Positive displacement meters series
SBM 75 - SBM 150

SBM 150 with VEGA T

SBM 75 CF

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The solutions that count

SBM 75 with VEGA T

SBM 150 CF+Check

Positive displacement meters series SBM 75 - SBM 150

ISOIL PD meter series **SBM** sizes 2"and 3"offers high accuracy: +/- 0,1% (SBM 150) and +/- 0,15% (SBM 75) with a repeatibility better than +/- 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).

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).

Applications

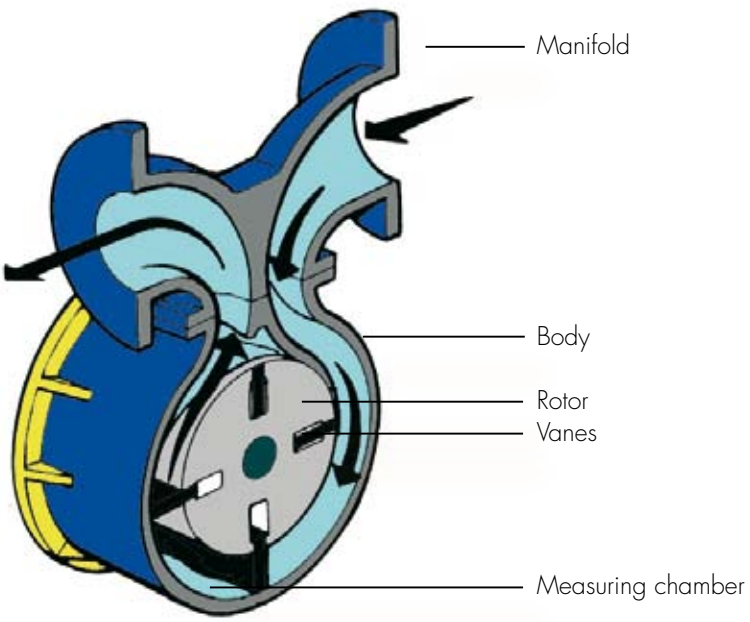
» tank trucks loading and unloading
» biofuel Blending
» aircraft refuelling
» petrochemical products transfer in refineries, loading terminals and pipelines
» calibration of other meters or tanks (Master Meters)

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.

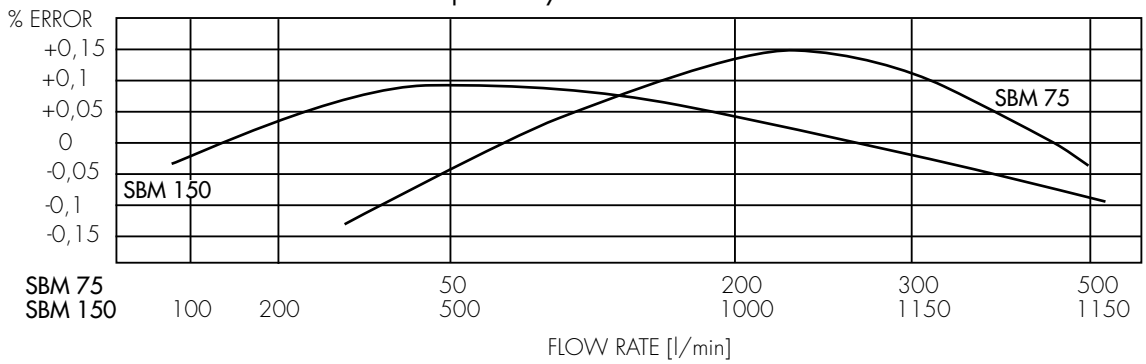
Accessories

» pulses emitters: 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 density
» unit drum (for Master Meter): allows the reading of the tens of litre
» instant flow rate indicator: Mechanical needle indicator
» ticket printer: Veeder Root. Zero start or cumulative
» preset register: Veeder Root 7889, with one or two pneumatic micro switches or electric micro switches Eex-d ATEX
» extension for electronic or mechanical counter: L= 250 mm e 500 mm
» preset valve : 2" and 3"
» air check valve: 2" and 3"



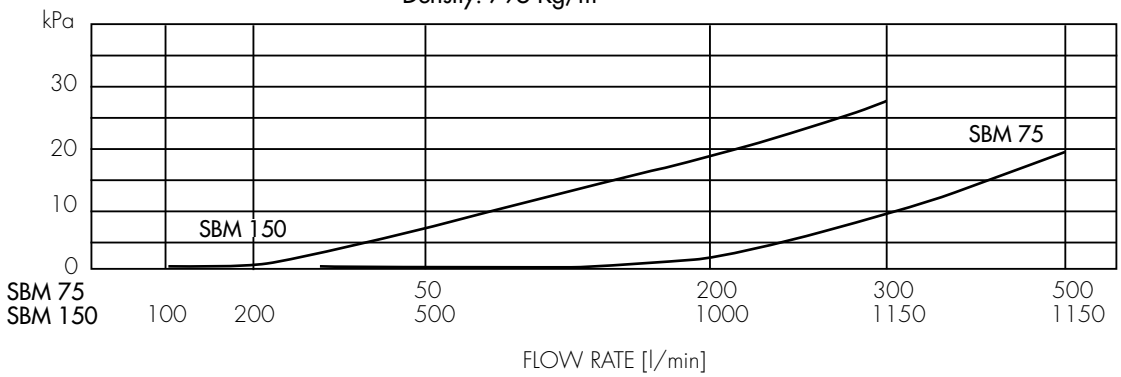
Accuracy curves

Accuracy: ±0.1%
Repeatability: ±00.1%



Pressure drop curves

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



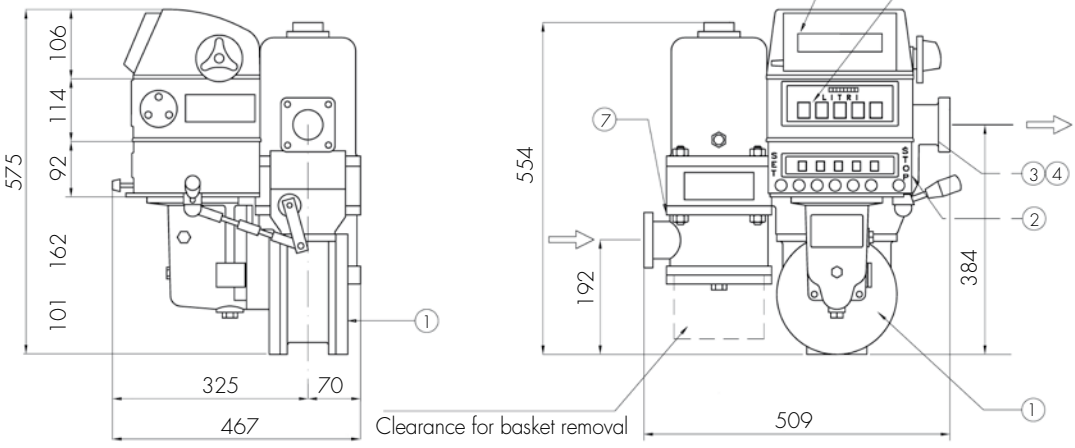
Technical specifications

	STANDARD		UPON REQUEST
	SBM 75	**SBM 150**	**SBM 75 / SBM 150**
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:	[50 ; 500] l/min @ 10 cSt	[100 ; 1,300] l/min @ 10 cSt	
	600 l/min max with jet fuel (*)	1,400 l/min max with jet fuel (*)	
Working pressure:	1,000 KPa max	1,000 KPa max	Higher available upon request
Test pressure:	1,700 KPa	1,700 KPa	Higher available upon request
Working temperature:	[-30; +100] °C	[-30; +100] °C	Higher and lower available upon request
Construction			
Manifold and flanges:	Alluminium	Alluminium	
Body:	Alluminium	Alluminium	
Covers:	Carbon steel	Carbon steel	
Rotor:	Alluminio	Alluminium	
Vanes:	Rilsan	Graphite	PTFE or graphite (SBM75)
Gaskets:	NBR (Nitrile)	NBR (Nitrile)	FKM (viton) or PTFE
Ball bearings:	Stainless Steel	Stainless Steel	Graphite bushes
Coupling:	Viton lip seal	Viton lip seal	Mechanical or magnetic drive
Flanged:	Square 90 x 90 mm	3" ANSI150 FF	2" ANSI150 RF (SBM75) square 120 x 120 mm (SBM150)
Readout (with mechanical register)	litres	litres	Others upon request
Volume per revolution:	0.625 litres	2.2797 litres	
Flow direction:	Left (IN) to right (OUT)	Left (IN) to right (OUT)	Right (IN) to left (OUT)
Performances			
Accuracy:	± 0.15%	± 0.1%	
Repeatability:	± 0.02%	± 0.01%	
Pressure drop:	Refer to the diagram attached	Refer to the diagram attached	

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

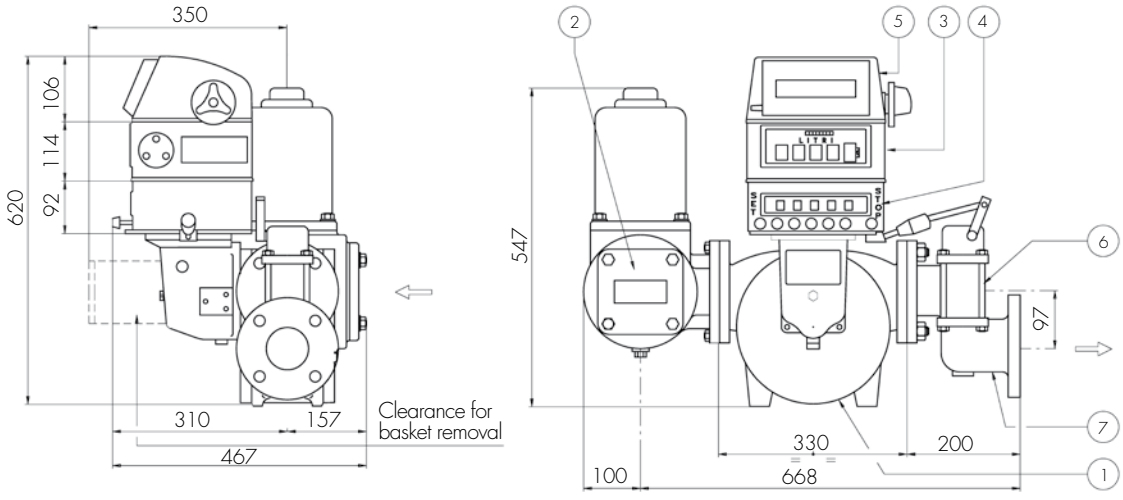
SBM 75

1) P.D. Meter
2) Strainer-air separator
3) Counter
4) Preset
5) Preset valve
6) Check valve
7) Printer



SBM 150

1) P.D. Meter
2) Strainer-air separator
3) Counter
4) Preset
5) Preset valve
6) Check valve
7) Printer



Weight water with accessories

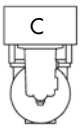
Type	CF	CFPVp	CFS	CFPVpS
SBM 75	38 Kg	44 Kg	43 Kg	49 Kg
SBM 150	62 Kg	75 Kg	67 Kg	80 Kg



Terminal version

C = "Counter" V/R 7887
F = Trainer-airseparator
P = Preset
Vp = Preset valve
Vm = Manual valve
S = Ticket printer V/R
Check = Check valve

SBM 75



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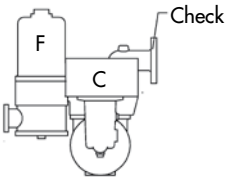

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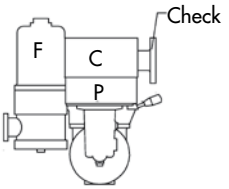
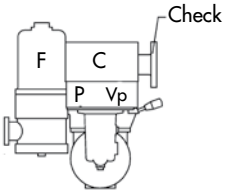


2) MOD: CFP + check



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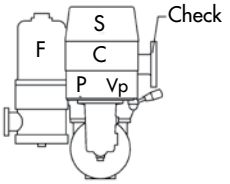
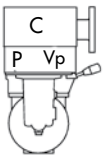


4) MOD: CFPVpS + check



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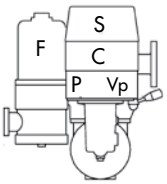

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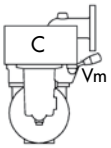

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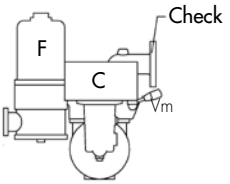
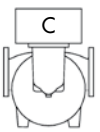


8) MOD: CFVm + check

SBM 150



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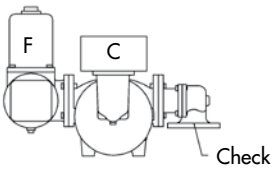
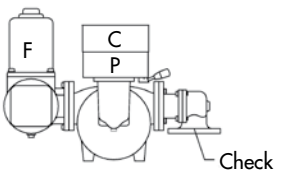
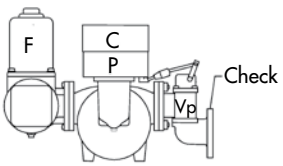


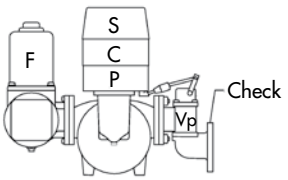
1) MOD: CF + check



2) MOD: CFP + check



3) MOD: CFPVp + check



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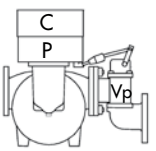

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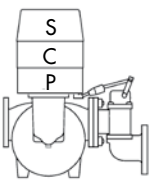

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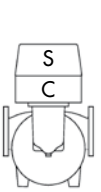

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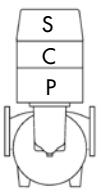

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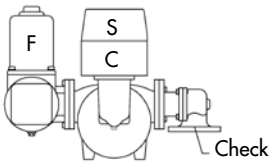
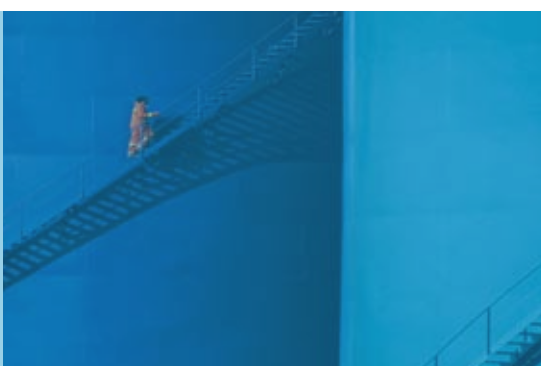


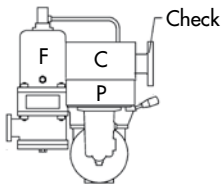
9) MOD: CFS + check



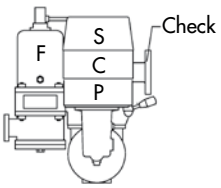
Positive displacement meters series
SBM 75 - SBM 150

Tank truck version

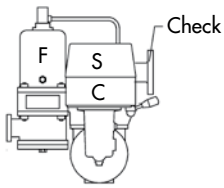
SBM 75 CEE



0) MOD: CFPVp + check



1) MOD: CFPVps + check



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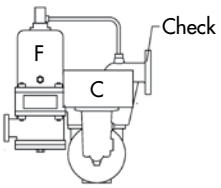

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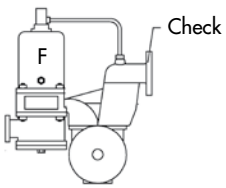
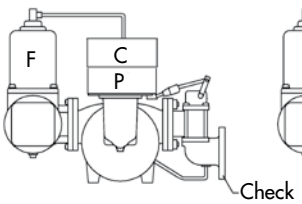


4) MOD: BARE SHAFT

C = "Counter" V/R 7887
F = Trainer-airseparator
P = Preset
Vp = Preset valve
S = Ticket printer V/R
Check = Check valve

SBM 150 CEE



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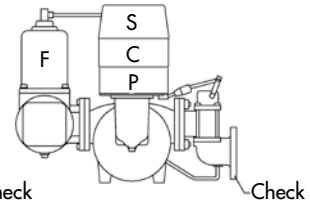

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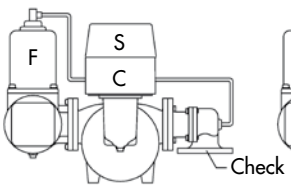

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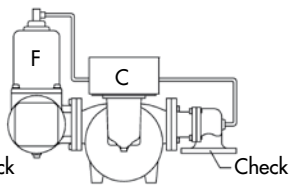

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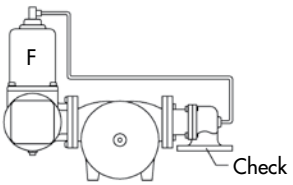

9) MOD: BARE SHAFT

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