



Confirmation of Product Type Approval 12/SEP/2011

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This is to certify that, pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 15/SEP/2015. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 17/MAY/2015 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

LK VALVES AB

**Model Name(s): Remote Controlled Quick Closing Valve, Straight/ Angle type;
Bellow Sealed, Remote Controlled Quick Closing Valve, Straight/ Angle type;
Globe valve, Straight/ Angle type; Bellow Sealed, Globe valve, Straight/ Angle
type; Self Closing valve, Straight/ Angle type**

Presented to:

LK VALVES AB
GARNISONSGATAN 19
HELSINGBORG
Sweden

Intended Service:

Fuel and Thermal Oil Emergency Shut Off Valves; fuel oil, lubricating oil and hydraulic oil systems.

Description:

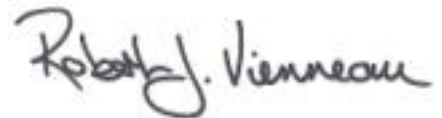
Quick Closing Valve & Bellow Sealed Quick Closing Valve: Flanged, straight/ angle, spring loaded quick closing valves with hydraulic/ pneumatic and/or mechanical release mechanism with built in fire release melting ring, including bellow sealed quick closing valve for thermal oil applications. Valve body material nodular cast iron Grade GGG 40(or equivalent). Optionally, valves are supplied with body material Cast Steel Grade GS-C25, Gunmetal Grade Rg5 or Stainless Steel AISI 316 (or equivalent). Disc, stem, seat ring - material EN 10883-3-1.4301 (AISI 304). The valve is quick closed by a remote hydraulic/ pneumatic signal or by turning the lever of the release arrangement by hand or a wire arrangement. Self Closing Valve, Globe Valve & Bellow Sealed Globe Valve: Flanged, straight/ angle valves. Valve body material nodular cast iron Grade GGG 40; Disc, stem, seat ring - AISI 304;

Ratings:

Quick Closing Valve, Bellow Sealed Quick Closing Valve, Self Closing Valve, Globe Valve & Bellow Sealed Globe Valve: DN 15 - DN 150, nominal pressure PN 16; DN 200 - DN 250, nominal pressure PN 10 Self Closing Valve: DN 15 - DN 80, nominal pressure PN 16

Service Restrictions:	Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
Comments:	1. The source of power to operate quick closing valves is to be from outside of the space in which these valves are located, except for a pneumatically operated system the air supply may be from a source located within the same space as the valves provided, an air receiver is located outside the space with sufficient capacity to close all connected valves twice and fitted with a low pressure alarm and a non return valve adjacent to the air receiver in the air supply line. 2. Each pressure vessel is to be provided with an ABS certificate in accordance with ABS Rules.
Notes / Documentation:	1) LK valves, drawing no 33073 rev 0, 33074 rev 0, 33075 rev 0, 33076 rev 0, 33092 rev 0, 76103 rev D. 2) This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.
Term of Validity:	This product/model is covered under Product Design Assessment (PDA) Certificate # 05-LD120375/1-PDA, dated 18/May/2010. This PDA Certificate expires 17/May/2015. It will remain valid for 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first). It is valid for all vessels contracted on or before the date of the Rules used in this evaluation.
ABS Rules:	2010 ABS Steel Vessel Rules 1-1-4/7.7, 4-6-2/5.11, 4-6-4/ 13.5.3, 4-6-4/13.7.2, 4-6-7 3.5.5, 4-6-7/5.3.3
National Standards:	
International Standards:	Face to Face Dimension as per ISO 5752 Basic Series 1, Flange ISO 7005
Government Authority:	
EUMED:	
Others:	

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	05-LD120375/1-PDA	18/MAY/2010	17/MAY/2015



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.



Confirmation of Product Type Approval 12/SEP/2011

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This is to certify that, pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 01/FEB/2015. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 17/MAY/2015 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

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ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

CHANGZHOU LK VALVES CO LTD

**Model Name(s): Remote Controlled Quick Closing Valve, Straight/ Angle type;
Bellow Sealed, Remote Controlled Quick Closing Valve, Straight/ Angle type;
Globe valve, Straight/ Angle type; Bellow Sealed, Globe valve, Straight/ Angle
type; Self Closing valve, Straight/ Angle type**

Presented to:

CHANGZHOU LK VALVES CO LTD
EAST EAST ROAD 167
BUILDING 13
JIANGSU
China

Intended Service:

Fuel and Thermal Oil Emergency Shut Off Valves; fuel oil, lubricating oil and hydraulic oil systems.

Description:

Quick Closing Valve & Bellow Sealed Quick Closing Valve: Flanged, straight/ angle, spring loaded quick closing valves with hydraulic/ pneumatic and/or mechanical release mechanism with built in fire release melting ring, including bellow sealed quick closing valve for thermal oil applications. Valve body material nodular cast iron Grade GGG 40(or equivalent). Optionally, valves are supplied with body material Cast Steel Grade GS-C25, Gunmetal Grade Rg5 or Stainless Steel AISI 316 (or equivalent). Disc, stem, seat ring - material EN 10883-3-1.4301 (AISI 304). The valve is quick closed by a remote hydraulic/ pneumatic signal or by turning the lever of the release arrangement by hand or a wire arrangement. Self Closing Valve, Globe Valve & Bellow Sealed Globe Valve: Flanged, straight/ angle valves. Valve body material nodular cast iron Grade GGG 40; Disc, stem, seat ring - AISI 304;

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Service Restrictions: Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments: 1. The source of power to operate quick closing valves is to be from outside of the space in which these valves are located, except for a pneumatically operated system the air supply may be from a source located within the same space as the valves provided, an air receiver is located outside the space with sufficient capacity to close all connected valves twice and fitted with a low pressure alarm and a non return valve adjacent to the air receiver in the air supply line. 2. Each pressure vessel is to be provided with an ABS certificate in accordance with ABS Rules. 3. The original product design assessment belongs to LK Valves AB, Sweden.

Notes / Documentation: 1) LK valves, drawing no 33073 rev 0, 33074 rev 0, 33075 rev 0, 33076 rev 0, 33092 rev 0, 76103 rev D. 2) This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

Term of Validity: This product/model is covered under Product Design Assessment (PDA) Certificate # 05-LD120375/1-DUP, dated 18/May/2010. This PDA Certificate expires 17/May/2015. It will remain valid for 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first). It is valid for all vessels contracted on or before the date of the Rules used in this evaluation.

ABS Rules: 2010 ABS Steel Vessel Rules 1-1-4/7.7, 4-6-2/5.11, 4-6-4/ 13.5.3, 4-6-4/13.7.2, 4-6-7 3.5.5, 4-6-7/5.3.3

National Standards:

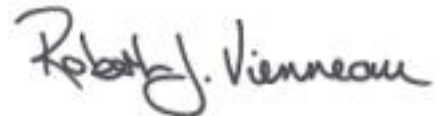
International Standards: Face to Face Dimension as per ISO 5752 Basic Series 1, Flange ISO 7005

Government Authority:

EUMED:

Others:

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA-DUP	05-LD120375/1-DUP	18/MAY/2010	17/MAY/2015



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.