

## CERTIFICATE OF PRODUCT CONFORMITY

*Dubai Central Laboratory Department (DCLD) of Dubai Municipality,*

*hereby attests that the product(s)*

**THERMAL SOLAR SYSTEMS AND COMPONENTS – SOLAR COLLECTORS**

*(Details as per the attached Scope of Certification)*

*manufactured by:*

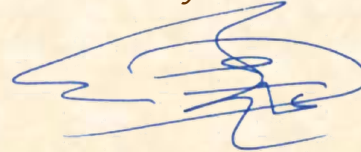
**SOLAHART INDUSTRIES PTY LTD (Factory is RHEEM VIETNAM LIMITED in Vietnam)**

**55 Brodie Street, Rydalmere 2216, Australia**

*have been assessed in accordance with DCLD Document Ref. No. DM-DCLD-RD-DP21-2001 (IC) "General Rules for DM third party product certification system through factory assessment" and the relevant Specific Rules, and were found in conformity with the standard specification:*

**BS EN 12975-1:2006+A1:2010**

*Accordingly, DCLD hereby authorizes the above manufacturer to affix the DCL Product Conformity Mark to the above-mentioned product(s).*



for / **ENGR. AMIN AHMED AMIN**

**Director, Dubai Central Laboratory Department**

**Dubai Municipality**

Verify:



**Certificate No: CL17020508**

**Valid Until: 26 September 2019**



**Current Issue Date: 27 September 2018**

**Original Issue Date: 27 September 2017**

DM-DCLD-F-IC-2031 REV 13

*The attached Scope of Certification bearing the same Certificate No. forms an integral part of this Certificate.*

*This Certificate is an electronic document, subject to the Terms and Conditions of the Product Certification System and shall not be reproduced except in full.*

DUBAI CENTRAL LABORATORY DEPARTMENT  
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

**SCOPE OF CERTIFICATION  
FOR CERTIFICATE NO. CL17020508**

**Certificate Issued To:** SOLAHART INDUSTRIES PTY LTD (Factory is  
RHEEM VIETNAM LIMITED in Vietnam)  
55 Brodie Street, Rydalmere 2216, Australia

**Applicable Standard Specification:** BS EN 12975-1:2006 +A1: 2010 – Thermal solar systems and components – Solar Collectors – Part 1: General requirements

**Applicable Specific Rules:** RD-DP21-2178 (IC) – Specific Rules Certification of Solar Collectors as per BS EN 12975-1 Through Factory Assessment  
RD-DP21-2084 (IC) – Guidelines for Factory Production control Plan for Solar Collector Manufacturers

S/N	Product Description	Brand Name	Product Details
1	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Black polyester powder coated Aluminum, Laser welded with Copper pipes Tempered low Iron Glass 3.2mm thickness top cover. Black polyester thermal insulation with density of 14kg/m<sup>3</sup>, thermal conductivity of 0.05W/ (m.K) and thickness of 38mm for back insulation. Black polyester thermal insulation with density of 32kg/m<sup>3</sup>, thermal conductivity of 0.038W/ (m.K) and thickness of 28mm for side insulation. Casing: Marine grade Aluminium Sealing Tape : Tesa</p>	<p><b>SOLAHART L COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 1.98m<sup>2</sup> Aperture Area of 1.86 m<sup>2</sup> Absorber Area of 1.80 m<sup>2</sup> Gross dimensions (without support frame): 1940 x 1020 x 83 mm Weight (empty) : 29 Kg Weight (full) : 31 kg Collector Fluid Volume : 1.5 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.4mm x 0.91mm, Risers – Copper: 9.52 mm x 0.7mm Number of tubes : 7 risers Test Pressure : 21.5 bar Working Pressure : 10 bar Distance between risers: 133mm Maximum Stagnation Temperature: 137°C Maximum Working Pressure: 14 bar</p>

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S/N	Product Description	Brand Name	Product Details
2	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Sputtered Aluminum selective surface, Laser welded with Copper pipes Tempered low Iron Glass 3.2mm thickness top cover. Glass wool thermal insulation with density of 12kg/m<sup>3</sup>, thermal conductivity of 0.044W/(m.K) and thickness of 38mm for back insulation. Black polyester thermal insulation with density of 32kg/m<sup>3</sup>, thermal conductivity of 0.038W/ (m.K) and thickness of 28mm for side insulation. Casing: Marine grade Aluminum Sealing Tape: Tesa</p>	<p><b>SOLAHART LCS COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 1.98m<sup>2</sup> Aperture Area of 1.86 m<sup>2</sup> Absorber Area of 1.86 m<sup>2</sup> Gross dimensions (without support frame): 1938 x 1022 x 80 mm Weight (empty) : 29 Kg Weight (full) : 31 kg Collector Fluid Volume : 1.5 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.4mm x 0.91mm, Risers – Copper: 12.7 mm x 0.7mm Number of tubes : 6 risers Test Pressure : 21.0 bar Working Pressure : 14 bar Distance between risers: 133mm Maximum Stagnation Temperature: 180°C</p>
3	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Sputtered copper selective surface, Laser welded with Copper pipes Tempered low Iron Glass 3.2mm thickness top cover. Glass wool thermal insulation with density of 12kg/m<sup>3</sup>, thermal conductivity of 0.044W/(m.K) and thickness of 38mm for back insulation. Black polyester thermal insulation with density of 32kg/m<sup>3</sup>, thermal conductivity of 0.038W/ (m.K) and thickness of 20mm for side insulation. Casing: Marine grade Aluminum, Sealing Tape: Tesa</p>	<p><b>SOLAHART Bt COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 2.0m<sup>2</sup> Aperture Area of 1.87 m<sup>2</sup> Absorber Area of 1.87 m<sup>2</sup> Gross dimensions (without support frame): 1942 x 1032 x 83 mm Weight : 31 kg Collector Fluid Volume : 2.1 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.35mm x 0.91mm, Risers – Copper: 9.52 mm x 0.7mm Number of tubes : 13 risers Test Pressure : 21.0 bar Maximum Operating Pressure : 14 bar Maximum Stagnation Temperature: 189°C</p>

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S/N	Product Description	Brand Name	Product Details
4	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Black polyester powder coated steel welded with fully flooded riser. Tempered low Iron Glass 3.2mm thickness top cover. Black polyester thermal insulation with density of 14kg/m<sup>3</sup>, thermal conductivity of 0.044W/(m.K) and thickness of 38mm for back insulation. Black polyester thermal insulation with density of 32kg/m<sup>3</sup>, thermal conductivity of 0.038W/ (m.K) and thickness of 28mm for side insulation. Casing: Marine grade Aluminum Sealing Tape: Tesa</p>	<p><b>SOLAHART J COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 1.98m<sup>2</sup> Aperture Area of 1.86 m<sup>2</sup> Absorber Area of 1.86 m<sup>2</sup> Gross dimensions (without support frame): 1940 x 1020 x 83 mm Weight (empty) : 42 Kg Weight (full) : 49 kg Collector Fluid Volume : 3.8 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.4mm x 0.8mm, Risers – Steel :fully flooded diamond shape, width 17.5 mm, inner height 4.5 mm, outer height 5.6 mm) Length of single absorber tube 1852 mm Number of risers : 35 Test Pressure : 21.0 bar Maximum Operating Pressure :2 bar Maximum Stagnation Temperature: 137°C</p>
5	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Tinox surface treated copper 0.2mm thickness, Laser welded with Copper pipes Matt Tempered Glass 3.2mm thickness top cover. Glasswool thermal insulation with density of 12kg/m<sup>3</sup>, thermal conductivity of 0.044W/(m.K) and thickness of 38mm for back insulation. Midnight black polyester thermal insulation with density of 32kg/m<sup>3</sup>, thermal conductivity of 0.038W/ (m.K) and thickness of 20mm for side insulation. Casing: Aluminum Frame fastening : Nylon corner blocks</p>	<p><b>SOLAHART CSA2013 COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 2.08m<sup>2</sup> Aperture Area of 1.88 m<sup>2</sup> Absorber Area of 1.88 m<sup>2</sup> Gross dimensions (without support frame): 1996 x 1043 x 82 mm Weight (empty) : 36 Kg Weight (full) : 38 kg Collector Fluid Volume : 2.1 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.4mm x 0.91mm, Risers – Copper: 9.48mm x 0.71mm Length of single absorber tube 1850 mm Number of tubes : 13 Test Pressure : 22.0 bar Maximum Operating Pressure :14 bar Maximum Stagnation Temperature: 182°C</p>

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6	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Black polyester powder coated Aluminum, Laser welded with Copper pipes Matt Tempered Low Iron Glass 3.2mm thickness top cover. Black polyester thermal insulation with density of 14kg/m<sup>3</sup>, thermal conductivity of 0.05W/ (m.K) and thickness of 38mm for back insulation. Casing: Marine grade Aluminium</p>	<p><b>SOLAHART APA2007* COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 2.08m<sup>2</sup> Aperture Area of 1.88m<sup>2</sup> Absorber Area of 1.78 m<sup>2</sup> Gross dimensions (without support frame): 1996 x 1043 x 82 mm Weight (empty) : 32 Kg Weight (full) : 34 kg Collector Fluid Volume : 1.5 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.4mm x 0.95mm, Risers – Copper: 9.5mm x 0.35mm Number of tubes : 7 risers Test Pressure : 21.5 bar Working Pressure : 10 bar Distance between risers: 133mm Maximum Stagnation Temperature: 137°C Maximum Working Pressure: 14 bar</p>
7	<p><b>FLAT PANEL SOLAR TYPE COLLECTOR</b></p> <p>Absorber materials: Black polyester powder coated Aluminum, Laser welded with Copper pipes Matt Tempered Low Iron Glass 3.2mm thickness top cover. Black polyester thermal insulation with density of 14kg/m<sup>3</sup>, thermal conductivity of 0.05W/ (m.K) and thickness of 38mm for back insulation. Black polyester thermal insulation with density of 32kg/m<sup>3</sup>, thermal conductivity of 0.038W/ (m.K) and thickness of 28mm for side insulation. Casing: Marine grade Aluminium Sealing Material: PVC Closed Cell Foam</p>	<p><b>SOLAHART NPT200* COLLECTOR FLAT PLATE</b></p>	<p>Gross Area of 1.98m<sup>2</sup> Aperture Area of 1.86 m<sup>2</sup> Absorber Area of 1.85 m<sup>2</sup> Gross dimensions (without support frame): 1941 x 1023 x 80 mm Weight (empty) : 36 Kg Weight (full) : 38 Collector Fluid Volume : 1.5 litres water, water/Propylene Glycol Absorber Pipe dimensions: Headers – Copper: 25.4mm x 0.91mm, Risers – Copper: 9.5mm x 0.7mm Number of tubes : 7 risers Test Pressure : 21 bar Working Pressure : 10 bar Distance between risers: 133mm Maximum Stagnation Temperature: 124°C Maximum Working Pressure: 14 bar</p>

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**NOTE1:** *This document forms part of the Certificate of Product Conformity bearing the same certificate number.*

**NOTE2:** *The above products shall bear the DCL Conformity Mark.*

*Original Issue Date : 27 September 2017*  
*Current Issue Date : 27 September 2018*  
*Valid Until : 26 September 2019*



ARIF HUSAIN AL MARZOOQI  
Products Conformity Assessment Section Manager  
Dubai Central Laboratory Department