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### ГЕРМЕТИЧНЫЕ ПРОБООТБОРНИКИ

Технические характеристики на HERMetic

## **HERMetic UTImeter Gtex**

The HERMetic UTImeter Gtex is a portable gas tight liquid level gauge designed for closed gauging of hydrocarbons and chemicals. The unit is used for custody transfer, inventory control measurement and free water detection on marine vessels and shore tanks. Connected to a HERMetic vapour control valve fixed on the tank, the HERMetic UTImeter Gtex avoids any gas release during operation.

The unit enables 3, optionally 4 measurements in one single operation:

- Ullage
- Temperature
- Oil-Water interface level
- Innage, Reference height (Visc version)

## A GAUGE IN DIFFERENT VERSIONS DEDICATED TO YOUR APPLICATION:

### **HERMetic UTImeter Gtex**

 with 1" sensing probe, FKM gaskets for the main applications in hydrocarbons.

#### **HERMetic UTImeter Gtex Chem**

 with 1" sensing probe, FFKM gaskets and tape connector for use in corrosive liquids.

## HERMetic UTImeter Gtex Visc and HERMetic UTImeter Gtex Chem Visc

- with 2 Inch load on the sensing probe, recommended for operation in high viscous products or for innage measurements in hydrocarbons or in corrosive liquids.
- Manual detection of tank bottom.

OMI <</p>

Solas 74

MARPOL 73/78

ISO, API, IP

EC Directive 89/336/EEC

EC Directive 94/9/EC

➤ EC Directive 96/98/EC

➤ ATEX, Factory Mutual, IECEx

National authorities, (USCG, MSA, ..)

All major classification societies

Installation, connection and references for the new UTImeter family are fully compatible with previous HERMetic UTI/ GT3 type of equipment.

"A closed system exists when a marine tank vessel does not permit the direct exposure and/or release of the tank content into the atmosphere under normal operating conditions." (API MPMS 17.2 A.4.1.)



### **ULTRA SENSING PROBE**

### **Benefits:**

- 100 % repeatability of measures.
- Continuous temperature reading.
- High accuracy and stability.
- Chemically resistant to corrosive liquids (Chem version).
- Easy access for battery exchange.
- Sensor exchange without need of new calibration.
- · Low weight for easy operation and carry around.
- No temperature drift. No degradation of the sensitivity due to sensor ageing.
- Interchangeable adapters for connection to different vapour control valves.
- Tape cleaning devices, window wiper and tape protection on all units as standard.

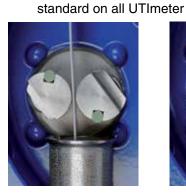
#### Low maintenance cost:

Fully modular unit. Change tape, storage tube, sensor or instrument unit yourself. Easy and detailed instructions in Operation and Service Manual.





Mechanical tape cleaning device as



Type: C2-SS-SEC



Visc version Storage tube SS2-Q2



Sensor fitted with additional load, recommended for operation in high viscous products or for innage measurements





### TECHNICAL SPECIFICATIONS:

Accuracy of ullage-interface detection:

Ullage, interface indication: Maximum tank overpressure:

Tape length:
Tape graduation:
Tape resolution:

Tape accuracy:

Meets API MPMS Chap 3.1A and ISO 4512 requirements

Temperature accuracy:

Meets API MPMS Chap 7 request Meets ISO 4268, IP PMM Part IV

Ambient temperature range:

Temperature sensor measurement range: Temperature measurement resolution:

Temperature reading:

LCD Display:

Power:

Weight with 15 meter / 50ft tape:

Hazardous environments approvals

**ATEX** 

Factory Mutual

**IECEx** 

± 2 mm (± 0.08" approx.)

Audible and Visible selectable

0,3 bar (4,4 psi)

15 m/50 ft, 30 m/100 ft, 35 m/115 ft

Metric/English 1 mm / 1/16"

 $\pm$  1.5 mm/30 m ( $\pm$ 1/16"/100 ft approx.)

± 0.1°C (0°C to 70°C);

± 0.2°F (32°F to 158°F)

,

-20°C to 50°C / (-4°F to 122°F)

-40°C to 90°C / (-40°F to 194°F)

0.01° or 0.1° selectable

°C or °F selectable

8 characters with backlight

Approved 9V batteries

4.4 kg / 9.7 Lbs.

II 1 G Ex ia IIB T4 / Tamb 50°C

CL I, DIV 1,  $\,$  C&D, T4  $\,$  Tamb  $\,$  50°C and

CL I, ZN 0, AEx ia IIB T4 Tamb 50°C

Zone 0, Ex ia IIB T4

All HERMetic UTImeters are now equipped with the sensor "ULTRA" for use in low and high viscous liquids. The ULTRA sensing probe consists of a stainless steel tube terminated by a PEEK head. The sensing probe includes an ultrasonic liquid level sensor, a temperature sensor and a conductivity electrode. The sensitivity for ullage and interface measurement does not require any adjustment. The sensor is calibrated once at the factory and does not require subsequent calibration. The temperature transducer is a RTD element. The characteristics of the RTD element are stored inside the sensor. The sensor is sending true temperature values to the electronic box and display.

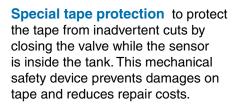
### **Benefits**

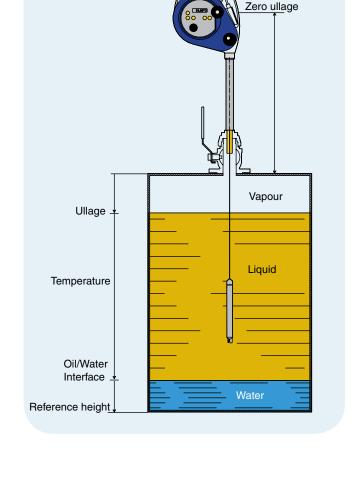
- 100% repeatability.
- · No adjustment of the sensitivity required.
- Small diameter for use on 1" HERMetic valves.
- Chemically resistant to corrosive liquids (Chem version).
- High mechanical stability.
- No degradation of the sensitivity due to ageing of the sensor.



All HERMetic portable level gauges and 2 Inch samplers are delivered with a tailor made plywood carrying case as a standard. This special box avoids any damage during transport and storage.

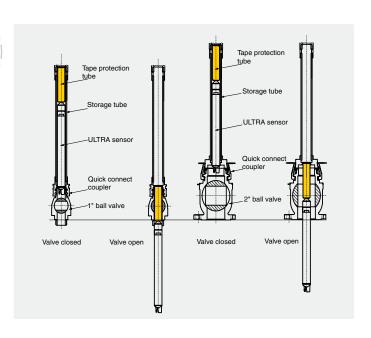






Principle of installation

Ullage readout point



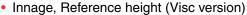
## **HERMetic UTImeter Rtex**

The HERMetic UTImeter Rtex is a portable liquid level gauge designed for restricted gauging of petroleum products. The unit is used for custody transfer, inventory control measurement and free water detection on marine vessels and shore tanks. The HERMetic UTImeter Rtex has to be connected to a HERMetic vapour control valve fixed on the tank.

The unit enables 3, optionally 4 measurements in one single operation:



- Temperature
- Oil-Water interface level







Storage tube SS1-Q1



### A GAUGE DEDICATED TO YOUR APPLICATION:

### **HERMetic UTImeter Rtex**

 with 1" sensing probe, FKM gaskets for the main applications in hydrocarbons.

### **HERMetic UTImeter Rtex Visc**

- with 2 Inch load on the sensing probe, recommended for operation in high viscous products or for innage measurements in hydrocarbons.
- Manual detection of tank bottom.

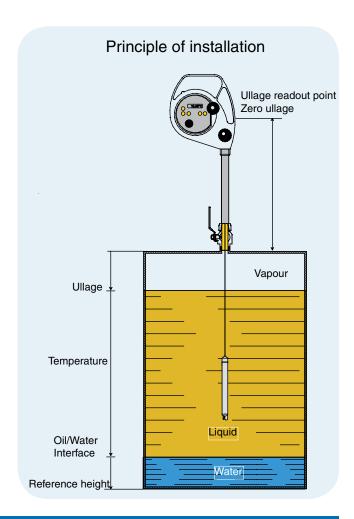
### ○ IMO

- Solas 74
- MARPOL 73/78
- SO, API, IP
- EC Directive 89/336/EEC
- ➤ EC Directive 94/9/EC
- EC Directive 96/98/EC
- ATEX, Factory Mutual, IECEx
- National authorities, (USCG, MSA, ..)
- All major classification societies

All HERMetic UTImeters are now equipped with the sensor "ULTRA" for use in low and high viscous liquids. The ULTRA sensing probe consists of a stainless steel tube terminated by a PEEK head. The sensing probe includes an ultrasonic liquid level sensor, a temperature sensor and a conductivity electrode. The sensitivity for ullage and interface measurement does not require any adjustment. The sensor is calibrated once at the factory and does not require subsequent calibration. The temperature transducer is a RTD element. The characteristics of the RTD element are stored inside the sensor. The sensor is sending true temperature values to the electronic box and display.







### TECHNICAL SPECIFICATIONS:

Accuracy of ullage-interface detection:

Ullage, interface indication:

Tape length:

Tape graduation:

Tape resolution:

Tape accuracy:

Meets API MPMS Chap 3.1A and ISO 4512 requirements

Temperature accuracy:

Meets API MPMS Chap 7 request Meets ISO 4268, IP PMM Part IV

Ambient temperature range:

Temperature sensor measurement range:

Temperature measurement resolution:

Temperature reading:

LCD Display:

Power:

Weight with 15 meter / 50ft tape:

Hazardous environments approvals

**ATEX** 

**Factory Mutual** 

**IECEx** 

± 2 mm (± 0.08" approx.)

Audible and Visible selectable 15 m/50 ft, 30 m/100 ft, 35 m/115 ft

Metric/English

1 mm / 1/16"

± 1.5 mm/30 m (±1/16"/100 ft approx.)

± 0.1°C (0°C to 70°C);

± 0.2°F (32°F to 158°F)

-20°C to 50°C / (-4°F to 122°F)

-40°C to 90°C / (-40°F to 194°F)

0.01° or 0.1° selectable

°C or °F selectable

8 characters with backlight

Approved 9V batteries

3.7 kg / 8.1 Lbs.

II 1 G Ex ia IIB T4 / Tamb 50°C

CL I, DIV 1, C&D, T4 Tamb 50°C and CL I, ZN 0, AEx ia IIB T4 Tamb 50°C

CL I, ZIV O, ALX IA IID 14 IAIIID

Zone 0, Ex ia IIB T4

## **HERMetic Sampler GTX Chem** or Sampler GTN Chem

The HERMetic Sampler GTX Chem and HERMetic Sampler GTN Chem are designed for closed sampling of liquids or chemicals, which present a fire, health or air pollution hazard. The gas tight construction of these units avoids a pressure release from the tank and exposure to fumes during operation.

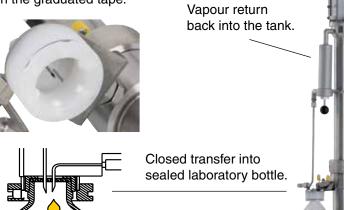
For the **HERMetic Sampler GTX Chem** the transfer of the liquid from the sampling bottle to a laboratory bottle occurs by overpressuring the upper chamber of the sampler with a pump.

- · After sampling, the liquid can be transferred into a laboratory bottle by opening the transfer valve and actuating the pressure pump.
- The graduated tape permits checking of sampling bottle height.
- The HERMetic Sampler GTX Chem is very easy to clean and fully compatible with all kind of non corrosive and corrosive liquids.

For the **HERMetic Sampler GTN Chem**, the sample can be transferred under closed condition. This transfer guarantees the integrity of the sample, since the liquid is never in contact with the atmosphere. A closed vapour recovery system dispatches the vapours back into the tank during transfer of the liquid into the laboratory bottle.

- The HERMetic Sampler GTN Chem can be purged with inert gas before and/or after sampling.
- The sampled liquid is never in contact with the atmosphere.
- The sampling height can be measured on the graduated tape.





**HERMetic Sampler GTX Chem** 

**HERMetic Sampler GTN Chem** 

**HERMetic GTN Chem** 

MPMS Chap 8.1 → MPMS Chap 17.11

### TECHNICAL SPECIFICATIONS:

### **HERMetic GTX Chem**

Maximum tank overpressure: 0.3 bar 0,3 bar Unit height: 800 mm 801 mm 5.3 kg Weight: 7.5 kg 30m / 100 ft Tape length: 30m / 100 ft Capacity of sampling bottle: Approx. 0.5 I Approx. 0.5 I Capacity of laboratory bottle: 0.47 l, 16 oz **FFKM** 

Type of gaskets:

Materials: Stainless steel AISI 316, PTFE, PVDF

Hazardous environments approvals

**ATEX** II 1 G c IIB T6 II 1 G c IIB T6

## HERMetic Large Volume Samplers with 4 Inch Valves

The **HERMetic Sampler A-4** is designed for restricted sampling and the **HERMetic Sampler GT4** for closed, gas tight sampling of liquids which present a fire, health or air pollution hazard.

The sampler housing is mounted on top of the HERMetic 4 Inch deck valve. The sample is taken by a vertical move of the bottle inside the liquid. The bottle is linked with a graduated tape. A reading window allows monitoring the bottle location. The opening of the bottle valve is realized by lowering the sampling bottle until it is sitting on the ball of the valve. The transfer of the liquid from the sampling bottle to a laboratory bottle occurs by opening the transfer valve at the bottom of the sampler, A pump can be connected to the winder to accelerate and complete the transfer of the sample. Choose the type of sampling bottle fitting your needs. See page 17.

The **HERMetic Sampler A-4** is dedicated for applications where restricted sampling is accepted and more than 0.5 litre of liquid is needed.

The HERMetic Sampler GT4 is dedicated for closed sampling of liquids and where more than 0.5 litre of liquid is needed. Its gas tight construction avoids a pressure release from the tank and exposure to fumes during operation.

\* Stainless steel const uction on request







HERMetic Deck Valve A-4 SS

**HERMetic Sampler GT4** 

### TECHNICAL SPECIFICATIONS:

Maximum tank overpressure:

Capacity of sampling bottle:

Unit height::

Tape length:

On request:

Weight:

2 inch quick connector

**HERMetic Sampler A-4** 

0.3 bar 0.3 bar 770 mm 770 mm 7.4 kg 8.1 kg

30 m / 100 ft 30 m / 100 ft 40 m tape length 50 m tape length Approx. 1.8 I. Approx. 1.8 I.

Materials: AISI 316. Rilsan coated Aluminium

Hazardous environments approvals **ATEX** 

II 1 G c IIB T6 II 1 G c IIB T6

## Other HERMetic Samplers

The **HERMetic Sampler A-2** is dedicated to applications where restricted sampling is accepted. The sampler A-2 is for connection on 2" HERMetic vapour control valves. The liquid transfer from the sampling bottle to the laboratory bottle occurs under open conditions after closing the vapour control valve.

The **HERMetic Sampler GT1** is fitted with a gas tight housing designed for closed sampling of liquids, which present a fire, health or air pollution hazard. It protects the storage facility from vapour emission and avoids a pressure release in the tank during sampling. The sampling height can be measured on the graduated tape.

### **HERMetic Sampler GT1**

- Easy installation on 1 Inch HERMetic vapour control valves with a quick connect coupling.
- The sampling bottle can be easily removed.

**HERMetic Sampler GT1** 



**HERMetic Sampler A-2** 



2 Inch connection



HERMetic Compact valve C2-SS-BL

### TECHNICAL SPECIFICATIONS:

 Sampler GT1
 Sampler A-2

 Unit height:
 1260 mm
 802 mm

 Weight:
 4.2 kg
 6.2 kg

 Tape length:
 30 m, 100 ft
 30 m, 100 ft

 Capacity of zone sampling bottles:~ 0.3 l
 ~ 0.5 l

 Type of gaskets:
 FKM
 FKM

Materials: Stainless steel AISI 316, Brass, PTFE, PVDF

### Accessories

### **HERMetic DIP 2**

A 500 mm long graduated DIP rod, designed for easy penetration of sediments on tank bottom, is attached to a 30 metres. long stainless steel tape, which is coiled on a reel graduated in combined metric and English unit. The storage tube is fitted with a quick connect coupling for fast and easy installation on all 1 Inch quick connect nipples.

Weight, 3,3 kg

### **HERMetic DIP 2 Gas tight**

The HERMetic DIP 2 is also available in closed, gas tight version. The gas tight construction of this unit avoids a pressure release from the tank and exposure to toxic fumes during operation.

# For connection on HERMetic valves with 2" connector, an additional adaptor can be supplied. **HERMetic Dip2**

**HERMetic Dip2 GT** 

### **HERMetic OXY**

As per IMO requirement on Tanker Safety and Pollution Prevention, oxygen level shall be determined before start of crude oil washing. The HERMetic OXY samples inert gas ( or any other gas ) over full tank height without escape of gas to the atmosphere. Hollow brass plug fitted to the rubber hose of up to 30 meters length. Valve provided on hose before gas analyser (analyser not supplied) for air purging of hose. HERMetic OXY adapts to all 1 Inch quick connect nipples.

Weight: 3,8 kg

IMO requirements on Tanker Safety and Pollution Prevention, 1978 - resolution 15

Annex 6.6: Before each tank is crude oil washed, the oxygen level shall be determined at a point 1 meter from the deck and at the middle region of the ullage space and neither of these determinations shall exceed 8 percent by volume.



**HERMetic OXY** 

### **HERMetic PRESS**

Tanker operation requires verification of tank pressure without potential for error due to signal conversion or remote transmission. This rugged high precision gauge provides reliable reading within the range of 1500 mm vacuum and 2500 mm pressure. Gauge is protected by thick rubber rim and mounted on top of vapour tight adaptor for closed tank operation. Quick connect coupling lower end for use with all 1 Inch quick connect nipples. Weight, 1,5 kg



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