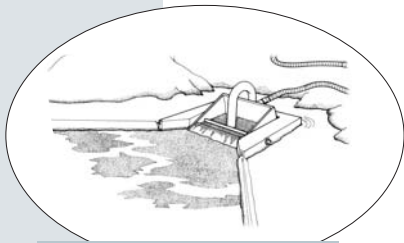
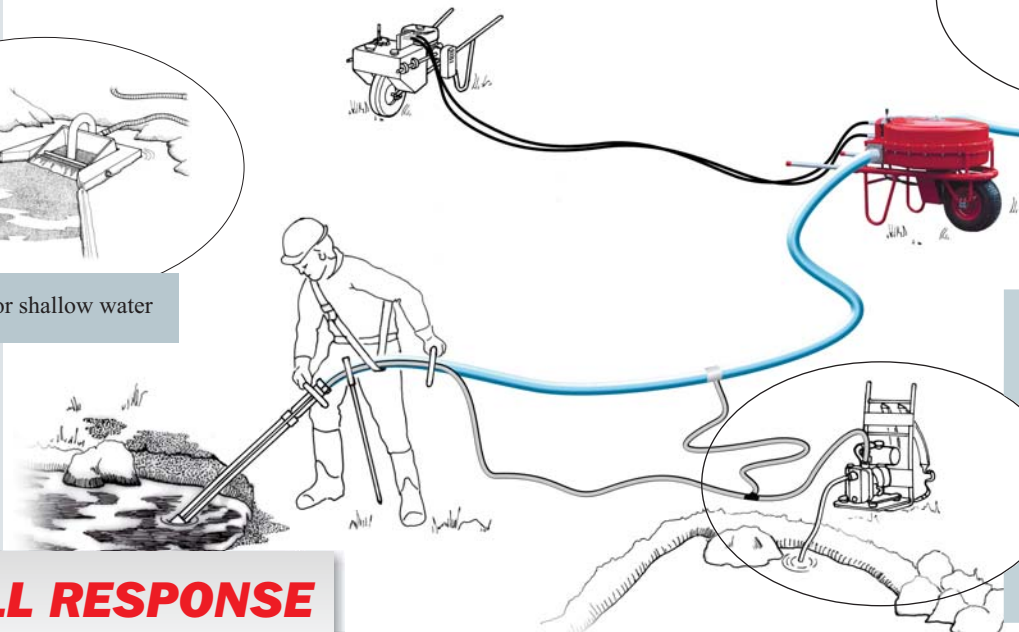


salarollpump®

CLEAN UP SYSTEM FOR OIL AND CHEMICALS



Skimmer for shallow water



When pumping oil at high viscosity the capacity is increased when water is injected in the suction nozzle and couplings between hose sections.

SPILL RESPONSE



Clean up of oil on beaches or along pipe lines is one of the basic uses for the system.

Salarollpump is a system for clean up of oil and chemicals in remote areas. Both pump and power pack are built as a portable unit for easy transport.

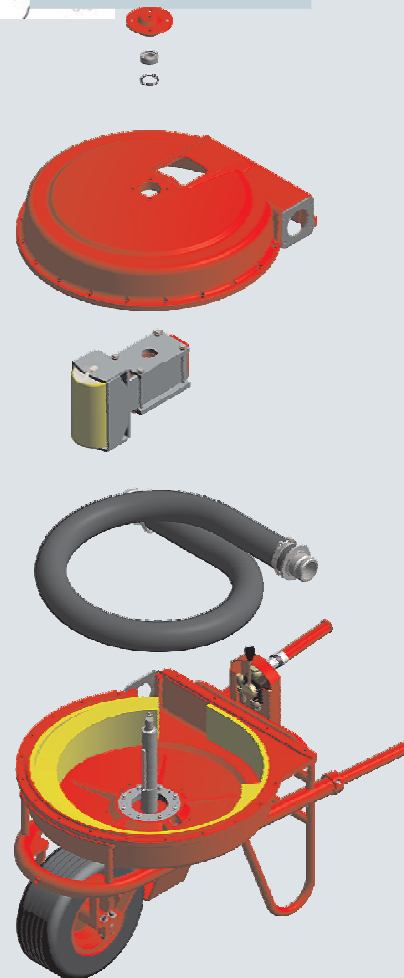
The pump is tolerant to debris. Stones up to 35mm (1 1/2") can pass through without damaging the pump. The extremely strong vacuum and long pump cycle makes suction of bunker c (no. 6 fuel oil) around freezing temperatures possible. The discharge pressure enables it to pump the media to a collecting container. The pump is hydraulically driven and the power pack can be equipped with diesel, gasoline or electric motor. The pump can run dry and suction starts as soon as the suction nozzle is placed in the media. Should a blockage occur, the hydraulic system can be reversed to clear the pump.



The standard inner lining of the pump hose is made of nitril for long term pumping of oil but the material can also handle short term operations of a number of aggressive chemicals. The risk for sparks is very small as the power pack can be placed outside the hazardous area and the rotating speed of the pump is very low. Also the system can easily be grounded to earth.

Function

The function is achieved with a peristaltic type of pump. A very strong hose is compressed by a rotating wheel. The suction is developed when the hose with its own force returns to its round shape. Discharge pressure is created by the force of the wheel moving the media. No mechanical parts will come in contact with the pumped media.



The ease of transporting the system is further enhanced by handles that attach to both the pump and power pack for lifting in difficult terrain or by wheeling it as a wheel barrow. An all terrain vehicle or band driven vehicle attached to a trailer is available to transport the pump and power pack to the impacted area. The trailer can also be used for transporting smaller amounts of oil in sacks or barrels to the collecting area.

Slurry removal from tanks has always been difficult and time consuming. The salarollpump with its exceptional suction and discharge pressure makes it possible to lift high viscous slurry from the bottom of the tank to a manhole opening at the top, or at the side of the tank.

Solid particles up to 37 mm, (1 1/2") can pass through without damaging the system. The unique design allows for self-priming and enables the pump to safely run with a completely dry suction, without depending on a by-pass or other easily blocked device.



TANK CLEANING



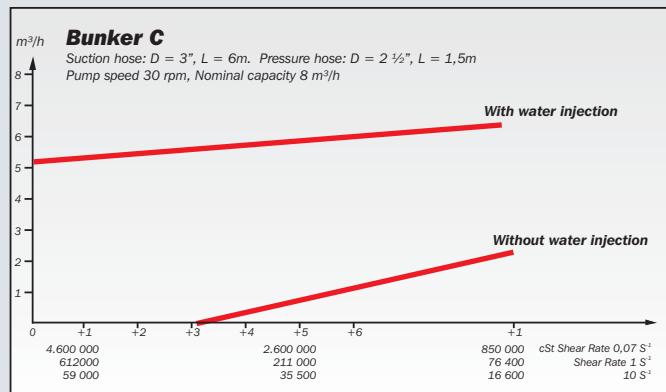
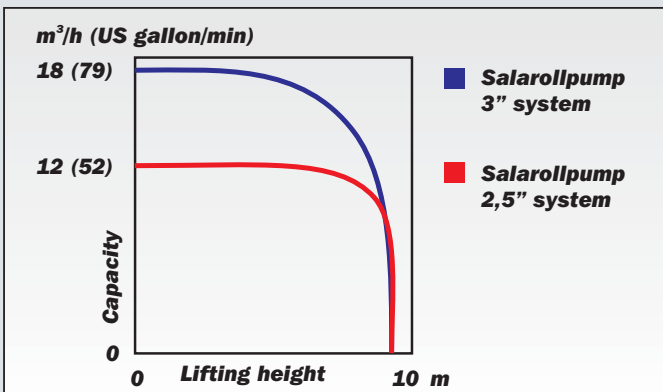
Sludge nozzles

In addition to the standard nozzles a special arrangement is available for tank cleaning. (see picture). The hose rests on trolleys with wheels and the nozzle is provided with a handle and a swivel. When pushing the nozzle the hose will follow. With help of the swivel the nozzle can be turned the other way. Three different nozzles are available for this arrangement.



The pump can be lifted in and lowered through a manhole at 800mm (31 1/2") diameter. The pump is hydraulically driven and the powerpack can be equipped with diesel-, electric or gasoline engine. Different sludge nozzles are available with or without a hydraulically driven rotating blade and with water injection. The water forms a lubrication film between the hose and the slurry. Steam can also be injected to the nozzle which heats up only the slurry that is being pumped at the moment. The system can be used for pumping flammable products by using grounding equipment.

As shown on the picture, with and without a rotating hydraulically driven blade and a lower nozzle for clean up of the last thin layer of the pumped product. The hydraulic power for the blade is provided either from a separate electric power pack or from the industrial power pack.



Close to full capacity is achieved at theoretical maximum suction height of approximately 10m (33ft) with water. The most important effect of this is the pump's unique suction capability when dealing with high viscous media.

Pump tests have been carried out which indicates that the limit for suction with a 6m (20ft) suction hose is a viscosity of 3.5 million cst measured at a shear rate of 0.07 s-1. With water injection on the suction, a capacity of 5m³/hr (22 gpm) was possible at a viscosity of 5 million cst.