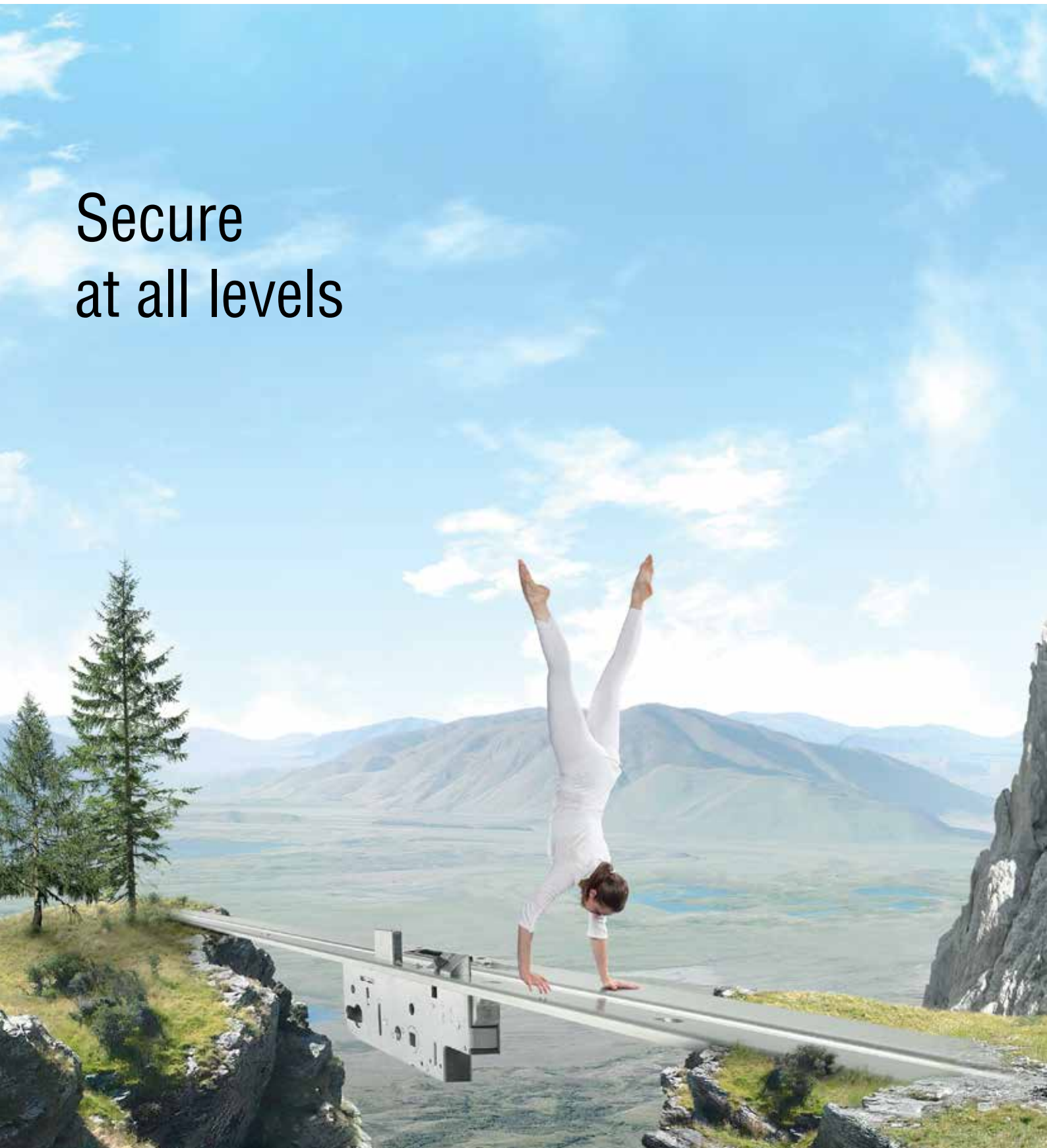


TECHNOLOGY IN MOTION



Secure  
at all levels



**QUALITY PRODUCTS  
FOR DOORS**



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MACO-PROTECT door locks on front doors, flat entrance doors and side entrances make forced entry a difficult job thanks to its key features, e.g. i.S. security roller pins, steel bolts, steel hooked latches and combinations of steel hooks and bolts. Optimized acoustic and thermal protection with appropriately adjustable gasket compression complete the extra lock-related properties. Depending on the version and requirements, security components like the hook-bolt combination can be used to provide resistance up to Resistance Class RC 3.

Door elements made of timber, PVC and aluminium complement the door locks. They are available in the MACO surfaces *Silverlook*, TRICOAT-PLUS and RAL power coating. The *Silverlook* surface finish itself offers an extremely high resistance to corrosion. *Silverlook* has been tested for 240 hours corrosion resistance in a salt spray test in accordance with the European standard EN 1670. If the exposure to corrosion is likely to be higher (in direct local locations or in environments where chemically aggressive substances are present, for example), the use of TRICOAT-PLUS door locks is recommended. All door locks have been for long-term performance.

The modular door lock system PROTECT is always able to provide the right locking solution for single-sash and two-sashed entrance doors made of timber, PVC or aluminium up to a door height of 1650 bis 3100 mm. The same lock case positioning with a variable upper locking point, uniform case milling and easy lengthening or shortening facilities for the multi-point locking system are its main features. This ensures full variability when adapting to varying door heights.

The door lock range is complemented by the aesthetically designed strike plates and strike plate rails.



**LOCKS AND ACCESSORIES**



## Cylinder-operated Automatic door lock Z-TA 3-latch lock Automatic/Comfort

The 3-latch lock Z-TA Automatic/Comfort is superlative in the MACO PROTECT door lock range. The 3 latches ensure optimum gasket compression when the door closes. Furthermore, two hook locking modules, and even the locking bars, are deployed automatically. This makes for highest convenience and optimum

security without having to lock the door with a key. An optional retrofit motor complements the Z-TA Automatic lock: The motor-driven Z-TA Comfort offers those who are looking for superiority the most convenient method for keyless, automatic door opening. It has been tested according to DIN 18251-3.

- Main lock casing with soft latch and locking bar as standard
- 2 additional lock casings with multifunctional latch and steel hook
- Faceplate and lock



## Advantages for the producer

### Flexible planning and processing

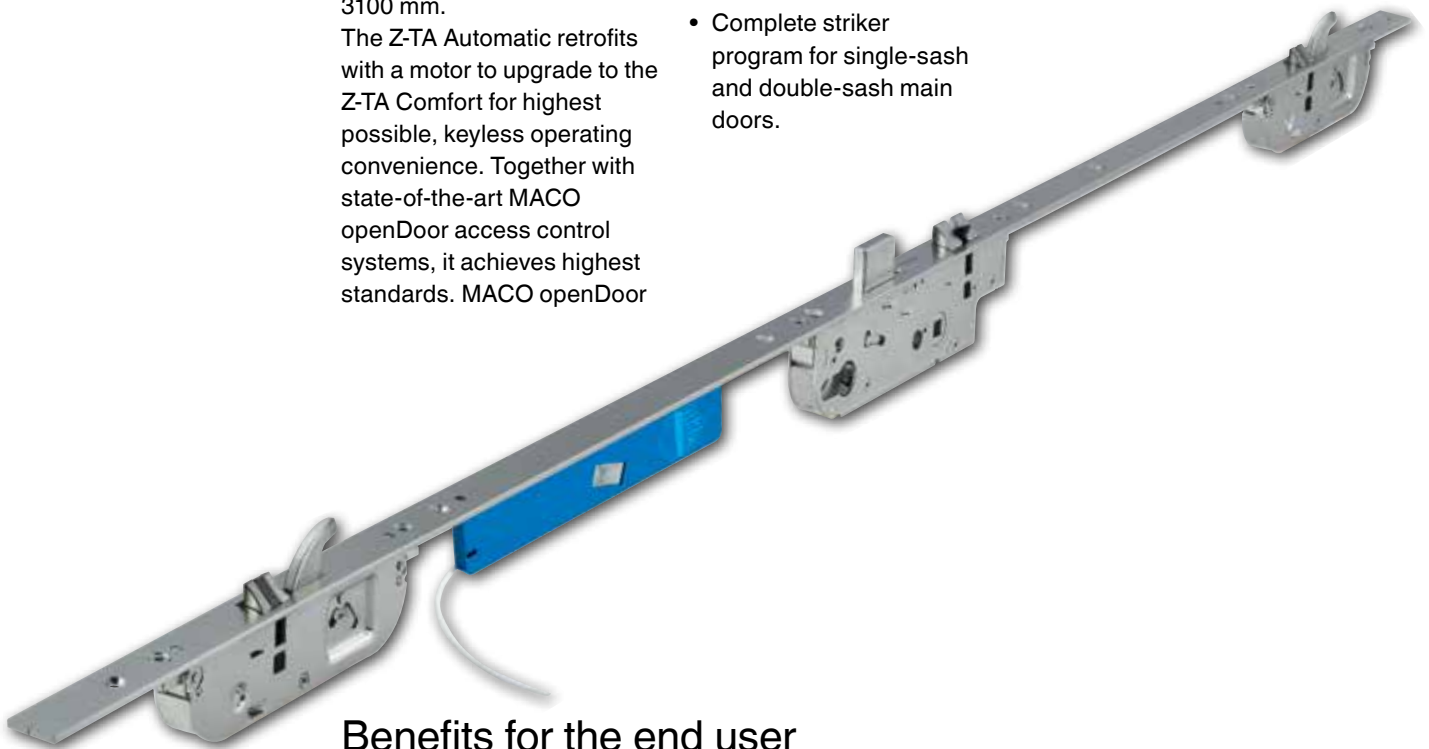
The Z-TA gives your customers the wide range of convenience options provided by a high-end door. The MACO PROTECT Z-TA module concept uses standard products with low storage requirement to implement door heights up to 3100 mm.

The Z-TA Automatic retrofits with a motor to upgrade to the Z-TA Comfort for highest possible, keyless operating convenience. Together with state-of-the-art MACO openDoor access control systems, it achieves highest standards. MACO openDoor

access control systems are available as Touch (Fingerprint), Code (keyboard) and Transponder Plus versions.

- Versatile module system for heights up to 3100 mm
- Use on the left or right
- Complete striker program for single-sash and double-sash main doors.

- „Plug and Play“ connections for easy installation
- Versatile control systems: Can also be used with commercially available access control systems



## Benefits for the end user

### Safe and secure - no need to lock up

- Automatic interlocking for utmost convenience
- Even gasket compression over the entire door height
- Acoustic and thermal protection
- Durable due to permanent gasket compression over the entire door leaf (3 latches counteract any distortion of the door leaf)
- Resistance class up to RC 2 in accordance with EN 1627-30
- Smooth-running with soft latch and multifunctional latches
- Blocking feature on the lever handle provides additional security when locked
- MACO top for enhanced aesthetic appearance
- Motor support for enhanced operational comfort: The Z-TA Comfort opens the door leaf automatically
- Can also be used with the MACO openDoor and commercially available access control systems



## Z-TA with day setting

**NEW**

Do you want the front door, apartment entrance door or side entrance to remain open during the day despite the automatic self-locking mechanism in the door lock? Use the new day setting function of the Z-TA to achieve this. It retrofits easily on the Z-TA Automatic and Z-TA Comfort: To do this,

simply replace the soft latch in the main lock casing with a roller latch for both types of locks.

In the case of the Z-TA Automatic, add the slider for the day setting. In the case of the motor-driven Z-TA Comfort, the motor operates as the slider.



## Advantages for the producer

### Retrofit whenever needed

The Z-TA day setting can be retrofitted on any of the existing products.

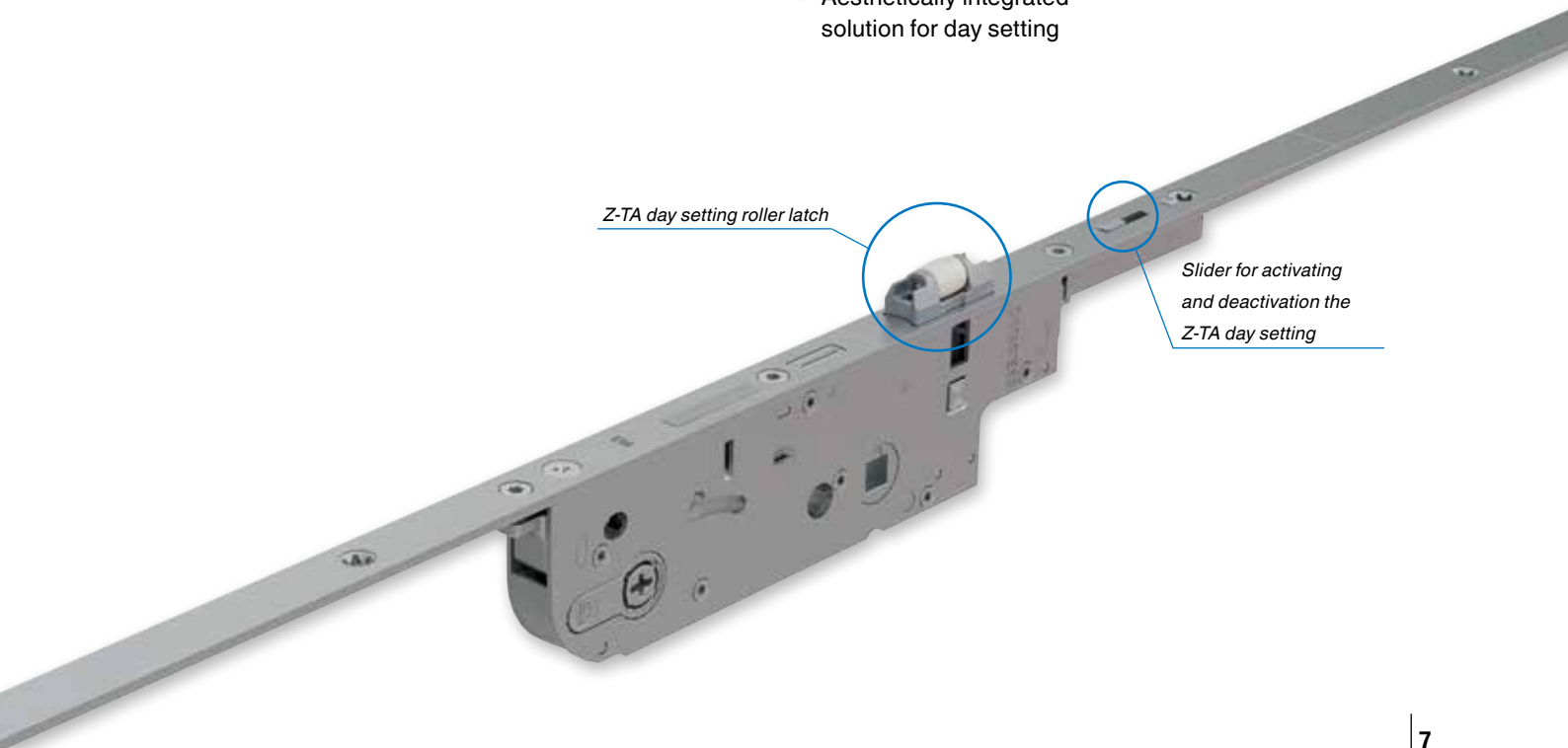
- Day setting through retrofit roller catch
- Easy to install day setting attachment
- Low, cost-effective storage, since only the „day setting retrofit kit“ need be kept in storage
- No additional routing needed in the door sash, since the retrofit kit for activating the day setting is integrated in the hardware groove
- Full existing striker program for single-sash and double-sash main doors.

## Benefits for the end user

### No more accidental lock-outs!

The MACO Z-TA day setting uses a roller catch to hold the door leaf in the frame. The door opens at any time by simply pushing the door leaf.

- Easy activation and deactivation of the day setting
- The roller latch keeps the door leaf closed
- Aesthetically integrated solution for day setting





## The Z-TF 3-latch lock

Conventional locks use only one latch to hold the doors. The gasket-compression of the door sash is then not always ideal at the corners. The MACO PROTECT Z-TF has two additional multifunctional latches to complement the standard soft latch and produce an optimal, permanent gasket-compression over the entire

height of the door. Immediately after closing, the door leaf is held securely and reliably at the three points, without the need for additional locking. The Z-TF MACO PROTECT door lock range is available with bolt or i.S. security roller cam. Tested according to DIN 18251-3.

### **With multi-function latches and steel bolts.**

- Main lock casing with soft latch and locking bar as standard
- 2 additional lock casings with multifunctional latch and steel bolt
- Faceplate and lock

### **Multifunctional latches and i.S. security roller cams**

- Main lock casing with soft latch and locking bar as standard
- 2 additional lock casings with multifunctional latch
- 2, 3 or 4 i.S. security roller cams
- Faceplate and lock



## Advantages for the producer

### Rapid installation

Easy handling and effective solutions are the characteristics of this product.

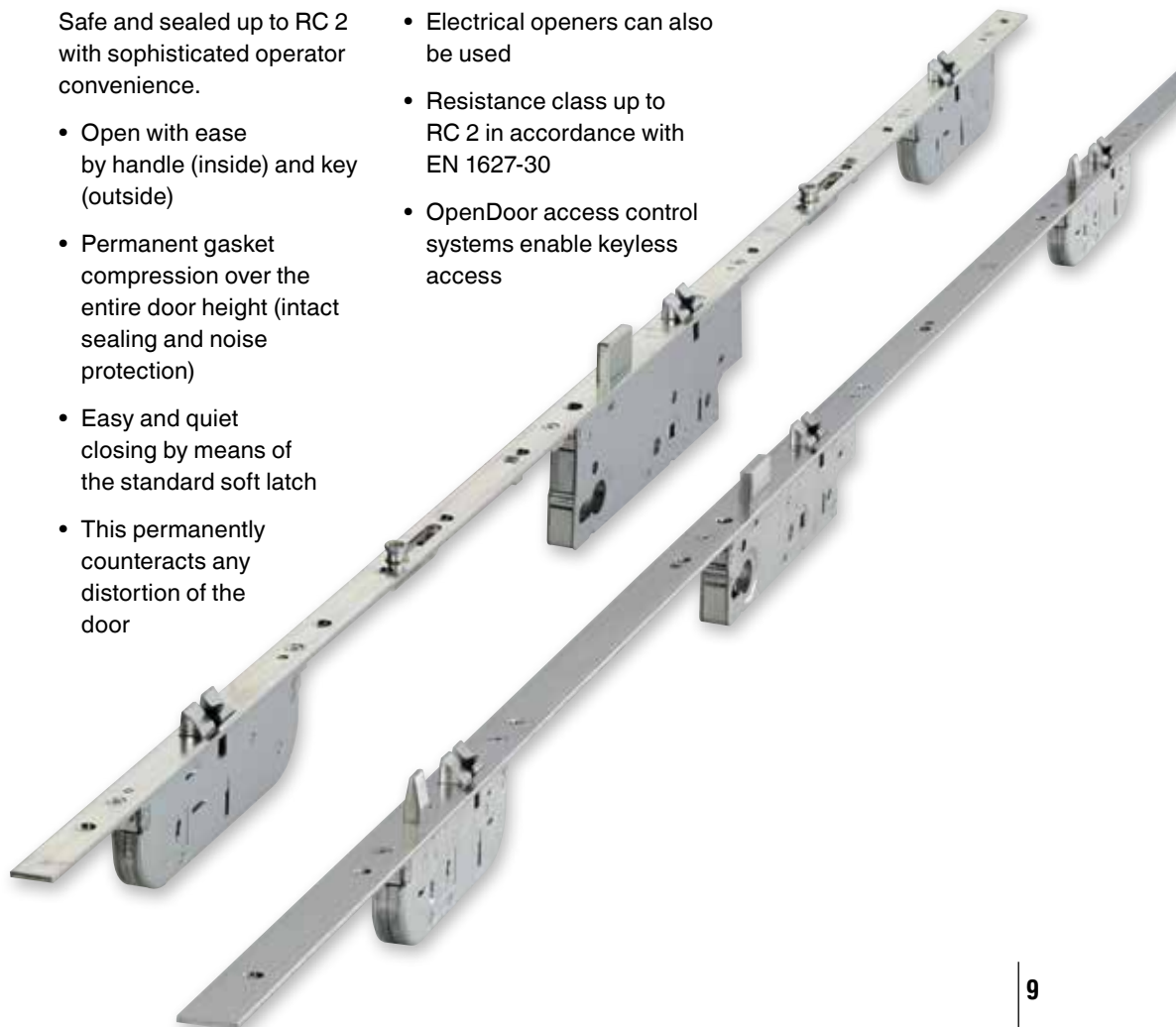
- One routing pattern for two different locking mechanisms
- Z-TF with i.S. security roller cam or bolt locking
- Available in three different heights
- Easy and quiet closing by means of the standard soft latch
- Straightforward and rapid installation, since the flat latch insert requires no routing
- No routing for the i.S. strikers
- Easy gasket-compression adjustment

## Benefits for the end user

### Always with an even gasket compression

Safe and sealed up to RC 2 with sophisticated operator convenience.

- Open with ease by handle (inside) and key (outside)
- Permanent gasket compression over the entire door height (intact sealing and noise protection)
- Easy and quiet closing by means of the standard soft latch
- This permanently counteracts any distortion of the door
- Electrical openers can also be used
- Resistance class up to RC 2 in accordance with EN 1627-30
- OpenDoor access control systems enable keyless access





## The Z-TS/G-TS module

The Z-TS/G-TS MACO PROTECT Module door lock system meets a wide range of requirements. Standardised installation procedures go hand-in-hand with full flexibility regarding the height of the multi-point locking system.

The Z-TS/G-TS PROTECT module offers a technically perfect solution for any door height. No additional head-dashes with storage capacity or installation times. The

Z-TS/G-TS PROTECT module can be used in timber, OVC or aluminium main doors.

The basic standard for the PROTECT Module door lock is the hook&bolt combination with triple-point locking system. The door lock also comes as a version with hook only or bolt only, each with triple-point locking system. Tested according to DIN 18251-3

- Main lock casing with soft latch and locking bar as standard
- 2 additional lock casings with steel hook& bolt combination
- Faceplate and lock

(module system for a variety of locking options)



## Advantages for the producer

### Flexible functionality and height adjustment

Z-TS/G-TS PROTECT  
Module satisfies every customer wish up to an unbelievable sash rebate height of 3100 mm.

- Standardized hinge with few module variants
- Savings on storage space and logistics thanks to compact, easy-to-store modules
- Uniform routings for reduced effort and cost reductions (same profile!)
- Use commercially available, pre-stamped reinforcements

## Benefits for the end user

### Variety of functions up to 3100 mm height and RC 3 for any main door

Customize any main door with the multifunctional hardware of the Z-TS/G-TS PROTECT modules.

- High-level security with hook&bolt combination locks made of solid steel
- Provides additional protection against distortion of the door leaf when locked
- Even for very high main doors (up to 3100 mm), the PROTECT module effectively counteracts any door-leaf distortion over the long term when locked
- Effortless operation of the door lock, even at high gasket compression
- The following modules can be retrofitted in the Z-TS/G-TS PROTECT module system: Door restrictors, magnetic cams, auxiliary locks and hook&bolt locking systems. They ensure a matched functionality for the particular requirements
- Easy to retrofit, upgrade and replace to components in existing door systems
- Resistance class up to RC 3 in accordance with EN 1627-30





## G-TA – handle-operated Automatic door lock

The G-TA can be used in three versions: as an automatic door lock, handle-operated or balcony door locking system. The end user is free to choose.

- Main lock casing with soft latch and locking bar as standard
- 4 i.S. security roller cams
- Faceplate and lock



## Advantages for the producer

### Three variants in one product

The new G-TA door lock range provides all the options that producers and end users desire:

a door lock range that is versatile for use with main doors, side entrance doors and balcony doors, individual operation modes with automatic or mechanical function.

- 3-in-1 – Automatic door lock, handle-operated door lock and balcony door lock in one product
- Complete range from DM 28 – 50 (DM 25 for the balcony door variant)
- Rapid installation with minimum of routing (routing required only for the main lock casing)
- Extends up and down
- Use on left/right
- MACO soft latch installed as standard
- 3 mm faceplate material provides high stability
- Convenient latch conversion without the need for tools
- Handle turns up 90°: The G-TA is thus ideal for special applications (window in door leaf).

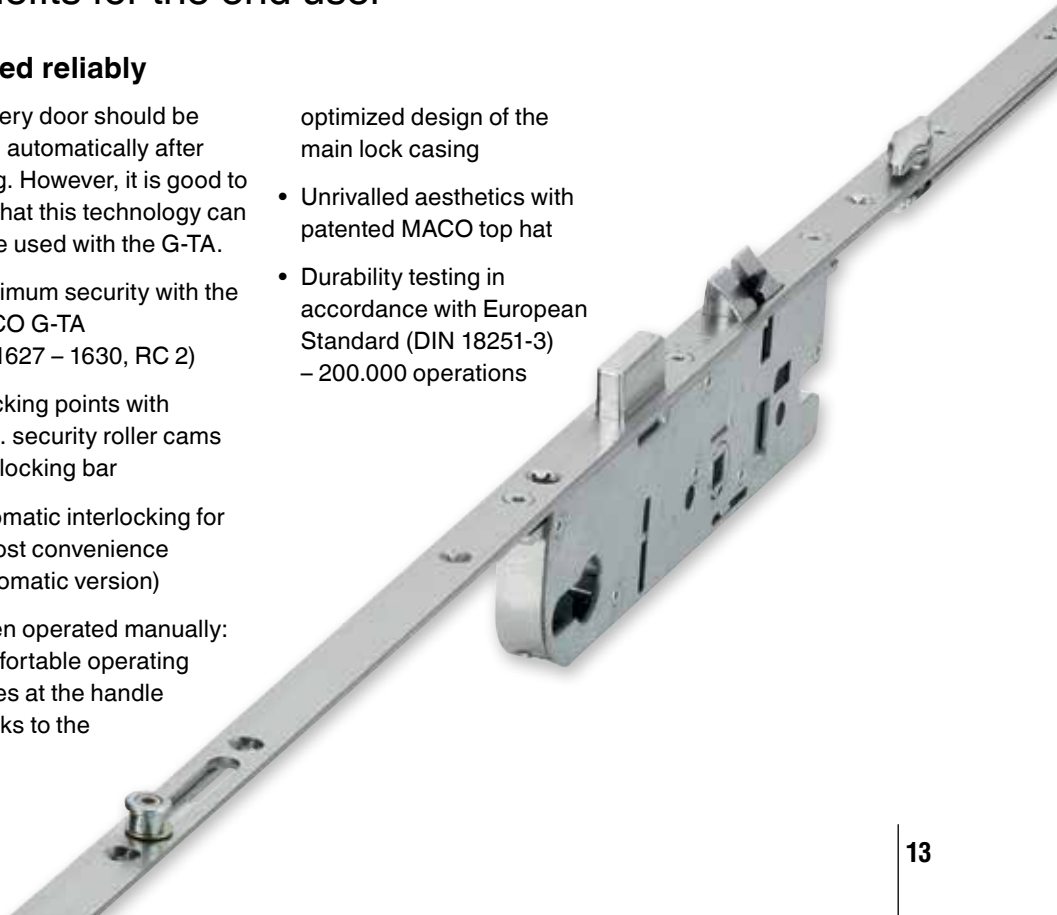
- And, with the MACO i.S. security roller cam, satisfies highest safety requirements (RC 2 to EN1627 – 30)
- Lower engagement of the i.S. safety roller cam in the strikers – 20 mm lift
- Unrivalled aesthetics with patented MACO top hat

## Benefits for the end user

### Locked reliably

Not every door should be locked automatically after closing. However, it is good to know that this technology can also be used with the G-TA.

- Maximum security with the MACO G-TA (EN1627 – 1630, RC 2)
- 5 locking points with 4 i.S. security roller cams and locking bar
- Automatic interlocking for utmost convenience (Automatic version)
- When operated manually: comfortable operating forces at the handle thanks to the optimized design of the main lock casing
- Unrivalled aesthetics with patented MACO top hat
- Durability testing in accordance with European Standard (DIN 18251-3) – 200.000 operations





## C-TS – Composite door lock for alternate operation

The combined MACO PROTECT C-TS door lock allow production of a large range of easy-to-operate doors based on a slim-line door lock product family.

This high-security locking system combines two operating functions: The split spindle incorporates the handle and alternate operation in the lock casing.

- Main lock casing with soft latch and locking bar as standard
- 2 additional lock casings with steel hook and locking cam
- Faceplate and lock



## Advantages for the door producer

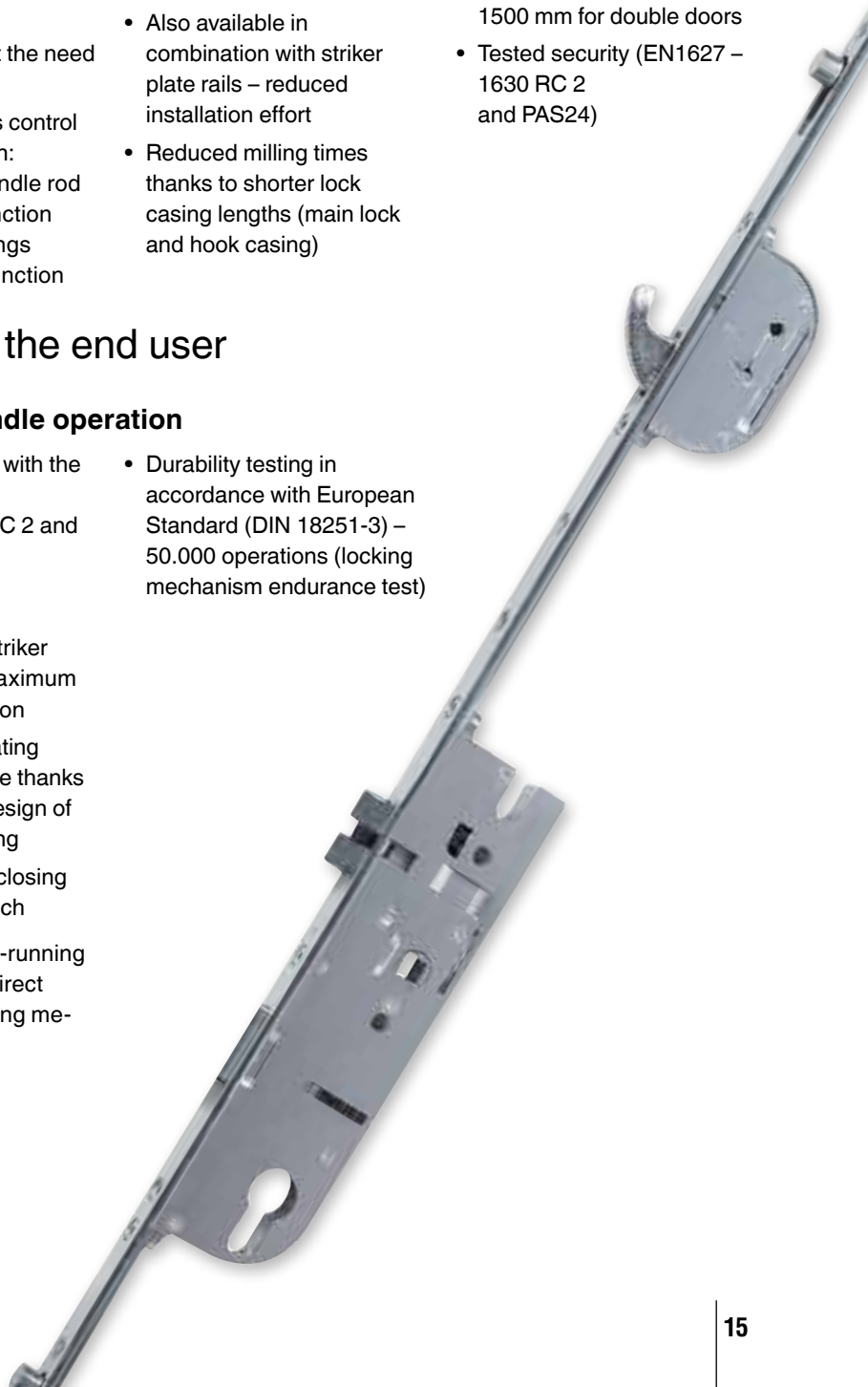
### One main lock casing, two functions

- Combined function: Handle and alternate operation (split spindle) in one main lock casing
- Small, compact main lock casing
- Convenient latch conversion without the need for tools
- The spindle fittings control the locking function:
  - Single-piece spindle rod = Lever/lever function
  - Split spindle fittings = Split spindle function
- Combined, easy-to-adjust hook&locking cam strikers
- Adjustable striker plates and locking cams enable high gasket-compression settings
- Also available in combination with striker plate rails – reduced installation effort
- Reduced milling times thanks to shorter lock casing lengths (main lock and hook casing)
- High stability with 3 mm faceplate material, available in 16-and 20-mm widths
- Door lock length 2200 mm for single doors and 1500 mm for double doors
- Tested security (EN1627 – 1630 RC 2 and PAS24)

## Benefits for the end user

### Convenient handle operation

- Maximum security with the MACO C-TS (EN1627 – 1630 RC 2 and PAS24):
  - hooks made of cast steel
  - and solid steel striker plates ensure maximum burglary protection
- Comfortable operating forces at the handle thanks to the optimized design of the main lock casing
- Quiet, convenient closing with MACO soft latch
- Extremely smooth-running operation due to direct control of the locking mechanism
- Durability testing in accordance with European Standard (DIN 18251-3) – 50.000 operations (locking mechanism endurance test)





## Z-RS – cylinder-actuated narrow case lock

The cylinder-actuated narrow case lock can be used anywhere at any time; but is ideal for aluminium entrance door applications. Its excellent, rugged construction

and a deadbolt extension of 20 mm even for a backset of 25 mm are special characteristics of the MACO Z-RS narrow case lock. Tested according to DIN 18251-2

- Main lock casing with soft latch and locking bar as standard
- Faceplate



## Advantages for the producer

### Straightforward, rapid installation

Ideal for timber, PVC and aluminium main doors, this product excels with straightforward routing a rapid installation.

- Straightforward and rapid installation
- This soft latch as standard
- Roller latch retrofits easily
- Use existing striker program
- Use on right/left
- Lock casing closed in upper area
- On request also available with retrofit rear retrofit dirt cover

## Benefits for the end user

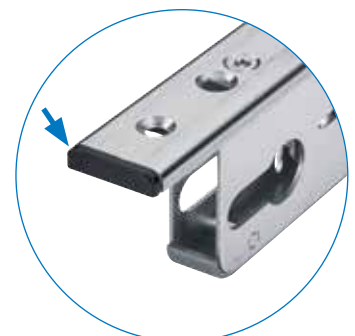
### Basic security integrated

The Z-RS is durability tested to DIN 18251-2 Class 3 and has a deadbolt extension of 20 mm for a backset of 25 mm. This generally ensures a basic level of security.

- Compact, rugged construction
- Locking bolt is secured against counter-pressure
- With soft latch as standard for quiet and smooth closing of the door leaf
- Single-turn lock



*Standard design with 16 mm flat faceplate*



*Lock is version with U-faceplate and optional snap-on ends*



*Lock with retrofittable cover on the rear*



## MACO F-24/16 top hat

The patented F-24/16 top hat ensures uniform installation procedures and guarantees a high-quality appearance.



## Advantages for the door producer

### **Any routing fits!**

The top-hat faceplate can accommodate dimensional deviations in the routing.

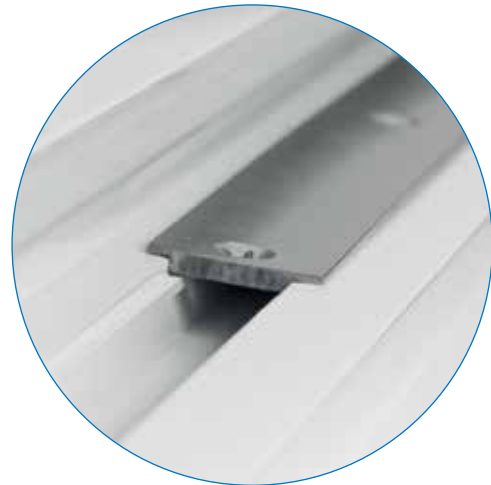
- A routing that is too large is covered by the F-24/16 top hat
- Higher production rates due to large tolerances when milling
- Easy, rapid installation due to more „leeway“ for the products

## Benefits for the end user

### **24 mm exposed faceplate width for excellent aesthetic appearance**

Besides the striking appearance, the „overlapping“ top hat prevents any dirt deposits in the conventional gaps between the faceplate and the hardware groove routing.

- Aesthetic robust design
- Robust 24-mm appearance enhances the door unit' aesthetics
- Stops dirt collecting between the faceplate and the fitting groove





## MACO's striker range

MACO PROTECT striker plates are available for all familiar profile systems. The full range of striker plates can be used for all PROTECT locking variants in PVC, timber and aluminium systems.



## Advantages for the producer

### Straightforward and rapid installation for any application

The striker plate range covers all familiar systems. It is used for single-sash and double-sash doors.

- Full striker plate range for PVC, timber and aluminium
- Variety of striker plate series for individual use
- Easy, rapid and safe positioning with profile adaptation directly at the

striker plate basic profile

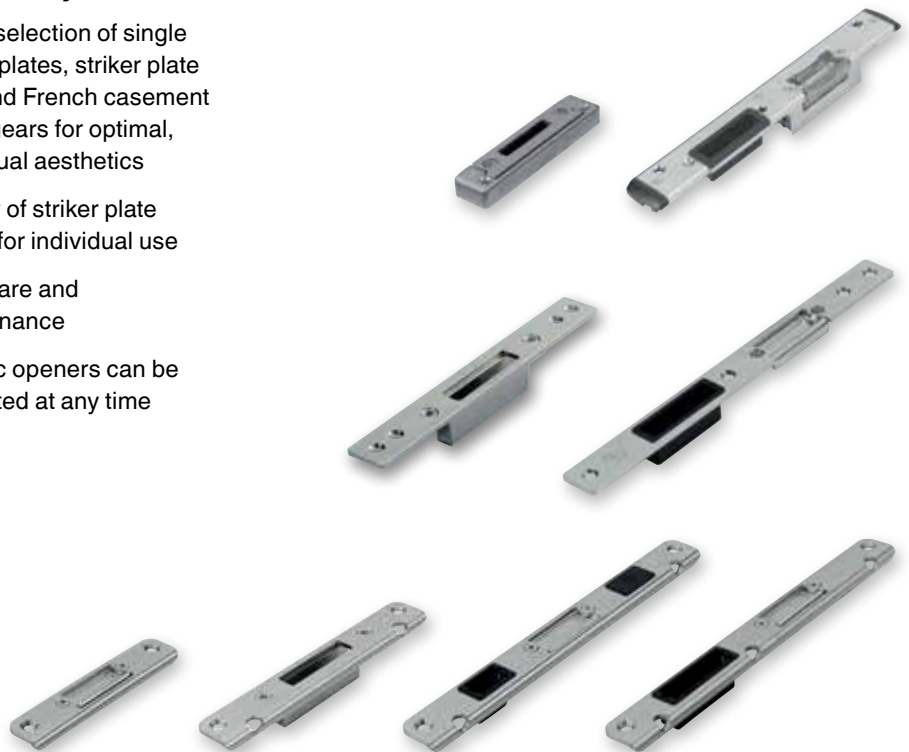
- Simply, convenient adjustment of the gasket compression
- In some cases, even no routing required for the latch insert
- Angled striker plates for timber with short, only 8-mm high shoulder with sloped screw fixing

- Screws securely into the reinforcement of PVC profiles
- Electrical openers can also be used

## Benefits for the end user

### Individuality is the asset

- Large selection of single striker plates, striker plate rails and French casement drive-gears for optimal, individual aesthetics
- Variety of striker plate series for individual use
- Easy care and maintenance
- Electric openers can be retrofitted at any time





## MACO French casement drive gear

For double sash main doors: MACO's French casement drive gear can be used on a variety of interlocking systems. They are RC 2 and/or SKG\*\* tested. They are available for the main door locking systems PROTECT Z-TS and G-TS Module,

3-latch lock PROTECT Z-TF and 3-latch lock PROTECT Z-TA Automatic/Comfort. The MACO finger-operated door shootbolts represent a conservative alternative to the French casement drive gear



## Advantages for the door producer

### Rapid installation

The MACO French casement drive gear is characterized by its simple installation and reduced storage requirement (modular design).

- Easy positioning and coupling of the end pieces for the required sash rebate height
- French casement drive gear has an adjustable gasket compression (settable locking points +/- 1.5 mm)
- Reduced, therefore low-cost storage (only one standard article in stock,

additional corresponding end pieces for the for the different door heights)

- Modularity, i. e. matches Z-TS and G-TS module concept  
**NEW: also for Z-TA**
- Various height versions – sash rebate heights from 1915 – 3100 mm
- Additional third locking point possible for high doors
- Adaptations for timber and PVC profile systems

## Benefits for the end user

### Locked securely

Easy-to-operate, the MACO French casement drive gear ensure maximum security.

- Unrivalled aesthetics of the passive door (surface finishes silver, TRICOAT-PLUS or powder-coated)
- Convenient opening and closing of the passive door with effortless one-handed operation

- Robust, secure design of the shootbolt protrusions
- Convenient, secure locking of the passive door for 2-sashed door units
- Central, convenient one-handed operation





## The finger-operated door shootbolt

For double sash main doors: The MACO finger-operated doors provide an additional and useful solution. They also allow simple positioning and represent a traditional alternative to French casement drive gears.

The finger-operated door shootbolt are available for the entire range from PVC to aluminium and timber (4 or 12 air gap). Special finger-operated door shootbolts have been developed for PVC profiles with centre seal.



**MACO  
OPEN DOOR**



## **ACCESS CONTROL SYSTEMS**



## MACO openDoor access control systems

Open the entrance,  
apartment or side entrance  
doors even without a key?

The MACO openDoor  
access control systems offer  
this operational convenience;  
delivery includes  
pre-assembled cables.

The openDoor access control

systems are reliable function  
partners of the 3-latch door  
lock PROTECT Z-TA Comfort.

The formula for success is:

Security with the Z-TA  
+ Easy operation  
with openDoor  
= optimal convenience.



## Advantages for the producer

### Standardized installation dimensions and pre-assembled cables for easy and rapid installation

Identical routing dimensions of the various access control systems ensure efficient and simple routing. The coded connections support rapid installation and quick commissioning.

- Standardized installation dimensions of the access control system basic profiles
- The door leaves can be pre-aligned. The access

control systems Touch, Code or Transponder-Plus are not installed until the end user has made a final decision.

- Elongated hole fastenings for precise positioning of the access control systems
- Straightforward, quick auto-test functions for the producer for testing the workshop



MACO doorleaf-integrated openDoor Transponder-Plus access control systems



MACO doorleaf-integrated openDoor Code access control systems



MACO openDoor Touch access control systems



## Benefits for the end user

### The door is your opener

The openDoor access control system unites convenient keyless door opening with excellent aesthetic appearance.

- Three doorleaf-integrated access control systems are available: Touch, Code, Transponder-Plus
- Tamper-proof through separately positioned control unit
- Easily comprehensible, short operating instructions for new access authorizations to be assigned
- The user assigns the access authorizations
- High-grade stainless-steel covers for excellent aesthetic appearance

**MACO  
PRO-DOOR**



**DOOR HINGES**



## PRO-DOOR T120 P

The PRO-DOOR range of door hinges for PVC doors uses patented ball bearings to combine technically sophisticated functionality with reliable safety and long service life. The ball bearings centre the rotary axis (in the form of a pin) between the sash side and the frame-side component of the door leaf. They further minimize the already extremely low tolerances. A further advantage is the point contact of the approaching components. This reduces friction and results in less wear.

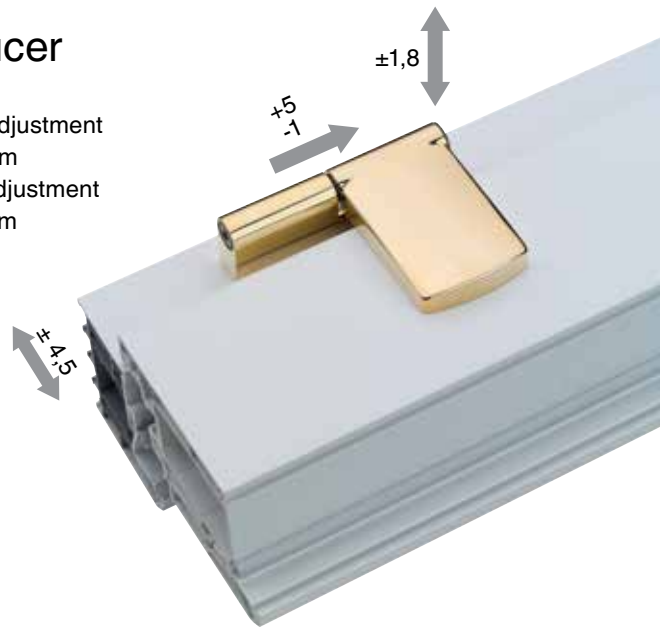
- Screw-on door hinge for doors with sash weights up to 120 kg
- Extremely stable mechanical design with solid sash component made of steel
- Rebate step height possible from 16 to 25 mm
- Patented ball-bearing design for spindle pin
- Available in numerous different colours
- The compact design allows very slim sash views



## Advantages for the producer

- One drill size for all supporting pins and screws
- Individual and telescoping-adjustable drill jigs available
- All adjustments can be made using a 4 mm Allen key
- Large setting range:  
Gasket compression  
+/- 1.8 mm

Lateral adjustment  
+/- 4.5 mm  
Height adjustment  
+ 5/- 1 mm



## Benefits for the end user

- Perfect appearance
- Patented ball bearings prevent the door from sinking and ensure a long service life





## PRO-DOOR T100 R

The subtle appearance of the MACO PRO-DOOR T100 R is captivating: When installed, only the hung sash is visible at this partially concealed

aluminium door hinge. This makes the T100 R a high-performance detail of subtle design in representative PVC entrance doors.



## Advantages for the producer

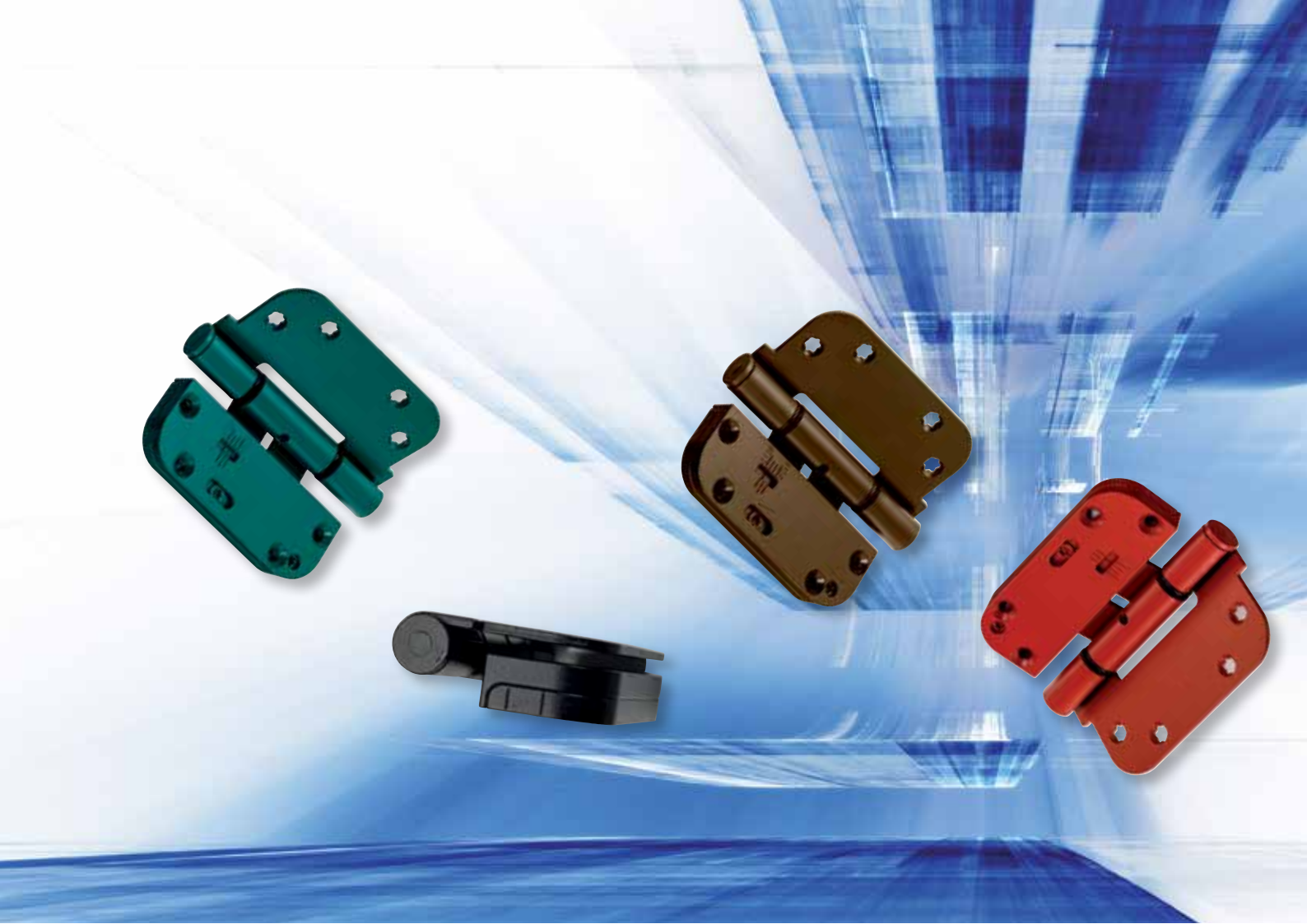
- For sash weights up to 120 kg
- The aluminium body can be enhanced in a wide variety of high-grade Eloxal surface finishes.
- One drill size for supporting pins and all screws
- Individual and telescoping-adjustable drill jigs available
- Screws directly into the hardware groove and steel reinforcement
- Unique patented butt hinge system: Frame and sash install together
- The butt hinge can be set in three dimensions and adjusts when hinged: +/- 4.5 mm lateral adjustment, + 5 /-1 mm height adjustment, gasket compression regulation +/- 1 mm. The hinge not only withstands sinking but also other signs of the times, such as potential material deformation caused by difference in temperature.
- All settings can be made using a 4 mm Allen key
- All settings with door sash hinged

## Benefits for the end user

- Patented ball bearings prevent the door sash from sinking and ensure a long service life
- The extremely stable socket in the frame of the butt hinge plate is made of material that is highly resistant to creep-pressure. The fibre-reinforced plastic of the socket and the steel axis pin form a functional unit that operates without the need for extra maintenance.



*The special shape of the axis pin of the PRO-DOOR door hinge prevent the door from sinking: The concave pin with hemispherical pin end rests positively connected on the ball*



## PRO-DOOR T80 C

The conventional door hinge solutions on the market for flush, unrebutted timber door systems or composite doors are unreliable in assembly and adjustment because the sash and frame can become separated. Hinge adjustment is often restricted and very time-consuming. Two people are required to adjust an installed door: one holds the door sash, while the other adjusts the hinge.

The T80 Composite door hinge eliminates scenarios like this. The shaft pin of the T80 C Composite keeps the sash and frame securely together during assembly and adjustment. One person can use a T20 key to adjust an installed door alone whenever necessary – no need to release the catch first.



## Advantages for the producer

**All dimensions of the mounted hinges are directly adjustable using the T20 setting key. There is no need to release any catches. The door sash remains securely fastened to the frame.**

Revolutionary technology: All hinges are equipped with a patented mechanism that provides freedom of upward motion. Upwards height adjustment is carried out on only one hinge. The other hinges move up automatically. The contact pressure is set with the door closed. This

means that the sash lies in the frame and the fitter can see how the contact pressure increases or decreases while adjusting the door.

### **Adjustment range**

The T80 C Composite door hinge adjusts directly and continuously +/- 3 mm in all dimensions.



## Benefits for the end user

- The connecting arm of the frame is fixed to the sash component, which ensures that a reliable connection is always made even under extreme conditions.
- For sash weights up to 80 kg
- The bushings are made of a special material that is extremely resistant to wear.
- Pin locking screw for doors that open out are available as an option
- Tested in accordance with English Standards PAS 23 / 24

**MACO  
DOORS**




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