

EasyClean

INGOLD

Leading Process Analytics



**EasyClean Systems for
Cleaning and Calibration**

Reduced Maintenance Costs

Increased Life Span of Sensor

Higher Product Yield

Improved Process Reliability

Increased Operational Safety



Process Reliability
Through Targeted Automation

METTLER TOLEDO

Solutions Proven in Practice and Safe for Your Process

The wide range of METTLER TOLEDO products allows you to make your processes more effective and safe. The automation solutions which are proven in practice increase your product yield, improve the sensor life while reducing maintenance costs and consumables at the same time. The EasyClean Systems can be easily integrated into your process.

Higher Product Yield Through Improved Process Reliability

The proven automation systems from METTLER TOLEDO reliably clean and calibrate the sensor so downtimes are a thing of the past. At the same time, extensive diagnosis and alarm functions improve product reliability and increase the product yield, as incidents are quickly detected and appropriate actions implemented.

Reduced Maintenance Costs

The cleaning and calibration systems EasyClean from METTLER TOLEDO allow you to effectively reduce the maintenance costs of measuring points while increasing the operational safety at the same time. You achieve a safe work environment and increase the effectiveness of the measuring points.

Longer Life Span of Sensors

Also, for measurements in aggressive media with high pressures and temperatures, the sensor life can be increased significantly through automatic cleaning and calibration. Furthermore, due to an automatic system it is possible to insert the sensor into the process only when measurement is required. Otherwise, it can be stored in the flushing chamber of the housing.



Chemical industry



Pharmaceutical industry



Food and beverage industry



Pulp and paper industry



EC 400 (X) EC 350 e EC 200 e EC 150 EC 100

EasyClean Series – System Solutions for any Requirement

- **EasyClean 350 e and 400:**
Fully automatic cleaning and calibration systems reduce the maintenance costs of pH measuring points to an absolute minimum. EasyClean 400 X has been developed especially for explosion hazardous areas.
- **EasyClean 200 e:**
Flushing of sensors with water and additional cleaning with cleaning agent in case of heavily contaminated sensors.
- **EasyClean 100 and 150:**
Automatic flushing of sensor with water or air.

EasyClean system solutions from METTLER TOLEDO – designed to meet your requirements.

Functionality	EC 400 (X)	EC 350 e	EC 200 e	EC 150	EC 100
Flushing	•	•	•	•	•
Cleaning	•	•	•		
Calibration	•	•			
System integration	•	•	•		
PROFIBUS PA/ FOUNDATION fieldbus	•				
Ex-areas	•				
Housing					
InDip 550					•
InTrac 7XX e	• ¹	• ²	• ²	•	
Transmitter					
M300			•	•	•
X100 e			•	•	•
pH 2100 e (4-wire)		•	•	•	•
M 700 (X)	•		•	•	•
Sensor					
pH	•	•	•	•	•
O ₂			•	•	•
CO ₂			•	•	•
Turbidity			•	•	•
Conductivity			•	•	•

1 With pneumatic position indicators
2 With inductive position indicators

EasyClean 400

Flexible, for Highest Demands

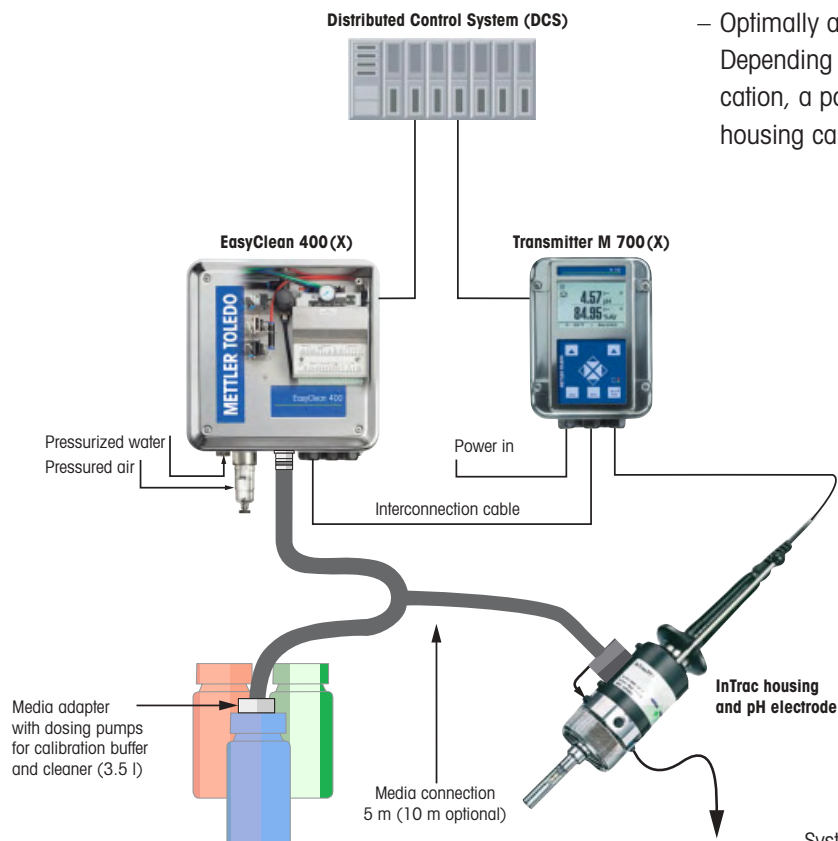


EasyClean 400 is used for fully automatic cleaning and calibration of pH measuring points. In combination with the transmitter M 700 and the InTrac 7XXe retractable housing it provides a flexible system solution which can either be implemented into continuous or batch measurements.

EasyClean 400 is versatile in its application. It offers multiple control possibilities and can be programmed extensively. Furthermore, a version for applications in explosion hazardous areas is available. The connection to a supervisory process control system can easily be realized in a conventional way, via FOUNDATION fieldbus™, or via PROFIBUS® PA.

Your Advantages

- Minimum maintenance costs by fully automatic cleaning and calibration of the sensor
- Optimal adaptation to the process conditions thanks to diverse program runs with freely programmable sequences
- High flexibility thanks to free choice of individually programmable intervals or weekly programs
- Low maintenance costs through minimum consumption of buffer and cleaning solution
- Flexible system integration
- EasyClean 400 X guarantees a safe application in explosion hazardous areas
- Optimally adapted housing. Depending on the field of application, a polished or coated housing can be applied



System overview EasyClean 400

EasyClean 350 e

Robust and Reliable



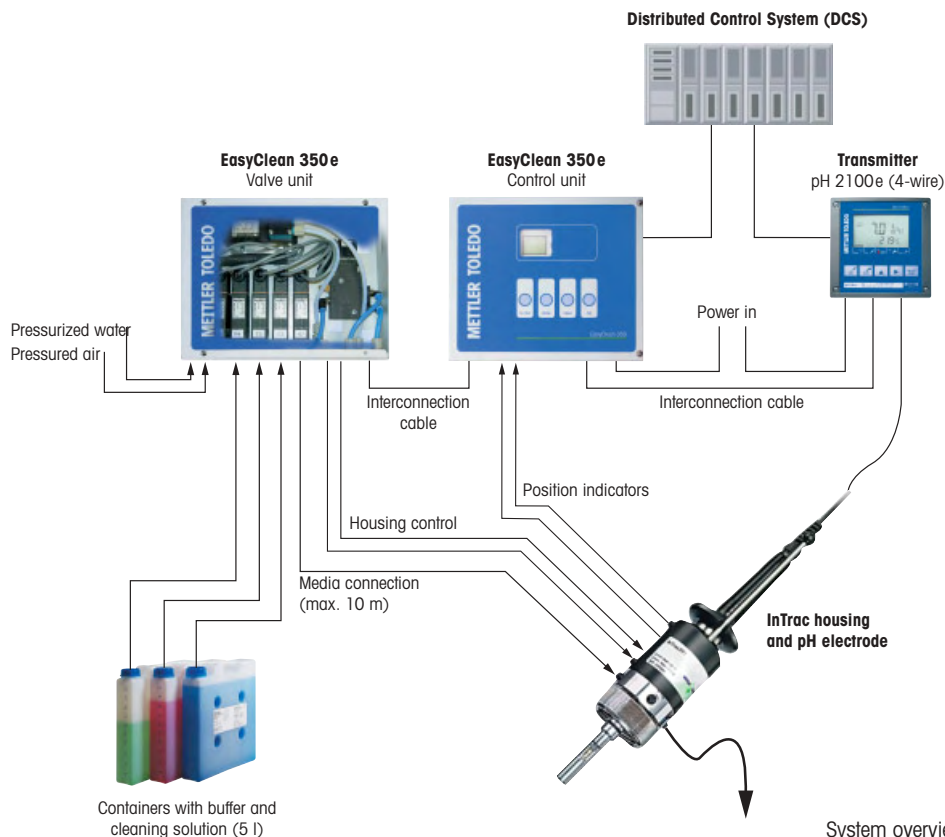
EasyClean 350 e is a robust and proven fully automated system which works reliably even in high maintenance measuring points.

Typical fields of application are chemical processes with aggressive chemicals and high temperatures.

The extremely compact and sturdy construction guarantees the safe application of aggressive cleaning chemicals and high temperatures. Thus, with the EasyClean 350 e you achieve a long life span of the sensor and reliable measuring values even in the most demanding applications.

Your Advantages

- Minimum maintenance costs through fully automatic cleaning and calibration of the sensor
- Extremely user friendly operation through pre-defined flushing, cleaning, and calibration programs
- Optimal program runs through adjustable software parameters
- Ideal process adaptation through freely programmable cleaning and calibration intervals
- Optimal installation thanks to the extremely compact design and integration into a process control system
- Operation in the most demanding applications due to the extremely resistant components



System overview EasyClean 350 e

EasyClean 200 e, 150 and 100

Automated Sensor Flushing and Cleaning



EasyClean 200 e: Individual Sensor Flushing and Cleaning for Heavily Contaminated Processes

An integrated diaphragm pump feeds the cleaning agent to the flushing chamber. The adjustable soaking time of the cleaning agent ensures an optimal cleaning effect. The cleaning cycle can either be triggered by the wash contact of the transmitter or released manually at the EasyClean control unit as desired. EasyClean 200 e features strict separation of the electronics from all wet areas.

Characteristics

- Automatic sensor flushing with water
- Additional cleaning with cleaning solution
- Free choice of cleaning agent
- Reliable components for harsh conditions



EasyClean 150: Easy and Safe Flushing of Sensors With Water

EasyClean 150 is a cost-effective unit for the automatic flushing of sensors with water. It can be operated with any pneumatic retractable housing, controls the insertion and exiting of the housing and monitors the flushing function.

EasyClean 150 is suitable for any applications in which the use of water alone as a cleaning medium is sufficient.

Characteristics

- Automatic sensor flushing with water
- Integrated housing control



EasyClean 100: Continuous Cleaning of Sensors in Waste Water Applications

EasyClean 100 has been developed to clean sensors installed in immersion housings. A specially designed spray head directs a jet of compressed air or flushing water at the sensing end of the sensor. The assembly configuration ensures that the sensor is effectively cleaned under water. Through the cavitation effect induced by air bubbles impacting around the sensor tip, deposits on the sensitive surface areas of the sensor are loosened and swept away.

Characteristics

- Cleaning of sensor with air or water
- Maintenance-free component
- Flushing directly in the process

EasyClean System Components

Quality Which Sets Standards



Transmitters

The transmitter M 700 features a highly modular, multi-parameter design. The flexible hardware and software concept can be easily adapted to new requirements, and the various communication possibilities facilitate a trouble-free system integration.

The proven X100 e transmitter line is reliable and safe in operation. It utilizes a self-explaining user interface and several possibilities of diagnosis.

The M300 transmitter series combines robustness with ease of use. High versatility and reliability make this instrument the ideal choice for your basic process applications.

Housings

Remarkable features of InTrac housings are their reliability and high safety standards. For wetted parts, various materials are available and the process connections including flanges, hygienic adaptations or complete flow through housings permit multiple applications.

Sensors

pH electrodes from METTLER TOLEDO are designed for a variety of applications. They guarantee stable and precise measurement values whether in biotechnology, food industry, or in demanding chemical processes.

When combined with the EasyClean 350 e or the EasyClean 400 they provide a fully automated pH measurement, cleaning and calibration system.

With EasyClean 100, 150 and 200 e, oxygen, conductivity, turbidity, and CO₂ measuring points can also be automated in addition to pH.

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