

## Type Approval Certificate

*This is to certify that the undernoted products have been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.*

This certificate is issued to:

<b>PRODUCER</b>	ABO valve, s.r.o. Dalimilova 285/54 78335 Olomouc Czech Republic
<b>DESCRIPTION</b>	Concentric soft sealed lug or wafer type butterfly valves for installation between EN/ANSI/JIS flanges. Top flange acc. to ISO 5211 allows connection of various kind of actuators.
<b>TYPE</b>	900
<b>RATINGS</b>	Nominal pressure: PN 6 / 10 / 16; ANSI class 150 Temperature range: -20 to +180°C (depending on pressure, medium and material) Body material: ductile iron GGG40 epoxy coated, carbon or stainless steel
<b>STANDARDS</b>	Lloyd's Register Rules and Regulations for the Classification of Ships, 2011 Design according to EN 593, API 609, DN 50 - DN 600 Tightness check acc.: EN 593, EN 12266-1 rate A, ISO 5208 rate A, API 598 Tab. 6, ANSI/FCI 70-2 Class 6;

<b>Certificate No.</b>	12/20002
<b>Issue Date</b>	11 January 2012
<b>Expiry Date</b>	10 January 2017
<b>Sheet</b>	1 of 2

  
Torsten Schröder  
Hamburg Design Support Centre  
Lloyd's Register EMEA

*Lloyd's Register EMEA*  
71 Fenchurch Street, London EC3M 4BS

## APPLICATION

As shut-off or regulating valve in high performance applications for installation on ships and offshore installations classed or intended for Classification with Lloyd's Register allowable systems. They have to be installed to the attending surveyor's satisfaction for:

1. Shiplside valves provided the valve is bolted to the shiplside connection in such way that the section of pipe immediately inboard of the valve can be removed
2. Sea water, fresh water and water ballast systems
3. Cargo Lines as "in-line" valves on oil and chemical tankers and on liquefied gas carriers (depending on pressure, temperature, medium and material)
4. As "in-line" valves in lubricating or oil fuel piping systems in low fire risk compartments of cargo vessels
5. Bilge suctions (in association with a metal non return valve) of cargo vessels in low fire risk compartments only
6. As pump suction valves from the main bilge line only where the valve is located in the immediate vicinity of the pump. The valve is to be fitted in conjunction with a metal non-return valve, which is to be on the bilge main side of the butterfly valve.
7. Sanitary, black and grey water
8. Inert gas
9. Air piping (except as stop valves for air receivers) having a working pressure not greater than 7 bar

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. ENS 27478-12, Issue No. 0 dated 11 January 2012 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

<b>Certificate No.</b>	12/20002
<b>Issue Date</b>	11 January 2012
<b>Expiry Date</b>	10 January 2017
<b>Sheet</b>	2 of 2

  
Torsten Schröder  
Hamburg Design Support Centre  
Lloyd's Register EMEA

Lloyd's Register EMEA  
71 Fenchurch Street, London EC3M 4BS



# Marine Design Appraisal Document

**Lloyd's Register EMEA**  
**Hamburg Design Support Centre**  
**Am Sandtorkai 41**  
**20457 Hamburg, Germany**  
**Telephone +49 (0)40 328107 - 0 Fax +49 (0)40 328107 - 480**  
**Email: hamburg-design-support@lr.org**

Date  
**11 January 2012**

Quote this reference on all future communications  
**HPC 1110100/27478-12/TS/HR**

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002**  
**ISSUED TO: ABO VALVE S.R.O.**  
**FOR: BUTTERFLY VALVES TYPE 900**  
**TYPE APPROVAL CERTIFICATE NO. 12/20002**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

## COMMENTS

1. The relevant materials are to be made and tested in accordance with the "Rules for the Manufacture, Testing and Certification of Materials".
2. Materials for Class I and Class II piping systems are to be produced at a works approved by Lloyd's Register.
3. Materials for Class III piping systems are to be manufactured and tested in accordance with the requirements of acceptable national specifications. The manufacturer's test certificate (3.1) will be acceptable and is to be provided for each consignment of material.
4. Shell strength test is required for each valve in accordance with Pt. 5, Ch. 12, Section 8 of the Rules for Ships.
5. For pressure-temperature ratings the producer's conditions and recommendations are to be adhered to.
6. The manufacturer's maintenance and fitting instruction is to be sought.

## TEST REPORTS

PRA1100654/1	Lloyd's Register Prague visit report for Type Approval	07.09.2011
-	LR Type Approval – Testing report for shell strength and leak test, seat leak test incl low and high pressure closure types 924B, 913B, 921B, 924B, 943B, 923T, 924B and 923B	07.09.2011

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

Lloyd's Register EMEA  
is a member of the Lloyd's Register Group

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

**Lloyd's Register EMEA**  
**Hamburg Design Support Centre**  
**Am Sandtorkai 41**  
**20457 Hamburg, Germany**  
**Telephone +49 (0)40 328107 - 0 Fax +49 (0)40 328107 - 480**  
**Email: hamburg-design-support@lr.org**

Date  
**11 January 2012**

Quote this reference on all future communications  
**HPC 1110100/27478-12/TS/HR**

**APPROVAL DOCUMENTATION**

Form LR6606	Approval Service – Request for Quotation	26.09.2011
-	LR Type Approval Testing program, rev. 02B	31.08.2011
-	Interflange butterfly valves series 900 / technical data	-
-	Installation instruction - Series 900	2011
-	Operating instructions for ABO valves, series 900	2011
-	Safety instructions for ABO valves, series 900	2011
Assembly, rev. A	s.900 DN 32 - 600	11.02.2011
QMS-714 Annex 1	Butterfly valves – Maximum allowable closure test leakage rate acc. to Standards with test fluid water	29.08.2011
QMS-714 Annex 2	Butterfly valves – Maximum allowable closure test leakage rate acc. to Standards with test fluid air, nitrogen	29.08.2011
QMS-714 Annex 3	Pressure equipment	07.09.2011
QMS-713 Annex 7	Inspection and test program 11-100-003	07.09.2011
-	Declaration of conformity according to Directive 97/23/EC	30.09.2009
00.755.007/09/06/05/0	EC certificate 97/23/EC for ABO valve series 900	10.09.2009
AT-05209/0	ISO 9001 QMS certificate	17.06.2009
-	Set of calibration certificates for measuring devices	-



Torsten Schröder  
Senior Surveyor  
Engineering Systems  
Hamburg Design Support Centre  
Lloyd's Register EMEA  
T +49 (0)40 328107-463  
E torsten.schroeder@lr.org

**Supplementary Type Approval Terms and Conditions**

*Type Approval certifies that a representative sample of the products referred to herein have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said representative sample.*

*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.*

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

Lloyd's Register EMEA  
is a member of the Lloyd's Register Group

Part 1

Subject: Valves

Product: Butterfly Valves

Description of Product		Remarks	Cert. No.
Type	Details of Approval		
<p>900</p> <p>ABO valve, s.r.o. Dalimilova 285/54 78335 Olomouc Czech Republic</p>	<p>Concentric soft sealed lug or water type butterfly valves for installation between EN/ANSI/JIS flanges. Top flange acc. to ISO 5211 allows connection of various kind of actuators.</p> <p><b>Ratings:</b> Nominal pressure: PN 6 / 10 / 16; ANSI class 150 Temperature range: -20 to +180°C (depending on pressure, medium and material) Body material: ductile iron GGG40 epoxy coated, carbon or stainless steel</p> <p><b>Standards:</b> Lloyd's Register Rules and Regulations for the Classification of Ships, 2011 Design according to EN 593, API 609, DN 50 - DN 600 Tightness check acc.: EN 593, EN 12266-1 rate A, ISO 5208 rate A. API 598 Tab. 6, ANSI/FCI 70-2 Class 6;</p>	<p>As shut-off or regulating valve in high performance applications for installation on ships and offshore installations classed or intended for Classification with Lloyd's Register allowable systems. They have to be installed to the attending surveyor's satisfaction for:</p> <ol style="list-style-type: none"> <li>1. Shipside valves provided the valve is bolted to the shipside connection in such way that the section of pipe immediately inboard of the valve can be removed</li> <li>2. Sea water, fresh water and water ballast systems</li> <li>3. Cargo Lines as "in-line" valves on oil and chemical tankers and on liquefied gas carriers (depending on pressure, temperature, medium and material)</li> <li>4. As "in-line" valves in lubricating or oil fuel piping systems in low fire risk compartments of cargo vessels</li> <li>5. Bilge suction (in association with a metal non return valve) of cargo vessels in low fire risk compartments only</li> <li>6. As pump suction valves from the main bilge line only where the valve is located in the immediate vicinity of the pump. The valve is to be fitted in conjunction with a metal non-return valve, which is to be on the bilge main side of the butterfly valve.</li> <li>7. Sanitary, black and grey water</li> <li>8. Inert gas</li> <li>9. Air piping (except as stop valves for air receivers) having a working pressure not greater than 7 bar</li> </ol>	<p>Expires: 10 January 2017</p> <p>12/20002</p>