

# Positive displacement meters series **SBMD 75 - BMD 200** **BMD 400 - BMD 600**



BMD 200 with VEGA II



BMD 600 with ENCODER



BMD 400 with mechanical counter

[www.isoilmeter.com](http://www.isoilmeter.com)



## Positive displacement meters series

### SBMD 75 - BMD 200

### BMD 400 - BMD 600

ISOIL PD meter series **BMD** sizes 2", 3", 4" and 6" offers high accuracy:  $\pm 0,1\%$  (BMD) and  $\pm 0,15\%$  (SBMD) with a repeatability better than  $\pm 0,02\%$ , over a 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). Double case PD meters are suitable for a large range of pressure.

#### Applications

- » Loading and unloading of tank truck, tank wagon and barges
- » Aircraft refuelling
- » Transfer of petrochemical products from refineries to depots and pipelines

#### Filtering and air elimination

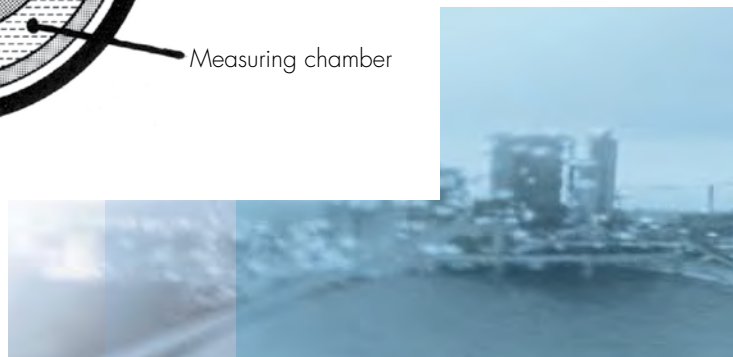
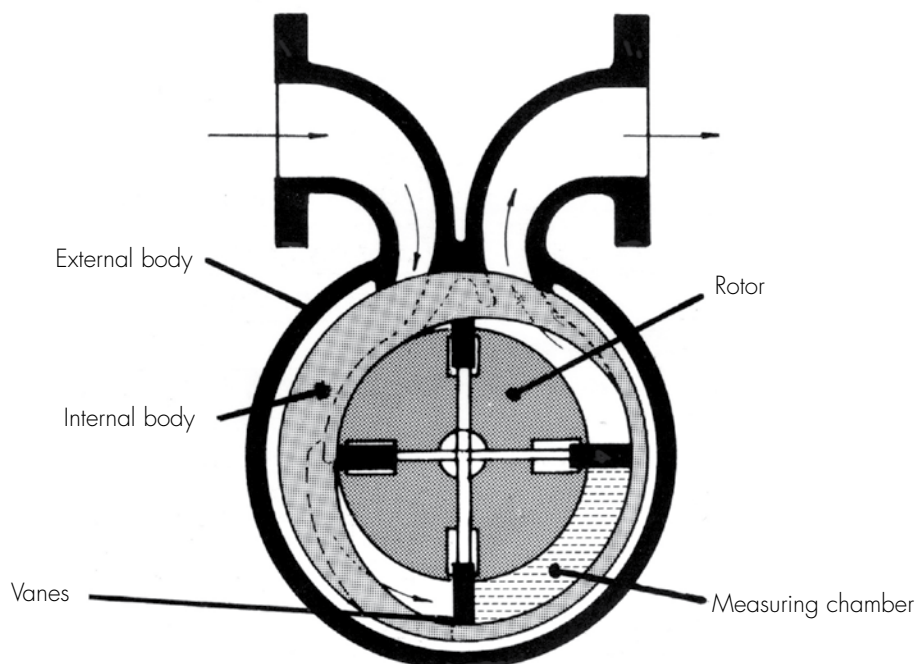
To assure a measuring accuracy and preserve the meter from damage, the fluid under measurement must be properly filtered and air or gas must be eliminated. Isoil produces a wide range of strainers and strainer - air separators (see SFA - SFDA - FA - FDA leaflet).

#### 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.

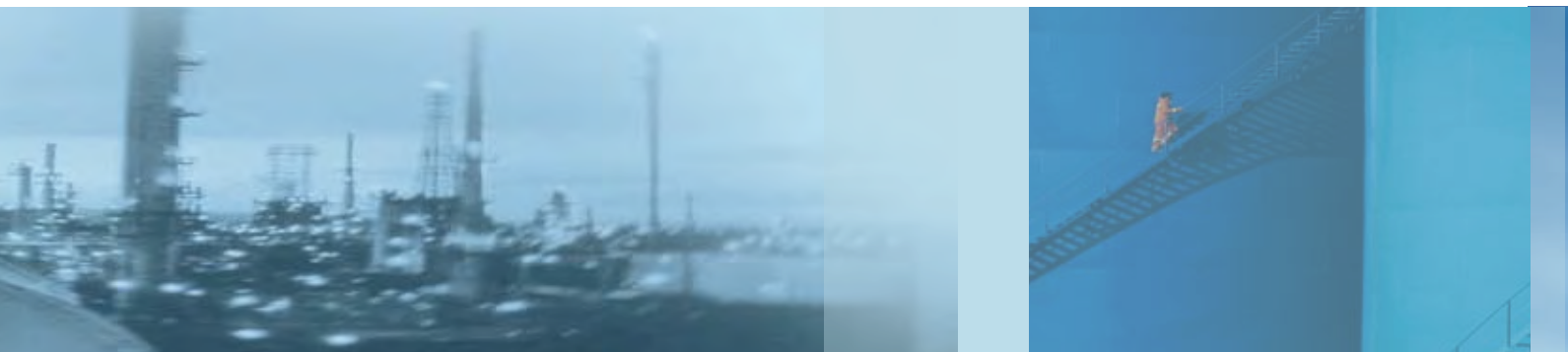
The calibration mechanism allows micrometric adjustment. It is not necessary to change gears.

When an electronic counter is used, the calibration mechanism is substituted with a 90° driving gear, if the electronic counter is mounted directly on the meter. If the electronic counter is remote, the meter mounts a pulses emitter or encoder (see Encoder Isoil 6422 data sheet).

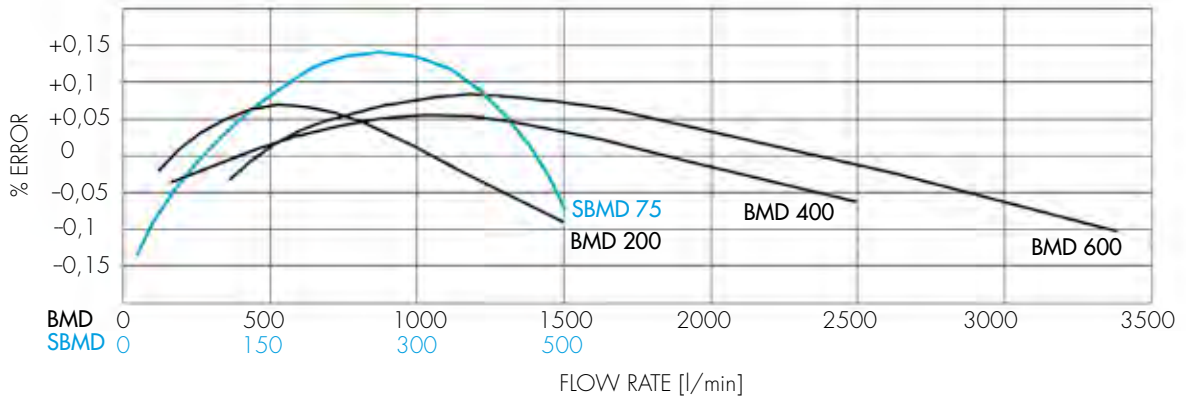


## Technical specifications

	STANDARD				UPON REQUEST
	SBMD 75	BMD 200	BMD 400	BMD 600	SBMD 75 BMD 200 BMD 400 BMD 600
<b>EU Directives compliance</b>					
PED (dir. 97/23/CE)	Compliant directive 97/23/CE, with risk category depending on the measured liquid				
ATEX (dir. 94/9/CE)	Non electrical equipment, compliant directive 94/9/CE, suitable for installation in hazardous area II 2G, marking Ex II 2 G c T1 ... T6				
<b>Working conditions</b>					
Flow rate:	[50 ; 500] l/min @ 10 cSt	[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	1,000 KPa max	Higher available upon request
Test pressure:	1,700 KPa	1,700 KPa	1,700 KPa	1,700 KPa	Higher available upon request
Working temperature:	[-30; +100] °C	[-30; +100] °C	[-30; +100] °C	[-30; +100] °C	Higher and lower available upon request
<b>Construction</b>					
Manifold and flanges:	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel for low temperature
External body:	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel for low temperature
Internal body:	Alluminium	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel for low temperature (BMD)
Covers:	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel with corrosion prevention treatment	Carbon Steel for low temperature
Rotor:	Alluminium	Alluminium	Alluminium	Alluminium	Stainless Steel
Vanes:	Graphite	Graphite	Graphite	Graphite	PTFE
Gaskets:	Nitrile	Nitrile	Nitrile	Nitrile	Viton or PTFE
Ball Bearings:	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Graphite bushes
Drive:	Viton lip seal	Mechanical	Mechanical	Mechanical	Mechanical or magnetic drive
Flanged:	2" ANSI150 RF	3" ANSI150 RF	4" ANSI150 RF	6" ANSI150 RF	Other sizes and standards
Readout (with mechanical register)	litres	litres	litres or m <sup>3</sup>	m <sup>3</sup>	Others upon request
Volume per revolution:	0.625 litres	2.275 litres	4.55 litres	6.825 litres	
Flow direction:	Left (IN) to right (OUT)	Left (IN) to right (OUT)	Left (IN) to right (OUT)	Left (IN) to right (OUT)	Right (IN) to left (OUT)
<b>Performances</b>					
Accuracy:	± 0.15%	± 0.1%	± 0.1%	± 0.1%	
Repeatability:	± 0.02%	± 0.01%	± 0.01%	± 0.01%	
Pressure drop:	Refer to the diagram attached	Refer to the diagram attached	Refer to the diagram attached	Refer to the diagram attached	

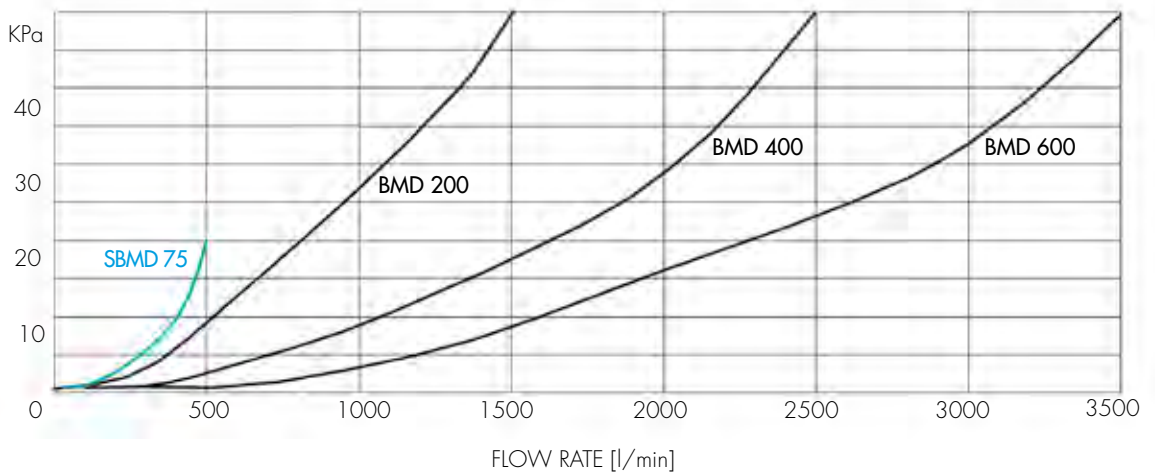


### Accuracy curves



### Pressure drop curves

Viscosity at 15°C = 2 cSt  
Density = 795 Kg/m<sup>3</sup>





## Accessories

### Pulses emitter

Model EM 6422 EEx-d.  
Model EM 345 EEx-i.

### Mechanical temperature compensation

Setting "alfa" coefficient (only with Veeder Root 7887 register)

### With VEGA II compensation

Is achieved by an algorithm based on "alfa" coefficient or density

### Instant flow rate

Mechanical needle indicator

### Ticket printer

Zero start or accumulative

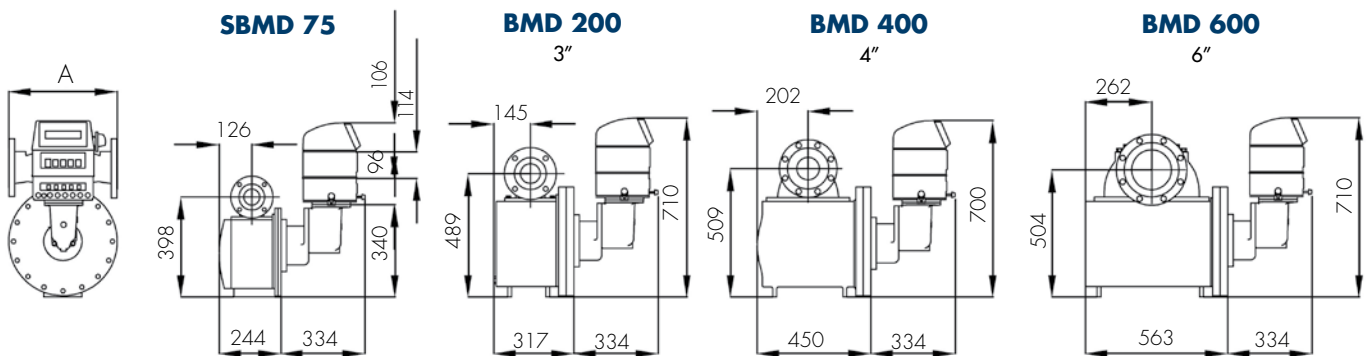
### Preset

With one or two EEx-d microswitches or pneumatical switches

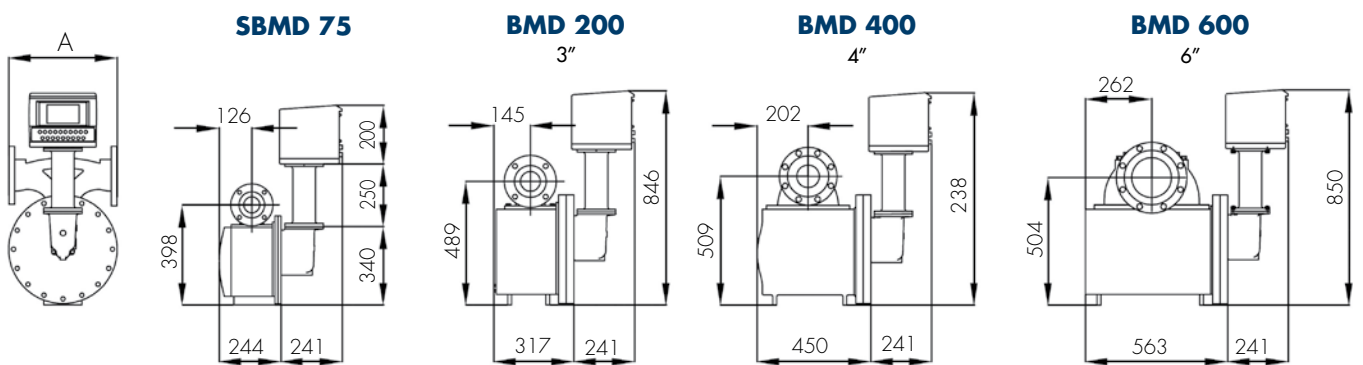
### Extension for electronic or mechanical counter

L = 250 mm, 500 mm, 1000 mm and 3000 mm

## P.D. Meter with mechanical counter



## P.D. Meter with VEGA II



Type	Dimension A	Weight
<b>SBMD 75</b>	328 mm	80 Kg
<b>BMD 200</b>	356 mm	95 Kg
<b>BMD 400</b>	432 mm	125 Kg
<b>BMD 600</b>	733 mm	160 Kg

Accessories	Weight
<b>Testata VR</b>	6 Kg
<b>Preset</b>	5 Kg
<b>Stampatore</b>	5 Kg
<b>Testata VEGA II</b>	15 Kg



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**ISOIL**  
I M P I A N T I  
The solutions that count

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