

# TYPE APPROVAL CERTIFICATE

Certificate No: **TAP00000N4**Revision No: 2

with type designation(s) Storm valve straight and angle type Issued to  Meson AB Laholm, Hallands Län, Sweden is found to comply with DNV rules for classification – Ships Pt.4 Ch.6 Piping systems 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: -10°C to 60°C Max. working press.: 4 bar(g) Sizes: DN50, DN65, DN80, DN100, DN125 and DN150  Issued at Høvik on 2022-07-07  for DNV This Certificate is valid until 2026-11-30. DNV local station: Malmö  Approval Engineer: Rob Oerlemans	This is to certify:				
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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.



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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: **262.1-023846-3** Certificate No: **TAP00000N4** 

Revision No: 2

## **Product description**

Self-closing swing check valves, straight type and angle type with a closing device (hand wheel). Pressure tests, test procedures and acceptance criteria acc. to EN12266-1 (leakage rate A).

End connections : Flanges PN10 acc. to EN 1092-2 or flanges ANSI 150 acc. to ASME B16.5

(applicable for both straight and angle types and all sizes)

Sizes : DN50, DN65, DN80, DN100, DN125 and DN150

Medium : Sea water and fresh water

#### Material of construction:

Part	Material grade	
Body	Ductile iron EN GJS 400-15 (GGG40), EN-GJS-400-18-LT(GGG40.3), 1.0619 (WCB),1.1131 (WCC)	
Disc	Ductile iron EN GJS 400-15 (GGG40), EN-GJS-400-18-LT(GGG40.3), 1.0619 (WCB),1.1131 (WCC)	
Sleeve	Brass CW614N (Ms58)	
Sealing	NBR	
Stem	Brass CW614N (Ms58)	
Shaft	Brass CW614N (Ms58)	
Plug	Zinc plated steel	

#### Manufacturing locations:

(1) Meson AB, Kullgårdsvägen 27 SE-312 34 Laholm, Sweden

(2) Meson (Changzhou) Flow Control System Co., Ltd Building No 16, Xin Yu Logistics Park, Renmin Road No 8, YaoGuan, Wuijin Changzhou, Jiangsu Province Peoples Republic of China

#### Application/Limitation

Valves covered by this certificate may be used in General machinery service and ship side discharge applications.

Maximum allowable working pressure: 4 bar Permissible temperatures: -10 °C to +60 °C

Nodular cast iron of the ferritic type, with specified minimum elongation of 12%, may be used in class II and III piping and in pipes and valves located on the ship's side and bottom and valves on the collision bulkhead.

The approval does not include actuator and/or other equipment for remote control of the valves.

The valves covered by this certificate are not to be considered fire safe and therefore shall not be installed wherever fire safe application is required.

Material in contact with seawater shall be properly protected. Surface preparation and coating shall be approved by society.

## **Type Approval documentation**

159301 Storm Valve Angle PN10/PN4, Drawing No. 37184 Rev.B

159801 Storm valve, straight type PN10/PN4, Drawing No. 37185 Rev.C

Datasheet Storm valve angle type 159301

Datasheet Storm valve straight type 159801

Pressure tests, procedure and acceptance criteria, Doc. No. 22 (VHB-TS-OTE-0001-C)

Burst Pressure Test of Valve Bodies for LK Valves Storm Valve (procedure), dated 2016-08-31

Burst Pressure Test of Valve Bodies for LK Valves Storm Valve (test report for valve size DN150), dated 2016-11-22

Acquisition letter from Meson acquiring LK valves

Authorization letter dated 2020-03-31 from LK Valves authorizing Meson AB

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### **Tests carried out**

**Burst testing** 

# **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).

## Marking of product

Minimum marking requirements shall be as outlined in the valve design standard.

#### 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.

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