



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAP0000153**  
Revision No:  
**1**

## This is to certify:

**That the Globe Valve**

with type designation(s)  
**Straight & Angle type**

Issued to

**Dikkan Gemi ve Endustriyel Vana Sanayi Ticaret Anonim Sirketi**  
**Izmir, Türkiye**

is found to comply with

**DNV class programme DNV-CP-0186 – Type approval – Valves**  
**DNV rules for classification – Ships Pt.4 Ch.6 Piping systems**

## Application :

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

**Temperature range:** 0°C to 180°C (depending on the sealant material, see page 2)  
**Max. working press.:** 16 bar(g)  
**Sizes:** DN 15 to DN 200 (see page 2)

Issued at **Høvik** on **2023-05-31**

for **DNV**

This Certificate is valid until **2028-01-01**.

DNV local unit: **Istanbul**

Approval Engineer: **Jane Lozanov**

**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.

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.



Form code: TA 251

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## Product description

Four different types of valves with various sizes designed in accordance with EN 12516-3 as shown below:

Size	Minimum wall thickness of valve body & bonnet, mm							
	Globe valves		Quick Closing Valves		Self-closing Valves (Lever & counter-weight type)		Self-closing Valves (Spring loaded)	
	Straight type	Angle type	Straight type	Angle type	Straight type	Angle type	Straight type	Angle type
DN 15	5	6	5	6	5	6	5	6
DN 20	5	6	5	6	5	6	5	6
DN 25	6	7	6	7	6	7	6	7
DN 32	5	7	5	7	5	7	5	7
DN 40	7	7	7	7	7	7	7	7
DN 50	7	7	7	7	7	7	7	7
DN 65	5	5	7,5	7,5	7,5	7,5	7,5	7,5
DN 80	5	5	8	8	8	8	8	8
DN 100	5	5	8,5	9,5	8,5	9,5	8,5	9,5
DN 125	6	6	9,5	9,5	-	-	-	-
DN 150	7	7	10,5	11	-	-	-	-
DN 175	10	10	10	10	-	-	-	-
DN 200	8	8	11	12	-	-	-	-

End flanges are in accordance with PN 16 from EN 1092-2.

Material of construction:

Valve component	Material grade			
	Globe valves	Quick Closing Valves	Self-closing Valves (Lever & counter-weight type)	Self-closing Valves (Spring loaded)
Body & bonnet	EN GJS-400-18-LT from EN 1563	EN GJS-400-18-LT from EN 1563	EN GJS-400-18-LT from EN 1563	EN GJS-400-18-LT from EN 1563
Bonnet gasket	Graphite	Graphite	Graphite	Graphite
Bolting	Grade 8.8 from ISO 898-1	Grade 8.8 from ISO 898-1	Grade 8.8 from ISO 898-1	Grade 8.8 from ISO 898-1
Disc	CuSn5Zn5Pb5-C from EN 1982/ X5CrNi18-10 from EN 10028-7 for sizes ≤ DN65	X20Cr13 from EN 10088-2	X20Cr13 from EN 10088-2	X20Cr13 from EN 10088-2
	EN GJS-400-18-LT from EN 1563 for sizes ≥ DN 80			
Stem	CuZn35Ni3Mn2AlPb from EN 12449/ X20Cr13 from EN 10088-3 CuZn39Pb3 from EN 12164	X20Cr13 from EN 10088-3	X20Cr13 from EN 10088-3	X20Cr13 from EN 10088-3
Seat	CuSn5Zn5Pb5-C from EN 1982/ X5CrNi18-10 from EN 10028-7	X20Cr13 from EN 10088-2	X5CrNi18-10 from EN 10028-7	X5CrNi18-10 from EN 10028-7
Gland packing	Graphite	-	Graphite	-
O-ring	-	NBR/ Viton (FKM)	-	NBR/ Viton (FKM)
Gland	EN GJS-400-18-LT from EN 1563	-	-	-

**Note:** '-' → Not applicable

## Application/Limitation

Valves covered by this certificate may be used in general machinery service for class II and class III piping systems only.

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

Pressure temperature ratings shall follow Table 16 from EN 1092-2.

Temperature limits based on the sealant materials used: -

Graphite: 0°C to 180°C  
NBR : 0°C to 100°C  
Viton (FKM) : 0°C to 180°C

Valves covered by this certificate (except quick closing valves with NBR O-ring) are not considered as fire-safe.

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

'Globe valves - straight & angle type' and 'Self-closing valves – straight & angle type' covered by this certificate may not be used as shut off or quick closing valve.

### Production testing and Certification

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

### Type Approval documentation

Straight & angle globe valve drawing titled 'GLOBE VALVE STR-ANG.XLSX' dated 2017-12-28  
Straight & angle quick closing valve drawing titled 'QUICK CLOSING VALVE STR-ANG.XLSX' dated 2017-12-28  
Straight & angle self closing valve drawings titled 'SELF CLOSING STR-ANG.XLSX' and 'SELF CLOSING-SPRING LOADED STR-ANG.XLSX' dated 2017-12-28  
Burst test calculation report as per EN 12516-3  
Burst test report (with procedure) witnessed by DNV Surveyor dated 2017-05-12  
Vibration test report no. C13884.00 for quick closing valves followed by functional & hydrostatic tests (report no. D178001) dated 2017-08-24  
Fire test certificates from ITIS B.V.: 201700250-C001 dated 2017-06-30 & 201700250-C003 rev. 1 dated 2017-11-03 witnessed by DNV surveyor

### Tests carried out

Burst tests as per EN 12516-3;  
Vibration test as per DNV-CG-0339 (IEC 60068-2-6) & fire test as per ISO 10497 (for quick closing valves)

### Marking of product

Valves shall be marked at least with the following details:

- manufacturer's name or trade mark
- valve type designation and size
- maximum design pressure and temperature
- arrow to indicate direction of flow on one way flow valves

### 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 DNV-CP-0338.