

# Dispersing and dissolving in the Eirich MixSolver®

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for cost-effective results  
batch by batch and continuously  
minimal cost and energy usage



**+** Outstanding practical features include task specification and highly cost-effective results.

## Eirich dispersing and dissolving systems for cost-efficient results

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For decades, Eirich has been providing leading technologies for the preparation of raw materials and bodies in the ceramic industry. The preparation of high-solids, pasty and highly viscous bodies requires special expertise.

Eirich dispersing systems have been developed specifically for this field of application and have outstanding practical features that deliver cost-effective results in line with the task specifications.

### Applications in the ceramic industry

#### Dispersing of

- silicate raw materials such as clay and kaolin
- filter cake
- recycling material (unfired)
- oxide and non-oxide raw materials (e.g. ferrites, SiC, SiN<sub>4</sub>, pigments)
- for the production of casting slurry and spray slurry (e.g. for tiles, sanitary ware, ceramic foils)

### General applications

#### Dispersing of

- CWS (Coal-Water-Slurry)
- microsilica (used in concrete production)
- Coating pigments and fillers in the paper industry

#### Dissolving of

- rubber (e.g. sealing compounds)



The EirichMixSolver® has a unique working principle that enables highly effective dispersing, which cannot be achieved with other machines. The main characteristic of this process is the combination of

mechanical friction and shear forces with material flow. The forces generated by mechanics and fluid flow can be adjusted individually to suit the task at hand.

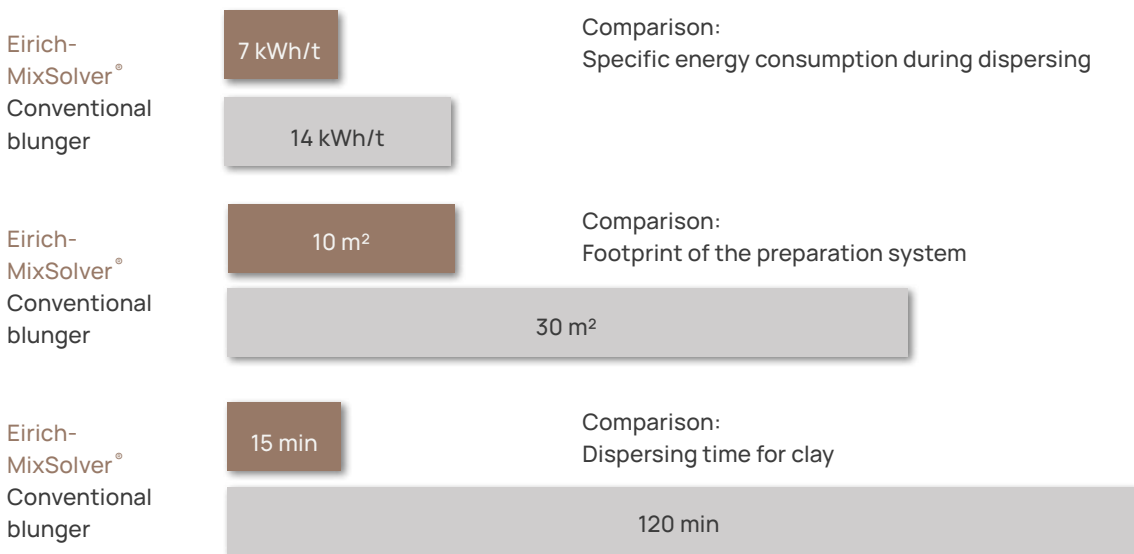
**Workflow of an Eirich dispersing system:**

- The solid materials are fed in.
- Only 40 to 50 % of the total fluid required (Fluid 1) is added.
- The mixture is then plasticized to form a plastic body. The high input of energy at this stage is particularly useful for dispersing agglomerates.
- Once the mixture is uniform, the rest of the liquid is added. This process takes very little time.
- Afterwards, the weight per liter or the solids concentration is adjusted.

**What users of the Eirich MixSolver® have to say:**

- highly effective dispersion of solids
- significant energy savings
- short batch processing times
- small footprint
- high operational availability

**The advantages at a glance**



# The unique working principle of the Eirich MixSolver®

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## Powerful, service-friendly, low-wearing and reliable – the Eirich MixSolver®:

- Materials are carefully selected to suit the task, including rustproof versions.
- Even when fully loaded, the MixSolver® can be easily restarted.
- The drives and gear units are located outside the dissolving tank.
- Easy access to the inside of the machine facilitates servicing and maintenance.
- Easy replacement of wearing parts.

## Eirich's working principle is globally unique:

- a rotating dissolving pan
- a stationary bottom/wall deflector
- a rotary tool in an eccentric position relative to the center of the pan.

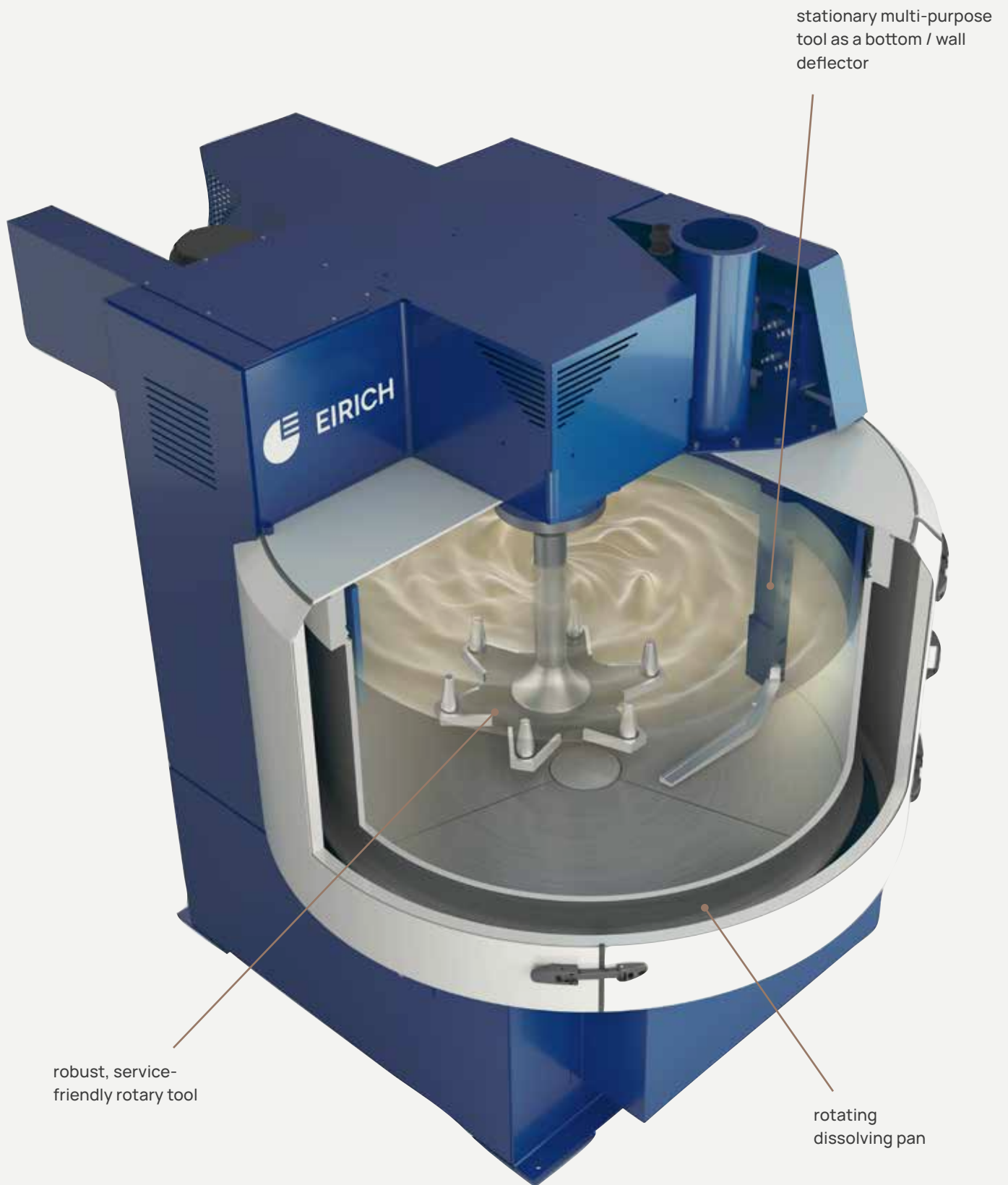
## The advantages of the Eirich working principle

- The speed of the rotary tool can be adjusted to meet specific requirements, ranging from 2 m/s to 40 m/s. This allows for selective control of the power input into the mix.
- By adjusting the energy input and the tool geometry, the properties of the product, including its viscosity, morphology and rheology, can be selectively controlled to optimise the results to suit the requirements.
- Agglomerates are completely disintegrated.
- Solids are completely dispersed or dissolved.
- Primary particles are completely fluidised.
- There is no limit to the adjustment of weight per litre.
- The dissolving pan has no low-flow zones.
- The energy density is high.
- Process times are short.
- Slurries can be degassed at pressures below ambient or vacuum.

The product comes into contact with parts that are made of stainless steel.

Clay is dispersed with the Eirich MixSolver®.





stationary multi-purpose  
tool as a bottom / wall  
deflector

robust, service-  
friendly rotary tool

rotating  
dissolving pan

A unique operating principle  
is the foundation of the Eirich  
MixSolver®.

# The Eirich-MixSolver® series

Eirich MixSolver® is known for its exceptional performance and flexibility. Leading producers have relied on Eirich's proven solutions for many years.

The MixSolver® range covers a wide variety of sizes, meeting user-specific requirements with great efficiency.

Excerpt from the range of dissolver mixers MixSolver®:

Type	RL08	RLV12	RL16	RL19	RL24	RL28	RL33
Volume approx. (l)	75	400	900	1500	3000	400	700



Eirich MixSolver® for mineral raw materials



Research and development in the laboratory and small series



Highly efficient production facilities



The Eirich Group supplies machinery, systems and services for mixing, granulating/pelletising, drying and pulverising, with the Gustav Eirich Maschinenfabrik in Hardheim as our strategic centre. Our core competencies are procedures and processes for the treatment of loose materials, sludge, and mud. We are a family-run company with 15 locations worldwide.

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More information at:  
**[www.eirich.com](http://www.eirich.com)**