

# Positive displacement meters series BMV 200 - BMV 400 - BMV 600



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## Positive displacement meters series BMV 200 - BMV 400 - BMV 600

ISOIL PD meter series **BMV** sizes 3", 4" and 6" offers high accuracy and repeatability of over large range of flow rate. This accuracy remains constant during long periods of use.

Visual indication of the flow rate measured can be obtained when associated with mechanical register or electronic flow computer directly mounted on the meter or remote by means of a pulses emitter (see VEGA II or VEGA T leaflets).

### Description

BMV is composed by PD meter series BM and a strainer air separator (with removal strainer basket).

### Applications

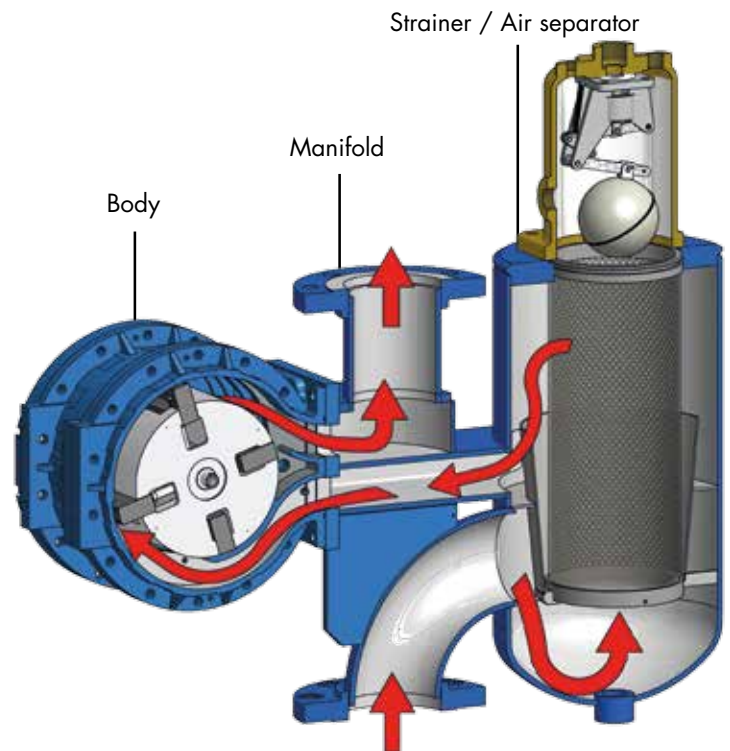
The configuration p.d. meter assembled to the strainer air separator has been specially designed to be installed into tank truck and tank wagon loading rail in the deposits. Indeed for the top and bottom loading, the loading arms develop from top to bottom and then always required a vertical pipe that rise until the entrance flange of the loading arm. The special manifold of the BMV meters has been studied to be directly inserted into the vertical pipe section that links to the loading arm.

### Operation

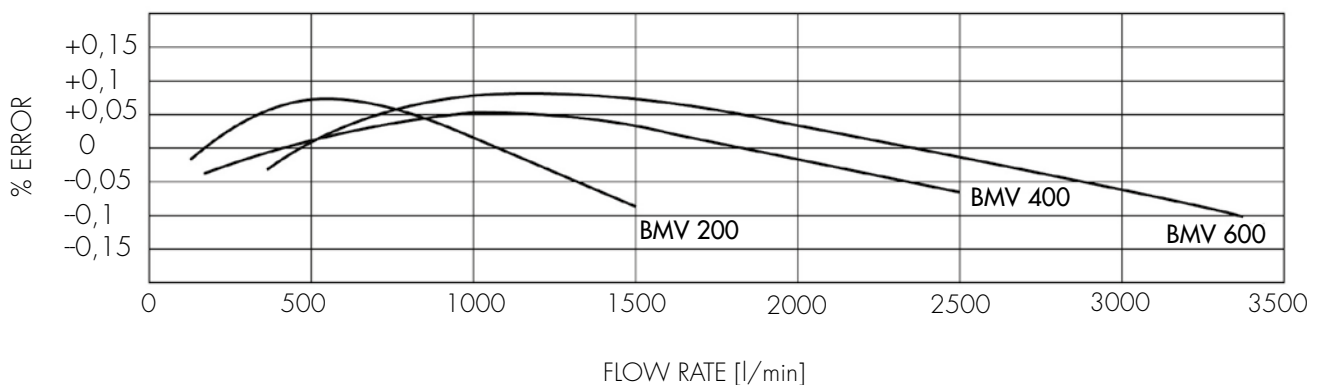
While rotating, the vanes are driven by the internal surface of the single body. This means that the self-lubricating vanes are always in contact with the internal surface of measuring chamber, therefore product leakage is avoided and though high accuracy is granted. The calibration mechanism allows micrometric adjustment. It is not necessary to change gears.

When an electronic counter is remote, the meter mounts a pulses emitter or encoder (see Encoder Isoil 6422 data sheet).

The strainer and the air separator are placed in the same cylindrical body; the basket strainer can be inspected by removing the air vent valve cap.



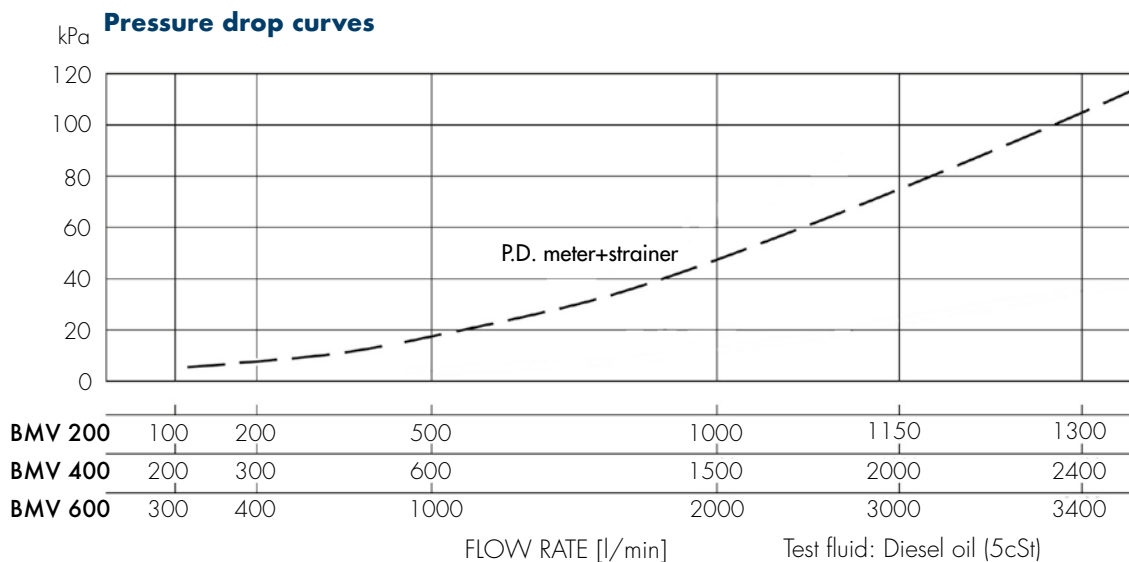
### Accuracy curves



## Technical specifications

	STANDARD			UPON REQUEST
	BMV 200	BMV 400	BMV 600	
<b>EU Directives compliance</b>	ATEX e PED			
<b>Working conditions</b>				
Flow rate:	[100 ; 1,300] l/min @ 10 cSt	[200 ; 2,400] l/min @ 10 cSt	[300 ; 3,400] l/min @ 10 cSt	
Working pressure:	1,000 kPa max	1,000 kPa max	1,000 kPa max	Higher values
Test pressure:	1,700 kPa	1,700 kPa	1,700 kPa	
Working temperature:	[-30; +100] °C*	[-30; +100] °C*	[-30; +100] °C*	Higher and lower values
<b>Construction</b>				
<i>Filter air eliminator:</i>				
Body:	Carbon Steel	Carbon Steel	Carbon Steel	
Air eliminator:	Aluminium	Aluminium	Aluminium	
Filtering element:	Stainless Steel	Stainless Steel	Stainless Steel	
Mesh size:	Typically 100 (gasoline), 60 (diesel oil)	Typically 100 (gasoline), 60 (diesel oil)	Typically 100 (gasoline), 60 (diesel oil)	Others
<i>Meter:</i>				
Body:	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	
Manifold and flanges:	Carbon Steel	Carbon Steel	Carbon Steel	
Covers:	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	
Rotor:	Aluminium	Aluminium	Aluminium	
Vanes:	Graphite	Graphite	Graphite	PTFE
Gaskets:	Nitrile	Nitrile	Nitrile	Viton or PTFE
Ball Bearings:	Stainless Steel	Stainless Steel	Stainless Steel	Graphite bushes
Seal:	Viton lip seal	Viton lip seal	Viton lip seal	Mechanical or magnetic drive
Flanged:	3" ANSI150 RF	4" ANSI150 RF	6" ANSI150 RF	Others
Readout (with mechanical register)	litres	litres or m <sup>3</sup>	m <sup>3</sup>	Others
Flow direction:	Right (IN) to left (OUT)	Right (IN) to left (OUT)	Right (IN) to left (OUT)	Left (IN) to right (OUT)
<b>Performances</b>				
Accuracy:	± 0,1%	± 0,1%	± 0,1%	
Repeatability:	0,02%	0,02%	0,02%	
Pressure drop:	Refer to the diagram attached	Refer to the diagram attached	Refer to the diagram attached	

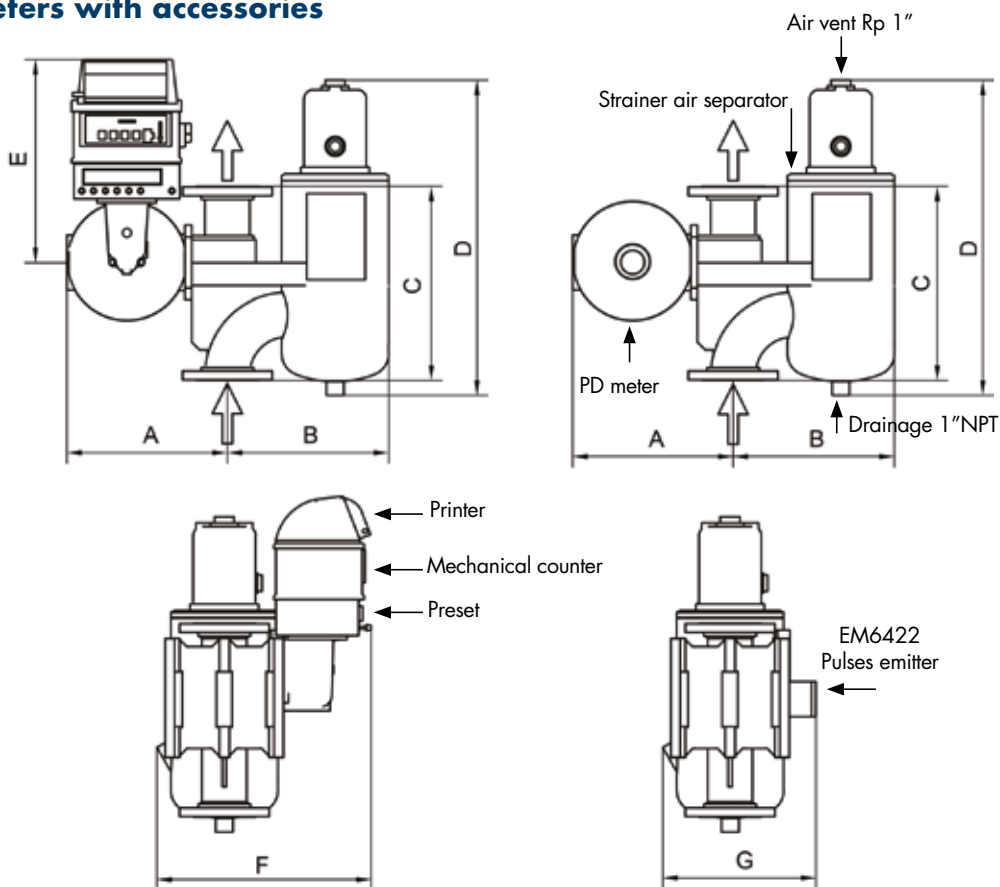
\*Temperature range, printed on plate, will always span 60° C



## Accessories

<b>Pulses emitter</b> Encoder 6422 Ex-d. Pulses emitter EM 345 Eex-i or EMT2-2 Ex-d incorporated in Veeder Root 7887 register
<b>With VEGA II compensation</b> Is achieved by an algorithm based on "alfa" coefficient or density
<b>Instant flow rate</b> Mechanical needle indicator
<b>Ticket printer</b> Veeder Root. Zero start or cumulative
<b>Preset</b> Veeder Root 7889, with one or two pneumatic micro switches or electric micro switches Ex-d ATEX
<b>Extension for electronic or mechanical counter</b> L = 250 mm, 500 mm
<b>Line pressure gauge</b> 0-1,600 KPa, 100 mm diam. Dial
<b>Differential pressure gauge</b> 0-200 KPa
<b>Drain valve</b> 1" NPT ball valve
<b>ISOVALVE automatic valve</b> 3" or 4" or 6". 2 stages or Multistep closure. Flow limiting. No return

## BMV Meters with accessories



Type	Flange Dimension								Weight
		A	B	C	D	E	F	G	
<b>BMV 200</b>	3"	410 mm	412 mm	385 mm	805 mm	474 mm	751 mm	345 mm	170 Kg
<b>BMV 400</b>	4"	410 mm	412 mm	495 mm	805 mm	474 mm	751 mm	400 mm	210 Kg
<b>BMV 600</b>	6"	468 mm	456 mm	650 mm	775 mm	474 mm	700 mm	515 mm	300 Kg

Accessories	Weight
<b>VR Counter</b>	6 Kg
<b>Preset</b>	5 Kg
<b>Printer</b>	5 Kg