

CERTIFICATE OF PRODUCT CONFORMITY

Dubai Central Laboratory Department (DCLD) of Dubai Municipality
hereby attests that the product(s)

Solar Collector

(Details as per the attached Scope of Certification)

manufactured by:

VISSMANN WERKE GMBH & CO. KG

Avenue Andre Gouy, 57380 Faulquemont, France

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 on the above-mentioned product(s).



for / ENGR. AMIN AHMED AMIN
Director, Dubai Central Laboratory Department
Dubai Municipality



Certificate No: CL15020249
Valid Until: 29/09/2021



Current Issue Date: 30/09/2020
Original Issue Date: 30/09/2015



The attached Scope of Certification bearing the same Certificate Number forms an integral part of this Certificate.
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DUBAI CENTRAL LABORATORY DEPARTMENT
DCL PRODUCT CONFORMITY CERTIFICATION SCHEME

SCOPE OF CERTIFICATION
FOR CERTIFICATE NO. CL15020249

Certificate Issued To: VIESSMANN WERKE GMBH & CO. KG
Avenue André Gouy, 57380 Faulquemont, France

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

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

S/N	PRODUCT DETAILS	BRAND NAME(S) / MODEL(S)	PRODUCT DESCRIPTION
1.	<p>FLAT PANEL SOLAR TYPE COLLECTOR</p> <p>Absorber Materials: Copper Absorber Sheet laser welded into copper tubes</p> <p>Rockwool insulation 30 mm thickness and with thermal conductivity of 0.035 w/(m- ° K) for 100-F</p> <p>Melamin thermal insulation 10mm thickness (main) and 15mm thickness (lateral) and with thermal conductivity of 0.033 w/(m- ° K) for 200-F</p> <p>Solar clear 3.2 mm glass cover</p> <p>Aluminum profile frame</p> <p>Silicone based sealing materials</p> <p>Use with anti-freeze thermal fluid (propylene glycol for solar system)</p>	<p>“VIESSMANN” Brand</p> <p>VITOSOL 100F (SV1B / SH1B)</p> <p>VITOSOL 200F (SV2D / SH2D)</p>	<p>Gross dimensions of Length x Width x Depth: 2380 x 1056 x 90 mm / 1056 x 2380 x 90 mm; Gross Area: 2.51 m²; Aperture area: 2.33 m²; Total Absorber Area: 2.32 m²; Headers: 2 horizontal copper tube of 22 mm diameter x 0.7 mm thickness Serpentine Risers: copper tubes of 9 mm diameter x 0.35 mm thickness Maximum operational pressure: 6 bars; Maximum Stagnation Temperature: 196°C Liquid content: 1.67 & 2.33 liters Empty Collector Weight: 41 kg</p> <p>Gross dimensions of Length x Width x Depth: 2380 x 1056 x 90 mm / 1056 x 2380 x 90 mm; Gross Area: 2.51 m²; Aperture area: 2.33 m²; Total Absorber Area: 2.32 m²; Headers: 2 horizontal copper tube of 22 mm diameter x 0.7 mm thickness Serpentine Risers: copper tubes of 9 mm diameter x 0.35 mm thickness Maximum operational pressure: 6 bars; Maximum Stagnation Temperature: 185°C Liquid content: 1.83 & 2.48 liters</p>

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			Empty Collector Weight: 41 kg
2.	<p>FLAT PANEL SOLAR TYPE COLLECTOR</p> <p>Absorber Materials: Aluminum Absorber Sheet with termprotect, with 95% solar absorptance and 5% hemispherical emittance, laser welded into copper tubes</p> <p>Rockwool insulation 30mm thickness and with thermal conductivity of 0.035 w/(m- ° K) for 100-F</p> <p>Melamin thermal insulation 10mm thickness (main) and 15mm thickness (lateral) and with thermal conductivity of 0.033 w/(m- ° K) for 200-F</p> <p>Tempered solar clear 3.2 mm glass cover with 91.6% solar transmittance</p> <p>Aluminum profile frame with Galvanized Steel Back Cover</p> <p>Silicone based sealing materials</p> <p>Use with anti-freeze thermal fluid (propylene glycol for solar system)</p>	<p>"VIESSMANN" Brand</p> <p>VITOSOL 100-FM (SV1F / SH1F)</p> <p>VITOSOL 200-FM (SV2F / SH2F)</p>	<p>Gross dimensions of Length x Width x Depth: 2380 x 1056 x 73 mm / 1056 x 2380 x 73 mm; Gross Area: 2.51 m²; Aperture area: 2.33 m²; Total Absorber Area: 2.31 m²; Headers: 2 horizontal copper tube of 22 mm diameter x 0.7 mm thickness Serpentine Risers: 22 copper tubes of 9 mm diameter x 0.35 mm thickness Maximum operational pressure: 6 bars; Maximum Stagnation Temperature: 145°C Liquid content: 1.83 liters Empty Collector Weight: 39 kg</p> <p>Gross dimensions of Length x Width x Depth: 2380 x 1056 x 90 mm / 1056 x 2380 x 90 mm; Gross Area: 2.51 m²; Aperture area: 2.33 m²; Total Absorber Area: 2.31 m²; Headers: 2 horizontal copper tube of 22 mm diameter x 0.7 mm thickness Serpentine Risers: 22 copper tubes of 9 mm diameter x 0.35 mm thickness Maximum operational pressure: 6 bars; Maximum Stagnation Temperature: 145°C Liquid content: 2.4 liters Empty Collector Weight: 40 kg</p>
3.	<p>FLAT PANEL SOLAR TYPE COLLECTOR</p> <p>Absorber Materials: Aluminum Absorber Sheet, sputtered Viessmann coating with 95% solar absorptance and 5% hemispherical emittance, laser welded into copper tubes</p> <p>Mineral wool insulation 30mm thickness and with thermal conductivity of 0.035 w/(m- ° K)</p> <p>Structural 3.2 mm glass cover with 91.7% solar transmittance</p> <p>Aluminum profile frame with Galvanized Steel Back</p>	<p>"VIESSMANN" Brand</p> <p>VITOSOL 100-F SVT 2.18m²</p>	<p>Gross dimensions of Length x Width x Depth: 2066 x 1056 x 73 mm; Gross Area: 2.182 m²; Aperture area: 2.016 m²; Total Absorber Area: 2.010 m²; Headers: 2 horizontal copper tube of 22 mm diameter x 0.7 mm thickness Harp Risers: 9 copper tubes of 9 mm diameter x 0.45 mm thickness Maximum Operating Temperature: 210°C Maximum operational pressure: 600 kPa (6 bar); Liquid content: 1.88 liters</p>

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	<p>Cover</p> <p>Frame fastening method is drilling/bending /stamping</p> <p>Silicone based sealing</p> <p>Water – glycol mixture</p> <p>VERTICAL (HARP)</p>	<p>VITOSOL 100-F SVT</p> <p>2.51m²</p>	<p>Empty Collector Weight: 42 kg</p> <p>Tilt Angle: 15° Minimum and 45°Maximum</p> <p>Gross dimensions of Length x Width x Depth: 2380 x 1056 x 73 mm;</p> <p>Gross Area: 2.51 m²; Aperture area: 2.33 m²;</p> <p>Total Absorber Area: 2.32 m²;</p> <p>Headers: 2 horizontal copper tube of 22 mm diameter x 0.7 mm thickness</p> <p>Harp Risers: 9 copper tubes of 9 mm diameter x 0.45 mm thickness</p> <p>Maximum Operating Temperature: 210°C</p> <p>Maximum operational pressure: 600 kPa (6 bar);</p> <p>Liquid content: 2.06 liters</p> <p>Empty Collector Weight: 52 kg</p> <p>Tilt Angle: 15° Minimum and 45°Maximum</p>
4.	<p>VACUUM TUBE SOLAR COLLECTOR VITOSOL FAMILY</p> <p>Vacuum tube collector based on the heat pipe principle with thermprotect</p> <p>Absorber Materials: Aluminum Absorber Sheet with selective coating (TINOX) ultrasonic welded into copper heat pipe</p> <p>Glass Tube: outside diameter x thickness: 102 mm x 2.8 mm Copper header</p> <p>Rockwool insulation with thermal conductivity of 0.037 w/(m- ° K)</p> <p>Aluminum profile frame</p> <p>EPDM & Silicone based sealing materials</p> <p>Use with anti-freeze thermal fluid (propylene glycol for solar system)</p>	<p>“VIESSMANN” Brand</p> <p>VITOSOL 200-TM</p> <p>SPEA (3.26 m²)</p> <p>VITOSOL 200-TM</p> <p>SPEA (1.63 m³)</p>	<p>Gross dimensions of Length x Width x Depth: 2244 x 2343 x 160 mm;</p> <p>Gross Area: 5.3 m²; Aperture area: 3.46 m²; Total Absorber Area: 3.26 m²;</p> <p>No of evacuated tubes: 18 pieces</p> <p>Maximum operational pressure: 6 bars;</p> <p>Maximum Stagnation Temperature: 175°C</p> <p>Liquid content: 1.72 liter</p> <p>Empty Collector Weight: 102 kg</p> <p>Gross dimensions of Length x Width x Depth: 2244 x 1173 x 160 mm;</p> <p>Gross Area: 2.69 m²; Aperture area: 1.73 m²;</p> <p>Total Absorber Area: 1.63 m²;</p> <p>No of evacuated tubes: 9 pieces</p> <p>Maximum operational pressure: 6 bars;</p> <p>Maximum Stagnation Temperature: 175°C</p> <p>Liquid content: 0.86 liter</p> <p>Empty Collector Weight: 51 kg</p>

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5.	<p>VACUUM TUBE SOLAR COLLECTOR VITOSOL FAMILY</p> <p>Vacuum tube collector based on the heat pipe principle</p> <p>Absorber Materials: Aluminum Absorber Sheet with selective coating (TINOX) ultrasonic welded into copper heat pipe</p> <p>Glass Tube: outside diameter x thickness: 67 mm x 2.0 mm</p> <p>Melamin thermal insulation of 9.5 kg/m³ density with thermal conductivity of 0.033 w/(m- ° K)</p> <p>Aluminum profile frame</p> <p>EPDM & Silicone based sealing materials</p> <p>Use with anti-freeze thermal fluid (propylene glycol for solar system)</p>	<p>"VIESSMANN" Brand</p> <p>Vitosol 300-TM SP3C</p> <p>1.25 m² HW</p>	<p>Gross dimensions of Length x Width x Depth: 2244 x 885 x 150 mm;</p> <p>Gross Area: 1.98m²; Aperture area: 1.33 m²;</p> <p>Total Absorber Area: 1.26 m²;</p> <p>No of evacuated tubes: 12 pieces</p> <p>Maximum operational pressure: 6 bars;</p> <p>Maximum Stagnation Temperature: 273°C</p> <p>Liquid content: 0.75 liter</p> <p>Empty Collector Weight: 33 kg</p>
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NOTE 1: The above products shall bear the DCL Conformity Mark applied on each individual product.

NOTE 2: This document forms part of the Certificate of Product Conformity bearing the same certificate number.

Original Issue Date: 30 September 2015

Current Issue Date: 30 September 2020

Valid Until: 29 September 2021



ARIF HUSAIN AL MARZOOQI

Products Conformity Assessment Section Manager

Dubai Central Laboratory Department