



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-12428

This is to certify that the  
**Direct Acting Temperature Controller**

with type designation(s)  
V-Temperator

Manufactured by  
**Clorius Controls A/S**  
**BALLERUP, Denmark**

is found to comply with  
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards


Application  
Location classes:

Temperature	A
Humidity	B
Vibration	A
EMC	Not relevant
Enclosure	B

Høvik, 2011-08-04  
for Det Norske Veritas AS



This Certificate is valid until  
2012-12-31

  
Odd Magne Nesvåg  
Head of Section

DNV local office:  
Copenhagen

  
Andrzej Gdaniec  
Surveyor

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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: A-12428  
File No.: 894.20  
Job Id.: 262.1-002395-3

## Product description

Type: V-Temperator

V.2.05, V.4.05, V.4.10, V.8.09, V.8.18 with rod sensor of high alloy stainless steel.

V.2.05, V.4.05, V.4.10, V.8.09 with rod sensor of copper.

V.4.03, V.4.05 of stainless steel.

## Application/Limitation

The use of the control valve may be limited as the regulated temperature varies up to 0.14°C per degree change in ambient temperature.

The valve type used is to be in accordance with Det Norske Veritas' Rules in Pt.4 Ch. 9.

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

## Type Approval documentation

Documentation	Documentation Reference Number
Data sheets	3.4.01-H, 3.4.05.-B, 3.5.01-C
Drawings	0061816T, 0061824T, 0061832T, 0062049T, 0062057T, 0062065T, 0062235T, 0062367T, 0084913, 0084921, 0144843T
Instructions	99.34.01-H,
Quick Choice Guide	9.0.00-B

DNV Katowice Certificate retention survey report for A-11232, dated 2011-07-18.

## Tests carried out

Tests according to DNV Standard for Certification No. 2.4.

## Place of manufacture

Broen Sp. z o o.

Dzierżoniów, Poland

## Certificate Retention Survey

The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE