



Lloyd's Register EMEA

Hamburg Design Support Centre
Mönckebergstr. 27
20095 Hamburg
Germany

Telephone +49 (0)40328107-0
Direct line -463
Facsimile +49 (0)40328107480
Email hamburg-design-
support@lr.org

www.lr.org

ARMATUREN-WOLFF
Friedrich H. Wolff GmbH & Co. KG
Attn. Mr Hendrik Wolff
Oehleckerring 29
D-22419 Hamburg
Germany

Date 30 March 2012
Your ref
Our ref HPC 0710143/
27732-12/TS/HR

Dear Sirs,

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002
ISSUED TO: ARMATUREN-WOLFF FRIEDRICH H.WOLFF GMBH & CO KG
FOR: QUICK CLOSING AND OPENING VALVES
TYPE APPROVAL CERTIFICATE NO. 91/20413 (E5)**

Reference is made to your letter dated 19 November 2012 in respect of the above mentioned subject.

Enclosed please find original of Type Approval Certificate No. 91/20413 (E5) and pertaining Design Appraisal Document No. ENS 20431-07, Issue No. 01 dated 29 March 2012.

You will find the List Entry on the Lloyd's Register web site <http://www.cdlive.lr.org/information> click on **Approvals** then on **Approved Products List**.

On the first occasion you log onto the site you will be requested to accept the Terms and Conditions and to complete a dialogue box with the following information: *Contact Name, Company Name, Email Address*.

Our invoice for the services rendered will follow in due course.

Yours faithfully,

Helena Rempel
Administrative Assistant
Hamburg Operational Business Support
Lloyd's Register EMEA

Encls.

c.c. Lloyd's Register Hamburg Port Office

+ copy of Cert. and DAD

LIFE MATTERS

Type Approval Certificate Extension

This is to certify that Certificate No. 91/20413 (E3) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	ARMATUREN-WOLFF Friedrich H. Wolff GmbH & Co. KG Oehleckerring 29 22419 Hamburg Germany
DESCRIPTION	Flange spring loaded quick opening or quick closing valves of straight or angle type, standard compact or bellow-sealed design, either rope-, hydraulically- or pneumatically activated
TYPES	AW 33005 to 34517, DN 15 - 250 AW 3320F to 3350F, DN 200 - 250
APPLICATION	As quick closing and opening valves in marine, offshore and industrial fields.
RATINGS	Nominal diameter: DN 15 to DN 250 Quick closing valves type number: AW 33 X Y Z Quick opening valves type number: AW 34 X Y Z For X: Body material: Pattern: Nom Pressure: 0 Rg. 5 (2.1096) straight PN 16 1 Rg. 5 (2.1096) angle PN 16 2 GS-C25 (1.0619) straight PN 40 3 GS-C25 (1.0619) angle PN 40 4 GGG 40.3 (0.7043) straight PN 16 5 GGG 40.3 (0.7043) angle PN 16 For Y: 0 – manual actuation 1 – (universal) hydraulic / pneumatic release 2 – pneumatic release (only for classic design) For Z: 5 – regular design, fire safe (only for quick closing valves) 7 – bellows- sealed design (for quick closing and opening valves) F – classic design, fire safe (only for quick closing valves) Disc material : X20Cr13 or G-CuSn5ZnPb
Certificate No.	91/20413 (E5)
Issue Date	29 March 2012
Expiry Date	14 November 2016
Sheet	1 of 2


Torsten Schröder
Hamburg Design Support Centre
Lloyd's Register EMEA

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



STANDARD

Lloyd's Register's Rules and Regulations for the Classifications of Ships, 2012

"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 20431-07, issue 1 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 91/20413 (E4) to which this extension should be attached.

Certificate No.	91/20413 (E5)
Issue Date	29 March 2012
Expiry Date	14 November 2016
Sheet	2 of 2


Torsten Schröder
Hamburg Design Support Centre
Lloyd's Register EMEA

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

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.



Marine Design Appraisal Document

Lloyd's Register EMEA
Hamburg Design Support Office
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
29 March 2012

Please quote this reference number on all future communications
HPC 0710143/27732-12/TS/HR

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002
ISSUED TO: ARMATUREN-WOLFF FRIEDRICH H.WOLFF GMBH & CO KG
FOR: QUICK CLOSING AND OPENING VALVES
TYPE APPROVAL CERTIFICATE NO. 91/20413 (E5)**

Please note that the DAD Issue Number 1 is superseded hereby

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.

APPROVAL DOCUMENTATION

Form LR6606	Approval Services- Request for Quotation	21.02.2012
-	Numbering system of products, pgs. 48 - 51	-
332150200-3	Quick closing valve, PN25, DN200 with hydr./pneumatic actuator (fire safe)	24.09.2009
332150250-3	Quick closing valve, PN25, DN250 with hydr./pneumatic actuator (fire safe)	24.09.2009
333150200-3	Quick closing valve, PN25, DN200 with hydr./pneumatic actuator (fire safe)	01.02.2012
333150250-3	Quick closing valve, PN25, DN250 with hydr./pneumatic actuator (fire safe)	01.02.2012
334150200-3, A	Quick closing valve, PN16, DN200 with hydr./pneumatic actuator (fire safe)	24.09.2009
334150250-3, A	Quick closing valve, PN16, DN250 with hydr./pneumatic actuator (fire safe)	24.09.2009
335150200-3	Quick closing valve, PN16, DN200 with hydr./pneumatic actuator (fire safe)	01.02.2012
335150250-3	Quick closing valve, PN16, DN250 with hydr./pneumatic actuator (fire safe)	01.02.2012
3321F000-3	Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN25	31.01.2012
3331F000-3	Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN25	31.01.2012
3341F000-3	Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN16	31.01.2012
3351F000-3	Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN16	31.01.2012
33405_D1_d	Quick closing valve, PN 16, DN 15 - 50 with hydraulic actuator	20.03.2007
33415_D1_d	Quick closing valve, PN 16, DN 15 - 50 with hydraulic actuator	23.06.2006
33415_D2_d	Quick closing valve, PN 16, DN 65 - 150 with hydraulic actuator	23.06.2006
33416_D1_d	Quick opening valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator	25.05.2007
34416_D1_d	Quick closing valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator	29.05.2007
33516_D1_d	Quick closing valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator	25.05.2007
34516_D1_d	Quick opening valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator	29.05.2007
33515_D1_d	Quick closing valve, PN 16, DN 15 - 50 with hydraulic actuator	20.03.2007
33515_D2_d	Quick closing valve, PN 16, DN 65 - 150 with hydraulic actuator	20.03.2007
33404000_12_F	Actuator ø40, DN 15 – 50	03.05.2006
33404000_14a_F	Actuator ø52, DN 65 –150	27.04.2006

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 Office
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
29 March 2012

Please quote the document number on all future communications
HPC 0710143/27732-12/TS/HR

TEST REPORTS

0710143	LR-Visit Report - Inspection and surveillance of production facilities	26.01.2012
0710143/19174-07	Visit Report / Function and Performance Test without rubber seals	13.09.2007
137-03	Test Report, PACONSULT	13.03.2003



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 product(s) referred to herein has/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 product(s) 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

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.

Part 1A
Subject: Valves
Product: Valves – General (Part 1A)

Description of Product				Cert. No.
Producer /Licence No.	Type	Details of Approval	Application	
ARMATUREN-WOLFF Friedrich H. Wolff GmbH & Co. KG Oehleckerweg 29 22419 Hamburg Germany	AW 33005 to 34517 , DN 15 – 250; AW 3320F to 3350F, DN 200 - 250	<p>Flange spring loaded quick opening or quick closing valves of straight or angle type, standard compact or bellows-sealed design, either rope-, hydraulically- or pneumatically activated</p> <p>Nominal diameter: DN 15 to DN 150 Quick closing valves type number: AW 33 X Y Z Quick opening valves type number: AW 34 X Y Z</p> <p>For X: Body material: Pattern: Nom Pressure: 0 Rg.5 (2.1096) straight FN 16 1 Rg.5 (2.1096) angle FN 16 2 GS-C25 (1.0619) straight FN 40 3 GS-C25 (1.0619) angle FN 40 4 GGG 40.3 (0.7043) straight FN 16 5 GGG 40.3 (0.7043) angle FN 16</p> <p>For Y: 0 – manual actuation 1 – (universal) hydraulic / pneumatic release 2 – pneumatic release (only for classic design)</p> <p>For Z: 5 – regular design, fire safe (only for quick closing valves) 7 – bellows- sealed design (for quick closing and opening valves) F – classic design, fire safe (only for quick closing valves)</p> <p>Disc material : X20Cr13 or G-Cu5Sn5ZnPb</p>	As quick closing and opening valves in marine, offshore and industrial fields.	Expires: 14 November 2016 91/20413 (E5)