



### Special Features

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One measuring cartridge for all applications and locations of installation, suitable for surface and flush installation as well as for connection to valve and mixing faucet

Meter head position adjustable for perfect reading

Cold and hot water meter version

Electronic version (E)

Highest measuring accuracy due to multijet system

Sealing ring ensures safety without complicated manipulation of seal wire and lead

The measuring cartridge provides economic meter replacement on expiry of verification

Special sealing and O-ring provides long-term protection of the co-axial seat and prevents corroding or incrusting between body and cartridge. A special body of red brass (RG 5) – only for flush installation – is available for aggressive media.

The meter can be installed in different body makes by means of adapters



## The System

The heart piece of the PolluMUK system is the measuring cartridge optionally available with mechanical or electronic register for cold or hot water type meters.

The easy and comfortable meter cartridge exchange is supported by the service-friendly type of construction.

A profiled sealing ring protects the cartridge thread against moisture thus maintaining its easy action throughout the installation period.

## The Different Types

### PolluMUK:

The mechanical type of the PolluMUK is equipped with a 3+5 digit roller counter

The multijet dry-dial technology prevent from deposition inside the counter as there are no gears in the wet area.

### PolluMUK E:

The PolluMUK E combines the benefits of the co-axial measuring cartridge system with up-to-date electronics.



A LC-display shows all available data:

- Actual counter reading
- Counter reading on key-day
- 12 month values
- service data
- etc.

The measuring accuracy of 1:100 in all installation positions meets the high requirements of the Metrological Class C.

### Options:

- M-Bus version with data telegram IAW EN 1434.
- Pulse version for remote reading etc.

## Accessories

Universal assembly key for all installation work required.

Flow direction control for correction in case of flush-mounted body installed inversely.

Extension 40mm for level compensation in case of flush-mounted body installed too deep.

Adapter UP 193 for installation of a PolluMUK measuring cartridge into single jet dry-dial body (previous model).

Blind cover and collar for flush-mounting without installing the measuring cartridge.

Collar set for complete flush installation of the PolluMUK.

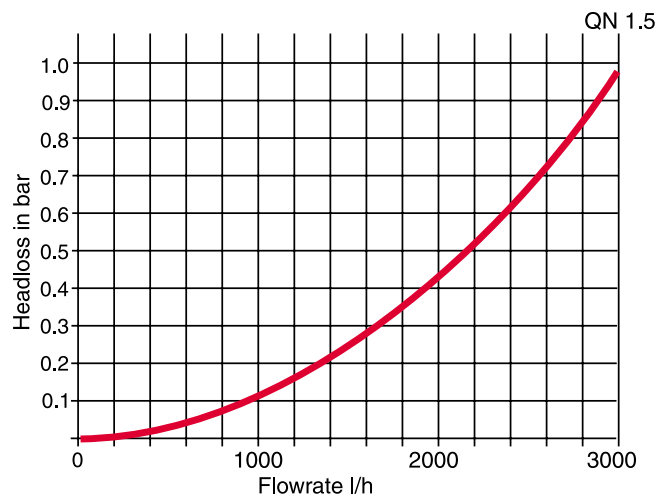
Valve body VTG and valve connection for installation of the PolluMUK cartridge into a check valve or mixing faucet connection for installation of the PolluMUK cartridge as mixing faucet meter.

Collar Z1222 for valve meter in case of flush-mounted valve installed too close to surface.

## Materials

Measuring cartridge	Plastic
Roller counter roller counter shaft and roller drive shaft	Plastic Stainless steel
Electronic counter	Plastic
O-rings	Rubber
Body	Brass
All materials comply with KTW-specifications	

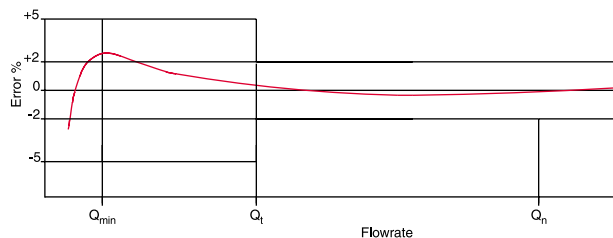
## Head Loss Curve



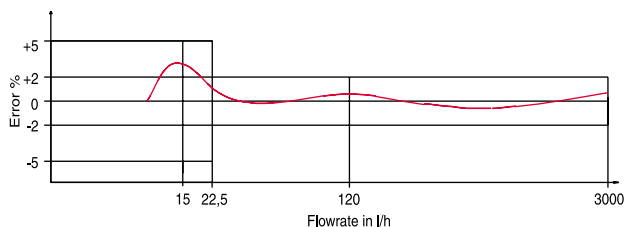
# Technical Data

		PolluMUK	
		mechanical	E
Nominal flow rate	$Q_n$	1.5 m <sup>3</sup> /h	
Headloss at $Q_n$		227 mbar	
Maximum flowrate	$Q_{max}$	3.0 m <sup>3</sup> /h	
Flowrate at headloss $\Delta p=1\text{bar}$		3.030 l/h	
Maximum water temperature			
Cold water version	30 °C	30°C	
Hot water version	90 °C	90°C	
Metrological class			
Horizontal installation		B	C
Vertical installation		A	C
Minimum flowrate			
Horizontal installation		30 l/h	15 l/h
Vertical installation and 90° slanted		60 l/h	15 l/h
Transitional flowrates			
Horizontal installation		120 l/h	90 l/h
Vertical installation		150 l/h	90 l/h
Cold water version	30 °C	120 l/h	22.5 l/h
Hot water version	90 °C	150 l/h	90 l/h
Indication range		0.1 l ... 100.000 m <sup>3</sup>	
Remote reading option			
Pulse value		100 l	
Closing time		500 ms	
Maximum switching voltage		28 V DC	
Maximum switching current		50 mA	
Protective resistance		100 Ohm	
Weight		360 g	480 g

## Typical Error Curve



PolluMUK mechanical



PolluMUK E (electronic)

# Ordering Information

Type code	Type code
<b>Measuring cartridge mechanical</b>	<b>Accessories program</b>
PolluMUK QN 1.5 cold water	PolluMUK mounting key
PolluMUK QN 1.5 hot water	PolluMUK flow direction shifter
<b>Measuring cartridge electronic</b>	PolluMUK tailpiece 40 mm
PolluMUK E 30°C	PolluMUK blind cover
PolluMUK E 30°C contact outlet	PolluMUK collars - set
PolluMUK E 30°C M-Bus	PolluMUK spacer ring - set
PolluMUK E 90°C	Software MiniCom 2 for PolluMUK-E
PolluMUK E 90°C contact outlet	Optical selector head for PolluMUK-E
PolluMUK E 90°C M-Bus	Centering aid for selector head
<b>Set for flush installation</b>	Combined data coupler for PolluMUK-E
PolluMUK UPG 1	<b>Accessories valve counter</b>
PolluMUK UPG 2	Valve with UP-connection 1/2"
PolluMUK UPG 3	Valve with UP-connection 3/4"
PolluMUK UPG 4	Valve with UP-connection 1"
PolluMUK UPG 5	Tailpiece set 1/2"
PolluMUK UPG 6 (red brass)	Tailpiece set 3/4"
<b>Set for installation on wall</b>	Tailpiece set 1"
PolluMUK APG 1	Mixing fauced connection 3/4"
PolluMUK APG 2	Compensation piece
PolluMUK APG 3	Collar Z 1222
<b>PolluMUK including valve body</b>	<b>Adapter program*</b>
PolluMUK QN 1.5 UV 30 °C	SPX -previous model UP 193
PolluMUK QN 1.5 UV 90 °C	ABB Kent „Modulmeter“
	Allmess „UP 6000 MK“
	Brunata „M 307/1“
	Techem-coaxial counter
	Wassergegeräte Spaichingen
	Zenner, Werle, Extern

\* construction heights depending on adapter used

# Dimensions

Body:	PolluMUK mechanical				PolluMUK E			pipe connection G
	length l	height h	height H	width B	height h	height H	width B	
<b>Program for flush mounting:</b>								
UPG 1	110	16	82,3	75	16	100,2	75	G 1/2" outside <sup>1)</sup>
UPG 2								G 3/4" outside <sup>2)</sup>
UPG 3								G 3/4" inside
UPG 4								22 mm <sup>3)</sup>
UPG 5								G 1/2" inside
UPG 6 Red brass			76,5					94,4
<b>Program for installation on wall:</b>								
APG 1	80	13,9	75,9	75	13,9	93,8	75	G 3/4" outside
APG 2	110	17,9	71,9		17,9	89,8		G 3/4" outside
APG 3	130	20,9			20,9			G 1" outside
<b>Valve body:</b>								
VTG		22,9	63	75	22,5	80,9	75	

1) incl. 15 mm weld-on connection

2) incl. 18 mm weld-on connection

3) weld-on connection

All dimensions in mm.

Diameter of measuring cartridge incl. lead sealing ring for flush installation 88 mm

Diameter of measuring cartridge incl. lead sealing ring for surface installation 88 mm

Diameter of measuring cartridge without lead sealing ring 88 mm

Exterior diameter of collar

Connection thread of measuring cartridge

Length of connection cable for remote reading and M-Bus:

Measuring cartridge change height

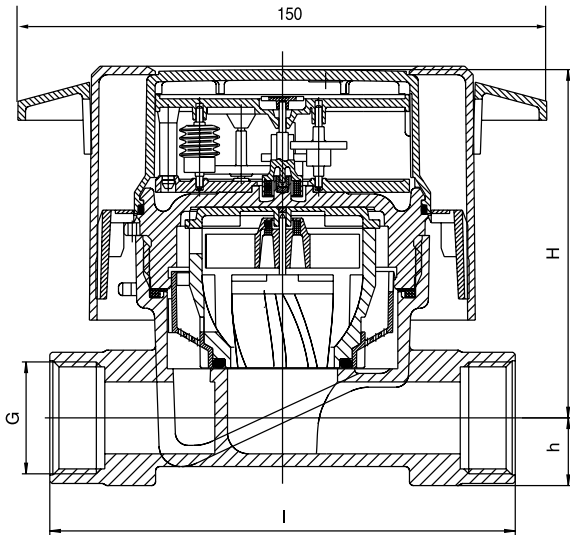
## Special Dimensions Valve Counter

Connection	Size A (DIN-size) *)	Size B2		
		0 ... 35 mm *) valve with UP-connection 1/2"	> 35 ... 55 mm tailpiece set 1/2" (one threaded nipple)	> 55 ... 75 mm tailpiece set 1/2" (two threaded nipples)
R 1/2"	22	0 ... 35 mm *) valve with UP-connection 1/2"	> 35 ... 55 mm tailpiece set 1/2" (one threaded nipple)	> 55 ... 75 mm tailpiece set 1/2" (two threaded nipples)
R 3/4"	25	0 ... 35 mm *) valve with UP-connection 3/4"	> 35 ... 55 mm tailpiece set 3/4" (one threaded nipple)	> 50 ... 75 mm tailpiece set 3/4" (two threaded nipples)
R 1"	31	0 ... 35 mm *) valve with UP-connection 1"	> 35 ... 55 mm tailpiece set 1" (one threaded nipple)	> 55 ... 75 mm tailpiece set 1" (two threaded nipples)
R 1/2", R 3/4", R 1"	Size C	147	167	187
	Size D	147 - B2	167 - B2	187 - B2

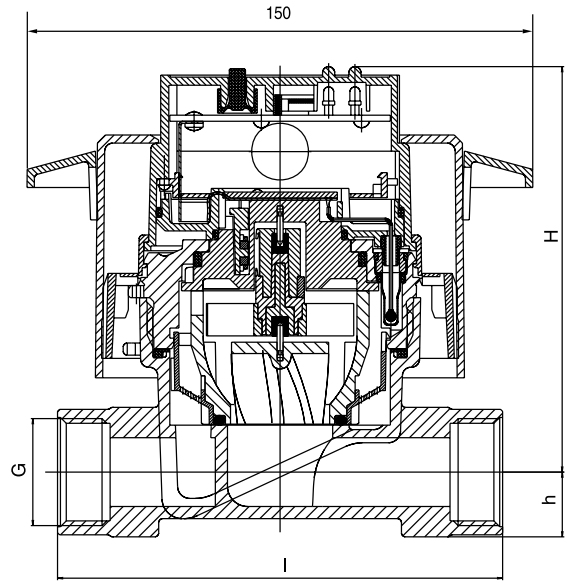
\*) permissible tolerance: + 6

Attention: Size B 0 ... 15 mm with collar Z 1222 (please order separately)

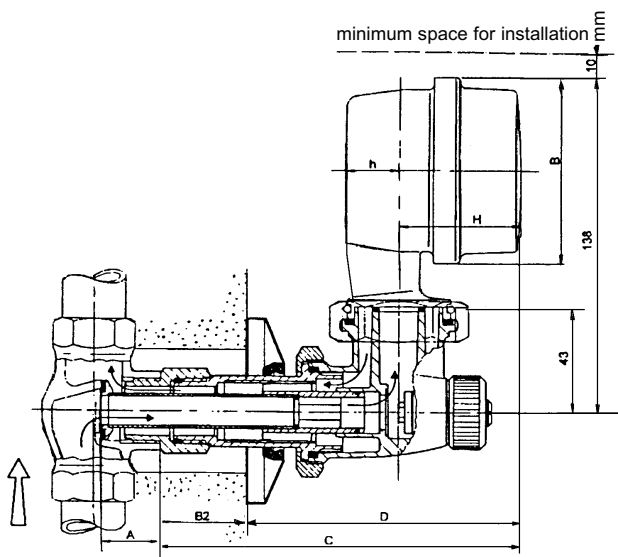
# Dimension Pictures



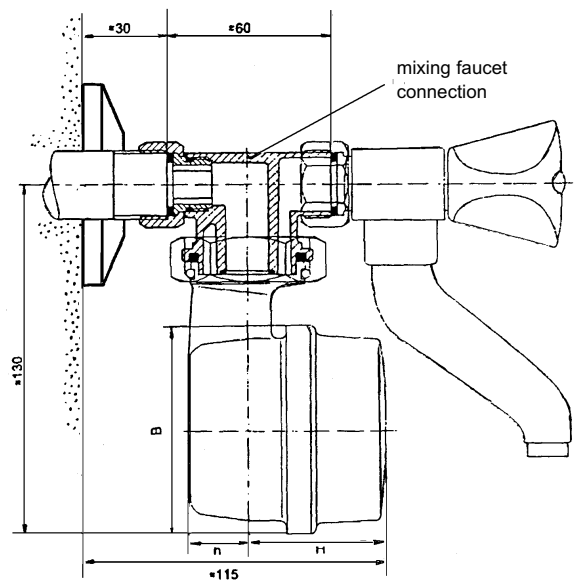
PolluMUK mechanical



PolluMUK-E



valve with valve body



mixing faucet connection  
with valve body

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