TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00003RX
Revision No:
1

This is to certify:

that the Governor Control System

with type designation(s)
DG2800.14 / DG2800.14 II

issued to
Heinzmann GmbH & Co. KG
Schönau im Schwarzwald, Baden-Württemberg, Germany

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**B**
EMC	**A**
Enclosure	**C (IP65)**

Issued at **Hamburg** on **2026-09-15**
This Certificate is valid until **2030-09-21**.
DNV local unit: **Augsburg**

for **DNV**

Approval Engineer: **Jens Dietrich**

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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.

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 USD 300 000.

Product description

The electro-hydraulic governor system **DG2800.14** / **DG2800.14 II** consists of 2 sections:

DG14 Governor Section

Power Supply Supply voltage:
18 - 32 VDC. Nominal 24 VDC.

Supply current:
1,5 Amp. maximum To be external fused at 3 Amp.
Connection for Main and Back-up Supply

Speed Sensing DG2800.14 / DG2800.14 II:
1 input / 2 inputs
By means of internal pick-up or by means of external mounted pick-up.
Internal Pick-up type: Hall sensor
Optional external speed pickup maybe used.

Digital Inputs
7 Bi-directional digital inputs, NPN or PNP type
The inputs have one side common to be connected to ground or supply
The function of the inputs can be configured

Digital Outputs
2 Bi-directional digital outputs, NPN or PNP type
The outputs have one side common to be connected to ground or supply
The function of the outputs can be configured

Analogue Inputs
3 of 4-20 mA inputs
1 of 0-5 VDC or PWM input
The inputs are isolated with common ground

Analogue Outputs
1 of 4-20 mA output, isolated active output

Indication
LED display, 4 lines each 20 characters,
LED indication for:
-Analogue speed setting selected
-Digital speed setting selected
-Alarm
-Healthy

CAN-Bus connection

Electrical Connections DG2800.14 / DG2800.14 II:
36 Cage-clamp terminals 1.5 mm². max / 40 Cage-clamp terminals 1.5 mm². max.
9 pole Sub-D RS232 connector.

SW Versions DG2800.14 / DG2800.14 II:
00.0.16 / 00.0.03:
Adjustment of speed setpoint by means of digital or analogue inputs, master slave operation via CAN-communication configurable.

00.10.16 / 00.10.03:
Adjustment of speed setpoint by means of digital or analogue inputs with additional kW control mode operation, when connected to the grid.

Actuator Section:

Nominal operating speed: 300 - 1800 rpm.

Nominal work output (torque):
15 Ft.Lbf. Build 36 Ft.Lbf. Build

19.5 joules	(14.4 ft.lbf.)	48.8 joules	(36 ft.lbf.)
34.5 Nm.	(25.4 lb.ft.)	77 Nm.	(49.5 lb.ft.)
23.9 Nm.	(17.3 lb.ft.)	60.5 Nm.	(44.6 lb.ft.)

Output shaft angular travel
46.7 degrees full travel
28 degrees should normally be used for the travel between full speed no-load and full speed full-load position.
The additional 9.35 degrees at each end of the travel allow for positive fuel shut off and additional fuel for acceleration. The output scale is marked 0…10; 2…8 would be the recommended working range.

Output shaft dimensions
Standard 3/4 inch 48 SAE serration at both sides.
Optional 5/8 inch 36 SAE serrations at both sides.
Drive shaft type: Serrated or keyed.

Actuator installed location
Vertical flange mounted. The actuator will function at an angle of 10 degrees to the vertical and will cope with normal excursions from the vertical as would be associated with shipboard use

Approval conditions

The DG2800.14 governor is part of an engine speed governing control loop including the fuel pumps and linkage. Any failure of this control may cause the engine to stop or overspeed:
-To be used for failed-to-stop applications (i.e. auxiliary generator sets)
-Heinzmann Installation and Operation handbook to be observed for safe operation.
-The prime mover shall be equipped with an overspeed shutdown device
-The overspeed shutdown device must be totally independent of the governor.

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- System block diagram
- Power supply arrangement (may be part of the System block diagram)
- Test program for certification, maybe part of the related engine certification test programme.

The Type Approval covers hardware listed under Product description.

When the type approved software is revised (affecting all future deliveries) DNV is to be informed by forwarding updated software version documentation. If the changes are judged to affect functionality for which rule requirements apply a new functional type test may be required and the certificate may have to be renewed to identify the new software version.

Product certificate
Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Application software control
All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board.

Tests carried out

-Applicable tests according to class guideline DNV CG-0339, August 2021,
-Functional performance test Control System and Hydraulic Actuator DG2800.14.

Marking of product

The products to be marked with:
- manufacturer name
- model name DG2800-14 or DG2800-14 II
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE