

TopClean High-pressure cleaning system for mixers

- Fast and effective cleaning
- Suitable for retrofitting
- Conversion possible in a short time



A clean mixer at the push of a button

The TopClean high-pressure cleaning system for mixers has been developed by Eirich so that existing mixers can be quickly and easily retrofitted with an effective cleaning system.



Mixer after the end of production



Mixer after automatic cleaning

Features

- Modular design, suitable for retrofitting, flexible, and individually adaptable
- Suitable for all standard production mixer types
- Simple operation
- Standalone control system – no need for interventions in the mixer control system
- Communication with an existing control system is possible – an interface is provided

Advantages

- Excellent cleaning performance is achieved through a combination of static and rotating nozzles
- Reliable cleaning – even in problematic areas
- System can be individually adapted to the requirements of the specific application
- Easy to replace individual nozzles during servicing
- Improved workplace safety
- Sustainability, durability, and ease of repairs
- Replacement of sealing kits is possible



- 1 Automatic extraction unit for residual water
- 2 Water distribution valves
- 3 Automatic extraction unit for residual water can be retracted pneumatically
- 4 Manual suction lance with flushing pipe
- 5 Suction pump



Example of a complete upgrade set



Retrofit set with system

The retrofit kit for the TopClean high-pressure cleaning system for mixers consists of the following elements:

- Pump unit
- Valve unit
- Nozzles and pipe system
- Control unit
- Mobile high-pressure cleaner for manual follow-up cleaning (optional)

Pump unit

- Two different power stages are available depending on the machine size: 50 L/min and 100 L/min, each operating at 100 bar
- The following are integrated: shut-off valve, water filter, pressure sensor on the supply side, temperature sensor, overpressure valve
- Connected electrical load: 11 kW (50 L/min) or 22 kW (100 L/min)

Nozzles

- Static and rotating nozzles
- With patented components
- The number of nozzles depends on the size of the machine.
- The cleaning performance can be individually adjusted by using full jet nozzles and flat jet nozzles.
- Easy adjustment of the nozzles using the laser-guided adjustment aid

Control system

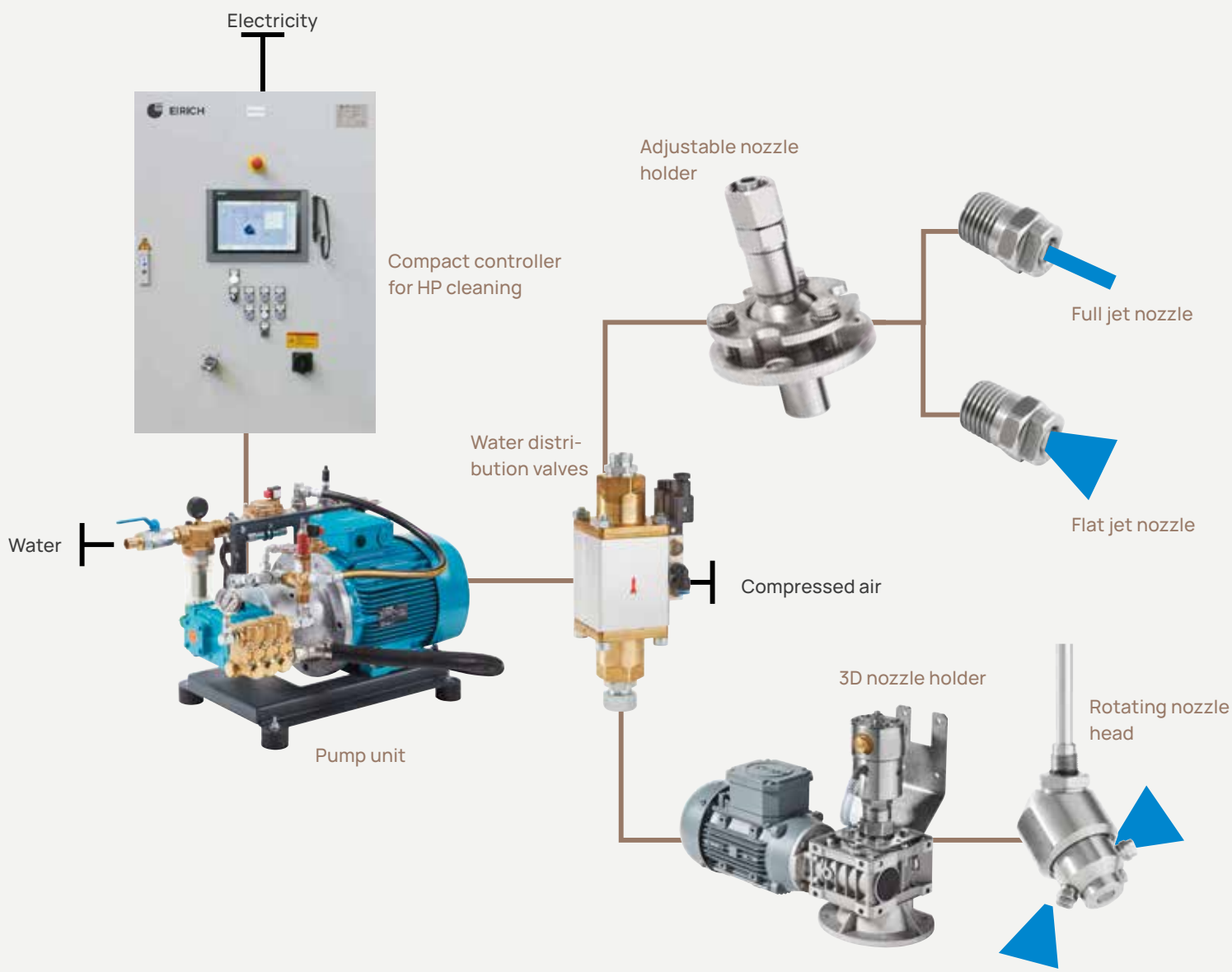
- Independent unit, i.e. no need for interventions in the mixer control system
- Simple operation via pushbuttons for time, pressure, order of switching times
- An interface to the mixer control system is provided if required
- Cleaning processes can be individually designed

Connections required on the customer's side

- Water connection: 3-4 bar
- Electricity supply
- Compressed air connection: 6 bar

Items supplied

Eirich set



The know how is in the control system

The control system for the TopClean high-pressure cleaning system for mixers has been designed to combine clarity and ease of use with the level of robustness required for the harsh conditions it will encounter in practice. It is designed optionally for largely autonomous operation or for operation in combination with an existing machine control system. It can be used to safely control all the relevant functions of the high-pressure cleaning system for mixers.

Features

- Easy-to-read operator panel with high-resolution 12-inch TFT display and membrane-protected mineral glass panel for high operational reliability
- User-friendly graphical touch surface for setting up the operating parameters
- Additional pushbuttons for selecting favorite programs (easy to operate even with gloves)
- PLC control part (Simatic)

Functions

- Preconfigured cleaning program that perfectly meets the needs for thorough cleaning in most cases.
- Additional cleaning sequences can also be programmed for different purposes.
- Here, at each step it is possible to adjust the cleaning time for each cleaning area with the aid of the visual guidance provided on the graphical user interface.
- Individual cleaning sequences can be saved, e.g. Quick Cleaning, Batch Cleaning, Daily Scheduled Cleaning, or Weekly Scheduled Cleaning
- Quick selection of the three most commonly used cleaning programs via push buttons, to which favorites can be assigned.

- Programs can be temporarily paused via push buttons.
- Nozzles can be vented at the end of the cleaning cycle to prevent drips so that the mixer can be switched off with no risk of frost damage.
- As an option, the cleaning water can be used as supply water/process water for the next batch. In this case the maximum cleaning time of the nozzles is limited. It is also possible to use the cleaning water as supply water for a neighboring mixer (e.g. core mixer). We can offer a collecting tray system for the cleaning water for this purpose.

Alternative operating mode

- a) As an autonomous control system (with corresponding integration of safety-related signals from the machine control system), or
- b) In combination with the higher-level machine control system ("local remote" operation). An Ethernet interface is provided for this purpose.

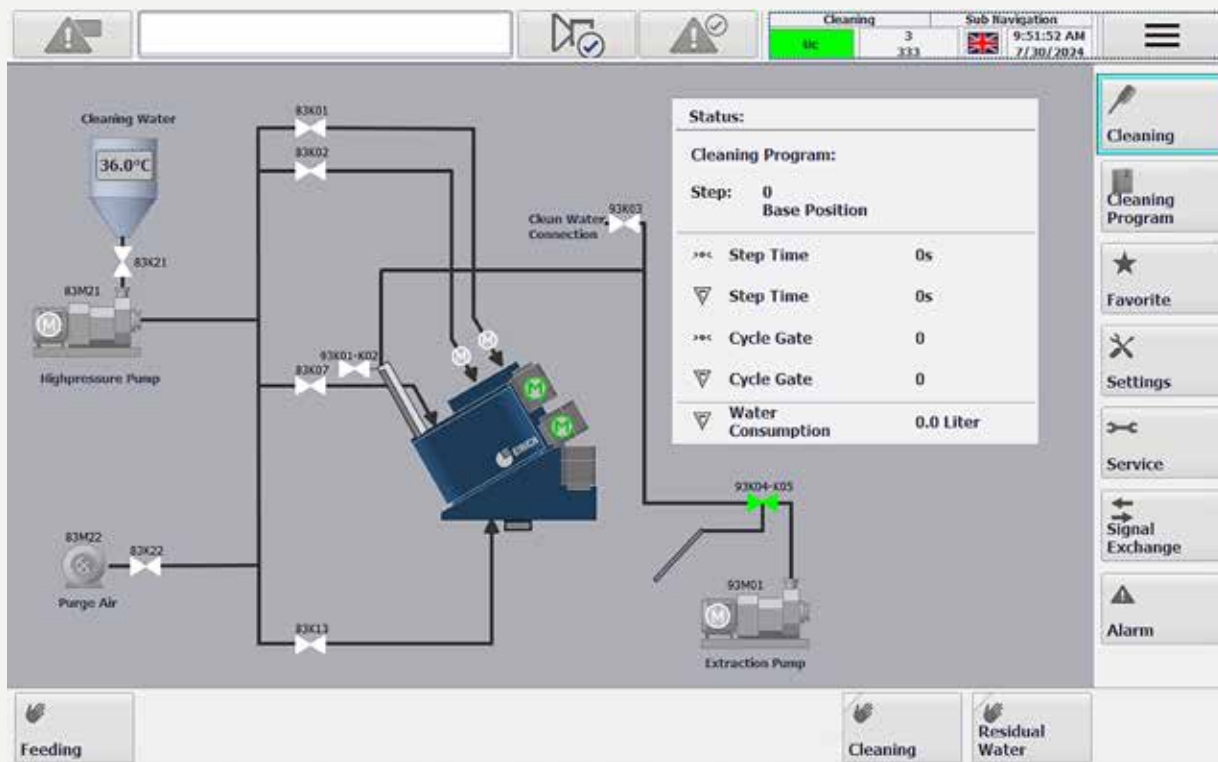


Diagram of the Cleaning System Interface showing the process flow and status.

Process Flow:

- Cleaning Water:** 36.0°C, supplied to the Highpressure Pump (83M21) via valve 83K21.
- Purge Air:** Supplied to the system via valve 83K22 from pump 83M22.
- Valves:** 83K01, 83K02, 83K07, 83K13, 83K03, 83K04-K05.
- Extraction Pump:** 83M01, connected to the system via valve 83K04-K05.
- Clean Water Connection:** Output from the system.

Status:

Cleaning Program:

Step: 0 Base Position

Step	Time
Step Time	0s
Step Time	0s
Cycle Gate	0
Cycle Gate	0
Water Consumption	0.0 Liter

Buttons: Feeding, Cleaning, Residual Water, Cleaning Program, Favorite, Settings, Service, Signal Exchange, Alarm.

Table 1: Basic Information

Number	Name	Operator	Revision date
1	Basic	333	10/21/2022 1:35:51 PM

Table 2: Cleaning Program Details

Step	Description	Valve	Time (s)	Consumption (Liter)
01	Rotation Nozzle 1	83K01	5	4.17
02	Rotation Nozzle 2	83K02	6	5.00
03				0.00
04	Nozzle Cover	83K07	7	5.83
05				0.00
06	Outlet Casing	83K13	2	16.67
07				0.00
08				0.00
09				0.00
10				0.00

Buttons: Cleaning Program, Favorite, Settings, Service, Signal Exchange, Alarm.

We are at your service!

We are on hand to help you personally with our comprehensive expertise, including on site. Please get in touch – we will be happy to offer our advice.

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