KAYCEE

Brand that set the standards

WOLTMAN TYPE WATER METER

Kayceefor Commitment...
Kayceefor Quality..

Minol
All that counts.

CMS GROUP

A modular approach was used in the development of the W-ZF meter series. This can be seen by the broad range of applications in which the meter can be used. In its simplest form, the meter can be used as a purely mechanical meter that utilizes a Woltman style measuring technique. However, this basic meter also has a removable insert which can be easily serviced. Furthermore the meter can be readily upgraded to generate a range of different pulse outputs which in turn can link the meter to a complex communication network.

The W-ZF development is based on a ‘ total solutions ‘ concept. Meter sizes DN 80 TO DN 150 employ a well proven measuring insert that delivers the high accuracy and lifetime usually associated with Woltman technology. However, the size DN 40/65 and DN 200 represent a further development in terms of accuracy. The meter is designed for water temperatures of up to 50^0 C and as a hot meter or volume measuring unit for energy meters of up to 130^0 C.

Special features are:

- **EEC approval** class B from DN 50 to DN 200
- **Turbine bearing:** The standard version turbine bearing consists of metal and corundum which wear to a minimum and thus guarantee high durability.
- **Pinion bearing:** The pinion connecting turbine and counter runs on bearings with sapphire (corundum) on both ends.
- **The insert:** is removable and thus well accessible for maintenance.
- **All screws and nuts** in the insert are made from stainless steel.
- **Magnet protection:** The meter is protected against interference from external magnetic fields.
- For horizontal and vertical installations.

Body and Insert : The body is completely coated with plastic powder providing tough, durable protection against corrosion and impacts. Standard bodies are rated to PN 16 (1600kpa). ISO7005-2 flange dimension conform to ISO 7005-2 PN 10; ISO 7005-2 flange dimension conform to ISO 7005-2 PN 16 is also on our list. On request a high pressure version PN 25 for all meter sizes available.

The insert insures long term, high level of accuracy and within class B measurement accuracy. The **WPH- ZF** is constructed according to the standards of ISO 4064 class B and meets the relevant EEC standards for cold water.

Counter : (The counter is a completely new development and meets all requirements for a modern counter of today.) The **multi-functional counter with six big number rollers** and two pointers easily read and presents itself in a modern, appealing design. The counter can be equipped with plastic or mineral glass. The anti-condensation coating (nano-coating) guarantees optimal readability of the counter. The counter can also be adjusted he desired position and thus makes simple and correct reading of the display possible.

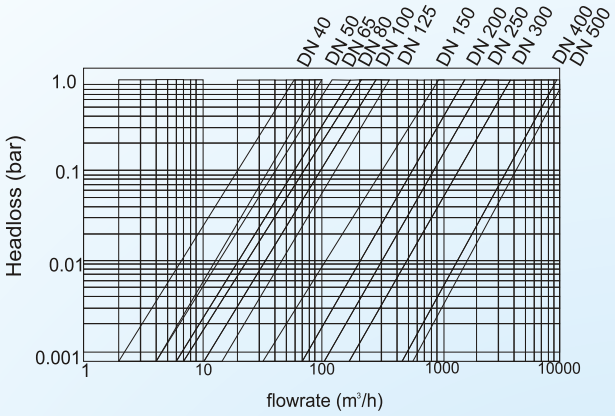
The encapsulated, evacuated counter sealed with an O- ring is **protected against flooding** and an be equipped with an additional **dry cartridge** on request.

Steel sealing cap: protects the window against dirt and damage. A plastic sealing cap which can be rotated by 3600 is also available on request. The plastic sealing cap can be adjusted according to the mounting conditions of the meter.

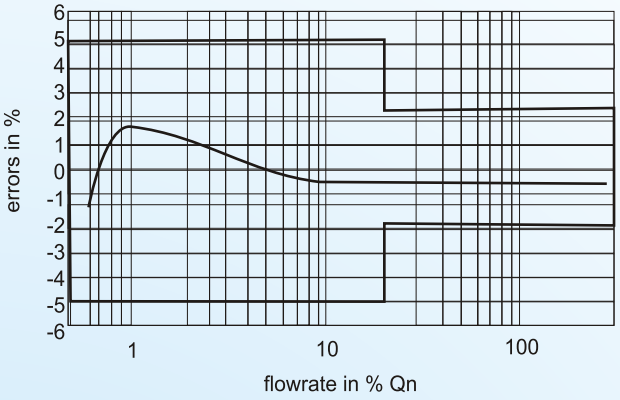
“The sky is the limit” in regard to the pulse output options: **Reed*, Opto and Namur type pulsers** can ve fit directly in WPH counters up to DN 500. A key feature of this meter is that these pulsers can be installed without disturbing calibration seal. A field installer can fit the pulser without the need to reseal the meter. The pulser can also be secured with an additional lead seal. This range of products can be tied into the CHEKKERR® SYSTEM WITH THE CHECKKERR® pulse counter module visio.

An electronic counter is currently under development. This module will fit directly into the meter replacing the mechanical gear box and rollers. It will provide unprecedented levels of accuracy and extensive communication and data logging facilities.

A host of technical solutions that handle the output pulses from the meter and process them are avavilable.



Head loss curve



Error curve

Approvals

WPH-K-ZF

DN 40 (Approval has been applied for) DN 50 B99 325.13 DN 65 B00 325.16 DN 80 B99 325.09

DN 100 B99 325.10 DN 125 B00 325.15 DN 150 B99 325.12 DN 200 B00 325.14

Technical Data

Nominal diameter	DN	mm	40	50	65	80	100	125
Nominal flow rate	Qn	m³/h	15	15	25	40	60	100
Maximum flow rate (short term)	Qmax	m³/h	60	90	120	150	250	300
Maximum flow rate (durable)		m³/h	30	45	60	90	125	179
Transitional flow rate	Qt	mm³/h	0,9	0,9	1,2	6	6	8
Minimum flow rate	Qmin	m³/h	0,35	0,35	0,45	0,8	1,5	3
Flow rate at 0.1 bar head loss		m³/h	20	30	50	70	100	150
Pressure loss at Qmax		bar	0,2	0,1	0,1	0,2	0,2	0,2
Maximum water temerature		°c			50			
Maximum working pressure		bar			16			
Maximum dial indication		m3			999.999			
Minimum dial indication		l			0,2			
Metrological class					B			

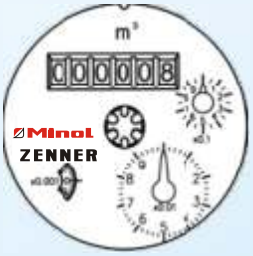
Nominal diameter	DN	mm	150	200	250	300	400	500
Nominal flow rate	Qn	m³/h	150	250	400	600	1000	1500
Maximum flow rate (short term)	Qmax	m³/h	350	650	1200	1500	2500	4000
Maximum flow rate (durable)		m³/h	250	325	600	700	1250	2000
Transitional flow rate	Qt	mm³/h	12	12	20	50	100	200
Minimum flow rate	Qmin	m³/h	3,5	6,5	12	18	30	45
Flow rate at 0.1 bar head loss		m³/h	200	650	1000	1500	2500	4000
Pressure loss at Qmax		bar	0,2	0,05	0,05	0,05	0,05	0,05
Maximum water temerature		°c			50			
Maximum working pressure		bar			16			
Maximum dial indication		m3			999.999		99.999.999	
Minimum dial indication		l			20		200	
Metrological class					B			

Installation

Pipeline	horizontal vertical diagonal
Head of meter	upwards aside

Display

Display for DN 40 and DN 125

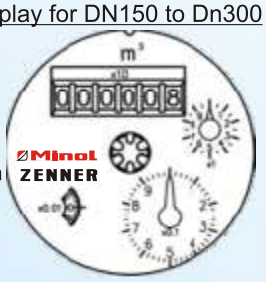


Namur opto sensor position

reed 2 position 1000 l/p

reed 1 position 100 l/p

Display for DN150 to Dn300

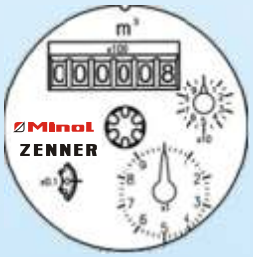


Namur opto sensor position

reed 2 position $10m^3/p$

reed 1 position 1000 l/p

Display for DN 400 and DN 500



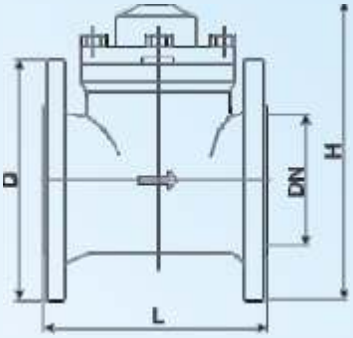
Namur opto sensor position

reed 2 position $100m^3/p$

reed1 position $10m^3/p$

Nominal diameter DN	Lowest scale value
40/125mm	0,2l
150/300mm	20l
400/500mm	200l

Dimensions



Nominal diameter	DN	mm	40	50	65	80	100	125
Nominal flow	Qn	m^3/h	15	15	25	40	60	100
Length	L	mm	200	200	200	225	250	250
Height	H	mmm	206	200	208	225	275	290
Flange0	D	mm	150	165	185	200	220	250
Weight		kg	9,8	10,6	11,6	15,4	17,8	21,6
Nominal diameter	DN	mm	150	200	250	300	400	500
Nominal flow	Qn	m^3/h	150	250	400	600	1000	1500
Length	L	mm	300	350	450	500	600	800
Height	H	mm	305	375	470	495	635	740
Flange0	D	mm	285	340	395	445	565	670
Weight		kg	31,5	46	94	114	199	340

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