



Mk1 Shootbolt-Espagnolette

TECHNOLOGY IN MOTION

SHOOTBOLT-E

For high security



- **Designed for profiles with eurogrooves.**
- **Fast fit assembly with a minimum of components.**
- **Profile designated striker plates with a Night Vent position.**
- **Adjustable length shootbolt throw.**
- **Passive shootbolt for security purposes only.**
- **Compression is achieved by adjustable mushroom bolts, on sash rebate sizes over 400 mm.**
- **Small lockcase prep size for maximum profile strength.**
- **Available in 20 and 22 mm backsets, with 7.7, 9.0 and 10.5 mm high mushroom bolts.**
- **Mushroom and shootbolt striker plates interlock for maximum security.**
- **Shootbolt striker plates are designed to act as anti jemmy devices.**
- **Total lockcase depth is only 7 mm more than backset.**
- **Tested to 7.4Kn, more than double the current requirements of BS7950:1997.**

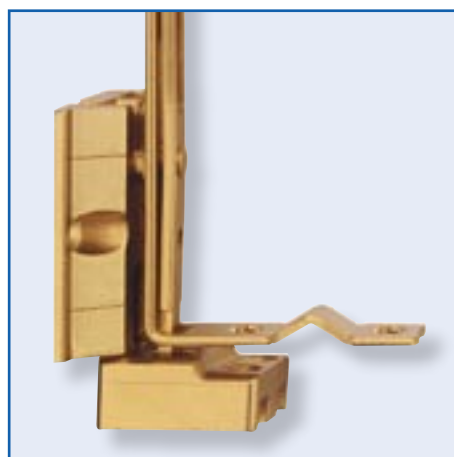
MACO shootbolt espagnolettes for casement windows incorporate all the benefits of safety and security expected of modern window technology in today's environment.

MACO shootbolt espagnolettes have been vigorously tested for security and performance

above the requirements of industry standards.

For performance they have been endurance tested to 40,000 operations and have been salt spray tested for 500 hours by the BBA.

BBA assessment report No. 1469



Espagnolettes

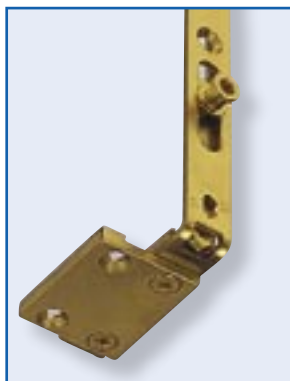
Security Windows.



Accessories

Stabilizing Plates.

Stabilizing plates help to increase the strength of the corner weld (not required on all profile systems).



Hinge Protectors.

Interlocking bolts are used to protect the hinges when under attack.



Locking Handles.

Locking handles are recommended for security windows. The MACO Monaco handle is available in various finishes and spindle lengths.



Extension Pieces.

Extension pieces can be added so that the handle can be fitted below the centre of the sash.



(all dimensions in mm)

Reverse Action Drive Gear		
Silver N [±]	Yellow N [±]	Backset
11262	13128	20
11263	13129	22
57177	28213	20 without cover plate
57178	28214	22 without cover plate
57175	10228	20 + cover holder
57176	10229	22 + cover holder

Shootbolt Extension Pieces									
7.7 mm Mushroom		9.0 mm Mushroom		10.5 mm Mushroom		Size	Sash Rebate Size	Mush. Per. Extension	
Silver N [±]	Yellow N [±]	Silver N [±]	Yellow N [±]	Silver N [±]	Yellow N [±]				
58177	28215	58177	28215	58177	28215	Gr. 0	320 – 400	–	
58160	28610	58161	28611	58157	50916	Gr. 1	401 – 800	1	
58162	28612	58162	28613	58158	50917	Gr. 2	801 – 1100	2	
58164	28614	58165	28615	58159	50918	Gr. 3	1101 – 1400	2	



MACO-GROUP

MACO-FITTINGS

TECHNOLOGY IN MOTION

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Order No. 49637 – Date: January 1999

Alteration – Date: May 2003

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Maco Mk1 Shootbolt Espagnolette



**Independently Tested by the
BBA
British Board of Agreement
Who have Given a life Expectancy of
25 Years**

Maco Mk1 Shootbolt Espagnolette



www.securedbydesign.com

**Licensed under the Police Preferred
Specification
SECURED BY DESIGN
(SBD)**

**Tested to BS7950:1997
(Security Standard)**

Maco Mk1 Shootbolt Espagnolette



High quality materials.

Up to 4 adjustable mushroom locking points.

Adjustable throw steel shootbolts.

Metal striker plates.

Interlocking corner striker plates.

10 Year product warranty.

**Tested up to 7.6 Kn
(Bs7950 requires only 3 Kn).**

40,000 life cycle operations.

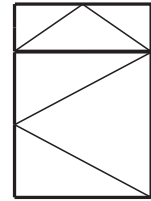
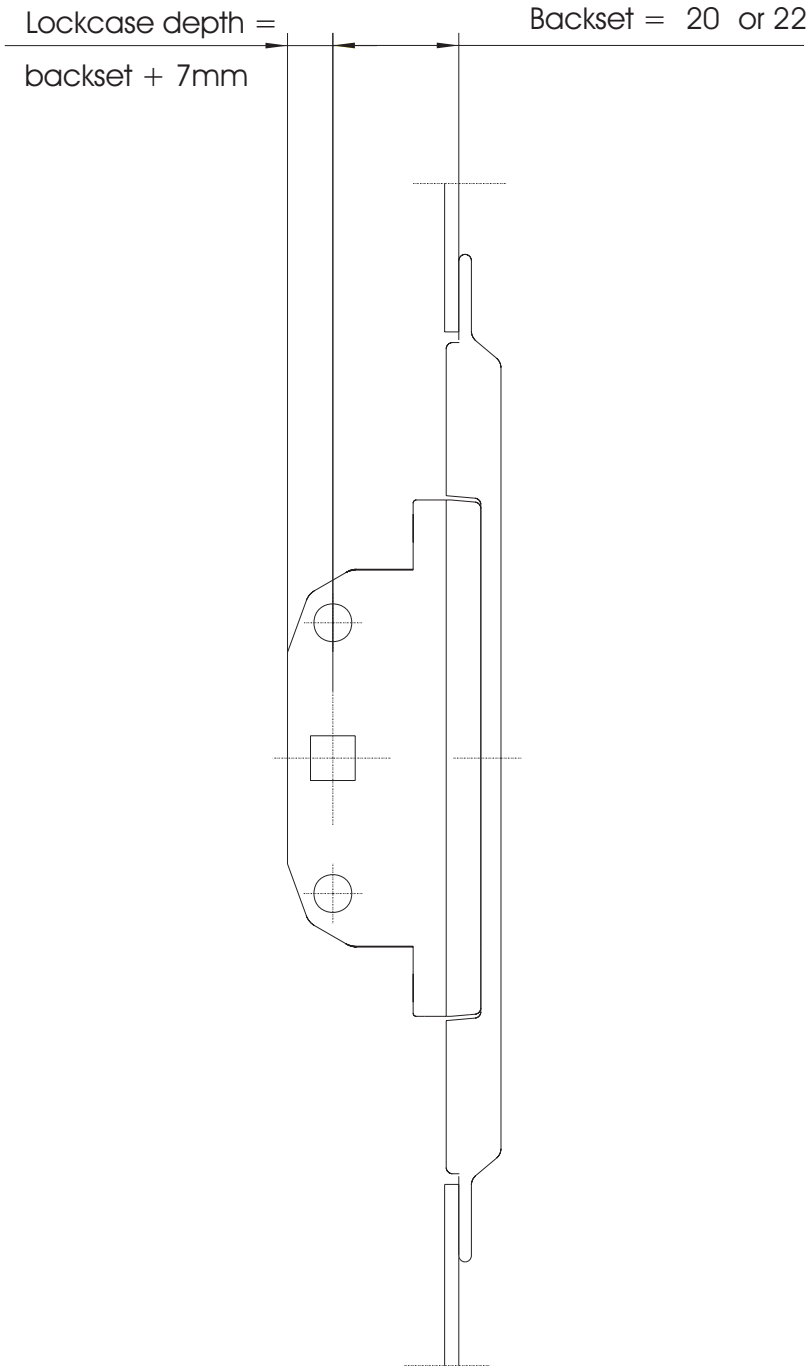
500 Hours salt spray resistance.

**Profile specific striker plates for greater
strength and security.**

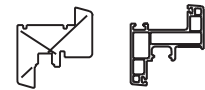
Membership to the Maco Secure Scheme



Mk1 Shootbolt Espagnolette



MACO Espagnolette Fittings

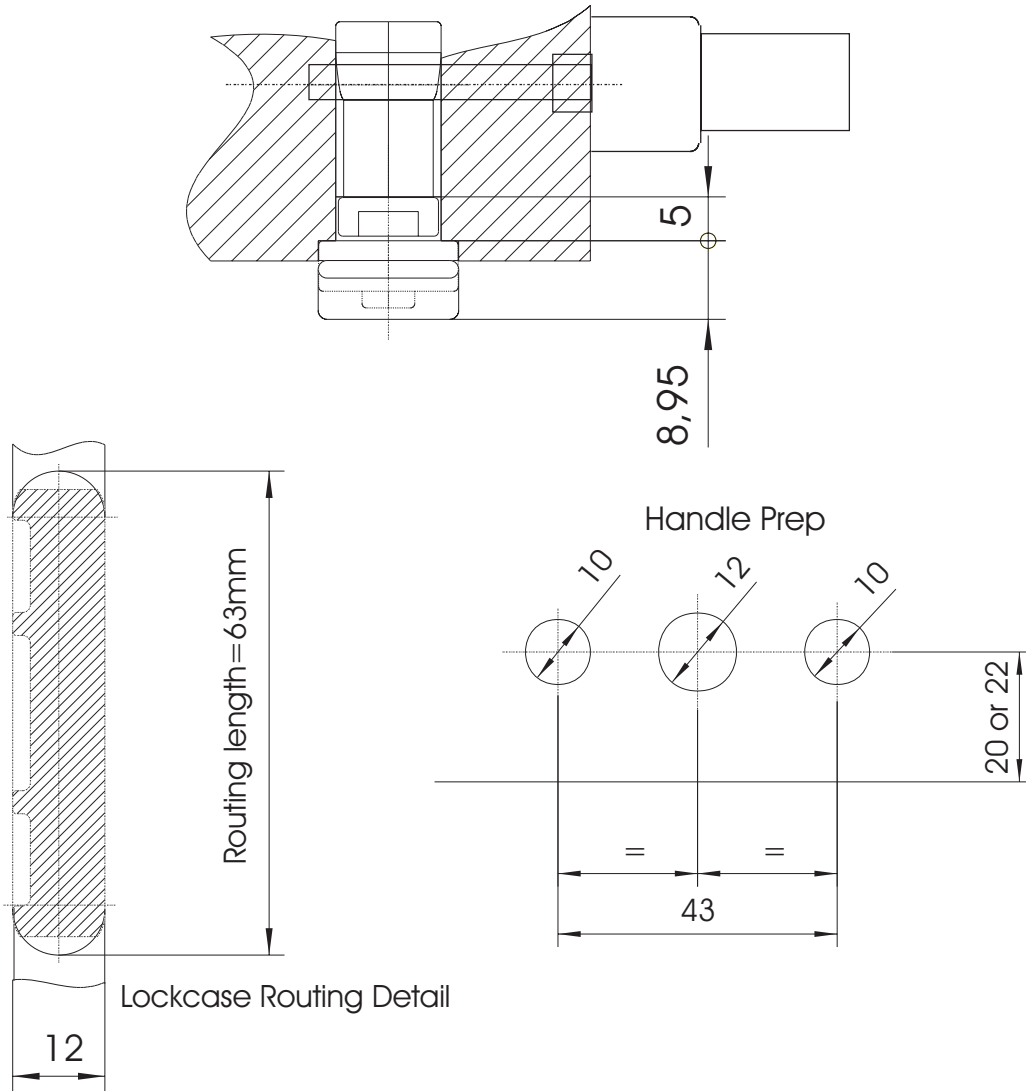


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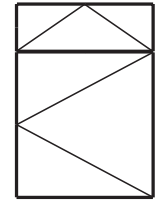
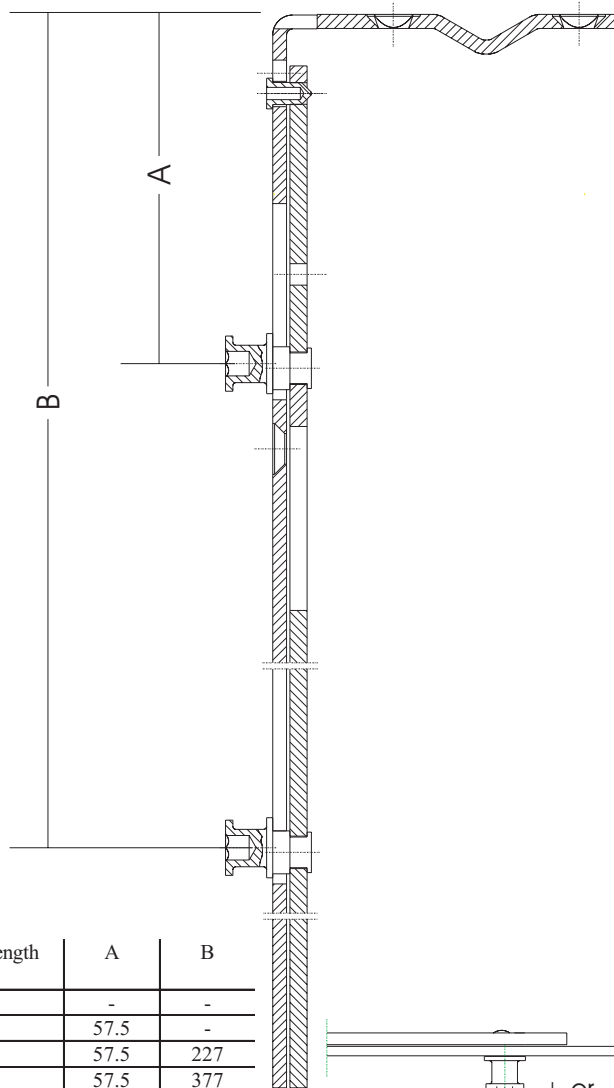


Yellow	Silver	BS	Description
13128	11262	20	Reverse action drive gear with cover plate
13129	11263	22	Reverse action drive gear with cover plate
10228	57175	20	Reverse action drive gear with cover holders and cover plate
10229	57176	22	Reverse action drive gear with cover holders and cover plate
28213	57177	20	Reverse action drive gear without cover plate
28214	57178	22	Reverse action drive gear without cover plate
28088		20	Reverse action drive gear with cover holders without cover plate
28089		22	Reverse action drive gear with cover holders without cover plate
32335			Cover Plate

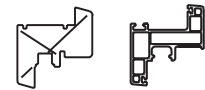
Mk 1 Shootbolt Espagnolette



Mk 1 Shootbolt Espagnolette Extension Pieces



MACO Espagnolette
Fittings



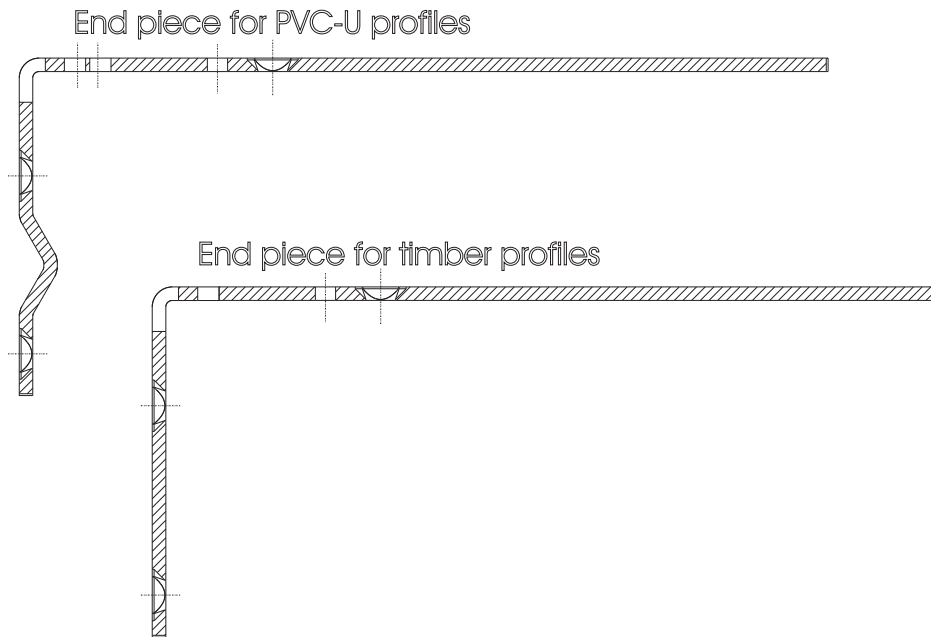
Date: 12.10.00

Size	Faceplate Length (mm)	A	B
Gr. 0	131.8	-	-
Gr. 1	356	57.5	-
Gr. 2	492	57.5	227
Gr. 3	642	57.5	377

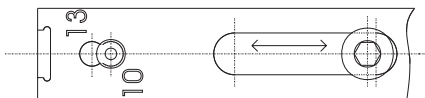


Size	Sash Reabate Size (mm)	Mushrooms Per Extension						
			Yellow	Silver	Yellow	Silver	Yellow	Silver
PVC-U								
Gr. 0	320 - 400	-	28215	58177	28215	58177	28215	58177
Gr. 1	401 - 800	1	28610	58160	28611	58161	50916	58157
Gr. 2	801 - 1100	2	28612	58162	28613	58163	50917	58158
Gr. 3	1101 - 1400	2	28614	58164	28615	58165	50918	58159
-	250 mm Extension Piece	1	10194	11804	10195	101530	-	-
-	400-600 mm Extension Piece	1	206436	206508	206437	206509	-	-
Timber								
Gr. 0	320 - 400	-	52800	58170	52800	58170	52800	58170
Gr. 1	401 - 800	1	52801	58171	52804	58174	-	-
Gr. 2	801 - 1100	2	52802	58172	52805	58175	-	-
Gr. 3	1101 - 1400	2	52803	57173	52806	58176	-	-
-	250 mm Extension Piece	1	10194	11804	10195	101530	-	-
-	400-600 mm Extension Piece	1	206436	206508	206437	206509	-	-

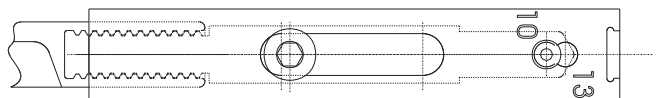
Mk 1 Shootbolt Espagnolette Extension Pieces



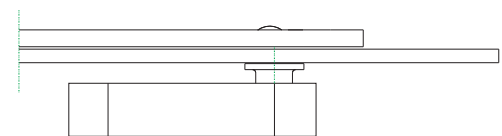
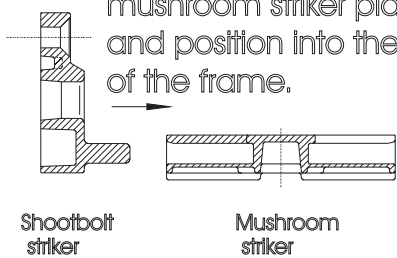
The bolt throw is adjusted by moving the mushroom bolt before cropping to size



Locate the extension into the corner of the sash and crop to size



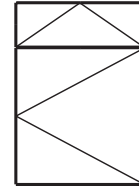
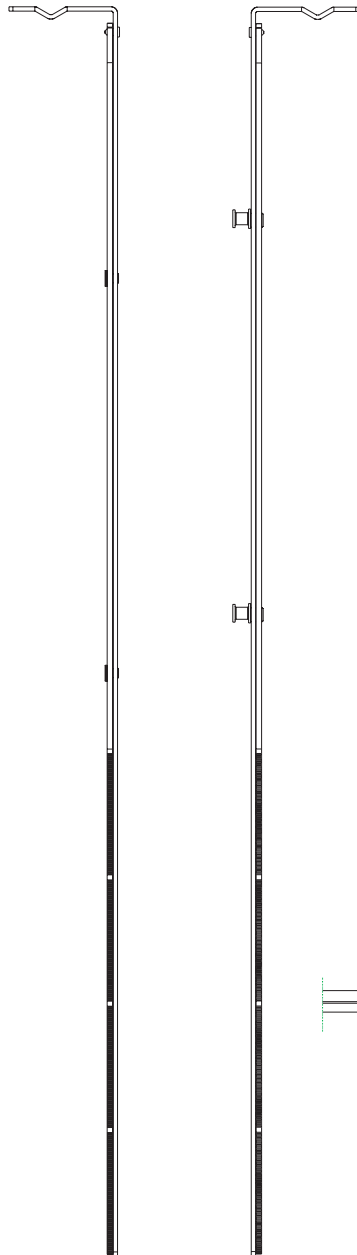
Locate the shootbolt and mushroom striker plate together and position into the corner of the frame.



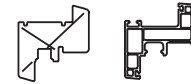
Align the center of the mushroom with the location mark on the striker when the espagnolette is in the locked position



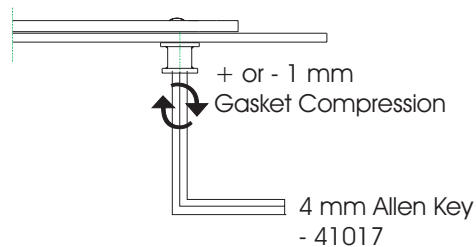
Mk1 & MACH II Shootbolt Espagnolette Extensions for French Casement Windows



MACO Espagnolette
Fittings



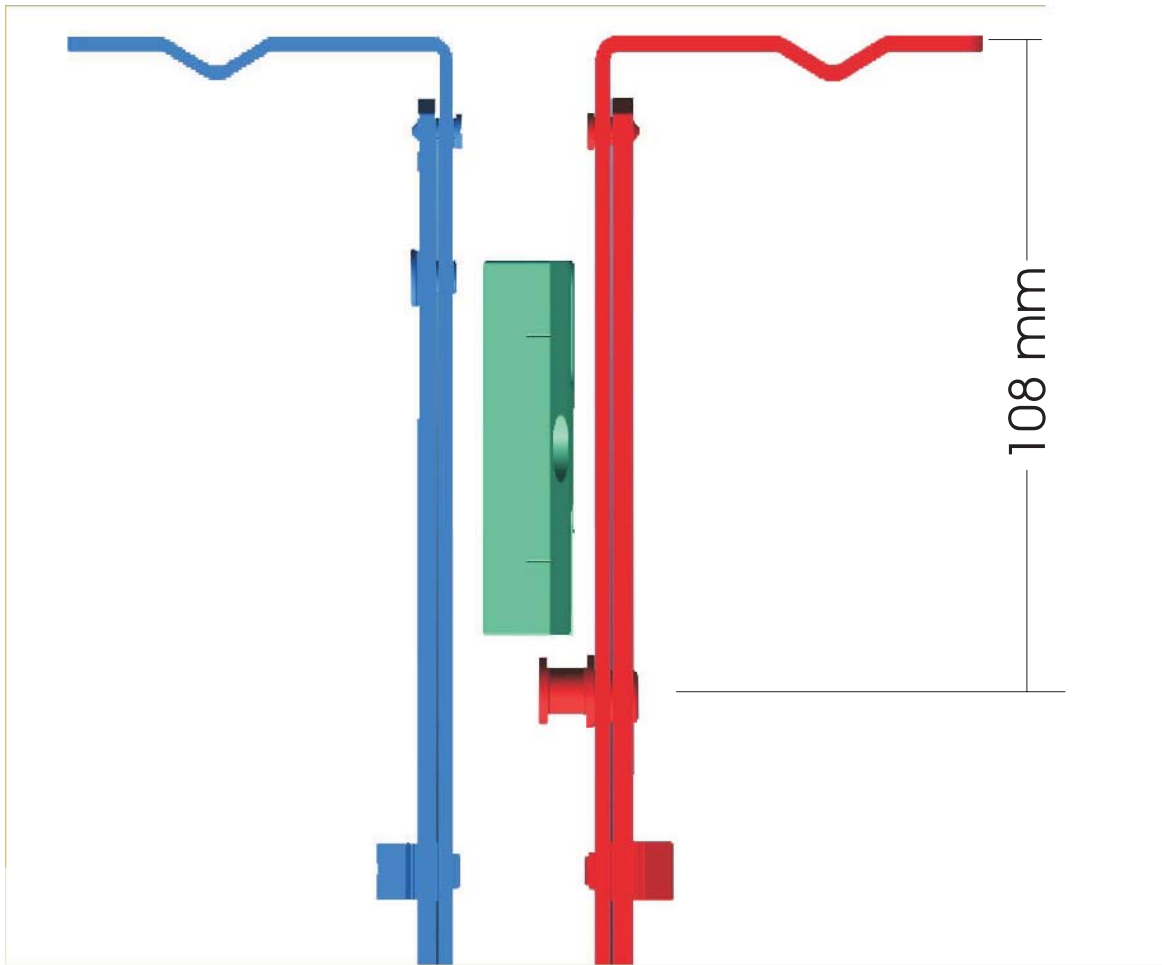
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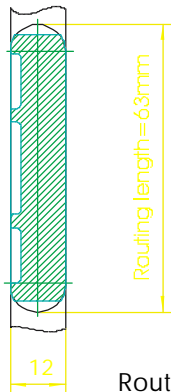
Size	Sash Rebate Size (mm)	Mushrooms Per Extension				
			Yellow	Silver	Yellow	Silver
	Mach II Master Sash Extensions					
Gr. 1	600 - 1000	1	57133	57143	57136	57146
Gr. 2	1001 - 1400	1	57134	57144	57137	57147
	Mk1 Master Sash Extensions					
Gr. 1	600 - 1000	1	57133	57143	57136	57146
Gr. 2	1001 - 1400	2	57135	57144	57138	57148
	Slave Sash Extensions					
Gr. 1	600 - 1000	0	57131	57141	57131	57141
Gr. 2	1001 - 1400	0	57132	57142	57132	57142

TECHNOLOGY IN MOTION

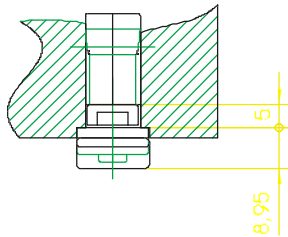
Mk1 & MACH II Shootbolt Espagnolette Extensions for French Casement Windows



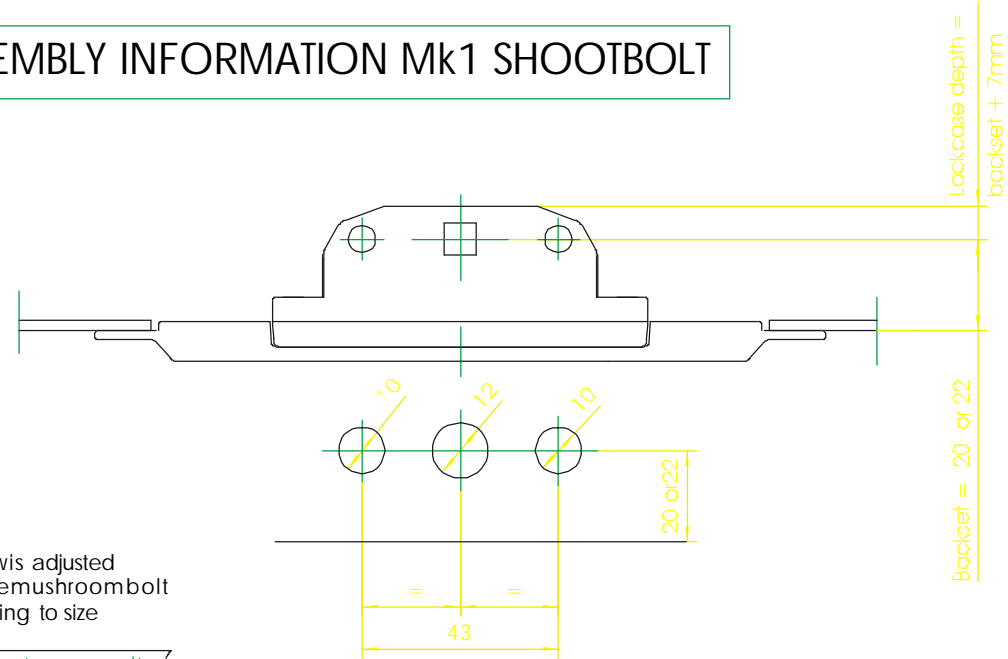
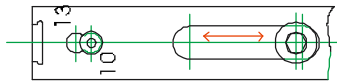
ASSEMBLY INFORMATION Mk1 SHOOTBOLT



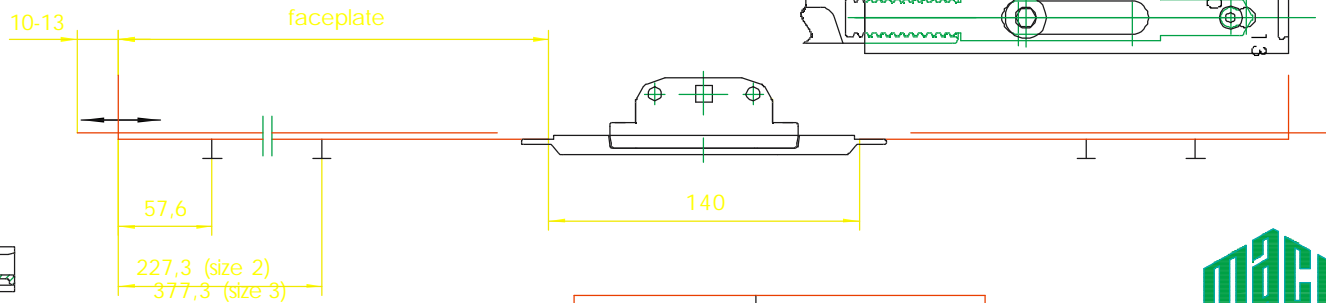
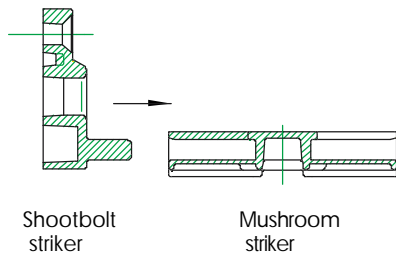
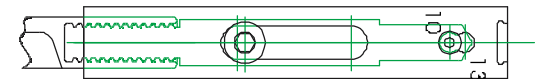
Router size: Ø12mm



The bolt throw is adjusted by moving the mushroom bolt before cropping to size



Locate the extension into the corner of the sash and crop to size



Size	Faceplate length
0	320-400
1	400-800
2	800-1100
3	1100-1400



techn. Montagezeichnung
SecurityEspagnolette
18-Apr-96
Brandst.

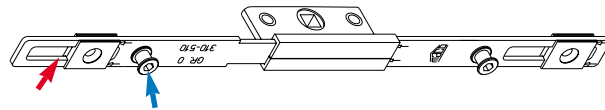
SI_KV-MONTAGE2

Care and maintenance instructions

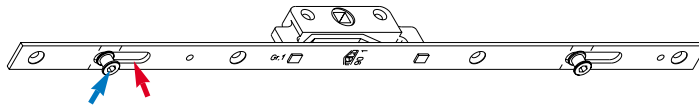
To ensure that your window espagnolettes function correctly, it is important that the following maintenance procedure is carried out at least once a year.

- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary fixing screws should be tightened by a suitably qualified person.
- All handles and locking mechanisms must be lubricated as shown. **DO NOT LUBRICATE THE FRICTION HINGES.**
- Ammonia based and abrasive cleaning fluids should not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.

Offset Espagnolette



Inline Espagnolette



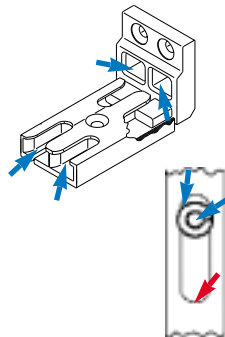
Shoother Espagnolette



Handles

Lightly lubricate (twice a year) with a light machine oil between the handle and backplate.

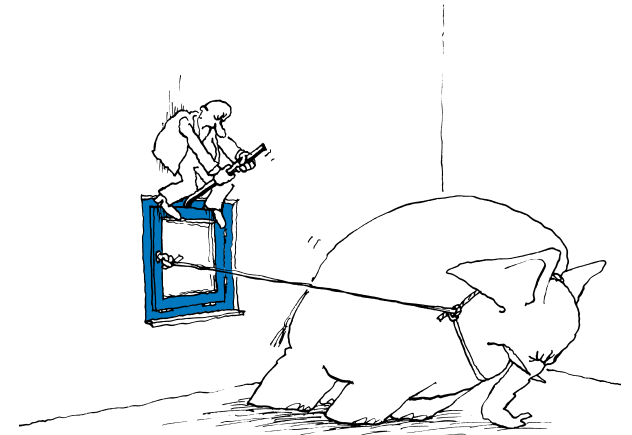
Only clean the handle with a soft damp cloth.



Grease with acid free lubricant (e. g. Petroleum Jelly).

Place a few drops of a light machine oil in all guide slots.

Operating and Maintenance Instructions



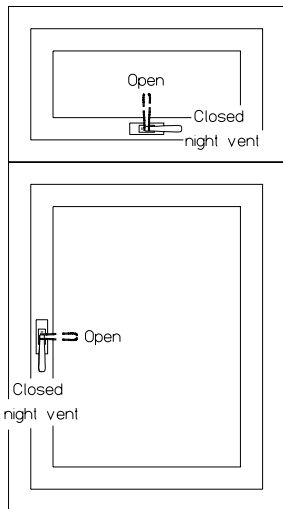
Window Espagnolettes



Advice on your Windows

- Your Windows have been fitted with high quality MACO espagnolette locking mechanisms. They are simple and easy to operate, despite this it is important that you read these instructions carefully to ensure that they are operated and maintained correctly.
- Do keep these instructions handy for future reference. Please ensure that all users are made aware of their contents.
- By following these guidelines you will ensure that your windows remain in good working order.

Operating Instructions



Push button on handle (if applicable) rotate handle 90 degrees and push window open.

To close the window pull the window closed and rotate handle back through 90 degrees.

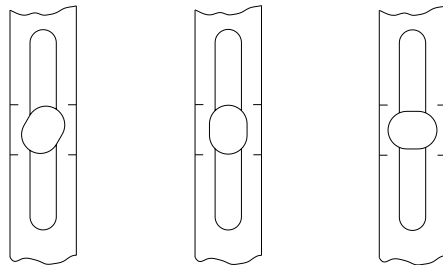
To locate the window in the night vent position open the sash approximately 15 mm and rotate the handle.

For security reasons it is advisable that windows are not left in the night vent position – when the room is left unoccupied.

Adjusting the espagnolettes

The locking cams on the espagnolettes are adjustable to allow the contact pressure between the sash and the frame to be altered.

Standard cam adjustable with a 9 mm spanner

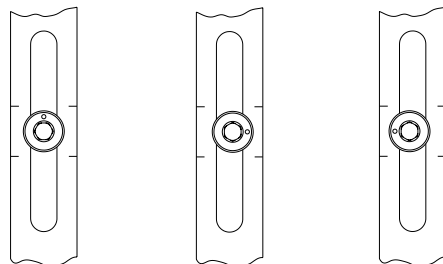


Standard pressure

Lighter pressure

Stronger pressure

Mushroom cam adjustable with a 4 mm allen key



Standard pressure

Lighter pressure

Stronger pressure

If the sash is clashing with the frame or striker plates, the window must be adjusted by a suitably qualified person.

User Information

- ⇒ Do not apply additional loading to the sash.
- ⇒ Do not force the sash past its opening edge.
- ⇒ Do not wedge the sash open.



- ⇒ An injury can be caused if you place any part of your body in the opening between the sash and the frame.
- ⇒ Danger of falling out.
- ⇒ Danger of being injured due to the effect of the wind.

General Guidelines for your windows

A good window does more than let in light and air, it is a structural unit which has high technical demands made on it. The fittings must be maintained according to these instructions coupled with periodical checks of the glass and weather seals, etc. Any faulty components should be replaced immediately. We do not recommend the use of caustic cleaning agents to clean your windows, use only water with a mild soap solution.



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Order-No. 49558 — Date: November 1998

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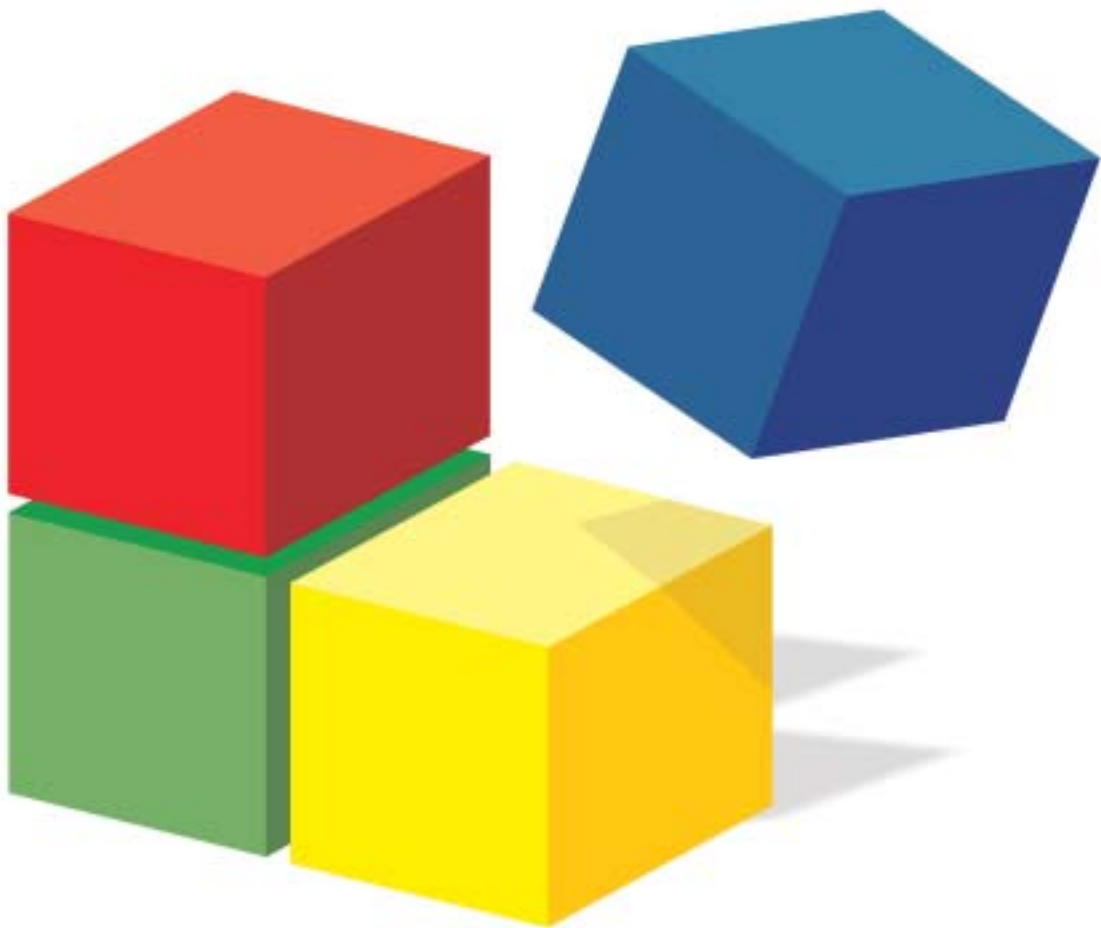
One for all . . .

MACH II Shootbolt Espagnolette

TECHNOLOGY IN MOTION

MULTI *TREND*

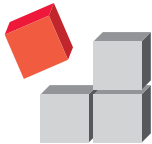
Fittings that,
fulfil all your window requirements!



MACH II - *One for all . . .*

The technology behind our fittings allows all of these possibilities in one single programme.
Simply: *one for all . . .*

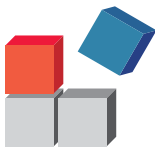
- One for all . . .



SECURE

You want secure windows . . .

- that have central locking cams
- that have a mushroom and shootbolt corner combination
- that exceed the requirements of BS7950:1997



FUNCTIONAL

You want functional windows . . .

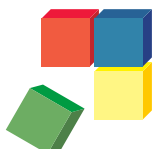
- that are easy to operate
- that are simple to adjust
- that will make your windows stand out from the rest



FAST

You want fast and efficient fabrication . . .

- of the striker plates onto the frame
- with fittings that do not require cropping to size
- that clip into the eurogroove

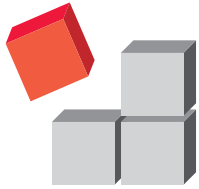


COMPATIBLE

You want fittings that . . .

- fully locate into the eurogroove
- are manufactured specifically for your profile system
- that are reliable in use





Secure

The issue of a window's burglar resistance gains more prominence every day. You need to be able to produce windows that have build tolerances so that they perform as required



Operation:

By engaging two central mushroom cams either side of a single striker plate, when the locking point is put under load during an attempted break in, or testing to BS7950, the load is dispersed evenly on the striker plate which prevents it from twisting and stops the locking points from disengaging.

MACH II Shootbolt Espagnolette . . .

. . . the most advanced way of securing a window.

. . . creates satisfied customers putting you one step ahead of the competition.



- Central mushroom cams tested to 8,7Kn, almost three times more than the requirements of BS7950:1997.
- MACH II meets all the requirements of BS7950:1997.
- Two central mushroom cams.
- Adjustable shootbolt throw 10-13 mm
- Interlocking shootbolt and mushroom strikes.
- Steel cover plate.

The MACH II shootbolt espagnolette . . .

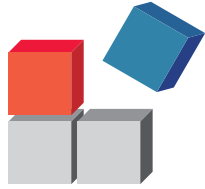
. . . has been designed to give years of customer satisfaction through a reliable function



- Secure steel cover plate.
- Improved screw positions so that they pick up the reinforcing.
- Small routing detail maintains strength in the profile.
- 19 mm cam travel ensures maximum engagement into the striker plate.
- Sintered steel spindle follower and drive wheels ensure strength and durability.
- 500 hours salt spray corrosion resistance.
- Manufactured under BS ISO 9001.

Stabilizing plates (only required on some profile systems) help to increase the strength of the corners.





Functional

The window fittings will enable you to produce good looking windows whilst enhancing the overall performance. Your customers will know that they are getting the best available window technology.



Double Side Hung Casement Window with Floating Mullion



The MACH II shootbolt espagnolette has been developed with versatility in mind. This easily enables the production of a wide range of window styles.

The MACH II enables the production of the following windows styles:

- Double side hung casement window
- Tall top hung windows with round the corner locking
- Low handle height for disabled access or hard to reach windows



Striker plates

All MACO striker plates incorporate a night vent position to allow airflow into occupied rooms. For security reasons it is not recommended that windows are left in the night vent position when the house is unoccupied.

A slimline striker plate design results in optically pleasing sight lines when the window is open.

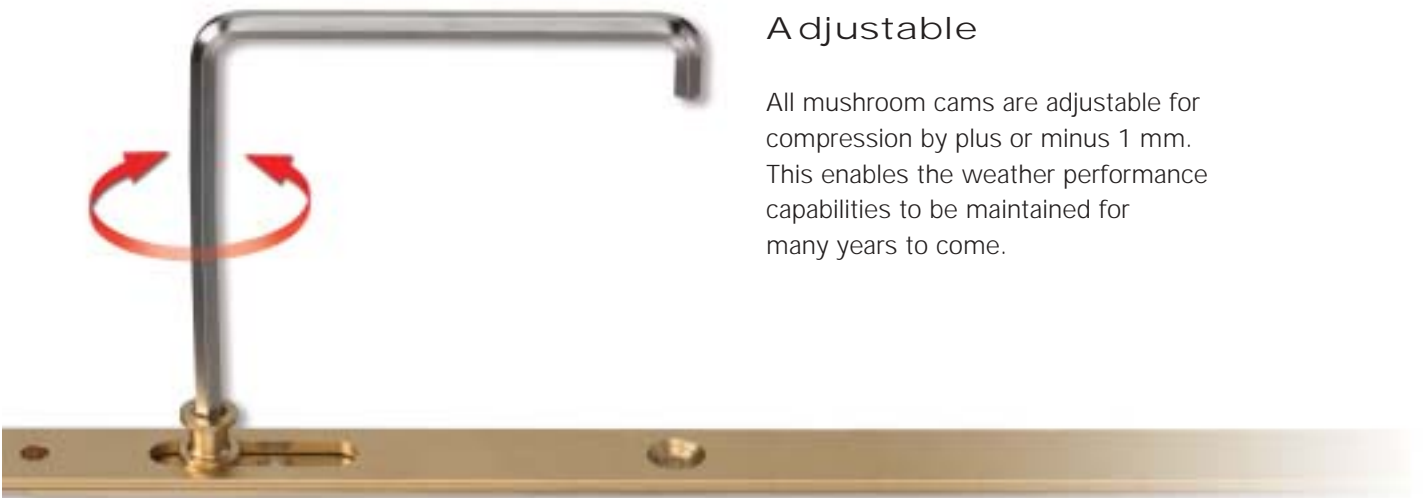
Simple and easy

Windows fitted with the MACH II shootbolt espagnolette are simple and easy to operate. The smooth operation is achieved by the use of adjustable mushroom cams to close the window. The end shootbolts are passive and only come into contact with the shootbolt strike when the windows is attacked.



Adjustable

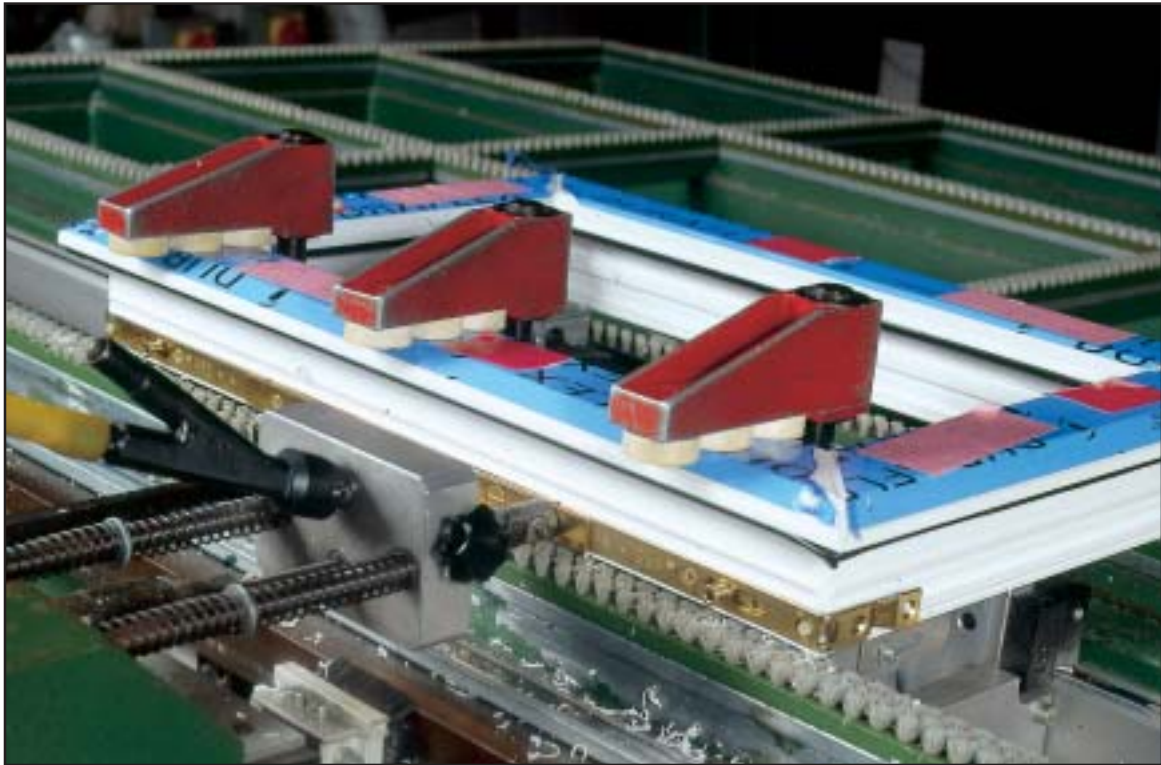
All mushroom cams are adjustable for compression by plus or minus 1 mm. This enables the weather performance capabilities to be maintained for many years to come.





Fast

In an ever changing market new window fabrication methods are constantly being developed. As methods improve, the installation of the hardware has to be able to keep up with the pace change.



„Click-Fix“ - Eurogroove clips



Click-Fix:

- Hold extensions in the eurogroove
- Speeds up production
- No special components required
- Helps automatic assembly machines
- Helps when assembling by hand

Rapid-Fix - non crop extensions

- No need to crop extensions to size
- 50 mm adjustment per extension
- Size increases in 100 mm increments
- 9 Rapid-Fix extensions for SRS 500 - 1400 mm



Rapid-Fix extension partially enclosed



Rapid-Fix extension fully enclosed

The MACH II shootbolt espagnolettes are also available with Std-Fix croppable extensions. The Std-Fix version has all the

features of the Rapid-Fix but requires the extensions to be cut to size with a pneumatic cropping machine.

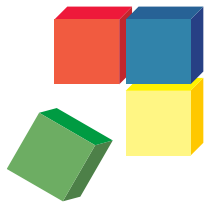


Striker Plate Locating Jig

Rapid assembly of striker plates

- The mushroom and shootbolt striker plates combine to form the end strikers that are located into the corners of the frame
- A mushroom striker plate is located in the centre of the frame
- For faster assembly a locating jig is available for positioning the centre mushroom strike





Compatible

You need to ensure that your fittings will operate smoothly and are fully compatible with your window system



- Fully locates into the eurogroove
- Available in 20 & 22 mm backset
- Lockcase depth only 7 mm more than the backset
- 12 mm wide lockcase
- 63 mm long routing detail
- Works with the same striker plate and routing detail as inline espagnolettes

The MACH II shootbolt espagnolette has been designed for profile systems with a eurogroove depth of 9 mm.

This ensures that the MACH II lockcase is fully supported within the eurogroove and that the connecting shoes are supported by the base of the profile, making the assembly quicker, simpler and more secure. With a lockcase width of

12 mm and an overall depth of only 7 mm more than the backset, this virtually eliminates the possibility of the lockcase breacking into the glazing area.

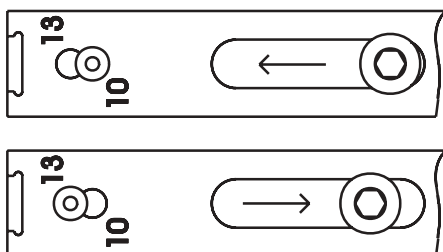
Different backsets (20 & 22 mm) coupled with two mushroom heights (7.7 & 9.0 mm) along with bespoke striker plates ensures that correct manufacturing tolerances are achieved.

Dedicated striker plates are designed to suit individual profile systems



All MACO striker plates are developed in conjunction with the systems extrusion companies, this guarantees that they are an exact fit.

By developing our striker plates this way we are able to maximize the strength and security of the windows as we can position the screw fixings so that they pick up screw ports and reinforcing.



To adjust the shootbolt throw 10 to 13 mm, move the mushroom cam so that the plastic pin locates into the desired position. This should be done before either cropping the extension to size, or locating the extension into the rapid-fix drive gear.



www.maco-europe.com

Order No. 49682 — Date: January 2002

MAYER & CO. BESCHLÄGE GMBH	MACO-BESCHLÄGE GESELLSCHAFT M.B.H.	MACO DOOR & WINDOW HARDWARE (U.K.) LTD	MAICO SRL	MACO-BESCHLÄGE B.V.	MACO POLSKA SP. Z O.O.
A-5020 Salzburg Alpenstraße 173 Tel.: +43 (0)662 6196-0 Fax: +43 (0)662 6196-101 e-mail: maco@maco.at http://www.maco.at	D-94508 Schöllnach Haidhof 3 Tel.: +49 (0)9903 9323-0 Fax: +49 (0)9903 9323-60 e-mail: d-maco@maco.de http://www.maco.de	Eurolink Industrial Centre, Castle Road, Sittingbourne Kent, ME10 3LY Tel.: +44 (0)1795 433900 Fax: +44 (0)1795 433901 e-mail: maco@macouk.net http://www.macouk.net	I-39015 S. Leonardo i. P. Zona Artigianale 15 Tel.: +39 (0)473 651200 Fax: +39 (0)473 651300 e-mail: maico@maico.com http://www.maico.com	NL-7021 BN Zelhem Stikkenweg 60 Tel.: +31 (0)314 622627 Fax: +31 (0)314 623649 e-mail: info@maco-nl.nl http://www.maco-europe.com	PL 44-137 Czekanów k/Gliwicz Ul. Gliwicka 1a Tel.: +48 (0)32 3050904 Fax: +48 (0)32 3050901 e-mail: maco@demo.pl http://www.maco-europe.com

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Maco MACH 11 Shootbolt Espagnolette



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**Licensed under the Police Preferred
Specification
SECURED BY DESIGN
(SBD)**

**Tested to BS7950:1997
(Security Standard)**

Maco MACH 11 Shootbolt Espagnolette



**Independently Tested by the
BBA
British Board of Agreement
Who have Given a life Expectancy of
25 Years**

Maco MACH 11 Shootbolt Espagnolette



High quality materials.

4 Adjustable mushroom locking points.

2 Central adjustable mushroom locking points.

Adjustable throw steel shootbolts.

Metal striker plates.

Interlocking corner striker plates.

Rapid Fix no cropping required.

10 Year product warranty.

**Tested up to 8.4 Kn
(Bs7950 requires only 3 Kn).**

50,000 life cycle operations.

500 Hours salt spray resistance.

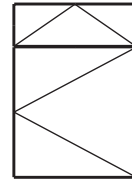
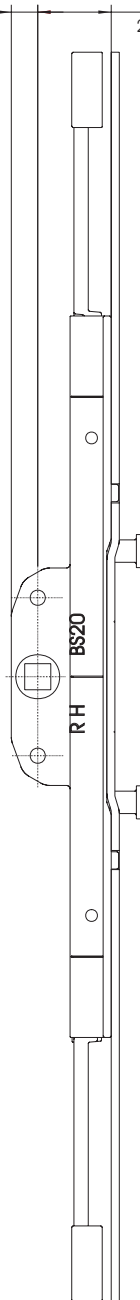
**Profile specific striker plates for greater
strength and security.**

Membership to the Maco Secure Scheme

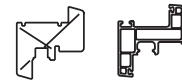
MACH II Shootbolt Espagnolette Rapid-Fix Non Croppable



Lockcase depth
backset + 7 mm 20 or 22



MACO Espagnolette
Fittings



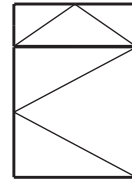
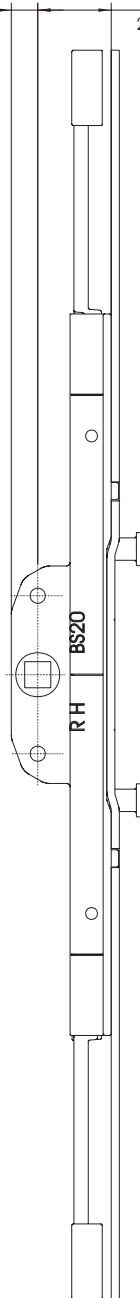
Date: 13.10.00

BS				
	Yellow	Silver	Yellow	Silver
20	10763	11033	10765	11035
22	10764	11034	10766	11037

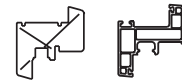
Atlantic MACH II Shootbolt Espagnolette - Rapid-Fix Non Croppable



Lockcase depth
backset + 7 mm 20 or 22



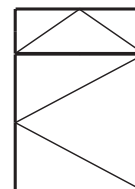
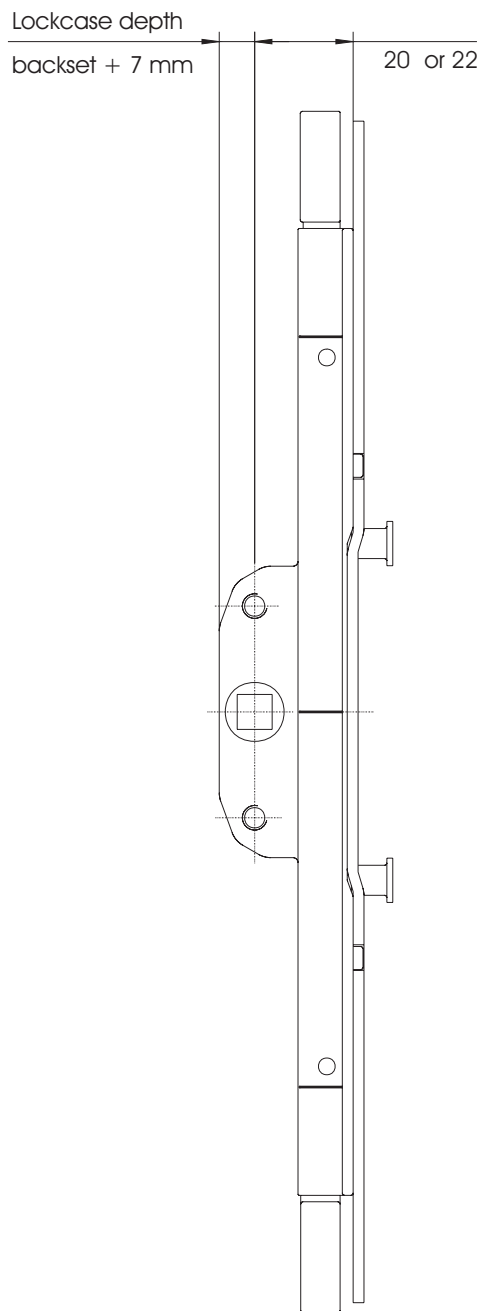
MACO Espagnolette
Fittings



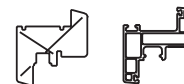
Date: 30.06.2006

BS		
	Stainless Steel	Stainless Steel
20	101564	101565
22	101437	101566

Atlantic MACH II Shootbolt Espagnolette - Croppable



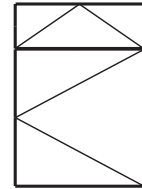
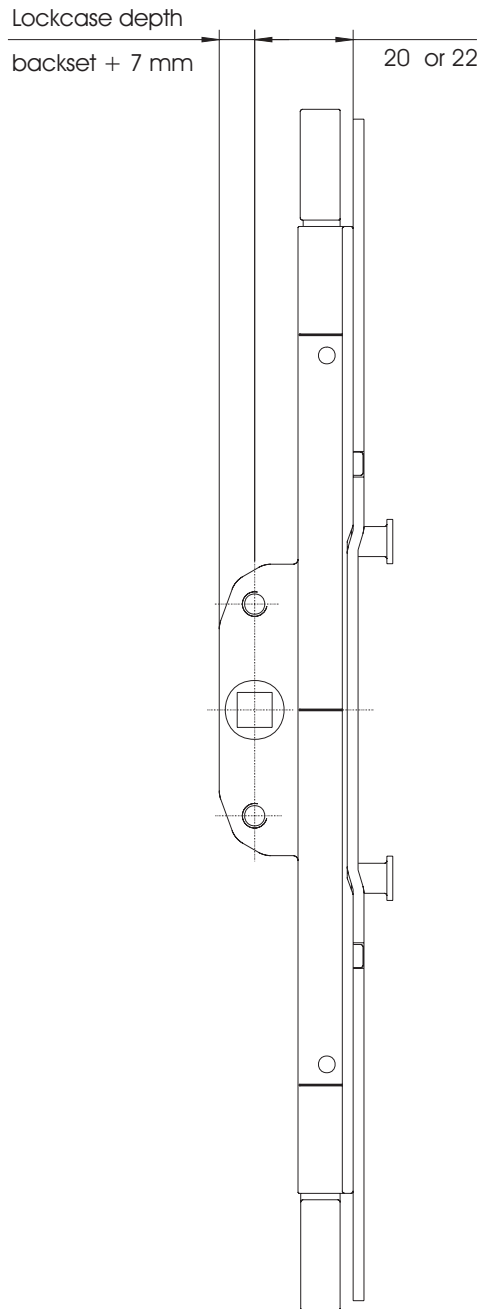
MACO Espagnolette Fittings



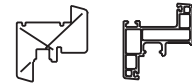
Date: 30.06.2006

BS		
	Stainless Steel	Stainless Steel
20	101567	101569
22	101568	101570





MACH II Shootbolt Espagnolette Croppable



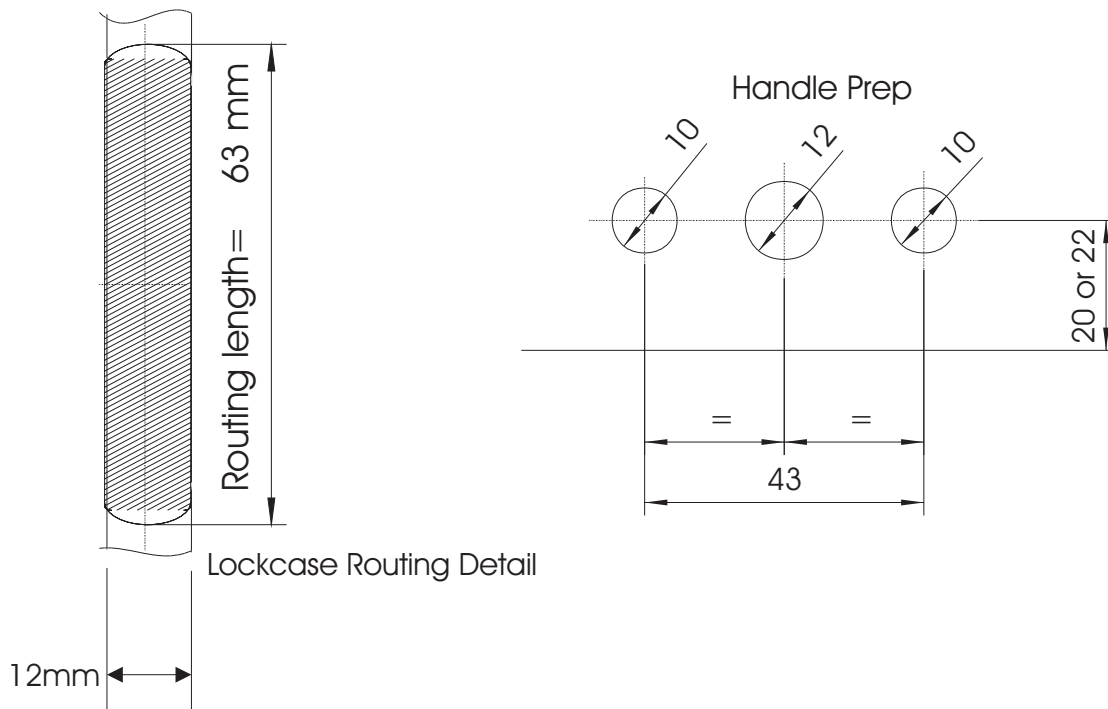
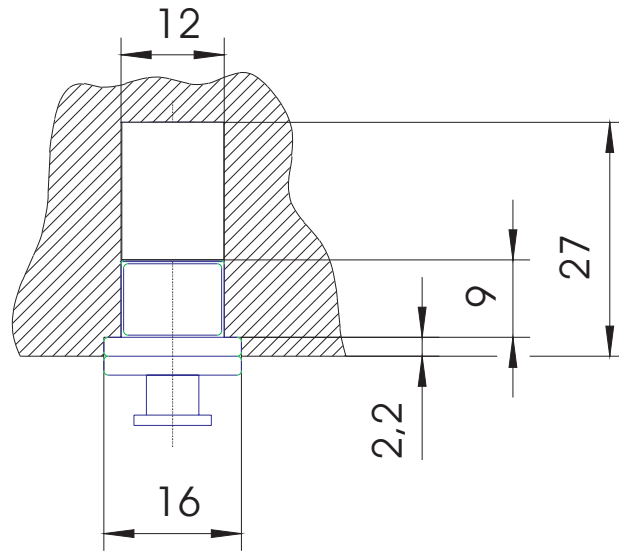
MACO Espagnolette Fittings



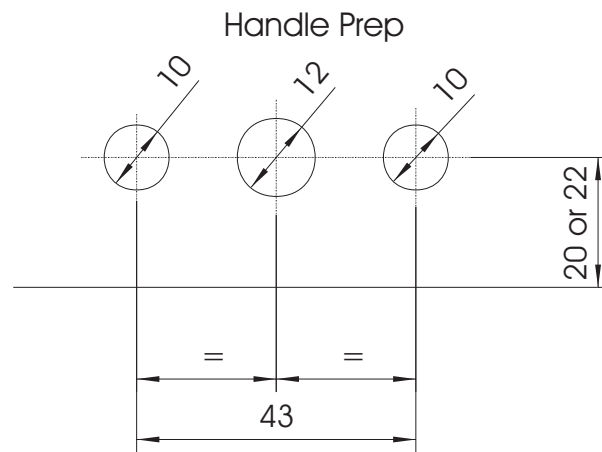
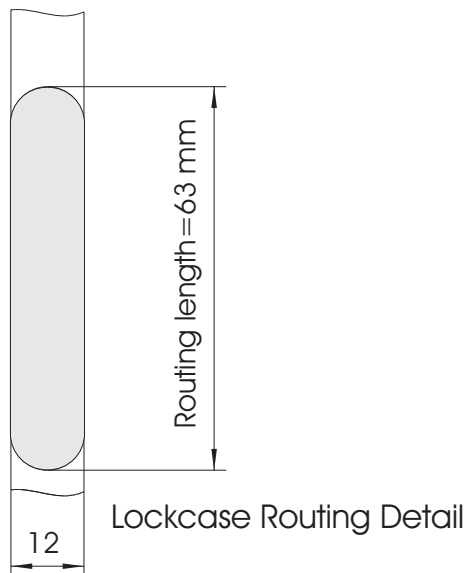
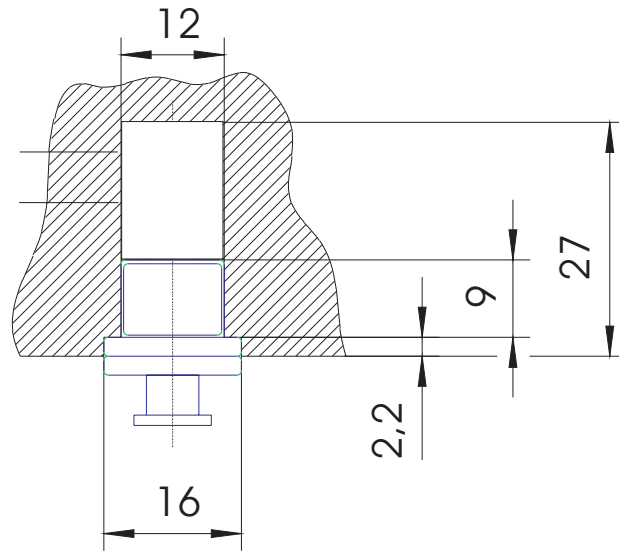
Date: 13.10.00

BS	 $\overline{p.7}$	 $\overline{p.7}$	 $\overline{p.0}$	 $\overline{p.0}$	
	Yellow	Silver	Yellow	Silver	
20	10767	11038	10769	11048	
22	10768	11041	10770	11050	

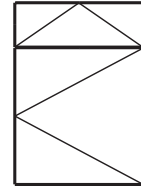
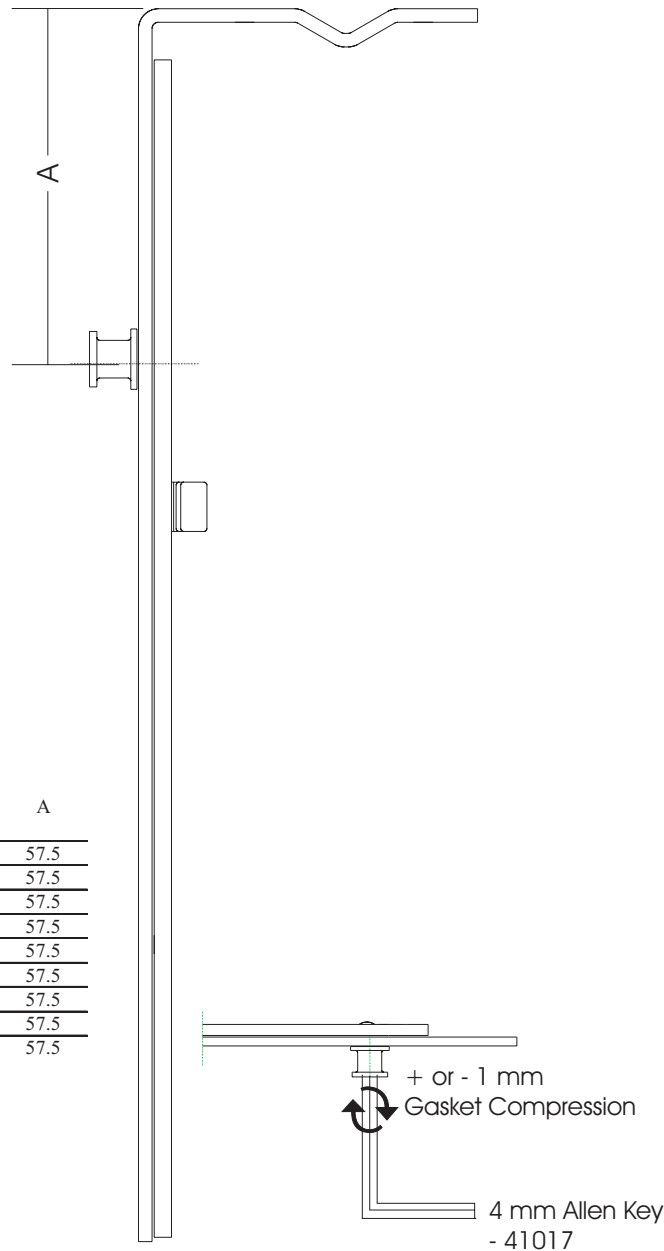
MACH II Shootbolt Espagnolette Croppable



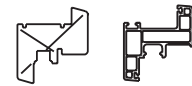
MACH II Shootbolt Espagnolette Rapid-Fix Non Croppable



MACH II Shootbolt Espagnolette Rapid-Fix Non Croppable Extension Pieces







MACO Espagnolette
Fittings

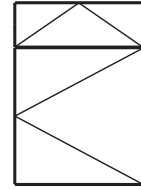
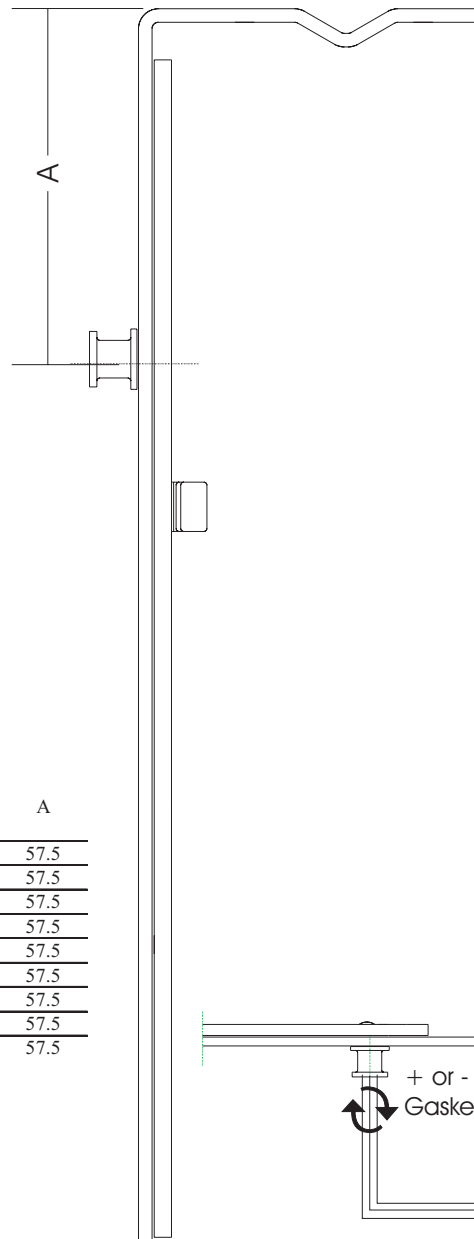


Date: 12.10.00

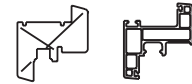
Size	Faceplate Length (mm)	A
Gr. 1	150	57.5
Gr. 2	200	57.5
Gr. 3	250	57.5
Gr. 4	300	57.5
Gr. 5	350	57.5
Gr. 6	400	57.5
Gr. 7	450	57.5
Gr. 8	500	57.5
Gr. 9	550	57.5

Size	Sash Reabate Size (mm)	Mushrooms Per Extension	 p.7	 p.7	 p.0	 p.0
			Yellow	Silver	Yellow	Silver
Gr. 1	500 - 600	0	29850	58140	29850	58140
Gr. 2	601 - 700	1	29851	58141	29869	58149
Gr. 3	701 - 800	1	29852	58142	29870	58150
Gr. 4	801 - 900	1	29853	58143	29871	58151
Gr. 5	901 - 1000	1	29854	58144	29872	58152
Gr. 6	1001 - 1100	1	29855	58145	29873	58153
Gr. 7	1101 - 1200	1	29856	58146	29874	58154
Gr. 8	1201 - 1300	1	29857	58147	29875	58155
Gr. 9	1301 - 1400	1	29858	58148	29878	58156
-	250 mm Extension Piece	1	10194	11804	10195	-
-	400-600 mm Extension Piece	1	206436	206508	206437	206509

Atlantic MACH II Shootbolt Espagnolette- Rapid-Fix Non Croppable Extension Pieces





MACO Espagnolette
Fittings



Date: 30.06.2006

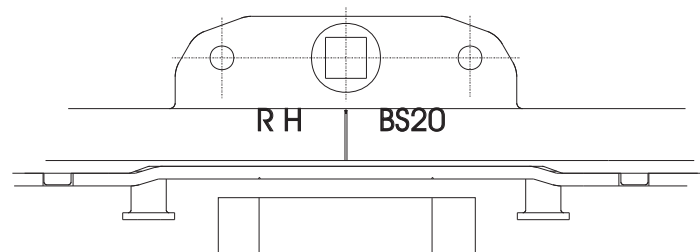
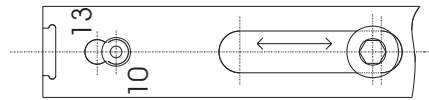
Size	Faceplate Length (mm)	A
Gr. 1	150	57.5
Gr. 2	200	57.5
Gr. 3	250	57.5
Gr. 4	300	57.5
Gr. 5	350	57.5
Gr. 6	400	57.5
Gr. 7	450	57.5
Gr. 8	500	57.5
Gr. 9	550	57.5

Size	Sash Reabate Size (mm)	Mushrooms Per Extension		
			Stainless Steel	Stainless Steel
Gr. 1	500 - 600	0	222150	222150
Gr. 2	601 - 700	1	222151	222159
Gr. 3	701 - 800	1	222152	222160
Gr. 4	801 - 900	1	222153	222161
Gr. 5	901 - 1000	1	222154	222162
Gr. 6	1001 - 1100	1	222155	222163
Gr. 7	1101 - 1200	1	222156	222164
Gr. 8	1201 - 1300	1	222157	222165
Gr. 9	1301 - 1400	1	222158	222166
-	250 mm Extension Piece	1	-	-
-	400-600 mm Extension Piece	1	-	-

MACH II Shootbolt Espagnolette

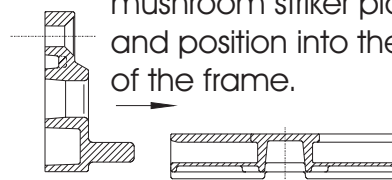
Rapid-Fix Non Croppable Extension Pieces

The bolt throw is adjusted by moving the mushroom bolt before cropping to size.



Align the center marks on the mushroom strike with the center lines on the cover plate.

Locate the shootbolt and mushroom striker plate together and position into the corner of the frame.



Shootbolt
striker

Mushroom
striker



The Maco Secure scheme guarantees windows that are fitted with the Mach II shootbolt espagnolette and hinge protectors against burglary. *Should a burglar gain entry through the window due to failure of the hardware Maco will repay any Insurance Excess up to the value of £1000.

*Terms and conditions apply

The Maco Mach II Shootbolt Espagnolette has been approved by the BBA. Assessment Report No.1864.



All Maco products are manufactured under DIN EN 9001: 2000.

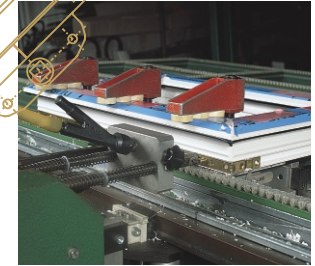


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CENTRE, CASTLE ROAD
SITTINGBOURNE
KENT ME10 3LY
TEL 01795 433900
FAX 01795 433901
MACO@MACOUK.NET



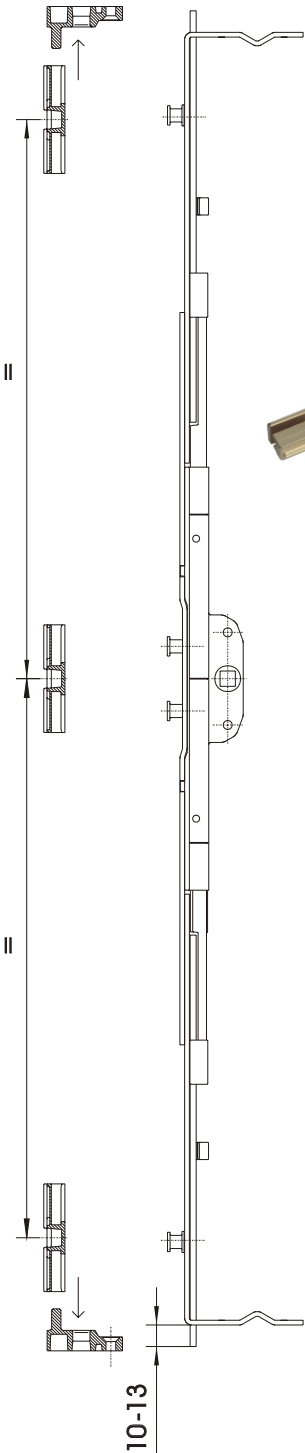
MACH II SHOOTBOLT ESPAGNOLETTE NON-CROP



Order and Fitting Instructions



Order Details



**Mach II Reverse Action Drive Gear
Non-Croppable**

Back Set (mm)	7.7 mm Mushroom	9.0 mm Mushroom
20	10763	10795
22	10764	10766



**Mach II Shootbolt Extensions
Non-Croppable**

Size	Sash Rebate Size (mm)	7.7 mm Mushroom	9.0 mm Mushroom
1	500 - 600	29850	29850
2	601 - 700	29851	29869
3	701 - 800	29852	29870
4	801 - 900	29853	29871
5	901 - 1000	29854	29872
6	1001 - 1100	29855	29873
7	1101 - 1200	29856	29874
8	1201 - 1300	29857	29875
9	1301 - 1400	29858	29878



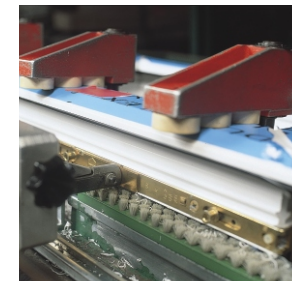
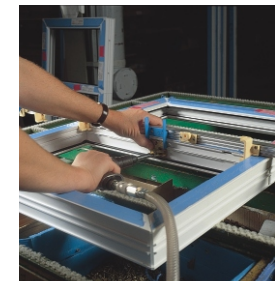
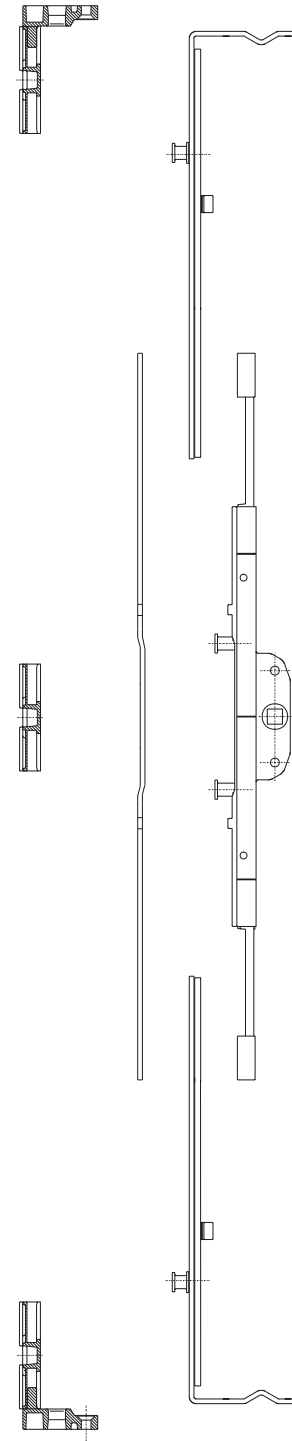
Fitting Instructions

Sash Fittings

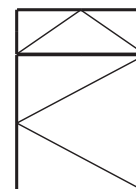
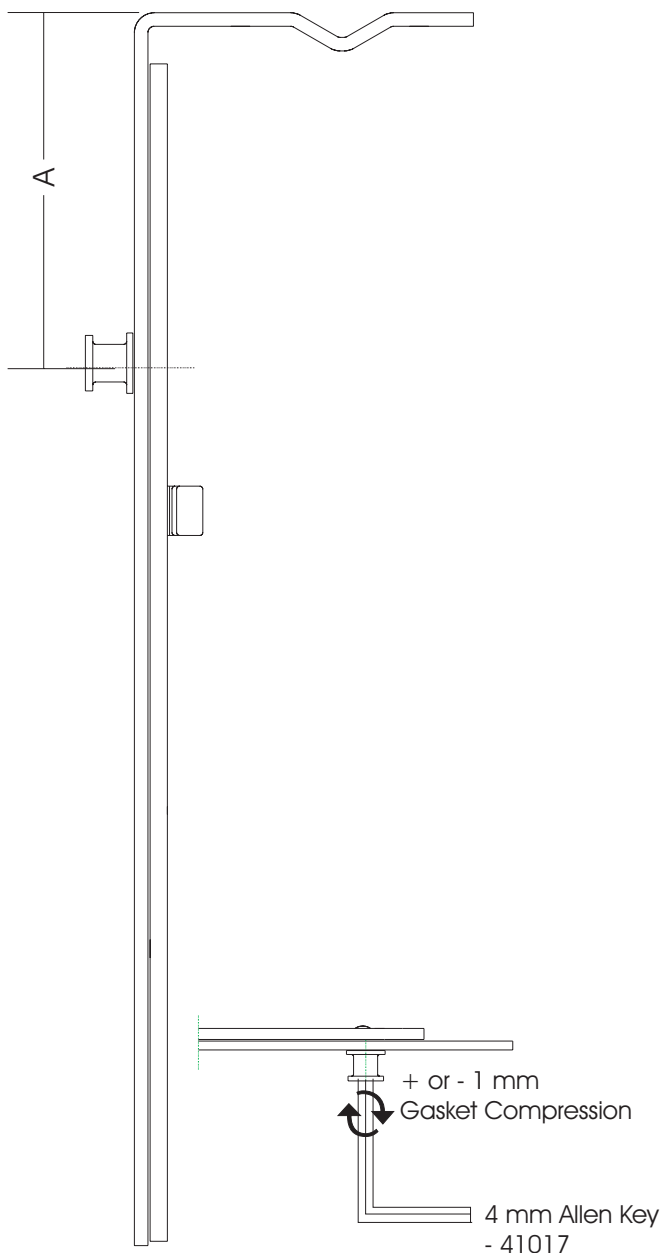
1. Locate the central drive gear.
2. Set the shootbolt throw on the extension to 10 or 13 mm.
3. Insert the extension into the corner of the sash and snap into position. Repeat with the other extension and screw in place.
4. Locate cover plate over the centre and screw fix in position.
5. Fit handle. The first operation will shear the plastic pins.

Frame Fittings

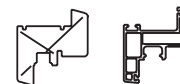
6. Locate the shootbolt strike into the mushroom strike and fit the, into both corners of the frame.
- Mark the centre position of the frame and locate the central mushroom strike. Alternatively a location jig is available order number 55253.







MACH II Shootbolt Espagnolette Rapid-Fix Croppable Extension Pieces



MACO Espagnolette
Fittings

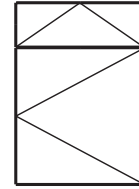
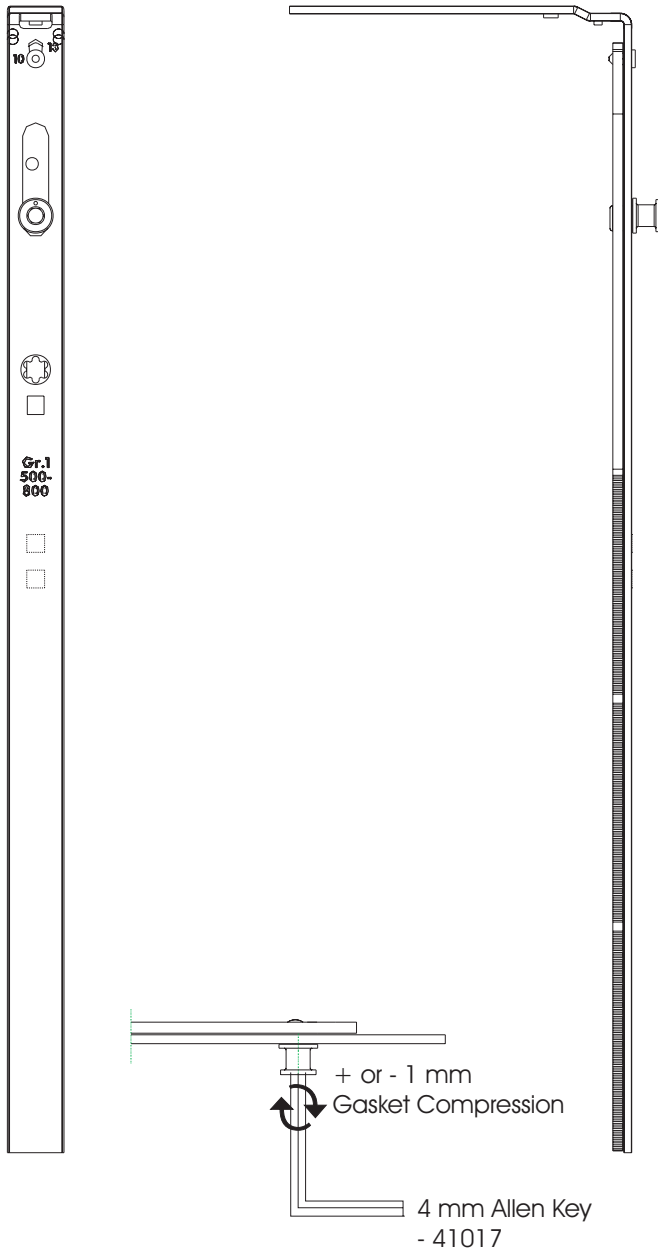


Date: 12.10.00

Size	Sash Reabate Size (mm)	Mushrooms Per Extension	 7.7	 7.7	 9.0	 9.0
			Yellow	Silver	Yellow	Silver
Gr. 1	382 - 450	0	28215	58177	28215	58177
Gr. 2	451 - 920	1	28610	58160	28611	58161
Gr. 3	801 - 1100	1	58035	58166	58037	58168
Gr. 4	1101 - 1400	1	58036	58167	58038	58169
-	250 mm Extension Piece	1	10194	11804	10195	101530



MACH II Shootbolt Espagnolette Extension Pieces for Top Hung Windows



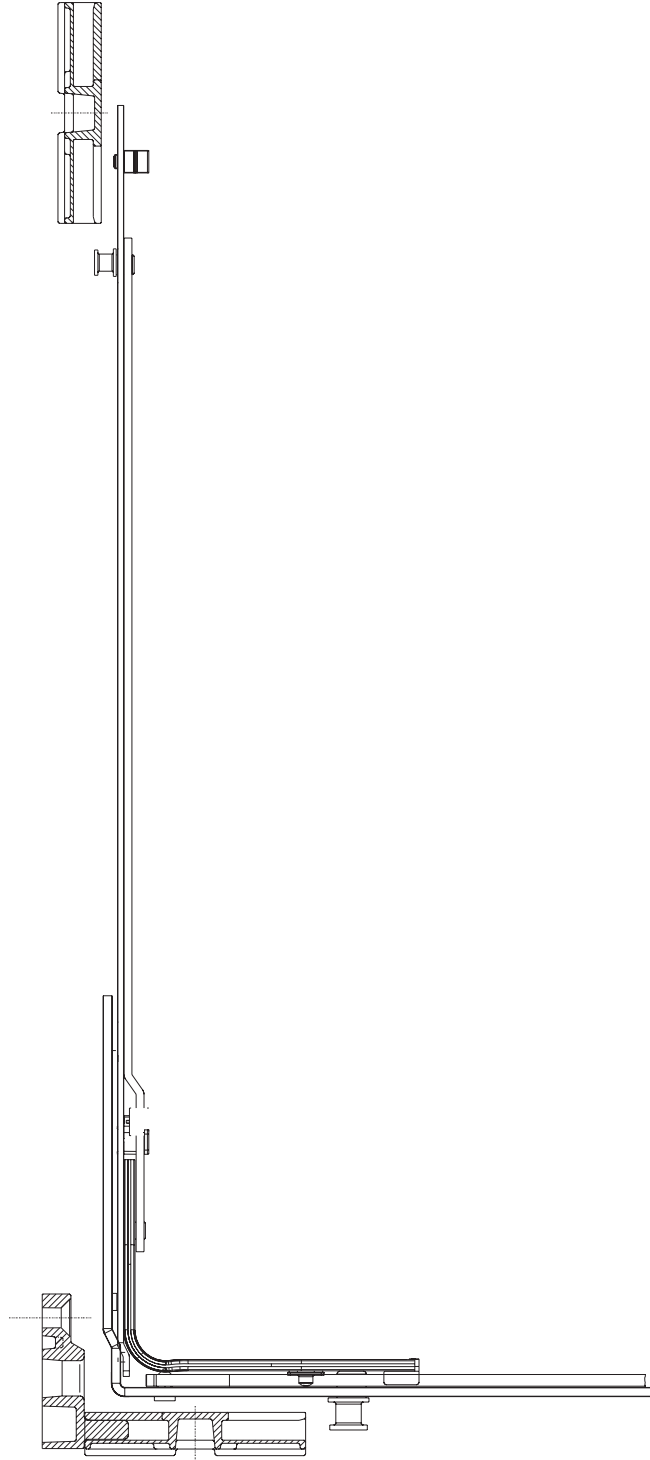
MACO Espagnolette
Fittings



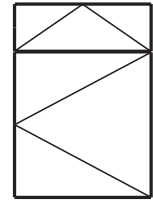
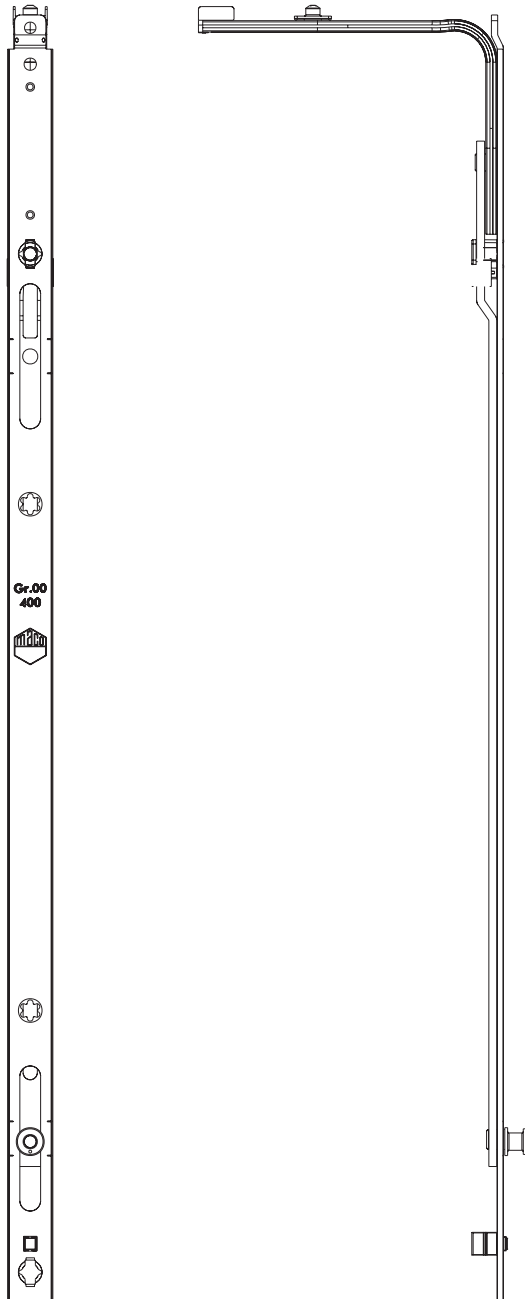
Date: 12.10.00

Size	Sash Rebate Width (mm)	Mushrooms Per Extension				
			Yellow	Silver	Yellow	Silver
Gr. 1	500 - 800	1	59943	220229	59946	220232
Gr. 2	801 - 1100	1	59944	220230	59947	220233

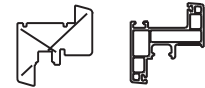
MACH II Shootbolt Espagnolette Extension Pieces for Top Hung Windows



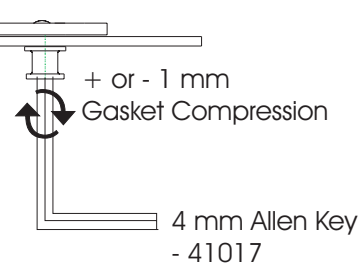
MACH II Shootbolt Espagnolette Centre Locks for Top Hung Windows



MACO Espagnolette
Fittings

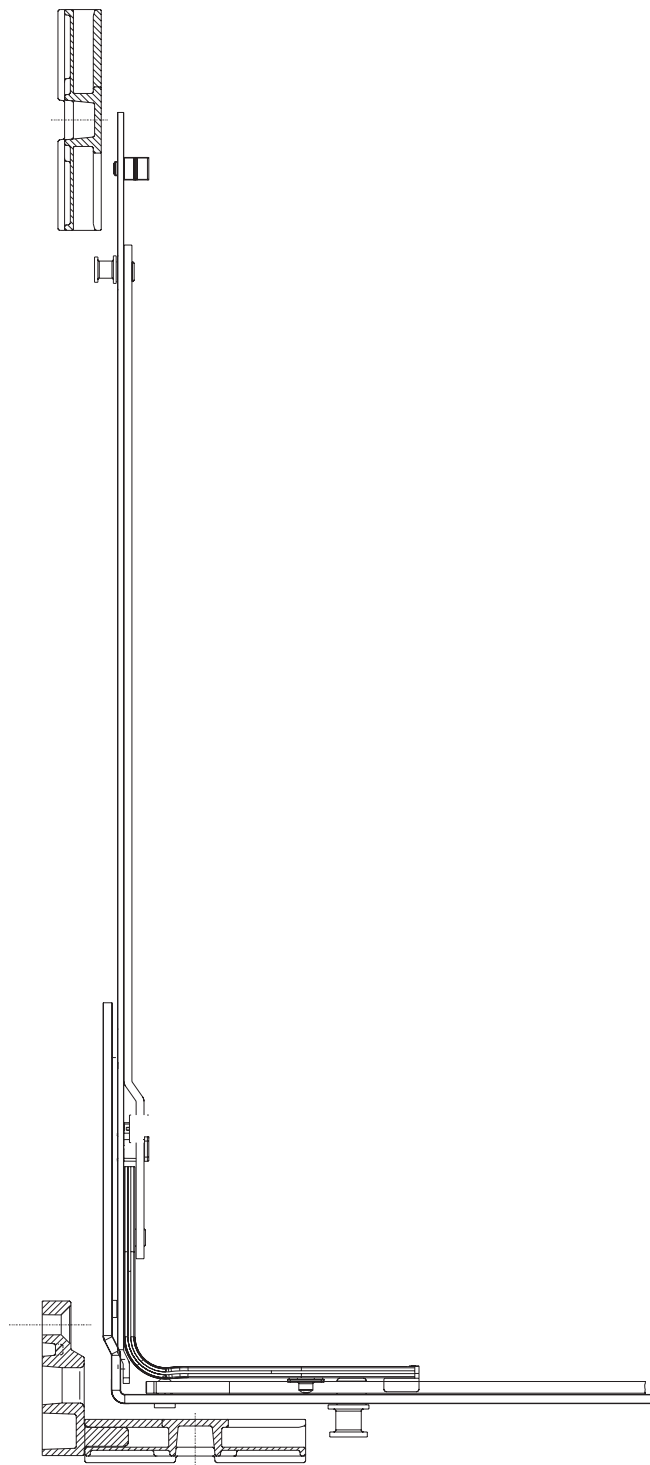


Date: 12.10.00



Size	Mushrooms Per Extension				
		Yellow	Silver	Yellow	Silver
Gr.300	1	204247	205961	204248	
Gr. 00	1	220026	220029	220032	220035
Gr. 0	1	220027	220030	220033	220036
Gr.1	1	220028	220031	220034	220037

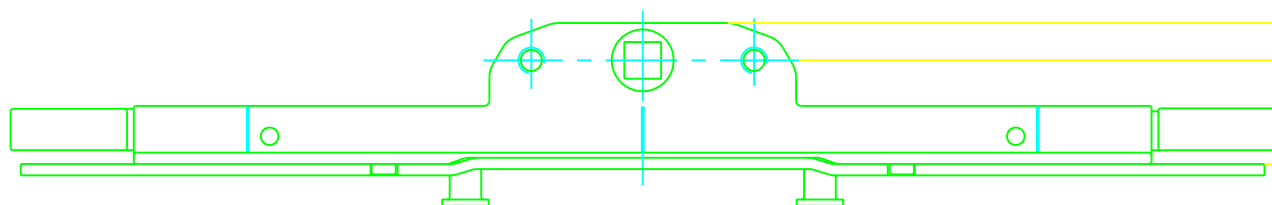
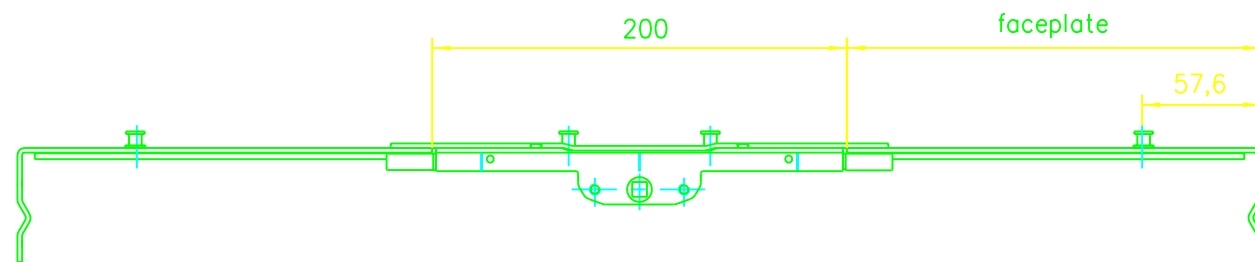
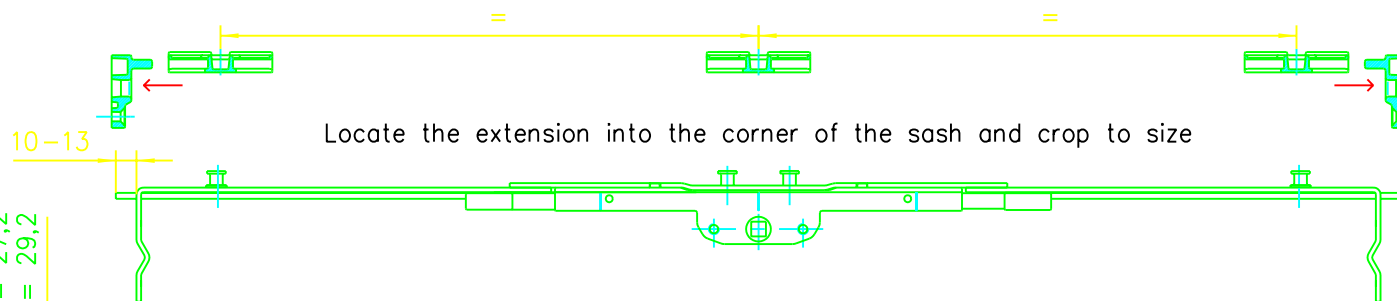
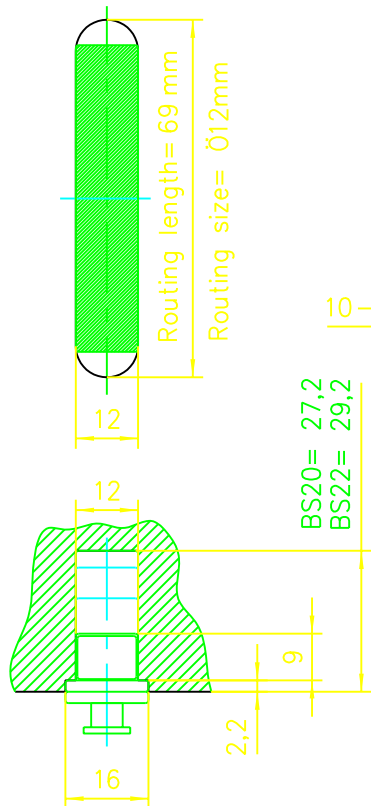
MACH II Shootbolt Espagnolette Centre Locks for Top Hung Windows





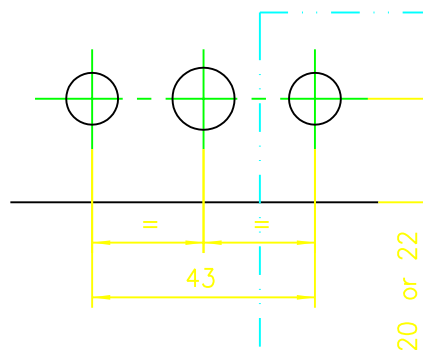
ASSEMBLY INFORMATION

Reverse Action Espagnolette MACH II short with the old extensions

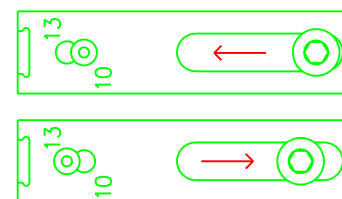


Lockcase depth
backset + 7,2 mm

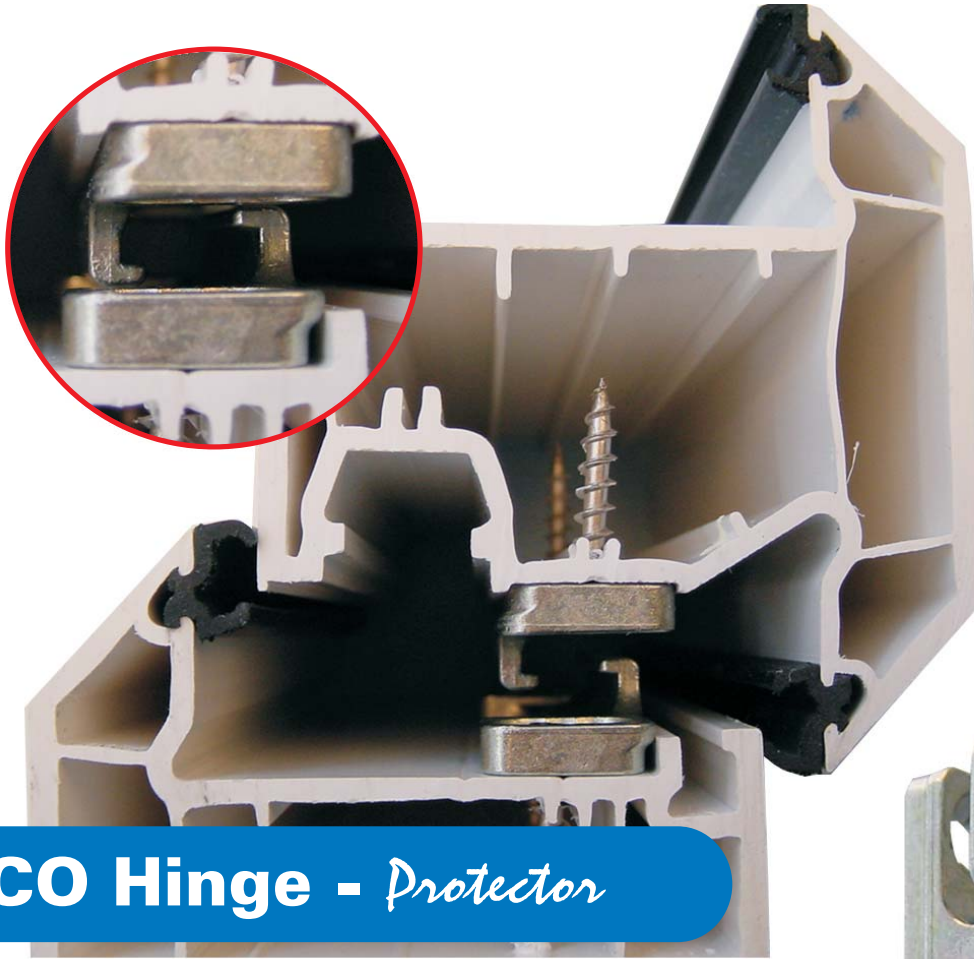
Size	Faceplate length
0 383-487	131,8
1 448-912	356
2 844-1184	492
3 1144-1484	642



The bolt throw is adjusted by moving the mushroom bolt before cropping to size



The Friction Hinge Security System

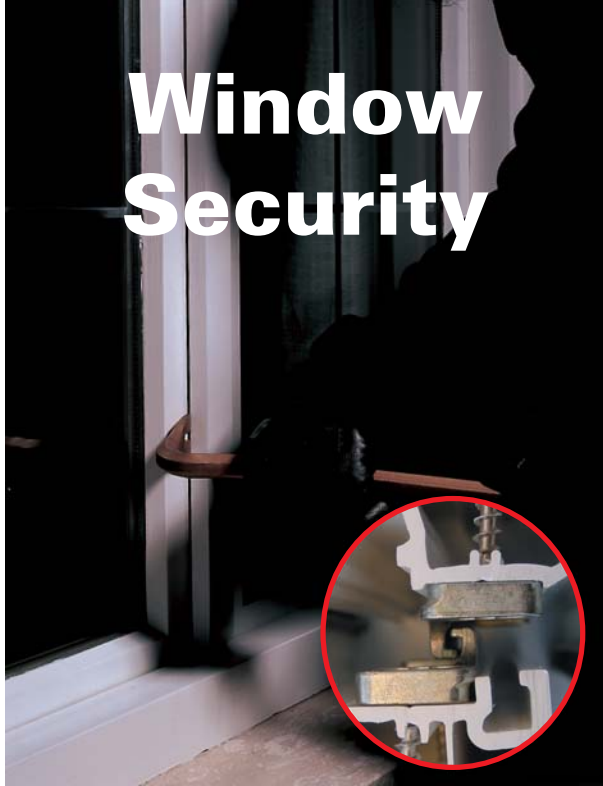


MACO Hinge - *Protector*

- Protects hinges against forced entry.
- BS7950 tested up to 5Kn.
- Suitable for PVCu; Aluminium and Timber profiles.
- Available for standard and egress hinges.
- Interlocks when under attack.
- Fast and simple to fit.
- Multiple screw ports.
- Suits all profile systems.
- Non handed.
- Available in two heights.
- Maco Secure Approved.



Window Security



The Maco **Hinge - Protector** is an easy to fit non profile related hinge security system that can be fitted during the fabrication of the window or as a retro fit security device.

Simply position one half of the **Hinge - Protector** onto the outer frame, and the other half onto the sash. The multiple screw ports enable the screw fixings to be positioned to pick up screw ports or the reinforcing inside the window.

To maximise the security performance of the **Hinge - Protector** they should be positioned so that the centre of the **Protector** is within 100 mm of each hinge, this ensures that the friction stay arm gets the support it requires when tested to Bs7950.

Maco **Hinge - Protectors** are available in two styles for standard and egress hinges and two stack heights for 13 and 17 mm height hinges.

13 mm stack height hinges

Standard **Hinge - Protector** - 94100

Egress **Hinge - Protector** - 352928

Universal Sash Part

Hinge - Protector - 356365

17 mm stack height hinges

Standard **Hinge - Protector** - 94200

Egress **Hinge - Protector** - 353309

Universal Sash Part

Hinge - Protector - 356366



www.macouk.net

Date - August 2004