

SolarRem™

Solar-Powered Remediation System for Fluid Recovery

Benefits:

- ❖ Quick and easy to install (particularly at remote sites) which leads to earlier start of product recovery and lower construction costs.
- ❖ Easy setup and use make it simpler for any field staff to operate.
- ❖ Trenching and underground line identification can be avoided.
- ❖ Faster regulatory approval because there is no external power required (no need to extend power line or install noisy gas driven compressor).

Applications:

The DGSI SolarRem™ is a patented solar powered remediation system. Because it uses the sun's energy — a renewable resource — as the only power source necessary to operate recovery pumps, the SolarRem system is particularly friendly to the environment.

The SolarRem system can be configured to run pumps in the following recovery applications:

- LNAPL recovery
- Gas condensate recovery
- DNAPL recovery
- Ground water pumping

Installation Advantage:

The SolarRem™ systems are pre-designed, compact, easy to install and operate. They can be installed and operated at remote sites quickly without the need for an external power source. This minimizes construction costs and saves time and coordination efforts while avoiding costly delays. These advantages are particularly meaningful during installation on tank farms where costly trenching and the process of identifying underground lines are avoided.

SolarLNAPL System (TR-51600)

The SolarRem™ SolarLNAPL system is configured to run an optional F.A.P. Plus™ pump skimming system for product recovery.



SolarLNAPL, TR-51600, in field application.
Recovery drum and accessories not included.

The controller regulates the battery power used to operate the internal air compressor driving the pneumatic F.A.P. Plus™ pump. The control panel includes a PLC allowing the operator to set system On/Off times consistent with the air requirements of the pump. The On/Off times are user defined and based on the amount of product to recover, the well's recovery rate, and the F.A.P. Plus' pumping rate of approximately 0.2 gpm.

The standard SolarLNAPL system includes the NEMA 4 control panel, a 7.5 gallon air receiver tank, one 120-Watt solar panel and the Tank Full shut-off. The Tank Full shut-off turns the air supply to the pumping system off when the product tank is full. The F.A.P. Plus™ pump (TR-516), skimmer (TR-517), 105 A·h battery, solar panel mounting pole (TR-51614) and the bracket (TR-51615) must be purchased separately.

The AGM battery (ordered separately) is a deep-cycle battery specially designed for use in solar powered applications. Depending on the amount of product to be recovered and the site location, additional solar panels and batteries may be required to achieve optimum performance. In typical installations the standard system can provide up to 25 gallons of product recovery per day. Contact DGSI for recommendations on solar panels and battery ampere hour capabilities to maximize product removal rates.

SolarRem™ is a registered trademark of the SolarRem Corporation

The SolarNAPL system can be configured to operate multiple F.A.P. Plus skimming pumps and can be trailer mounted for greater on-site mobility.

ORDERING INFORMATION

TR-51600	SolarNAPL Control System.
TR-51602	SolarNAPL Dual Sys 100 W panel, 200 A•h, 20 Air
Supplemental items (if required):	
TR-51611	Advanced Glass Matte (AGM) battery , 105 A•h, 12 V
TR-51612*	Advanced Glass Matte (AGM) battery , 200 A•h , 12 V
TR-51610	Solar Panel, 120 Watt
TR-51611	Solar System Battery, 12 V, 105 Ah, AGM type
TR-51612	Solar System Battery, 12 V, 200 Ah, AGM type
TR-51613	Solar Panel Mounting Pole, Single
TR-51615	Solar Panel Bracket
Options:	
TR-51660	Dual axle trailer
Related Items:	
TR-516	F.A.P. Plus™ Pump
TR-517	F.A.P. Plus™ 36" Travel Skimmer
TR-70410	4" High Viscosity Density Rod Skimmer (30" travel)

* This larger battery is required when using more than one 100 W solar panel.

SPECIFICATIONS for SolarRem™ SolarNAPL

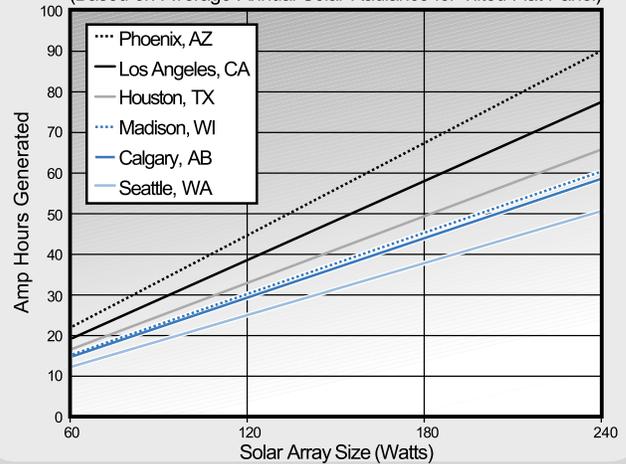
Compressor Pump Type	Piston Pump
Max. Rated Pressure	100 psi (690 kPa)
Operating Flow Rate	0.79 scfm at 0 psi (0.022 m³/min) 0.24 scfm at 100 psi (0.0068 m³/min)
Oper. Pressure Range	25 - 100 psi (172 - 690 kPa)
Hysteresis (Dead Band)	20%
Air Connection Line	PushLock® fittings.
Housing Type	NEMA 4 metal box
Air Receiver Tank Capacity	7.5 gal (0.028 m³)
Battery	Capacity 105 A•h Type Advanced Glass Matte (AGM)
Solar Panel Capacity	110-120 W
Dimensions (W x H x D)	
Compressor Assembly	28 x 36 x 15 in (711 x 914 x 381 mm)
Solar Panel	59 x 29 x 2 in (1500 x 737 x 51 mm)
Battery w/ case	14.5 x 17 x 14 in (368 x 432 x 356 mm)
Weight	Total 210 lb (95 kg)
Compressor Assembly	105 lb (48 kg)
Solar Panel	30 lb (14 kg)
Battery w/ case	75 lb (34 kg)
Ship. Volume	9 ft³ (0.25 m³)



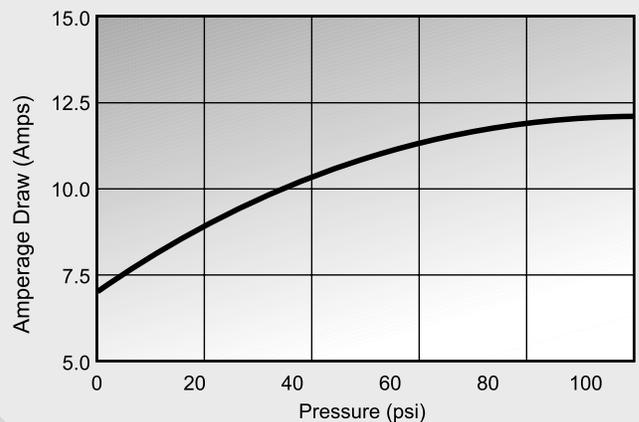
SolarNAPL, custom mounted on dual axle trailer (TR-51660).

Power Generated by Solar Array

(Based on Average Annual Solar Radiance for Tilted Flat Panel)



SolarRem Compressor Amperage Draws



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