ENVITEC



DISTRIBUTOR

SV60V Portable Solids Pump - Vertical



About

The SV60V Portable Solids Pump is a one man vacuum loading, pressure discharge pump capable of recovering and transferring up to 15 m₃/hr (119USGPM) @ SG1.0 of almost any flowable material.

The SV60V Portable Solids Pump is 100% air powered and operated, generates up to 25"Hg+ of vacuum combined with high airflow which allows the unit to transfer materials ranging from mining slurries and oil sludge through to cementatious powders and grains.

The SV60V Portable Solids Pump is employed worldwide servicing farms, mines, drill rigs, municipal, industrial and construction sites.

Applications

- Spillage recovery and transfer
- Sump cleaning and desilting
- Tank bottoms and sludge extraction
- Pneumatic excavation and dewatering
- OBM transfer and pit cleaning
- Bentonite, sand, and cement powders transfer

Features

- ATEX Zone 2/CE conformity C€ 🔂 11 3 G T6
- 100% compressed air operation
- Multipurpose vacuum pump
- Intrinsically safe
- Fully automatic
- Versatile
- No internal moving components
- Minimal maintenance
- High vacuum and high airflow
- Recovers material from up to 50 metres (164ft)
- Delivers up to 500 metres (1640ft)

- Height 110 cm (44")
- Width 73 cm (29")
- Length 93 cm (37")
- Weight 198 kg (437 lb)
- Throughput capacity up to 15m³/hr (119USGM) @ SG1.0
- Air consumption 150cfm (71 L/sec) at minimum 85psi (6bar) to 100psi (7bar) at the pump
- Air supply connection 25mm (1")
- Up to 25"Hg+ (85kPa) vacuum
- Suction 75 mm (3") BSP/Type B camlock
- Discharge 75 mm (3") BSP/Type A camlock
- Handles solids to 50 mm (2")
- Carbon steel vessel
- Also available in 316 stainless materials of construction
- Skid mounted/roll frame weights/ dimensions on request

SV60-V2 Next Generation Portable Solids Pump







Features

- ATEX Zone 1/CE conformity
- Next Generation Pneumatics
- 100% compressed air operation
- Multipurpose vacuum pump
- Intrinsically safe
- Fully automatic
- Versatile
- No internal moving components
- Minimal maintenance
- High vacuum and high airflow
- Recovers material from up to 50 metres (164ft)
- Delivers up to 500 metres (1640ft)

About

The SV60V Portable Solids Pump is a one man vacuum loading, pressure discharge pump capable of recovering and transferring up to 15 m₃/hr (119USGPM) @ SG1.0.

The SV60V Portable Solids Pump is 100% air powered and operated, generates up to 25"Hg+ of vacuum combined with high airflow which allows the unit to transfer materials ranging from mining slurries and oil sludge through to cementitious powders and grains.

The SV60V Portable Solids Pump is employed worldwide servicing farms, mines, drill rigs, municipal, industrial and construction sites.

Next Generation Pneumatic control box provides a more user friendly system with new countdown timers, indicators showing pump cycle, increased safety, usability & serviceability. Standardized across our SV30, SV60, SV60-V & SV110-V ranges, completely interchangeable & quick connectivity minimizing down time.

Applications

- Spillage recovery and transfer
- Sump cleaning and desilting
- Tank cleaning and sludge extraction
- Pneumatic excavation and dewatering
- WBM / OBM / Drill Cuttings transfer

New Options

- Next Generation Pneumatics Control box retro fit kits to upgrade existing pumps
- Low (adjustable) discharge pressure
- Reduced air consumption
- Spare parts kit includes quick change control box, reducing down time.

- Height 110 cm (44")
- Width 73 cm (29")
- Length 93 cm (37")
- Weight 198 kg (437 lb)
- Throughput capacity up to 15m/hr (119USGM) @ SG1.0
- Air consumption 150cfm (71L/sec) at minimum 85psi (6bar) to 100psi (7bar) at the pump
- Air supply connection 25mm (1")
- Up to 25"Hg+ (85kPa) vacuum
- Suction 75 mm (3") BSP/Type B camlock
- Discharge 75 mm (3") BSP/Type A camlock
- Handles solids to 50 mm (2")
- Carbon steel vessel
- Also available in 316 stainless materials of construction
- Skid mounted/roll frame weights/ dimensions on request

SV110V-SKRF Solids and Sludge Pump - Skid Mount



About

The SV110V Mobile Sludge Pump is 100% air powered and operated, generates up to 25"Hg (85kPa) of vacuum whilst generating high in-line convey velocities. The unit requires only 280 cfm (132L/sec) at 85psi (6 bar)+ and can transfer heavy sludge with a high solids content up to a rate of 32m³/hr (140USGPM) @ SG1.0

The SV110V Mobile Sludge Pump is a vacuum loading pressure discharge batch system that can recover from up to 50 metres (164 ft) and deliver in excess of 500 metres (1640 ft) whilst remaining a one man or fully automatic operation.

Employed worldwide in the offshore drilling, oil, gas and mining industries the SV110V Mobile Solids and Sludge Pump is ideal for rapid recovery of large scale spills, tank cleaning, mining slimes and sump/drain cleaning.

Applications

- Thickener de-sludge
- Tunnelling and TBM applications
- Sump and shaft cleaning
- Tailings and ash pond cleaning
- Digester and pond cleaning
- Oil spill capture and transfer
- Hazardous waste recovery
- Drilling mud and cuttings transfer
- Transfer of mining slurries
- Agricultural product and waste transfer

Features



- ATEX Zone 2/CE conformity
- 100% compressed air operation
- Multipurpose vacuum pump
- Intrinsically safe
- Fully automatic
- No internal moving parts
- Minimal maintenance
- Robust construction
- High vacuum and high airflow
- Recovers material from up to 50 metres (164ft)
- Delivers over 500 metres (1640ft)
- Skid mounted with roll frame

- Height 140 cm (55" skid mount)
- Width 66 cm (26" skid mount)
- Length 133 cm (53" skid mount)
- Weight 315 kg (695 lb)
- Throughput capacity up to 20m³/hr (140USGPM) @SG1.0
- Air consumption minimum 280 cfm (132 L/sec) at minimum 85psi (6 bar) to 100psi (7 bar) at the pump
- Air supply connection 25 mm (1")
- Up to 25"Hg (85kPa)+ vacuum
- Suction 100 mm (4") BSP/Type B camlock
- Discharge 100 mm (4") BSP/Type A camlock
- Handles solids to 70 mm (3")
- Carbon steel vessel
- Also available in Class 3 carbon, 316 stainless steel or polyurethane coated tanks
- Skid mounted/roll frame weights dimensions on request

SV110V2 Mobile Solids and Sludge Pump - Vertical



Features

- ATEX Zone 1/CE conformity
- 100% compressed air operation
- Multipurpose vacuum pump
- Intrinsically safe
- Fully automatic
- Versatile
- No internal moving parts
- Minimal maintenance
- Robust construction
- Next Generation Pneumatic control IP66 SST box provides a more user friendly system with new countdown timers, indicators showing pump cycle, increased safety, usability & serviceability. Standardized. Quick connectivity minimizing down time

About

The SV110V Mobile Sludge Pump is 100% air powered and operated, generates up to 25"Hg (85kPa) of vacuum whilst generating high in-line convey velocities. The unit requires only 280 cfm (132L/sec) at 85psi (6bar)+ and can transfer heavy sludge with a high solids content up to a rate of 32m³/hr (140USGPM) @ SG1.0

The SV110V Mobile Sludge Pump is a vacuum loading pressure discharge batch system that can recover from up to 50 metres (164 ft) and deliver in excess of 500 metres (1640 ft) whilst remaining a one man or fully automatic operation.

Employed worldwide in the offshore drilling, oil, gas and mining industries the SV110V Mobile Solids and Sludge Pump is ideal for rapid recovery of large scale spills, tank cleaning, mining slimes and sump/drain cleaning.

Applications

- Thickener de-sludge
- Tunnelling and TBM applications
- Sump and shaft cleaning
- Tailings and ash pond cleaning
- · Digester and pond cleaning
- Oil spill capture and transfer
- Hazardous waste recovery
- Drilling mud and cuttings transfer
- Transfer of mining slurries
- Agricultural product and waste transfer

New Options

- Next Generation Pneumatics Control box retro fit kits to upgrade existing pumps
- Low (adjustable) discharge pressure
- Reduced air consumption
- Spare parts kit includes quick change control box, reducing down time.

- Height 136 cm (54" wheel mount)
- Width 83 cm (33" wheel mount)
- Length 140 cm (55" wheel mount)
- Weight 234 kg (516 lb)
- Throughput capacity up to 20m3/hr (140USGPM) @ SG1.0
- Air consumption minimum 280 cfm (132 L/sec) at minimum 85psi (6 bar) to 100psi (7 bar) at the pump
- Air supply connection 25mm (1")
- Up to 25"Hg+ (85kPa) vacuum
- Suction 100 mm (4") BSP/Type B camlock
- Discharge 100 mm (4") BSP/Type A camlock
- Handles solids to 70 mm (3")
- Carbon steel vessel
- Also available in Class 3 carbon, 316 stainless steel or polyurethane coated tanks
- Skid mount/roll frame weights dimensions on request

SV250V Solids/Mining Slimes Pump



About

The SV250V Solids Mining Slimes Pump is designed to transfer an extremely wide array of heavy sludges via 100 mm (4") suction and discharge lines.

The SV250V Pump has the ability to operate with various SV Jet Packs ranging from 150 (71 L/sec) to 750 cfm (354 L/sec).

The SV250V Pump is a vacuum loading pressure discharge batch system that can recover flowing slurries from up to 50 metres (164 ft) and deliver the same up to 1000 metres (1640 ft) whilst remaining a one person or fully automatic operation.

The SV250V Pump can transfer in excess of 45 m_3 /hr (264USGPM) @ SG1.0 single pump operation & double with Synchronized/Dual pump operation.

Applications

- Drilling mud and cuttings transfer
- Thickener de-sludge
- Petrochemical tank cleaning
- Heavy crude transfer
- Barge and hull cleaning
- Sump and shaft de-mucking
- Tailings and ash pond cleaning
- Raw effluent pond de-sludging
- Hazardous waste recovery
- Transfer of mining slurries

Applications

- Next Generation Pneumatics Control box retro fit kits to upgrade existing pumps
- Low (adjustable) discharge pressure
- Reduced air consumption
- Dual pump operation for synchronised pumping with 2 units using common suction & discharge hoses
- Manual control box or @ suction point
- Spare parts kit includes quick change control box, reducing down time.

Features

- ATEX Zone 2/CE conformity C€ € 113 G T6
- Intrinsically safe
- Manual or fully automatic operation
- High vacuum and high airflow
- Throughput capacity up to and in excess of 45m3/hr (264USGPM) @ SG1.0
- Variable air consumption
 150 750 cfm (75 354 L/sec)
- Robust and compact
- Gravity feed capability
- Next Generation Pneumatic control IP66 SST box provides a more user friendly system with new countdown timers, indicators showing pump cycle, increased safety, usability & serviceability. Standardized. Quick connectivity minimizing down time.

- Height 165 cm (65")
- Width 129 cm (51")
- Length 120 cm (48")
- Weight 550 kg (1213 lb) with RF
- Air consumption minimum 150/270 /400 /600/750 cfm (75/128/189/284/354 L/sec) at minimum 85psi (6 bar) to 100psi (7 bar) at the pump
- Air supply connection 50 mm (2")
- Up to 25"Hg+ (85kPa) vacuum
- Suction 100 mm (4") BSP/Type B camlock
- Discharge 100 mm (4") BSP/Type A camlock
- Handles solids to 70 mm (3")
- Carbon steel vessel
- Also available in Class 3 carbon, 316 stainless steel or polyurethane coated tanks
- Roll cage and weather cover

SV510 Heavy Duty Solids Pump







About

The SV510 Heavy Duty Solids Pump is capable of capturing high density slurries via a strong 25"Hg+ (85kPa) vacuum combined with high velocity airflows.

The pump is capable of recovering up to 60 m3/hr (198USGPM) @ SG1.0 of various materials via vacuum load or top load gravity feed.

The SV510 Solids Pump can transfer drill cuttings, mud, sludge and mining slurry along with heavy aqueous waste directly from the source to an array of destinations including skips, bulk tanks or return to belt if required.

Compact and with a relatively small footprint, the SV510 is capable of operating on a wide array of materials with very high solids content.

Applications

- Capture and transfer of drill cuttings
- Slurry transfer
- Thickener de-sludging
- Mud and tailing transfer
- Pit and sump cleaning
- Hazardous waste recovery
- Oil sludge and tank bottoms residue transfer
- Tank cleaning and sludge extraction
- Vacuum cleaning of barge and vessel bottoms
- Heavy crude transfer
- Bulk transfer, load and unload
- HS2 Slurry

Features

- ATEX Zone 2/CE conformity
- 100% compressed air operation, intrinsically safe
- Dual Pump option for two pumps
- Control box, quick connect / disconnect with indicators for easy diagnostic / visual of operation
- No internal workings, minimal maintenance
- Manual or automatic operation
- Throughput capacity up to and in excess of 60 m3/hr (198USGPM) @ SG1.0depending on the materials and distances involved
- Generates 25"Hg+ (85kPa) vacuum using 600cfm (284 L/sec) jet pack and requires 750 cfm (354 L/sec) using air assisted discharge option at minimum 95psi (6.5 bar to 115psi (7.9 bar) at the pump
- 100 (4') Vacuum Load
- 250mm (10") top load / gravity feed with
 100mm
- Added vent to increase material throughput during gravity mode

- Height 174 cm (69")
- Width 110 cm (44")
- Length 209 cm (83")
- Weight 860 kg (1896 lb)
- Air consumption 600 cfm (284 L/sec) using air assisted discharge option minimum 95psi (6.5 bar) to 115psi (7.9 bar) at the pump
- Air supply connection 1.5"
- Up to 25"Hg+ (85kPa) vacuum
- Suction 100 mm (4") BSP/Type B camlock
- Discharge 125 mm (5") Victaulic
- Top load gravity feed 250 mm (10") flange connection AS2129 Table E
- 100 mm (4") top load / gravity vent
- 100 mm (4") Vacuum Load
- Handles solids to 70 mm (2")
- Carbon steel vessel



WASTE SAND SLUDGELADEN WITH TAR

EXTRACTION PLANT SETTLING LAGOON

THE CHALLENGE

This highly abrasive settling pond waste contains tons of sand and is laden with sticky tar and chunks. Vacuum recovery is accomplished using 25 inches of mercury and discharged with 100 PSI air pressure. No centrifugal or submersible pump or vacuum truck has ever been able to handle this transfer task.

The current, arduous method to remove this sludge and solids from these primary settling ponds is to scoop it up with long reach loaders and transfer it into large trucks for transport. This equipment is requisitioned from a demanding production schedule. As the trucks travel along the roadway to dump the sludge for permanent placement, an environmental trail of sticky sludge marks the journey.

TAR SANDS

Using no electricity, these pneumatic displacement pumps are considered intrinsically safe for use in most plant and x-p locations. SupaVac have invested in global certifications such as CE and ATEX. These pumps operate automatically and require only minimum operator intervention. And with no rotating parts in use and no moving parts in direct contact with the harmful effects of the flow, high reliability has proven to be the experience.

THE RESULTS

- Long distance transfer through the pipeline
- Even dry sand has been pumped
- No additional water was required
- No more unscheduled downtime





SUPAVAC SV110-V

This SupaVac SV110-V pump system was recently put to the test on a small scale at an extraction plant settling pond. This tarladen waste sand is abrasive and resistant to flow. These ponds, containing sheets and chunks of hardened tar, have ongoing operational, maintenance and environmental issues.

SUPAVAC SV250

For larger scale operations, based on experience in similar installations, SupaVac envisions injecting air into the lagoon sludge before and during pumping operation to increase the lubricity of the tar components, thereby facilitating a smooth operation. The SupaVac air-assist pickup nozzle, specifically designed to handle this application, when operated with the larger recommended SV250V pump, will enhance the vacuum recovery of this tar-laden sludge. This will maintain maximum flowability characteristics into the pump and for long distance transfer through the pipeline.





MILL WATER SLUDGE POND CLEAN-OUT

MOBILE SOLIDS TRANSFER PUMP SYSTEM

THE CHALLENGE

This large mill water sludge pond required cleaning of over 3,000m3 of thick, 4.5 SG settled abrasive, corrosive sludge and hard solids. Dredges and excavators could not be used because of concerns over damage to the pond liner. An additional challenge was the solids were to be discharged 1,350 meters away into the mine sump for disposal. Further challenges present with limited site access to this remote nickel mining operation in northern Canada was by air or water only.

OUR SOLUTION

After site meeting with customer Mill Engineering, operations and environmental personnel, plus Supavac Distributor; Spicer Solution Providers (2sp) Inc., the contract was awarded to supply a Supavac solution. Three SV250V-600 pumps, custom accessories to protect the liner from damage, spare parts, 5,700 meters of 100mm SDR11 hdpe piping, special suction, discharge, and compressed air hose assemblies were mobilized to the site by ship.

Two supervisors from 2sp rotated onsite as required to manage and monitor equipment deployment and operation ensuring a successful project outcome. Providing system setup, product training and overseeing daily operation and maintenance as required.



THE SUPAVAC SV250V

The SV250V Solids Mining Slimes Pump is designed to transfer a wide array of heavy sludges via 100 mm (4") suction and discharge lines.

- ATEX Zone 2/CE conformity
- Intrinsically safe
- Manual or fully automatic operation
- High vacuum and high airflow
- Throughput capacity up to and in excess of 60 m3/hr (264USGPM)
 @ SG1.0
- Variable air consumption
 150 750 cfm (75 354 L/sec)
- Robust and compact
- Gravity feed capability

Complete pump systems are available for purchase or rental with the option to recover a large portion of rental paid towards the purchase price. Onsite startup supervision and training is available.





THE RESULTS

The job was completed on time and on budget, removing all the solids allowing the pond liner to be inspected and repaired as required, with maximum efficiency, no damage, environmental or safety incidents. Mobile solids transfer pump system vacuum recovered tons of settled sludge from mill water sludge pond with 1,350 meter zero-leak discharge for disposal, all on one simple operation.

- Cost-effective solution
- Minimal maintenance
- Environmental incidents are excluded
- Ability to clean over 3,000m3 sludge and hard solids



FEATURES & BENEFITS

- 100% compressed air operation
- Automatic or manual operations
- Intrinsically safe
- Unit has no electrical components
- Easy to install, does not require major modifications to install
- High-Capacity, High Vacuum and airflow for movement of difficult materials
- No moving parts in contact with material being pumped
- Robust construction and low wear characteristics
- Delivers cuttings up to 1000 m (3280') horizontally and 35 m (115') vertically
- Air supply connection 50 mm (2")
- Air consumption minimum 150/270 /400 /600/750 cfm (75/128/189/284/354 L/sec) at minimum 85psi (6 bar) to 100psi (7 bar) at the pump





SYNCHRONIZED PUMPING

HEAVY DUTY VACUUM SLURRY

THE CHALLENGE

A customer approached SupaVac with the desire to connect two SV250 pumps together for synchronised pumping to allow for constant suction and discharge of drill cuttings onto the cuttings dryer.

OUR SOLUTION

The engineering team at Supavac designed and manufactured two control boxes with selectable modes – each control box could operate as a standalone unit, or together to allow for synchronised pumping.

These two 316 stainless steel control boxes were dispatched to the customer along with detailed graphical procedures covering each step of how to retrofit the pumps in a safe and efficient manner. The entire assembly took the customer approximately 4 hours to complete the full retrofit of both pumps.

In addition, this retrofit reduced the air consumption of the control systems, increased their reliability and accuracy and allowed for new levels of productivity to be offered on these existing units.

The upgrades made to these existing SV250 units allowed our customer to win the contract to install the cuttings blower system onto the rig.

These control systems form an integral part of allowing the Supavac SV250 to operate in potentially hazardous environments across a wide range of industries.

The SupaVac SV250 has worked with zero reported downtime on multiple locations over the past 8 years.

CONTROLS

SUPAVAC SV250

The SV250V Solids Mining Slimes Pump is designed to transfer an extremely wide array of heavy sludges via 100 mm (4") suction and discharge lines. The SV250V Pump has the ability to operate with various SV Jet Packs ranging from 150 (71 L/sec) to 750 cfm (354 L/sec). The SV250V Pump is a vacuum loading pressure discharge batch system that can recover flowing slurries from up to 50 metres (164 ft) and deliver the same up to 1000 metres (1640 ft) whilst remaining a one person or fully automatic operation. The SV250V Pump can transfer in excess of 60 m3/hr (264USGPM) @ SG1.0 single pump operation & double with Synchronized/Dual pump operation.



TANK CLEANING APPLICATIONS

FLOATING PRODUCTION STORAGE & OFF LOADING

THE CHALLENGE

An ongoing issue FPSO owner/operators experience is that the vessels need to be in dry dock for a number of days for tank sludge removal and cleaning, the traditional cleaning methods are high cost due to time intensive manual labour and operational downtime. Malaysia Marine and Heavy Engineering (MMHE) are seeking to reduce cost and increase the efficiency of their ongoing tank cleaning requirements.

ZAR LYNX MALAYSIA

For many years, SupaVac has been working closely with ZAR Lynx Malaysia for FPSO (Floating Production Storage and Off loading) tank sludge removal & cleaning with its unique, fully air operated SV solids pumps.

The chosen SupaVac slurry pump, namely SV30, SV60-V and SV110-V models, have provided increased efficiencies and reduced completion times, which is crucial as vessels often have very limited time in dock. In addition the SupaVac solution for FPSO applications has drastically reduced associated risks of working in confined hazardous areas by reducing manpower requirements.



OUR SOLUTION

SupaVac solids pumps were trialed as an alternative method, an onsite demonstration of the SV110-V solids pump unit was conducted at the MMHE facility, with very impressive results.

The SV pump was able to efficiently suction all of the sludge and simultaneously discharge waste through a 30m vertical hosing, significantly reducing downtime, manpower and minimising associated OH&S risks.

Following this demonstration, a contract was awarded to SupaVac distributor, ZAR Lynx for the task of de-sludging and cleaning FPSO vessel storage tanks for MHHE.

ZAR Lynx was able to efficiently clean two vessel tanks the same size in significantly reduced time frame using the SV110-V, and only half the manpower as previously required.



ZAR Lynx and SupaVac are continually working together to develop market specific solutions for this application. The current SV60-V & SV110-V models have the ability, but typically require a larger access point in the tank. The newly developed smaller SV30 series will allow for tank sludge removal & cleaning to occur whilst the vessel is afloat, reducing dry dock costs and reducing downtime for the FPSO which is a significant benefit to vessel owners and operators.

- · Required 2 times less people onsite
- · Reduced completion times
- Up to 30m vertical discharge





- ◆ ATEX & CE Certified
- Low pressure discharge option

WORLDWIDE



DISTRIBUTOR



Fabrikkveien 6, N-4323, Sandnes • Phone: (+47) 900 84 800 • Email: post@envitec.no