

# EnvvaTech AB

*Quality, efficient, commercially and environmentally sound product solutions*

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## Key Products

Waste Incinerators

Solar Thermal

Cabin Heat and Light Packs

Cabin Power Management System

Solar PV – high output / anti-vandal

Uridan water free urinals

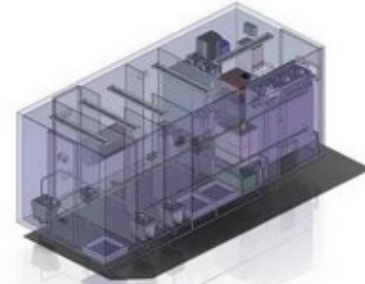
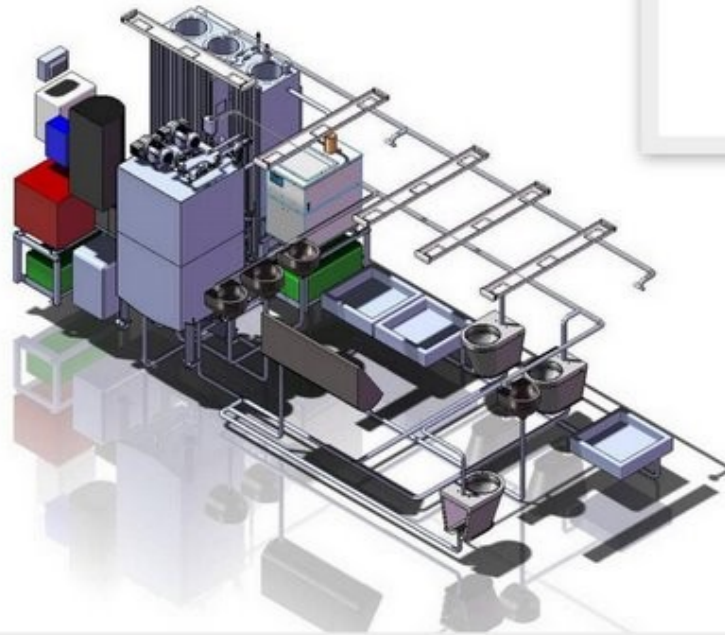
Shower and decontamination units

# John Dennis Coachbuilders



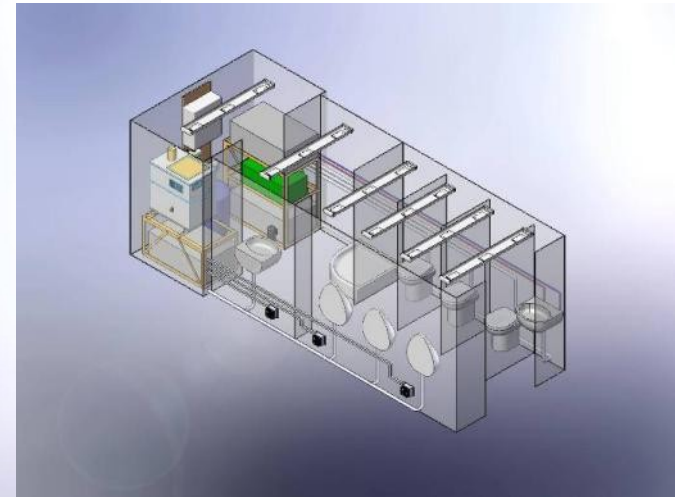
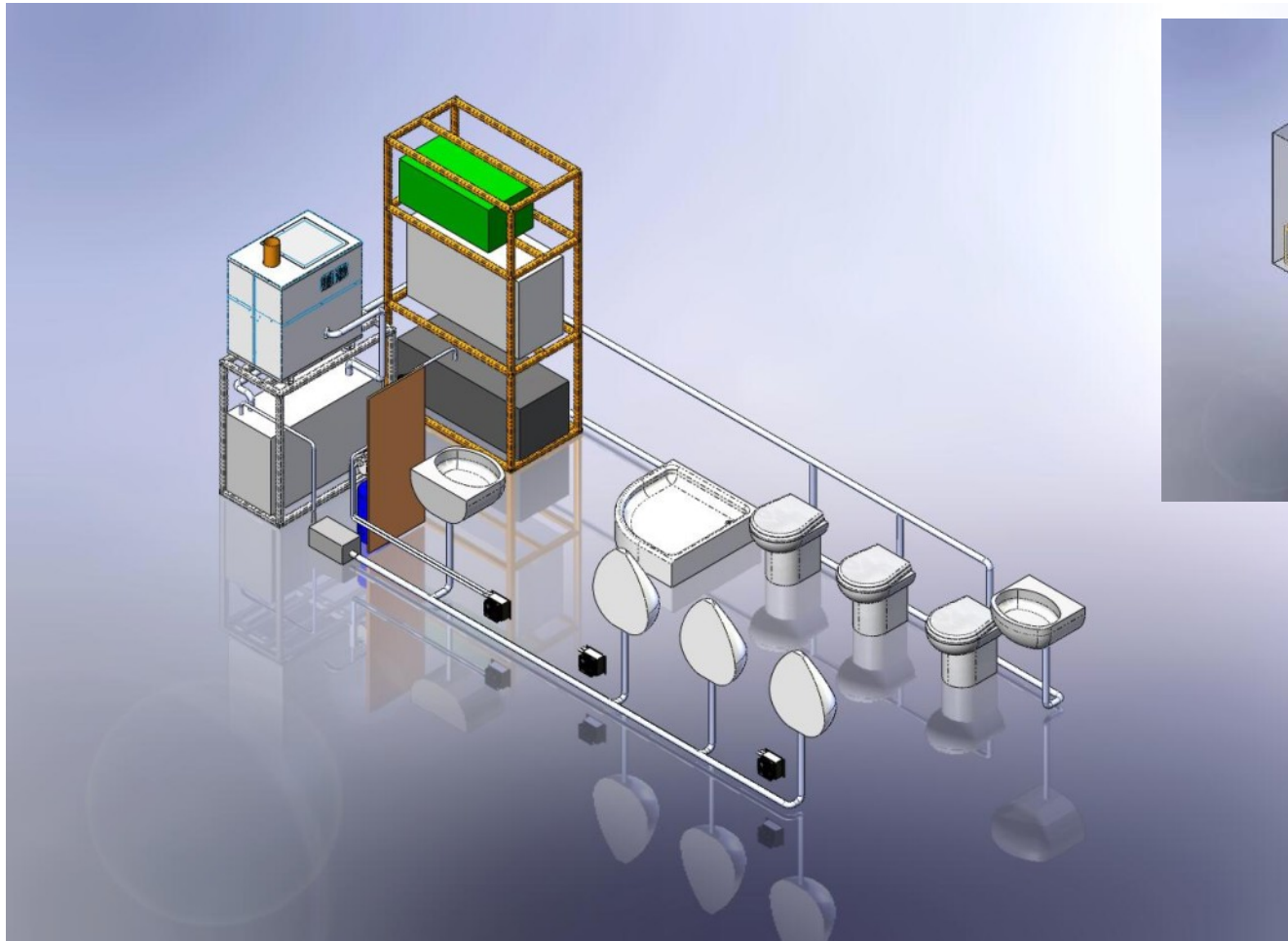
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# Military ISO Container System



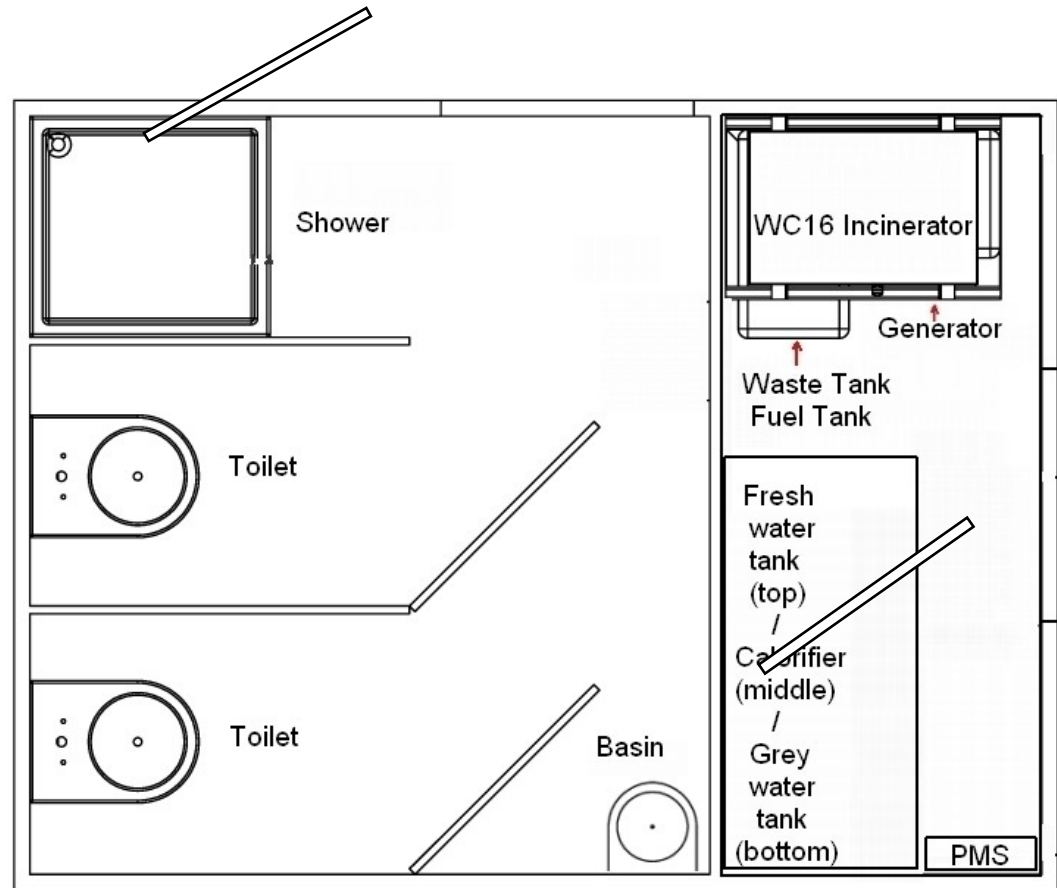
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# Standard Cabin/ Container System



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## 10' DSU SAF (Spanish Air Force)



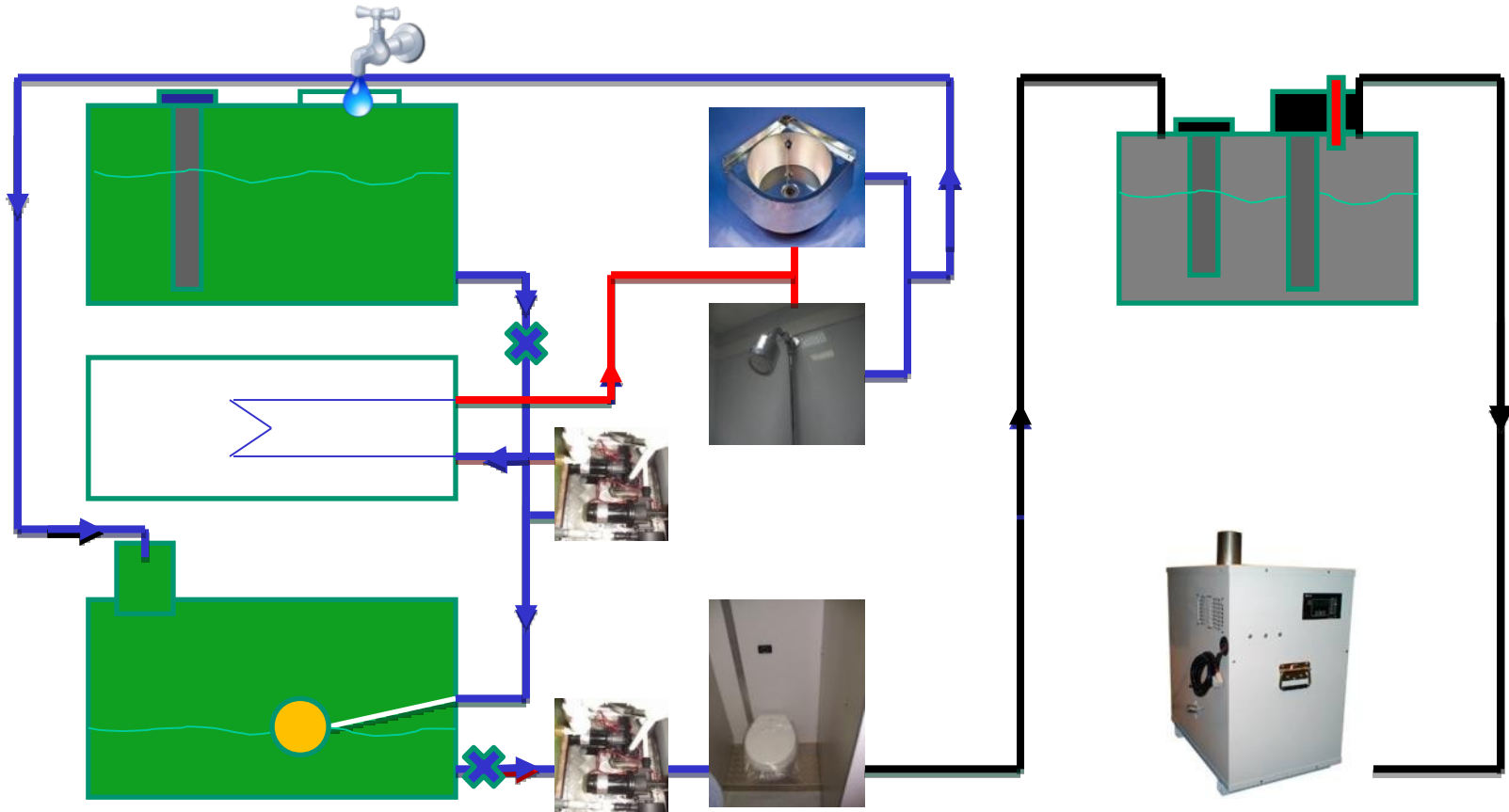
## 10' DSU SAF (Spanish Air Force)



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# 10' DSU SAF (Spanish Air Force)

## The Water and waste systems



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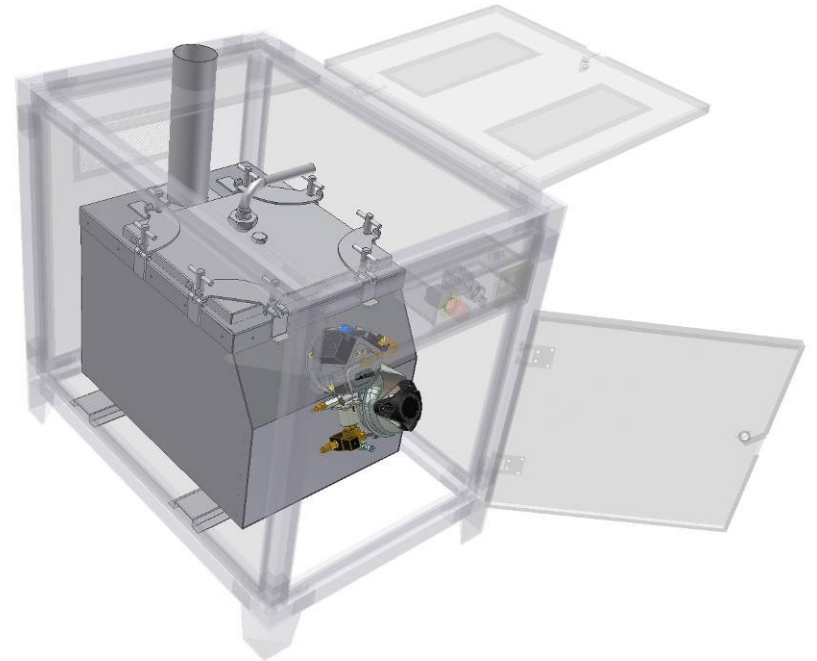
# MILSYS DSU TRAILER



Trailer unit with toilet and wash facilities

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# New Family of Incinerators



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# Energy Management Systems

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Due to the considerable electrical energy requirement to provide heat, hot water and light, a 3.5kva generator is required regardless of the numbers of staff on site.

The generators are usually running all the time staff are on site regardless of their energy requirement and usage, especially an issue for any out of hours security personnel whose energy requirement will be minimal but still require the generator to be in operation

# Energy Management Systems

	Daily Fuel Usage 8 hour days	Cost of Petrol 1.19 p / litre	Maintenance Cost @ 50p/hr	Carbon Produced Daily
Minimum Load 1.2 litre/hour	9.6 litres	£11.42	£5.00	22.37 kgs
Fitted with SOLAR, battery & diesel heating estimated winter usage running 75% due to the system cycling. System will only run 1 hours per day for summer use dramatically reducing these figures				
	Daily Fuel Usage 8 hour days	Cost of Fuel Red @ 90p / litre	Maintenance Cost	Carbon Produced Daily
Maximum Load 0.27 litre/hour	1.62 litres	£1.46	£50 once a year	4.38 kgs
<b>Savings based on winter running conditions</b>				
	Cost of fuel Saved	Weight of Carbon (CO <sub>2</sub> ) Saved	Cost of fuel + maintenance savings	Cost of Carbon Offset £75 per Tonne
Daily	£9.96	17.57 kgs	£14.96	£1.31
Weekly (5 day week)	£49.80	87.85 kgs	£74.80	£6.55
Annually (50 weeks)	£2,490	4392.50 kgs	£3,440	£327.50
Total Saved	£2,817 and 4.39 tonnes of carbon			

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# Energy Management Systems

Proposal to reduce the carbon footprint of construction welfare trailers.

The use of diesel heating and LED lights combined with solar panels eradicates the requirement of a generator.

Therefore the only emission comes from the Heater/Hot water system

## CO<sup>2</sup> Emission Data for site generators

Genset: 3.5KVA = 1.2 ltr/hr, Fuel type: Petrol @ 2.33kg of CO<sup>2</sup> per ltr

$$1.2\text{ltr} \times 2.33\text{kg} = 2.796\text{kg/hr}$$

$$8\text{hrs} \times 2.796\text{kg/hr} = 22.37\text{kg or for 24hrs} = 67.1\text{kg of CO}_2$$

## CO<sup>2</sup> Emission Data for ISO unit

Webasto Thermotop 50 = 0.27 ltr/hr,

Fuel type: diesel @ 2.7kg of CO<sup>2</sup> per ltr

$$0.27\text{ltr} \times 2.7\text{kg} = 0.73\text{kg/hr}$$

$$8\text{hrs} \times 0.73 = 5.84\text{kg, at 75\%} = 4.38\text{kg}$$

# Energy Management Systems

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## Summary

SAVING Based on a 40 hour running time week x 50 weeks

Carbon footprint saving 4392kg of CO<sup>2</sup> a year

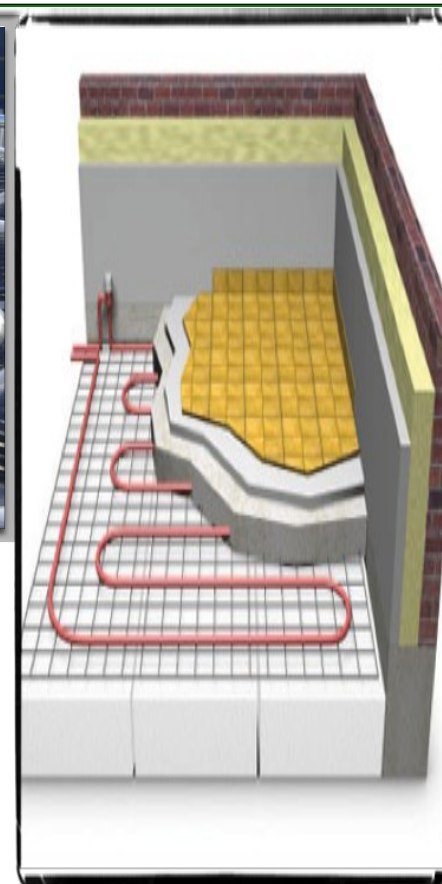
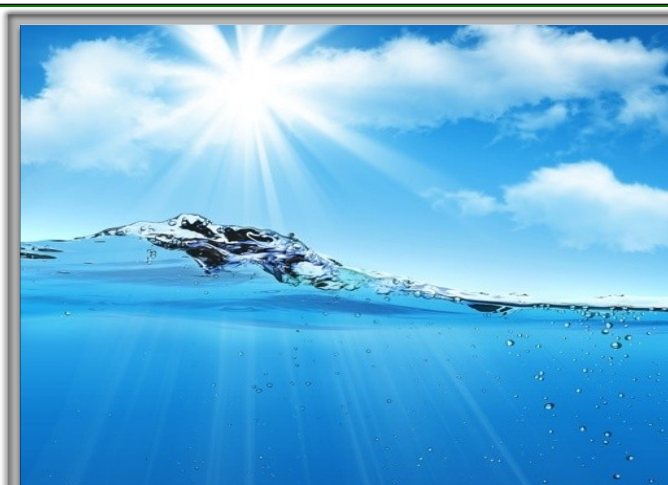
Fuel saving £2,490

Maintenance saving £950 a year

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# Solar Thermal Solutions



SWIMMING POOLS

HOT WATER

UNDERFLOOR  
HEATING

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# Solar Thermal

Bubblesun is a collector which facilitates the use of solar energy.

Hemispherical shape, always receives radiation from the Sun, without specifying a particular orientation or inclination.

Ideal for overcast days.

It is lightweight, weighing 8 kg and has a small footprint, simple installation, saving time and labor.

It is a collector made up entirely of plastic, so it is free of corrosion and scale deposits.

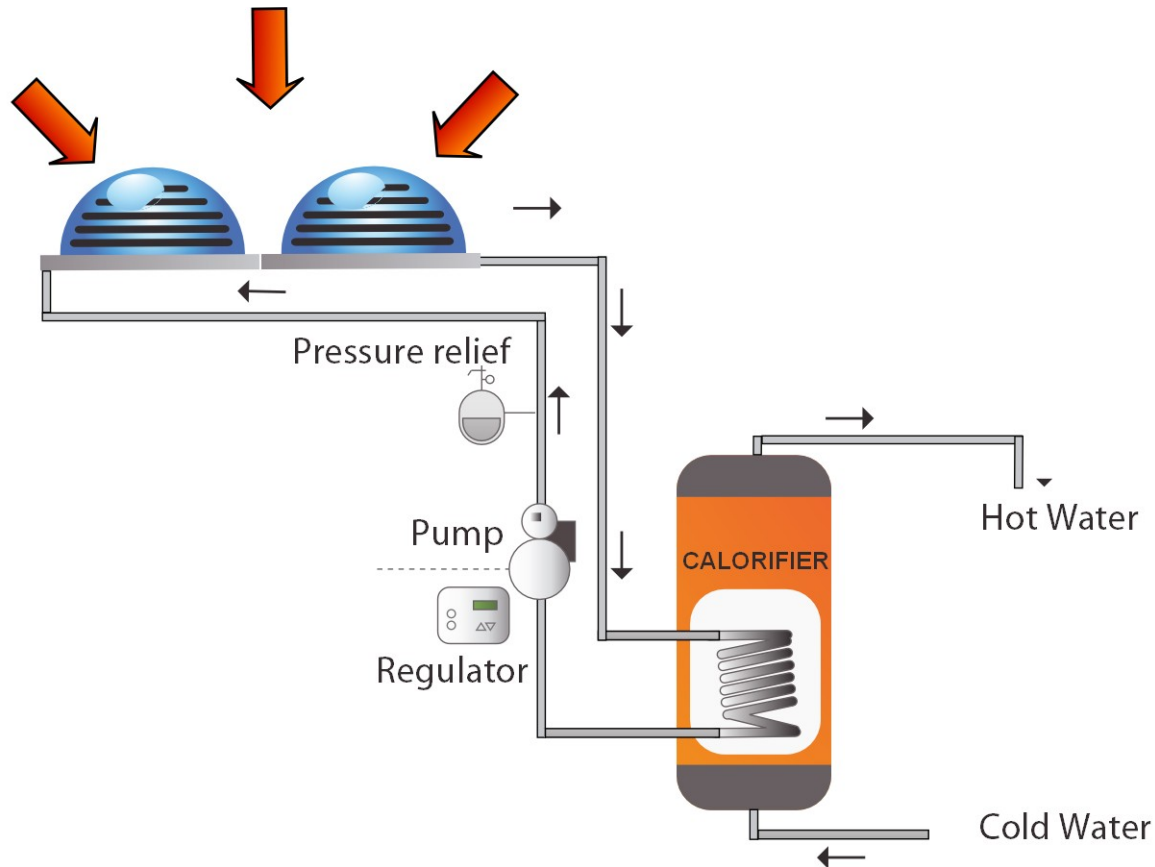
It can be used directly, for example, with the pool water.

Despite being lightweight, robust and resistant to adverse weather, wind, storms, frost or hail.





# Solar Thermal Hot Water

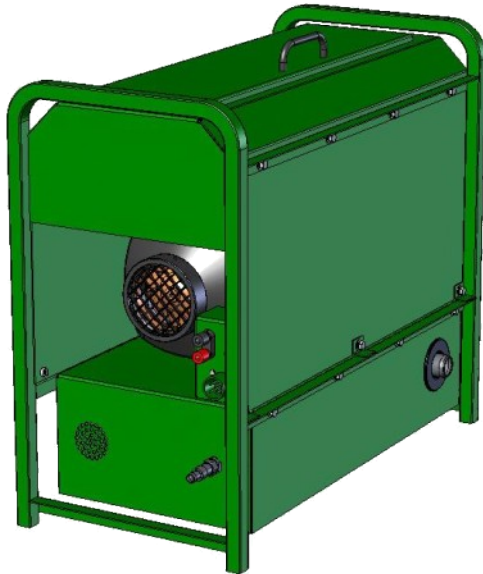


Up to 50 litres per panel per day giving 45 deg c to 80 deg c water  
Depending upon number of panels

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# Portable Heating

Water and space heating recovered



5 kw man portable heater unit using a Webasto Airtop

Portable and fitted within containers

Diesel Fuelled 0.15 l/h

Ducting, jerry can adapter, and remote thermostat and cabling stowed within

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# Environmental Benefits

## Key Issues

**Reduced Water Consumption Saving Earth's Water Resources With Use Of Low Water Flush Toilets & Waterless Urinals**

**No Septic Tank Required or Chemicals**

**Recoverable Energy**

**DC Power Consumption to promote better Health and Safety**

**Solar & Wind Generation Options**

**Low Odour reduction in Noise Pollution**

**Emission Level Low reducing Carbon Footprint**

**Low Maintenance reduced logistics**

**Lengthening product life**



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