

# techno gramm

Edition 01/2020

Where  
does the  
journey go?

INNOVATION  
ENGINE OUT  
OF THE CRISIS

DRILL  
INSERT  
SCREW IN  
DONE  
MODULAR  
CONSTRUCTION

Innovations that  
increase performance.

New solutions introduced

# Innovations that help you increase your performance

**Dear readers,  
dear friends of MACO,**

We were all in the starting blocks for the Fensterbau Frontale when suddenly Covid 19 paralysed social and economic life. With our decentralised production and high manufacturing depth, we were able to maintain supply chains while others were cut off from world trade. Supported by our new supply chain management (more on page 22), we were able to counteract well the daily fluctuations and delivery bottlenecks. This made us very agile and able to deliver.

How did the Corona crisis hit you? We have gathered your experience in a survey across the MACO markets. You can read the results in the mood barometer on page 26. But one thing can be revealed - this is based on confidence, although many of you seek differentiation and new ways. What is the drive out of the pandemic and how can we stand together? We have summarised this for you in the following editorial from page 4 onwards and will thereafter present our innovations, which will make your fabrication easier and increase your performance.

## Contents

### MARKET DEVELOPMENT

#### **04** Innovation engine out of the crisis

Manufacture with a system

#### **08** Complete door portfolio

Individual doors with a system

### MARKET DEVELOPMENT

#### **20** Innovations around windows/doors

Where does the journey go?



Guido Felix, Chairman of the  
MACO Group Management

Just like in the production, we have also adapted our communication. As the external teams had to switch to internal teams, we made our presentations and products available digitally. Since then, we have been presenting the many new products, brochures and data/services that we wanted to show you personally in Nuremberg on our homepage and we invite you to tour our virtual exhibition stand at [maco.eu](http://maco.eu). Or subscribe to our Facebook, LinkedIn, Twitter and Instagram accounts so that you're always up to date. Because we don't maintain social distance, but rather physical distance.

For a look into the future, we invite you, Corona situation permitting, in small groups to our new showroom in the Salzburg Research and Innovation Centre. Here, you must see and experience live the ground-breaking research studies, as personal conversations cannot be replaced by even the best online dealer.

### Let's stay in touch.

Thank you for your trust and we hope you enjoy reading this issue.  
The MACO Group Management.

## 14 Sliding systems made easy

How do you keep track of the variety  
of sliding solutions?

### Legal Notice

Media Owner:  
Mayer & Co Beschläge GmbH  
Address:  
Alpenstr. 173, A-5020 Salzburg, [maco.eu](http://maco.eu)  
Contact  
Tel. +43 662 6196-0  
Email: [technogramm@maco.eu](mailto:technogramm@maco.eu)  
Editor in Chief:  
Petra Janßen  
Editors:  
Alexander Wesser, Hanspeter Platzer,  
Christoph Lahnsteiner, Klaus Bichler,  
Gerhard Kaiser, Marina Mikhailova,  
Alex Schweitzer  
Art Director:  
Manuel Macala  
Photos:  
MACO, Adobe Stock  
October, 2020  
All rights and amendments reserved.

## 22 Supply Chain Management

Manage the supply  
chain efficiently

## 26 How did Corona affect you as a manufacturer?

Mood barometer from  
the MACO markets

## MANUFACTURING WITH A SYSTEM

The lock-down was followed by the shut-down. This has brought stationary trade to its knees worldwide. Online commerce alone has boomed and has given digitalisation a huge boost. What does the Corona pandemic mean for specialist companies and how can they position themselves to sell quality?

# INNOVATION DRIVEN

## FROM THE CRISIS

The shut-down has led to an increase in internet bandwidth in countries such as Germany, where the motorways are faster than the data lines, and also 5G expansion is being pushed ahead. After all, the decentralised working structure, which has suddenly become necessary, needs to be created nationwide right down to the last home office. Digitisation is now proceeding to a degree that would not have been

possible before. Almost overnight, flexible forms of work and life emerge that influence the way of life. Commuting becomes superfluous and the suburbs and real estate in the surrounding areas become attractive. The housing market therefore seems to remain lucrative due to long-term fixed interest rates unless there are high waves of redundancies.

## WHAT IS IMPORTANT NOW



Reduce costs across the entire value chain



Respond more flexibly to individual requests and changes



Produce more efficiently - fewer resources, more output. Minimise down-times and error rates



Increase cost-effectiveness - interlock work processes, faster planning, production and delivery



Differentiation through sophisticated solutions, innovations and consulting expertise

### The engine of sustainable construction

The construction industry is resource-intensive and should therefore make a significant contribution to climate protection. Government support programmes are leveraging renovations and through stimulus packages will boost business by 2021/22. However, in new construction it is not about a short-term flash in the pan, but about long-term ecological change. Climate targets must be achieved, and more than just legal simplification is needed. New revolutionary approaches and technical precision, coupled with flexible fabrication, are required.

### System competency for energy-conscious construction

These begin with the best possible coordination of all components and convincing end customers through decades of quality. This is important, for example, in the case of building connections, when it comes to tightness and energy efficiency. Here, the synergy of hardware, thresholds and weather seals is a must. An example is MACO's weather seals and threshold portfolio. This is extended to lower and interior door weather seals with dB values up to 61 as well as those with KOMO certification for public construction requirements in the Netherlands. What fabricators need, they get from a single source, perfectly matched with the threshold solutions and the hardware. The advantage? Designed for and with each other, their perfect combination determines sound, energy loss, condensation and mould formation. This significantly minimises the effort for fabricators in coordination and adaptation, especially for system extensions.

### Competency leads to more performance

The right network and partnership clearly determine the lead over the market. MACO supports its customers with decades of research, experience and system expertise to strengthen the business of its fabricators. As a hardware manufacturer and architect of weather seals, MACO knows all the fine details of materials as well as the requirements and problem areas around the door and window. This knowledge creates the optimum quality for a weather seal with which window and door manufacturers can offer the absolute state of the art. And this with differing and optimised geometries for each groove and any pivot point

options of the window/door sash. This makes them clean and tight to process, even in the corners. Their quality and condition also make the most significant difference in sound insulation.

### The system improves the quality

The same applies to thresholds. With the use of Transit thresholds, fabricators offer excellent thermal separation that keep condensation and mould outside, as well as cold and driving rain. The good interaction of the weather seal, the end pieces and the rubber covers make all the difference and allow them to be adapted to each timber and timber-aluminium profile and be made barrier-free. Minimal processing effort goes without saying - whether as a fixed threshold width or with a variable depth, they are easy to assemble and customise with universal rubber compensating pieces. They are certified to QM 340 and approved for RC 3.

### Fulfilling demanding wishes

If you want to personalise the threshold to the profile geometry of the window frame and the structural conditions for front doors and balcony doors with a sash or frame-side weather seal, use TRANSIT PERSONAL. This is the only threshold that can be fully customised. ►



**MACO demonstrates the synergy for the all-round perfect window/door** with this element. This is where the synergy of all components comes into play in the truest sense of the word. The weight dissipation of heavy elements into the threshold is supported by the MULTI POWER load transfer device. In combination with the TRANSIT Personal threshold and the appropriate MACO weather seal, both the tightness and production possibilities for heavy balcony doors increase.

### Reduce time and costs - modular manufacturing

Building economically means building modularly and reducing the workload because time is money. In order to ensure both, industry professionals are increasingly relying on prefabricated modules for building the future. The growth in the pre-assembled and pre-cast industries seems to confirm this trend. But this style of manufacturing also offers many advantages in the hardware industry. MACO and HAUTAU recognised this trend years ago and developed the modular design for their customers. Especially with the large sliding elements, this manufacturing method offers an enormous advantage due to the sizes and weights. It saves a lot of time, strength and sweat, reduces errors in installation and ensures long-term smooth operation and pleasure in daily use for the end customer. Drill, insert, screw in - done! Modular solutions can be so simple and also offer business models for every requirement, market or situation. Read more on pages 14-19.

### Create from a fully modular system - react flexibly to customer specifics

That which has proved itself in the production of sliding elements is also indispensable in door construction. The PROTECT door lock portfolio enables fabricators to draw from a full portfolio and to create many individual door situations based on a modular principle consisting of a few, compatible components. These range from handle or cylinder operated locks, to mechanical-automatic and motorised locks with access control, use in nine-way locking locks or special solutions for markets as well as special requirements e.g. corrosion or flood protection. For news and details, see pages 8-11.

### Think globally, act locally

Those who supply across countries must have an eye on the different requirements and preferences. But how do you reconcile series production with special designs? As a global company, MACO offers market-specific solutions – be it for country-specific standards and certifications such as SKG or KOMO, or for construction requirements such as in the case of “Dorpels”<sup>[1]</sup> We deliver these “install ready” or adapted to the individual system for sliding/door construction without requiring new machine settings. This allows fabricators to make standard production with individual customer adjustments as flexibly as possible. This creates more output with fewer resources and maximum cost-effectiveness. MACO employees are gladly available for personal solutions. MACO has had its weather seals KOMO certified for the requirements of public construction in the Netherlands.

### Drive Health

The health aspect has come to the fore during this pandemic and has made natural ventilation to avoid aerosols more important than ever as a criteria in the home or at work. In addition to the classic turn&tilt solutions, skylight windows, secured ventilation position and the E-hardware for automatic tilting are also available here. The motorisation of lift&slide elements for opening at the push of a button or the new MOVE sliding hardware with six millimetres of parallel adjustment are just a few of the many possibilities. Details can be found in the articles below.



### Innovations for new consumption habits

Find out more about new products on the following pages, with which you can differentiate yourself and stay in tune with changing consumer habits thanks to our innovations. With new approaches, everyone can win in the local competition and show exemplary character in sustainable housing with their elements. ●



©Michael van Oosten

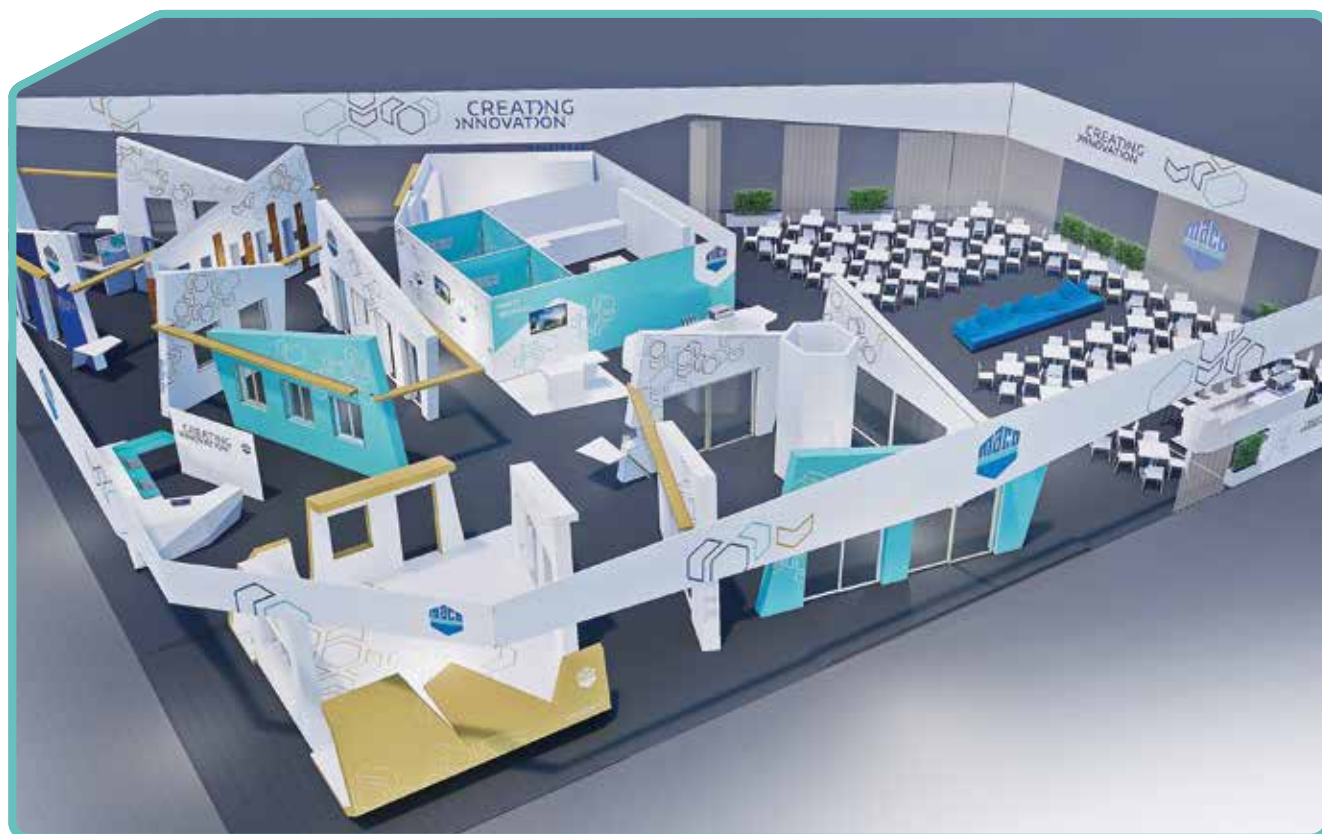


<sup>1</sup> Dorpels are a separate PVC threshold solution for the Dutch market. There, the construction depth of thresholds with timber up to five centimetres above the construction, which is otherwise used in Europe, is not permitted.

# MACO

## FRONTALE 2020

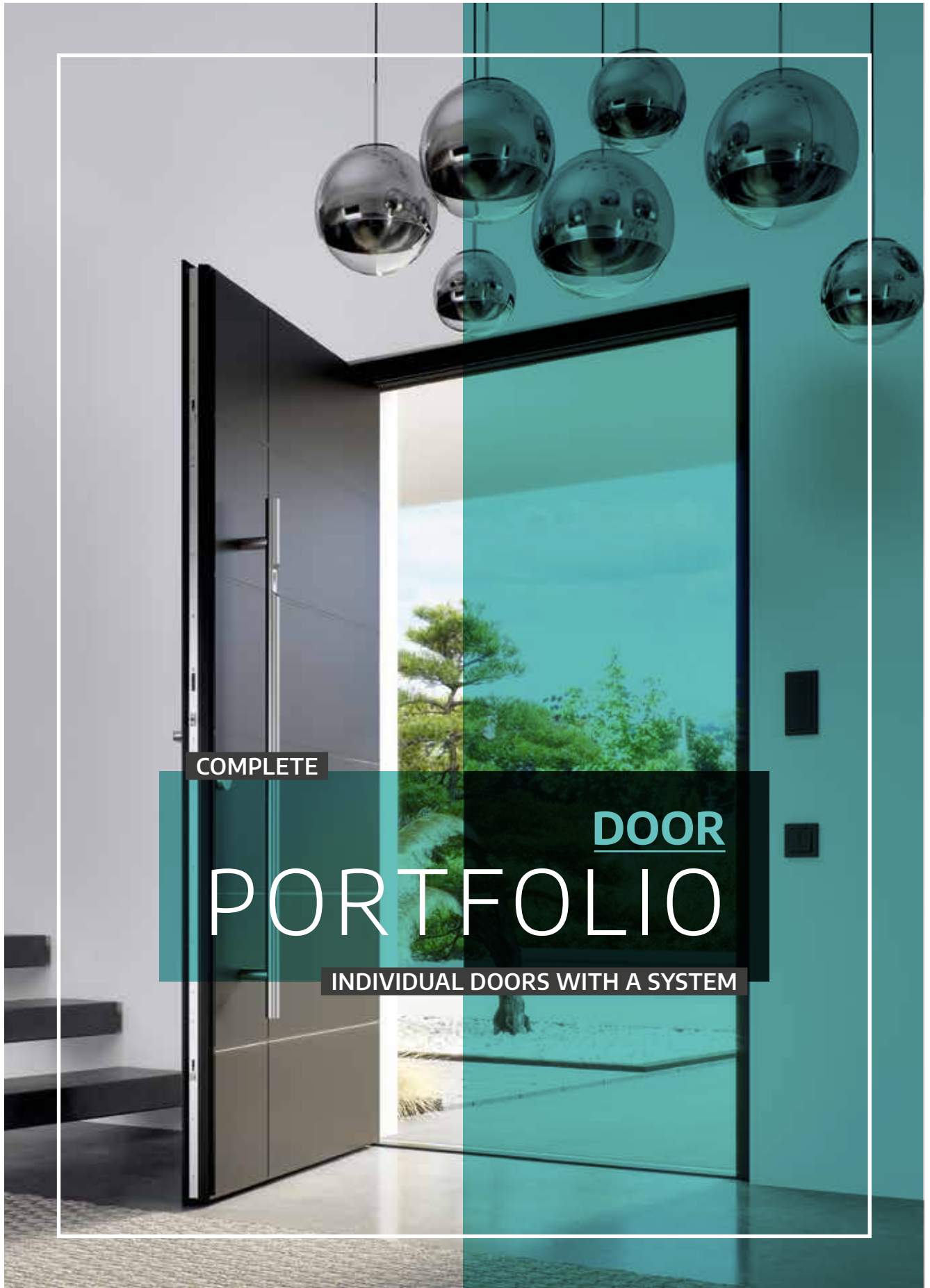
### DIGITAL-HIGHLIGHTS



**You can also visit  
our virtual booth  
on [maco.eu](https://maco.eu) or follow  
us on Facebook,  
LinkedIn, Twitter  
and Instagram.**

**More details can be found  
in our new brochures.**





COMPLETE

# DOOR PORTFOLIO

INDIVIDUAL DOORS WITH A SYSTEM

Many possibilities in designing doors does not mean having to hoard a large stock of components. With a clever and streamlined assortment in the form of a modular system, a lock can be configured for many applications. Here you can read about the big and small innovations with which fabricators differentiate themselves and how they make a door the end-customer's figurehead with low manufacturing costs and higher margins.

### Modular construction makes it easier

Efficient and economical processing is based on a clever modular system that, with just a few components, can produce a high variety of lock solutions and cater to any door. MACO has been pursuing this approach with its proven PROTECT module locks for years and has constantly developed them further. The flexible combination of the individual components gives manufacturers an even greater scope for production in lock configuration. This means they can meet every customer's needs and places efficient logistics as well as assembly in the foreground.

### One lock for many security levels

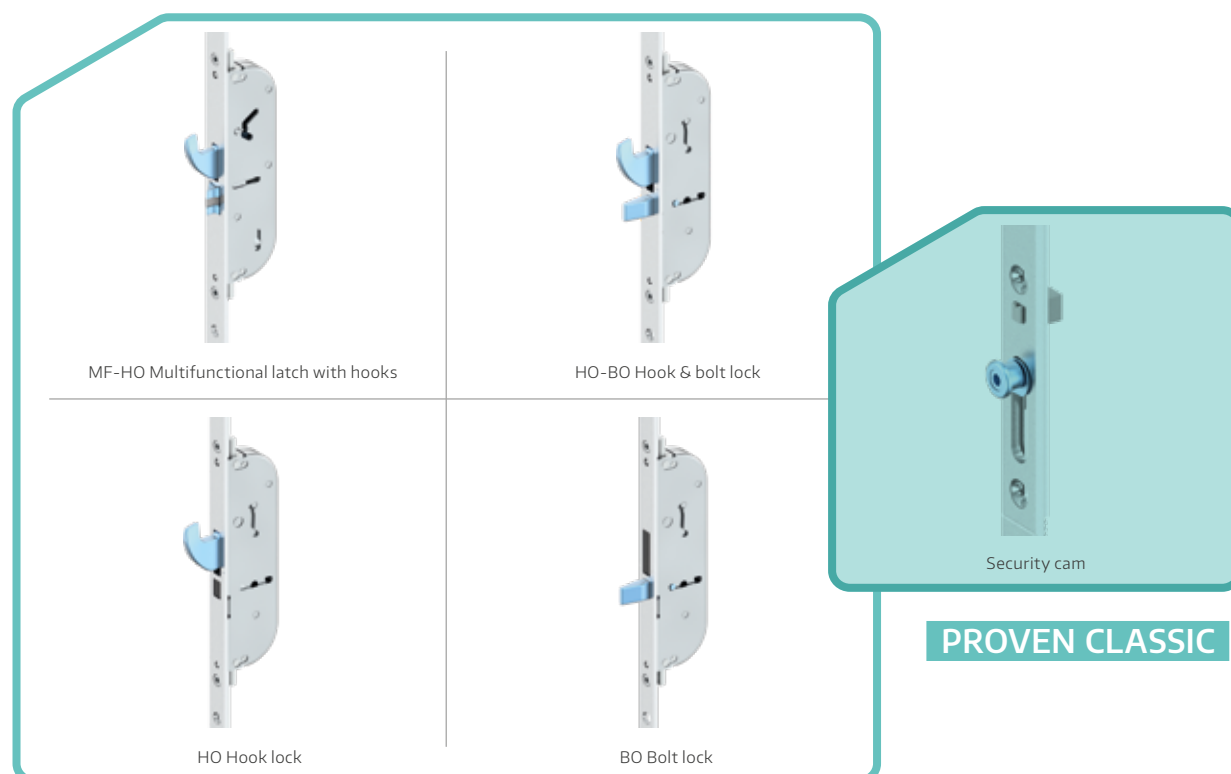
Various secondary locks right up to the expansion level of nine-fold locking give door manufacturers great leeway when it comes to the security needs of the occupants. Module locks, such as the cylinder-operated Z-TS, the handle-operated G-TS

and the automatic lock A-TS, can be easily adapted to different door heights and supplemented by a wide range of additional modules. Security has also been proven with the Z-TS lock being listed on [www.k-einbruch.de](http://www.k-einbruch.de) and helps position fabricators as security conscious and prevention conscious.

### Automatic lock drive

A significant step in the expansion of the MACO door lock portfolio was the market launch of a completely revised automatic lock. The A-TS was born as a result of experience from the previous generation and its development was pushed to the extreme. It is the most mature and innovative lock of its kind in the industry, thanks to the complete functional and temporal separation of gasket compression and locking. With the A-TS, all locking elements, including the locking bolts, are automatically extended. The sales figures speak for themselves, as these have more than doubled within one year. ►

## WHICH LOCKING FITS YOUR LOCK?



# A-TS and its possibilities

## Automatic lock growth potential

What makes the automatic lock so interesting? With the A-TS automatic lock, the growing demand for comfort on the front door can be operated and implemented very easily. Customers are heaping praise on it, as it allows all door situations including motorised doors to be implemented with all sorts of components from one single source. It delivers good margins, especially in combination with access control systems. Its fabrication is easy and the components are not that much more expensive compared to the added value it achieves for the end customer.

## Lock portfolio completed, country customisations included

In recent months, additions to the product range have been added and thus complete the A-TS range. Since summer 2020, variants with door opening restrictors have also been available. Country-specific security certificates such as VdS1 or SKG2 cover all markets high standards. The

A-TS guarantees the highest quality and flexibility and this qualifies it for export to other countries. Those who want to configure it for the Swiss market, can use a Swiss round cylinder at any time. For the German market, it is a sought-after solution without handle blocker when it comes to door production for apartment buildings, where legal regulations require the opening from the inside at all times.

## Motorised automatic lock

Its great advantage is that it can be upgraded quickly and very easily with a motorised unlocking system and thus enables the combination of various access solutions for opening the door. Fabricators therefore do not have to keep motorised locks in stock in order to combine fingerprint or pinpad. All they have to do is add one motor to the automatic lock and thanks to Plug & Play, simply connect the plug-in access solutions that are milled into the door leaf, to the motor. Smart home integration into thus also possible. ►

<sup>1</sup> In Germany, the VdS seal of approval is recognised by insurance companies for the highest security. <https://vds.de/>

<sup>2</sup> SKG is the certification required in the Netherlands.



## COMFORT PACKAGE



Drive and access control



Daytime release and  
E-opener

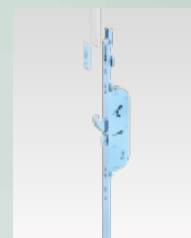
## SECURITY UPGRADES



Lock monitoring with  
lock switch contact



Door opening limiter



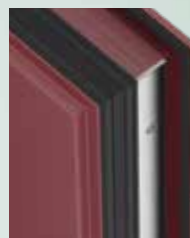
Intermediate faceplate  
with secondary locking

## DESIGN UPGRADES



Top hat faceplate

All faceplates are optionally available in Tricoat-Plus.  
The U faceplate also in stainless steel-optics.



Flat faceplate



U faceplate

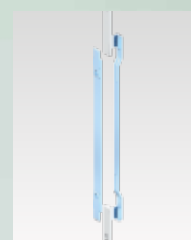
## FOR EACH SIZE



Shortening faceplate



Standard size



Extension faceplate

## FLEXIBLE IN HEIGHT ADJUSTMENT

### A classic with new locking: Z-TF with MF-HO

Since summer 2020, the MF-HO auxiliary lock, which has been proven by the A-TS, has also been available for the classic Z-TF MACO door locks. This new premium locking system combines automatic gasket compression thanks to the proven three multifunction latches with maximum security thanks to the swivel hooks that extend upwards. The semi-automatic door lock thus guarantees even more ease of use for smooth opening and closing with the highest gasket compression. Automatically tight, manual locking and maximum security for high burglary prevention all combined in this one lock. In addition to the Z-TF and the A-TS, the MF-HO lock is also used as standard for the future M-TS motorised lock.

### Day release with only one E-opener

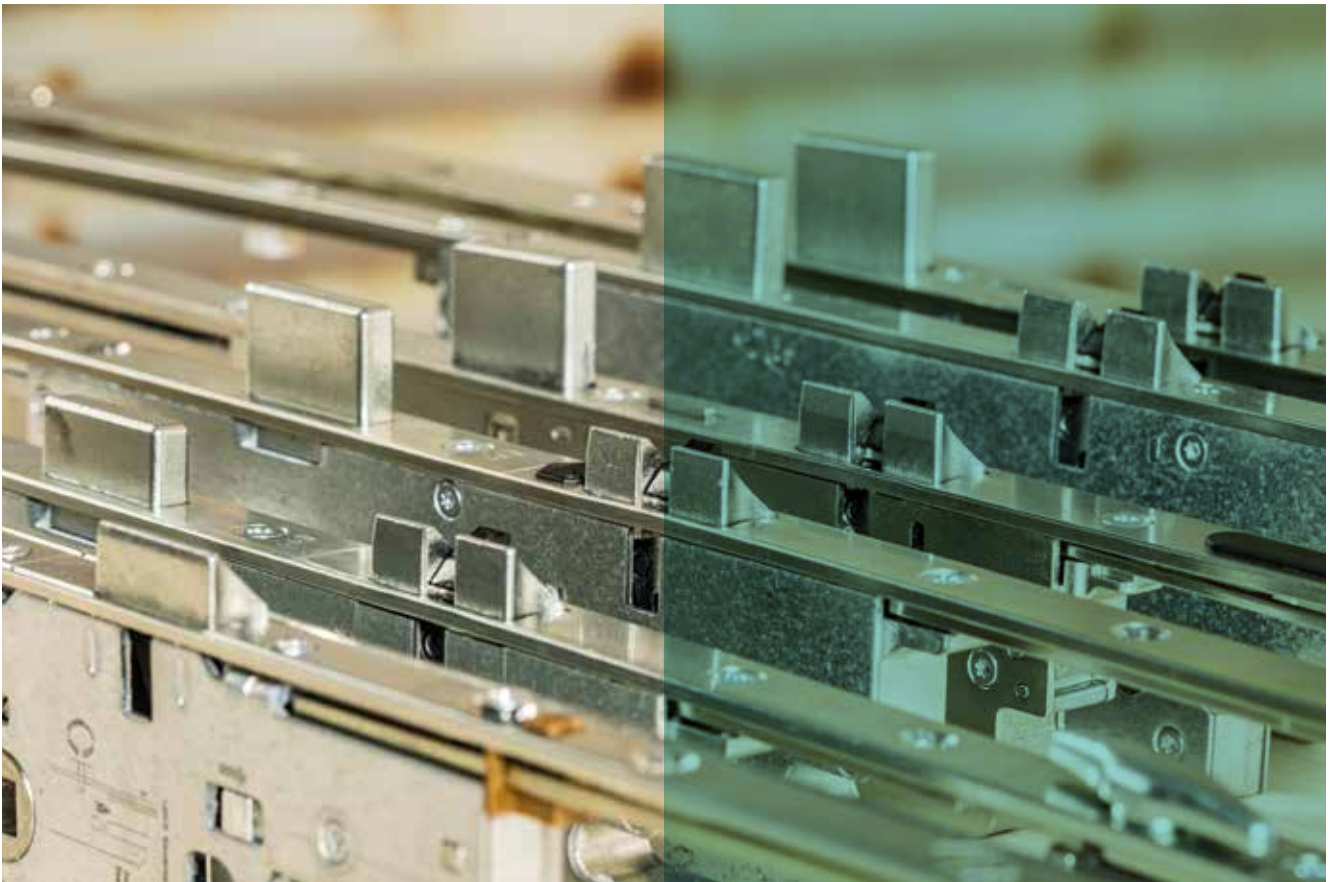
The possibilities offered by this MF-HO-based locking system are reflected not only in the high level of security, but also in the functionality. From now on, the Z-TF can also be optionally equipped with a day release. Since only one E-opener is required, the number of required components is reduced while at the same time increasing the customer benefit. The many technical advantages in combination with the uniform striker plate platform allow many customers to switch to the new locking system.

### Items reduced - functionality increased

The MF-HO locking system also offers another advantage in that it underlines the MACO system idea and consistently builds on the concept of simple fabrication. Like the other multi-point locks with hooks, bolts or hook-bolt combinations, it is based on the same locking platform, regardless of whether that's a mechanical or semi-/automatic lock. This results in standardisation through uniform case positions, milling dimensions, screwing and drilling jigs and makes it highly flexible in the production. It simplifies machine setup and reduces logistics and storage capacities. This is important in times like these when liquidity through lean warehousing and fast delivery capability is decisive for progress and differentiation.

### Integrating doors into the smart home

The desire to open the door at the touch of a button and to control who goes in and out is making its way into living and will significantly shape the future of door design. Motorised opening doors with access control solutions controlled by smartphones and integrated closure monitoring for the integration of the door into building monitoring are key market drivers. In addition to automatic locks, motorised locks are also used here and their market share is growing.



### Motorised lock milestone

Those who know the motorised lock market will appreciate the M-TS, which is expected to be available from the beginning of 2021. It is not only the fastest on the market, but is also very quiet. What makes the M-TS so fast and quiet? The innovations are in the technical detail and make the difference in open, modern living areas, where the entrance merges into the living room.

### Door with a system

In order to perfect the modular design, MACO is the single source for everything from suitable hinges, handles, cylinder rosettes and thresholds as well as advice in CE marking and a data service.

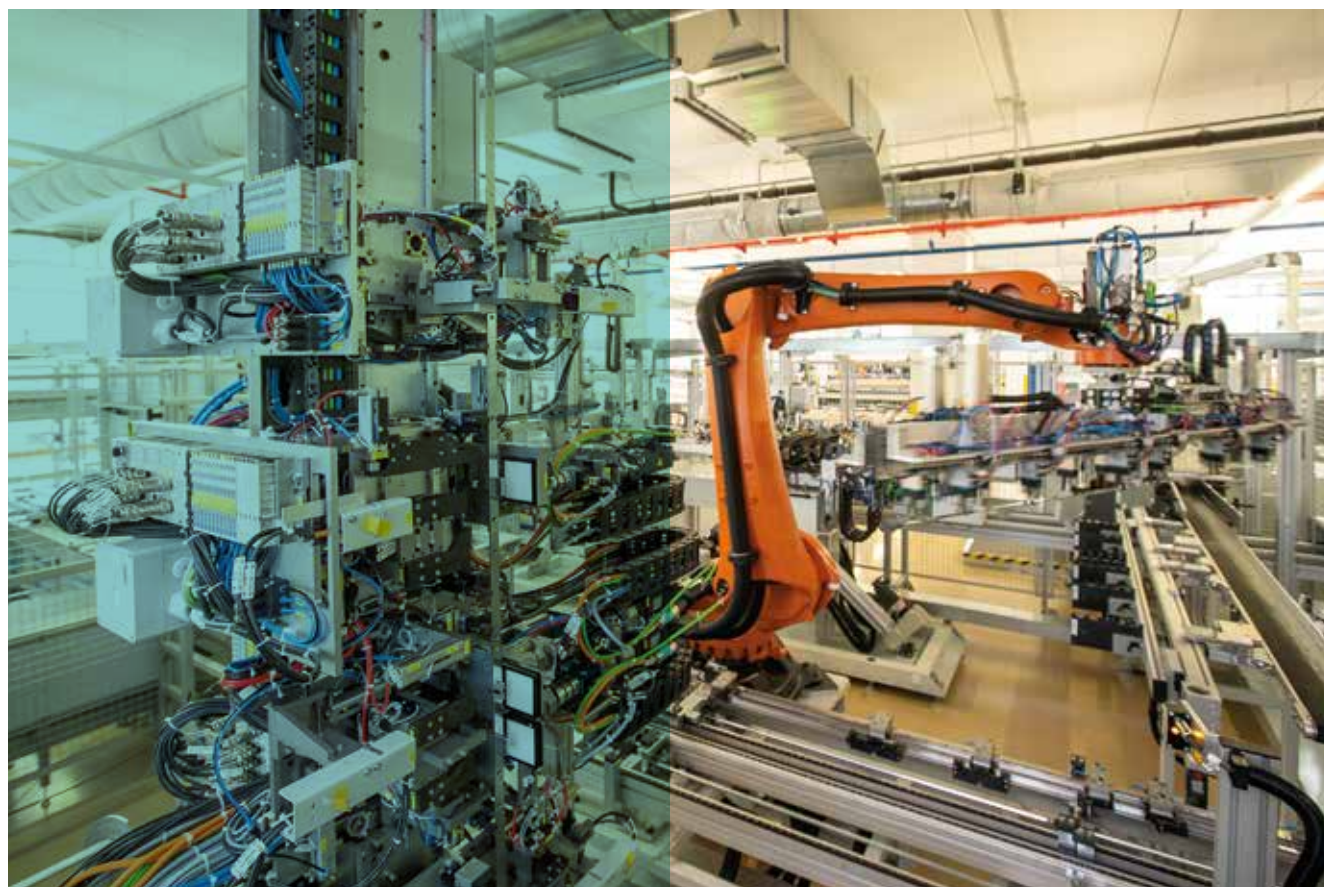
### Door lock assembly plant

With quality at the start, with service at the finish  
The newly commissioned automatic door lock assembly system at the plant in Mauterndorf is 300 m<sup>2</sup> in size. With it, the quality increases with shorter set-up and lead times. It handles 1,100 lock variants and up to 180 locks per hour. This machine, which is unique worldwide, increases the efficient and flexible production and will reduce delivery times thanks to the new logistics (more on pages 26 ff). In the future, this means orders can be processed and delivered faster. ●



THE GASKET COMPRESSION ON THE DOOR IS CREATED MECHANICALLY VIA THE PROVEN 3-LATCH TECHNOLOGY, WHICH MEANS THE MOTOR CAN CONCENTRATE ON THE ESSENTIALS OF LOCKING AND UNLOCKING. IN ADDITION, IT SITS ON THE MAIN LOCK CASE AND DRIVES DIRECTLY INTO THE CONNECTING ROD. THE RESULT IS THAT IT REQUIRES LESS EFFORT THAN CONVENTIONAL LOCKS, AND THUS CAN BE SMALLER AND THEREFORE QUIETER. IN ADDITION, THE MOTOR IS DECOUPLED FROM THE CYLINDER SO THAT ANY STANDARD CYLINDER CAN BE USED. <<

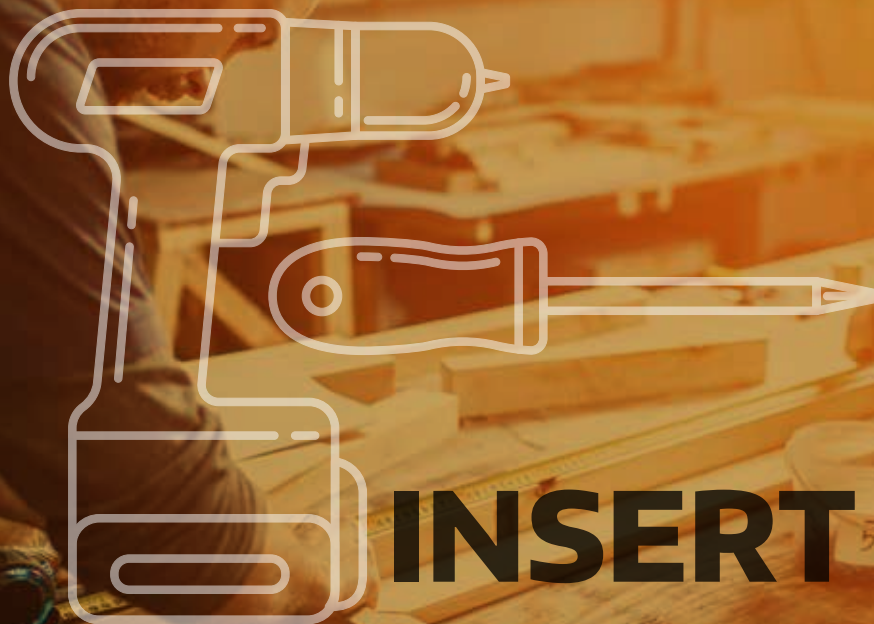
ROBERT ANDEXER,  
HEAD OF BUSINESS UNIT DOOR AND BUSINESS UNIT SERVICE AT MACO



100 % quality control – no lock leaves the factory without it.

## SLIDING SYSTEMS

# DRILL



# INSERT

## SCREW IN - DONE

How do you keep track of the variety of sliding solutions? Whether it's a lift&slide, slide or slide&tilt opening, with pre-assembled and modular components, the production can be kept economical and manageable. Read more here which sliding systems can be implemented with MACO and what standards you can set with their innovations.



Comfort drive gear is the first RC2 tested motor in the industry. This means lifting and sliding at the push of a button.

# Timber lift&slide elements

## Higher margins thanks to system competencies

Fabricators can assemble very individual lift&slide systems for their customers in upscale private construction, thanks to the countless components and then tailor them down to the smallest detail, depending on the wishes and the budget. Those made of timber with an aluminium shell in the outdoor area are of the highest quality and offer the most extensive production variants. The manufacturing characteristics of timber elements also make it possible to offer the threshold already completely assembled. This requires however an advance consulting and production compared to other sliding variants, but the quality and service pay off, because nothing is more natural than timber lift&slide elements. It's worth it as the margins for fabricators are high and the maintenance effort is low.

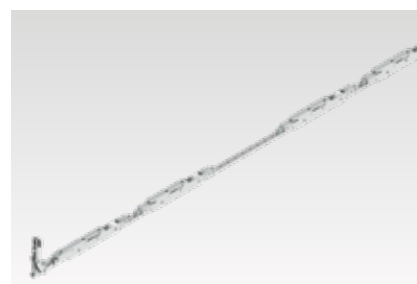
## Designing variety easily thanks to modular design

Fabricators can create this variety by working with MACO's application diagrams and drawing from a finished modular

system that allows for a simple modular design. The components are delivered ready for plugging in, with sash profiles prepared with all grooves cut and drilling done, drive gears with operating force reduction custom-made on request, and rollers fully adapted. Assembly doesn't get any easier!

## Internationally positioned

In this way, cross-market products can be manufactured, even if operating habits, building requirements and legal regulations vary depending on the market. These conditions must already be reflected in product development. From Germany to the Netherlands, from Austria to Italy or Switzerland and beyond – MACO systems have the same functions and values, but vary in the details. Country-specific solutions are therefore easy to implement, as industrial production remains highly flexible in technical and country-specific variations. ►



Technical precision for the big picture - this is how you set new standards. Closing a sliding door as comfortably and gently as a kitchen drawer: - the technical precision of the details make the difference in this system solution. This shows the quality of lift&slide elements. Comfort close left and Comfort stop right for lift&slide elements in timber, aluminium and PVC

The small but robust 18X30 roller is the all-rounder in MACO's lift&slide range for all materials. It rolls, and rolls, and rolls.

# Slide&tilt elements (SKB)

When floor-to-ceiling sliding doors of up to 200 kg sash weight need to be not only pushed, but also tilted, then SKB is the right choice. Whether it's for PVC, timber or timber-aluminium elements, the manufacturing advantage is that it is based on the construction of windows. Window manufacturers can build on their existing profile in a hardware neutral way and, with just a few additional components on the same production line, also produce SKB elements in different variants, while cutters and tools remain the same.



REGARDLESS OF WHAT YOU PRODUCE, WE HAVE A SOLUTION FOR EVERY SYSTEM, WHETHER HS, PAS, OR SKB. OUR STRATEGIC APPROACH IS TO WORK WITH HAUTAU TO PROVIDE SOLUTIONS AND SYSTEMS THAT CAN BE USED AS UNIVERSALLY AS POSSIBLE AND OFFER OUR CUSTOMERS GROWTH POTENTIAL AND DIFFERENTIATION. MOVE IS OUR LATEST PRODUCT ON THIS PATH. <<

ALEXANDER WESSER,  
HEAD OF BUSINESS UNIT LARGE SURFACES AT MACO.



Slide&tilt hardware for all materials



## SKB upgrade

### Creating differentiation potential

The quality of the hardware is all the more important when elements are exposed to changing users. Having a different hotel guest every day and erratic opening cause issues for these sliding colossus' in the long run. Technical precision and consistency in detail therefore create important differentiation and are indispensable in production when ease of use and safety are paramount. New components that really make the difference are the height-adjustable rollers with reinforcement part, stop absorbers and closing initiators. Due to their optimal interaction, the sash makes no noise when tilting the sliding door and it is prevented from uncontrolled swinging. And for those who want to stand out even more from the competition, you can use the TRICOAT-PLUS surface-coated hardware for use in hard corrosive woods or tough environments. ►

stop absorber

closing initiator

reinforcement part



Stop absorber, closing initiator and reinforcement part for slide&tilt systems in timber, aluminium and PVC.

# PVC lift&slide elements

## Economically attractive

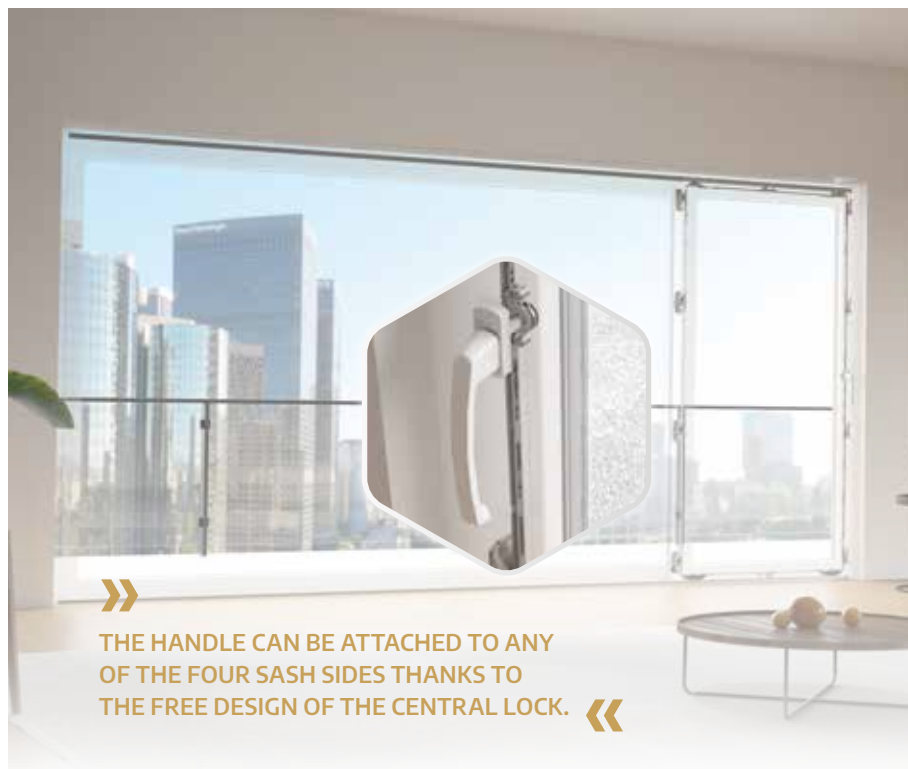
The attractiveness in the production of PVC elements lies in their cost-effectiveness. Due to the complete adaptation of the system, well thought-out and fully configured elements can be implemented in high quantities with all sorts of technical finesse. Fabricators can thus create a ready-made solution with special extras for maximum ease of use and long service life. Flush-mounted hook locking, Comfort close for closing sliding doors as gently as a kitchen drawer, Comfort stop for gentle opening without hitting the frame on the opening side - these make all the difference.



MACO\_HAUTAU lift&slide PVC solution

Complete adaptations for well thought-out and fully configured elements. Fabricators get a ready-made solution without the need for special work.

# Move Sliding luxury for PVC



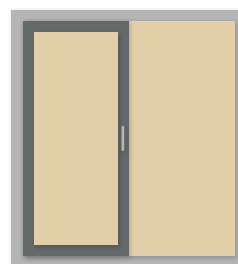
THE HANDLE CAN BE ATTACHED TO ANY OF THE FOUR SASH SIDES THANKS TO THE FREE DESIGN OF THE CENTRAL LOCK. «

Creating great things together. With the MOVE, MACO and HAUTAU realise the cost-effective alternative to lift&slide hardware, for doors as well as window elements. It stands for smooth and error-free operation without any effort. This is how luxury becomes the standard.

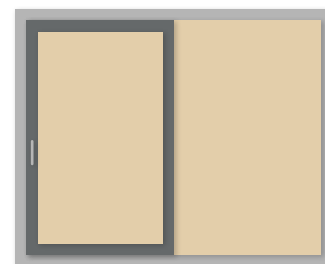
Skylights



Windows



Terrace door



## Affordable sliding luxury for PVC elements

Sliding elements with force-controlled parallel torque such as MOVE, a MACO-HAUTAU project, have become increasingly popular in recent years and are in high architectural demand. Initially developed for the aluminium segment, the sliding hardware now comes into the focus of PVC element manufacturers.

## Sliding luxury in public construction

The sliding hardware is perfectly suited to hotels, schools and hospitals, where lift&slide systems are too complex and slide&tilt hardware are too error-prone due to many different users. "In public construction, it is important that elements are energy-saving and can be operated error-free," says Hanspeter Platzer, Head of Product Management Large Surfaces at MACO. "We solved this by separating the sliding and locking technology." The handle can be turned upwards very softly and adjusts the sash to six millimetres, which allows easy all-round ventilation, before the door can be easily and gently pushed open. This makes it an affordable sliding luxury, which is suitable for series production with these features and fills a gap in the commercial construction market.

## Special format construction

The sliding hardware can not only be used for large sliding doors, but is also suitable for special formats, where the turn&tilt hardware is at its limits. When the window sash is wider than it is high, for example, as with skylight windows. Or with windows where there is a lack of space, be it on the window sill or in the masonry. MOVE is therefore predestined for use in the kitchen, where ventilation is necessary with decorated window sills, or with wide, narrow skylight windows that need to be opened. "The flexible positioning of the handle plays into our hands. This can be mounted on each of the four sash sides thanks to the free design of the central lock, depending on the window position," Hanspeter Platzer explains the USP which is unique in the industry.

## Series production with turn&tilt hardware

PVC window builders can include MOVE in their production at any time, because this hardware system can be implemented with any turn&tilt hardware and safety roller pins. It only needs to be supplemented with profile-related striker plates in the middle joint. MACO fabricators use the MULTI-MATIC hardware for this purpose. Sashes and frames are easy to weld and can be fabricated with standard tools - drill, insert, screw in - done. Nowhere is this easier than with MOVE, which makes it interesting for export markets. ●

## WHERE DOES THE JOURNEY GO?

# INNOVATIONEN AROUND WINDOWS/DOORS

How can we adapt windows and doors to the habits of residents? How will we live in 10 to 20 years and how will we then serve them? And what technical requirements will be necessary? The Frontale would have shown this. Now you can read here about current developments and smart windows/doors.



Fabricators are aware of the increasing demand for larger opening widths, barrier-free thresholds as well as for the materials timber and timber-aluminium. The customer is king, so the production wants to be adapted to these needs.

### Balcony doors with zero barrier

Here, a double-sashed balcony door that can be tilted is suitable – with zero threshold, driving rain-proof and RC 2 certified. All this can be easily combined and fabricated with the MULTI ZERO hook lock. The double hook, made of solid steel, mounted in the underside of the sash hooks into the security striker plate in the threshold which makes it secure and tight, also when tilted. The structural setup decides whether a single or double sash is needed. What is certain is that the hook lock can be adapted to the desired door width by simple linking and is ideally suited for the production of double-sas-

hed doors by adding a French window sash. The zero threshold solution, which ensures secure tilting, is of course also available in PVC.



Trip-free threshold: MULTI ZERO – the hook closure for zero barrier on balcony doors is now also available for timber and timber-aluminium - RC2-tested.

### From component to smart home integration

Accessibility can really be simple, as the implementation of a balcony door with MULTI ZERO proves. But it is even more than getting outside barrier-free. Like security, it is increasingly closely linked to automation in order to clear the way for occupants - to open at the touch of a button and to be controlled by being connected into the building monitoring. This is the logical consequence of a development that we can no longer stop. Smart building components such as the E-hardware or wireless sensors in windows and doors are becoming core components for secure smart homes and building construction. What is their advantage and how is a smart window prepared so that the electrician can integrate it into the building technology?



TECHNOLOGICAL DEVELOPMENT IS ESSENTIAL IN THE SEARCH FOR DIFFERENTIATION FOR SUSTAINABLE SUCCESS IN THE WINDOW MARKET," SAYS MATHIAS HABERSATTER, HEAD OF BUSINESS UNIT WINDOWS AT MACO. "WHAT DRIVES US IS EVERY DAY THINKING OUTSIDE CURRENT BORDERS AND OFFERING OUR CUSTOMERS BENEFITS WITH OUR DEVELOPMENTS THAT CREATE CONSULTING EXPERTISE AND A HEAD START IN THE MARKET FOR OUR FABRICATORS. <<



mTronic

**The window is fitted to the occupant.** After all, ventilation and checking whether the windows are closed no longer have to be done physically. Smart-home compatible - this is MACO's E-hardware.

### E-mobility on the window?

What the automotive industry is doing in terms of E-mobility and control connectivity will not stop in construction development. Whether we like it or not, windows and doors will be part of this future by default. So, why not prepare these components smartly so that customers have on-time what will be standard in their smart home in the foreseeable future?

### E-hardware for automatic and manual operation

With the E-hardware, the window is fitted to the occupants and the structural conditions. Being able to control a window automatically is especially important in exposed locations. In the stairwell, for example, where it is difficult to get to the window, an electrically operated hardware is worth its weight in gold. Tilting at the touch of a button, for example by means of a wall switch without needing a ladder, is a

great help for daily ventilation. For people with disabilities or in wheelchairs, controlling the automatic tilt at the touch of a button is essential. Being prepared for an independent life in old age, i.e. able to stay in one's home for as long as possible, is a development that will be taken more into account due to the changing demographic.

### Fabricator friendly

MACO has redesigned the electric motor-driven hardware for the requirements of the market, thus offering new construction the ideal preparation for a smart home window integration. It is very easy and sits concealed in the fitting groove and needs no cables in the sash or glass groove. Likewise, it does not need cabling between the frame and sash, but works with a spring-loaded power carrier. Thus, the sash is not only easy to mount and unmount, but is designed to be overall particularly fabricator-friendly.

### Automatic ventilation of the living room through smart-home connection

Therefore, ventilating and checking whether the windows are closed no longer needs to be done physically. The E-hardware can be combined with wired lock monitoring as well as with wireless sensors and is smart-home capable. It is controlled by an integrated mini-gateway from Eltako and is Apple Home Kit enabled. The E-hardware therefore does not require any extra control and supports sensor-controlled tilting and locking. ●

PROCESS AND CONTROL EFFICIENTLY

# SUPPLY CHAIN MANAGEMENT

When talking about deliverability, one thinks of fast delivery of the goods to the customer. However, it is more important to be able to deliver precisely and reliably. For this to work, Supply Chain Management is needed. And this does not only start with our own production, but also with the purchasing structure. You can read here how SCM helps during crises.

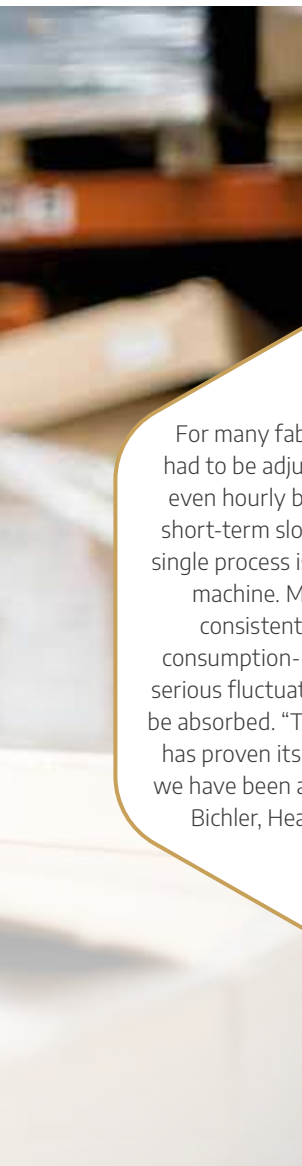
## The art of controlling processes cleanly

Every fabricator knows the problem - quality products are created by many individual components. Having these available and being able to combine them at the same time with all their differences requires precise planning and outstanding logistics with clean interfaces and processes. For this, the value chain has to be broken down to the last detail, which is an enormous challenge for a window or hardware manufacturer.



### Well controlled during the crisis

MACO has more than 700 production machines at 5 locations and 20,000 warehouse-controlled items. Making these available at all times, individually and in their entirety as an assembly, was reflected in a functioning supply chain during the Corona crisis.



### SCM as Risk Management

For many fabricators, it was certainly similar that orders had to be adjusted and intelligently controlled on a daily or even hourly basis, and heavy purchases were followed by short-term slowdowns. This can only be cushioned if every single process is calculable and runs together like a well-oiled machine. MACO has harmonised its interfaces with a consistent chain of information and optimisation of consumption-driven to plan-driven scheduling. In this way, serious fluctuations could be excluded and order spikes could be absorbed. "This means that our Supply Chain Management has proven itself to be a tool for risk management and that we have been and are able to deliver at any time," says Klaus Bichler, Head of Supply Chain Management at MACO.

### Purchasing as a strategic pillar of the company

Strategic purchasing methodology and sophisticated supplier management are key cornerstones. This starts with the question of how many pieces are needed when and where. Who is a risky supplier? During the Corona crisis, this was the most exciting of all questions for maintaining the supply chain, owing to the collapse of world trade. It helps to work with local service providers as an alternative and to pay attention to short distances.

### SCM as a sales tool

Any company who controls everything perfectly from production to delivery becomes a reliable and predictable manufacturer of a high level. Precise forecasts and precise quantity determination ensure suppliers have early and predictable planning reliability. "These can, as was the case with our steel suppliers during the lock-down, align their production up and down with ours in parallel. In this way, the supply chain remains operational even during the crisis and results in an efficient cooperation with high predictability," says Klaus Bichler proudly. He added: "We were thus able to continue full production and to supply our customers during the crisis, in accordance with their requirements."

### Just in time delivery instead of a full warehouse

The networked processes provide more insight and transparency, which improves capacity planning in terms of quantities, amounts and personnel down to the smallest detail. This includes optimising exact incoming and outgoing quantities, targeted phase-in and phase-out control as well as warehouse utilisation in such a way that they are not too high but do not create a delivery bottleneck. This allows the flow of goods to be controlled Just In Time.

### Minute-by-minute logistics

And more than that. Logistics rotate faster due to the measurability. By means of exact time specifications, routes can be planned in minute-by-minute timings and time windows can be kept. This reduces transport shunting and waiting times and thus is a time and fixed & variable cost saving for all parties involved.



OPTIMISATION STARTS WITH COURAGE AND TRUST AND NEVER ENDS," SAYS KLAUS BICHLER, HEAD OF SUPPLY CHAIN MANAGEMENT. "WE HAVE MANAGED TO PLAN IN REAL TIME ACROSS ALL STAGES, FROM THE PLAN TO PRODUCTION TO PLANNED SCHEDULING CONTROL AND TRANSPORT, WHILE INVOLVING ALL SUPPLIERS AS PARTNERS. CORONA HAS SHOWN US THAT OUR EFFORTS OVER THE LAST TWELVE MONTHS TO OPTIMISE THE SUPPLY CHAIN HAVE CLEARLY BORNE FRUIT. «



Foto: © www.mphoto.at

KLAUS BICHLER,  
HEAD OF SUPPLY CHAIN MANAGEMENT,  
MACO GROUP



## Digital Transformation in the Supply Chain

In order to be able to carry out actions and reactions at any point in the entire supply chain, it is necessary to manage information in an integrated way. This means digital networking and communication across all process stages with all participants in the chain - production plants, machines, material supply and processes, components, and logistics and sales processes. After mechanisation, electrification and automation, the fourth industrial revolution, which is the digitalisation and networking of the entire value chain, is in rapid and continuous development. MACO has taken this on and is gradually connecting all areas of SCM in order to keep the information, material and financial flows transparent, fast and efficient. This will ensure we are able to offer our customers the highest service in Supply Chain Management.

## Automatically replenished warehouse? VMI makes it possible

As a fabricator, do you want automated item deliveries from your supplier? Sophisticated Supply Chain Management includes Vendor Managed Inventory (VMI). These are systems that retrieve the inventory from customers and automatically control their material flow and the specially tuned supply settlement. Simply put, the fabricator no longer has to take care of his orders as these are automatically triggered by the supplier and the warehouse is replenished as required. The supplier can thus supply the customer precisely and exactly on time, as he can align his own production accordingly and control it more efficiently.

## Boosting performance

The automated supply chain processes also optimise reporting. The latter is not a burden and for once, quite the contrary. It provides employees with up-to-date data for fine-tuning at all times and increases competency and consistency in performance. Every single person in the chain will be faster in implementation. This results in process-optimised volume production, reduced set-up times, better customer service and consequently the best-aligned customer orientation.

## Team building

And a supposed side-effect opens up as the team cooperation grows and motivation increases, which gives further impetus. The performance spiral drives itself upwards and employees can feel how they contribute to the customer experience and to the company's image. SCE, Supply Chain Excellence, is the responsible driver for this. At MACO, it stands for Speed, Concentration & Enthusiasm and promotes the big picture in small sprint projects without any pressure. This has made MACO more "powerful" than ever before, even in the Corona crisis, despite the various necessary measures such as shift equalisations and changed shift models.

## MOOD BAROMETER FROM THE MACO MARKETS

# HOW ARE WINDOW/DOOR MANUFACTURERS COPING WITH THE CORONA CRISIS?

In the construction industry, the Corona crisis has run more smoothly than in other industries. Many are happy about their well-filled order books up to the end of 2020, with windows and doors wanting to be installed before winter. What comes next? The Technogramm editorial team conducted a survey in the MACO markets and used the following questions to create a mood barometer as to how Corona has affected window/door manufacturers and dealers around the world.

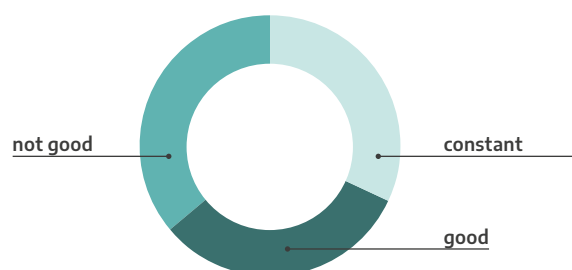
## Confidence through stimulus packages

The survey results showed a balanced result between good, consistent and bad, and they show a generally positive trend in the assessment of the near future. Perhaps according to the motto of "hope springs eternal", most of the window and door manufacturers surveyed have rolled up their sleeves and are confidently looking to the future. How successful this is and how optimistic the customers surveyed are depends on the introduction of a vaccine and, not least, on the policies of the countries and the respective stimulus packages that governments are putting together. "If we don't get a second wave, we are very confident about a government support program for the construction sector," Italian window builders say. There, the government is providing high tax write-offs for the replacement of windows. The energy-based

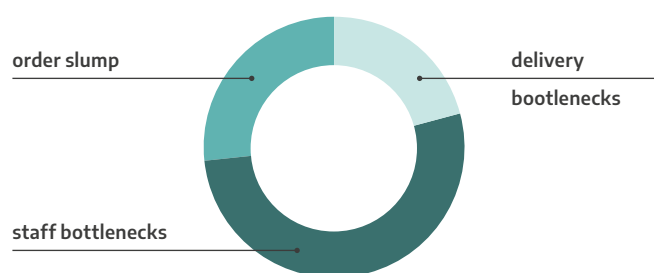
refurbishments are intended to avert the decline in the window market and to promote construction development, especially in urban areas. In general, all manufacturers around the world are planning for and hoping to catch up after the lock-down in the second half of the year and to achieve a 10% increase over 2019 sales in 2020. There is optimisti

feedback coming out of Russia, although manufacturers there are facing a downward spiral in prices due to the fluctuations between the Rubel and the Euro. Cheap products are on the rise and it seems that private buyers are weakening.

Mood barometer:  
your future in the next 12 months ist..?



## How did Covid-19 hit you with in particular?



### Order slump across all countries

Order slumps were spread across all countries, with some happening immediately with the lock-down, while others were somewhat delayed. The main concern was how to stabilise the order situation and to keep costs under control. Everyone agrees that two months of order losses in the spring are not easy to catch up on.

### Delivery bottlenecks control purchasing behaviour

Some window and door manufacturers suffered from delivery problems. Fearing broken supply chains, they have, as far as possible, stored up components in April and filled their warehouses, to ensure that they could manufacture for all planned projects this year. Dealers were busy in the first few weeks as the quarantine gave many people a lot of time at home, in home office, on short-time work or in their holiday homes in the countryside – a lot of time to renovate private homes. This led to a growing demand for window construction at the beginning of the pandemic in Russia. The Corona pandemic initially boosted sales in some countries, because with the introduction of short-time working, there was suddenly time available to renovate homes and get windows at attractive prices before they increase, as is predicted in Russia. In most countries, however, the travel ban halted everything from March onwards.

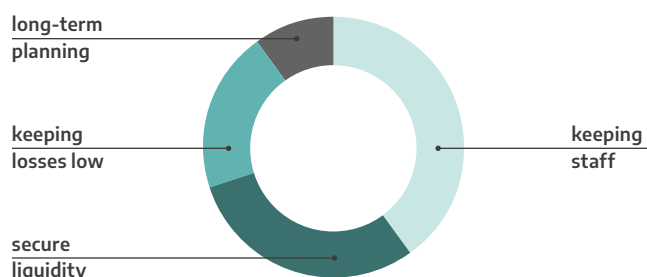
### Renovations instead of new constructions

However, the general uncertainty also put the brakes on the construction industry. Greek manufacturers report delayed payments, an increase in raw material prices and project cancellations. In South America, manufacturers have suffered from currency fluctuations that make imports more difficult. And countries where tourism is the driving force behind the economy have particularly felt the Corona crisis. The renovation market has suffered setbacks, and new construction projects have been closely scrutinised for risks by investors and housing cooperatives. While it used to be a case of build and then sell, in many countries construction is now only carried out when the sale of the property is secured in advance.

### Staff bottlenecks overcome

Manufacturers were able to cope the best with the consequences of staff shortages. Reducing the number of employees was only short-lived for most and was solved by holidays or short-time work.

## The biggest challenge within the next 12-24 months?



### Keeping losses low

The biggest challenge is to keep economic losses as low as possible while maintaining staff, turnover and liquidity. On the one hand, new orders must be generated. While on the other hand, the sales network must be in place when the economy comes back to full operation and when demand increases due to government subsidy programmes, as is forecast in Italy.

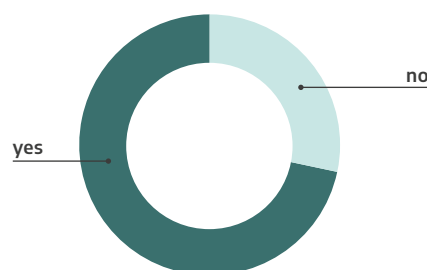
### Long-term planning

The uncertainty that is felt everywhere leads to delayed demand and makes long-term planning more difficult. Specifically, Corona, the great unknown, makes it difficult to assess how the economy is developing, how each government is dealing with it, and whether building permits are being accelerated. All of this has to work together. 2021 and the following years will be ground-breaking.

### The construction industry as a barometer for the hardware industry

Two thirds of respondents see the construction industry as an indicator of the further development of their activities. They share concerns about a sharp decline in new construction and hope for long-term support from their governments. The positive ones are those hoping for a vaccine and seeing economic power rise as the infection rate falls.

## Corona effects on the construction industry and companies



### Boosting construction through climate policy

Everyone, from South America to Europe to Asia, has one goal - to lower regulatory hurdles, speed up approval procedures and boost the construction industry through climate policy goals. ●



TECHNOLOGY IN MOTION



Simply pull  
for automatic locking

**A-TS**

SELF-LOCKING DOOR LOCK

The only automatic lock where the locking bolt automatically extends and locks – without having to additionally lock it.

