



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



TG 1 PP
Model 7

(Fig. with LED Counter resettable)

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.

RITTER™ gas meters are manufactured out of 5 different excellent materials: Polyvinyl Chloride (PVC), Polypropylene (PP), Polyvinylidene Fluoride (PVDF), PE-el (polyethylene electrically conductive) or refined stainless steel 1.4571 (316 Ti). Thus, the user is able to measure even highly aggressive gases with laboratory accuracy.

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 8 sizes (types) extending as a whole from 1 Ltr/h to 18,000 Ltr/h at a gas temperature ranging from -10°C to +80°C. The solidly manufactured casing of the standard meters is designed to withstand a maximum overpressure of 50 mbar (plastic casings) or 500 mbar (stainless steel casings); meters for higher pressure ranges up to 35 bars are available.

The measurement of **RITTER** drum-type gas meters works on the principle of displacement. The gas flow causes a rotation of the measuring drum within a packing fluid (usual: water or low viscous oil). The measuring drum compulsorily measures the gas volume by periodically filling and emptying the rigid measuring chambers.

Fastidious production methods and calibration enable a mea-

suring accuracy of $\pm 0.2\%$ at standard flow rate and approx. $\pm 0.5\%$ over the whole measuring range.

The **direct** measurement of volume is 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 measurands such as speed, heat capacity, hot-wire resistance or similar. That means that the condition and the composition of the gas do not influence 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 measurements the accuracy given for that measurement can only be achieved if the correcting factors for the actual gas condition or gas mixture are exactly known.



TG 1 – 35 bar

(Fig. with Pulse Generator ex-version)



TG 50 PP
Model 6

(Fig. with "Resettable Roller Counter")

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:

- Measurement accuracy:
± 0.2% at standard flow rate (exact value is stated in individual Calibration Certificate),
approx. ± 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	Drum Capacity [ltr]	Flow Rate			Indication	
		Minimum [ltr/h]	Maximum [ltr/h]	Standard [ltr/h]	Min. Dial Division [ltr]	Maximum Value [ltr]
TG 05	0.5	1	60	50	0.002	9,999,999.9
TG 1	1	2	120	100	0.01	99,999,999
TG 3	3	6	360	300	0.02	99,999,999
TG 5	5	10	600	500	0.02	99,999,999
TG 10	10	20	1,200	1,000	0.1	99,999,999
TG 20	20	40	4,000	3,200	0.2	999,999,990
TG 25	25	50	7,000	5,000	0.1	999,999,990
TG 50	50	100	18,000	10,000	0.5	999,999,990

Available Models (materials of construction):

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

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 thermoplastic and stainless steel casings are welded.

Accessories:

- Data acquisition software "Rigamo"
- Thermometer (gas), range 0° to +60°C
- Thermometer (packing liquid), range 0° to +60°C
- Manometer, range 10 mbar differential pressure

Built-in Options:

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