



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



GAS OR ELECTRIC 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 55% to 80% and could save up to 1.4 to 3.0 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	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	0.680	0.680	0.730
	in	26.8	26.8	28.7
Solar controller kit	PN 299284	1	1	1

Collectors	L Collectors		CSA2007 Collectors	
Aperture (heating) area	m ² / ft ²	1.87 / 20	1.87 / 20	
	length - mm / in	1943 / 76.5	1996 / 78.6	
Dimensions	width - mm / in	1027 / 40.5	1043 / 41.1	
	height - mm / in	83 / 3.3	82 / 3.2	
Working pressure	kPa / psi	1000 / 145	1000 / 145	
Capacity	litres / US gal	1.5 / 0.4	1.5 / 0.4	
Weight empty	kg / lbs	32 / 71	36 / 80	
Weight full incl. fittings	kg / lbs	34 / 75	38 / 84	
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	38 mm glass wool blanket	
Glass		3.2 mm tempered low iron	3.2 mm tempered low iron	

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.

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)

Energy savings of up to 55% to 80% shown are based on Australian Government approved TRNSYS simulation modelling using a medium load. 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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