



Fig.: TG 05 Model 5 with "Totalizing Roller Counter"



**TG 1 Model 7**  
 (Fig. with "Totalizing Roller Counter")

**RITTER** drum-type gas meters are universally applicable for measuring the volume of flowing gases and are particularly effective when measurements demand the highest precision.

The possibility of selecting the gas meter material from among 5 different excellent materials (polyvinyl chloride (PVC), polypropylene (PP), polyvinylidene fluoride (PVDF), PE-el (polyethylene electrically conductive) or refined stainless steel 1.4571 (316 L) enables the user individually to meet measurement requirements even in case of highly aggressive gases.

For rugged, industrial applications, robust models with a stainless steel casing and plastic drum (four different materials) are available.

The desired measurement range can be selected from among 9 magnitudes (types) extending as a whole from 0.1 ltr/h to 18,000 ltr/h at a gas temperature ranging from -50 to +120 °Celsius. The solidly manufactured casing of the standard meters is designed to withstand a maximum over-pressure of 50 mbar (plastic casings) or 500 mbar (stainless steel casings); meters for higher pressure ranges up to 16 bars are available.

The measurement of **RITTER** drum-type gas meters works on the principle of displacement. The gas meters contain a revolving measuring mechanism (measuring drum) within a packing liquid (usual: water or thin-bodied oil). The measuring drum compulsorily measures volume by periodically filling and emptying four rigid measuring chambers.

Fastidious production methods and calibration enable a measuring accuracy of  $\pm 0.2\%$  at standard flow rate and approx.  $\pm 0.5\%$  over the whole measuring range.



**TG 10 Model 5**  
 (Fig. with "Totalizing Roller Counter")



**TG 50 Model 7**  
 (Fig. with "Resettable Roller Counter")

The major advantage and the superiority of volumetric Gas Meters (like Drum-type Gas Meters) over other measurement principles, which determine gas volume using secondary measurable variables such as speed, heat capacity, hot-wire resistance or similar, is that the volume is **directly** measured. That means that the condition and the composition of the gas has no influence on the measurement accuracy.

**Correcting factors** which take into account gas type, temperature, humidity etc are therefore **not necessary**. It should be noted that with other, non-volumetric measurement processes, the measurement accuracy given for that process can only be achieved if the correcting factors for the immediate condition of the gas are exactly known.



## DRUM-TYPE GAS METERS

01.04

### Overview

Rev. 03/2010

#### Standard Equipment:

- 4-Chamber Measuring Drum
- Magnetic Coupling (between the measuring drum and counting mechanism)
- 8-digit Totalizing Roller Counter
- large, one-Needle dial
- Filling-level Indicator (for setting the Packing Liquid level)
- Manometer/Thermometer Supports
- Viton sealing
- Level, and Levelling Feet.

#### Performance Data:

- Measuring accuracy:  
 $\pm 0.2\%$  at standard flow rate (exact value is stated in individual Calibration Certificate),  
approx  $\pm 0.5\%$  across the measurement range
- Maximum gas inlet pressure (overpressure):  
50 mbar with plastic casings  
500 mbar (0.05 MPa) with stainless steel casings
- Flow rate (measuring range) and meter indication:

Type	Flow Rate			Indication	
	Minimum [ltr/h]	Maximum [ltr/h]	Standard [ltr/h]	Min. Dial Division [ltr]	Maximum Value [ltr]
TG 05	1	60	50	0.002	9,999,999.9
TG 1	2	120	100	0.01	99,999,999
TG 3	6	360	300	0.02	99,999,999
TG 5	10	600	500	0.02	99,999,999
TG 10	20	1,200	1,000	0.1	99,999,999
TG 20	40	4,000	3,200	0.2	999,999,990
TG 25	50	7,000	5,000	0.1	999,999,990
TG 50	100	18,000	10,000	0.5	999,999,990

<sup>(1)</sup> Indication at EDU32

#### Available Models (Materials):

Casing	Measuring drum	Model
PVC-transparent	PVC-grey	<b>5</b>
PP-grey	PP-grey	<b>6</b>
PVDF	PVDF	<b>7</b>
PE-el	PE-el	<b>8</b>
1.4571 (316 Ti)	PVC-grey	<b>1</b>
1.4571 (316 Ti)	PE-el	<b>2</b>
1.4571 (316 Ti)	PP-grey	<b>3</b>
1.4571 (316 Ti)	PVDF	<b>4</b>

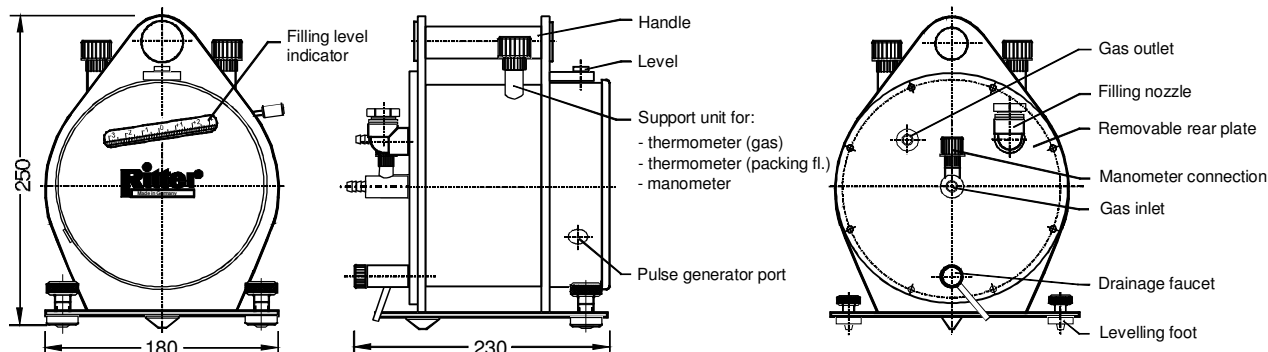
Legend:	
PVC	= Polyvinyl chloride
PP	= Polypropylene
PVDF	= Polyvinylidene fluoride
PE-el	= Polyethylene-electrically conductive
1.4571	= 316 Ti
	= Refined stainless steel
Viton	= Fluorine rubber

For chemical resistance properties please contact **RITTER**.  
Both the casings out of plastic and stainless steel are welded.

**Accessories:** Thermometer (gas), range 0° to +60°C  
Thermometer (packing liquid), range 0° to +60°C  
Manometer, range 10 mbar differential pressure  
Electronic Display Unit, including Interface RS 232 and Analog Output  
(requires Pulse Generator)

#### Built-in Options:

Pulse Generator (for connection of Electronic Display Unit or Computer)  
- Standard Version  
- Ex-proof Version  
High Precision Liquid Level Indicator ("HPLI")  
LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)



### Performance Data:

Minimum flow $Q_{\min}$	0.1 ltr/h	<b>Maximum gas inlet pressure</b>	<b>50 mbar</b>
Standard flow $Q_{\text{stand}}$	10 ltr/h	Minimum differential pressure <sup>1)</sup>	0.3 mbar
Maximum flow $Q_{\max}$	30 ltr/h	Minimum indication @ EDU 32 <sup>2)</sup>	0.002 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication @ EDU 32 <sup>2)</sup>	999.9999 ltr
Packing liquid quantity, approx.	0.9 ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	0.1 ltr/Rev.	Hose barb outside diameter	12 mm

<sup>1)</sup> Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup> No mechanical counter mechanism at the TG01 (to keep the friction as low as possible), therefore no display of measured volume. Instead, the TG01 is equipped with a pulse generator to transfer the measured volume (= pulses) to the EDU or PC (by means of the "RIGAMO"-software).

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-grey	PVC-grey	2.0	40
6	PP-grey	PP-grey	1.4	80
7	PVDF	PVDF	2.5	100
8	PE-el	PE-el	1.4	60
<b>• Caution</b> Before and after measurements with <b>oxygen</b> purge the meter with an inert gas to avoid the danger of <b>explosion</b> .				

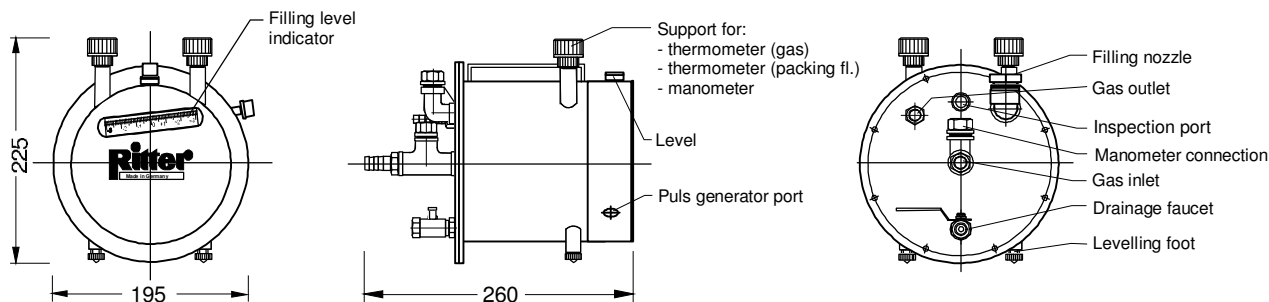
For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

4-Chamber Measuring Drum	Viton Sealing
Pulse Generator V5.0 (inductive proximity switch, NAMUR)	Level
High Precision Packing Liquid Level Indicator (HPLI)	Levelling Feet
Manometer/Thermometer Supports	

### Accessories:

Electronic Display Unit EDU 32 FP (needed for volume display) including Interface RS 232 and Analog Output
Pulse Generator, EX-proof version
Thermometer (gas), range 0° to +60°C
Thermometer (packing liquid), range 0° to +60°C
Manometer, range 10 mbar differential pressure



### Performance Data:

Minimum flow $Q_{\min}$	0.1 ltr/h	<b>Maximum gas inlet pressure</b>	<b>1 bar</b>
Standard flow $Q_{\text{stand}}$	10 ltr/h	Minimum differential pressure <sup>1)</sup>	0.3 mbar
Maximum flow $Q_{\max}$	30 ltr/h	Minimum indication @ EDU 32 <sup>2)</sup>	0.002 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication @ EDU 32 <sup>2)</sup>	999.9999 ltr
Packing liquid quantity, approx.	1.3 ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	0.1 ltr/Rev.	Hose barb outside diameter	11.2 mm

<sup>1)</sup> Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup> No mechanical counter mechanism at the TG01 (to keep the friction as low as possible), therefore no display of measured volume. Instead, the TG01 is equipped with a pulse generator to transfer the measured volume (= pulses) to the EDU or PC (by means of the "RIGAMO"-software).

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	2.7	40
2	Stainless Steel	PE-el	2.1	60
3	Stainless Steel	PP	2.1	80
4	Stainless steel	PVDF	3.2	100 (because of pulse generator)

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

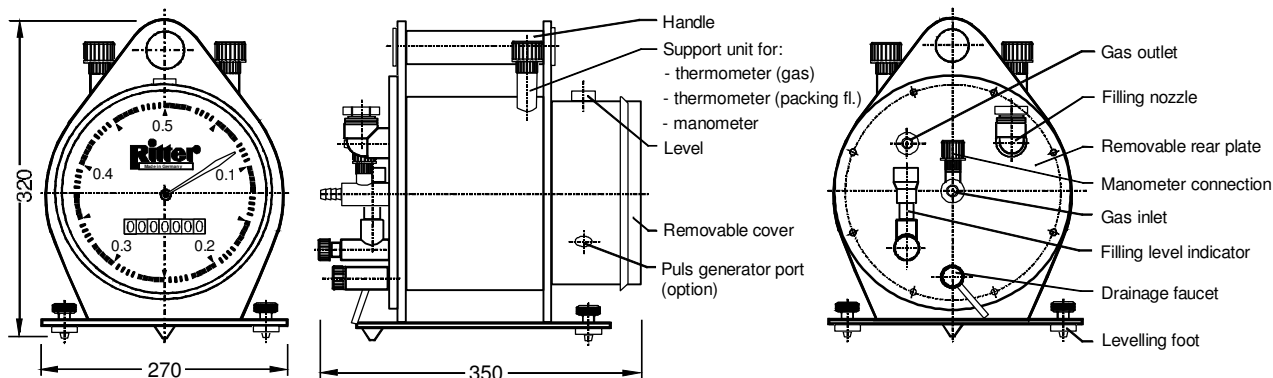
### Standard Equipment:

4-Chamber Measuring Drum	Viton Sealing
Pulse Generator V5.0 (inductive proximity switch, NAMUR)	Level
High Precision Packing Liquid Level Indicator (HPLI)	Levelling Feet
Manometer/Thermometer Supports	

### Accessories:

Electronic Display Unit EDU 32 FP (needed for volume display) including Interface RS 232 and Analog Output
Pulse Generator, EX-proof version
Thermometer (gas), range 0° to +60°C
Thermometer (packing liquid), range 0° to +60°C
Manometer, range 10 mbar differential pressure





### Performance Data:

Minimum flow $Q_{\min}$	1 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{\text{stand}}$	50 ltr/h	Minimum differential pressure <sup>1)</sup>	0.4 mbar
Maximum flow $Q_{\max}$	60 ltr/h	Minimum dial division	0.002 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	9,999,999.9 ltr
Packing liquid quantity, approx.	2.5 ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	0.5 ltr/Rev.	Hose barb outside diameter	16 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	4.0	40
6	PP-grey	PP-grey	3.0	80
7	PVDF	PVDF	5.0	120
8	PE-el	PE-el	3.0	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

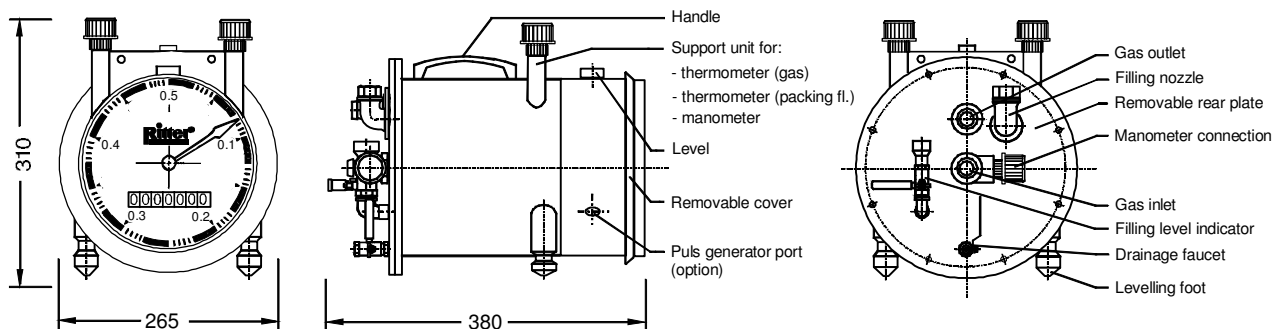
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 7-digit + 1 decimal (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	1 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{\text{stand}}$	50 ltr/h	Minimum differential pressure <sup>1)</sup>	0.4 mbar
Maximum flow $Q_{\max}$	60 ltr/h	Minimum dial division	0.002 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	9,999,999.9 ltr
Packing liquid quantity, approx.	3.5 ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	0.5 ltr/Rev.	Hose barb outside diameter	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	8.3	40
2	Stainless Steel	PE-el	8.2	60
3	Stainless steel	PP-grey	8.2	80
4	Stainless steel	PVDF	8.5	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

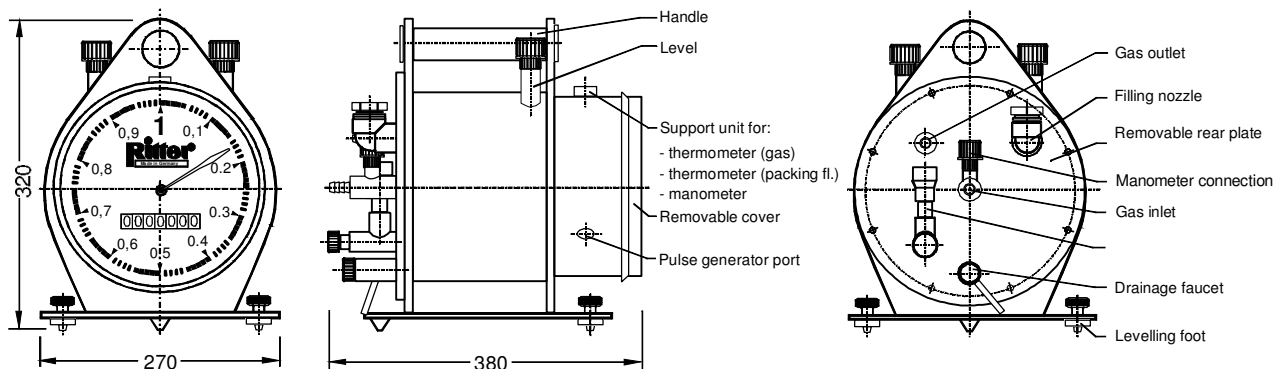
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### **Built-in Options:**

LCD display, resettable, 7-digit + 1 decimal (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{min}$	2 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{stand}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	3.0 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb outside diameter	16 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	4.3	40
6	PP-grey	PP-grey	3.1	80
7	PVDF	PVDF	5.1	120
8	PE-el	PE-el	3.1	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

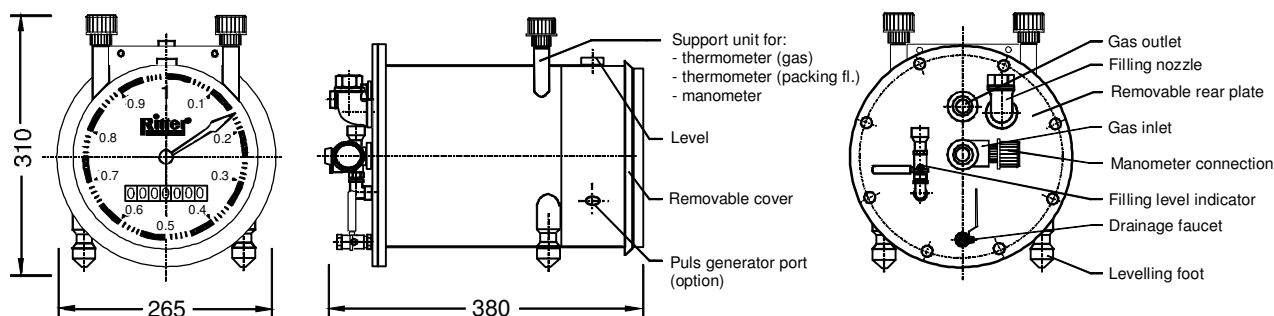
### Accessories:

Thermometer (gas), range 0° to +60 °C  
 Thermometer (packing liquid), range 0° to +60 °C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)





### Performance Data:

Minimum flow $Q_{min}$	2 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{stand}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	3.5 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb outside diameter	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	8.5	40
2	Stainless Steel	PE-el	8.3	60
3	Stainless steel	PP-grey	8.3	80
4	Stainless steel	PVDF	8.9	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

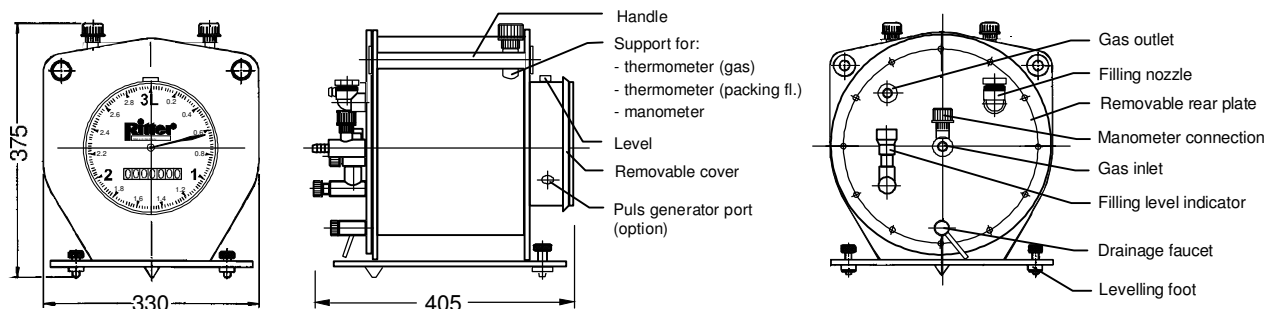
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	6 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{\text{stand}}$	300 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	360 ltr/h	Minimum dial division	0.02 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	5.8 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	3.0 ltr/Rev.	Hose barb outside diameter	16 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	6.3	40
6	PP-grey	PP-grey	4.5	80
7	PVDF	PVDF	8.1	120
8	PE-el	PE-el	4.5	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

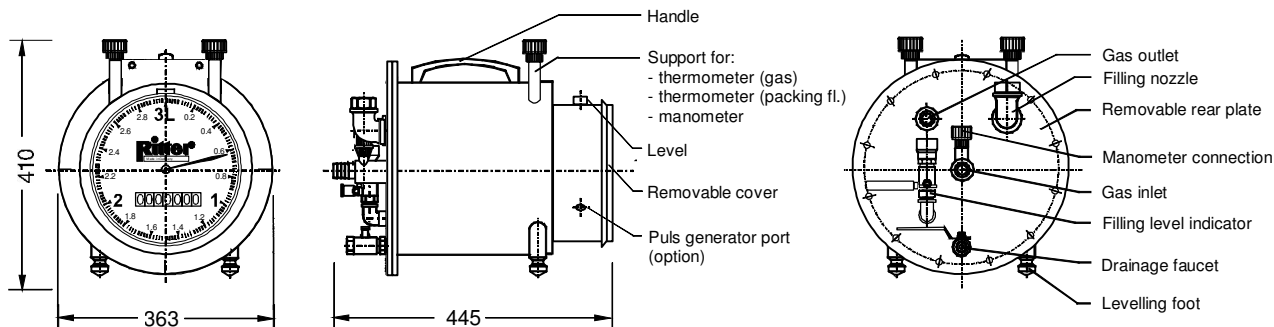
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### **Built-in Options:**

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{min}$	6 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{stand}$	300 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	360 ltr/h	Minimum dial division	0.02 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	11 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	3.0 ltr/Rev.	Hose barb outside diameter	17 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	15.8	40
2	Stainless Steel	PE-el	15.7	60
3	Stainless steel	PP-grey	15.7	80
4	Stainless steel	PVDF	16.2	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

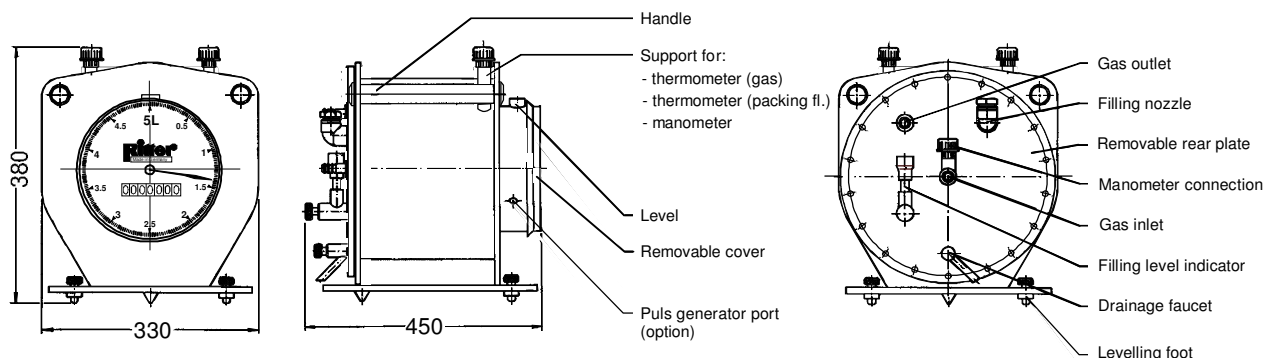
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	10 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{\text{stand}}$	500 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	600 ltr/h	Minimum dial division	0.02 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	8.5 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	5.0 ltr/Rev.	Hose barb outside diameter	16 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	7.1	40
6	PP-grey	PP-grey	4.9	80
7	PVDF	PVDF	9.2	120
8	PE-el	PE-el	4.9	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

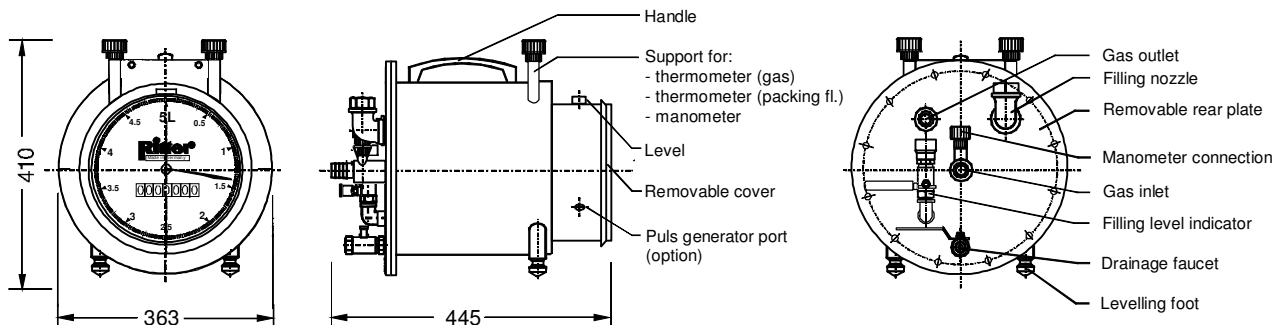
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	10 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{\text{stand}}$	500 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	600 ltr/h	Minimum dial division	0.02 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	11 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	5.0 ltr/Rev.	Hose barb outside diameter	17 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	15.0	40
2	Stainless Steel	PE-el	14.8	60
3	Stainless steel	PP-grey	14.8	80
4	Stainless steel	PVDF	15.2	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

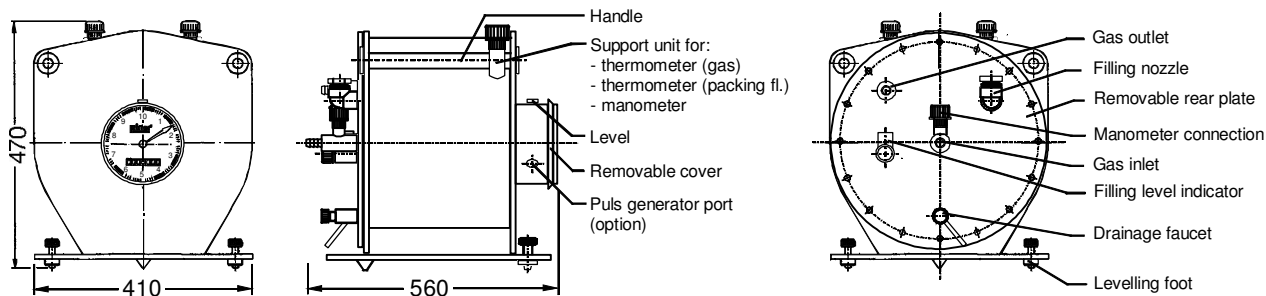
### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)





### Performance Data:

Minimum flow $Q_{\min}$	20 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{\text{stand}}$	1,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	1,200 ltr/h	Minimum dial division	0.1 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	15.5 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	10.0 ltr/Rev.	Hose barb outside diameter	25 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	10.6	40
6	PP-grey	PP-grey	7.8	80
7	PVDF	PVDF	13.6	120
8	PE-el	PE-el	7.8	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

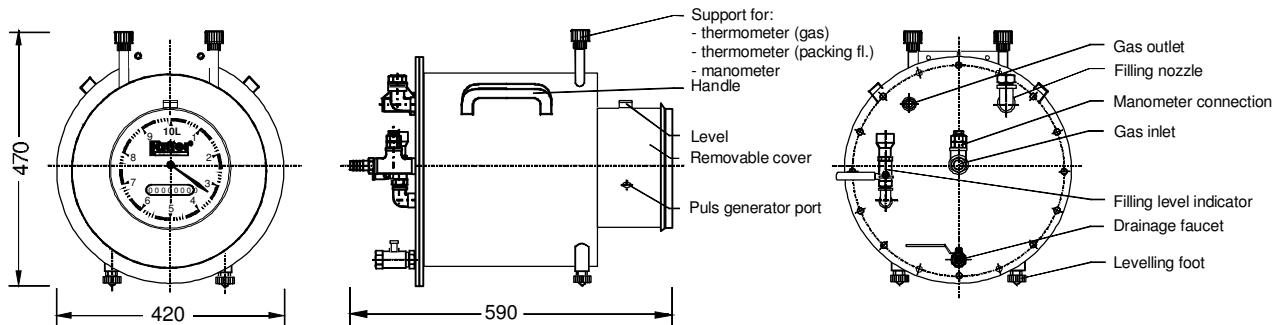
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### **Built-in Options:**

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	20 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{\text{stand}}$	1,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	1,200 ltr/h	Minimum dial division	0.1 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	21 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	10.0 ltr/Rev.	Hose barb outside diameter	34 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	25.6	40
2	Stainless Steel	PE-el	25.2	60
3	Stainless steel	PP-grey	25.2	80
4	Stainless steel	PVDF	25.8	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

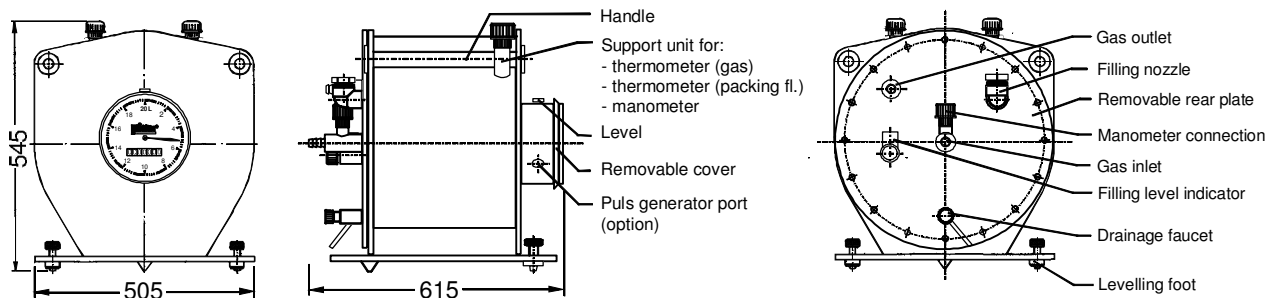
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8-digit)	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60 °C  
 Thermometer (packing liquid), range 0° to +60 °C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	40 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{\text{stand}}$	3,200 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	4,000 ltr/h	Minimum dial division	0.2 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	999,999.990 ltr
Packing liquid quantity, approx.	28.5 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	20.0 ltr/Rev.	Hose barb outside diameter	25 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	18.0	40
6	PP-grey	PP-grey	13.4	80
7	PVDF	PVDF	23.2	120
8	PE-el	PE-el	13.4	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

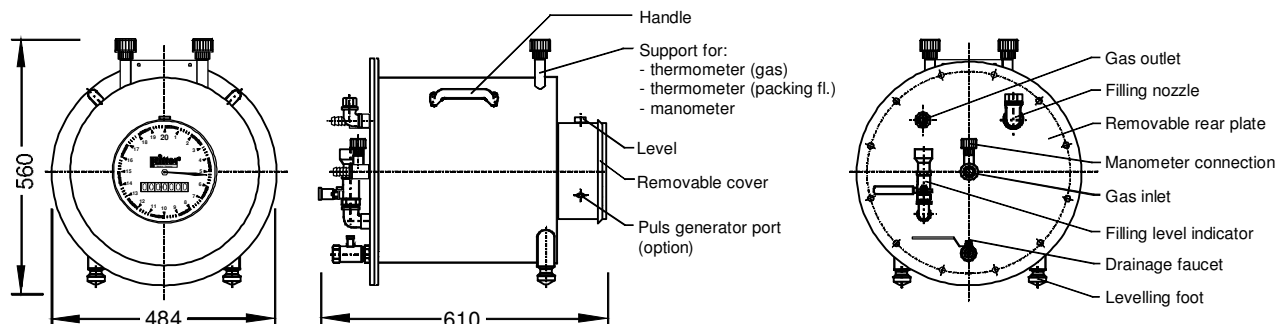
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{min}$	40 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{stand}$	3,200 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{max}$	4,000 ltr/h	Minimum dial division	0.2 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	999,999.990 ltr
Packing liquid quantity, approx.	30 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	20.0 ltr/Rev.	Hose barb outside diameter	25 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	31.6	40
2	Stainless Steel	PE-el	31.2	60
3	Stainless steel	PP-grey	31.2	80
4	Stainless steel	PVDF	32.4	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

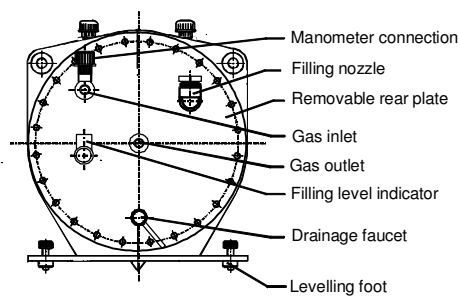
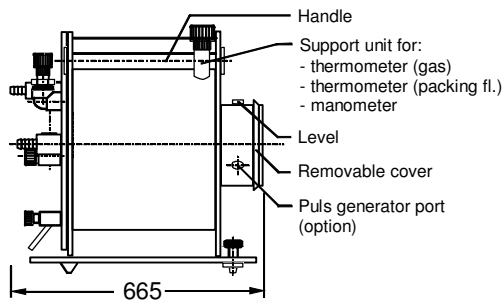
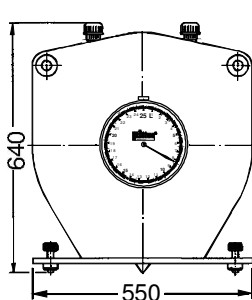
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{min}$	50 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{stand}$	5,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{max}$	7,000 ltr/h	Minimum dial division	0.1 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	42 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	25 ltr/Rev.	Hose barb outside diameter	32 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	26.7	40
6	PP-grey	PP-grey	19.4	80
7	PVDF	PVDF	34.5	120
8	PE-el	PE-el	19.4	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

5-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	Level, Levelling Feet

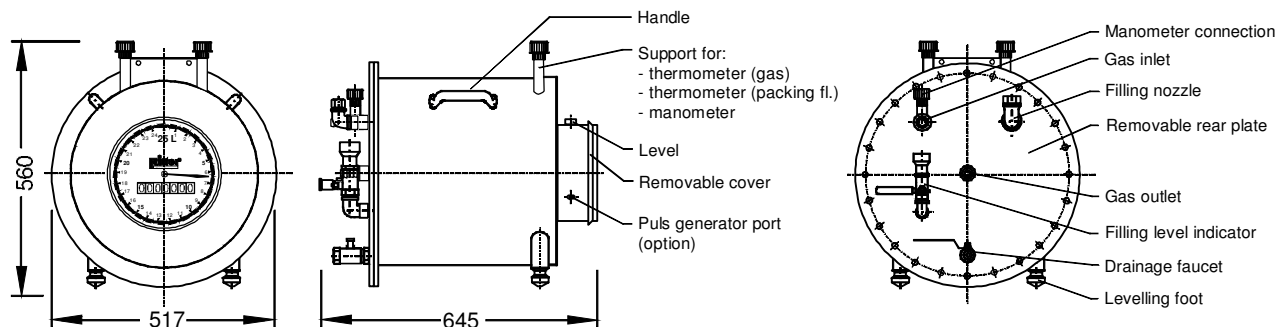
### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)





### Performance Data:

Minimum flow $Q_{\min}$	50 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{\text{stand}}$	5,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	7,000 ltr/h	Minimum dial division	0.1 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	39 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	25 ltr/Rev.	Hose barb outside diameter	25 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	40.0	40
2	Stainless Steel	PE-el	39.6	60
3	Stainless steel	PP-grey	39.6	80
4	Stainless steel	PVDF	40.8	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

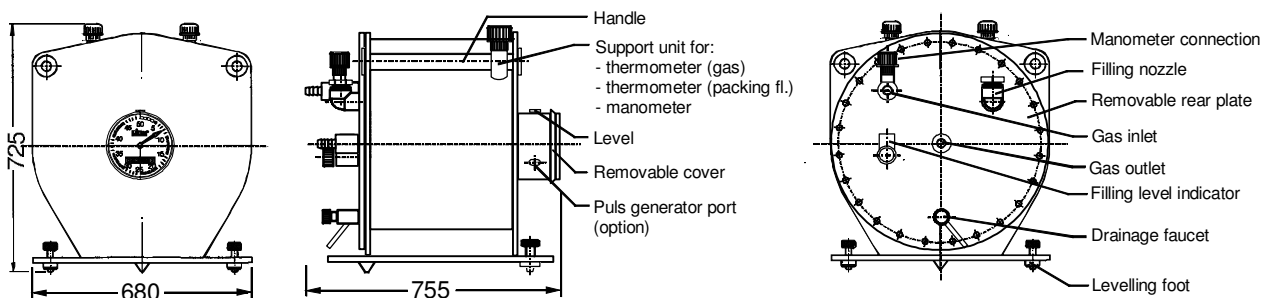
5-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	100 ltr/h	Maximum gas inlet pressure	50 mbar
Standard flow $Q_{\text{stand}}$	10,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	18,000 ltr/h	Minimum dial division	0.5 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	91 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	50.0 ltr/Rev.	Hose barb outside diameter	40 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  
⇒ gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
5	PVC-transparent	PVC-grey	57.0	40
6	PP-grey	PP-grey	40.7	80
7	PVDF	PVDF	73.3	120
8	PE-el	PE-el	40.7	60

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

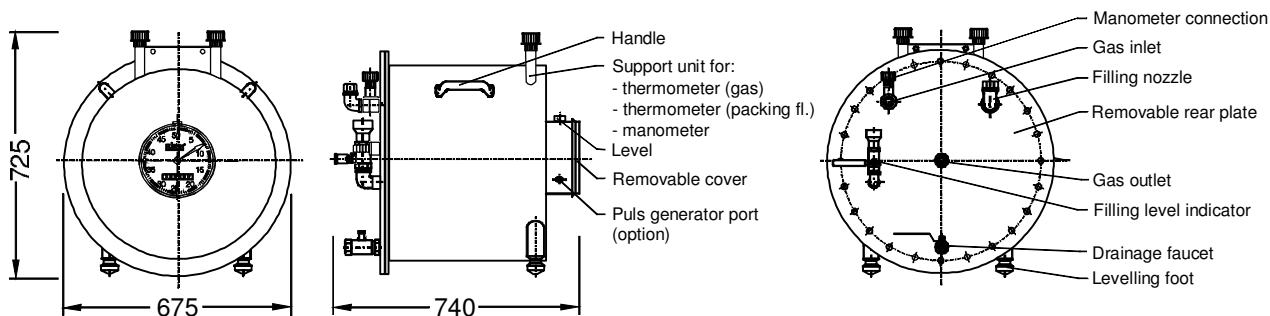
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	100 ltr/h	Maximum gas inlet pressure	500 mbar
Standard flow $Q_{\text{stand}}$	10,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	18,000 ltr/h	Minimum dial division	0.5 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	88 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	50.0 ltr/Rev.	Hose barb outside diameter	40 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	91.0	40
2	Stainless Steel	PE-el	90.0	60
3	Stainless steel	PP-grey	90.0	80
4	Stainless steel	PVDF	94.2	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

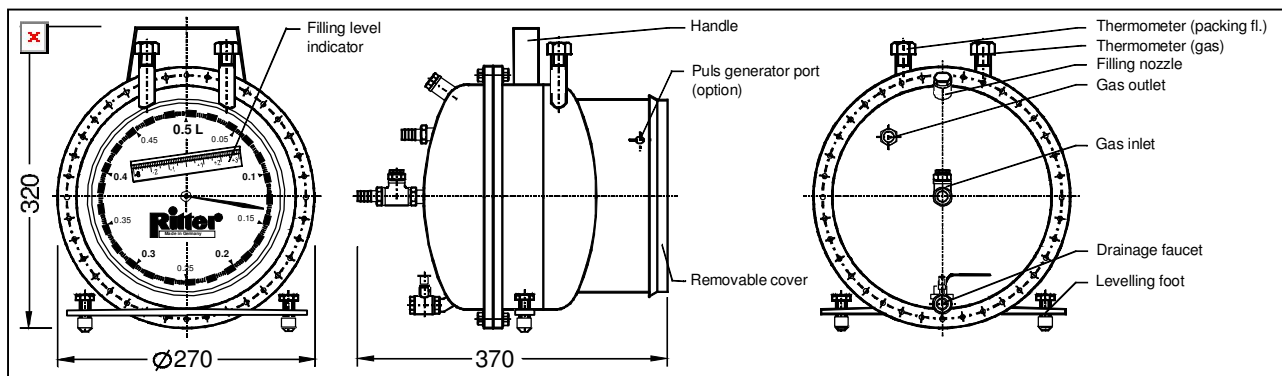
4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	Level, Levelling Feet

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 10 mbar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)



### Performance Data:

Minimum flow $Q_{\min}$	1 ltr/h	<b>Maximum gas inlet <u>overpressure</u></b>	<b>6 bars</b>
Standard flow $Q_{\text{stand}}$	50 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	60 ltr/h	Minimum dial division	0.002 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	9,999,999.9 ltr
Packing liquid quantity, approx.	4 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	0.5 ltr/Rev.	Hose barb diameter (external)	11 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	14.0	40
2	Stainless steel	PE-el	13.9	60
3	Stainless steel	PP-grey	13.9	80
4	Stainless steel	PVDF	14.2	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

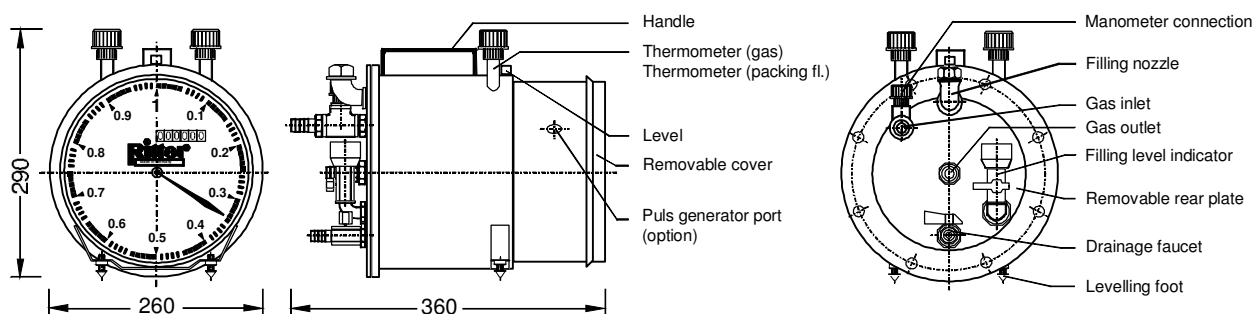
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### **Built-in Options:**

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{\min}$	2 ltr/h	Maximum gas inlet pressure	1 bar
Standard flow $Q_{\text{stand}}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	$\pm 0.2 \%$	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	3 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb diameter (external)	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	19.6	40
2	Stainless Steel	PE-el	19.1	60
3	Stainless steel	PP-grey	19.1	80
4	Stainless steel	PVDF	21.2	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8 digits)	Level, Levelling Feet

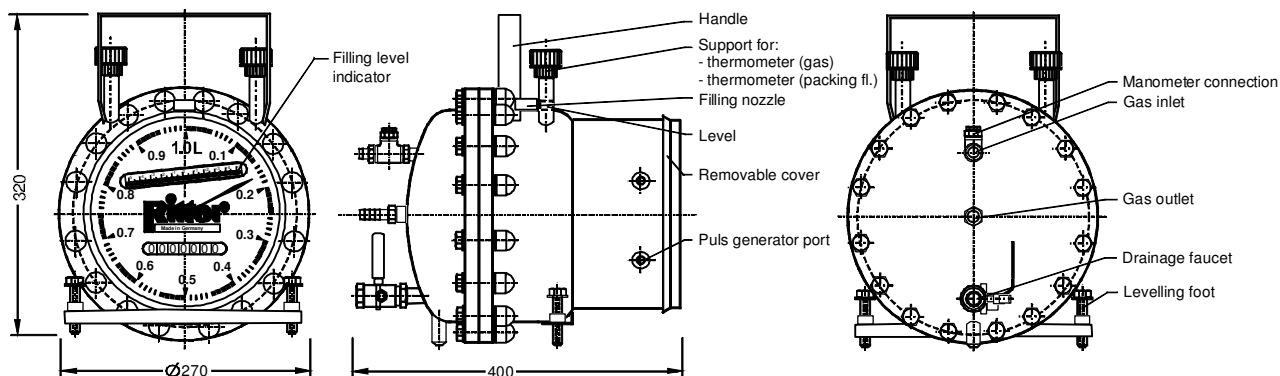
### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)  
 High Precision Liquid Level Indicator (HPLI)





### Performance Data:

Minimum flow $Q_{\min}$	2 ltr/h	Maximum gas inlet pressure	6 bar
Standard flow $Q_{\text{stand}}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	4 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb diameter (external)	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	14.3	40
2	Stainless Steel	PE-el	14.1	60
3	Stainless steel	PP-grey	14.1	80
4	Stainless steel	PVDF	14.7	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

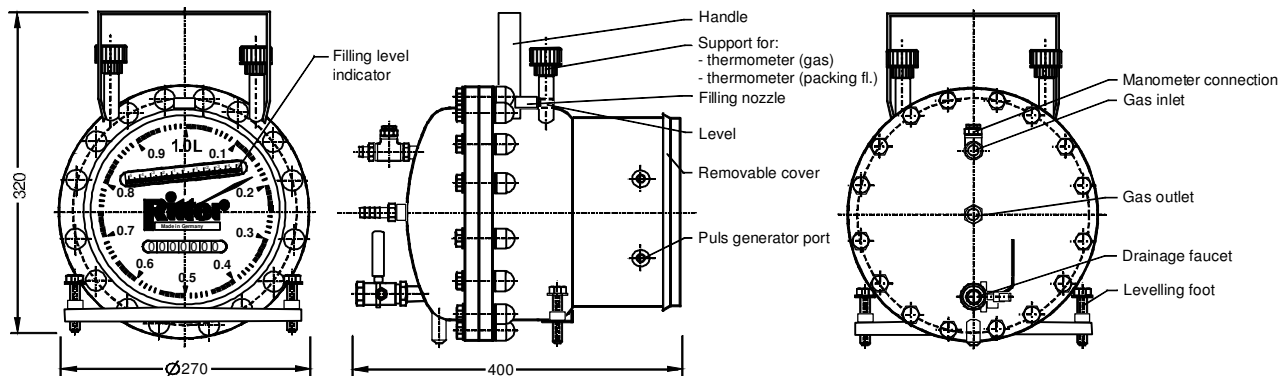
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{\min}$	2 ltr/h	<b>Maximum gas inlet pressure</b>	<b>6 bar</b>
Standard flow $Q_{\text{stand}}$	200 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	300 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	± 0.2 %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	4 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb diameter (external)	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet ⇒ gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
<b>1</b>	Stainless steel	PVC-grey	14.3	40
<b>2</b>	Stainless Steel	PE-el	14.1	60
<b>3</b>	Stainless steel	PP-grey	14.1	80
<b>4</b>	Stainless steel	PVDF	14.7	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

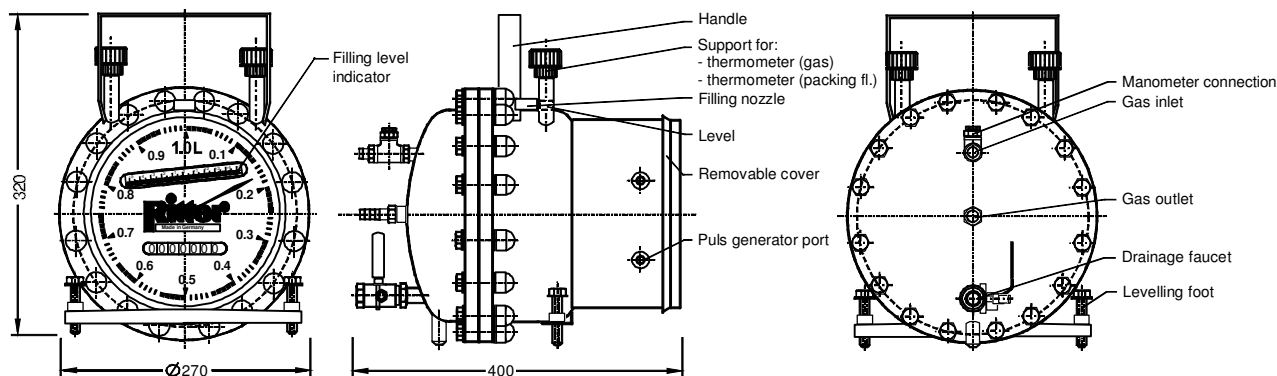
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{min}$	2 ltr/h	Maximum gas inlet pressure	10 bar
Standard flow $Q_{stand}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	± 0.2 %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	4 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb diameter (external)	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet ⇒ gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	14.3	40
2	Stainless Steel	PE-el	14.1	60
3	Stainless steel	PP-grey	14.1	80
4	Stainless steel	PVDF	14.7	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

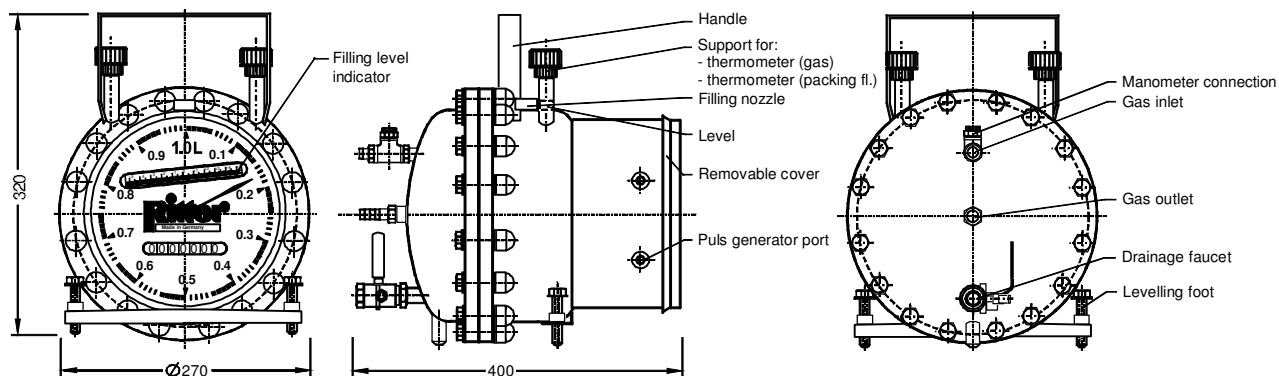
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60 °C  
 Thermometer (packing liquid), range 0° to +60 °C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{min}$	2 ltr/h	Maximum gas inlet pressure	16 bar
Standard flow $Q_{stand}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	4 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	1.0 ltr/Rev.	Hose barb diameter (external)	12 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	14.3	40
2	Stainless Steel	PE-el	14.1	60
3	Stainless steel	PP-grey	14.1	80
4	Stainless steel	PVDF	14.7	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

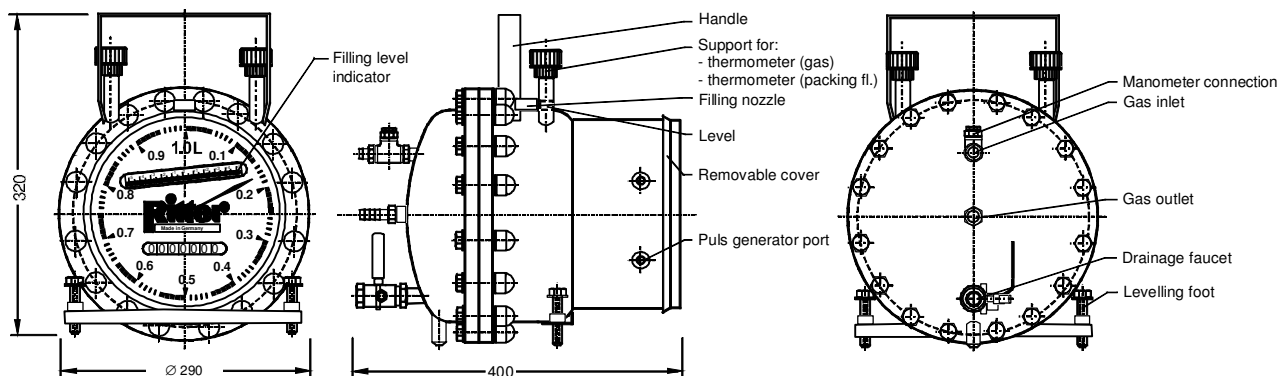
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



Graphic shows option "High Precision Level Indicator" (HPLI)

### Performance Data:

Minimum flow $Q_{min}$	2 ltr/h	Maximum gas inlet pressure	35 bar
Standard flow $Q_{stand}$	100 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	120 ltr/h	Minimum dial division	0.01 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	4 Ltr	Connection gas in/outlet	NPT 1/2" female
Measuring drum volume	1.0 ltr/Rev.		

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	18.3	40
2	Stainless Steel	PE-el	18.1	60
3	Stainless steel	PP-grey	18.1	80
4	Stainless steel	PVDF	18.7	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

4-Chamber Measuring Drum	Manometer/Thermometer Supports
Magnetic Coupling	Viton Sealing
Totalizing Roller Counter (8 digits)	Level, Levelling Feet

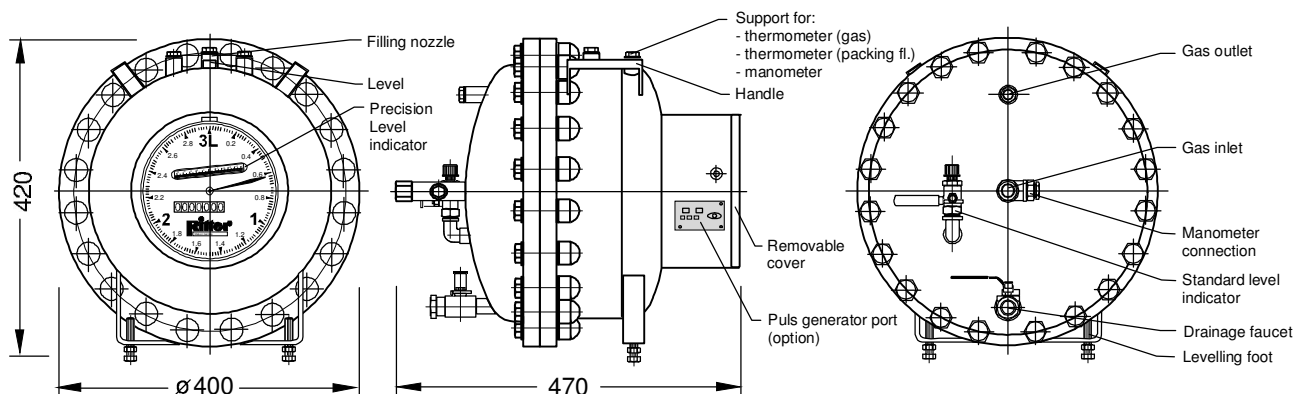
### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)





### Performance Data:

Minimum flow $Q_{\min}$	10 ltr/h	Maximum gas inlet pressure	6 bar
Standard flow $Q_{\text{stand}}$	500 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{\max}$	600 ltr/h	Minimum dial division	0.02 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	11 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	5.0 ltr/Rev.	Hose barb diameter (external)	15 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	27.7	40
2	Stainless Steel	PE-el	27.5	60
3	Stainless steel	PP-grey	27.5	80
4	Stainless steel	PVDF	28.1	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

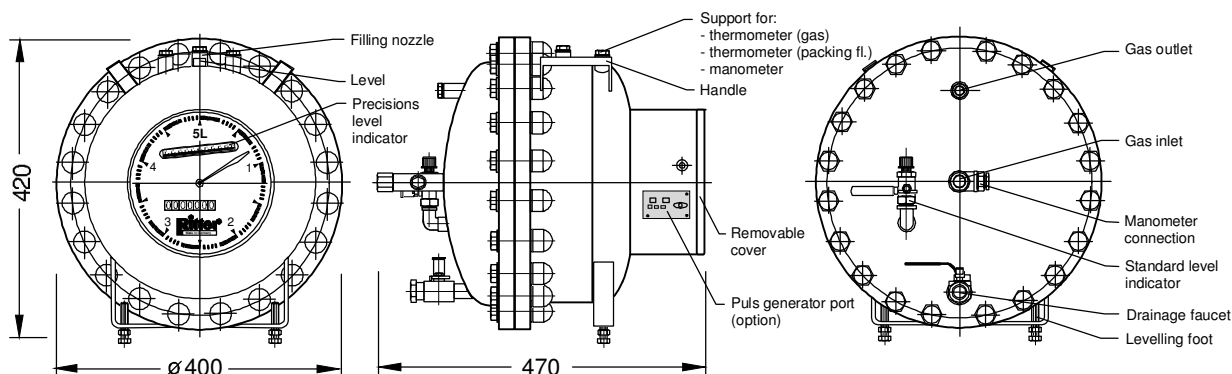
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{min}$	10 ltr/h	Maximum gas inlet pressure	6 bar
Standard flow $Q_{stand}$	500 ltr/h	Minimum differential pressure <sup>1)</sup>	0.2 mbar
Maximum flow $Q_{max}$	600 ltr/h	Minimum dial division	0.02 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	99,999,999 ltr
Packing liquid quantity, approx.	12 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	5.0 ltr/Rev.	Hose barb diameter (external)	15 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	31.1	40
2	Stainless Steel	PE-el	30.9	60
3	Stainless steel	PP-grey	30.9	80
4	Stainless steel	PVDF	31.5	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

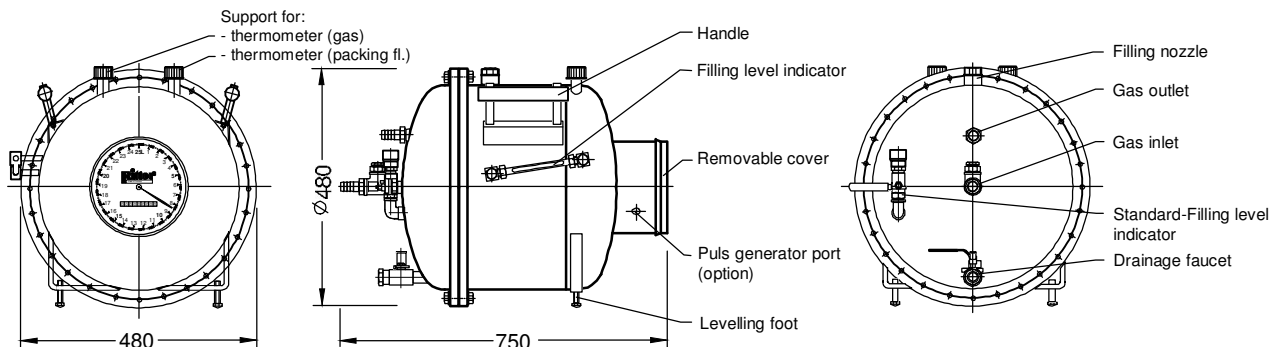
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter (8 digits)	

### Accessories:

Thermometer (gas), range 0° to +60 °C  
 Thermometer (packing liquid), range 0° to +60 °C  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{\min}$	40 ltr/h	Maximum gas inlet pressure	6 bar
Standard flow $Q_{\text{stand}}$	3,200 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	4,000 ltr/h	Minimum dial division	0.2 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	35 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	20.0 ltr/Rev.	Hose barb diameter (ext./int.)	25/18 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	45.0	40
2	Stainless steel	PE-el	44.5	60
3	Stainless steel	PP-grey	44.5	80
4	Stainless steel	PVDF	46.6	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

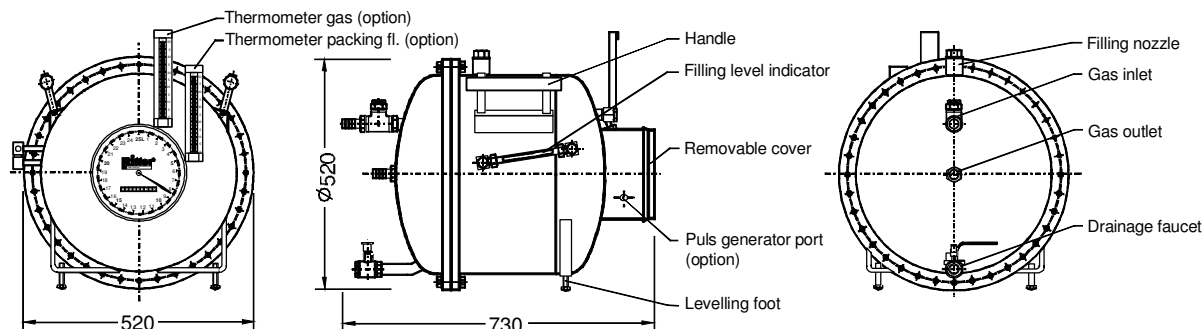
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
4-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 0...6 bar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)  
 Data acquisition software „Rigamo“, single- & multi-channel versions (requires Pulse Generator)

#### **Built-in Options:**

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{min}$	50 ltr/h	Maximum gas inlet pressure	6 bar
Standard flow $Q_{stand}$	5,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{max}$	7,000 ltr/h	Minimum dial division	0.2 ltr
Measuring accuracy	± 0.2 %	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	42 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	25.0 ltr/Rev.	Hose barb diameter (ext./int.)	25/18 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet ⇒ gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	53.0	40
2	Stainless Steel	PE-el	52.5	60
3	Stainless steel	PP-grey	52.5	80
4	Stainless steel	PVDF	54.6	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **RITTER**.

### Standard Equipment:

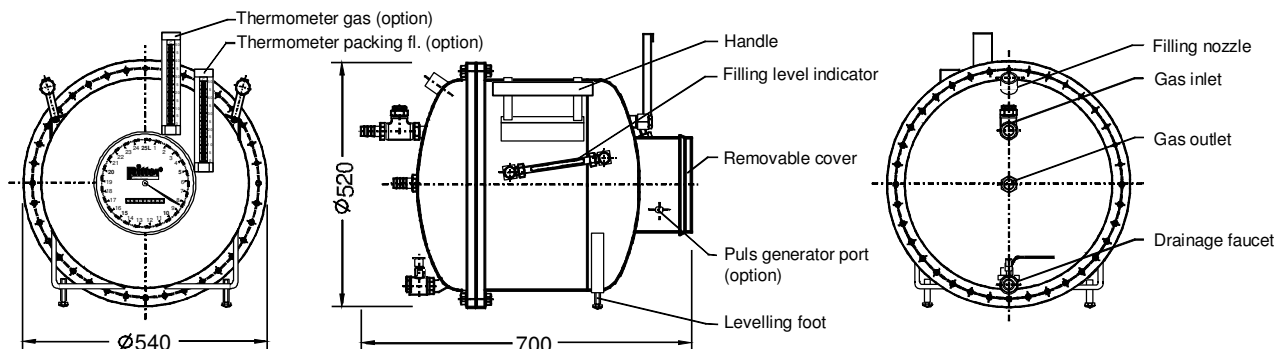
High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
5-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	

### Accessories:

Thermometer (gas), range 0° to +60°C  
 Thermometer (packing liquid), range 0° to +60°C  
 Manometer, range 0...6 bar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)



### Performance Data:

Minimum flow $Q_{\min}$	50 ltr/h	Maximum gas inlet pressure	10 bar
Standard flow $Q_{\text{stand}}$	5,000 ltr/h	Minimum differential pressure <sup>1)</sup>	0.1 mbar
Maximum flow $Q_{\max}$	7,000 ltr/h	Minimum dial division	0.2 ltr
Measuring accuracy	$\pm 0.2$ %	Maximum indication value <sup>2)</sup>	999,999,990 ltr
Packing liquid quantity, approx.	46 Ltr	Connection gas in/outlet	Hose barb
Measuring drum volume	25.0 ltr/Rev.	Hose barb diameter (ext./int.)	25/18 mm

<sup>1)</sup>Differential pressure (= pressure loss) gas inlet  $\Rightarrow$  gas outlet

<sup>2)</sup>Standard Totalizing Roller Counter

### Models (Materials):

Model	Casing	Measuring drum	Weight (kg) (without packing liquid)	Max. constant use temperature °Celsius
1	Stainless steel	PVC-grey	53.0	40
2	Stainless Steel	PE-el	52.5	60
3	Stainless steel	PP-grey	52.5	80
4	Stainless steel	PVDF	54.6	120

• **Caution** Before and after measurements with **oxygen** purge the meter with an inert gas to avoid the danger of **explosion**.

For chemical resistance properties please contact **ITTER**.

### Standard Equipment:

High Precision Liquid Level Indicator (HPLI)	Manometer/Thermometer Supports
5-Chamber Measuring Drum	Viton Sealing
Magnetic Coupling	Level, Levelling Feet
Totalizing Roller Counter, 9 digits, last digit (unit) = 0	

### Accessories:

Thermometer (gas), range 0° to +60 °C  
 Thermometer (packing liquid), range 0° to +60 °C  
 Manometer, range 10 bar differential pressure  
 Electronic Display Unit, including Interface RS 232 and Analog Output (requires Pulse Generator)

#### Built-in Options:

LCD display, resettable, 8-digit (substitutes Totalizing Roller Counter)  
 Pulse Generator, standard or Ex-proof version (for connecting Electronic Display Unit/Computer)