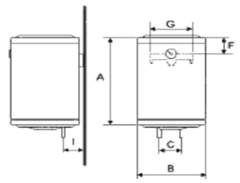
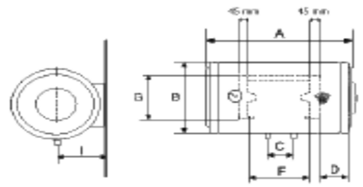
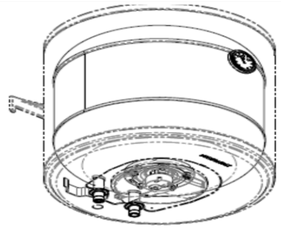
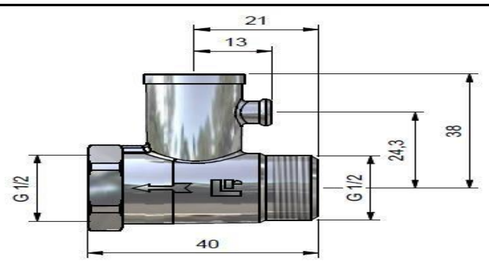
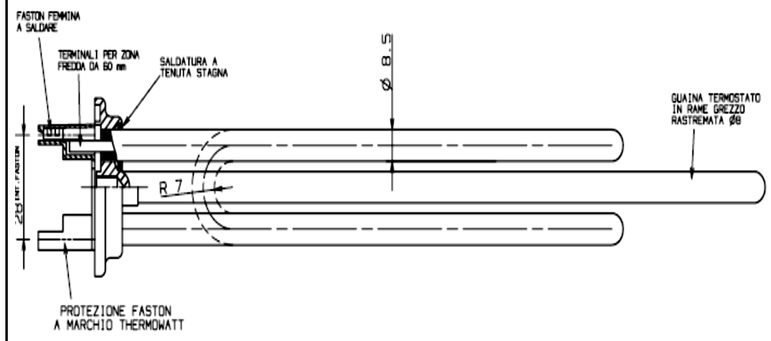
**TECHNICAL SUBMITTAL WATER HEATERS**

| REFERENCE | TECHNICAL DESCRIPTION | NOTES |
|---|---|---|
| **TYPE** | STORAGE WATER HEATER 30-200L | |
| **MODEL** | COWH-SFVWM1.2-1.50W<br>COWH-SFHWM1.2-1.50W | |
| **BRAND** | CALFREDDO | |
| **ORIGIN** | MADE IN ITALY | |
| **DIMENSIONS VERTICAL WATER HEATERS** |  | **MODEL** / **A MM** / **B MM** / **C MM** / **F MM** / **G MM** / **I MM**<br>COWH-SFVWM1.2-1.50W / 510 / 460 / 100 / 130 / 350 / 130<br><br>**WEIGHT** / **NET** / **GROSS**<br>**50 L** / 15 KGS / 17 KGS |
| **DIMENSIONS HORIZONTAL WATER HEATERS** |  | MODELS / A / B / C / D / F / G / I<br>COWH-SFHWM1.2-1.50W / 510 / 460 / 100 / 155 / 125 / 350 / 240<br><br>**WEIGHT** / **NET** / **GROSS**<br>**50 L** / 15 KGS / 17 KGS |
| **TANK** | HOT ROLLED PICKLED UNI EN 10025-10111-5867 FE P 13, STEEL THICKNESS 15/10.<br>THE TANK IS BUILT WITH 2 CUPS AND ONE CENTRAL CYLINDER.<br>THICKNESS 15/10.<br>PRESSURE RESISTANCE 8 BAR AND NORMATIVE TEST 16 BAR.<br>EN 60 335-2-21 7.1&22.47<br>FLANGE OPENING 72 MM.<br>CLOSING OF THE FLANGE WITH NUTS.<br>EACH LOT IS SUBJECT TO DESTRUCTIVE PRESSURE TEST<br>UP TO 16 BAR FOR 10 M NO SHOWING OF ANY LEAKAGE OR CRACKING.<br>6 BAR TEST PRESSURE ON 100% OF PRODUCTION BEFORE ENAMELING |  |
| **PROTECTION AGAINST CORROSION** | TITANIUM GLASS ENAMELED 300 MICRONS COOKED IN OVEN 850 °C.<br>VESSEL IS GLASS LINED ACCORDING TO DIN 4753<br> | EACH TANK IS TREATED WITH SAND BLASTING BEFORE ENAMELING.<br>ENAMEL IS GIVEN WITH TITANIUM ENRICHED GLASS ENAMEL, WITH HIGH RESISTANCE TO ACID WATER, STEAM AND CORROSION.<br>THE ENAMEL IS COOKED IN OVEN AT 850 °C |
| **ADDITIONAL PROTECTION AGAINST CORROSION** | MG ANODE WITH DENSITY 160 G/SQM OF THE ENAMELED SURFACE.<br>EPDM GASKET FOR THE PROTECTION OF THE TANK OPENING | ALLOY EN-MAMGA16ZN3<br>NORMATIVE REFERENCE UNI EN 12438-2002 |
| **RELIEF SAFETY VALVE** | RELIEF SAFETY VALVE SUPPLIED WITH EVERY BOILER<br>MATERIAL: BRASS UNI EN 12165<br>SURFACE TREATMENT: NICKEL PLATING<br>MAX WORKING TEMPERATURE: 100°C<br>THREADED END: G1/2’<br>RESISTANCE TO INTERNAL PRESSURE: UP TO 16 BAR<br>STANDARD OPENING VALVE: 8.5 BAR |  |

<table>
<tr><td>HEATER MODEL CODE</td><td>HEATING ELEMENT: IMMERSION TYPE WITH FLANGE CONNECTION, COPPER FACED HEAT RESISTANT PLASTIC BASE.<br>HEATING ELEMENT MADE OF NICKEL CHROMIUM WIRE EMBEDDED IN MG OXIDE AND SHEATHED IN COPPER TUBE.<br>WATT DENSITY 6.8 W SQ. CM<br>POWER 1200 W 220-240 V</td><td>THE CONSTRUCTION HAS BEEN MADE ACCORDING TO THE FOLLOWING RULES:<br>EN60730-1; EN60730-2-9<br>72/23/CEE “ELECTRICAL MATERIAL IN LOW VOLTAGE “MODIFIED BY 93/68-99/5-2006/95 CEE 89/336/CEE<br>“ELECTROMAGNETIC COMPATIBILITY” MODIFIED BY 92/31-93/68-93/97-2004/108<br>CEI-EN 6 1000-6-4<br> 
</td></tr>
<tr><td>INLET-OUTLET OF WATER</td><td>CONNECTIONS ARE ASSURED BY ½’ MALE THREADS.<br>THE DRAINING OF WARM WATER IS ASSURED BY STAINLESS STEEL PIPE.<br>THE INLET OF COLD WATER IS REGULATED BY A JET BREAKER IN ABS WITH SPECIAL DESIGN TO REDUCE THE COLD WATER INCOMING.</td><td>THE STAINLESS STEEL 304 DRAINING PIPE IS ENCASED IN PLASTIC SLEEVE TO AVOID ANY THERMAL BRIDGE.</td></tr>
<tr><td>CONNECTION FITTING PIPES</td><td>1/2" FEMALE FITTING</td><td></td></tr>
<tr><td>HIGH TEMPERATURE LIMIT CUT-OUT WITH MANUAL RESET.</td><td>TEMPERATURE CONTROL: ADJUSTABLE IMMERSION THERMOSTAT WITH BI-METALLIC<br>SAFETY CONTROL (AUTOMATIC) HIGH TEMPERATURE LIMIT.<br>THE DEVICE AND ITS THERMOSTAT GRANT THE RESPECT OF EN 335-2-21 22.112 AND 24.102 WITH THE BIPOLAR SAFETY LIMIT ENSURING A WATER TEMPERATURE LOWER THAN 98°C.<br>BIPOLAR SAFETY HAS A MANUAL RESET.</td><td>SETTING OF TEMPERATURE: 72° C<br>SETTING OF SAFETY (WITH MANUAL RESET): 85 ° C<br> </td></tr>
<tr><td>EXTERNAL JACKET</td><td>COLD ROLLED LOW CARBON STEEL FLAT PRODUCTS – FE P03<br>UNI EN 10130/10131 – THICKNESS 6/10<br>PAINTING<br>EPOXY POWDER – COLOR: WHITE PLAIN SHINE FOR HOUSE APPLIANCES<br>1. THICKNESS TEST: UNI EN ISO 2360:2004<br>2. ADHESION : UNI EN ISO 2409:2007<br>3. HARDNESS PENCIL : UNI 10782:1999<br>4. IMPACT RESISTANCE : UNI EN ISO 6272-2 :2006<br>5. CONICAL MANDREL : UNI EN ISO 6860:2006<br>6. SALT FOG : UNI EN ISO 9227 :2006<br>7. HUMIDISTAT: UNI EN ISO 6270:2001</td><td></td></tr>
<tr><td>THICKNESS OF SHELL INSULATION AND THERMAL CONDUCTIVITY</td><td>OUR PRODUCTS ARE INSULATED WITH PU FOAM HA 24-259-01/ISO10-002-00<br>THERMAL CONDUCTIVITY 0.023/0.03 = 0.766 W/SQM</td><td>THICKNESS OF THE INSULATION IS MINIMUM 2.20 CM AVERAGE SURROUNDING ALL THE BODY OF THE PRODUCT.</td></tr>
<tr><td>NAMEPLATE</td><td>THE NAMEPLATE CORRESPONDS TO EN 60 335-2-21</td><td>EACH PRODUCT HAS A SERIAL NUMBER WITH EASY REFERENCE TO THE MONTH AND YEAR OF PRODUCTION</td></tr>
<tr><td>HEATING TIME AND ENERGY CONSUMPTION</td><td>
<table>
<tr><th>VERTICAL MODEL</th><th>HEATING ELEMENT</th><th>KWH/24H</th></tr>
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<tr><td>HOT WATER L/H AND 24H</td><td>50 LT 1.2 KW= 51.60 L/H</td><td>50 LT = 1238 L/24H</td></tr>
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| **FASTENING TO THE WALL** | EACH PRODUCT IS EQUIPPED WITH A WALL BRACKET ABLE TO SUPPORT THE FULL WEIGHT OF PRODUCT.<br>IT IS ENOUGH USE NUTS AND BOLTS IN 2 FIXATION POINTS | |
| **INFORMATION** | EACH PRODUCT IS EQUIPPED WITH THERMOMETER SHOWING THE TEMPERATURE.<br>A SIGNAL LED LIGHT IS INDICATING THE HEATING PHASE. | EACH PRODUCT IS EQUIPPED WITH INSTALLATION MANUAL. |
| **APPLICABLE STANDARDS** | THE PRODUCT IS CORRESPONDING TO THE EN STANDARDS AND GSO STANDARDS<br>IEC 60335-2-21: 2012 (Sixth Edition)<br>used in conjunction with<br>IEC 60335-1:2010 (Fifth Edition)<br>incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013<br><br>AND EMC STANDARDS<br>CISPR 14-1 (Fifth Edition) + A1 + A2 in conjunction with CISPR 14-2 (Second Edition), IEC 61000-3-2 (Fourth Edition) , IEC 61000-3-3 (Third Edition) | CB TEST CERTIFICATE N.<br>50 L VERTICAL WATER HEATER:<br>AG16-0003805-02 ISSUED ON 16/11/2016<br><br>50 L HORIZONTAL WATER HEATER:<br>AG16-0003805-04 ISSUED ON 16/11/2016<br><br>ISSUED BY IMQ |
| **PROTECTION AGAINST SPLASHING WATER** | IPX4 | |
| **CERTIFICATES** | ISO 9001 CERTIFICATE | ROHS COMPONENTS ON THE PRODUCTS. |
| **FACTORY TEST** | ROUTINE TESTS<br>EARTH CONTINUITY UNDER IEC 60335-1 ANNEX A, ROUTINE TEST (A.1) 0,1OHM<br>ELECTRIC STRENGTH UNDER IEC 60335-1 ANNEX A ROUTINE TEST (A.2)<br>BASIC INSULATION 1000V, 50 HZ, 1 SEC<br>FUNCTIONAL UNDER IEC 60335-1 ANNEX A ROUTINE TEST (A.3)<br>CORRECT FUNCTIONING OF APPLIANCES | ON 100% OF THE PRODUCT AFTER ASSEMBLING OF THE ELECTRICAL PARTS AND BEFORE PACKING THEM |