

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP00001GY
Revision No:
3

This is to certify:
that the Flowmeter

with type designation(s)
J5025, J5040, J5050, J5025PT, J5040PT, J5050PT, B5015, B5023, B5025, B5040, B5050, J5015E, J5023E, J5025E, J5040E, J5050E, J5015PT2, J5023PT2, J5025PT2, J5040PT2, J5050PT2

issued to
VAF Instruments B.V.
Dordrecht, Zuid-Holland, Netherlands

is found to comply with
DNV rules for classification – Ships Pt.4 Ch.6 Piping systems

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Temperature range: -10 °C up to 180 °C. Refer to certificate.
Max. working press.: Up to PN 40. Refer to certificate.
Sizes: DN 15, DN 25, DN 40 and DN 50. Refer to certificate.

Issued at **Hamburg** on **2024-03-13**

for **DNV**

This Certificate is valid until **2029-03-12**.

DNV local unit: **Netherlands VMC**

Approval Engineer: **Jörg Hille**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

The flowmeters are positive displacement type and operate on the sliding vane principle and consist of the following main components:

Component	Material
Body	EN-GJS-400-15
Rotor	EN-GJS-400-15
Front cover	EN-GJS-400-15
Back cover	EN-GJS-400-15
O-ring sealing	FPM

Overview of approved flowmeters

Type	Temperature range [°C]	Nominal pressure	Nominal size
J5025	-10 °C up to 120 °C	PN 10 - PN 25	DN 25
J5040	-10 °C up to 120 °C	PN 10 - PN 25	DN 40
J5050	-10 °C up to 120 °C	PN 10 - PN 25	DN 50
J5025PT	-10 °C up to 150 °C	PN 10 - PN 25	DN 25
J5040PT	-10 °C up to 150 °C	PN 10 - PN 25	DN 40
J5050PT	-10 °C up to 150 °C	PN 10 - PN 40	DN 50
B5015	-10 °C up to 180 °C	PN 10 - PN 40	DN 15
B5023	-10 °C up to 180 °C	PN 10 - PN 40	DN 25
B5025	-10 °C up to 180 °C	PN 10 - PN 25	DN 25
B5040	-10 °C up to 180 °C	PN 10 - PN 25	DN 40
B5050	-10 °C up to 160 °C	PN 10 - PN 25	DN 50
J5015E	-10 °C up to 180 °C	PN 6 - PN 40	DN 15
J5023E	-10 °C up to 180 °C	PN 6 - PN 40	DN 25
J5025E	-10 °C up to 180 °C	PN 6 - PN 25	DN 25
J5040E	-10 °C up to 180 °C	PN 6 - PN 25	DN 40
J5050E	-10 °C up to 160 °C	PN 6 - PN 25	DN 50
J5015PT2	-10 °C up to 150 °C	PN 10 - PN 25	DN 15
J5023PT2	-10 °C up to 150 °C	PN 10 - PN 25	DN 25
J5025PT2	-10 °C up to 150 °C	PN 10 - PN 25	DN 25
J5040PT2	-10 °C up to 150 °C	PN 10 - PN 25	DN 40
J5050PT2	-10 °C up to 150 °C	PN 10 - PN 25	DN 50

Application/Limitation

The flowmeters are type approved for application in fuel oil, lubricating oil and hydraulic oil systems with respect to compliance with DNV RU SHIP Rules Pt.4 Ch.6.

Flowmeters, which are installed in fuel oil system, shall be fitted with means preventing immediate loss of fuel supply in case of blockage, if this will lead to loss of propulsion plant or auxiliary power.

The selection and installation of a flowmeter shall be as per the manufacturer's manuals (e.g. technical manual "144 MIDFLOW®", publication No. TIB-144-GB-1117).

Type Approval documentation

TAP00001GY, Rev. 2

Scope: Standard renewal

Documents

1. TA Assessment Report issued 2023-12-18
2. DNV ISO9001 Certificate no.: 272892-2018-AQ-NLD-RvA, Initial certification date: 1992-11-13, Valid: 2026-11-29

TAP00001GY up to Rev. 1

Technical manual "144 MIDFLOW®", publication No. TIB-144-GB-1117;

1. Product catalogues:
 - a. PB-142-GB-0414 ProFlow vane meters;
 - b. PB-127-GB-0614 MidFlow HiFlow meters;
 - c. PB-135-GB-0418 LoFlow MidFlow, model PT2;
2. Material inspection certificates of EN-GJS-400-15;
3. Fire endurance test report No. D363 / 2007;
4. AD 2000 Merkblätter - Material is suitable for temperature down to -10°C;
5. Drawings and bills of materials:

Flowmeter	Drawing No.	Bill of materials No.
J5025	0801-2331	0801-2338
J5040	0801-2331	0801-2340
J5050	0801-1269	0801-2342
J5025PT	0801-1405	0801-2349
J5040PT	0801-1405	0801-2350
J5050PT	0801-1406	0801-2351
B5015	0801-1344	0801-2310
B5023	0801-1345	0801-2311
B5025	0801-1334	0801-2237
B5040	0801-1334	0801-2247
B5050	0801-1339	0801-2258
J5015E	0801-1389	0801-2297
J5023E	0801-1390	0801-2298
J5025E	0801-1378	0801-2294
J5040E	0801-1383	0801-2295
J5050E	0801-1384	0801-2296
J5015PT2	0801-1407	0801-2352
J5023PT2	0801-1407	0801-2353
J5025PT2	0801-2333	0801-2343
J5040PT2	0801-2333	0801-2344
J5050PT2	0801-2334	0801-2345

Tests carried out

Fire endurance test.

Marking of product

For traceability to the type approval the products are to be marked with the following data:

Characteristic	Example
Manufacturer's name	VAF Instruments
Variant No.	113369
Type	J5025PT2 DIN
Maximum capacity	157.8 l/min
Service pressure	16 bar
Test pressure	24 bar
Allowable temperature range	-10/150 °C
Serial No.	714573

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNV - CP-0338, Sec.4.

The certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE