

## Split System MDV Series Electric Boost

### Description

The 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. It is suitable for use in low to high solar gain areas.

The new 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 an electric circulator and the heated water is stored in the ground mounted tank.

This system is available with two types of solar collectors to harvest the sun's heat and transfer it to the water. The higher efficiency TBT200 collector with its sputtered selective surface copper absorber plate is suitable for use in lower solar gain areas and the L collector with its polyester powder coated aluminium absorber plate provides economical service in medium to high solar gain areas.



Copper is used for the risers in both types of collectors for its high thermal conductivity, ensuring the maximum amount of heat energy is passed into the water.

The MDV series electric boosted models are equipped with an in-tank element to ensure a supply of hot water during periods of poor or no solar gain. Alternatively, this system can be installed as a preheater with an inline Solahart gas booster water heater.

### Key Features

- Stylish slimline design
- Minimum visual impact
- Choice of collectors to suit high to low solar gain areas
- Toughened, hail resistant collector glass
- Storage tank can be installed indoors or outdoors
- Ceramic lined tank
- Electric or gas booster

### Key Benefits

- Can save up to 55% to 85% of water heating energy consumption\*
- Hot water regardless of the weather
- Qualifies for valuable environmental incentives\*
- Reduced energy use can save up to 2.0 to 3.1 tonnes of CO<sub>2</sub> emissions per annum
- Peace of mind with Solahart's 5/3/1 year warranty†
- Space efficient and flexibility of installation

\* Energy savings of up to 55% to 85% shown are based on Australian Government approved TRNSYS simulation modelling using a medium load. Savings and incentives will vary depending upon your location, type of Solahart system installed, orientation and inclination of the solar collectors, type of water heater being replaced, hot water consumption and fuel tariff. Maximum financial savings off your hot water bill are achievable when replacing an electric water heater on continuous tariff. Refer to [solahart.com.au](http://solahart.com.au) for further information.

† Solahart Warranty Details: 5/3/1 warranty; 5 year cylinder and collectors supply, 3 year labour on cylinder, 1 year parts including labour, 1 year labour on collectors; applies to a single family domestic dwelling only. All other applications have a 3/1/1/1 warranty; 3 years cylinder supply, 1 year collectors, 1 year parts, 1 year labour warranty.

In Australia, an amended warranty period may apply where a government rebate has been received for the solar water heater. Phone 1300 769 475 for details.

# MDV Series - Electric Boosted Open Circuit Split Systems

These systems have limited frost protection and are not suitable for harsh water regions<sup>^</sup>.

## MLV and MTV Systems

Model	272MLV	273MLV	322MLV	323MLV	412MLV	413MLV	414MLV	272MTV	322MTV	412MTV	413MTV
Tank Model	270MDV	270MDV	320MDV	320MDV	410MDV	410MDV	410MDV	270MDV	320MDV	410MDV	410MDV
Collector	L	L	L	L	L	L	L	TBT200	TBT200	TBT200	TBT200
No. of collectors	2	3	2	3	2	3	4	2	2	2	3

## Solar Storage Tank

Tank Model		270MDV	320MDV	410MDV
Storage capacity	litres	270	320	410
	US gal	71.3	84.5	108.3
Boost capacity (electric)	litres	140	170	220
	US gal	37	44.9	58.1
Installation		Indoor / Outdoor		
Solar controller kit	PN 299280	1	1	1
Weight empty	kg	78	88	109
	lbs	172	194	241
Weight full	kg	348	414	525
	lbs	767	912	1158
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	0.680	0.680	0.730
	in	26.8	26.8	28.7

## Electric Boost Specifications

Heating unit type	Copper sheath immersion element			
Supply voltage	240V 50Hz			
Recovery rate @ 240 V and temperature rise of:				
Rating kW	Current Amps	30°C litres/hour	40°C litres/hour	50°C litres/hour
2.4	10	68	52	41
3.6	15	103	77	62
4.8	20	137	103	83

## Water Supply

TPR valve setting	kPa	1000	psi	145
ECV* setting	kPa	850	psi	125
Max. supply pressure with ECV	kPa	680	psi	100
	kPa	800	psi	115
Min. supply pressure	kPa	200	psi	29
Water Connections	cold	RP $\frac{3}{4}$ /20		
	hot	RP $\frac{3}{4}$ /20		
	solar	DN15 compression fittings (solar hot and solar cold inlets to tank RP $\frac{3}{4}$ /20)		

\*Expansion Control Valve (ECV) is not supplied.

<sup>^</sup> Limited frost protection – these systems have a level of freeze protection designed to guard against freeze conditions. These systems have a Solahart warranty for freeze damage (Australia only – conditions apply) when the water heater is installed at an altitude not exceeding 400 m above sea level.

Harsh water regions – these systems are not suitable for and the Solahart warranty may not apply to the water heater if it is connected to a water supply which: is scaling with a Saturation Index > +0.8, or: is corrosive with a Saturation Index < -1.0, or; has a Total Dissolved Solids content >2500 mg/L.

Technical data is subject to change.

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SH9975EOC 2012 November

## Collectors General

Aperture (heating) area	m <sup>2</sup>	1.87	ft <sup>2</sup>	20
Dimensions	length	mm	1937	in
	width	mm	1022	in
	height	mm	77	in
Capacity	litres	3	US gal	0.8
Working pressure	kPa	1000	psi	145

## L Collector

Weight	empty	kg	33	lbs	73
	full	kg	35	lbs	77
Absorber surface	Black polyester powder coat				
Absorber material	aluminium				
Riser material	copper tube				
Tray material	0.7mm aluminium				
Insulation material - base	38mm polyester blanket				
Glass	3.2mm tempered low iron glass				

## TBT200 Collector

Weight	empty	kg	37	lbs	82
	full	kg	39	lbs	86
Absorber surface	Tinox sputtered selective				
Absorber material	copper				
Riser material	copper tube				
Tray material	0.55 mm Zinalume®				
Insulation material - base	38 mm glass wool blanket				
Glass	3.2mm tempered low iron glass				

® Zinalume is a registered trademark of Bluescope Steel Limited

## Collector Installation

Roof area dimensions		2	3	4
Length*	m	2.0	2.0	2.0
	in	78.8	78.8	78.8
Width*	m	2.3	3.4	4.5
	in	90.6	133.9	177.2
Solar kits - L collector				
Collector kit	PN 12104297	1	1	1
Collector add on kit	PN 12104405	0	1	2
Solar kits - TBT200 collector				
Collector kit	PN 12104794	1	1	N/A
Collector add on kit	PN 12104795	0	1	N/A

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

The Streamline MLV and MTV 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.