

# The Eirich- laboratory mixer series

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Filling volumes from 0.1 liters to 10 liters  
for the highest demands in research,  
development and small-scale production



The Pioneer in Material Processing®

# Eirich laboratory mixer series



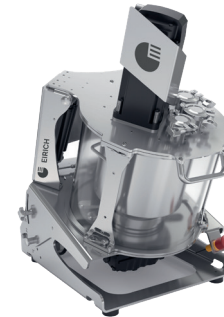
Modular und functional



EL1nano



EL1



EL5



EL10Ex



C5

	EL1nano	EL1	EL5	EL10Ex	C5
Usable capacity <sup>1</sup>	0.1 liter	0.3 - 1 liter	1.6 - 5 liter	3 - 10 liter	1.6 - 5 liter
Temperature measurement (PT100)	x	✓	✓	✓	✓
Integrated tilt adjustment	✓	✓	✓	x	✓
Process data acquisition	✓	✓	✓	✓	✓
Jacketed vessel	x	x	✓	x	✓
Hot air heating	x	x	✓	x	x
Vacuum version	x	x	x	x	✓
Explosion-proof version	x	x	x	✓	✓
FDA certification 3.1 certificates according to EN10204	x	x	x	x	✓

<sup>1</sup> Depending on the product

### Basic Touch Control - for manual operation

- Setting and displaying the speed or level of rotor and vessel
- Change of rotor direction
- Display of power and torque of rotor and vessel
- Temperature display
- Time-based process data recording

### Premium Touch Control - for manual operation as well as automatic operation:

- Setting, displaying and recording of rotor and vessel rpm / tip speed
- Change of rotor direction
- Display and recording of power and torque of rotor and vessel
- Display and data acquisition of temperature
- Recipe and raw material management
- Automatic recipe execution
- Batch-specific process data recording and data export
- Time-based process data recording
- External access for recipe management, raw material management and data analysis

	EL1nano	EL 1	EL5	EL10Ex	C5
Plug & play	✓	✓	✓	✓	✓
Separate units for control and machine	✗	✗	✓	✓	✓
Operation via touch display / tablet	✓	✓	✓	✓	✓
Operation with push buttons	✗	✗	✓	✓	✓
Display size / tablet size	4"	4"	14"	15,6 "	10" oder 14"
Rotor speed	Infinitely variable	Infinitely variable	Infinitely variable	Infinitely variable	Infinitely variable
Vessel speed	Two-stage	Two-stage	Single-stage	Variable in 2 speed ranges	Infinitely variable
Basic touch control	✓ (without vessel performance display)	✓ (without vessel performance display)	✓ <sup>2</sup>	✗	✗
Premium touch control	✗	✗	✓	✓	✓
Interfaces / data recording	Directly to USB	Directly to USB	Machine's native WLAN or Ethernet	USB and Ethernet	Machine's native WLAN or Ethernet
Data export / data analysis	CSV file	CSV file	Machine visualization or device connection to the machine's native WLAN	Batch-based data output	Device connection to the machine's native WLAN
Integration of external peripherals into the control system	✗	✗	✓ <sup>3</sup>	✗	✓ <sup>3</sup>

<sup>2</sup> Control modularly expandable, up to the scope of Premium Touch Control

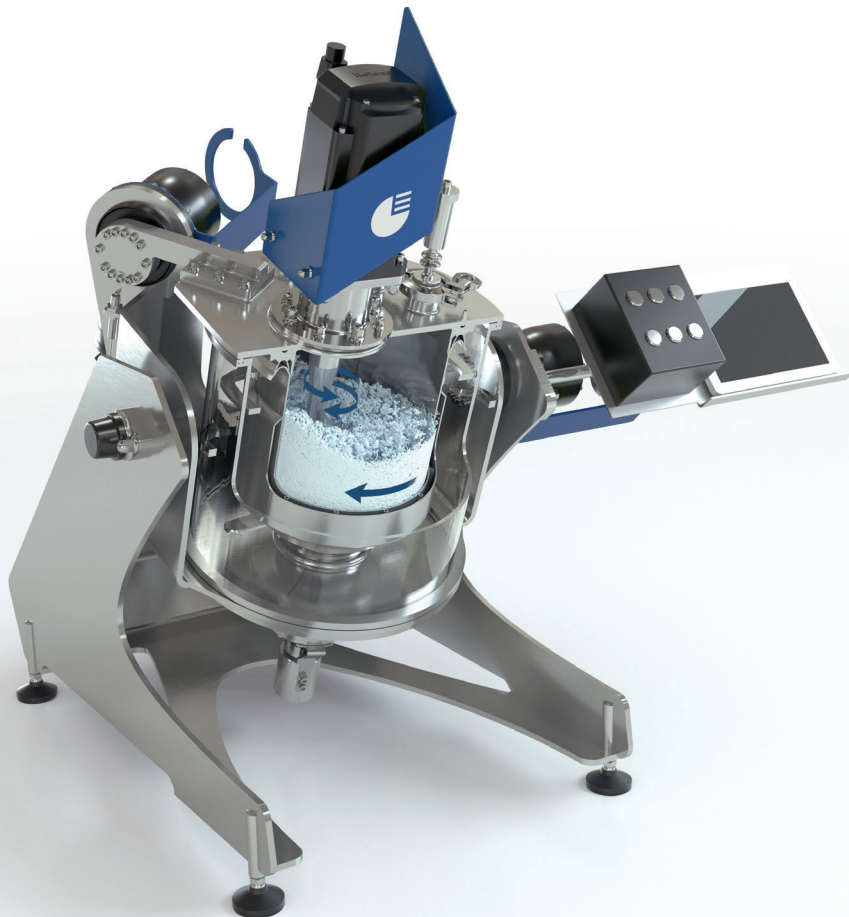
<sup>3</sup> Only with Premium Touch Control



# The Eirich Intensive Mixer

## One machine - many possibilities

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### **The Eirich Mixing System**

This special mixing system consists of three components that can be highly flexible and customized to meet process requirements.

### **Rotating Mixing Vessel**

The rotating mixing vessel conveys the blend material into the mixing tool zone.

### **Variable Mixing Tool**

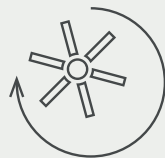
A one-piece welded or modularly constructed mixing tool, the design, rotation direction and speed of which can be optimally adjusted for the respective task.

### **Scraper Blade**

A bottom and wall-compatible, adjustable scraper blade prevents material from sticking, ensures additional blending and directs the material towards the mixing tool.

## One machine – many possibilities

Don't overcrowd and overspend in your laboratory with a multitude of lab machines. Thanks to our unique mixing principle, a single machine can perform all process operations, including mixing, deagglomeration, dispersion, granulation, coating, kneading, drying and many more.



Mixing



Granulating



Coating



Kneading



Dispersing



Drying

# Type EL1nano

**The flexible 0.1 liter mixer for processing high-priced raw materials, development and feasibility studies**

## Basic features

- Mixing vessel: INOX
- Machine frame: INOX
- Mixing tool: Stainless steel pin-type rotor
- Stainless steel star-type rotor
- Stainless steel Z rotor
- Two-part wall scraper: INOX/PTFE
- Inclination adjustment 0°, 10°, 20 °, and 30°

- Touch-screen operation for
  - entry of the mixing tools speed (steplessly adjustable) and direction of rotation
  - display of mixing tool speed and drive rating
  - mixing time display with timer function
- USB interface for reading the operating data
- Multi-range voltage from 100 V – 240 VAC
- Liquid feeding possible at two openings
- 2 connection pieces with sealing plugs

**+ Your entry  
into the Eirich world**

Type		EL1nano
Capacity	Liters	0.1
Height (open)	mm	510 (675)
Length (open)	mm	565 (600)
Width	mm	410
Machine weight (depending on equipment)	kg	45



## Filling and discharge

The mixing vessel can be removed for filling and discharge.

Additives and liquids are delivered through connection pieces.

## Options

- Accessory kit with various components
- Transport case with trolley function and compartment for accessories
- Training and instruction in the Eirich test center in Hardheim



# Type EL1

**The flexible 1-liter mixer for processing high-value raw materials, development and feasibility studies.**

## Basic Equipment

- Mixing vessel: Polyamide
- Mixing tool: Star-type rotor made of stainless steel
- One-piece wall scraper: stainless steel

- Temperature measurement as a handheld probe with value display on the control panel
- Tilt adjustment: 0°, 10°, 20°, and 30°
- Touch-screen operation with display of:
  - Mixing tool speed, infinitely adjustable in both directions from 2 to 30 m/s
  - 2 selectable speed levels for the mixing vessel (0.7 m/s or 1.4 m/s)
- Wide voltage range from 100 V to 240 V AC



## Filling and Discharging

The mixing vessel can be removed for filling and discharging.

## Options

- Mixing vessel: stainless steel
- Lid for covering the material, e.g. during transport
- Wall scraper with armored corner, polyamide or PTFE cutting edge
- Full stainless steel machine version
- Additional stainless steel mixing tools: pin-type rotor, Z-type rotor
- Various wear protection options for mixing tools
- Funnel with ball valve for liquid addition
- Filter
- Accessory set with various components like powder funnel, measuring cup, etc.
- Transport case with trolley function and storage compartment for accessories
- Instruction and training at the Eirich Test Center in Hardheim

Type		EL1
Capacity	liter	1
	kg	1.4
High (open state)	mm	510 (675)
Length (open state)	mm	565 (600)
Width	mm	410
Machine weight (depending on equipment)	kg	46

# Type EL5

**The versatile 5-liter mixer for flexible processing in daily laboratory operations.**

## Filling and Discharging

The mixing vessel can be removed for filling and discharging.

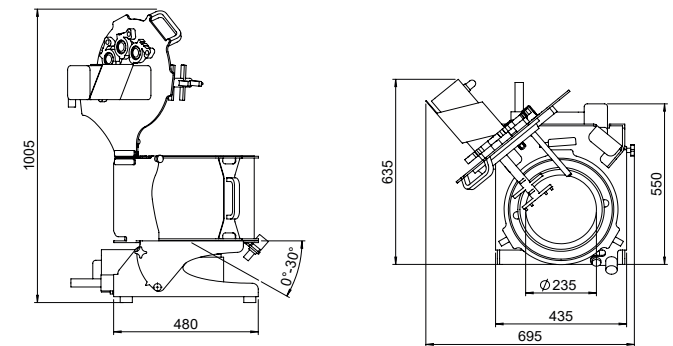
## Basic Equipment

- Mixing vessel: stainless steel, vessel speed of 0.6 m/s
- Mixing tool: modular construction, star-type rotor made of stainless steel, tip speeds from 0.6 to 27 m/s

**+ Smart technology – smart price**

- Two-part wall scraper: stainless steel with interchangeable Ampco cutting edge
- Integrated tilt adjustment: 0°, 10°, 20° and 30°
- Temperature measurement (PT100) in the wall scraper
- Maximum material temperature, depending on equipment, up to 180 °C
- Intuitive web-based tablet control Basic Touch for manual operation

Type		EL5
Capacity	liter	3-5
	kg	8
Height (open state)	mm	800 (1005)
Length (open state)	mm	600 (650)
Width (open state)	mm	500 (695)
Machine weight (depending on equipment)	kg	95



## Options

- Jacketed mixing vessel for product temperature control
- Interchangeable scraper blade made of PA6, PTFE, or tungsten carbide
- Additional stainless steel mixing tools: pin-type agitator, Z-type agitator
- Various wear protection options for mixing tools
- Stainless steel liquid funnel with ball valve
- Filter
- Hot air heating for heating the material through the vessel wall
- Premium Touch Control
- Integration of external Eirich peripherals
- Training and instruction at the Eirich Test Center in Hardheim



# Type EL10Ex

**The versatile 10-liter mixer for demanding processing and processing in explosive areas.**

## Basic Equipment

- Stainless steel mixing vessel
- One-piece welded star, pin, or Z-type rotor made of stainless steel
- Rotor speeds depending on application, ranging from 0.8 m/s to 14 m/s or 2.5 m/s to 44 m/s

- Vessel speed between 0.2 m/s and 0.6 m/s
- Material temperature:  
Depending on installed equipment, max. 120°C
- One-piece wall scraper: stainless steel
- Temperature sensor in wall scraper
- External control cabinet with Premium Touch control for automatic or manual operation: includes user-level management, recipe management, process parameter display and documentation, USB port



## Filling and Discharging

The mixing vessel can be removed for filling and discharging. The mixer cover is raised electromotively for this purpose.

## Options

- Manual inertization with display of inert gas flow rate
- Exhaust nozzle with non-return flap
- Wall scraper with armored corner
- Additional stainless steel mixing tools: pin-type rotor, Z-type rotor
- Various wear protection options for mixing tools
- Liquid funnel with solenoid valve
- Stand for mixer inclination of 10° or 0°
- Table trolley with mixer tilt adjustment as a flexible base for mixer inclinations of 0°, 10°, 20°, 30°

Type		EL10Ex
Capacity	liter	8 – 10
	kg	12
Height (open state)	mm	900(1200)
Length (open state)	mm	1120
Width (open state)	mm	510
Machine weight (depending on equipment)	kg	260

# Type C5

The all-rounder for the most demanding needs with excellent cleanability, ergonomic, and easy handling.

## Filling and Discharging

The vessel can be removed for filling and discharging. Alternatively, the vessel can be tilted out using a motor for emptying.

+ Hygienic  
and modular

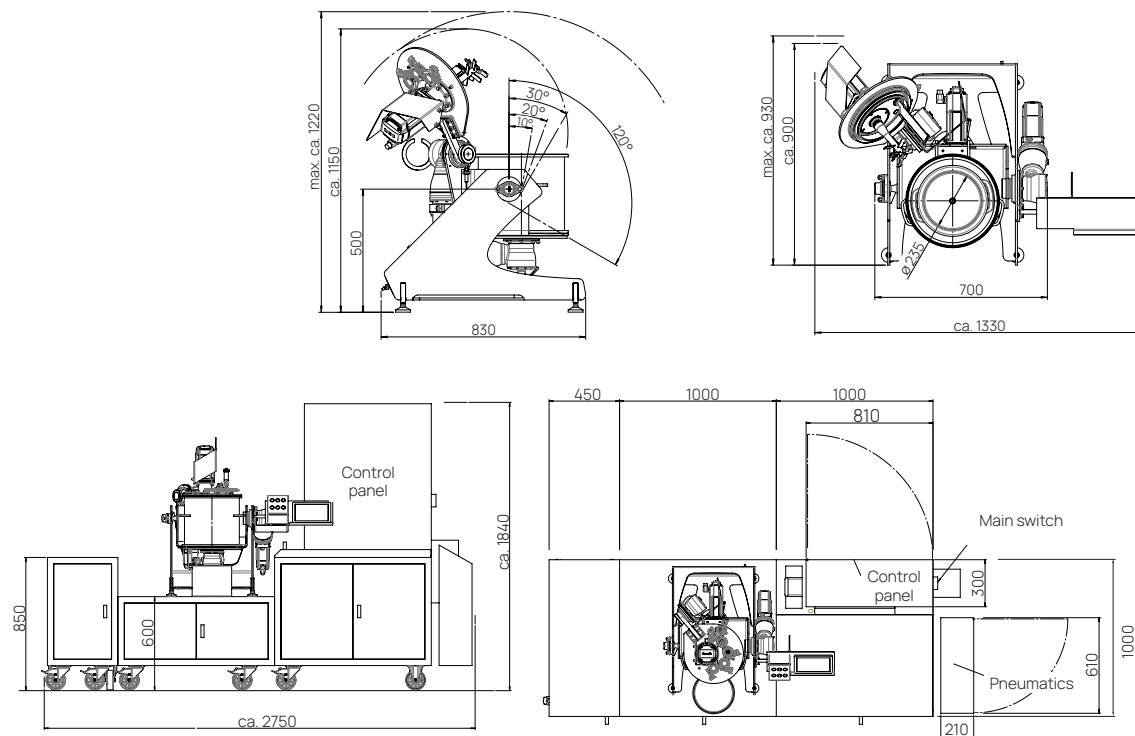


## Basic Equipment

- One-piece welded star rotor with tool speeds from 0.6 m/s to 27 m/s
- Removable mixing vessel for ergonomic work and easy cleaning, vessel speed from 0.1 to 1.3 m/s
- Wall scraper can be configured in a wiping manner to avoid product adhesion, with interchangeable PE cutting edge
- Stainless steel construction, product-contacting surfaces  $Ra < 0.8 \mu m$
- All product-contacting parts made of 1.4404 stainless steel
- Integrated motorized tilt adjustment: 0°, 10°, 20° and 30°
- Maximum material temperature, depending on equipment, up to 150°C
- Web-based tablet control Premium Touch for manual and automatic operation

## Technical data for your planning

Type		C5
Capacity	liter	1.6 - 5
	kg	8
Height (open state)	mm	1060 (1220)
Length (open state)	mm	830 (930)
Width (open state)	mm	700 (1330)
Machine weight (depending on equipment)	kg	195



## Options

- Jacketed mixing vessel for product temperature control
- Ex-capable version
- Vacuum version and vacuum peripherals (degassing, vacuum evaporation cooling, vacuum drying)
- Temperature measurement (PT100) in the wall scraper
- Interchangeable scraper blade made of PTFE

- Additional mixing tools: pin-type rotor, Z-type rotor
- Wear-protected variants of the mixing tools
- Stainless steel liquid funnel for permanent installation, with ball valve
- Stainless steel liquid funnel for permanent installation, without ball valve
- Accessories (filter, pressure sensor, camera and lighting source)

- Inertization
- Non-product-contacting surfaces also in  $Ra < 0.8 \mu m$
- FDA certificates and 3.1 certificates according to EN10204
- Integration of external Eirich peripherals
- Training and instruction at the Eirich Test Center in Hardheim
- Laboratory tables for ergonomic working





The Eirich Group, with Maschinenfabrik Gustav Eirich as its strategic center in Hardheim, is a supplier of machinery, systems, and services for industrial mixing, granulating/pelletizing, drying, and fine grinding. Our core expertise is in the field of processes and techniques used for the preparation of pourable materials, slurries, and sludges.

We are a family-run company that operates 16 sites around the world.

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You can find more information at:  
**[www.eirich.com](http://www.eirich.com)**