



CERTIFICATE NUMBER
16-SG1516652-PDA

DATE
06 May 2016

ABS TECHNICAL OFFICE
Singapore Engineering Services

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

REACH ELECTRICAL (S) PTE LTD

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Heater, Electric**

Model: **RB Series**


This Product Design Assessment (PDA) Certificate 16-SG1516652-PDA, dated 06/May/2016 remains valid until 05/May/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING


Panagiotis Kotsidas
Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A/3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

REACH ELECTRICAL (S) PTE LTD

51 UBI AVENUE 1, #03-05

PAYA UBI INDUSTRIAL PARK

SINGAPORE

Singapore 408933

Telephone: + 65 62966860

Fax: + 65 62981443

Email: sales@reachelectrical.com

Web: www.reachelectrical.com

Tier: 2 - PDA Issued**Product: Heater, Electric****Model: RB Series****Intended Service:**

Electric Heater Fan for space heating and comfort heating in locations on ships and offshore units that requires IP protection of up to IP 22.

Description:

IP 22 enclosure type Air Heater Fan:

380V 3-Phase -: RB30380 (3.0kW), RB40380 (4.0kW), RB50380 (5.0Kw), RB55380 (5.5Kw), RB60380 (6.0 kW), RB75380 (7.5kW), RB80380 (8.0kW), RB90380(9.0kW), RB40380(10.0kW);
415V 3-Phase -: RB30415 (3.0kW), RB40415 (4.0kW), RB50415 (5.0Kw), RB55415 (5.5Kw), RB60415 (6.0 kW), RB75415 (7.5kW), RB80415 (8.0kW), RB90415 (9.0kW), RB40415 (10.0kW);
440V 3-Phase -: RB30440 (3.0kW), RB40440 (4.0kW), RB50440 (5.0Kw), RB55440 (5.5Kw), RB60440 (6.0 kW), RB75440 (7.5kW), RB80440 (8.0kW), RB90440 (9.0kW), RB40440 (10.0kW);
480V 3-Phase -: RB30480 (3.0kW), RB40480 (4.0kW), RB50480 (5.0Kw), RB55480 (5.5Kw), RB60480 (6.0 kW), RB75480 (7.5kW), RB80480 (8.0kW), RB90480 (9.0kW), RB40480 (10.0kW);
110V Single Phase-: RB05110 (500W), RB10110(1kW), RB15110(1.5Kw), RB20110(2.0Kw), RB25110(2.5kW), RB30110 (3.0kW);
220V Single Phase-: RB05220 (500W), RB10220 (1000W), RB15220 (1500W), RB20220 (2000W), RB25220 (2500W), RB30220(3000W);
230V Single Phase-: RB05230(500W), RB10230 (1000W), RB15230(1500W), RB20230 (2000W), RB25230 (2500W), RB30230(3000W);
240V Single Phase-: RB05240 (500W), RB10240 (1000W), RB15240 (1500W), RB20240 (2000W), RB25240 (2500W), RB30240 (3000W);

Rating:

IP22; 3-Phase 480V, 440V, 415V, 380V; 1-Phase 110V, 220V, 230V, 240V

Service Restriction:

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

- 1.) The manufacturer has provided a declaration about the control of, or the lack of asbestos in this product.
- 2.) Heaters with maximum aggregate current 16 Amperes may be connected to a single final branch circuit (4-8-2/7.19 of SVR 2016).
- 3.) The heaters are neither to be used for weather exposed areas nor hazardous area.

Notes/Drawing/Documentation:

1. RB Axial Fan Heater (IP22) Manual (110V) (ABS) Rev. 0
2. RB Axial Fan Heater (IP22) Manual (220V-240V) (ABS) Rev.0
3. RB Axial Fan Heater (IP22) Manual (380V) (ABS) Rev. 0
4. RB Axial Fan Heater (IP22) Manual (415V) (ABS) dd20101216 Rev.0
5. RB Axial Fan Heater (IP22) Manual (440V) (ABS) dd20101216 Rev.0
6. RB Axial Fan Heater (IP22) Manual (480V) (ABS) dd20101216 Rev.0
7. RB Axial Fan Heater wiring diagram Rev. 0
8. S09EEC00089/YCC/THK, Rev. 0/IP22 Test report
9. S09EEC00089/A/BL/CEG, Rev.0/Testing of Axial Fan Heater

Terms of Validity:

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STANDARDS**ABS Rules:**

ABS Steel Vessel Rules (2016): 1-1-4/7.7, 1-1-A3 and A4, 4-8-3/1.7, 4-8-2/7.19;
ABS Offshore Support Vessel Rules (2016): 1-1-4/7.7, 1-1-A3 and A4, 4-8-3/1.7, 4-8-2/7.19;
ABS Steel Vessel Rules Under 90M (2016): 1-1-4/7.7, 1-1-A3 and A4, 4-6-2/7.1.8;
ABS Facilities on Offshore Installation Rules (2016): 1-1-4/9.7, 1-1-A2 and A3;
ABS Rules for Mobile Offshore Drilling Units (2016): 1-1-4/9.7, 1-1-A2 and A3, 4-3-2/7.1.7;
ABS HSC Rules (2016): 1-1-4/11.9, 1-1-A2 and A3, 4-4-7/3, 4-6-2/7.1.8;
ABS Steel Barges Rules (2016): 1-1-4/7.7, 1-1-A3 and A4, 3-2-11/15 and 17;
ABS Rivers and Intracoastal Waterways Rules (2016): 1-1-4/7.7, 1-1-A3 and A4;

National:

NA

International:

IEC 60529 (2001)

Government:

NA

EUMED:

NA

OTHERS:

NA