Solahart MDV series is an open circuit split system solar water heater with roof mounted slimline collectors and a tank that can be installed discreetly on the ground.

MDV solar storage tank systems provide an increase in solar energy savings. Solar energy is transferred directly to the water as it is moved through the collectors by a circulator and the heated water is stored in the ground-mounted tank.

This system is available with two types of solar collectors: The L collector with its polyester powder coated aluminium absorber plate which provides economical service in medium to high solar gain areas, and the higher efficiency CSA2007 Envelope collector with its sputtered selective surface copper absorber plate which is suitable for use in lower solar gain areas.

These direct systems have limited frost protection and are not suitable for harsh water regions.

**HOW YOU BENEFIT**

**OPTIMAL PERFORMANCE**
- **L Collector**
  Provides optimal performance in medium to high solar gain areas.

**HIGH PERFORMANCE**
- **CSA2007 Collector**
  Provides higher performance in low to medium solar gain areas.

**LOW VISUAL IMPACT**
- Slim roof-mounted collectors with a tank installed discreetly on the ground.

**REDUCE ENERGY USE**
- Water heating energy use may be reduced by up to **65% to 75%** and could save up to 1.7 to 2.9 tonnes of CO₂ emissions per annum when replacing an electric water heater.
## Technical Data

### SOLAR DATA

**Collector model**
- **Collector**
  - **L**
  - **L**
  - **L**
  - **L**
  - **L**
  - **L**
  - **CA2007**
- **Collector number**
  - **2**
  - **3**
  - **2**
  - **3**
  - **4**
  - **2**
  - **2**
  - **3**

**Solar Storage Tank Model**
- **270MDV**
- **320MDV**
- **410MDV**

**Installation**
- **Indoor / Outdoor**

**Nominal storage capacity**
- **litres**
  - **270**
  - **320**
  - **410**
- **US gal**
  - **71.3**
  - **84.5**
  - **108.3**

**Boost capacity**
- **litres**
  - **140**
  - **170**
  - **220**
- **US gal**
  - **37**
  - **44.9**
  - **58.10**

**Weight empty**
- **kg**
  - **76**
  - **91**
  - **113**
- **lbs**
  - **168**
  - **201**
  - **249**

**Weight full**
- **kg**
  - **346**
  - **417**
  - **529**
- **lbs**
  - **763**
  - **920**
  - **1167**

**Height**
- **m**
  - **1.395**
  - **1.640**
  - **1.840**
- **in**
  - **54.9**
  - **64.6**
  - **72.5**

**Width**
- **m**
  - **0.640**
  - **0.640**
  - **0.690**
- **in**
  - **25.2**
  - **25.2**
  - **27.2**

**Depth**
- **m**
  - **0.690**
  - **0.680**
  - **0.730**
- **in**
  - **26.8**
  - **26.8**
  - **28.7**

**Solar controller kit**
- **PN 299284**
- **1**
- **1**
- **1**

### Electric Boost Specifications

- **Heating unit type**: Copper sheath immersion element
- **Supply voltage**: 240 V, 50 Hz

**Recovery rate @ 240 V temperature rise of:**
- **Rating kW**
  - **3.6**
- **Current Amps**
  - **15**
- **30°C litres/hour**
  - **103**
- **40°C litres/hour**
  - **77**
- **50°C litres/hour**
  - **62**

### Water Supply

- **TPR valve setting**: kPa / psi
  - **1000 / 145**
- **ECV(2) setting**: kPa / psi
  - **850 / 125**
- **Max. supply pressure with ECV**: kPa / psi
  - **680 / 100**
- **Max. supply pressure without ECV**: kPa / psi
  - **800 / 115**
- **Min. supply pressure**: kPa / psi
  - **200 / 29**

**Water connections**
- **cold**: Rp 3/4
- **hot**: Rp 3/4
- **solar**: DN15 compression fittings (solar hot and solar cold inlets to tank Rp 3/4)

### Collectors

<table>
<thead>
<tr>
<th>Collectors</th>
<th>L Collectors</th>
<th>CSA2007 Collectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aperture (heating) area</td>
<td>m² / ft²</td>
<td>1.87 / 20</td>
</tr>
<tr>
<td>Dimensions</td>
<td>length - mm / in</td>
<td>1943 / 76.5</td>
</tr>
<tr>
<td></td>
<td>width - mm / in</td>
<td>1027 / 40.5</td>
</tr>
<tr>
<td></td>
<td>height - mm / in</td>
<td>83 / 3.3</td>
</tr>
<tr>
<td>Working pressure</td>
<td>kPa / psi</td>
<td>1000 / 145</td>
</tr>
<tr>
<td>Capacity</td>
<td>litres / US gal</td>
<td>1.5 / 0.4</td>
</tr>
<tr>
<td>Weight empty</td>
<td>kg / lbs</td>
<td>32 / 71</td>
</tr>
<tr>
<td>Weight full incl. fittings</td>
<td>kg / lbs</td>
<td>34 / 75</td>
</tr>
<tr>
<td>Absorber surface</td>
<td>Black polyester powder coat</td>
<td>Tinox sputtered selective</td>
</tr>
<tr>
<td>Absorber material</td>
<td>Aluminium</td>
<td>Copper</td>
</tr>
<tr>
<td>Riser material</td>
<td>Copper tube</td>
<td>Copper tube</td>
</tr>
<tr>
<td>Tray material</td>
<td>0.7 mm aluminium</td>
<td>N/A</td>
</tr>
<tr>
<td>Frame material</td>
<td>N/A</td>
<td>Extruded aluminium</td>
</tr>
<tr>
<td>Insulation material</td>
<td>38 mm polyester blanket</td>
<td>38 mm glass wool blanket</td>
</tr>
<tr>
<td>Glass</td>
<td>3.2 mm tempered low iron</td>
<td>3.2 mm tempered low iron</td>
</tr>
</tbody>
</table>

### Collector Installation

<table>
<thead>
<tr>
<th>Collector Installation</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof area dimensions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length(1)</td>
<td>m</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Width(1)</td>
<td>m</td>
<td>2.3</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>78.8</td>
<td>78.8</td>
</tr>
<tr>
<td>Solar kits - L collector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collector kit</td>
<td>PN 12104297</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Collector add on kit</td>
<td>PN 12104405</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Solar kits - CSA2007 collector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collector kit</td>
<td>PN 12103016</td>
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<tr>
<td>Collector add on kit</td>
<td>PN 12103017</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

(1) An additional 0.9m (35.4 in) should be left on all four sides of the installation for safe access and servicing.

(2) Expansion Control Valve (ECV) is not supplied.

The Streamline MLV and MCSV systems can be installed as a solar preheater with an inline Solahart gas booster water heater. Refer to the Solahart gas booster specification sheet for further details on the gas booster.

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**Specifications and designs included in this data sheet are subject to change without notice.**

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