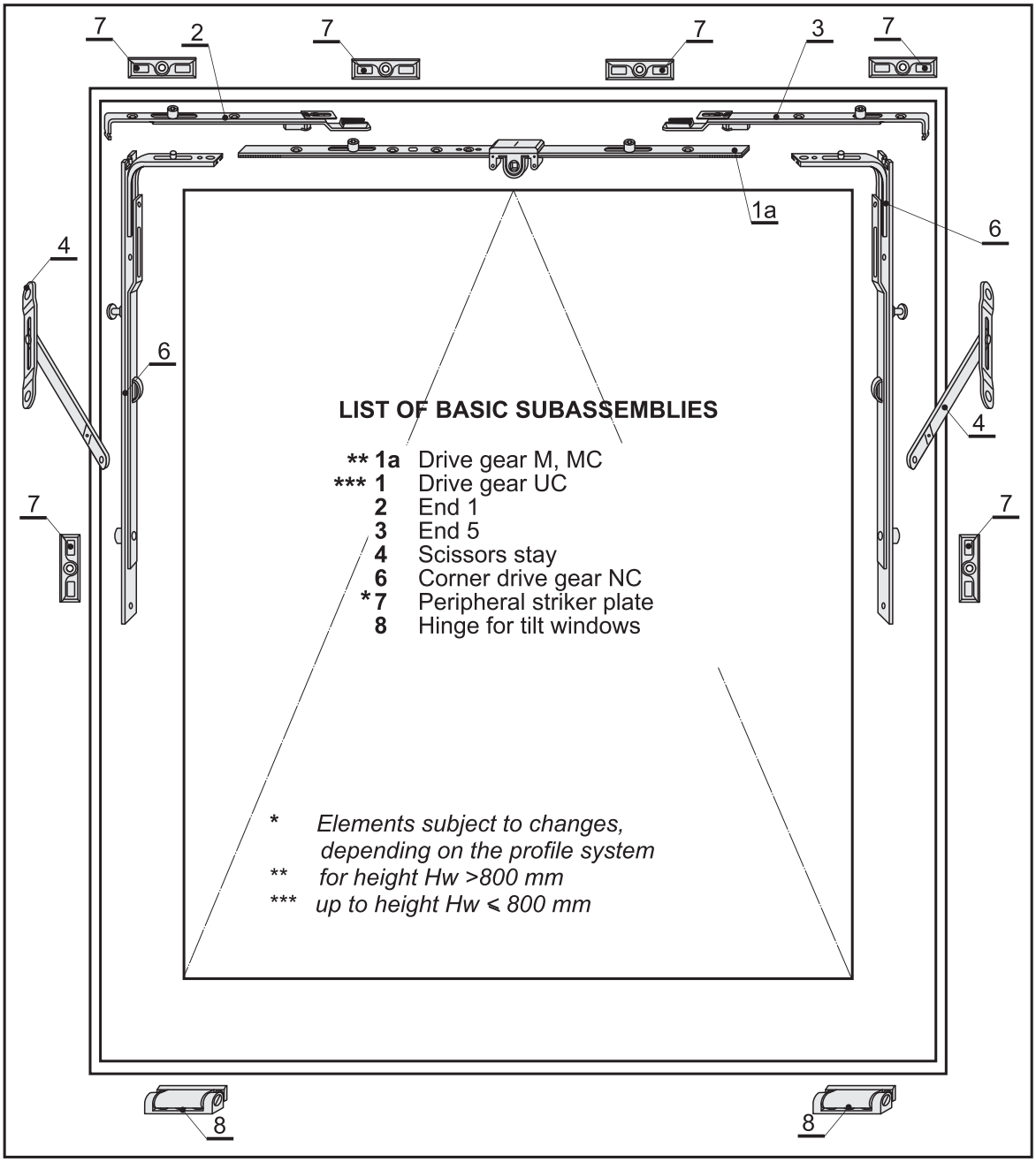
1	Corner A
1a	Corner S
1b	Corner R
2	Drive gear M
3	Stay
4	Stay arm Tw
5	Corner drive gear NR
6	Peripheral striker plate
7	Lower striker plate
8	Upper hinge bracket Tw-L
9	Lower hinge leaf Dr/Tw
10	Lower hinge bracket Dr/Tw
11	Lower notch hinge + lower notch hinge bracket
12	Drive gear blockade
13a	Guard IV
13b	Guard IIIA
13c	Guard I
13d	Guard II; IIA
13e	Guard IX
13f	Guard X
14	Tilt restrictor
15	Slide plate
16	Sash lift
16a	Sash lift striker plate
17	Striker plate R
18	End 2

PERIPHERAL HARDWARE ROMB
FOR PVC-U WINDOWS Tw
TURN VERSION R



PERIPHERAL HARDWARE ROMB
FOR PVC-U WINDOWS Tw
TILT VERSION U



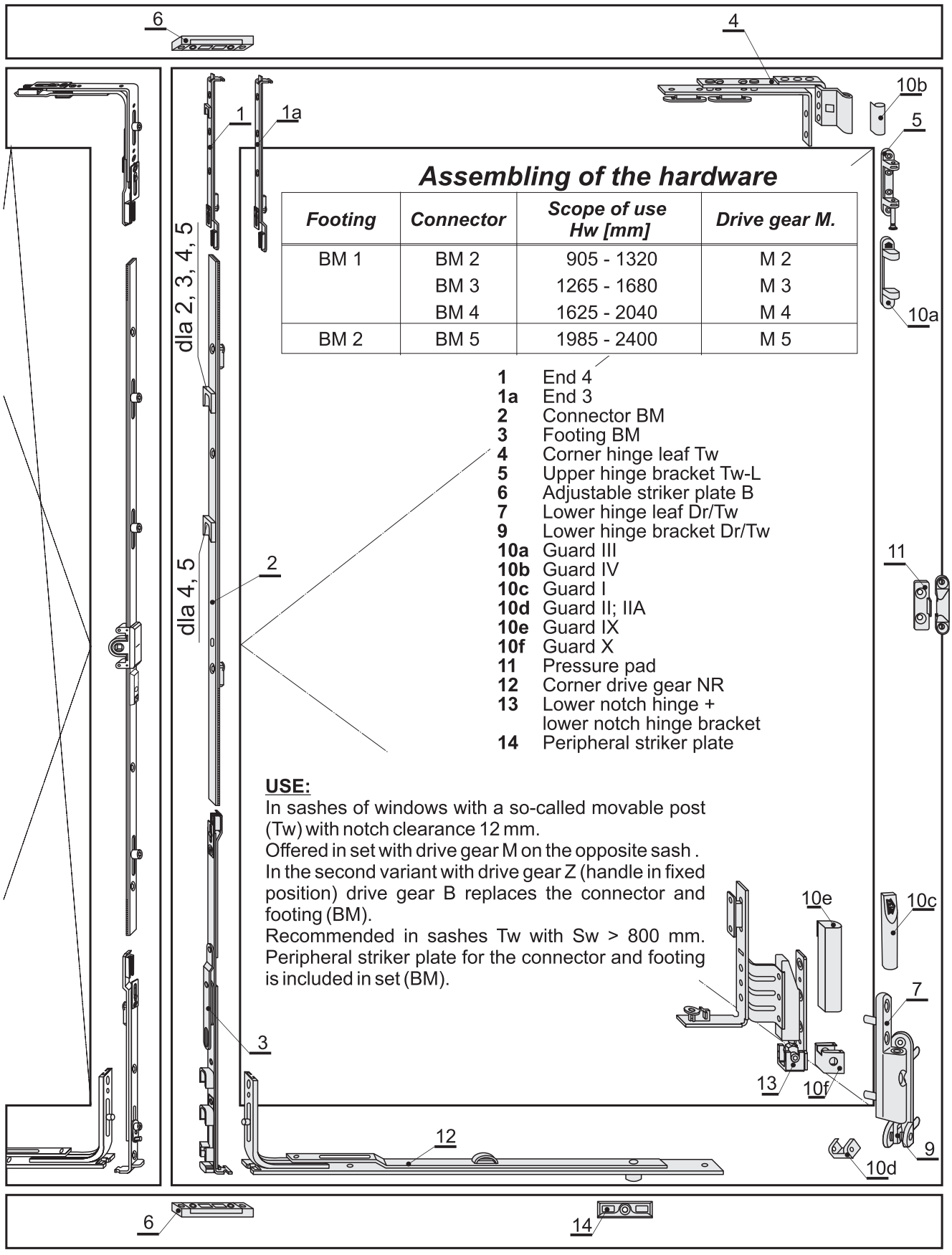


LIST OF BASIC SUBASSEMBLIES

**	**1a**	Drive gear M, MC
***	**1**	Drive gear UC
	2	End 1
	3	End 5
	4	Scissors stay
	6	Corner drive gear NC
*	**7**	Peripheral striker plate
	8	Hinge for tilt windows

* *Elements subject to changes, depending on the profile system*
** *for height Hw >800 mm*
*** *up to height Hw ⩽ 800 mm*

VERSION WITH HANDLE IN CENTRAL POSITION



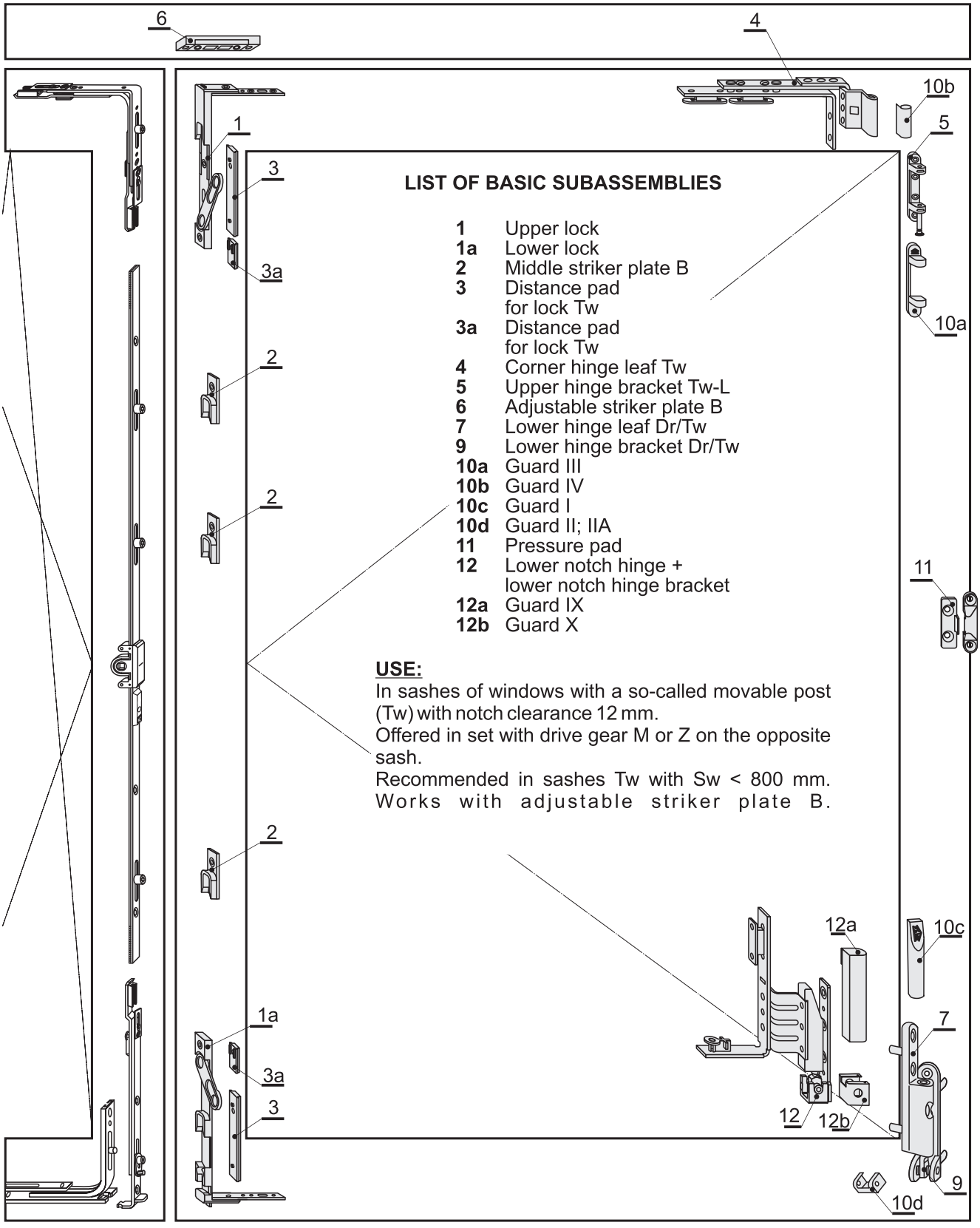
Assembling of the hardware

Footing	*Connector*	*Scope of use Hw [mm]*	*Drive gear M.*
BM 1	BM 2	905 - 1320	M 2
	BM 3	1265 - 1680	M 3
	BM 4	1625 - 2040	M 4
BM 2	BM 5	1985 - 2400	M 5

1 End 4
1a End 3
2 Connector BM
3 Footing BM
4 Corner hinge leaf Tw
5 Upper hinge bracket Tw-L
6 Adjustable striker plate B
7 Lower hinge leaf Dr/Tw
9 Lower hinge bracket Dr/Tw
10a Guard III
10b Guard IV
10c Guard I
10d Guard II; IIA
10e Guard IX
10f Guard X
11 Pressure pad
12 Corner drive gear NR
13 Lower notch hinge + lower notch hinge bracket
14 Peripheral striker plate

USE:
In sashes of windows with a so-called movable post (Tw) with notch clearance 12 mm.
Offered in set with drive gear M on the opposite sash .
In the second variant with drive gear Z (handle in fixed position) drive gear B replaces the connector and footing (BM).
Recommended in sashes Tw with Sw > 800 mm.
Peripheral striker plate for the connector and footing is included in set (BM).

VERSION WITH LOCKS

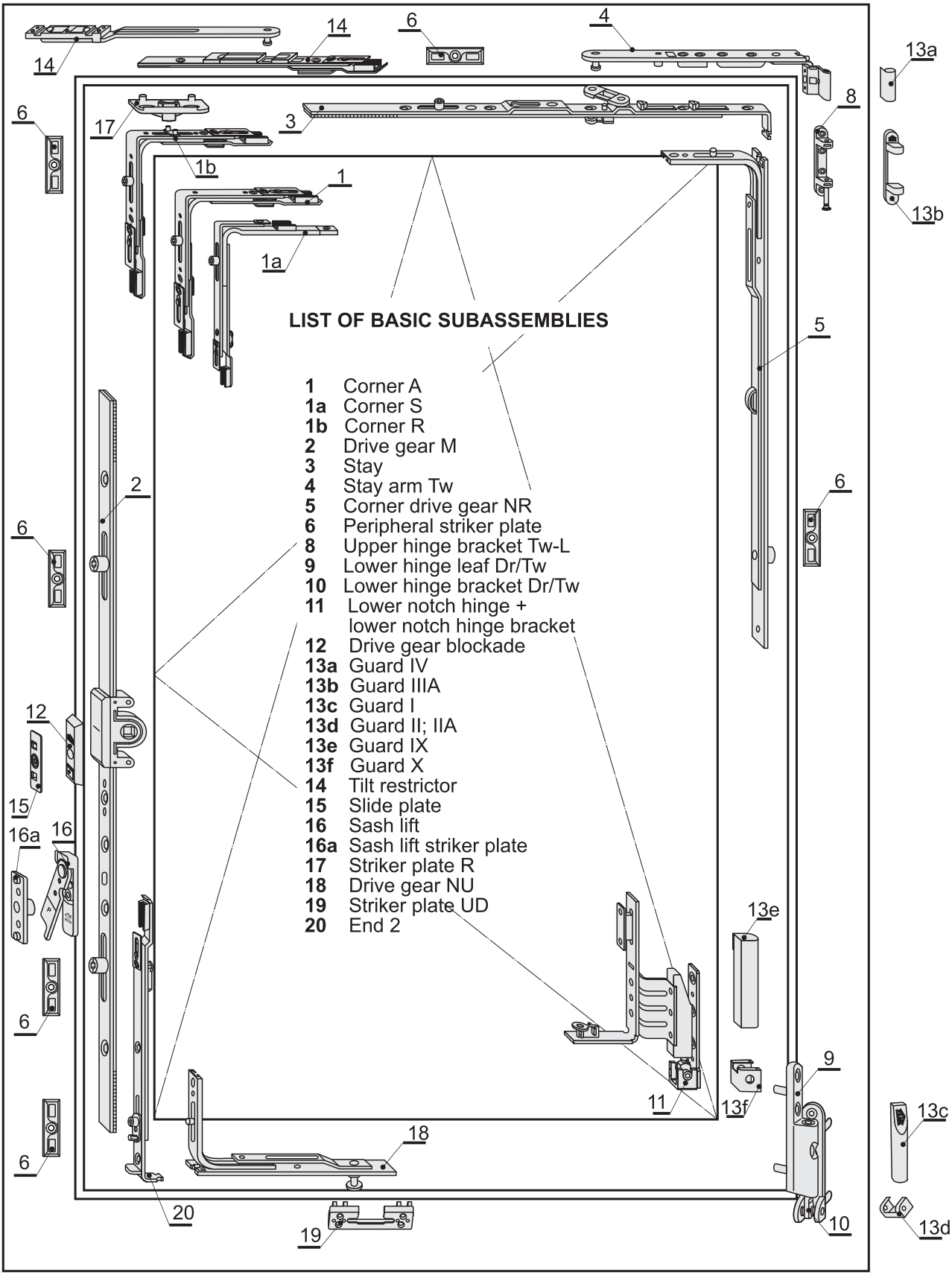


LIST OF BASIC SUBASSEMBLIES

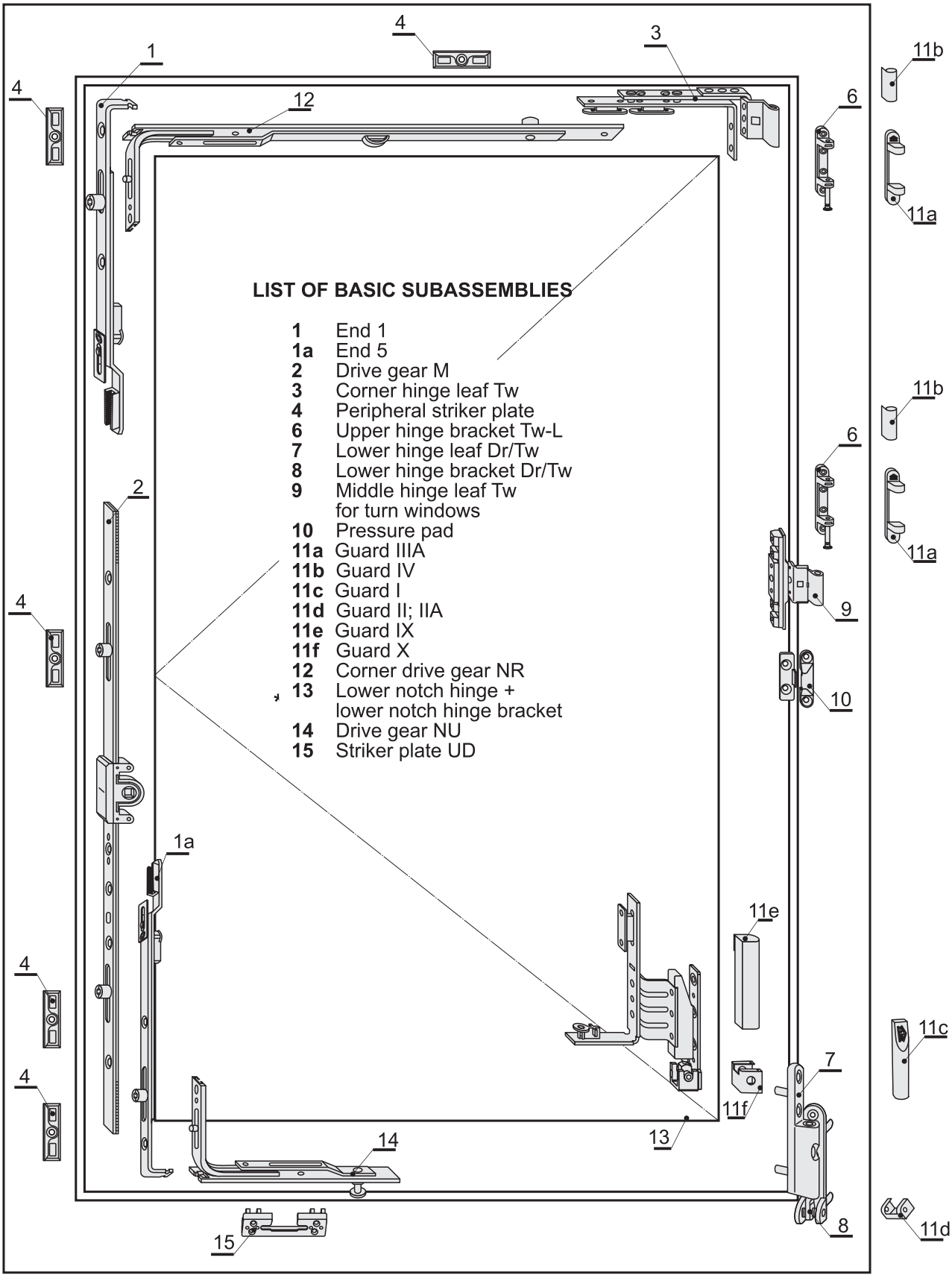
1 Upper lock
1a Lower lock
2 Middle striker plate B
3 Distance pad for lock Tw
3a Distance pad for lock Tw
4 Corner hinge leaf Tw
5 Upper hinge bracket Tw-L
6 Adjustable striker plate B
7 Lower hinge leaf Dr/Tw
9 Lower hinge bracket Dr/Tw
10a Guard III
10b Guard IV
10c Guard I
10d Guard II; IIA
11 Pressure pad
12 Lower notch hinge + lower notch hinge bracket
12a Guard IX
12b Guard X

USE:
In sashes of windows with a so-called movable post (Tw) with notch clearance 12 mm.
Offered in set with drive gear M or Z on the opposite sash.
Recommended in sashes Tw with Sw < 800 mm.
Works with adjustable striker plate B.

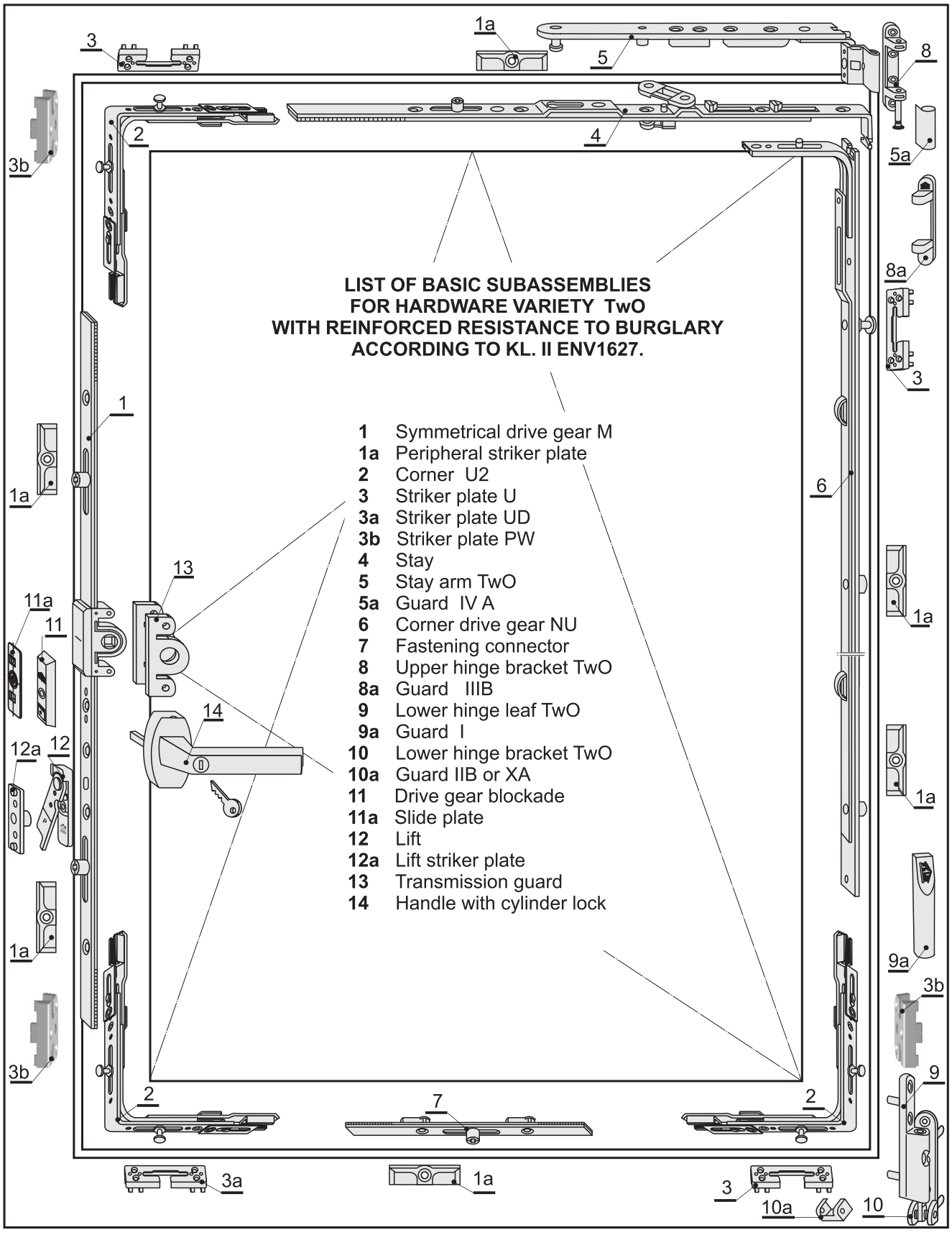
PERIPHERAL HARDWARE ROMB 2000
FOR PVC-U WINDOWS Tw
TURN / TILT VERSION RU



PERIPHERAL HARDWARE ROMB 2000
FOR PVC-U WINDOWS Tw
TURN VERSION R



PERIPHERAL HARDWARE ROMB 3000
FOR PCV-U WINDOWS Tw
VERSION RU WITH DRIVE GEAR M



LIST OF BASIC SUBASSEMBLIES FOR HARDWARE VARIETY TwO WITH REINFORCED RESISTANCE TO BURGLARY ACCORDING TO KL. II ENV1627.

1	Symmetrical drive gear M
1a	Peripheral striker plate
2	Corner U2
3	Striker plate U
3a	Striker plate UD
3b	Striker plate PW
4	Stay
5	Stay arm TwO
5a	Guard IV A
6	Corner drive gear NU
7	Fastening connector
8	Upper hinge bracket TwO
8a	Guard IIIB
9	Lower hinge leaf TwO
9a	Guard I
10	Lower hinge bracket TwO
10a	Guard IIB or XA
11	Drive gear blockade
11a	Slide plate
12	Lift
12a	Lift striker plate
13	Transmission guard
14	Handle with cylinder lock

PERIPHERAL HARDWARE ROMB TwO
GENERAL INFORMATION

PERIPHERAL HARDWARE ROMB TwO is used for closing, turning (opening) and tilting sashes of PVC-U windows. Operating functions are performed with handle that can be used in 4 or 8 positions, depending on the needs. Particular elements of the hardware are fitted in window and frame stiles. The **ROMB TwO** hardware's characteristic feature is flushing of its hinges with window sash edges.

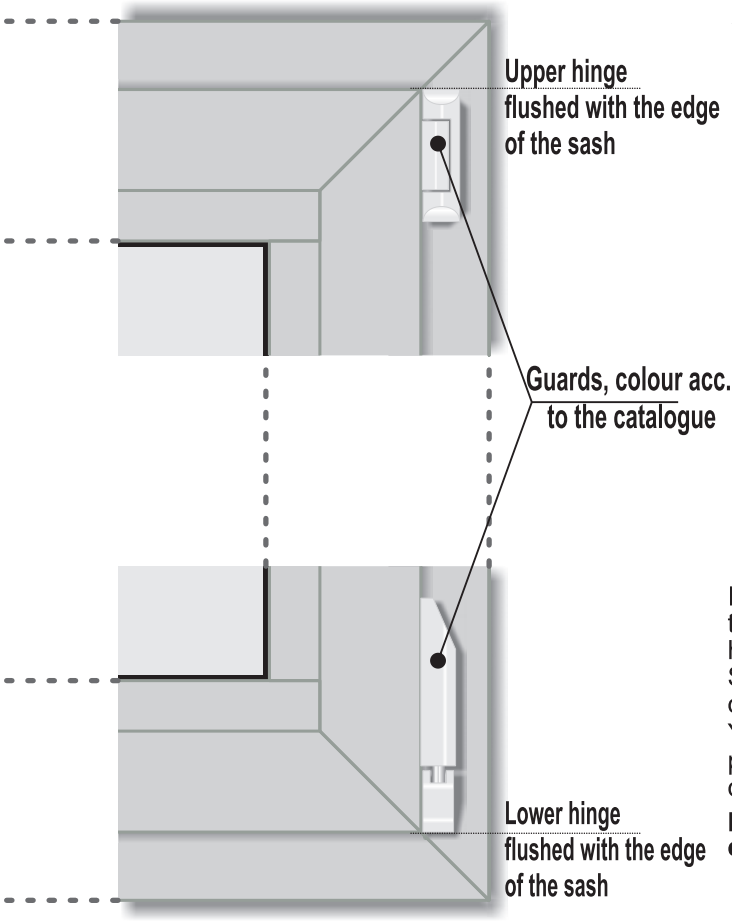
TECHNICAL DATA:

Max weight of sash..... 100 kg
Groove (hardware) width..... 16 mm
Distance from handle axis to front..... 15 mm (7,5 mm)
Deadbolt height from front..... 8 mm
Deadbolt throw..... 2×17 mm
Spacing of holes for screws in the handle..... 43 mm
Notch clearance..... 12 mm

NOTE: dependance Sw / Hw < 1,5 should be observed

The hardware features a blockade eliminating the possibility of displacement of the handle into "turn" position when the sash is tilted (blockade in stay). The construction of the hardware enables to fit a drive gear blockade that prevents moving the hardware from "turned" to "tilted" position while the sash is turned.
NOTE:
For window sashes weighing more than 60 kg a sash lift should be used. **When drive gears M0, M1, Z0, Z1, Z2 for Hw < 650 mm are used a lower (notch) hinge bracket is recommended**
Catalogue No **101-529-000.**

Peripheral hardware
ROMB - TwO



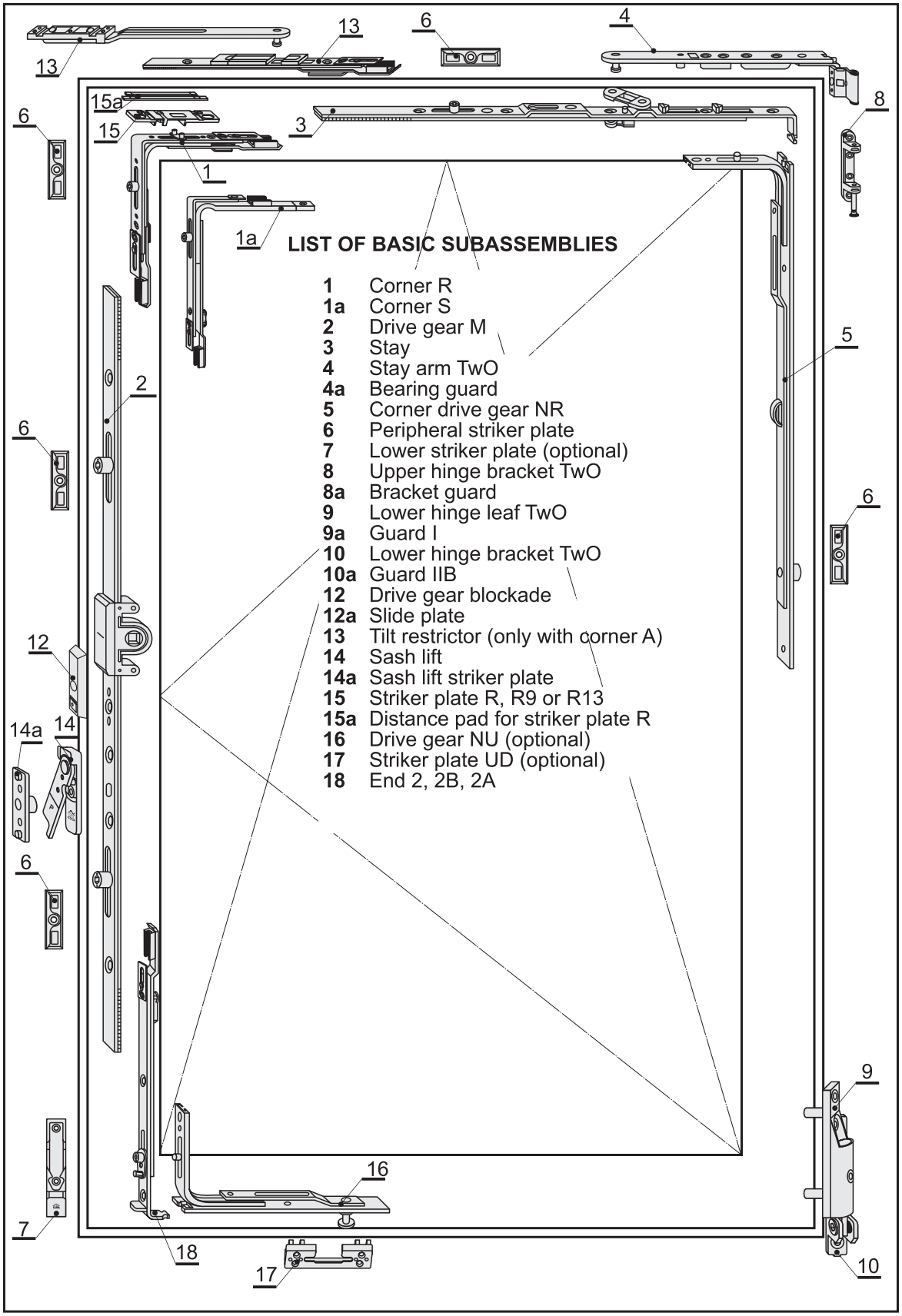
The peripheral hardware **ROMB TwO** can be used for PVC-U windows with a movable post, where it serves to close and turn window sashes.
Operating functions are performed with a lever.
The hardware is offered in sets:
- drive gear B in windows with drive gear Z
- footing BM + connector BM with drive gear M
- supplementary version (with locks)

TECHNICAL DATA:

Max weight of sash.....100 kg
Groove (hardware) width..... 16 mm
Locking slider throw..... 17 mm
Lock height from front... ..... 8 mm
Notch clearance..... 12 mm

In order to facilitate selecting and assembling of the hardware, we recommend using OKNO 1.0 hardware selection computer programme (or Stolcad hardware selection programme with an overlay for ROMB hardware).
Your comments on this catalogue and our products may be directed to our marketing department:
phone: +48 67 265 04 16
e-mail: romb@gk-kety.com.pl

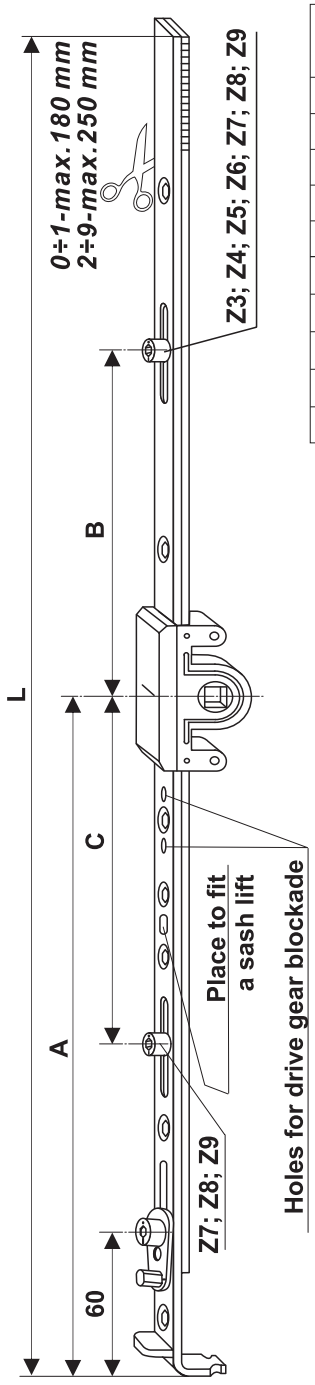
PERIPHERAL HARDWARE ROMB TwO
FOR PVC-U WINDOWS Tw
TURN / TILT VERSION RU



LIST OF BASIC SUBASSEMBLIES

1	Corner R
1a	Corner S
2	Drive gear M
3	Stay
4	Stay arm TwO
4a	Bearing guard
5	Corner drive gear NR
6	Peripheral striker plate
7	Lower striker plate (optional)
8	Upper hinge bracket TwO
8a	Bracket guard
9	Lower hinge leaf TwO
9a	Guard I
10	Lower hinge bracket TwO
10a	Guard IIB
12	Drive gear blockade
12a	Slide plate
13	Tilt restrictor (only with corner A)
14	Sash lift
14a	Sash lift striker plate
15	Striker plate R, R9 or R13
15a	Distance pad for striker plate R
16	Drive gear NU (optional)
17	Striker plate UD (optional)
18	End 2, 2B, 2A

DRIVE GEAR Z



Subassembly	*Catalogue number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*
Drive gear Z 0	**102-099-000**	360 - 540	380	115		
Drive gear Z 1	**102-061-000**	420 - 600	440	172		
Drive gear Z 2	**102-152-000**	590 - 840	680	300		
Drive gear Z 3	**102-153-000**	801 - 1050	890	460	109	
Drive gear Z 4	**102-154-000**	1001 - 1250	1090	560	109	
Drive gear Z 5	**102-155-000**	1251 - 1500	1340	660	109	
Drive gear Z 6	**102-156-000**	1501 - 1750	1590	660	109	
Drive gear Z 7	**102-157-000**	1751 - 2000	1840	1050	410	290
Drive gear Z 8	**102-158-000**	1951 - 2200	2040	1050	410	290
Drive gear Z 9	**102-159-000**	2151 - 2400	2240	1050	410	290

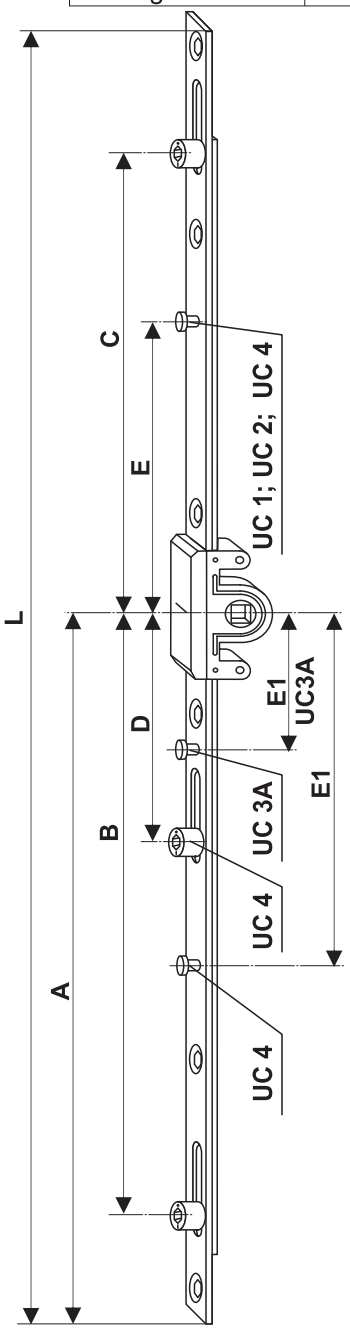
USE:
In sashes of windows **R** and **RU** (Dr and Tw) with handle in fixed position for drive gear in specified size.
In windows with a movable post drive gear Z works with drive gear B.

MARKING:
L - total length of drive gear
A - height of handle position

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Z0	box	470	85	50	10	2,5
	pallet	1200	800		1600	
Z1	box	470	85	50	10	2,7
	pallet	1200	800		1600	
Z2	box	800	85	50	10	3,8
	pallet	1230	800		1200	
Z3	box	930	85	50	10	4,8
	pallet	1200	800		800	
Z4	box	1230	85	50	10	5,8
	pallet	1200	800		800	
Z5	box	1420	85	50	10	7,8
	pallet	1600	800		800	
Z6	box	1600	85	50	10	8,4
	pallet	1600	800		800	
Z7	box	1870	85	50	10	9,4
	pallet	2200	800		800	
Z8	box	2100	85	50	10	10,4
	pallet	2200	800		800	
Z9	box	2250	85	50	10	11
	pallet	2250	800		800	

Subassembly	Catalogue number	Scope of use Sw [mm]	L [mm	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	E1 [mm]
Drive gear UC1	**102-057-000**	470 - 740	432	216	168	168		70	
Drive gear UC2	**102-058-000**	741 - 1040	696	348	306	306		70	
Drive gear UC3A	**102-161-000**	1041 - 1340	1002	501	459	459	118		40
Drive gear UC4	**102-060-000**	1341 - 1700	1308	654	612	612	118	354	354



Method of fitting for UC1 and UC2

Method of fitting for UC3A

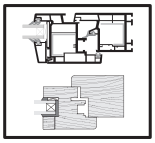
Method of fitting for UC4

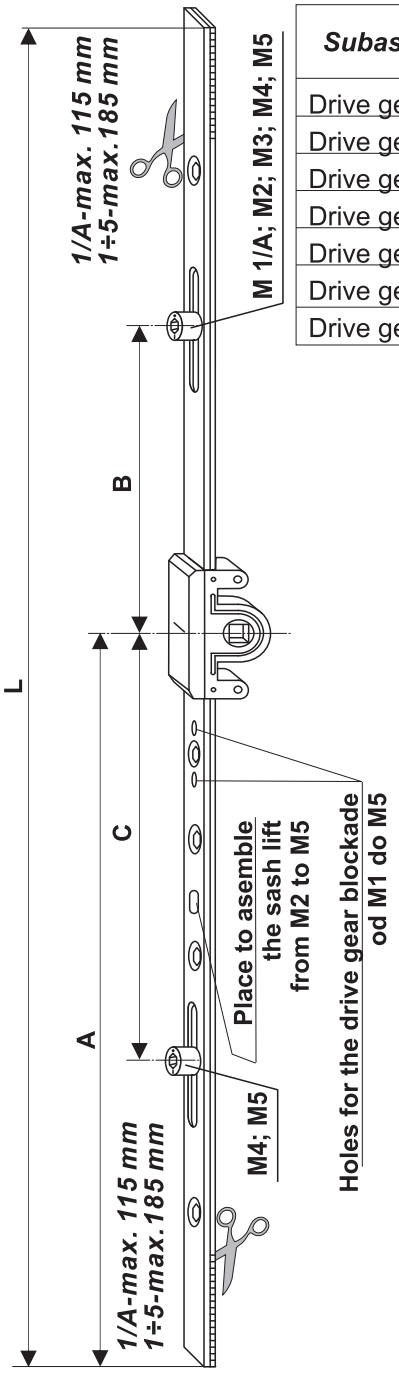
USE:
in sashes of windows **U** (Dr and Tw) with scissors stay.
Recommended in Dr sashes with Hw < 1000 mm, Tw with Hw < 800 mm.
MARKING:
L - total length of drive gear

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weght [kg]
UC1	box	470	85	50	10	2,70
	pallet	1200	800		1600	
UC2	box	800	85	50	10	4,00
	pallet	1200	800		1200	
UC3A	box	1100	85	50	10	5,54
	pallet	1200	800		800	
UC4	box	1420	85	50	10	7,15
	pallet	1600	800		800	

DRIVE GEAR M





Subassembly	*Catalogue number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*
Drive gear M 0	**102-145-000**	505 - 735	415	207,5		
Drive gear M 1	**102-146-000**	610 - 980	660	330		
Drive gear M 1/A	**102-269-000**	750 - 980	660	330	109	
Drive gear M 2	**102-147-000**	950 - 1320	1000	500	109	
Drive gear M 3	**102-148-000**	1310 - 1680	1360	680	109	
Drive gear M 4	**102-149-000**	1670 - 2040	1720	860	350	350
Drive gear M 5	**102-150-000**	2030 - 2400	2080	1040	350	350

USE:
In sashes of windows **R, RU** and **U** (Dr and Tw) where it is necessary to keep the central position of the handle.

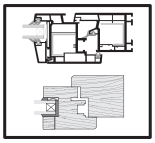
MARKING:
L - total length of drive gear

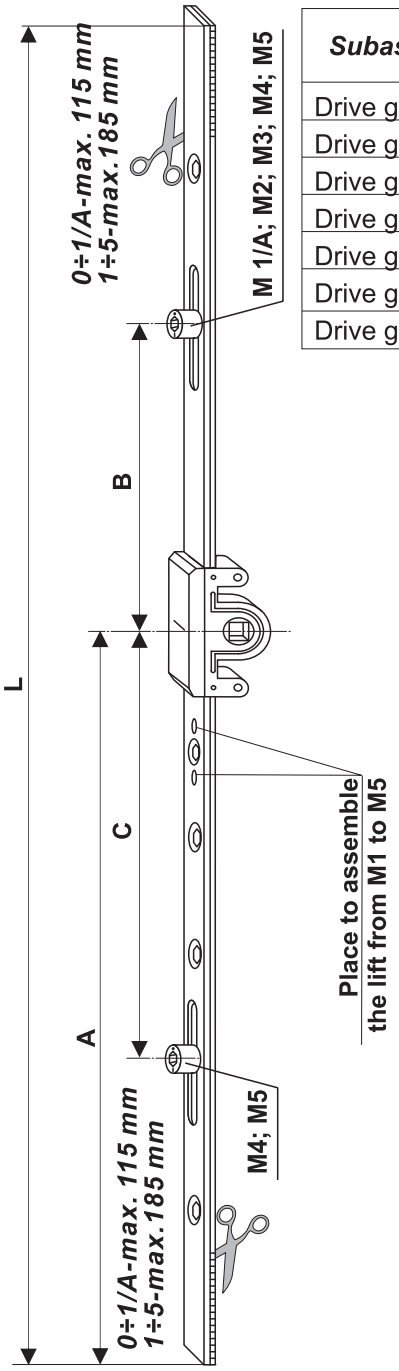
NOTE:
In windows with a movable post drive gear M works with footing BM and connector BM

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
M0	box	660	85	50	10	3,50
	pallet	1200	800		1600	
M1	box	660	85	50	10	3,80
	pallet	1200	800		1200	
M1/A	box	660	85	50	10	4,10
	pallet	1200	800		1200	
M2	box	1100	85	50	10	5,26
	pallet	1200	800		800	
M3	box	1420	85	50	10	7,06
	pallet	1630	800		800	
M4	box	1730	85	50	10	8,89
	pallet	2200	800		800	
M5		2100	85	50	10	10,50
		2200	800		800	

DRIVE GEAR M
FOR THE LIFT WITH BLOCKADE





Subassembly	*Cat. number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*
Drive gear M 0	**102-145-000**	520 - 750	430	215		
Drive gear M 1	**102-301-000**	660 - 1030	710	355		
Drive gear M 1/A	**102-306-000**	750 - 980	660	330	109	
Drive gear M 2	**102-302-000**	950 - 1320	1000	500	109	
Drive gear M 3	**102-303-000**	1310 - 1680	1360	680	109	
Drive gear M 4	**102-304-000**	1670 - 2040	1720	860	350	350
Drive gear M 5	**102-305-000**	2030 - 2400	2080	1040	350	350

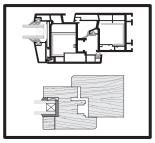
USE:
In sashes of windows **R, RU** and **U** (Dr and Tw) where it is necessary to keep the central position of the handle.

MARKING:
L - total length of drive gear

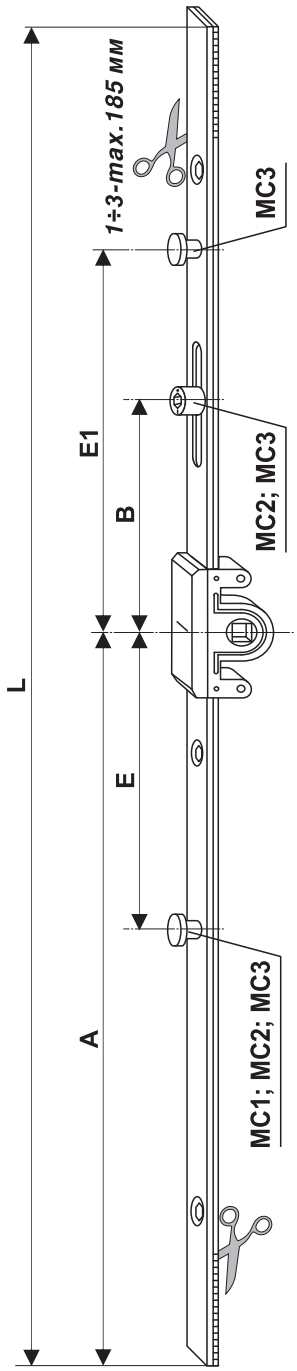
NOTE:
In windows with a movable post the drive gear **M**, works with footing **BM** and connector **BM**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
M0	box	660	85	50	10	3,50
	pallet	1200	800		1600	
M1	box	660	85	50	10	4,00
	pallet	1200	800		1200	
M1/A	box	660	85	50	10	4,10
	pallet	1200	800		1200	
M2	box	1100	85	50	10	5,26
	pallet	1200	800		800	
M3	box	1420	85	50	10	7,06
	pallet	1630	800		800	
M4	box	1730	85	50	10	8,89
	pallet	2200	800		800	
M5		2100	85	50	10	10,50
		2200	800		800	



Subassembly	*Catalogue number*	*Scope of use Sw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*E [mm]*	*E1 [mm]*
Drive gear MC 1	**102-266-000**	610 - 980	660	330		57	
Drive gear MC 2	**102-267-000**	950 - 1320	1000	500	109	57	
Drive gear MC 3	**102-268-000**	1310 - 1680	1360	680	109	231	231



Method of fitting for MC1

Method of fitting for MC2

Method of fitting for MC3

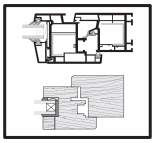
USE:
In sashes of windows **U** (Dr and Tw), works with scissors stay and with ends.

MARKING:
L - total length of drive gear.

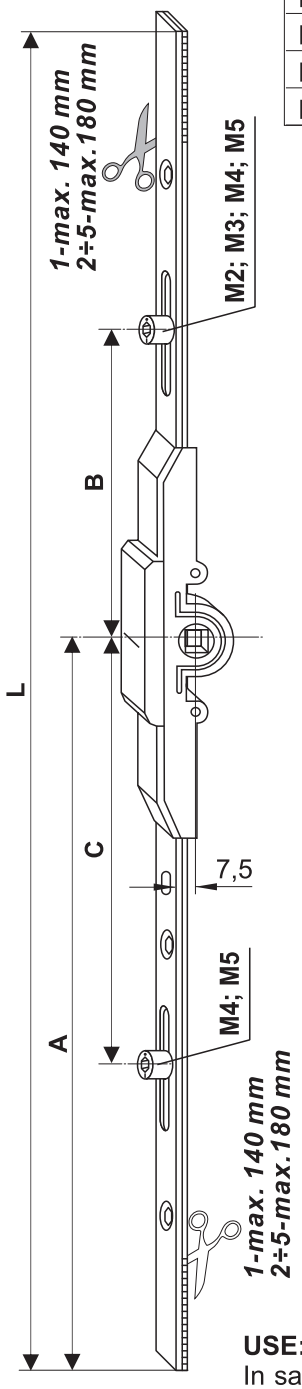
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
MC 1	box	660	85	50	10	3,80
	pallet	1200	800		1200	
MC 2	box	1100	85	50	10	5,30
	pallet	1200	800		800	
MC 3	box	1420	85	50	10	7,10
	pallet	1630	800		80	

SYMMETRICAL DRIVE GEAR M 7,5



Subassembly	*Catalogue number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*
Drive gear 7,5 M 1	**102-105-000**	680 - 960	640	320		
Drive gear 7,5 M 2	**102-106-000**	960 - 1320	1000	500	160	
Drive gear 7,5 M 3	**102-107-000**	1320 - 1680	1360	680	160	
Drive gear 7,5 M 4	**102-108-000**	1680 - 2040	1720	860	360	360
Drive gear 7,5 M 5	**102-109-000**	2040 - 2400	2080	1040	360	360



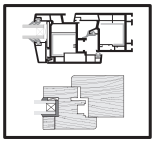
USE:
In sashes of windows **R, RU** and **U** (Dr and Tw) made of special profiles (so-called ”economical”) where it is necessary to keep the central position of the handle.

MARKING:
L - total length of drive dear

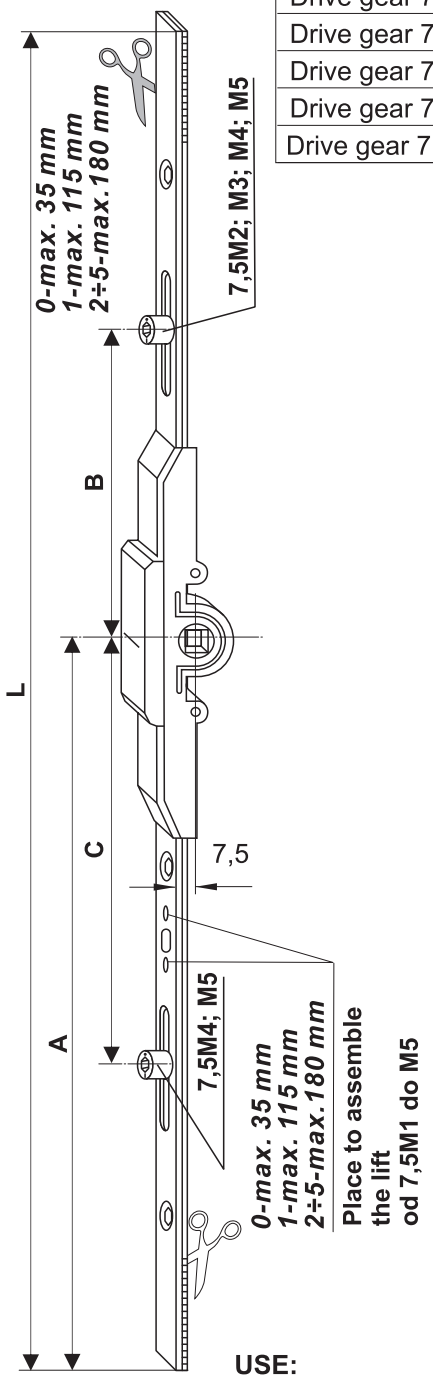
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
7,5 M 1	box	660	85	50	10	3,80
	pallet	1200	800		1200	
7,5 M 2	box	1100	85	50	10	5,30
	pallet	1200	800		800	
7,5 M 3	box	1420	85	50	10	6,90
	pallet	1630	800		800	
7,5 M 4	box	1730	85	50	10	8,76
	pallet	2200	800		800	
7,5 M 5	box	2100	85	50	10	10,83
	pallet	2200	800		800	

SYMMETRICAL DRIVE GEAR 7,5 M
FOR THE LIFT WITH BLOCKADE



Subassembly	*Cat. number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*
Drive gear 7,5 M. 0	**102-330-000**	670 - 750	430	215		
Drive gear 7,5 M 1	**102-331-000**	750 - 980	660	330		
Drive gear 7,5 M 2	**102-332-000**	950 - 1320	1000	500	160	
Drive gear 7,5 M 3	**102-333-000**	1310 - 1680	1360	680	160	
Drive gear 7,5 M 4	**102-334-000**	1670 - 2040	1720	860	360	360
Drive gear 7,5 M. 5	**102-335-000**	2030 - 2400	2080	1040	360	360



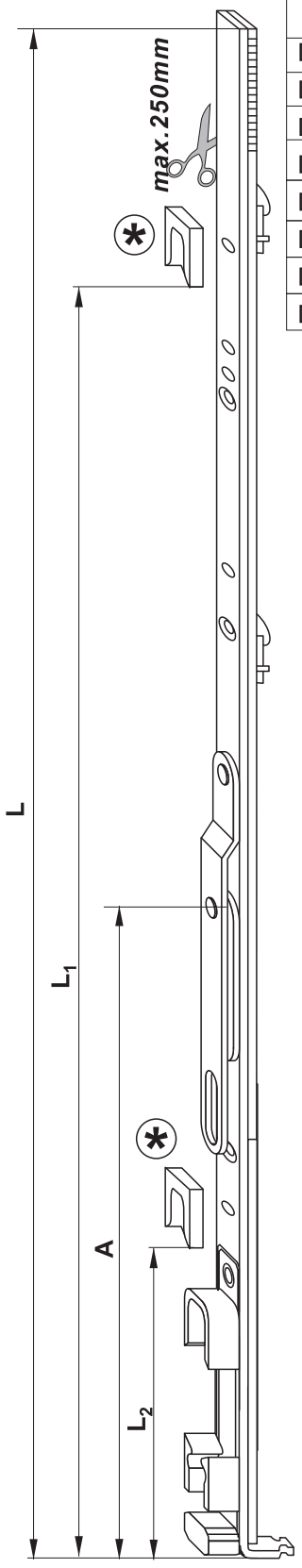
USE:
In sashes of windows **R, RU** and **U** (Dr and Tw) made of special profiles (so-called “economical”) where it is necessary to keep the central position of the handle.

MARKING:
L - total length of drive gear.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
7,5 M.. 0	box	660	85	50	10	3,50
	pallet	1200	800		1200	
7,5 M 1	box	660	85	50	10	3,80
	pallet	1200	800		1200	
7,5 M 2	box	1100	85	50	10	5,30
	pallet	1200	800		800	
7,5 M 3	box	1420	85	50	10	6,90
	pallet	1630	800		800	
7,5 M 4	box	1730	85	50	10	8,76
	pallet	2200	800		800	
7,5 M 5	box	2100	85	50	10	10,83
	pallet	2200	800		800	

ZASUWNICA B



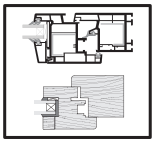
Subassembly	Catalogue number	Scope of use Hw [mm]	L [mm]	A [mm]	L_1 [mm]	L_2 [mm]	Peripheral striker plate (pcs)
Drive bolt B 2	**102-250-000**	590 - 840	680	177			1
Drive bolt B 3	**102-251-000**	801 - 1050	890	177	578		1
Drive bolt B 4	**102-252-000**	1001 - 1250	1090	177	678		1
Drive bolt B 5	**102-253-000**	1251 - 1500	1340	427	778		1
Drive bolt B 6	**102-254-000**	1501 - 1750	1590	427	778		1
Drive bolt B 7	**102-255-000**	1751 - 2000	1840	937	1469	769	2
Drive bolt B 8	**102-256-000**	1951 - 2200	2040	937	1469	769	2
Drive bolt B 9	**102-257-000**	2151 - 2400	2240	937	1469	769	2

USE:
In sashes of windows with a so-called movable post (Dr and Tw) with notch clearance 12 mm.
Offered in set with drive gear Z. Works with adjustable striker plate B and end 3 or end 4 transmitting drive to corner drive gear NR in the upper and lower part of the sash.
Recommended in sashes Dr with Sw>1000mm, Tw with Sw>800mm.

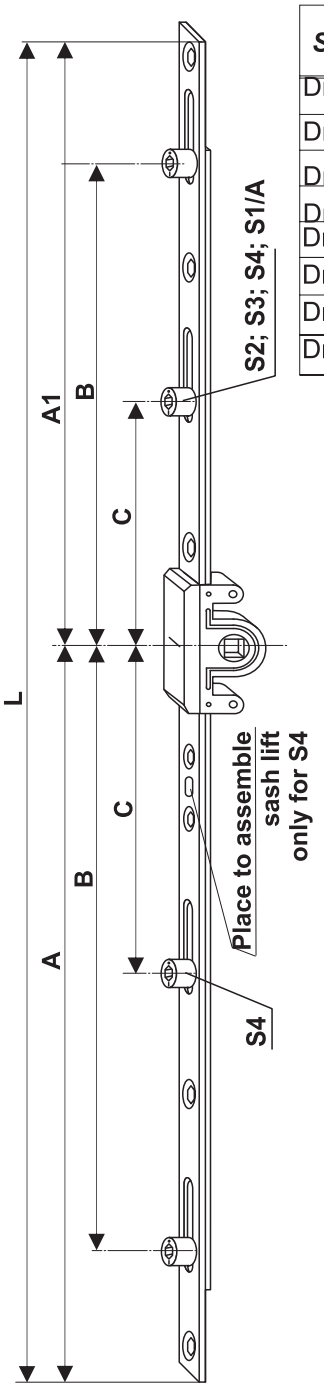
MARKING:
L -total length of drive gear
A- height of lever location
Peripheral striker plate - catalogue number **111-033-000** in set with drive gear.

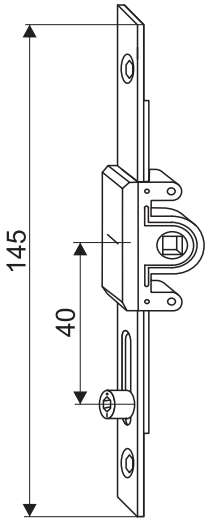
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
B2	box	800	85	50	10	3,6
	pallet	1230	800		1200	
B3	box	930	85	50	10	4,6
	pallet	1200	800		800	
B4	box	1230	85	50	10	5,6
	pallet	1200	800		800	
B5	box	1420	85	50	10	6,7
	pallet	1600	800		800	
B6	box	1600	85	50	10	7,8
	pallet	1600	800		800	
B7	box	1870	85	50	10	8,5
	pallet	2200	800		800	
B8	box	2100	85	50	10	9,7
	pallet	2200	800		800	
B9	box	2250	85	50	10	10,9
	pallet	2250	800		800	



Subassembly	*Catalogue number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*	*A1 [mm]*
Drive gear S 00	**102-202-000**	< 340	145				
Drive gear S 01	**102-110-000**	340 - 540	300	150	100		
Drive gear S 02	**102-111-000**	541 - 730	500	250	208		
Drive gear S 03	**102-112-000**	731 - 990	690	345	303		
Drive gear S1A	**102-203-000**	991 - 1290	950	465	433	100	485
Drive gear S2	**102-074-000**	1291 - 1490	1250	615	583	100	635
Drive gear S3	**102-075-000**	1491 - 2030	1450	715	683	100	735
Drive gear S4	**102-076-000**	2031 - 2400	1900	940	908	303	960





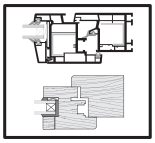
Drive gear **S00**

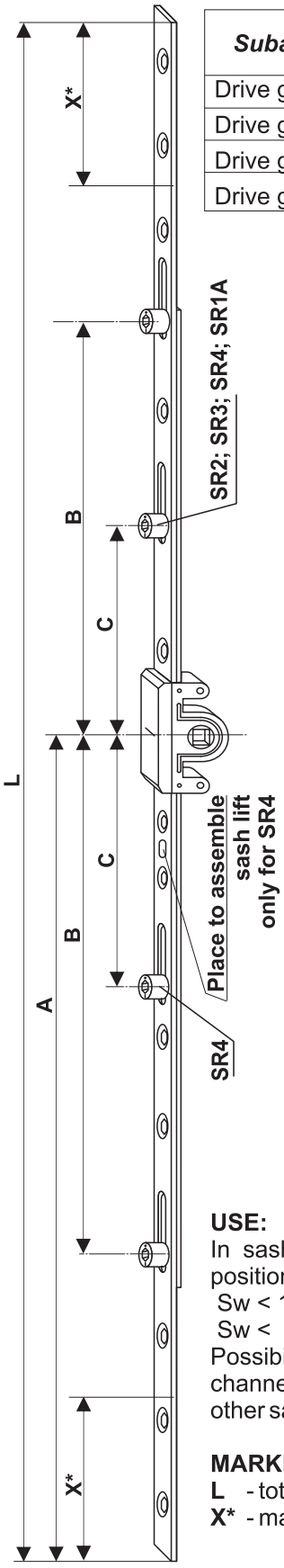
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
S 00	box	470	85	50	10	2,5
	pallet	1200	800		1600	
S 01	box	470	85	50	10	2,7
	pallet	1200	800		1600	
S 02	box	800	85	50	10	3,8
	pallet	1230	800		1200	
S 03	box	930	85	50	10	4,8
	pallet	1200	800		800	
S 1A	box	470	85	50	10	5,8
	pallet	1200	800		1600	
S 2	box	800	85	50	10	6,2
	pallet	1230	800		1600	
S 3	box	930	85	50	10	7,2
	pallet	1200	800		1200	
S 4	box	1230	85	50	10	9,3
	pallet	1200	800		800	

USE:
In sashes of windows **R** (Dr and Tw) with middle (central) position of the handle.
Scope of use: Dr for Sw < 1000 mm, Tw for Sw < 800 mm.

MARKING:
L - total length of drive gear





Subassembly	*Catalogue number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*B [mm]*	*C [mm]*	*X* [mm]*
Drive gear SR1A	**102-204-000**	991 - 1250	1250	625	433	100	150
Drive gear SR2	**102-171-000**	1251 - 1450	1450	725	583	100	100
Drive gear Sr3	**102-172-000**	1451 - 1900	1900	950	683	100	225
Drive gear SR4	**102-173-000**	1901 - 2400	2400	1200	908	303	250

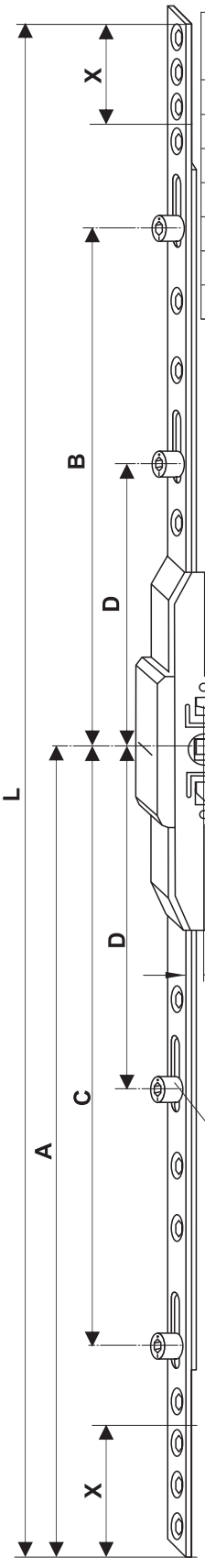
USE:
In sashes of windows **R** with middle (central) position of the handle.
Sw < 1000 mm (windows Dr)
Sw < 800 mm (windows Tw)
Possibility of total covering of the hardware channel and adjusting the handle axis toward the other sash (concerns typical windows).

MARKING:
L - total length of drive gear
X* - maximum length of cutting

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
SR1A	box	660	85	50	10	5,9
	pallet	1200	800		1200	
SR2	box	1100	85	50	10	6,5
	pallet	1200	800		800	
SR3	box	1420	85	50	10	8,7
	pallet	1630	800		800	
SR4	box	1730	85	50	10	10,7
	pallet	2200	800		800	

SYMMETRICAL DRIVE GEAR 7,5 SR



Subassembly	Catalogue number	Scope of use Hw [mm]	L [mm]	A [mm]	B [mm]	C [mm]	D [mm]	X [mm]
Drive gear 7,5 SR 01	102-218-000	340 - 540	540	270	100	135		95
Drive gear 7,5 SR 02	102-219-000	541 - 730	730	365	208	208		95
Drive gear 7,5 SR 03	102-220-000	731 - 990	990	495	303	303		130
Drive gear 7,5 SR 1/A	102-225-000	991 - 1290	1290	645	433	433	100	150
Drive gear 7,5 SR 2	102-222-000	1291 - 1490	1490	745	583	583	100	100
Drive gear 7,5 SR 3	102-223-000	1491 - 2030	2030	1015	683	683	100	270
Drive gear 7,5 SR 4	102-224-000	2031 - 2400	2400	1200	908	908	303	185

USE:
In sashes of windows **R** and **U** (Tw) in special profiles (so-called “economical”) where it is necessary to keep the central position of the handle.
No possibility of working with scissor stay. In windows **U** the scissors stay should be used from the side of the sash.

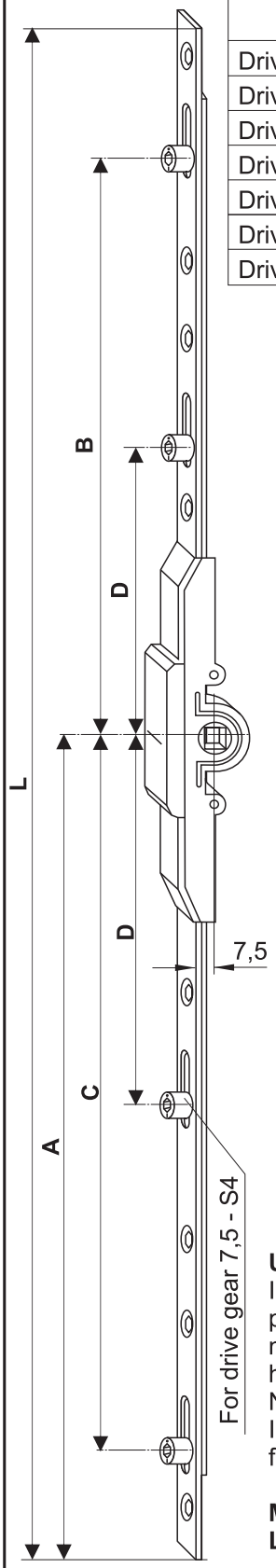
MARKING:
L - total length of drive gear
X - max. length of cutting

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
7,5 SR 01	box	660	85	50	10	5,4
	pallet	1200	800		1600	
7,5 SR 02	box	1100	85	50	10	6,9
	pallet	1200	800		1200	
7,5 SR 03	box	1100	85	50	10	7,9
	pallet	1200	800		800	
7,5 SR 1/A	box	1420	85	50	10	6,1
	pallet	1630	800		800	
7,5 SR 2	box	1730	85	50	10	6,7
	pallet	2200	800		800	
7,5 SR 3	box	2100	85	50	10	8,9
	pallet	2200	800		800	
7,5 SR 4	box	2400	85	50	10	10,9
	pallet	2400	800		800	

DRIVE GEAR 7,5 S

Subassembly	Catalogue number	Scope of use Hw [mm]	L [mm]	A [mm]	B [mm]	C [mm]	D [mm]
Drive gear 7,5 S 01	102-210-000	340 - 540	320	160	100	135	
Drive gear 7,5 S 02	102-211-000	541 - 730	500	250	208	208	
Drive gear 7,5 S 03	102-212-000	731 - 990	690	345	303	303	
Drive gear 7,5 S 1/A	102-217-000	991 - 1290	950	465	433	433	100
Drive gear 7,5 S 2	102-214-000	1291 - 1490	1250	615	583	583	100
Drive gear 7,5 S 3	102-215-000	1491 - 2030	1450	715	683	683	100
Drive gear 7,5 S 4	102-216-000	2031 - 2400	1900	940	908	908	303



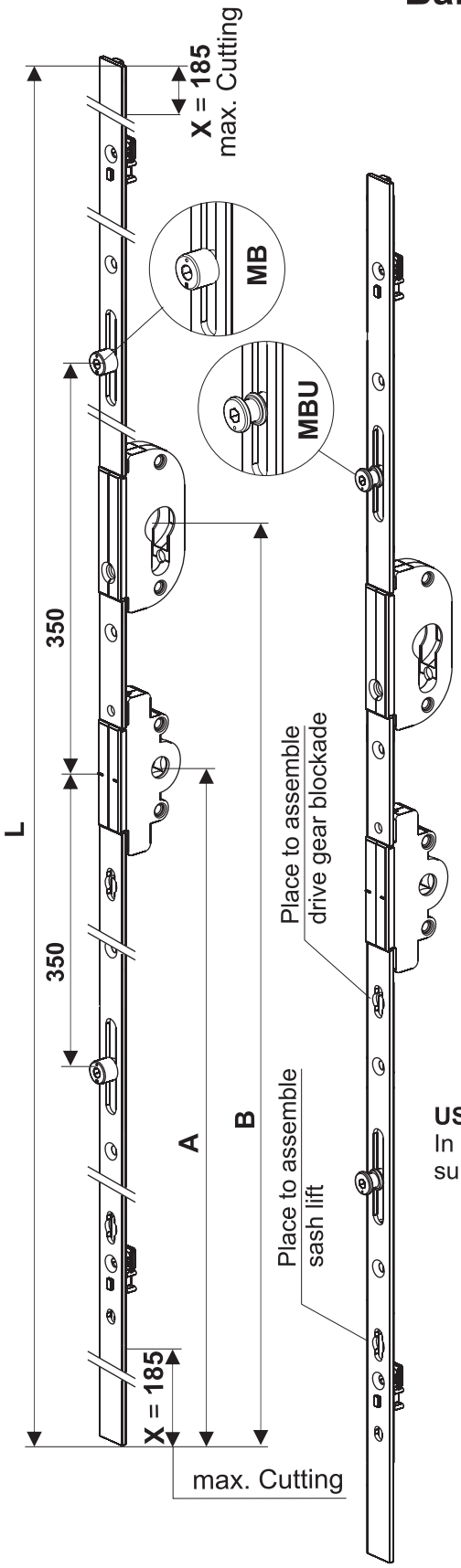
USE:
In sashes of windows **R** and **U** (Tw) in special profiles (so-called ”economical”) where it is necessary to keep the central position of the handle.
No possibility of working with scissors stay.
In windows **U** the scissors stay should be used from the side of the sash.

MARKING:
L - total length of drive gear

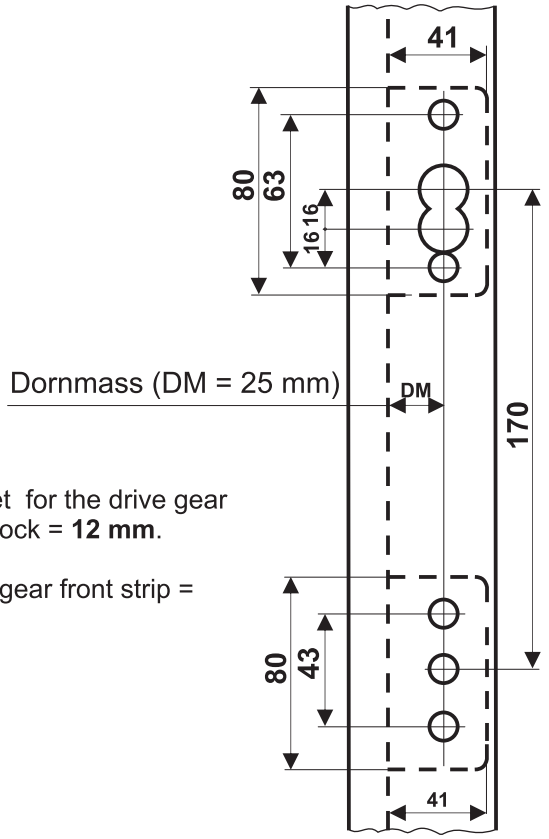
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
7,5 S 01	box	660	85	50	10	5,4
	pallet	1200	800		1600	
7,5 S 02	box	1100	85	50	10	6,9
	pallet	1200	800		1200	
7,5 S 03	box	1100	85	50	10	7,9
	pallet	1200	800		800	
7,5 S 1/A	box	1420	85	50	10	6,1
	pallet	1630	800		800	
7,5 S 2	box	1730	85	50	10	6,7
	pallet	2200	800		800	
7,5 S 3	box	2100	85	50	10	8,9
	pallet	2200	800		800	
7,5 S 4	box	2400	85	50	10	10,9
	pallet	2400	800		800	

Balcony drive gear MB



Subassembly	Catalogue number	Scope of use Hw [mm]	L [mm]	A [mm]	B [mm]
MB4	**102-299-000**	1670 - 2040	1720	860	1030
MB4U	**102-300-000**				
MB5	**102-274-000**	2030 - 2400	2080	1040	1210
MB5U	**102-275-000**				



Scheme for making holes.

NOTE:
Width of the socket for the drive gear transmission and lock = **12 mm**.

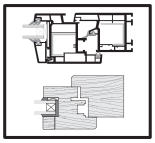
Width of the drive gear front strip = **16mm**.

USE:
In sashes of turn/tilt and turn balcony doors (**Dr** and **Tw**) as a basic subassembly transmitting drive to the other parts of the hardware.

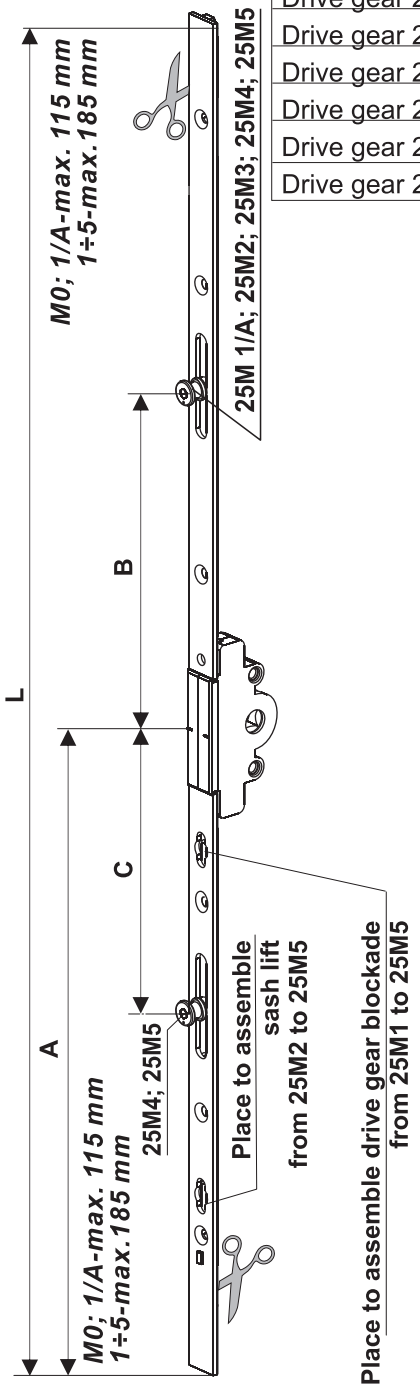
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
MB4	box	1730	85	50	10	9,80
	pallet	2200	800			
MB4U	box	1730	85	50	10	9,80
	pallet	2200	800			
MB5	box	2250	85	50	10	11,85
	pallet	2250	800			
MB5U	box	2250	85	50	10	11,85
	pallet	2250	800			

DRIVE GEAR 25M



Subassembly	Catalogue number	Scope of use Hw [mm]	L [mm]	A [mm]	B [mm]	C [mm]
Drive gear 25M 0	**102-292-000**	505 - 735	415	207,5		
Drive gear 25M 1	**102-293-000**	610 - 980	660	330		
Drive gear 25M 1/A	**102-298-000**	750 - 980	660	330	109	
Drive gear 25M 2	**102-294-000**	950 - 1320	1000	500	109	
Drive gear 25M 3	**102-295-000**	1310 - 1680	1360	680	109	
Drive gear 25M 4	**102-296-000**	1670 - 2040	1720	860	350	350
Drive gear 25M 5	**102-297-000**	2030 - 2400	2080	1040	350	350



USE:
In sashes of windows **R, RU** and **U** (Dr and Tw) where it is necessary to keep the central position of the handle.

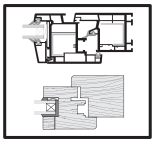
MARKING:
L - total length of the drive gear

NOTE:
In windows with a movable post drive gear 25M works with footing BM and connector BM.

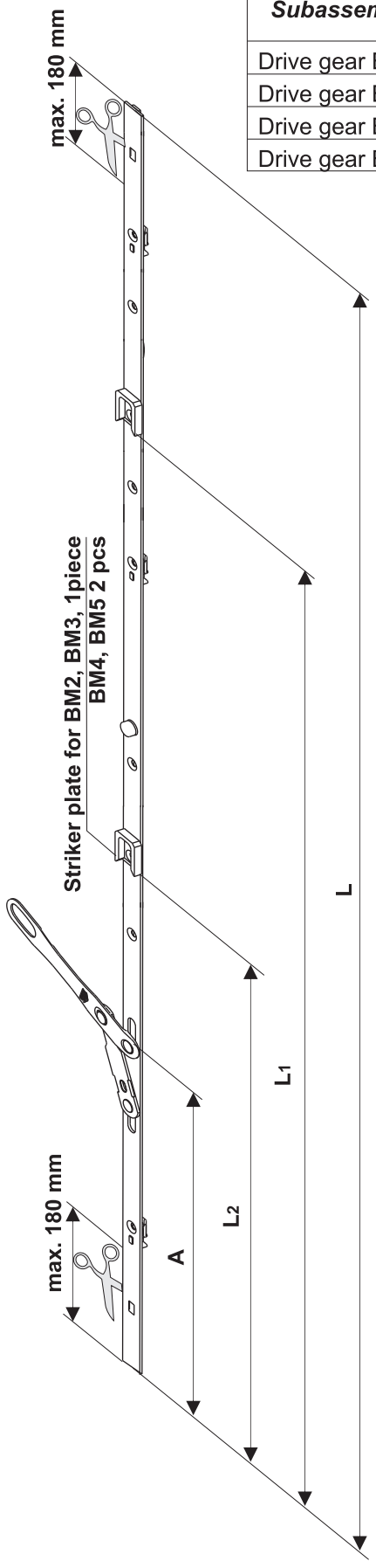
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
25 M0	box	660	85	50	10	3,00
	pallet	1200	800		1600	
25 M1	box	660	85	50	10	4,00
	pallet	1200	800		1200	
25 M1/A	box	660	85	50	10	4,10
	pallet	1200	800		1200	
25 M2	box	1100	85	50	10	5,50
	pallet	1200	800		800	
25 M3	box	1420	85	50	10	7,50
	pallet	1630	800		800	
25 M4	box	1730	85	50	10	9,10
	pallet	2200	800		800	
25 M5		2100	85	50	10	10,70
		2200	800		800	

DRIVE GEAR BM



Subassembly	*Cat.number*	*Scope of use Hw [mm]*	*L [mm]*	*A [mm]*	*L_1 [mm]*	*L_2 [mm]*
Drive gear BM 2	**102-326-000**	960 - 1320	1000	335	618	
Drive gear BM 3	**102-327-000**	1321 - 1680	1360	335	798	-
Drive gear BM 4	**102-328-000**	1681 - 2040	1720	425	1219	519
Drive gear BM 5	**102-329-000**	2041 - 2400	2080	425	1399	699

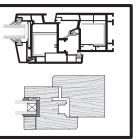


USE:
In sashes of windows with a so-called movable post **Dr** and **Tw** with notch clearance min. **12 mm**. Offered with symmetrical drive gear **M**.
Works with corners **A** in upper and lower part of the sash.
Recommended in sashes **Dr** with **Sw > 1000 mm**
Tw with **Sw > 800 mm**

Striker plate cat.number **111-033-000** offered in set with drive gear **BM**.

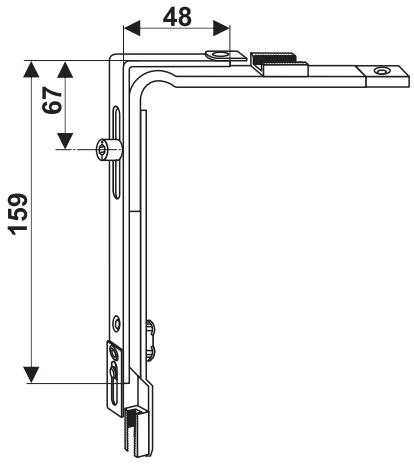
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
BM2	box	1100	85	50	10	5,50
	pallet	1200	800		800	
BM3	box	1420	85	50	10	7,20
	pallet	1630	800		800	
BM4	box	1730	85	50	10	9,30
	pallet	2200	800		800	
BM5	box	2100	85	50	10	11,40
	pallet	2200	800		800	



Corner S

Catalogue number 101-195-000



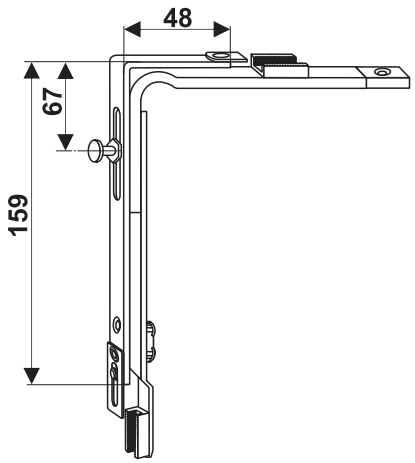
USE:
in sashes of windows **RU** (Dr and Tw).
Corner S is the hardware's fundamental subassembly that transmits drive from drive gear to stay.
Scope of use: Sw > 290 to 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
S	box	400	290	80	50	7,90
	pallet	1200	800		4000	

Corner US

Catalogue number 101-510-000



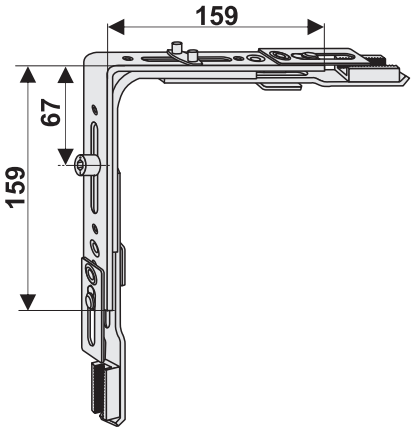
USE:
In sashes of windows **RU** (Dr and Tw) in the hardware's version hindering burglary in the upper part of the sash.
Works with striker plate **U** with reinforced resistance to burglary or with tilt striker plate **UD**.
Scope of use **: Sw > 290 to 400 mm.**

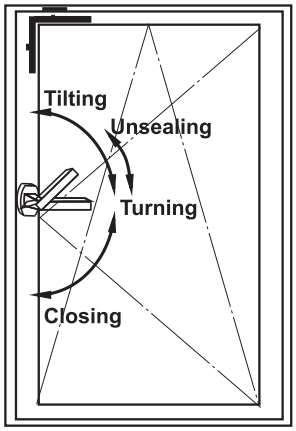
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
US	box	400	290	80	50	7,85
	pallet	1200	800		4000	

Corner R

Catalogue number 101-229-000





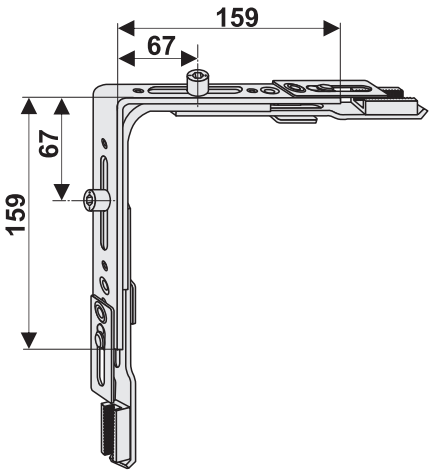
USE:
In sashes of **RU** windows (Dr and Tw). Fundamental subassembly to transmit drive from drive gear to other subassemblies. Corner R allows unsealing windows (microventilation) by setting the slit $6^{\pm 1}$mm with the handle in the middle position at 45° angle, between tilted and turned position. Used with striker plate R or R13, R9.
Scope of use: Sw > 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
R	box	400	290	80	50	11,10
	pallet	1200	800		4000	

Corner D

Catalogue number **101-277-000**



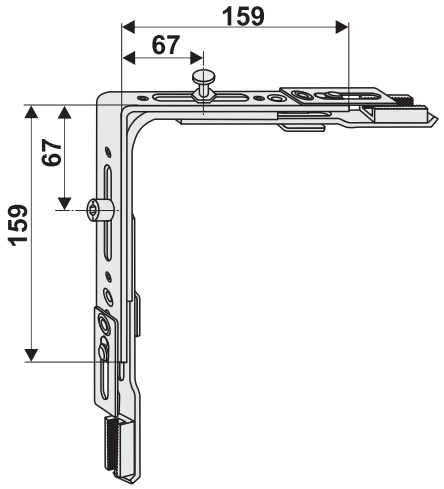
USE:
In sashes of **RU** windows (Dr and Tw) with a so-called movable post, as a sealing element (works with end “4”). In sashes of windows **U** operated from the side. May be used in windows **RU** where there is a necessity of sealing.
Scope of use: Sw > 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
D	box	400	290	80	50	11,15
	pallet	1200	800		4000	

Corner U1

Catalogue number 101-375-000



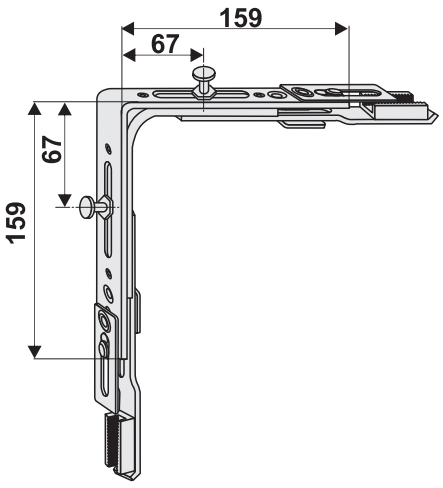
USE:
in sashes of windows **RU** (Dr and Tw) in the hardware's version hindering burglary **(basic protection).**
Corner transmits drive from drive gear to stay.
Corner U1 works with striker plate with reinforced resistance to burglary
Scope of use: Sw > 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
U1	box	400	290	80	50	11,00
	pallet	1200	800		4000	

Corner U2

Catalogue number 101-376-000



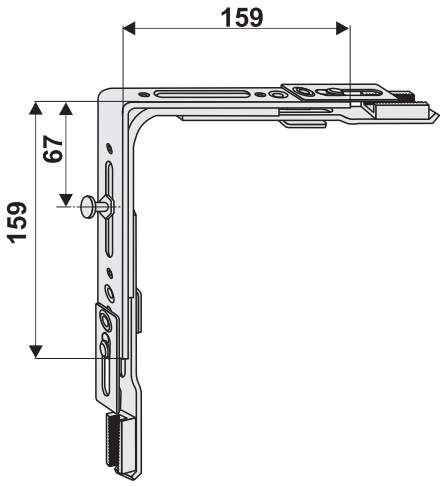
USE:
in sashes of windows **RU** (Dr and Tw) in the hardware's version that hinders burglary (**additional protection**).
Corner transmits drive from drive gear to stay.
Corner U2 works with striker plate with reinforced resistance to burglary.
Scope of use: Sw > 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
U2	box	400	290	80	50	11,10
	pallet	1200	800		4000	

Corner U

Catalogue number 101-511-000



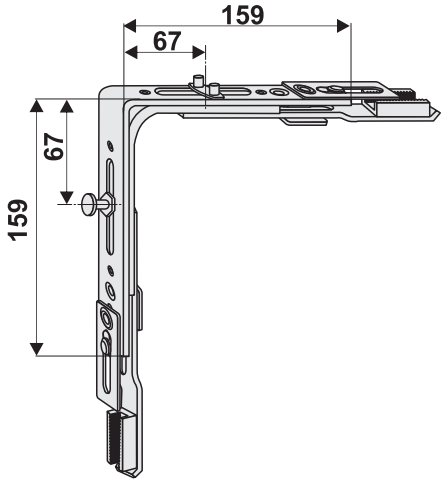
USE:
in sashes of windows **RU** (Dr and Tw) in the hardware's version hindering burglary, in the upper part of the sash or as a tilt corner (in the lower part of the sash).
Works with striker plate **U** with reinforced resistance to burglary or with tilt striker plate **UD**.
Scope of use: Sw > 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
U	box	400	290	80	50	11,00
	pallet	1200	800		4000	

Corner UR

Catalogue number 101-551-000



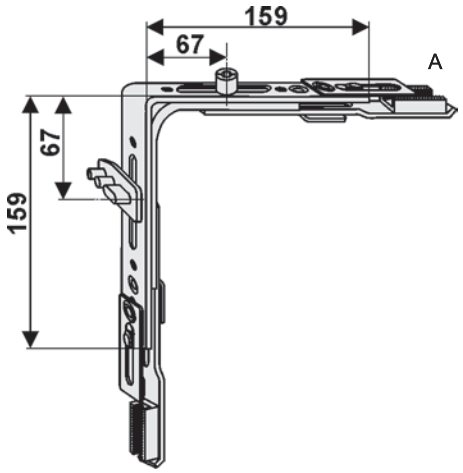
USE:
In sashes of windows **RU** (Dr and Tw) in the hardware's version hindering burglary with unsealing (**additional protection**). Corner transmits drive from drive gear to stay.
Corner UR works with striker plate **U**, with reinforced resistance to burglary and striker plate **R, R13** or **R9**.
Scope of use: Sw > 400 mm.

PACKING

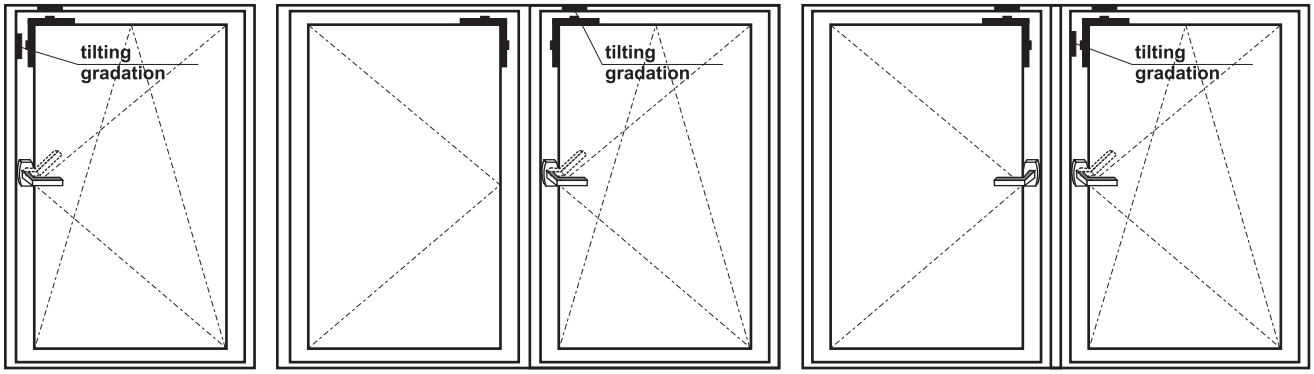
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
UR	box	400	290	80	50	10,90
	pallet	1200	800		4000	

Corner RS

Catalogue number **101-618-000** left
Catalogue number **101-619-000** right

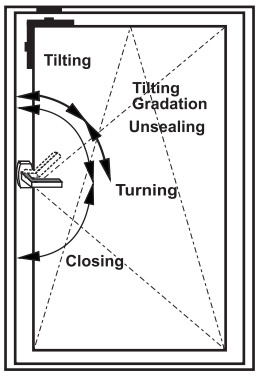


EXAMPLES OF USE



1-sash windows | Windows with movable post | 2-sashes windows

OPERATING THE HARDWARE



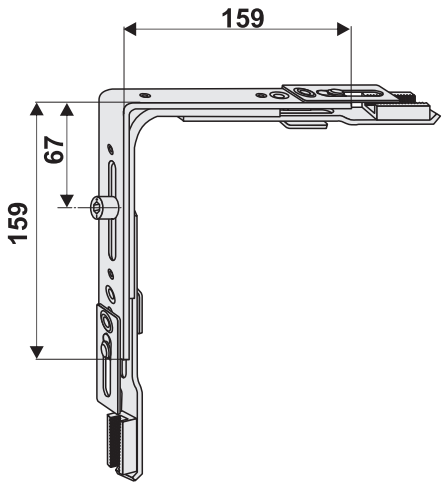
USE:
the fundamental subassembly in window sashes **RU** (Tw), that transmits drive from drive gear to stay and other hardware's subassemblies.
Corner **RS** enables gradation of tilting range of the sash in the following scopes:
1st degree - slit size ca 20 mm.
2nd degree - slit size ca 30 mm.
Used with the striker plate **RS 13**.
Additional function of the corner is unsealing (microventilation) by setting the slit at ca 6mm ± 1 mm.
All the corner's attributed functions **RS** work with the handle in the middle position at 45° angle, between the "tilted" and "turned" position.
Scope of use: Sw > 400 mm, but Sw < 1000 mm
Maximum weight of the sash 60 kg.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
RS	box	400	290	80	50	11,12
	pallet	1200	800		4000	

Corner A

Catalogue number 101-243-000



USE:
in sashes of windows **RU** (Dr and Tw)
Corner A is the hardware's fundamental subassembly that transmits drive form drive gear to stay.
Scope of use: Sw > 400 mm.

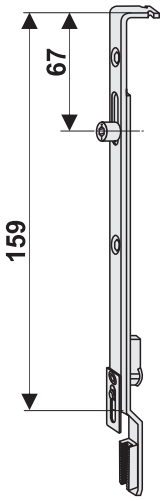
NOTE: it is necessary to use the corner A in the hardware's variant with the tilt restrictor for Sw > 1200 (mm).

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
A	box	400	290	80	50	11,00
	pallet	1200	800		4000	

End 1

Catalogue number 101-059-000



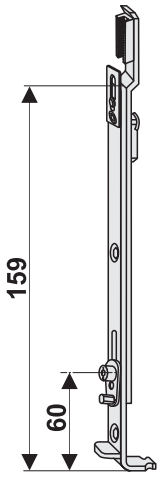
USE:
in sashes of the windows **U** and **R** (Dr and Tw).
Transmits drive in the upper part of the sash.
Deadbolt throw = 17 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
1	box	300	180	180	150	14,00
	pallet	1200	800		9600	

End 2

Catalogue number 101-234-000



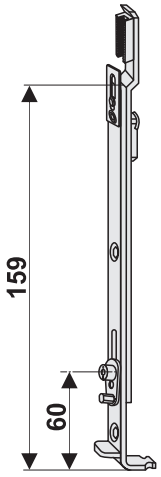
USE:
In sashes of windows **RU** (Dr, Tw) with drive gear M.
Transmits drive in the lower part of the sash.
Deadbolt throw = 2 × 17 mm
In the hardware TwO and Dr S5 recommended mainly for range of drive gears M1, M2 i M3.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
2	box	300	180	180	150	15,00
	pallet	1200	800		9600	

End 2A

Catalogue number 101-559-000



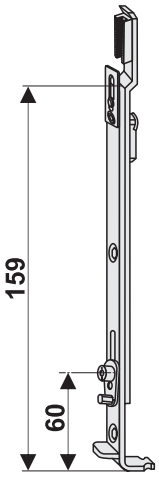
USE:
in sashes of windows **RU** (Dr and Tw) with drive gear M.
Transmits drive in the lower part of the sash.
Deadbolt throw = 2 × 17 mm
In TwO hardware recommended mainly for the range of drive gears M4 and M5.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
2/A	box	300	180	180	150	15,00
	pallet	1200	800		9600	

End 2B

Catalogue number **101-684-000**



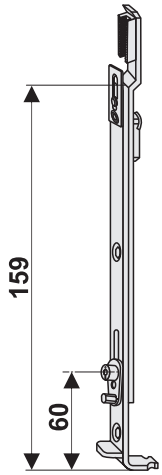
USE:
in sashes of windows **RU** (Dr and Tw) with drive gear M.
Transmits drive in the lower part of the sash.
Deadbolt throw =2 ×17mm.
Recommended for use in the height range **Hw < 600 mm**.
In TwO and Dr S5 hardware recommended mainly for use with drive gear M0.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
2/B	box	300	180	180	150	15,00
	pallet	1200	800		9600	

End 2/C

Catalogue number **101-735-000**



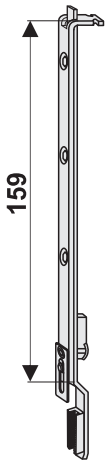
USE:
In sashes of windows **RU** (Dr) with drive gear M4 and M5.
Transfers drive in the lower part of the sash.
Deadbolt throw = 2 × 17 mm.
In Dr S5 hardware recommended mainly for use in drive gears range M4 and M5.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
2/C	box	300	180	180	150	15,0
	pallet	1200	800		9600	

End 3

Catalogue number **101-061-000**



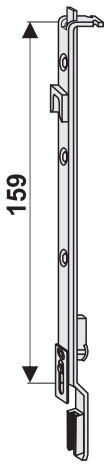
USE:
In window sashes with a so-called movable post **(version with drive gear *B* or with footing and connector)**.
Transfers drive in the upper part of the sash. Works with adjustable striker plate B.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
3	box	300	180	180	150	13,89
	pallet	1200	800		9600	

End 4

Catalogue number **101-235-000**



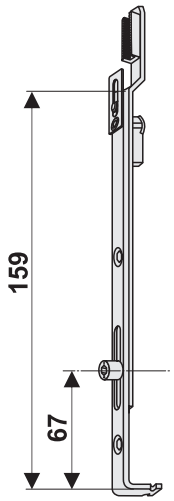
USE:
In sashes of windows (Dr and Tw) with a so-called movable post **(version with drive gear B or with footing and connector).**
Transfers drive to corner drive gear in the upper part of the sash.
Works with adjustable striker plate B.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
4	box	300	180	180	150	15,41
	pallet	1200	800		9600	

End 5

Catalogue number **101-233-000**



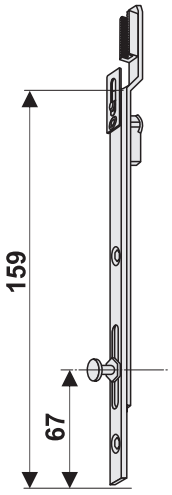
USE:
In sashes of windows **U** and **R** (Dr and Tw) with drive gear M and end 1.
Transfers drive in the lower part of the sash.
Deadbolt throw = 2 × 17 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
5	box	300	180	180	150	13,89
	pallet	1200	800		9600	

End 5-U

Catalogue number **101-512-000**



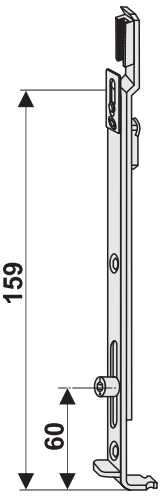
USE:
In sashes of windows **RU** (Dr and Tw).
In the hardware's version with reinforced resistance to burglary as an additional anti-burglary element, subassembly closing the connector in the lower or backside part of the sash.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
5-U	box	300	180	180	150	13,3
	pallet	1200	800		9600	

End 6

Catalogue number **101-060-000**



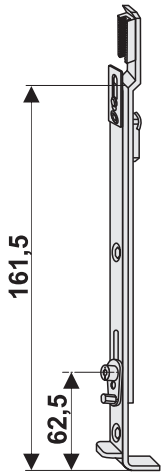
USE:
In sashes of windows **R** (Dr and Tw) with drive gear M.
Recommended in sashes Dr - **Sw >1000 mm** and Tw - **Sw > 800 mm**.
Transfers drive to corner drive gear in the lower part of the sash.
Deadbolt throw = 2 × 17 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
6	Box	300	180	180	150	13,89
	pallet	1200	800		9600	

End 7

Catalogue number **101-419-000**



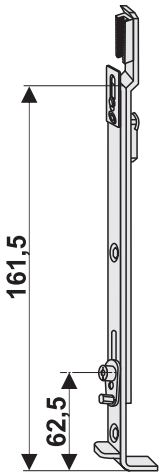
USE:
In sashes of windows **RU** (Dr) where maximum Sw is 1000 mm. with drive gear M.
The end cannot be connected to the corner drive gear in the lower part of the sash.
Deadbolt throw =2×17 mm.
In Dr S5 hardware recommended mainly for range of drive gears M1 and M2. **To be used only in windows without hardware groove (in the lower part of the sash).**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
7	box	300	180	180	150	15,00
	pallet	1200	800		9600	

End 7/A

Catalogue number **101-560-000**



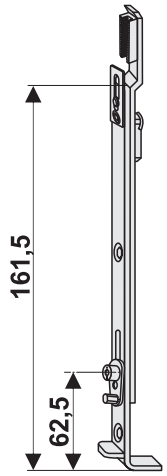
USE:
In sashes of windows **RU** (Dr) with max. Sw<1000 mm with drive gear M.
The end cannot be connected with corner drive gear in the lower part of the sash.
Deadbolt throw =2×17 mm.
In Dr S5 hardware recommended mainly for range of drive gears M3; M4; M5.
To be used only with windows without hardware groove (in the lower part of the sash)

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
7/A	box	300	180	180	150	15,00
	pallet	1200	800		9600	

End 7/B

Catalogue number **101-701-000**



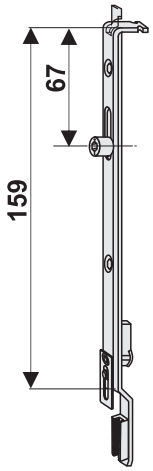
USE:
In sashes of windows **RU** (Dr) with maximum **Sw < 1000 mm** with drive gear M.
It is impossible to connect the end with corner drive gear in the lower part of the sash.
Deadbolt throw = 2×17 mm.
In Dr S5 hardware recommended mainly for drive gear M0.
To be used only in windows without hardware groove (in the lower part of the sash).

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
7/B	box	300	180	180	150	15,00
	pallet	1200	800		9600	

End 8

Catalogue number **101-474-000**



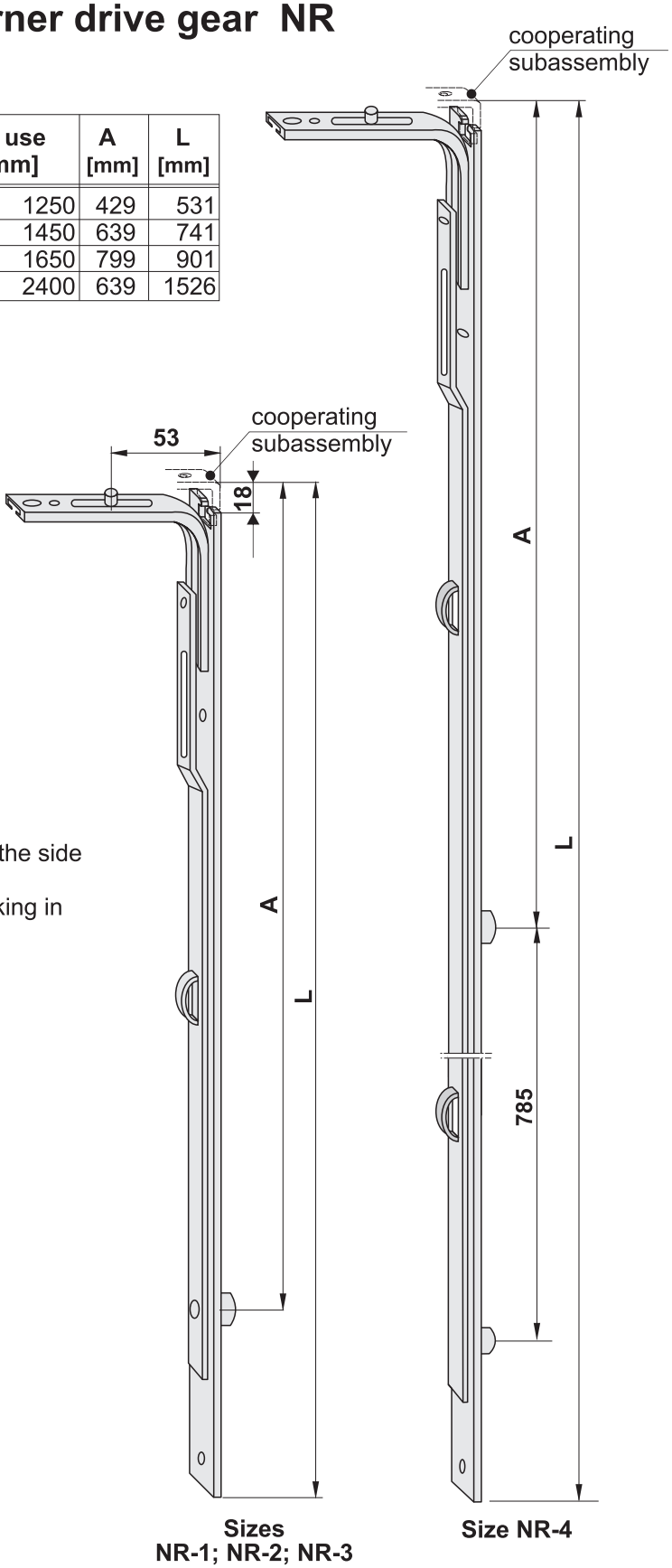
USE:
In sashes of windows **R** (Dr and Tw) with a so-called movable post with drive gear M or Z.
It is possible to use it in hardware set with locks, drive gear B or BM.
Transfers drive to corner drive gear in the upper part of the sash.
Deadbolt throw = 17 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
8	box	300	180	180	150	13,89
	pallet	1200	800		9600	

Corner drive gear NR

Subassembly	Catalogue Number	Scope of use Sw/Hw [mm]		A [mm]	L [mm]
Drive gear NR-1	**102-167-000**	801	1250	429	531
Drive gear NR-2	**102-168-000**	1251	1450	639	741
Drive gear NR-3	**102-208-000**	1451	1650	799	901
Drive gear NR-4	**102-209-000**	1651	2400	639	1526



Sizes NR-1; NR-2; NR-3

Size NR-4

USE:
- in sashes of windows **RU** (Dr and Tw) as a subassembly ensuring middle locking from the side of hinges and in the lower part of the sash,
- in sashes of windows **R** (Dr and Tw) for locking in the lower and upper part of the sash.

USAGE RULES:

Wooden windows Hw > 1000 mm
Sw > 1000 mm

PVC-U windows Hw > 800 mm
Sw > 800 mm

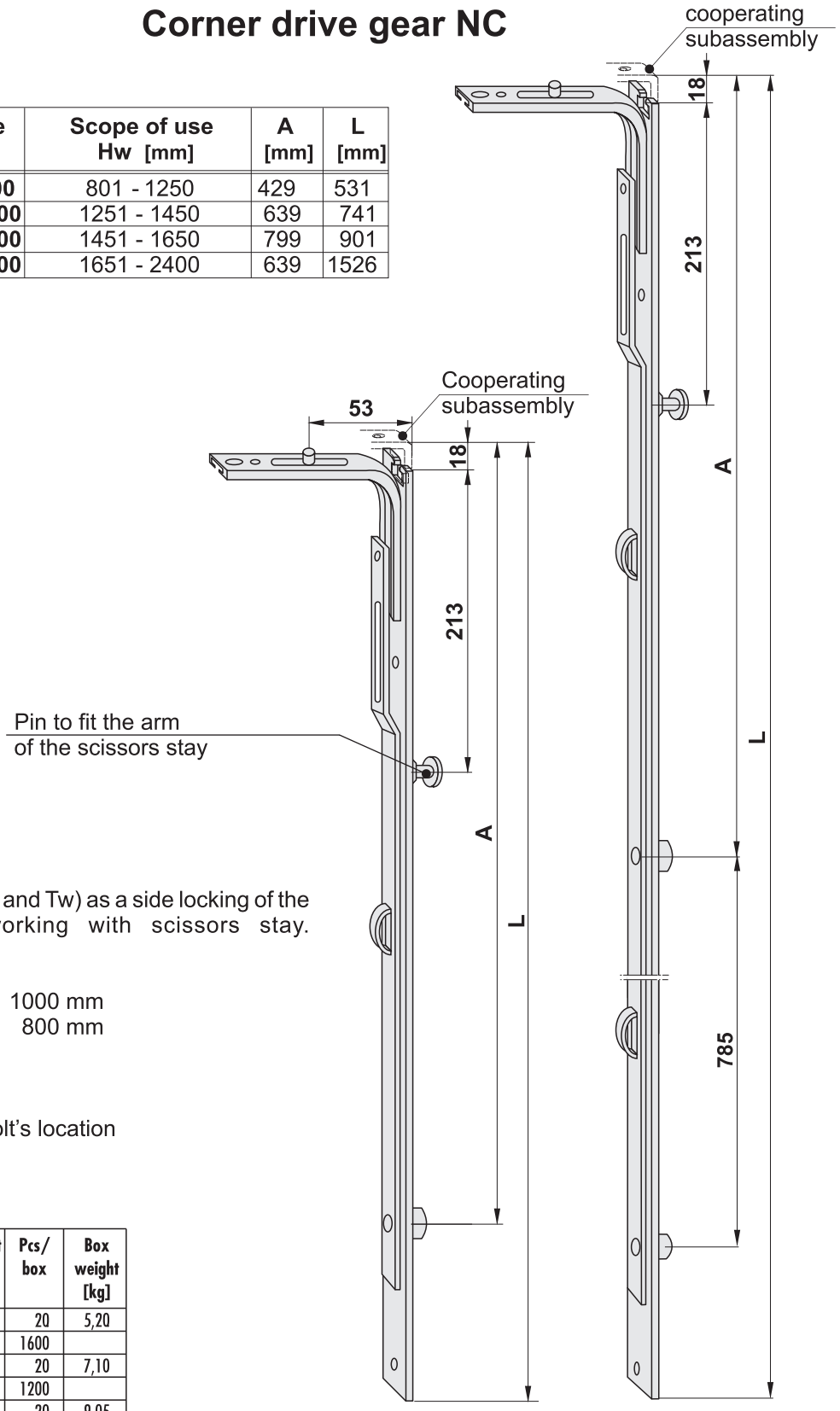
MARKING:
L - total length
A - dimension of the deadbolt position

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
NR1	box	610	170	50	20	5,37
	pallet	1200	800		1600	
NR2	box	820	170	50	20	7,47
	pallet	1200	800		1200	
NR3	box	980	170	50	20	9,05
	pallet	1200	800		800	
NR4	box	1610	170	50	20	15,00
	pallet	1600	800		800	

Corner drive gear NC

Subassembly	Catalogue number	Scope of use Hw [mm]	A [mm]	L [mm]
Drive gear NC1	**102-262-000**	801 - 1250	429	531
Drive gear NC2	**102-263-000**	1251 - 1450	639	741
Drive gear NC3	**102-264-000**	1451 - 1650	799	901
Drive gear NC4	**102-265-000**	1651 - 2400	639	1526



Sizes NC-1; NC-2; NC3

Size NC-4 for tilt windows (not covered with approval)

USE:
- in sashes of windows **U** (Dr and Tw) as a side locking of the sash. Possibility of working with scissors stay.

USAGE RULES:
Wooden windows: Hw > 1000 mm
PVC-U windows : Hw > 800 mm

MARKING:
L - total length
A - dimension of the deadbolt's location

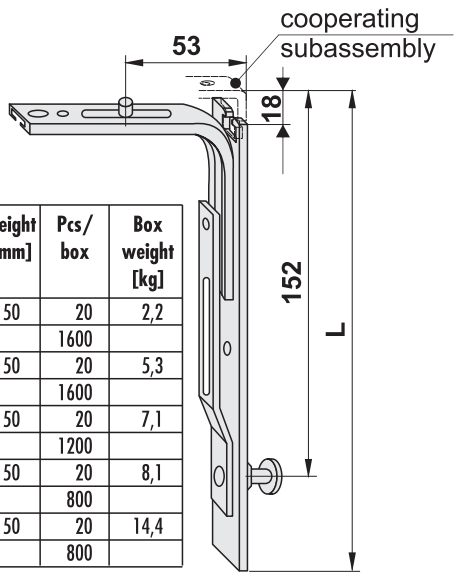
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
NC1	box	610	170	50	20	5,20
	pallet	1200	800		1600	
NC2	box	820	170	50	20	7,10
	pallet	1200	800		1200	
NC3	box	980	170	50	20	9,05
	pallet	1200	800		800	
NC4	box	1610	170	50	20	15,00
	pallet	1600	800		800	

Corner drive gear NU

Subassembly	Catalogue Number	Scope of use Sw or Hw [mm]	A [mm]	L [mm]
Drive gear NU-0	**102-136-000**	< 800	-	192
Drive gear NU-1	**102-137-000**	801 - 1250	429	531
Drive gear NU-2	**102-138-000**	1251 - 1450	639	741
Drive gear NU-3	**102-139-000**	1451 - 1650	799	901
Drive gear NU-4	**102-140-000**	1651 - 2400	639	1526

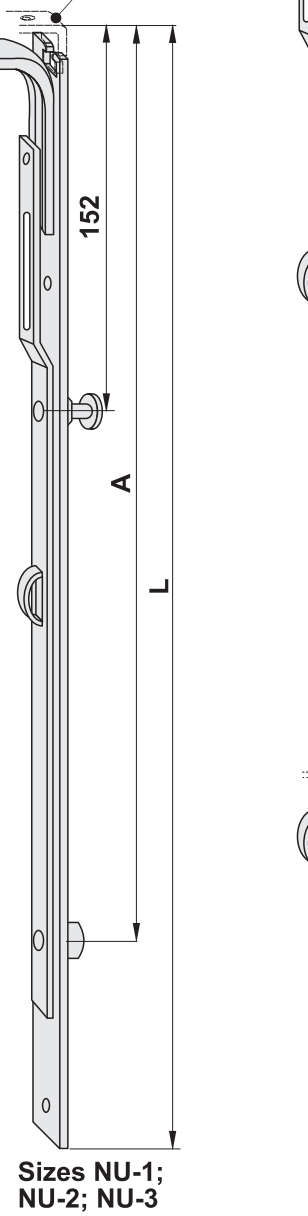
Cooperating subassemblies:
stay, drive gear, end.



Size NU-0

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
NU-0	box	260	170	50	20	2,2
	pallet	1200	800		1600	
NU-1	box	610	170	50	20	5,3
	pallet	1200	800		1600	
NU-2	box	820	170	50	20	7,1
	pallet	1200	800		1200	
NU-3	box	980	170	50	20	8,1
	pallet	1200	800		800	
NU-4	box	1610	170	50	20	14,4
	pallet	1600	800		800	



Sizes NU-1; NU-2; NU-3

Size NU-4

USE:
- in sashes of windows **RU** (Dr and Tw) in the hardware's variety hindering burglary as a subassembly ensuring middle locking from the side of hinges and in the lower part of the sash (basic protection)
- in sashes of windows **R** (Dr and Tw) for locking in the lower and upper part of the sash
- in sashes of windows **U** (Dr and Tw) as a side locking of the sash.

USAGE RULES:

Wooden windows:	Hw > 1000	mm
	Sw > 1000	mm
PVC-U windows:	Hw > 800	mm
	Sw > 800	mm

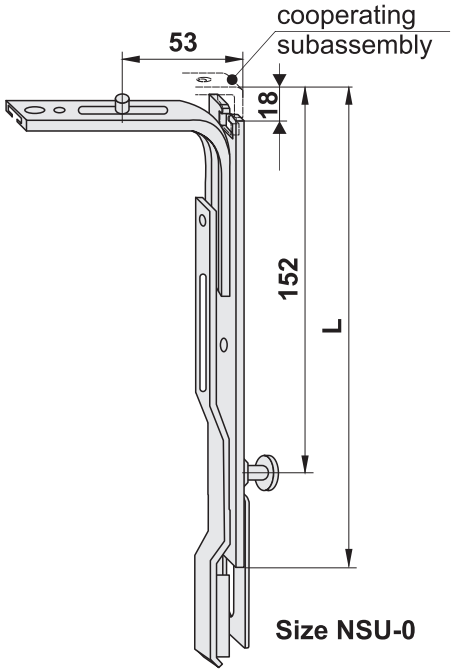
Corner drive gear Nu0 is to be used when additional pressure and anti-burglary protection must be obtained in the following range:

Wooden windows:	Hw < 1000	mm
	Sw < 1000	mm
PVC-U windows:	Hw < 800	mm
	Sw < 800	mm

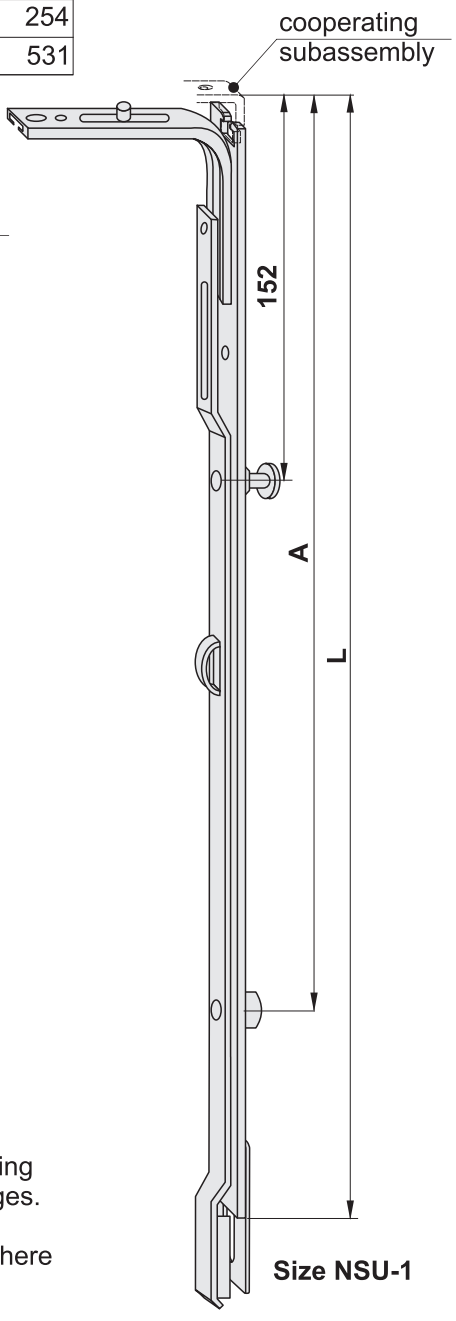
MARKING:
L - total length
A - dimension of deadbolt's location

Fastening corner drive gear NSU

Subassembly	Catalogue Number	Scope of use Sw lub Hw [mm]	A [mm]	L [mm]
Drive gear NSU-0	**102-206 -000**	Sw >800 (Tw) 1000 (Dr)	-	254
Drive gear NSU-1	**102-207 -000**	Hw >800 (Tw) 1000 (Dr)	429	531



Size NSU-0



Size NSU-1

USE:
In sashes of windows **RU** (Dr and Tw) in hardware's version (**ROMB 3000**) with reinforced resistance to burglary as a subassembly providing additional locking in the lower part of the sash or from the side of hinges.
Possibility of cooperation with fastening connector /ŁS/.
Drive gear NSU is recommended in arched and trapezoid windows where it is necessary to transfer drive through the bottom to the back of the sash.

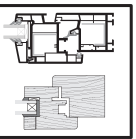
USAGE RULES:

Wooden windows: Hw and Sw > 1000 mm
PVC-U windows: Hw and Sw > 800 mm

MARKING:
L - total length
A - dimension of the deadbolt's location

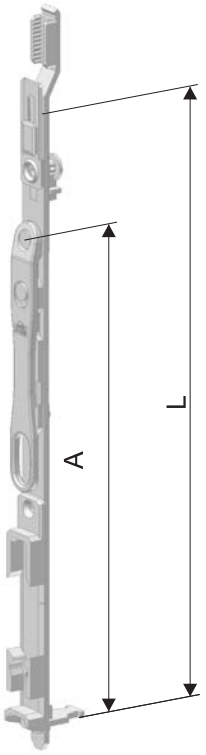
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
NSU-0	box	410	170	50	20	3,20
	pallet	1200	800			
NSU-1	box	610	170	50	20	5,30
	pallet	1200	800			



Footing BM

Footing	*Catalogue number*	*L [mm]*	*A [mm]*	*Scope of use Hw [mm]*
BM 1	**102-258-000**	285	225	905 - 1320 1265 - 1680 1625 - 2040
BM 2	**102-259-000**	535	475	1985 - 2400



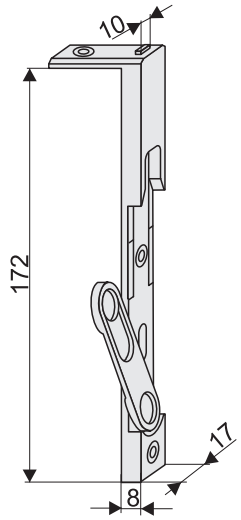
USE:
In sashes of windows with a so-called movable post (Dr and Tw) with notch clearance 12 mm.
Offered in hardware set with drive gear M.
Works with connectors BM and corner drive gear NR.
Recommended in window sashes Dr with **Sw > 1000 mm**
Tw with **Sw > 800 mm**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
BM1	box	470	85	50	10	1,7
	pallet	1200	800		2400	
BM2	box	470	85	50	10	2,9
	pallet	1200	800		1200	

Upper lock DR

Catalogue number **101-198-000**



For Euronut 7×8
distance pad
catalogue number **001-200-000**

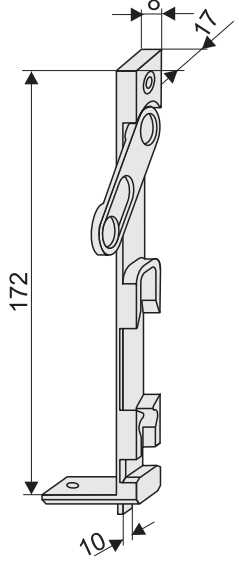
USE:
Upper lock is intended for locking the **R** sash in double window set with a so-called movable post. Used in **Dr** windows with notch clearance 11 or 12 mm. Works with adjustable striker plate B. The lock is to be fixed flat without groove.
Recommended in sashes with Sw < 1000 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Upper	box	300	180	180	100	8,70
	pallet	1200	800			

Lower lock DR

Catalogue number **101-197-000**



For Euronut 7×8
distance pad
catalogue number **001-200-000**

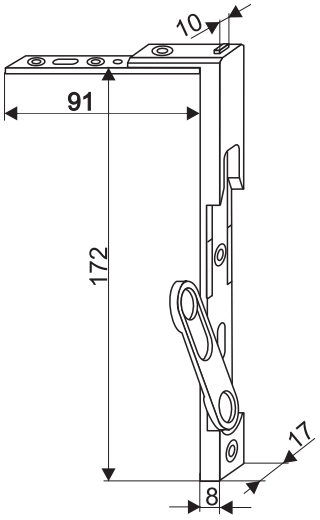
USE:
The lower lock is intended for closing the sash **R** in double window set with a so-called movable post. Used also in **Dr** windows with notch clearance 11 or 12 mm.
Works with adjustable striker plate B. The lock should be fitted flat without groove.
Recommended in sashes with Sw <1000 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Lower	box	300	180	180	100	9,00
	pallet	1200	800			

Upper lock Tw

Catalogue number **101-331-000**



WHILE THE STOCK LASTS!!!

Stop block for lock footing:
catalogue number **001-096-000**
Additional distance pads:
catalogue number **001-199-000**
catalogue number **001-284-000**

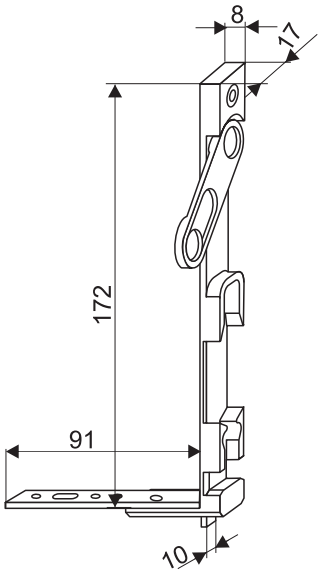
USE:
Upper lock intended for closing sash **R** in double window set with a so-called movable post. Used also in **Tw** windows with a notch clearance 12 mm while using proper pads. Works with adjustable striker plate B.
Recommended in sashes Tw with Sw < 800 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Upper Tw	box	300	180	180	100	12,05
	pallet	1200	800			

Lower lock Tw

Catalogue number **101-330-000**



WHILE THE STOCK LASTS!!!

Stop block for lock footing:
catalogue number **001-096-000**
Additional distance pads:
catalogue number **001-199-000**
catalogue number **001-284-000**

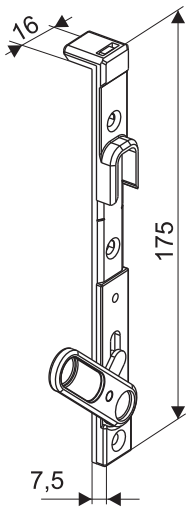
USE:
Lower lock is intended for closing sash **R** in double window set with a so called movable post. Used in **Tw** windows with notch clearance 12 mm while using proper pads.
Works with adjustable striker plate B.
Recommended in sashes Tw with Sw < 800 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Lower Tw	box	300	180	180	100	12,45
	pallet	1200	800			

Upper lock Tw 16

Catalogue number **101-870-000**



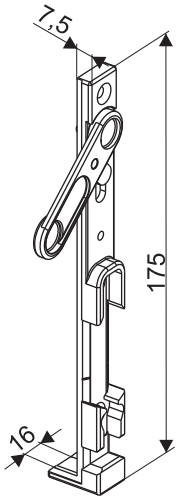
USE:
Upper lock is intended for locking the sash **R** in double window set with a so-called movable post. Used in windows **Tw** with notch clearance 12 mm, (fastened in the hardware groove). Works with adjustable striker plate **B**.
Recommended in sashes Tw with Sw < 800 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
upper Tw 16	box	300	180	180	100	11,30
	pallet	1200	800			

Lower lock Tw 16

Catalogue number **101-869-000**



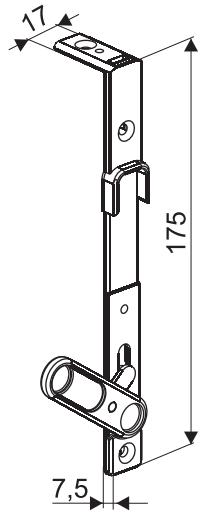
USE:
Lower lock is intended for locking the sash **R** in double window set with a so-called movable post. Used in windows **Tw** with notch clearance 12 mm, (fastened in the hardware groove). Works with adjustable striker plate **B**.
Recommended in sashes Tw with Sw < 800 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
lower Tw 16	box	300	180	180	100	11,80
	pallet	1200	800			

Upper lock Dr 7/8

Catalogue number **101-872-000**



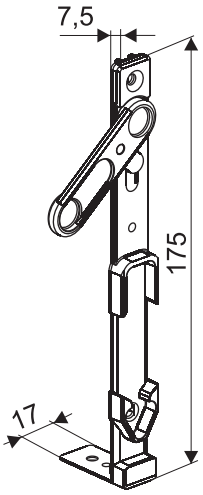
USE:
Upper lock is intended for locking the sash **R** in double window set with a so-called movable post. Used in windows **Dr** with notch clearance 11 or 12 mm. Works with adjustable striker plate **B7/8**. The lock should be fixed without pads by fastening directly in groove Euronut.
Recommended in sashes with Sw < 1000 mm
Locking slider throw = 8mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Upper	box	300	180	180	100	8,70
	pallet	1200	800			

Lower lock Dr 7/8

Catalogue number **101-871-000**



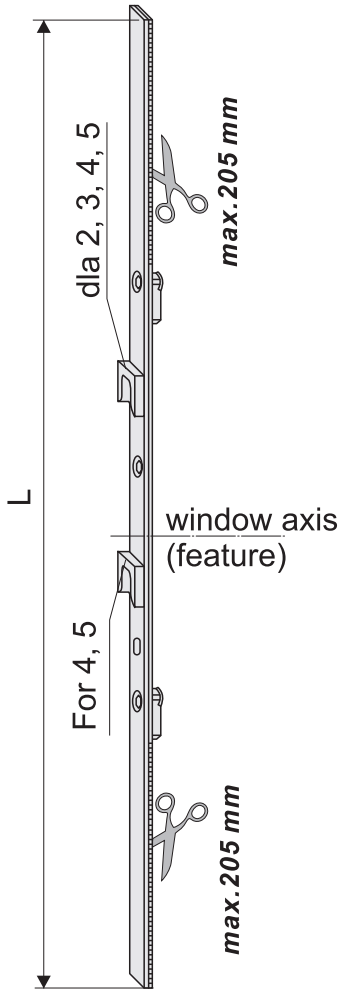
USE:
Lower lock is intended for locking the sash **R** in double window set with a so-called movable post. Used also in windows **Dr** with notch clearance 11 or 12 mm.
Works with adjustable striker plate **B7/8.** The lock should be fixed without pads by fastening directly in groove Euronut.
Recommended in sashes with Sw <1000 mm
Locking slider throw = 8 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Lower	box	300	180	180	100	9,00
	pallet	1200	800			

Connector BM

Connector	*Catalogue number*	*Scope of use Hw [mm]*	*L [mm]*
Connector BM 2	**102-130-000**	905 - 1320	875
Connector BM 3	**102-131-000**	1265 - 1680	1235
Connector BM 4	**102-132-000**	1625 - 2040	1595
Connector BM 5	**102-133-000**	1985 - 2400	1705



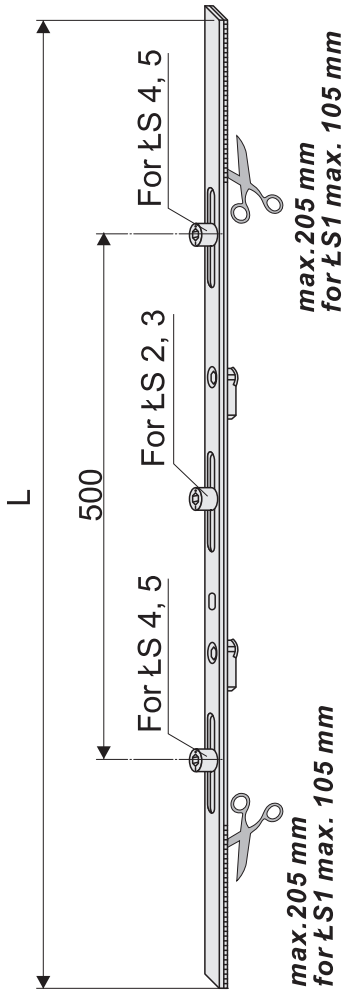
USE:
In sashes of windows with a so-called movable post (Dr and Tw) with notch clearance 11 or 12 mm.
Offered in hardware set with drive gear M.
Works with ends 3 and 4, footings BM.
Peripheral striker plate is a part of the connector BM set.
Recommended in Dr sashes with **Sw > 1000 mm**, Tw with **Sw > 800 mm**.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
BM2	box	930	85	50	10	3,9
	pallet	1200	800		1200	
BM3	box	1420	85	50	10	5,6
	pallet	1600	800		800	
BM4	box	1600	85	50	10	7,2
	pallet	1600	800		800	
BM5	box	1870	85	50	10	7,8
	pallet	2200	800		800	

Fastening connector ŁS

Subassembly	Catalogue number	L [mm]	Scope of use Sw or Hw [mm]	
			NSU-1	NSU-0
Fastening connector ŁS 1	**102-240-000**	500	980 - 1190	700 - 910
Fastening connector ŁS 2	**102-241-000**	875	1150 - 1560	875 - 1280
Fastening connector ŁS 3	**102-242-000**	1235	1510 - 1920	1235 - 1640
Fastening connector ŁS 4	**102-243-000**	1595	1870 - 2280	1595 - 2000
Fastening connector ŁS 5	**102-244-000**	1705	1980 - 2395	1705 - 2110



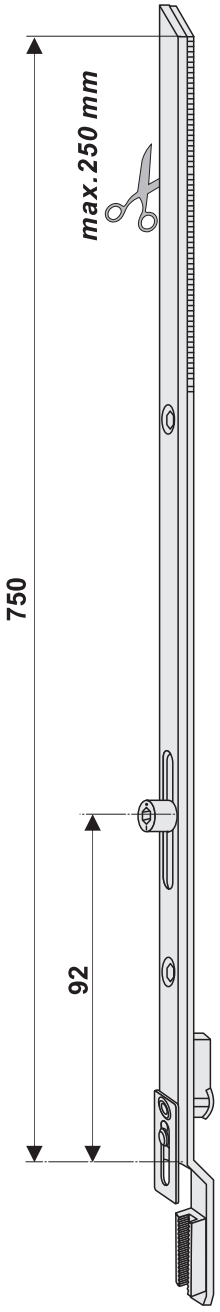
USE:
In sashes of windows **RU** (Dr and Tw) in hardware's variety (**ROMB 3000**) with reinforced resistance to burglary as a subassembly connecting two elements, e.g. corner drive gear coupling with end 5 U or corner U with end 5 U.
Recommended in arched and trapezoid windows with Sw or Hw > 800 mm, to transmit drive through the lower part to the backside part of the sash.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
ŁS 1	box	800	85	50	10	2,5
	pallet	1230	800		1200	
ŁS 2	box	930	85	50	10	4,0
	pallet	1200	800		800	
ŁS 3	box	1420	85	50	10	6,0
	pallet	1600	800		800	
ŁS 4	box	1600	85	50	10	7,5
	pallet	1600	800		800	
ŁS 5	box	1870	85	50	10	8,0
	pallet	2200	800		800	

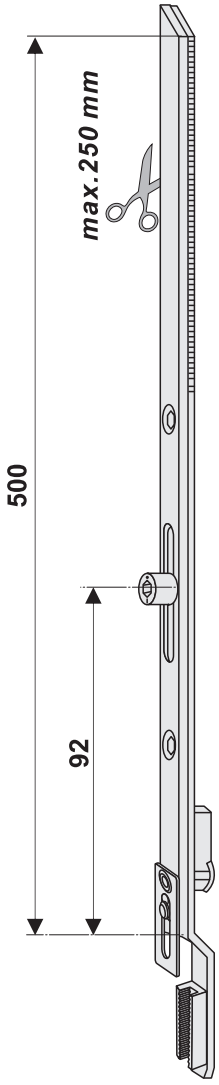
Extension rod 750

Catalogue number **101-625-000**



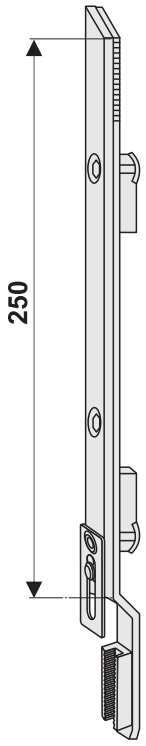
Extension rod 500

Catalogue number **101-062-000**



Extension rod 250

Catalogue number **101-248-000**



USE:
In case of necessity of decreasing the handle's location in sashes of windows **R** and **RU** (Dr and Tw) with drive gear Z or drive gear M..

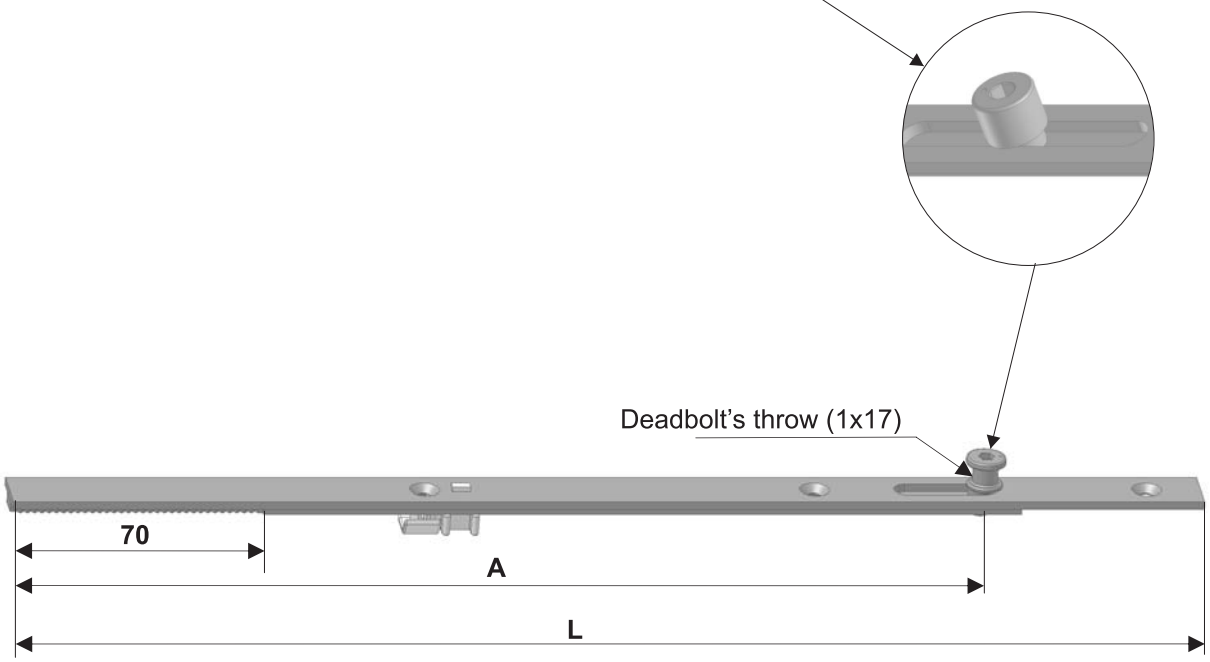
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
250	box	470	85	50	20	2,75
	pallet	1200	800			
500	box	660	85	50	20	5,14
	pallet	1200	800			
750	box	850	85	50	20	7,30
	pallet	1200	800			

Corner D extension rod

Size	Catalogue number		L [mm]	A [mm]
	with mushroom deadbolt	With roller deadbolt		
1 D	**101-842-000**	**101-860-000**	330	270
2 D	**101-844-000**	**101-862-000**	540	480
3 D	**101-846-000**	**101-864-000**	700	640

Extension rod's variety with roller deadbolt.



USE:
In sashes of windows **R** (Dr and Tw) as a subassembly extending the corner's arm, with the possibility of additional locking in the **lower part of the sash**. It is an alternative solution for the **ROMB** set of hardware: corner drive gear, ends with drive gear M.

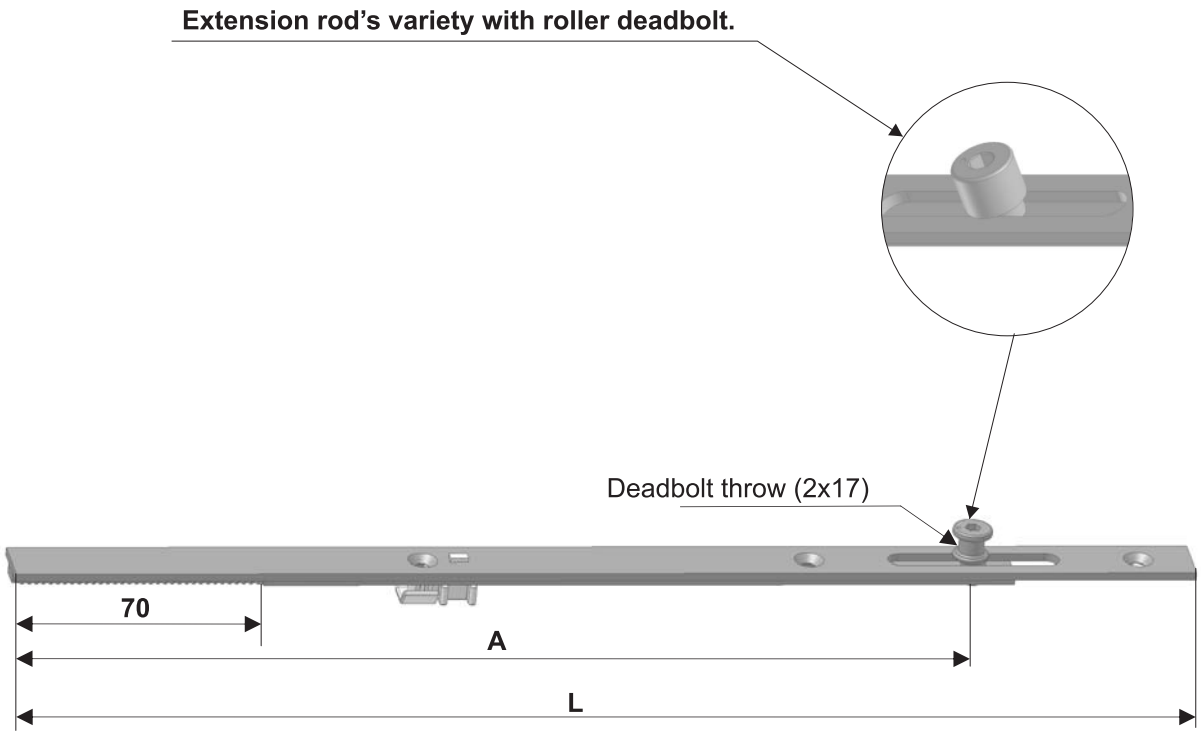
NOTE:
Deadbolt's location as with corner drive gears: No 1, No 2, No 3.
Jig for setting the striker plates, catalogue number **001-448-000** (bottom of the sash).

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
1 D	box	380	80	50	20	2,96
	pallet	1200	800			
2 D	box	660	80	50	20	4,90
	pallet	1200	800			
3 D	box	720	80	50	20	6,90
	pallet	1200	800			

Corner G extension rod

Size	Catalogue number		L [mm]	A [mm]
	with mashroom deadbolt	with roller deadbolt		
1 G	**101-843-000**	**101-861-000**	330	270
2 G	**101-845-000**	**101-863-000**	540	480
3 G	**101-847-000**	**101-865-000**	700	640



USE:
In sashes of windows **R** (Dr and Tw) as a subassembly extending the corner's arm; with possibility of additional locking **in the upper part of the sash.**
In turn / tilt windows, in **ROMB 2000** hardware's version, extension **G** to be used in the lower part of the sash.

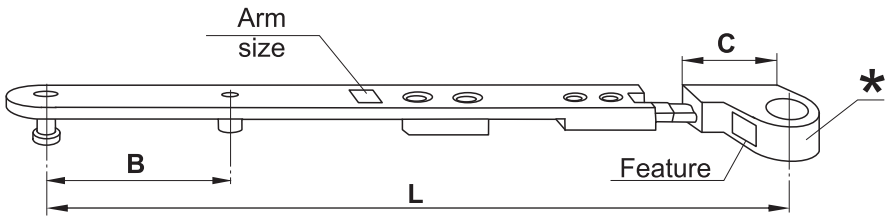
NOTE:
Deadbolt's location as in corner drive gears: Nr 1, Nr 2, Nr 3.
Jig for setting striker plates - catalogue number **001-447-000** (top of the sash).

PACKING

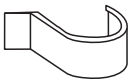
Subassembly		Length [mm]	Width. [mm]	Height [mm]	Pcs/ box	Box weight [kg]
1 G	box	380	80	50	20	2,80
	pallet	1200	800			
2 G	box	660	80	50	20	4,80
	pallet	1200	800			
3 G	box	720	80	50	20	6,80
	pallet	1200	800			

Stay arm Dr 11

Size	*Catalogue number*	*Scope of use Sw [mm]*	*L [mm]*	*B [mm]*	*C [mm]*	*Feature*
Dr 1	**101-266-000**	290 - 510	236	65	29	11
Dr 2	**101-267-000**	511 - 830	321	80	29	
Dr 3	**101-268-000**	821 - 1450	461	120	29	



Bearing guard No VII



USE:
Subassembly fixed in the upper part of the frame's corner. When combined with the stay it enables tilting the window sashes in **RU** (Dr) windows with notch clearance Dr 12mm.
In windows with sash weighing up to 100 kg it may be used with upper hinge bracket Dr-L (light version).
In windows with sash weighing up to 130 kg used with upper hinge bracket Dr-C.
Depending on the needs Dr 11 arm may be used as either left or right arm (by turning the bearing*).

IMPORTANT:
The guard should be fitted before fixing the arm into upper hinge bracket.

PACKING

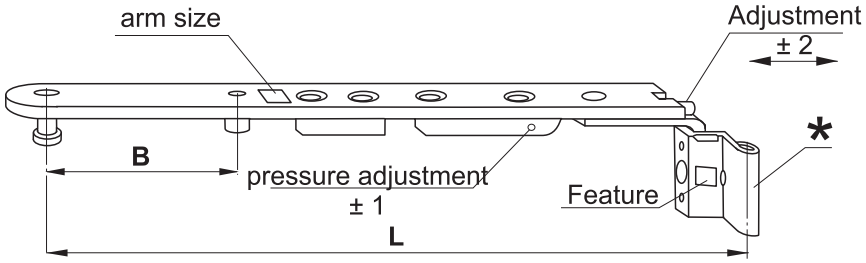
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Dr11/1	box	380	50	85	10	1,59
	pallet	1200	800		2400	
Dr11/2	box	470	50	85	10	2,05
	pallet	1200	800		1200	
Dr11/3	box	660	50	85	10	2,63
	pallet	1200	800		1200	

Stay arm Tw 9

Size	Catalogue number	Scope of use Sw [mm]	L [mm]	B [mm]	Feature
1	**101-341-000**	290 - 510	240	65	9
2	**101-342-000**	511 - 830	325	80	
3	**101-343-000**	821 - 1450	465	120	

Stay arm Tw 13

Size	Catalogue number	Scope of useSw [mm]	L [mm]	B [mm]	Feature
1	**101-344-000**	290 - 510	240	65	13
2	**101-345-000**	511 - 830	325	80	
3	**101-346-000**	821 - 1450	465	120	



Bearing guard No IV

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Tw9/1	box	380	50	85	10	1,91
	pallet	1200	800		2400	
Tw9/2	box	470	50	85	10	2,39
	pallet	1200	800		2400	
Tw9/3	box	660	50	85	10	2,93
	pallet	1200	800		2400	
Tw13/1	box	380	50	85	10	1,94
	pallet	1200	800		2400	
Tw13/2	box	470	50	85	10	2,39
	pallet	1200	800		2400	
Tw13/3	box	660	50	85	10	2,94
	pallet	1200	800		2400	

USE:
Subassembly fitted in the upper part of the frame corner. In connection with the stay it enables tilting window sashes in **RU** (Tw) windows . Works with upper hinge bracket Tw.
Depending on the needs it can be used as either left or right arm (by turning the bearing * and driving in a stud).

IMPORTANT:
The guard should be fitted before placing the arm into upper hinge bracket.

Stay arm TwO 9

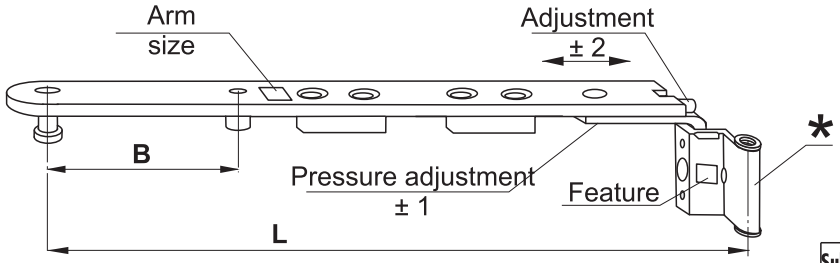
Size	Catalogue number	Scope of use Sw [mm]	L [mm]	B [mm]	Feature
RR1	**101-727-000**	290-510	240	65	9
RR2	**101-728-000**	511-830	325	80	
RR3	**101-729-000**	821-1450	465	120	

Stay arm TwO 13

Size	Catalogue number	Scope of use Sw [mm]	L [mm]	B [mm]	Feature
RR1	**101-730-000**	290-510	240	65	13
RR2	**101-731-000**	511-830	325	80	
RR3	**101-732-000**	821-1450	465	120	

Stay arm TwO 13/21

Size	Catalogue number	Scope of use Sw [mm]	L [mm]	B [mm]	Feature
RR1	**101-717-000**	290-510	241,5	65	13/21
RR2	**101-718-000**	511-830	326,5	80	
RR3	**101-719-000**	821-1450	466,5	120	



Bearing guard No IV A

USE:
Subassembly fitted in the upper part of the frame corner. In connection with stay it enables tilting window sashes in **RU** (Tw) windows.
Works with upper hinge bracket TwO **(bracket flushed with the edge of the sash)**. Depending on the needs it can be used as either left or right arm (by turning the bearing* and driving in the stud).

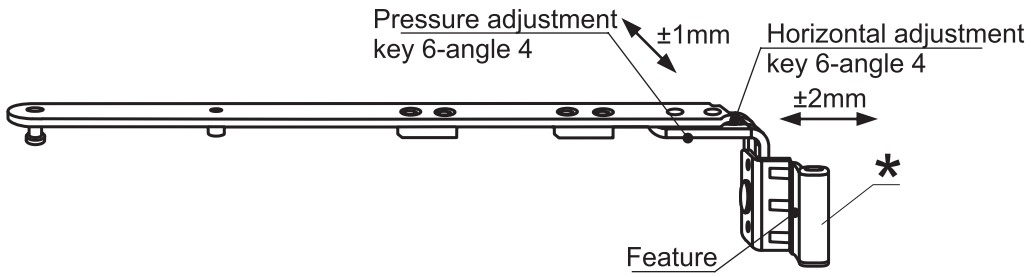
IMPORTANT:
The guard should be fitted before placing the arm into upper hinge bracket.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-727-000	box	380	100	50	10	1,91
	pallet	1200	800		2400	
101-728-000	box	380	100	50	10	2,39
	pallet	1200	800		2400	
101-729-000	box	660	100	50	10	2,93
	pallet	1200	800		2400	
101-730-000	box	380	100	50	10	1,90
	pallet	1200	800		2400	
101-731-000	box	380	100	50	10	2,35
	pallet	1200	800		2400	
101-732-000	box	660	100	50	10	2,90
	pallet	1200	800		2400	
101-717-000	box	380	100	50	10	1,90
	pallet	1200	800		2400	
101-718-000	box	380	100	50	10	2,35
	pallet	1200	800		2400	
101-719-000	box	660	100	50	10	2,90
	pallet	1200	800		2400	

Stay arm S5

Size	*Catalogue number*	*Scope of use Sw [mm]*	*Feature*
RR1	**119-001-000**	290 - 510	Dr 12/18
RR2	**119-002-000**	511 - 830	
RR3	**119-003-000**	821 - 1450	



Bearing guard No IV A

USE:
in **R** (Dr) windows with sash weighing up to 100 kg.
Works with upper hinge bracket S5.

IMPORTANT:
The guard should be fitted before connecting the arm with upper hinge bracket.
Depending on the needs it can be used as either left or right arm (by turning the bearing* and driving in the stud).

PACKING

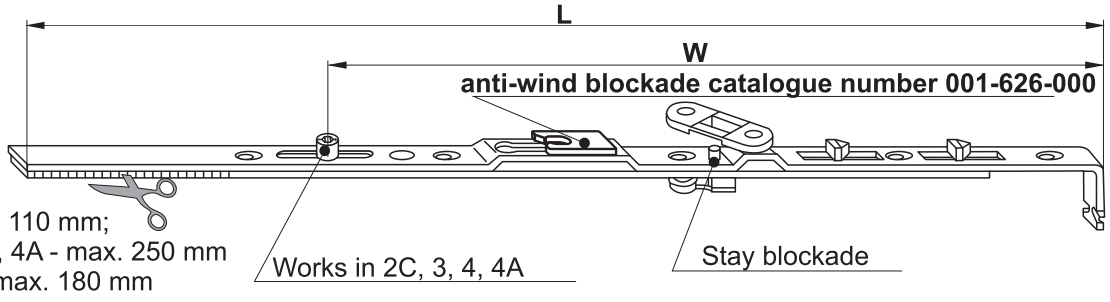
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
RR1	box	380	95	60	10	1,90
	pallet	1200	800			
RR2	box	475	95	60	10	2,25
	pallet	1200	800			
RR3	box	665	95	60	10	2,80
	pallet	1200	800			

Stay

Table for the selection and use of stay and stay arm subassembly	
Stay (Size)	***Stay arm (Size)***
Stay 1	RR 1/9 RR 1/13 RR 1/13/21 RR 1/S5 RR Dr1/11
Stay 2 Stay 2A Stay 2C Stay 3	RR 2/9 RR 2/13 RR 2/13/21 RR 2/S5 RR Dr2/11 RR 3/9
Stay 4 Stay 4A	RR 3/13 RR 3/13/21 RR 3/S5 RR Dr3/11

Subassembly	*Catalogue number*	*Scope of use Sw [mm]*	*L [mm]*	*W [mm]*
Stay 1	**101-041-000**	290-510	350	
Stay 2	**101-042-000**	511-760	600	
Stay 2A	**101-217-000**	580-830	670	
Stay 2C	**101-363-000**	650-830	670	381
Stay 3	**101-043-000**	821-1000	840	536
Stay 4	**101-044-000**	951-1200	1040	536
Stay 4A	**101-362-000**	1201-1450	1290	701

IMPORTANT:
to limit the tilting extent in windows with Hw < 600 the anti-wind blockade should be used.
Catalogue number **000-703-00**



Cutting
1 - max. 110 mm;
2, 2A, 4, 4A - max. 250 mm
3, 2C - max. 180 mm

USE:
in **RU** (Dr and Tw) windows as a subassembly enabling transferring drive from corner to corner drive gear. In connection with stay arm it enables tilting and turning window sashes. Equipped with a blockade eliminating the possibility of forcing the hardware into turned position when the sash is in tilted position. Works with anti-wind blockade that works as a latch by holding the stay arm in tilted position in case of draught or a strong gust of wind.

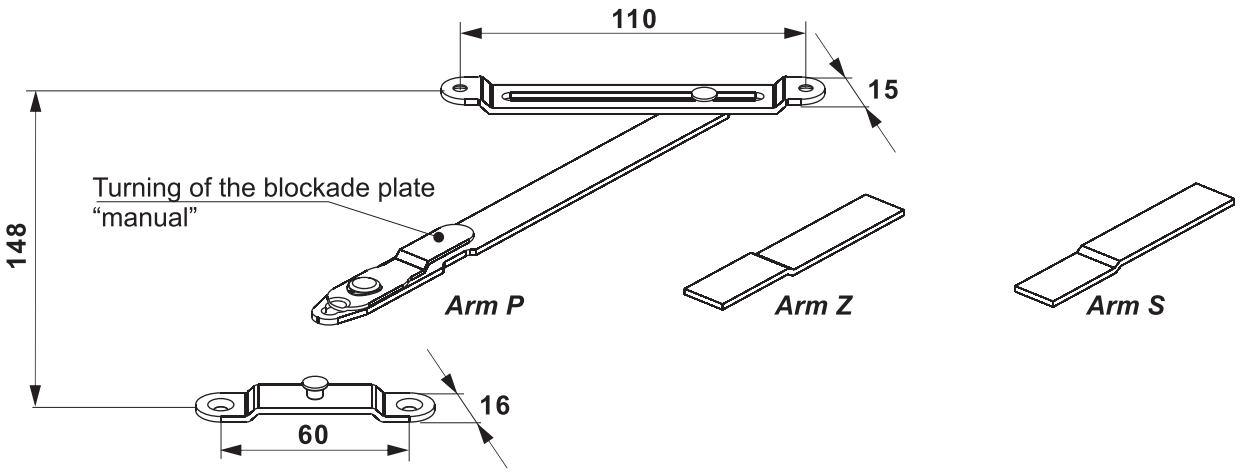
MARKING:
L - total length
W- deadbolt's location

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
1	box	380	50	85	10	1,82
	pallet	800	800		2400	
2	box	660	50	85	10	2,95
	pallet	1200	800		1200	
2A	box	800	50	85	10	3,30
	pallet	1200	800		1200	
2C	box	800	50	85	10	3,32
	pallet	1200	800		1200	
3	box	920	50	85	10	4,30
	pallet	1200	800		800	
4	box	1100	50	85	10	5,30
	pallet	1200	800		800	
4A	box	1420	50	85	10	6,55
	pallet	1600	800		800	

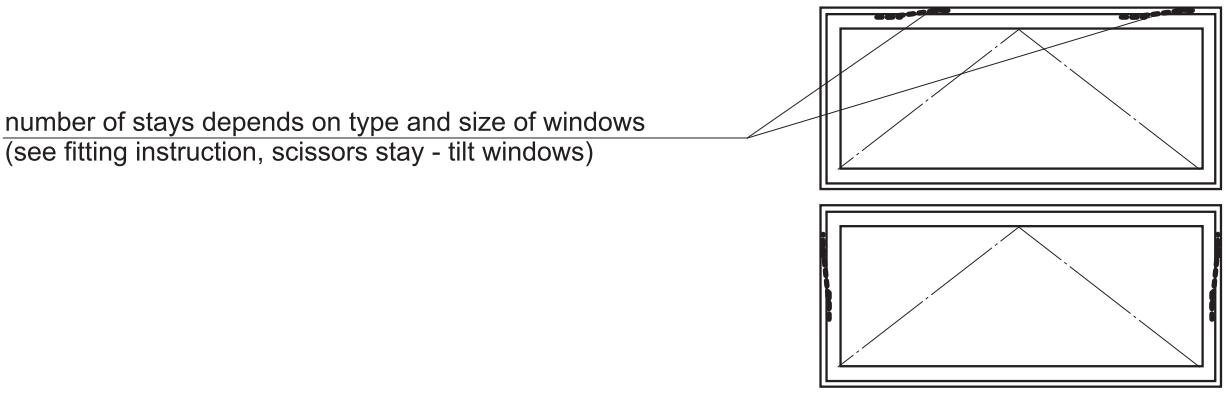
Scissors stay

Slit in window [mm]	*Arm*	*Use*	*Catalogue number of the stay*
11÷12	P	Stay MC; Stay NC	**106-008-000**
	S	Stay UC1 up to Uc4	**106-009-000**
8÷9	Z	Stay UC1 up to UC4	**106-010-000**



Bracket B

Catalogue number **106-006-000**



USE:
Scissors stay is used in tilt windows as a subassembly limiting tilting the sashes. In connection with drive gear MC and NC works without bracket.
Used in windows with **TAKT-150** hardware as an element protecting against disconnecting of the window sash.

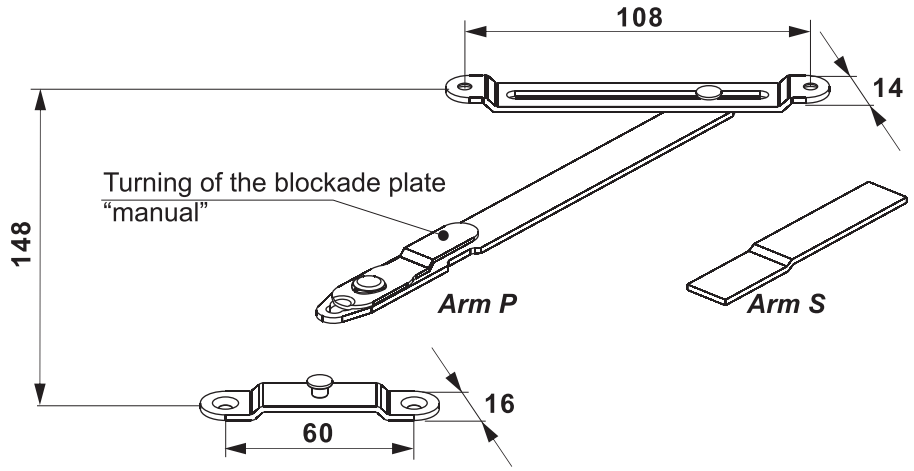
ORDERING:
Stay catalogue number and bracket catalogue number should be given separately.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
P	box	300	180	180	200	15,75
	pallet	1200	800			
S	box	300	180	180	200	15,75
	pallet	1200	800			
Z	box	300	180	180	200	15,75
	pallet	1200	800			

Scissors stay AI

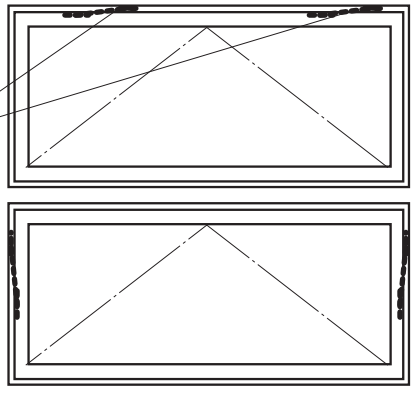
Slit in window [mm]	*Arm*	*Use*	*Catalogue number Of the stay*
11÷12	P	with bracket B	**206-008-000**
	S	drive gear MC, drive gear NC	**206-009-000**



Bracket B

Catalogue number **106-006-000**

Number of stays depends on type and size of windows
(see fitting instruction, scissors stay - tilt windows)



USE:
Scissors stay is used in aluminium tilt windows, mainly in **MB59S** system as a subassembly limiting tilting the sashes. In connection with drive gears MC and NC works without bracket.
Used in windows with **TAKT-150** hardware as an element protecting against disconnecting of the window sash.

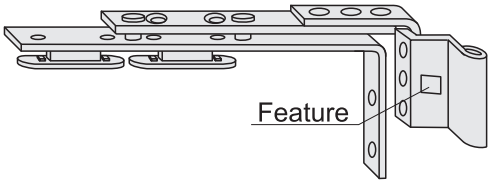
ORDERING:
Stay catalogue number and bracket catalogue number should be given separately.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
P	box	300	180	180	200	15,75
	pallet	1200	800			
S	box	300	180	180	200	15,75
	pallet	1200	800			
Z	box	300	180	180	200	15,75
	pallet	1200	800			

Corner hinge leaf Tw

Feature	*Catalogue number*
9	**101-386-000**
13	**101-387-000**



Bearing guard No IV

USE:
In sashes of **R** (Tw) windows.

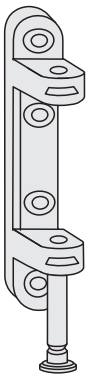
IMPORTANT:
Guard should be fitted before placing hinge leaf into upper hinge bracket.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
9	box	300	180	180	50	10,00
	pallet	1200	800		3200	
13	box	300	180	180	50	10,25
	pallet	1200	800		3200	

Upper hinge bracket Tw 3

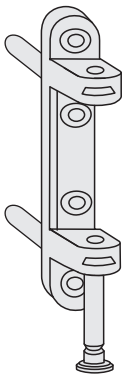
Catalogue number **101-389-000**



Bracket guard No IIIA

Upper hinge Bracket Tw 6

Catalogue number **101-390-000**



USE:
In sashes of **R** and **RU** (Tw) windows, in cooperation with stay arm Tw, or corner hinge leaf Tw. Maximum sash weight 100 kg.

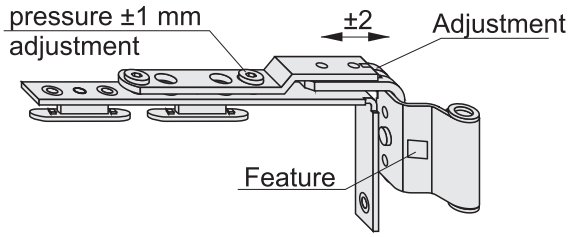
For **Tw3** jig catalogue No: **001-396-000**
For **Tw6** jig catalogue No: **001-397-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Tw3	box	300	180	180	300	13,30
	pallet	1200	800			
Tw6	box	300	180	180	200	10,20
	pallet	1200	800			

Corner hinge leaf TwO

Feature	*Catalogue number*
9	**101-725-000**
13	**101-726-000**
13/21	**101-745-000**
14	**101-856-000**



Bearing guard No IVA

USE:
In sashes of **R** (**Tw**) windows.

IMPORTANT:
Guard should be fitted before placing hinge leaf into upper hinge bracket.
Construction of the leaf enables flushing upper hinge bracket with the edge of the sash.

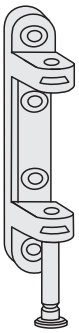
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
9 TwO	box	300	180	180	50	10,40
	pallet	1200	800			
13TwO, 14TwO	box	300	180	180	50	10,40
	pallet	1200	800			
13/21TwO	box	300	180	180	50	10,60
	pallet	1200	800			

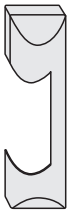
Upper hinge bracket TwO

TwO3 catalogue number **101-720-000**

TwO6 catalogue number **101-739-000**



Bracket guard No IIIB



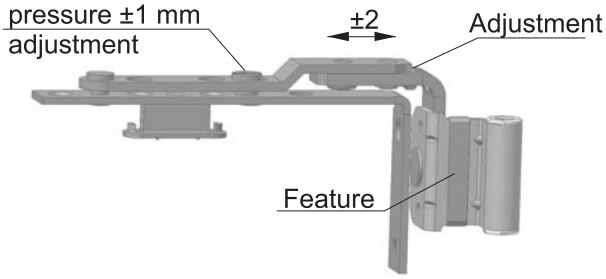
USE:
In sashes of **R** and **Ru**(**Tw**) windows in cooperation with stay arm **TwO**, or corner hinge leaf **TwO**. Maximum sash weight is 100 kg. Construction of the bracket enables flushing with the edge of the sash.
For **TwO 3** jig cat. No: **050-001-000**
For **TwO 6** jig cat. No: **050-016-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
TwO 3	box	300	180	180	300	13,30
	pallet	1200	800			
TwO 6	box	300	180	180	200	10,20
	pallet	1200	800			

Corner hinge leaf TwH

Feature	*Catalogue number*
9	**101-822-000**
13	**101-823-000**
13/21	**101-824-000**



Bearing guard No IVA

USE:
In sashes of **R** (**Tw**) windows in cooperation with tilt restrictor (**ORC**), or sash brake (**HBK**).
Maximum sash weight 80 kg.

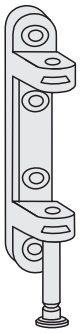
IMPORTANT:
Guard should be fitted before placing the hinge leaf into upper hinge bracket.
Construction of the leaf enables flushing the upper hinge bracket with the edge of the sash.

PACKING

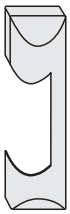
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
9 TwH	box	300	180	180	50	9,60
	pallet	1200	800			
13TwH	box	300	180	180	50	9,60
	pallet	1200	800			
13/21TwH	box	300	180	180	50	9,80
	pallet	1200	800			

Upper hinge bracket TwO

TwO3 catalogue number **101-720-000**
TwO6 catalogue number **101-739-000**



Bracket guard No IIIB



USE:
In sashes of **R** and **Ru**(**Tw**) windows in cooperation with stay arm **TwO**, or corner hinge leaf **TwH** (**TwO**).
Maximum sash weight 100 kg.

Construction of the bracket enables flushing with the edge of the sash.

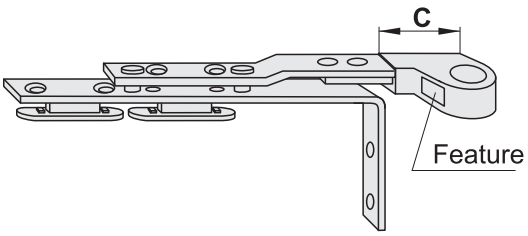
For **TwO 3** jig catalogue No: **050-001-000**
For **TwO 6** jig catalogue No: **050-016-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
TwO 3	box	300	180	180	300	13,30
	pallet	1200	800			
TwO 6	box	300	180	180	200	10,20
	pallet	1200	800			

Corner hinge leaf Dr

Feature	*Catalogue number*	*Notch clearance [mm]*	*C [mm]*
11	**101-054-000**	11 or 12	29



Bearing guard No VII

USE:
In sashes of **R** (Dr) windows.

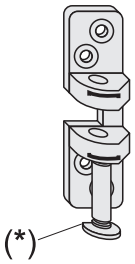
IMPORTANT:
Guard should be fitted before placing the leaf into upper hinge bracket.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Dr	box	300	180	180	50	8,50
	pallet	1200	800			

Upper hinge bracket DrL

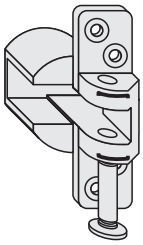
Catalogue number **101-369-000**



Bearing guard No VIII

Upper hinge bracket DrC

Catalogue number **101-299-000**



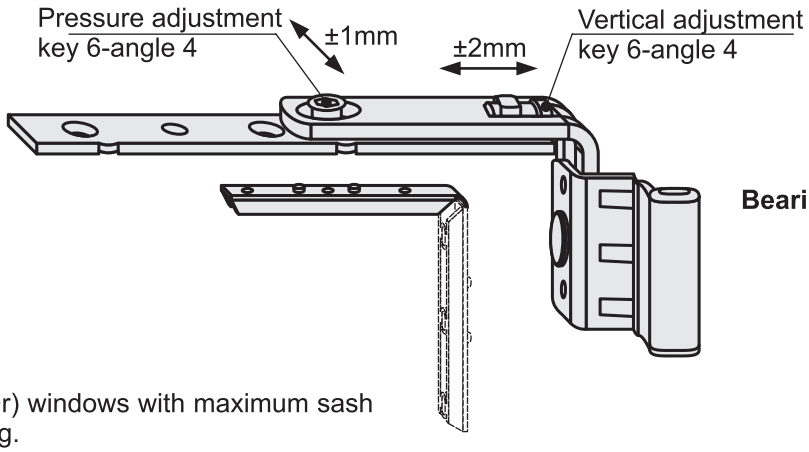
USE:
In sashes of **R** and **RU** (Dr) windows with maximum sash weight up to 130 kg. In sashes of **R** and **RU** (Dr) windows with maximum sash weight up to 100 kg, the bracket catalogue number **101-369-000** should be used.
(*) pin's head cut off.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
DrC	box	300	180	180	150	11,80
	pallet	1200	800		7200	
DrL	box	300	180	180	300	13,10
	pallet	1200	800		9600	

Corner hinge leaf S5

Catalogue number **119-009-000**



Bearing guard No IVA

USE:
In sashes of **R** (Dr) windows with maximum sash weight up to 100 kg.
Works with upper hinge bracket S5.

IMPORTANT:
guard should be fitted before connecting the arm to upper hinge bracket.

NOTE:
no hardware channel is required!
In case of sashes with hardware channel, half a stop block should be used, catalogue number **019-001-000**.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Corner hinge leaf S5	Box	310	185	185	50	6,60
	pallet	1200	800			

Upper hinge bracket S5

Catalogue number **119-004-000**

Bearing guard No IIIB

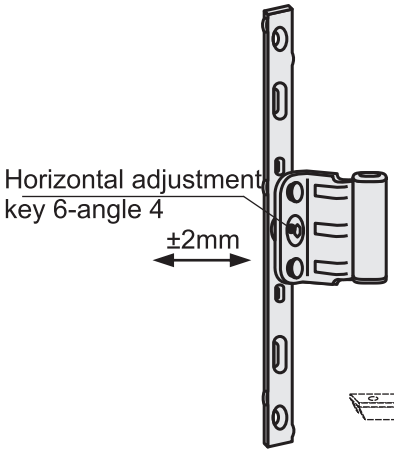
USE:
in **R** and **RU** (Dr) window sashes with maximum sash weight up to 100 kg.
Jig catalogue number **050-010-000**.

PACKING

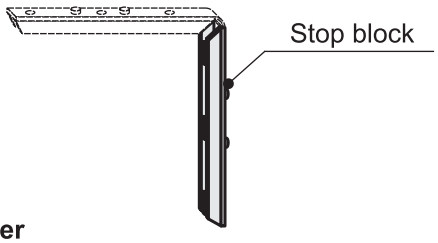
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
U.h.b. S5	box	310	185	185	200	12,95
	pallet	1200	800			

Middle hinge leaf S5

Catalogue number **119-008-000**



Guard No IVA



USE:
In sashes of **R** (Dr) windows with maximum sash weight up to 100 kg.
Works with upper hinge bracket S5.

IMPORTANT:
Guard should be fitted before connecting hinge leaf to upper hinge bracket.
In case of sashes with hardware channel, half a stop block catalogue number **019-001-000** should be used.

NOTE:
No hardware channel is required!
The hinge leaf is used in tilt windows.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
M..h.l. S5	box	300	180	180	100	9,65
	pallet	1200	800			

Upper hinge bracket S5

Catalogue number **119-004-000**

Bracket guard No IIIB

USE:
In sashes of **R** and **RU** (Dr) windows with maximum sash weight up to 100 kg.
Jig catalogue number **050-010-000**.

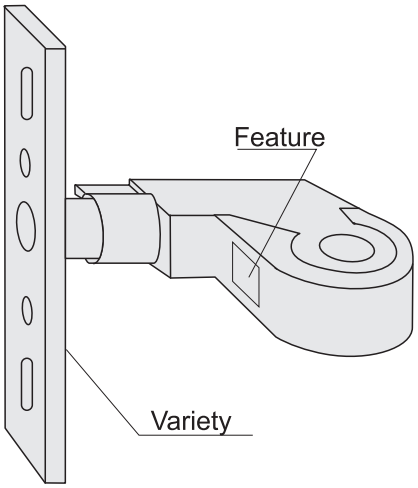
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
U.h.b. S5	box	310	185	185	200	12,95
	pallet	1200	800			

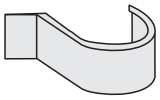
Middle hinge leaf Dr C

(for turn windows)

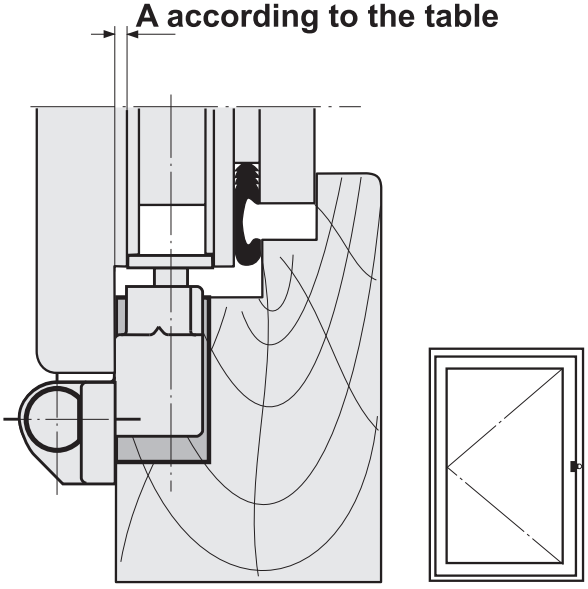
Variety	*Catalogue number*	*A [Mm]*	*Feature*
1 - 1	**101-099-000**	1	11
0 - 2	**101-098-000**	0(2)	11



Guard No VII



A according to the table



USE:
In sashes of **R** (Dr) windows.
For windows weighing up to 130 kg, **Dr C** upper hinge bracket should be used, catalogue number **101-083-000**.
In case of full hardware channel a stop block should be used, catalogue number **101-096-000**.
To be assembled in hardware groove.

IMPORTANT:
guard should be fitted before placing into hinge bracket.

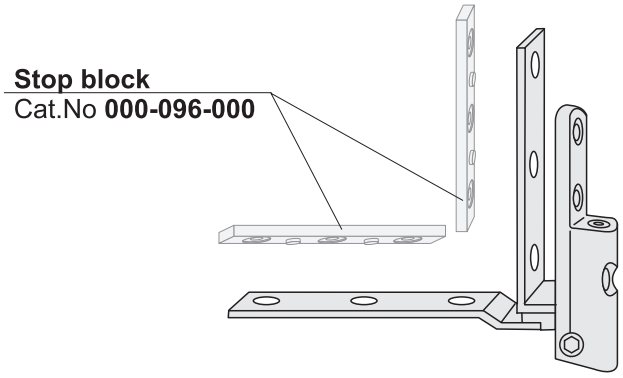
A - displacement dimension obtained by turning the plate toward the bearing (dimension of the hardware groove distance from the rebate).

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
1-1	box	300	180	180	200	13,30
	pallet	1200	800			
0-2	box	300	180	180	200	13,30
	pallet	1200	800			

Lower hinge leaf DrC 11

Type	*Catalogue number*	*Notch clearance [mm]*
Left	**101-354-000**	11 or 12
Right	**101-355-000**	11 or 12



Bracket guard No VA
(left or right)

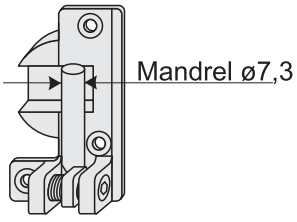
USE:
In sashes of **R** and **RU** (**Dr**) windows with hardware groove. Leaf enables pressure adjustment ±1 mm and adjustment in vertical axis ±2 mm.

PACKING

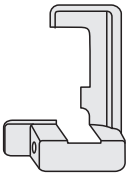
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
DrC11	box	300	180	180	50	6,00
	pallet	1200	800		3200	

Lower hinge bracket DrC

Type	*Catalogue number*
Left	**101-492-000**
Right	**101-491-000**



Bracket guard No VIB
(left or right)



USE:
In sashes of **R** and **RU** (**Dr**) windows weighing up to 130 kg.
Works with lower hinge leaf with pressure adjustment.
Jig catalogue number **001-211-000**

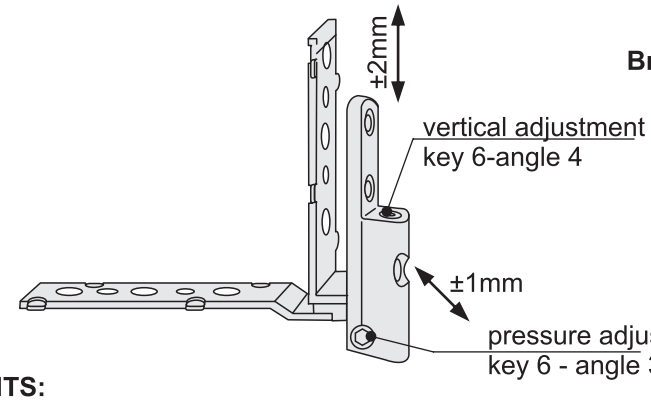
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	piece/ box	Box weight [kg]
DrC	box	300	180	180	100	10,95
	pallet	1200	800			

Lower hinge leaf DrC11/BR

(window sash w/o groove)

Type	*Catalogue number*	*Notch clearance [Mm]*
Left	**101-432-000**	11 or 12
Right	**101-433-000**	11 or 12



Bracket guard No VA
(left or right)

COOPERATING ELEMENTS:
Lower hinge bracket Dr-C.

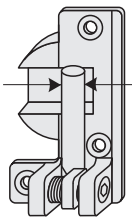
USE:
In sashes of **R** and **RU** (Dr) windows, without hardware groove. Leaf enables pressure adjustment ±1 mm, and adjustment in the vertical axis ±2 mm.

PACKING

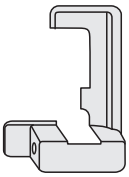
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
DrC11/BR	box	300	180	180	50	6,00
	pallet	1200	800		3200	

Lower hinge bracket DrC

Type	*Catalogue number*
Left	**101-492-000**
Right	**101-491-000**



Bracket guard No VIB
(left or right)



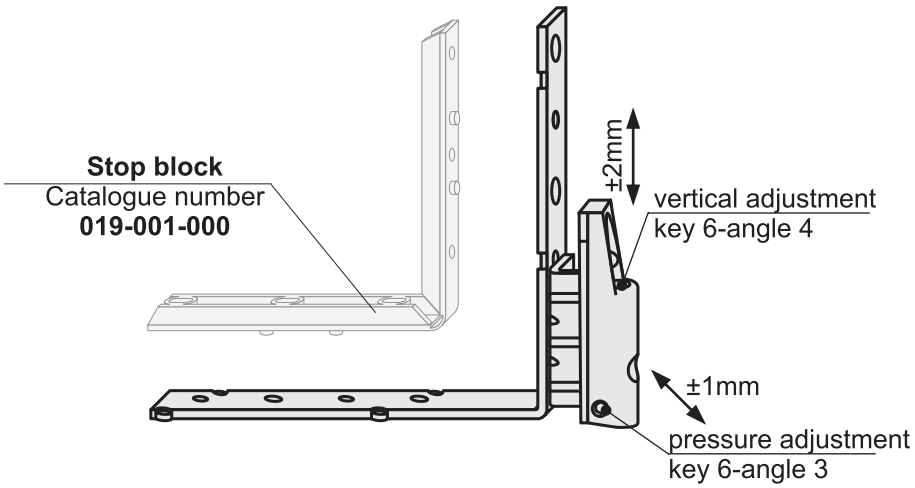
USE:
In sashes of **R** and **RU** (**Dr**) windows weighing up to 130 kg.
Works with lower hinge leaf with pressure adjustment.
Jig catalogue number **001-211-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
DrC	box	300	180	180	100	10,95
	pallet	1200	800			

Lower hinge leaf S5

Catalogue number **119-005-000** - Left
Catalogue number **119-006-000** - Right



Guard No IXA
(left or right)

USE:
In sashes of **R** (Dr) windows with maximum sash weight up to 100 kg.
Works with lower hinge bracket S5.

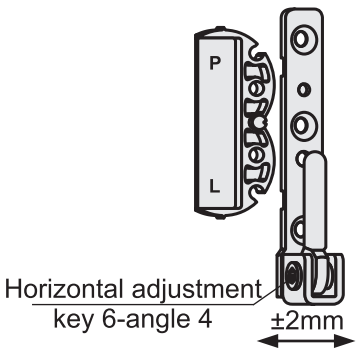
NOTE: No hardware channel is required!
In case of sashes with hardware channel a stop block should be used, catalogue number **019-001-000**.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Lower hinge leaf	box	310	185	185	50	8,15
	pallet	1200	800			

Lower hinge bracket S5

Catalogue number **119-007-000**



Bracket guard No XA

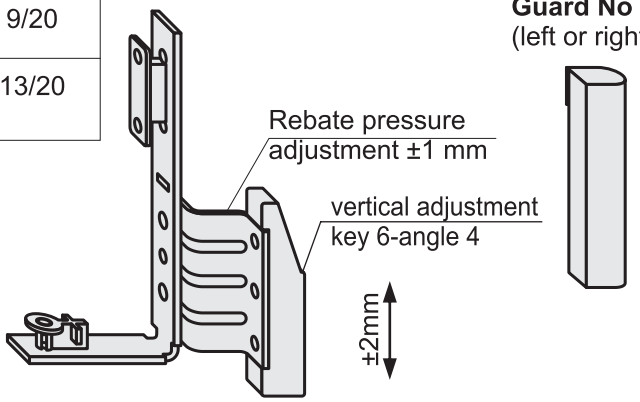
USE:
In sashes of **R** (**Dr**) windows with max. sash weight up to 100 kg.
Works with lower hinge leaf S5.
Jig catalogue number. **050-010-000**.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	piece/ box	Box weight [kg]
L.h.b. S5	box	310	185	185	300	17,10
	pallet	1200	800			

Lower notch hinge leaf

Type	*Catalogue number*	*Notch clearance [mm]*	*Variety*
Left right	**101-523-000** **101-524-000**	12	9/20
left right	**101-525-000** **101-526-000**	12	13/20



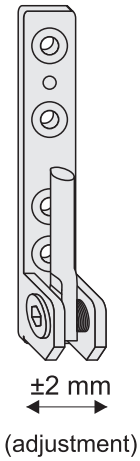
PACKING

Subassembly		Length [mm]	Width [mm]	Height. [mm]	Pcs/ box	Box weight [kg]
9/20	box	300	180	180	50	7,80
	pallet	1200	800			
13/20	box	300	180	180	50	7,80
	pallet	1200	800			

USE:
In sashes of **R** and **RU** (Tw) windows with sash weight up to 100 kg.
Recommended particularly in inclined PVC-U systems with atypical thin rebates.

Lower notch hinge bracket

Catalogue number **101-529-000**



Guard No XA

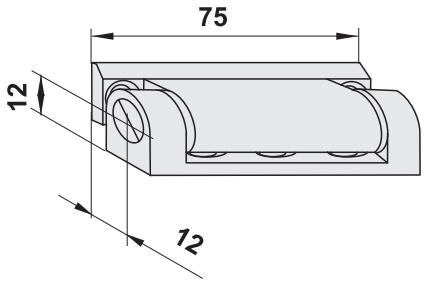
PACKING

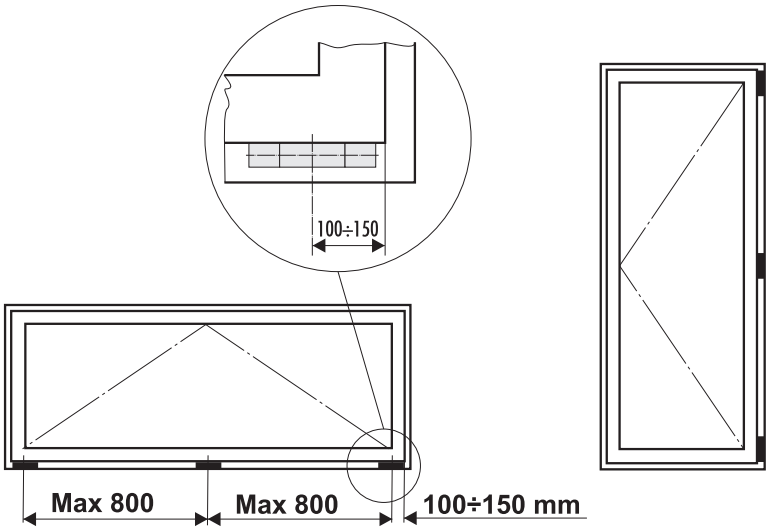
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Bracket	box	300	180	180	200	8,40
	pallet	1200	800			

USE:
In sashes of **R** and **RU** (**Tw**) windows.
Offered in sets with lower notch hinge leaf and with lower hinge leaf **TwO,** within range Hw < 650 mm.
Jig catalogue number **050-001-000.**

Hinge for tilt windows

Finish / coat	*Catalogue number*	*RAL*
Varnished white	**001-169-000**	9016
Varnished brown	**001-205-000**	8017
Zinc coat	**101-058-000**	-





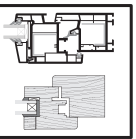
Fitting scheme

USE:
In sashes of **U** (**Dr** and **Tw**) windows. Max. sash weight up to 100 kg.
May be also used in **R** windows (there is no adjustment).
Maximum spacing between hinges: 800 mm.

Jig: for **Dr/Tw** windows, catalogue No **050-011-000**.

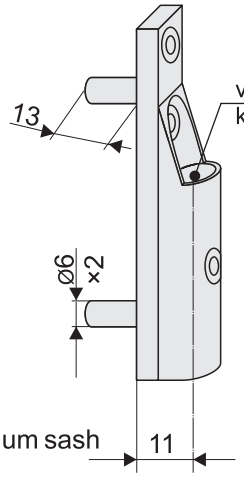
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
white	box	300	180	180	250	25,85
	pallet	1200	800			
brown	box	300	180	180	250	25,85
	pallet	1200	800			
zinc coat	box	300	180	180	50	5,80
	pallet	1200	800			



Lower hinge leaf TwO

Catalogue number **101-640-000**



Guard No I

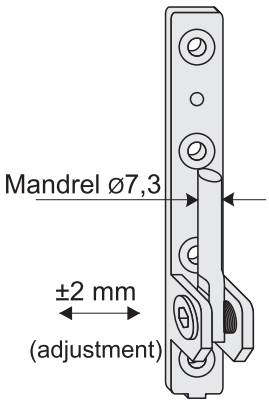
USE:
In sashes of **R** and **RU** (**Tw**) windows with maximum sash weight up to 100 kg
Offered in set with lower hinge leaf **TwO** or lower notch hinge leaf. Provides flushing of the hinge with the edge of the sash.
Jig catalogue number **050-019-000**
Jig catalogue number **050-020-000** (for rebate at angle).

PACKING

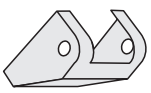
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Hinge leaf	box	300	180	180	200	8,40
	pallet	1200	800			

Lower hinge bracket TwO

TwO3 catalogue number **101-677-000**
TwO6 catalogue number **101-678-000**

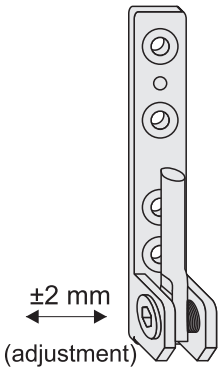


Guard No IIB



Lower notch hinge bracket

Catalogue number **101-529-000**



Guard No XA

USE:
In sashes of **R** and **RU** (Tw) windows. For windows with maximum sash weight up to 80kg, lower hinge bracket TwO to be used.
For windows with maximum sash weight up to 100 kg, or Hw < 650 mm lower notch hinge bracket TwO to be used.
Provides flushing of the hinge with the edge of the sash.
Lower hinge leaf TwO may be used in Dr windows (light version up to 80 kg).

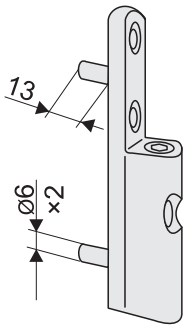
Jig catalogue number **050-001-000** for TwO3
Jig catalogue number **050-016-000** for TwO6

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
TwO3	box	300	180	180	300	12,65
	pallet	1200	800			
TwO6	box	300	180	180	200	9,20
	pallet	1200	800			
Lnhb	box	300	180	180	200	8,40
	pallet	1200	800			

Lower hinge leaf Dr / Tw

Guard No I



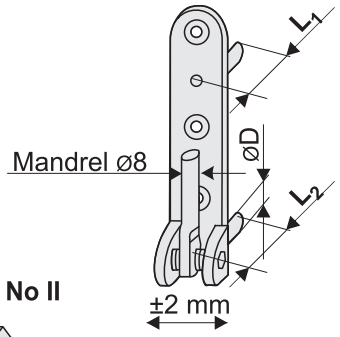
Catalogue number of the set with lower hinge bracket Dr-L (light version)

Catalogue number	L_1 *[mm]*	L_2 *[mm]*	*Typ*	*D [mm]*
101-053-000	14	14	-	ø6
101-399-000	21	21	"B"	ø6
101-488-000	21	21	"C"	ø6
101-568-000	2	2	"D"	ø3

Jig catalogue number **001-171-000**
Jig catalogue number **050-007-000 (for rebate at the angle**)

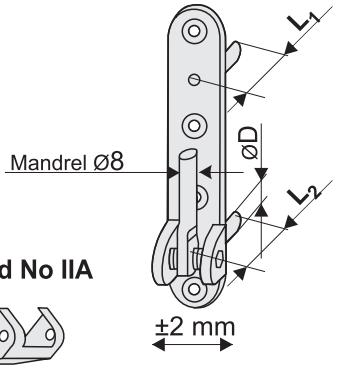
WHILE THE STOCK LASTS !!!

Lower hinge bracket Dr/Tw



Guard No II

Lower hinge bracket Dr/Tw "C" variety



Guard No IIA

USE:
in sashes of windows **R** and **RU** (Dr and Tw) weighing up to 80 kg; when a "C" bracket is used - up to 100 kg.

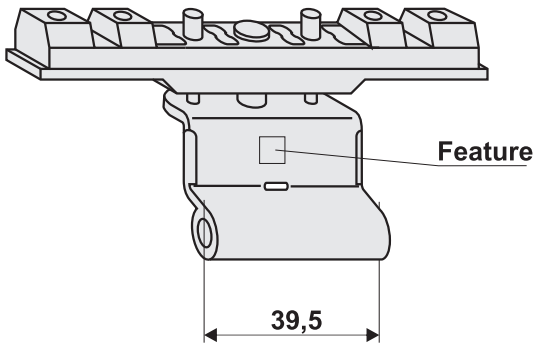
Jig catalogue number **001-396-000** for Lhb ø6 and Lhb ø3
Jig catalogue number **001-397-000** for Lhb ø6 and Lhb ø6
Jig catalogue number **001-733-000** for Lhb ø3 and Lhb ø3

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
-	box	300	180	180	150	14,80
	pallet	1200	800			
B	box	300	180	180	150	15,90
	pallet	1200	800			
C	box	300	180	180	150	16,00
	pallet	1200	800			
D	box	300	180	180	150	13,95
	pallet	1200	800			

Notch hinge leaf Tw

Feature	*Catalogue number*
9/A	**101-409-000**
13/A	**101-410-000**



Bearing guard No IV

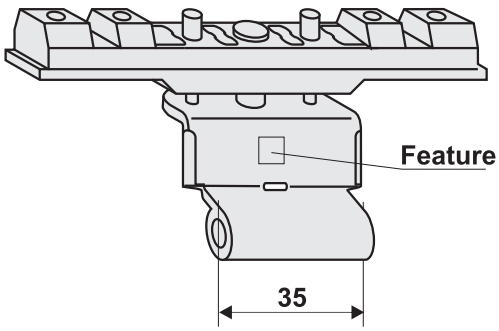
USE:
In sashes of tilt windows **(U) Tw** with notch clearance 12 mm. Works with upper hinge bracket Tw.
Adjustment in vertical axis for the range ±2 mm is obtained by screwing in or out the bearing (1 turning of a screw = 1 mm). Socket screw key 6-angle 4 mm.
May be used in sashes of turn windows **(R)** without vertical adjustment.
IMPORTANT:
Guard should be fitted before placing into hinge bracket.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
9/A	box	300	180	180	100	12,25
	pallet	1200	800			
13/A	box	300	180	180	100	12,25
	pallet	1200	800			

Notch hinge leaf Tw
(trimmed)

Feature	*Catalogue number*
9/B	**101-405-000**
13/B	**101-406-000**



Bearing guard No IV

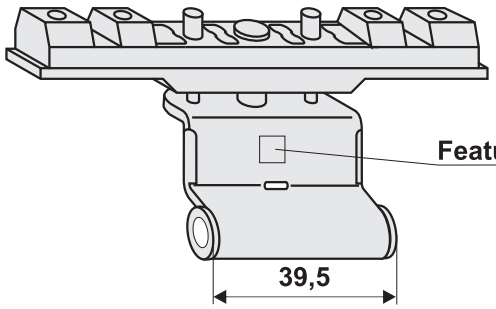
USE:
In sashes of tilt windows **(U) Tw** with clearance notch 12 mm.
Works with upper hinge bracket Tw.
Adjustment in vertical axis within the range ±2 mm is obtained by screwing in or out the bearing (1 turning of a screw = 1 mm). In horizontal axis self-adjustment ±2 mm. Socket screw key 6-angle 4 mm.
Leaf TwO may be used in sashes of turn windows **(R)** with vertical adjustment.
IMPORTANT:
Guard should be fitted before placing into hinge bracket.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
9/B	box	300	180	180	100	11,70
	pallet	1200	800			
13/B	box	300	180	180	100	11,70
	pallet	1200	800			

Notch hinge leaf TwO

Feature	Catalogue number
9/A	**101-721-000**
13/A	**101-722-000**
13/21A	**101-747-000**



Bearing guard No IVA

USE:
in sashes of tilt windows **(U) Tw** with clearance notch 12 mm.
Works with upper hinge bracket TwO.
Adjustment in vertical axis within the range ±2 mm is obtained by screwing in or out the bearing (1 turning of a screw = 1 mm). Socket screw key 6-angle 4 mm.
May be used in sashes of tilt windows **(R)** without vertical adjustment.
IMPORTANT:
Guard should be fitted before placing the hinge bracket.

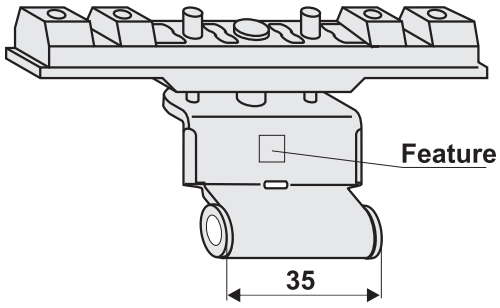
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	piece/ box	Box weight [kg]
9/A	box	300	180	180	100	12,25
	pallet	1200	800			
13/A	box	300	180	180	100	12,25
	pallet	1200	800			
13/21/A	box	300	180	180	100	12,40
	pallet	1200	800			

Notch hinge leaf TwO

(Trimmed)

Feature	Catalogue number
9/B	**101-723-000**
13/B	**101-724-000**
13/21B	**101-746-000**



Bearing guard No IVA

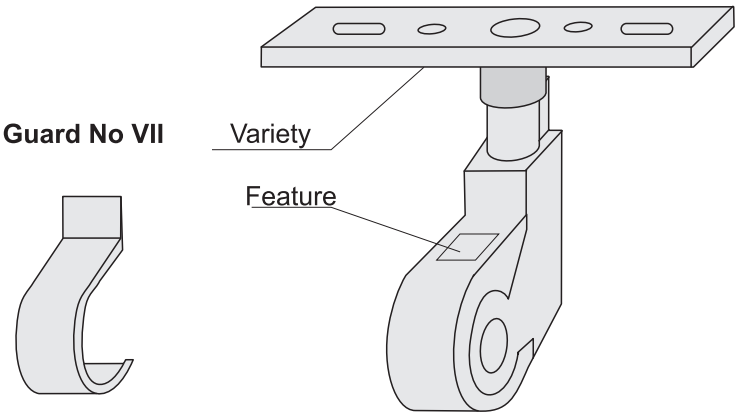
USE:
In sashes of tilt windows **(U) Tw** with notch clearance 12 mm.
Works with upper hinge bracket TwO.
Adjustment in vertical axis within the range ±2 mm is obtained by screwing in or screwing out the bearing (1 turning of a screw = 1 mm). In vertical axis self-adjustment ±2 mm. Socket screw key 6-angle 4 mm.
Leaf TwO may be used in sashes of turn windows **(R)** with vertical adjustment.
IMPORTANT:
Guard should be fitted before placing into hinge bracket.

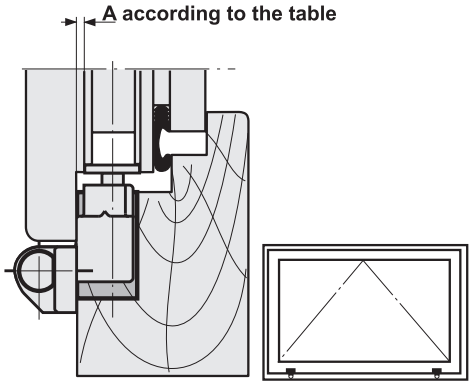
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
9/B	box	300	180	180	100	11,60
	pallet	1200	800			
13/B	box	300	180	180	100	11,60
	pallet	1200	800			
13/21/B	box	300	180	180	100	11,90
	pallet	1200	800			

Tilt hinge leaf U Dr C11

Variety	Catalogue number	A [mm]	Feature
1-1	**101-102-000**	1	11
0-2	**101-103-000**	0(2)	11





A - displacement extent obtained by turning the plate toward the bearing. (Distance between the hardware groove and the rebate).

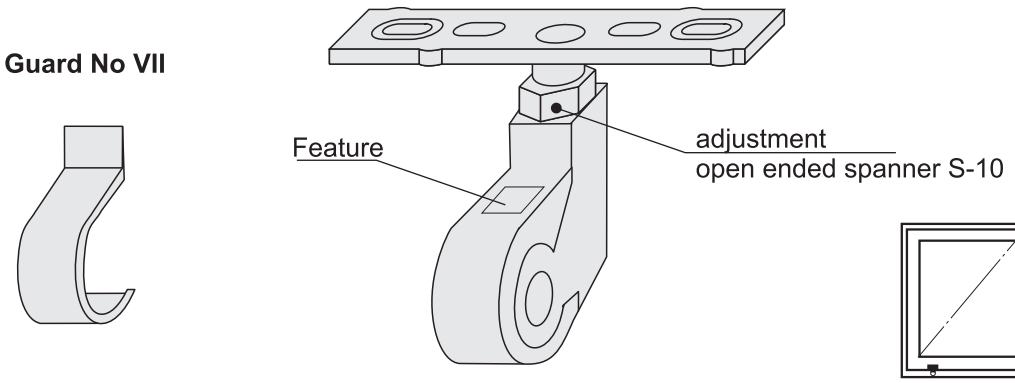
USE:
in sashes of windows **U** (Dr).
For windows weighing up to 130 kg upper hinge bracket **Dr C** should be used, catalogue No **101-083-000**.
In case of full hardware channel a stop block should be used, catalogue No **101-096-000**.
To be assembled in hardware groove.
IMPORTANT:
Guard should be fitted before placing into hinge bracket.

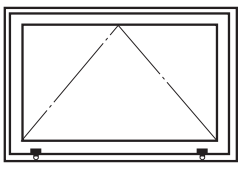
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
DrC11 1-1	box	300	180	180	200	13,35
	pallet	1200	800			
DrC11 0-2	box	300	180	180	200	13,35
	pallet	1200	800			

Tilt hinge leaf R Dr

Catalogue number - **101-736-000**





USE:
In sashes of windows **U** (Dr 11/12 mm) without hardware channel in the lower part of the sash.
IMPORTANT:
Guard should be fitted before placing into hinge bracket.

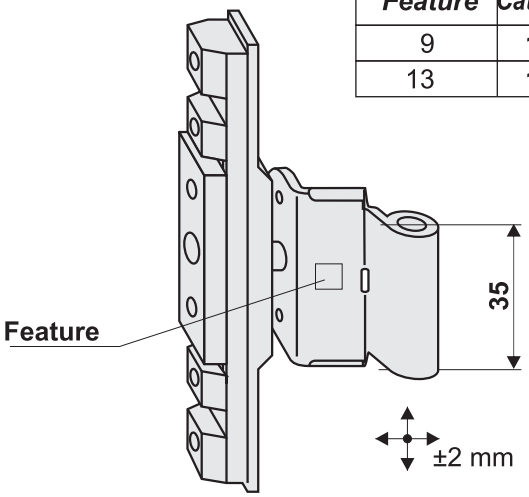
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
R-Dr	Box	300	180	180	200	13,25
	pallet	1200	800			

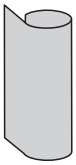
Middle hinge leaf Tw

(For turn windows)

Feature	*Catalogue number*
9	**101-236-000**
13	**101-245-000**



Guard No IV



USE:

In sashes of turn windows (**R**) Tw with notch clearance 12 mm. Works with upper hinge bracket Tw.

In vertical and horizontal axis there is a self-adjustment for the range ±2 mm.

IMPORTANT:

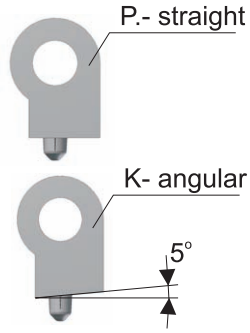
Guard should be fitted before placing into hinge bracket.

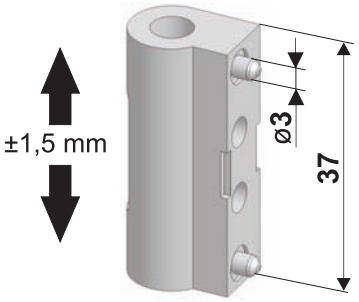
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
9	box	300	180	180	100	12,40
	pallet	1200	800			
13	box	300	180	180	100	12,60
	pallet	1200	800			

Rebate leaf

P- Straight Cat. Number **101- 866-000**
K- Angular Cat. Number **101- 867-000**





Leaf guard No IVB

USE:
In sashes of windows **R** and **U** (**Tw**), with max. weight 60 kg.
It has the possibility of displacing toward bracket axis (self-adjustment) ±1,5 mm
Leaf construction enables flushing the hinge bracket with the edge of the sash

IMPORTANT:
Guard should be fitted before placing the hinge leaf into upper hinge bracket.

Jig catalogue No **050-029-000**

PACKING

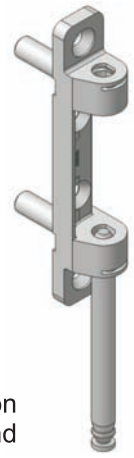
Subassembly		Lenght [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Rhl P	box	300	180	180	300	6,90
	pallet	1200	800			
Rhl K	box	300	180	180	200	7.10
	pallet	1200	800			

Upper hinge bracket TwO

TwO3 cat. number **101-720-000**

TwO6 cat. number **101-739-000**

Bracket guard No IIIB



USE:
In sashes of windows **R** and **Ru**(**Tw**) in cooperation with stay arm **TwO**, or corner hinge leaf **TwO** and rebate hinge leaf. Maximum sash weight is 100 kg.
Bracket construction enables flushing with the edge of the sash.

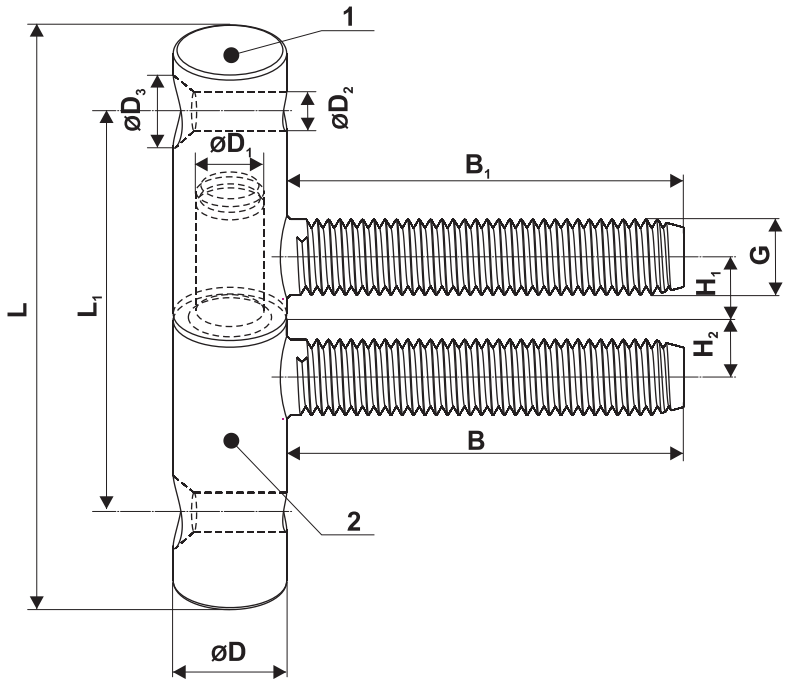
For **TwO 3** jig catalogue No: **050-001-000**
For **TwO 6** jig catalogue No: **050-016-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
TwO 3	box	300	180	180	300	13,30
	pallet	1200	800			
TwO 6	box	300	180	180	200	10,20
	pallet	1200	800			

Deadbolt hinge with screws.

Item	*Subassembly*	*Cat. Number*	*Type*	*Finish / Coat*
1	Bearing leaf	**014-122-000**	87.05	silver / zinc coat
		014-128-000		yellow / zinc coat
2	Deadbolt leaf	**014-123-000**	87.05	silver / zinc coat
		014-129-000		yellow / zinc coat



Type	ØD	$ØD_1$	L	L_1	$ØD_2$	$ØD_3$	H_1	H_2	G	B	B_1
87.05	15	9	80	60	5,5	10,5	9	9	M10	54	54

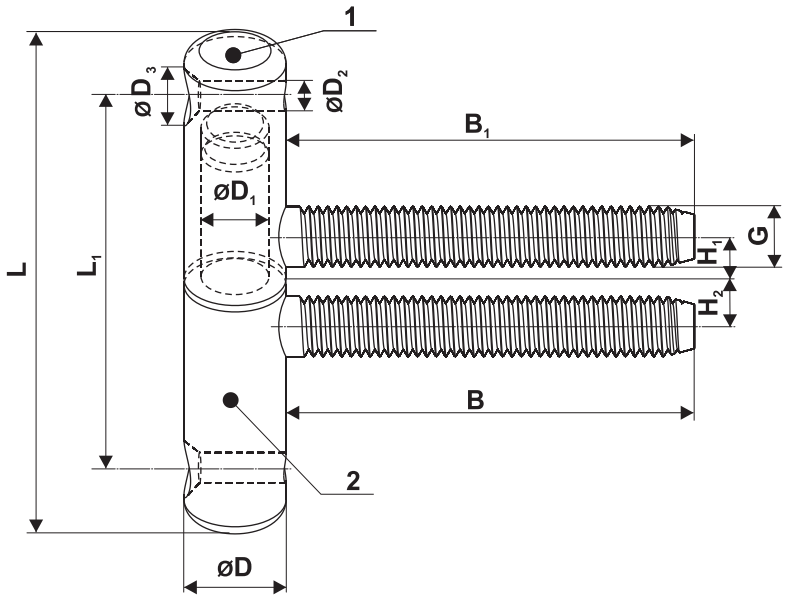
USE:
Recommended mainly for using in turn wooden windows (Dr) and internal doors.

PACKING

Subassembly		Length [mm]	Width. [mm]	Height [mm]	pcs/ box	Box weight [kg]
B.l.	box	300	180	180	100	7,50
	pallet	1200	800			
D.l.	box	300	180	180	100	9,40
	pallet	1200	800			

Deadbolt hinge with screws

Item	*Subassembly*	*Cat.number*	*Type*	*Finish Coat*
1	Bearing leaf	**014-126-000**	87.24	silver / zinc coat
		014-132-000		yellow / zinc coat
2	Deadbolt leaf	**014-127-000**	87.24	silver / zinc coat
		014-133-000		yellow / zinc coat



Type	ØD	$ØD_1$	L	L_1	$ØD_2$	$ØD_3$	H_1	H_2	G	B	B_1
87.24	13,5	9	72	58	4	8,4	7	7	M8	54	54

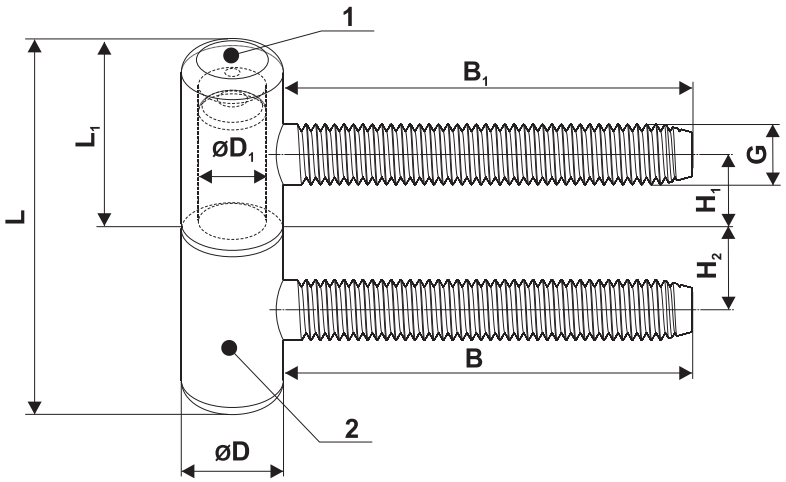
USE:
Recommended mainly for using in turn wooden windows (Dr) and internal doors.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
B.I.	box	300	180	180	200	9,80
	pallet	1200	800			
D.I.	box	300	180	180	200	14,00
	pallet	1200	800			

Screwable deadbolt hinge

Item	*Subassembly*	*Cat. number*	*Type*	*Finish coat*
1	Bearing leaf	**014-124-000**	87.23	silver / zinc coat
		014-130-000		yellow / zinc coat
2	Deadbolt leaf	**014-125-000**	87.23	silver / zinc coat
		014-131-000		yellow / zinc coat



Type	øD	$øD_1$	L	L_1	H_1	H_2	G	B	B_1
87.23	13,5	9	52	26	13	13	M8	54	54

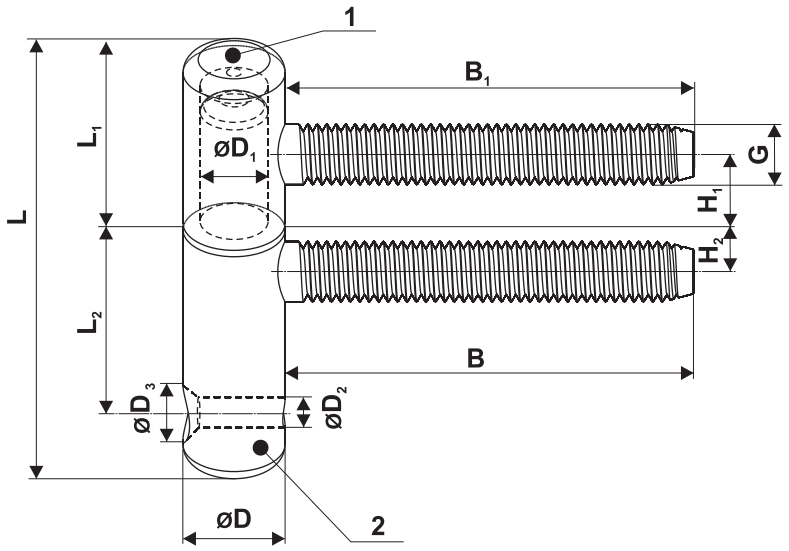
USE:
Recommended mainly for using in turn wooden windows (Dr) and internal doors.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
B.I.	box	300	180	180	200	7,80
	pallet	1200	800			
D.I.	box	300	180	180	200	12,00
	pallet	1200	800			

Deadbolt hinge with a screw

Item	*Subassembly*	*Cat. number*	*Type*	*Finish Coat*
1	Bearing leaf	**014-124-000**	87.23	silver / zinc coat
		014-130-000		yellow / zinc coat
2	Deadbolt leaf	**014-127-000**	87.24	silver / zinc coat
		014-133-000		yellow / zinc coat



Type	øD	$øD_1$	L	L_1	L_2	$øD_2$	$øD_3$	H_1	H_2	G	B	B_1
87.24	13,5	9	62	26	29	4	8,4	13	7	M8	54	54

USE:
Recommended mainly for using in turn wooden windows (Dr) and internal doors.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
B.I.	box	300	180	180	200	7,80
	pallet	1200	800			14,00
D.I.	box	300	180	180	200	
	pallet	1200	800			

Striker plates Dr

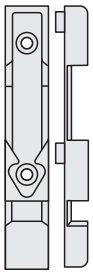
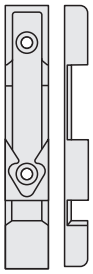
Item	*Profile system*	*Lower striker plate catalogue number*	*Peripheral striker plate catalogue number*
1	**Dr 7×8** (Euronut)	left 111-023-000 right 111-024-000 	left / right 111-096-000 
2	**Dr** (Eurofalz)	left / right 111-062-000 	left / right 111-063-000 

TABLE FOR THE SELECTION OF STRIKER PLATES DEPENDING ON THE Dr PROFILE

Profile	*Peripheral striker plate*	*Lower striker plate*	*Micro-ventilation Striker plate R*	*Adjustable striker plate B*	*Lift striker plate*	*Slide plate*
Eurofalz	111-063-000	111-062-000	101-231-000 L 101-232-000 P	101-670-000	101-620-000	102-179-000
Euronut 7x8	111-096-000	111-023-000 L 111-024-000 P	101-231-000 L 101-232-000 P + pad 001-221-000	101-669-000		102-180-000

Profile	*Peripheral striker plate U*	*Lower striker plate UD*	*Lower striker plate PWD*	*Striker plate H*
Eurofalz	101-605-000 L 101-604-000 P	101-601-000 L 101-600-000 P	111-133-000 L 111-134-000 P	101-821-000
Euronut 7x8	101-607-000 L 101-606-000 P	101-603-000 L 101-602-000 P	111-130-000 L 111-131-000 P	101-820-000

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Eurofalz lower	box	300	180	180	300	11,00
	pallet	1200	800			
Eurofalz peripheral	box	300	180	180	1000	19,85
	pallet	1200	800			
Euronut 7x8 lower	box	300	180	180	300	11,00
	pallet	1200	800			
Euronut 7x8 peripheral	box	300	180	180	1000	19,85
	pallet	1200	800			

Table for the selection of striker plates Tw 13

Profile	*Peripheral striker plate*	*Lower striker plate*	*Micro-ventilation Striker plate R*	*Adjustable striker plate B13*	*Lift striker plate*	*Slide plate*
Aluplast IDEAL 2000	111-039-000	111-038-000 L 111-037-000 P	101-708-000	101-662-000	101-780-000	102-201-000
Aluplast 4000	111-039-000	111-038-000 L 111-037-000 P.	101-707-000	101-400-000	101-781-000	102-201-000
AURA 6402	111-087-000	111-088-000 L 111-089-000 P	101-738-000	101-661-000	101-781-000	102-201-000
Brügmann AD/MD	111-039-000	111-038-000 L 111-037-000 P	101-708-000	101-661-000	101-781-000	102-201-000
Deceuninck Mondial 2000	111-093-000	111-046-000 L 111-045-000 P	101-704-000	101-401-000	101-784-000	102-201-000
Deceuninck Zendow	111-047-000	111-046-000 L 111-045-000 P.	101-703-000	101-716-000	101-785-000	102-201-000
Decco 60	111-087-000	111-088-000 L 111-089-000 P	101-709-000	101-655-000	101-778-000	102-201-000
Decco 70	111-087-000	111-088-000 L 111-089-000 P	101-713-000	101-660-000	101-775-000	102-201-000

Profile	*Peripheral striker plate U*	*Lower striker plate UD*	*Peripheral striker plate PW*	*Lower striker plate PWD*	*Striker plate H*	*Striker plate RS*
Aluplast IDEAL 2000	101-518-000	101-575-000 L 101-576-000 P	111-114-000	111-112-000 L 111-113-000 P	101-809-000	101-795-000
Aluplast 4000	101-395-000	101-522-000 L 101-574-000 P	111-114-000	111-112-000 L 111-113-000 P	101-809-000	101-803-000
AURA 6402	101-591-000	101-612-000 L 101-613-000 P	111-105-000	111-103-000 L 111-104-000 P	101-806-000	101-802-000
Brügmann AD/MD	101-591-000	101-612-000 L 101-613-000 P	111-105-000	111-103-000 L 111-104-000 P	101-806-000	101-802-000
Deceuninck Mondial 2000	101-688-000	101-692-000 L 101-693-000 P	111-120-000	111-118-000 L 111-119-000 P	101-807-000	101-799-000
Deceuninck Zendow	101-689-000	101-694-000 L 101-695-000 P	111-129-000	111-127-000 L 111-128-000 P	101-814-000	101-800-000
Decco 60	101-517-000	101-614-000 L 101-615-000 P	111-111-000	111-109-000 L 111-110-000 P	101-813-000	101-794-000
Decco 70			111-126-000	111-124-000 L 111-125-000 P		101-790-000

PACKING: box length/width/height - 300/180/180 [mm]

Lower striker plate	Pcs/ box	Box weight [kg]
111-038-000 L 111-037-000 P	300	11,40
111-043-000 L 111-042-000 P	300	10,80
111-046-000 L 111-045-000 P	300	11,50

Lower striker plate	Pcs/ box	Box weight [kg]
111-075-000 L 111-076-000 P	200	15,00
111-088-000 L 111-089-000 P	300	10,56
111-091-000 L 111-092-000 P	300	10,50

Peripheral striker plate	Pcs/ box	Box weight [kg]
111-039-000	300	11,40
111-044-000	1000	15,85
111-047-000	300	11,10
111-077-000	500	13,10
111-087-000	1000	15,60
111-090-000	1000	15,40

Peripheral striker plate	Pcs/ box	Box weight [kg]
111-093-000	1000	16,30

Table for the selection of striker plates Tw 13

Profile	*Peripheral striker plate*	*Lower striker plate*	*Micro-ventilation Striker plate R*	*Adjustable striker plate B13*	*Lift striker plate*	*Slide plate*
Dimex MD	111-039-000	111-038-000 L 111-037-000 P	101-706-000	101-663-000	101-782-000	102-201-000
Foris 3K, 5K	111-087-000	111-088-000 L 111-089-000 P	101-708-000	101-659-000	101-781-000	102-201-000
Gealan 3000	111-044-000	111-043-000 L 111-042-000 P	101-714-000	101-657-000	101-774-000	102-201-000
KBE 70	111-087-000	111-088-000 L 111-089-000 P	101-709-000	101-655-000	101-778-000	102-201-000
Kömmerling Eurodur	111-097-000	111-094-000 L 111-095-000 P	101-715-000	101-656-000	101- 787-000	102-201-000
Kömmerling Futura	111-044-000	111-043-000 L 111-042-000 P	101-714-000	101-657-000	101-774-000	102-201-000
LB STYL 2000	111-039-000	111-038-000 L 111-037-000 P	101-738-000	101-661-000	101-779-000	102-201-000
Plustec	111-039-000	111-038-000 L 111-037-000 P	101-738-000	101-653-000	101-779-000	102-201-000

Profile	*Peripheral striker plate U*	*Lower striker plate UD*	*Peripheral striker plate PW*	*Lower striker plate PWD*	*Striker plate H*	*Striker plate RS*
Dimex MD	101-518-000	101-575-000 L 101-576-000 P	111-114-000	111-112-000 L 111-113-000 P	101-805-000	101-797-000
Foris 3K, 5K	101-680-000	101-681-000 L 101-682-000 P	111-105-000	111-103-000 L 111-104-000 P	101-809-000	101-795-000
Gealan 3000	101-494-000	101-577-000 L 101-578-000 P	111-123-000	111-121-000 L 111-122-000P	101-811-000	101-789-000
KBE 70	101-517-000	101-614-000 L 101-615-000 P	111-111-000	111-109-000 L 111-110-000 P	101-813-000	101-794-000
Kömmerling Eurodur	101-590-000	101-608-000 L 101-609-000 P	111-123-000	111-121-000 L 111-122-000P	101-812-000	101-803-000
Kömmerling Futura	101-494-000	101-577-000 L 101-578-000 P	111-123-000	111-121-000 L 111-122-000P	101-812-000	101-803-000
LB STYL 2000	101-591-000	101-612-000 L 101-613-000 P	111-105-000	111-103-000 L 111-104-000P	101-806-000	101-802-000
Plustec	101-517-000	101-614-000 L 101-615-000 P	111-105-000	111-103-000 L 111-104-000P	101-806-000	101-802-000

PACKING: box length/width/height - 300/180/180 [mm]

Lower striker plate	Pcs/ box	box weight [kg]
111-038-000 L 111-037-000 P	300	11,40
111-043-000 L 111-042-000 P	300	10,80
111-046-000 L 111-045-000 P	300	11,50

Lower striker plate	Pcs/ box	box weight [kg]
111-075-000 L 111-076-000 P	200	15,00
111-088-000 L 111-089-000 P	300	10,56
111-091-000 L 111-092-000 P	300	10,50

Peripheral striker plate	Pcs/ box	box weight [kg]
111-039-000	300	11,40
111-044-000	1000	15,85
111-047-000	300	11,10
111-077-000	500	13,10
111-087-000	1000	15,60
111-090-000	1000	15,40

Peripheral striker plate	Pcs/ box	box weight [kg]
111-093-000	1000	16,30

Table for the selection of striker plates Tw 13

Profile	*Peripheral striker plate*	*Lower striker plate*	*Striker plate R Micro-ventilation*	*Adjustable striker plate B13*	*Lift striker plate*	*Slider plate*
Rehau Brillant Rehau Basic Rehau Termo	111-039-000	111-038-000 L 111-037-000 P.	101-707-000	101-400-000	101-781-000	102-201-000
Roplasto 7001 Roplasto 6002	111-039-000	111-038-000 L 111-037-000 P	101-710-000	101-654-000	101-778-000	102-201-000
Roplasto 4k.	111-039-000	111-038-000 L 111-037-000 P	101-714-000	101-654-000	101-778-000	102-201-000
Royal Gold	111-039-000	111-038-000 L 111-037-000 P	101-707-000	101-400-000	101-781-000	102-201-000
Royal Silver Line	111-099-000	111-083-000	111-711-000	101-670-000 + pad 001-567-000	101-777-000	101-547-000
Rywen	111-039-000	111-038-000 L 111-037-000 P	101-738-000	101-400-000	101-781-000	102-201-000
Salamander 3D Salamander 2D	111-039-000	111-038-000 L 111-037-000 P	101-705-000	101-663-000	101-783-000	102-201-000

Profile	*Peripheral striker plate U*	*Lower striker plate UD*	*Peripheral striker plate PW*	*Lower striker plate PWD*	*Striker plate H*	*Striker plate RS*
Rehau Brillant Rehau Basic Rehau Termo	101-395-000	101-522-000 L 101-574-000 P.	111-102-000	111-100-000 L 111-101-000 P	101-804-000	101-796-000
Roplasto 7001 Roplasto 6002			111-111-000	111-109-000 L 111-110-000 P	101-813-000	101-793-000
Roplasto 4k.			111-111-000	111-109-000 L 111-110-000 P	101-813-000	101-789-000
Royal Gold	101-395-000	101-522-000 L 101-574-000 P	111-102-000	111-100-000 L 111-101-000 P	101-804-000	101-796-000
Royal Silver Line	101-590-000	101-608-000 L 101-609-000 P			101-821-000 + pad 001-567-000	101-792-000
Rywen	101-592-000	101-610-000 L 101-611-000 P	111-105-000	111-103-000 L 111-104-000 P	101-806-000	101-802-000
Salamander 3D Salamander 2D	101-687-000	101-690-000 L 101-691-000 P	111-117-000	111-115-000 L 111-116-000 P	101-805-000	101-798-000

PACKING: box length/width/height - 300/180/180 [mm]

Lower striker plate	Pcs/ box	box weight [kg]
111-038-000 L 111-037-000 P	300	11,40
111-043-000 L 111-042-000 P	300	10,80
111-046-000 L 111-045-000 P	300	11,50

Lower striker plate	Pcs/ box	box weight [kg]
111-075-000 L 111-076-000 P	200	15,00
111-088-000 L 111-089-000 P	300	10,56
111-091-000 L 111-092-000 P	300	10,50

Peripheral striker plate	Pcs/ box	box weight [kg]
111-039-000	300	11,40
111-044-000	1000	15,85
111-047-000	300	11,10
111-077-000	500	13,10
111-087-000	1000	15,60
111-090-000	1000	15,40

Peripheral striker plate	Pcs/ box	box weight [kg]
111-093-000	1000	16,30

Table for the selection of striker plates Tw 13

Profile	*Striker plate*	*Lower striker plate*	*Microventilation Striker plate R*	*Adjustable Striker plate B13*	*Lift striker plate*	*Slide plate*
Schüco AS-60	111-090-000	111-091-000 L 111-092-000 P	101-706-000	101-636-000	101-782-000	102-201-000
Schüco CT 70	111-090-000	111-091-000 L 111-092-000 P	101-708-000	101-661-000	101-780-000	102-201-000
Spectus 4 and 5 chamber	111-087-000	111-038-000 L 111-037-000 P	101-738-000	101-400-000	101-781-000	102-201-000
Thyssen	111-099-000	111-083-000	111-711-000	101-670-000 + pad. 001-567-000	101-777-000	101-547-000
Trocal confort (Frame 11.01.00)	111-047-000	111-046-000 L 111-045-000 P	101-702-000	101-477-000	101-786-000	102-201-000
Veka Topline	111-039-000	111-038-000 L 111-037-000 P	101-738-000	101-661-000	101-779-000	102-201-000
Wymar 2500	111-044-000	111-043-000 L 111-042-000 P	101-712-000	101-658-000	101-776-000	102-201-000

Profile	*Peripheral U Striker plate*	*Lower striker plate UD*	*Peripheral striker plate PW*	*Lower striker plate PWD*	*Striker plate H*	*Striker plate RS*
Schüco AS-60	111-637-000	111-638-000 L 111-639-000 P	111-114-000	111-112-000 L 111-113-000 P	101-812-000	101-797-000
Schüco CT 70	101-518-000	101-575-000 L 101-576-000 P	111-114-000	111-112-000 L 111-113-000 P	101-806-000	101-795-000
Spectus 4 and 5 chamber					101-804-000	101-802-000
Thyssen	101-590-000	101-608-000 L 101-609-000 P			101-821-000 + pad 001-567-000	101-792-000
Trocal confort (Frame 11.01.00)					101-808-000	101-801-000
Veka Topline	101-591-000	101-612-000 L 101-613-000 P	111-105-000	111-103-000 L 111-104-000 P	101-806-000	101-802-000
Wymar 2500	101-680-000	101-681-000 L 101-682-000 P	111-108-000	111-106-000 L 111-107-000 P	101-804-000	101-791-000

PACKING: box length/width/height - 300/180/180 [mm]

Lower striker plate	pcs/ box	Box weight [kg]
111-038-000 L 111-037-000 P	300	11,40
111-043-000 L 111-042-000 P	300	10,80
111-046-000 L 111-045-000 P	300	11,50

Lower striker plate	pcs/ box	Box weight [kg]
111-075-000 L 111-076-000 P	200	15,00
111-088-000 L 111-089-000 P	300	10,56
111-091-000 L 111-092-000 P	300	10,50

Peripheral striker plate	pcs/ box	Box weight [kg]
111-039-000	300	11,40
111-044-000	1000	15,85
111-047-000	300	11,10
111-077-000	500	13,10
111-087-000	1000	15,60
111-090-000	1000	15,40

Peripheral striker plate	pcs/ box	Box weight [kg]
111-093-000	1000	16,30

Table for the selection of striker plates - Tw 9

Profile	*Peripheral striker plate*	*Lower striker plate*	*Striker plate R microventilation*	*Adjustable striker plate B / B9*	*Lift striker plate*	*Slide plate*
Ergo Plus	111-012-000	* 111-005-000 L/P...	101-647-000	101-670-000	101-581-000	101-546-000
Veka Softline	111-059-000	111-071-000 L 111-070-000 P	101-645-000	101-665-000	101-581-000	102-201-000
KBE uniwersal system	111-059-000	111-071-000 L 111-070-000 P	101-646-000	101-666-000	101-581-000	102-201-000
Plastmo Index	111-059-000	111-071-000 L 111-070-000 P	101-646-000	101-666-000	101-581-000	102-201-000
Roplasto 6190	111-050-000	111-049-000 L 111-048-000 P.	101-647-000	101-670-000	101-527-000	102-205-000
EK 100	111-012-000	111-068-000 L 111-069-000 P	101-647-000	101-670-000	101-581-000	101-546-000
Tras Eco	111-084-000	111-005-000 L/P	101-647-000	101-670-000	101-581-000	101-546-000
Polaris PA 2000	111-012-000	* 111-005-000 L/P	101-647-000	101-670-000	101-581-000	101-546-000
Winhouse	111-059-000	111-071-000 L 111-070-000 P	101-644-000	101-668-000	101-581-000	101-201-000

Profile	*Anti-burglary peripheral strker plate U*	*Anti-burglary lower striker plate UD*	*Striker plate H9*
Ergo Plus	101-403-000	101-521-000 L 101-571-000 P.	101-817-000
Veka Softline	101-403-000	101-521-000 L	101-815-000
KBE uniwersal system	101-561-000	101-571-000 P 101-616-000 L	101-816-000
Plastmo Index	101-561-000	101-617-000 P 101-616-000 L	101-816-000
Roplasto 6190	101-403-000	101-617-000 P 101-521-000 L	101-817-000
EK 100	101-516-000	101-572-000 L 101-573-000 P	101-817-000
Tras Eco	101-403-000	101-521-000 L 101-571-000 P	101-817-000
Polaris PA 2000	101-403-000	101-521-000 L 101-571-000 P	101-817-000
Winhouse	101-561-000	101-616-000 L 101-617-000 P	101-817-000

(*) Depending on the type of the gasket, it is possible to use striker plates:
cat.No **111-068-000 L**
cat.No **111-068-000 P**

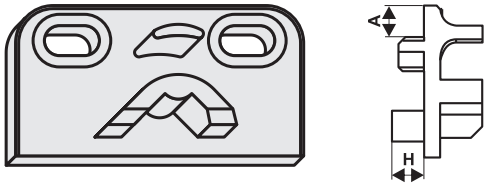
PACKING

Lower striker plate	pcs/ box	Box weight [kg]
111-005-000 L/P	200	9,05
111-071-000 L 111-070-000 P	300	10,55
111-048-000 L 111-049-000 P	300	11,80
111-081-000 L 111-082-000 P	300	11,40
111-061-000 L/P	300	10,80
111-068-000 L 111-069-000 P	300	11,50

Peripheral striker plate	pcs/ box	Box weight [kg]
111-012-000	1000	18,40
111-050-000	1000	18,25
111-059-000	1000	17,90
111-066-000	500	14,60
111-084-000	1000	17,20

Box length/width/height - 300/180/180 [mm]

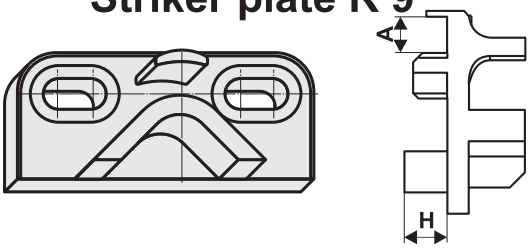
Striker plate R 13



Catalogue number	H [mm]	A [mm]	Profile system
101-702-000	3	3,9	Trocal Confort 11.01.00; Trocal Innonowa
101-703-000	4	3,9	Deceuninck Zendow
101-704-000	6,6	3,9	Deceuninck Mondial 2000
101-705-000	--	3,9	Salamander 2D/3D
101-706-000	4,9	3,9	Dimex System MD; Schüco AS, Aluplast 4000
101-707-000	3,8	3,9	Rehau Basic; Rehau Thermo; Rehau Brillant, Royal Gold
101-708-000	3	3,4	Aluplast Ideal 2000; Schüco CT; Foris
101-709-000	4	3,4	KBE 70, DECCO 4K
101-710-000	3,8	3,4	Roplasto 7001; Roplasto 6002
101-711-000	5	3,4	Royal Silver Line; Thyssen
101-712-000	2,5	3,4	Wymar 2500
101-713-000	6,7	3,4	Wymar 2000, DECCO 6K
101-714-000	4,2	3,4	Gealan 3000; Roplasto 4K
101-715-000	4,7	3,9	Kömmerling
101-738-000	3,2	3,9	LB Styl 2000; Veka Topline; Plustec; Brügman AD/MD; Spectus; Aura; Ryven

USE:
in sashes of windows **RU** (Tw) where there is necessity of unsealing. Works with corner R.

Striker plate R 9



Catalogue number	H [mm]	A [mm]	Profile system
101-641-000	--	10,8	Becker
101-642-000	2,2	3,3	Trocal 900
101-643-000	--	4,5	Greiner 7,5
101-644-000	2	4,5	Winhouse
101-645-000	2,7	4,5	Veka
101-646-000	3,7	4	KBE; Plastmo
101-647-000	3	4	EK 100; Panorama

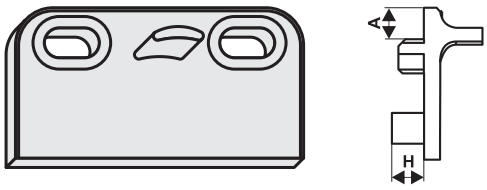
USE:
in sashes of windows **RU** (Tw) where there is necessity of unsealing. Works with corner R.

PACKING: box length/width/height - 300/180/180 [mm]

Micro-ventilation striker plate R 13	Pcs/ box	box weight [kg]
101-702-000	500	8,75
101-703-000	500	8,80
101-704-000	500	8,70
101-705-000	500	8,80
101-706-000	500	8,75
101-707-000	500	8,75
101-708-000	500	8,75
101-709-000	500	8,80
101-710-000	500	8,70
101-711-000	500	8,80
101-712-000	500	8,75
101-713-000	500	8,75
101-714-000	500	8,75
101-715-000	500	8,80
101-738-000	500	8,70

Micro-ventilation striker plate R 9	Pcs/ box	box weight [kg]
101-641-000	500	6,65
101-642-000	500	6,65
101-643-000	500	6,60
101-644-000	500	6,65
101-645-000	500	6,70
101-646-000	500	6,65
101-647-000	500	6,65

Striker plate RS 13



Catalogue number	*H [mm]*	*A [mm]*	*Profile system*
101-789-000	4,2	3,4	Gealan 3000; Roplasto 4K
101-790-000	6,7	3,4	Wymar 2000, DECCO 6K
101-791-000	2,5	3,4	Wymar 2500
101-792-000	3,5	3,4	Royal Silver Line; Thyssen
101-793-000	3,8	3,4	Roplasto 7001; Roplasto 6002
101-794-000	4	3,4	KBE 70,DECCO 4K
101-795-000	3	3,4	Aluplast Ideal 2000; Schüco CT; Foris
101-796-000	3,8	3,9	Rehau Basic; Rehau Thermo; Rehau Brillant, Royal Gold
101-797-000	4,9	3,9	Dimex System MD; Schüco AS, Aluplast 4000
101-798-000	0	3,9	Salamander 2D/3D
101-799-000	6,6	3,9	Deceuninck Mondial 2000
101-800-000	4	3,9	Deceuninck Zendow
101-801-000	3	3,9	Trocal Confort 11.01.00; Trocal Innonowa
101-802-000	3,2	3,9	LB Styl 2000; Veka Topline; Plustec; Brügman AD/MD; Spectus; Aura; Ryven
101-803-000	4,7	3,9	Kömmerling

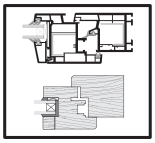
PACKING:

Micro-ventilation striker plate R 13	Pcs/ box	Box weight [kg]
101-789-000	500	8,75
101-790-000	500	8,80
101-791-000	500	8,70
101-792-000	500	8,80
101-793-000	500	8,75
101-794-000	500	8,75
101-795-000	500	8,75
101-796-000	500	8,80
101-797-000	500	8,70
101-798-000	500	8,80
101-799-000	500	8,75
101-800-000	500	8,75
101-801-000	500	8,75
101-802-000	500	8,80
101-803-000	500	8,70

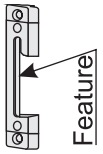
Box length/width/height 300/180/180 [mm]

USE:
in sashes of windows **RU** (Tw) where it is necessary to unseal and grade the extension of sashes tilting.

Works with corner RS, catalogue number **101-618-000** left
catalogue number **101-619-000** right



Striker plate U (hindering burglary)

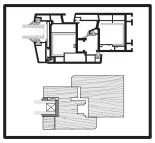
Item	Catalogue number / feature	Remarks	Profile system	Dr/Tw	
1	101-605-000 101-604-000	L - left P - right	Eurofalz	(Dr)	
2	101-607-000 101-606-000	L - left P - right	Euronut 7×8		
3	101-395-000	universal (left / right)	Rehau 730, Royal Gold	(Tw) 13	
4	101-517-000		Plustec, KBE-70		
5	101-518-000		Schüco CT, Dimex MD Aluplast Ideal 2000		
6	101-592-000		Rywen		
7	101-494-000		Gealan		
8	101-590-000		Thyssen Kömmerling Royal Silver		
9	101-591-000		Brügmann - MD, LB Styl 2000, Veka Topline		
10	101-637-000		Schüco AS		
11	101-680-000		Wymar 2500 Foris		
12	101-688-000		Deceuninck 2000		
13	101-689-000		Deceuninck Zendow		
14	101-687-000		Salamander 2D/3D		
15	101-403-000	universal (left / right)	Panorama 1000; 2000 Eco Tras Veka Roplasto 6190	(Tw) 9	
16	101-516-000		EK 100		
17	101-561-000		KBE Plastmo Index		

PACKING

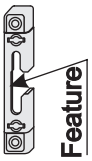
Anti-burglary peripheral hardware U	Pcs/ box	Box weight [kg]
101-395-000	200	14,90
101-403-000	200	15,00
101-494-000	200	14,80
101-516-000	200	15,00
101-517-000	200	14,80
101-518-000	200	14,80
101-561-000	200	14,90
101-590-000	200	15,00
101-591-000	200	14,90
101-592-000	200	14,90
101-604-000	200	10,80
101-606-000	200	10,85
101-607-000	200	10,85
101-637-000	200	14,35
101-680-000	200	14,90
101-687-000	200	14,90
101-688-000	200	14,90
101-689-000	200	14,90

Box length/width/height 300/180/180 [mm]

USE:
striker plates Dr in wooden windows **R** and **RU** (Euronut and Eurofalz) in set of anti-burglary hardware.
Striker plates Tw in PVC-U windows **R** and **RU** depending on the profile system.
Striker plates work with mushroom deadbolts with reinforced resistance to burglary on the girth of the sash.



Striker plate U-D (hindering burglary)

Item	Catalogue number /feature	Remarks	Profile system	Dr/Tw	
1	101-601-000 101-600-000	L - left P - right	Eurofalz	(Dr)	
2	101-603-000 101-602-000	L - left P - right	Euronut 7×8		
3	101-522-000 101-574-000	L - left P - right	Rehau 730 Royal Gold	(Tw) 13	
4	101-614-000 101-615-000	L - left P - right	Plustec, KBE-70		
5	101-575-000 101-576-000	L - left P - right	Aluplast Ideal 2000 Schüco CT, Dimex MD		
6	101-610-000 101-611-000	L - left P - right	Rywen		
7	101-577-000 101-578-000	L - left P - right	Gealan		
8	101-608-000 101-609-000	L - left P - right	Kömmerling, Thyssen, Royal Silver Line		
9	101-612-000 101-613-000	L - left P - right	Brügmann - MD, Aura LB Styl 2000,Veka Topline		
10	101-638-000 101-639-000	L - left P - right	Schüco AS		
11	101-681-000 101-682-000	L - left P - right	Wymar 2500 Foris		
12	101-692-000 101-693-000	L - lewy P - prawy	Deceuninck 2000		
13	101-694-000 101-695-000	L - left P - right	Deceuninck Zendow		
14	101-690-000 101-691-000	L - left P - right	Salamander		
15	101-521-000 101-571-000	L - left P - right	Panorama 1000; 2000 Eco Tras, Veka Roplasto 6190	(Tw) 9	
16	101-616-000 101-617-000	L - left P - right	EK 100		
17	101-616-000 101-617-000	L - left P - right	Plastmo Index KBE		

USE:

Striker plates U-D/Dr in wooden windows **R** and **RU** (Euronut and Eurofalz) in hardware set with reinforced resistance to burglary (ROMB 3000).

Striker plates U-D/Tw9, U-D/Tw13 in PVC-U windows **R** and **RU** depending on the profile system.

Striker plates work with mushroom deadbolts of the corner, corner drive gear or fastening corner drive gear in the lower part of the window with tilting function.

PACKING

Anti-burglary lower striker plate UD	Pcs/ box	Box weight [kg]
101-522-000 L 101-574-000 P	200	12,40
101-575-000 L 101-576-000 P	200	13,00
101-577-000 L 101-578-000 P	200	12,60
101-608-000 L 101-609-000 P	200	13,40
101-610-000 L 101-611-000 P	200	13,00
101-612-000 L 101-613-000 P	200	13,36

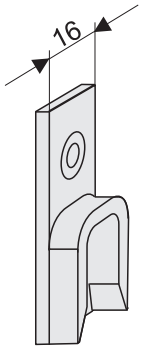
Anti-burglary lower striker plate UD	Pcs/ box	Box weight [kg]
101-614-000 L 101-615-000 P	200	13,26
111-638-000 L 111-639-000 P	200	13,00
101-681-000 L 101-682-000 P	200	13,00
101-690-000 L 101-691-000 P	200	13,00
101-692-000 L 101-693-000 P	200	13,00
101-694-000 L 101-695-000 P	200	13,00

Anti-burglary lower striker plate UD	Pcs/ box	Box weight [kg]
101-601-000 L 101-600-000 P	200	7,76
111-603-000 L 111-602-000 P	200	10,80

Box length/width/height 300/180/180 [mm]

Middle striker plate B

Catalogue number **101-278-000**



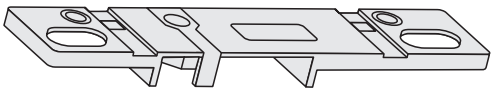
USE:
In sashes of windows **RU** and **R** (Tw) with a so-called movable post in set of hardware with locks Tw (upper and lower).
Assembled in hardware groove.
Works with locking deadbolts of drive gear M or Z.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Middle striker plate B	box	300	180	180	500	24,70
	pallet	1200	800			

Striker plate R 9

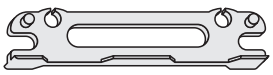
Catalogue number **101-231-000** left
Catalogue number **101-232-000** right



Distance pad for striker plate R 9

Profile type	*Catalogue number*	
Dr 11-7×8	**001-221-000**	
EK100, Panorama, Roplasto System 6190,	**001-176-000**	
Veka	**001-193-000**	
KBE Universal System, Plastmo,	**001-194-000**	

Distance pad for striker plate B/R

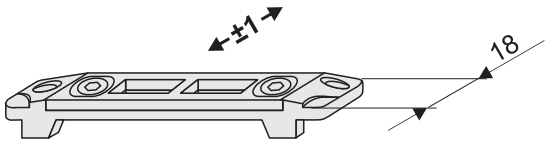
Profile type	*Catalogue number*	
Royal, Thyssen	**001-567-000**	

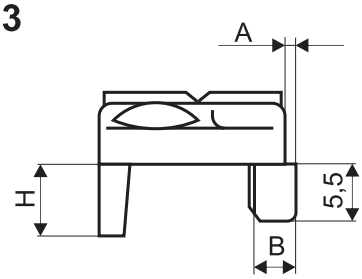
USE:
in sashes of windows **RU** (Tw and Dr) where it is necessary to unseal. Works with corner R.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Striker plate R L and P	box	300	180	180	1000	13,30
	pallet	1200	800			

Adjustable striker plate B13





Catalogue number	A [mm]	B [mm]	H [mm]	Profile system
101-400-000	0	4	4	Rehau 730-Basic, Rehau Brillant, Rehau 730-Termo, Royal Gold
101-401-000	1	4,6	7	Deceuninck 2000
101-477-000	1	4,6	2,9	Trocal Confort
101-653-000	1	4	2,8	Plustec
101-654-000	1	4	4,2	Roplasto 7001, Roplasto 4K
101-655-000	1,5	4	4,2	KBE 70
101-656-000	1,5	4	4,9	Kömmerling
101-657-000	1,5	4	4,4	Gealan 3000
101-658-000	1,5	4	3,2	Wymar 2500
101-659-000	1,5	4	3,5	Foris
101-660-000	1	4,6	7,3	Wymar 2000
101-661-000	0	4	2,8	Brügmann AD/MD, Aura 6402, Schüco CT, Styl LB 2000, Veka Topline
101-662-000	0	4	3,6	Aluplast 2000
101-663-000	0	4	4,5	Dimex-MD, Salamander 2D/3D
101-636-000	0	4	4,8	Schüco AS-60
101-716-000	1	4,6	4	Deceuninck Zendow

USE:
In **R** and **RU** (Tw) windows with a so-called movable post in hardware set with locks, drive gear B or BM.
Assembled in upper and lower frame stile.
Works with locks Tw, ends, drive gear B and BM.
Possible adjustment of rebate pressure (socket screw key 4mm).

PACKING

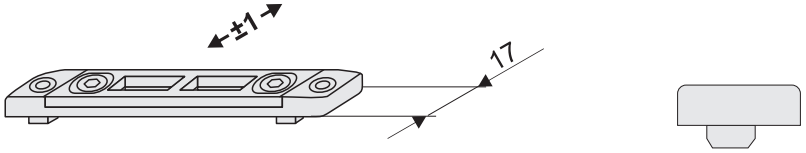
Subassembly		length [mm]	width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-400-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-401-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-477-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-653-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-654-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-655-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-656-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-657-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-658-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-659-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-660-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-661-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-662-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-663-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	
101-636-000	box	300	180	180	400	16,48
	pallet	1200	800		25600	
101-716-000	box	300	180	180	400	16,40
	pallet	1200	800		25600	

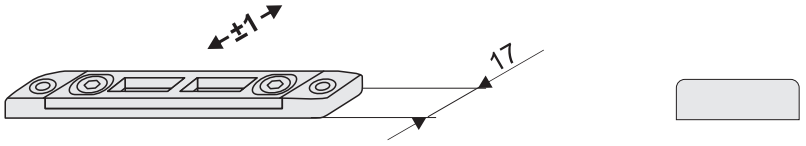
Adjustable striker plate B Euronut 7x8

Catalogue number **101-669-000**



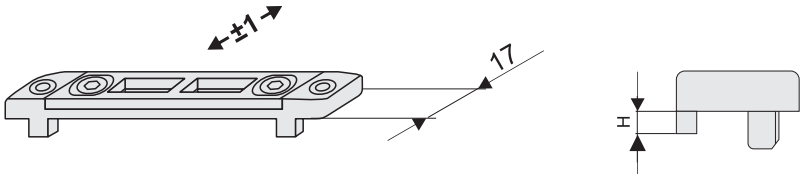
Adjustable striker plate B Eurofalz

Catalogue number **101-670-000**



Adjustable striker plate B9

Catalogue number	*H [mm]*	*Profile system*
101-665-000	2,7	Veka
101-666-000	3,7	KBE, Plastmo
101-667-000	-	Greiner 7,5
101-668-000	2	Winhouse
101-737-000	3	PANORAMA



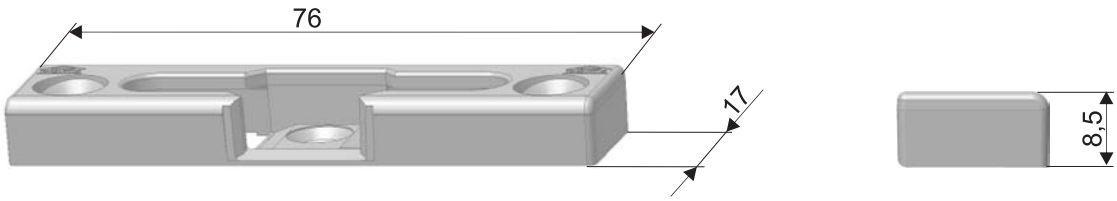
USE:
In **R** and **RU** (Tw) with a so-called movable post in hardware set with locks, drive gear B or BM.
Assembled on upper and lower frame stile.
Works with locks Tw and Dr, ends, drive gear B and BM. Possible adjustment of rebate pressure (socket screw key 4mm).

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-665-000	box	300	180	180	400	17,44
	pallet	1200	800		25600	
101-666-000	box	300	180	180	400	17,48
	pallet	1200	800		25600	
101-667-000	box	300	180	180	400	17,28
	pallet	1200	800		25600	
101-668-000	box	300	180	180	400	17,20
	pallet	1200	800		25600	

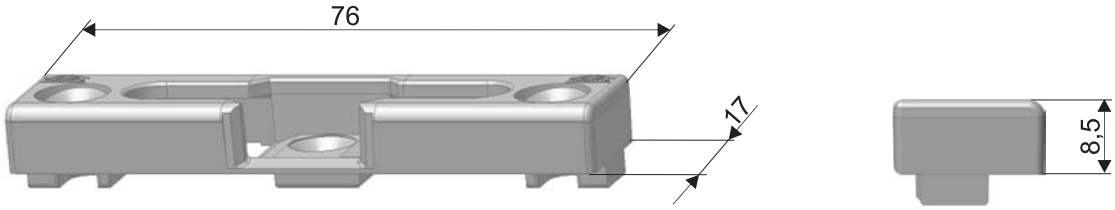
Striker plate PWD Eurofalz

Catalogue number: **111-133-000 Left**
Catalogue number: **111-134-000 Right**



Striker plate PWD Euronut 7x8

Catalogue number: **111-130-000 Left**
Catalogue number: **111-131-000 Right**



USE:
In tilt/turn, wooden windows and balcony doors with notch clearance 12 mm in flat variety (eurofalz 18 mm) and with striker plate groove 7/8/4 mm (euronut).

Lower anti-unhingement striker plate PWD DR is **ROMB 2000** hardware element assembled on the frame in the lower window corner, opposite the hinge. It seals window corner in closed position and keeps window in tilt position, while hindering its unhingement. Works with mushroom deadbolts of corners or corner drive gears.

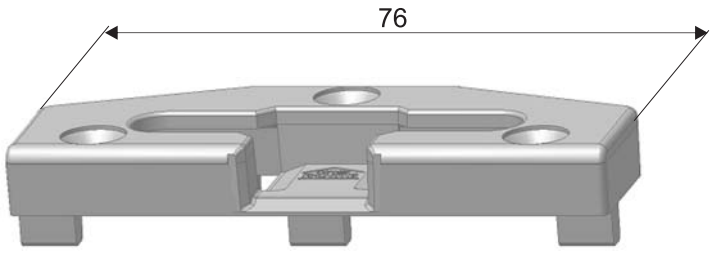
Offered in right and left variety.

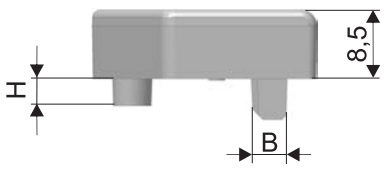
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
All varieties	Box	300	180	180	300	12,00
	Pallet	1200	800		19200	780,00

Striker plate PWD 13

Catalogue number	*B [mm]*	*H [mm]*	*Profile system*
111-100-000 L **111-101-000 P**	3,7	4,3	Rehau 730 -Termo, Rehau Brillant, Rehau 730-Basic, Royal Gold
111-103-000 L **111-104-000 P**	3,7	3,3	Brugmann, Tantroniks, Veka-topline, Aura, LB Styl
111-106-000 L **111-107-000 P**	3,7	3,3	Wymar 2500, Foris
111-109-000 L **111-110-000 P**	3,7	4,5	Scheffer, SOK, Roplasto 4K, Roplasto 7001, KBE 70, DECCO 60
111-112-000 L **111-113-000 P**	3,7	4,8	Schüco AS-60 Dimex-MD, Aluplast 4000
111-115-000 L **111-116-000 P**	3,7	4,5	Salamander 2D/3D
111-118-000 L **111-119-000 P**	4,6	7	Deceuninck 2000
111-121-000 L **111-122-000 P**	3,7	4,5	Gealan 3000
111-124-000 L **111-125-000 P**	3,7	7	Wymar 2000, DECCO 70
111-127-000 L **111-128-000 P**	4,4	3,8	Deceuninck Zendow





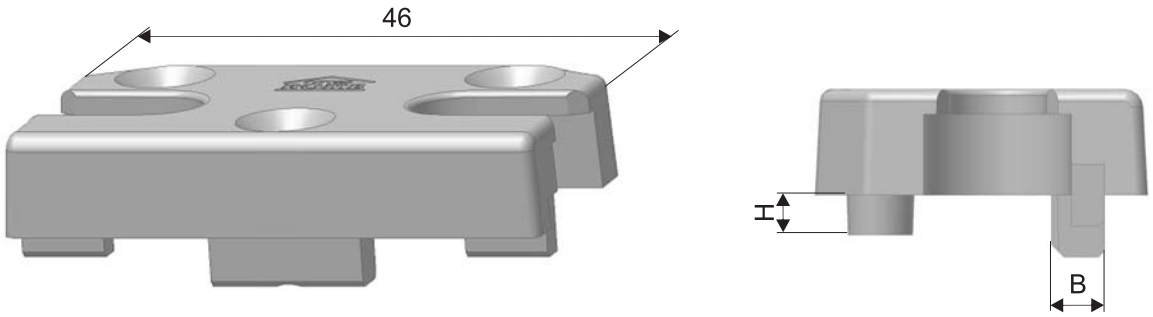
USE:
In tilt/turn windows and balcony doors, made of PVC-U profiles listed in the above table. Lower anti-unhingement striker plate PWD is a **ROMB 2000** hardware element assembled on the frame in the lower window corner opposite the hinge. It seals the window corner in the closed position and keeps the window in tilt position while hindering its unhingement. Works with mushroom deadbolts of corners and corner drive gears. Offered in left and right variety.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
All varieties	Box	300	180	180	300	18,00
	Pallet	1200	800		19200	1180,00

Striker plate PW 13

Catalogue number	*B [mm]*	*H [mm]*	*Profile system*
111-102-000	3,7	4,3	Rehau 730 -Termo, Rehau Brillant, Rehau 730-Basic, Royal Gold
111-105-000	3,7	3,3	Brugmann, Tantroniks, Veka-topline, Aura,LB Styl Schüco CT 70, Foris
111-108-000	3,7	3,3	Wymar 2500
111-111-000	3,7	4,5	Scheffer, SOK, Roplasto 4K, Roplasto 7001, KBE 70, DECCO 60
111-114-000	3,7	4,8	Dimex-MD, Schüco AS-60, Aluplast 4000
111-117-000	3,7	4,5	Salamander 2D/3D
111-120-000	4,6	7	Deceuninck 2000
111-123-000	3,7	4,5	Gealan 3000
111-126-000	3,7	7	Wymar 2000, DECCO 70
111-129-000	4,4	3,8	Deceuninck Zendow



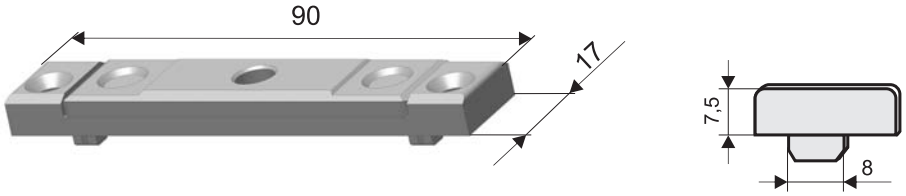
USE:
In turn or tilt/turn windows and balcony doors, made of PVC-U profiles listed in the above table. Peripheral anti-unhingement striker plate (PW) is a ROMB hardware element assembled on the frame in striker plate groove. Works with mushroom deadbolts of drive gears and corners. Supports anti-burglary striker plates assembled in corners of windows fitted with **ROMB 3000** hardware.

PACKING

Subassembly		Length [mm]	Width [mm]	Height. [mm]	Pcs/ box	Box weight [kg]
All varieties	Box	300	180	180	300	13,00
	Pallet	1200	800		19200	850,00

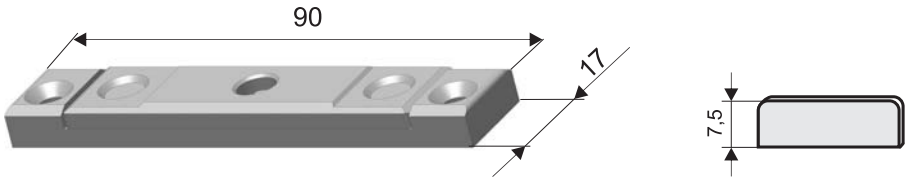
Brake striker plate Euronut 7x8

Catalogue number: **101-820-000**



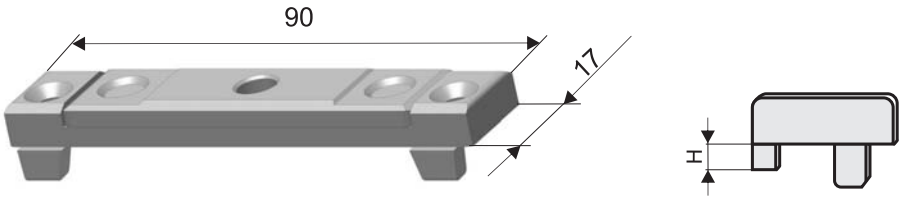
Brake striker plate Eurofalz

Catalogue number: **101-821-000**



Brake striker plate H9

Catalogue number	*H [mm]*	*Profile system*
101-815-000	2,7	Veka
101-816-000	3,7	KBE, Plastmo
101-817-000	3	PANORAMA, Ergo Plus, EK 100
101-818-000	2	Winhouse
101-819-000	-	Greiner 7,5



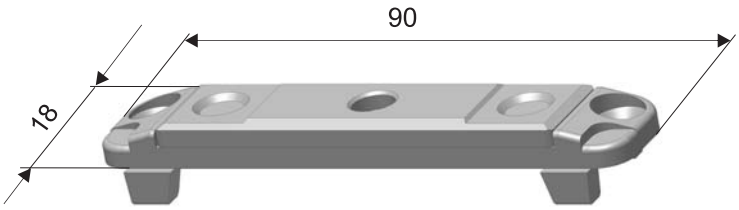
USE:
In turn or tilt/turn windows and balcony doors, made of PVC-U profiles listed in the above table as well as of wood (**Euronut**, **Eurofalz**).
Brake striker plate (**H9**) is a striker plate element assembled on the frame that works with tilt restrictor **(ORC**) or sash brake (**HBK**).

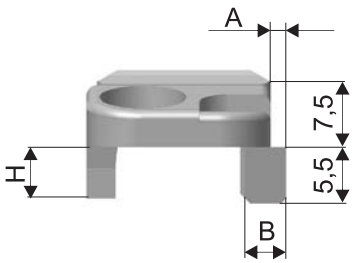
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
All varieties	Box	300	180	180	200	10,50
	Pallet	1200	800			

Brake striker plate H 13

Catalogue number	*A [mm]*	*B [mm]*	*H [mm]*	*Profile system*
101-804-000	0	4	4	Rehau 730-Basic, Rehau Brillant, Rehau 730 -Termo, Royal Gold, Spectus
101-805-000	0	4	4,5	Dimex-MD, Salamander 2D/3D
101-806-000	0	4	2,8	Brügmann AD/MD, Aura, Schüco CT, Styl LB 2000, Veka Topline, PlusTec, Ryven
101-807-000	1	4,6	7	Deceuninck 2000
101-808-000	1	4,6	2,9	Trocal Confort, Innonowa
101-809-000	1,5	4	3,5	Foris, Aluplast 2000
101-810-000	1,5	4	3,2	Wymar 2500
101-811-000	1,5	4	4,4	Gealan 3000
101-812-000	1,5	4	4,9	Kommerling, Schüco AS-60, Aluplast 4000
101-813-000	1	4	4,2	Roplasto 7001, Roplasto 4K, KBE 70, DECCO 60
101-814-000	1	4,6	4	Deceuninck Zendow
101-821-000 + pad **001-567-000**	1	-	5	Thyssen, Royal Silver





USE:
In turn or tilt/turn windows and balcony doors, made of PVC-U profiles listed in the above table.
Brake striker plate (**H13**) is a striker plate element assembled on the frame that works with tilt restrictor (**ORC**) or with sash brake (**HBK**).

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
All varieties	Box	300	180	180	200	10,00
	Pallet	1200	800			

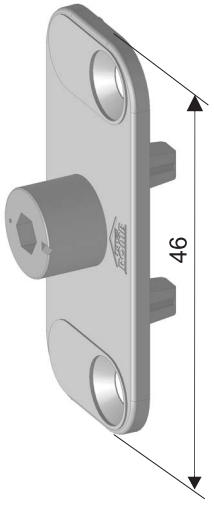
Lift striker plate Tw 13

Catalogue Number	*Profile system*
101-774-000	Gealan 3000, Roplasto
101-775-000	Wymar 2000, DECCO 70 6K
101-776-000	Wymar 2500
101-777-000	Royal Silver
101-778-000	KBE 70, Roplasto 7001
101-779-000	Styl LB 2000, Veka Topline, PlusTec
101-780-000	Aluplast Ideal 2000, Schüco CT
101-781-000	Aura 6401, Aura 6402, Foris, Spectus, ТАНТРОНИКС ЛЮКС, Ryven, Brügmann AD/MD, Rehau Termo, Rehau Basic, Rehau Brillant, Royal Gold
101-782-000	Dimex System MD, Schüco AS
101-783-000	Salamander 2D/3D
101-784-000	Deceuninck Mundial 2000
101-785-000	Deceuninck Zendow
101-786-000	Trocal Confort 11.01.00, Innonowa
101-787-000	Kömmerling

Lift striker plate Dr

Catalogue number	*Profile system*
101-787-000	Euronut

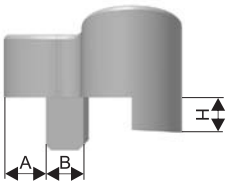
WHILE THE STOCK LASTS !!!



PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
All varieties	Box	300	180	180	1000	17,00
	Pallet	1200	800			

USE:
In sashes of windows Dr and Tw; works with the sash lift.



LIFT STRIKER PLATES Tw 13

Catalogue number	*A [mm]*	*B [mm]*	*H [mm]*	*Profile system*
101-841-000	2,5	3	5	Tyssen, Tyssen Sigma, Royal Silver
101-840-000	3	4,5	7,2	Deceuninck Mondial 2000
101-839-000	3	4,7	6,7	Deco 70 (Ortis) 6K, Deco 60 3K
101-838-000	4	4,5	3,2	Trocal Confort, Trocal innonowa 70/5K
101-837-000	2,5	3,7	3	LB Styl 2000, Veka Topline
101-836-000	2,5	3,7	4	Gealan 3000, Deco (Ortis) 4K
101-835-000	2,5	4,6	3	Wymar 2500
101-834-000	3	4,5	4	Deceuninck Zendow
101-833-000	3	3,7	4	KBE 70
101-832-000	3	3,7	3,5	Foris 60, Foris70, PlusTec
101-831-000	3,5	3,4	3	Aura 6402, Brugmann 70/5K
101-830-000	3,5	3,7	4,2	Roplasto 6002, Roplasto 7001
101-829-000	3	3,7	4,6	Kömmerling Futura 70 Kömmerling Eurodur 60
101-828-000	4	3,7	-	Salamander
101-827-000	4	3,7	5	Aluplast 4000/5K, Aluplast 6000/6K Dimex (3K), Schüco AS
101-826-000	4	3,7	2,8	Schüco CT 60 cava/5K, Aluplast 2000
101-825-000	4	3,7	3,5	Rehau Termo, Rechau Brillant, Rehau Basic, Royal Gold

LIFT STRIKER PLATES Dr

Catalogue number	*A [mm]*	*B [mm]*	*H [mm]*	*Profile system*
101-857-000	6	8	4	Euronut 7x8
101-858-000	-	-	-	Eurofalz

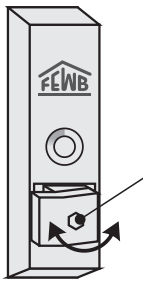
USE:
In PVC-U (**Tw**) and wooden (**Dr**) Euronut, Eurofalz windows and balcony doors to enable lift work with blockade.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
All varieties	box	300	180	180	500	9,10
	pallet	1200	800			

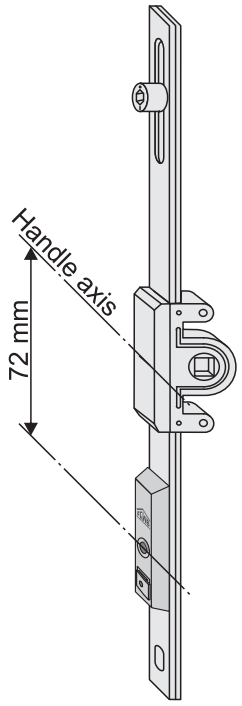
Drive gear blockade

Catalogue number **102-141-000**



Re-adjustment of the mushroom (left-right)
key 6-angle 4 mm

WHILE THE STOCK LASTS !!!



Place to assemble the blockade

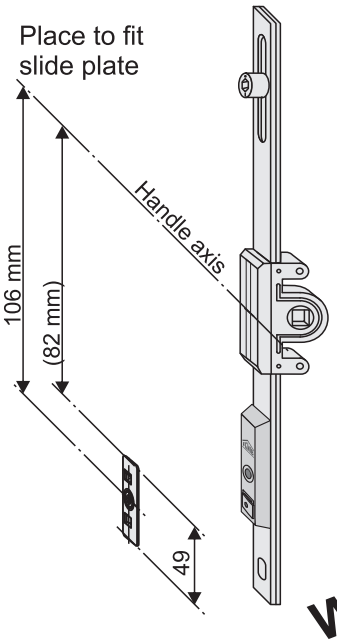
USE:
in sashes of windows **RU** (Dr and Tw) in order to eliminate the possibility of displacement of the handle from a turned position into tilted position while the sash is turned.
Blockade is to be assembled as right or left after moving the mushroom.
Used in drive gears Z2÷Z9 and drive gears M1÷M5.
Works with slider plate.

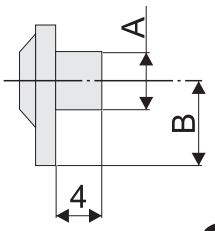
PACKING

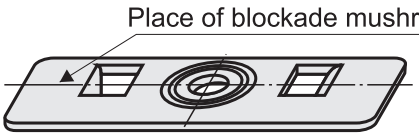
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Blockade	box	300	180	180	400	14,65
	pallet	1200	800			

Slider plate

Use	*Catalogue number*	*A [mm]*	*B [mm]*
Euronut 7×8	102-180-000	8	10
Trocal confort	102-200-000	5	9,5
Rehau Aluplast 2000 Kommerling LB Styl 2000 Plustec Dimex	102-201-000	4,2	10,5
Roplasto	102-205-00		





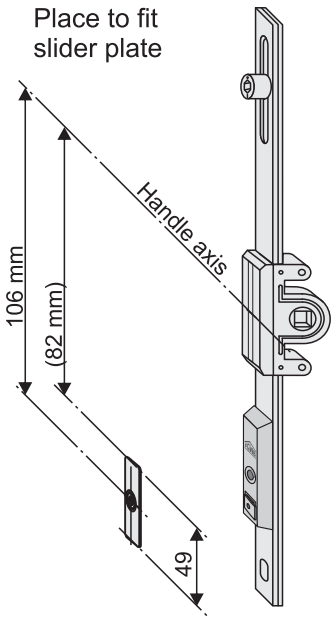


WHILE THE STOCK LASTS !!!

PACKING

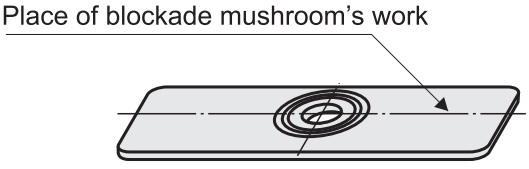
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
102-180-000	box	300	180	180	2000	10,00
	pallet	1200	800			
102-200-000	box	300	180	180	2000	12,00
	pallet	1200	800			
102-201-000	box	300	180	180	2000	14,20
	pallet	1200	800			
102-205-000	box	300	180	180	2000	32,00
	pallet	1200	800			

USE:
in sashes of windows **RU** (Dr and Tw).
In set of drive gear blockade, catalogue number **102-141-000**.



Slide plate

Catalogue number **102-179-000**



WHILE THE STOCK LASTS !!!

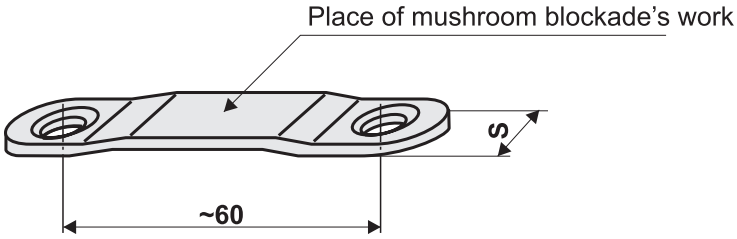
PACKING

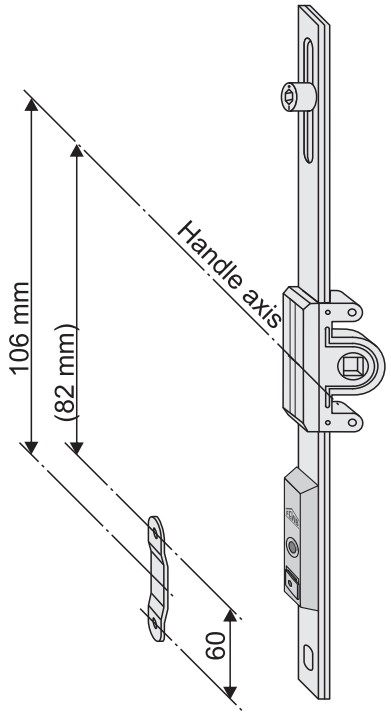
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
102-179-000	box	300	180	180	2000	14,20
	pallet	1200	800			

USE:
In sashes of windows **RU** (Dr12 Eurofalz).
In set with drive gear blockade catalogue number **102-141-000**.

Slide plate Tw 9, Tw 13

Use	*Catalogue number*	*S [mm]*
Roplasto 6190, TRAS-ECO Panorama 1000; 2000, Ek100	101-546-000	15
Thyssen, Royal	101-547-000	16





WHILE THE STOCK LASTS !!!

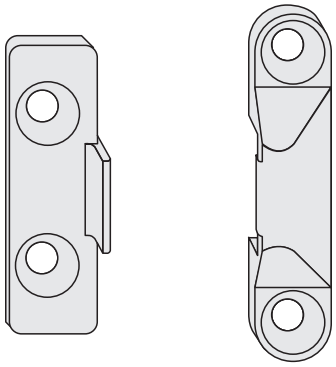
USE:
In sashes of windows **RU** in set with drive gear blockadeM catalogue number **102-141-000**.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-546-000	box	300	180	180	2000	32,00
	pallet	1200	800			
101-547-000	box	300	180	180	2000	31,00
	pallet	1200	800			

External pressure pad

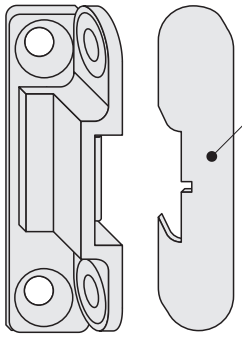
Type of finish	*cat. number*
white varnished coat	**001-121-000**
brown varnished coat	**001-204-000**
zinc coat	**101-114-000**



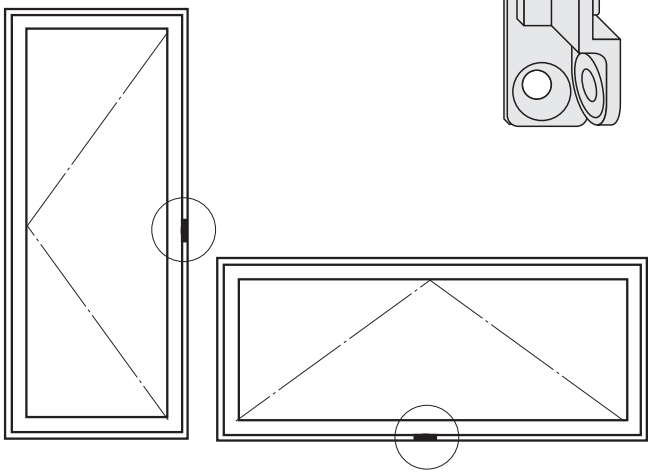
Jig catalogue number **001-184-000**

External connectable pressure pad

white catalogue number **001-497-000**
brown catalogue number **001-498-000**
silver catalogue number **001-570-000**



Jig catalogue number **903-727-000**



Location of the pressure pad in window.

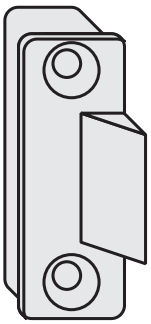
USE:
In sashes of windows **R** (Dr and Tw) for **Hw > 800 mm** and sashes of windows **U** (Dr and Tw (version up to 60 kg) for **Sw > 800 mm**.
Colours according to RAL: white - 9016; brown -8017

PACKING

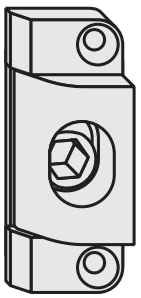
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
001-121-000	box	300	180	180	1000	18,65
body	pallet	1200	800			
001-121-000	box	300	180	180	1000	15,65
striker plate	pallet	1200	800			
001-204-000	box	300	180	180	1000	18,65
body	pallet	1200	800			
001-204-000	box	300	180	180	1000	15,65
striker plate	pallet	1200	800			
101-114-000	box	300	180	180	1000	18,30
body	pallet	1200	800			
101-114-000	box	300	180	180	1000	15,25
striker plate	pallet	1200	800			
connectable	box	300	180	180	250	8,35
striker plate	pallet	1200	800			

Internal pressure pad - adjustable

Use (Profile)	*Catalogue number*	*System*
Gealan 3000	101-759-000	Tw 13
Wymar 2000, DECCO-70	101-760-000	Tw 13
Wymar 2500	101-761-000	Tw 13
Aluplast Ideal 2000	101-761-000	Tw 13
Roplasto 7001	101-759-000	Tw 13
KBE 70	101-759-000	Tw 13
Rehau	101-765-000	Tw 13
Schüco AS, Schuco CT 70	101-766-000	Tw 13
Salamander 2D/3D	101-767-000	Tw 13
Deceuninck Mondial 2000	101-768-000	Tw 13
Deceuninck Zendow	101-769-000	Tw 13
Trocal Confort 11.01.00	101-770-000	Tw 13
Veka Topline	101-771-000	Tw 13



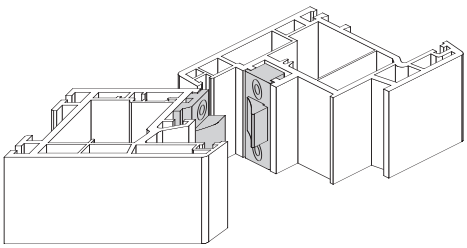
Item 1.

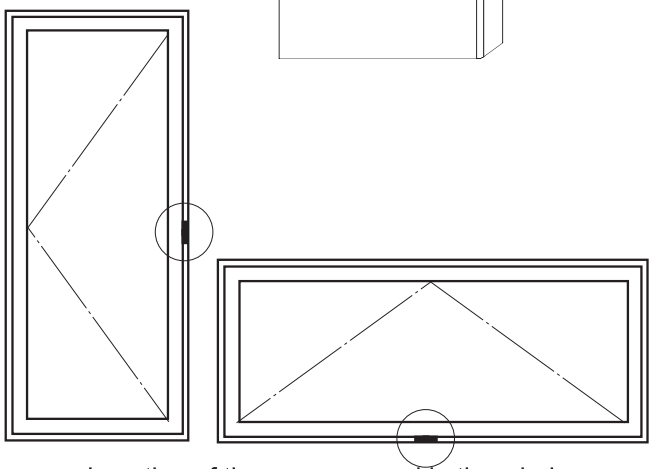


Item 2.

COMPOSITION OF THE SET:

poz. 1. Sash striker plate - (subassembly **common** for every system).
poz. 2. Frame striker plate - (subassembly **changeable** depending on the system).





Location of the pressure pad in the window

USE:
in sashes of windows **R** (Tw) for **Hw > 800 mm** and sashes of windows **U** (Tw) (up to 60 kg) for **Sw > 800mm.**

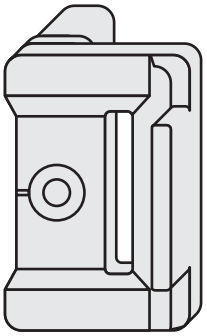
PACKING

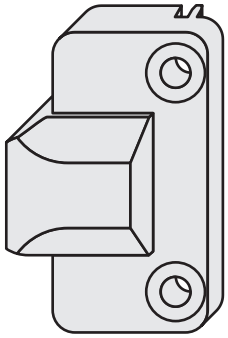
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-759-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-760-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-761-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-762-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-763-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-764-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-765-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-766-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-767-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-768-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-769-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-770-000	box	300	180	180	300	15,30
	pallet	1200	800			
101-771-000	box	300	180	180	300	15,30
	pallet	1200	800			

Fixed internal pressure pad

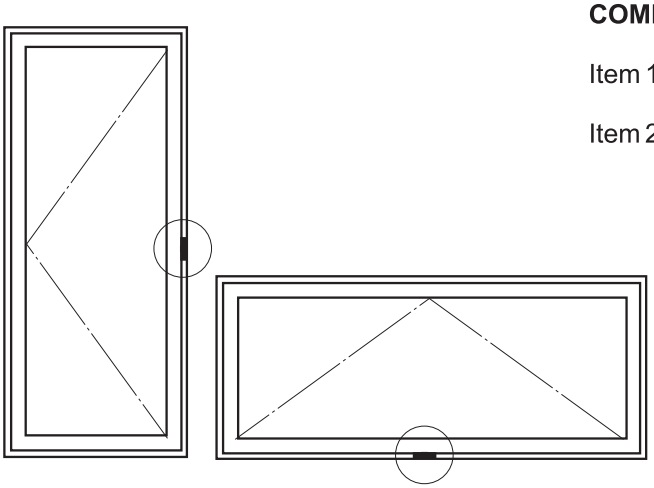
Use (Profile)	*Catalogue number*	*Sytem*
Aluplast, Rehau	101-733-000	Tw 13
Veka, KBE, Kömmerling	101-734-000	Tw 13

Item 1.





Item 2.



Location of the pressure pad in the window

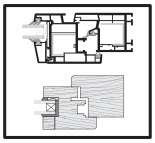
COMPOSITION OF THE SET:

Item 1. Sash striker plate (subassembly **common** for every system).
Item 2. Frame striker plate (subassembly **changeable** depending on the system).

USE:
In sashes of windows **R** (Tw) for Hw>800 mm
In sashes of windows **U** (Tw) for maximum sash weight up to 60 kg, for Sw > 800 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
body	box	300	180	180	500	16,00
	pallet	1200	800			
striker plate	box	300	180	180	500	9,00
	pallet	1200	800			



Stop block DrC

Catalogue number **001-096-000**

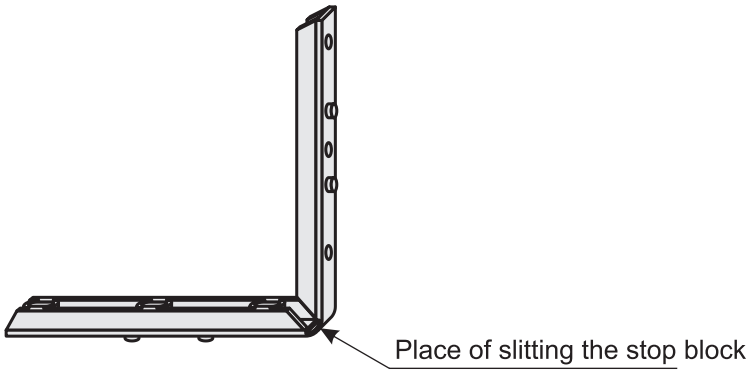
USE:
in sashes of windows (Dr) as an element holding lower hinge leaf DrC and middle hinge leaf DrC in hardware groove.
In window sashes with a so-called movable post as an element holding the lock Tw.
Facilitates proper leading of the screw during assembling the above mentioned hardware subassemblies.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Stop block	box	300	180	180	500	2,10
	pallet	1200	800			

Stop block S5

Catalogue number **019-001-000**



USE:
Supplementary element used only in windows with hardware channel.
Works with lower hinge leaf S5, and after cutting with middle hinge leaf S5 or corner hinge leaf S5.

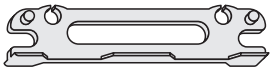
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Stop block S5	box	310	185	185	100	2,60
	pallet	1200	800	890		

Distance pad for striker plate B

Profile type	*Catalogue number*	
Dr 11-7×8	**001-221-000**	
EK100, Panorama, Roplasto System 6190, Trocal 900	**001-176-000**	

Distance pad for striker plate B/R

Profile type	*Catalogue number*	
Royal, Thyssen	**001-567-000**	

Distance pad for lock Tw

Catalogue number	
001-284-000	
001-199-000	

Distance pad for lock Dr 7×8

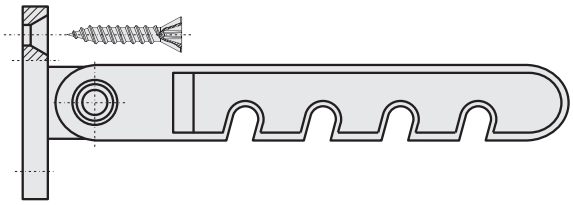
Catalogue number	
001-200-000	

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
001-221-000	box	300	180	180	500	1,95
	pallet	1200	800			
001-176-000	box	300	180	180	500	1,20
	pallet	1200	800			
001-567-000	box	300	180	180	500	1,45
	pallet	1200	800			
001-284-000	box	300	180	180	1000	2,55
	pallet	1200	800			
001-199-000	box	300	180	180	500	2,10
	pallet	1200	800			
001-200-000	box	300	180	180	500	190
	pallet	1200	800			

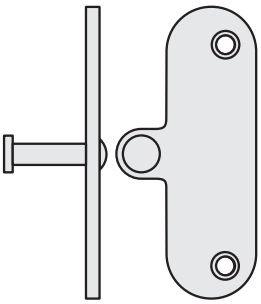
Holder's arm

Catalogue number **005-001-000 (white)**



Striker plate for rebate "20"

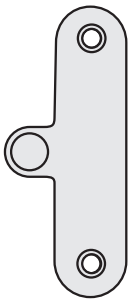
Catalogue number **005-008-000 (varnished white)**

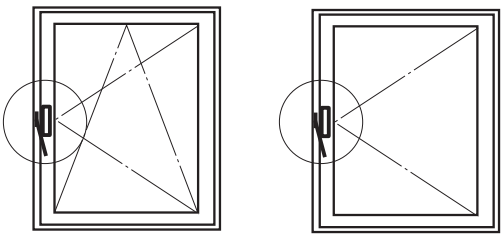


WHILE THE STOCK LASTS !!!

Striker plate for rebate "15"

Catalogue number **005-006-000 (varnished white)**

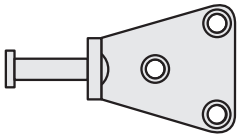




Holder's location in the window

Top striker plate

Catalogue number **005-007-000 (varnished white)**



NOTE:
For varnished striker plates - white colour **Ral 9016**

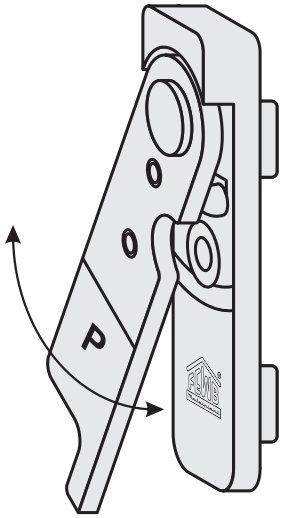
PACKING

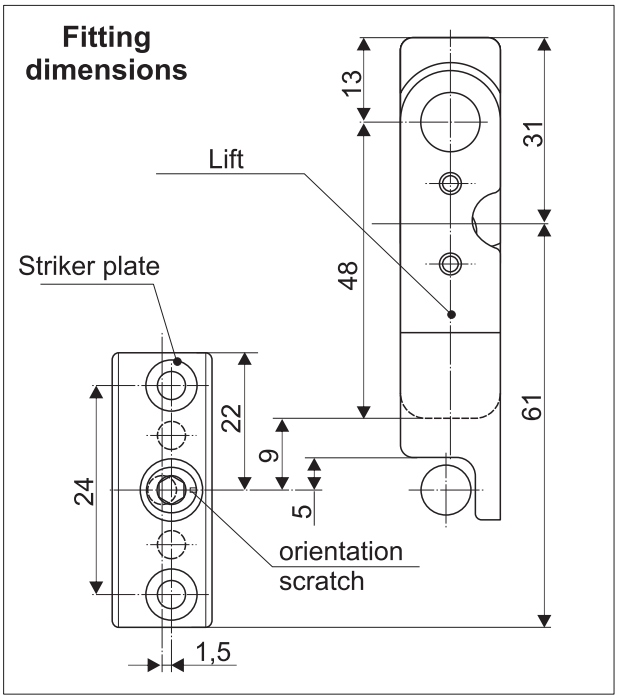
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
holder's arm	box	300	180	180	500	4,25
	pallet	1200	800			
striker plate 15	box	300	180	180	500	8,15
	pallet	1200	800			
striker plate 20	box	300	180	180	500	13,85
	pallet	1200	800			
top striker plate	box	300	180	180	500	10,00
	pallet	1200	800			

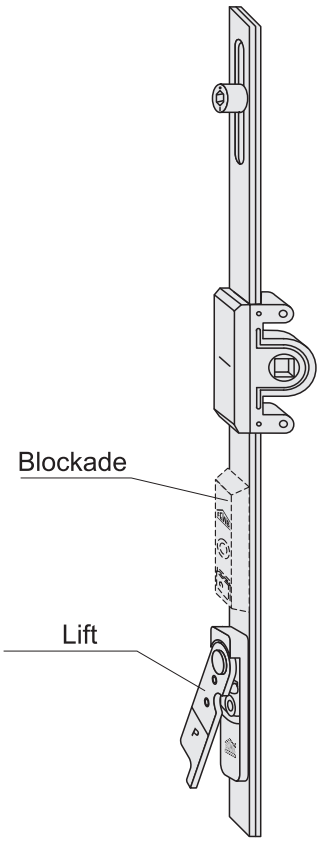
Sash lift

Catalogue number **101-453-000** Right
Catalogue number **101-452-000** Left

WHILE THE STOCK LASTS !!!





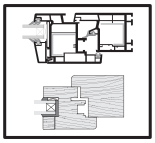


Place to assemble the lift

USE:
In sashes of windows (Dr and Tw) as an element holding the sash in fixed position toward the frame.
Facilitates closing heavy sashes by lifting them with little effort.
Adjustment range is ±1,5 mm on striker plates.
May be used in drive gears M2÷M5 as well as Z2÷Z9.

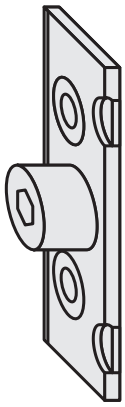
PACKING

Subassembly		Length [mm]	Width [mm]	height [mm]	Pcs/ box	Box weight [kg]
Sash lift L/P	box	300	180	180	500	20,60
	pallet	1200	800			



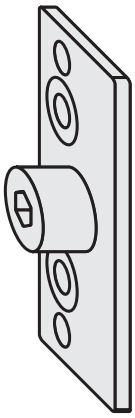
Striker plate Dr
(Eurofalz)

Catalogue number
101-620-000



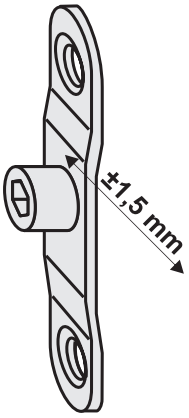
Striker plate Tw 9/Tw13

Profile type	Catalogue number	System
PANORAMA	**101-581-000**	**Tw9**
REHAU	**101-582-000**	**Tw13**



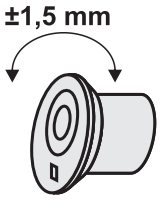
Striker plate Tw 9/Tw13

Profile type	Catalogue number	System
PANORAMA ROPLASTO 6190	**101-527-000**	**Tw9**
ROYAL THYSSEN	**101-545-000**	**Tw13**



Striker plate Dr
(Eurofalz)

Catalogue number **101-496-000**



WHILE THE STOCK LASTS !!!

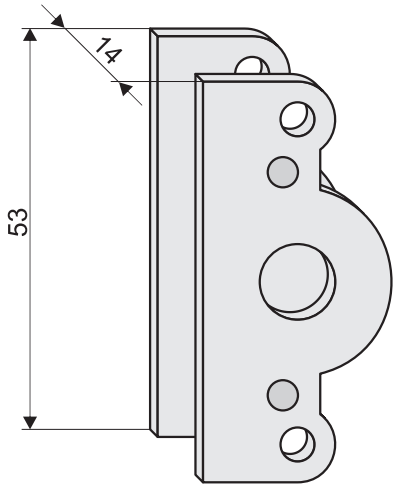
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
101-620-000	box	300	180	180	1000	16,00
	pallet	1200	800			
101-581-000	box	300	180	180	1000	16,95
	pallet	1200	800			
101-582-000	box	300	180	180	1000	16,90
	pallet	1200	800			
101-527-000	box	300	180	180	1000	15,00
	pallet	1200	800			
101-545-000	box	300	180	180	1000	15,00
	pallet	1200	800			
101-496-000	box	300	180	180	1000	17,00
	pallet	1200	800			

Transmission guard

Catalogue number **102-181-000**

Material: HARDENED STEEL



USE:
in **ROMB 3000** hardware set (hardware with reinforced resistance to burglary).
Protects drive gear transmission against drilling from the outside during burglary attempt.

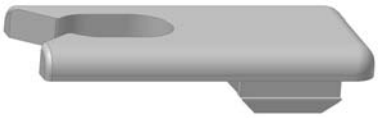
NOTE: required widening of the socket for drive gear transmission.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Transmission guard	box	300	180	180	300	5,30
	pallet	1200	800			

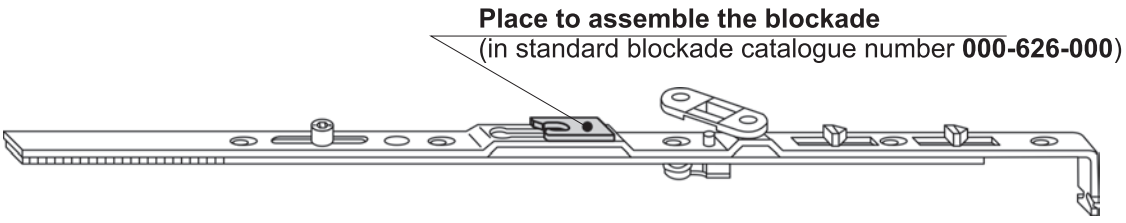
Anti-wind blockade

Catalogue number **001-626-000**



Anti-wind blockade

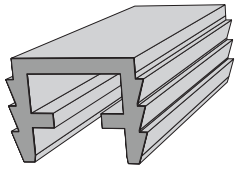
Catalogue number **001-703-000**

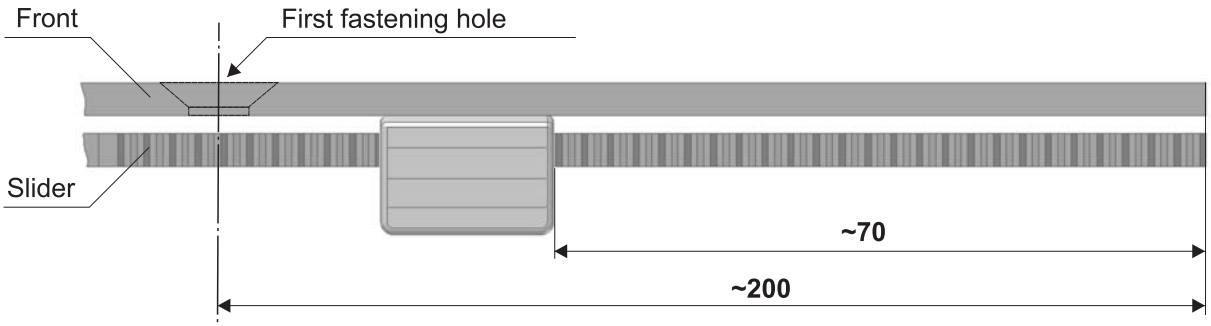


USE:
In **RU** (**Dr** and **Tw**) windows to work with stay and stay arm. The blockade acts as a latch holding the stay arm in tilt position in case of draught or strong gust of wind.
NOTE:
blockade catalogue number **001-703-000** additionally limits tilting of the sash.
Recommended in windows **Hw < 600 mm**.

Distance insert pad Dr

Catalogue number **001-270-000**





USE:
In sashes of wooden windows with hardware groove 16x2,5/12x9,5.

Plays a role of a distance between two cooperating elements (front and slider) in **ROMB** hardware subassemblies, within the parts ended with prongs, enabling connecting successive parts on the girth of the sash. The insert pad also ensures the slider's work in places the most prone to the action of forces pushing the hardware out of the groove.

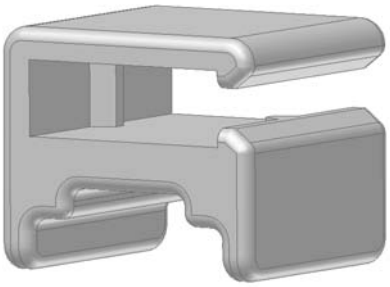
It is recommended to use the insert pad in all the hardware subassemblies where after cutting off the slider and front it remains more than 1/2 of the part with prongs but less than 200 mm, counting from the edge of the cut to the first fastening hole.

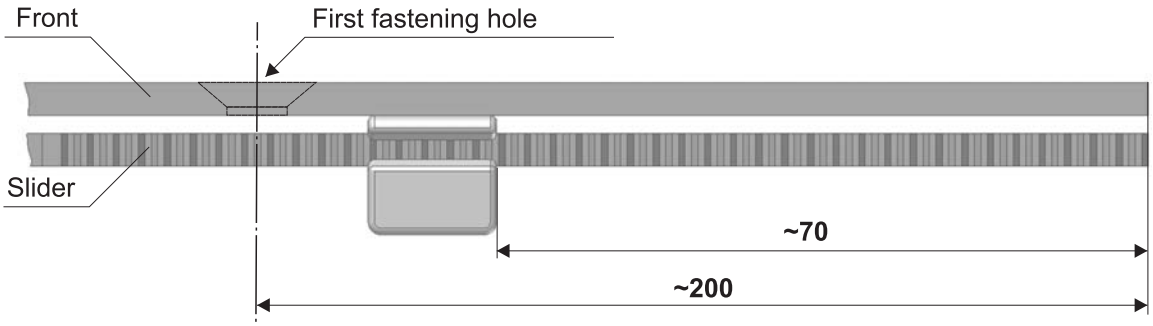
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Distance insert pad	box	300	180	180	2000	4,00
	pallet	1200	800			

Distance insert pad Tw

Catalogue number **001-374-000**





USE:
In sashes of PVC-U windows to be assembled in **ROMB** hardware subassemblies within parts ended with prongs.

Plays a role of a stabilizer and distance between two cooperating elements (front and slider) in **ROMB** hardware subassemblies.

It is recommended to use the insert pad in all the subassemblies of the hardware, where after cutting of the slider and front it remains more than 1/2 of the part with prongs, but less than 200 mm, counting from the edge of the cut to the first fastening hole. It is possible to use it in wooden windows.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Distance insert pad	box	300	180	180	4000	2,45
	pallet	1200	800			

Tw Hardware guards

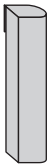
Use		*Guard type*	*Finish*	*Catalogue number*
Lower hinge leaf		I	White	**001-063-000**
			Brown	**001-188-000**
			(F4) Gold	**001-631-000**
			Silver	**001-627-000**
Lower hinge bracket 80 kg		II	White	**001-064-000**
			Brown	**001-189-000**
			(F4) Gold	**001-632-000**
			Silver	**001-628-000**
Lower hinge bracket 100 kg		II A	White	**001-514-000**
			Brown	**001-515-000**
Upper hinge bracket Tw		III A	White	**001-065-000**
			Brown	**001-190-000**
			(F4) Gold	**001-633-000**
			Silver	**001-629-000**
Corner hinge leaf Tw stay arm Tw		IV	White	**001-066-000**
			Brown	**001-191-000**
			(F4) Gold	**001-634-000**
			Silver	**001-630-000**

NOTE:
Guard **No I** can also be used in **TwO** hardware.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
I	box	300	180	180	300	1,70
	pallet	1200	800			
II	box	300	180	180	300	0,80
	pallet	1200	800			
II A	box	300	180	180	300	1,45
	pallet	1200	800			
III A	box	300	180	180	300	0,75
	pallet	1200	800			
IV	box	300	180	180	300	1,55
	pallet	1200	800			

Two Hardware guards

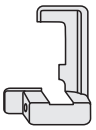
Use		*Guard type*	*Finish*	*Catalogue number*
Lower hinge leaf TwO		I	White	**001-063-000**
			Brown	**001-188-000**
			(F4) Gold	**001-631-000**
			Silver	**001-627-000**
Lower hinge bracket TwO		II B	White	**001-678-000**
			Brown	**001-679-000**
			(F4) Gold	**001-677-000**
			Silver	**001-676-000**
Upper hinge bracket TwO		III B	White	**001-698-000**
			Brown	**001-753-000**
			(F4) Gold	**001-702-000**
			Silver	**001-701-000**
Corner hinge leaf TwO stay arm TwO		IV A	White	**001-697-000**
			Brown	**001-752-000**
			(F4) Gold	**001-700-000**
			Silver	**001-699-000**
Lower notch hinge leaf		IX	White left	**001-553-000**
			White right	**001-554-000**
			Brown left	**001-556-000**
			Brown right	**001-557-000**
			Silver left	**001-746-000**
			Silver right	**001-747-000**
			(F4) Gold left	**001-749-000**
			(F4) Gold right	**001-750-000**
Lower notch hinge bracket (welded)		X A	White	**019-010-000**
			Brown	**019-011-000**
			(F4) Gold	**019-012-000**
			Silver	**019-013-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
I	box	300	180	180	300	1,70
	pallet	1200	800			
II B	box	300	180	180	300	0,85
	pallet	1200	800			
III B	box	310	185	185	300	0,75
	pallet	1200	800	890		
IV A	box	310	185	185	1000	1,55
	pallet	1200	800	890		
IX	box	310	185	185	300	0,90
	pallet	1200	800	890		
X A	box	310	185	185	1000	0,85
	pallet	1200	800	890		

NOTE:
Guards **No IIIB** and **IVA** can also be used in **S5** hardware.
Guard **No I** can be used in **Tw** hardware.

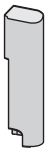
DrC Hardware guards

Use		*Guard type*	*Finish*	*Catalogue number*
Lower hinge leaf DrC (with adjustment)		**V A**	White left	**001-237-000**
			White right	**001-238-000**
			Brown left	**001-250-000**
			Brown right	**001-251-000**
			(F4) Gold left	**001-690-000**
			(F4) Gold right	**001-691-000**
			Silver left	**001-684-000**
			Silver right	**001-685-000**
Lower hinge bracket DrC		**VI B**	White left	**001-583-000**
			White right	**001-584-000**
			Brown left	**001-585-000**
			Brown right	**001-586-000**
			(F4) Gold left	**001-692-000**
			(F4) Gold right	**001-693-000**
			Silver left	**001-686-000**
			Silver right	**001-687-000**
Corner hinge leaf DrC stay arm DrC		**VII**	White	**001-241-000**
			Brown	**001-254-000**
			(F4) Gold	**001-688-000**
			Silver	**001-694-000**
Upper hinge bracket DrC		**VIII**	White	**001-242-000**
			Brown	**001-255-000**
			(F4) Gold	**001-695-000**
			Silver	**001-689-000**

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
V A	box	300	180	180	300	0,95
	pallet	1200	800			
VI B	box	300	180	180	300	0,95
	pallet	1200	800			
VII	box	300	180	180	300	0,45
	pallet	1200	800			
VIII	box	300	180	180	300	1,00
	pallet	1200	800			

S5 Hardware guards

Use		*Guard type*	*Finish*	*Catalogue number*
Upper hinge bracket S5		**III B**	White	**001-698-000**
			Brown	**001-753-000**
			(F4) Gold	**001-702-000**
			Silver	**001-701-000**
Corner hinge leaf S5 stay arm S5		**IV A**	White	**001-697-000**
			Brown	**001-752-000**
			(F4) Gold	**001-700-000**
			Silver	**001-699-000**
Lower hinge leaf S5		**IX A**	White left	**019-002-000**
			White right	**019-003-000**
			Brown left	**019-004-000**
			Brown right	**019-005-000**
			(F4) Gold left	**019-008-000**
			(F4) Gold right	**019-009-000**
			Silver left	**019-006-000**
			Silver right	**019-007-000**
Lower hinge bracket S5		**X A**	White	**019-010-000**
			Brown	**019-011-000**
			(F4) Gold	**019-012-000**
			Silver	**019-013-000**

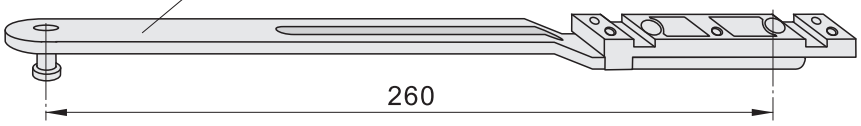
NOTE:
Guards **No IIIB** and **IVA** can also be used in **TwO** hardware.
Guard **No XA** can be used in lower notch hinge.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
III B	box	310	185	185	300	0,75
	pallet	1200	800	890		
IV A	box	310	185	185	1000	1,55
	pallet	1200	800	890		
IX A	box	310	185	185	300	0,90
	pallet	1200	800	890		
X A	box	310	185	185	1000	0,85
	pallet	1200	800	890		

Tilt restrictor arm

Catalogue number Left L **101-356-000**
Right P **101-357-000**

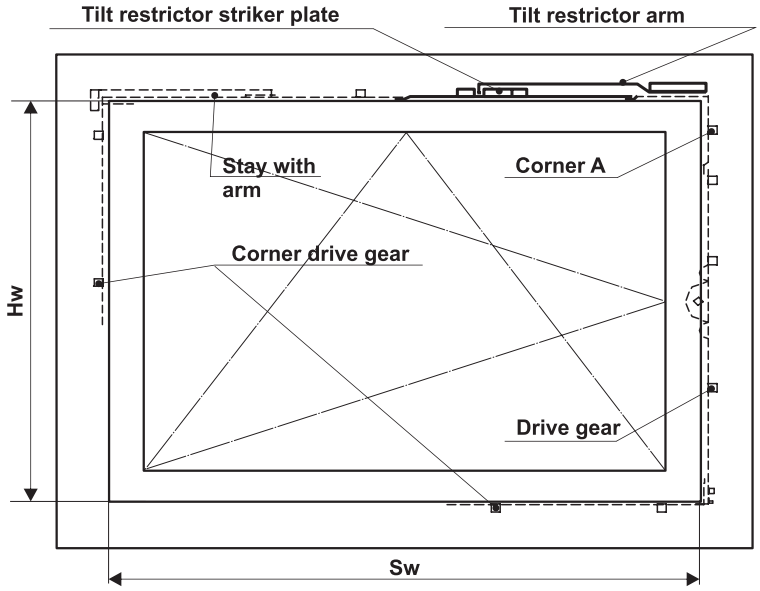


Tilt restrictor striker plate

Catalogue number **101-358-000**

Scope of use of the restrictor

Item	*Dimension Scope (Sw) [mm]*	*Stay (size)*	*Stay arm (size)*	*Restrictor arm L or P*	*Restrictor striker plate*
1	*1201-1450*	*4*	*3*	*offered*	*offered*
1	*1451-1600*	*4a*	*3*	*offered*	*offered*

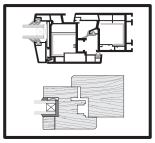


USE:
In sashes of windows **RU** (**Dr** and **Tw**) as a subassembly providing additional support for the sash in tilt position. Recommended for using in the following dimension range:
Sw = 1201 mm to 1600 mm.

NOTE:
1. Tilt restrictor works **only with corner "A"**.
2. In wooden windows EURONUT the restrictor arm should be assembled with the pad, catalogue number **001-221-000**.
3. In PVC-U windows the restrictor arm should be assembled with the pad depending on the system.

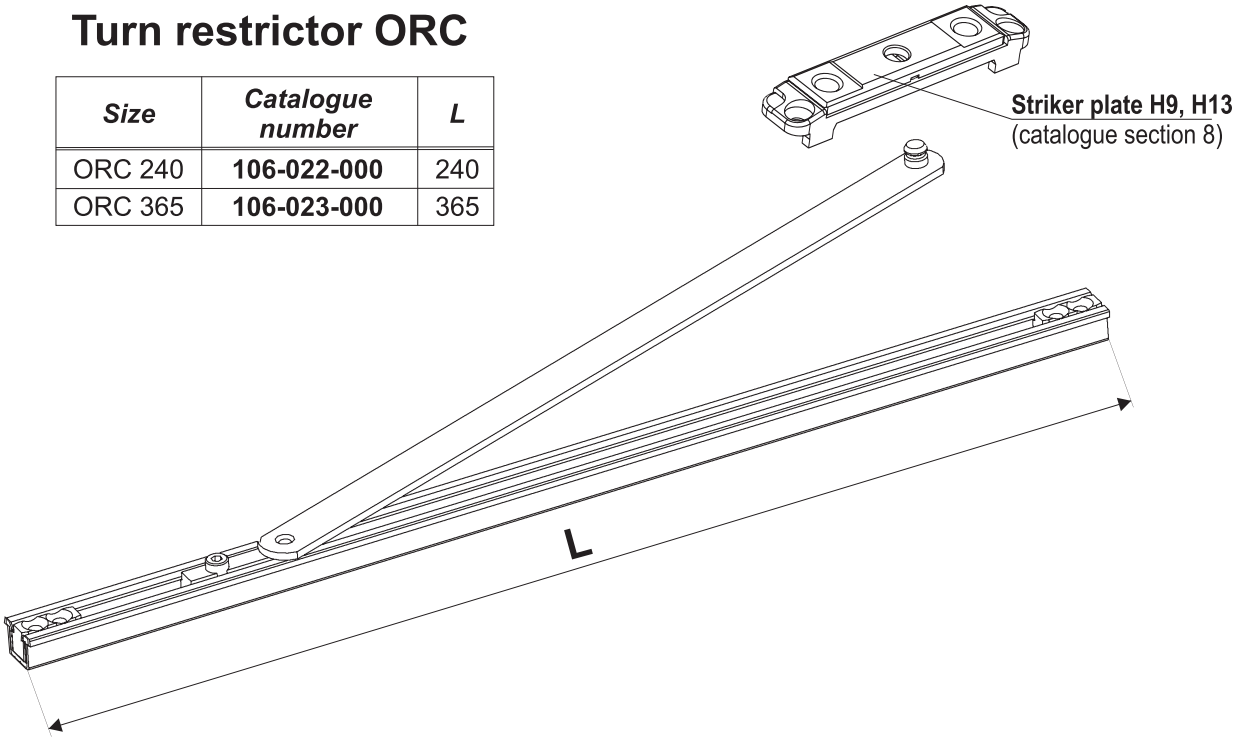
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Restrictor arm	box	380	85	50	50	2,30
	pallet	1200				
Restrictor striker plate	box	300	85	50	20	3,18
	pallet	1200				



Turn restrictor ORC

Size	*Catalogue number*	*L*
ORC 240	**106-022-000**	240
ORC 365	**106-023-000**	365

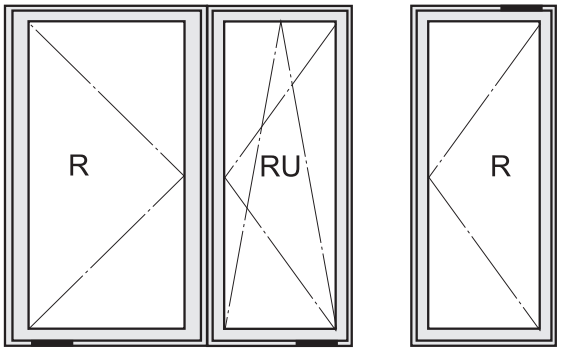


USE:

Turn restrictor (**ORC**) is an additional accessory for the **ROMB** hardware. Its function is to limit the turning of the window sash to the angle ca 90°.

Recommended for using mainly in turn windows and balcony doors **(R)**, wooden Eurnonut, Eurofalz as well as PVC-U with notch clearance **min. 12 mm**. Depending on the type of hardware it is fitted in the upper or lower part of sash stile (striker plate only in the frame channel).

In tilt/turn windows it is possible to use the restrictor only in the lower part of the window. In case of necessity of using turn restrictor for windows **Sw > 800** (**Tw**) or **1000** (**Dr**), it is recommended to assemble it with the corner drive gear (**NR**) in accordance with the **table 1** (page 9/22).



PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
ORC 240	Box	380	85	50	10	1,35
	pallet	1200	800			
ORC 365	box	470	85	50	10	1,75
	pallet	1200	800			

TURN RESTRICTOR ORC
FITTING RULES

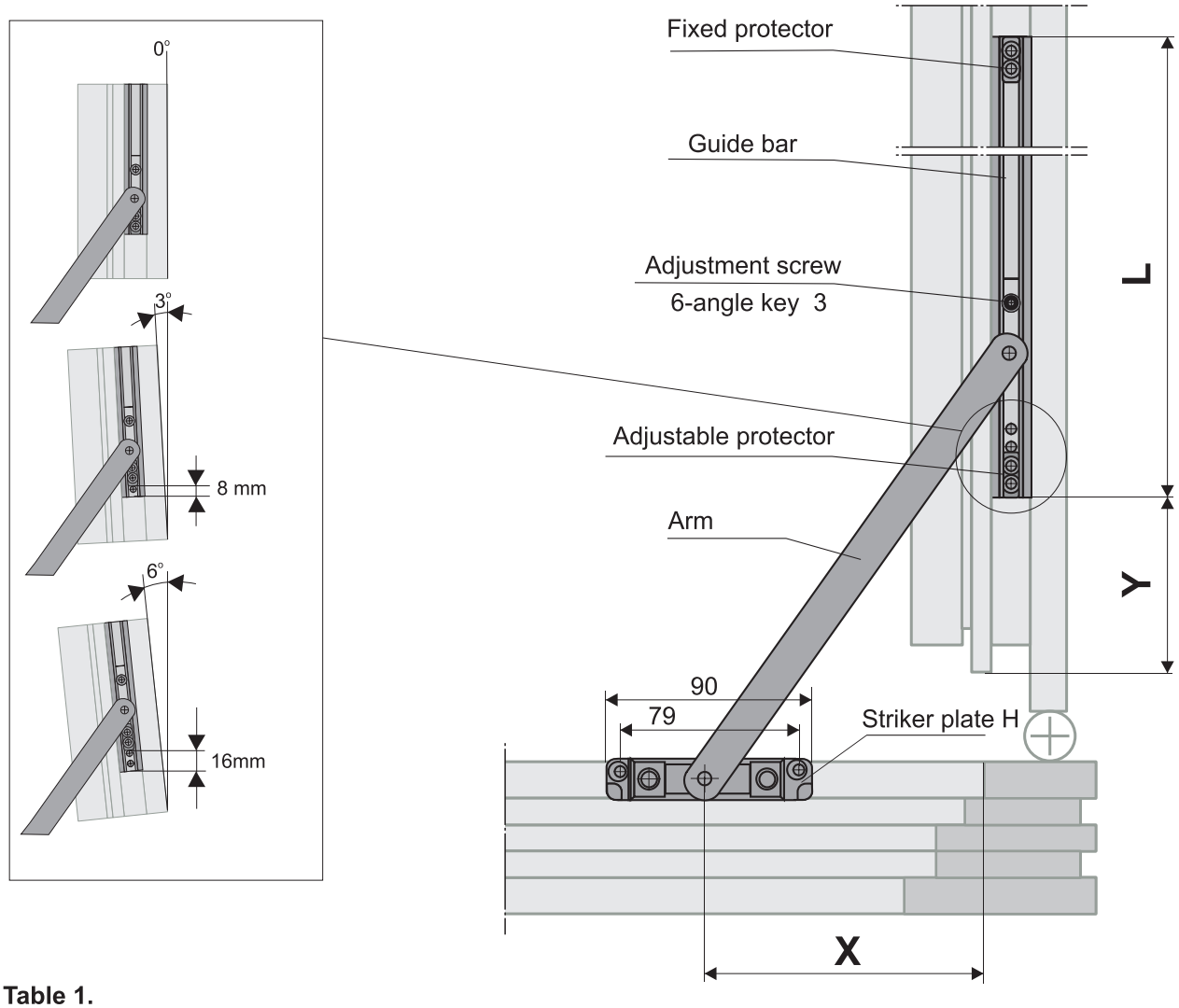


Table 1.

Turn restrictor	*X*	*Y*	*L*	*Corner drive gear NR*	*Scope of use Sw*	
					From	*To*
ORC - 240	91	130	240	-	390	550
ORC - 365	172	130	365	-	515	800*
ORC - 365	172	130	365	NU 0	801	900
ORC - 240	91	130	240	NR 1	901	1025
ORC - 365	172	130	365	NR 1	1026	1110
ORC - 240	91	130	240	NR 2	1111	1235
ORC - 365	172	130	365	NR 2	1236	1450

* for windows (Dr) Sw max. 1000 [mm]

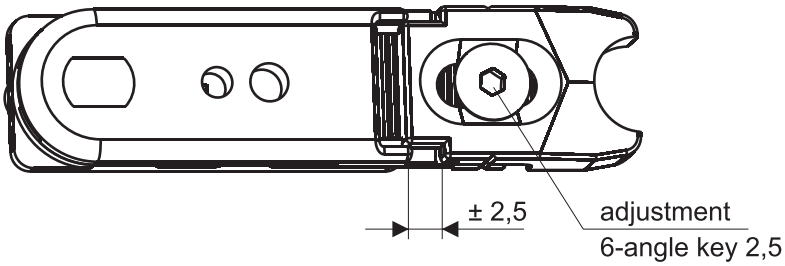
Table 2.

Corner hinge leaf	*Catalogue number*
TwH 9	**101-822-000**
TwH 13	**101-823-000**
TwH 13/21	**101-824-000**
Dr 12/S5	**119-009-000**

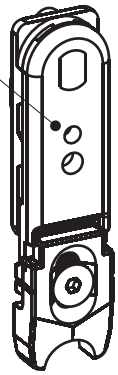
Note:
Turn restrictor in the upper part may be completed only with corner hinge leaf, in accordance with the **table 2**.

Sash lift

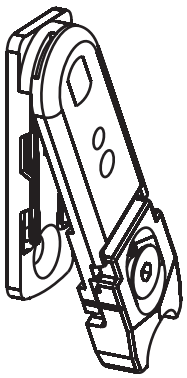
Catalogue number **101-850-000**



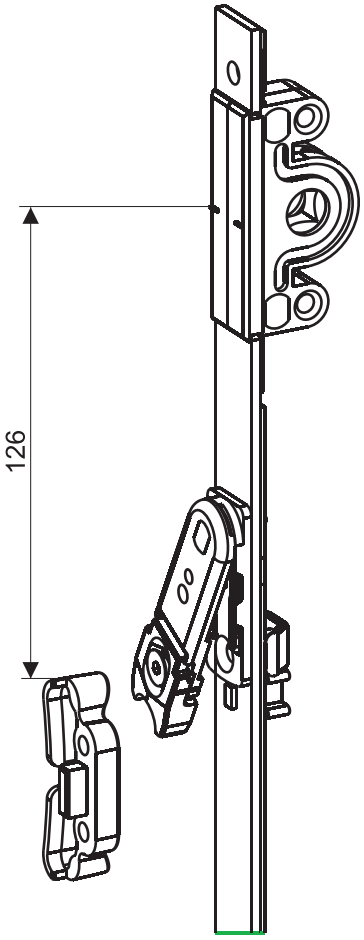
Left or right version of the sash lift is obtained by pressing the spring in the hole and bending the arm.



Position to assemble the lift



Position of the lift arm - left



Place to assemble the lift striker plate

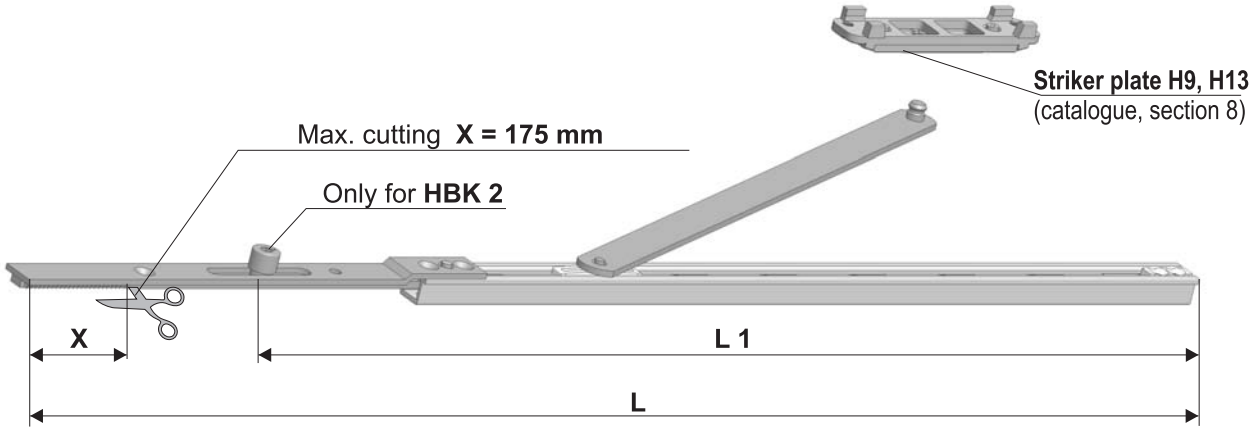
USE:
In sashes of wooden or PVC-U windows (RU and R) as an element holding the sash in fixed position toward the frame.
Facilitates closing heavy sashes by lifting them with little effort. Equipped with blockade eliminating the possibility of displacement of the hardware into turned position from sash being in tilted position, as well as displacement of a turned sash into closed or tilted position.
Vertical adjustment range is ±2,5 mm on the lift arm.
Possible use in drive gears M1÷M5 and Z2÷Z9.

PACKING

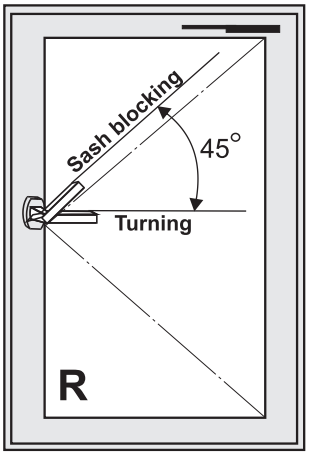
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Sash lift	box	300	180	180	500	37,00
	pallet	1200	800			

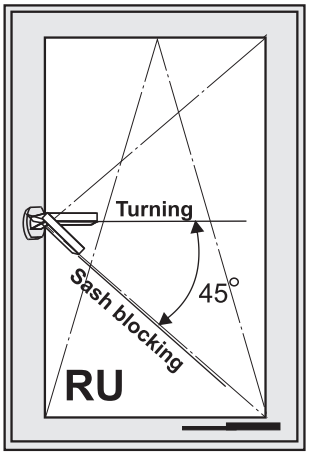
Sash brake HBK

Size	*Catalogue number*	*L1*	*L*
HBK 1	**101-851-000**	-	625
HBK 2	**101-852-000**	496	800



USE:
In turn/tilt and turn windows and balcony doors (Dr and Tw), as an element enabling blocking the sash turned at different angles. The operating functions are performed with the handle which transfers drive through successively connected hardware subassemblies. Minimum angle of turning with blocking of the sash is 15°.
NOTE:
It is not recommended to use HBK brake for turn/tilt windows and balcony doors with **Hw < 2000 mm.**





PACKING

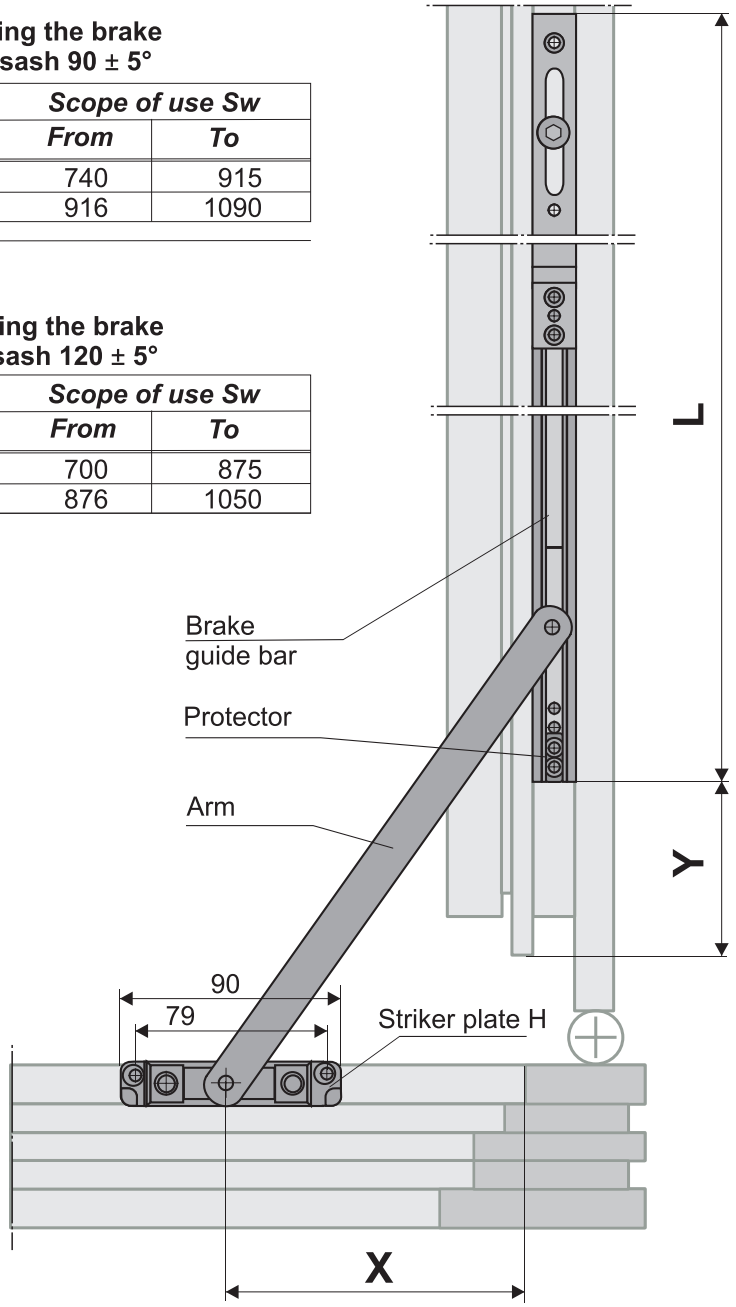
Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
HBK 1	box	660	85	50	10	3,70
	pallet	1200	800			
HBK 2	box	920	85	50	10	4,55
	pallet	1200	800			

Coordinates of fitting the brake for turning of the sash 90 ± 5°

Brake size	*X*	*Y*	*L*	*Scope of use Sw*	
				From	*To*
HBK 1	172	130	625	740	915
HBK 2	172	130	800	916	1090

Coordinates of fitting the brake for turning of the sash 120 ± 5°

Brake size	*X*	*Y*	*L*	*Scope of use Sw*	
				From	*To*
HBK 1	130	91	625	700	875
HBK 2	130	91	800	876	1050



Note:
Sash brake in the upper part may be assembled only with the corner hinge leaf **TwH**, in accordance with **table 2**.
Reducing the minimum scope of using the brake is possible in case of using the corner **S** or **US** to transfer drive, **however only in turn windows.**

Recommended way of transferring drive in turn/tilt windows. From drive gear **M** to corner **U**, **U1** or **U2** and then to the brake in the lower part of the sash.

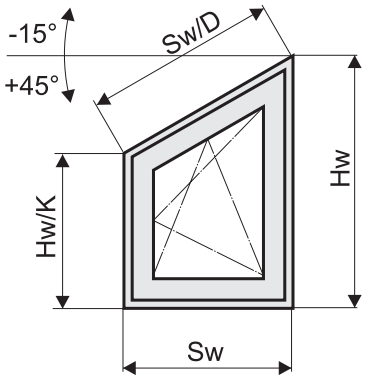
Recommended way of transferring drive in turn windows. From drive gear M to corner **A**, **U** or **S** and then to the brake in the upper part of the sash.

Table 2.

Corner hinge leaf	*Catalogue number*
TwH 9	**101-822-000**
TwH 13	**101-823-000**
TwH 13/21	**101-824-000**
Dr 12/S5	**119-009-000**

PERIPHERAL HARDWARE ROMB
FOR TRAPEZOID PVC-U /TW/ WINDOWS

TURN/TILT VERSION /RU/



max. sash weight 80 kg

At special order. Time of realization to be agreed with the company's Sales Department.

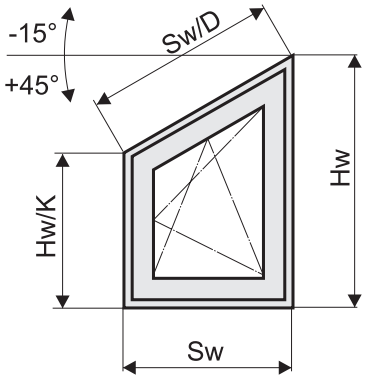
List of basic subassemblies for Hw and Sw max. 800 mm.

	1	Corner T
	2	Drive gear Z
	3	Stay T
	3a	Fastening insert part T
	4	Stay arm Tw/T
	4a	Guard I
	5	Corner drive gear
*	**6**	Peripheral striker plate
*	**7**	Lower striker plate
	8	Upper hinge bracket Tw
	8a	Guard IIIA
	9	Lower hinge leaf Dr/Tw
	9a	Guard I
	10	Lower hinge bracket Dr/Tw
	10a	Guard II
	11	Distance pad Tw
*	**12**	Drive gear blockade
	12a	Slide plate

* - Elements subject to change depending on the profile system.

PERIPHERAL HARDWARE ROMB
FOR TRAPEZOID WOODEN /DR/ WINDOWS

TILT / TURN VERSION /RU/



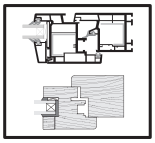
max. Sash weight 80 kg

At special order. Time of realization to be agreed with the company's Sales Department.

List of basic subassemblies for Hw and Sw max. 1000 mm.

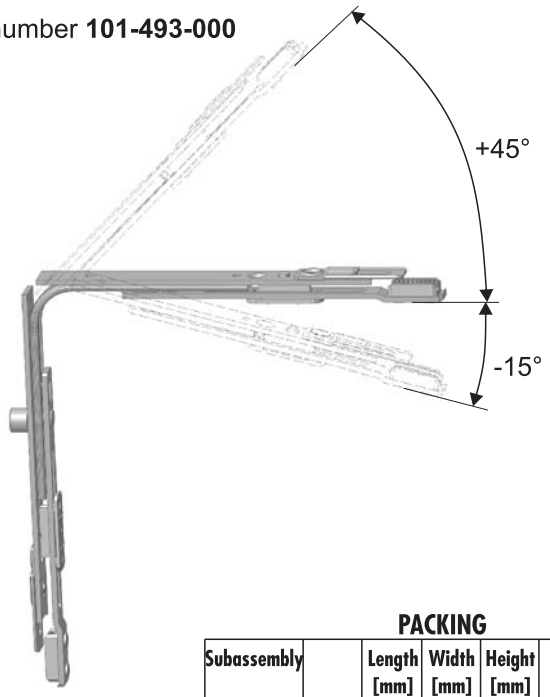
	1	Corner T
	2	Drive gear Z
	3	Stay T
	3a	Fastening insert pad T
	4	Stay arm Dr/T
	4a	Guard VII
	5	Corner drive gear
*	**6**	Peripheral striker plate
*	**7**	Lower striker plate
	8	Upper hinge bracket Dr
	8a	Guard VIII
	9	Lower hinge leaf Dr/Tw
	9a	Guard I
	10	Lower hinge bracket Dr/Tw
	10a	Guard II
	11	Distance insert pad Dr
*	**12**	Drive gear blockade
	12a	Slide plate

* - Elements subject to change depending on the profile system (Dr 11 Euronut, Dr 11 Eurofalz)



Corner T

Catalogue number **101-493-000**



At special order. Time of realization to be agreed with the company's Sales Department.

USE:
In sashes of trapezoid windows **RU** (**Tw**), (**Dr**) corner T is the main subassembly transferring drive from drive gear to stay in trapezoid windows.

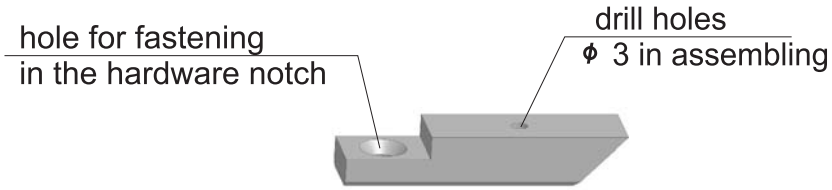
Minimal scope of use Sw > 400 mm.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
T	box	400	290	80	50	10,00
	pallet	1200	800			

Fastening insert pad T

Catalogue number **001-509-000**

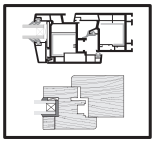


At special order. Time of realization to be agreed with the company's Sales Department.

USE:
In sashes of trapezoid windows **RU** (**Tw**), (**Dr**) as a completing element to fit the stay T.

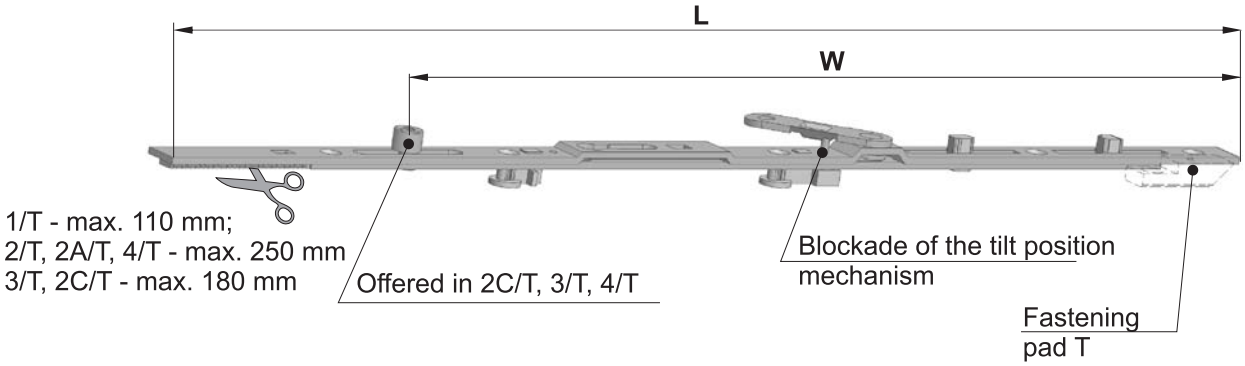
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Insert pad T	box	300	180	180	500	2,10
	pallet	1200	800			



Stay T

Subassembly	*Catalogue number*	*Scope of use SwD*	*L*	*W*
Stay 1/T	**101-530-000**	290-510	350	-
Stay 2/T	**101-531-000**	511-760	600	-
Stay 2A/T	**101-534-000**	580-830	670	-
Stay 2C/T	**101-535-000**	650-830	670	381
Stay 3/T	**101-532-000**	821-1000	840	536
Stay 4/T	**101-533-000**	951-1200	1040	536



Subassembly	*Stay arm T*			
		Tw 9	*Tw 13*	*Dr 11*
Stay 1/T	Stay arm 1/T	**101-503-000**	**101-506-000**	**101-500-000**
Stay 2/T	Stay arm 2/T	**101-504-000**	**101-507-000**	**101-501-000**
Stay 2A/T				
Stay 2C/T				
Stay 3/T	Stay arm 3/T	**101-505-000**	**101-508-000**	**101-502-000**
Stay 4/T				

At special order. Time of realization to be agreed with the company's Sales Department.

USE:
In sashes of trapezoid windows **RU** (Dr and Tw) as a subassembly enabling locking in the upper part of the window. Together with the stay arm it allows turning and tilting window sashes. Equipped with a blockade that eliminates the possibility of the displacement of the hardware into turned position when the sash is tilted.

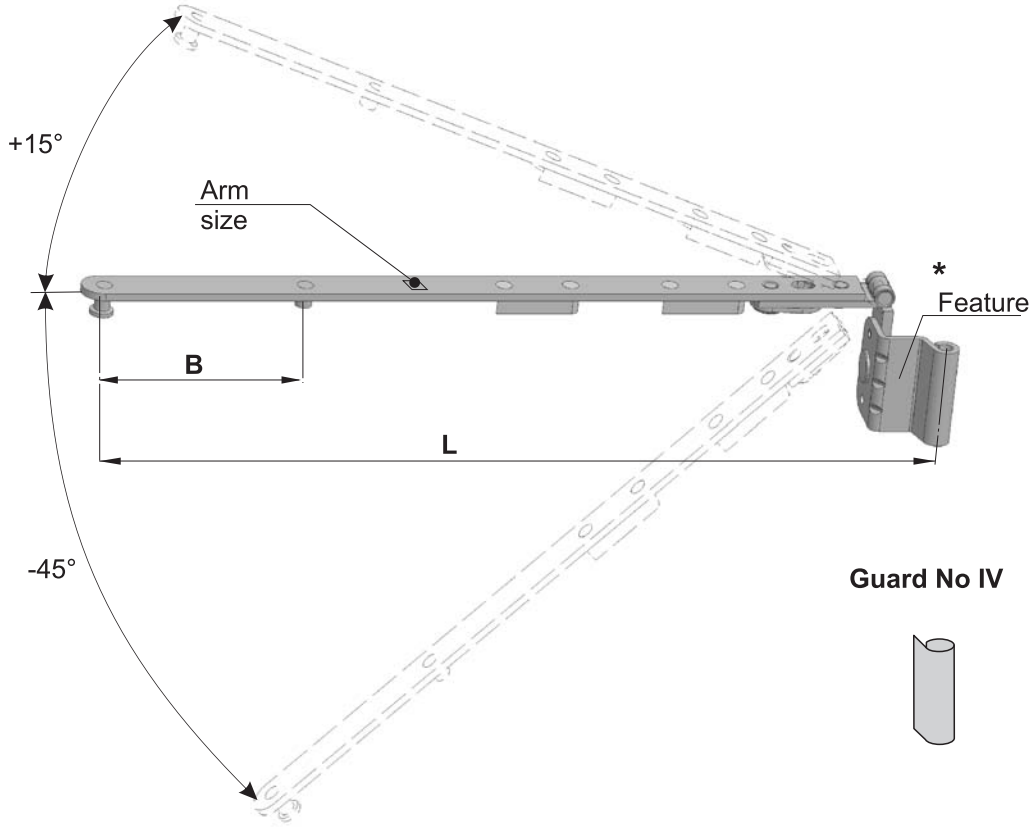
NOTE:
Fastening insert pad (**T**) catalogue number **001-509-000** should be used.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
1T	box	380	85	50	10	1,75
	pallet	1200	800			
2T	box	660	85	50	10	2,90
	pallet	1200	800			
2A/T	box	800	85	50	10	3,25
	pallet	1200	800			
2C/T	box	800	85	50	10	3,20
	pallet	1200	800			
3T	box	920	85	50	10	4,20
	pallet	1200	800			
4T	box	1100	85	50	10	5,20
	pallet	1200	800			

Stay arm Tw / T

Size	*Catalogue number*	*Scope of use SwD*	*L*	*B*	*Feature*
1	**101-503-000**	400-510	240	65	9
2	**101-504-000**	511-830	325	80	
3	**101-505-000**	821-1450	465	120	
1	**101-506-000**	290-510	240	65	13
2	**101-507-000**	511-830	325	80	
3	**101-508-000**	821-1450	465	120	



Guard No IV

At special order. Time of realization to be agreed with the company's Sales Department.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Tw9/1	box	380	85	50	10	2,00
	pallet	1200	800			
Tw9/2	box	470	85	50	10	2,45
	pallet	1200	800			
Tw9/3	box	660	85	50	10	3,00
	pallet	1200	800			
Tw13/1	box	380	85	50	10	2,00
	pallet	1200	800			
Tw13/2	box	470	85	50	10	2,45
	pallet	1200	800			
Tw13/3	box	660	85	50	10	3,00
	pallet	1200	800			

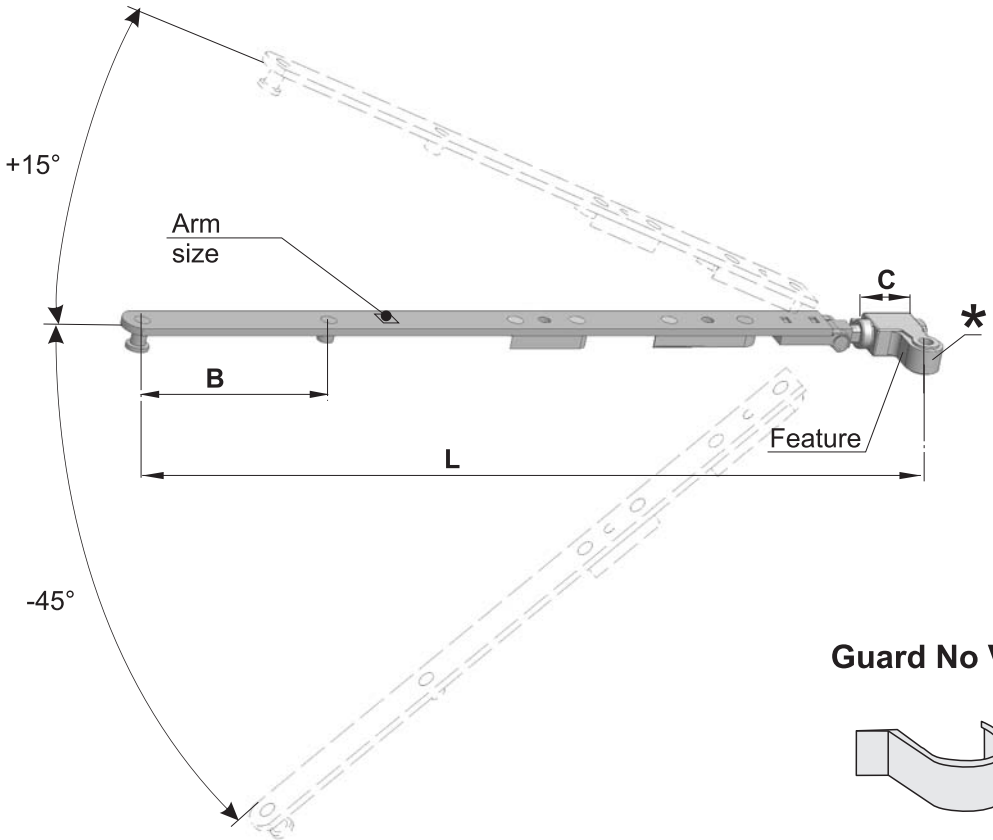
USE:
Subassembly fitted in the upper part of the frame corner. Together with the stay it enables tilting the window sashes in trapezoid windows **RU** (Tw). Works with the upper hinge bracket (Tw). May be used as a left or right arm (by turning the bearing* and driving in a stud).

IMPORTANT:
Guard should be fitted before placing the arm into upper hinge bracket.

PERIPHERAL HARDWARE ROMB
FOR TRAPEZOID WINDOWS

Stay arm Dr / T

Size	*Catalogue number*	*Scope of use SwD*	*L*	*B*	*C*	*Feature*
1	**101-500-000**	400 - 510	236	65	24,5	11
2	**101-501-000**	511 - 830	321	80	24,5	
3	**101-502-000**	821 - 1450	461	120	24,5	



Guard No VII

At special order. Time of realization to be agreed with the company's Sales Department.

USE:
Subassembly fitted in the upper part of the frame corner.
Together with the stay it enables tilting the window sashes in trapezoid windows **RU** (Dr) with notch clearance min.12mm. It may be used as a left or right arm (by turning the bearing *).

NOTE:
Guard should be fitted before placing the arm into the upper hinge bracket.

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	Pcs/ box	Box weight [kg]
Dr T/1	box	380	85	50	10	1,65
	pallet	1200	800			
Dr T/2	box	470	85	50	10	2,10
	pallet	1200	800			
Dr T/3	box	660	85	50	10	2,68
	pallet	1200	800			

ALU KARO PERIPHERAL HARDWARE
GENERAL INFORMATION
MB-59S SYSTEM

PERIPHERAL HARDWARE ALU KARO is used for closing, turning and tilting window sashes in windows **Al**. Operating functions are performed with a handle that can be used in 4 or 8 positions depending on the needs. Hardware elements are fitted in window and frame stiles.

TECHNICAL DATA:

Max weight of sash..... 100 kg
Groove (hardware) width..... 16 mm
Distance from handle axis to front.....15 mm (7,5 mm)
Deadbolt height from front..... 8 mm
Deadbolt throw..... 2×17 mm
Spacing of holes for screws in handle..... 43 mm
Notch clearance.....min. 12mm

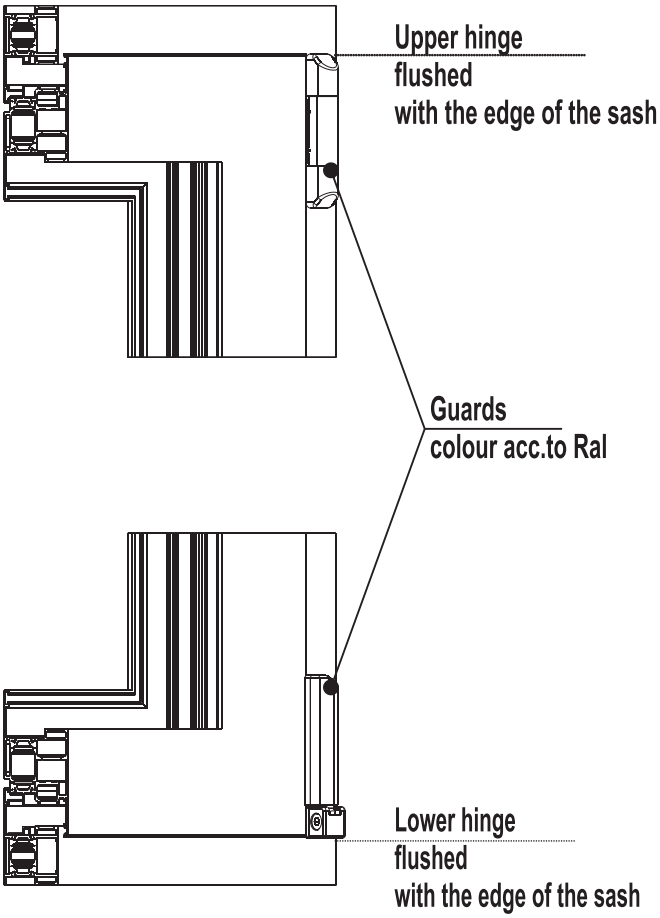
NOTE: dependance Sw / Hw < 1,5 should be observed

The hardware is equipped with a blockade eliminating possibility of displacement of the handle into "turned" position when the sash is in tilted position (blockade in stay). The hardware construction enables fixing a drive gear blockade preventing mishandling of the hardware from "turned" position into “tilted” position when the sash is turned.
A sash lift with a blockade should be used for window sashes with Hw > 750 mm.

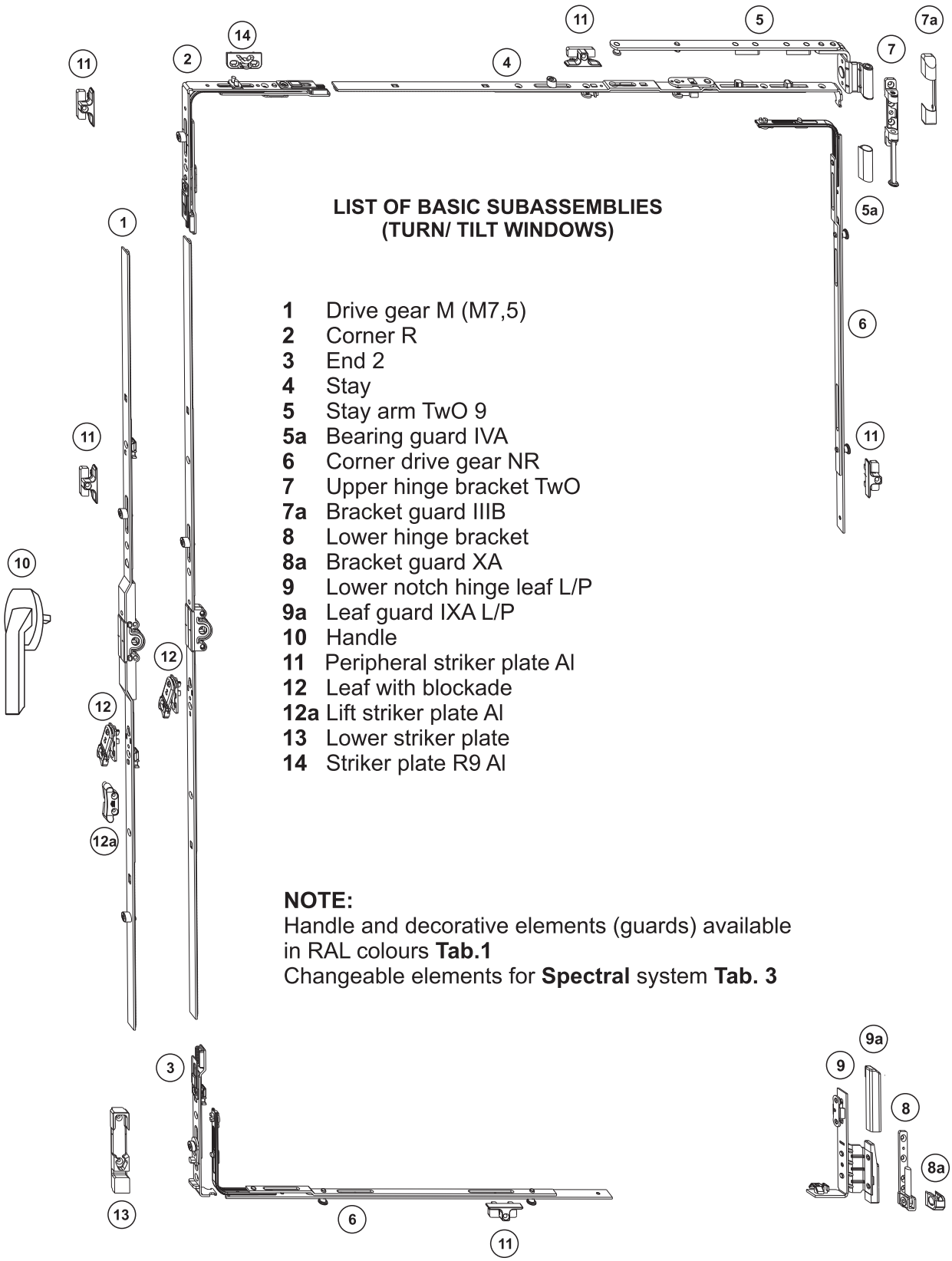
USE:
Peripheral hardware **ALU KARO** can be used in aluminium windows: turn/tilt, turn and tilt with hardware groove as for PVC-U (MB59S, Spectral) profiles.

NOTE:
In order to facilitate selecting and assembling **ALU KARO** hardware we recommend using **MB-CAD** computer programme by **ALUPROF S.A.**

Peripheral hardware
ALU KARO



ASSEMBLING OF ALU KARO HARDWARE
FOR TURN / TILT WINDOWS RU AI
MB-59S SYSTEM

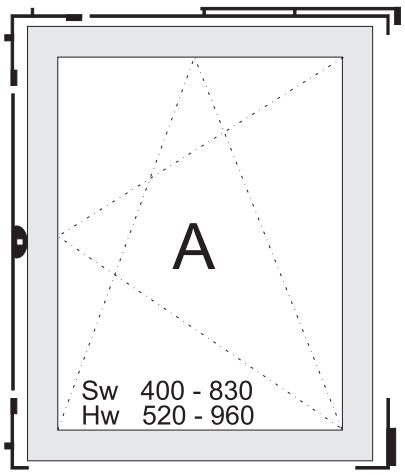


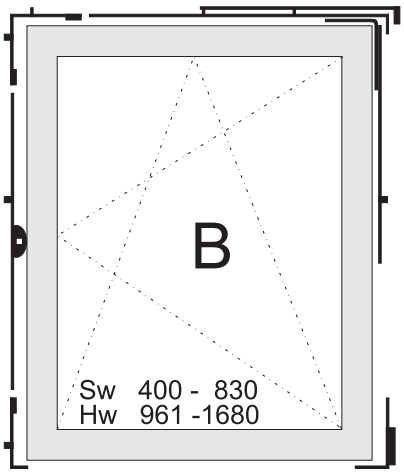
LIST OF BASIC SUBASSEMBLIES
(TURN/ TILT WINDOWS)

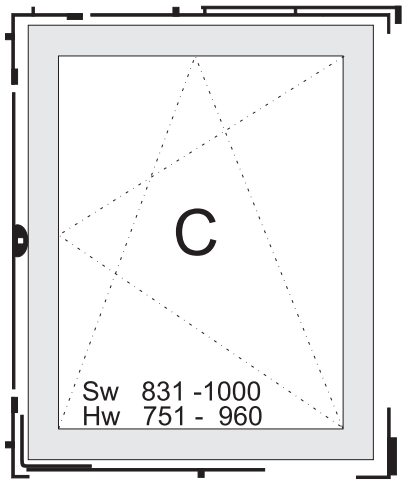
1 Drive gear M (M7,5)
2 Corner R
3 End 2
4 Stay
5 Stay arm TwO 9
5a Bearing guard IVA
6 Corner drive gear NR
7 Upper hinge bracket TwO
7a Bracket guard IIIB
8 Lower hinge bracket
8a Bracket guard XA
9 Lower notch hinge leaf L/P
9a Leaf guard IXA L/P
10 Handle
11 Peripheral striker plate AI
12 Leaf with blockade
12a Lift striker plate AI
13 Lower striker plate
14 Striker plate R9 AI

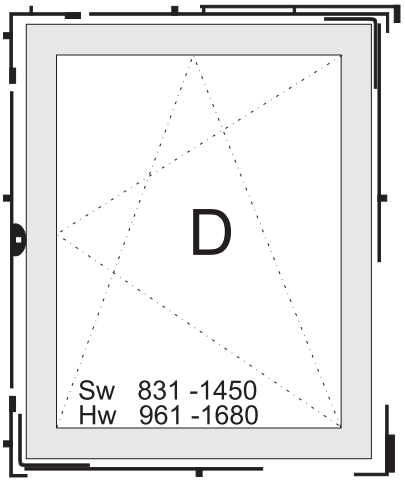
NOTE:
Handle and decorative elements (guards) available in RAL colours **Tab.1**
Changeable elements for **Spectral** system **Tab. 3**

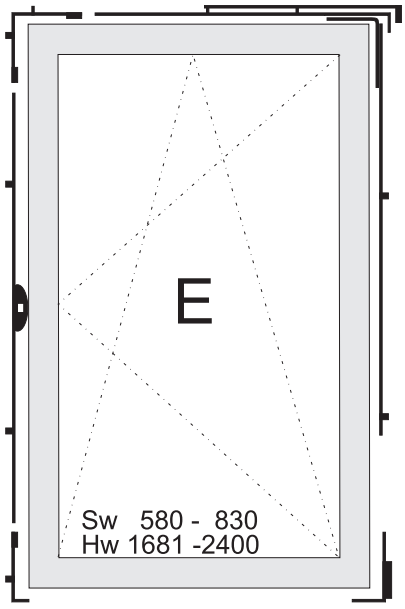
ASSEMBLING OF ALU KARO HARDWARE
TURN / TILT WINDOWS RU AI
SCOPES OF USE MB-59S SYSTEM

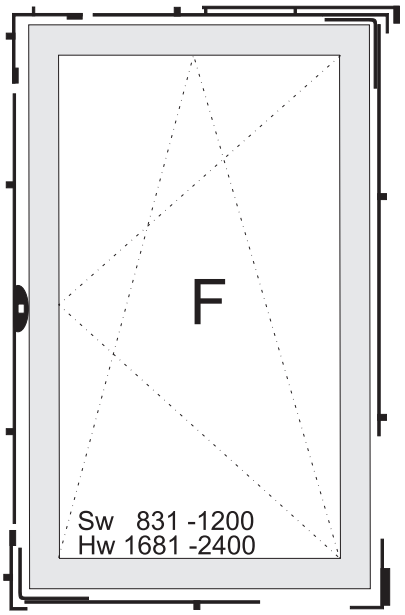












ASSEMBLING OFALUKAROHARDWARE
FOR TURN / TILT WINDOWS RU AI
MB-59SSYSTEM

A1
Sw 400 - 510
Hw 670 - 750
Hw 520 - 750(*)

◇	?	1..
1	202-330-000 202-145-000(*)	1
2	201-229-000	1
3	201-684-000	1
4	201-041-000	1
5	201-727-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	1
12	-	-
12a	-	-
13	504-001-000	1
14	WZ5AK0501	1

A2
Sw 400 - 510
Hw 751 - 960

◇	?	1..
1	202-331-000 202-306-000(*)	1
2	201-229-000	1
3	201-684-000	1
4	201-041-000	1
5	201-727-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	1
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

A3
Sw 511 - 760
Hw 670 - 750
Hw 520 - 750(*)

◇	?	1..
1	202-330-000 202-145-000(*)	1
2	201-229-000	1
3	201-684-000	1
4	201-042-000	1
5	201-728-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	1
12	-	-
12a	-	-
13	504-001-000	1
14	WZ5AK0501	1

A4
Sw 511 - 760
Hw 751 - 960

◇	?	1..
1	202-331-000 202-306-000(*	1
2	201-229-000	1
3	201-684-000	1
4	201-042-000	1
5	201-728-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	1
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

A5
Sw 761 - 830
Hw 751 - 960

◇	?	1..
1	202-331-000 202-306-000(*	1
2	201-229-000	1
3	201-684-000	1
4	201-217-000	1
5	201-728-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	1
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

B1
Sw 400- 510
Hw 961-1320

◇	?	1..
1	202-332-000 202-302-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-041-000	1
5	201-727-000	1
6	202-309-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

B2
Sw 511- 760
Hw 961-1320

◇	?	1..
1	202-332-000 202-302-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-042-000	1
5	201-728-000	1
6	202-309-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

B3
Sw 761- 830
Hw 961-1320

◇	?	1..
1	202-332-000 202-302-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-217-000	1
5	201-728-000	1
6	202-309-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

B4
Sw 400- 510
Hw1321-1680

◇	?	1..
1	202-333-000 202-303-000(*	1
2	201-229-000	1
3	201-234-000	1
4	201-041-000	1
5	201-728-000	1
6	202-310-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

B5
Sw 511- 760
Hw1321-1680

◇	?	1..
1	202-333-000 202-303-000(*	1
2	201-229-000	1
3	201-234-000	1
4	201-042-000	1
5	201-728-000	1
6	202-310-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

(*)appliesto assemblingwithdrivegear(M.)

Changeable elementsfor **Spectral** system.

Tab.3

11	211-084-000
12a	WZ5AK 0902
13	211-005-000L/P
14	WZ5AK 0502

SELECTION OF ALU KARO HARDWARE
FOR TURN / TILT WINDOWS RU AI..
MB-59SSYSTEM

B6 Sw 761- 830 Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-217-000	1
5	201-728-000	1
6	202-310-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

C1 Sw 831-1000 Hw 751- 960

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-229-000	1
3	201-684-000	1
4	201-043-000	1
5	201-729-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

Tab.1

○	?		
	RAL9016	RAL8019	RAL9006
5a	001-697-000	001-761-000	001-699-000
7a	001-698-000	001-760-000	001-701-000
8a	019-010-000	019-762-000	019-013-000
9a	500-001-000/L 500-002-000/P	500-003-000/L 500-004-000/P	500-005-000/L 500-006-000/P.
10	007-032-000	007-033-000	007-034-000

RAL9016 -white
RAL8019 - brown
RAL9006 -silver

D1 Sw 831-1000 Hw 961-1320

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-043-000	1
5	201-729-000	1
6	202-308-000 202-309-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

D2 Sw1001-1200 Hw 961-1320

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-044-000	1
5	201-729-000	1
6	202-308-000 202-309-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

D3 Sw 831-1000 Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-243-000	1
5	201-729-000	1
6	201-308-000 201-310-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

D4 Sw1001-1200 Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-044-000	1
5	201-729-000	1
6	201-308-000 201-310-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

D5 Sw1200-1450 Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-229-000	1
3	201-234-000	1
4	201-362-000	1
5	201-729-000	1
6	201-308-000 201-310-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a		1
7a		1
8a	Tab.1	1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

(*)appliestoassemblingwithdrivegear(M.)

Changeable elementsfor **Spectral** system.

Tab.3

11	211-084-000
12a	WZ5AK 0902
13	211-005-000L/P
14	WZ5AK 0502

SELECTION OF ALU KARO HARDWARE
FOR TURN / TILT WINDOWS RU AI
MB-59SSYSTEM

F1 Sw 831-1000 Hw1681-2040

○	?	1..
1	202-334-000 202-304-000(*)	1
2	201-229-000	1
3	201-735-000	1
4	201-043-000	1
5	201-729-000	1
6	202-310-000 202-308-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	6
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

F2 Sw 831-1000 Hw2041-2400

○	?	1..
1	202-335-000 202-305-000(*)	1
2	201-229-000	1
3	201-735-000	1
4	201-043-000	1
5	201-729-000	1
6	202-311-000 202-308-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	7
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

F3 Sw1001-1200 Hw1681-2040

○	?	1..
1	202-334-000 202-304-000(*)	1
2	201-229-000	1
3	201-735-000	1
4	201-244-000	1
5	201-729-000	1
6	201-311-000 201-308-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	6
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

F4 Sw1001-1200 Hw2041-2400

○	?	1..
1	202-335-000 202-305-000(*)	1
2	201-229-000	1
3	201-735-000	1
4	201-044-000	1
5	201-729-000	1
6	201-311-000 201-308-000	1+1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	7
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

E1 Sw 580- 830 Hw1681-2040

○	?	1..
1	202-334-000 202-304-000(*)	1
2	201-229-000	1
3	201-735-000	1
4	201-217-000	1
5	201-728-000	1
6	202-310-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	4
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

E2 Sw 580- 830 Hw2041-2400

○	?	1..
1	202-335-000 202-305-000(*)	1
2	201-229-000	1
3	201-735-000	1
4	201-217-000	1
5	201-728-000	1
6	202-311-000	1
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1
13	504-001-000	1
14	WZ5AK0501	1

Tab.1

○	?		
	RAL9016	RAL8019	RAL9006
5a	001-697-000	001-761-000	001-699-000
7a	001-698-000	001-760-000	001-701-000
8a	019-010-000	019-762-000	019-013-000
9a	500-001-000/L 500-002-000/P	500-003-000/L 500-004-000/P	500-005-000/L 500-006-000/P.
10	007-032-000	007-033-000	007-034-000

RAL9016 -white
RAL8019 - brown
RAL9006 -silver

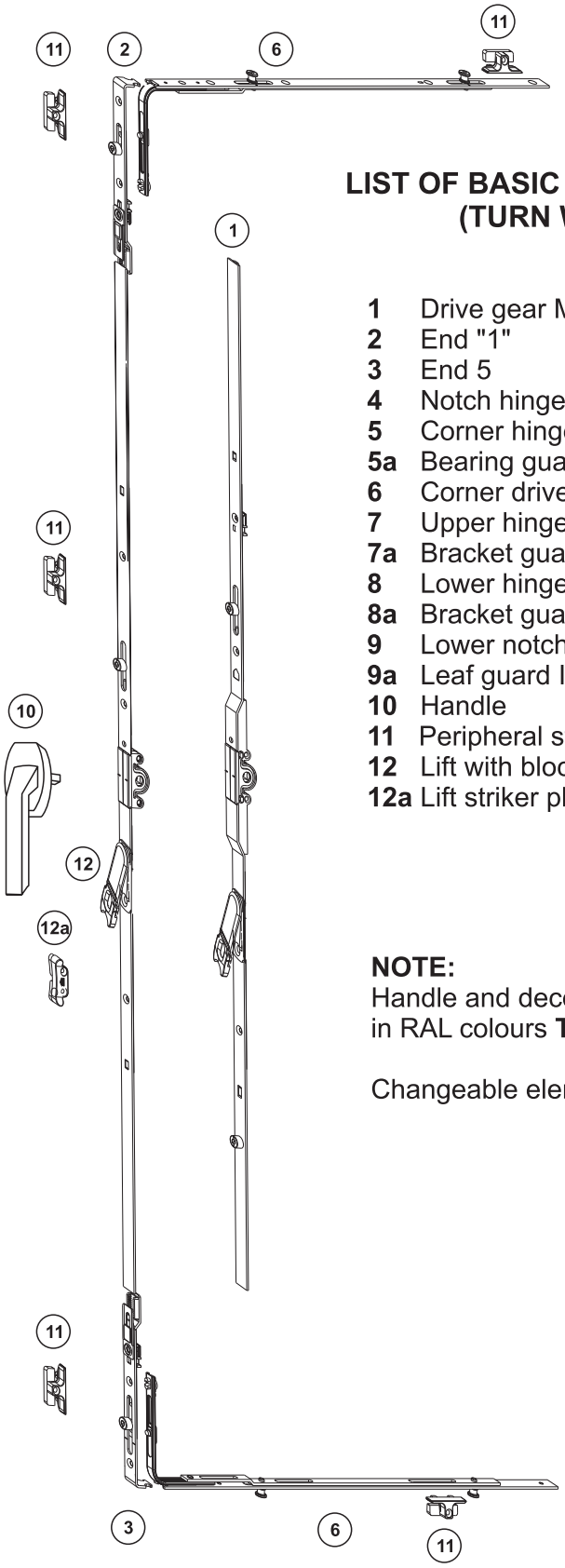
(*)appliestoassemblingwithdrivegear(M.)

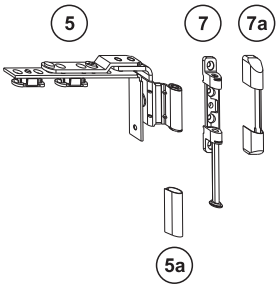
Changeable elementsfor **Spectral** system.

Tab.3

11	211-084-000
12a	WZ5AK 0902
13	211-005-000L/P
14	WZ5AK 0502

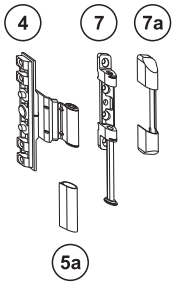
ASSEMBLING OF ALU KARO HARDWARE
FOR TURN WINDOWS R AI
MB-59S SYSTEM





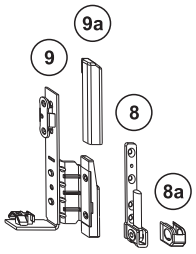
LIST OF BASIC SUBASSEMBLIES (TURN WINDOWS)

1 Drive gear M (M7,5)
2 End "1"
3 End 5
4 Notch hinge leaf TwO 9/B
5 Corner hinge leaf TwO 9
5a Bearing guard IVA
6 Corner drive gear NR
7 Upper hinge bracket TwO
7a Bracket guard IIIB
8 Lower hinge bracket
8a Bracket guard XA
9 Lower notch hinge leaf L/P
9a Leaf guard IXA L/P
10 Handle
11 Peripheral striker plate AI
12 Lift with blockade
12a Lift striker plate AI

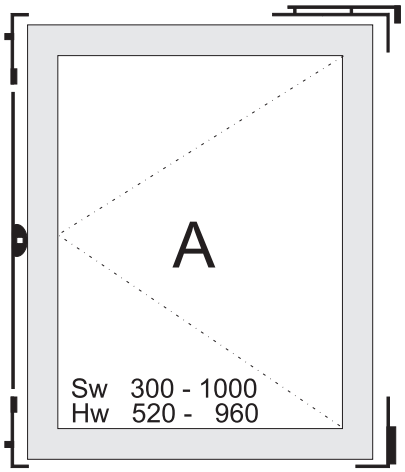


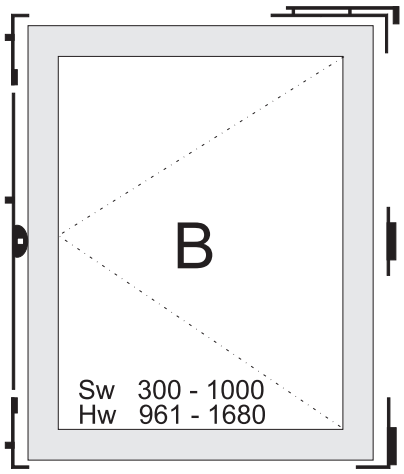
NOTE:
Handle and decorative elements (guards) available in RAL colours **Tab. 1**

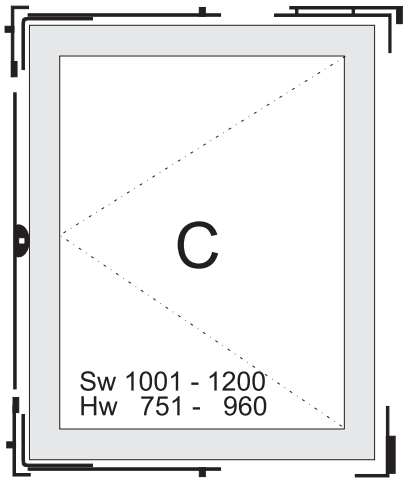
Changeable elements for **Spectral** system **Tab. 4**

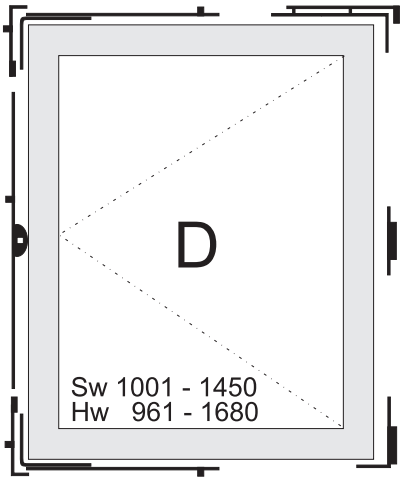


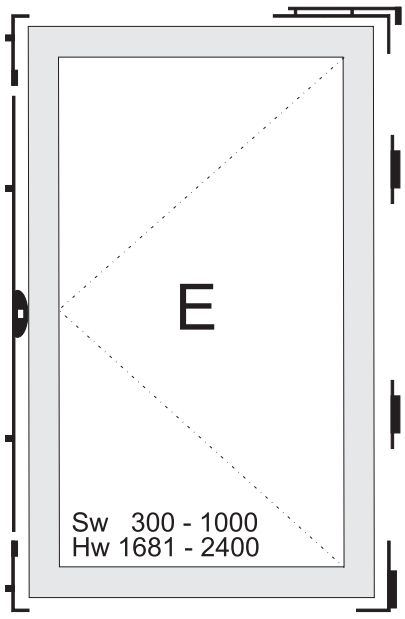
ASSEMBLING OF ALU KARO HARDWARE
FOR TURN WINDOWS R AI
SCOPES OF USE MB-59S SYSTEM

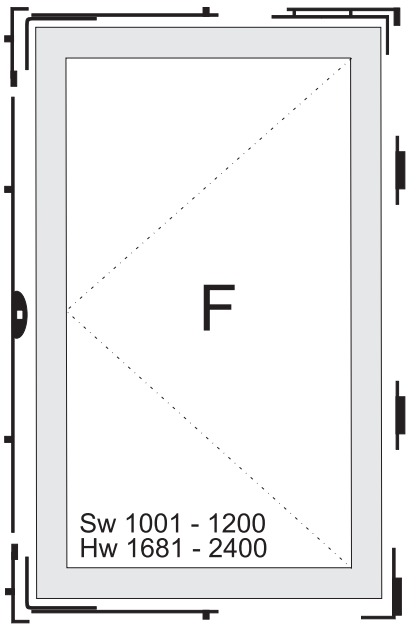












KARO

SELECTION OF ALU KARO HARDWARE
FOR TURN WINDOWS R AI
MB-59SSYSTEM

A1
Sw -1000
Hw 670- 750
Hw 520- 750(*)

○	?	1..
1	202-330-000 202-145-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	-	-
5	201-725-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	2
12	201-850-000	1
12a	WZ5AK0901	1

A2
Sw 300-1000
Hw 751- 960

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	-	-
5	201-725-000	1
6	-	-
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	2
12	201-850-000	1
12a	WZ5AK0901	1

B1
Sw 300-1000
Hw 961-1320

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	1
5	201-725-000	1
6	-	-
7	201-720-000	2
8	201-529-000	1
9	201-523-000/L 201-524-000/P	1
5a	Tab.1	2
7a		2
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1

B2
Sw 300-1000
Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	1
5	201-725-000	1
6	-	-
7	201-720-000	2
8	201-529-000	1
9	201-523-000/L 201-524-000/P	1
5a	Tab.1	2
7a		2
8a		1
9a		1
10		1
11	503-002-000	3
12	201-850-000	1
12a	WZ5AK0901	1

C1
Sw1001-1200
Hw 751- 960

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	-	-
5	201-725-000	1
6	202-308-000	2
7	201-720-000	1
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	1
7a		1
8a		1
9a		1
10		1
11	503-002-000	4
12	201-850-000	1
12a	WZ5AK0901	1

D1
Sw1001-1200
Hw 961-1320

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	1
5	201-725-000	1
6	202-308-000	2
7	201-720-000	2
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	2
7a		2
8a		1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1

D2
Sw1001-1200
Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	1
5	201-725-000	1
6	202-308-000	2
7	201-720-000	2
8	201-529-000	1
9	201-523-000/L 201-524-000/P	1
5a	Tab.1	2
7a		2
8a		1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1

D3
Sw1201-1450
Hw1321-1680

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-234-000	1
4	201-723-000	1
5	201-725-000	1
6	202-309-000	2
7	201-720-000	2
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	2
7a		2
8a		1
9a		1
10		1
11	503-002-000	5
12	201-850-000	1
12a	WZ5AK0901	1

Tab.1

○	?		
	RAL9016	RAL8019	RAL9006
5a	001-697-000	001-761-000	001-699-000
7a	001-698-000	001-760-000	001-701-000
8a	019-010-000	019-762-000	019-013-000
9a	500-001-000/L 500-002-000/P	500-003-000/L 500-004-000/P	500-005-000/L 500-006-000/P.
10	007-032-000	007-033-000	007-034-000

RAL9016 -white
RAL8019 - brown
RAL9006 -silver

(*)appliestoassemblingwithdrivegear(M.)

Changeable elementsfor **Spectral** system.

Tab.4

11	211-084-000
12a	WZ5AK0902

E1 Sw 300-1000 Hw1681-2040

○	?	1..
1	202-334-000 202-304-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	1
5	201-725-000	1
6	-	-
7	201-720-000	3
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	3
7a		3
8a		1
9a		1
10		1
11	503-002-000	4
12	201-850-000	1
12a	WZ5AK0901	1

E2 Sw 300-1000 Hw2041-2400

○	?	1..
1	202-335-000 202-305-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	2
5	201-725-000	1
6	-	-
7	201-720-000	3
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	3
7a		3
8a		1
9a		1
10		1
11	503-002-000	4
12	201-850-000	1
12a	WZ5AK0901	1

F1 Sw1001-1200 Hw1681-2040

○	?	1..
1	202-334-000 202-304-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	1
5	201-725-000	1
6	202-308-000	2
7	201-720-000	3
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	3
7a		3
8a		1
9a		1
10		1
11	503-002-000	6
12	201-850-000	1
12a	WZ5AK0901	1

F2 Sw1001-1200 Hw2041-2400

○	?	1..
1	202-335-000 202-305-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	201-723-000	2
5	201-725-000	1
6	202-308-000	2
7	201-720-000	3
8	201-529-000	1
9	201-523-000/L 201-524-000/P.	1
5a	Tab.1	3
7a		3
8a		1
9a		1
10		1
11	503-002-000	6
12	201-850-000	1
12a	WZ5AK0901	1

Tab.1

○	?		
	RAL9016	RAL8019	RAL9006
5a	001-697-000	001-761-000	001-699-000
7a	001-698-000	001-760-000	001-701-000
8a	019-010-000	019-762-000	019-013-000
9a	500-001-000/L 500-002-000/P	500-003-000/L 500-004-000/P	500-005-000/L 500-006-000/P.
10	007-032-000	007-033-000	007-034-000

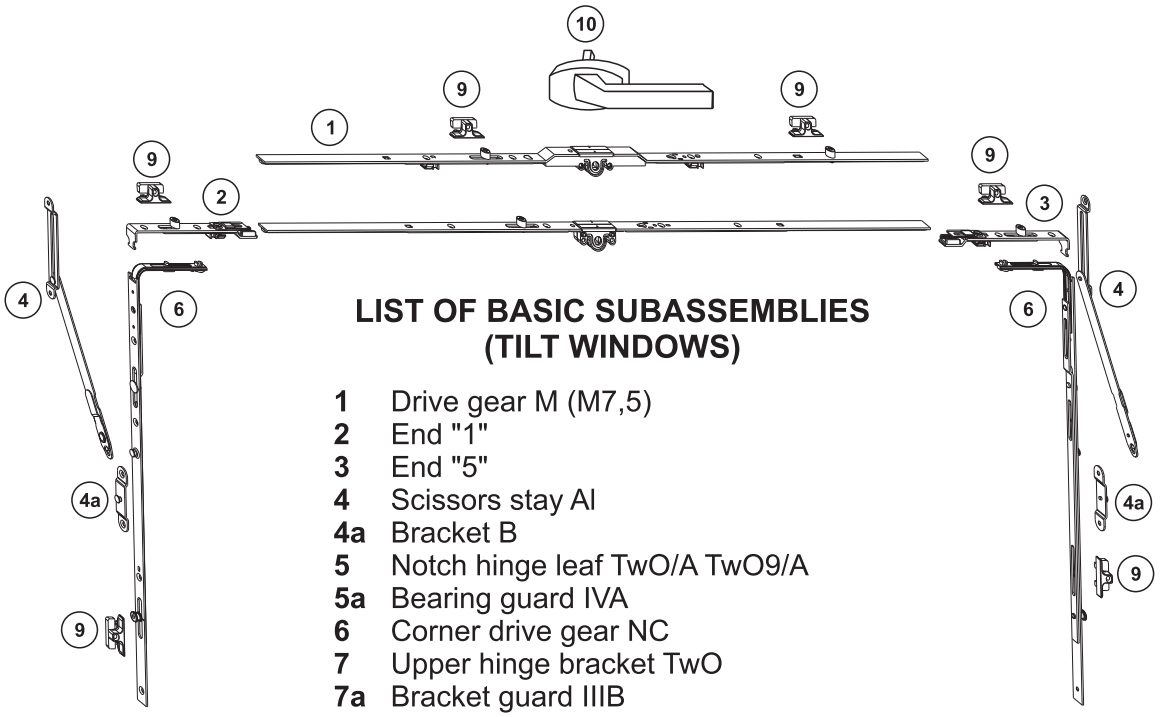
RAL9016 -white
RAL8019 - brown
RAL9006 -silver

(*)appliestoassemblingwithdrivegear(M.)

Changeable elementsfor **Spectral** system**.**

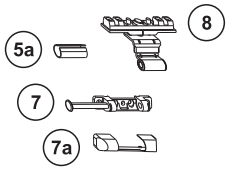
Tab.4

11	211-084-000
12a	WZ5AK0902

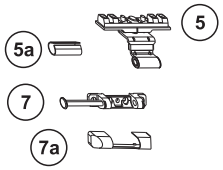


LIST OF BASIC SUBASSEMBLIES (TILT WINDOWS)

1 Drive gear M (M7,5)
2 End "1"
3 End "5"
4 Scissors stay Al
4a Bracket B
5 Notch hinge leaf TwO/A TwO9/A
5a Bearing guard IVA
6 Corner drive gear NC
7 Upper hinge bracket TwO
7a Bracket guard IIIB
8 Notch hinge leaf TwO/B TwO9/B
9 Peripheral striker plate Al
10 Handle



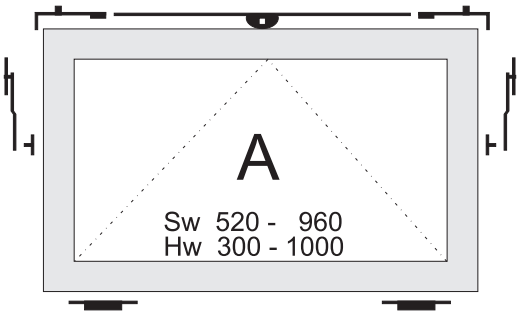
NOTE:
For spacing between hinges **>1000 mm** a third hinge should be used according to position **8**.

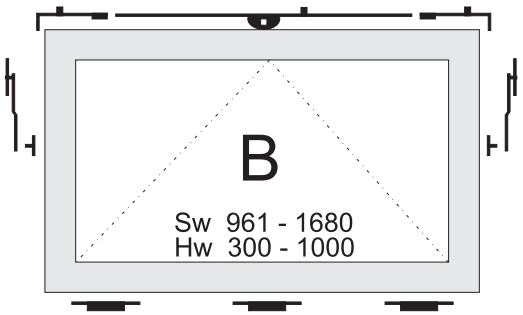


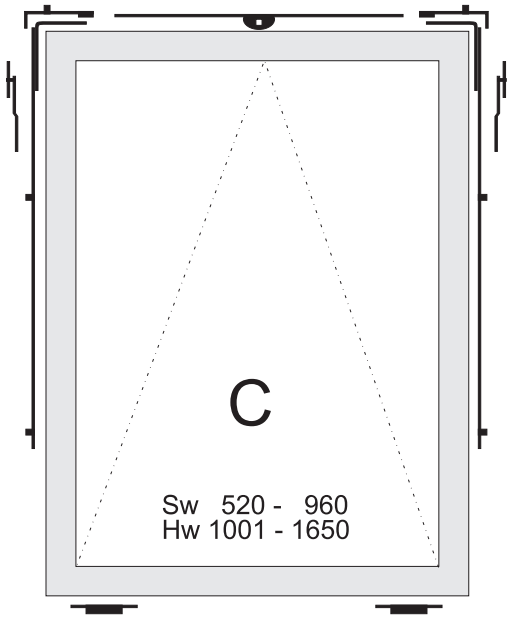
NOTE:
Handle and decorative elements (guards) available in RAL colours **Tab. 2**

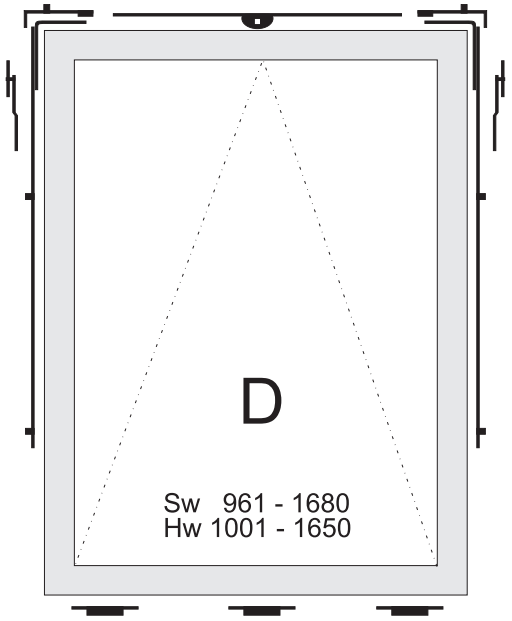
Changeable elements for **Spectral** system **Tab. 5**

ASSEMBLING OF ALU KARO HARDWARE
FOR TILT WINDOWS U AI
SCOPES OF USE MB-59S SYSTEM









SELECTION OF ALU KARO HARDWARE
FOR TILT WINDOWS U AI
MB-59SSYSTEM

A1
Sw 520- 750(*)
Sw 670- 750
Hw 300-1000

○	?	1..
1	202-330-000 202-145-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	206-006-000	2
5	201-721-000	1
6	-	-
7	201-720-000	2
8	201-723-000	1
9	503-002-000	2
5a	Tab.2	2
7a		2
10		1

A2
Sw 751- 960
Hw 300-1000

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	206-006-000	2
5	201-721-000	1
6	-	-
7	201-720-000	2
8	201-723-000	1
9	503-002-000	2
5a	Tab.2	2
7a		2
10		1

B1
Sw 961-1320
Hw 300-1000

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	206-006-000	2
5	201-721-000	1
6	-	-
7	201-720-000	3
8	201-723-000	2
9	503-002-000	3
5a	Tab.2	3
7a		3
10		1

B2
Sw1321-1680
Hw 300-1000

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	206-006-000	2
5	201-721-000	1
6	-	-
7	201-720-000	3
8	201-723-000	2
9	503-002-000	3
5a	Tab.2	3
7a		3
10		1

C1
Sw 520- 750(*)
Sw 670- 750
Hw1001-1250

○	?	1..
1	202-330-000 202-145-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-312-000	2
7	201-720-000	2
8	201-723-000	1
9	503-002-000	4
5a	Tab.2	2
7a		2
10		1

C2
Sw 751- 960
Hw1001-1250

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-312-000	2
7	201-720-000	2
8	201-723-000	1
9	503-002-000	4
5a	Tab.2	2
7a		2
10		1

C3
Sw 520- 750(*)
Sw 670- 750
Hw1251-1450

○	?	1..
1	202-330-000 202-145-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-313-000	2
7	201-720-000	2
8	201-723-000	1
9	503-002-000	4
5a	Tab.2	2
7a		2
10		1

C4
Sw 751- 960
Hw1251-1450

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-313-000	2
7	201-720-000	2
8	201-723-000	1
9	503-002-000	4
5a	Tab.2	2
7a		2
10		1

C5
Sw 520- 750(*)
Sw 670- 750
Hw1451-1650

○	?	1..
1	202-330-000 202-145-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-264-000	2
7	201-720-000	2
8	201-723-000	1
9	503-002-000	4
5a	Tab.2	2
7a		2
10		1

C6
Sw 751- 960
Hw1451-1650

○	?	1..
1	202-331-000 202-306-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-264-000	2
7	201-720-000	2
8	201-723-000	1
9	503-002-000	4
5a	Tab.2	2
7a		2
10		1

(*)appliestoassemblingwithdrivegear(M.)

Tab.2

○	?		
	RAL9016	RAL8019	RAL9006
5a	001-697-000	001-761-000	001-699-000
7a	001-698-000	001-760-000	001-701-000
10	007-032-000	007-033-000	007-034-000

RAL9016 -white
RAL8019 - brown
RAL9006 -silver

Changeable elementsfor **Spectral** system.

Tab.5

4	206-009-000
9	211-084-000

SELECTION OF ALU KARO HARDWARE
FOR TILT WINDOWS U AI
MB-59SSYSTEM

D1 Sw 961-1320 Hw1001-1250

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-312-000	2
7	201-720-000	3
8	201-723-000	2
9	503-002-000	5
5a	Tab.2	3
7a		3
10		1

D2 Sw 961-1320 Hw1251-1450

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-313-000	2
7	201-720-000	3
8	201-723-000	2
9	503-002-000	5
5a	Tab.2	3
7a		3
10		1

D3 Sw 961-1320 Hw1451-1650

○	?	1..
1	202-332-000 202-302-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-314-000	2
7	201-720-000	3
8	201-723-000	2
9	503-002-000	5
5a	Tab.2	3
7a		3
10		1

D4 Sw1321-1680 Hw1001-1250

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-312-000	2
7	201-720-000	3
8	201-723-000	2
9	503-002-000	5
5a	Tab.2	3
7a		3
10		1

D5 Sw1321-1680 Hw1251-1450

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-313-000	2
7	201-720-000	3
8	201-723-000	2
9	503-002-000	5
5a	Tab.2	3
7a		3
10		1

D6 Sw1321-1680 Hw1451-1650

○	?	1..
1	202-333-000 202-303-000(*)	1
2	201-059-000	1
3	201-233-000	1
4	501-001-000	2
4a	-	-
5	201-721-000	1
6	202-314-000	2
7	201-720-000	3
8	201-723-000	2
9	503-002-000	5
5a	Tab.2	3
7a		3
10		1

Tab.2

○	?		
	RAL9016	RAL8019	RAL9006
5a	001-697-000	001-761-000	001-699-000
7a	001-698-000	001-760-000	001-701-000
10	007-032-000	007-033-000	007-034-000

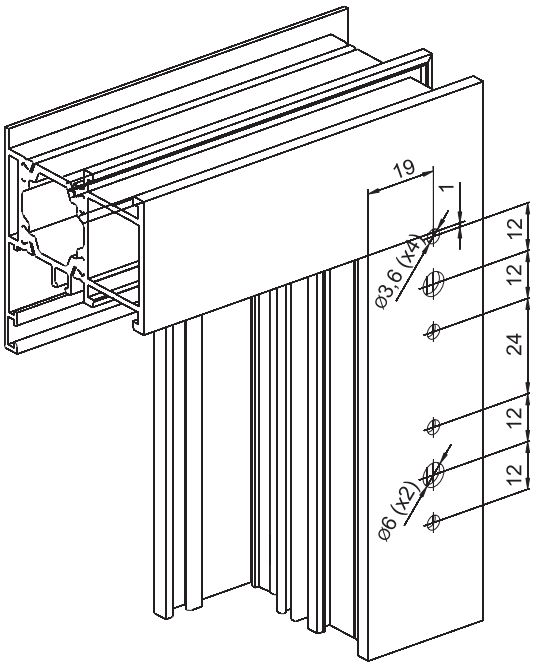
RAL9016 -white
RAL8019 - brown
RAL9006 -silver

(*)appliestoassemblingwithdrivegear(M.)

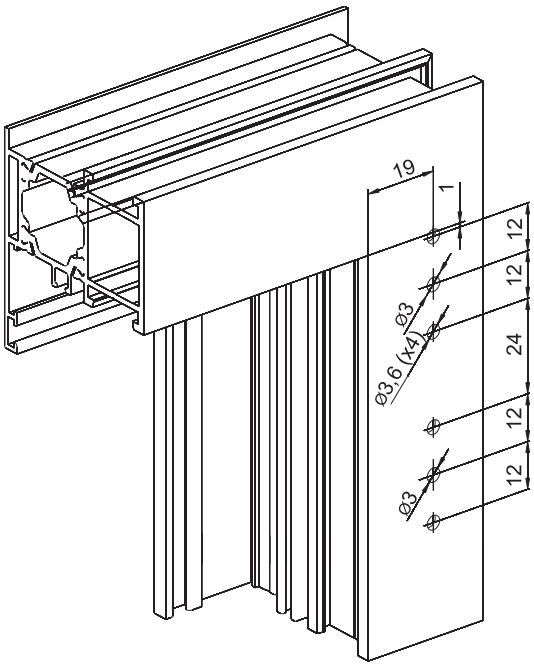
Changeable elementsfor **Spectral** system**.**

Tab.5

4	206-009-000
9	211-084-000

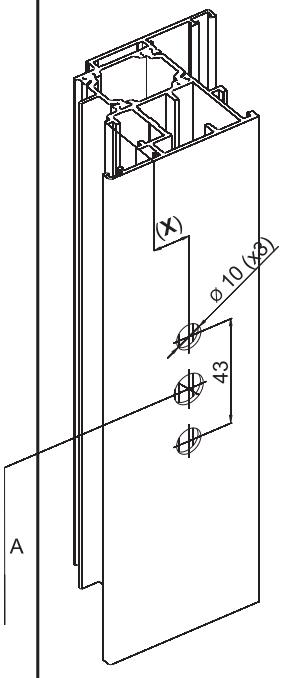


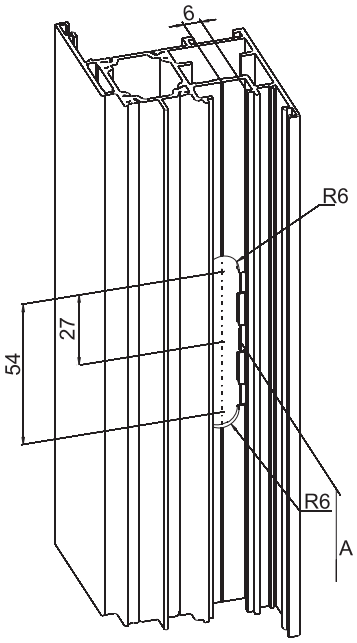
Holes for upper hinge bracket **TwO 6**
Jig No **050-028-000/A**



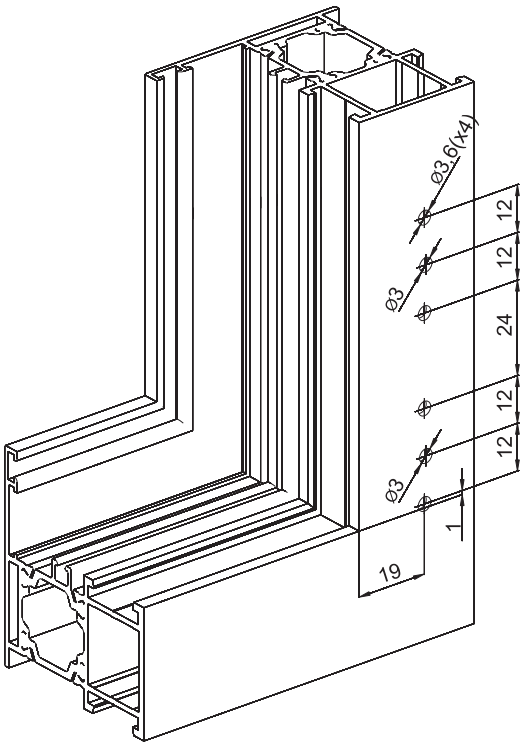
Holes for upper hinge bracket **TwO 3**
Jig No **050-027-000/A**

X= 14.5 mm for drive gear **M**
X= 7 mm for drive gear **7.5M**



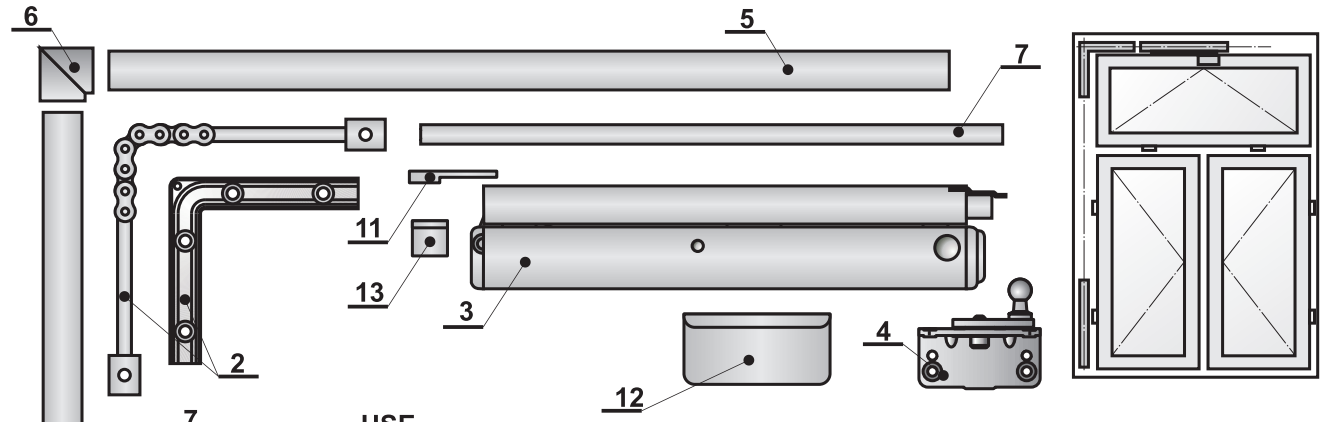


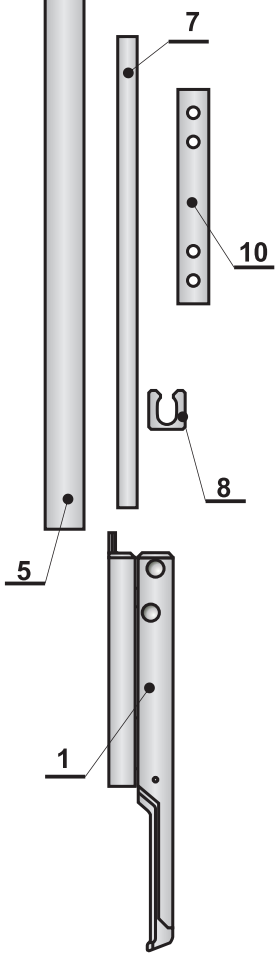
Holes for handle
Jig No **050-025-000 (7,5)**
050-026-000 (15M)



Holes for lower notch hinge bracket
Jig No **050-027-000**

LEVER LOCKING ROD TAKT 150
FOR WINDOWS AND TRANSOMS
GENERAL INFORMATION





USE

Lever locking rod **TAKT-150** (in the basic version) is used in vertically mounted rectangular tilt windows made of wood, PVC-U and aluminium with the horizontal sash turn axis.

It allows inward tilting of sashes with maximum weight up to 80 kg and sash width from 400 mm to 3600 mm and minimum height Hz = 300 mm.

Lever locking rod **TAKT-150** enables operating highly placed transom hardware from the floor. The tilt depth is ca 150 mm.

The construction of the lever locking rod allows to fit it on the right or left side of the sash.

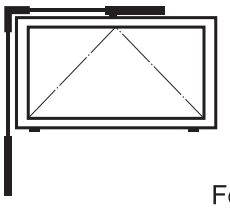
All the steel elements of the locking rod are zinc coated with silver passivation and light alloy elements have decorative varnished or anodized coatings.

Permissible glass pane weight depending on the sash width.

Sash width	Number of scissors	Max glass pane weight
400 - 1200 mm	1 pc/set	30 kg/m^2
1200 - 2400 mm	2 pcs/set	30 kg/m^2
2400 - 3600 mm	3 pcs/set	25 kg/m^2

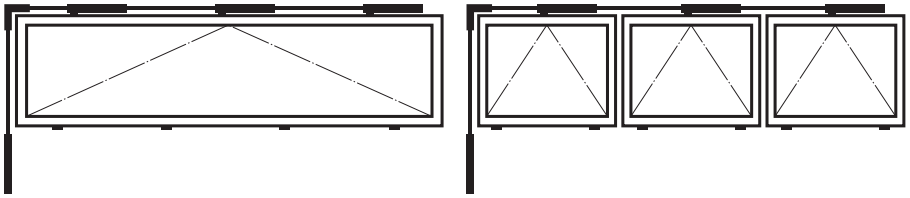
Variants and sizes

For sash width from 400 to 1200 mm



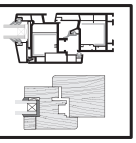
For sash width from 1200 to 2400 mm

For sash width to 3600 mm



1 - Complete lever
2 - Corner
3 - Scissors
4 - Scissors bracket
5 - Masking frame
6 - Corner guard
7 - Bar ⌀ 8
8 - Guide block
10 - Rod connector
11 - Stop insert pad
12 - Bracket guard
13 - Scissors blockade insert pad

LEVER LOCKING ROD TAKT - 150
FOR WINDOWS AND TRANSOMS



Complete lever

Catalogue number	*Surface - colour*	*No acc. to RAL*
001-413-000	Varnished white	9016
001-466-000	Varnished white	9003 (*)
001-430-000	Varnished brown	8017 (*)
001-431-000	Anodized silver	C-0
001-467-000	Anodized brown	C-34

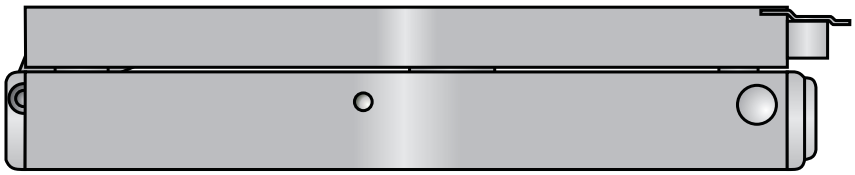
(*) at special order

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Complete lever	box	300	180	180	24	6,18
	pallet	1200	800			

Scissors

Catalogue number	*Surface - colour*	*No acc. to RAL*
001-587-000	Varnished white	9016
001-468-000	Varnished white	9003 (*)
001-597-000	Varnished brown	8017 (*)
001-598-000	Anodized silver	C-0
001-599-000	Anodized brown	C-34

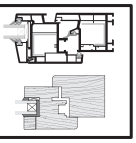


(*) at special order

PACKING

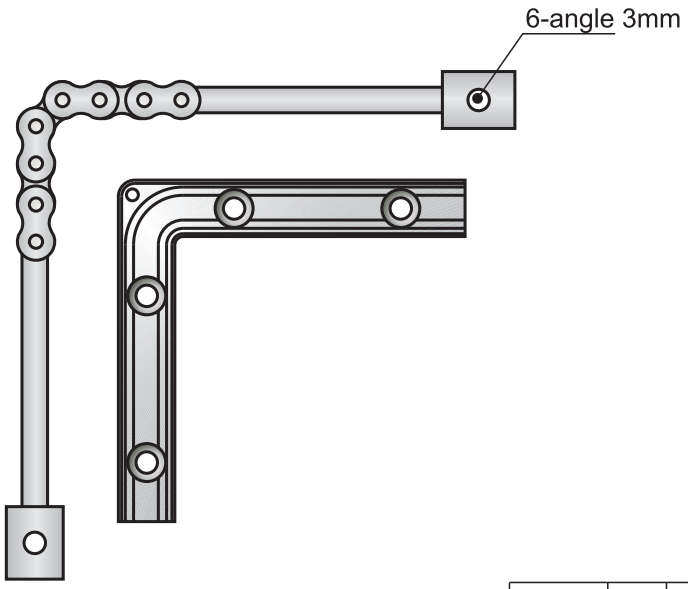
Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Scissors	box	300	180	180	12	5,07
	pallet	1200	800			

LEVER LOCKING ROD TAKT 150
FOR WINDOWS AND TRANSOMS



Corner

Catalogue number: **101-414-000**

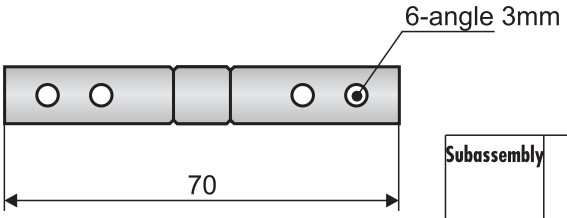


PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Corner	box	410	170	50	45	9,05
	pallet	1200	800			

Rod connector

Catalogue number: **101-465-000**



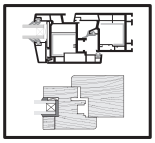
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Rod connector	box	380	85	50	100	5,71
	pallet	1200	800			

Scissors blockade insert pad

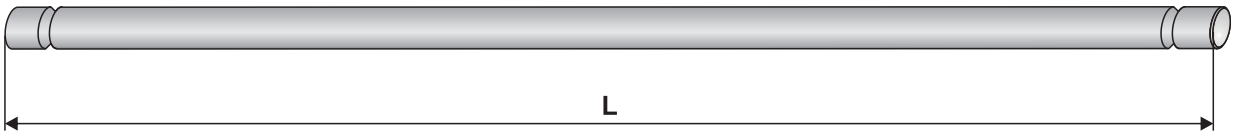
Insert pad is delivered in set with scissors.

LEVER LOCKING ROD TAKT - 150
FOR WINDOWS AND TRANSOMS



Rod ø 8

Catalogue number	*Length-L [mm]*
101-415-000	1000
101-416-000	2000
101-417-000	3000



- rod's length L>3000 mm is obtained by using the rod connector - catalogue number 101-465-000

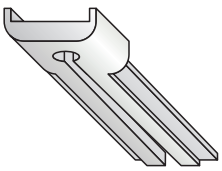
PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Rod L - 3000	box				10	11,50
	pallet					

Guide block

Catalogue number: **001-418-000**

Stop insert pad



Insert pad is delivered in set with scissors.

LEVER LOCKING ROD TAKT - 150
FOR WINDOWS AND TRANSOMS

Masking frame

Catalogue number	*Surface - colour*	*No acc.to RAL*
001-424-000	varnished white	9016
001-472-000	varnished white	9003 (*)
001-428-000	varnished brown	8017 (*)
001-429-000	anodized silver	C-0
001-473-000	anodized brown	C-34

(*) at special order

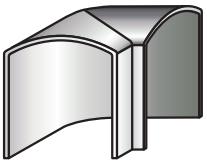
Trade length L=3000 mm

PACKING

Subassembly		Length [mm]	Width [mm]	Height [mm]	pcs/ box	Box weight [kg]
Masking frame	box	3040	180	80	32	15,10
	pallet					

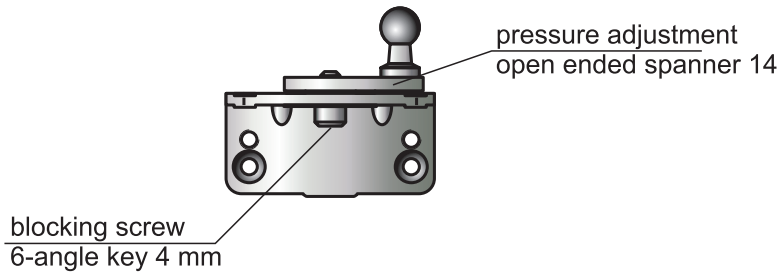
Corner guard

Catalogue number	*colour*	*No acc.to RAL*
001-425-000	black	9004



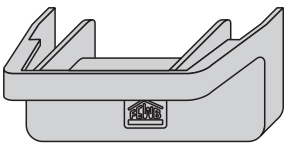
Scissors bracket

Catalogue number: **101-456-000**



Bracket guard

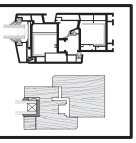
Catalogue number	*colour*	*No acc.to RAL*
001-470-000	white	9016
001-696-000	silver	-
001-471-000	brown	8017



FITTING INSTRUCTION
LEVER LOCKING ROD TAKT - 150 FOR WINDOWS AND TRANSOMS

1. **Preliminary activities:**
   - **checking window's dimensions**
   - **preparing hardware**
   - **preparing holes**
2. **Assembling the hardware.**
3. **Final remarks.**

FITTING INSTRUCTION
LEVER LOCKING ROD TAKT - 150
FOR WINDOWS AND TRANSOMS



1. Preliminary activities.

1.1. Check the precision of window manufacturing (sash and frame):
a) difference between diagonals max 4 mm - **obligatory condition!**
b) slit size on the girth 4 or 12 mm

NOTE: sash weight cannot exceed 80 kg, for maximum filling weight according to the table 1.

Table 1.

Sash weight Sw [mm]	*Max sash height Hw [mm]*	*Number of scissors[pcs]*	*Max filling weight [kg/m²]*
(*) 400 - 800	800	1	30
801 - 1200	800	1	30
1201 - 2400	800	2	30
2401 - 3600	800	3	25

(*) special case - fitting scheme presented in point 1.6.

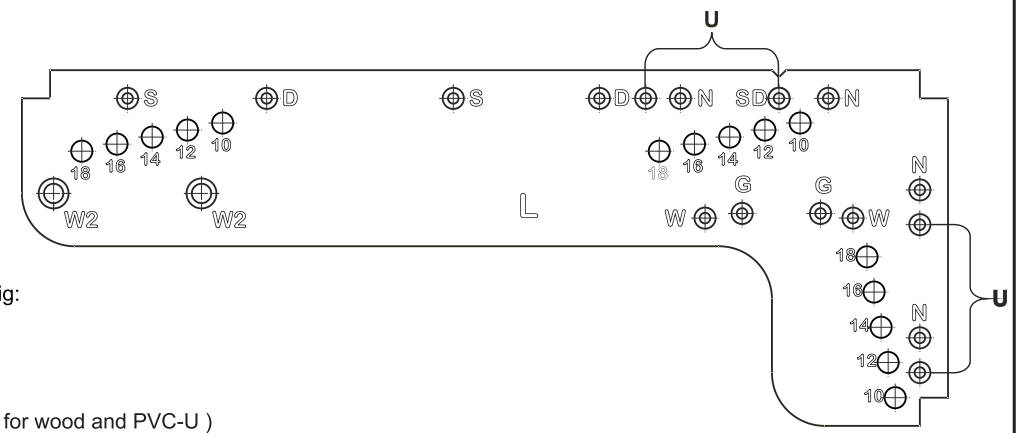
1.2. Prepare fitting elements :
a) lever
b) corner
c) scissors
d) scissors bracket
e) guide blocks
f) rod Ø8 (rod connector according to the needs)
g) masking frame
h) scissors blockade insert pad

1.3. Establish dimension **D according to the tab. 2** or according to the possibility of drilling holes.
D=10÷18 mm - jig dimension for assembling (fig. 1) catalogue number **001-495-000**

Table 2.

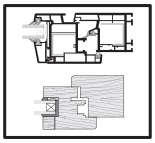
Sash height Hw [mm]	Min. upper assembling belt C [mm]	Assembling dimension D [mm]
300 to 400	D+9	12
> 400	D+9	10

Fig. 1.



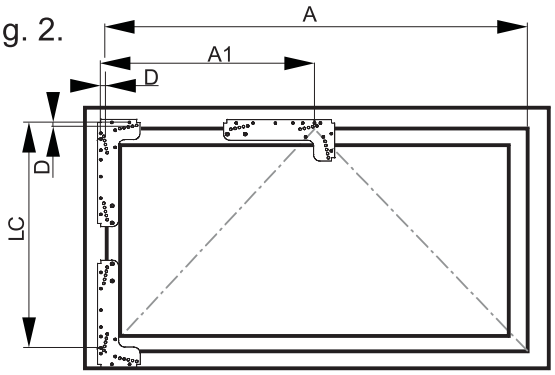
Marking of the symbols on the jig:

N..... corner
D..... lever
S..... scissors
W..... bracket (coordinates for wood and PVC-U)
W2 ..... bracket (coordinates for aluminium)
L..... left version
P..... right version
U..... holes for holding studs in the corner (it is not necessary to drill in window fitting).
10÷18... assembling dimension D

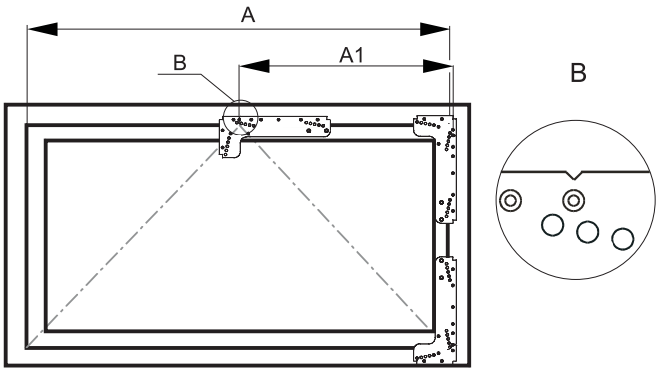


1.4. Establish fitting dimensions A1, A2, A3, LC and make holes for screws to fasten (scheme presented on fig. 2.) lever, corner, scissors and guide blocks, according to the jig (for scissors and lever a stud should be driven on the shorter jig arm). The jig should be placed on the fitted sash. The jig position is presented on the fig. 2

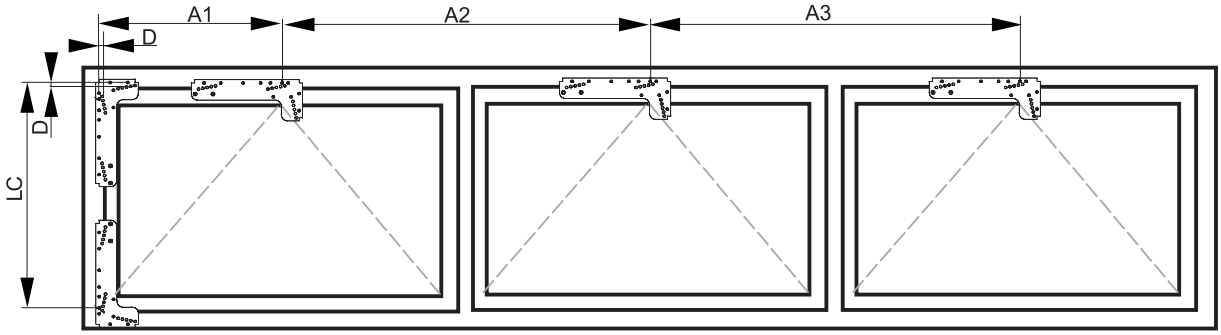
Fig. 2.

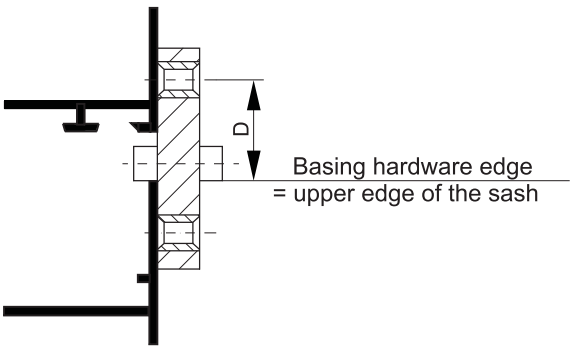


For lever from the left side of the sash
Left version **L**

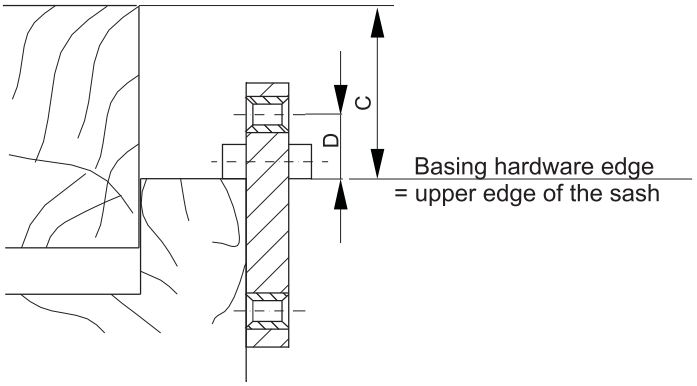


For lever from the right side of the sash
Right version **P**





For windows without a rebate



For windows with a rebate (Dr and Tw)

1.5. Cut to the length the connecting rods and masking profiles according to the table 3.

Table 3. Fitting scheme for windows 800 mm ÷ 3600 mm wide

Sash width (A) [Mm]	A1	A2	A3	M1	M2	M3	MY	LY	L	Scissors (number)
800–1200	A/2+D	—	—	A1-224	—	—	LC-149	LC-149	A1- 60	1
1201–2400	A/4+D	A/2	—	A1-224	A2-225	—	LC-149	LC-149	A1+A2- 60	2
2401–3600	A/6+D	A/3	A/3	A1-224	A2-225	A3-225	LC-149	LC-149	A1+A2+A3- 60	3

Where:

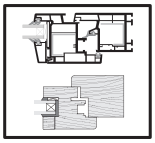
A1, A2, A3 - fitting dimensions
M1, M2, M3 - length of horizontal masking profiles
MY - length of vertical masking profile
LY - length of vertical rod
LX - length of horizontal rod
LC - dimension between the last (**lower**) lever hole axis and horizontal fitting axis
A - sash width on the outline

The above sizes are presented on the fig. 3

Fig. 3.

NOTE:
Horizontal bar: when scissors are in CLOSED position it should flush with scissors latching slider.
Vertical bar: when scissors are in CLOSED position it should flush with lower edge of the lever.

NOTE:
In case of intentional displacement of the scissors bracket axis, it is necessary to correct other rods and masking frame dimension values.



1.6. Scheme for fitting windows 400 ÷ 800 mm wide

Fig. 4.

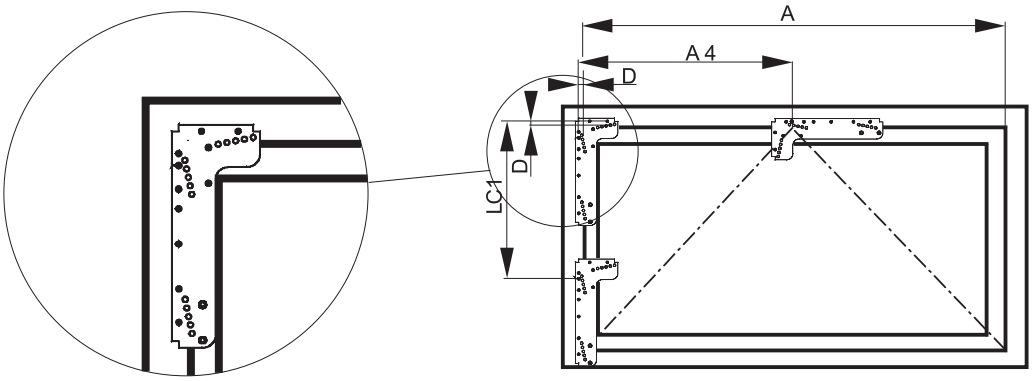
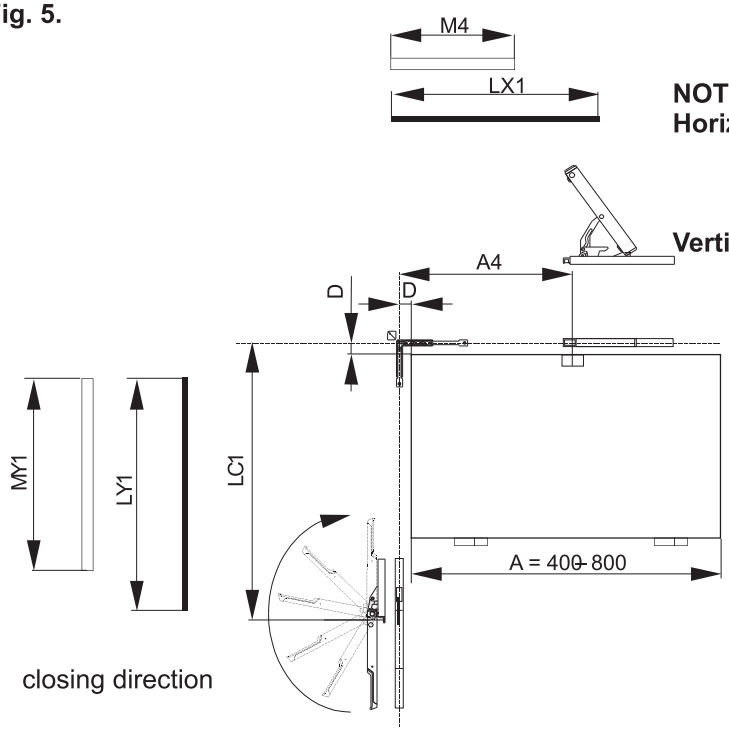


Table 4.

Sash Width (A) [mm]	A4	M4	MY1	LY1	Lx1	Scissors (number)
400 – 800	A/2+D	A4-27	LC1-165	LC1- 90	A4+80	1

Fig. 5.



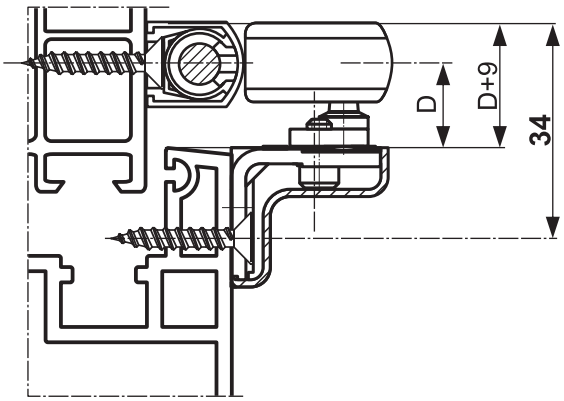
NOTE:
Horizontal rod: when scissors are in CLOSED position, the rod should stand out min. 10 mm over scissors guide.
Vertical rod: when scissors are in CLOSED position, the rod should flush with lower edge of the lever.

Where:

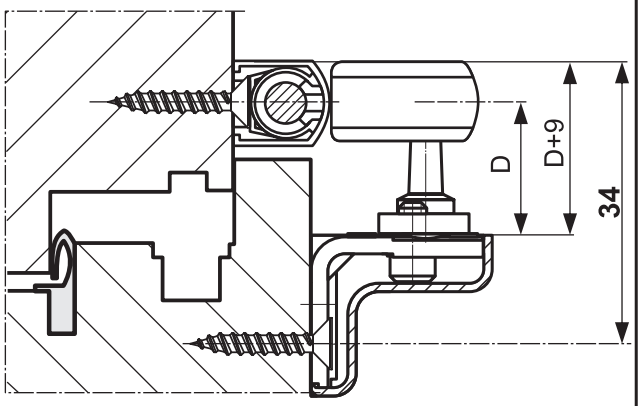
A4 - fitting dimension
M4 - length of horizontal masking profile
MY1 - length of vertical masking profile
LY1 - length of vertical rod
LX1 - length of horizontal rod
LC1 - dimension between the last **(lower)** lever hole axis and horizontal fitting axis.
A - sash width on the outline

1.7. Scheme for fastening scissors and bracket for different kinds of window sashes is presented on fig. 6.

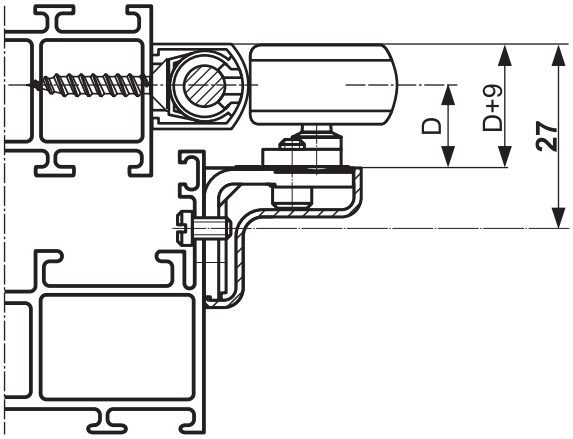
Fig. 6.



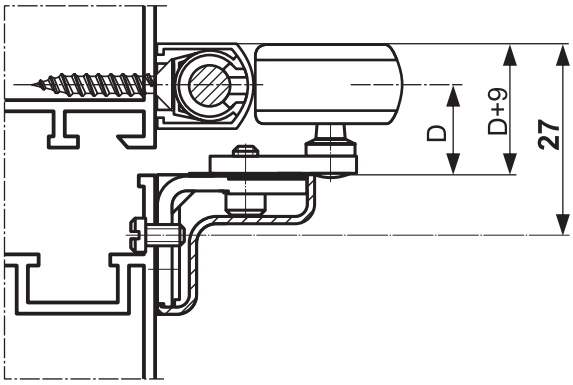
PVC-U sash



Wooden sash



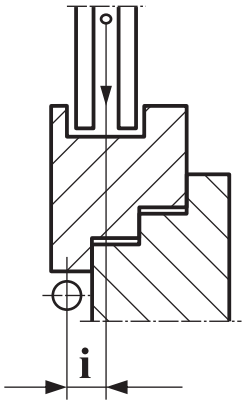
Aluminium sash, not flushed



Aluminium sash, flushed

Distance of the hinges turning axis from the line passing by the centre of gravity of the window sash must be within 10 ÷ 60 mm (dimension **“ i ” on fig**. **7**).

Fig. 7.



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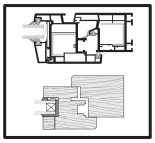
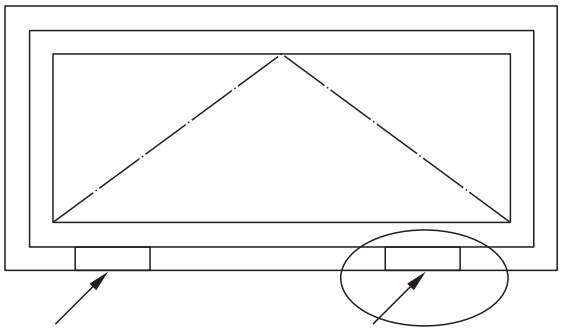


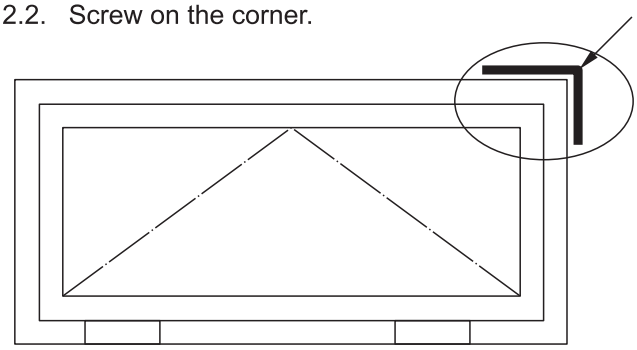
2.1. Fix the sash on hinges and check its functioning.



Hinge for tilt windows

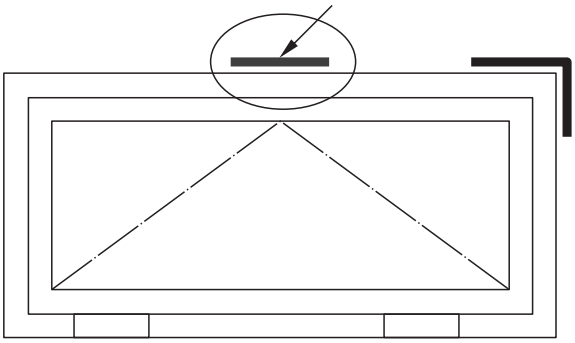
White ..... Cat.No **001-169-000**
Brown ..... Cat.No **001-205-000**
(Optionally other hinges for tilt windows - see the **ROMB** catalogue Section 7)

2.2. Screw on the corner.



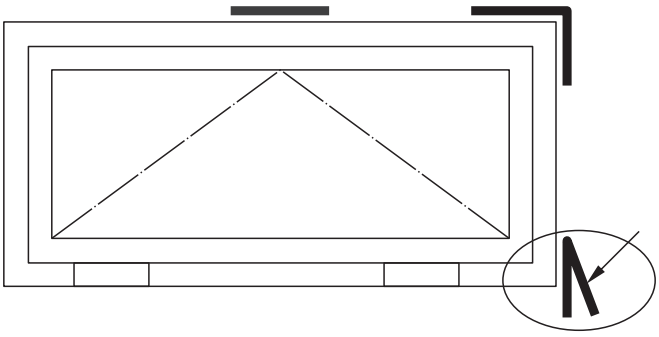
Corner catalogue number **101-414-000**

2.3. Fasten the scissors guide.



White scissors .....cat.No **001-587-000**
Brown scissors... .....cat.No **001-597-000**
Silver scissors..... cat.No **001-598-000**

2.4. Fix the lever.



Lever set (white) .....cat.No **001-413-000**
Lever set (brown)..... cat.No **001-430-000**
Lever set (silver). .....cat.No **001-431-000**

FITTING INSTRUCTION
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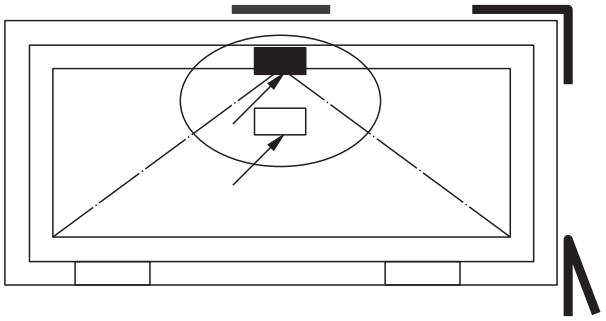
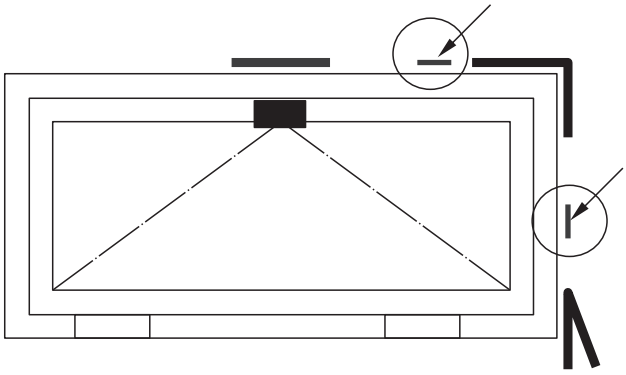
2.5. Screw on the scissors bracket



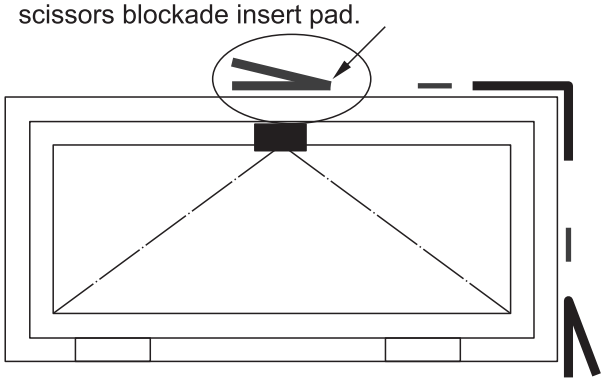
Scissors bracket ..... cat.No **101-456-000**
Bracket guard (white)..... ... cat.No **001-470-000**
Bracket guard (black)..... cat.No **001-471-000**
Bracket guard (silver)..... cat.No **001-696-000**

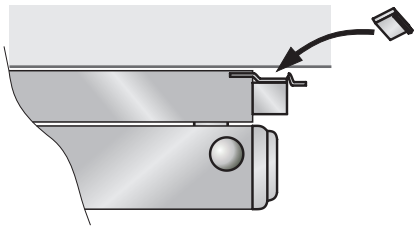
2.6. Fix the guide blocks for rods.
NOTE: Guide blocks **should be fixed ca 100 mm from the corner ends (D+180 mm)**, additionally in spaces 800 ÷ 1200 mm.



Guide block catalogue number **001-418-000**

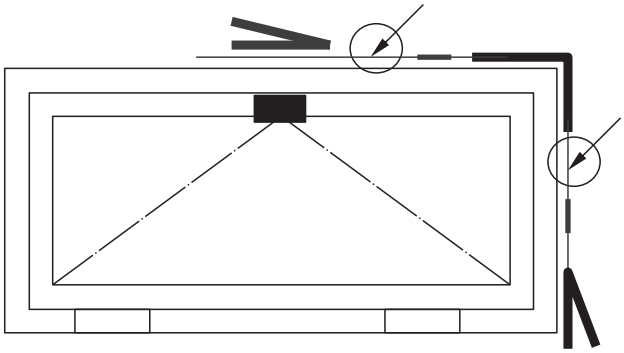
2.7. Connect scissors with guide bar and block it with the help of the fastening spring, protect the spring with the scissors blockade insert pad.





Slide from top

2.8. Insert connecting rods through clamping elements of the lever or scissors to the corner arms. Tighten (**socket screw key 6-angle 3**).



Rod ø8 L=1000 cat.No **101-421-000**
Rod ø8 L=2000 cat.No **101-422-000**
Rod ø8 L=3000 cat.No **101-423-000**

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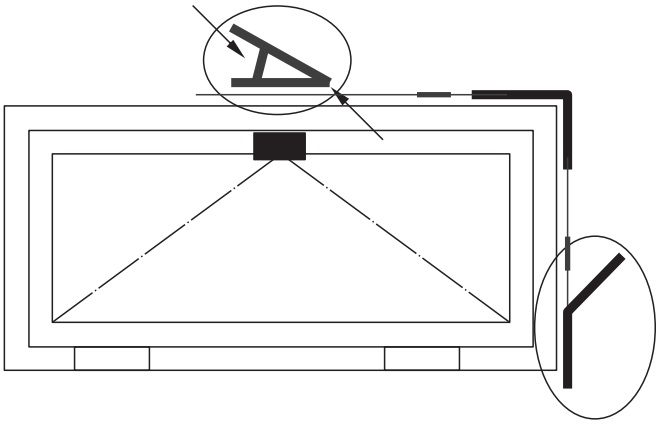
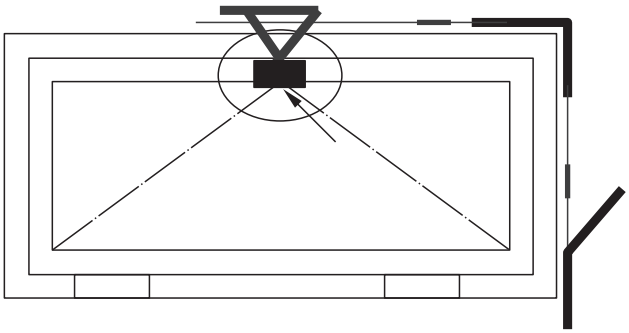
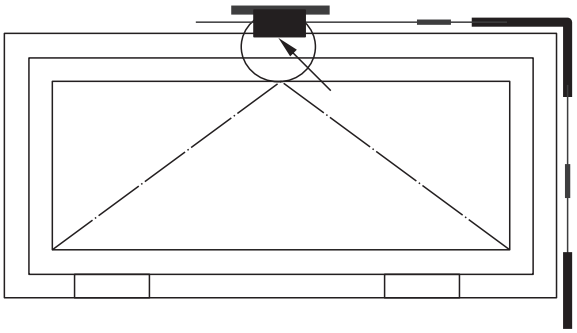
2.9. Put lever and scissors into opened position and then tighten fastening screws.
Fix (**socket screw key 6-angle 3**).



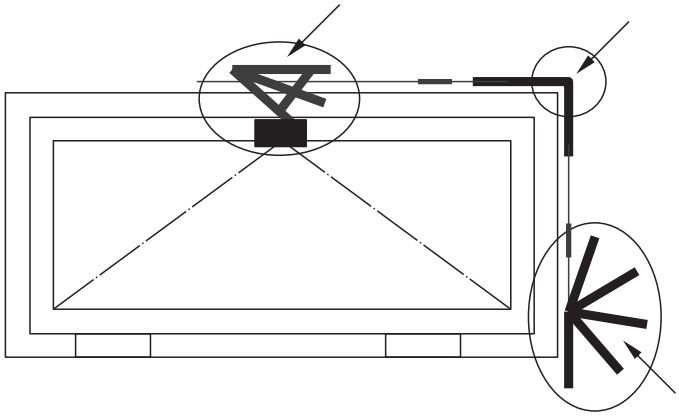
2.10. Fix scissors on the bracket mandrel. The bracket ball should be completely inserted into scissors handle. The safety button should stand out ca 5 mm above the scissors.



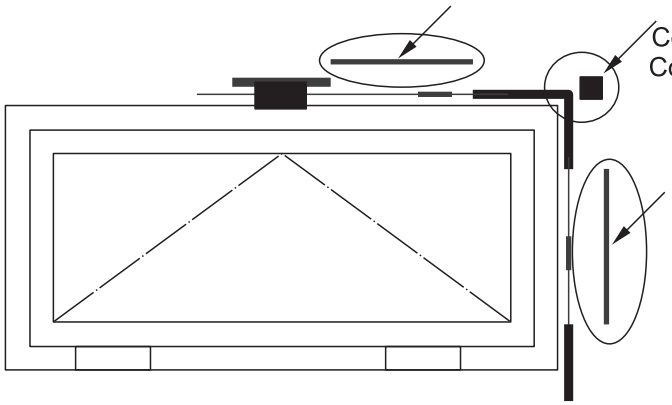
2.11. Adjust the sash pressure.
Close the lever ; check the pressure pad while the sash is closed by turning the bracket mandrel with an open ended spanner 14. Tighten the screw to the sash bracket.
(**socket screw key 6-angle 4**).



2.12 Check functioning of the hardware. Lubricate sliding elements and articulated joints.



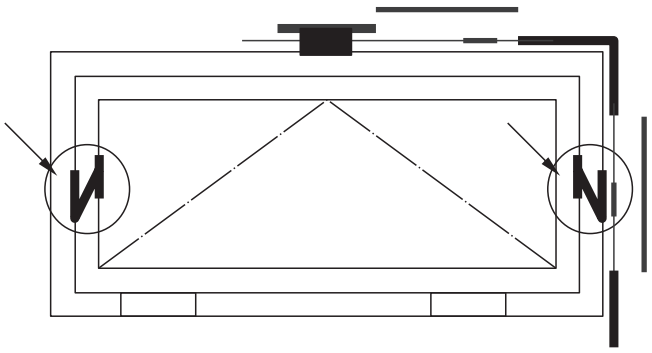
2.13. Fix masking profile (masking frame) and corner guard.



Corner guard (white) cat.No **001-425-000**
Corner guard (black) cat.No **001-426-000**

Masking frame (white) cat.No **001-424-000**
Masking frame (brown) cat.No **001-428-000**
Masking frame (silver) cat.No **001-429-000**

2.14. Additionally the hardware should be completed with a scissors stay that limits the tilting of the sash after disconnecting scissors and bracket.



3. Final notes.

3.1. All rules concerning the number of used scissors as well as the method of their fitting depending on the sash width should be strictly observed.

3.2. Screws for metal should be used for windows made of light alloys.
(Note: profile wall thickness should be minimum 1,8 mm).

In PVC-U windows screws should go through **minimum two profile walls.**
In wooden windows screws for wood should be used.

Suggested screws lengths are presented in the table below.

Hardware element	Fastening screws	
	Wooden windows	Al or PVC-U windows
Corner	4 screws 4x40	4 screws 4,2xL
Scissors	3 screws 4x40	3 screws 4,2xL
Scissors bracket	2 screws 4x25	2 screws M5 or 4,2xL
Lever	3 screws 4x40	3 screws 4,2xL
Guide block	1 screw 4x25	1 screw 4,2xL

Note: L - screw length selected according to the comments in point 3.2.

3.3. **Hardware should be additionally completed with scissors stay which limits the sash tilting after disconnecting the scissors and bracket (safety requirements).**

As an alternative solution it is recommended using additional scissors to secure the window during washing.

3.4. **Flexible connectors** are recommended to use with TAKT-150 hardware in windows where the drive must be transmitted through the windowsill or jamb.

Recommended lengths of flexible connectors:
1) L = 700 mm cat.No **101-740-000** (white)
2) L = 1000 mm cat.No **101-741-000** (white)
3) L = 1250 mm cat.No **101-742-000** (white)
4) L = 700 mm cat.No **101-754-000** (brown)

5) Flexible connectors equipment **cat.No 101-743-000**

TABLE OF CONTENTS

1. PRELIMINARY ACTIVITIES

1.1. Check the precision of window manufacturing (sash and frame) according to the following features:
a) difference between diagonals: max 4 mm - **obligatory condition!**
b) notch clearance: 11 mm, for the hardware version with the reinforced resistance to burglary **notch clearance min. 12 mm**

1.2. Select type and size of the hardware, check fixing position (stop studs) and the position of the deadbolts toward the orientation marks.

1.3. Establish the length of drive gear and stay and then cut to length according to he following formula:

Drive gear **Z** length	= H_w	minus	160 mm
Stay length	= S_w	minus	160 mm
Drive gear **M** length	= H_w	minus	2 x 160 mm

1.4. Perform the channel where the hardware is to be assembled according to the following figure (it is recommended to perform the channel all along the sash girth).

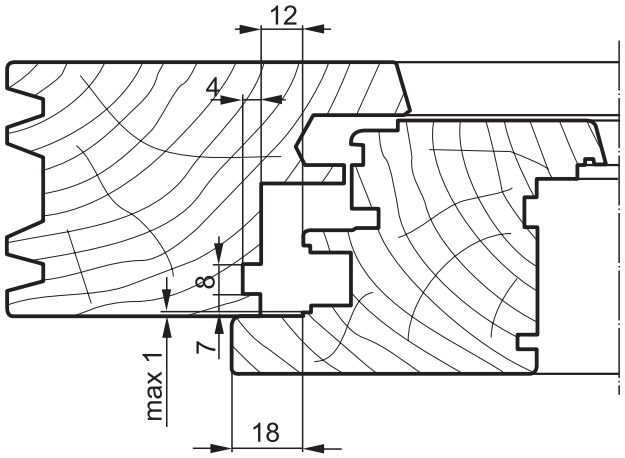
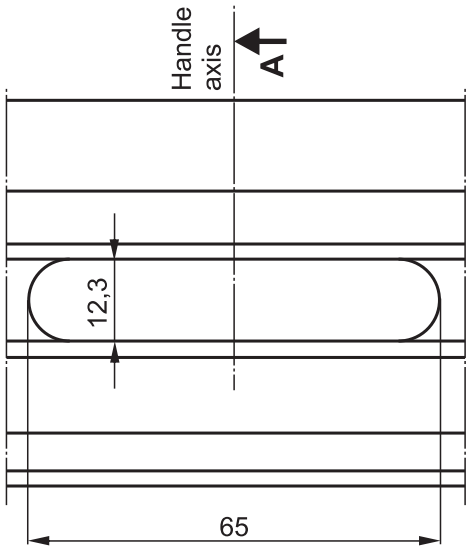


Figure presents the profile variant for EURONUT 7x8

1.5. Mill the socket (recess) for drive gear transmission with dimensions 65x12,3 mm according to the following figure:

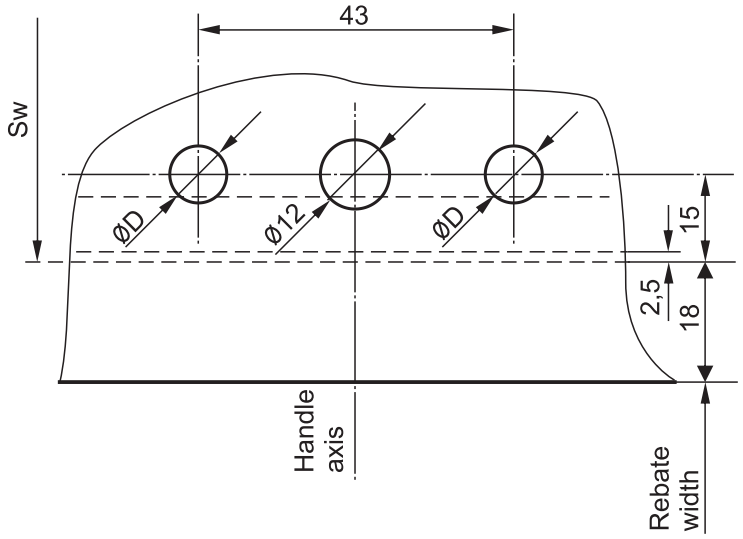


1.6. Drill holes for the handle according to the following figure.

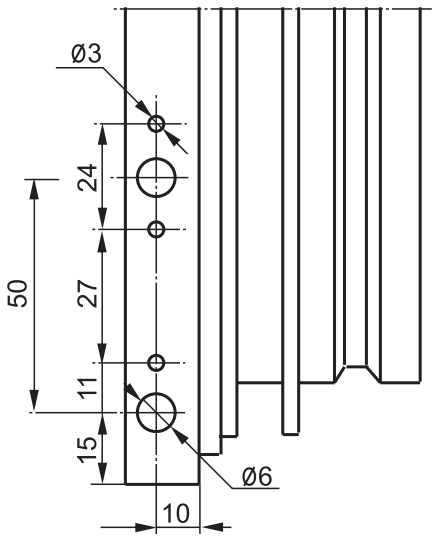
a) diameter of holes D according to the type of used handle
b) position of the handle axis (A) for drive gears in fixed, defined position is:

Z0 /	380	A =	115 мм
Z1 /	440	A =	172 мм
Z2 /	680	A =	300 мм
Z3 /	890	A =	460 мм
Z4 /	1089	A =	660 мм
Z5 /	1340	A =	660 мм
Z6 /	1590	A =	1050 мм
Z7 /	1840	A =	1050 мм
Z8 /	2040	A =	1050 мм
Z9 /	2240	A =	1050 мм

c) for symmetrical drive gears (M) position of the handle in the window (sash) axis.



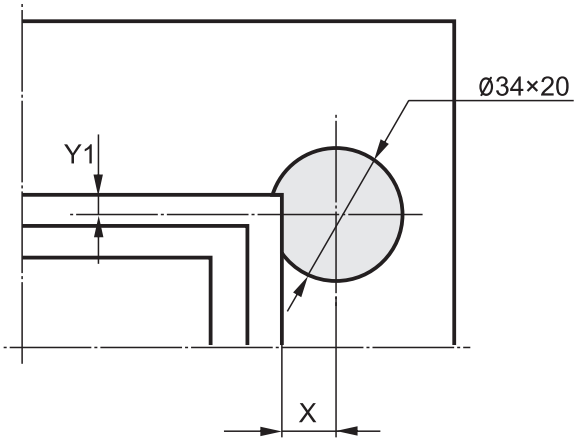
1.7. Drill two holes Ø6 mm for deadbolts holding the lower hinge leaf and three holes Ø3 mm for screws according to the figure (applies to light version).



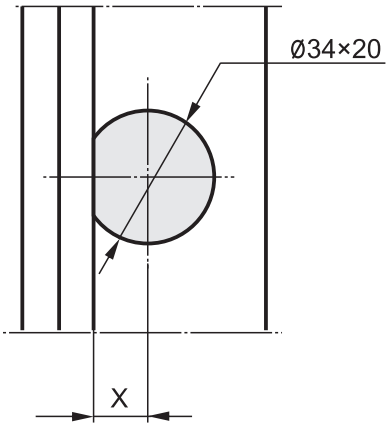
1.8. Sockets for hinge boxes (heavy version) should be performed with a special end milling cutter Ø34 mm using a vertical milling machine catalogue number and jig: **001-211-000**.

Clearance 11 mm	
Rebate	18 mm
X	11 mm
Y1	7 mm
Y2	10 mm

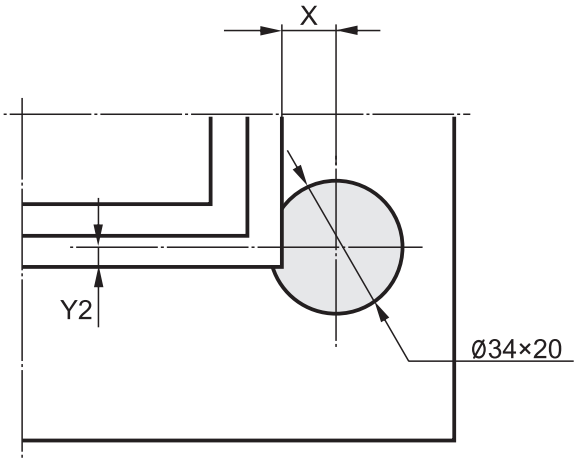
Socket for hinge bracket Dr/C



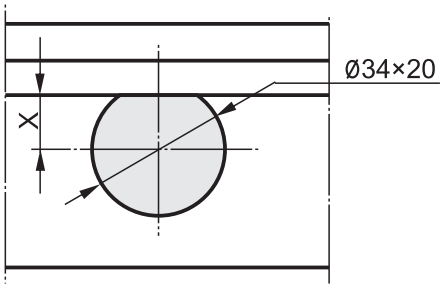
Relates to middle hinge Dr/C



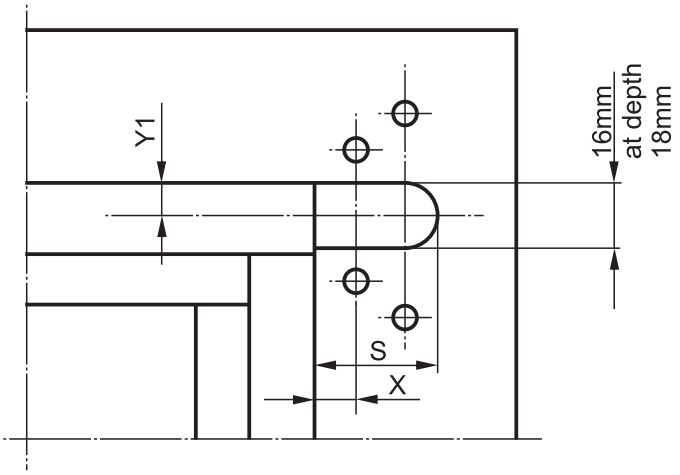
Socket for hinge bracket Dr/C



Relates to the hinge for tilt windows Dr/C

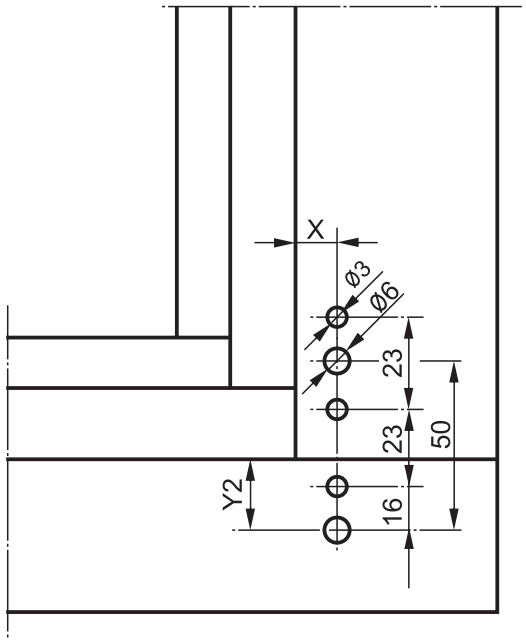


1.9. The recess for the stay arm bearing to be performed with an end mill Ø16 mm using a vertical milling machine. Drill four Ø3 holes for the fastening screws.



Clearance 11	
Rebate	18 mm
X	18 mm
Y1	8 mm
S	26 mm

1.10. Drill two 6 mm holes for deadbolts holding lower hinge bracket and three Ø3 mm holes for screws according to the figure.



Clearance 11	
Rebate	18 mm
X	17 mm
Y2	18 mm

Note:
Fit the striker plates Dr 12 in the channel 4x8 (Euronut), or in the channel (Eurofalz).

2. FITTING - WOODEN WINDOWS - GENERAL RULES

ORDER OF ASSEMBLING THE SUBASSEMBLIES FOR THE SASH TURN AND TURN / TILT VERSION

2.1. **CORNER** (depending on the type)
- place the corner into the hardware groove of the sash paying particular attention to the proper adjoining of arms. The deadbolt for the corner (A and R) should be located from the side of fitting the drive gear. Fasten with two screws 4 x 30 in the holes closest to the corner bend.

2.2. **CORNER DRIVE GEAR**
- put the drive gear into hardware groove of the sash together with the stay. Fasten with screws 4x30. Locking deadbolt should be located in the axis of the bean hole of the drive gear front. Check if the stay slider is properly connected.

2.3. **STAY**
- place properly cut stay together with the corner drive gear into the hardware groove of the sash by meshing the corner drive gear slider with the stay slider and then with the corner. Fasten with 4 x 30 screws. Additionally fasten the corner together with the stay through the corner connecting plate.

Note:
1) in case of windows of Sw > 1200 mm it is recommended to use the tilt restrictor:
- restrictor arm L - **101-356-000**
- restrictor arm P - **101-357-000**
- restrictor striker plate - **101-358-000**

2.4. **DRIVE GEAR „M"** or **„Z"**
- place properly cut drive gear into the sash groove paying particular attention to the proper meshing of the drive gear slider and corner slider (corner deadbolt in the bean hole axis). Fasten the drive gear with screws 4 x 30. Additionally fasten the corner together with the drive gear through the corner connecting plate.

Note:
1) the clearance between the corner and drive gear fronts may be max. 4 mm. Meshing the slide and the cogged block should be min. 3/4 of teeth length.

2.5. **LOWER HINGE - LEAF**
- place the leaf body deadbolts into Ø 6 mm holes made in the rebate. Fasten with 4 x 40 screws.

2.6. **HANDLE**
- fasten the handle with two M5 x 35 screws.

Note:
choice of the handle depending on the needs, 4 or 8 positions with the mandrel length:
L = 32 mm for the rebate „15"
L = 35 mm for the rebate „18"

ORDER OF ASSEMBLING THE HARDWARE SUBASSEMBLIES TO THE FRAME

2.7. **STRIKER PLATES**

a) place peripheral striker plate into the frame channel or in the sockets, fasten with 4 x 30 screws.

b) place the lower striker plate into the lower frame corner depending on the type of the window (left, right).

Fasten with 4 x 30 screws.

c) in case of using jigs to position striker plates, fix peripheral striker plates to the frame first.

2.8. **LOWER HINGE - BRACKET**

Place bracket deadbolts in Ø 6 mm holes made in the frame. Fasten with 4 x 40 screws (light version).

2.9. **UPPER HINGE**

- fasten upper hinge bracket with 4 x 40 screws so that the mandrel is inserted from the bottom side of the stay arm.

NOTE:

1) when using the hardware version with a symmetrical drive gear the ends should be assembled before placing the drive gear.
2) in the sashes of turn windows when using corner drive gears with Sw > 1000 mm fit the corner drive gears together with the ends first.
3) place lower, middle and upper Dr-C hinges brackets into 34 x 20 sockets using 4 x 40 screws. Other cooperating elements located in the sash channel should be fastened with 4 x 30 screws.
4) when fixing corner and middle hinges use the same coordinates like for upper hinge bracket.
5) in turn windows fasten the middle pressure plate (indirect) with 4 x 30 screws.
Fitting coordinates according to the jig.

3. MOUNTING AND REMOVING THE SASH.

3.1. Place the sash into the frame so that the bracket mandrel of the lower hinge is in the hinge leaf body.

3.2. **Put the PVC-U guard on the bearing**. Connect the stay arm with the stay and then with the upper hinge bracket.

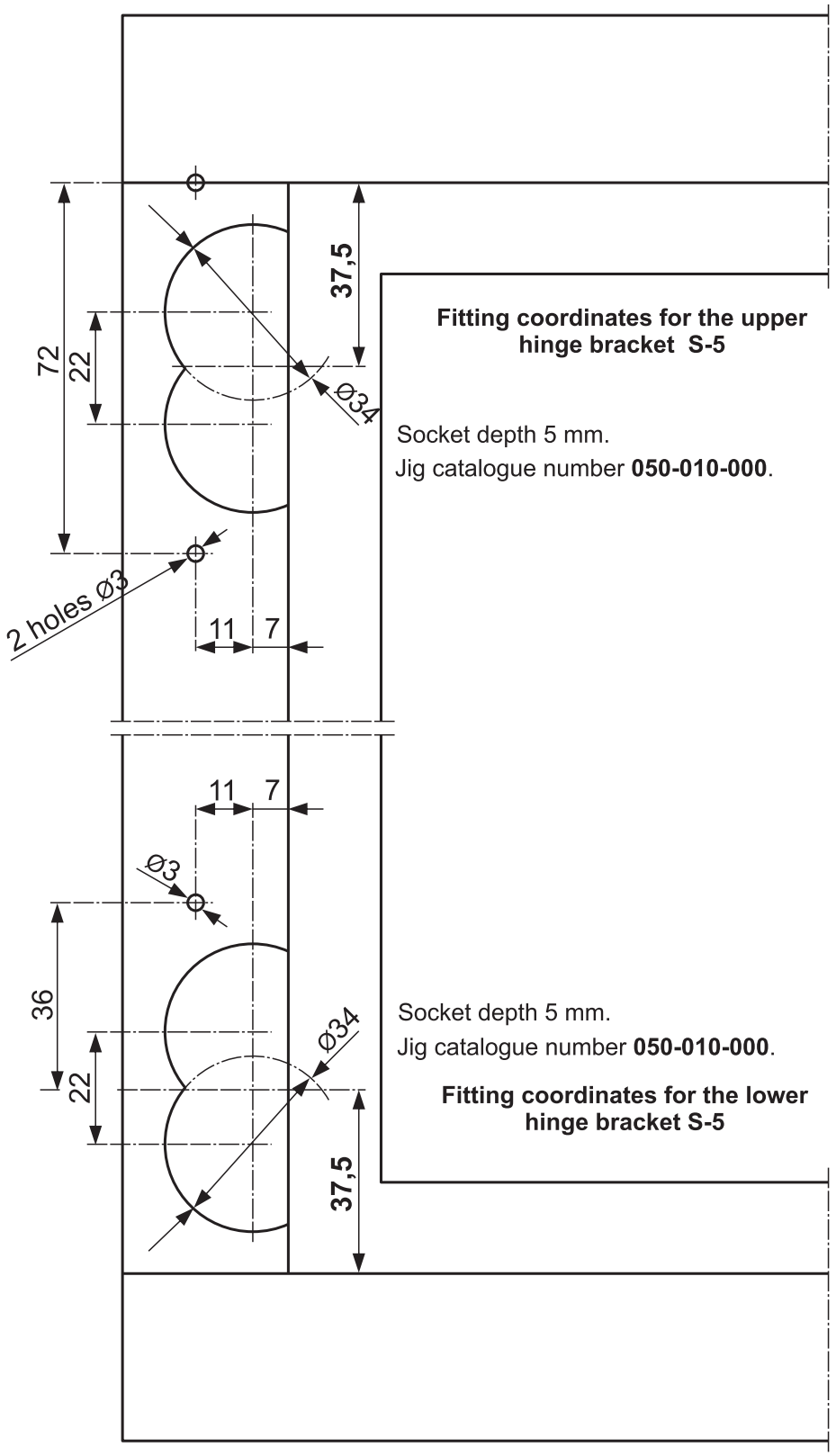
3.3. Break the studs fixing the assembling position of the hardware with a smooth motion of the handle into “CLOSED” position. Adjust if necessary (after glazing).

NOTE:

1) Check the hardware functioning.
2) Check if the upper hinge mandrel is placed properly.
3) The sash should be removed in a reverse order.

4. **ADJUSTMENT AND MAINTENANCE** (see chapter 13A of the catalogue)

5. **LIST OF JIGS** (see chapter 14 of the **catalogue**)



Fitting coordinates for the upper hinge bracket S-5

Socket depth 5 mm.
Jig catalogue number **050-010-000**.

Socket depth 5 mm.
Jig catalogue number **050-010-000**.

Fitting coordinates for the lower hinge bracket S-5

TABLE OF CONTENTS

1. PRELIMINARY ACTIVITIES

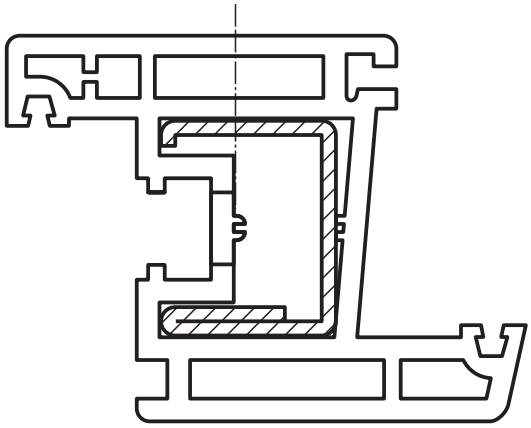
1.1. Check the precision of window manufacturing (sash and frame) according to the following features:
a) difference between diagonals: max 4 mm - **obligatory condition!**
b) slit size on the girth: 12 mm

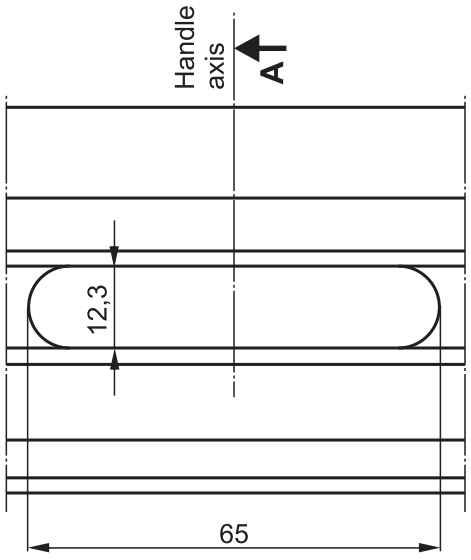
1.2. Select type and size of the hardware, check the assembling positions (stopping studs) and the deadbolts position toward orientation marks.

1.3. Establish drive gear and stay lengths according to the following formula:

Drive gear **Z** length = H_w minus 160 mm
Stay length = S_w minus 160 mm
Drive gear **M** length = H_w minus 2 x 160 mm

1.4. Mill the socket (recess) for the drive gear transmission with dimensions 65x12,3 mm, according to the below figure.



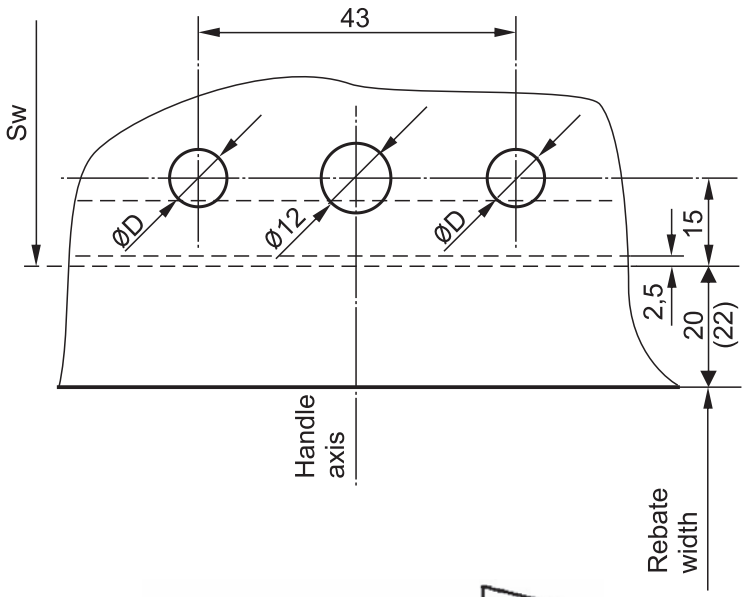


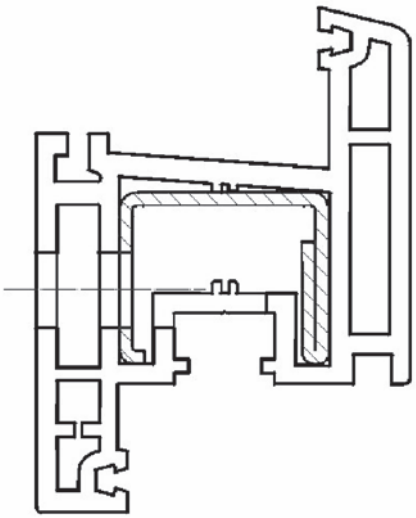
1.5 Drill holes for the handle according to the figure below.

a) holes diameter ØD according to the type of the used handle
b) position of handle axis (**A**) for **Z** drive gears, with fixed defined position according to the table:

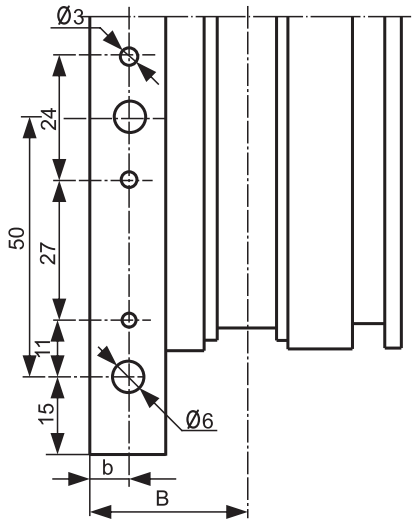
Z0	L = 380 mm,	A = 115 mm
Z1	L = 440 mm,	A = 172 mm
Z2	L = 680 mm,	A = 300 mm
Z3	L = 890 mm,	A = 460 mm
Z4	L = 1089 mm,	A = 660 mm
Z5	L = 1340 mm,	A = 660 mm
Z6	L = 1590 mm,	A =1050 mm
Z7	L = 1840 mm,	A =1050 mm
Z8	L = 2040 mm,	A =1050 mm
Z9	L = 2240 mm,	A =1050 mm

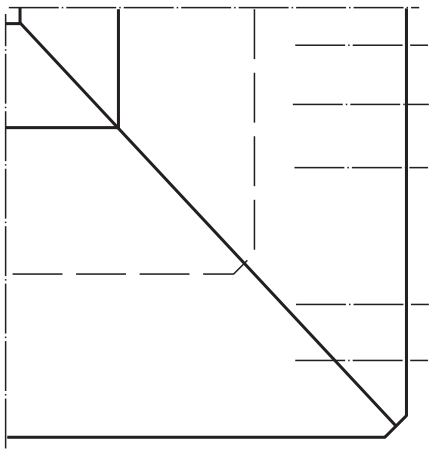
c) for symmetrical drive gears (**M**) the handle position is always in the sash axis.





1.6. Drill two Ø6 mm holes for deadbolts stopping lower hinge leaf and three Ø3 mm holes for screws according to the jig. Jig catalogue number 001-171-000 or 005-007-000 (rebate angle 5°)

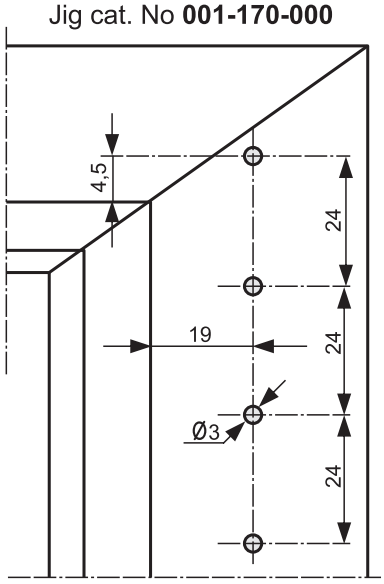




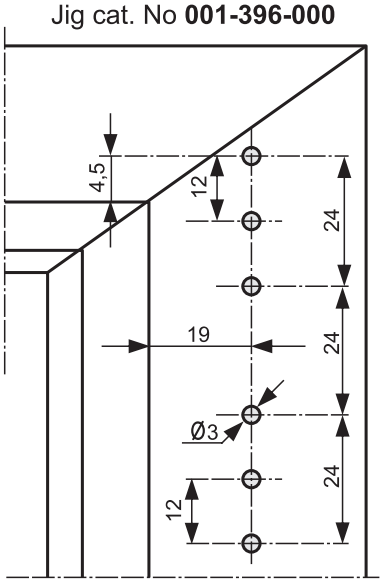
NOTE:
dimension (b) depends on the type of gasket, rebate thickness, and distance of the fitting groove(B). Follow the recommendations of the producer of a given profiles system.
In order to obtain the recommended dimensions it is possible to adjust the jig with the distance pads thickness.

1.7. Drill four Ø3 mm holes for the screws fastening lower hinge bracket (or depending on the bracket version six Ø3 mm holes , or four Ø3 mm holes and two Ø6 mm holes for stopping deadbolts) according to the jig.

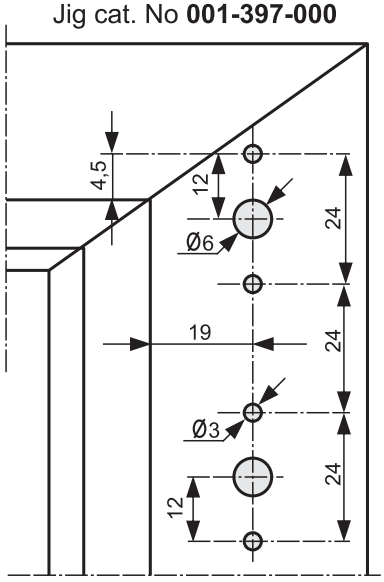
For bracket
cat. No **101-370-000**
Jig cat. No **001-170-000**



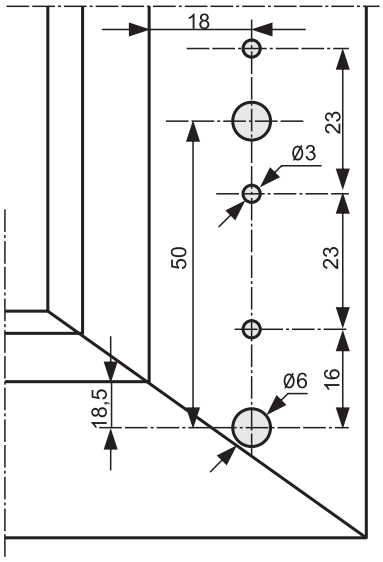
For bracket
cat. No **101-389-000**
Jig cat. No **001-396-000**



For bracket
cat. No **101-390-000**
Jig cat. No **001-397-000**



1.8. Drill two Ø6 mm holes for deadbolts stopping the lower hinge bracket and three Ø3 mm holes for screws according to the jig.



2. FITTING PVC-U WINDOWS - GENERAL RULES

ORDER OF FITTING THE SUBASSEMBLIES TO THE SASH
TURN AND TURN/TILT VERSION

2.1. **CORNER** (according to the type)
- place the corner into the hardware groove of the sash, paying particular attention to the proper adjoining of arms. For corner (A and R) the deadbolt should be located from the side of assembling the drive gear. Fasten with two 3,9 x 25 screws in the holes closest to the corner bend.

2.2. **CORNER DRIVE GEAR**
- insert into the hardware groove of the sash together with the stay, fasten with 3,9 x 25 screws. The locking deadbolt should be located in the bean hole axis of the drive gear front. Check the correctness of the connection with the stay slider.

2.3. **STAY**
- place the properly cut stay together with the corner drive gear into the hardware groove of the sash by meshing the corner drive gear slider with the stay slider and then with the corner.
Fasten with 3,9 x 25 screws. Additionally fasten the corner together with the stay through the corner connecting plate.

NOTE:

In case of windows with **Sw > 1200 mm** it is recommended to use the tilt restrictor:
- restrictor arm L - **001-356-000**
- restrictor arm P - **001-357-000**
- restrictor striker plate - **001-358-000**

2.4. **DRIVE GEAR „M"** or **„Z"**
- place the properly cut drive gear into the sash groove, paying attention to the proper meshing of the drive gear slider and corner slider (corner deadbolt in the bean hole axis).
Fasten with 3,9 x 25 screws.
Additionally fasten the corner together with the drive gear through corner connecting plate.

NOTE:
1) the clearance between the corner and drive gear fronts may be max 4 mm, meshing of the slider and the cogged block should be min. 3/4 of the teeth length.

2.5. **LOWER HINGE - LEAF**
- place the leaf body deadbolts in 6 mm holes made in rebate.
Fasten with 3,9 x 38 screws.

2.6. **HANDLE**
- screw the handle with two M5 x 35 screws.

NOTE: choice of the handle depending on the needs, handle with 4 or 8 positions with the following mandrel length:
L = 32 mm for profile system „9"
L = 35 mm for profile system „13"

ORDER OF ASSEMBLING THE HARDWARE SUBASSEMBLIES TO THE FRAME

2.7. **STRIKER PLATES**
a) peripheral striker plate - place in the frame channel, fasten with 3,9 x 25 screws.
b) lower striker plate - place in the lower frame corner depending on the type of the window (left, right), Fasten with 3,9 x 25 screws.
c) when using jigs to position striker plates, the peripheral striker plates should be fastened to the frame first.

2.8. **LOWER HINGE - BRACKET**
- place the bracket deadbolts in Ø6 mm holes made in the frame.
Fasten with 3,9 x 25 screws.

2.9. **UPPER HINGE**
- fasten the upper hinge bracket with 3,9 x 25 screws so that the mandrel is inserted from the bottom side of the stay arm.

NOTE:
1) when using hardware version with a symmetrical drive gear, fix the ends before placing the drive gear.

2) in turn windows with Sw>800 mm fasten corner drive gears together with the ends first.

3) in turn windows fasten the middle (indirect) pressure pad with 3,9 x 25 screws. Fitting coordinates according to the jig.

3. MOUNTING AND REMOVING THE SASH

3.1. Place the sash into the frame so that the bracket mandrel of the lower hinge is in the hinge leaf body.

3.2. **Put the PVC-U guard on the bearing.** Connect the arm stay with the stay and then with the upper hinge bracket.

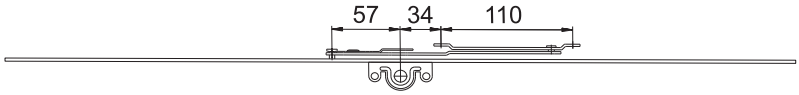
3.3. Brake the studs fixing the fitting position of the hardware with a smooth motion of the handle into “CLOSED” position. Adjust if necessary (after glazing).

NOTE:
1) **Check the hardware functioning.**
2) **Check if the upper hinge mandrel is placed correctly.**
3) **The sash should be removed in a reversed order.**

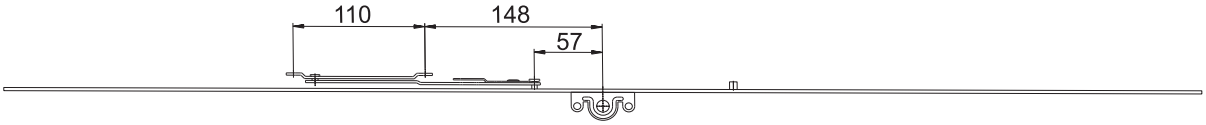
4. **ADJUSTMENT AND MAINTENANCE RULES -** see chapter 13 of the **catalogue.**

5. **LIST OF JIGS** - see chapter 14 of the **catalogue.**

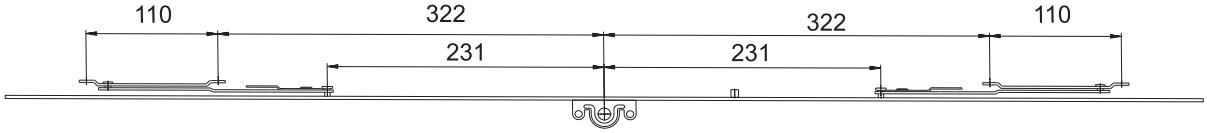
Drive gear MC



Method of fitting for **MC1**

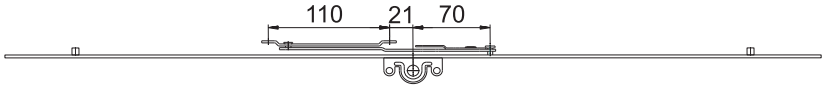


Method of fitting for **MC2**

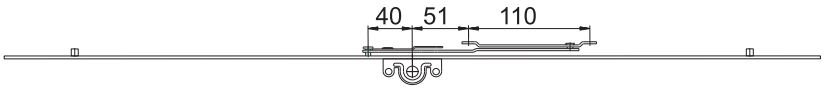


Method of fitting for **MC3**

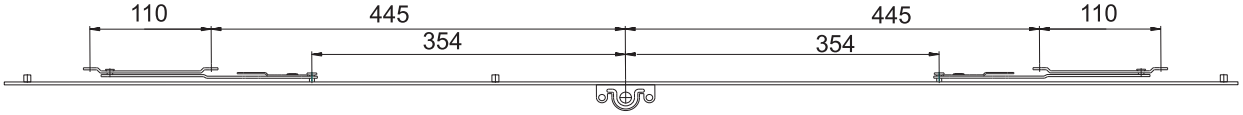
Drive gear UC



Method of fitting for **UC1** i **UC2**



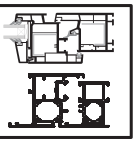
Method of fitting for **UC3A**

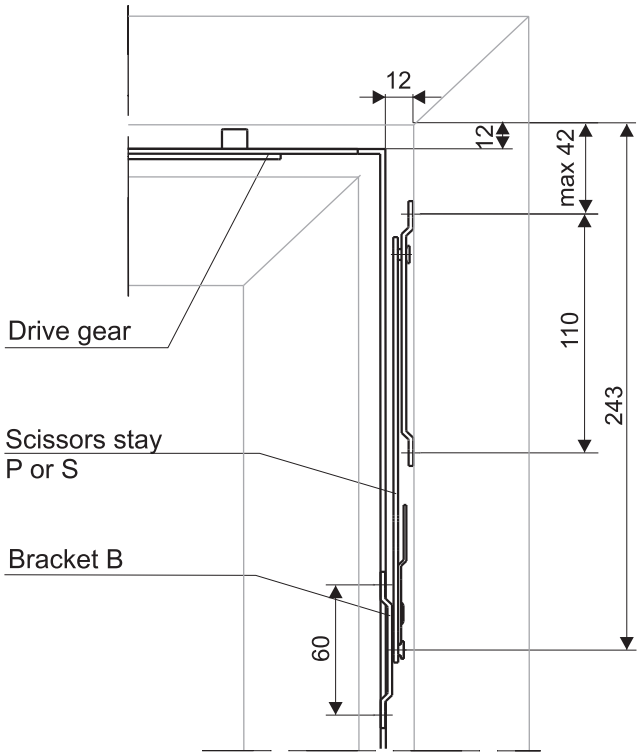


Method of fitting for **UC4**

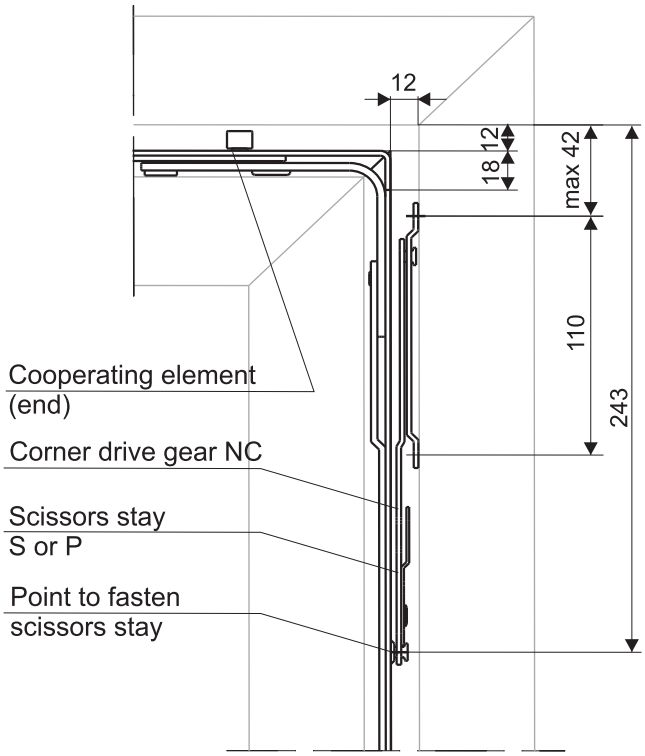
NOTE:
Recommended types of scissors stay:
Wooden windows type **P**
PVC-U windows type **S**
Aluminium windows type **S/Al**

FITTING INSTRUCTION
SCISSORS STAY
FOR PVC-U AND ALUMINIUM WINDOWS

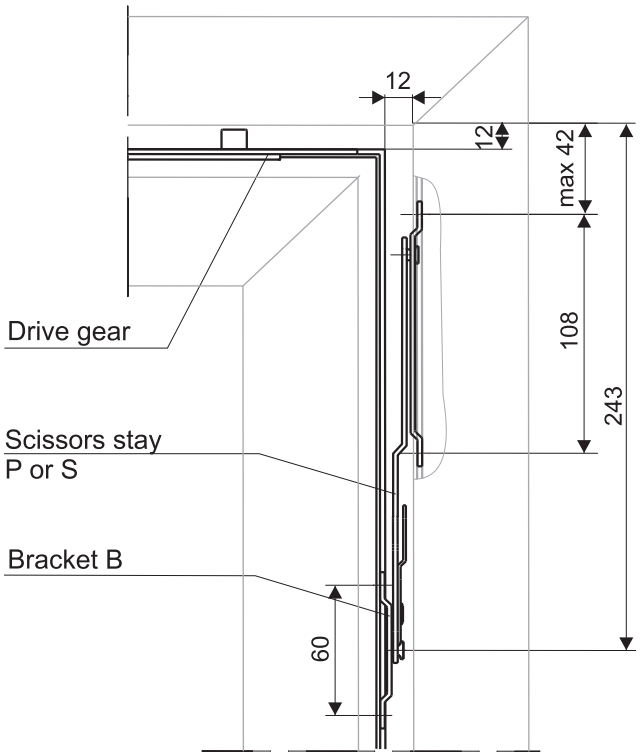




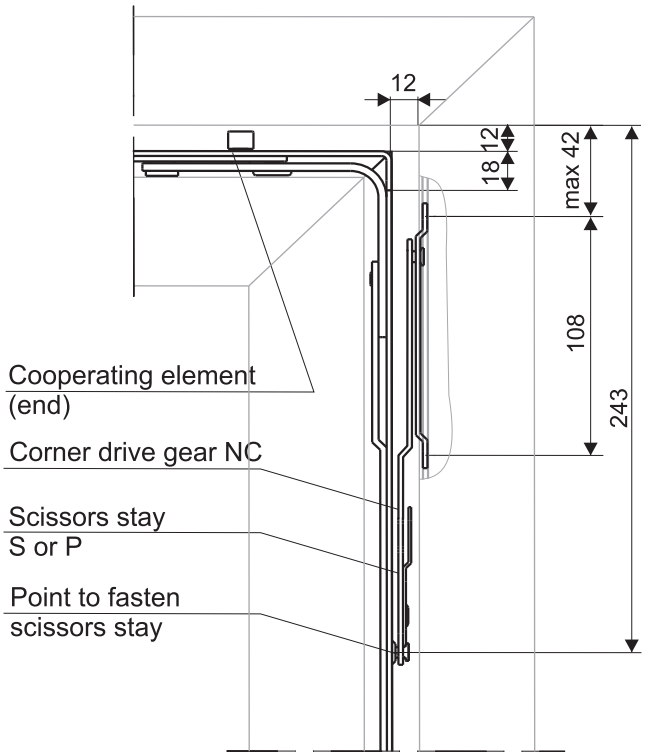
Method of fitting the scissors stay on the side of the sash in Tw windows. Hw≤1000
(bracket located in the hardware notch).



Method of fitting the scissors stay on the side of the sash in Tw windows. Hw ≥ 1000
(point to fasten the stay on the corner drive gear pin NC).

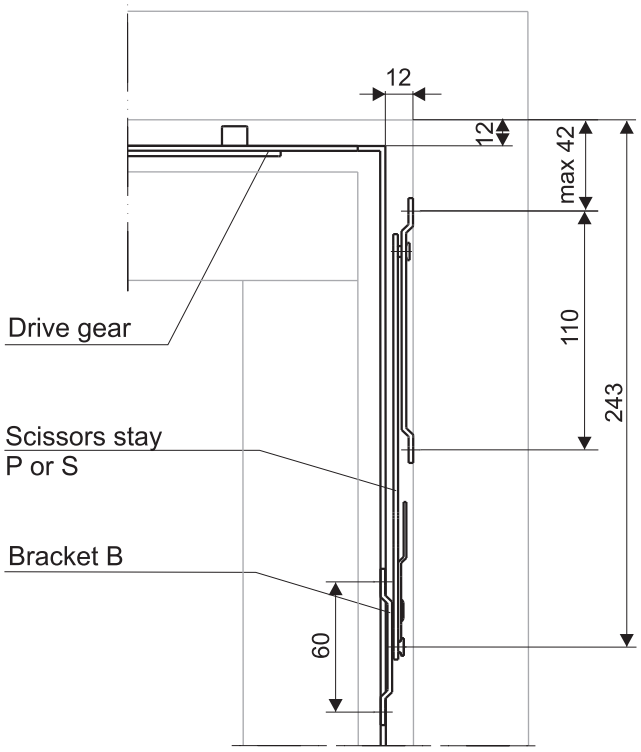


Method of fitting the scissors stay on the side of the sash in Al windows with a hardware channel like in PVC-U profiles. Hw≤1000
(bracket located in the hardware notch).

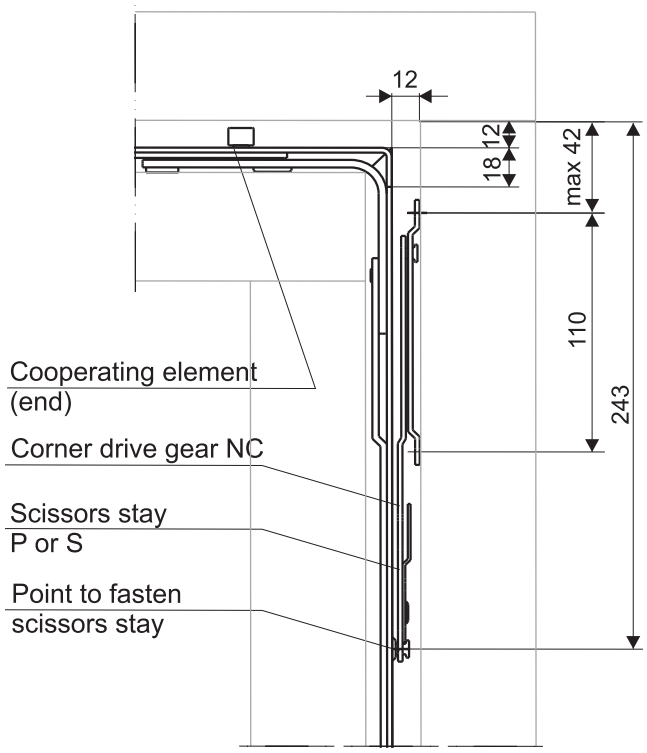


Method of fitting the scissors stay on the side of the sash in Al windows with a hardware channel like in PVC-U profiles. Hw ≥ 1000
(point to fasten the scissors stay on the corner drive gear pin NC).

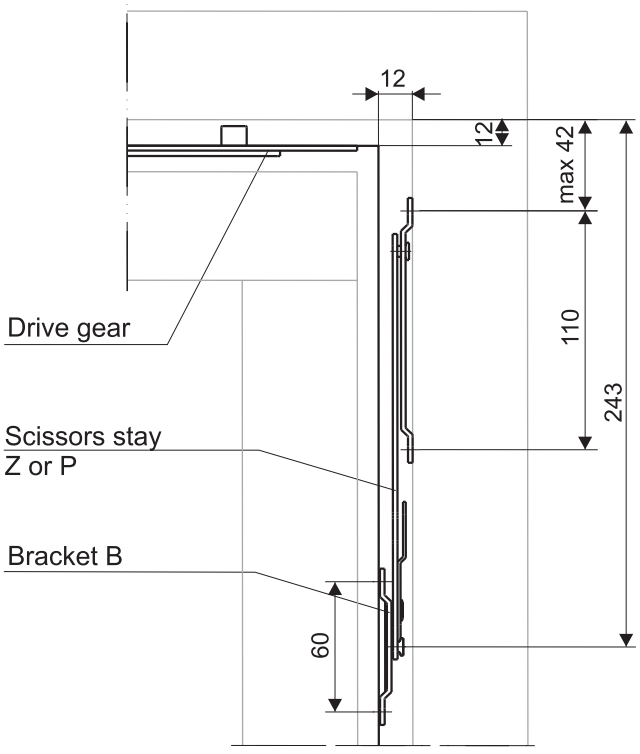
FITTING INSTRUCTION
SCISSORS STAY FOR WOODEN WINDOWS



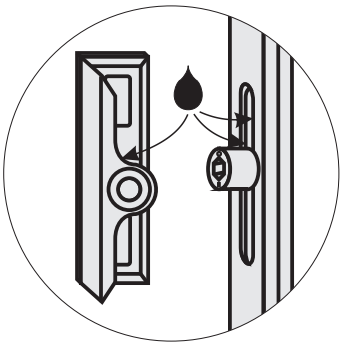
Method of fitting the scissors stay on the side of the sash in Dr windows. Hw≤1000
(bracket located in the hardware notch).



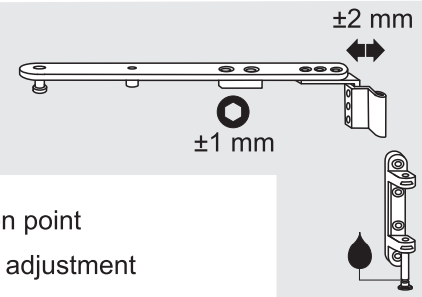
Method of fitting the scissors stay on the side of the sash in Dr windows. Hw ≥ 1000
(point to fasten the stay on the corner drive gear pin NC).

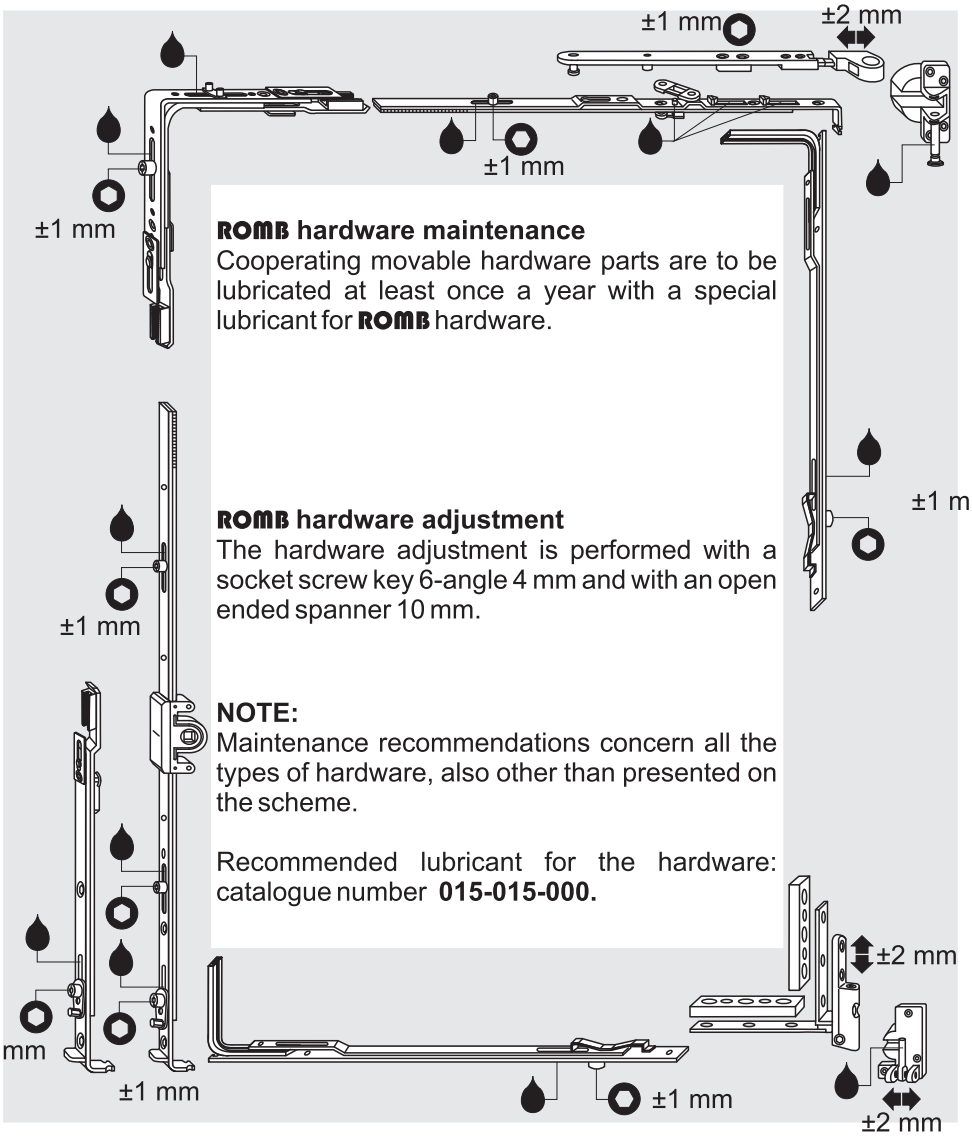


Method of fitting the scissors stay on the side of the sash in Dr windows. Hw≤1000
(bracket located in the sash).



- lubrication point
- pressure adjustment
- position adjustment





ROMB hardware maintenance
Cooperating movable hardware parts are to be lubricated at least once a year with a special lubricant for **ROMB** hardware.

ROMB hardware adjustment
The hardware adjustment is performed with a socket screw key 6-angle 4 mm and with an open ended spanner 10 mm.

NOTE:
Maintenance recommendations concern all the types of hardware, also other than presented on the scheme.

Recommended lubricant for the hardware: catalogue number **015-015-000.**

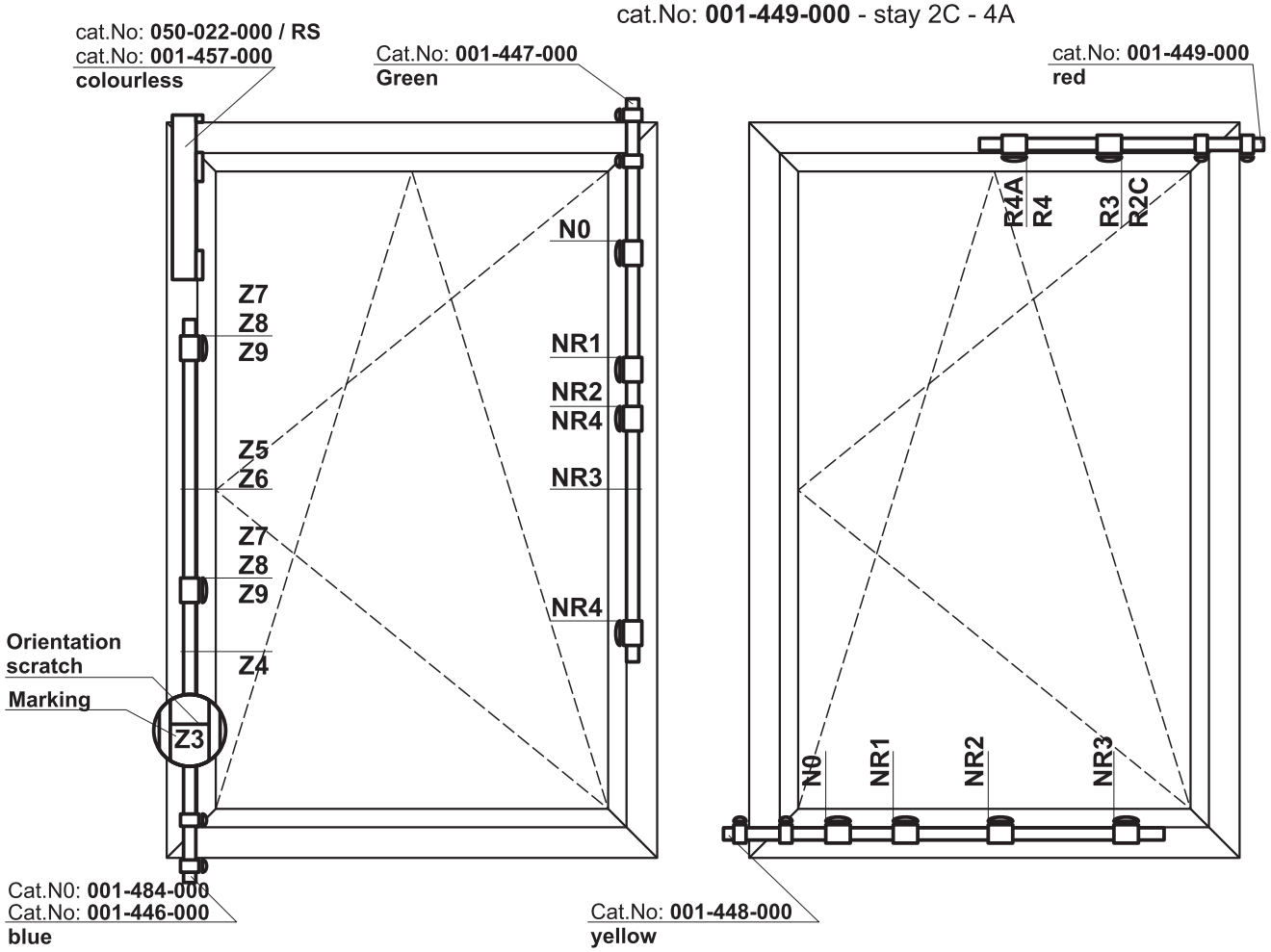
LIST OF JIGS AND FITTING TOOLS

Item	Jig designation	Catalogue number	Characteristics
1	Jig for frame Uhb/Lhb Ø3	001-396-000	windows Tw
2	Jig for frame Uhb/Lhb Ø6	001-397-000	windows Tw
3	Jig for frame Uhb/Lhb Tw	050-009-000	Tw 21 Ø3/Ø6
4	Jig for frame Uhb/Lhb Ø6	050-016-000	TwO Ø6
5	Jig for frame Uhb/Lhb Ø3	050-001-000	TwO 9/20 13/20
6	Jig for sash Lhl	001-171-000	windows Tw
7	Jig for sash Lhl Tw	050-007-000	rebate for angle 5°
8	Jig for sash Lhl/TwO	050-019-000	lower hinge leaf TwO
9	Jig for sash Szd/TwO	050-020-000	lower hinge leaf TwO rebate at angle 5°
10	Jig for corner striker plates Dr - Euronut	001-458-000	T-shaped jig
11	Jig for corner striker plates Tw/Dr	001-457-000	T-shaped jig
12	Jig for striker plates Tw/Dr - Eurofalz, Euronut drive gear Z3 - Z6	001-446-000	slider jig blue colour
13	Jig for striker plates Tw/Dr - Eurofalz, Euronut drive gear N0 - NR3 (backside of the sash)	001-447-000	slider jig green colour
14	Jig for striker plates Tw/Dr - Eurofalz, Euronut drive gear N0 - NR3 (bottom of the sash)	001-448-000	slider jig yellow colour
15	Jig for striker plates Tw/Dr - Eurofalz, Euronut stay 2C - 4A	001-449-000	slider jig red colour
16	Jig for striker plates Tw/Dr - Eurofalz, Euronut drive gear Z7 - Z9, Nr4	001-484-000	double-sided slider jig green/blue colour
17	Jig for striker plates Tw/Dr - Eurofalz, Euronut drive gear M2, M3	050-014-000	symmetrical extendible jig violet colour
18	Jig for striker plates Tw/Dr - Eurofalz, Euronut drive gear M4, M5	050-015-000	symmetrical extendible jig violet colour
19	Jig for connectable pressure pad	903-727-000	jig with adjustment
20	Jig for pressure pad	001-184-000	windows Dr/Tw
21	Jig for tilt hinge Tw / Dr	050-011-000	jig with adjustment
22	Jig for frame 2×Ø34 (milling)	050-010-000	hardware S5 Dr
23	Jig for frame Ø34 (milling)	001-211-000	windows DrC
24	Jig for striker plate R9/R13	050-008-000	Tw corner R
25	Jig for striker plate UD/Tw	050-012-000	corner U1 window hardware Tw
26	Jig for striker plate UD/Dr	050-013-000	corner U1 windows Dr
27	Jig for lift striker plate drive gear Z (older version)	050-017-000	Z3÷Z6 Tw Dr/Eurofalz
28	Jig for lift striker plate drive gear Z (older version)	050-002-000	Z7÷Z9
29	Jig for lift striker plate drive gear M (older version)	050-003-000	M2÷M3 Tw Dr/Eurofalz
30	Jig for lift striker plate drive gear M (older version)	050-004-000	M4÷M5 Tw Dr/Eurofalz
31	Jig for lift striker plate drive gear M.. 7,5 (older version)	050-005-000	M7,5 M2÷M3 Tw Dr/Eurofalz
32	Jig for lift striker plate drive gear M 7,5 (older version)	050-006-000	M7,5 M4÷M5 Tw Dr/Eurofalz
33	Manual cutter	015-002-000	cutter
34	Pneumatic cutter	902-082-000	press
35	Hook key	050-023-000	for mandrel TwO / S5
36	Hex key 6-angle 4	015-000-007	for adjustment
37	Hex key 6-angle 4 and open ended spanner S10	015-001-000	for adjustment
38	Jig for striker plates of the corner	050-022-000	striker plate RS vertically

JIGS FOR FITTING
PERIPHERAL STRIKER PLATES
IN Tw, DR WINDOWS WITH DRIVE GEAR Z

corner..... T-shaped or slider jig
drive gear Z..... slider jig
corner drive gear..... slider jig
corner drive gear.....slider jig
stay..... slider jig

(RU)..... colourless;
cat.No: **001-457-000** - periph.striker plate and striker plate R/R13
(RU + R).. blue;
cat.No: **001-446-000** - drive gear Z3 - Z6
(RU+R).... green;
cat.No: **001-447-000** - sash back RU, sash top R drive gear N0 - NR3
(RU+R).....yellow;
cat.No: **001-448-000** - for sashes with Sw > 800 mm (sash bottom RU+R - drive gear N0 - NR3
(RU).....red;
cat.No: **001-449-000** - stay 2C - 4A



1. For the proper assembling the striker plates the slider should be placed above the orientation scratch so that the marking is visible (eg. Z3).

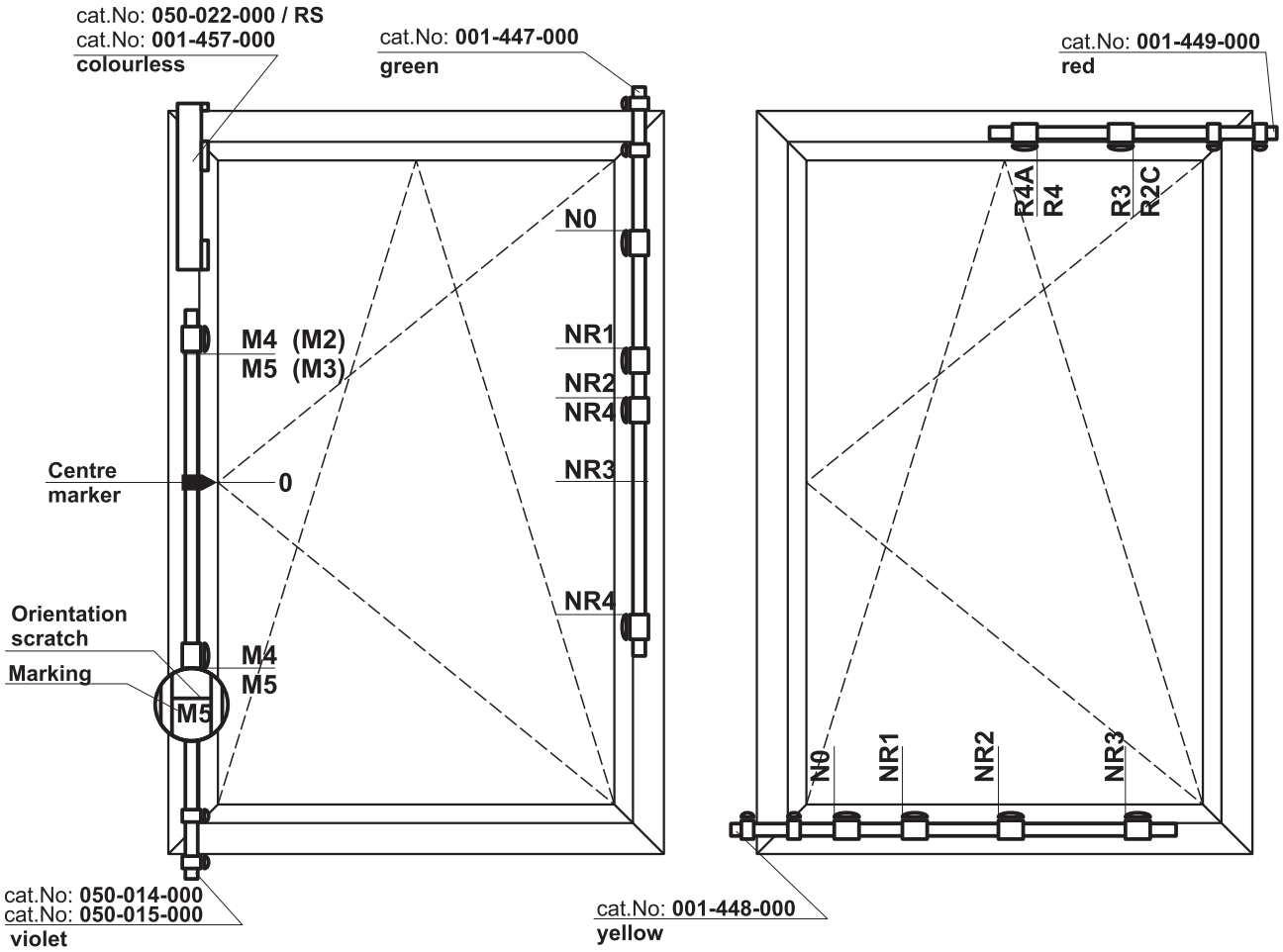
2. Peripheral striker plates should be placed before assembling lower and upper hinge brackets, as well as lower striker plate.

3. In balcony door (for drive gear **Z7 - Z9**) a jig **001-484-000** should be used (green/blue) and for **NR4** jig **001-447-000** (green).

4. Instruction concerns using the above mentioned jigs in Dr/Eurofalz windows with peripheral striker plate Dr 12 cat.No **111-063-000**, as well as Dr/Euronut with peripheral striker plates cat.No **111-096-000.**

JIGS FOR FITTING
PERIPHERAL STRIKER PLATES
IN Tw DR WINDOWS WITH DRIVE GEAR M

corner.....	T-shaped or slider jig	(RU).....	colourless; cat.No: **001-457-000** - periph.striker plate and striker plate R/R13
drive gear M.....	extendible jig	(RU+R)....	violet; cat.No: **050-014-000** - drive gear M2 - M3
corner drive gear.....	slider jig	(RU+R)...	green; cat.No: **001-447-000** - sash back RU, sash top R
corner drive gear.....	slider jig	(RU+R)...	yellow; cat.No: **001-448-000** - for sashes with Sw > 800 mm (sash bottom RU+R)
stay.....	slider jig	(RU).....	red; cat.No: **001-449-000** - stay 2C - 4A



NOTES:

1. For the proper assembling of striker plates the slider must be placed above the orientation scratch so that the marking is visible, eg. M5.

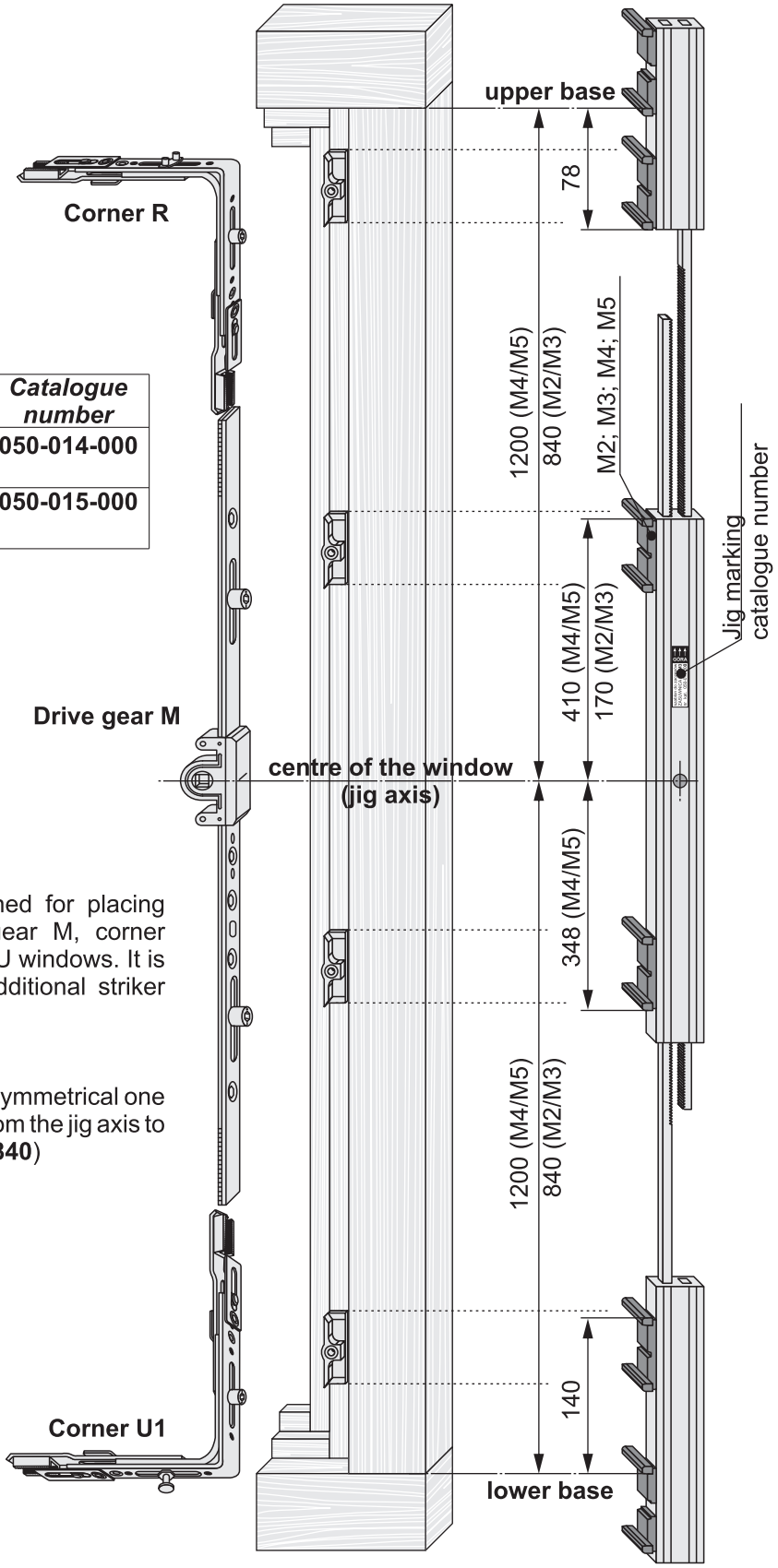
2. Peripheral striker plates should be placed before assembling lower and upper hinge bracket, as well as lower striker plate.

3. For M4 - M5 drive gears in balcony door the jig catalogue number **050-015-000** should be used, for NR4 - jig catalogue number **001-447-000**, green.

4. Instruction applies to using the above mentioned jigs in Dr/Eurofalz windows with peripheral striker plate Dr 12 catalogue number **111-063-000**, as well as Dr/ Euronut with peripheral striker plate, catalogue number **111-096-000.**

JIG FOR DRIVE GEAR M2/M3; M4/M5
USAGE RULES

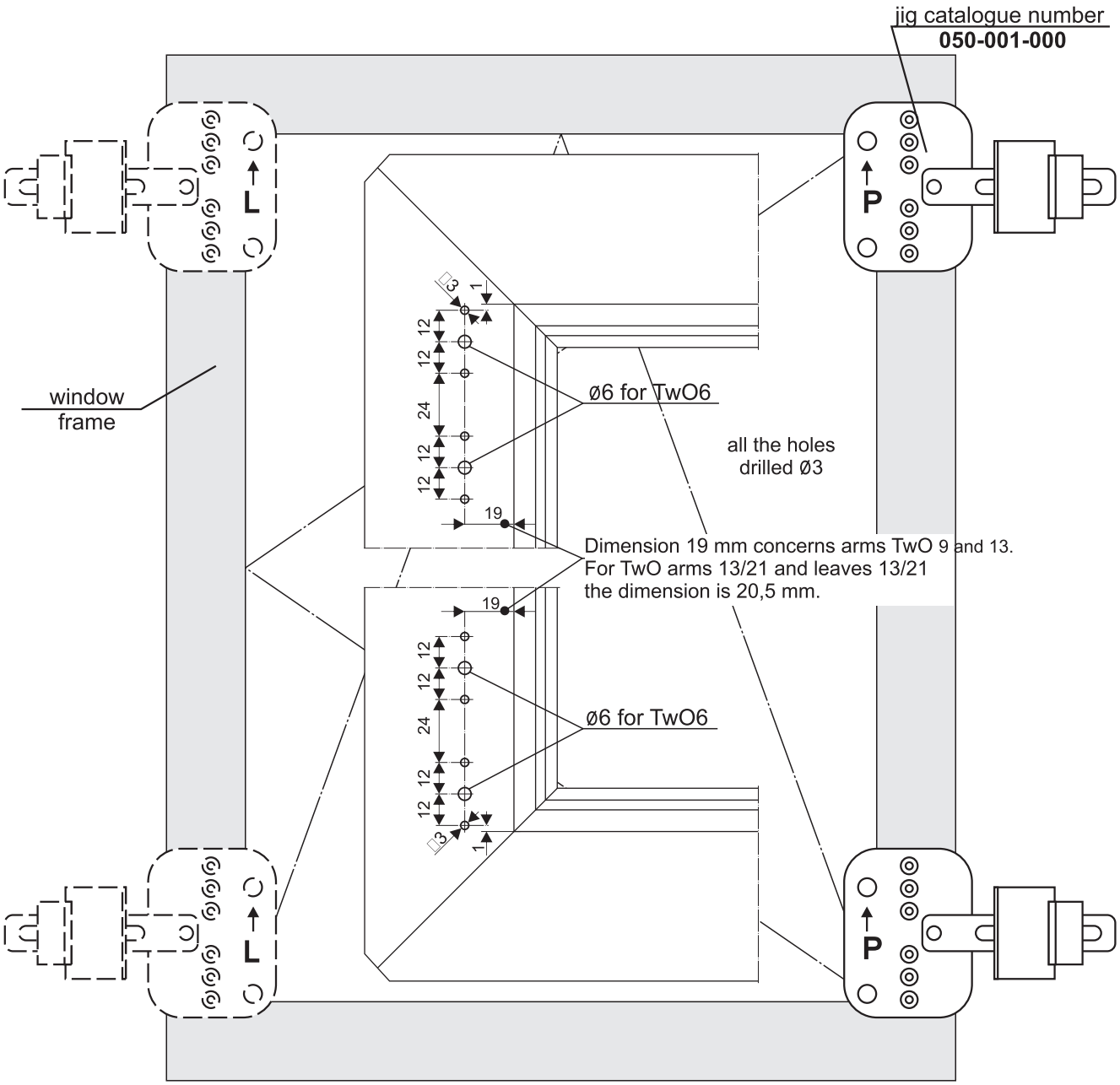
Item	*Name of the jig*	*Catalogue number*
1	Symmetrical jig M2/M3 extendible	**050-014-000**
2	Symmetrical jig M4/M5 extendible	**050-015-000**



USE:
Symmetrical-extendible jig is designed for placing peripheral striker plates of drive gear M, corner (R),corner (U1) in wooden and PVC-U windows. It is possible to complete the jig with additional striker plate sockets.

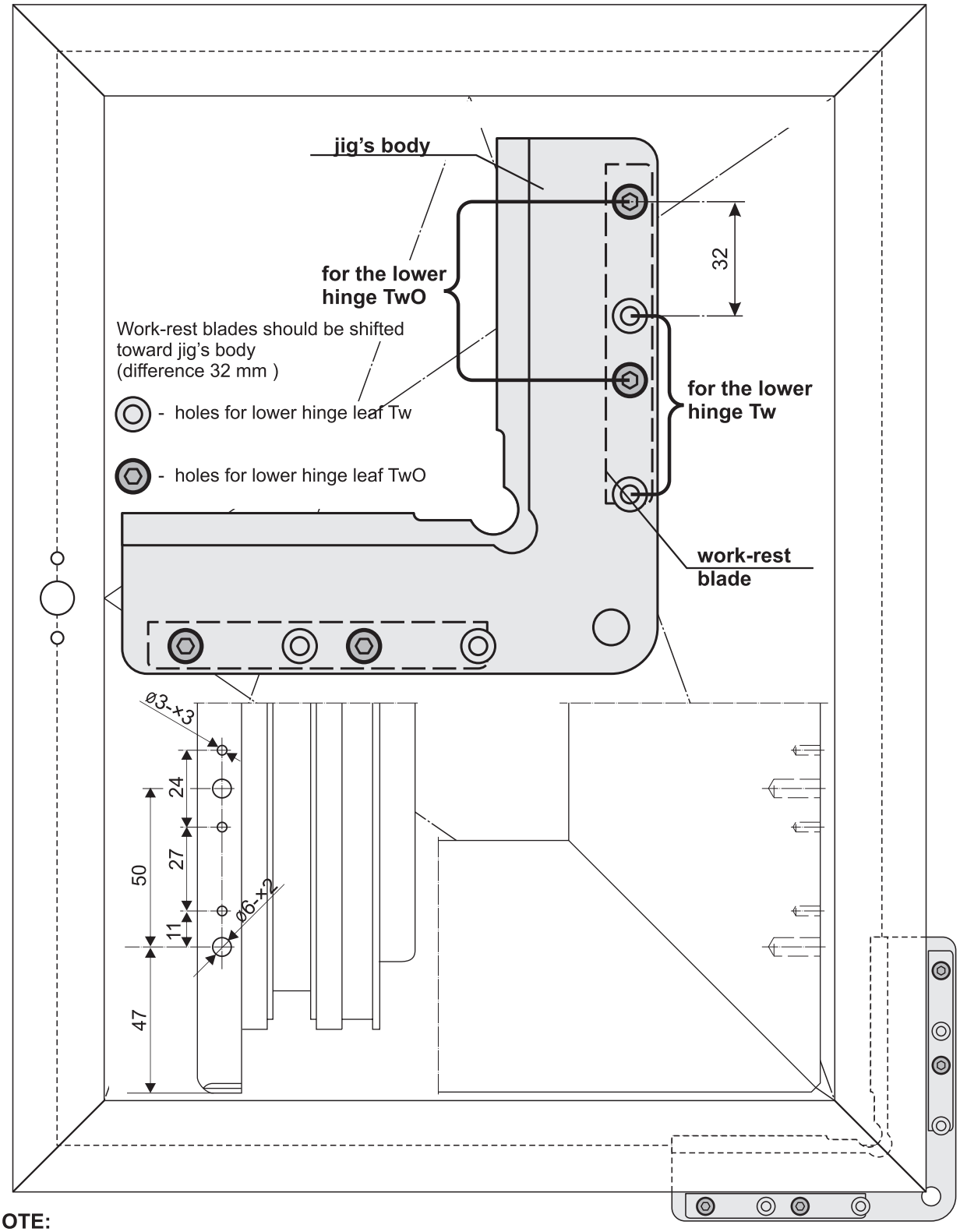
NOTE:
In order to check if the striker plate is symmetrical one has to establish the same distances from the jig axis to the upper and lower buffer (e.g.: **840=840**)

JIG FOR THE FRAME
ROMB TwO HARDWARE USAGE RULES



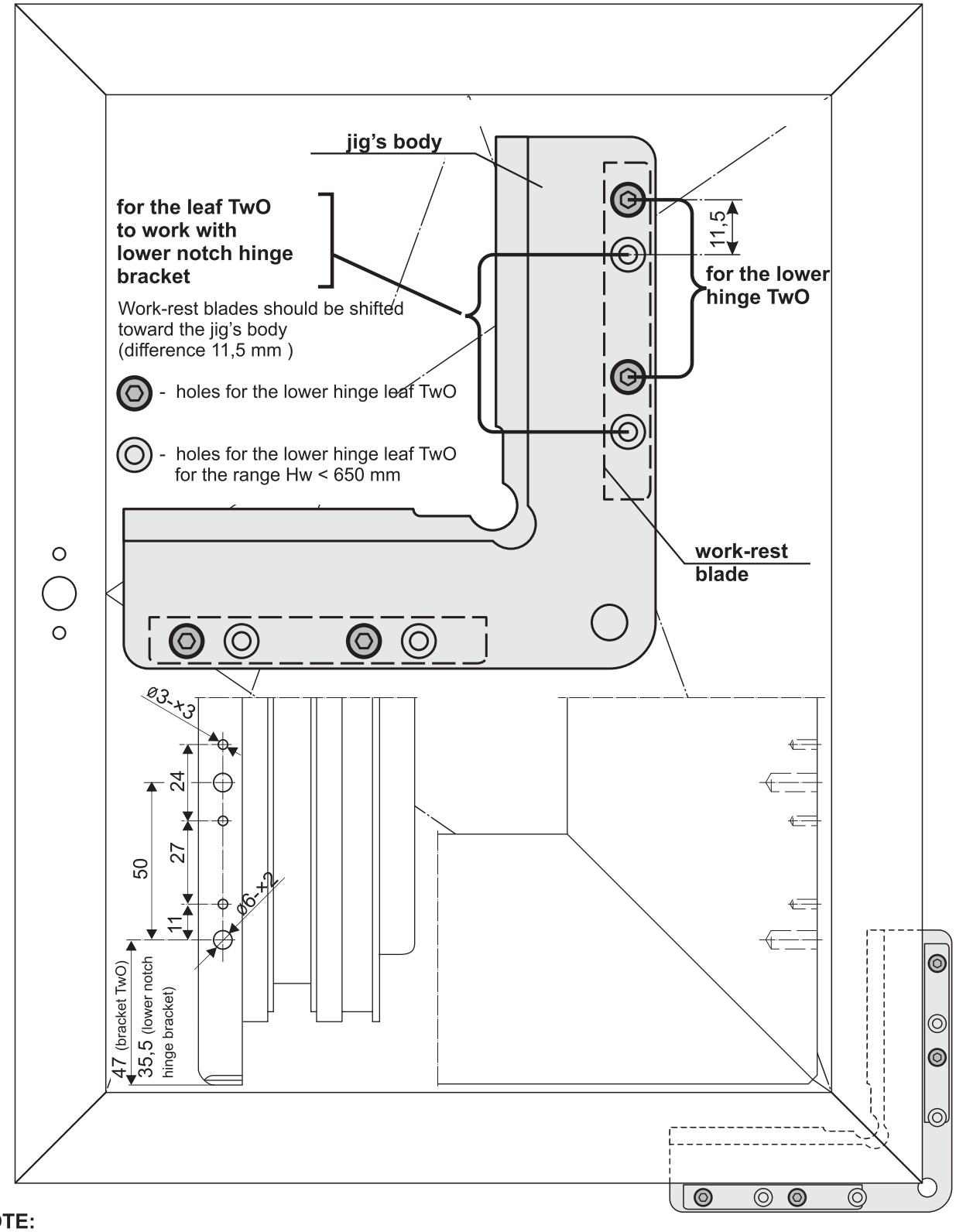
NOTE:
drilling Ø3 holes for the upper hinge bracket TwO3 and lower hinge bracket TwO3 or lower notch hinge bracket:
according to the jig catalogue number **050-001-000.**
Drilling Ø6 holes for the upper hinge bracket TwO6 and lower hinge bracket TwO6:
according to the jig catalogue number **050-016-000.**

Method of rearrangement of the jig cat.No **001-171-000 lub** cat.No **050-007-000**



NOTE:
drilling holes: Ø6 mm - 2 holes, Ø3 mm - 3 holes for the lower hinge leaf TwO,
according to the jig for the sash cat. No **001-171-000** or **050-007-000** (rebate bend 5°).
It is necessary to rearrange the jig used for the sash Tw to the jig for the sash TwO.

Method of rearrangement of the jig cat.No **050-019-000** or cat. No **050-020-000**



NOTE:
drilling holes : Ø6 mm - 2 holes, Ø3 mm - 3 holes for the lower hinge leaf TwO,
according to the jig cat. No **050-019-000** or cat. No **050-020-000** (rebate bend 5°).
For the scope Hw < 650 mm it is necessary to rearrange the jig used for the sash TwO to the jig working with the lower notch hinge leaf.

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

KARO ROMB

„METALPLAST KARO ZŁOTÓW"
Spółka Akcyjna

PL-77-400 Złotów, ul. Kujańska 10 e

has established and applies
a Quality Management System for

Development and production
of metal mounts for windows and doors

An audit was performed, Report No. **70001281**

Proof has been furnished that the requirements
according to

ISO 9001: 2000

are fulfilled. The certificate is valid until **2009-06-25**

Certificate Registration No. **12 100 7621 TMS**

Munich, 2007-09-03

QMS-TGA-ZM-07-92

TÜV SÜD Management Service GmbH • Zertifizierstelle • Ridlerstraße 65 • 80339 München • Germany

APROBATY TECHNICZNE • APROBATY TECHNICZNE • APROBATY TECHNICZNE

KRAJOWE AKCESORIA
I ROZWIĄZANIA OKUCIOWE

KARO

ROMB SYSTEM

List of valid technical approvals

1. **Technical Approval AT-15-7511/2007**
   Tilt hardware **ROMB** with drive gear or lever locking rod.

2. **PN-EN 13126-8:2006 (U) Construction hardware**
   Requirements and methods of testing for windows and balcony doors.
   Part 8: Turn/tilt, tilt/turn and only turn hardware.

3. **Technical Approval AT-06-0003/2003**
   Turn/tilt, turn and tilt **ROMB** hardware, turn/tilt and turn **ROMB 2000** hardware as well as turn/tilt **ROMB 3000** hardware with reinforced resistance to burglary for wooden windows and balcony doors

4. **PN-EN 13126-1:2006 (U) Construction hardware**.
   Requirements and methods of testing for windows and balcony doors.
   Part 1: Requirements common for all types of hardware.

Grupa Kęty

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WARRANTY CARD

Metalplast KARO Złotów S.A. **grants a warranty for hardware systems ROMB; ROMB 2000 and ROMB 3000 for a period of 10 years.**

Metalplast KARO Złotów S.A. **guarantees that in the above mentioned groups of hardware no defects connected with the following shall occur:**

1. **Safety of construction:**

* **The hardware construction ensures stability of windows and doors elements against self-detachment of the sash from the frame caused by a faulty construction of the parts or subassemblies of the hardware essential for safety,**
* **Anti-corrosion protection of steel elements of the hardware protective layers meet requirements of class 3 corrosion resistance according to PN EN 1670:2000.**

2. **Safety of usage:**

* **The execution of parts and sets protects the user against self-detachment of the sash from the frame in any operating position of windows and balcony doors,**
* **The execution of hardware hinge sets ensures safe movement of window sashes or balcony door sashes.**

3. **Property protection and safeguards applies to ROMB 3000 hardware:**

* **The safeguards hindering burglary through windows and balcony doors comply with class 2 of burglary resistance according to ENV 1627.**

The warranty is granted on the conditions:

1. **Using of the hardware in accordance with its designation - windows and balcony doors made of PVC-U and wood used in construction**
2. **Proper selection of the hardware, in particular:**
* **Maximum permissible dimensions of window sashes and balcony door sashes must be in accordance with the hardware selection catalogue by Metalplast KARO Złotów S.A.**
* **Maximum weight of window sashes and balcony door sashes must be in accordance with the appropriate load capacity of the hardware of Metalplast KARO Złotów S.A.**
3. **Correct and professional fitting of the hardware according to the current fitting instructions.**
4. **Usage in accordance with our recommendations and documented maintenance of the hardware performed by the service department of the joinery manufacturer in accordance with maintenance instructions.**

The warranty for the durability of the hardware protective coating remains valid if the coating is not affected by any aggressive influence from external environment or aggressive substances used for the maintenance of windows and balcony doors.

In case of warranty claims we provide cost-free replacement of defective parts.
The warranty does not cover the refund of other costs.

The warranty does not cover the following defects of the hardware:
* **In which sets or parts made by other manufacturers have been discovered,**
* **Damages caused by force majeure, e.g. natural disasters.**

The warranty period commences on the date permanently marked on the hardware elements.

Head of Laboratory
Mieczysław Kotyński

President of the Management Board
Krzysztof Zięba

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WARRANTY CARD

Metalplast KARO Złotów S.A. grants a warranty for the hardware:
Lever locking rod for windows and tilting transoms **TAKT-150** for a period of 24 months from the date of the purchase.

During this period the warrantor warrants to the user cost-free repair of damages caused by the defects of lever locking rods **TAKT-150** related to:
1. Safety of construction:
- loss of stability of windows and transoms elements due to a defective functioning of **TAKT-150** hardware
- improper anti-corrosion protection of steel elements of **TAKT-150** hardware

2. Safety of usage:
- Direct hitting by closing elements of windows and transoms caused by a defect in lever locking rods **TAKT-150**

Warranty repairs are performed by Metalplast KARO Złotów S.A. within 14 days from the date of notification and identification of the cause of the defect.
For **TAKT-150** hardware sets replaced under the warranty, the warrantor grants a warranty for a period of 12 months from the date of the replacement.

Metalplast KARO Złotów S.A. shall be released from its warranty obligations, if the identified defects were caused by the user, in particular:
- Inappropriate usage of the hardware.
- Inappropriate choice of hardware elements for the intended purpose (weight, height and width of window and transom sashes)
- In case of installation of **TAKT-150** hardware not in accordance with fitting instructions.

The warranty for anti-corrosive protection of steel elements of **TAKT-150** hardware remains valid if they are not affected by any aggressive influence from the external environment or any aggressive substances used for the maintenance of windows and transoms.

Head of Laboratory
Mieczysław Kotyński

President of the Management Board
Krzysztof Zięba

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QUALITY POLICY

Aims of the quality policy

Manufacturing and sales of products and services of the highest quality, determined on the basis of legal and market conditions as well as requirements specified together with the customer.
Quality is our priority. Commitment to quality means that all employees participate jointly to this end.
Quality means customer's satisfaction. Customer's expectations constitute an actively changing, superior goal that requires the quality oriented management to be constantly improved.

To achieve these goals, the following rules must be observed:

Preventing defects is better than discovering them.
Quality reduces costs.
If the quality is embedded in production, installation and distribution of products, there is no need to keep excessive stocks of materials and semi-finished products.
Use top quality suppliers and strive to optimise their number.
Team-work is more effective than commanding.
Times where an employee used to tell their superior: I have done what I had to do and it is your turn now, are gone.
All employees are responsible for quality.
Everyone has incredible possibilities.

The Management Board of METALPLAST KARO ZŁOTÓW S.A.

carries out the quality policy through dynamic and innovative approach to management through quality while taking into consideration the following: quality culture,
- promotion of quality awareness,
- motivation for better performance,
- quality improvement programs,
- general participation of employed personnel in the realization of quality goals.

The Management Board of METALPLAST KARO ZŁOTÓW S.A.

establishes and introduces the above Quality Policy, and determines the responsibility of the management regarding the maintenance of all quality operations now and in the future.

President of the Management Board

Krzysztof Zięba

Złotów 15.05.2007