



apra-group and EMKA

A success story spanning over 40 years

This partnership has already had its ruby anniversary, which seems to be as unbreakable as the red gemstone. The collaboration between the apra Group and EMKA remains as prosperous today as it was 40 years ago. Whether we are talking about the solutions for locking systems, hinges or seals, in many apra housings and cabinets, you will find a wide variety of components made by EMKA. What is the secret of this long-standing cooperation? Regular optimisations and adaptations of the solutions, high flexibility, the direct line between contact person and customer, and setting new standards in the design of housing systems.



The EMKA swinghandle 1185 with sliding cap and rod control for flat rods. The handle is specially molded in RAL 7037 and stamped with the apra logo.

Source: apra-norm

The apra Group has been specialising in cabinet and housing technology for over 50 years. With its five subsidiaries, it supplies over 25 different industries worldwide and serves global trends such as laser, security and charging technology as well as cabinet systems for critical infrastructure such as energy-efficient data centre solutions. At its headquarters in Mehren in the Volcanic Eifel region of Germany and five other European locations, around 440 employees develop and manufacture a wide range of solutions made of sheet metal, aluminium, stainless steel, and plastic. One of the apra Group's particular strengths is its flexible housing design. In addition, the family-owned company offers customised housings both as individual items and in large series. This diversity is also reflected in the order volume. About 86 per cent of the orders are for newly developed or customised products according to the customer's specifications. Whether combining traditional stamping and bending technology in metal processing, milling bending technology, and modern 3D printing in plastics – apra makes it possible.

But there are also components that apra sources from external companies, such as locking solutions, hinges and seals. Since the safety of housings plays a major role in cabinet and housing technology, the apra Group relies on EMKA in this area. The cooperation between the two family-owned companies has a long history. Not only have the founders been acquainted since childhood, but both organisations also pursue similar methods in their corporate philosophy: a wide in-house production and the perpetual refinement of their product portfolio.

Lockings, hinges & Co: apra relies on EMKA expertise

EMKA solutions have been used for over 40 years by the subsidiaries of the apra Group – first and foremost by apra-norm Elektromechanik GmbH in Mehren, Germany and apra-gerätebau GmbH in Chemnitz, Germany. Equipping control cabinets and server racks with locking technology has traditionally been EMKA's most important business field. With its in-house designers and developers, the renowned world market leader from Velbert, Germany, has a great deal to offer when searching for new locking solutions. Another advantage is that EMKA offers complete locking systems because handles, hinges and seals are precisely matched to each other. This allows coordination processes to be accelerated and all cabinets to be opened and closed with the same quality.

Many standardised and customised apra housing solutions for the industrial and network technology sector contain EMKA components. The products' high potential for customisation corresponds with EMKA philosophy's ability to be modified. Among the regularly used solutions is a complete locking system from EMKA. This is the swinghandle 1185 with the "apra" logo and a colour-matched handle. In combination with a rod control, flat rods and rod guides, this results in a complete locking system with 3-point locking. In addition, the family-owned company relies on EMKA hinges of the 1110 series, which can only be unhinged at a certain opening angle. This design makes it easy to

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assemble and disassemble doors and flaps within a few minutes. To ensure that they also close tightly, the apra Group relies on vulcanised frames made of the 1011-12 sealing profile. EMKA mitre-cuts these to a precise fit and vulcanises the corners. This approach creates a homogeneous connection, and the seals made in this way do not have to be glued or placed around the corner as usual. The sealing frame can then be installed directly after delivery without further processing.

In total, apra purchases zinc and aluminium die-cast parts, handles, swivelling levers, hinges, quarter turns, locks, seals, and sealing profiles from EMKA. Because of the established partnership, these pieces are included in various apra Group items. Ralf Mayer, Business Manager at apraNET, is also aware of this: "Whether it's the die-cast aluminium corners of a cabinet's frame profile for audio and media applications, the vulcanised seal of a machine housing in industry, or the swinghandle of a server rack in the data centre sector – we use EMKA components everywhere".



The apra group has its headquarters in Mehren in the Volcanic Eifel: Here, among others, the companies apra-norm and apraNET are based.



The server racks close with a 3-point locking system consisting of a rod control, flat rods and rod guides.

New challenges enliven the partnership

Countless collaborative initiatives have enabled EMKA to gain the reputation of being a dependable and enduring partner. Christian Herzig, EMKA's Group Sales Manager, knows this status has been achieved above all through the constant optimisation of the company's solutions: "We are constantly concerned with the question of how we can reduce weight and thus save material costs in the interests of our customers. We benefit from the fact that we process different materials in our production, such as steel, zinc and plastic, and are not limited to one process. These optimisation steps always follow the approach "quality before price" in order to always offer the best possible solution to the end customer. Nevertheless, EMKA has developed a sterling reputation for its

dependable staff and punctual service and is now a trusted authority in the field of lockings, hinges, and seals. "EMKA regularly presents us with new ideas. This can be a new locking, but also constructive details such as an improved roller shoe that makes the locking system run more smoothly" Ralf Mayer describes EMKA's contribution. "We can also be sure that if we have any queries, no matter what kind, we will get a response within a few hours". The family-owned firms are striving to have a say in the future of cabinet and housing construction – they are already laying the groundwork for their next project.

EDITORIAL | COMPACT INFORMATION IN FIVE LANGUAGES AND A NEW LOOK

Dear readers,

An exciting year of trade fairs lies ahead of us. Topping the list of highlights is the, of course, the Hanover Trade Show. EMKA is showcasing their program on an exhibition booth measuring 300 square metres, which is much larger than in previous years. The first issue of EMKA News also has a new look this year. From now on, our customer magazine will be published in the main languages of German, English, Spanish, Italian and French. Adhering to the popular adage: "Presentation is everything" each edition provides even more room for illustrations and material about our products, website updates, new arrivals and success stories. One of these stories is the long-standing cooperation with the apra Group. In this edition's lead feature, we illustrate how our locking solutions, fittings and seals have been applied in the control cabinets and server racks of this highly successful family-run business over the course of four decades.

The second example of our successes also relates to server racks. We will take you to Switzerland, where a civil defence bunker has been transformed into a state-of-the-art data centre. We also take another look at our largest production site: EMKA Bosnia, and our ongoing growth in the mould construction. Furthermore, we highlight the German Parachuting Championship and the Caritas Day at the EMKA facility in Wuppertal in our indispensable EMKA Sponsoring segment. Finally, I hope you will enjoy reading the first issue of EMKA News in 2023 and, of course, its new look.

R. Kloth

Yours, Dr. Ralph Kloth, Head of Strategic Sales and Marketing

Data centre security

Before entering Lucerne's civil defence bunker „open your wide eyes“

Previous applications of the "Agent E Wireless" system have been installed in data centres of prestigious operators, ranging from banks to energy suppliers, and thus in vital infrastructures. However, the proven radio-based locking system is now celebrating its debut in a converted civil defence bunker, the Stollen Lucerne Data Centre. For the first time, EMKA's solution is being combined with an iris scanner at the customer's request.



The old civil defence bunker in the Wartegg hill near Lucerne was converted into one of the most modern data centres in Switzerland.



In the main and secondary tunnels, the cabinets with "Agent E Wireless" technology are installed in cold aisle enclosures.

What added value can an aging bunker complex still offer in this day and age? This was the question energie wasser luzern (ewl) asked itself – talking about the old civil defence bunker in the Wartegg hill near Lucerne. The response: Here, the energy service provider built one of the most sophisticated data centres in Switzerland. Today, the Stollen Lucerne Data Centre boasts five major tunnels, each allocated 200 square metres for IT system hardware. In addition, there are eight auxiliary tunnels, referred to as Private Rooms, each allotted 50 to 100 square metres for IT system hardware. The CO2-neutral facility, operated by ewl Rechenzentrum AG, combines state-of-the-art technology with sustainability and an optimal connection to the communication and energy networks.

To keep data stored on-site from unauthorised digital access, firewalls and complex encryption solutions are used by data centres. The same degree of security should be applied to physical access. The Stollen Luzern Data Centre already offers a high security standard because of its underground location. Additionally, the operators require the ability to monitor the activity of each individual at any given time in the various

sections of the data centre. As the facility contains servers from several companies, individual racks must be secured independently. To ensure a superior outcome, ewl Rechenzentrum AG sought suitable solutions even during the early planning stages of the project. Alongside stable server racks, the emphasis was also placed on a dependable locking solution.



The individual doors of the server cabinets are secured using the "Agent E Wireless" system supplied by EMKA.

Wireless locking system featuring an iris scanner upgrade

ewl Rechenzentrum AG had a detailed plan for the sophisticated locking system in the bunker. The biometric access control had to be secure and the wireless communication with the rack and database had to be seamless, with a quick and simple setup. While searching for a suitable supplier, ewl Rechenzentrum AG contacted EMKA already at an early stage. The "Agent E Wireless" system fit the criteria exactly. By leveraging a combination of electromechanical handle, software and wireless technology, the security system allows individualised access to all cabinets and perpetually supervises the opening and closing processes. In addition, the handles can be easily and quickly adapted to cabinets from different manufacturers. This system had already been tested and proved successful in similar projects in Switzerland. ewl

Rechenzentrum AG attached particular importance to a biometric system that regulates access to the server cabinets. Typically, EMKA provides authentication with an RFID card and Agent E. In this instance, there was a unique requirement that called for an iris scanner that can open the server cabinets remotely. Since the eye profile cannot be mistaken, this authentication method offers maximum security. The Swiss company Touchless Biometric Systems AG (TBS) provided just the right system for this project. To manage access, all authorised individuals and personnel in the computer centre save a scan of their iris in the database. The individual pattern of iris is then encrypted and safeguarded from misuse. To open the desired server cabinet, the personnel or customer at the data centre

must use the iris scanner to identify themselves. The scanner sends the data to the database and evaluates the information against the pre-existing patterns and authorisation profile. All authorised rack doors are now shown and can be selected on a display. The selected handles are transmitted to the control unit of the EMKA system and from there the activation is triggered wirelessly. Simultaneously, ewl Rechenzentrum AG receives up-to-date information regarding the server rack doors. Through personalised access control down to the cabinet level, Agent E thus enables clear logging and tracing. The entire system thus consists not only of an iris scanner and electromechanical handles, but also includes database-based control software and powerful modules.

Leader in the global market five years in a row

EMKA defends topranking

It's now official – EMKA is the world market leader for a fifth consecutive year! We proudly present our expertise in the locking market, backed by the seal of quality from the German news magazine WirtschaftsWoche. At the same time, our product range has grown to unprecedented heights. Besides battery-free, intelligent locking systems for switch and control cabinets, this also includes a multi-point locking system. The latter is made of glass-fibre-reinforced plastic that closes almost silently.

In 2023, EMKA can officially call itself the world market leader for locking systems, hinges, and seals for switch and control cabinets. Except for 2019, when the honour was not given, we have now been able to claim the award for the fifth time consecutively. The scope of products comprises 30,000 items, which are designed, manufactured, finished, and assembled at 11 production facilities in Germany, France, England, Spain, Bosnia, Serbia, China, Indonesia, and India. Simultaneously, our experts are consistently examining ways to improve our established systems. This way, we can always offer our customers the perfect solution for their needs. Besides conventional locking systems, electronic locking solutions are also increasingly in demand.



Using a mobile phone to unlock control cabinets



We have increased our range of products to include the outdoor swinghandle for iLOQ 550 profile half cylinders, an energy-autonomous, digital locking solution. The handle from the 1317 range has been adapted specially to the cylinder from iLOQ, a manufacturer from Finland. An Android/iOS smartphone with Near-Field Communication (NFC) capability may be used in lieu of a physical key to open the lock, either through an application or a digital key (iLOQ K55S Fob). Access is only granted to those who have been authorised by an administrator. The corresponding data for all keys, locking cylinders and access rights are stored in combination on a cloud-based SaaS platform. The administrator can grant or revoke these access rights in real-time. This functional principle also optimises key management and greatly increases the security of the entire system. The process of unlocking requires energy supplied by an NFC from the Android/iOS smartphone, as the handles do not necessitate a constant power supply or battery. This makes the lock particularly interesting for use in the telecommunications industry, especially in remote locations. In order to ensure the necessary security there as well, both the pull and the handle of the energy-autonomous locking solution are made of die-cast zinc. Consequently, the system includes IK 10 degree of protection in compliance with DIN EN 50102 and burglar resistance class RC2.

With the outdoor swinghandle for iLOQ 550 profile half-cylinders, EMKA expands its portfolio with an energy-autonomous, digital RC2 locking solution.

New multi-point locking system made entirely of plastic

Another optimised solution from the EMKA portfolio is our multi-point locking system made of glass-fibre-reinforced plastic. Using a newly developed adapter, all locks with flat rod receptacles, e.g., swinghandles and key escutcheons with rod control and lever handles, can now be connected to the new plastic system. In addition, the solution can now be used both inside and outside the seal. The plastic connecting rods are simply clipped onto the locking element and fixed to the inside of the door using special rod guides. A shoe at each end of the rod completes the three-point locking system.

EMKA is able to maintain a balance between strength, ease of use and cost-effectiveness with the switch to plastic material. Moreover, our plastic locking components are well known for their excellent corrosion resistance and durability. Compared to steel rod systems, the lightweight locking system has a 20% higher strength and is 30% less expensive. The carbon dioxide balance in the raw material's manufacturing and in the final product's subsequent processing is a significant benefit compared to the steel variation. But the multi-point locking system made of glass fibre-reinforced plastic also provides great added value in the application – the almost noiseless opening and closing.

At the Hannover Messe 2023, customers were presented with the RC2-tested version of the outdoor swinghandle for iLOQ S50 profile half cylinders and the nearly silent multi-point locking made of plastic for the very first time. In the future, EMKA will be able to supply both from stock.

The new multi-point locking system made of plastic can be combined with the swinghandle 1325 from EMKA and many other locking elements.



Using team spirit to reach a common goal: EMKA promotes sports and social awareness of important issues.

EMKA is once again keeping up with its local social commitment and giving to many charities and associations this year. Working with the German Caritas Association, Wuppertal, we feel strongly about spreading hope and solidarity on the National Day of Children's Hospice Work. At the same time, we look forward to sporting successes and highlight events this year with the FSC Remscheid e.V. and TSG.

EMKA has a soft spot for football clubs from the region, including TSG Sprockhövel from the Oberliga Westphalia. The team from the heart of North Rhine-Westphalia has been competing in the top division for several years now. The TSG focuses, in particular, on youth development. This benefits not only the club as a whole but also the players. A selection of promising talents from the club's youth academy has already presented themselves to more accomplished clubs. Examples are Nazzareno Ciccarelli (today Rot-Weiß Erfurt) and Dilhan Demir (today SC Paderborn). EMKA is particularly related to sponsor TSG Sprockhövel considering their impressive and successful performance.



Special cheers at the 5:2 victory against Preußen Münster 2.

From left to right: Nazzareno Ciccarelli (today Rot-Weiß Erfurt) and Dilhan Demir (today SC Paderborn). In the background are Macel Weiß and Levin D'Hone (today Wuppertaler SV).



Stefan Wiesner diving from a Swiss Pilatus Porter over France jumps from an altitude of 2,500 m. EMKA joined the flight.

Practice makes perfect

In 2023, there will be another German championship in Accuracy landing. This time, the EMKA-sponsored parachute club FSC Remscheid will be the organiser. In September, Germany's top athletes will meet in Plate near Schwerin (Mecklenburg-Western Pomerania, Germany). But the preparations have been going on for months. The FSC is particularly pleased with the participation of Bundeswehr's Sports Promotion Group. Besides a head coach, an assistant coach, and a leader accompanied by his deputy, this team comprises 18 elite athletes – a necessary component of the world's top competitors. With 40 world championship titles in the last ten years, the team can look back on many successes. In addition, distinguished guest Stefan Wiesner, a German, European, and World Champion in Accuracy landing, will be in attendance. EMKA and the host parachute club Remscheid e.V. are delighted about this commitment. The German championship will be a milestone in the 50-year history of the FSC Remscheid because of the top-class guests.

Commitment to children's hospice work

Our support for the Caritas Association Wuppertal is also about an extraordinary team. On February 10 2023, we expressed our shared support for Children's Hospice work and the families of those children who suffer from serious illnesses. For 16 years, the green ribbons have symbolised hope and solidarity on this special nationwide day. This is to bring the topics of death and to die into the public eye. These subjects are still taboo for many, but not for EMKA. Mrs Marita Runge's invaluable efforts as Caritas ambassador and patron of the campaign alongside the EMKA staff have enabled us to create an awareness of the priceless work performed in children's hospices, and we consider the team's backing of this endeavour to be a natural expression of the help that each of us can give.



February 10, 2006, marked the initiation of the Day of Children's Hospice Work by the German Children's Hospice Association. Since then, it has taken place annually.

EMKA mould making in Bosnia

Up to 900 injection mouldings and die casts per year

EMKA connects customers and experts with locking systems, hinges, and seals – we are undeniably the world leader in these areas. In the meantime, EMKA has also developed into one of the largest mould makers in Europe. We provide an exclusive look into one of the two plants in Bosnia, where up to 900 moulds are produced annually for world-renowned companies.



EMKA's plant 2, including mould making (marked in yellow) in Goražde, Bosnia Herzegovina



Mechanical processing in the mould shop

The Goražde facility has expanded to about seven hundred personnel, becoming the largest EMKA location in the world. In recent years, the most significant change has been the physical transformation of the structures and infrastructure on-site, as the new plant was completely rebuilt only 5 km from the old location. In addition, EMKA bought another large, highly modern plant with its in-house mould-making department. Today, a total of 35,000 square metres are available under one roof for production and development. Additionally, the two plants are near one another, providing many logistical benefits.

Whether zinc die-casting or plastic injection moulding: The large machine park of both plants enables, on the one hand, the production of its own products for the EMKA catalogue programme; on the other hand, EMKA sees itself as a bilateral development partner of its customers. As a contract manufacturer, EMKA can thus produce prototypes, initial samples, and pilot series, as well as large series from various materials, right up to complex assemblies. The end customers benefitting from this resource strength include well-known industry giants from the automotive and sports sectors.

Customers of EMKA can take advantage of the facilities and conditions offered at the Goražde EMKA location: besides EMKA's capability to manufacture in Bosnia at reasonable costs, the firm can count on personnel with extensive specialist knowledge and a high level of consulting competence. If necessary, EMKA customers can request samples of 3D-printed parts made from the desired materials in advance. Furthermore, prospective customers can find out during the project enquiry how the desired product can be produced most cost-effectively. This process will then be detailed in the respective quotations. In contrast to our competition, EMKA Bosnia can also examine and offer the use of alternative materials, such as aluminium or glass fibre-reinforced plastics instead of zinc. This process will then be discussed in the following consultation meetings.

Over 120 colleagues are directly employed in mould making. In addition, 30 engineers work in development, design, and CNC programming. EMKA has a unique selling proposition in the production of moulds: As soon as a mould is ready, it is subjected to detailed testing on a suitable in-house machine – directly on site. Finally, initial samples will only be made when everything meets the desired specifications. These samples are then sent to the customer for approval, together with all production data and an initial sample test report. Following this procedure up to 900 moulds can leave the factory each year ready for production with a complete "data package" and all paperwork.



Half of a finished mould before the final acceptance test in the factory

Staff-News

Andrew Clutterbuck



EMKA UK

Mr Andrew Clutterbuck has been appointed **Managing Director** of EMKA UK. He handles the company's business units in the UK and Ireland. He brings over 20 years of experience in managing positions in retail, wholesale and manufacturing companies. Andrew Clutterbuck has already worked in Germany and France. His strengths, therefore, include his extensive knowledge of the European distribution system and his strategic business understanding. Mr Clutterbuck will continue EMKA UK's decades of successful distribution work.

Michael Borg



EMKA AUSTRALIA

Mr Michael Borg has been responsible for EMKA's newest sales subsidiary, EMKA Pacific Australia, as **Managing Director** since July 2022. As a trained industrial electrician, Mr Borg has worked in the control cabinet industry for over 30 years. Before taking the helm of EMKA Pacific Australia, headquartered in Melbourne, Michael Borg was the Managing Director of a large industrial hardware company in the access control sector. He was directly involved in developing many products used in the Australian control panel, rail, RV, transport, and telecommunications industries.

Smart access with “EMKA mobile” app

Agent E is one of the electronic perennial favourites in the EMKA portfolio. The new “EMKA mobile” app, transforms the mobile phone into the digital key for the sophisticated locking solution. In the future, it will be possible to trace, manage, and access allocated handles with various levels of permission determined by specified user profiles. This way, EMKA mobile secures personalised access and once again supplements the range of access options.

The smartphone application “EMKA mobile” guarantees that only authorised personnel can open EMKA’s locking solutions, such as the “Agent E Wired” swinghandle.

As the amount of data continues to increase, control and telecommunication cabinets are essential components of our infrastructure. Ensuring only authorised personnel have access to these data and making modifications regularly is essential. In order to provide authorised personnel with digital access control, EMKA has developed a solution that uses a smartphone application to unlock the handle. At this point, the app is compatible with the “Agent E-BLE” swinghandle. The communication between the app and the handle is based on Bluetooth® Low Energy (BLE).

Intelligent, all-embracing solution

Until now, personalised access to the Agent-E has been secure and convenient using RFID (Radio Frequency Identification) cards. Now, the intuitive smartphone app provides a new way to open the handle. Other locking solutions such as the single-point locking and the outdoor swinghandle of the 1317 series can also be opened via app. The prerequisite is the use of the EMKA mobile app. Upon successful registration, the “handle owner” will grant the user permission to use the app. In order to ensure

maximum security, the user’s identity is checked again each time before the handle is opened. Depending on the smartphone manufacturer, this may require entering a pin, activating a fingerprint sensor, or facial recognition. In the next step – depending on the authorisation level – a list of approved locks that are within range of the BLE signal is available. Subsequently, the user selects the lock they want to open. The “handle owner” can grant or revoke authorisations at any time. Access is further restricted by using a predetermined time frame.

After undergoing a predetermined testing phase, the app has been put into use by a producer of transport boxes that are fitted with the EMKA single-point locking system. Merging the function of advanced locking technology and a user-friendly smartphone app creates a comprehensive, intelligent solution. EMKA has designed this system to target business customers that are aiming to improve their security technology or offer their clients fresh, innovative locking options. With the app, the smartphone becomes a digital key.

The EMKA mobile app will be available for iOS and Android platforms during the third quarter of 2023.

Trade Fair Impressions



AHR Expo, Atlanta



ISH, Frankfurt



Matelec, Madrid



MEE, Dubai

Worldwide Trade Fairs 2023

	Caravan Salon, Düsseldorf, Germany (25.08. - 03.09.2023)
	Expo Ferreteria, Guadalajara, Mexico (07.09. - 09.09.2023)
	Energetab, Bielsko-Biala, Poland (12.09. - 14.09.2023)
	MetalBarcelona, Barcelona, Spain (13.09. - 14.09.2023)
	Electric & Power Indonesia, Jakarta, Indonesia (13.09. - 16.09.2023)

	Expo AHR, Ciudad de Mexico, Mexico (19.09. - 21.09.2023)
	Trako, Gdansk, Poland (19.09. - 22.09.2023)
	M-Tech, Osaka, Japan (04.10. - 06.10.2023)
	ISK SODEX, Istanbul, Turkey (25.10. - 28.10.2023)
	Blechexpo, Stuttgart, Germany (07.11. - 10.11.2023)

IMPRINT

EMKA Beschlagteile GmbH & Co. KG
Langenberger Str. 32
42551 Velbert/Germany
Tel.: +49 2051 273-0
Fax: +49 2051 273-128
www.emka.com
presse@emka.de

Responsible for Contents:
Dr. Ralph Kloth, EMKA

Editorial Staff, Design & Layout:
additiv pr GmbH & Co. KG
www.additiv.de