Certificate No:
TAP00002J6

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Plug Valve

with type designation(s)
OMEGA Compact

Issued to
Frese A/S
Slagelse, Sjælland, Denmark

is found to comply with
DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
DNV class programme DNV-CP-0186 – Type approval – Valves

Application :

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

Temperature range:	**-20°C to +120°C**
Max. working press.:	**up to 16 bar (see page 2)**
Sizes:	**DN65 to DN800 (see page 2)**

Issued at **Høvik** on **2023-02-02**
This Certificate is valid until **2028-02-01**.
DNV local station: **Denmark CMC**

Approval Engineer: **Per Ola Nymoen**

for **DNV**

Bosman van der Merwe
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.

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

3-way rotary control valve of plug type with flange connections according to EN 1092 with the following material of construction:

Part		Material
Housing and cover	:	EN-GJS-400-18LT EN 1563
Slide (stem)	:	EN-GJS-400-18LT EN 1563
Adapter	:	AISI 304/ 1.4301
Gasket	:	AFM 34 (Reinforced aramid fiber)
O-rings	:	NBR or FKM (FKM for temp. above 100°C)
Bolting	:	A2-70

Application/Limitation

Valves covered by this certificate are approved to be use in ship and machinery piping systems (class II & III) with below maximum working pressure ranges:

Size	Pressure rating according to EN 1092-2
DN65	PN16
DN80	PN16
DN100	PN16
DN125	PN16
DN150	PN16
DN200	PN16
DN250	PN16
DN300	PN16
DN350	PN10
DN400	PN10
DN450	PN10
DN500	PN10
DN550	PN10
DN600	PN10
DN650	PN10
DN700	PN10
DN800	PN10

Control valves covered by this certificate are only to be used where complete shut-off of the process flow is not required.

The approval does not include any operating gear for remote control of the valves.

The valves covered by this certificate are not considered fire safe.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions.

Type Approval documentation

Production testing and Certification

Production Testing and Certification for the actual intended application shall follow the standard EN 1349 and the latest applicable edition of the Rules (as mentioned on the front page of this certificate).

Marking of product

Minimum marking requirements shall be as outlined in the valve standard EN 1349 [10].

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 approval are complied with. Reference is made to DNVGL-CP-0338.