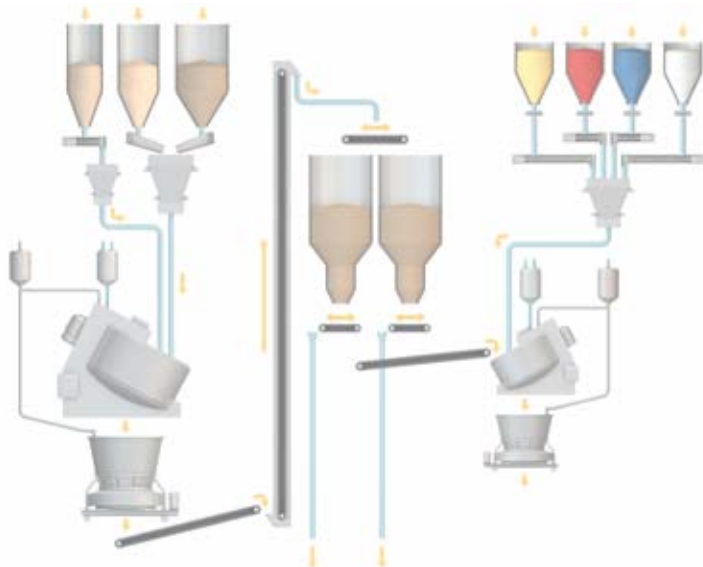


## Preparation technology for sand-lime brick mixes

outstanding mix homogeneity  
automatic sand, water and lime correction  
high performance process control engineering



# Future-proof your production environment with products/services from a single source

The patent for the production of sand-lime brick has existed since 1880. EIRICH has contributed to the sand-lime brick success story since its earliest industrial beginnings.

We supply material preparation equipment for state-of-the-art wall construction material

- mixing systems
- a full range of conveying, weighing and feeding equipment
- control and process control systems
- machinery and systems engineering
- a broad service portfolio

## Efficient project management

EIRICH can provide a full range of products and services for any new build, retrofit or productivity enhancement project from a single source.

- consultancy, planning
- development, design
- production, service

Our experienced Project Managers are at your side to provide advice and support. Solution development is a joint effort.

## Cutting-edge process control technology ensures predictable, reproducible production flows

EIRICH provides the best configuration for the particular application from its own development and production portfolio. You always have the option of upgrading as technology evolves. You benefit from our very extensive experience base. EIRICH process control technology always puts you in complete command of the quality and cost-efficiency of your products.

## Optimal project implementation – excellent investment security

- assembly/installation
- commissioning
- training

EIRICH has a wealth of international machinery and systems engineering expertise which is an essential prerequisite for ensuring that your equipment is installed and commissioned on schedule.

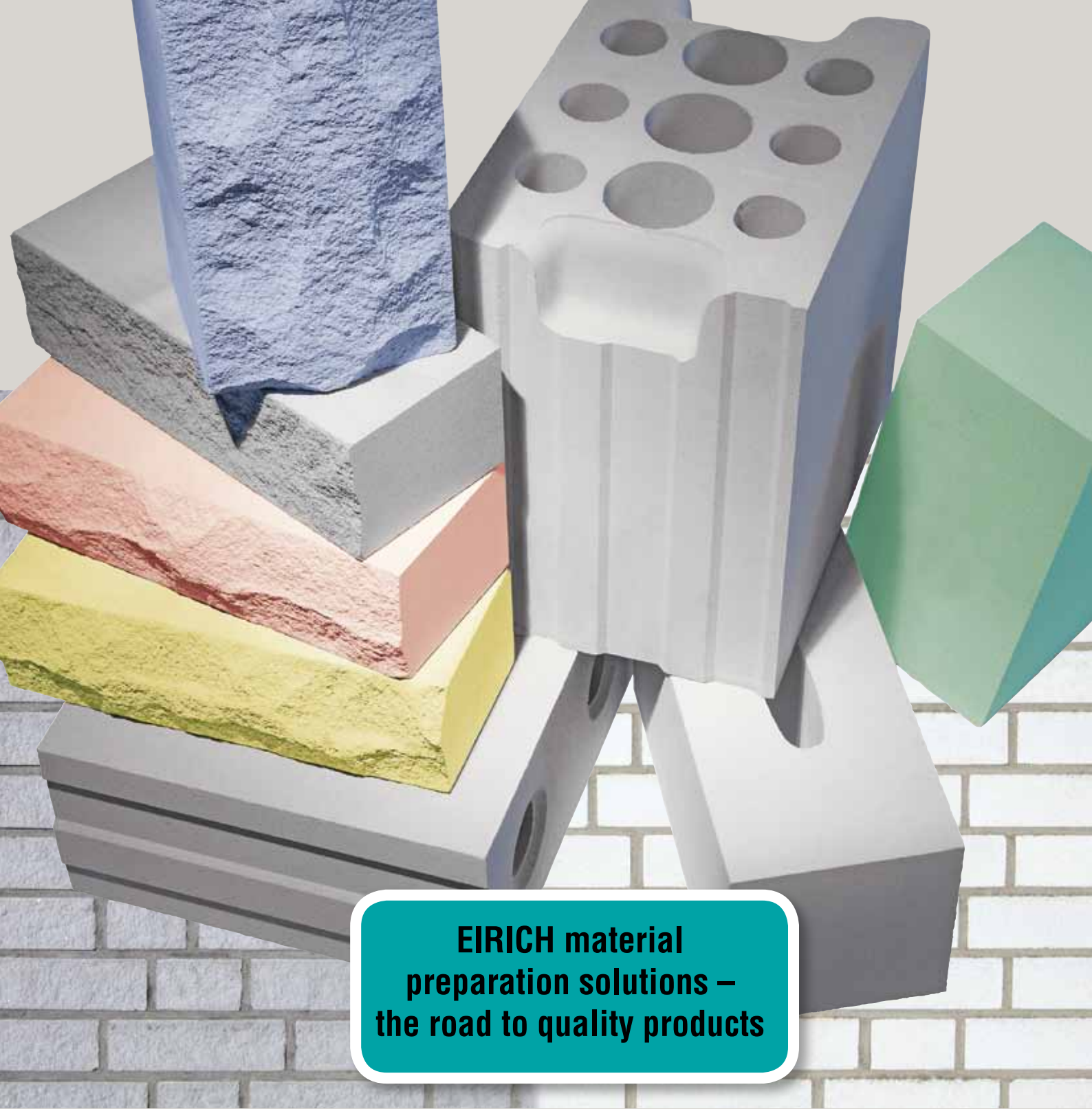
Training is provided to ensure that your operators and maintenance team are able to keep production running smoothly, reliably and safely.

## State-of-the-art service portfolio ensures that your investment is secure and cost-effective

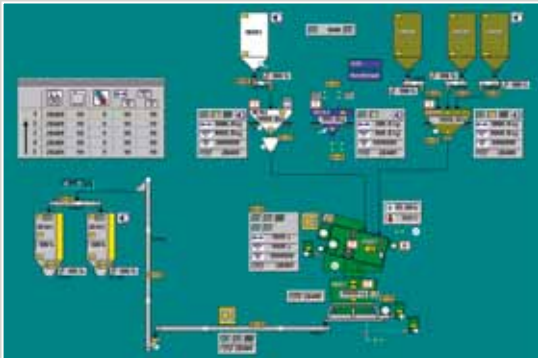
EIRICH offers state-of-the-art machinery and systems service solutions to protect the long term security of your investment. We can provide service worldwide as well as all-inclusive Lifecycle Service depending on your location. A team of specialists is available to analyze your service needs.

## The EIRICH service portfolio

- **Support**  
helpdesk / teleservice
- **Maintenance**  
inspection, repair and maintenance / condition monitoring
- **Optimization**  
refurbishment and retrofit / training
- **Genuine spare parts**  
advice / delivery / repair



**EIRICH material preparation solutions – the road to quality products**



# Product quality depends on the quality of the mix

**To put it another way:  
the quality of your end product can never be better  
than the quality of the mix!**

EIRICH intensive mixers feature a unique mixing principle and offer outstanding flexibility and performance. Service-proven mixing technology from EIRICH has been the trusted choice for leading manufacturers for decades.

The special characteristics of the EIRICH intensive mixers are

- the rotating mixing pan
- the stationary bottom/wall scraper
- the high-speed rotor mounted eccentrically to the center of the mixing pan

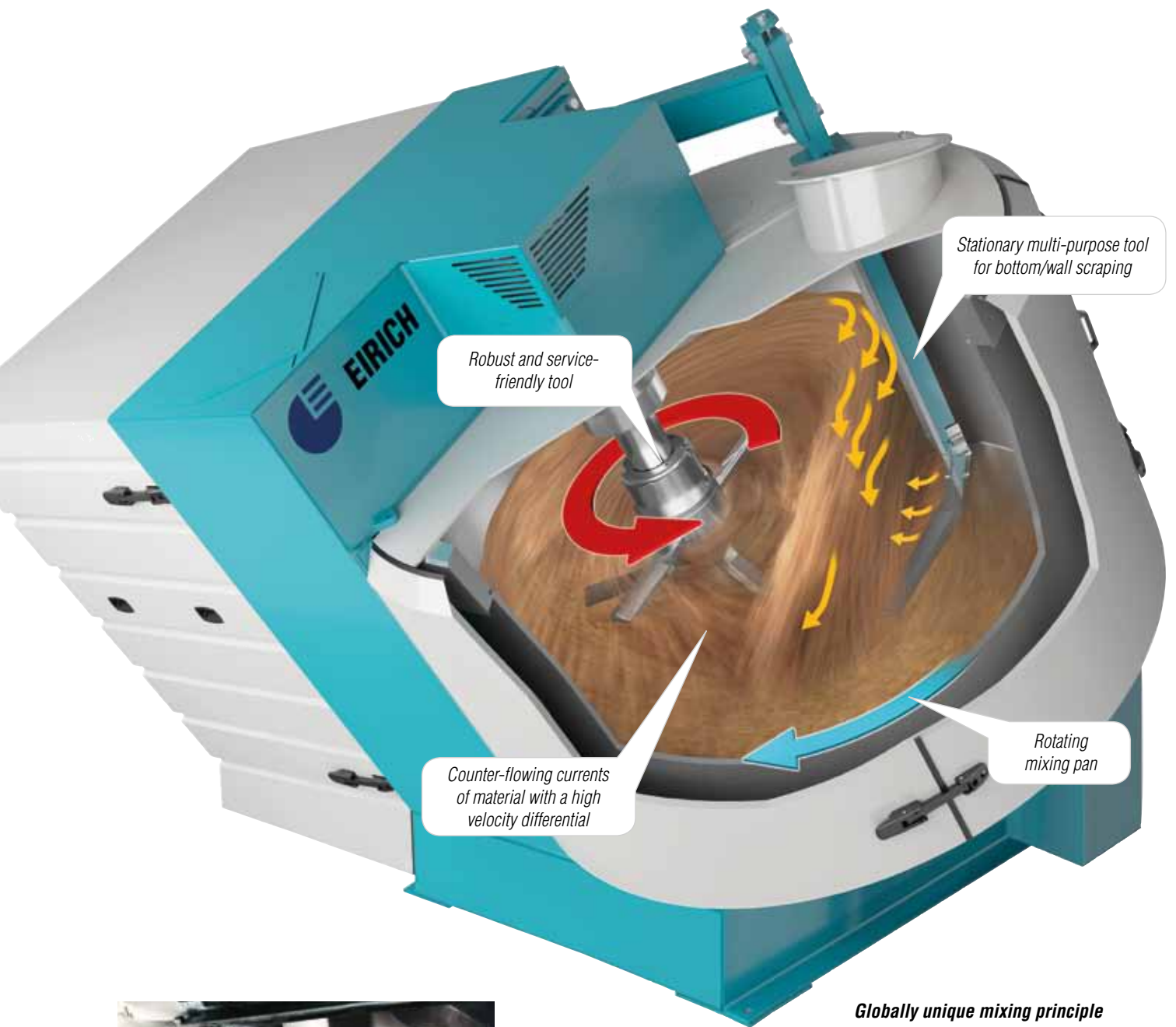
## **The unique mixing principle of the EIRICH intensive mixer**

Inside the mixing pan the material is forced upward by the rotation of the inclined pan before dropping again from the highest point under the force of gravity. This process is boosted by the bottom/wall scraper, which effectively circulates the material and conveys it into the area of the rotor. The extremely effective fine mixing that takes place at the high-speed rotor is thus superimposed on the rough mixing performed by the rearranging function of the bottom/wall scraper.

## **The essential differences compared to other mixing systems:**

- transportation of the mix is separate from the actual mixing process, producing unparalleled mixing quality
- higher power input reduces mixing time
- smaller, less expensive machines can be used to produce the same output
- rugged construction ensures above average machine service life, and fewer high-wear parts reduce wear-related costs

## **With EIRICH mixing solutions, quality is truly cost-effective!**

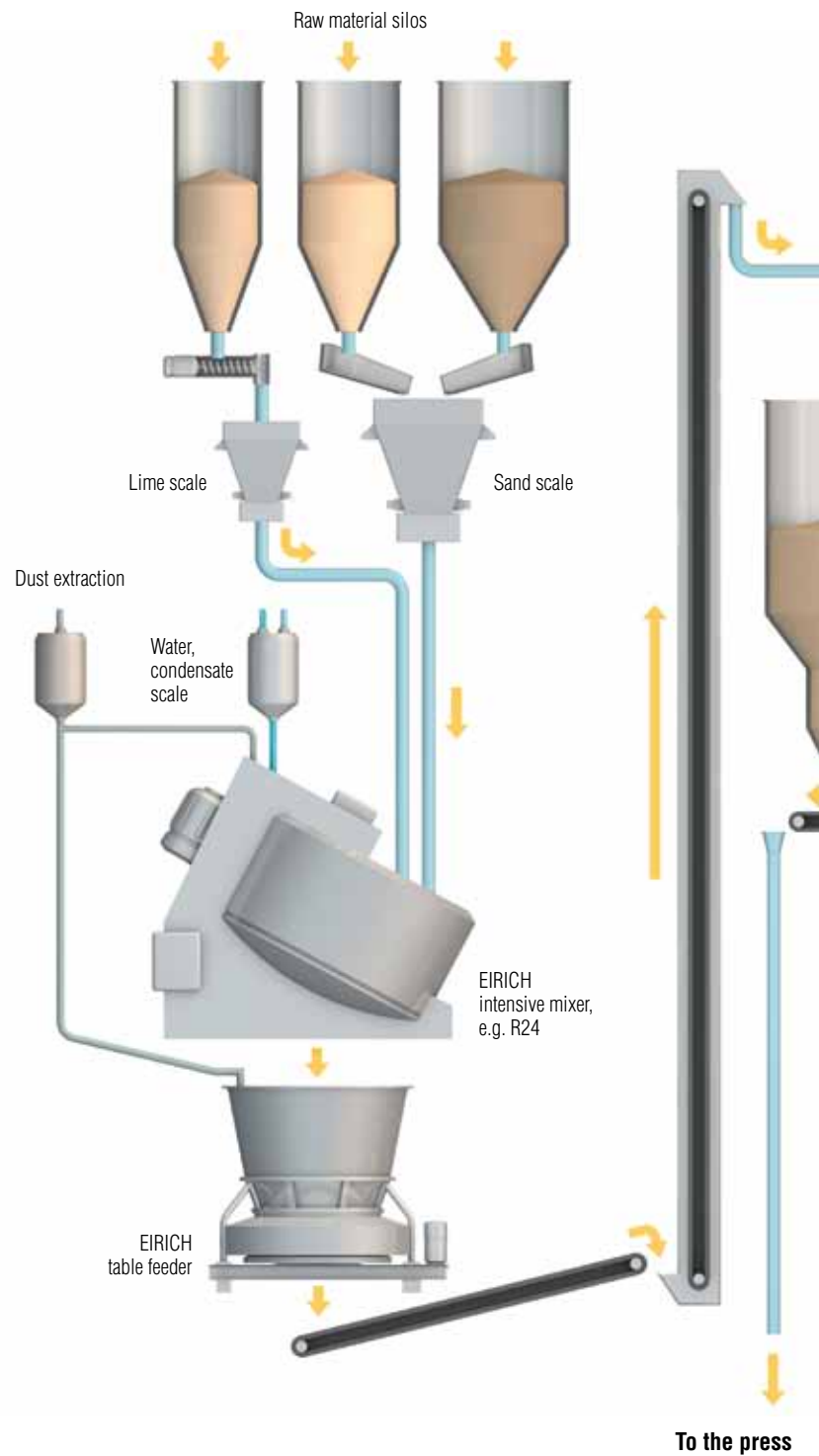


Material stream in the EIRICH intensive mixer

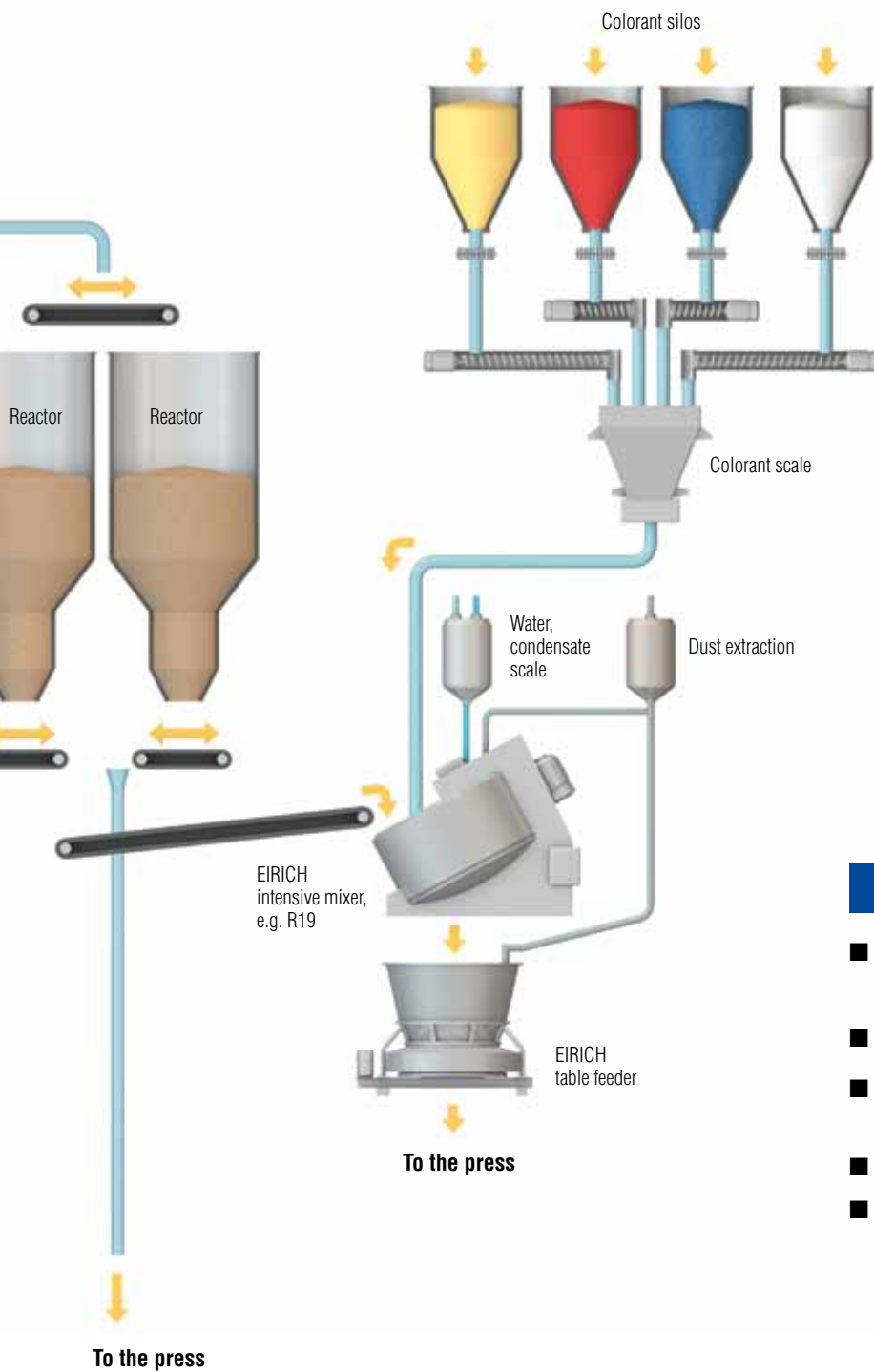
# Premixing

## The advantages of EIRICH technology

- homogeneous distribution of all materials in the mix as well as a uniform coating of lime on the sand
- intensive wetting of the lime with water
- the full surface of the sand grains is activated to form calcium silicate
- clay agglomerates, which inhibit the formation of high-density calcium silicate with fine pores, are broken down
- lime agglomerates are reliably separated
- uniform brick structure when light aggregates or fly ash are mixed in
- outstanding, reproducible mixing quality



# Secondary mixing



## The advantages of EIRICH technology

- reliable separation of reactor material agglomerates
- accurate control of the moisture for pressing
- continuous material stream up to brick removal on the press
- no streaking when pigments are mixed in
- adaptation of the mixing power to changes in pressing output associated with different brick sizes

# EIRICH range of mixers

EIRICH intensive mixers offer outstanding flexibility and performance. Service-proven mixing technology from EIRICH has been the trusted choice for leading manufacturers for decades.

The EIRICH range of mixers covers a considerable variety of sizes to meet user-specific requirements with outstanding cost-efficiency.

## Laboratory mixers for formula development

Type of mixer	Max. fill quantity:	
	Liters	kg*
EL1	1	1.3
R01	5	7
RV01	10	13
R05	40	52
R08	75	98
R09	150	195

## EIRICH premixers

Type of mixer	Max. fill quantity:		Max. throughput rates*		
	Liters	kg*	approx. t/h	approx. m <sup>3</sup> /h	approx. NF/h
R16	600	780	15.6	12	4,000
RV16	900	1,170	23.4	18	6,000
R19	1,125	1,460	29	22	7,000
RV19	1,500	1,950	39	30	10,000
R24	2,250	2,925	58.5	45	15,000
RV24	3,000	3,900	78	60	20,000
R28	4,000 to 5,000	5,200 / 6,500	104 / 130	80 / 100	27,000 / 33,000

## EIRICH secondary mixers

Type of mixer	Max. fill quantity:		Max. throughput rates*		
	Liters	kg*	approx. t/h	approx. m <sup>3</sup> /h	approx. NF/h
RV12	400	520	9	7	2,000
RV16	900	1,170	20	15	5,000
RV19	1,500	1,950	33	26	8,000
RV24	3,000	3,900	66	51	17,000

\*with an assumed bulk density of 1.3 kg/l





*EIRICH  
intensive mixer  
type DEV 29/4*



*EIRICH scale  
and table feeder*

# Exact formulation control and quality logging

**To complement EIRICH mixing machinery, we offer a full range of peripherals right through to turn-key preparation of mixes.**

All of the components are fully compatible with the throughput of the mixer to ensure maximum cost-efficiency.

We design and produce a full range of conveying, weighing and feeding equipment as well as control and process control systems. We provide the mechanical/electrical interface for our customers. EIRICH has developed special software modules to optimize the process flow in the sand-lime brick industry which guarantee excellent operational reliability along with upgrades to existing systems. Seamless data acquisition and process parameter control extend from feeding of the input materials to transfer of the prepared mix to the press. The quality of your mix is maintained even if the moisture content of the raw materials varies.

**Consistent mix quality even if the moisture content of the raw materials varies.**

The amount of water and lime required changes constantly because of variations in the moisture content of the sand. The moisture content of the sand is therefore measured. The control system continually monitors the captured data and corrects the amounts of sand, water and lime to ensure constant moisture content in the mix which is transferred to the press. A variety of measuring methods are used for measuring the moisture content of the sand automatically. The measured value (actual moisture content) is processed by the control system which calculates setpoint values for sand, water and lime feeding.

## **Lime/water correction**

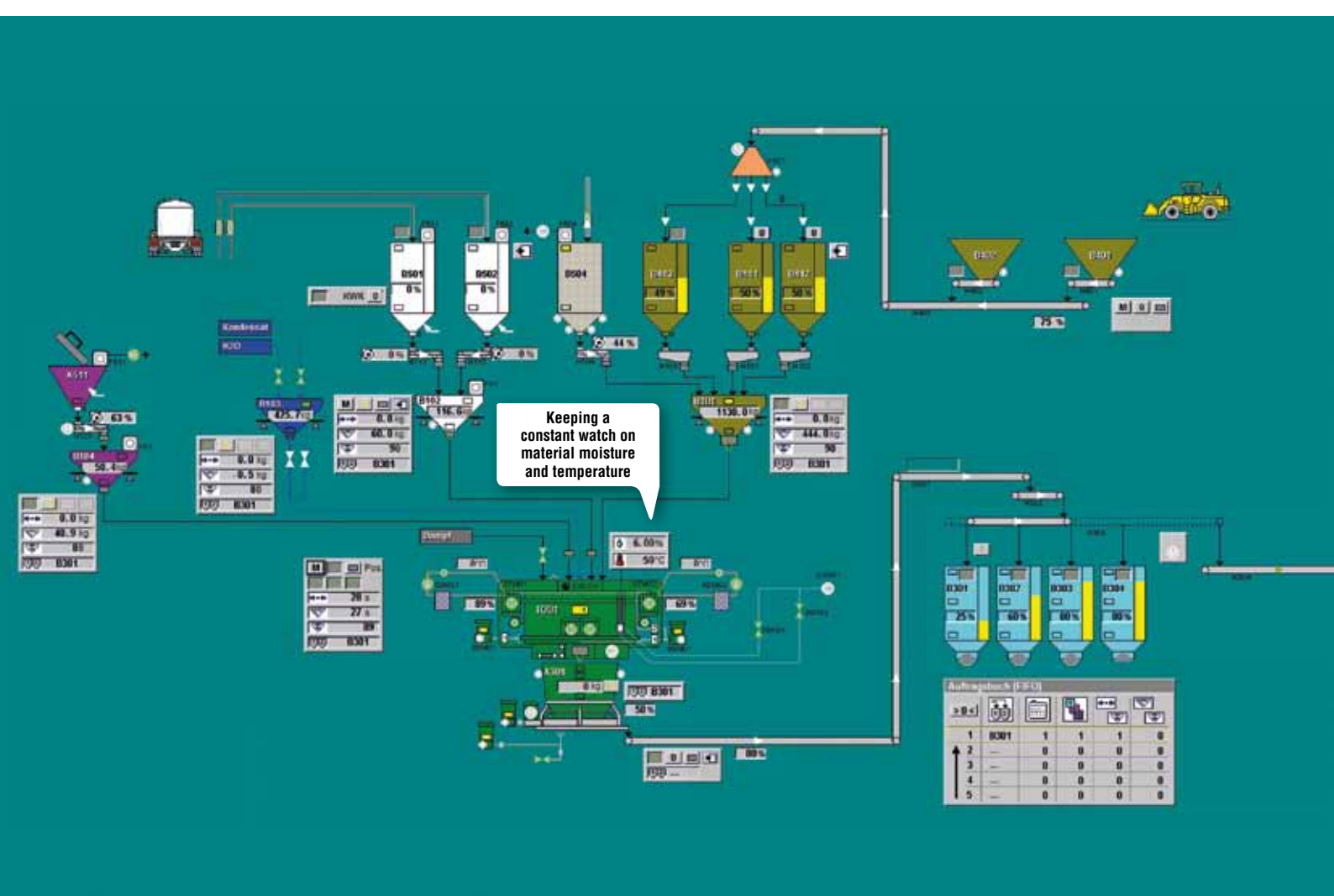
This software module is mainly used where a number of different types of sand need to be mixed in a specific ratio. The weighed sand is fed to the mixer where it is homogenized and the water content of the batch measured. The formula is calculated on the basis of the measured moisture content and the amount of lime and/or water to be added is adjusted automatically. If it is determined that there is already an excess of water in the fed amount of sand, additional lime can be added so that the water is bonded as monohydrate. This process is also carried out automatically by the batch control system, as is the calculation of the additional lime requirement.

## **The extensive range of functions includes:**

- setpoint verification
- target/actual comparison
- afterflow optimization
- tolerance monitoring
- scale standstill check
- scale empty verification
- automatic zero check
- formula calculation
- balancing
- logging (production/consumption)
- service interval monitoring
- remote maintenance
- machine diagnostics (condition monitoring)

**Processing sand-lime brick mixes with EIRICH means production of a quality product. Dependable! Reproducible!**

*EIRICH system for  
complete material preparation  
Control concepts from EIRICH*



## Industrial Mixing and Fine Grinding Technology

### Tradition and innovation since 1863

EIRICH stands worldwide for a comprehensive range of products and services in the field of preparation technology. Its particular focus is on mixing and fine grinding technology, with know-how developed over 150 years of close cooperation with industrial users, universities and research institutions.

Pursuing a corporate philosophy of operating internationally and thereby ensuring close proximity to every customer, the EIRICH Group has secured its place in all the key economic regions of the world.

The focus is on innovative technology for machinery and systems engineering designed to offer solutions for high-standard preparation tasks from a single source.

Applications and process technology with own test centers, a high vertical range of production and comprehensive after-sales service provide the ideal basis for the development of modern and economical processes for a multitude of industries.

**Building materials – Ceramics – Glass – Carbon paste – Battery paste  
Friction linings – Metallurgy – Foundries – Environmental protection**

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