

EcoOnline PoolMasterTM PVC Strip Solar Pool Heating Systems



Australian
Standard
Certified
Polymer

Premium BASF[®] Resin
Superior Design & Engineering
Unbeatable Value for Money



eFLOW-balanceTM is a
Unique Energy Saving
Low Flow System Design*



AS 2369.2 1993 Compliant



* Based on research¹ by the University of NSW, the eFLOW-balanceTM low flow design principle trades minor collector efficiencies for substantial energy savings. See back page for more info.

¹ L.N. Cunio, A.B. Sproul, Solar Energy, 86, p1511-17 (2012)



www.EcoOnline.com.au

EcoOnline / Optex Solar Pty Ltd
ABN: 88 128 228 884
Address: 7B Steele Crt, Mentone, 3194, Victoria
Website: www.EcoOnline.com.au
Email: info@EcoOnline.com.au



EcoOnline.com.au

best choice under the sun

EcoOnline PoolMaster_{pro}TM Pool Heating Systems

Certified System

Australian
Standard
Certified
Polymer



Small Air Gaps - Top Performance In Its Class

- Our strips have one of the smallest in-between tube air gaps on the market
- More tubes per length mean higher water flow and lower air gap hot spot losses
- Resulting in excellent thermal and pump efficiencies for a PVC tube class system



Made With Field Proven BASF[®] Polymer Resins

- Our collector strips are made using the highest grade PVC nitrile doped resin
- While our manifolds are made using the highest grade LURAN STM resin
- All sourced from BASF[®] - the world's leading polymer resin company



Designed in Australia

- From the PVC collector strips
- To the barb manifolds and system
- All designed in Australia



Made In Australia

- From the PVCn collector strips
- To the barb manifolds and components
- Using resin sourced from BASF[®] Australia



Australian Certified PVC Polymer

- Certified to high Australian PVC standard AS 2369.2 1993
- System design is based on Australian pool heating standard AS 3634-1989
- You can be sure the system is designed and made for harsh Australian conditions



Lower Pressure and Thermal Cycling Design

- Other companies may oversize collectors and/or pumps and don't care for later
- We advise low collector pressures and do not oversize systems
- Resulting in the lowest pressure & thermal cycling for max longevity & efficiency



Don't Pay \$3K - \$7K for Inferior Systems

- Pool companies ask a mint for rushed installs during peak seasons
- DIY if you can do it safely or source your own trusted installer
- You'll get the best components and the best install for much less



www.EcoOnline.com.au

EcoOnline / Optex Solar Pty Ltd
ABN: 88 128 228 884
Address: 7B Steele Crt, Mentone, 3194, Victoria
Website: www.EcoOnline.com.au
Email: info@EcoOnline.com.au



EcoOnline.com.au

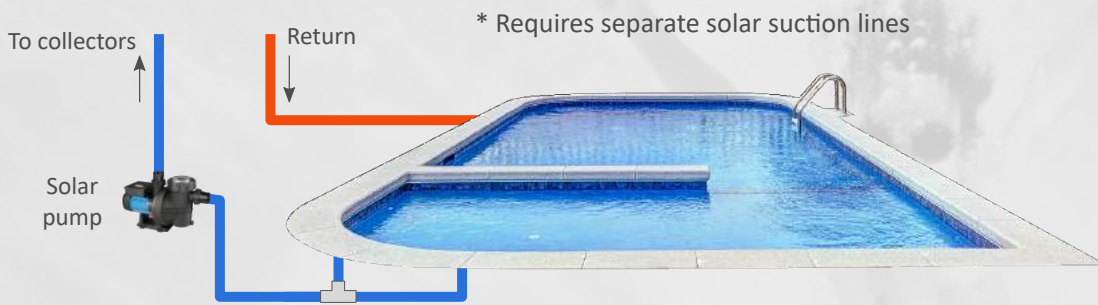
best choice under the sun

EcoOnline PoolMaster_{pro}™ System Options

Certified System

Australian Standard Certified Polymer

Independent System (recommended)



* Requires separate solar suction lines

Manual/Timer/Motorized Ball Valve System



* For older pools without solar suction lines
* Motorized valve requires special controller
* Pump filter can be automated with an AquaSun3+

Integrated-Independent System



* Requires solar suction Tee far below waterline
* NegShield™ may not be possible

Booster/Retro Fit System



* For older pools without solar suction lines
* Requires special dual pump controller
* NegShield™ may not be possible for a first story install



EcoOnline / Optex Solar Pty Ltd
 ABN: 88 128 228 884
 Address: 7B Steele Crt, Mentone, 3194, Victoria
 Website: www.EcoOnline.com.au
 Email: info@EcoOnline.com.au



EcoOnline.com.au
 best choice under the sun

EcoOnline PoolMaster_{pro}™ Specifications



Australian Standard Certified Polymer

PoolMasterpro Collector Thermal Specs	
Pressure drop at 2L/m/m ²	8.5kPa across 25m
Pressure drop at 5L/m/m ²	67kPa across 25m
Normal flow rate range	2-5L/min/m ²
Lowest eFLOW-balance rate [†]	~1.2L/min/m ²
Weight per m ²	3.5 kg or 4.4kg with water
Water content per m ²	< 0.7L
Temperature range	-20 to + 85°C
Color available	Black only
Recommended pressure*	< 1psi
Pro rata warranty	15 Years

PoolMasterpro Collector Mechanical Specs	
Area per 25m role	~4m ²
Tube ID / OD	~6mm / ~8mm
Strip width	160mm
Manifold length	500mm
Manifold PVC dimensions	PVC40mm
Cockytoo resistant strips	No
Suitable for water types	All
Collector material	BASF PVCn
Certification	AS 2369.2 1993
Manifold material	BASF Luran S

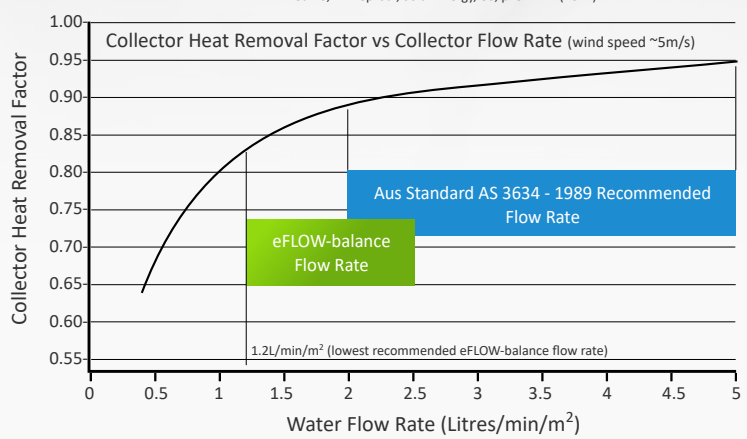
*At the vacuum release point on the return

[†]Subject to the availability of a low power mains pool pumps suitable for your situation. Independent eFLOW-balance systems may also require you to run the filter pump in the afternoon to help mix warm water deeper into the pool.

eFLOW-balance™ Pump Energy Savings

eFLOW-balance is the design principle of choosing a smaller a pool heating solar pump to achieve exponential energy savings. Researchers at the University of NSW showed¹ that "...electrical energy savings in excess of 80% are achievable for typical solar collectors operating at flow rates reduced by up to 75%, (from 4.8L/min/m² to 1.2L/min/m²) while collector efficiency is only reduced by approximately 10–15%."

¹L.N. Cunio, A.B. Sproul, Solar Energy, 86, p1511-17 (2012)



Only collectors with high tube density spacing, such as the 14 tube PoolMaster_{pro} strip and/or collectors with relatively low pressure drops are suitable for eFLOW-balance low power pump sizings. For other PVC strips, the flow would be compromised too much on low power pumps. Our comprehensive installation manual will help you size up a pump with an eFLOW-balance flow[†] down to 1.2L/min/m² if you so choose (note you'll require approx 10% more collector area for such a choice). But even if you don't want to go to such eco extremes, you can still save a bundle if you simply halved your pump size as shown in the table below. For example, instead of a 900W pump you run a 450W pump, in this case your collectors will run 5% less efficient, however, as shown over 15 years you can save the better part of the system cost. You can even do this without comprising the systems heating performance - just use an extra 5% collector area.

Pump energy savings with an eFLOW-balance principle pump choice over 15 years				
	Months in Season	kWhs Saved per Day	Savings per Season	15 Year Savings
Melbourne	6	2.7	\$111	\$1,663
Sydney	7	2.7	\$129	\$1,940
Perth	8	2.7	\$148	\$2,217
Brisbane	8	2.7	\$148	\$2,217
Hobart	5	2.7	\$92	\$1,386
Adelaide	7	2.7	\$129	\$1,940

Assumptions:
 * As an example we used system with a pump energy saving of 450W.
 * We assume an average 6 hour solar collection day and a 22.5c/kWh electricity cost



EcoOnline / Optex Solar Pty Ltd
 ABN: 88 128 228 884
 Address: 7B Steele Crt, Mentone, 3194, Victoria
 Website: www.EcoOnline.com.au
 Email: info@EcoOnline.com.au

www.EcoOnline.com.au

EcoOnline.com.au
 best choice under the sun