

- 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, CO<sub>2</sub>, 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



InTrac 776 e  
(with pneumatic position indicators)

InTrac 776 e  
(pneumatic type, made of PP)

# InTrac 777 e/InTrac 797 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, CO<sub>2</sub> 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 and food & beverage industries. Special models (InTrac 779 e/799 e) are also available for InPro 8100/8200 turbidity sensors.

## Main specifications

		InTrac 777 e and InTrac 797 e		
Operation		Manual or pneumatic		
Immersion depths	InTrac 777 e/779 e:	70, 100 or 200 mm		
	InTrac 797 e/799 e:	100 mm		
Electrodes/sensors	pH:	Gel or solid polymer electrolyte models, ø 12 mm		
	CO <sub>2</sub> :	InPro 5000 (InTrac 797 e)		
	Dissolved oxygen:	InPro 6800/InPro 6900		
	Conductivity:	InPro 7001 (not with InTrac 797 e)		
	Turbidity:	InPro 8100/InPro 8200		
Wetted O-rings		Viton®-FDA, EPDM-FDA or Kalrez®-FDA		
Process-wetted parts	InTrac 77X e:	DIN 1.4404/AISI 316L, HA-C22, titanium, PP, PVDF, PEEK		
	InTrac 79X e:	DIN 1.4404/AISI 316L		
Flexible process adaptation		776 e	777 e/779 e	797 e/799 e
	DN 25:	●	●	●
	Flanges (DIN, ANSI):	●	●	
	NPT thread:	●	●	
	TriClamp:	●	●	●
	Tuchenhagen Varivent:	●	●	●
Specific features		TRI-LOCK™, sensor detector, position indicators, (optional, pneumatic or inductive version)		
Certificates/approvals	CE:	●		
	PED*:	●		
	ATEX (94/9/EC):	●		
	MaxCert™:	●		
	Sterile test:	● (for InTrac 797 e/799 e)		

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



### Use in Ex-classified zones

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

### 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 777 e**  
(pneumatic version, made of PVDF)

**InTrac 797 e**  
(manual version)

# Automatic control with EasyClean.

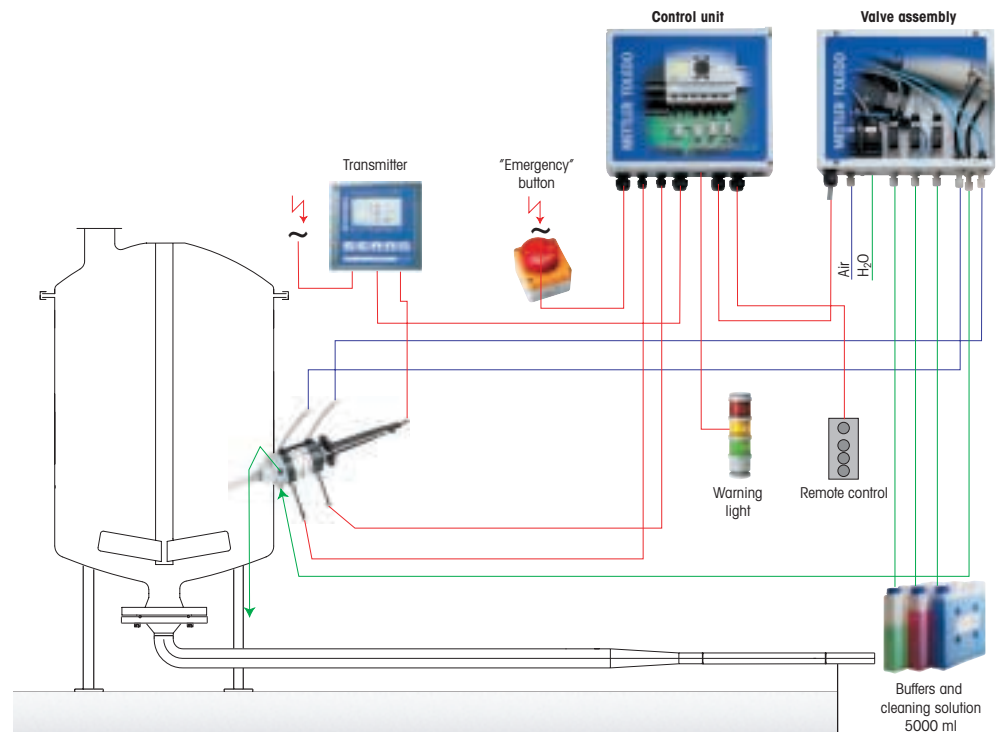
The new retractable housings combined with the EasyClean automatic cleaning and calibration system form unique measuring systems. These systems accommodate specific maintenance objectives aimed at optimizing process safety as well as maintenance costs – even in the most demanding applications.

## Examples of a complete measurement loop

Field of application	Retractable housing	Parameter	Electrodes/ Sensors	Transmitter	Cleaning & Calibration System
 <b>Chemical industry (CPI)</b>	InTrac 776 e	pH/Redox	Liquid electrolyte electrodes	pH2100 e pH2500 pH2220X M 700*	EC 150 EC 200 EC 300 EC 300EX EC 350
	InTrac 777 e	pH/Redox	Gel and solid polymer electrolyte electrodes		
		O <sub>2</sub>	InPro 6800	O <sub>2</sub> 4100 e	
	InTrac 779 e	Conductivity	InPro 7001 -VP	Cond 7100 e	
Turbidity		InPro 8100 InPro 8200	Trb 8300		
 <b>Pharmaceutical industry</b>	InTrac 797 e	pH	InPro 3100 InPro 3200 InPro 3300	pH2100 e pH2500 M 700*	
		O <sub>2</sub>	InPro 6800 InPro 6900	O <sub>2</sub> 4100 e	
		CO <sub>2</sub>	InPro 5000	CO <sub>2</sub> 5100 e	
 <b>Food and Beverage Industry</b>	InTrac 799 e	Turbidity	InPro 8100 InPro 8200	Trb 8300	

\* The transmitter M 700 is available Q1/04.

## 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, O<sub>2</sub>, conductivity, turbidity and CO<sub>2</sub> 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.



## 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



### O<sub>2</sub>/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



### CO<sub>2</sub>

- In-situ measurement for in-line fermentation control



### Housings

- For ø 12 mm electrodes/sensors
- For liquid electrolyte electrodes



### Cleaning & calibration systems

- EasyClean family

Sales and service: