

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Separator Discharge Controller**

with type designation(s)

Control System for Separators - EPC60/EPC 60 Retrofit

Issued to

Alfa Laval Tumba AB**Tumba, Stockholms Län, Sweden**

is found to comply with

DNV GL 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 GL.****Location classes:**

Temperature	A
Humidity	B
Vibration	A
EMC	A
Enclosure	B

Issued at **Høvik** on **2018-02-13**This Certificate is valid until **2020-02-12**.DNV GL local station: **Stockholm**for **DNV GL**Approval Engineer: **Geir Bjørn Alnes**

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Odd Magne Nesvåg
Head of Section

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.



Product description

EPC 60 separator control system with Article no. 581 042 80, -81, - 82, -83, -84 and 581 043 80, -81, - 82, -83, -84 including:

- EPC 60 Operating Panel
- EPC 60 CPU
- EPC 60 IO-boards
- EPC 60 Starter

Possible options available:

- | | |
|-----------------------------|-----------------------|
| - ESD-kit | Article no. 581001 80 |
| - Steam heater kit | Article no. 581044 80 |
| - Speed transmitter kit | Article no. 581045 80 |
| - Vibration transmitter kit | Article no. 581046 80 |
| - Extra I/O board kit | Article no. 581047 80 |
| - Electrical heater kit | Article no. 581048 80 |
| - Heat tracing kit | Article no. 581050 80 |
| - Vibration switch kit | Article no. 581052 80 |

Software versions:

- | | |
|----------------------|-----------------------|
| - 581058 01 ver 2.43 | S-type Separators |
| - 581058 02 ver 2.27 | S805/ S815 Separators |
| - 581058 03 ver 2.32 | P-type Separators |

EPC 60 Retrofit separator control system with Article no. 595 448 80

Application/Limitation

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)

The Type Approval covers hardware and software listed under Product description.

When the type approved software is revised (affecting all future deliveries) DNV GL 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.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 [1.4] will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

Starters are not part of this Type Approval and shall be handled as required in DNV GL Rules Pt.4 Ch.8.

Type Approval documentation

Tests carried out

Applicable tests according to Standard for Certification No.: 2.4

Place of manufacture

P.C. Project S.r.l.
Via Bergamo, 83
23807 Merate (LC) - Italy

HP TRONIC (SUZHOU) CO. LTD
UNIT 1A, MODERN INDUSTRIAL SQUARE

Job Id: **262.1-003880-5**
Certificate No: **TAA00001HH**

NO. 333 INGPU ROAD
215126 SIP SUZHOU CHINA

Hörberg Petersson (HP) Tronic AB
Långgatan 26
341 32 Ljungby
Sweden

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

A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE