



**Marine & Offshore
Division**

Certificate number: 38455/A0 BV

File number: AP4541

Product code: 3932H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Heinzmann GmbH & Co. KG
Schönau (Schwarzwald) - GERMANY

for the type of product

ELECTRICAL ACTUATORS

StG EC 40, StG EC 250 and WEA 40, WEA 250 series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 22 Sep 2019

For BUREAU VERITAS,

At BV HAMBURG, on 22 Sep 2014,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 May 2009

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **StG EC40**, **StG EC250**, **WEA 40** and **WEA 250** series are actuators with self-locking gearbox with optional manual override and return spring to zero setting.

1.1 - Types:

| Order No. | Designation | Return spring | Rotary |
|---------------|-----------------|---------------|-------------------|
| 504-00-100-00 | StG EC40 | - | selectable |
| 504-00-100-01 | StG EC40 CW-RS | x | clockwise |
| 504-00-100-02 | StG EC40 CCW-RS | x | counter clockwise |
| 504-00-100-10 | WEA 40 | - | counter clockwise |
| 504-00-100-11 | WEA 40 CW-RS | x | clockwise |
| 504-00-100-12 | WEA 40 CCW-RS | x | counter clockwise |
| 504-00-100-13 | WEA 40 CW-PWM | - | clockwise |
| 504-00-100-14 | WEA 40 CCW-PWM | - | counter clockwise |
| 504-00-100-15 | WEA 40 CW-CURR | - | clockwise |
| 504-00-100-16 | WEA 40 CCW-CURR | - | counter clockwise |
| 507-00-004-00 | StG EC250 | - | selectable |
| 507-00-004-10 | WEA 250 | - | selectable |

1.2 - Main characteristics:

Power supply: StG EC40, WEA 40: 2x 24V DC (redundant)
StG EC250, WEA 250: 1x 24V DC (for ECU), 1x 48V DC (for Drive)

Inputs: 3x DI 24V DC
for setpoints: 1x AI 4..20mA; 1x AI 0..5V or 0..10V and 1x PWM input

Outputs: 3x DO 24V AC/DC
for position: 1x AO 4..20mA; 1x PWM output

Communication: CANbus

Degree of protection: IP67

Software: xx.11.01

2. DOCUMENTS AND DRAWINGS:

- ETM_DS_STGEC40_02_12_10_e dated 02.12.10; ETM_DS_STGEC250_02_12_10_e dated 02.12.10;
- 320-90-229-02 dated 26.02.2010; 504-00-100-.. dated 01.12.2010; 504-00-100-00 Rev. d dated 23.03.2010;
- 507-00-004-.. dated 03.06.2014; DG 09 005-e Rev. 1.4 dated 03-10; DG 10 004-e dated 05-10;
- DG 11 002 e dated 07-14

3. TEST REPORTS:

Heinzmann GmbH & Co. KG:

- StG EC40 Performance Test dated 2011-03-14

KRIWAN Testzentrum GmbH & Co. KG:

- 100682_02_G dated 22 Oct 2010; 100682_02_H dated 21 Oct 2010; 100682_03_H dated 31 Jan 2011;
- 100682_04_H dated 04 Apr 2011; 100858_03_H dated 04 Apr 2011

TÜV SÜD Product Service GmbH:

- 71378355 dated 2010-12-09

4. APPLICATION/LIMITATION:

- 4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - Bureau Veritas Environmental Category, **EC Code: 33.**
- 4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zone.
- 4.5 - Documents relating to each application are to be submitted to the Society's examination prior fitting on board.
- 4.6 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **HEINZMANN GmbH & Co. KG** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 - **HEINZMANN GmbH & Co. KG** has to make the necessary arrangements to have its works recognized by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

HEINZMANN GmbH & Co. KG
Am Haselbach 1
79677 Schönau
GERMANY

5.4 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT:

- Maker's name or trademark.
- Equipment type or model identification.
- Date of manufacture and/or serial number.

7. OTHERS:

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **HEINZMANN GmbH & Co. KG - GERMANY**, will accept full responsibility for informing shipbuilders, ship owners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

*** END OF CERTIFICATE ***