

- Enhanced process safety with TRI-LOCK™
- Reduction in overall process costs
- Broad-based electrode/sensor program
- Flexibility in process adaption

Housing



**InTrac® Series – versatile retractable housings:
When process safety is crucial!**

Safe and reliable.

The new InTrac retractable housings from METTLER TOLEDO fulfill the highest demands on process safety and reliability even in harsh applications.

Operational safety through TRI-LOCK™.

The TRI-LOCK™ safety system from METTLER TOLEDO prevents any release of process media via the housing. Without the presence of a sensor, the housing cannot be inserted into the process. Also it makes it impossible to remove the electrode from the housing when in the measuring position. An optional alignment system indicates the actual position of the housing at all times, even in automated systems.

Reduced overall process costs.

The InTrac family of retractable housings helps to substantially reduce the operating costs of a measuring point, by allowing well-planned automatic cleaning and calibration of the electrodes which will increase their average operational life significantly. Consequently, the performance characteristics of the individual electrodes can be exploited to the full, and plant productivity optimized at the same time.

Broad-based electrode and sensor compatibility.

A wide variety of different types of electrodes and sensors can be used in conjunction with the InTrac family of retractable housings, whether in the measurement of pH/redox, dissolved oxygen, CO₂, conductivity, or turbidity. Appropriate models are also available for specific applications in the chemical and pharmaceutical industries or for food and beverage processes.

Flexibility of process adaption.

METTLER TOLEDO offers a variety of different process adaptations, ranging from the tried and tested INGOLD sockets, or flange fixtures, to special hygienic connection systems. The retractable housings are available both in steel and in polymer versions to suit individual process requirements. Immersion depths are variable, and can be suited to the design and configuration of vessels and pipes.



Chemical processes:
Greater safety even under demanding conditions.



Pharmaceutical processes:
Double flushing chamber for a higher degree of sterility.



Food and beverage industry:
Hygienic process adaption.

InTrac 776 e: the tough one.

InTrac 776 e retractable housings are designed for applications in the chemical industry in processes involving the use of pH/redox electrodes with liquid electrolyte reference systems, e.g. InPro 2000 or 465 Series. In the built-in flushing chamber, the electrode can be cleaned and, if necessary, also be recalibrated, both procedures without any interruption of the ongoing process.

Also the intermittent use of these electrodes leads to an increase in their operational life and reduces the overall costs of the measuring point.

Main specifications

		InTrac 776 e
Operation		Manual or pneumatic
Immersion depths		70, 100 or 200 mm
Electrode types		Liquid-filled electrodes (InPro 2000 or 465 Series)
Wetted O-rings		Viton®-FDA, EPDM-FDA or Kalrez®-FDA
Process-wetted parts		DIN 1.4404 / AISI 316L, HA-C22, titanium, PP, PVDF, PEEK
Specific features		TRI-LOCK™, sensor detector, position indicators, (optional, pneumatic or inductive version)
Certificates/approvals	CE:	●
	PED*:	●
	ATEX (94/9/EC):	●
	MaxCert™:	●

* PED = pressure equipment directive, 97/23/EC

MaxCert™ from METTLER TOLEDO covering the following certificates/ approvals included in delivery:

- Material certificate according to 3.1B
- Confirmation of FDA conformity of wetted parts according to EN 10 204-2.1
- Additional relevant certificates (depending upon type of housing)

TRI-LOCK™ from METTLER TOLEDO provides the following elements of safety:

- Safe sealing of process medium
- No motion of housing without sensor / electrode in place
- No removal of sensor / electrode possible while housing in measuring position (immersed)
- No unintentional release of process media possible

High flexibility in process adaptations

- METTLER TOLEDO offers a wide selection of process adaptations in various materials and sizes, such as
- DN 25 for INGOLD weld-in sockets
 - Flanges (DIN and ANSI)
 - NPT threads
 - TriClamp
 - Tuchenhagen Varivent



InTrac 776 e
(with pneumatic position indicators)

InTrac 776 e
(pneumatic type, made of PP)

InTrac 777 e/797 e/798 e versatility at a glance.

The InTrac 777 e/797 e retractable housings have been specifically designed for use with 12 mm electrodes and sensors for the measurement of pH/redox, dissolved oxygen, CO₂ and conductivity in industrial processes. InTrac 777 e with a single flushing chamber is suitable for employment in the chemical industry. InTrac 797 e with double chambers is the preferred choice for sterile processes in the pharmaceutical industry. The InTrac 798 e with the hygienic design (EHEDG) is the optimal housing for the food & beverage industries. Special models (InTrac 779 e/799 e) are also available for InPro 8100/8200 turbidity sensors.



Use in Ex-classified zones

The InTrac 776 e/777 e/797 e retractable housings (steel versions) are intrinsically safe for operation in Ex-classified zones according to guideline ATEX 94/9/EC.

Main specifications

		InTrac 777 e and InTrac 797 e			InTrac 798 e
Operation		Manual or pneumatic			Manual or pneumatic
Immersion depths	InTrac 777 e/779 e: InTrac 797 e/799 e:	70, 100 or 200 mm 100 mm			50 or 100 mm
Electrodes/sensors	pH: CO ₂ : Dissolved oxygen: Conductivity: Turbidity:	Gel or solid polymer electrolyte models, ø 12 mm InPro 5000 (InTrac 797 e) InPro 6800/InPro 6900 InPro 7001 (not with InTrac 797 e) InPro 8100/InPro 8200			All 120 mm electrodes/sensors with Pg 13.5 thread and 12 mm diameter (except turbidity sensors)
Wetted O-rings		Viton®-FDA, EPDM-FDA or Kalrez®-FDA/USP VI			EPDM-FDA
Process-wetted parts	InTrac 77X e: InTrac 79X e:	DIN 1.4404/AISI 316L, HA-C22, titanium, PP, PVDF, PEEK DIN 1.4404/AISI 316L			DIN 1.4404
Flexible process adaption		776 e	777 e/779 e	797 e/799 e	
	DN 25:	●	●	●	●
	Flanges (DIN, ANSI):	●	●		
	NPT thread:	●	●		
	TriClamp:	●	●	●	●
	Tuchenhagen Varivent:	●	●	●	●
	Neumo DN50:				●
Specific features		TRI-LOCK™, sensor detector, position indicators, (optional, pneumatic or inductive version)			Hygienic design, uniform sensor length 120 mm
Certificates/approvals	CE:	●			●
	PED*:	●			
	ATEX (94/9/EC):	●			
	MaxCert™:	●			
	Sterile test:	● (for InTrac 797 e/799 e)			
	EHEDG:	on request			●
	3A:	on request			●

* PED = pressure equipment directive, 97/23/EC



InTrac 777 e
(pneumatic version, made of PVDF)



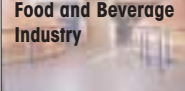
InTrac 797 e
(manual version)

InTrac 798 e
(pneumatic version)

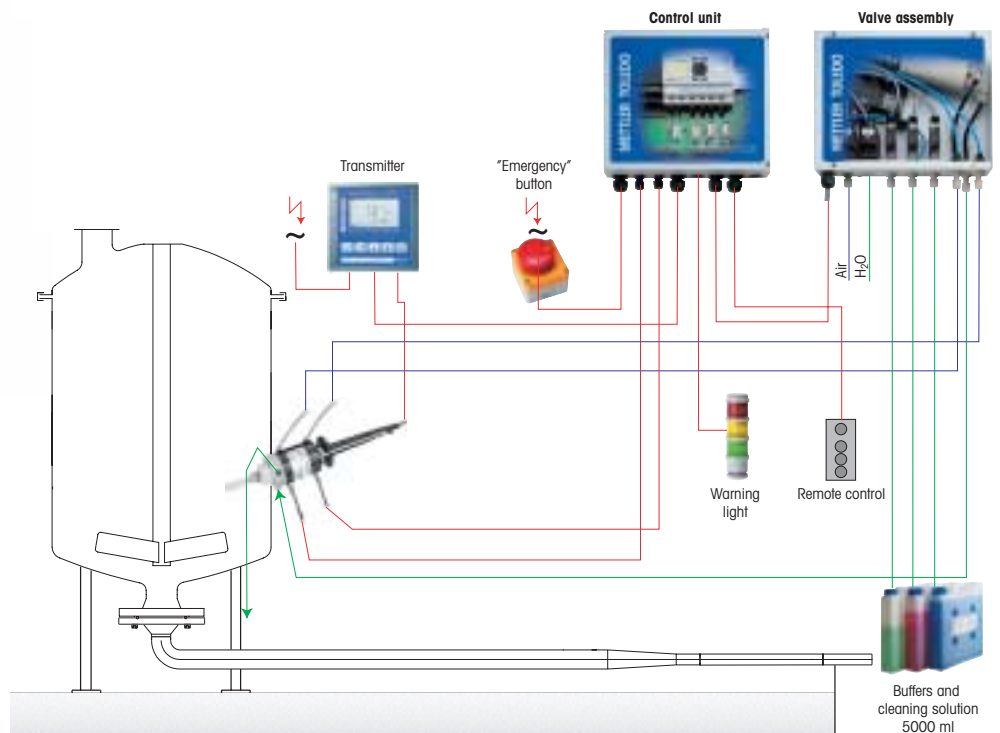
Automatic control with EasyClean.

The new retractable housings combined with the EasyClean automatic cleaning and calibration system form unique measuring systems. These systems accommodate specific maintenance objectives aimed at optimizing process safety as well as maintenance costs – even in the most demanding applications.

Examples of a complete measurement loop

Field of application	Retractable housing	Parameter	Electrodes/ Sensors	Transmitter	Cleaning & Calibration System
 Chemical industry (CPI)	InTrac 776 e	pH/Redox	Liquid electrolyte electrodes	pH2100 e pH2500 pH2220X M700	EC 150 EC 200 EC 300 EC 300 EX EC 350
	InTrac 777 e	pH/Redox	Gel and solid polymer electrolyte electrodes		
		O ₂	InPro 6800	O ₂ 4100e	
	InTrac 779 e	Conductivity	InPro 7001 -VP	Cond 7100e	
Turbidity		InPro 8100 InPro 8200	Trb 8300		
 Pharmaceutical industry	InTrac 797 e InTrac 798 e	pH	InPro 3100 InPro 3200 InPro 3300	pH2100 e pH2500 M700	
		O ₂	InPro 6800 InPro 6900	O ₂ 4100e	
 Food and Beverage Industry	InTrac 799 e	CO ₂	InPro 5000	CO ₂ 5100e	
		Turbidity	InPro 8100 InPro 8200	Trb 8300	

Typical system configuration for demanding applications



Swift and competent.

METTLER TOLEDO offers a wide range of technological measurement solutions for the area of industrial Process Analytics:

- A complete range of electrodes/sensors for pH/ORP, O₂, conductivity, turbidity and CO₂ measurements.
- A wide variety of static and retractable housings, cables and dedicated accessories as well as auxiliary systems such as automatic sensor cleaning and calibration devices.
- A comprehensive line of transmitters to meet your most demanding requirements, including compatibility with sophisticated, modern communication and automation systems.

ServiceXXL
Tailored Services



Professional service and support is always close at hand

Our professional worldwide distribution and service network provides you with the best possible technical and application support, ranging from consulting through to trouble-shooting.

For the new retractable housings, the following technical information is available:

Technical data (TD)

with detailed product information and product order numbers

Order No. 52 403 126

For technical data sheets covering other housing models, please contact our local representative.

Documentation material for products and systems (available in English, German and French):



Transmitters

- «Value Line»
- «Advanced Line»
- «Premium Line»



pH/ORP

- Gel/polymer electrodes
- Liquid electrodes
- Non-glass electrodes
- Polymer body electrodes



O₂ / DO

- Value sensors
- Advanced sensors
- Premium sensors
- Portable instruments



Conductivity

- Value sensors
- 2/4-electrode sensors
- Inductive sensors



Management System
certified according to
ISO 9001 / ISO 14001



Turbidity

- Low to medium turbidity
- Medium to high turbidity



CO₂

- In-situ measurement for in-line fermentation control



Housings

- For InFit stationary housing series
- For Ø 12 mm electrodes/sensors
- For liquid and gel electrolyte electrodes
- InTrac® series



Cleaning & calibration systems

- EasyClean family

Sales and service: