SOLiDSVAC®

SOLiDS PUMPiNG SYSTEMS

SV-VP VAC-PACK
Operations Manual

AUSTRALIAN MADE

U1/ 5-7 Boeing Place - Caboolture - QLD 4510 - Australia

+61 456 000 665 / info@solidsvac.com / www.solidsvac.com

ISSUED DATE - 010123 V 1.0 LAST REVISED - 010123

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SCAN ME

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SAFETY FIRST

CAUTION & GENERAL SAFETY

This manual contains important information concerning the installation, operation and maintenance of the Solidsvac Vac-Pack, Model SV-VP. To prevent injury to personnel or equipment damage, this manual MUST be read and understood by those responsible for the installation, operation and maintenance of the equipment.

THIS OPERATION MANUAL MUST BE USED IN CONJUNCTION WITH BOTH SITE-SPECIFIC RA AND JSA's.

- Isolate, tag out and disconnect the air supply to the unit prior to working on any part of the system
- Lift the equipment only at the lifting points provided
- Ensure the correct PPE is worn when operating and working on the unit
- The Vac-Pack should be installed in a safe level area, which provides adequate access for operating the equipment
- Ensure all hoses are in good condition, correctly rated and certified for the service in which they are to be used
- Inspect the unit regularly for damaged or worn components
- Tie down points (if fitted) must NOT be used as lifting points
- Lid MUST be closed during operation

CAUTION: ISOLATE, TAG OUT & DISCONNECT THE AIR SUPPLY PRIOR TO WORKING IN THE SYSTEM

SOLIDSVAC VAC-PACKS EACH HAVE SPECIFIC COMPRESSED AIR REQUIREMENTS DEPENDING ON THE JETPACK FITTED.

The operator MUST ensure that an appropriate and adequate air supply is available depending on the model and Jetpack in use.

All Solidsvac Vac-Packs require a minimum operating pressure of 689kPa and have a maximum operating pressure of 758kPa (110psi).

The recommended size for the air supply hose is dependent on the Jetpack configuration, below is a guide for each.

JETPACK CONFIGURATION	AIR LINE NOMINAL BORE (I.D) REQUIRED
230CFM	1"
380CFM	1 1/2"
600CFM	2"
900CFM	3"
1200CFM	3"

REMINDER: THE COMPRESSED AIR SOURCE SHOULD BE LOCATED NO FURTHER THAN 50 METRES FROM THE VAC-PACK

WARNING: OVERFILLING CAN CARRY OVER INTO THE VAC-PACK

WARNING

THE TOP LID MUST REMAIN CLOSED & LOCKED AT ALL TIMES DURING OPERATION.
FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY.

1. PNEUMATIC CONVEYING

A Solidsvac Vac-Pack generates vacuum via 100% compressed air powered venturi system. The Vac-Pack can turn any appropriately rated container into a powerful vacuum recovery system.

The Vac-Pack operates in two phases: Lean Phase, where the material is conveyed within the air stream and Dense Phase, where the material is conveyed by the air stream.

The below items should be considered if you are to optimise the performance of a Solidsvac Vac-Pack.

NOTE: For the suction hose recovering material to reach full flow/vacuum, the Vac-Pack must evacuate the air from the vacuum tank or skip the unit is connected to. The time required for this is determined solely by the size of skip or tank and may take several seconds or significantly longer in the case of a 20,000 litre ISO vessel.

BE AWARE: ANY DELAY IN REACHING FULL VACUUM MAY BE A RESULT OF AN INCORRECTLY SEALED SKIP OR TANKS AND EACH SEAL OR INLET SHOULD BE INSPECTED AND/OR CLOSED PRIOR TO THE COMMENCEMENT OF OPERATIONS.

CORRECT AIR SUPPLY

Available air (Both volume - CFM/m^3 and pressure - Psi/kPa) and using the correct nominal bore (ID) supply hose is crucial.

The loss of pressure brought about by either distance or insufficient hose ID, is somewhat equivalent to that of voltage drop experienced in electrical equipment.

NOTE: A larger diameter supply line can act as an accumulator, often saving a significant amount of energy when employed correctly.

APPRECIATE THE ENERGY REQUIRED

At 1 Sg of a material to be conveyed in every 100mm of 100mm (4") hose, equates to approximately 1 Kg or 2.2lb and as such a 5 metre (20') hose will carry around 60 Kg (130lb) of material. It is worth keeping in mind that it takes far more energy to vacuum convey a material vertically or over substantial distances.

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2. TECHNICAL SPECIFICATIONS

TECHNICAL DATA	METRIC	US IMPERIAL
Height	1350 mm	53″
Width	890 mm	35″
Length	960 mm	37.7″
Weight	280 kg	617 lb
Air inlet	25/38/50/75 mm	1"/ 1 1/2″/2"/3" BSP/NPT
Suction inlet	100 mm	4″
Operating pressure	689 kPa	100 psi
Air consumption options	10.7 m^3 /Min Jet Pack 16.9 m^3 /Min Jet Pack 25.4 m^3 /Min Jet Pack 33.9 m^3 /Min Jet Pack	380 cfm Jet Pack 600 cfm Jet Pack 900 cfm Jet Pack 1200 cfm Jet Pack

GENERAL USAGE

- Mining
- Drilling
- Industrial
- Agricultural
- Municipal

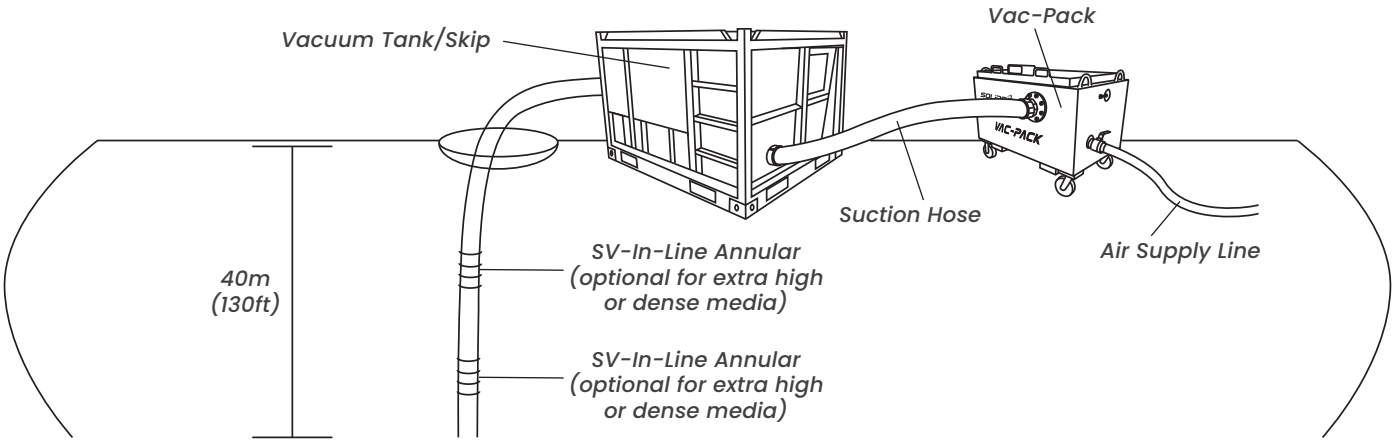
APPLICATIONS INCLUDE

- Drilling mud waste
- Corrosive slurries
- Noxious waste
- Mine tailings
- Raw effluent

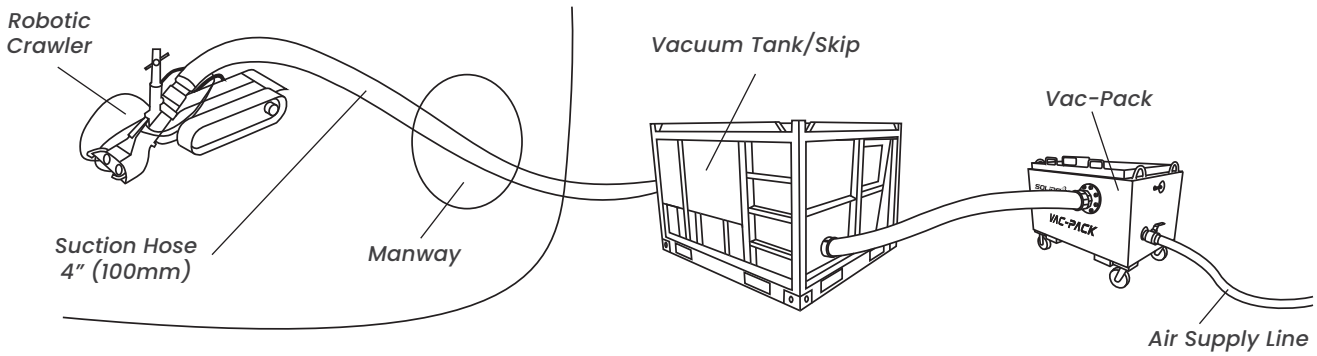
OPTIONAL ACCESSORIES

- Suction wand
- Suction hose
- Discharge hose
- Duck bill & Vacuum head
- Large capacity strainer
- Dropbox
- Delivery carousel

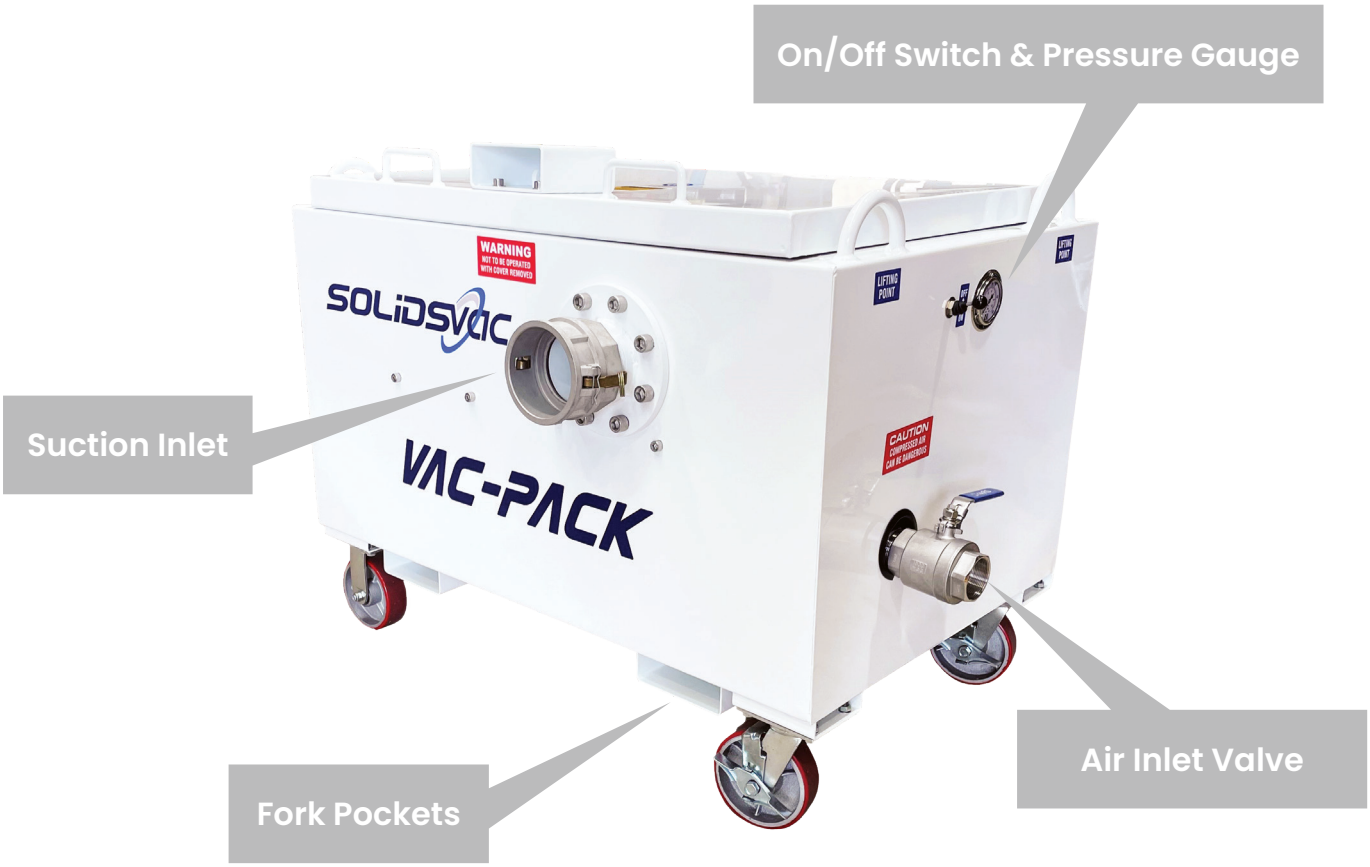
Vac-Pack High Lift Application



Vac-Pack Robotic Crawler Application



3. MAIN COMPONENTS



4. SET UP

Before commencing operation, Solidsvac strongly recommends each user reads the Operation Manual supplied with each unit and is available online or via the QR code found on the unit.

Note: No training is necessary to operate the SV-VP, however understanding the Operations Manual is essential to safe practice.

Solidsvac also recommends that a site specific Risk Assessment of the operation is undertaken. Any recommendations arising from the Risk Assessment would be additional to the following:

- The Vac-Pack and all hose fittings are undamaged and in good working order.
- Ensure the compressor in use MUST be installed in a safe area and is in good working condition.
- All covers and fittings are in place and correctly secured
- Clean compressed air at minimum working pressure of 689kpa (100psi) is available.
- A correctly sized air hose is available (see page 3).
- The correct PPE is available and worn for operating compressed air equipment.

Complete the Set Up of the Vac-Pack by doing the following:

- Set the Solidsvac Vac-Pack in a safe level location and ensure wheels are locked.
- Ensure the main air valve is closed and the control switch is in the OFF position.
- Attach the correctly sized air hose (see page 3) to the Vac-Pack & fit safety clips.
- Connect a 4" (100mm) suction hose from the outlet of rated container to the Vac-Pack & fit safety clips/whipchecks
- Connect a 4" (100mm) suction hose from the inlet of the rated container to any accessories (if required) & fit safety clips/ whipchecks
- The Vac-Pack is now ready for use.

TO MAINTAIN OPTIMAL PERFORMANCE, THE VAC-PACK SHOULD BE LOCATED NO FURTHER THAN 50 METRES FROM THE SUCTION POINT

5. OPERATION

Commence operation of the Vac-Pack by doing the following:

- Ensure top lid is closed and securely locked.
- With all correct hoses safely secured and suction hoses removed from the material, open the air compressor supply valve.
- Open the Vac-Pack air supply valve.
- Turn the Vac-Pack switch to ON.
- The unit will automatically begin continuously vacuuming.

THE OPERATOR MUST REMAIN AWARE OF THE MATERIAL LEVEL IN THE RATED CONTAINER.

IF MATERIAL APPEARS INSIDE THE VAC-PACK, OVERFILLING MAY BE OCCURRING.

6. SHUTDOWN

Complete operation of the Vac-Pack by doing the following:

- Once suction is complete, close the compressor air supply valve.
- Ensure the air supply line is bled and system is free of compressed air prior to disconnecting any hoses.
- Operation has finished.

LID SHOULD BE OPENED, INTERNALS INSPECTED AND ANY CARRY OVER REMOVED AFTER EACH APPLICATION.

7. HIGH LIFT APPLICATIONS

The Vac-Pack can perform high vertical suction lifts in excess of 25 metres (80 feet), however recovering material from this distance cannot be achieved via vacuum alone, this needs to be pneumatically conveyed. The material must share the suction line with a volume of air and Solidsvac recommends the use of SV-In Line Annulars to aerate and fluidize high Sg or dense material during high vertical lifts or applications where the material to be conveyed is heavy and non viscous.

It is important to remember that although lifts in excess of 25 metres are achievable, there can be a drop in the recovery rates.

NOTE: When using the SV-In Line Annulars, follow the below order of operations.

1. Ensure the In Line Annulars are closed, the Vac-Pack switch is in the 'OFF' position and supply valve is closed.
2. Turn on air supply and open the air supply valve.
3. Move the Vac-Pack switch to the 'ON' position. The Vac-Pack will begin vacuuming via the rated container.
4. Once vacuum is achieved, the Annulars can be opened to assist with conveying.

SV-IN LINE ANNULAR

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Model Number	
Serial Number	
Date of Manufacture	
Inspected by	

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