



Product Catalogue

DIM-B

DIM-B

Agricultural Irrigation
Water Meter

DIM-B
(Water Meters)



Application

The DIM-B Agricultural Irrigation Water Meter series is used for the measurement of high flows of cold potable water passing through the pipeline.

The DIM-B is built with field use in mind: rugged, durable, dependable and long-lasting, while maintaining high accuracy.

The DIM-B is your best option for registering water consumption outdoors.

Working Conditions

Water temperature: $\leq 40^{\circ}\text{C}$

Water pressure: $\leq 1.6\text{MPa}$

Construction

The DIM-B water meter consists of a cast iron body, a measuring mechanism and several connecting pieces.

Working Principle

The meter uses a multi-bladed plastic paddle wheel partially immersed in the pipe's water flow. The paddle wheel in turn is connected to a register through mechanical and magnetic relays.

The flowing water causes the paddle wheel to rotate, indicating the volume on the DIM-B register display.



Features

- Includes a magnetic drive for lower transmission resistance.
- Sealed dry dial register ensures clear reading.
- Register can rotate 360° for easy reading from all directions.
- The body is made of cast iron coated with UV resistant epoxy.
- The paddle wheel design resists blockage and damage to the meter due to solids in the water.
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- The measuring mechanism can be easily replaced in case of damage.
- Checking, maintaining and replacing the register can be performed while the body remains attached to the pipe.
- The paddle wheel parts are identical in most meter sizes.
- The DIM-B can optionally be equipped with a reed switch (360° rotation is disabled).
- Suitable for irrigation and waste water applications.

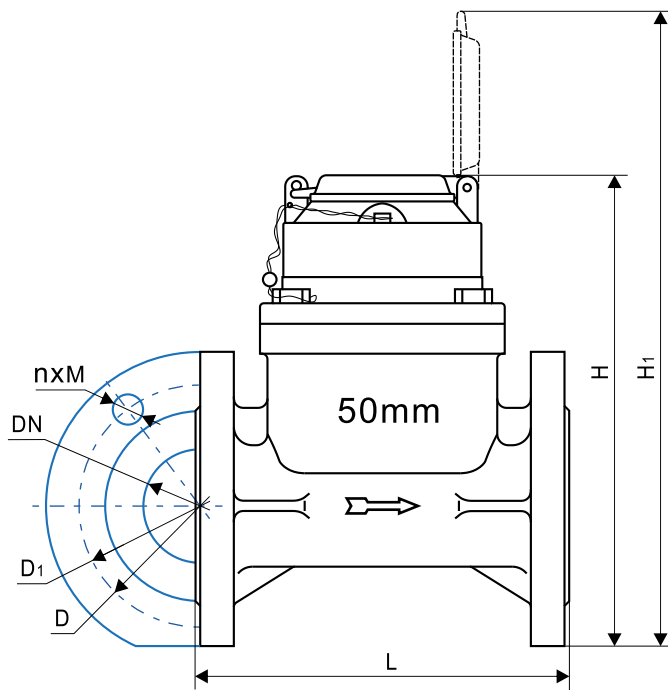
Dimensions & Weights for pressure rating PN10

Nominal diameter	DN	50	65	80	100	125	150	200	250	300
Length (mm)	L	200	200	225	250	250	300	350	450	500
Height (mm)	H	252	266	283.5	293.5	307	336.5	390	445.5	497.5
Working height (mm)	H1	338	352	369.5	379.5	393	422.5	476	531.5	583.5
Outside diameter (mm)	D	165	185	200	220	250	285	340	395	445
Circle diameter (mm)	D1	125	145	160	180	210	240	295	350	400
Num. of Connecting bolts	nxM	4xM16		8xM16			8xM20		12xM20	
Meter weight (Kg)		10.5	11.8	15.5	17.5	19.5	30.5	42.5	58.5	80.5
Body weight (Kg)		8	9.3	13	15	17	28	40	56	78

Dimensions & Weights for pressure rating PN16

Nominal diameter	DN	50	65	80	100	125	150	200	250	300
Length (mm)	L	200	200	225	250	250	300	350	450	500
Height (mm)	H	256	266	283.5	293.5	307	336.5	393	446.5	502.5
Working height (mm)	H1	342	352	369.5	379.5	393	422.5	479	532.5	588.5
Outside diameter (mm)	D	165	185	200	220	250	285	340	405	460
Circle diameter (mm)	D1	125	145	160	180	210	240	295	355	410
Num. of Connecting bolts	nxM	4xM16		8xM16			8xM20	12xM20	12xM24	
Meter weight (Kg)		10.5	11.8	15.5	17.5	19.5	30.5	41.1	60	82.5
Body weight (Kg)		8	9.3	13	15	17	28	38.6	57.5	80

Dimension Picture



- Nominal diameter and arrow are indicated on both sides of the meter body.
- The lid can open 180°.

Main Technical Data

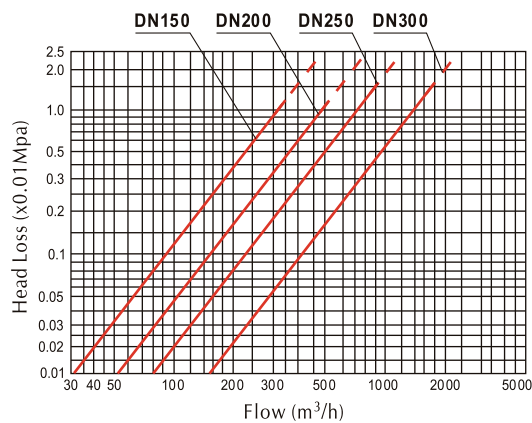
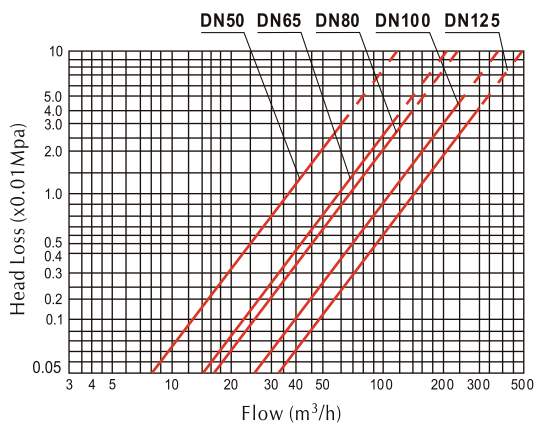
Nominal diameter	DN	50	65	80	100	125	150	200	250	300	
Maximum flow rate m ³ /h	Q _{max}	70	100	150	250	350	500	900	1200	1600	
Nominal flow rate m ³ /h	Q _n	35	50	75	125	175	250	450	600	800	
Transition flow rate m ³ /h	Q _t	10.5	15	22.5	37.5	52.5	75	135	180	240	
Minimum flow rate m ³ /h	Q _{min}	2.8	4	6	10	14	20	36	48	64	
Maximum reading m ³		9999999.99						99999999.9			
Minimum reading m ³		0.01						0.1			
Minimum graduation L		0.001						0.01			

Maximum Permissible Error:

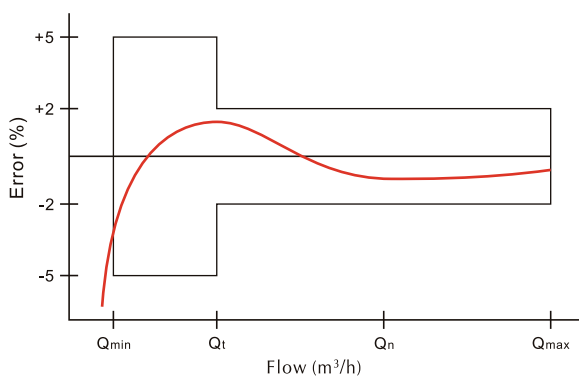
In the lower zone from Q_{min} inclusive up to but excluding Q_t is ±5%

In the upper zone from Q_t inclusive up to and including Q_{max} is ±2%

Head Loss Curve

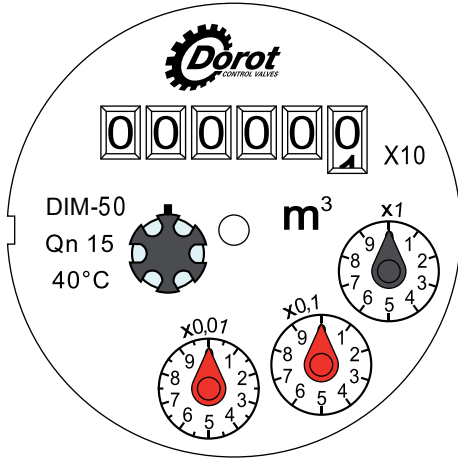


Accuracy Curve

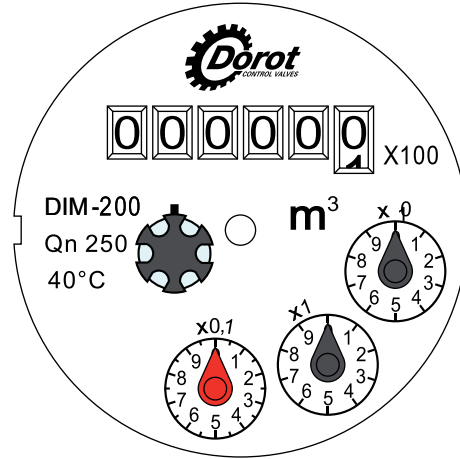


Dial

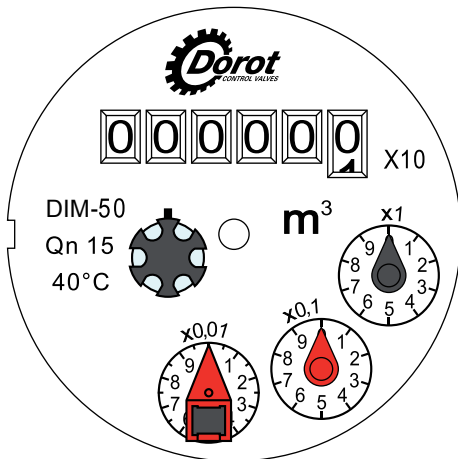
DIM-B50~150:



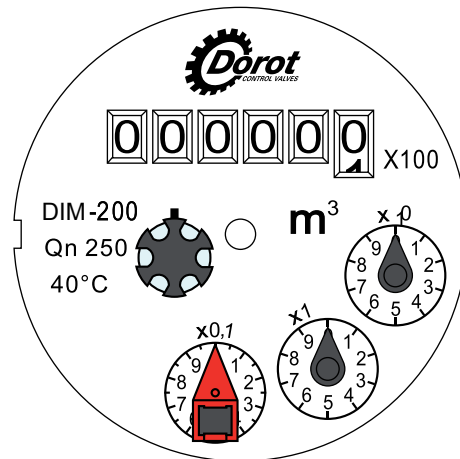
DIM-B200~300:



DIM-B/Y-50~150:



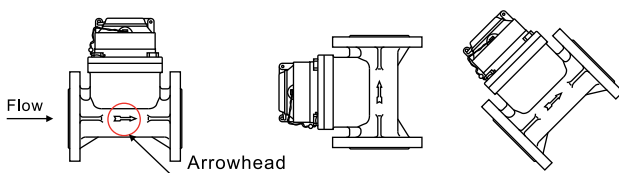
DIM-B/Y-200~300:



- DIM-B-50 / DIM-B-200: meter type.
DIM-B/Y-50, DIM-B/Y-200: meter with reed switch option.
- Qn 15/Qn 250: nominal flow rate.
- 40°C: maximum water temperature.
- Scale 1:1

Installation

- The meter can be installed in any position:



- The meter must be installed with the flow direction as indicated by the arrow on the meter body.
- Flush the pipeline before installing the meter.
- A horizontal installation with the register facing up is recommended.
- The meter must be installed at least 10 "meter diameters" of straight pipe upstream of the meter and 5 "meter diameters" of straight pipe downstream, to avoid turbulent flow through the meter. For example, if the meter diameter is 2", it should be installed with an upstream straight pipe length of 20" and a downstream straight pipe length of 10".
- Separation valves should be installed up- and downstream of the water meter.
- Note maximal temperature meter limitation before installation.

DIM-B With Reed Switch Option

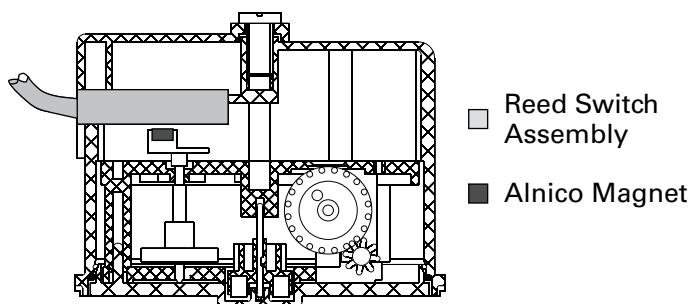
Features

- The reed version DIM-B-50~300 Water Meter is equipped with a reed switch assembly which can be connected to remote reading systems.
- The reed switch closes an electric circuit once per full dial rotation. Output values are set at 3 ratios: 0.1, 1, 10m³
- Reed switch meters require a constant external power source.
- If the reed meter isn't supplied with the reed switch assembly, it is factory-ready for 3rd party switches.
- The reed meter has all the advantages of the basic DIM-B-50~300 water meter.
- Dimensions and technical data are identical to the basic DIM-B-50~300 water meter.

Working Conditions

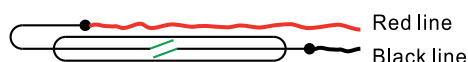
- Maximum water temperature: 40°C (for cold potable water meter)
- Maximum water pressure: 1.6MPa
- Maximum distance to data logger: 100m

Schematic Figure



Reed Switch Assembly

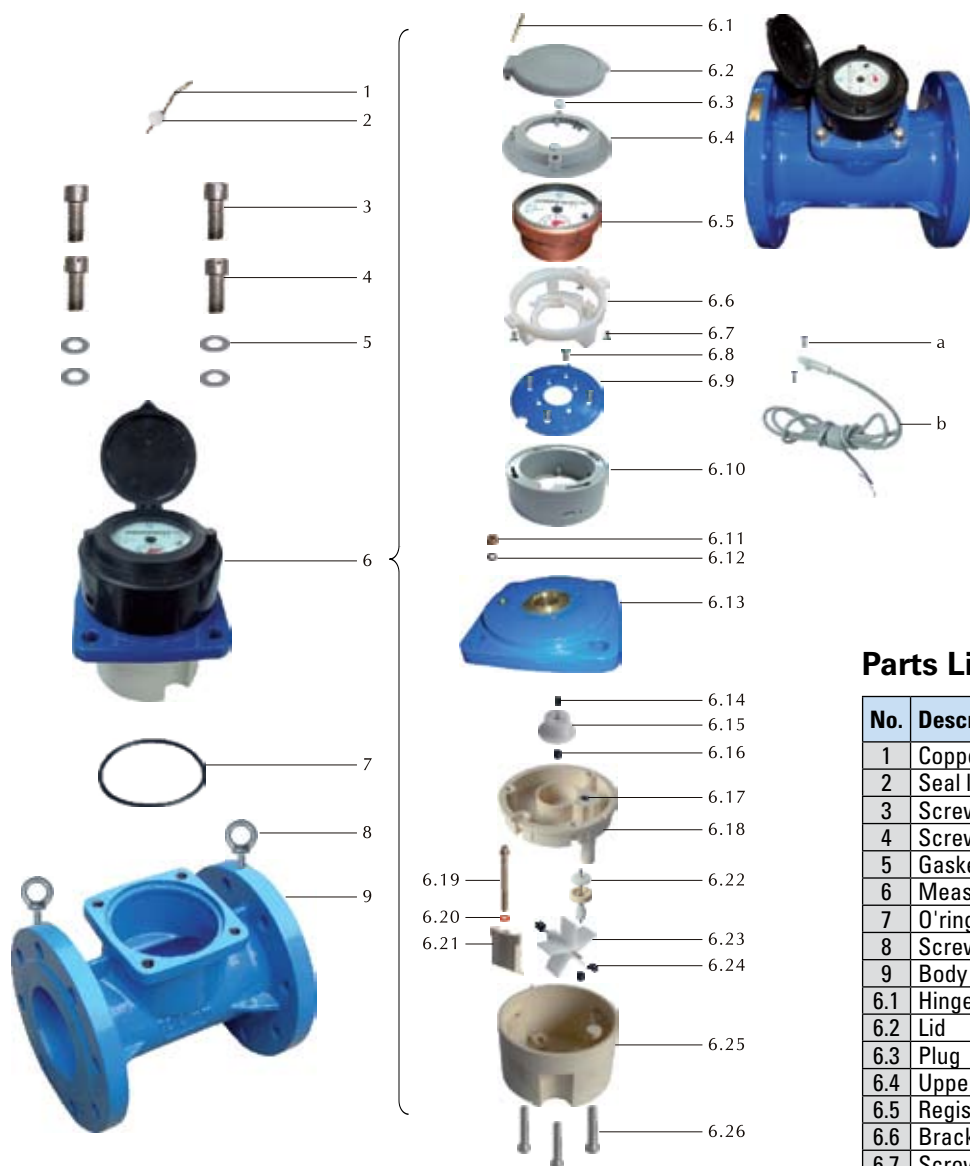
- The reed meter consists of a plastic housing with a reed switch, designed to read the total consumption of water.
- Pulser wiring: cable.
 - 1) 2 core, 1.5m long, 3.5mm diameter.
 - 2) Red-black: pulse team.
- Reed switch: single.
- Electric data:
 - Vmax: 24AV/DC,
 - I_{max}: 0.01A.
- Drawing:



Data Output Options

- The special meter comes in two model variations, which indicate different pulse rates. See table below for sizing.
- DN: nominal diameter.

Positions of special pointer	X0,01	X0,1	X1
Reed switch pulse	1 pulse for each		
Water quantity per rotation	0.1 m ³	1 m ³	10 m ³
DN50/65/80/100/125/150	•	•	
DN200/250/300		•	•



Parts List

No.	Description	Qty
1	Copper wire	1
2	Seal lead	1
3	Screw	3
4	Screw with seal hole	1
5	Gasket	4
6	Measuring unit	1
7	O'ring	1
8	Screw (just for DN250~DN300)	2
9	Body	1
6.1	Hinge pin	1
6.2	Lid	1
6.3	Plug	2
6.4	Upper retaining ring	1
6.5	Register	1
6.6	Bracket	1
6.7	Screw	3
6.8	Screw	4
6.9	Immovable plate	1
6.10	Register house	1
6.11	Regulating bolt	1
6.12	Gasket	1
6.13	Flange cover	1
6.14	Bearing	1
6.15	Magnetic transmission assembly	1
6.16	Bush1	2
6.17	Bush2	1
6.18	Upper support	1
6.19	Regulating Shaft	1
6.20	O'ring	1
6.21	Regulating patch	1
6.22	Mechanical transmission assembly	2
6.23	Impeller	1
6.24	Bush	2
6.25	Lower support	1
6.26	Screw	3
a	Screw	2
b	Reed switch option	1



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