

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Flowmeter**

with type designation(s)

SBM32, SBM75, BM200, BM400, BM600, LBM1000, LBM1100, LBM3000, P4000

Issued to

ISOIL IMPIANTI SPA**Milano, MI, Italy**

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems**DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018****Application :****Products approved by this certificate are accepted for installation on vessels classed by DNV GL.**

Type:	Temperature range:	Max. working press.:	Sizes:
SBM32, SBM75	See Certificate	10 bar	See Certificate
BM200, BM400, BM600	See Certificate	20 bar	See Certificate
LBM1000, LBM1100, LBM3000	See Certificate	30 bar	See Certificate
P4000	See Certificate	20 bar	See Certificate

This Certificate is valid until **2025-02-02**.Issued at **Høvik** on **2020-09-25**for **DNV GL**DNV GL local station: **Italy/Malta CMC**Approval Engineer: **Mehdi Rowshan**

Zeinab Sharifi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-021674-2**
Certificate No: **TAP0000095**
Revision No: **1**

Product description

Positive displacement meters series with following models and flange sizes:

Model	SBM32	SBM75	BM200	BM400	BM600	LBM1000	LBM1100	LBM3000	PD4000
Size (inch/DN)	1.5/32	2/ 50	3 /80	4/100	6 / 150	8 /200	8 / 200	10 /250	4/100

Material

Body, Manifold & Flanges: Steel cast according to ASTM A216, ASTM A351, ASTM A516 Gr.60
ASTM A436, ASTM A105, ASTM A234 WPB
Vaness: Graphite, Rilsan, Teflon, Aluminium
Gasket: Viton, Nitrile, Teflon
Bearings: Stainless Steel, Carbon Steel, Graphite

Manufacturing Address:

Isoil Impianti S.p.A.
Via Madonna delle Rose, 74
24061 Albano S. Alessandro
ITALY

Application/Limitation

The flowmeters may be used in water piping systems, fuel oil, lubricating oil and hydraulic oil piping systems on ships as well as offshore installations.

The selection of the flowmeters for the corresponding application and the right installation are to be in accordance with the Regulations of the manufacturer.

Temperature range: Gasket Viton: -25 [°C] to 170 [°C]
Gasket Nitril: -30 [°C] to 100 [°C]
Gasket Teflon: -30 [°C] to 100 [°C]

Type Approval documentation

Calibration Report-No.: 1533, dated: 2015-12-18
Test for Pattern Approval-No.: 267/2014, dated: 2014-03-18
Drawing 8368/2, dated: 2015-07-03
List of Documents Rev. 2, dated : 2015-08-03
List of Equipment Rev. 2; dated : 2015-08-03
Vibration Test No.: VIBP 08_019, dated: 2008-07-08
Tightness Test No.: 1533, dated: 2015-12-18
Functional Test, dated: 2008-07-25
Strength Calculations P4000 dated: 07/05/2020

Tests carried out

Vibration Test, Tightness Test, Functional Test

Marking of product

For traceability to this type approval the products are to be marked with:
- Manufacturer's name or trade mark
- Type designation
- Size

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Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.