



GROUND-MOUNTED DIRECT SYSTEMS

MDV SERIES - OPEN CIRCUIT SPLIT SYSTEM

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.[^]



L Collector



**ELECTRIC OR GAS
BOOSTING FOR HOT
WATER REGARDLESS
OF THE WEATHER**

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

MODELS	MLV - DIRECT SYSTEMS							MCSV - DIRECT SYSTEMS			
Systems	272MLV	273MLV	322MLV	323MLV	412MLV	413MLV	414MLV	272MCSV	322MCSV	412MCSV	413MCSV
Tank model	270MDV	270MDV	320MDV	320MDV	410MDV	410MDV	410MDV	270MDV	320MDV	410MDV	410MDV
Collector model	L	L	L	L	L	L	L	CSA2007	CSA2007	CSA2007	CSA2007
Collector number	2	3	2	3	2	3	4	2	2	2	3
Solahart Warranty*	5/3/2							5/3/2			

Solar Storage Tank Model	270MDV	320MDV	410MDV
Installation	Indoor / Outdoor		
Nominal storage capacity	litres	270	320
	US gal	71.3	84.5
Boost capacity	litres	140	170
	US gal	37	44.9
Weight empty	kg	76	91
	lbs	168	201
Weight full	kg	346	417
	lbs	763	920
Height	m	1.395	1.640
	in	54.9	64.6
Width	m	0.640	0.640
	in	25.2	25.2
Depth	m	0.680	0.680
	in	26.8	26.8
Solar controller kit	PN 299284	1	1

Collectors	L Collectors	CSA2007 Collectors
Aperture (heating) area	m ² / ft ²	1.87 / 20
Dimensions	length - mm / in	1943 / 76.5
	width - mm / in	1027 / 40.5
	height - mm / in	83 / 3.3
Working pressure	kPa / psi	1000 / 145
Capacity	litres / US gal	1.5 / 0.4
Weight empty	kg / lbs	32 / 71
Weight full incl. fittings	kg / lbs	34 / 75
Absorber surface	Black polyester powder coat	Tinox sputtered selective
Absorber material	Aluminium	Copper
Riser material	Copper tube	Copper tube
Tray material	0.7 mm aluminium	N/A
Frame material	N/A	Extruded aluminium
Insulation material	Base	38 mm polyester blanket
Glass	3.2 mm tempered low iron	3.2 mm tempered low iron

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	Current Amps	30°C litres/hour	40°C litres/hour	50°C litres/hour
3.6	15	103	77	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)

Collector Installation		2	3	4
Roof area dimensions				
Length ⁽¹⁾	m	2.0	2.0	2.0
	in	78.8	78.8	78.8
Width ⁽¹⁾	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 - CSA2007 collector				
Collector kit	PN 12103016	1	1	N/A
Collector add on kit	PN 12103017	0	1	N/A

⁽¹⁾ An additional 0.9m (35.4in) 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.

Energy savings of up to 65% to 75% shown are based on Australian Government approved TRNSYS simulation modelling of a Solahart 322MLV and 322MCSV and using a medium load in Zone 3 and apply when replacing an electric water heater. Any savings 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 for more information.

* Solahart Warranty Details: 5/3/2 warranty; 5 year cylinder and collector supply, 3 year cylinder and collector labour, 2 year parts supply including labour; applies to a single family domestic dwelling only. All other applications have a 3/1/1/1 warranty; 3 year cylinder supply, 1 year collector supply, 1 year parts supply, 1 year labour.

^ 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 – the Solahart warranty may not apply if the water heater 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 >2500mg/L.

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

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Reorder code: SHDS/SHW-MDV

IH0113_MDV_Series_July 2019

Solahart
HOT WATER *Free* FROM THE SUN®