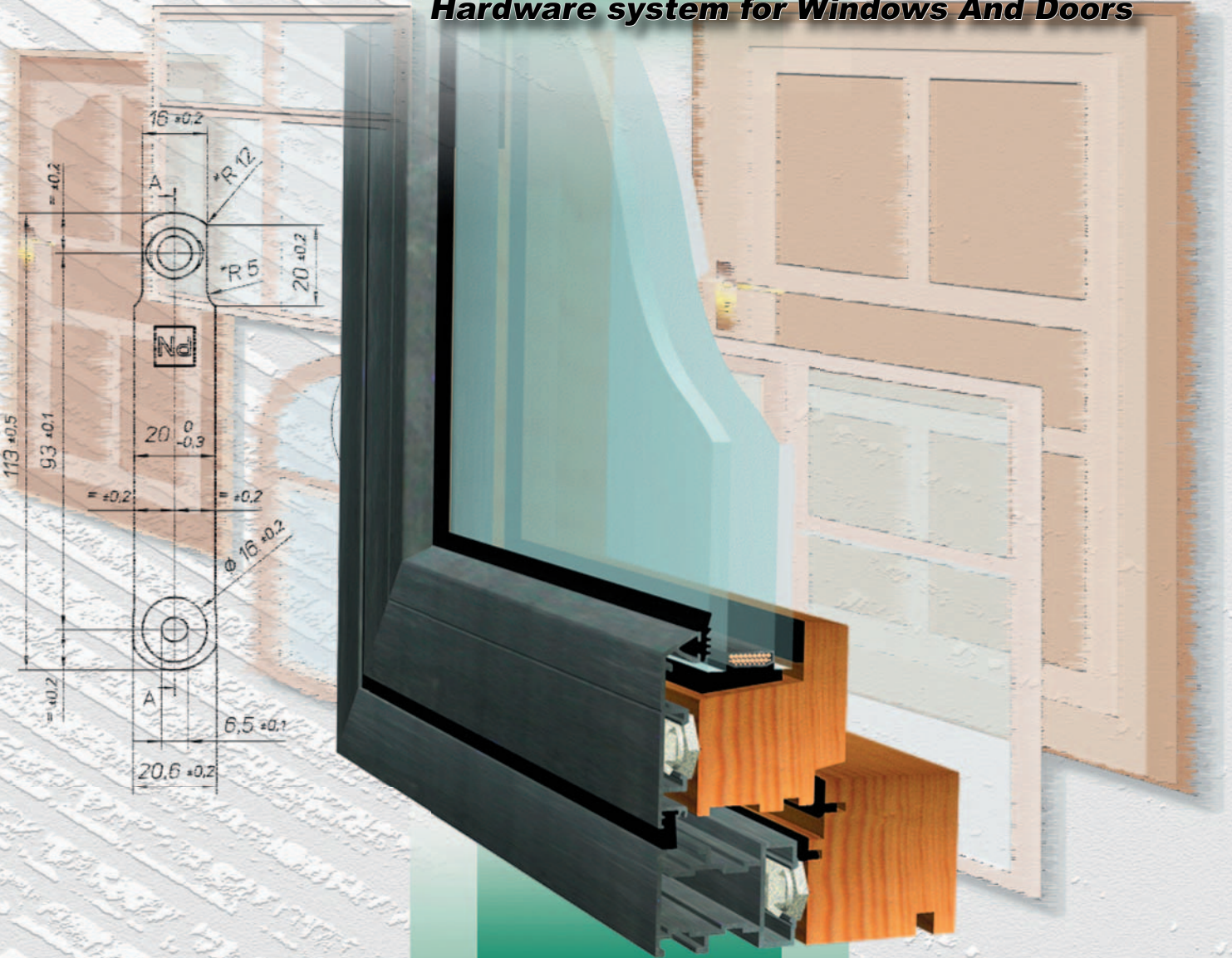


PN

HARDWARE

Combi *System 500*

Hardware system for Windows And Doors



Technical Catalogue
Combi 500
Technical Catalogue

COMBI 500 AM PROFILES DESIGN-5 TIMBER/ALUMINIUM PROFILES

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3c	Side Hung Window - (Butt Hinges) Hinges to Size Selection	11.10.07
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8b	Top Hung Projecting Window - Double Friction	09.08.07
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PN COMBI 500

PN
HARDWARE

Product Description

PN COMBI SYSTEM 500 is a Hardware System for flexible production of windows and doors. With just a few dispositions you can rationalize production utilizing your machinery effectively.

Combi 500 Hardware system is for 5 x 16mm groove and for 2.5 x 16mm casement groove. Common profiling for all window types.

Environment

When the gearring is no longer functional, it should be disposed of in such a way as to cause minimum environmental impact, in accordance with the regulations of your local authority.

Maintenance of Fittings

All building parts and components must be given periodic maintenance. This also applies to the fittings.

The moving parts of builders hardware must be kept lubricated. Use either white neutral grease (vaseline) or neutral oil, e.g. sewing machine oil or Gleitmo 300.

Gliders and aluminium slide rails must not be repainted. They must be kept free of dirt. The relevant fitting instructions should be followed with respect to lubrication and maintenance.

How often lubrication and maintenance? Builders' Hardware should be maintained regularly and the frequency will depend on the environment and weather conditions. It is recommended to lubricate as a minimum once a year. Attention must also be paid to other factors leading to corrosion, for example the effects of caustic fluids, air pollution, etc. Fittings used in large towns, industrial atmosphere, or salty air require special attention due to the greater corrosive effects. The frequency of lubrication and maintenance will have to be more regular than fittings used where the corrosive effect is less.

Note that gliders and slide rails as well as rivets have to be lubricated. However it is not recommended to lubricate friction parts since this will **reduce the friction**.

Where building components are regularly maintained externally with paint, butt hinges and other fittings (but not gliders and aluminium slide rails) should also be painted, giving a further protection against corrosion to the fittings and therewith increasing their life. Before painting, the fittings should be thoroughly cleaned, and the paint manufacturer's instructions followed in pretreatment and selection of paint type. The function of the fittings must of course be preserved when painting.

Note that damage to the surface treatment may occur when using tools on mounted fittings. Brass products will also be affected by corrosion. To maintain the original colour, parts have to be polished regularly. Stainless steel can also be affected and spots that look like rust can be removed by using a stain remover and polish.

Lacquered fittings are maintained by paint according to the instructions of the paint and colour manufacturer.

Anodized aluminium is cleaned at least once a year. It is recommended to polish the surface with a cloth or sponge. Only neutral solvents and non-scratching material can be used.

When using custom-made fittings, always ask A/S Peder Nielsen Beslagfabrik.

Restrictors

Where restrictors are supplied either as an integral part of the hardware or as a separate component as specified. It is essential that the restrictor functions correctly.

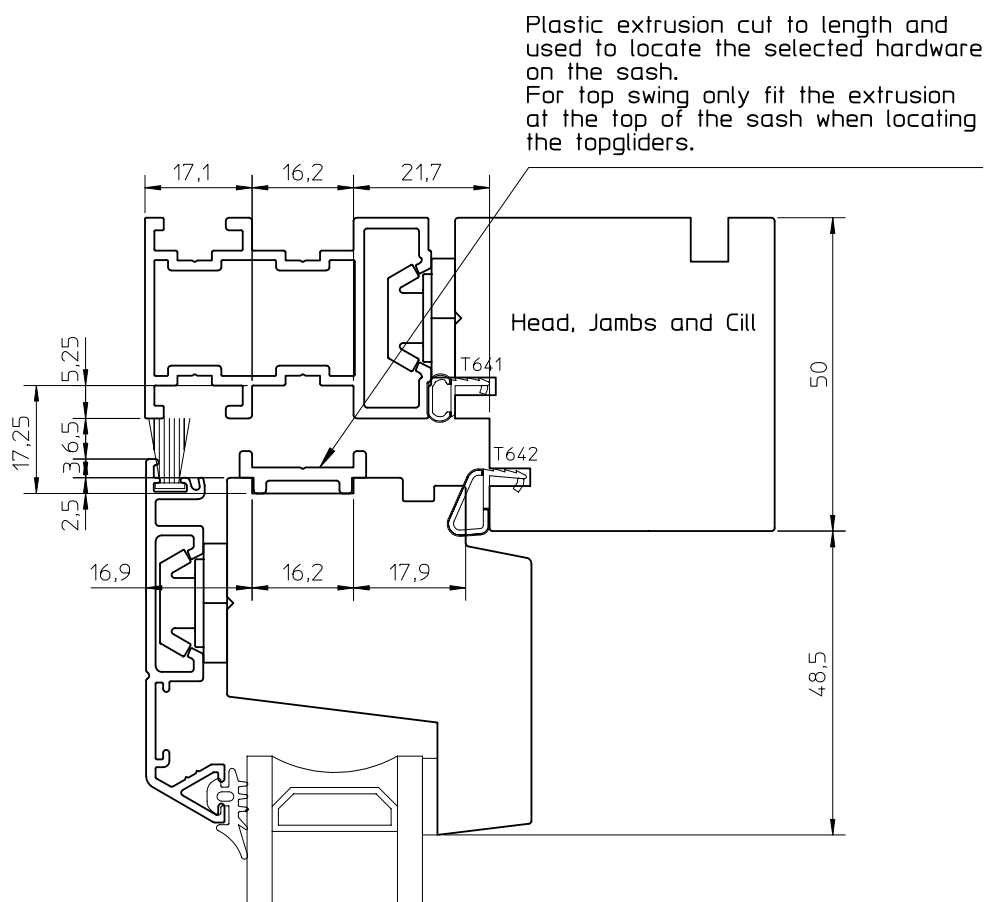
After installation the window must be checked for function, and all restrictors and reverse catches should limit the opening or closing of the window. Initial restrictors must hold the window at approx. 100 mm max. and automatically engage and re-engage when operated.

Please control as part of the quality checks before the building is occupied.

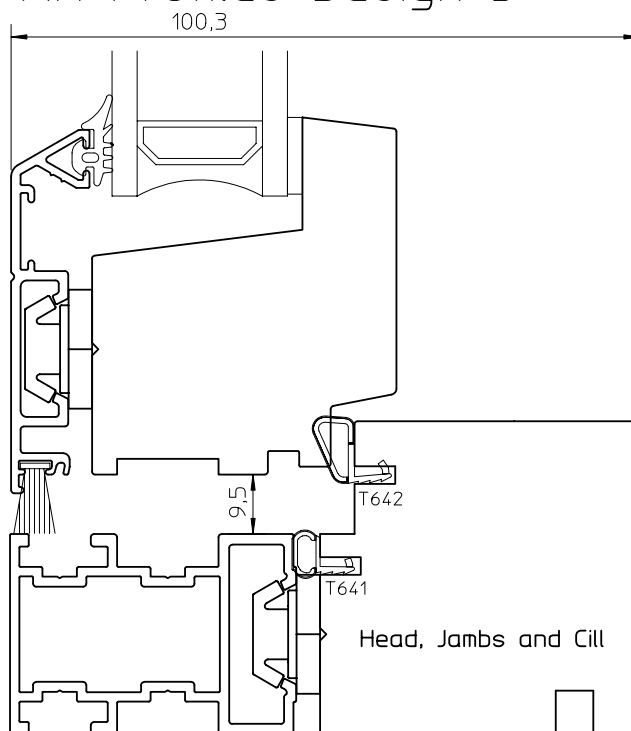
Areas with High Corrosive Effect

Please be aware of special areas i.e. coastal or industrial areas, etc.

The contents of salt, acid etc. in the air can be so high that metal parts require regular maintenance and lubrication.

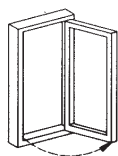


AM Profiles Design 5



M362891-114

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung

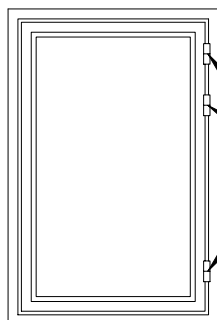


Timber/Alu

Page 3

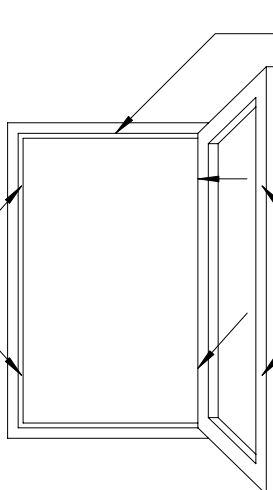
Latest issue 11.10.07

PN
 HARDWARE



Butt hinges
 PN 1170
 PN 1174
 PN 1193
 PN 1194
 (see page 3a)

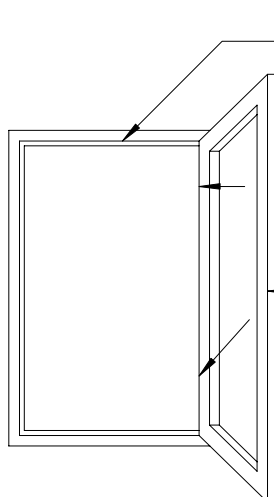
Keepers for
 locking handles



Friction brake
 PN 3935-3937

Block for additional
 compression
 PN 5492
 (see page 18)

Locking handles



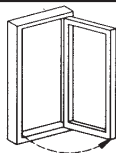
Friction brake
 PN 3935-3937

Block for additional
 compression
 PN 5492
 (see page 18)

Espag. bolt

M117091-123

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung



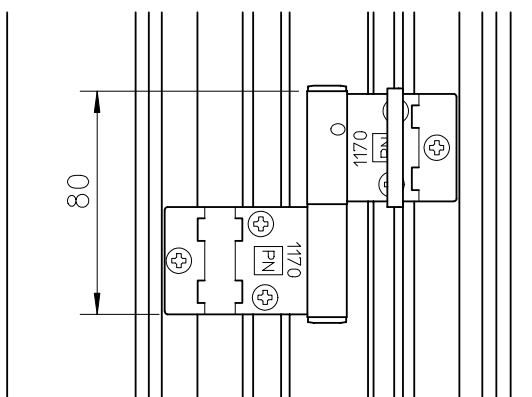
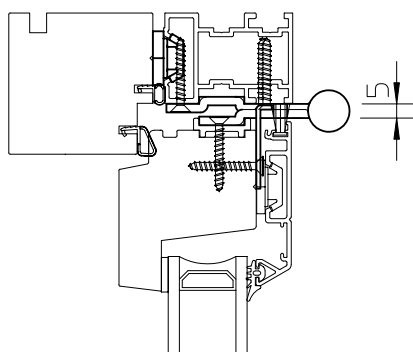
Timber/Alu

Page 3a

Latest issue 27.09.07

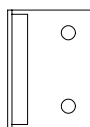
PN
 HARDWARE

Combi 500 Butt hinges
 PN 1170
 PN 1174
 PN 1193
 PN 1194

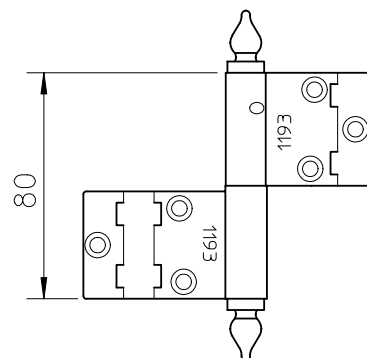
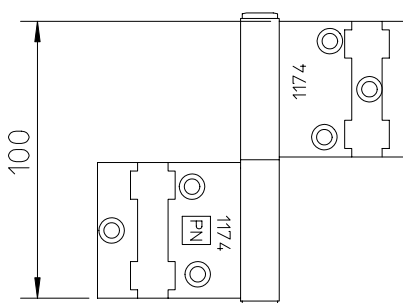
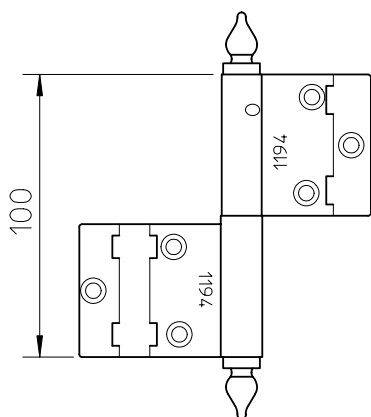


Frame

Sash

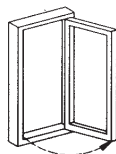


This part is not yet a PN item.
 Only laser cut prototypes exists.



M117091-118

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung



Timber/Alu

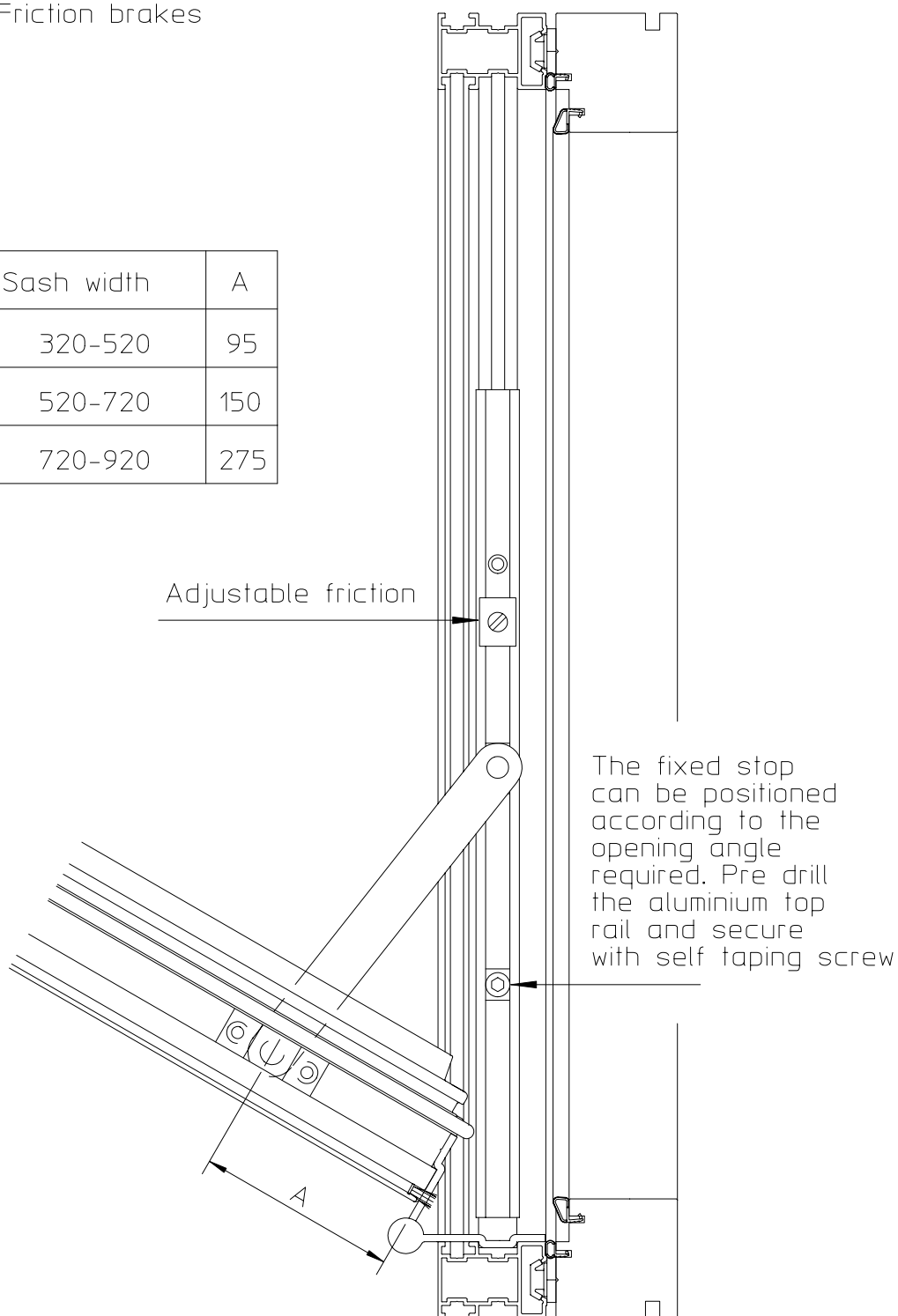
Page 3b

Latest issue 17.10.07

PN
 HARDWARE

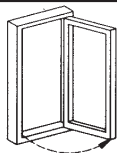
Combi 500 Friction brakes
 PN 3935
 PN 3936
 PN 3937

	Sash width	A
PN 3935	320-520	95
PN 3936	520-720	150
PN 3937	720-920	275



Horizontal Section

M393591-103



Sizes of sashes and numbers of hinges

- 1: Sash weight max. 45 kg
- 2: Hinges to be fitted using the longest screws possible
- 3: The glass to be fitted correctly using the "toe and heel" glazing method

1500								
1400					3 hinges/leaf			
1300								
1200								
1100								
1000								
900					2 hinges/leaf			
800								
700								
600								
500								
400								
Sash height								
	300	400	500	600	700	800	900	
	Sash width							

Use 2 hinges/leaf
 Use 3 hinges/leaf

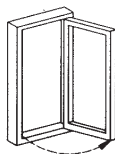
Emergency egress windows

PN Combi 1170+1174+1193+1194

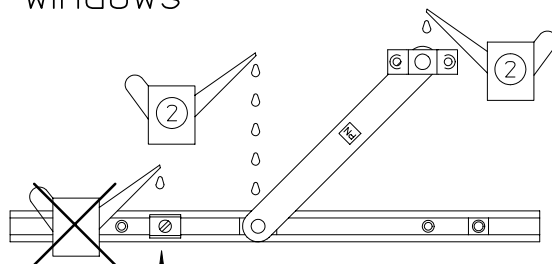
1500				45	45	45	45	45
1400				45	45	45	45	45
1300				45	45	45	45	45
1200				45	45	45	45	45
1100				45	45	45	45	45
1000				45	45	45	45	45
900				45	45	45	45	45
800				45	45	45	45	
700				45	45	45		
600					45			
500								
400								
Sash height								
	300	400	500	550	600	700	800	900
	Sash width							

45 Will meet the fire escape regulation of min. 45 cm opening
 and H x W = min 0,33 m2

M117091-107



Maintenance and lubrication of
PN Combi 500 side
hung butt hinges for
timber / alu windows



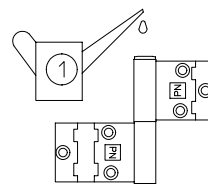
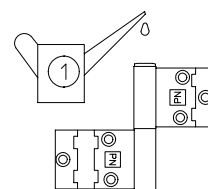
Frictionbrake

Following places to be lubricated
at least once a year. If the gearing
is placed in aggressive environment
lubricate more often.

Lubricate using acid free oil or alter-
natively white vaselin.
When dirty, wash the gearing using
common dish soap with neutral Ph
value.

- 1: Hinges
- 2: Frictionbrake rivet points

The frictionbrake must not be
lubricated



M117091-122

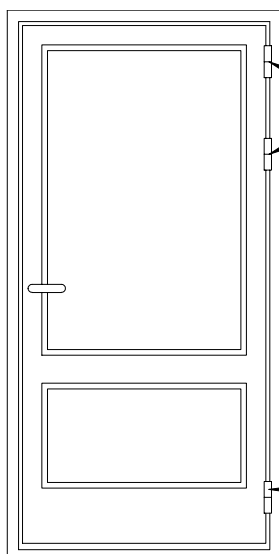
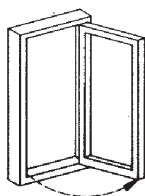
PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung Door

Timber/Alu

Page 4

Latest issue 09.08.07

PN
 HARDWARE

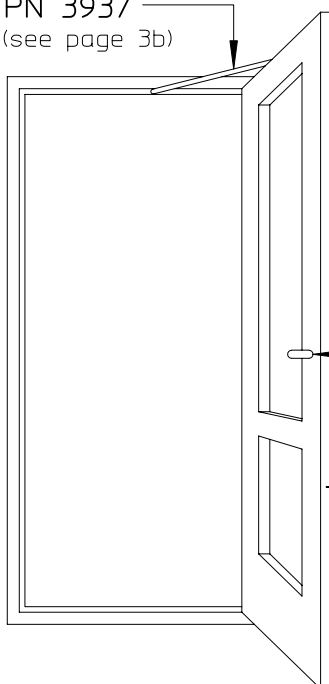


Door hinges
 PN 1182
 PN 1187
 PN 1197
 (see page 4a)

Door hinges
 PN 1183 adjustable
 (see page 4a)

The adjustable hinge is always fitted at the bottom, the two hinges at the top are guiding hinges.

Friction brake
 PN 3937
 (see page 3b)



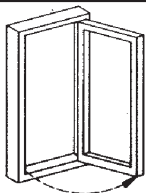
Handle

Espag. bolt

M118291-104

A/S PEDER NIELSEN BESLAGFABRIK
 Nørregade 25 . 9700 Brønderslev . Denmark
 Tel. +45 96 45 56 56 . Fax +45 96 45 56 57 (Sales +45 96 45 56 58)

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung Door



Combi 500 Door hinges

PN 1182

PN 1183

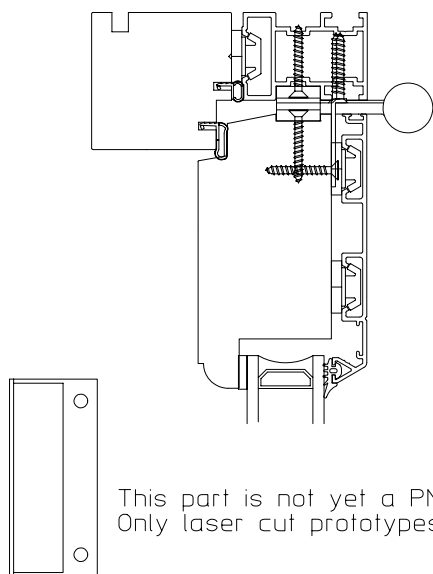
PN 1197

Timber/Alu

Page 4a

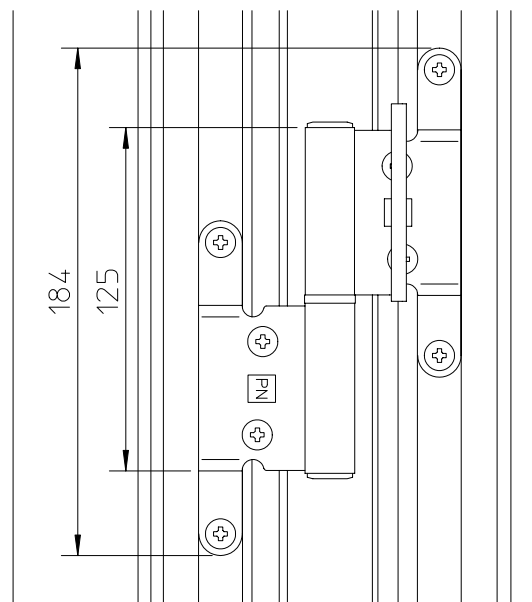
Latest issue 27.09.07

PN
 HARDWARE



This part is not yet a PN item.
 Only laser cut prototypes exists.

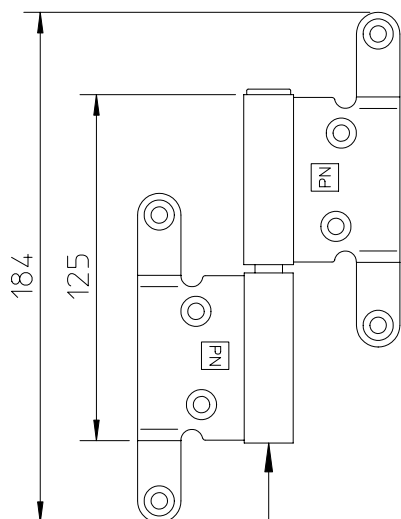
PN 1182



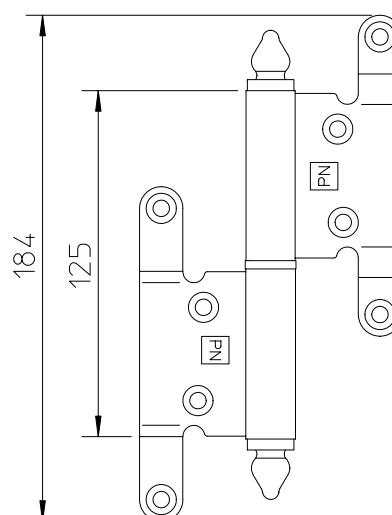
Frame

Door

PN 1183



PN 1197

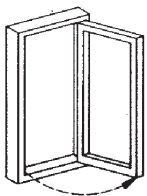


Adjustable in height and
 pin bearing using
 5 mm Allan key.

M118291-106

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PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung Door



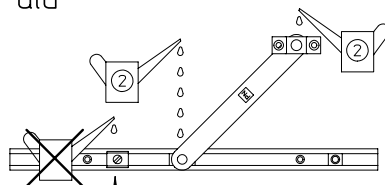
Timber/Alu

Page 4b

Latest issue 17.10.07

PN
 HARDWARE

Maintenance and lubrication of
 PN Combi 500 side
 hung butt hinges for doors
 for timber / alu

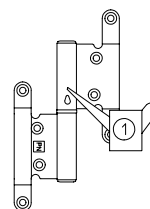
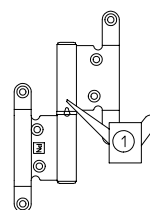
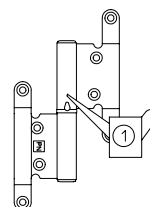


Frictionbrake

Following places to be lubricated
 at least once a year. If the gearing
 is placed in aggressive environment
 lubricate more often.
 Lubricate using acid free oil or alter-
 natively white vaselin.
 When dirty wash the gearing using
 common dish soap with neutral Ph
 value.

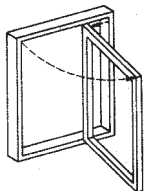
- 1: Hinges
- 2: Frictionbrake rivet points

The frictionbrake must not be
 lubricated.



M118291-121

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung Projecting

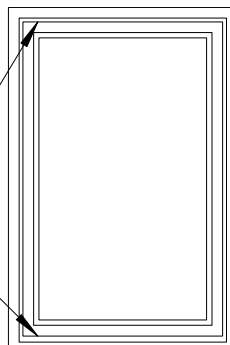


Timber/Alu

Page 5
 Latest issue 11.10.07

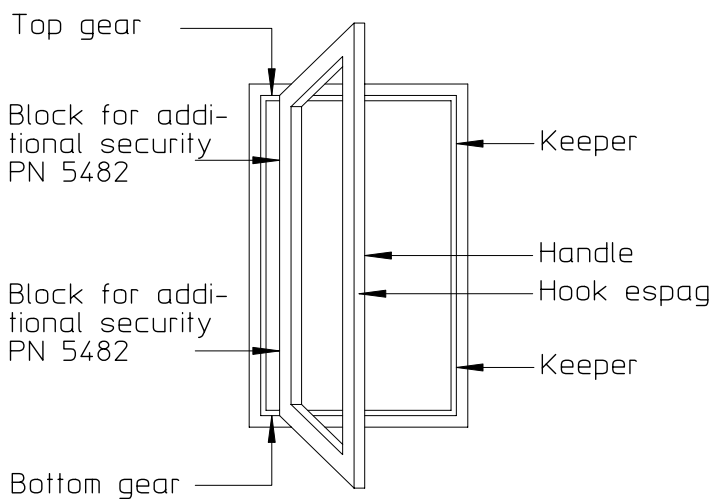
PN
 HARDWARE

Combi 500 Side hung projection
 PN 3958 (see page 5a)
 PN 3968 (see page 5b)



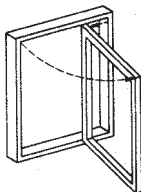
PN 3958 has no adjustable friction
 but sideways adjustment

PN 3968 has adjustable friction
 and sideways adjustment



M395991-101

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung Projecting



Timber/Alu

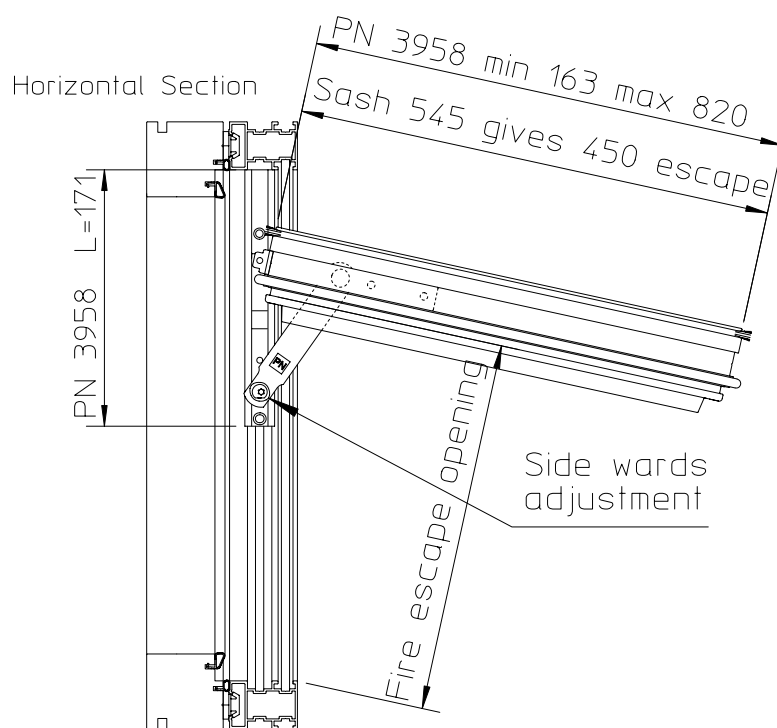
Page 5a
Latest issue 17.10.07

PN
HARDWARE

Combi 500 Side hung projecting
PN 3958

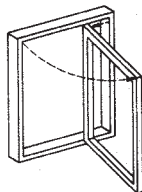
Note: PN 3958 has no
adjustment friction but
side wards adjustable

Top gearing shown



M395991-103

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Hung Projecting



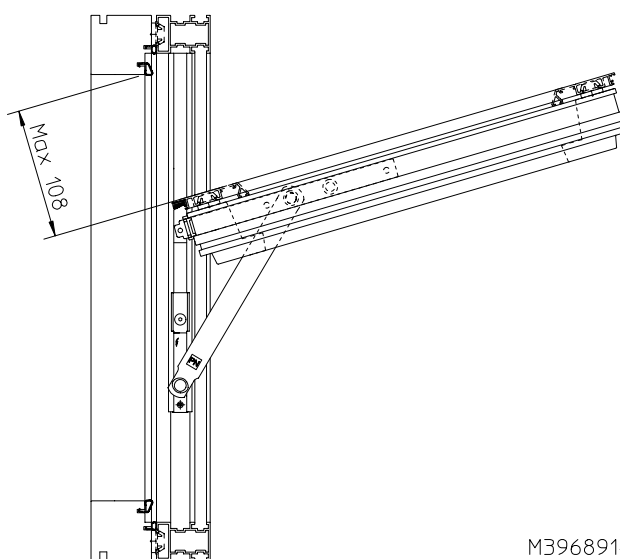
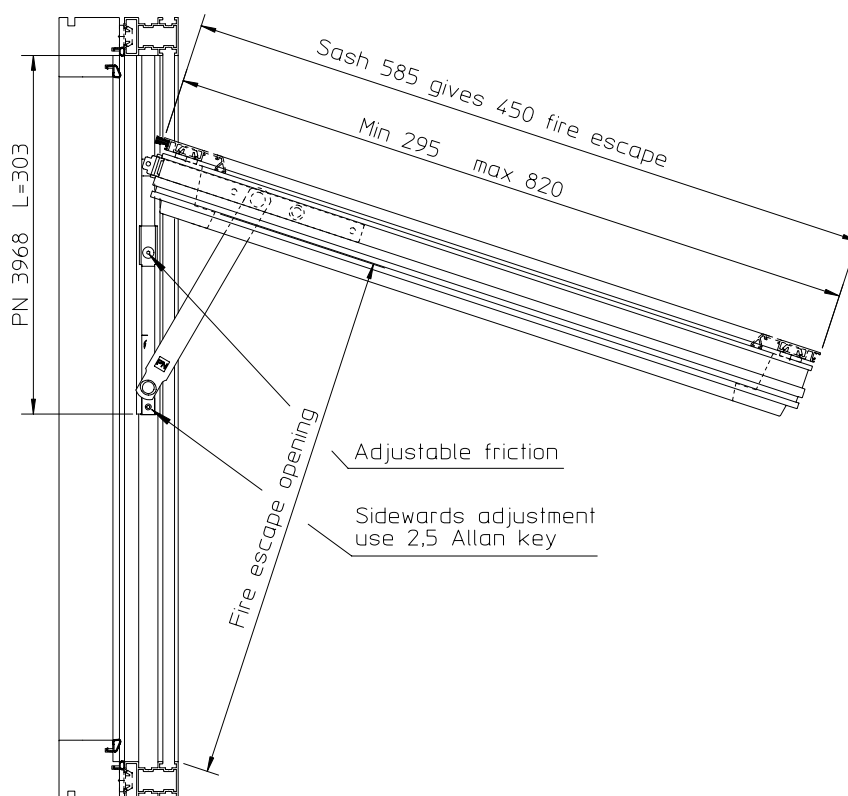
Timber/Alu

Page 5b

Latest issue 11.10.07

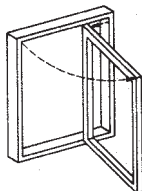
PN
HARDWARE

PN Combi 500 Side Hung Projecting
PN 3968

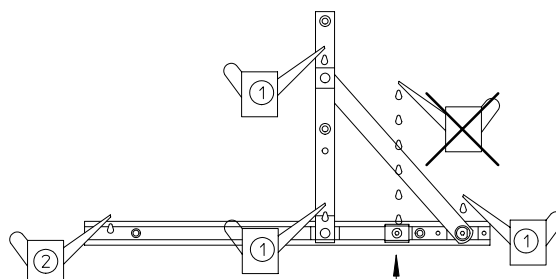


M396891-100

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Maintenance and lubrication of
 PN Combi 500 side hung
 projecting windows



Frictionbrake

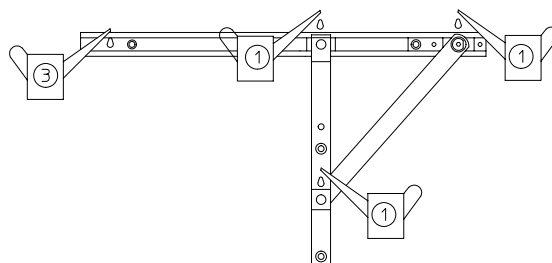
Following places to be lubricated
 at least once a year. If the gearing
 is placed in aggressive environment
 lubricate more often.

- 1: Side hung projecting hinges pivot points
- 2: Inside the alu-rail
- 3: Alu-bottom rail gliding surface

It is important to clean and lubricate
 the alu-bottom rail gliding surface as
 it is vital for the smooth acting of the
 gearing

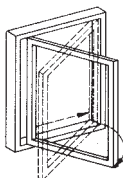
Lubricate using acid free oil or alter-
 natively white vaselin.
 When dirty, wash the gearing using
 common dish soap with neutral Ph
 value

Frictionbrake must not be lubricated



M391191-105

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Swing

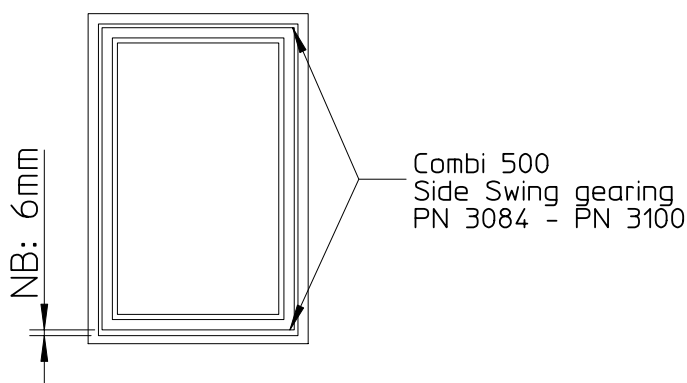


Timber/Alu

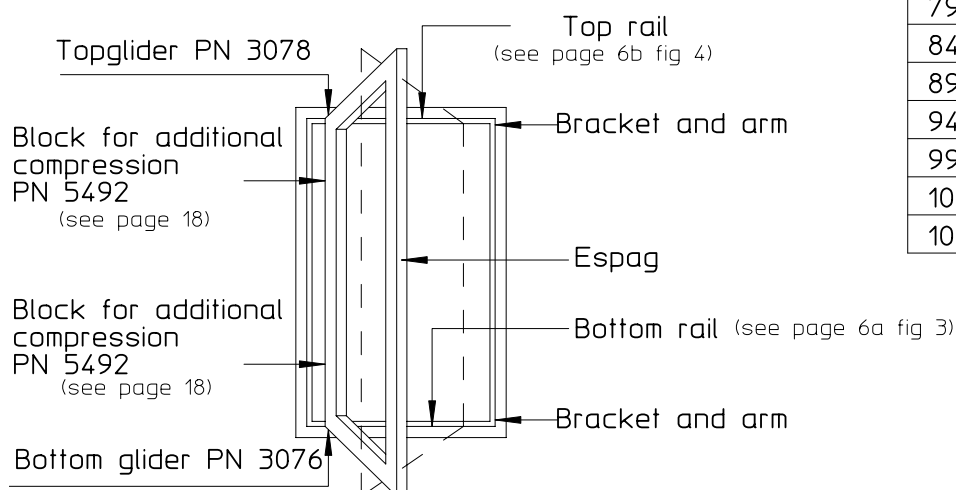
Page 6

Latest issue 11.10.07

PN
HARDWARE



Side Swing gearing	
Sash width	Use PN No
322-347	3084
348-397	3085
398-447	3086
448-497	3087
498-547	3088
548-597	3089
598-647	3090
648-697	3091
698-747	3092
748-797	3093
798-847	3094
848-897	3095
898-947	3096
948-997	3097
998-1047	3098
1048-1097	3099
1098-1122	3100



Top glider	PN 3078
Bottom glider	PN 3076

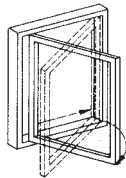
Top and bottom rails		
Sash width	Use PN No	Top-rail length mm
322-547	3080	532
548-797	3081	782
798-1047	3082	1032
1048-1122	3083	1107

Installing the window into the building:

In order to ensure performance of the PN Combi Side Swing Gear, it is essential to make a solid support, max distance between supports 200mm, at the cill. All forces from the weight of the sash will end here. Be sure the cill never bends. The window must be plumb and square.

M308491-121

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Side Swing



Timber/Alu

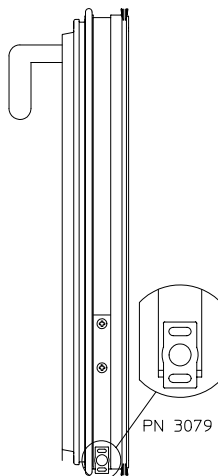
Page 6a

Latest issue 09.08.07

PN
HARDWARE

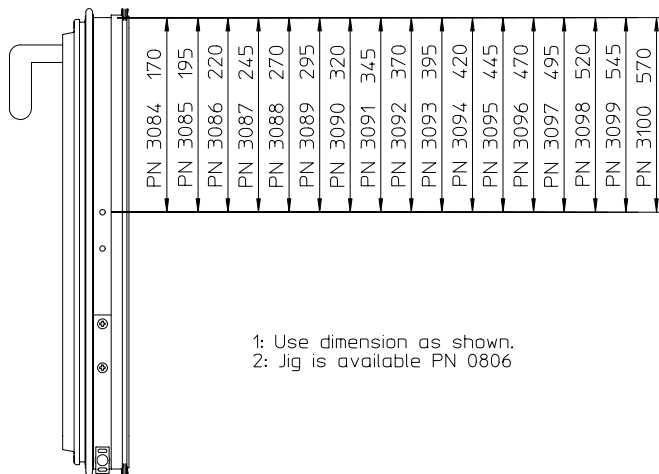
1

Fit bottom glider.



2

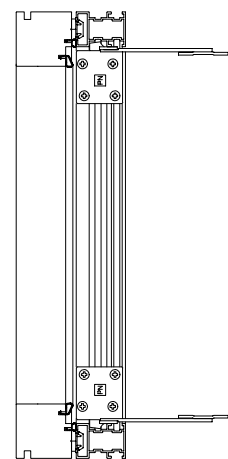
Mark holes for arms both top and bottom of sash.



1: Use dimension as shown.
 2: Jig is available PN 0806

3

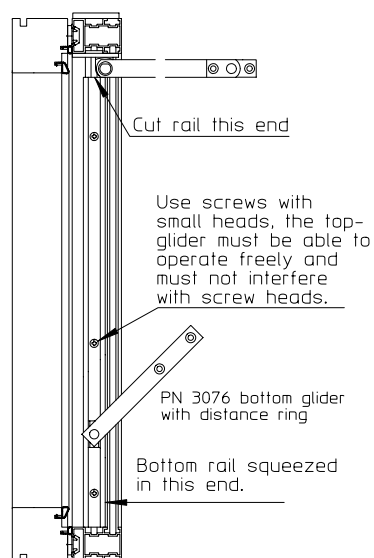
Fit arms at the frame at the handle side.



Vertical Section

4

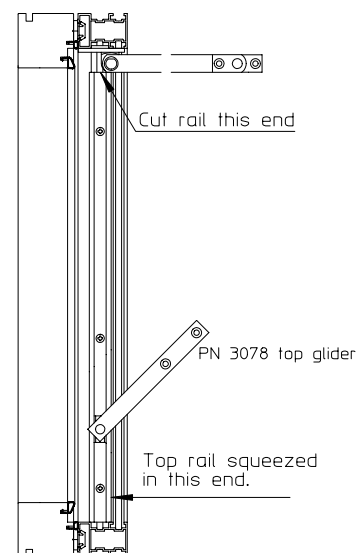
Fit bottom rail.



Horizontal section

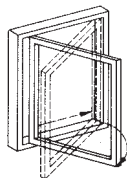
5

Fit top rail with topglider incl. If top rail must be cut do it in the end that is not squeezed. The squeezing is a built-in friction.



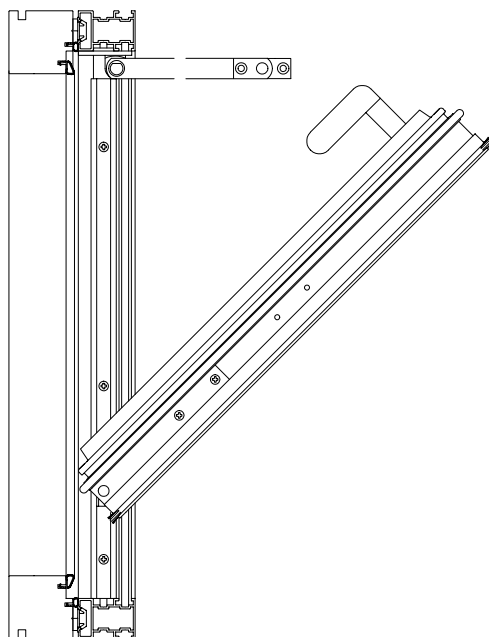
Horizontal Section

M308491-114



6

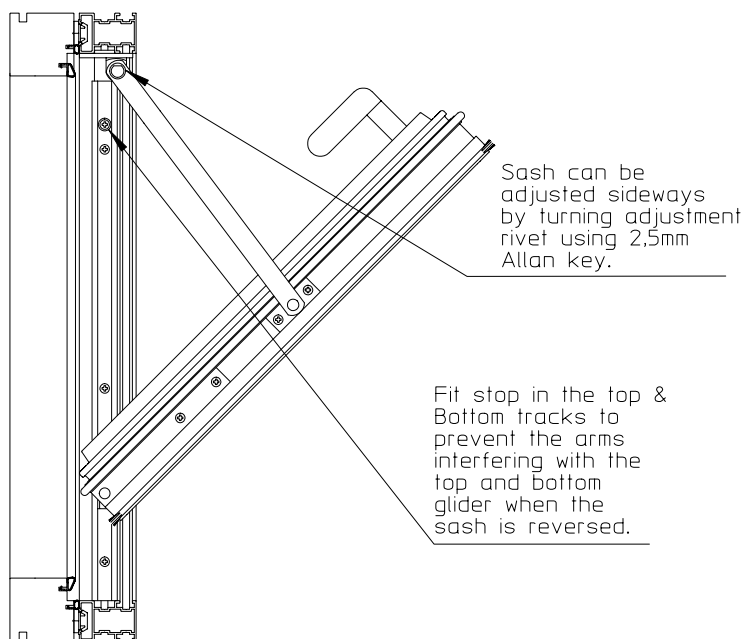
Fit the sash. Bottom glider to be mounted into the bottom rail. Sash to be tilted up to the top glider and fixed with screws.



Horizontal section

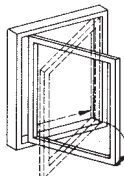
7

Fit arms in the pre-marked holes, see fig.2



Horizontal Section

M308491-115



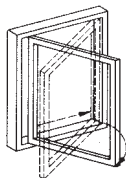
PN 3084 - 3100 Sizes and fire escape openings

- 1: Sash weight max 45 kg
- 2: Hinges to be fitted using the longest screws possible
- 3: The glass to be fitted correctly using the "toe and heel" glazing method

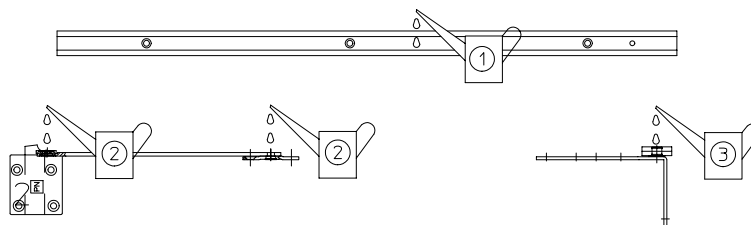
Sash height	1500					45	45	45	45	45	45	45
	1400					45	45	45	45	45	45	45
	1300					45	45	45	45	45	45	45
	1200					45	45	45	45	45	45	45
	1100					45	45	45	45	45	45	45
	1000					45	45	45	45	45	45	
	900					45	45	45	45	45		
	800					45	45	45	45			
	740					45	45	45				
	600					45	45					
	530					45						
	500											
Sash height	400											
	300											
		300	400	500	600	655	700	800	900	1000	1100	1200
		Sash width										

45 Will meet the fire escape regulation of min. 45 cm opening
 and HxW= min. 0,33 m2

M308491-103



Maintenance and lubrication of
PN Combi 500 side swing gearing
for timber / alu windows

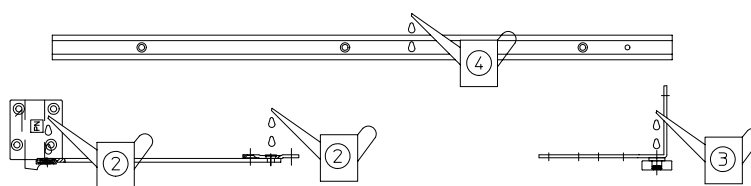


Following places to be lubricated at
least once a year. If the gearing is
placed in aggressive environment
lubricate more often.

- 1: Top alu-rail.
- 2: Armsystem rivet points.
- 3: Top- and bottom gliders rivet points.
- 4: Bottom rail gliding surface.

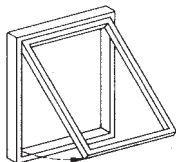
It is important to clean and lubricate
the gliding surface at the bottom rail
as it is vital for the smooth action of
the window.

When dirty wash the gearing using
common dish soap with neutral Ph
value.



M308491-122

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Hung

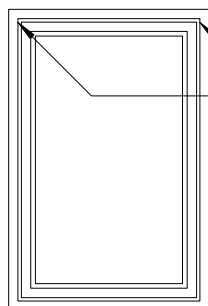


Timber/Alu

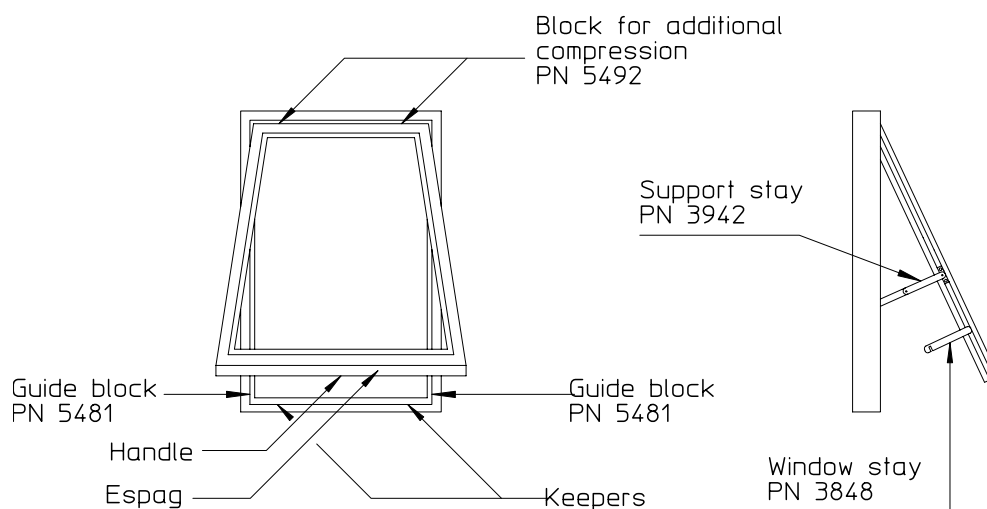
Page 7

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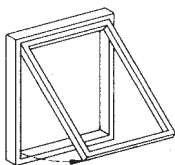
PN
 HARDWARE



Top Hung
 PN 3052

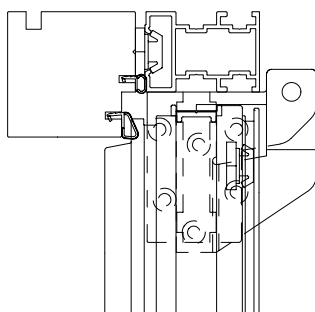


M305291-110



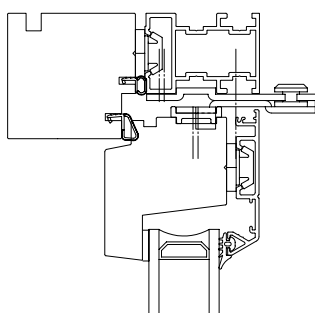
Combi 500 Top Hung
PN 3052

Vertical section

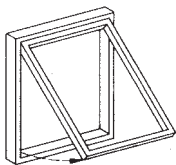


Sash can only be
dismounted in
horizontal position

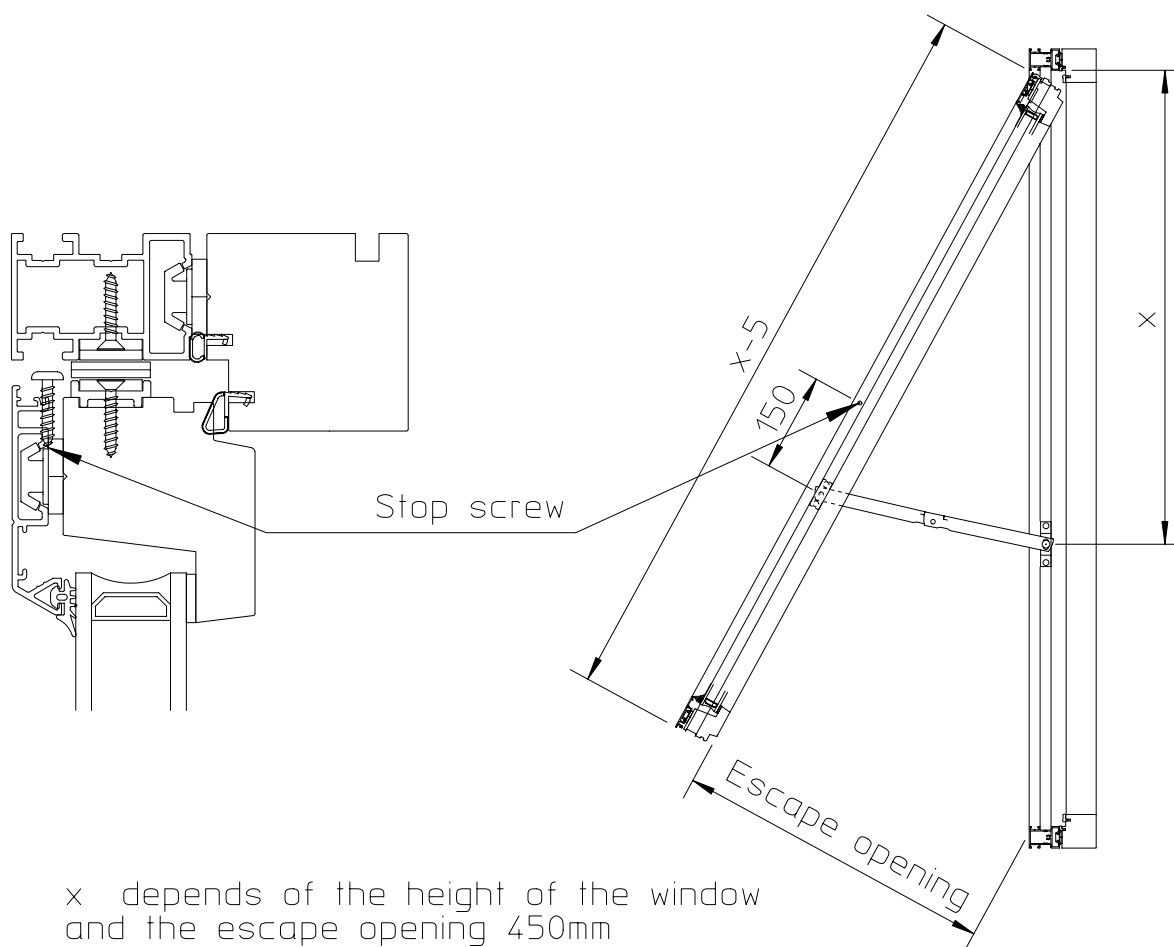
Horizontal section



M305291-111



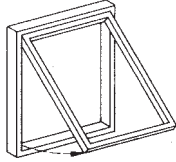
PN Combi 500 Support Stay
 PN 3942 length 350mm



x depends of the height of the window
 and the escape opening 450mm

M394291-101

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Hung



Timber/Alu

Page 7d
 Latest issue 09.08.07

PN
 HARDWARE

PN 3052 + 3074 Sizes and fire escape

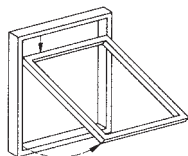
- 1: Sash weight max. 45 kg
 2: Hinges to be fitted using the longest screws possible

Sash height	1500					45	45	45	45	45	45	45							
	1400					45	45	45	45	45	45	45							
	1300					45	45	45	45	45	45	45							
	1200					45	45	45	45	45	45	45	45	45					
	1100					45	45	45	45	45	45	45	45	45	45				
	1000					45	45	45	45	45	45	45	45	45	45	45	45		
	900					45	45	45	45	45	45	45	45	45	45	45	45	45	
	800					45	45	45	45	45	45	45	45	45	45	45	45	45	45
	700					45	45	45	45	45	45	45	45	45	45	45	45	45	45
	600					45	45	45	45	45	45	45	45	45	45	45	45	45	45
	500																		
	400																		
	300																		
	200																		
		200	300	400	500	550	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
		Sash width																	

45 Will meet the fire escape regulation of min. 45 cm opening and HxW= min 0,33 m2

M305291-104

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Hung Projecting

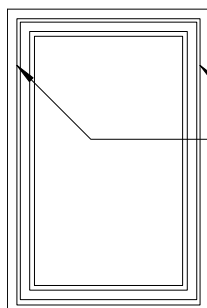


Timber/Alu

Page 8

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PN
 HARDWARE



Combi 500 Top Hung Projecting hinges

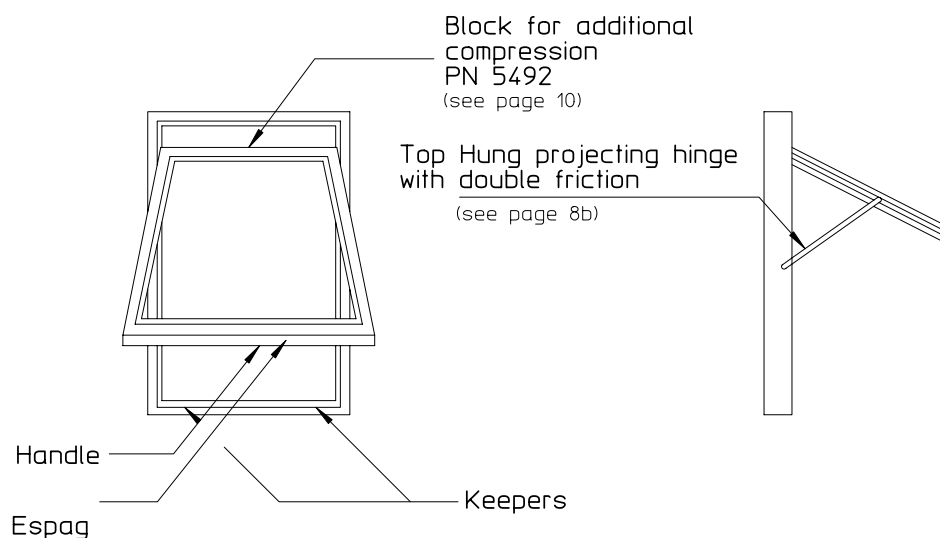
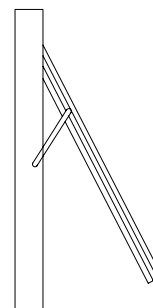
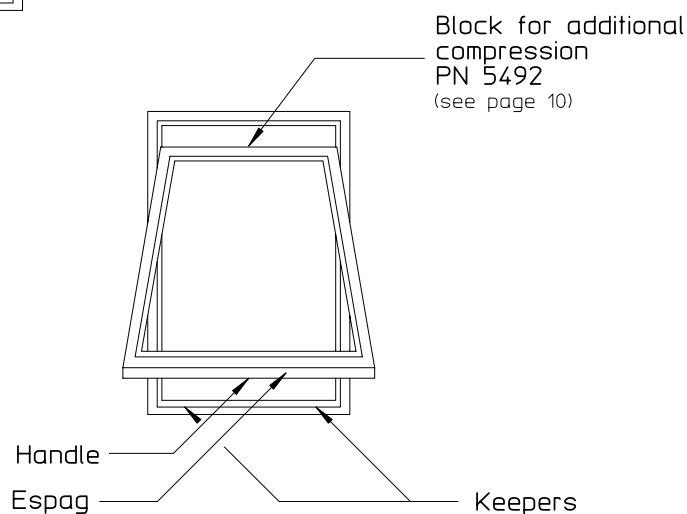
PN 3925 max sash weight 45 kg (see page 8a)

PN 3926 max sash weight 45 kg (see page 8a)

PN 3927 max sash weight 75 kg (see page 8a)

Combi 500 Top Hung Projecting hinge with double friction

PN 3928 max sash weight 45 kg (see page 8c)

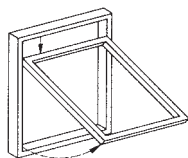


M392591-116

For enhanced security use:
 Support hardware PN 3943

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PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Hung Projecting



Timber/Alu

Page 8a

Latest issue 09.08.07

PN
 HARDWARE

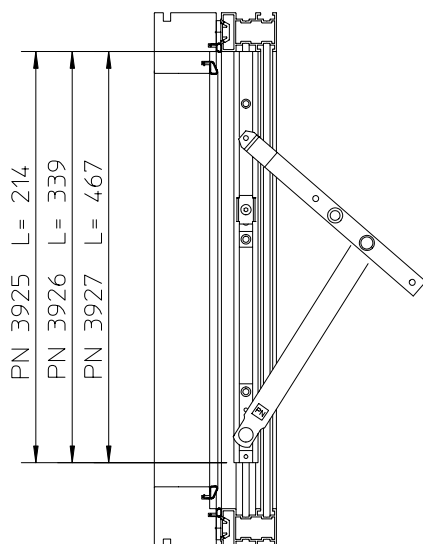
Combi 500 Top Hung Projecting

PN 3925

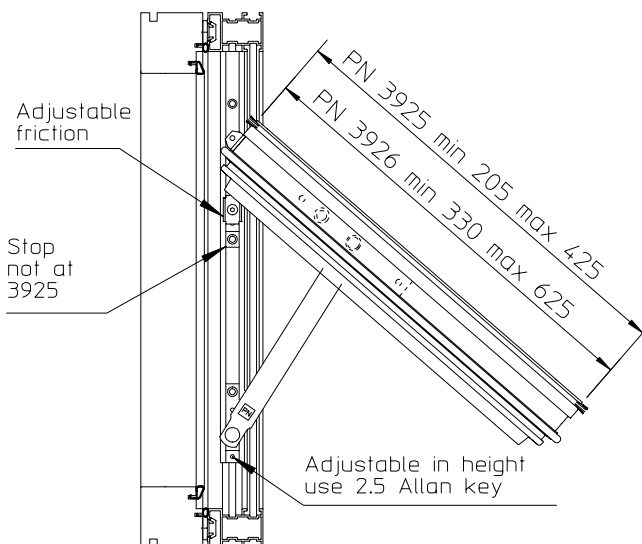
PN 3926

PN 3927

Vertical section

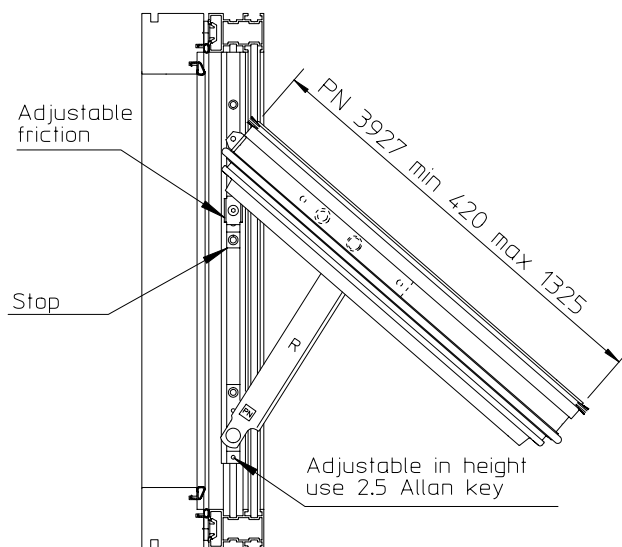


Vertical section



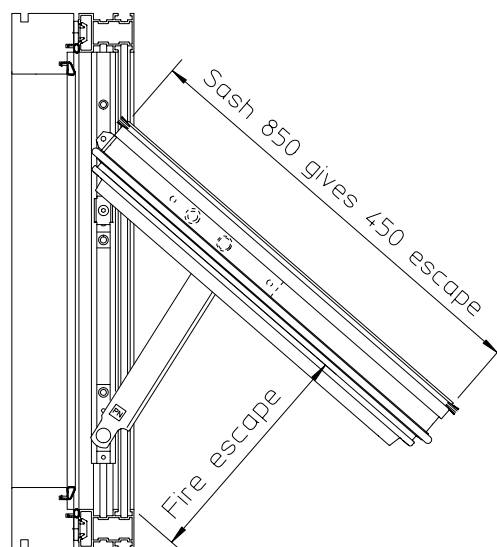
NB: PN 3927 is handed
 R/L stamped in the arms

Vertical section



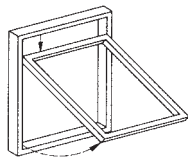
Fire escape opening

Vertical section



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PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Hung Projecting



Timber/Alu

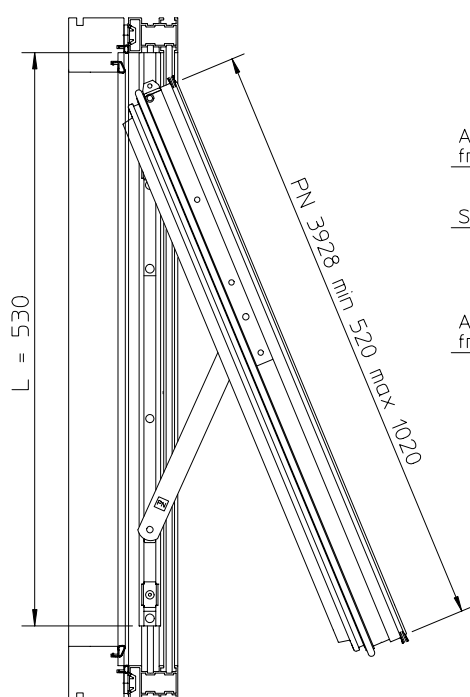
Page 8b

Latest issue 09.08.07

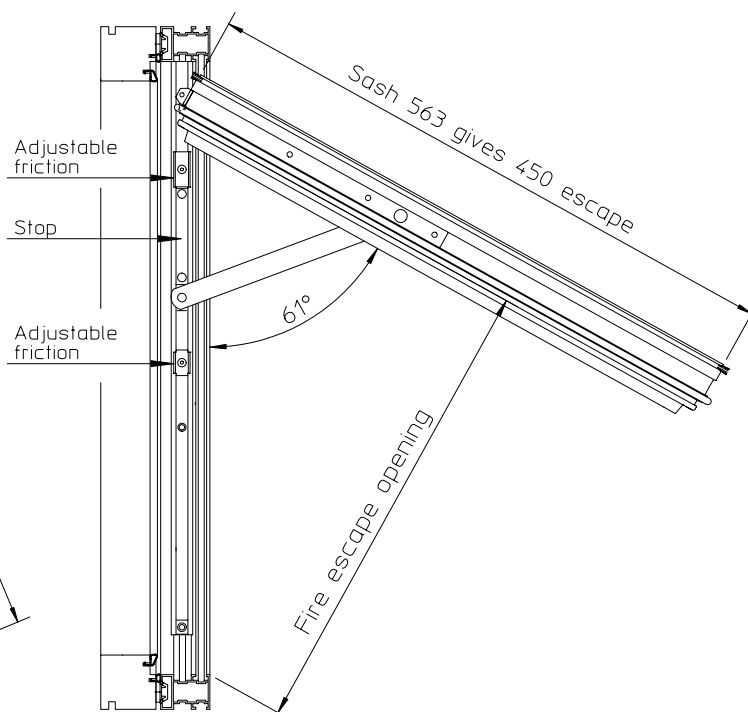
PN
 HARDWARE

Combi 500 Top Hung Projecting with double friction
 PN 3928

Vertical section



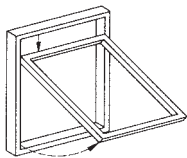
Vertical section



M392891-106

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PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Hung Projecting



Timber/Alu

Page 8c

Latest issue 09.08.07

PN
HARDWARE

PN 3925 + 3926 + 3927 Sizes and fire escape

1: Sash weight for 3925 + 3926 max. 45 kg

2: Sash weight for 3927 max. 75 kg

3: Hinges to be fitted using the longest screws possible

1300				45	45	45	45	45	45	45	45	45	45	45
1215				45	45	45	45	45	45	45	45	45	45	45
1100					45	45	45	45	45	45	45	45	45	45
1000					45	45	45	45	45	45	45	45	45	45
900						45	45	45	45	45	45	45	45	45
820							45	45	45	45	45	45	45	
700														
600														
500														
400														
300														
200														
Sash height														
	200	300	400	475	600	700	800	900	1000	1100	1200	1300	1400	
	Sash width													

45 Will meet the fire escape regulation of min. 45 cm opening
and HxW= min. 0,33 m2

PN 3928 Sizes and fire escape

1: Sash weight max. 45 kg

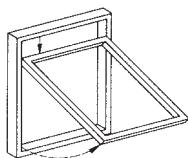
2: Hinges to be fitted using the longest screws possible

1300			45	45	45							
1200			45	45	45	45						
1100			45	45	45	45	45					
1000			45	45	45	45	45	45				
890			45	45	45	45	45	45	45	45		
800				45	45	45	45	45	45	45	45	
700					45	45	45	45	45	45	45	
600						45	45	45	45	45	45	
500												
400												
300												
200												
Sash height												
	200	300	475	500	600	700	800	900	1000	1100		
	Sash width											

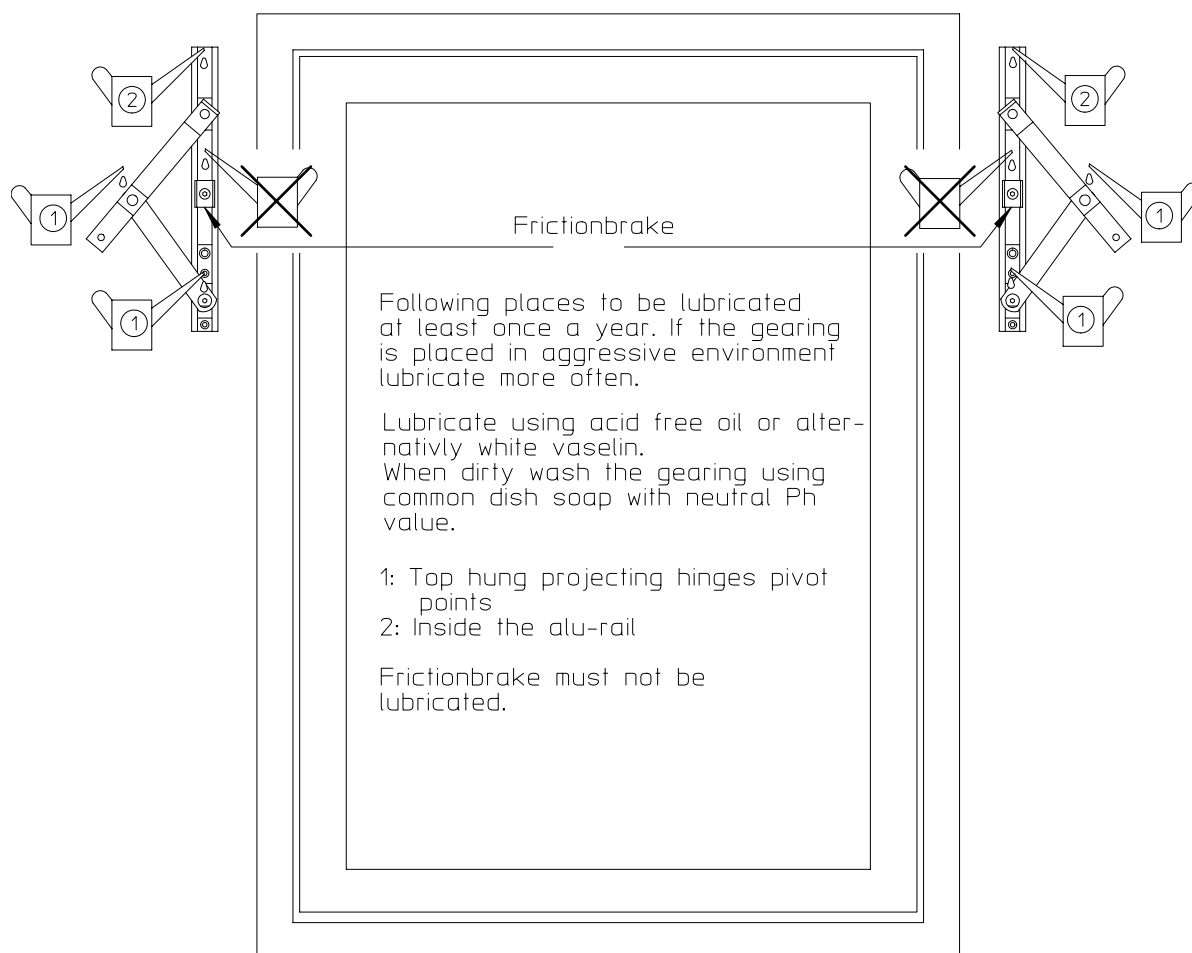
45 Will meet the fire escape regulation of min. 45 cm opening
and HxW= min. 0,33 m2

M392591-102

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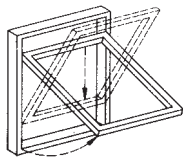


Maintenance and lubrication of
PN Combi 500 top hung
projecting gearing for
timber / alu windows



M395191-105

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Swing

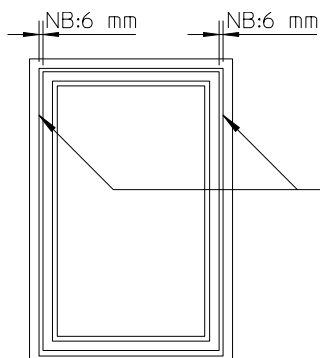


Timber/Alu

Page 9

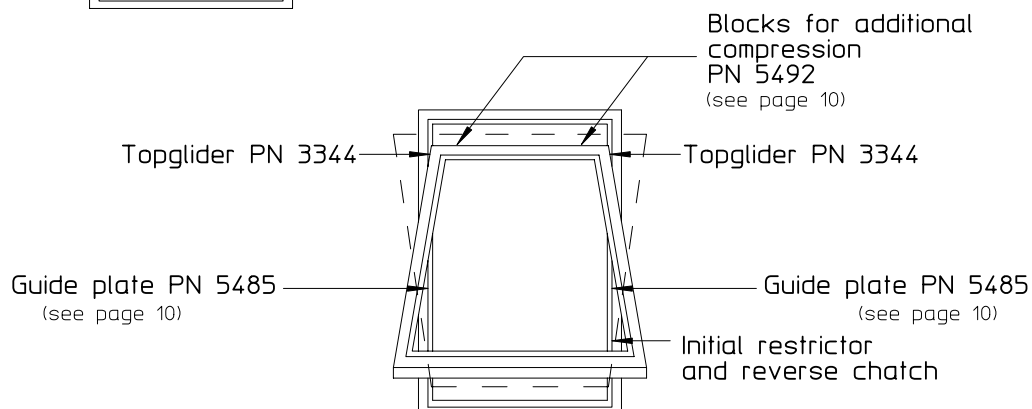
Latest issue 17.10.07

PN
HARDWARE



Note: See page 9a for further PN Combi 500 Top Swing details

Combi 500 Top Swing gear
 PN 3324 - 3336



Blocks for additional
 compression
 PN 5492
 (see page 10)

Topglider PN 3344

Topglider PN 3344

Guide plate PN 5485
 (see page 10)

Guide plate PN 5485
 (see page 10)

Initial restrictor
 and reverse catch

Combi 500 Top Swing Gear			
PN no.	Sash height mm Min. Best Max.	F	Gear length mm
3324	270-320-369	145	335
3325	370-420-469	195	435
3326	470-520-569	245	535
3327	570-620-669	295	635
3328	670-720-769	345	735
3329	770-820-869	395	835
3330	870-920-969	445	935
3331	970-1020-1069	495	1035
3332	1070-1120-1169	545	1135
3333	1170-1220-1269	595	1235
3334	1270-1320-1369	645	1335
3335	1370-1420-1469	695	1435
3336	1470-1520-1569	745	1535

Combi 500 Top Swing Alu. Rails	
PN no.	Alu. length mm
3364	335
3365	435
3366	535
3367	635
3368	735
3369	835
3370	935
3371	1035
3372	1135
3373	1267
3374	1335
3375	1435
3376	1535

A window with sash height in Min. gives 43mm overswing in reversed position.

A window with sash height in Best gives 6mm underswing in reversed position.

A window with sash height in Max. gives 42mm overswing in reversed position.

The above is based on PN suggested profiles.
 If the frame is produced out of larger timber it will benefit overswing positive.

Jig for F-dim is available PN 0807

Initial restrictor and reverse catch	
PN no.	Sash height mm
3340	470-1569

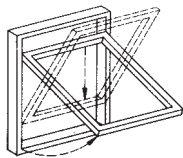
Topglider
PN no.
3344

Centre boss for euro groove
PN no.
3338

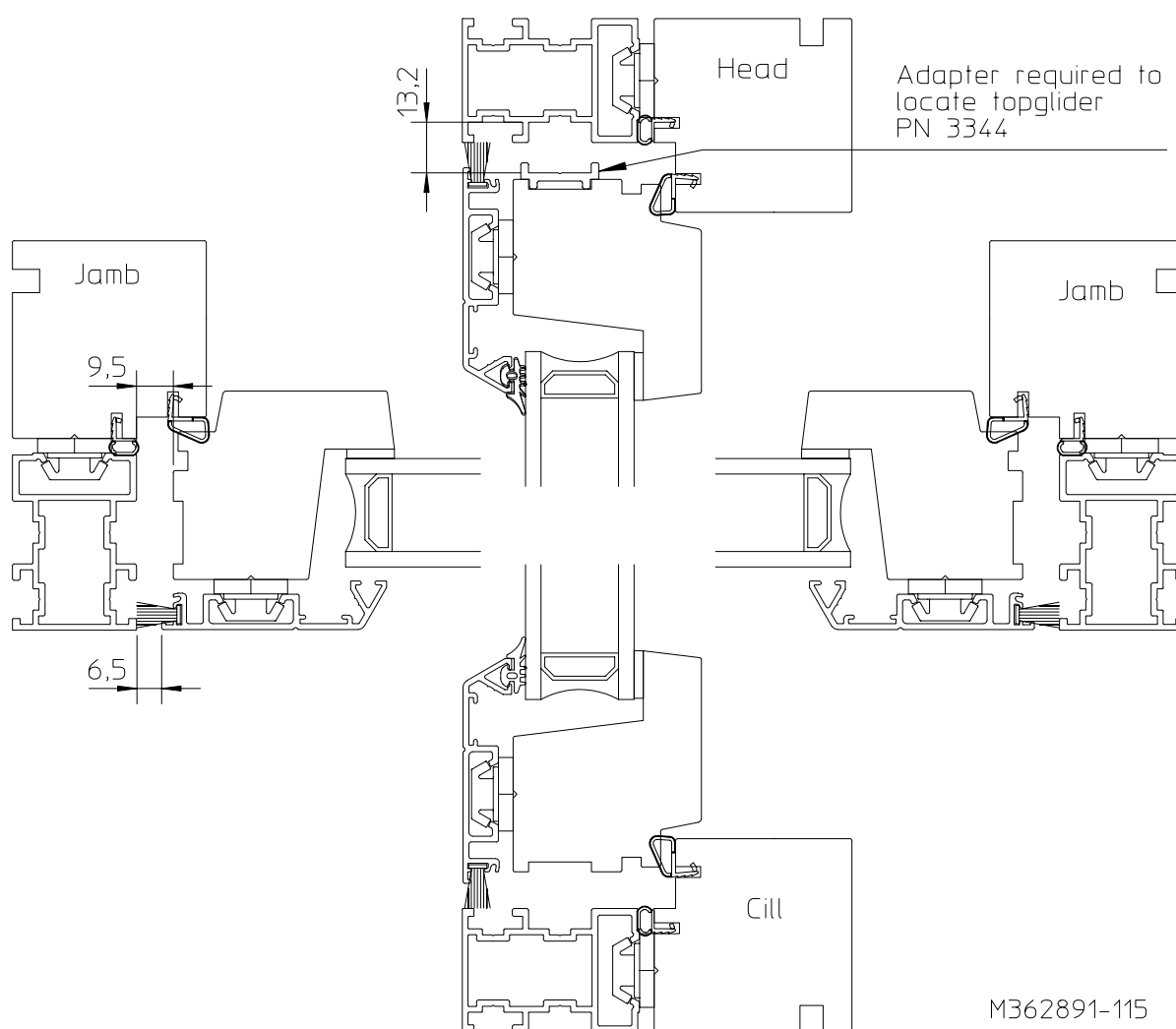
For enhanced security use:
 Support hardware PN 3943

M332491-145

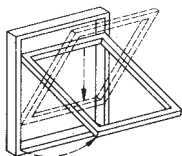
A/S PEDER NIELSEN BESLAGFABRIK
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Tel. +45 96 45 56 56 . Fax +45 96 45 56 57 (Sales +45 96 45 56 58)



AM Profiles for PN Combi Top Swing gearing



PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Swing



Timber/Alu

Page 9b

Latest issue 17.10.07

PN
HARDWARE

Figure 1

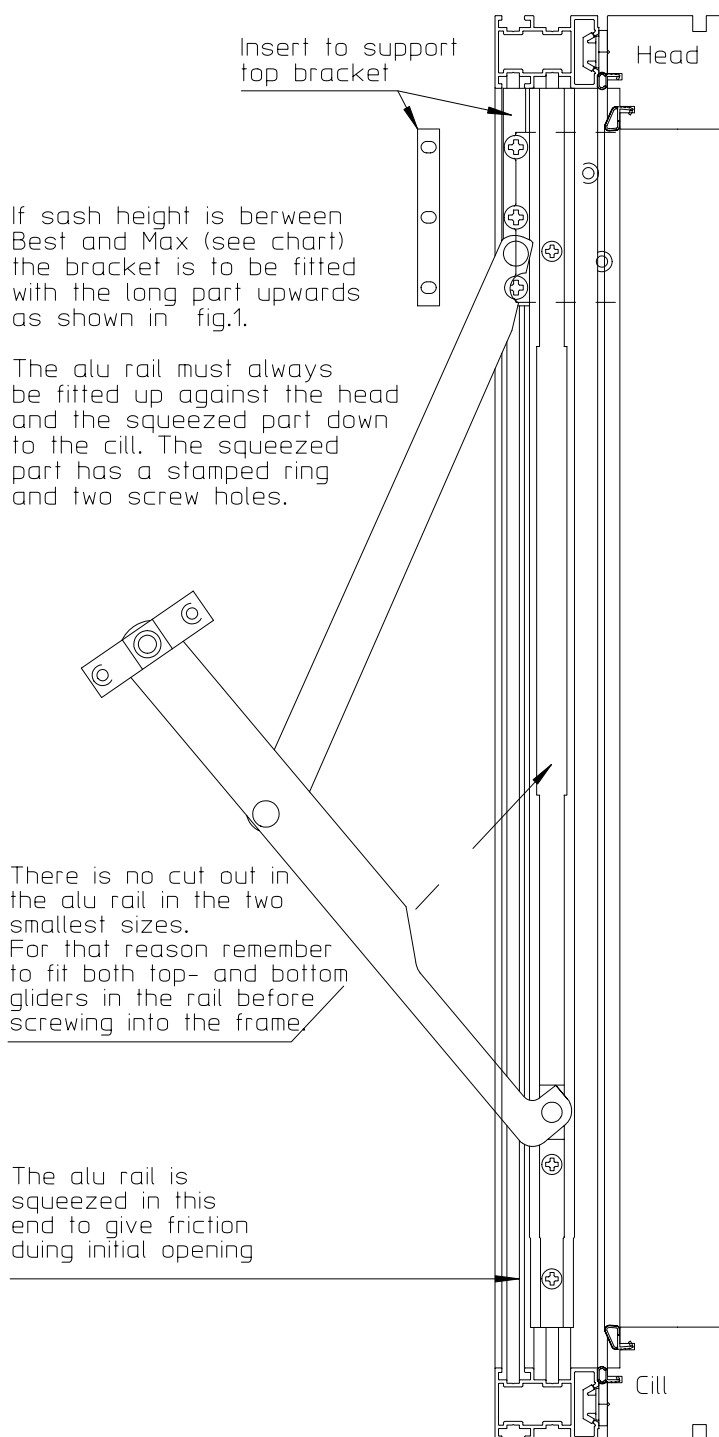
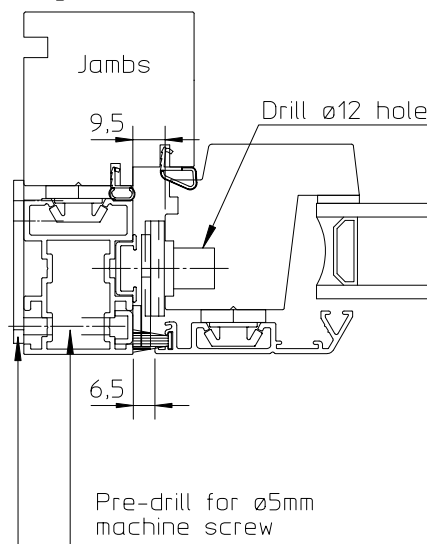


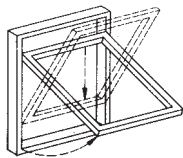
Figure 2



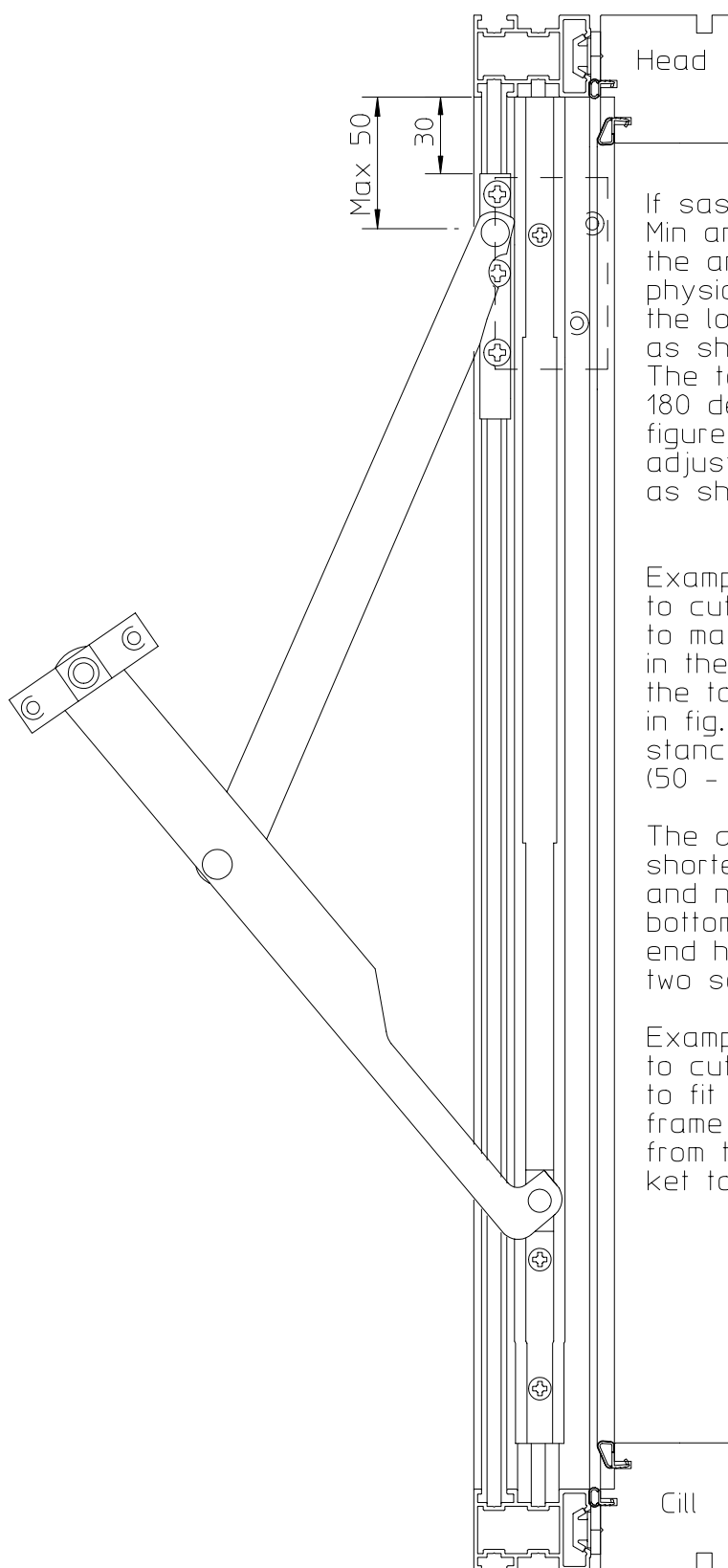
Back plate to be fitted from sash height 670mm upwards.

It is important to fit the back plates as all forces from the weight of the sash is gathered at the top brackets. If the back plates are not fitted there is a risk that the timber will split and the sash falling out.

M332491-146



Figur 3



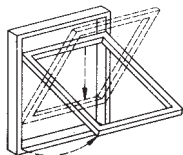
If sash height is between Min and Best (see chart) the arm system cannot physically be fitted with the long part upwards as shown in fig.1. The top bracket is rotated 180 degrees as shown in figure 3 and can be adjusted up to 50mm as shown

Example: If it is necessary to cut the alu rail 20mm to make it fit the groove in the frame you must turn the top bracket as shown in fig. 3 and have the distance to the head 30mm (50 - 20).

The alu rail must always be shortened at the top end and never from the squeezed bottom end. The squeezed end has a stamped ring and two screw holes.

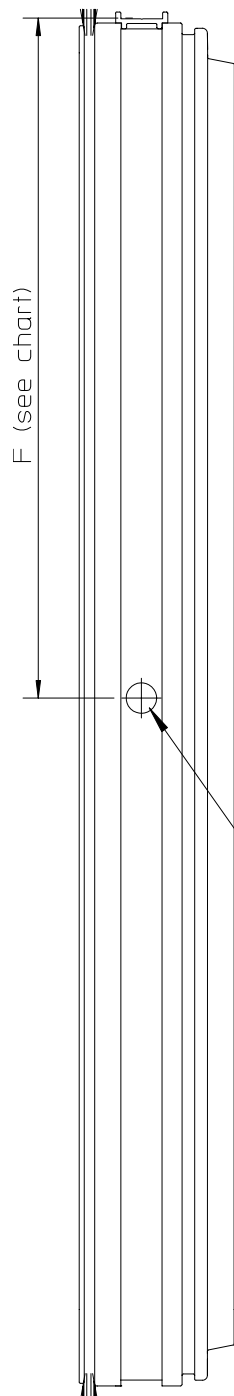
Example: If it is necessary to cut the alu rail by 40mm to fit it into the groove in the frame you must have 10mm from the short end of the bracket to the head (50 - 40)

M332491-147



Sash profile

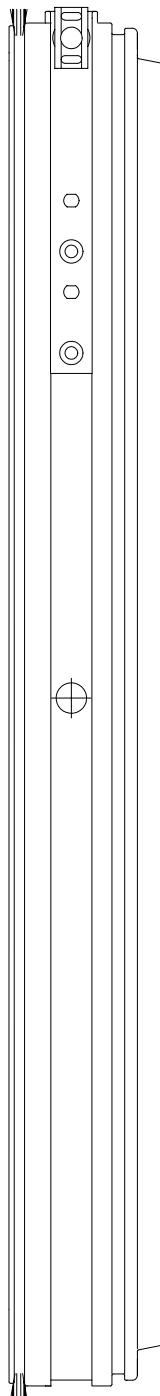
Figure 4



F-dimension must be reduced if the alu rail has been cut to suit the frame part.
 F-dimension must be reduced by the same amount as the alu rail has been cut.

Example: If the alu rail has been shortened by 20 mm and the arm system moved 20 upward then the F-dimension must be reduced by the same 20 mm

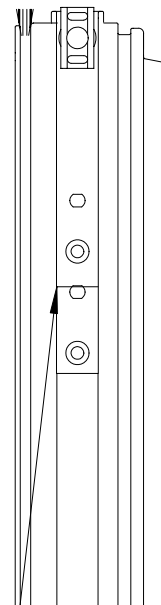
Figure 6



Fit topglider PN 3344 as shown except for small windows where the topgliders already has been fitted into the alu rail in the frame

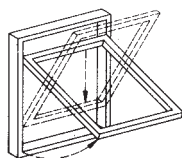
Making small sashes it must be necessary to cut topgliders here or else it will interfere with the brackets of the arm systems.

Figure 7



M332491-148

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Swing



Timber/Alu

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PN
 HARDWARE

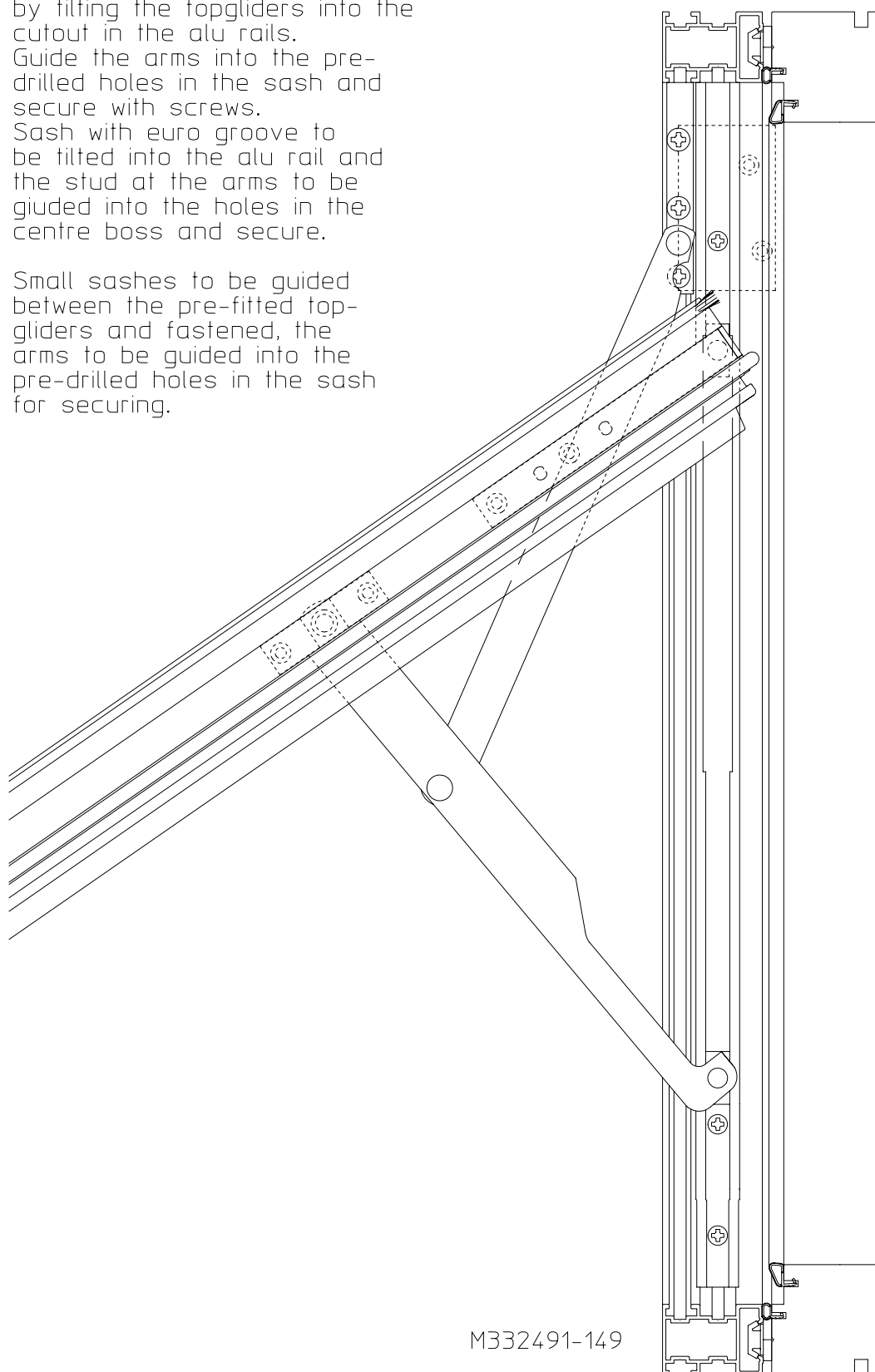
Sash to be fitted into the frame by tilting the topgliders into the cutout in the alu rails.

Guide the arms into the pre-drilled holes in the sash and secure with screws.

Sash with euro groove to be tilted into the alu rail and the stud at the arms to be guided into the holes in the centre boss and secure.

Small sashes to be guided between the pre-fitted topgliders and fastened, the arms to be guided into the pre-drilled holes in the sash for securing.

Figure 8



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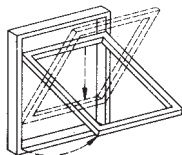
PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Swing

Timber/Alu

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Latest issue 11.10.07

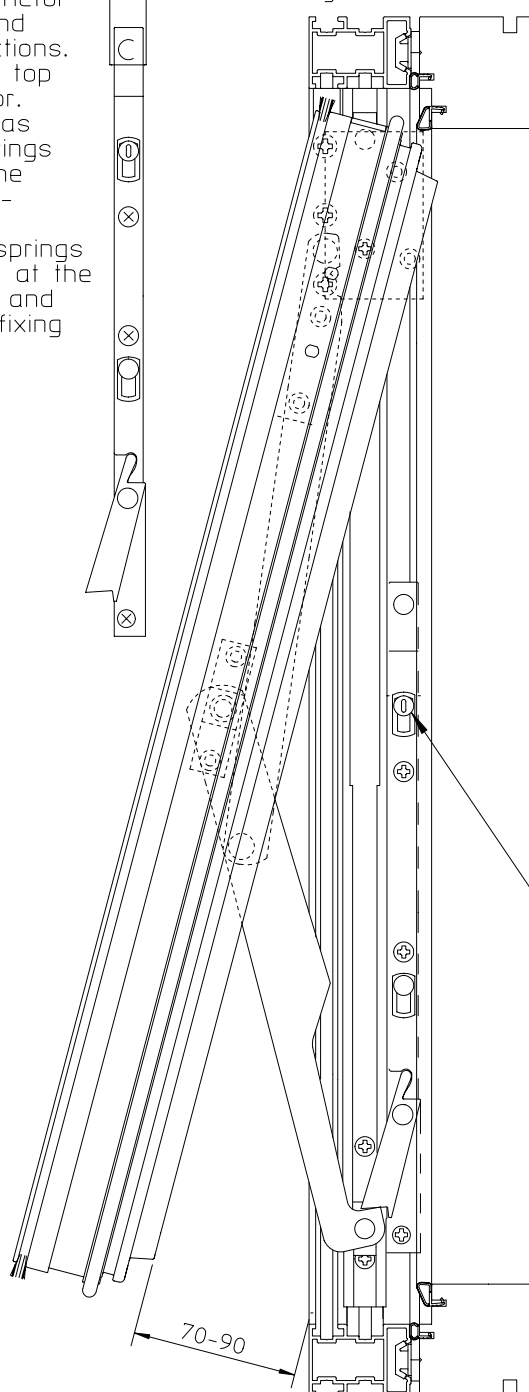
PN
 HARDWARE



PN 3341

In some cases it can be difficult to get the restrictor working free and without obstructions. Fit PN 3341 on top of the restrictor. The PN 3341 has two built-in springs which forces the restrictor downwards. Compress the springs by approx 5mm at the top of the bar and secure with a fixing screw

Figure 9



Open the sash to the required restricted position (Normally 70-90mm)

The restrictor PN 3340 to be fitted at the left hand side of the window (viewed from the inside) up against the alu rail. The claw at the restrictor must catch the steel part of the arm system as shown.

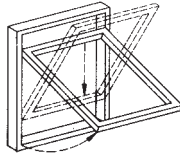
Be sure the restrictor is able to move unimpeded and free.

If the window must comply with British Standard BS 6375: Part 2, and the sash is greater than 970 mm there must be fitted a right hand restrictor as well. The right hand restrictor must be fitted 5 mm higher than the left hand one.

The top rivet has a slot for a screwdriver, by turning this rivet 1/4 rotation to lock the restrictor. To unlock turn the rivet back to the start position.

M332491-150

PN COMBI 500
AM Profiles' Design-5
Special Profiles
Top Swing



Timber/Alu

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Latest issue 09.08.07

PN
HARDWARE

PN 3324 - 3336 Sizes and fire escape openings

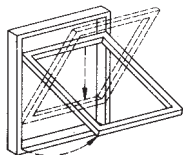
1: Sash weight max 45 kg

2: Hinges to be fitted using the longest screws possible

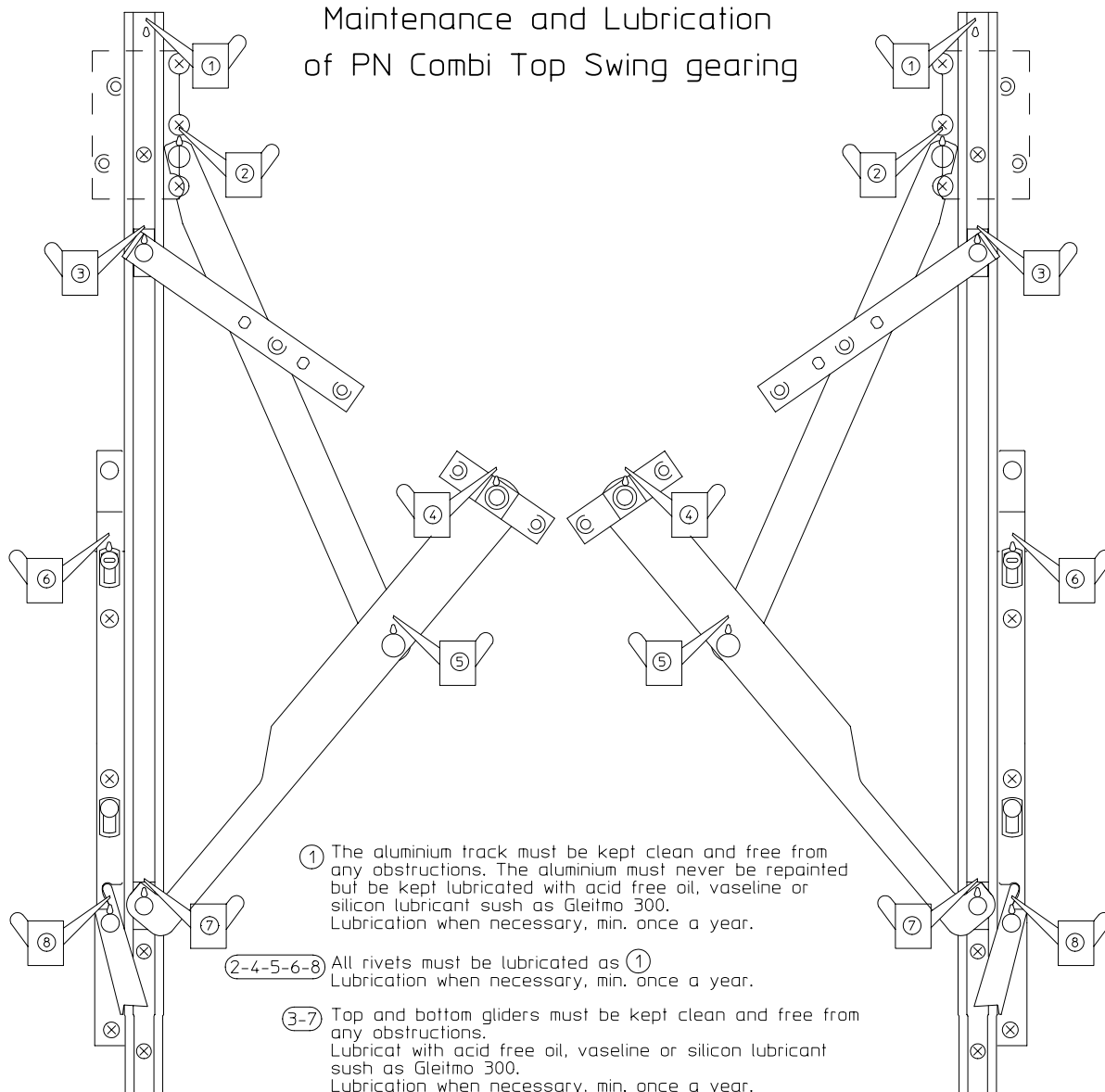
Sash height	1600				45	45	45	45	45	45	45	45	45					
	1520				45	45	45	45	45	45	45	45	45					
	1420				45	45	45	45	45	45	45	45	45	45				
	1320				45	45	45	45	45	45	45	45	45	45	45	45	45	45
	1220				45	45	45	45	45	45	45	45	45	45	45	45	45	45
	1120				45	45	45	45	45	45	45	45	45	45	45			
	1020				45	45	45	45	45	45	45	45	45	45				
	920					45	45	45	45	45	45	45	45					
	820						45	45	45	45	45	45						
	735							45	45	45	45							
	720																	
	620																	
	520																	
	420																	
	270																	
	200	300	400	475	500	600	740	800	900	1000	1100	1200	1300	1400	1500			
	Sash width																	

45 Will meet the fire escape regulation of min 45 cm opening and HxW= min 0,33 m2

M332491-102



Maintenance and Lubrication of PN Combi Top Swing gearing



① The aluminium track must be kept clean and free from any obstructions. The aluminium must never be repainted but be kept lubricated with acid free oil, vaseline or silicon lubricant such as Gleitmo 300. Lubrication when necessary, min. once a year.

②-④-⑤-⑥-⑧ All rivets must be lubricated as ①. Lubrication when necessary, min. once a year.

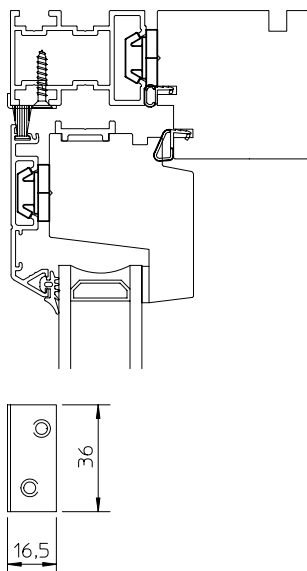
③-⑦ Top and bottom gliders must be kept clean and free from any obstructions. Lubricate with acid free oil, vaseline or silicon lubricant such as Gleitmo 300. Lubrication when necessary, min. once a year.

When dirty wash the gearing using common dish soap with neutral Ph value.

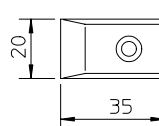
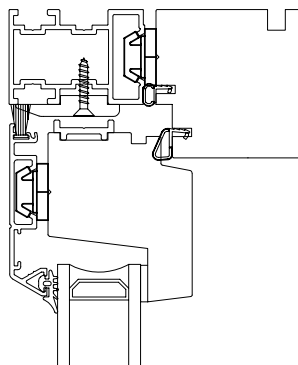
Note: Frequency of lubrication must be increased in corrosive areas.

M332491-101

Combi 500 Guide plate
PN 5485



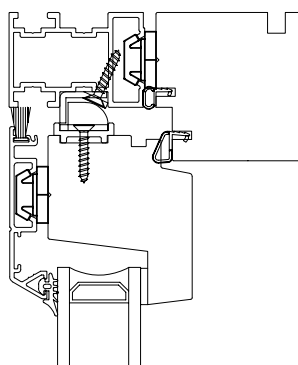
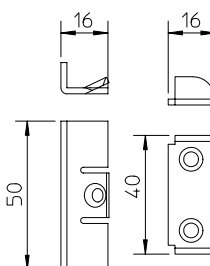
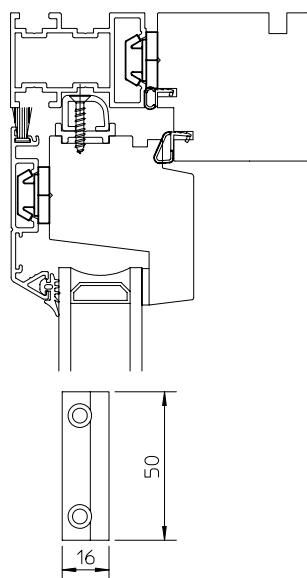
Combi 500 Guide block
PN 5481



Reduces excessive sideways movement. Replaces Avoids sash to be pushed sideways

Combi 500 Support hardware
To be used for BS 7950
PN 3943

Combi 500 Block for additional compression
PN 5492



For additional compression on the hinged stile of a large windows

M306191-104