



SRX LP

Landfill Pumps

Simply Reliable

SRX LP

The SRX LP is a proven landfill pump based on a simple, innovative design and built with field-tested components. The result: a reliable pump to meet the harsh landfill environment.

Application

The SRX LP is an air-powered pump used to extract leachate or gas condensate at variable rates equal to the well recharge rate. Pump flow rates are up to 9.5 gpm and operating temperatures up to 250 °F.

Better Value

- More Uptime:
 - Reliable
 - Simple Routine Maintenance
- Competitive Price
- Easy Replacement for Existing Pump

Our 25 years of experience with pneumatic landfill pumps has produced the SRX LP. We used proven components from our successful MVP landfill pump to build a product that is simple and has few parts. The result? Reliability and effortless maintenance. It is so simple that, in minutes, the complete pump (including air, exhaust and fluid discharge check valves) can be disassembled with only one wrench.

Advantages

1. Advanced, positive-sealing air valves with built-in filtration
2. Tolerance for high temperatures
3. Complete disassembly with only one wrench
4. All-stainless-steel body
5. Domed bottom to prevent hang-ups during installation
6. Durable Syntactic foam float
7. Light weight

Operation

The SRX LP is installed to the desired drawdown level. It requires only three lines: air supply, air exhaust and fluid discharge. Compressed air is supplied to the pump (generally 0.5 psi per foot of depth is sufficient). As the liquid enters the bottom of the pump through the inlet screen, the internal float moves to the upper (or "ON") position. At that end point, the float opens the air valve. Air enters the pump, closes the bottom inlet check valve, and pushes the fluid (in the pump chamber) through the center discharge tube and all the way to the surface. As the fluid is expelled from the vessel, the float returns to the lower limit (or "OFF" position) at which point it closes the air inlet valve and opens the air exhaust valve. As the pump fills under the fluid's own static pressure, air is vented through the exhaust port and the cycle is automatically repeated based on the well recharge rate.



For manuals, parts lists and more, visit www.landfill-pumps.com

Simply Reliable

Air Valve Design — The advanced air valve design provides a leak-tight seal. This is accomplished with a special Viton® ball ① on a stainless steel seat ②. The positive seal eliminates air leakage that can increase the formation of precipitates at the pump head. Assisted by an isolated high temp magnet, the valve shifts positively, — every time. This prevents stalling even in slow-filling situations. No adjustments are necessary with this valve assembly.

Air Valve Filtration — The air valve incorporates 330-mesh stainless steel screens ③ to prevent debris from entering the ball/seat sealing assembly, possibly causing the valve to malfunction. On other pumps, when the air supply to the pump is turned off, the float will activate the air valve and create a pathway through which debris may enter the air valve and interfere with the proper seating of the ball. This is not a concern with the SRX LP pump.

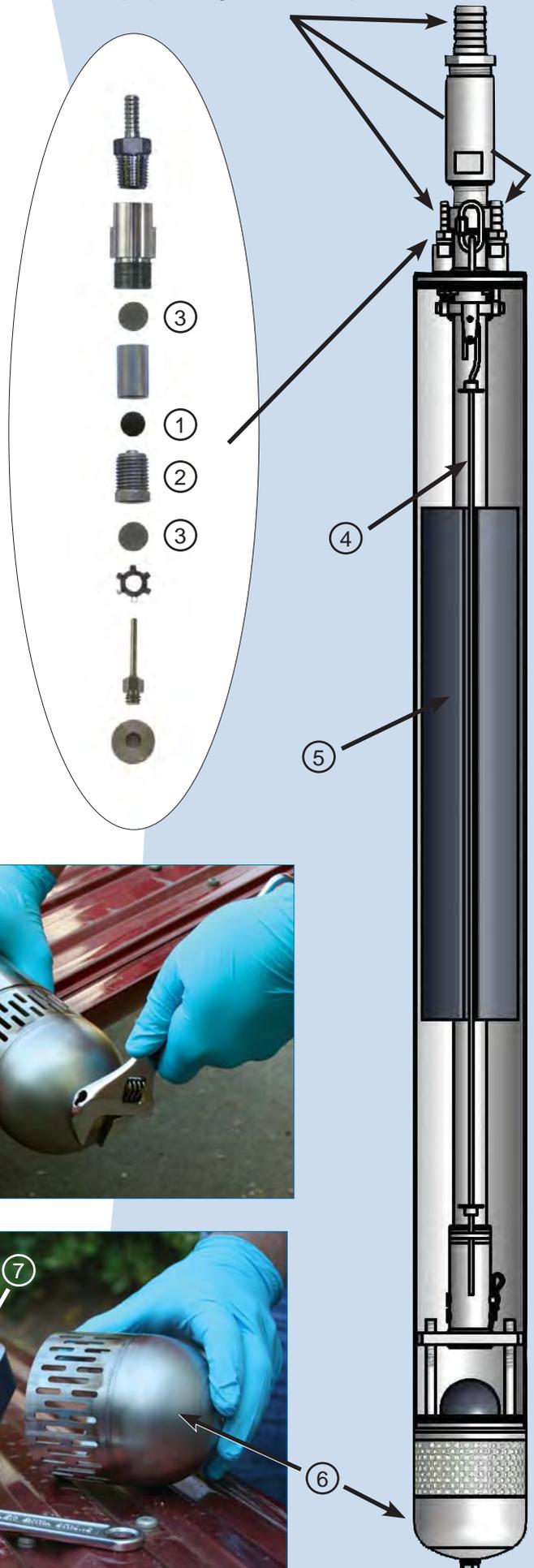
Easy Access — To make routine maintenance easier, the air and exhaust valves on the SRX LP can be accessed from the top of the pump without disassembling the body. In addition, the internal valve assemblies can be accessed by removing the hose barbs.

Lightweight Control Rod — The lightweight control rod ④ is a primary reason why the SRX LP does not stall. Less weight translates into less force to open the air valve. This ensures a quick, positive opening every time. The control rod is isolated from the energy that is created by the float movement ⑤, therefore eliminating any stress on the rod.

Pump Disassembly — The SRX LP pump is designed to be completely disassembled with just one wrench. Remove three bolts from the bottom assembly, slide the body off and remove two cotter pins to fully disassemble the pump. Simple!

Screen Inlet — The domed bottom inlet screen ⑥ assists in guiding the pump during installation. The arch ⑦ located within the domed bottom helps protect the screen from collapse. For cleaning, the domed bottom inlet screen is easily removed by unthreading a single bolt.

Note: Barbed fittings are sold separately. Select proper fittings kit at time of purchase.



Ordering Information

SELECTION TABLE FOR SRX LEACHATE PUMPS

Part Number	Model	Pump OD (in)	Pump Length (in)	Volume per Cycle ¹ (US gal)	Min. Submergence (in)	Pump Weight (lb)	Max. Flow Rate ² (gpm)	Air Valve Filtration
TR-970	SRX LP	3.5	39	0.4	29.1	17.5	9.5	Yes
TR-970T	SRX LPT		47.5	0.4	29.1	18.0	7.6	
TR-971	SRX LPS		33	0.2	23.1	16.9	7.5	

1) Volume per pump cycle will vary slightly depending on air pressure supplied to pump, depth of well, etc.

2) Maximum flow rates can vary due to air pressure supplied to pump, depth of well, etc. For assistance, contact DGSi.

SRX LP Barbed Fittings Kits

Part Number	Air In			Air Exhaust			Fluid Discharge		
	Thread ¹	Barb ² O.D.	Barb ³ O.D. (actual)	Thread ¹	Barb ² O.D.	Barb ³ O.D. (actual)	Thread ¹	Barb ² O.D.	Barb ³ O.D. (actual)
603511	1/4 in	1/4 in	0.281 in	1/4 in	3/8 in	0.406 in	1 in	1 in	1.090 in
603512 ⁴	1/4 in	3/8 in	0.406 in	1/4 in	1/2 in	0.531 in	1 in	3/4 in	0.790 in

1) All threaded ends are MNPT (Male National Pipe Thread).

2) All barbed ends are measured on the O.D. (outer diameter) of the barb.

3) All barbed tolerances are +/- 0.010 inches.

4) Includes 304 stainless steel bushing, 3/4 x 1 in.

Pump Construction

Stainless steel, Type 304: Pump body, discharge tube

Stainless steel, Type 303: Pump head, bottom intake valve, assembly control rod, control linkage assembly

Stainless steel, Type 316: Hose and tubing barbs

Hydlar (Nylon/Kevlar® composite): Control rod bushing

Nylon®: Discharge check valve ball

Buna-N®: Intake check valve ball

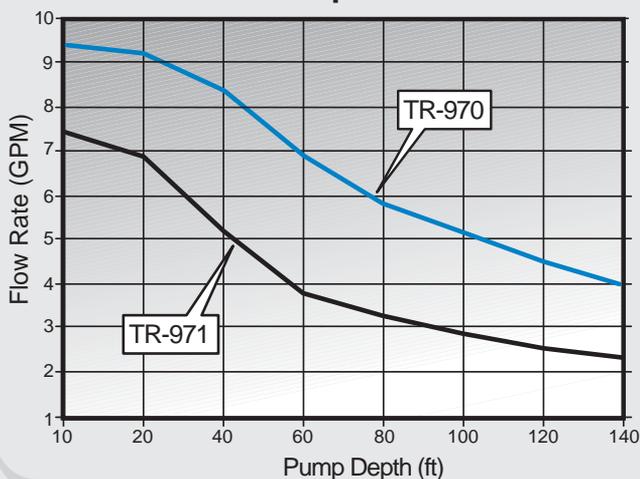
Viton®: O-ring seals, air inlet ball valve

Syntactic foam: Float

Neodymium Iron: High temperature magnets (250 °F)



SRX LP Pump Performance



(Flow rates will be affected by the head above the pump.)

(Max. air consumption is 1 cfm @ 100 psi per gallon per minute.)

Optimize Pump Performance

The two primary factors that influence the flow rate of the SRX LP are the liquid or head above the pump and the ability to quickly remove the air from the pump. Exhausting the air is especially important on deeper installations where the air is vented to the surface. It may be necessary to increase the size of the exhaust line.

In other applications, it may be desirable to reduce the flow rate of the SRX LP pump. This is accomplished by restricting the rate at which the air is allowed to escape from the pump. The slower the air flows out, the slower the pump will fill. DGSi offers the flow control kit (TR-281) to adjust the fluid discharge rate.



III 1 Gc
T6 Ta 1 °C to 100 °C

Accessories

Nylon® Bundled Tubing Assembly (TR-794)

Consists of three Nylon-12 lines bundled in a Nylon-12 sheath for convenience. The line sizes are 1 in, 3/8 in, and 1/4 in. Sold per foot. Stainless steel suspension cable (918705) also available. Sold per foot.



TR-794

TR-794 Nylon Bundled Tubing Assembly, (1, 3/8, 1/4 in)			
Line	I.D. (in)	O.D. (in)	Pressure* (PSI)
Air-in	0.250	0.375	700
Air exhaust	0.375	0.500	500
Fluid discharge	1	1.170	250

*Working Pressure @ 68 °F

Pulse Counter (TR-77804 w/ fittings) (TR-77802 w/o fittings)

Used to determine the total flow of the SRX LP pump. The compact and robust counter is installed in the air supply line at the well head. As the pump cycles, the counter senses the drop in air pressure that indicates the pump has cycled. The number of cycles is multiplied by the internal volume of the specific pump you are using to calculate the flow rate. The counter body can be disassembled for service, but cannot be reset. Available with or without 1/4-in NPT fittings.



TR-77804

TR-77804 Pulse Counter (with fittings)	1 lb
TR-77802 Pulse Counter (without fittings)	1 lb
Materials	Delrin body and piston, 304 stainless steel spring, Nylon set screw, plated steel end fittings, Neodymium iron magnets (2) and polycarbonate counter.
Dimensions	1.5 in dia. X 4.75 in

Filter/Regulator (TR-77803)

Supplies proper air pressure to the SRX LP pump and optimizes air consumption. Should be installed at the well head. Includes a 5-micron filter, various fittings and mounting brackets to meet most requirements.



TR-77803, Filter/Regulator.
(R) Fittings kit provided with TR-77803.

TR-77803 Filter/Regulator	2 lb
Range	0 - 125 psi (Max. 150 psi)
Fittings	Brackets, tube and hose fittings are included for SRX LP installations and DGSI well seals. Some assembly required.
Capacity	Less than 1 psi pressure drop while passing 20 scfm at 100 psig.
603538	Particulate filter replacement
Dimensions	10.3 in X 2.48 in

Well Head Module (TR-80810)

The well head module is a NEMA 4 weather-resistant enclosure that protects instrumentation from harsh site conditions. The see-through window allows viewing the optional Pulse Counter, Filter/Regulator, liquid level gauge and vacuum/gas flow from the well. The module allows quick reading of the number of pump cycles and liquid level in the well from one location without accessing the well head. Options include extracted gas flow and velocity.



TR-80810

Well Head Module shown with optional accessories

TR-80810 Well Head Module	8 lb
Range	0 - 125 psi (Max. 150 psi)
Fittings	3/8 in hose barbs and push-to-connect
Liquid Level	0 - 100 in (other pressures available)
Dimensions	14 3/4 h X 12 3/4 w X 6 1/2 d
TR-808	Well Head Module with Pulse Counter and Filter Regulator.

Equalization Exhaust ("E") Valve (TR-697)

The Equalization Exhaust Valve ("E" Valve for short) maintains the standard activation level in wells that have high vacuum stress applied to them. The "E"-valve is placed inside the casing below the well seal but above the highest anticipated liquid level.

For more information go to www.landfill-pumps.com/valve.



TR-697

TR-697 Equalization Exhaust "E"-Valve	1 lb
Material	Stainless steel
Range	0 - 125 psi (Max. 150 psi)
Fittings	1/2 in O.D. push-to-connect

Cleaning Kit (TR-979)

The cleaning kit comprises of 2 round, stainless steel brushes sized for the I.D. of the pump body and the I.D. of the pump float. Includes an interchangeable fiberglass handle that fits both brushes. Kit also includes 2 hand brushes with stainless steel bristles sized for cleaning the internal parts of the SRX LP pump.

Well Seals

DGSI manufactures a comprehensive line of well head seals for landfill leachate and gas condensate wells. These well seals provide an easy method for connecting fluid and air lines, simplifying installation. Standard well seals are available for wells with liquid only or gas and liquid removal. Strain relief seals isolate the individual DGSI tubing sizes used on the SRX LP pumps.

The well seals are attached to the casing by mating flanges or by sealing them to the diameter of the well casing with a Fernco™-type flexible coupling. Additional threaded openings through the seals are provided for fluid level, pressure and/or temperature measurement. Both fluid and air supply lines attach via quick-connect fittings and feature isolation valves that allow for easy pump servicing.

Well seal accessories include an air-in/fluid-out kit, manifold flanges, pump exhaust diversion kit and pump flow control kit. Each well seal assembly includes hose clamps for attaching bundled Nylon tubing to an SRX LP pump and cable clips for securing the stainless steel cable that supports the pump. Pulse counters not included with well seals.



Well Seal (TR-272) with Air-In and Fluid-Out kit (TR-274).

How to spec your well seal: Select part numbers from the following groups as needed.

 TR-27601	Landfill Seal Flanges TR-27601 6-in Flange TR-27602 8-in Flange TR-27603 10-in Flange	 TR-274	Air In/Fluid Out Kit TR-274 Air In/Fluid Out Kit
 TR-27605	Landfill Seal Flange, Universal TR-27605 8-in Flange w/ Methane Extraction Allows the use of 2 and 3 inch Iron Pipe Size (IPS) velocity pipes. Can be used on 6 inch casing with proper reducer.	 TR-274A	Air In Kit Only TR-274A Air In Kit Only
 TR-272	Landfill Seal Plugs TR-272 4-in Plug TR-271 6-in Plug TR-270 8-in Plug	 TR-281	Accessory Item TR-281 Exhaust Restrictor Kit
 TR-27005	Landfill Seal Plugs, Universal TR-27005 8-in Plug w/ Methane Extraction TR-27006 6-in Plug w/ Methane Extraction Allows the use of 2 and 3 inch Iron Pipe Size (IPS) velocity pipes. Can be used on 6 inch casing with proper reducer.	 TR-280	Accessory Item TR-280 Exhaust Diverter Kit
 TR-27501	Manifold Flange Kit TR-27501 2-in Air in/Fluid Out Manifold TR-27502 3-in Air In/Fluid Out Manifold TR-27503 4-in Air In/Fluid Out Manifold		

Note: To view detailed information on the above listed parts, visit www.landfill-pumps.com