

techno gramm

Edition 01/2022

WINDOWS IN
COMMERCIAL
BUILDINGS

DECOR
ON THE
WINDOW

CONSTRUCTION
BOOM.
AND
NOW?

DOOR LOCK
NOW, IT'S
MOTORISED.

Growth through differentiation

Shaping the market together

Growth through differentiation

Dear Readers,
Dear Friends
of MACO,

Not much has changed in year two of the pandemic. Disrupted supply chains and increased raw material prices exacerbate material shortages and increase construction costs. Added to this is staff shortages at a time when low interest rates, rising energy costs and stricter regulations on energy efficiency are further boosting housing construction. How are we coping?

We continue to make all the adjustments that increase our output. But even though we increased our delivery volumes by more than 15% last year, the demand of some customers was even higher. With our local production, we can act flexibly, but we are doing even more. An internal project called "Zeus" will increase our pace. Across all departments and hierarchies, teams work to improve work processes, to increase capacity and improve delivery service levels. Cobots complement the production team when working where there is a shortage of workers.

We can influence the raw material situation to a limited extent through good supplier relationships, but we cannot cushion the exorbitant price increases. That is why we have opted for a transparent path since mid-2021. Price surcharges are linked to the commodity price index at MACO and can be viewed in the MACO Partner Portal - so that you know where you stand.

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Digital printing opens up new possibilities



Guido Felix, CEO of the MACO Group (right) and Michael Weigand, Managing Director Sales and Marketing (left)

With all these challenges, we are looking ahead and developing solutions for even more added value. Read about the ongoing window boom in this Technogramm issue (pages 4–5).

In the sliding area, we have excellent system solutions on offer that help increase your market share – be it InfinityView (see pages 6–9) or Move from HAUTAU. On the front door, not only the new motorised lock will cause a sensation (pages 10-17), but also the revolutionary new door lock that we wanted to present to you at the Frontale.

Since we have decided not to participate in Fensterbau Frontale due to the pandemic development, we are developing alternative formats to make personal contact with you possible. Together, let's seize the opportunities for growth through differentiation.

We continue to thank you for your trust in these special times and wish you a lot of fun reading. Stay healthy!

The MACO Group Management.

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Media Owner:
Mayer & Co Beschläge GmbH
Address:
Alpenstr. 173, A-5020 Salzburg, maco.eu
Contact:
Tel. +43 662 6196-0
Email: technogramm@maco.eu
Editor-in-Chief:
Petra Janßen-Wahl
Editors:
Alexander Wesser, Hanspeter Platzer,
Gerhard Kaiser, Christoph Lahnsteiner,
Florian Schneckleithner, Alex Schweitzer
Art Direction:
Daniel Heller | Büro für Gestaltung
(www.danielheller.de)
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ONGOING WINDOW BOOM

FROM MASS

TO VALUE CREATION

Help, customers are threatening new orders! Despite a shortage of raw materials, challenging delivery situations and price increases, the construction and window boom continues. What is fuelling it and is it to be expected that this will promote quantity instead of value creation? How can we position ourselves?

Shortages

Usually, supply creates demand. This time, the boom is due to scarcity. A scarcity of living space on the one hand, due to population growth or, as in Germany, partly due to a backlog of building permits, which must be processed in the next few years. On the other hand, shortages due to interrupted supply chains, lockdown, border closures and Brexit brought the free movement of goods to a standstill. And so, when it came to a standstill at the world's trading hubs, the container terminals, the available supplies were bunkered in. Instead of just-in-time deliveries, full warehouses are now in demand again – a return to what was a no-go before Covid. Prices exploded, raw materials became scarce and transport suddenly cost twenty times as much. An economic upswing was stimulated.

One's own home as an object of value

At the same time, the pandemic has continued to focus on the home as a new value object. The fundamental change in lifestyle habits towards "My Home is my castle" due to the Covid 19 pandemic is closely linked to the development of the window market. Beautifying and renovating one's home seems to have become an almost global hobby. Coupled with new construction and increased density due to housing shortages, the economic engine is racing and has brought a construction boom to many countries.





Incentives through loose monetary policy

Non-functioning supply chains and a shortage of raw materials led to price increases, which are countered with low interest rates and various government incentives - for example, with the extension of loan terms.

When the state drives the market

As with the economic crisis of 2008, many governments have again launched state support packages, as our example in Italy shows. There, the window market had lost a lot in the last ten years and hardly any investments were being made. Now, thanks to Covid, a creative tax model is enormously boosting thermal renovations. This has been achieved with a hefty tax bonus that is granted if the energy class of the building improves by two classes. The possibility of "free" refurbishment has led to an extreme increase in demand among end customers. It provides that the thermal renovation of a house or apartment can be carried out without any cost to the owner. The aim is to modernise the house for a better climate balance and higher earthquake resistance. Incidentally, cash-in-hand work is also reduced as it is no longer profitable.

These factors have favoured growth, as MACO France reports. In some regions, this has increased building permits by 15%. The acquisition and construction of houses brought 11% growth to the construction industry there. The lion's share of 61% in France is accounted for by the renovation of apartments, 27% by the construction of new apartments and 6% by non-residential buildings. Residential construction is also the number 1 economic driver in Austria, Germany, Italy, Russia and the Netherlands.

Reconciling renovation costs with benefits

The ever increasing number of subsidies are constantly bringing new demands on climate measures, while higher energy standards clearly and narrowly define the framework for building regulations. All this increases the demands on construction components. You have to be able to afford an energy-efficient renovation and the investment costs are often too high compared to the benefits or only pay for themselves over a period of many years. Here, reality still lags behind what's desired. This is where state subsidies help.

Identify customer needs

This phase of oversized growth will subside and return to a normal level. Fabricators then have to adapt to a normal market development again and need added value through additional functions that go beyond colouring and triple glazing of the window. If you ask about the needs and living conditions of your customer, you can put together better and more individual offers - tailored to customer benefits and not to "That's what we have on offer".



For flexible, architectural design options - Move is the sliding hardware for many window shapes.

New differentiation options

There are many ways to achieve a significantly higher added value per window unit. MACO supports and navigates you through the topics that concern end customers - design and opening variants, security, ventilation solutions, automation for convenient opening in combination with sensors and shutter monitoring for smart home solutions. Anyone who manages to set the right priorities in their sales area and digitise production to such an extent that they can respond to individual customer requirements with short changeover times will have nothing to worry about. MACO supports easier fabrication with modular, partly pre-assembled and holistic solutions. This saves you as a fabricator time, resources and storage space.





SLIDING
InfinityView
ELEMENT

Maximum glass components, small frame widths, feather-light operation and zero millimetre floor threshold are the end customer's decision criteria for an InfinityView lift & sliding door. For fabricators, it is ready-made kits that simplify assembly. We will show you their entire production process - from production at MACO to production at the window manufacturer and onto assembly on the building site.

SASH ASSEMBLY



From top to bottom:

Cut to length, pre-drill and mill, then put the sash frame together to check the accuracy of fit. The GRP core is characterised by special stability, which makes floor-to-ceiling sliding doors with triple glazing possible in the first place. It allows huge sliding elements to be realised in timber, which otherwise reach their physical limits in terms of size.

The installation site is in Vienna, in a courtyard with beautiful old vines, all kinds of greenery, a small idyllic gem in the middle of the city. The building owners, a doctor couple have their mother and mother-in-law moving in and have converted a former stable into a living room.

Purchasing Criteria

For maximum light, the garden side has been equipped with an all-glass façade, which is supplemented by a sliding door. For these senior citizens, the door must be barrier-free in terms of the threshold and the sash must slide easily. Triple glazing for good insulation is important for energy efficiency, as is the design. With an aluminium shell on the outside and a cosy wooden ambience on the inside, the local window manufacturer scored highly. He planned this element as a left-opening Scheme A, but it can also be designed as a right-opening Scheme A or as Scheme C.

Sliding element extends glass front in existing building

The company PSP in Krems, Austria, relies on large glass fronts and likes to mix floor-to-ceiling fixed glazing with patio doors and sliding doors. In order to do justice to the narrow frames of the fixed glazing and the aluminium coating on the outside, InfinityView was the logical next step for this building façade. The sturdy GRP profile, a glass-fibre-reinforced plastic core, enables face widths of only five centimetres and is clad with timber on the inside and aluminium on the outside. This window construction was made by Rauh near Bamberg, in Germany.

Tailor-made delivery

We accompany Rauh during the construction of the InfinityView element step by step for you. Rauh receives the threshold completely finished and the GRP profiles pre-cut, pre-drilled and milled – delivered complete and ready with all hardware. The sash frame is prepared to such an extent that the sash parts only have to be put together. The milling for the rollers is precisely adapted to the element size and the drive gear is custom-made with operating force reduction. This creates the perfect basis for further fabrication for the fabricator. "The great advantage of pre-assembly for our customers is that fewer work steps have to be carried out in the final production," says Reinhold Wörner, Sales Manager at MACO HAUTAU Germany. ▶



THE BIG ADVANTAGE OF PRE-ASSEMBLY FOR OUR CUSTOMERS IS THAT FEWER WORK STEPS HAVE TO BE CARRIED OUT IN PRODUCTION. ◀◀

REINHOLD WÖRNER
SALES MANAGER AT MACO HAUTAU GERMANY

InfinityView

Assembly as a modular system

The four profile sides are screwed and glued before the hardware are installed. Then the drive gear cover is cut to length, and the rollers, connecting rod and drive gear are inserted. In the next step, the vulcanised silicone seals in the corner are attached to the sash profile. Hidden therein is a lot of know-how which makes the essential difference to other sliding elements. Then the turn holders for the aluminium cover shells are put on. On the outside, the four aluminium cover shells are plugged together and simply connected to the GRP profile with the help of the turn holders. On the inside, tight connectors are attached to the GRP profile, which allow the timber veneer to simply be attached. Furthermore, the centre seal track and the upper PVC seal track are attached, which ensures the maximum thermal barrier. Thereafter, the aluminium cover shell, the frame strips and the stop strips are mounted. Finally, the glass is inserted and glued to the GRP core.



The sealing rail is attached



Putting on the aluminium cover shell



The timber frame is applied

The special feature of this element

Comfort is standard for quality-conscious customers, who are also ready to pay for it. Rauh appreciates the special features such as the floor-to-ceiling glazing with very slim frames. The sealing strip is mitred and circumferential, while the glazing can be done from the outside, which benefits the working process when inserting such large panes. The zero millimetre threshold with integrated water drainage is an especially strong customer argument, as are striker plates and hooks that retract into the frame and do not protrude. And last but not least, one part fulfils two functions - the upper roller guide with stop absorber ensures clean running and safe guidance in the upper guide rail, and the stop absorber delivers braked, secure closing. This is not only secure for the residents, but also gentle on the building itself. InfinityView is RC 2 tested and was selected here in a manual version. And of course, this innovative sliding element is also available as motorised.



Assembly on the construction site

Marketing opportunities

"The more glass, the more energy-efficient the element is. With a narrow sash frame of 50 millimetres and no visible frame in the passage area, we address those who want to realise large glass surfaces in order to increase the amount of light. We supply customers for whom, as in Vienna, the entire south side should consist of a glass façade. There and in passive houses, we can integrate InfinityView very well and finally create opening possibilities that were previously not feasible in size," says Robert Böhmer, Technical Manager at Fensterbau Rauh in Zapfendorf. Fensterbau Rauh started five years ago with MACO's panorama system. With the all-glass facades in high demand, it is only logical for Fensterbau Rauh GmbH to enter the next dimension of endless views and high comfort with InfinityView.



Tight connectors are simply inserted into the GRP profile and the timber frame is attached – finished!



Almost finished sash. On the outside, the aluminium frame is clipped on. Here, you can see how the sash frame disappears into the frame on the right and the glass lights become the passage lights.

The InfinityView sliding element complements floor-to-ceiling glass facades. Slim frame views, zero threshold, RC 2 tested, energy-efficient for low-energy and passive houses – and very easy to operate. This creates added value for end customers and differentiation from the competition. ●



DOOR LOCK

**NOW, IT'S
MOTOR-
ISED**





Door catalogues have one thing in common - they focus on design, colour, material and surface. In the next step, handle variants and burglary protection play a role. But when does the motor come into play? Access control gets it up and running and will soon significantly increase sales thereof. Familiarise yourself with the M-TS motorised lock and make something special as standard. In this way, you generate added value with a higher margin.

Luxury - soon standard or a result of technology?

When or why do you need a front door with a motorised lock? And what happens in the event of a power or internet failure? Similar scepticism about the sense and benefit was experienced by the first iPhone owners in 2007, when they swiped over a display instead of tapping buttons as usual. Then, they were not called early adopters, but freaks. Today, we are probably all crazy. The acceptance of the motorised door lock is closely linked to the smartphone, and will establish itself as a logical consequence of our technological development if more is desired than just locking securely and tightly.

Comfort transfer - from smartphone to motorised lock

The convenience of a smartphone will immediately transfer to the operation of the front door. Unlocking one's phone by fingerprint, code entry or face scan is already well established, and the smartphone is a permanent and familiar companion that

everyone has at hand nowadays. Using an App to open one's front door will, at the latest, become standard for Generation Z when a motorised lock is present in the door. But everything in good time - why a motorised lock at all?

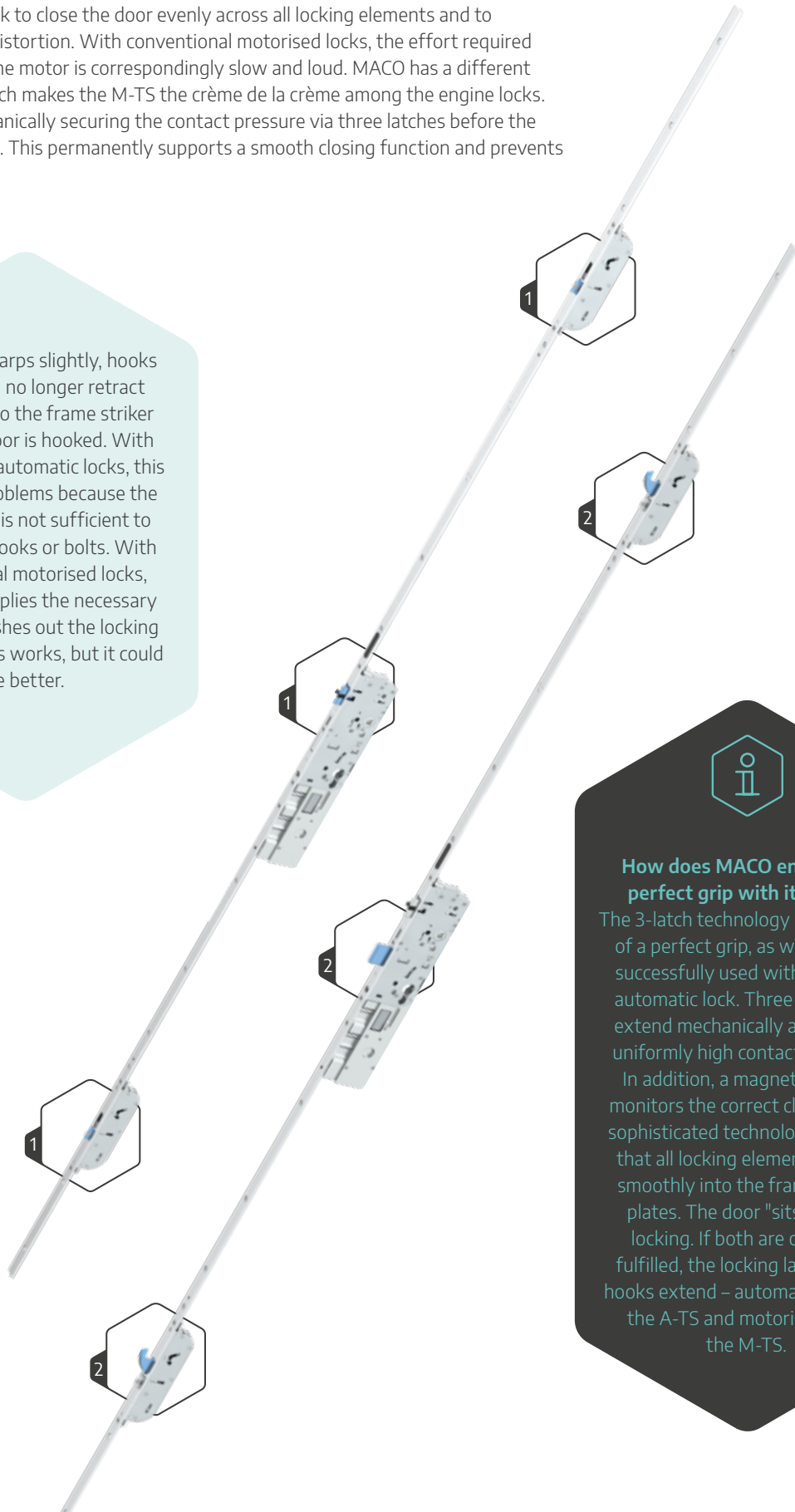
Keeping door distortion in check

Throughout its life, a door is opened many times more often than a window. Enormous temperature differences between summer and winter, between the inside and outside, strain the door and significantly influence its closing force and longevity. We are talking about door distortion, which is also due to the use of increasingly dark surfaces or structural constructions – e.g. a canopy that provides shade for the upper half of the door, while the lower half has less or none. Not only the correct and situation adapted structure of the door element, but even more, the right hardware solutions, can keep door distortion in check. ►

Prevent door distortion – the motor helps

The motorised lock to close the door evenly across all locking elements and to counteract door distortion. With conventional motorised locks, the effort required is very high and the motor is correspondingly slow and loud. MACO has a different concept here, which makes the M-TS the crème de la crème among the engine locks. It works by mechanically securing the contact pressure via three latches before the motorised locking. This permanently supports a smooth closing function and prevents door distortion.

If the door warps slightly, hooks or bolts can no longer retract smoothly into the frame striker plate. The door is hooked. With conventional automatic locks, this can cause problems because the spring force is not sufficient to extend the hooks or bolts. With conventional motorised locks, the motor applies the necessary force and pushes out the locking elements. This works, but it could be better.



How does MACO ensure the perfect grip with its locks?

The 3-latch technology is the secret of a perfect grip, as was already successfully used with the A-TS automatic lock. Three latches (1) extend mechanically and ensure uniformly high contact pressure. In addition, a magnetic trigger monitors the correct closing. This sophisticated technology ensures that all locking elements (2) run smoothly into the frame striker plates. The door "sits" before locking. If both are correctly fulfilled, the locking latches and hooks extend – automatically with the A-TS and motorised with the M-TS.

Temperature balanced, climate efficient

Only if door distortion is prevented, does the door remain easily operable, while the perfect closing force is maintained and the inside is tempered independently of the outside. Thus, warm air remains inside in winter, with cool air remaining inside in summer, and this protects the inhabitants from moisture, condensation and drafts. Thermal bridges are eliminated and in combination with suitable MACO thresholds and sealing solutions, you create the best U-values in favour of energy efficiency. In this way, you contribute to a healthy indoor climate in the homes of your customers.

The quietest lock for modern, open architecture

Due to its clever separation of mechanically securing the contact pressure before motorised locking, where the motor is only used for the latter, and of course for unlocking. As a result, its effort is lower than with conventional motorised locks, which makes a door with an M-TS much quieter. This is a strong selling point for houses with modern, open spaces and entrances without a porch. End customers are grateful when they don't hear the motor buzzing through their entire house when a family member comes home.

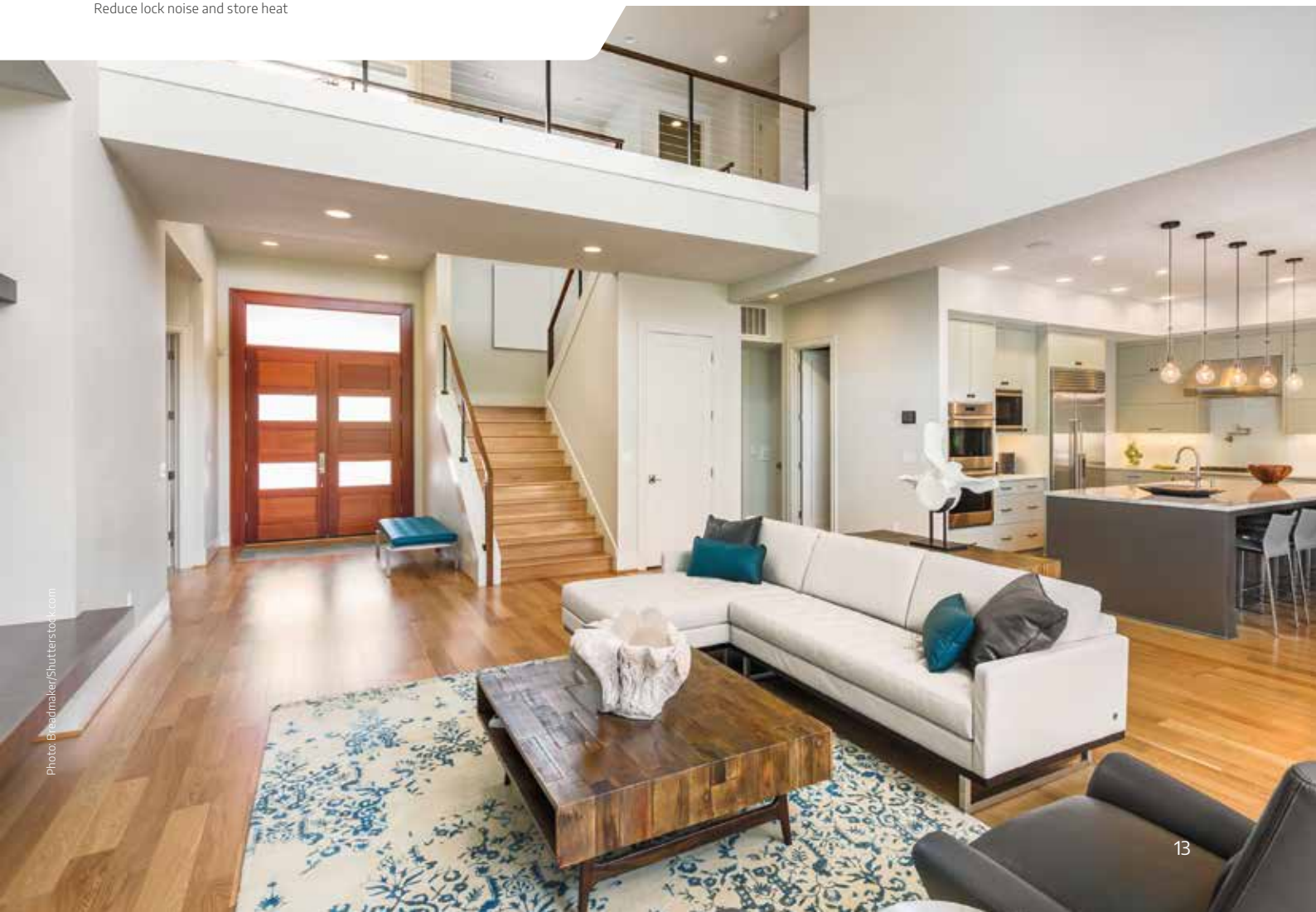
The Ferrari among the motorised locks

The clever design of the MACO lock not only covers the noise, but also makes it the Ferrari in the industry. With an opening speed of 0.3 seconds, it never leaves anyone standing in the rain. The motor sits directly on the main lock box and controls the locking elements directly, without long detours. This makes the M-TS faster, quieter and therefore top-class. For the door production, the advantage lies in the simple fabrication with only the milling for the main lock box having to be slightly enlarged. The lock itself clearly corresponds to MACO's Plug & Play philosophy as no configuration or programming activities are necessary, just plug it in and you're done.

Motor not muscles

In terms of accessibility, an M-TS is the ideal partner, especially for age-appropriate living in your own home or in retirement homes. And this where not only a zero threshold, but also easy opening of doors is important. It plays the perfect role in combination with access control, wall buttons and integrated day release for barrier-free operation. In combination with a revolving door drive, it also corresponds to hygiene factors such as contactless opening, that have recently increased due to the pandemic. ►

Important for living comfort -
Reduce lock noise and store heat



From garage door to motorised front door

From motorised garage doors and roller shutters to motorised front doors, there is still a long way to go in terms of the quantities. The urgency of opening the door comfortably and electronically is not as high as with garage doors, and has therefore not yet established itself on a large scale. This can be explained by both psychological and financial reasons. But supply and technological development create demand and, as with car door opening, sooner or later the motorised front door opening will also become standard. With the M-TS you are ideally equipped for this and offer secure locking with many convenient options and all safety aspects for opening. The basis for this is to be able to network the M-TS and the motorised A-TS automatic lock with all established systems.

Getting security-critical questions out of the way

Interestingly, it is often tech-savvy users, high earners and educated people who take a critical look at motorised front doors when it comes to their own door. It's all about a target group that uses its income to afford a new house with everything that goes with it or to renovate it extensively. The door has to meet a much higher security standard when it comes to protecting one's own home. Technology freaks especially know that with all the gimmicks around Alexa and voice commands that they are an open interface and like a microphone to the online world. Therefore, critical users only trust their either their key or access control in combination with a VdS-certified alarm system or a familiar smart home system of their choice. It's then up to the occupant as to whether they then integrate their door into the existing building technology and if so, which one. As a fabricator, you create the basis for networking the M-TS and the motorised A-TS automatic lock with all established systems.



You can rely on it!

The high-tech door lock assembly plant guarantees 100% quality in production and testing. No door lock leaves the plant without having successfully passed the fully automatic quality inspection in the installation situation.

Smart home connection made easy

After powerful locking, the standard integrated lock monitoring ensures that a reliable alarm is given in the event of a burglary attempt – without any additional components. The M-TS is equipped with three universal plugs, which easily enable a variety of connections to alarm systems, access control or intercom systems. Potential-free inputs and outputs for access systems and for closure monitoring enable easy integration into any smart home system, regardless of their communication standard.

Comfort and security through access solutions

Those who lock keylessly and securely, also want to open doors that way. End customers are increasingly asking for opening solutions. Whether its finger scan, keypad and/or smartphone app – they complement the mechanical key, but soon they will replace it and significantly fuel sales of motorised solutions. The subtle difference behind this and the added value is thus created by the M-TS as it is the perfect partner for various access systems and control solutions. In addition to Plug & Play connection and fast reaction time when opening, high security is an absolute must - not only in mechanical burglar resistance, but also in electronic communication. A dedicated Bluetooth-based access control solution for the front door supports the security cycle thanks to short radio links, highly secure AES256 encryption and 100% data sovereignty by the owner and will be introduced in spring 2022.

Keyed opening at any time

Some good news for the last sceptics - for the M-TS, there is a UPS solution with which the door can be opened via access control even in the event of a power failure. And when nothing else works or your mobile phone battery is empty, the door remains manually unlockable by key – smooth and comfortable, with just one turn of the key. ▶



Fabricator benefit - instead of a freewheel cylinder, you can also install a standard cylinder.

0.3 SECOND
RESPONSE TIME

BARRIER-FREE
OPERATION

SMART HOME
CONNECTION

PLUG & PLAY
PHILOSOPHY



Photo: Stock Rocket/stock.adobe.com



Marketing support for your end customer arguments can be found in this brochure, video or the ad on page 17. Display new possibilities in door design.

<https://www.maco.eu/assets/759203>



Scan the QR Code and watch the MTS Video

HOW WOULD YOU LIKE IT?

Depending on the door configuration, MACO fabricators can order everything ready from a single source - push handle with finger scan, keypad or finger scan for assembly on the door leaf, App, day release, cable transition, power supplies for DIN rail or flush-mounted installation. Thanks to MACO's uniform striker plate range for all locks with multifunction latches and hook or bolt locking, fabrication is greatly simplified in terms of time and storage. An easy-to-clip release magnet for the striker plate strip makes fabrication of the M-TS temptingly easy.

POSSIBLE ACCESSORIES

PRODUCT VARIANTS

USP-MODULE

POWER SUPPLIES

HEIGHT VARIANTS
K+605, K+730, K+980

E-OPENER

BACKSET
35, 40, 45, 50, 55, 65, 70, 80

DISTANCE
E92

FINGERSCAN & KEYPAD

FACEPLATE SHAPES
F-20, F-24, F-24/16, U-6/24/6

CABLE TRANSITIONS

SQUARE
8 MM, 10 MM

HANDLE HEIGHT
1020, 1050



THERE IS ENORMOUS POTENTIAL IN UPGRADES THROUGH MOTORISATION AND ACCESS CONTROL - COMFORTABLE, FAST AND QUIET FOR END CUSTOMERS, DIFFERENTIATION AND HIGHER MARGINS FOR FABRICATORS. <<

CHRISTOPH LAHNSTEINER
HEAD OF PRODUCT MANAGEMENT DOOR BUSINESS UNIT AT MACO



Uniquely fast, incredibly quiet.

M-TS - The fastest motorised lock

With the M-TS you set new standards on the front door. This opens in a record time of only 0.3 seconds and locks motorically securely at three points. Access control and integrated closure monitoring make it a diverse and smarthome-capable partner in building services. It is also fast in the fabrication with a standard instead of a freewheel cylinder. Conclusive down to the last detail.





WINDOWS IN COMMERCIAL BUILDINGS


HOW DO THESE BECOME INTERESTING FOR ARCHITECTS?

Windows are better than their reputation. As the eyes of the house, these contribute significantly to the façade's look. But architects and planners appreciate these even more. Read about the additional equipment and how the cooperation of the trades influences the construction process – especially in times of pandemic.

The challenge

The commercial building "Luisenbad" was built on the site of a previously demolished hotel in the middle of the pedestrian zone of the city of Bad Reichenhall in Berchtesgadener Land. Not only were the logistics a challenge due to the inner city location, but also the preservation of the historical backdrop on this, the first square in the city. It was more than just a building object, it was an urban district development under strict conditions. The builder was the Austrian company Habitat Wohnbau from Salzburg. Although there are only a few kilometres between the builder and the construction project, it is however separated by a national border between Austria and Germany, and thus two different building rights. "This is how I got to Habitat," says the Project Manager, Wolfgang Griesacker. "As a Bavarian, I was brought in especially for this project, because here you have to know the local regulations and speak the authorities' language," he says with a smile. And then came the Corona pandemic.



WHETHER COMMERCIAL OR PRIVATE CONSTRUCTION – WE PLAN THE SAME QUALITY, AS EVERY SINGLE WINDOW MUST INSPIRE AND LAST FOR DECADES. THERE IS NO OTHER WAY, BECAUSE WE DO NOT WANT TO IMAGINE THE COMPLAINTS AT THIS LEVEL. THE DIFFERENCE IS MADE IN THE EQUIPMENT. 

WOLFGANG GRIESACKER,
PROJECT MANAGER HABITAT WOHNBAU

CONSTRUCTION PROJECT LUISENBAD

€ 70 MILLION CONSTRUCTION VOLUME	NEW CONSTRUCTION OF A HOTEL	530 WINDOWS	9,000 M ² AREA	7,000 M ² UNDERGROUND CAR PARK
134 HOTEL ROOMS	70 RESIDENTIAL UNITS	THREE RESIDENTIAL BUILDINGS	2.5 YEARS CONSTRUCTION TIME	COMPLETION NOVEMBER 2021

Construction criteria

The building regulations and the local building authority have precisely defined the development plan. The new hotel had to adapt its façade design to the old one in order not to alienate itself from the cityscape too much. Kofler architects from Salzburg designed the hotel plans, while the company Habitat, in its role as general contractor, builder and owner of the hotel as well as planner of the residential buildings, built the project.

Planning

Planning is determined by the building's physics. It specifies the frame details, in addition to wishes for quality and appearance. Windows are very important for the façade and therefore an important part of the entire construction process for the client. The planner therefore defines the equipment with the hotel operator and determines which windows are installed with which requirements. In addition, there were the 70 apartment owners who also had a say in their equipment.

When to tender?

"It is at one's own discretion when to tender. With this construction volume, it made sense to receive comparative offers and to get to know some new companies," says Griesacker. In the end, Habitat Wohnbau commissioned a total of 40 trades - carpenters, roofers, locksmiths, plumbers, steel builders, window manufacturers, tilers, heating, ventilation, sanitary and electrical engineering among others. The Austrian window manufacturer Actual along with

Heuberger were awarded the contract from a selection of five window suppliers. "Tenders are becoming more and more high-quality when it comes to windows," says Gerhard Hofer, Sales Manager for Commercial Properties in Salzburg and Tyrol at the actual Fenster company. "Because the standards requirements in an object such as the Luisenbad are very high, additional functions such as closure monitoring or barrier-free thresholds are in greater demand than in private construction. We have to keep the quality very high due to the quantity - on the one hand, because we want to continue working with our clients, and on the other hand, because we want to avoid large numbers of complaints," explains Hofer.

Selection of trades

When awarding contracts to a trade, appearance and quality are important in order to ensure stable functionality for decades. Price and manpower follow on an equal footing. Also very important is how high are the capacities, how high is the consistency and speed of the team? "Many apply with a large team and then after a few days take staff away to work on the next construction site. That simply doesn't work! All in all, our own experience, satisfaction with service providers and suppliers, along with the quality seals are important selection criteria. That's why proven and trusted partners like actual and Heuberger Fenster have an easier game than new unknown companies," says the Habitat Project Manager. For this construction volume, two window manufacturers were therefore chosen. ►

Automation?

When asked about automation as an additional benefit, planners and window manufacturers alike answer - "We still look at this cautiously because it is maintenance-intensive and error-prone. and we have to reduce both. And an innovation has to be on the market for three years and prove itself before it is used by us, because we do not want to have any claims for damages from the plan," Griesacker says clearly. And further - "Automation will become more and more established, as with the electric car, at some point. Today, it is a can if the client wants it, but not a must from our perspective".



How does the window become interesting for architecture?

"Depending on the architectural requirements, the window as the main component of the façade's look and its hardware are the decisive factors. The latter fulfils the function (whether tilting, turning, sliding) for the design and, due to its technical possibilities, opens up architectural possibilities that offer us planners more creativity," says Griesacker happily. "In addition, the window industry, like the automobile industry, is one of the most regulated trades. You know what you're getting and that the window works as it should, if you order it from the right one," Griesacker says. However, desire and reality do not always go hand in hand. In the corridors of the hotel, tilt-and-turn was not technically feasible, so the window manufacturer had to take over the advisory function and show alternative solutions.



95% of all windows were floor-to-ceiling elements that were equipped with VSG according to the standard. MACO's Multi Mammut hardware was used for the high weights, says Matthias Buchegger, Project Manager at Heuberger Fenster (Fensterbau Salzburg).

Planning is the half of it!

Everything worked out well because the planner had pushed the deadlines out a little, knowing full well about Corona, and created buffers and reserves. Plant planning and delivery times were broken down exactly because it was quickly clear that an "intermediate push", as it normally works, was no longer possible. And finally, the most savings are made in planning – up to 80%. In the execution, this is limited, since only 20% is possible. Those who know their customers and suppliers well, understand the business and can cushion a lot of things with foresight. In this respect, strong partners and high team strength are so important to protect against delays or bankruptcies. Because only a single day construction delay leads to a horrendous cost explosion. The window manufacturers had a high level of delivery reliability in this project, as the planner confirmed. However, they were fortunate enough to be able to plan and order the components before the pandemic thanks to Habitat's rapid plant allocation. MACO performed very well as a hardware supplier here and delivered on time even during the lockdown.

Advantages for window manufacturers in commercial construction

Good plant planning and fast contract awarding by the general contractor are a time factor that often drags on. The faster this process goes, the faster the window manufacturer can plan and deliver which is a great advantage for our purchasing department, says Hofer from actual Fenster. From assignment to installation, six to ten weeks are planned in commercial objects for windows. The production time is around three to four weeks. The rest is



determined by taking making measurements and disposition. "The windows that were promised in six weeks were also delivered in six weeks," Hofer beams. The installation took place floor by floor.

Sustainability

"We build very well in our region as standard and integrate good materials, triple glazing and, as in this project, also closure monitoring for heating control," says Hofer confidently.

"However, if we consider all-round ecological building, then unfortunately there is still a long way to go in Germany," Griesacker notes. Here, one sometimes talks about € 200,000 additional costs for a terraced house, which are not feasible for many despite all the love for the climate. Subsidies alone are not attractive enough for this and the costs are still a stumbling block for a truly lived climate policy.

Digital planning?

Just like automation in window hardware, BIM is still in its infancy for planning. This is driven by public construction, but needs experienced consultants and does not replace the experience of a company. Habitat is using BIM successfully in individual projects up to approx. 20 residential units and learning from them. "This has to work perfectly and cannot be tested on such a large project. The Luisenbad property was therefore planned conventionally," explains Griesacker.

Building acceptance

Before the final acceptance, many joint interim acceptances are made in the presence of a construction expert to document the respective work and is still done manually. Damage occurs less frequently during the installation of the windows than, for example, by following trades that affect the glass or profile during grinding work or during final cleaning. An adhesion film to protect the windows and doors provides a remedy here. However, a lot also depends on the site manager. The more he is on site and can deal with people, the more successful the construction process is.

Summary? Honesty is wonderful!

Planners and all trades agree that a good network and a trusting partnership are as important as quality. Honest work, keeping promises and the team strength - that's honestly wonderful, even in Corona times. Therefore, good teams are unbeatable.



Requirements for windows and doors

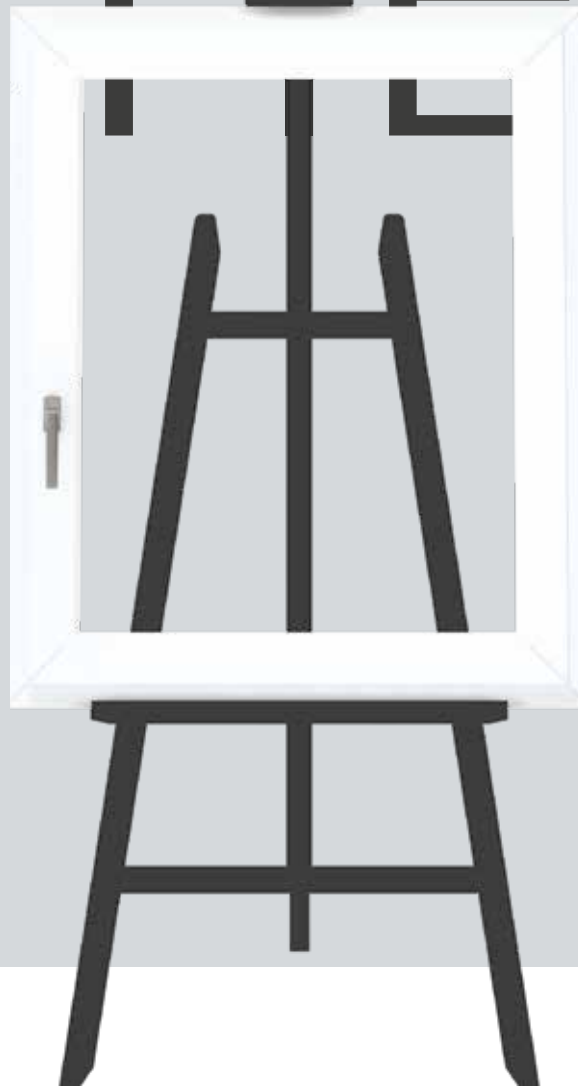
The city wants to preserve the historical image, the hotel operator wants quality, and the apartment owners want comfort. These requirements were bundled and packed into a tender. For the window manufacturers, the following criteria had to be met:

- Material in PVC, the colour white on the inside, an aluminium shell on the outside in RAL1035 pearl beige
- RC 2 security on the ground floor and special locations
- Good U-value against condensation and mould formation. The interplay of profile, glazing, the right seals and hardware make all the difference. "This gives us a good overall U-value, which is required in Austria and Germany as part of the energy performance certificate. With these requirements, we as a window manufacturer make a good contribution to climate protection," say the two window manufacturers.
- The highest demands were placed on sound insulation. In the spa area, this must not exceed 45 dB during the day and 35 dB at night.
- For the panes, triple glazing and safety glazing were subsequently provided where necessary, for example on the lower floor or in the case of floor-to-ceiling windows with a French balcony.
- The opening requirements defined the hardware, where in the apartments, the tried-and-tested turn-and-tilt hardware was used on windows and balcony doors, as was requested by the owners. Incorrect operation lock, anti-jemmy protection and banging protection in the scissor stays were also part of the package. As part of the tender, the hinge side was visibly mounted and concealed bearing parts as well as night ventilation as an additional ventilation position were required with shell handles on the outside.
- Tilt-and-turn hardware was required on the hotel windows for security reasons for the hotel guests.
- In the hotel, closure monitoring was also required. Reed contacts were implemented for control of the heating and air-conditioning.
- In the spacious penthouse apartments, lift-and-slide elements with concealed hardware were used.
- Barrier-free DIN thresholds were a must in all windows and lift-and-slide doors.

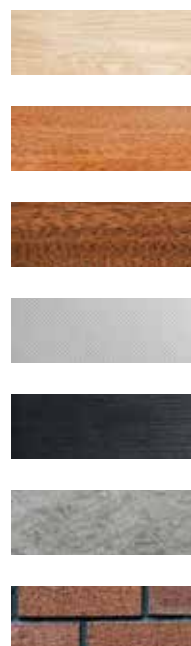
WINDOW DECOR

DIGITAL PRINTING
OPENS NEW

POSSIBILITIES



Let's paint the world as we like it. There's a bit of Pipi Longstocking in each of us. How do you make your windows light up? What is becoming increasingly popular with film coating in the PVC sector could get a further boost with all materials through digital printing.



Timber is painted, PVC is foiled or designed with acrylic colour, aluminium is powder-coated – these are the well-known methods to add protection or décor to windows and doors. Now digital printing comes into play as it can print onto all materials directly. Will this mix up the surface finishing? The Technogramm editors did some research and talked to film and profile manufacturers as well as DIPA founding member Adler Lacke.

Creative design – rapidly increasing

Colour and decor in window construction are increasing more and more. The trend continues, as film and profile manufacturers confirm, not least because of optimal room design for shrinking living spaces. At Veka, colour wrapping has increased from 30% to 50% in the last two years. Foiled profiles also occupy more than half the orders at Salamander. While in Germany 50% of the windows are foiled, in the other European countries it is 43%. In Germany, most are one-sided, while in the rest of Europe half are wrapped on both sides.

The colour range from profile manufacturers is getting bigger and bigger and includes over 100 colours. These come in nuances from matt to glossy, with depth effect and even haptic effects, are soft and of course stable and weatherproof.

Inside, the frame profiles usually remain neutral white or bright to give the rooms size and adapt to the furnishings. If décor is desired on the inside, then it is timber décor. On the outside, grey and brown tones as well as aluminium appearance have increased in recent years, depending on the region, matching the architectural style, e.g. for brick buildings. ▶



Creating a living ambience with surfaces

Digital printing has long been a popular technique in interior design because it not only refines surfaces but it also creates a sense of space and an individual feel-good flair. This can be through a Caribbean flair on shower walls, motif walls in living rooms and on pieces of furniture, tiles and floors. Even whole visible roof trusses are already refined by digital printing. In the Alps, new ways of designing the popular house facades in an old wood look can arise without having to remove the old alpine huts, which helps as these are becoming rarer and waste timber is very expensive. However, digital printing on windows is still in its infancy.



Photo: © Surteco

The advantage of flexible decor and quantity design

"Design-conscious customers often want the same wood grain and colour on every window, perfectly matching the front door and the floor in the best possible way. On the other hand, others want rustic decor with coarse structures and knots in the wood," says Dr. Simon Leimgruber, R & D Adler Lacke. Digital printing offers new solutions here.



Photo: © Parador



Photo: © Classen



Photo: © Kaindl

Let's paint the world as we like it

The digital data of the desired decor is sent directly to the printer and off you go. Any carrier material can be printed and in any quantity. Likewise, wishes and results can be compared with a "proof" before printing starts in order to avoid later complaints. This technology makes it possible to print lots of window decor economically and rapidly in both large and small quantities. Initially, digital printing is associated with investment, but once the process is established, it can be used to even out raw material availability issues such as those caused by the bark beetle.

Involving customers in decor development

The design demands of customers are increasing and more and more they want to help shape things. Social media platforms such as Pinterest and the like inspire people a lot. And this regardless of whether one wants to design windows and doors in a single look for a uniform façade or to provide windows in each room with different decor. Digital printing technology gives space to these ideas, for example to design a child's room in leopard look and the bedroom in a floral design. Of course, companies can also implement their corporate design in the window frame. There are no limits to the imagination and there is room for any gimmick.

Sustainable procurement of goods

Imagine serving a customer request for windows made of tropical timber but with local timber. Meranti or eucalyptus can be digitally printed on spruce, pine, etc. at any time, which reduces CO2 emissions and long (overseas) transports, not to mention the clearing of tropical forests. In addition, the domestic softwoods achieve better insulation values and contribute to very low U-values on the window.

What matters

In the printing process, all components must work together and here a lot depends on the ink. In the past, solvent-based inks were used, but now VOC1-free and quick-drying UV LED inks or environmentally friendly water-based inks are increasingly being used. However, this results in disadvantages in terms of adhesion due to abrasion, scratch resistance and lightfastness. Therefore, the use of primers and protective coatings is essential here. They make a significant contribution to the overall performance of the printed image.

The future of surface technology

In order to offer perfect solutions for this, DIPA2 was founded. The Digital Printing Association is a working group of manufacturers and users from printing experts, interior design, furniture, floors and the coating industry for a digitally and individually designed surface. Together, they want to further expand the future technology of digital printing for creative surface design. The platform serves as an exchange to technically achieve the design diversity for the perfect solution and to perfect the materials for the overall system. While so far mainly surfaces are printed, modern printers can also print around corners, e.g. on aluminium window cladding in a L-shape profile. This also makes the technology interesting for window production.

Quality

"If you want to print on front doors, windows and furniture, you should make sure that printers, ink, primers and conformal coatings are perfectly matched to each other to ensure high resistance and the highest qualities. Their optimal interaction increases the service life and thus also the sustainability of the products with the best visual appearance," says Leimgruber.

Printing and care on PVC

He also sees many advantages for PVC windows in painting and digital printing. Printing and protective coatings are now well-coordinated and established processes. The care of painted windows is also very easy, because today's protective coatings are durable and weatherproof in the long term.

When does digital printing make sense for a window fabricator?

If they want to provide large windows with decor and if they want to print many individual decor in alternation, but also in series production and economically. It is made more interesting by the high flexibility and cost-effectiveness that it means for the fabricator, in terms of quantities and design, but also automation and standardisation. In addition, it is independent of complex supply chains such as those for timber from distant countries. The changeover takes time, but the flexibility promises many freedoms and opportunities for development. Whether visible or concealed hardware is used and what handle colour is wanted, is ultimately a matter of taste and is determined by the customer's wishes. ●



Subtle decor or eye-catching patterns can be combined with visible or concealed hardware and matching handles. Room design does not stop at the window.

¹ It regulates solvent-limiting regulations. Volatile Organic Compounds (VOC) | Federal Environment Agency.

² Digital Printing Association is a working group of manufacturers and users from interior design, furniture, flooring and the paint industry for digital surface design.

DIGITAL IS GOOD, FACE-TO-FACE MEETINGS ARE BETTER

MACO DEVELOPS REPLACEMENT PROGRAM FOR FRONTALE 2022

In Nuremberg, MACO and HAUTAU wanted to exhibit together for the first time with a larger exhibition stand, bundled expertise, many innovations, such as INSTINCT by MACO, and digital solutions. And then came "Omicron".



instinct


Every revolution needs someone to lead it. This also applies to innovations that change the market.

Innovations

The new door lock is not only an innovation, but a revolution in the door sector. It was presented in 2016 as a vision with the working title "Door of the Future". At the Frontale, we wanted to present it as a market-ready product and show it on exciting door elements that we realised with well-known pilot customers.

"With the claim Re-inventing Entrance Technology, we make it clear that we have completely rethought the door lock and thus enable ground-breaking possibilities in door construction," says Robert Andexer, Head of Business Unit Door and Service of the MACO

Group. What if the door lock no longer determines the height, width or shape of doors? What if a locking system was accompanied by unprecedented flexibility in door production? Let yourself be surprised by the crucial role a horse-head plays in this.



See the Instinct by MACO Teaser Video now!

MACO and HAUTAU – better together

"In 2022, we had planned a joint stand with HAUTAU in Nuremberg for the first time. Over more than 1,200 m², our visitors were to experience the expanded product portfolio without having to change halls and stands. Innovations from the areas of doors, sliding, windows, automation, seals, thresholds and service," says Florian Schneckeleithner, Project Manager for Fensterbau Frontale at MACO. Other focal points around hardware solutions are their sustainability, digital networking and, of course, innovations. "Unfortunately, due to the current pandemic development, participation in the trade fair does not make sense," says Schneckeleithner.

Replacement program for face-to-face meetings

Video conferencing and product videos have gotten us through the pandemic well, but personal contact and hands-on product experiences are essential in the long run. Smooth running, quiet operation, perfect contact pressure and networking of components just have to be experienced and felt first hand. We are now working on other formats to give you a compact overview of our developments and to be able to exchange needs and experiences together," says Michael Weigand, Managing Director Sales and Marketing of the MACO Group. "We look forward to seeing you again elsewhere."



FOR THE PROTECTION OF ALL, WE ARE NOW STAYING AWAY FROM THE FRONTALE. BUT WE ARE WORKING ON A REPLACEMENT PROGRAM TO GET IN TOUCH WITH YOU PERSONALLY. WE LOOK FORWARD TO MEETING YOU! <<

MICHAEL WEIGAND
MANAGING DIRECTOR SALES AND MARKETING
OF THE MACO GROUP

Sliding expertise bundled

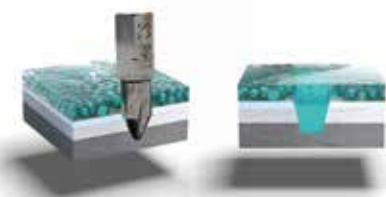
The collaboration between MACO and HAUTAU started with InfinityView and resulted in an innovation. "The latest sliding element with robust GRP core for slim frames with large glass surfaces was developed in Salzburg and supplemented with the motor from the automation experts in Helpsen. Together we plan and market everything jointly today. This lived partnership and our network bring our customers a lot of knowledge and advantages," says Alexander Wesser, Head of Windows and Large Surfaces Business Unit of the MACO Group. Another successful project is the internationally popular sliding element Move.



HAUTAU Move: A sliding hardware for versatile window shapes. It creates space where there is little and not only inspires end customers, but also makes fabricators' hearts beat faster.

Automation and digitalisation

New living concepts and the desire for comfort accelerate automation. For these requirements, we will show you the interaction of wireless sensors or reed contacts for window monitoring with electric drives for control. Whether for private or commercial construction, whether for timber, PVC or aluminium – MACO and HAUTAU make windows and doors smart home ready. The latest example of this is the fully motorised door lock M-TS, which reaches a new level of comfort and speed. With its integrated closure monitoring, it can be easily integrated into alarm systems and smart home systems. A lock for every case.



Robust, corrosion resistant, smooth running and with a self-healing effect – this is the new Silverlook Evo surface from MACO.

(R)evolution in surfaces

Windows and doors are in themselves very durable products. With our Evo surfaces, we make them even more durable. Years of experience, comprehensive know-how and the incentive to perfect our fittings resulted in the globally unique, tribological Evo surface coating. In creating this, we have used nature's own idea - human skin recognises small injuries and heals them independently. This is also how it works with Silverlook and Tricoat Evo. If a scratch occurs during assembly, the nano-capsules integrated in the sealer burst open and release the lubricants contained therein. This prevents corrosion.



The wireless sensors as reliable partners for closure monitoring (eTronic) and tilt monitoring (mTronic)

Sustainable into the future

We are shaping the world in which our children will live. We have been aware of this responsibility for society and the environment as a family business since the very beginning of our activity. Sustainable action is an important part of our corporate policy and therefore one of our core corporate values. In our Future Report, we have documented our actions for you.



With the 2021 Future Report, MACO was the first in the industry to focus on sustainability. And here we continue with the 2022 edition already in the works.

MACO Lab – inspiring studies & prototypes

As an innovation driver, we are continuously researching new, disruptive solutions. In the MACO Lab you can see current studies and prototypes. We use this platform to enter into dialogue with you and to jointly determine needs for future applications. In 2022, we will be able to show further developments of the Window of the Future and the next evolutionary stage in lift-and-slide in the Salzburg Research and Innovation Center. ●



Make your building components smart

Insert wired reed contacts or wireless sensors into windows or slides/doors and easily integrate them into alarm or smart home systems. The mTronic wireless sensor even scores with automatic intrusion detection.

Compatible with:

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Wireless sensor mTronic



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