Positive displacement meters series
BM 200 - BM 400 - BM 600

BM 200

BM 600

BM 400

www.isoilmeter.com

ISOIL IMPIANTI

The solutions that count

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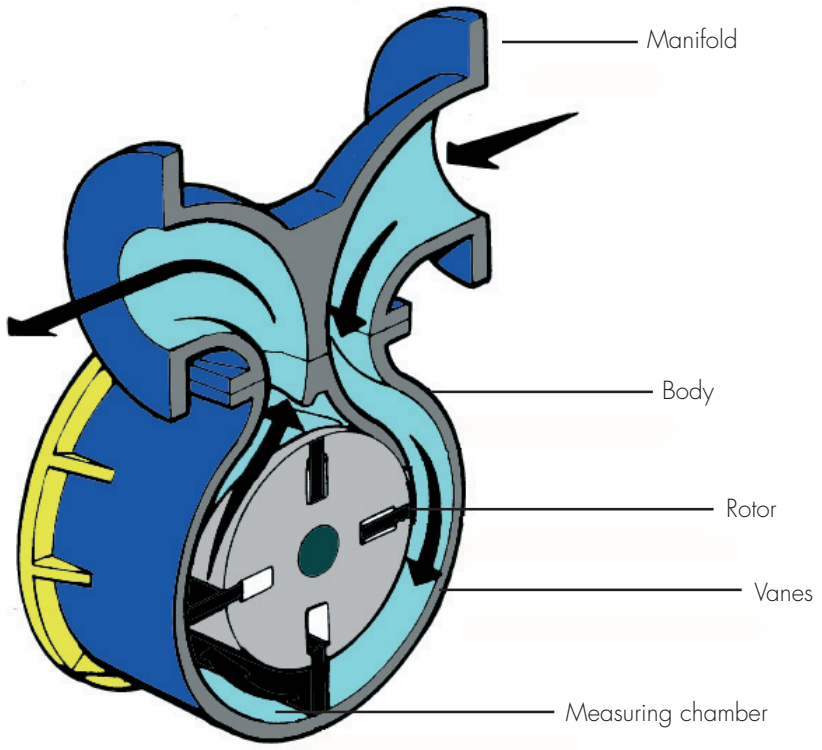
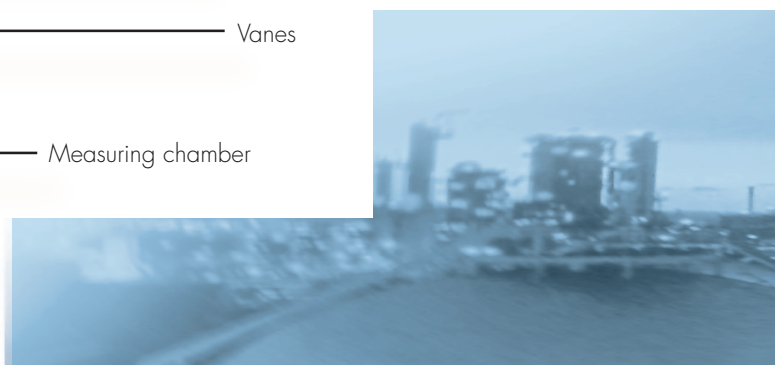
ISOIL PD meter series **BM** sizes 2", 3", 4" and 6" offers high accuracy: +/- 0,1% with a repeatibility of +/- 0,01%, over a large range of flow rate. This accuracy remains constant during long periods of use.
Visual indication of the flow rate measured, can be obtained when associated with mechanical 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).

Applications
» loading and unloading of tank trucks, tank wagons and barges
» aircraft refuelling
» transfer of petrochemical products from refineries to depots in pipelines
» calibration of other meters and tanks

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 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 in 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).

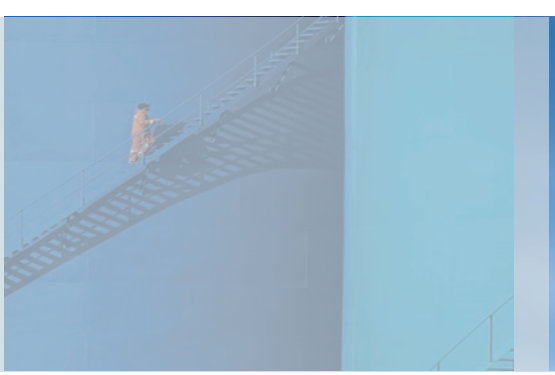




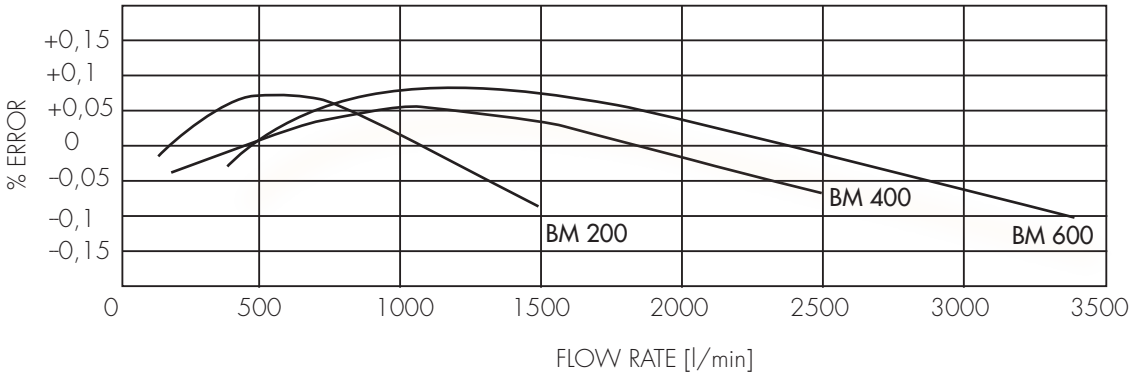
Technical specifications

	STANDARD			UPON REQUEST
	BM 200	**BM 400**	**BM 600**	**BM 200 BM 400 BM 600**
EU Directives compliance				
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			
Working conditions				
Flow rate:	[100 ; 1,300] l/min @ 10 cSt	[200 ; 2,400] l/min @ 10 cSt	[300 ; 3,400] l/min @ 10 cSt	
	1,400 l/min with jet fuel (*)	2,600 l/min with jet fuel (*)	4,000 l/min with jet fuel (*)	
Working pressure:	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	Higher available upon request
Working temperature:	[-30; +100] °C	[-30; +100] °C	[-30; +100] °C	Higher and lower available upon request
Construction				
Manifold and flanges:	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel for low temperature
Body:	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel for low temperature
Covers:	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel for low temperature
Rotor:	Aluminium	Aluminium	Aluminium	Stainless Steel SS316
Vanes:	Graphite	Graphite	Graphite	PTFE
Gaskets:	NBR (Nitrile)	NBR (Nitrile)	NBR (Nitrile)	FKM (viton) or PTFE
Ball bearings:	Stainless Steel AISI 404 C	Stainless Steel AISI 404 C	Stainless Steel AISI 404 C	Graphite bushes
Coupling:	Viton lip seal	Viton lip seal	Viton lip seal	Mechanical or magnetic drive
Flanged:	3" ANSI150 RF	4" ANSI150 RF	6" ANSI150 RF	Other sizes and standards
Readout (with mechanical register)	litres	litres or m^3	m^3	Others upon request
Volume per revolution:	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)	Right (IN) to left (OUT)
Performances				
Accuracy:	± 0.1%	± 0.1%	± 0.1%	
Ripeatability:	± 0.01%	± 0.01%	± 0.01%	
Pressure drop:	Refer to the diagram attached	Refer to the diagram attached	Refer to the diagram attached	

(*) version with "aviation trim" (no copper or copper alloys in the wetted parts)

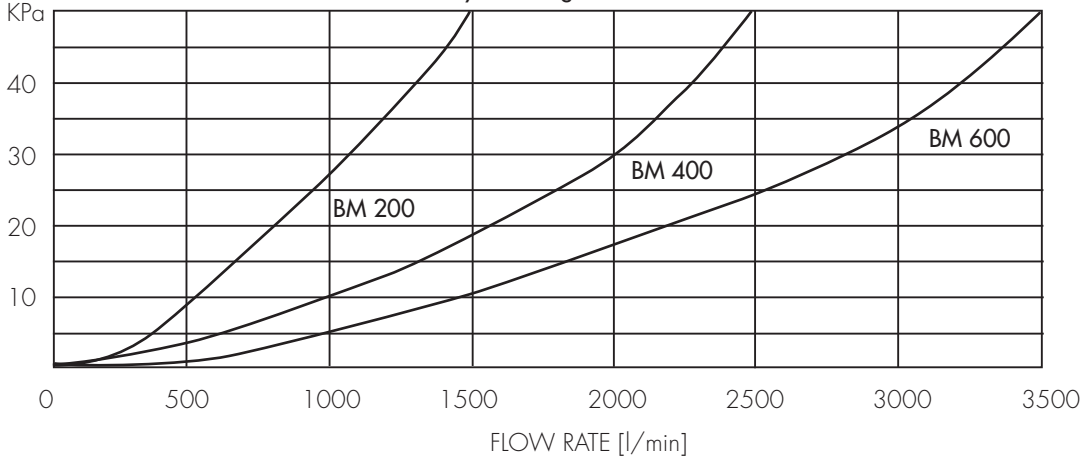


Accuracy curves



Pressure drop curves

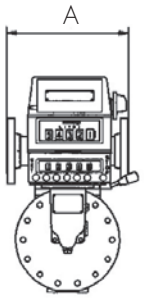
Viscosity at 15°C = 2 cSt
Density= 795 Kg/m^3



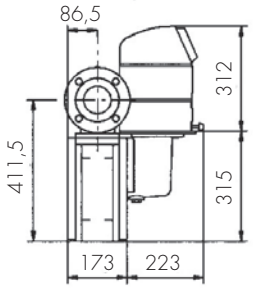
BMM 400
Master Meter with trolley

Accessories

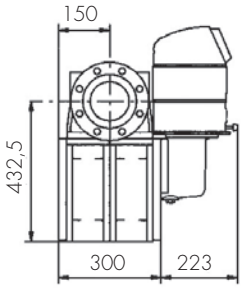
Pulses emitter Encoder 6422 Eex-d. Pulses emitter EM 345 Eex-i incorporated in Veeder Root 7887 register
Mechanical temperature compensation Setting "alfa" coefficient (only with Veeder Root 7887 register)
With VEGA II compensation Is achieved by an algorithm based on "alfa" coefficient or on ASTM tables
Unit drum (for Master Meter) Allows the reading of the tens of litre
Instant flow rate Mechanical needle indicator
Ticket printer Veeder Root. Zero start or cumulative
Preset Veeder Root 7889, with one or two pneumatic micro switches or electric micro switches Eex-d ATEX
Extension for electronic counter L = 250 mm, 500 mm, 1000 mm and 3000 mm



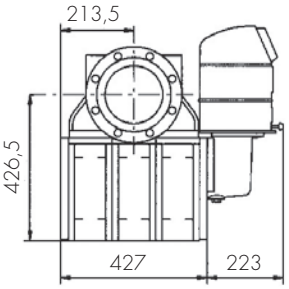
BM 200
3"

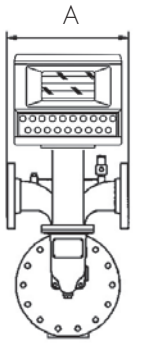


BM 400
4"



BM 600
6"





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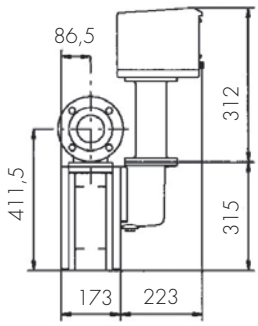
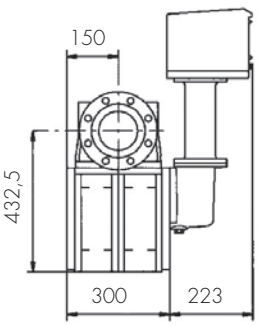
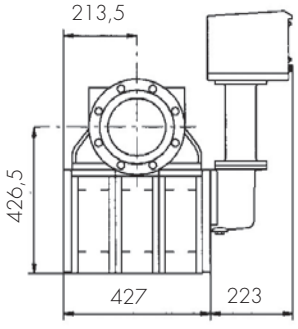
3"



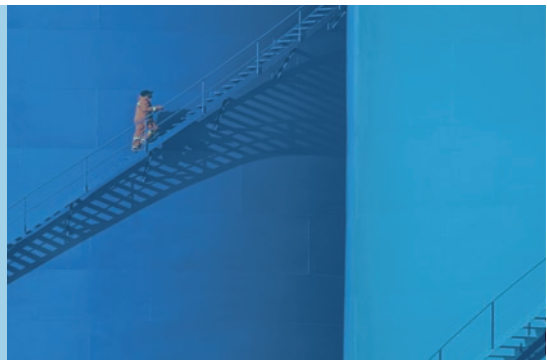
BM 400
4"



BM 600
6"



Type	Dimension A	Weight
BM 200	356 cm	54 Kg
BM 400	430 cm	102 Kg
BM 600	733 cm	155 Kg



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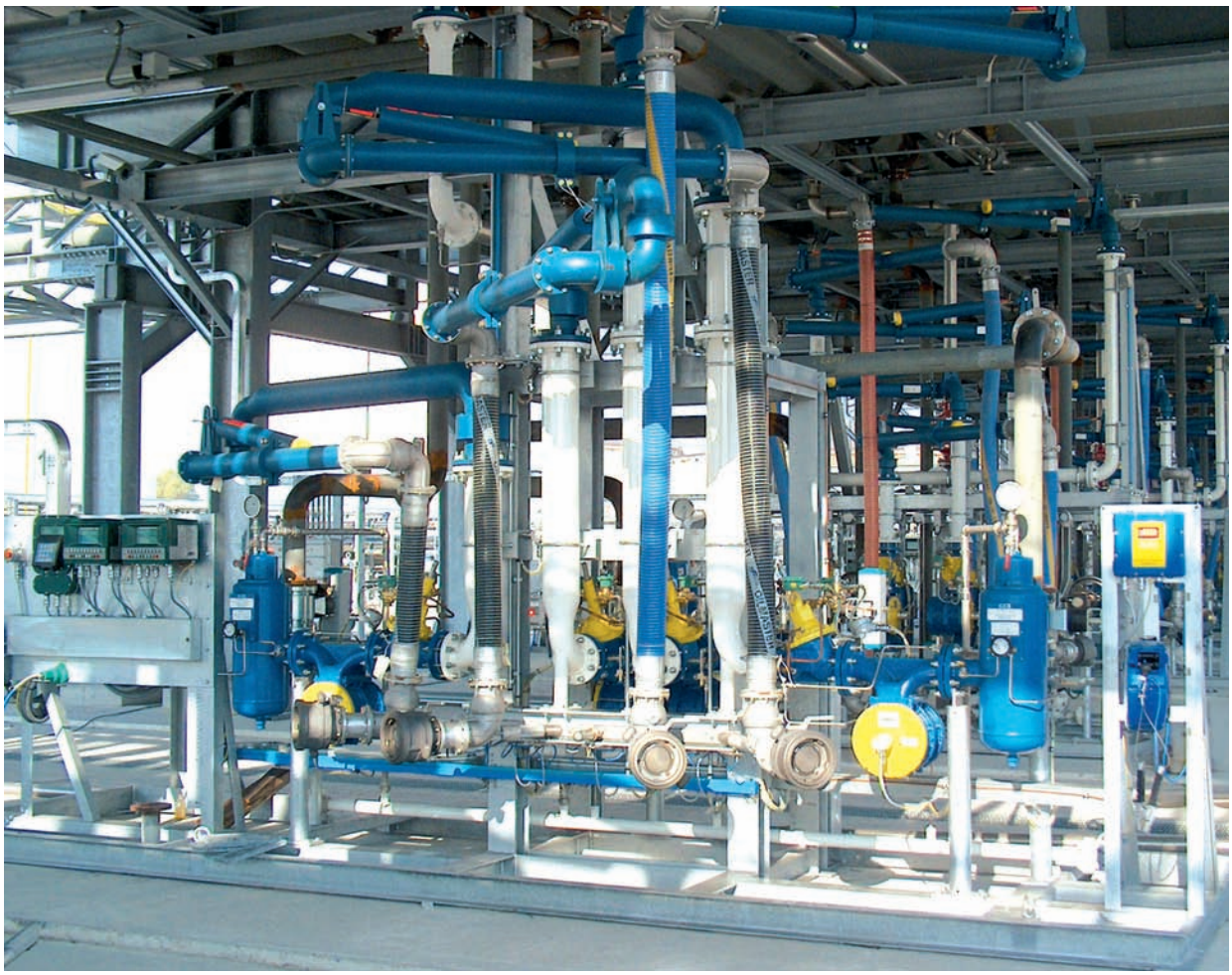

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