

Allied Moulded & EMKA: Partners around the globe

A shared spirit of development

The collaboration between EMKA and the specialist in electrical enclosures, Allied Moulded Products Inc, spans almost twenty years. Allied Moulded has created new standards in building enclosures and associated solutions by breaking industrial barriers. EMKA was excited to be in this journey of progress. Nonetheless, the history of the collaboration commenced much earlier, in the early 2000s in the United States.



The double door of the stainless steel control cabinet from Allied Moulded is locked seven times. All locking elements are made of stainless steel and are produced in-house at EMKA.

Allied Moulded India, is subsidiary of Allied Moulded Products, Inc. started over 65 years ago in the USA and is now one of the biggest company in the world for non-metallic electrical enclosures for homes, businesses, and factories. The portfolio of Allied Moulded, India contains enclosures made of FRP, Polycarbonate, Stainless Steel, and Aluminium along with enclosure accessories. The solar, railways, pharmaceutical, oil and gas, water, and food sectors employ these. Allied is committed to providing state-of-the-art solutions with over 2.1 million installations in more than 40 countries. The Group has been represented on the Indian subcontinent by its subsidiary Allied Moulded since 2010. In the southern Indian state of Karnataka, the company manufactures a wide range of electrical enclosures in an ISO 9001:2015 certified plant.

Sustainable solutions

The further development of its portfolio is of great importance to Allied Moulded India. Machine-produced, high-temperature-resistant silicone seals have been presented by the company recently. In addition to developing industrial stainless-steel enclosures with exceptionally high vibration protection, Allied Moulded has established itself in the enclosure industry with innovative product launches, such as the E90 enclosures with fire protection, Seismic Zone V and ATEX enclosures. Allied Moulded is the first company to launch SS304L, SS316Ti material enclosure along with vibration finish to bring differentiation in the market. The topic of environmental responsibility is prominent across all product categories. All enclosure series are designed for energy efficiency and recallability.

Reliable closure partner with creativity required

The product assortment of Allied Moulded in India includes various sizes of FRP, stainless-steel, PC and Aluminium enclosures. In addition to this table closure solution is also required to protect the internal electronics from external influences and unauthorized access. Since these components are not manufactured in-house, the need for an external supplier arose. Allied Moulded places a significant emphasis on conducting research, development, and design experimentation to address its customers' business challenges. Additionally, the company is constantly improving its product range and developing new solutions. For this reason, those responsible were searching for a long-term partner with a philosophy of customer proximity and the ambition to constantly raise the joint service range to a new level — and thus came into contact with the EMKA Group.

Everything from a single source: EMKA becomes an exclusive complete supplier

The closure expert from Velbert, Germany, has been collaborating with the parent company from the USA since 2001. The rationale behind the partnership was the significant EPDM self-clamping sealing profiles from EMKA that are UL-listed. These were

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required to ensure UL certification for the Empire series of wall-mounted enclosures. Since then, Allied Moulded Products, Inc. has procured its gaskets and closures from the renowned global market leader EMKA in Velbert, Germany. With the establishment of Allied Moulded India in 2010, the collaboration between EMKA and Allied was also sustained on the other side of the globe. The result was new and innovative designs for pressure caps, handles, and seals. Like its parent company more than 20 years ago, EMKA collaborated with Allied Moulded, India with its adaptability and flexibility to customer requirements: "The commitment of the EMKA team members to the customer, the consistent quality

of EMKA products, and on-time delivery were the decisive elements for making EMKA our partner."

EMKA has been designated as the exclusive complete supplier for all enclosure accessories, including latches, locking systems, gaskets, and hinges by Allied Moulded. Many EMKA components are used in the Cabinet series in particular. These include compression latches, three-point locking systems, heavy-duty handles, weld-on and screw-on hinges, and self-clamping sealing profiles. The products are already adjusted without any further modifications. All components are plug-and-play products that guarantee seamless

integration into the enclosures and housings. The collaboration also focuses on the creation of fresh approaches. One result of the partnership is the EMKA Stainless-steel grade 316 three-point locking system for railway tunnel applications, Research, development, and experimental design are essential for the company to stay ahead of market trends. The partnership with EMKA will result in cost-effective innovations, such as secure locking systems, RFID-based locking systems, and electronic and biometric solutions.



Forecast: Partnership continues to grow in 2024 and thereafter

The partnership between Allied Moulded Enclosure Products and EMKA began in 2010 and has continued to grow. "For over 13 years, we have been able to rely on EMKA's willingness to cooperate and delivery reliability here in India," says Mr Sanjeev Gambhir, CEO

of Allied Moulded India summarizing the collaboration to date. Ultimately, the compulsion to consistently enhance their product portfolio and remain one step ahead of the customer creates a common ground for the two companys. Consequently, the collaboration has persevered through challenging economic times without encountering difficulties: „Despite the pandemic, our collaboration has once again heightened significantly, resulting in significant expansion.“ The current forecasts indicate that the scope of supply for locking solutions will double by 2024.

„Stainless steel latches used:
1 - Quarter turn with double bit
2 - Lifthandle with flank cam
3 - Compression latch with square
4 - L-handle quarter turn“

EDITORIAL | Bringing quality to life – in every country of the world

Dear readers,

With the arrival of spring, we are embarking on a dynamic start to the trade fair season. EMKA is widely recognized for its commitment to applied quality, which we proudly demonstrate at the prestigious Hanover Fair, a globally significant industrial trade fair.

EMKA's motto, "Quality First", underlines its commitment to excellent products and processes as a promise and a measurable reality. This is true not only for the 300 m2 at the Hanover Fair but worldwide. We maintain global control over innovation and quality by producing over 92% of our products in-house. The stories in the first EMKA News of the year also demonstrate this. In the current spring edition, we have a particular focus on our endeavours in India, where we maintain a longstanding collaboration with Allied Moulded Products Inc. Furthermore, we will take you on a tour of our recently established facility in Bhilai, India. Following that, we

will introduce our sophisticated locking systems designed specifically for switch, control, and server racks, customised to meet our customers' requirements for maximum interior protection. Last but not least, we will give you an insight into our current involvement in sports sponsorship – from the Wuppertal City Championships to a top handball match at our production site in Gorazde, Bosnia and Herzegovina, to which EMKA owner Friedhelm Runge was exclusively invited.

Immerse yourself in the world of EMKA, where quality is more than just a word. I hope you enjoy reading the first issue of EMKA News in 2024.

R. Kloth

Dr Ralph Kloth, Head of Strategic Sales and Marketing



Personnel News: Mirko Klug

As of February 2024, Mr Mirko Klug has assumed the role of Head of Operations for our production sites, including EMKA Beschlagteile, ILS Speth, EMKA Aluminium, EMKA Bosnia (Plant 1 + 2), EMKA Feinguss, and EMKA France. In addition to his vocational training, Mr Klug has completed further studies and training courses. Considering his extensive background in various management positions spanning different industries, his addition to the EMKA Group is highly

valuable. The crucial factor in ensuring EMKA's success lies in the optimisation of our production sites to enhance product and process quality, as well as efficiency. The objective is to align EMKA's production sites to achieve maximum customer satisfaction and quality across all countries. Mr Klug's office is located at EMKA's headquarters in Velbert, Germany.



3D printing very close to the series part

EMKA has recently expanded its test laboratory by incorporating a state-of-the-art 3D printer that utilises the latest Laser Powder Bed Fusion (LPBF) technology. During this procedure – called selective laser sintering – minute polymer powder particles are sintered into a solid structure. The process uses a powerful laser, which is guided by a computer-aided design (CAD) model. This offers advantages in terms of sustainability and cost-effectiveness.

can be utilised. The mixing ratio is 70:30 – 70% used powder and 30% fresh powder.

Unlimited individuality

The components manufactured through 3D printing are just as superior as those produced by injection moulding. The components exhibit approximately 90% of their properties, as the PA12 (polyamide 12) utilised in 3D printing demonstrates resilience and dimensional stability equivalent to the PA6 (polyamide 6) employed in injection moulding. The surfaces are homogeneous and have no residue from support geometries. All tasks, including printing and polishing, are fully automated. Because the 3D printer has two construction chambers, continuous production is possible without downtime. As a result, EMKA can now not only rapidly produce its own prototypes or spare parts but also fulfil urgent customer orders without delay.

Perfect sustainable parts in record time

The printing procedure typically requires less than 12 hours because of the printer's impressive sintering speed of 20 mm per hour. The subsequent automated finishing process is completed in just 15 minutes. The chamber is a closed, sustainable cycle. The powder used during printing but not incorporated into the product is reused. This is because not only fresh powder but also loose or previously used powder

Different parts can be printed and processed simultaneously in two construction chambers.



Process optimisation at EMKA Aluminium

Vehicle shock absorbers are subject to rigorous requirements – they need to be stable, rust-free, vibration-resistant, and lightweight. This is the reason why aluminium is frequently used as a material.

A crucial element in the system is the shock absorber tube, which comprises a tube section and a forged mounting fork. Joining the aluminium parts is accomplished by using a process referred to as friction welding. Afterwards, several machining steps are necessary: milling, drilling, and tapping. For many of these machining processes, the shock absorber tube has to be tilted, turned, swivelled, and erected.

Until now, all these machining steps were carried out separately and one after the other. By implementing the new programme-controlled clamping device, these steps can now be seamlessly performed in succession. The new device was both designed and constructed by EMKA Aluminium. The result is a production process that is faster and more secure.

Locking technology with a system for switch rack construction

What do switch, control, and server racks have in common? They are subject to stringent requirements because they must provide the best possible protection for the electronics and other, sometimes highly sensitive, devices inside the rack. It is imperative to prevent the infiltration of dust, dirt, and water. Moreover, it is critical to ascertain the safety of the contents and restrict unauthorized persons from gaining access. EMKA, the leading company in the global market, showcases how this can be achieved through its innovative locking systems.

How can large switch and control racks – which may also be difficult to access – be securely locked? Seals on doors exceeding a height of 2,000 mm often display inadequate air tightness in the corners, rendering the doors ineffective in deterring unauthorized entry. Multiple interlocking systems with cams inside the seal are the method of choice in such cases, as they enable optimum distribution of the closing forces due to the numerous locking points. Three to seven locking points can be incorporated with this solution – and even more for particularly large doors. One notable benefit is the high level of operating convenience thanks to the synchronised closing process. Only a single operating element needs to be actuated to lock the door of an enclosure or the lid of an underfloor container at several points, for example. A continuous rod connects the individual locking points with each other and thus prevents delays or transmission errors during the locking process. At the same time, the three, five, seven or more cams driven in this way move, depending on the application. The result is significant time savings during the opening and closing process. Locking expert EMKA offers this system not only with an extensive selection of operating elements but also with a compression unit and optional corner drive.

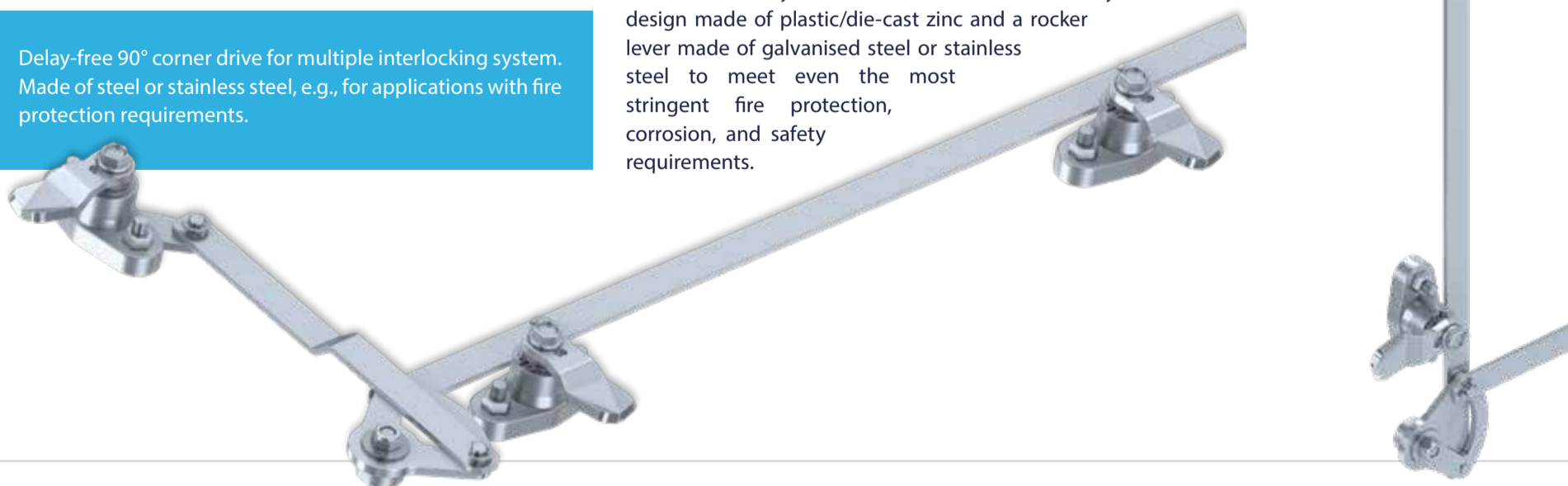
Delay-free 90° corner drive for multiple interlocking system. Made of steel or stainless steel, e.g., for applications with fire protection requirements.

Secure locking on three sides: Multi-point locking with corner guide

By using the multiple interlocking system with cams and additional compression, the tightness of the door and ease of use can be further increased. All locking points with turn-and-tighten function pull the door securely and smoothly into the surrounding door seal. When the door is closed at a 90° angle, there is a combined turning and lifting motion accompanied by an additional 4 mm compression. The 180° closing function enables the turning and lifting movements to be carried out independently. The locking principle is therefore particularly suitable for enclosures with

6-point multiple interlocking system in closed position with compression latch function and 2x 90° corner drive completely in stainless steel.

high sealing pressure. The locking systems with and without compression fulfil the requirements of protection class IP65 in accordance with DIN EN 60529 and are therefore dust-tight and protected against water jets. With the optional corner drive developed by EMKA, the vertical locking points are extended by horizontal ones. By incorporating extra locking points in the cross-shoring system, the locking specialist ensures even further increased security. The corner drive is available in a hybrid design made of plastic/die-cast zinc and a rocker lever made of galvanised steel or stainless steel to meet even the most stringent fire protection, corrosion, and safety requirements.



Lightweight and corrosion-resistant: Multiple interlocking system made of plastic

When seeking a cost-effective locking solution for switch rack doors ranging in height from 800 to 2,200 mm, the ideal option is the lightweight locking system made of glass fibre-reinforced plastic. All rods and locking components are made of this corrosion-resistant, durable, lightweight, but robust material. The virtually silent opening and closing operations provide further benefits. Customers benefit from maximum flexibility, as all locks with flat rod receptacles – such as swinghandles and escutcheons with rod control as well as lifthandles – can be connected to the new plastic system thanks to a newly developed adapter. The solution can also be used both inside and outside the seal. When used inside the seal, the plastic rod is simply clipped onto the locking element and attached to the inside of the door using special rod guides. A shoe for the rod at each end of

the rod and a locking plate on the inner frame complete the three-point locking system with a cam on the locking element. When used outside the seal, at least two locking brackets are required on the door frame for installation. Depending on the size of the rack, additional locking brackets are fitted. Whether inside or outside the seal, the symmetrical arrangement of the locking components and hinges makes it easy to change the door stop. Not only is the system versatile, but it also boasts a 20% increase in strength and a 30% decrease in costs when compared to conventional metal rod systems. Additionally, there is a substantial decrease in weight, presenting notable ecological benefits, particularly during long-distance transportation.

The modular lightweight locking system can be combined with a escutcheon, a swinghandle, and a lifthandle and can be used inside or outside the seal.



Control and manage locking processes via app

The new Agent E BLE lets you use your smartphone as a digital key. The swinghandle, which is based on wireless technology, is controlled using the new, free "EMKA Smart Access Key" app. With smart access, the management software only grants controlled access to authorised personnel. This solution ensures the optimal security and convenience for server racks containing sensitive content. Complex key management and multi-key locking cylinders have become obsolete. The management of all access authorisations is conducted through a smartphone connected to the cloud infrastructure. This means that locking processes are controlled and documented entirely via the app. Communication between the app and handle is based on Bluetooth® Low Energy (BLE). EMKA continues to offer the battery-operated, cable-guided, or wireless swinghandle Agent E, which can be opened using RFID cards. Like its predecessor, the new Agent E BLE can be used for almost all standard server racks on the market and is easy to install. The installation does not require any cabling in the racks, and ongoing operations can continue without interruption. The handles are registered and managed using the „EMKA Smart Access Key Manager“ management software for Windows. This software can be used to assign different individual authorizations that allow permanent, temporary or one-off locking processes. This implies that service calls can be promptly and conveniently addressed as well. Authorizations are transferred to registered smartphones via the Internet. The user's identity is checked when the smartphone app is opened. After successful login, a list of approved locks is available, depending on the authorisation. After selecting and tapping the desired handle, the lever on the swinghandle opens after a short time and can be moved manually. The app also indicates when the swinghandle is locked again. Automatic push messages remind the user if they forget to close the rack. The logging of access and access attempts enables

optimum control and thus leads to increased security for the user. At the launch of the app (April 2024), only the Agent E BLE can currently be operated with it. EMKA also plans to expand the system to include all locking solutions from its well-known product range.

In order for switch, control, and server racks to fully serve their purpose, the appropriate locking solution is crucial. This includes protection against water, dirt, and dust, as well as safeguarding against break-ins and implementing seamless access control. World market leader EMKA offers numerous modular systems for the increasingly complex areas of application and increased requirements in various industries.

The electronic swinghandle Agent E BLE can be opened by authorised personnel using the smartphone app "EMKA Smart Access Key". The opening impulse for the swinghandle is transmitted via an encrypted Bluetooth® Low Energy (BLE) wireless connection.



EMKA expands production in India

We maintain a steadfast commitment to India – in response to the rising demand for its locking solutions in India, EMKA has made substantial investments in new facilities at its Bhilai site in eastern central India. As a system supplier, EMKA possesses distinct advantages over its competitors and experienced a 48% increase in turnover last year. Further investments are also planned for the future.

India is becoming increasingly important for German companies. The nation is regarded as a promising growth market, primarily due to its youthful demographic and swiftly advancing infrastructure. Other advantages include political stability and relatively low labour costs. India's gross domestic product exceeds 3 trillion US dollars. As a result, the nation has positioned itself among the top five global economies, boasting consistent economic growth exceeding 6%. Thus, it is not surprising that EMKA is continuing to increase its commitment in India.



The total covered area is 6,000 m². A state-of-the-art powder coating machine was recently put into operation.

Short delivery times and a strong customer focus

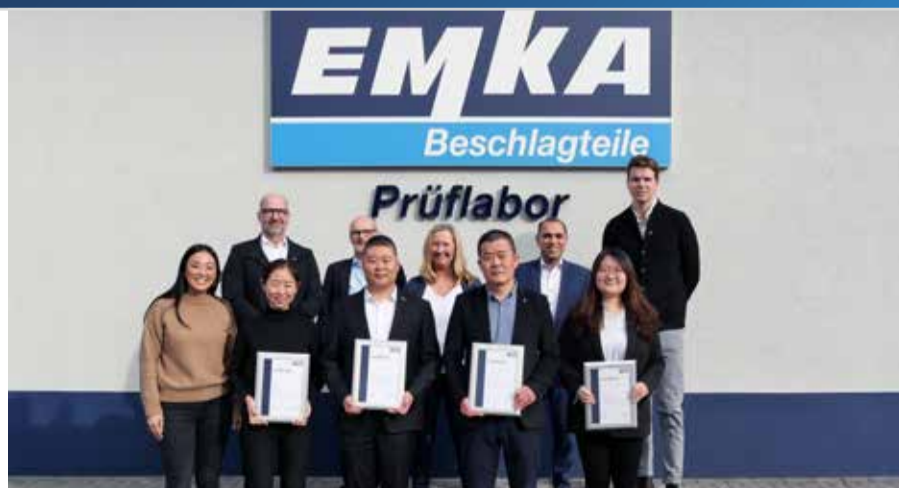
Since 2005, EMKA India, our sales company in Bangalore, has been established as the global market leader for locking solutions, hinges, and seals. A state-of-the-art production plant spanning 15,000 m² was constructed in Bhilai four years ago, located 1,300 kilometres away. "The COVID-19 pandemic made our start more difficult, but sales have been rising sharply since 2022 because the demand is enormous", says Mohammad Ali Reihani, Director of Sales Asia at EMKA. "We have invested in new machinery and are now able to manufacture products ourselves rather than having them delivered from Germany". EMKA India thus ensures short supply chains and supplies Indian customers faster than before. After receiving the orders, sea freight transportation alone took six to ten weeks; now, EMKA's standard products can be delivered within 24 hours. The strategically favourable location ensures optimal scheduling. "Our sales department is active throughout the country and works closely with the site in Bhilai", emphasises Reihani. "Customers benefit from a nationwide network and fast processing of their orders". The country is booming, and the infrastructure is being continuously expanded. Thanks to its extensive portfolio, EMKA offers solutions for many industries. To meet the growing demand, investments have been made in additional zinc die-casting machines, punching machines, and assembly equipment. "EMKA distinguishes itself as a system supplier and offers not only locking solutions but also matching hinges and seals from its production and with high quality", says Reihani. "All components are perfectly matched to each other. We also offer comprehensive advice and project support. Our customers appreciate that". The sales manager is optimistic about the future and expects continuous growth. While the focus is currently still on India, the entire Asian market is to be served more from Bhilai in the future.



The new powder coating machine produces up to approx. 20,000 parts per shift (8 hours) at full capacity

Visit from the Middle Kingdom

A delegation from EMKA China embarked on a study trip in February, visiting multiple EMKA sites in Germany and Spain, tracing the journey from Tianjin, China, to the heart of Europe's locking systems. The group, consisting of two women and two men, was invited to attend training courses at the company headquarters in Velbert, Germany and the subsidiaries in Wuppertal, Germany and Arnedo, Spain. The purpose of the trip was to offer additional technical training on all locally utilized EMKA manufacturing processes in the fields of stainless steel, zinc, plastic, and rubber. Following the successful completion of the training courses, the four visitors were awarded a certificate accordingly.



Handing over the certificates to the visitors from Tianjin (China).

Long-standing partnerships and new sporting challenges

Cronenberger SC and Wuppertaler SV, two football clubs that have received long-standing support from EMKA, recently competed against each other in the final match of the Wuppertal City Championship. In the end, which team emerged as the victor and claimed the title of the best team in the city? At the same time, EMKA demonstrates its commitment to supporting sports clubs by offering assistance not only in its local community but also on an international level. The handball club MRK Gorazde from Bosnia and Herzegovina recently thanked the home club for its support in front of a sell-out crowd.

EMKA has been a passionate general sponsor of the MRK Gorazde handball club for two years. The club can not only look back on a long tradition but is also proud of its players, who are among the finest in Bosnia and Herzegovina's top league. As a socially responsible company, EMKA supports the team from Gorazde and is therefore also committed to developing the city in which EMKA Bosnia is based. For this reason, the club management organised a small celebration for Friedhelm Runge, Managing Partner of EMKA, at the most important home match of the season. Mr Runge's unwavering support of the club was acknowledged by a thunderous applause and the presentation of a framed team jersey, signed by all players. EMKA is committed to providing ongoing support to the club and is looking forward to many more years of sporting achievements.



Friedhelm Runge is honoured by MRK Gorazde in front of a home crowd.



MRK Gorazde – one of the best teams in Bosnia and Herzegovina – has been sponsored by EMKA for two years.

Champions of Wuppertal: WSV leaves the pitch as winners

Just in time for the beginning of 2024, the tenth Wuppertal Indoor Football City Championships were held. A notable tournament took place, wherein the title of City Champion 2024 was fiercely contested by the top eight ranked teams in the region and an additional eight qualifying teams. The tournament began with a wide-open field: the first five group matches resulted in a draw until the defending champions, Wuppertaler SV, dominated the district league team Viktoria Rott with an impressive

win of 7:0. In their first match, Cronenberger SC, a team from the state league, emerged victorious with a 3:1 win over FK Jugoslavija. Both teams were also able to beat their opponents in the quarter-finals, with WSV again sending a clear signal to the competition winning again 7:0. While CSC reached the semi-finals with a 3:1 win against SSV Germania Wuppertal, WSV secured their place in the final with a two-goal lead against TSV 05 Ronsdorf, the winner of the 33rd Tournament of Südhöhen. In the presence of EMKA owner Friedhelm Runge, the two finalists, whom EMKA has supported for many years, then battled it out for the title of city champions. Although Cronenberg initially took the lead, they were outclassed by the regional league team from Wuppertal. Three goals from WSV could no longer be countered. In the end, the boys from Wuppertaler SV left the pitch as the winners and, thus, also as the 2024 indoor champions. EMKA congratulates both teams on this great tournament and wishes them all the best for the second half of the season.



EMKA in the final: In an exciting final, CSC and WSV fight for the title of city champion in Wuppertal.

The new housing quarter turns for profile half cylinders

Easy to open and even easier to lock, the new housing quarter turns for profile half cylinders from EMKA offer increased ease of use. At the same time, compact control racks in particular as well as distribution and meter boxes can be upgraded to a higher security level. The locking solution is based on EMKA's widely used 1,000-cut out. Consequently, the new EMKA solution offers a simple replacement for traditional quarter turns.



The new housing quarter turn for profile half-cylinders by EMKA, demonstrates notable improvements in both usability and security.

Shock and vibration tested

Quarter turns are a simple and practical solution for locking doors. They are frequently used in industrial rack construction and are available in numerous designs. EMKA is introducing a new product to the market that enhances user convenience and improves security by incorporating housing quarter turns for profile half cylinders. This is because conventional quarter turns can either be unlocked completely without a key, with a special tool or with the aid of a key. A round cylinder, which is comparatively easier to manipulate, is usually used. By combining the classic quarter turn lock with a 40 mm or 45 mm profile half cylinder, EMKA is now taking the locking solution to a new level of security. In addition, the new housing quarter turn can be ideally integrated into the key management of a system's main locking system. This is because the customer integrates the desired profile half cylinder into the EMKA solution and can, for example, operate all systems with one master key. The new housing quarter turn is conveniently unlocked from

the front using the key. The plastic handle pops out and is swivelled through 90° to open the rack. It has a pleasant feel and is extremely easy to operate. After opening, the key can be removed and used for other locks. To lock, the handle is returned to its original position and simply pressed shut; the key does not need to be used again. Another advantage of the new locking solution is using the universal cut out from EMKA's 1000 quarter turn programme. Even after installation, classic quarter turns on racks can therefore be easily replaced. The replacement is done in just a few simple steps. The new locking solution from EMKA is shock and vibration tested in accordance with DIN EN 61373 Cat. 1B and fulfils the requirements of protection class IP66. Thanks to the foamed seal, the new housing quarter turn for profile half cylinders is not only absolutely dust-tight but also offers maximum protection against powerful water jets.

Trade Fair Impressions



Data Centre World, London



Blechexpo, Stuttgart



IREE, India



Trako, Poland

Worldwide Trade Fairs 2024

TSE The Security Event, Birmingham, UK (30.04.–02.05.2024)

Expo Fabtech, Monterrey, Mexico (07.05.–09.05.2024)

Data Centre World, Frankfurt, Germany (22.05.–23.05.2024)

ELASIA, Bangalore, India (24.05.–26.05.2024)

BIEMH, Bilbao, Spain (03.06.–07.06.2024)

WIN Eurasia, Istanbul, Turkey (05.06.–08.06.2024)

SEC, Sidney, Australia (21.08.–23.08.2024)

Caravan Salon, Düsseldorf, Germany (31.08.–08.09.2024)

InnoTrans, Berlin, Germany (24.09.–27.09.2024)

EuroBLECH, Hannover, Germany (22.10.–25.10.2024)

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