



Valve Meter VZ

for stop valves that have already been installed

WFK...
WFW...

Can be retrofitted to stop valves that have already been installed. Meters the consumption of hot and cold water. Displays cumulative consumption, can be read remotely. Single-jet dry-rotor meter.

Applications

Metering water consumption of:

- service water supply systems in residential and non-residential buildings
- water supply systems of any kind
- multiple dwellings, office and administration buildings

Typical users are:

- private building owners and housing associations
- building service companies and property administrators

Type overview

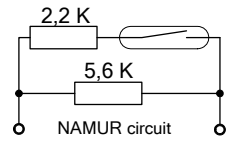
Meter	Valve meter	Cold	Hot	Cold	Hot
		high polish-chrome	high polish-chrome	chrome	chrome
	Valve meter VZ with fittings, stop valve and wall rose	WFK20.DVC	WFW20.DVC	WFK20.DVN	WFW20.DVN
	Contact valve-meter VZ with fittings, stop valve and wall rose, with pulse output NAMUR circuit	WFK23.DVC	WFW23.DVC	WFK23.DVN	WFW23.DVN
	Contact valve meter VZ with fittings, stop valve and wall rose, with pulse output, reed contact	WFK24.DVC	WFW24.DVC	WFK24.DVN	WFW24.DVN
	Replacement meter	Cold	Hot	Cold	Hot
		high polish-chrome	high polish-chrome	chrome	chrome
	Replacement meter VZ	WFK20.DVCA	WFW20.DVCA	WFK20.DVNA	WFW20.DVNA
	Replacement meter VZ with pulse output NAMUR circuit	WFK23.DVCA	WFW23.DVCA	WFK23.DVNA	WFW23.DVNA
	Replacement meter VZ with pulse output, reed contact	WFK24.DVCA	WFW24.DVCA	WFK24.DVNA	WFW24.DVNA
Connection sets		short 40 mm chrome		long 90 mm chrome	
	Connection set VZ 1/2"	WFZ2.SN1540		WFZ2.SN1590	
	Connection set VZ 3/4"	WFZ2.SN1840		WFZ2.SN1890	
	Connection set VZ 1"	WFZ2.SN2240		WFZ2.SN2290	
Accessories	Extension VZ 25 mm				
	chrome	WFZ2.VN25			
	*) Note: make sure to order an additional universal rising pipe B when using the extension VZ 25 mm				
	Universal rising pipe				
	Universal rising pipe B 1/2"	WFZ2.SR15			
	Universal rising pipe B 3/4" und 1"	WFZ2.SR18			
	Direction of flow changer VZ				
	1/2" chrome	WFZ2.FN15			
	3/4" chrome	WFZ2.FN18			
	1" chrome	WFZ2.FN22			
	Installation tools				
	Installation key VZ	F13011-2070			
	Allan key SW12	F13011-2071			

Ordering

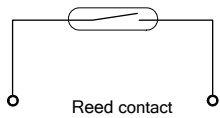
When placing an order, state the type designation as listed in the type overview. Included with valve meter VZ are the fittings with stop valve, a wall rose, a threaded pin M3x3 and appropriate Allan key as well as a seal.

The connection sets and accessories are not supplied with valve meter VZ; these parts must be ordered separately.

Technical Description



The flow rate is measured by means of a hydraulic, vane-type transducer. The flow-rate reading is transferred to a mechanical counter by means of a magnetic coupling. The reading is displayed using an 8-digit drum-type register and an additional pointer (one pointer revolution is equivalent to one litre). The star in the centre of the meter rotates when water is flowing through the meter.



The water meter outputs the acquired flow-rate values as pulses from its pulse output. One pulse is equivalent to a flow of 10 litres of water.

- NAMUR circuit version: The pulse output contains a reed contact with NAMUR-circuit.
- Version with reed contact without additional circuitry.

Design

Design and counter mechanism

The valve meter VZ is designed as a single-pointer vane-type counter. It comprises a vane-type transducer, the counter which is of the dry-rotor type, and the fittings. The fittings comprise a stop valve and a filter to remove coarse dirt particles. The valve meter is fitted to the existing installation with the appropriate connection set. The meter casing, fittings and connection set are in chrome-plated brass. The counter is covered by a transparent plastic hood.

The display comprises an 8-digit drum-type register and a pointer showing the present consumption. Both indicate consumption to within 0.1 l. A rotating star displays the flow rate.

The version with a pulse output has a 1.4m cable permanently connected to the side of the meter for connecting further recording equipment.

The valve meter can be rotated about various axes:

- The meter can be turned about its own axis for optimal read-off
- The meter itself can be turned through 360° about the vertical axis.
- In the valve, the valve meter fittings can also be turned.

The valve meter can be fitted to straight and slanted-seat valves to DIN 3512 or similar. It provides depth compensation of the valve seat by ± 7 mm and so can be accommodated by a wide variety of valves.

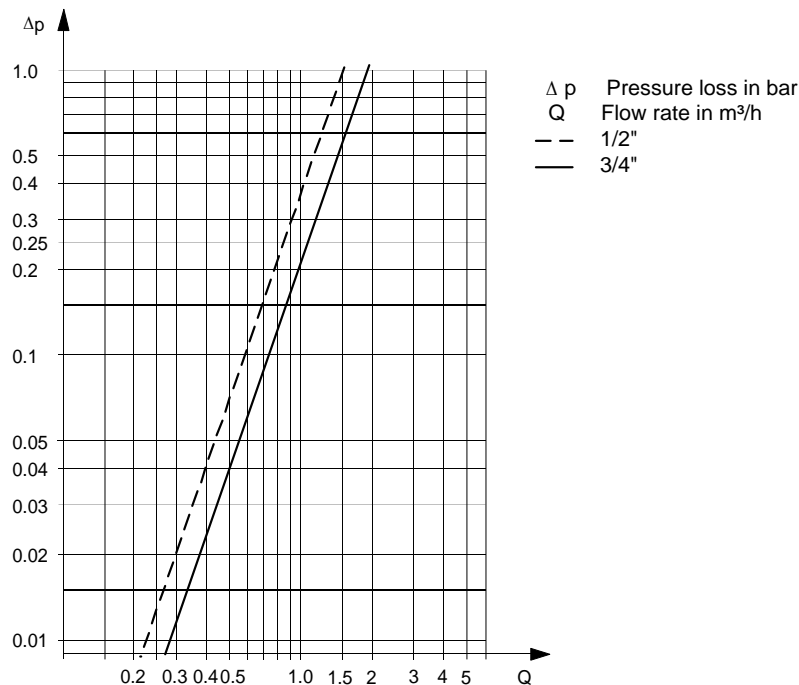
A flap rose with a 34mm internal diameter is provided to cover the installation point.

This diameter has been chosen so that other roses can be used. There is a wide selection available commercially as accessories.

Accessories

Replacement counter	When the calibration period expires, a replacement meter can be fitted. The old fittings and connection set do not need to be replaced.
Connection sets	Select the appropriate connection set for the valve threads ($\frac{1}{2}$ ", $\frac{3}{4}$ ", 1").
Extension	Each VZ extension increases the valve meter fittings by 25 mm. The maximum length (140 mm).can be reached by combining one 90 mm connection set with two 25 mm extensions.
Direction of flow changer	If the stop valve in the installation has been fitted in a direction opposite to the direction of flow, use a direction of flow changer instead of a connection set.

Dimensions



Pressure loss characteristics with straight-through valve

Installation instructions

- Observe the local regulations for use (installation, sealing, etc.) of water meters.
- Rinse out the pipe thoroughly before fitting the meter
- The meter should be positioned so that the display can be read horizontally.
- After installation, the system should be tested under pressure.
- If the total length of the connection set and the extension set exceeds 90 mm, fit a support to prevent fracture due to lever effects.
- Refer to installation instructions, which are supplied with every meter, for more details

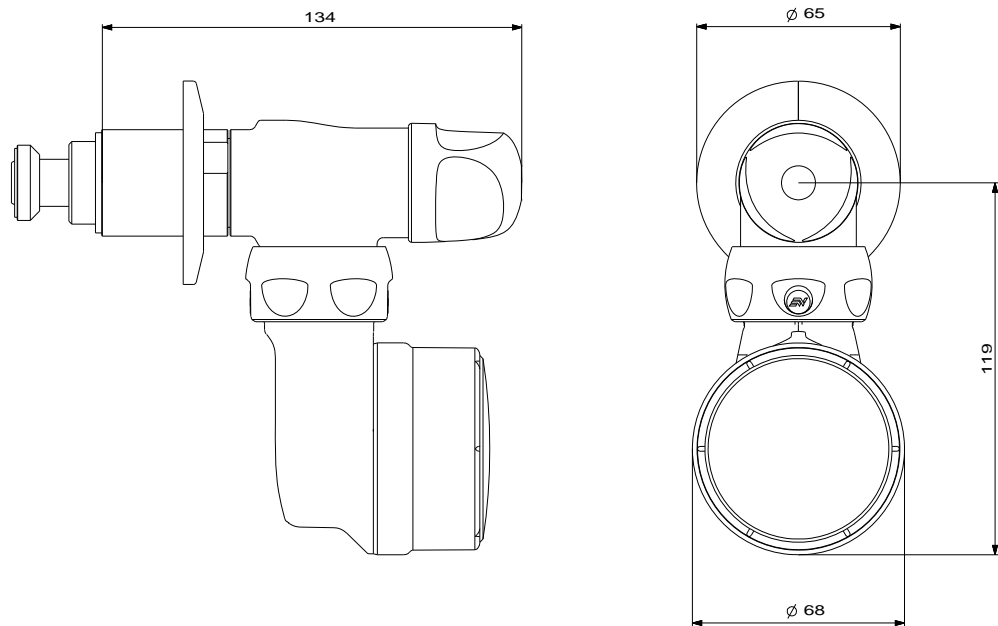
Operating instructions

Please note that when valve meters are fitted, the pressure loss is generally higher than would be the case with other types of water meter. Under certain circumstances, this may reduce the functionality of pressure-controlled equipment (e.g. flow heaters). In such cases, use the specified minimum flow pressure. Observe the local regulations regarding operation, recalibration and replacement of water meters.

Technical data

Flow metering	Metrological class	
	Meter, horizontal installation	A
	Meter, vertical installation	A
	Flow rates	
	Lower limit of flow rate Q_t	150 l/h
	Min. flow rate Q_{min}	60 l/h
	Nom. width	1/2"
	Nom. flow rate Q_n	1.5 m ³ /h
	Max. flow rate Q_{max}	3.0 m ³ /h
	Nom. pressure PN	10 bar
Miscellaneous data	Pressure drop (3/4") at Q_n	< 670 mbar
	Pressure drop (3/4") at Q_{max}	< 2.7 bar
	Calibration error limits	
	$Q_{min} \leq Q < Q_t$	± 5 %
	$Q_t \leq Q \leq Q_{max}$ (hot water)	± 3 %
	$Q_t \leq Q \leq Q_{max}$ (cold water)	± 2 %
	Max. water temperature	
	Types WFK...	30°C
	Types WFW...	90°C
	Pulse output for remote metering	
Pulse weighting	10 l/pulse	
Current drain	100 mA	
Pulse length at Q_N	~0.6 s	
Connector sizes		
1/2"		
3/4"		
1"		
Weights (mass)		
Valve meter with fittings	1.25 kg	
Replacement meter	0.52 kg	

Schematic diagram



Valve meter VZ with connection set VZ 3/4" (short, 40 mm) is shown in the diagram.

The information provided in this Data Sheet only gives general descriptions and general technical features which, in the case of specific applications, may not necessarily apply, or which may change due to further development of the product. Technical features are binding only when expressly agreed upon at the time a contract is concluded.

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