

PRODUCT BROCHURE



 **Erlenbach**
Maschinen

SHAPING SOLUTIONS

SHAPE MOULDING

EMMotion | 2

EMMotion Flex | 4

EMShuttle Evo | 6

EMHybrid | 8

EMBase | 9

PRE-EXPANDER

EMBead | 10

BLOCK MOULDING

EMTower | 12

ACCESSORIES

Silos and silo control | 15

Pressurising systems | 15

EMCycle | 15

EMHandling | 16

SERVICE

Digital Spare Parts Service | 19

Warranty 36 | 19

EMTraining | 19

Why Erlenbach?

Your success is for us a guarantee of a long-term business relationship, which is characterized by trust, know-how and understanding of the industry. Especially important to this long-term partnership are our sustainable business development and our motivated employees.

Our team guides you during planning, dimensioning and implementation of your individual machine requirements. Additionally, we support you for the training of your employees, the optimization of your processes and the service of the systems. For us it does not matter whether we discuss an individual machine or whether we jointly implement your turnkey project.

For more than 60 years, we are convinced that “good” can improve even further – must be improved. We perform our daily work based on this principle and advance the improvement of our products based on the latest technologies, processes and digitalization options.

We listen to you and understand you – especially with respect to your individual requirements! Jointly with us, you will find the ideal production solutions for your products, and we help you to always be a step ahead when using our high-quality and innovative products.

Also we do not lose sight of your objectives and requirements and meet those with innovative technologies and optimal processes.

EMMotion



Power to Move

*Those who want to achieve special goals must walk special paths. Therefore, the **EMMotion** 1.6, as well as the 5.0 and 2.5 variants, combine the knee lever typical for Erlenbach with the precise linear track – and this already for more than a decade!*

Increase your performance

- » **DRIVE:** For many years, the products of the **EMMotion** series provides a unique electrical servo-drive, consisting of two or four knee levers, depending on the operating area. The drive, a combination of an electrical servo-drive and a linear unit, results in a steady motion of the movable machine frame and offers a multitude of benefits for you. The high position- and repeat accuracy are especially impressive. Additionally, a lowering of the movable chamber is impossible due to the proven drive concept. Another advantage is the ease of maintenance of the **EMMotion** shape moulding machines – no hydraulic unit and therefore no viscosity variations, low noise emission and a clean production environment.
- » **CONTROL UNIT:** High-quality process and automation components ensure a high repeatability and guarantee a safe process. The interaction between mechanic and process technology is exactly synchronized through a mature software. Last but not least, the operator friendly Front-End ensures that you have your process at any time under control.
- » **EM QUICK MOULD CHANGE SYSTEM:** The proven system permits an ergonomic exchange of the moulds within a few minutes. The mould to be installed, including the injectors and ejectors, will be setup during the ongoing production on a clamp frame outside the machine. Therefore, the machine downtime is limited to the dismantling and installation of the mould through the backside of the machine.

- ⊕ *up to 25 % more productivity*
- ⊕ *energy savings*
- ⊕ *highest precision*
- ⊕ *mould change without long downtimes*

PROVEN ERLBACH QUALITY:

- » dynamic electrical servo-drive
- » machine frames made of torsion resistant steel profiles
- » hot galvanization and high-quality coating
- » fully electronically working PID control
- » EM quick mould change system with machine platform and guided clamp frames
- » insulated EM steam chamber system
- » individual machine stroke variants
- » situation analysis through remote maintenance module
- » operator friendly HMI
- » process data collection and acquisition

YOUR BENEFITS:

- » low setup costs through quick mould change system
- » material savings through precise crack- and backpressure filling
- » high process safety through fully electronically working control systems
- » short cycle times and highest precision through electrical servo-drive with linear unit
- » space saving and easy accessibility through optimal machine concept
- » continuous process control through operator friendly user interface

Helpful practical examples:



SUCCESS STORIES

Learn more about **EM**Motion:



YOUTUBE CHANNEL

EMMotion 1.6

OPERATING PRESSURE: 1.6 bar

MATERIALS: EPS, copolymers, biopolymers

APPLICATION: Packagings (ice boxes, fish boxes, electronic devices), insulation boards, floor panels, decorative elements, technical moulding parts

EMMotion 2.5

OPERATING PRESSURE: 2.5 bar

MATERIALS: EPS, sophisticated copolymers, biopolymers

APPLICATION: Automotive, packagings, suitable for EPS manufacturers, which want to expand their portfolio with low effort and investments

EMMotion 5.0

OPERATING PRESSURE: 5.0 bar

MATERIALS: EPS, EPP, E-TPU, sophisticated copolymers, biopolymers

APPLICATION: Applications with crack processing (positioning accuracy $\leq 0.1\text{mm}$), applications with back pressure processing, automotive (bumpers, sun visors, etc.), technical moulding parts for house and building systems, food packagings

EMMotion Flex



Focus on Flexibility

By offering the **EM**Motion Flex, Erlenbach combines the unbeatable advantages of the electrical servo-drive with a higher flexibility with respect to the mould adaptation. With respect to moulds, you do not want to commit to one system? With the **EM**Motion Flex, we offer the ideal solution.

Produce efficiently – without restrictions

- » **DRIVE AND CONTROL UNIT:** The **EM**Motion Flex is equipped with the proven electrical servo-drive and the linear unit, which provide highest precision and short cycle times for your processing. In addition, the **EM**Motion Flex includes a Siemens control unit, which enables you to use your systems in a operator friendly way and to network them easily. The Siemens control unit ensures a high repeatability and a safe process. The arrangement between mechanic and process systems was once more improved and optimally harmonized through the new control unit.
- » **STEAM CHAMBER SYSTEM:** The outstanding benefit of the **EM**Motion Flex is the inclusion of monoblock and third-party products without the use of additional adapter systems. This option in conjunction with the electrical servo-drive offers you the decisive competitive advantage. In addition, by using the Erlenbach steam chamber you continuously enjoy the benefits of the EM quick mould change system. An additional advantage is the revised and improved Erlenbach steam chamber insulation.

- ⊕ *adaption of the most different mould and monoblock systems*
- ⊕ *short cycle times and highest precision*
- ⊕ *energy savings*

PROVEN ERLENBACH QUALITY:

- » dynamic electrical servo-drive
- » highest flexibility when selecting your mould and steam chamber systems
- » machine frames made of torsion resistant steel profiles
- » hot galvanization and high-quality coating
- » highest ease of maintenance through revised machine concept
- » fully electronically working PID control
- » expanded steam chamber insulation of the **EMMotion Flex 5.0**
- » individual machine stroke variants
- » situation analysis through remote maintenance module
- » operator friendly HMI
- » process data collection and acquisition

YOUR BENEFITS:

- » more flexibility and efficiency through the straightforward use of monoblock and third-party products while simultaneously using the electrical servo-drive
- » time-saving through the EM quick mould change system when using an Erlenbach steam chamber system
- » precise drive air control through a shorter air input distance at the side of the control cabinet
- » more energy efficiency through holistic steam chamber insulation

MAXIMUM MOULDING PART SIZES:

| | EMMotion Flex 1.6 | EMMotion Flex 5.0 |
|------------|-------------------------------|-------------------------------|
| XS | 520 / 420 to 930 / 670 mm | – |
| S | 930 / 670 to 1270 / 920 mm | 520 / 420 to 1270 / 870 mm |
| M | 1270 / 920 to 1510 / 920 mm | 1270 / 870 to 1485 / 1285 mm |
| L | 1510 / 920 to 1650 / 1395 mm | 1485 / 1285 to 1850 / 1380 mm |
| XL | 1650 / 1395 to 1910 / 1700 mm | – |
| XXL | 1910 / 1700 to 2550 / 1450 mm | – |

OPERATING PRESSURE: max. 1.6 bar or 5.0 bar

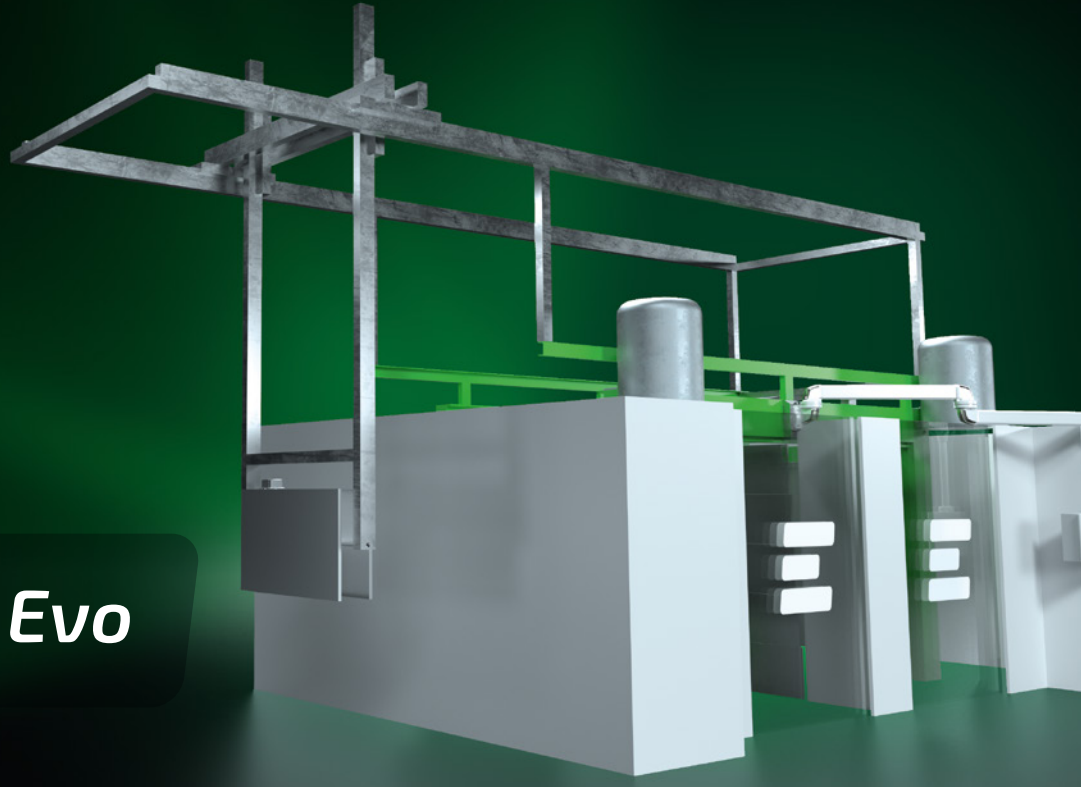
MATERIALS: EPS, EPP, E-TPU, copolymers, biopolymers

APPLICATION: Moulding parts for automotive, construction industry or technical applications, suitable for using different mould systems, optimization of the setup times

Learn more about
EMMotion Flex:



YOUTUBE CHANNEL



EMShuttle Evo

Efficient Inserting

*The electrically driven 2-in-1 moulding machine is outstandingly suitable for the particle foam production with complex insert parts. In this context, the **EMShuttle Evo** is flexible, efficient and especially space saving.*

The intelligent design for insert solutions

- » **DRIVE:** The **EMShuttle Evo** is equipped with an efficient electric drive whose movement is implemented through an electrical spindle stroke gear. The benefits are obvious: No hydraulic oil, no viscosity variations, low noise emission and a clean production environment.
- » **CONTROL UNIT:** High-quality process and automation components ensure a high repeatability and guarantee a safe process. The interaction between mechanic and process technology is exactly synchronized through a mature software. Last but not least, the operator friendly Front-End ensures that you have your process at any time under control.
- » **MOULD SYSTEM:** Based on the separated mould installation, **EMShuttle Evo** offers highest flexibility when installing steam chamber and monoblock systems. Take advantage of the **EMShuttle Evo** and its independently controlled steam chamber systems to be able to install two different moulds in one system.

- ⊕ *the production of the same or different products on one system is possible*
- ⊕ *two independently controlled medium circuits*
- ⊕ *easy and safe access for the insertion operation*
- ⊕ *individual automation level*

PROVEN ERLBACH QUALITY:

- » shortened cycle time through placing the insert during the foaming process
- » innovative electrical drive system
- » independently controlled medium circuits
- » machine frames made of torsion resistant steel profiles
- » hot galvanization and high-quality coating
- » fully electronic PID control
- » EM steam chamber systems
- » inclusion of monoblock and third-party products possible
- » situation analysis through remote maintenance module
- » operator friendly HMI
- » process data collection and acquisition

YOUR BENEFITS:

- » multi-tasking through easy insertion and removal during the foaming process
- » highest flexibility through different automation options and two independently controlled medium circuits
- » space saving due to two moulds in one machine
- » high productivity through the installation of monoblock and third-party products
- » short cycle times through fast and even driving motion

Learn more about
EMShuttle Evo:



YOUTUBE CHANNEL

OPERATING PRESSURE: max. 1.6 bar or 5.0 bar

MATERIALS: EPS, EPP, E-TPU, copolymers, biopolymers

APPLICATION: Moulding parts for automotive, construction industry or technical applications, efficient and safe handling of insert parts, production of standard moulding parts without insert is also possible

EMHybrid



Perfect Combination

The **EMHybrid** offers the perfect solution, especially for the production of large or deep moulding parts.

PROVEN ERLENBACH QUALITY:

- » faster and more flexible electrical servo drive
- » closing through hydraulic and electrical lock
- » solid machine frames made of torsion resistant steel profiles
- » hot galvanization and high-quality coating
- » EM quick mould change system
- » insulated EM steam chamber systems
- » situation analysis through remote maintenance module
- » operator friendly HMI and process data collection and acquisition

YOUR BENEFITS:

- » especially suitable for large and deep moulding parts
- » hydraulic lock during the foaming process
- » movement of the steam chamber through electrical drive

OPERATING PRESSURE: max. 1.6 bar or 5.0 bar

MATERIALS: EPS, EPP, E-TPU, copolymers, biopolymers

APPLICATION: frequent use for applications in the construction industry




Ace of Bases

Our hydraulically driven basic machine is available in 3 sizes and it guarantees solid processing and precise production results.

PROVEN ERLBACH QUALITY:

- » durable hydraulic drive
- » solid machine frames made of torsion resistant steel profiles
- » EM steam chamber systems
- » inclusion of monoblock systems and third-party products possible
- » EM pressure filling system
- » operator friendly PLC control
- » machine stroke: 1000 mm

YOUR BENEFITS:

- » low investment costs at optimal quality
- » fast adaptation through flexible mould system
- » shortest delivery times through standardized design
- » high service life with a maximum availability

OPERATING PRESSURE: max. 1.4 bar or 5.0 bar

MATERIALS: EPS, EPP

APPLICATION: Packagings, automotive


 A large industrial machine, the EMBead pre-expander, is shown against a dark green background. The machine is primarily green and white, featuring a complex arrangement of pipes, tanks, and a control panel. A prominent vertical cylindrical vessel is on the left, and a larger, more complex assembly is in the center. To the right, there's a white cabinet with a glass door and a set of stairs leading up to it. A yellow hose is connected to the machine's base. The overall design is modern and industrial.

EMBead

Right Action

*The impulse sensor of each particle foam processing must not only be reliable but must also be highly precise and efficient. The **EMBead** series products exactly offer these characteristics even when using the most different materials.*

Produce the perfect base product

- » **FOAMING VESSEL:** The optimized design of the foaming vessel in an insulated stainless-steel design offers you the optimal material throughput and discharge and it is exactly harmonized with all other components around the vessel. For example, the optimized steam flow in connection with the enlarged screening unit surface (>60%), which, in combination, results in an optimal foaming result.
- » **FLUIDIZED BED/MATERIAL DISCHARGE:** The fluidized bed of the **EMBead** is not only perfectly dimensioned but it is also accessible and illuminated in an operator friendly manner. This guarantees an easy and thorough cleaning of the fluidized bed during the material change. In addition, the fluidized bed heating with live steam and a temperature control guarantees a constant product quality.
- » **BULK DENSITY POST CONTROL ESN 10:** An adaptation of the raw material initial weighing is made possible through a precise bulk density control. The corrected initial weighing results in significant raw material savings. Additionally, a bulk densities documentation of all cycles is easily possible.

- ⊕ *precise bulk density results*
- ⊕ *homogeneous bead size distribution*
- ⊕ *high material throughput*
- ⊕ *gentle resources use*
- ⊕ *fast and easy material change*

PROVEN ERLBACH QUALITY:

- » robust and low-maintenance design
- » highest initial weighing accuracy
- » intuitively operable HMI
- » homogeneous steam flow
- » precise bulk density with a high material throughput
- » variable agitator speed
- » exchangeable screening units
- » steam temperature reduction possible by adding air

YOUR BENEFITS:

- » raw material savings through exact weighing in and precisely reachable bulk densities
- » flexible material throughput through operator friendly recipe management
- » optimized material transport and effective emptying of the fluidized bed (minimum material residues)
- » high product quality through material saving processes
- » space saving and easy access through perfectly conceived design
- » continuous control of the production process through operator friendly user interface

Learn more about
EMBead:



YOUTUBE CHANNEL

OPERATING PRESSURE: max. 0.5 bar or 2.5 bar

MATERIALS: EPS, EPP, copolymers, biopolymers

EMTower



Work it Out

Erlenbach's block mould systems are designed for a long service life due to their high-quality designs. Using the **EMTower**, you can react highly flexibly to almost any market change.

Perfect quality with efficient material use

- » **ELECTRICAL SIDE WALL ADJUSTMENT:** A traditional draft angle is not required for Erlenbach block mould systems due to the electrical side wall adjustment. Through very small movements the adjustment offers an easy de-forming, which also offers you material savings due to fewer cut-offs. Additionally, the electrically actuated spindle stroke gears offer a high position accuracy and therefore more efficiency.
- » **STEAMING:** The technology of the telescope steaming provides significant energy savings, because only a part of the block mould system will be vaporized during the use of the flexible side wall adjustment. Additionally, the freely configurable vaporization of the 4 separately controllable steam chambers offers a homogeneous welding of the final product.
- » **ANTI-BENDING SYSTEM:** The **EMTower** anti-bending system minimizes the residual tension of the EPS block through a separate mechanical compression of the second side wall. Another benefit of this technology is an increased lambda value for the same material use. In addition, the "bending effect" is reduced after the cutting of the EPS block.

- ⊕ *lengths and widths infinitively adjustable*
- ⊕ *optimized steaming system*
- ⊕ *homogeneous density and welding*
- ⊕ *significant competitive advantages through anti-bending system*

PROVEN ERLBACH QUALITY:

- » material saving and fast filling
- » corrosion resistant screening units
- » fully electronic control systems
- » intuitively operable HMI
- » shorter cycle times and lower energy consumption
- » flexible block sizes
- » homogeneous bulk density distribution and fusing
- » low residual moisture
- » large area and fast steam flow
- » robust and low-maintenance design
- » low space requirement

YOUR BENEFITS:

- » reduced steam consumption by using telescope steaming
- » constant and safe production process through operator friendly Front-End
- » highest flexibility through infinitive length and width adjustment
- » high product quality through homogeneous bulk density distribution and fusing

BENEFITS OF THE ANTI-BENDING SYSTEM:

- » minimized residual tension of the EPS block through an additional mechanical compression of the second side wall
- » lower storage costs through the shortening of the storage times
- » reduction of the steam consumption through partial mechanical generation of the foam pressure
- » improved insulation characteristics with the same material use

Learn more about
EMTower:



YOUTUBE CHANNEL

OPERATING PRESSURE: max. 1.6 bar

MATERIALS: EPS, EPS GREY

APPLICATION: Insulating materials and system panels for the construction industry

Perfect Match

The processing of the particle foams does no longer start and end with the shape moulding machine or the block moulding system. Starting with the right storage of the raw materials up to the efficient recycling, we at Erlenbach present the entire machining process and offer the matching accessories for any task.

The Erlenbach equipment is as versatile as your tasks covering your foaming process. We at Erlenbach see ourselves as a single source supplier and therefore, many products that can be viewed as accessories are produced in-house by Erlenbach – we work with selected partners that fulfil our and your high-quality requirements for all other expansions of your system.

You can rely on our consultations and the subsequent planning and implementation by Erlenbach to design your production processes more efficient.

The digitization sector is becoming more and more important. We offer you simple, but tailor-made solutions for networking your production units and having all important parameters in view every time.

» Silos and silo control

The flexible, breathable and anti-static textiles of our silos actively support your production process and help to dry, degas and stabilize the beads. This guarantees an optimal further processing. With the help of the intelligent silo control, you can automatically fill and empty different silos with different mixes and recipes.

YOUR BENEFITS:

- » parallel use of several silos
 - » automated filling and emptying
 - » executing predefined recipes
 - » controlled through your own display or through the pre-foaming system
-

» Pressurising systems

The pressurising systems can be used for all materials without propellants. They are mainly used for the optimal preparation of the initial material to be able to precisely regulate the loading pressure.

YOUR BENEFITS:

- » optimal preparation of the raw material for further processing
 - » processing of the raw material at lower densities
 - » optimization of the surface quality of the final product
 - » intuitive operation through a PLC control system
-

» EMCycle

Environmental protection and resource preservation are an integral part of the particle foam production. The **EMCycle** systems ensure that high-quality granulate is derived from existing particle foam parts – finely ground, de-dusted and ready for further use.

YOUR BENEFITS:

- » fast amortization through significant cost savings
 - » environmentally friendly recycling
 - » reduction of the disposal volume
 - » low residual dust content in grinding stock
-

EMHandling

Simply the Best

The **EMHandling** systems from Erlenbach help you to optimize your processes, to make them safer for your employees and they can be individually adapted to your requirements as well as the available space.

Traditional solutions for upstream and downstream automation

- » **PRODUCT SLIDE:** The mobile aluminium design with integrated textile slide is especially suitable for the easy discharge of EPP moulding parts and it is part of the simple and smart solutions of the **EMHandling** products.
- » **DEMOULDING AND STACKING SYSTEM:** The removal frame transports the moulding parts from the mould cavities to the movable stacking table. The design of the demoulding and stacking system will be individually adapted to the moulding part to be produced. Demoulding and stacking systems are often combined with additional individual designs such as taping unit.
- » **2-AXIS PORTAL:** The 2-axis portal can be used in a variety of ways and can place inserts and foils as well as foamed moulding parts efficient and safe in the machine. On request, Erlenbach implements both functions in one system.
- » **ROBOT SYSTEMS:** Robot systems for the fully automatic inserting and removal of your systems can be used even more flexibly than the 2-axis portal. It is even possible to supplement several systems with only one robot.
- » **HANDLING SYSTEM FOR INSULATION PANELS:** The panel handling brings panels that are produced vertical into a horizontal position, stacks them up to the desired height and often enables downstream processes such as printing, tight packing or palletizing.

- ⊕ *moulding part handling without cycle delays*
- ⊕ *automated processes with upstream and downstream processes*
- ⊕ *safe insertion and removal of moulding parts, foils or inserts*
- ⊕ *individually adapted systems to increase productivity*

PROVEN ERLBACH QUALITY:

The process expansions through the **EMHandling** systems offer you in many ways a significant added value. And this is the best: All products of the **EMHandling** series are tailored exactly to your requirements.

YOUR BENEFITS:

- » economical and universally usable
- » easily retrofitted
- » safe and operator friendly removal of the moulding parts
- » inserting and fixating inserts and foils without cycle time delays
- » personnel cost savings by using fully automatic systems

Learn more about
EMHandling:



YOUTUBE CHANNEL

APPLICATION: Rationalizing of the production process, automating the removal and insertion process, establishing ergonomic workplace solutions

A hand is pointing at a digital screen that displays a technical diagram of a production process. The diagram includes various components like pumps, valves, and motors, with a prominent 'M' in a circle. The background is a blurred industrial setting with blue lighting.

EMService – with a little Help

Whether the subject is training, installation or commissioning, maintenance or fast support in case of failures in your production processes: Our support-team is there for you whenever you need us!

A phone call is all that is needed, and our experts will effectively support you and your employees. Fast and straightforward, by phone or at your facilities. It is not important whether we take care of an individual system or a complete production plant – our service offers you a decisive competitive advantage.

We are very interested to ensure that failures in your production processes do not occur and therefore, we offer the electronic spare parts catalogue (Digital Spare Parts Service), the warranty extension Warrenty36 in connection with a service contract and a comprehensive training programme with experienced employees and an adequate digital support.

WE ARE SUPPORTING YOU:

- » worldwide support through comprehensive know-how
- » the comprehensive spare parts stock permits very short delivery times
- » customized service contracts for maintenance, inspection and repair
- » service hot line free of charge Monday to Friday 7 am to 6 pm
- » individual training programmes, covering subjects from energy savings to process optimizations, at your facilities or at our Experience Centre

» Digital Spare Parts Service

Together with the delivery of your new Erlenbach system, we offer an electronic spare parts catalogue, which enables you to identify spare parts quickly and easily and to inquire or directly order them through the spare parts service. The intuitive user interface saves a lot of time during the identification and procurement of your spare parts and therefore ensures a high availability of your system.

YOUR BENEFITS:

- » easy identification of your spare parts
 - » fast spare parts procurement
 - » intuitive user interface
-

» Warranty 36

With Warranty 36, you will receive a warranty extension to 36 months for the new investment of your system. Part of the Warranty 36 package is a service contract, which guarantees an annual maintenance of your system by an Erlenbach service technician. All of this to ensure that your systems are in top condition and are permanently available.

YOUR BENEFITS:

- » warranty extension for additional 24 months
 - » reduction of the machine downtimes
 - » annual maintenance and inspection of your system by an Erlenbach service technician
 - » increase of the utilization time
-

» EM Training

You will achieve the maximum performance for your production operation through the right know-how transfer to your employees. It does not matter whether the subject is material conditioning, block or moulding part production: The Erlenbach training sessions are exactly targeted for the requirements of your team. Using comprehensible training documentation, experienced trainer convey the important points when adjusting your system and how it is operated correctly.

It is your choice, whether your team is trained at your facilities or in our Experience Centre in Lautert about subjects like process sequences or costs and energy optimizations.

YOUR DIRECT LINK TO:



ERLENBACH
MASCHINEN



Success stories
EMMotion



YouTube Channel
EMMotion



YouTube Channel
EMMotion Flex



YouTube Channel
EMShuttle Evo



YouTube Channel
EMBead



YouTube Channel
EMTower



YouTube Channel
EMHandling



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