TECHNOLOGY IN MOTION

MACO MULTI-MATIC

TILT AND TURN FITTINGS





Your window makes the difference

THE NEW
HARDWARE GENERATION

We bring benefits to your customers





Sophisticated Design
Studies have shown that consumers increasingly have an eye for design and beauty. We put the finishing touches to your windows with a sophisticated fittings design and a range of additional features.

Durable, reliable operational for many years to come
Quality and functionality are at the top every window buyer's list of priorities.

Energy-saving features and tight sealing
Tight sealing is essential for any window. We want to raise window buyers awareness of the energy they can save by using specific ventilation features.

Security against uninvited guests
Window-buyers are still not familiar enough with those elements which can resist break-ins. MACO MULTI-MATIC offers your customers various types of security.

The benefit to you as a window manufacturer





Easy-to-handle fittings save time and money
Quick assembly thanks to a sophisticated coupling system, saving time and money. Compatible fittings parts can also be installed for special designs.

Many different ways of fabrication
This fitting system allows you to use various types of fabrication technology, from manual assembly through partial automation, right up to unmanned fully automated fabrication technology.

Packaging savings
The new packaging system has been designed so that less packing material is needed.
Removal of the packaging from the fitting is quick and simple.

Logistical solutions for the fabrication location.
The correct fitting equipment and a permanent supply to the fabrication site,
without excessive downtime, are essential criteria for the smooth running production of windows.

Fitting design



The sophisticated design, with the uniform Silver-look surface finish and linear recesses on the faceplate give the fittings an elegant and slimline look.

The fitting design

- Uniform Silver-look surface
- Linear recesses on the faceplate give the fittings an elegant and slimline look
- Rounded edges on strikers and sash lifter provide a smooth contour

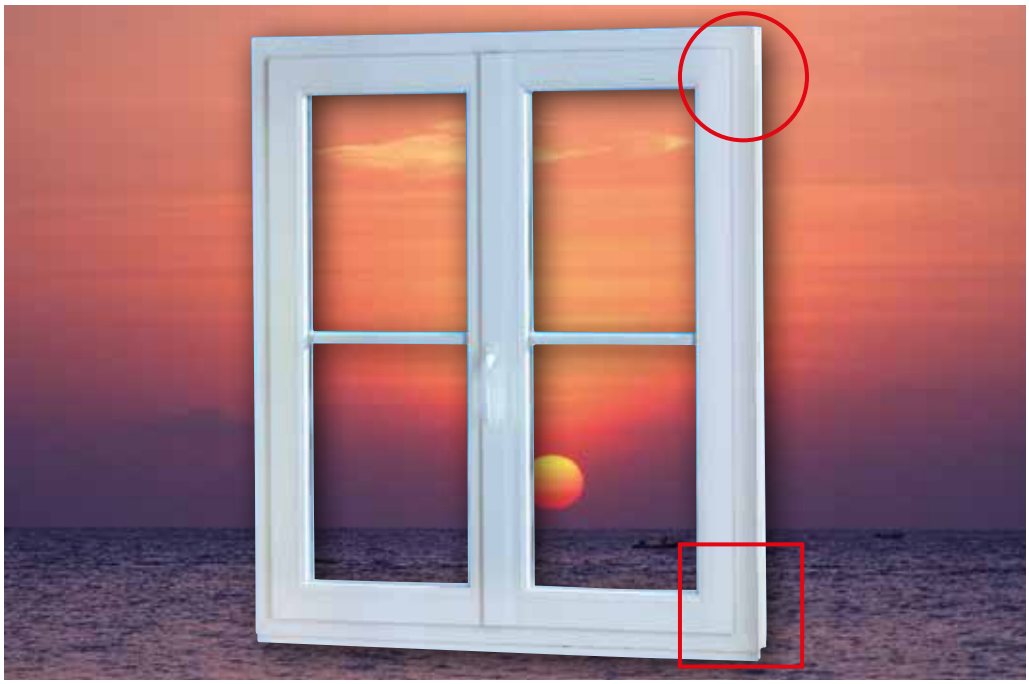


Connecting edge cover

- The connecting edges are covered, providing protection against corrosion and visual enhancement



Appearance of the window



Concealed corner and stay hinges particularly enhance the appearance of any window. But there are also solutions for the visible hinge parts, in the form of coloured cover caps which will enhance any window. Just right for customers looking for something special.

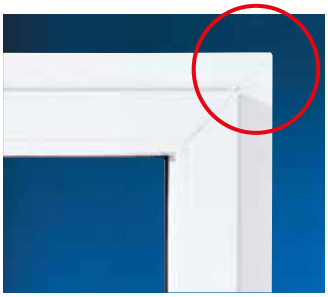
Does this window have no fitting?



MULTI MATIC TV

Partially-concealed top and bottom hinges

- Minimal free sizes
- Special Tilt&Turn shapes also available
- Opening angle up to 180°



MULTI MATIC VV

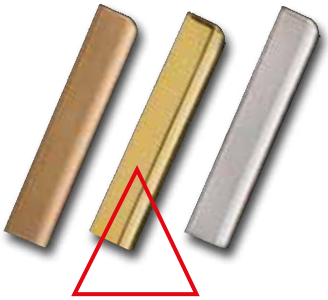
Fully concealed corner and stay hinges

- No milling of the sash or frame
- Minimal free sizes (from 4 mm)



Matching covers





Covers for top and bottom Hinges are colour coordinated to match your window handle.

Long Life



Door snapper for balcony doors

Reduced force as the door snapper is not active when in the tilt position. Individual height adjustable.



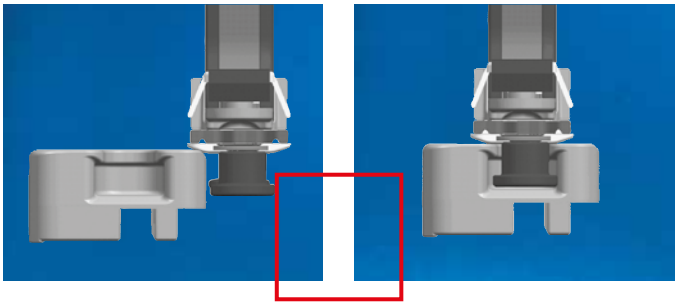
For years MACO has been the only fitting manufacturer to produce tilt-turn drive gears with a fixed safeguard against faulty control. Now the sash lifter has been inproved even further.

The sash lifter

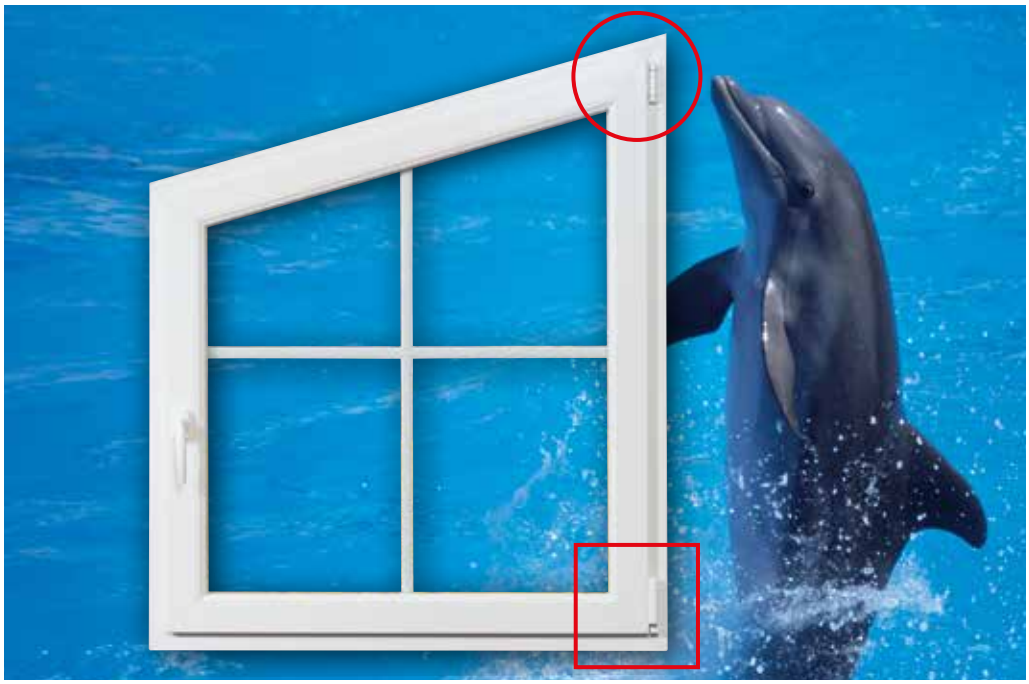
- Guarantees long life
- Prevents mishandling / incorrect operation
- Lifts the sash into the correct position with minmal effort thereby requiring little adjustment
- Even heavy sashes can be closed easily – ensuring improved operation for years to come
- Fixed to the gear - no additonal part
- Can be used for left and right handed windows
- Height-adjustable

Over-run conponent at the bottom

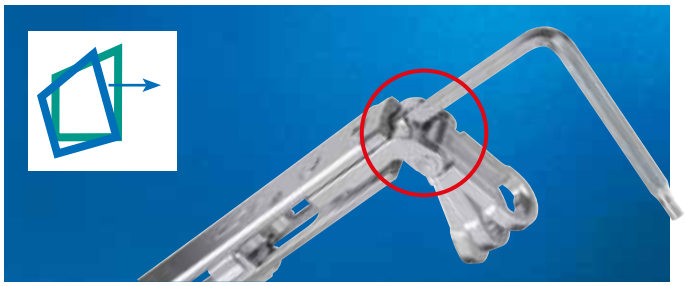
- Fixed as standard
- Guarantees free run into the striker plate
- Safeguards the function if a window is not properly positioned



Easy to use



Options for regulating the stay



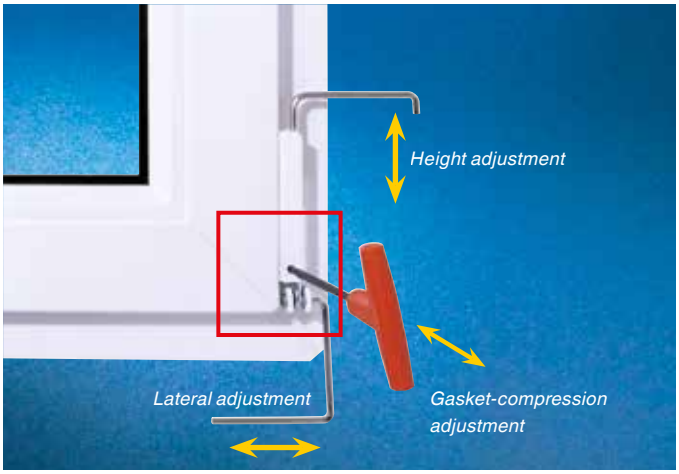
The top hinge on angled windows has the same regulating areas as the top hinge on standard windows

Lateral adjustment

side adjustment

Corner hinge can be regulated in 3 directions!

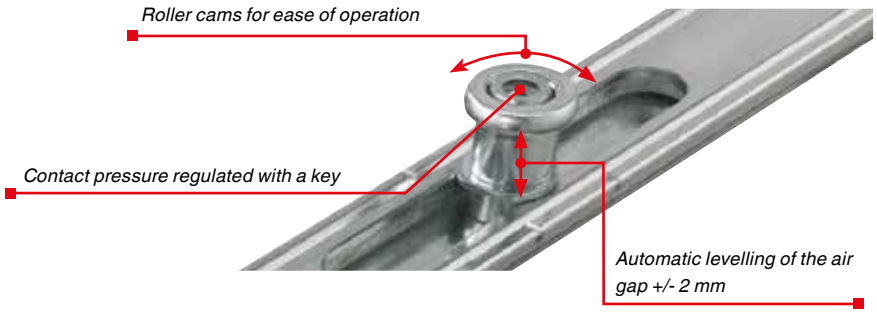
So that you can give your customers a window that provides complete satisfaction



Easy to use and tightly sealed

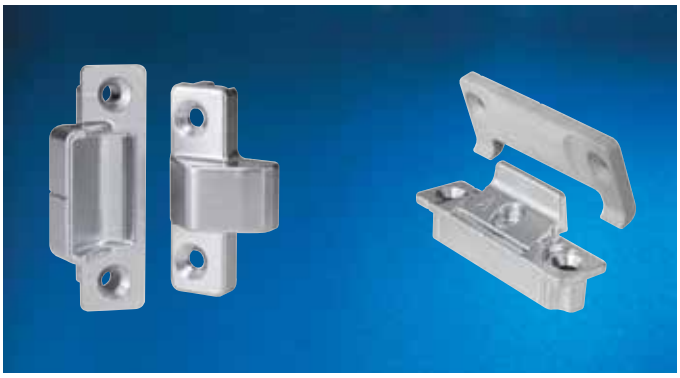


The contact pressure can easily be adjusted with i.S. cams; they seal your window tightly, save costs, ensure satisfied customers and allow you to stand out from the competition

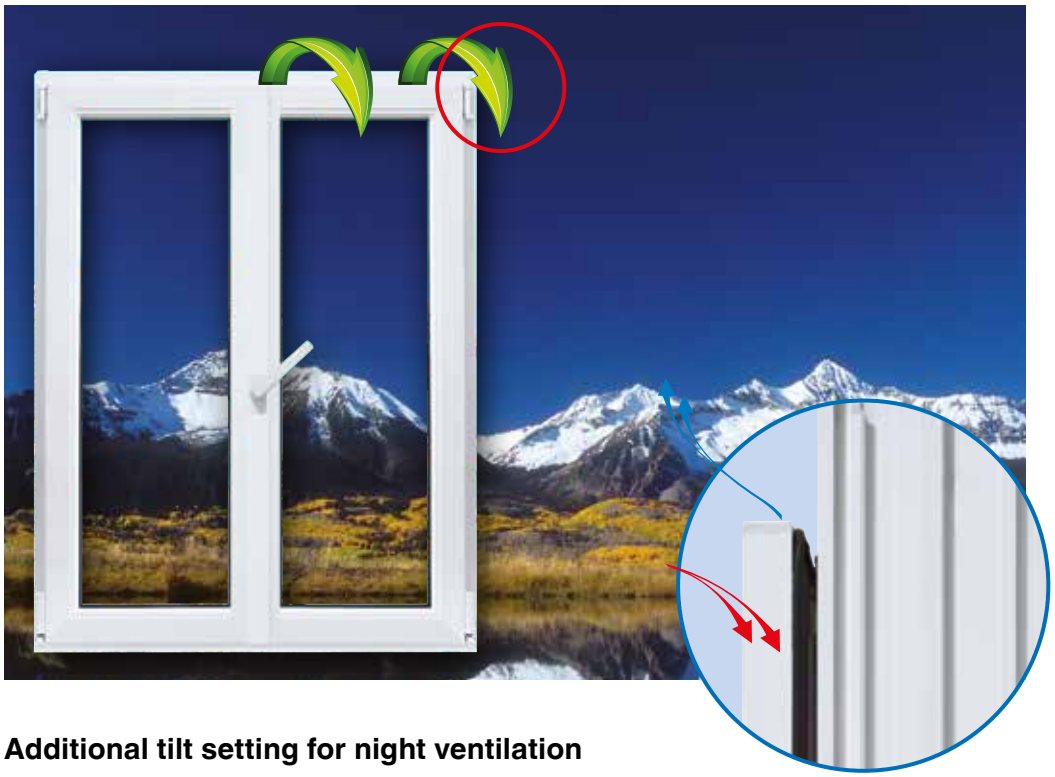


Beautiful and perfect: compression lock on double-sashed elements

- Beautiful, because the compression lock is not visible on the turn sash
- Perfect, because this component locks even when the air gap does not exactly fit, so that no re-adustment is needed.
- Compression locks can be used on both left and right sides



Save energy with the Night Ventilation Stay



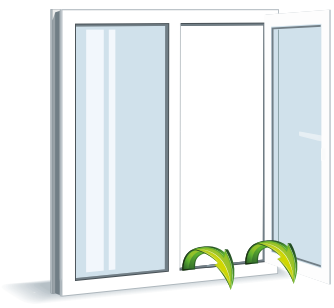
Additional tilt setting for night ventilation

- Functions entirely in the stay - no additional part
- When switching to the tilt setting, the sash stands out approx. 10-13mm at 45 degrees, according to size
- Easy to operate
- An anti-slam device fixed into the tilt setting
- Large stay pull in distance (at least 21mm), even with narrow windows
- Just the right for those months when the outside temperature never falls below 0° C. The ventilation setting is not affected by draughts or wind



Summer ventilation

or tilt setting for permanent exchange of air with minimum difference between the air inside and outside.



Intensive ventilation

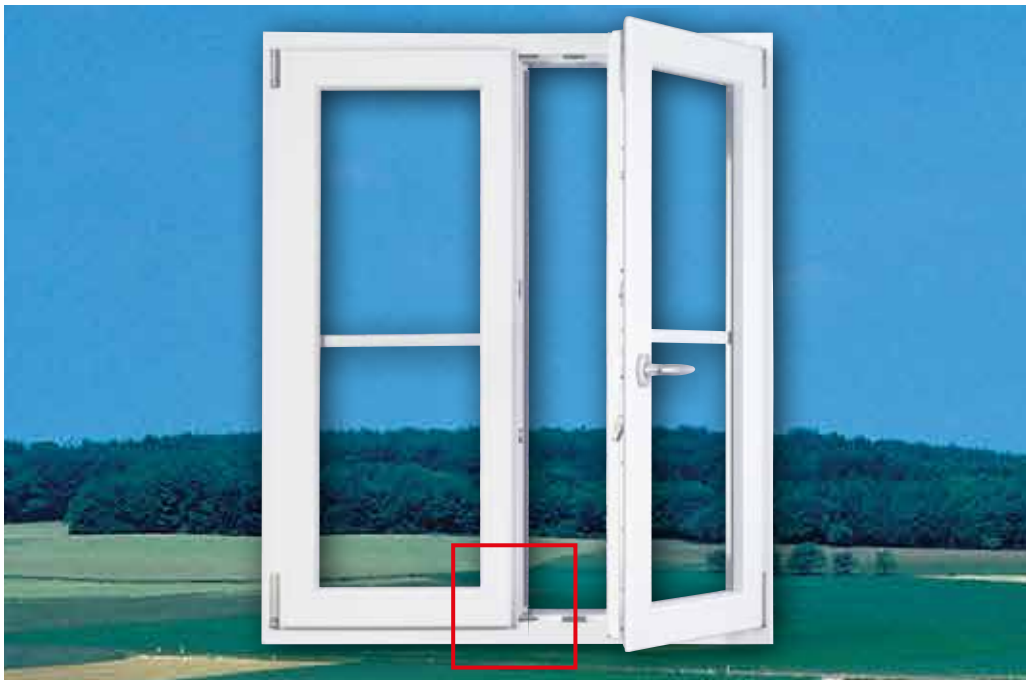
for a quick exchange of air. The window should not be left unattended! – Danger of damage by window and draughts.



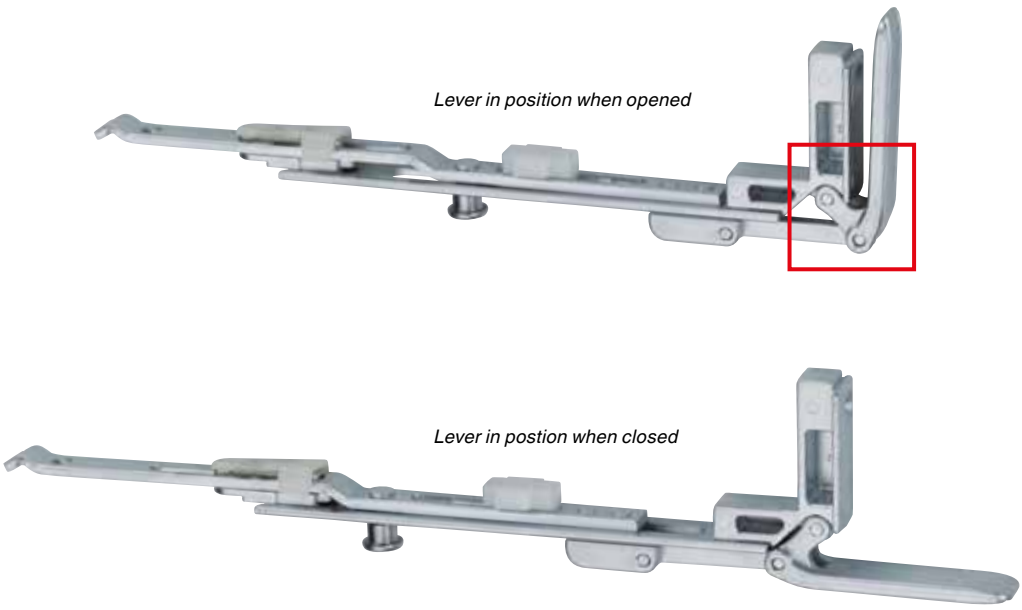
Night Ventilation

Just the right thing for the months when the outside temperature never falls below 0° C. The ventilation setting is not affected by draughts or wind.

Practical solution for double-sashed windows



The new dummy sash lock is easy to reach and can be opened without effort, furthermore the dummy sash lock can be coupled with the centre lock, making it suitable for security windows.



Horizontal dummy sash lock

- Proven security for double sashed windows, also without dummy sash gear
- Standard or EH (certified as resistant to break-in) striker plates can be used
- No shootbolt striker plates needed
- Dummy sash lock can be coupled with centre lock for wide turn sashes
  Striker plate rail allows precise cam intervention in the turn sash

Comfortable and secure



French casement drive gear with welded striker plate - the perfect solution for comfortable operation

- Suitable for left and right handed applications
- No additonal parts required for BRG2 (‘RC2’) windows thanks to a combination of the EU BRG2 (‘RC2’) with slider-stop (for windows produced in accordance with the European standard)
- Easy installation - Cropping in the closed position
- Easy operation



Secure against Intruders



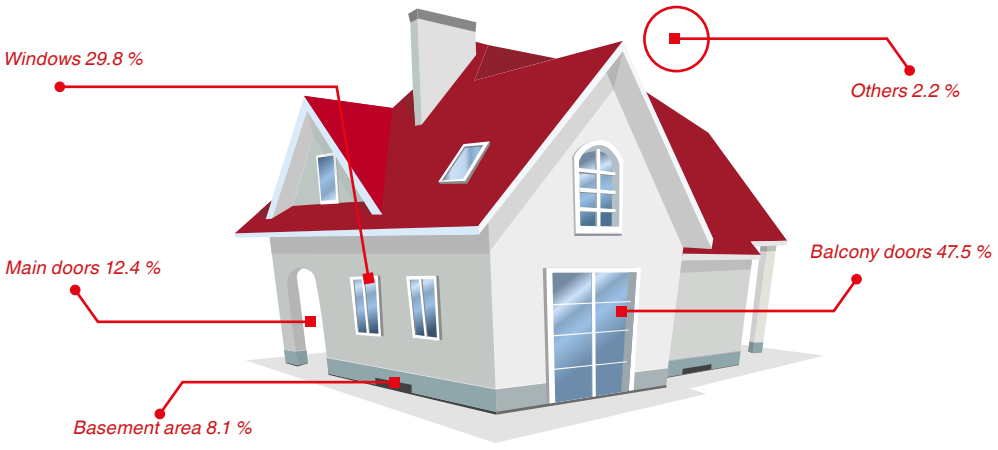
Who breaks in where and when?

The old saying “opportunity makes a thief” applies perfectly to burglars and intruders who spontaneously look for properties which are easy to break into

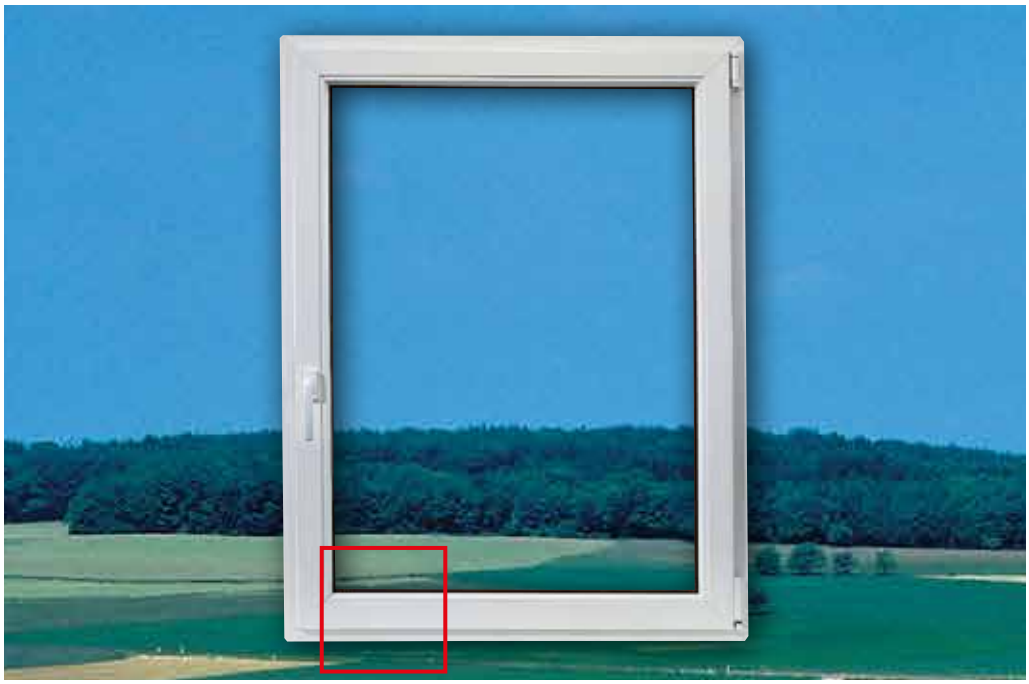
Burglaries normally occur during the day between 12 noon and 8pm. Statistics show that over 80% of the time the intruder’s path leads through the window or patio door and not as mistakenly believed through the front door of a house or flat

How do they break in?

Intruders can lever out a window relatively quickly using simple tools.
Almost 70 % of break-ins through a window are carried out using a screwdriver with a blade width of 6 to 12mm



Basic security, Always



The MULTI-MATIC fitting system is the only one which always provides the window buyer with the i.S. security cam as standard

i.S. = intelligent security

- The i.S. security cam can be combined with a standard striker plate and a security striker plate
- A special composition of materials makes it completely robust
- The striker screw fixings will on PVCu systems fix through either two profile walls or the frame reinforcing
- On timber windows the striker is fixed with two straight and one angled screw

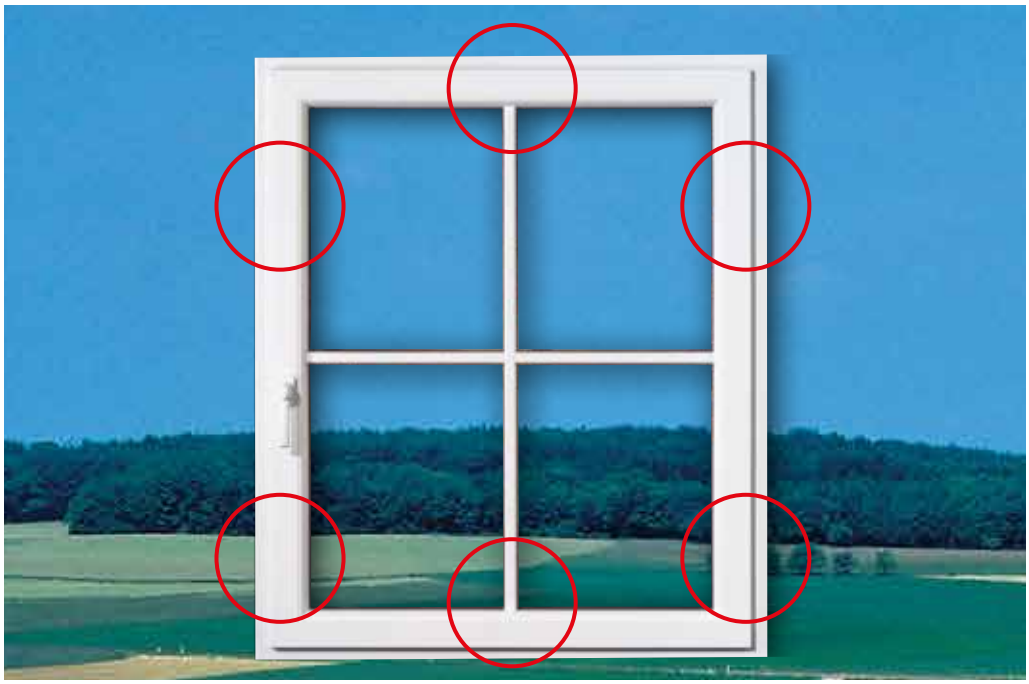


Secure tilt position!

- Basic-security at the window's most critical point
- No special stiker plate
- Protection against levering out in the tilt position
- The striker plate can be mounted at the floating fame section



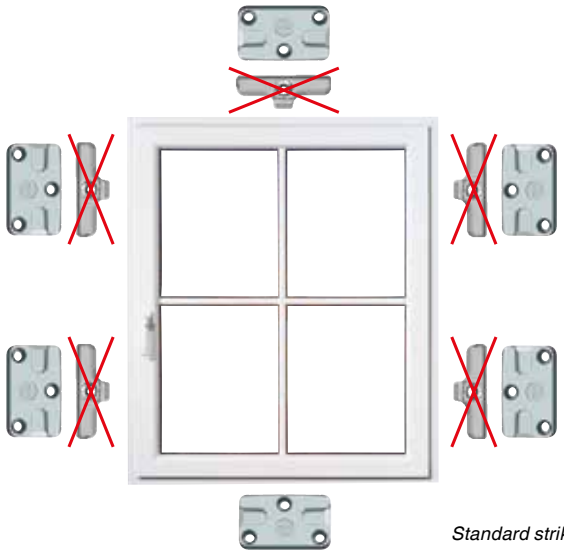
Unlimited possibilities



i.S. Striker Plates:

A special composition of materials and a very work intensive pressure casting procedure ensure complete stability.
The fittings are screwed into the frame reinforcement





Fitting parts which are resistant to break-ins can easily be retro fitted

- Should increased window security be desired at a later date, it is very easy to retro fit with i.S. security striker plates thanks to identical screw positions

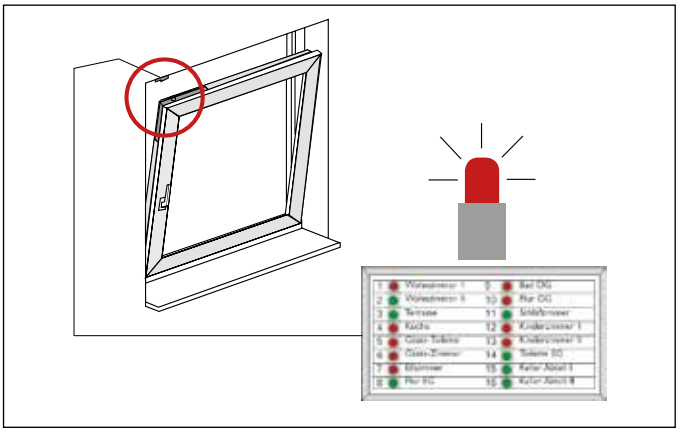
Standard striker plate

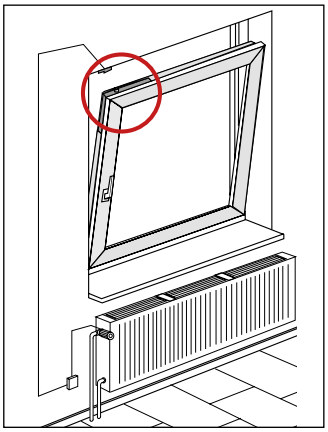
i.S. security striker plate

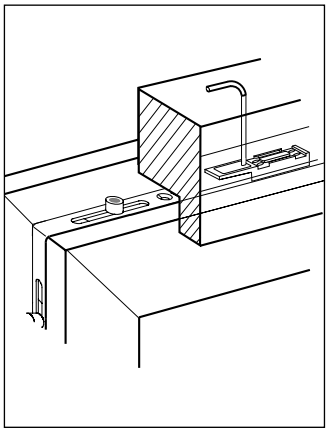


Electronic security









- Saves energy by being connected to a heating thermostat or an air conditioning unit. If the window is open, the heating is automatically switched off
- The connection to a central indicator signals which windows in a building are open (tilt position counts as open for insurance purposes) and which are closed

- Automatic window surveillance via connection to surveillance or alarm units

- Because its coupled to the fitting, the alarm unit is only activated when the fitting is locked and not just pulled to

One fitting system for all types of window



Many different styles possible

With the MULTI-MATIC fitting system, every style of window can be manufactured using only a few special parts. With the MACO MULTI-MATIC, you need fewer parts to set up a window. This saves warehouse space and logistics time.



- Circular windows
- Half round windows
- Night vent windows
- Single sash windows
- Double sash windows
- Triple sash windows
- Angled windows
- Balcony doors
- Tilt Turn Doors

You save warehouse space



The particular advantages for you:

- Shorter components
- Less components
- This makes handling easier and saves warehouse space

Easy to handle



Klix-fix! Fittings clip into the eurogroove

- Automatically held in the eurogroove by assembly clips

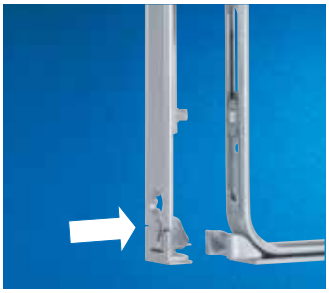


Short fittings components

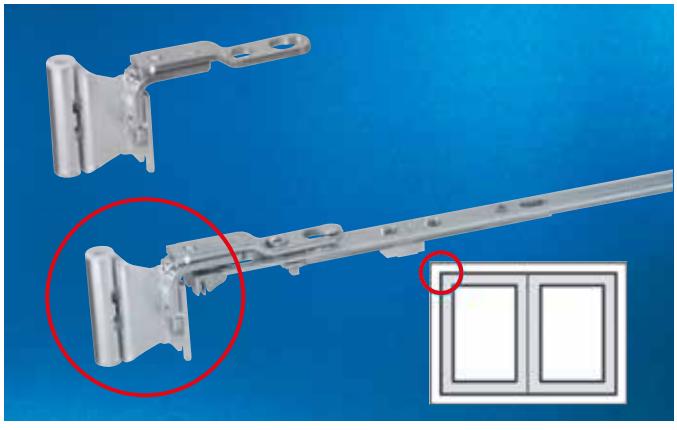
- Coupling system without connecting plates

Linear hole spindle connection

- Ensures high level of fitting accuracy
- Linear feeding ensures automated assembly
- No lifting loss
- Multiple use
- No spring guided long parts



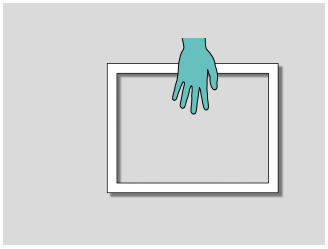
Coupling system



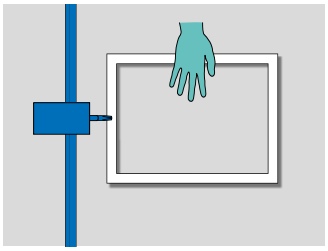
Turning hinge for dummy sashes

- Fixed turning hinge
- Turning hinge can be cut to length, coupled with corner support and centre lock - Therefore additional stay is not required
  - Centre lock resistant to break-in up to level 2 BRG2 (‘RC2’)

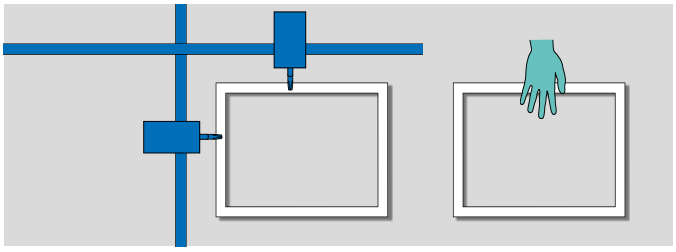
Fitting system for all types of assembly



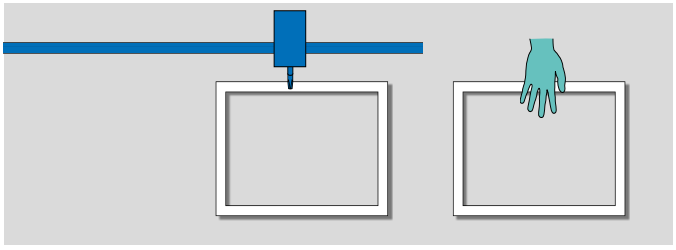
Manual assembly



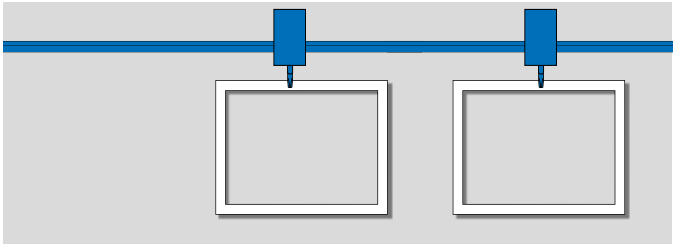
Screw automation in 2 minutes



Screw automation in 1 minute



Partial automation in 2 minutes



Full automation in 1 minute with unmanned assembly



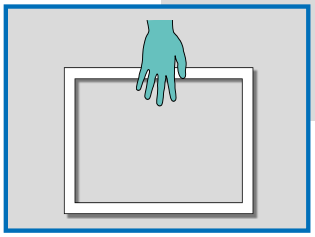
Manual assembly



Screwdriver

Traditional assembly – approx. 4 minutes

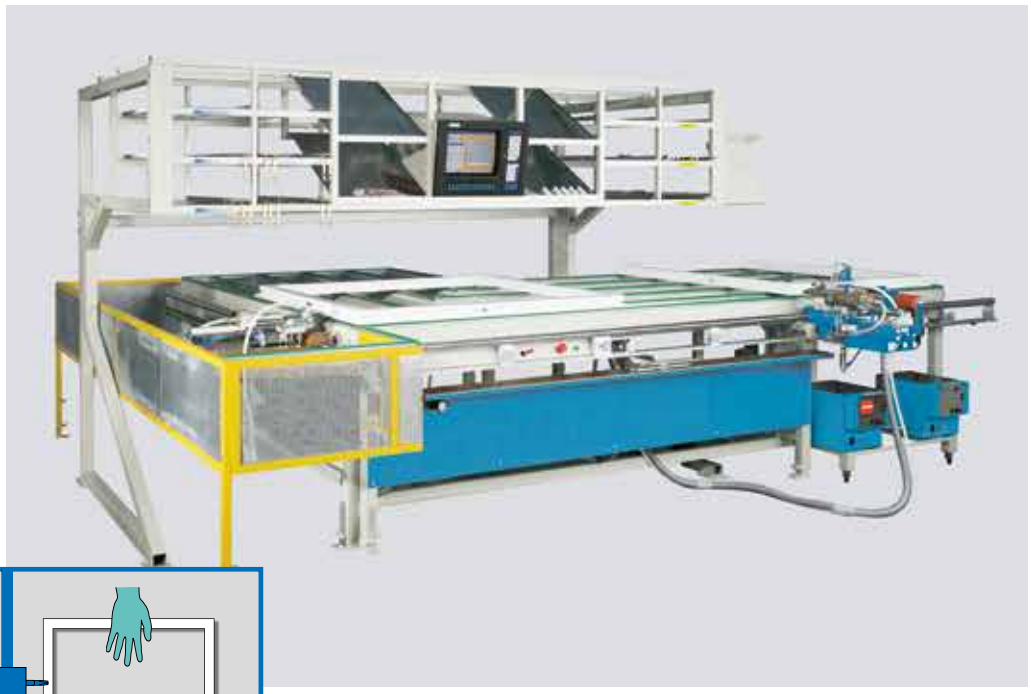


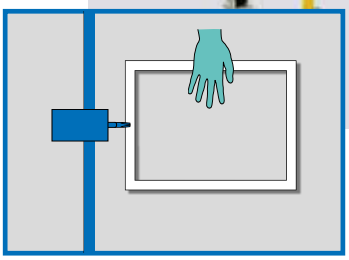


Complete Tilt&Turn fittings with top and bottom hinges

- Easy to handle thanks to
  - Short fittings parts
  - Linear hole-spindle connection
  - Coupling system without connecting plates
- The fitting clips into the eurogroove
- Only a few additional parts needed for special designs such as half round or angled windows

Single-axle screwdriver for two minute assembly



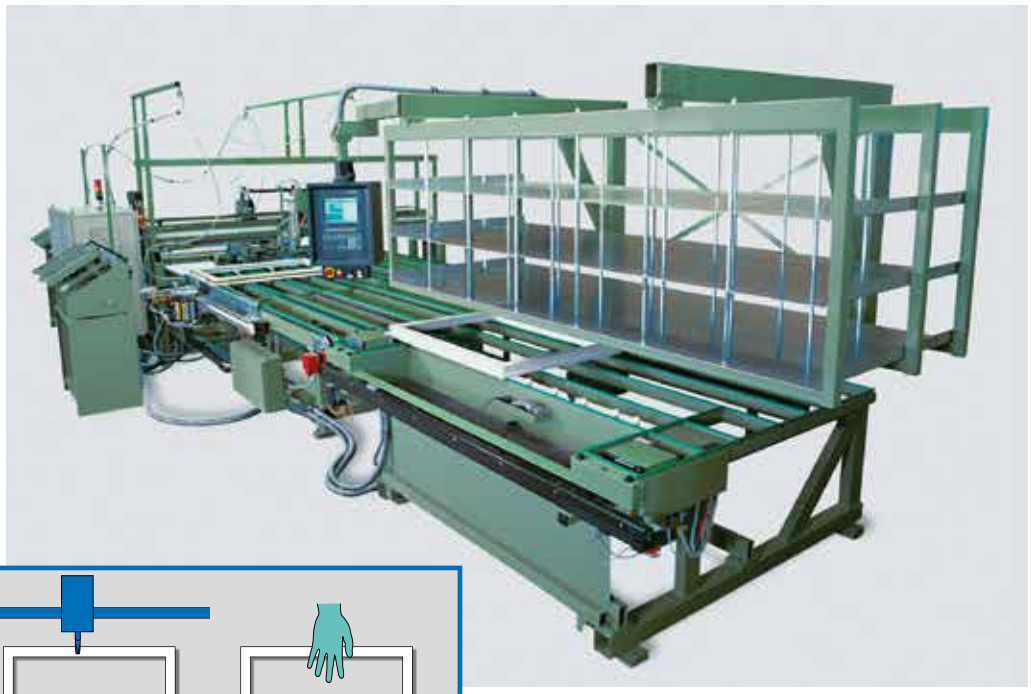


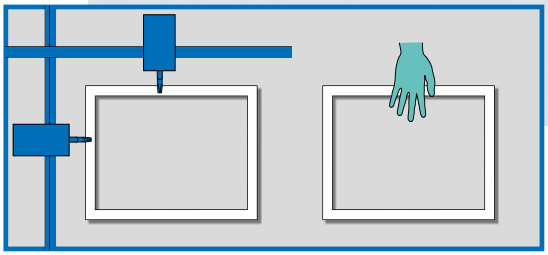
Partially automated screw fixing

- Fitting parts are inserted and cut to length, manually on one side

- At the same time, the clipped in fitting parts are screwed on automatically

Double-axle screw fixing for one minute assembly



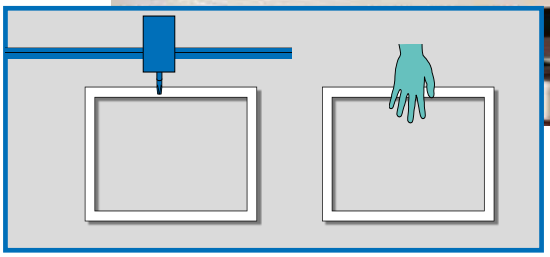


Fixing in 1 minute

- All components are inserted manually
- At the same time, the parts which have already been inserted in the second sash are screwed on automatically

The first steps towards fully automatic assembly





Starting full automation



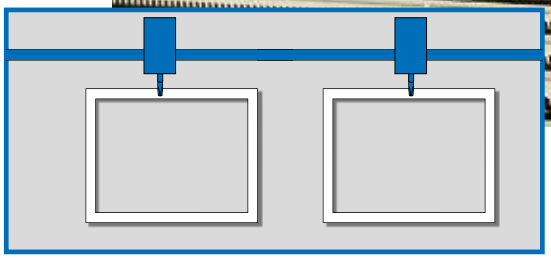
- Corner element
- Centre lock
- Corner hinge
- Compression devices are automatically inserted into the groove and screwed on



- Assembly of the drive gear and scissor stay are done manually

Fully automatic unmanned assembly





Fully-automated fitting installation

- Insertion and screw fixing of the fitting installation is fully automated, in one operating cycle

Advantages

- Unmanned assembly
- One minute duration
- Consistently higher screw fixing quality as well as increased production capacity

MACO
MULTI-MATIC

Packaging concepts for full automation



Intelligent packaging increases productivity

In developing the new packaging system, particular attention was paid to efficiency at the processing stage



Packaging concepts

- Less packaging material
- Easy to remove the packaging
- Batches of 10 for ease of individual handling or automated storage
- Environmentally friendly material
- Quick loading from the stacking pallet
- Considerable savings in time and costs
- Member of Interseroh for over ten years



Loading onto the fixing position

- Simple removal from the front
- Empty individual pallets can be exchanged from the side
- This does not interrupt the workflow

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