



Product Catalogue

**DIM-B**

# DIM-B

Agricultural Irrigation  
Water Meter

**DIM-B**  
(Water Meters)



## Application

For measurement of high flows of cold potable water passing through the pipeline.

The best option to register water consumption if there is outside watering or sprinling at your farm.

## Working Conditions

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

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

## Consruction

The meter consists of a main body, a measuring mechanism and several connecting pieces.

## Working Principle

The meter uses a multi-bladed plastic paddle wheel mounted semi-inside the flow pipe. The flowing water causes the paddle wheel to rotate continuously, which in turn is connected to a register through mechanical and magnetic linkages. The volume of water which has passed the paddle wheel is then indicated on the register.



## Features

- Can be connected to a irrigation system for in-plant applications.
- Magnetic drive, lower transmission resistance.
- Sealed dry dial register ensures clear reading.
- Register can rotate more than  $360^{\circ}$  for easily reading in any position.
- The body is made of special cast iron coated with epoxy varnish treatment.
- Paddle wheel design resists blockage and damage to meter from solids in water .
- The measuring mechanism can be removable from the body for checking, maintaining and replacing, and the body needn t be dismantled from the pipe.
- Paddle wheel parts can be in common use for several sizes.
- Can be equipped with reed switch option (register can not rotate).
- Suitable for irrigation and waste water applications.

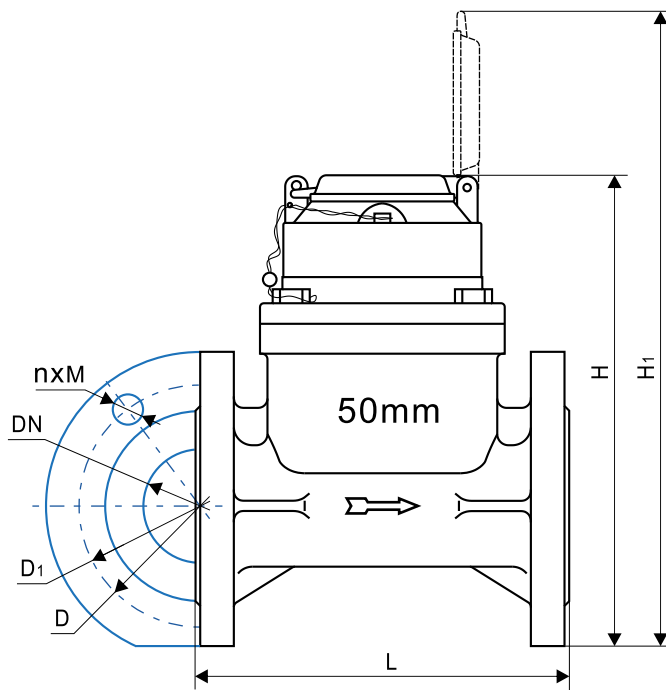
### Dimensions & Weights for pressure rating PN10

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
Connecting bolt quantity	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
Connecting bolt quantity	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 the both sides of the meter body.
- The lid can open 180°.

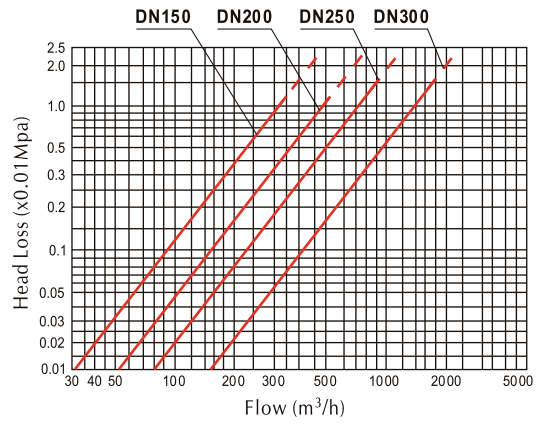
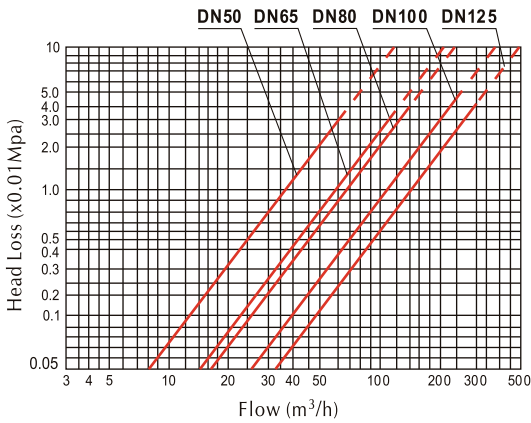
**Main Technical Data**

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

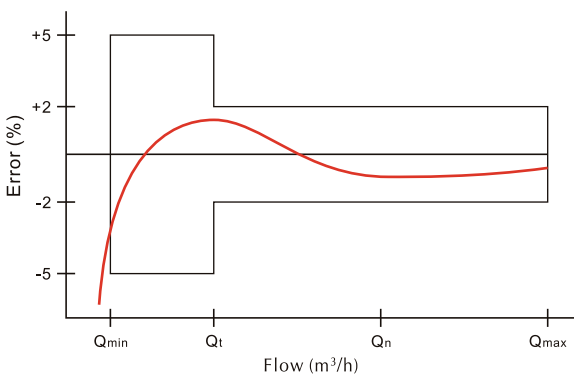
**Maximum Permissible Error:**

In the lower zone from Q<sub>min</sub> inclusive up to but excluding Q<sub>t</sub> is ±5%  
 In the upper zone from Q<sub>t</sub> inclusive up to and including Q<sub>max</sub> is ±2%

**Head Loss Curve**

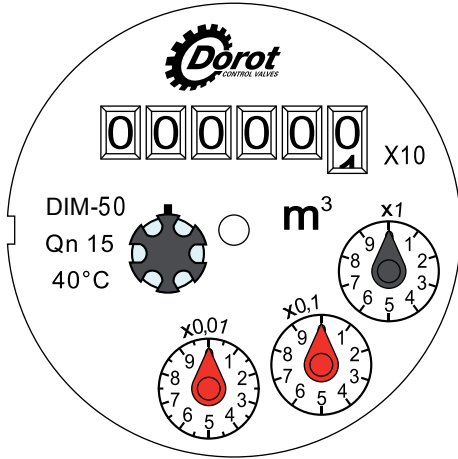


**Accuracy Curve**

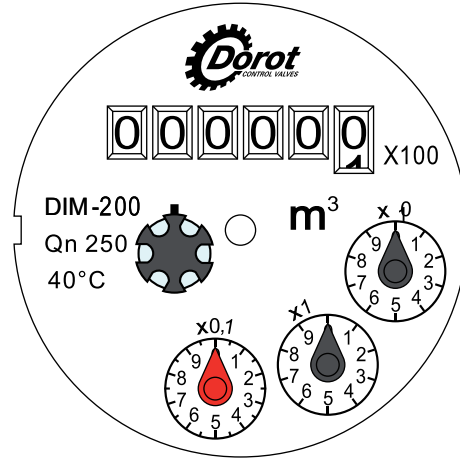


## Dial

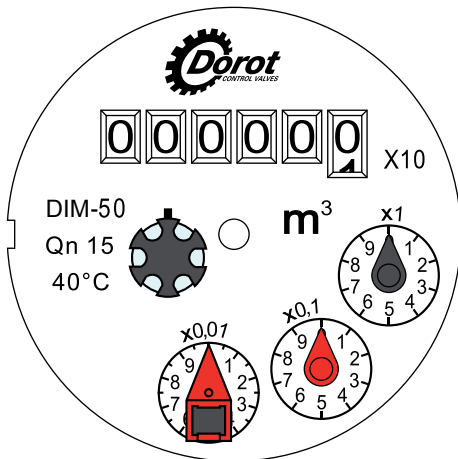
### DIM-B50~150:



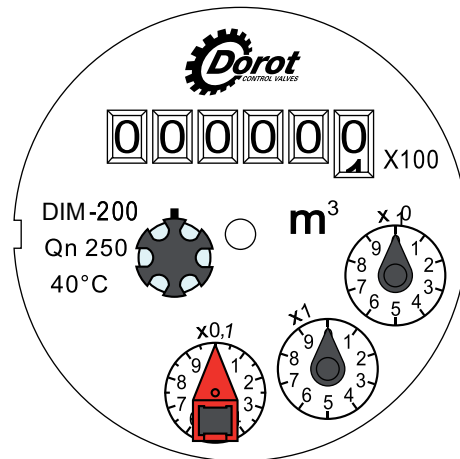
### DIM-B200~300:



### DIM-B/Y-50~150:



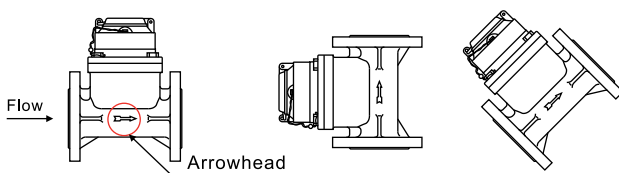
### DIM-B/Y-200~300:



- DIM-B-50 / DIM-B-200: meter type.  
DIM-B/Y-50, DIM-B/Y-200: meter type of the 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 direction of the flow as indicated by the arrow cast in the meter body.
- In order to keep the water meter in good working, the pipeline should be clear up before install the meter.
- A horizontal position with the register face upwards is recommended.
- The meter must have 10 diameters straight pipe ahead of the meter and 5 diameters straight pipe after to insure proper flow through the meter.
- The valves must be installed in the front and the back of the water meter.
- Attention should be paid that the cold water meter must not be used for hot water.

## DIM-B With Reed Switch Option

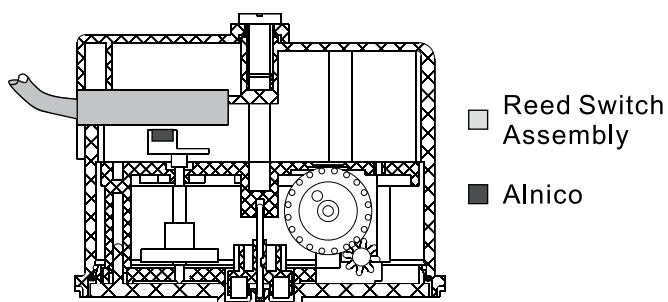
### Features

- The special version DIM-B-50~300 WaterMeter is equipped with a reed switch assembly which can be connected to remote reading systems, and several parts are different from the common DIM-B-50~300 meter.
- A pointer is combined with an alnico. Positions of the special pointer in register indicate different water quantity. The reed switch pulser sends out electric signals per a preset water quantity requiring power from an external source.
- If the special version meter isn't equipped with the reed switch assembly, it is a meter with pre-equipped output.
- The special meter has all advantages of the common DIM-B-50~300 water meter.
- Dimensions and technical data are the same as the common DIM-B-50~300 water meter.

### Working Conditions

- Water temperature:  $\leq 40^{\circ}\text{C}$  for cold potable water meter.
- Water pressure:  $\leq 1.6\text{MPa}$ .
- Distance between the meter and a data collector:  $\leq 100\text{m}$ .

### Schematic Figure



### Reed Switch Assembly

- The reed switch pulser consists of a plastic housing with a reed switch 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:
  - $V_{\text{max}}$ : 24AV/DC,
  - $I_{\text{max}}$ : 0.01A.
- Drawing:



### Data Output Options

- The special meter comes in two model variations, which indicate different pulse rates. To choose the best suitable variation for your need, please consult the table below.
- DN: nominal diameter.

Positions of special pointer	X0,01	X0,1	X1
Reed switch pulse	1 pulse for each		
Water quantity for each circle	0.1 m <sup>3</sup>	1 m <sup>3</sup>	10 m <sup>3</sup>
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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