

# Compressed air counter DN 65-250

testo 6446, testo 6447

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Measurement of norm volume flow in the measuring range 6.7 to 27500 m<sup>3</sup>/h (DN65 to DN350 or 2½''-10'')

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Exchangeable fitting: Probe removal under pressure possible (testo 6447 only)

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Material selectable between galvanized steel and stainless steel

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Highest flexibility thanks to different signal outputs:

- Analog output 4 to 20 mA (4-wire)
  - Pulse output
  - 2 switch outputs (parameterizable: consumption or volume flow-dependent, opener, closer, hysteresis, window)
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Built-in totalizer, even without additional analysis unit

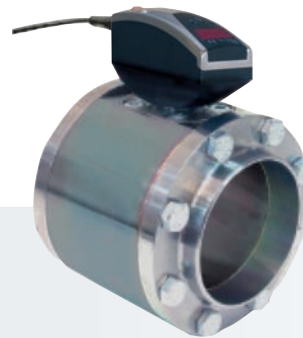
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Operating menu with LED display

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Cleanable sensor

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testo 6446



testo 6447

m<sup>3</sup>/h;  
l/min;  
m<sup>3</sup>

°C

The compressed air counters testo 6441 to testo 6444 are designed for the measurement, monitoring and recording of compressed air consumption, and therefore also for the determination of leakages in compressed air systems, consumption-based allocation of costs and the implementation of peak load management. The compressed air counters testo 6441 to testo 6444 record norm volume flow according to the calorimetric principle, which means the measurement procedure is independent of the process pressure and does not cause a permanent pressure drop.

The version testo 6447 offers everything the testo 6446 provides, in addition the removal of the probe under pressure is possible (patented screw fitting). The larger nominal values refer especially to important compressed air pipelines, often the main supply line after preparation.



# Technical data

	DN 65 (2 1/2")	DN 80 (3")	DN 100 (4")	DN 125 (5")	DN 150 (6")	DN 200 (8")	DN 250 (10")
<b>Parameters</b>							
<b>(Norm) volume flow</b>							
Selectable units	m <sup>3</sup> /h, l/min, m <sup>3</sup> /min, m <sup>3</sup>						
Measuring range <sup>1</sup>	6 to 2000 m <sup>3</sup> /h	9 to 2750 m <sup>3</sup> /h	15 to 4440 m <sup>3</sup> /h	23 to 7000 m <sup>3</sup> /h	33 to 10000 m <sup>3</sup> /h	58 to 17500 m <sup>3</sup> /h	92 to 27500 m <sup>3</sup> /h
Accuracy (norm volume flow)	For compressed air quality classes (ISO 8573: particles-humidity-oil) 1-4-1: ±3 % of meas. value ±0.3 % of final value For compressed air quality classes (ISO 8573: particles-humidity-oil) 3-4-4: ±6 % of meas. value ±0,6 % of final value						
Sensor	Thermal, glass-coated ceramic sensor (calorimetric measurement procedure)						
Response time	0.1 sec (for damping parameter = 0), delayable via operating menu (0 to 1 sec)						
<b>Temperature</b>							
Unit	°C						
Measuring range	0 to +60 °C / +32 to +140 °F						
Measurement uncertainty	±2 K						

## Inputs and outputs

### Analog outputs

Output type	4 to 20 mA (4-wire) freely scalable between zero and measuring range end
Load	max. 500 Ω

### Further outputs

Pulse output	Consumption quantity counter (value remains available after reset or power cut due to non-volatile memory), value 1 or 10 m <sup>3</sup> , pulse length 0.02 s to 2 s, 24 VDC level
Switch output	2 switch outputs, parameterizable (consumption or volume flow-dependent, opener, closer, hysteresis, window), loadable with max. 20 to 30 VDC or 250 mA each, switch status is displayed via 2 LEDs

### Supply

Voltage supply	19 to 30 VDC
Current consumption	<100 mA
Connection	M12 x 1 plug, loadable up to 250 mA, short-circuit-proof (synchronized), reverse-polarity-proof, overload-proof. Testo recommends the accessory cable order no. 0699 3393

## General technical data

### Design

Material housing	PBT-GF 20, PC (APEC), Makrolon, V2A (1.4301), Viton							
Measurement stretch length	124 mm	160 mm	160 mm	172 mm	180 mm	180 mm	196 mm	
Pipe diameter (measurement stretch)	DN 65 (2 1/2")	DN 80 (3")	DN 100 (4")	DN 125 (5")	DN 150 (6")	DN 200 (8")	DN 250 (10")	
Weight	testo 6446	8.3 kg	10.6 kg	12.7 kg	20.6 kg	25.4 kg	36 kg	48.4 kg
	testo 6447	9.2 kg	11.6 kg	13.7 kg	21.6 kg	26.4 kg	37 kg	49.4 kg

### Display

Screen/operation	4-figure alphanumerical display, two operating buttons, operating menu, LED (4 x green for phys. units, 3 x yellow for display x 1000 or switch status)						
Max. display value norm volume flow	0 to 2400 m <sup>3</sup> /h	0 to 3300 m <sup>3</sup> /h	0 to 5320 m <sup>3</sup> /h	0 to 8400 m <sup>3</sup> /h	0 to 12000 m <sup>3</sup> /h	0 to 21000 m <sup>3</sup> /h	0 to 33000 m <sup>3</sup> /h
Temperature display	0 to +60 °C						

### Miscellaneous

Protection class	IP65/III
EMC	according to guideline 89/336 EEC
Media contact	Materials stainless or galvanized steel, PEEK, polyester, Viton, anodized aluminium, ceramic

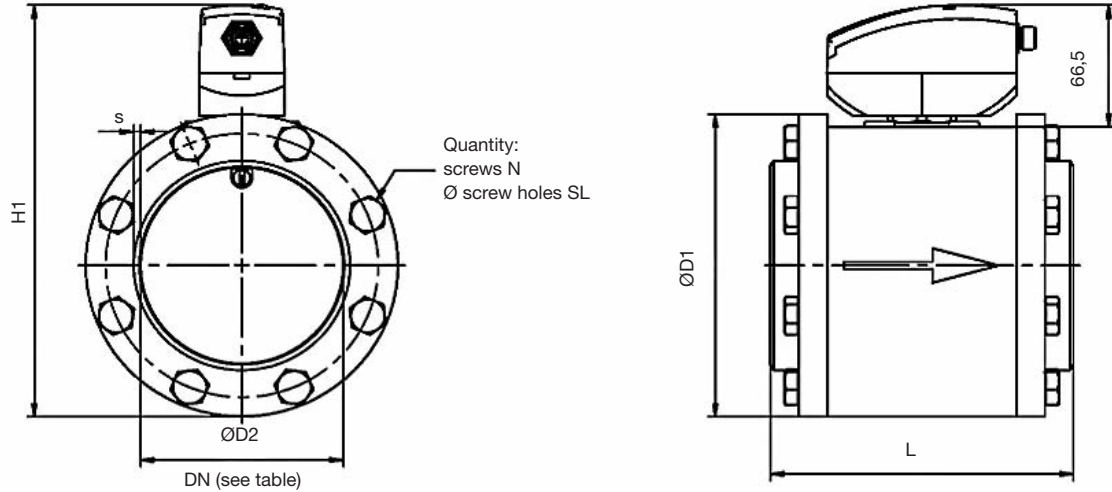
## Operating conditions

Humidity (sensor)	rel. humidity <90 %RH
Operating temperature (housing)	0 to +60 °C (+32 to +140 °F)
Storage temperature	-25 to +85 °C (-13 to +185 °F)
Measurement medium	Compressed air, on request also CO <sub>2</sub> or N <sub>2</sub>
Process pressure	PN 16 (max 16bar/232psi)
Air quality	ISO 8573: recommended classes 1-4-1

<sup>1</sup> Specifications according to DIN 2533 (+15 °C, 1013.25 hPa, 0 %RH)

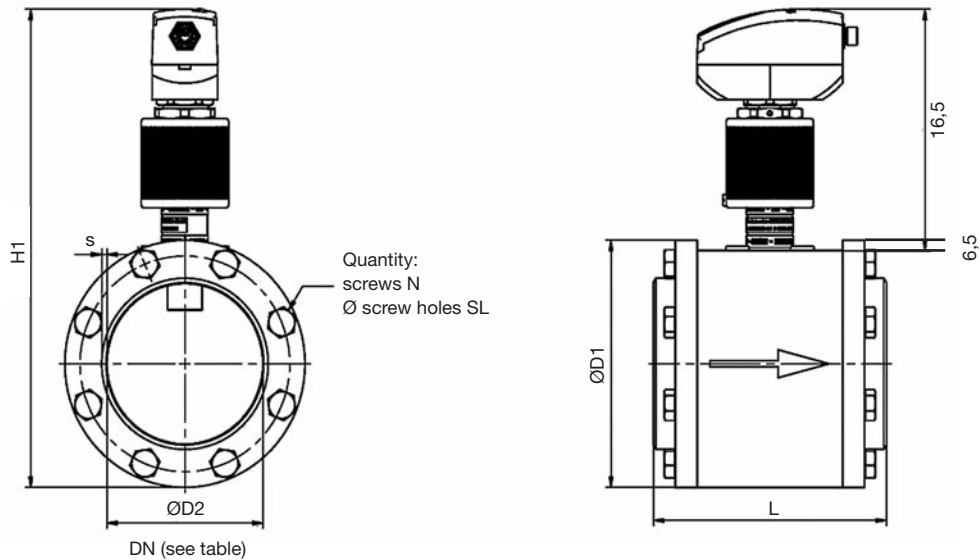
# Technical drawings

testo 6446



Nom. diam.	L (mm)	D1 (mm)	D2 (mm)	S (mm)	H1	N	SL	G1*(kg)
DN 65	124	125	70.3	2.9	185	8	13	8.3
DN 80	160	141	82.5	3.2	201	8	13	10.6
DN 100	160	165	107.1	3.6	225	8	13	12.7
DN 125	172	205	131.7	4.0	265	8	17	20.6
DN 150	180	235	159.3	4.5	295	8	17	25.4
DN 200	180	290	207.3	5.9	350	12	17	36.0
DN 250	196	355	260.4	6.3	415	12	21	48.4

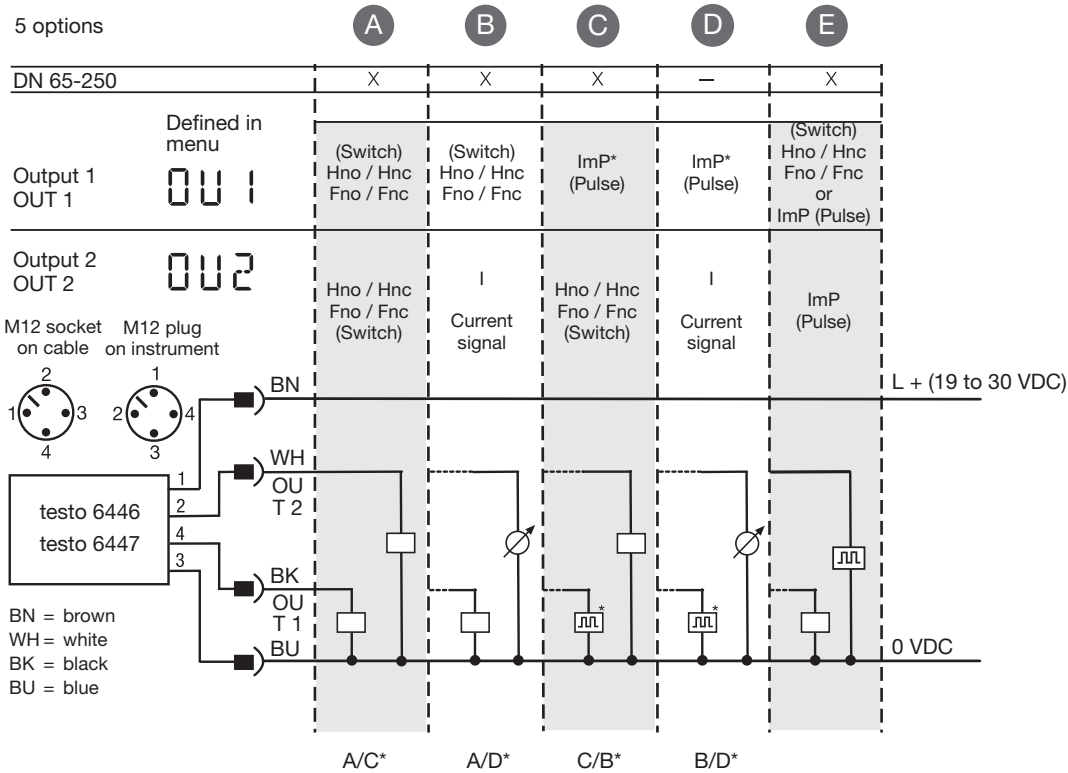
testo 6447



Nom. diam.	L (mm)	D1 (mm)	D2 (mm)	S (mm)	H1	N	SL	G1*(kg)
DN 65	124	125	70.3	2.9	279	8	13	9.3
DN 80	160	141	82.5	3.2	295	8	13	11.6
DN 100	160	165	107.1	3.6	319	8	13	13.7
DN 125	172	205	131.7	4.0	359	8	17	21.6
DN 150	180	235	159.3	4.5	389	8	17	26.4
DN 200	180	290	207.3	5.9	444	12	17	37.0
DN 250	196	355	260.4	6.3	509	12	21	49.4

# Technical drawings / Ordering example

## Electrical connection



\* If menu selection ImPR = Yes -> Pulse output  
If menu selection ImPR = No -> Switch output (pre-selection counter)

## Order data testo 6446, testo 6447

Version		0699 6446 / ... (Standard solution)		0699 6447 / ... (with probe removal under pressure)	
DN* mm	DN inch	 Material: galvanized steel	 Material: Stainless steel	 Material: galvanized steel	 Material: Stainless steel
65	2½	... / 1	... / 11	... / 1	... / 11
80	3	... / 2	... / 12	... / 2	... / 12
100	4	... / 3	... / 13	... / 3	... / 13
125	5	... / 4	... / 14	... / 4	... / 14
150	6	... / 5	... / 15	... / 5	... / 15
200	8	... / 6	... / 16	... / 6	... / 16
250	10	... / 7	... / 17	... / 7	... / 17

\* Customer-specific diameter between 65 mm and 250 mm available on request  
\*\* A connection cable, e.g. order no. 0699 3393 is required for operation.

## Ordering example

Order example for compressed air counter testo 6447 with the following options

- DN 150
- Probe removal under pressure
- Material stainless steel

Order no. 0699 6447 / 15