



# SX SOLIDS PUMPS

# SX SOLIDS PUMPS

## PNEUMATIC CONVEYING UNITS

**Air operated solids and slurry pumps.** Ultra tough pumping units capable of transferring any flowable material across a wide range of agricultural, industrial, municipal, mining, oil and gas applications.

### SX SOLIDS PUMPS

Southern Cross SX Solids Pumps are Pneumatic conveying units which are capable of transferring up to 60m<sup>3</sup>/hour of any flowable material with solids sizes up to 80% of the diameter of inlet.

SX Solids Pumps are not a competitor for conventional pumps, they come into their own when traditional pumps fail due to the high solids nature of the material being conveyed. SX Solids Pumps are self priming and are fully sealed with zero discharge, allowing for the safe transfer of hazardous materials for environmental compliance.

SX Solids Pumps are 100% air operated, relying on compressed air to create a vacuum and high airflow allowing the recovery of material up to 25 metres (82ft) and discharge up to 1000 metres (3280ft) horizontally.

With no rotating parts and no moving parts in contact with the pumped material, they are not susceptible to clogging and wear that occurs in centrifugal and submersible pumps. They do not suffer from cavitation and can be run dry indefinitely with no overheating or damage.

### COMPACT, LIGHTWEIGHT & MOBILE

SX Solids Pumps are designed to be easily transported and quickly deployed where and when required. Units are fitted with wheels or skid mounted for simple on-site mobility and deployment.

Units are supplied with protective covers for operating controls and valves. They can also be fitted with roll cages and enclosures to provide additional protection and durability.

### SIMPLE OPERATION

With easy access to air supply and suction and discharge pipelines, SX Solids Pump units can be deployed in less than 10 minutes.

Deployment is a simple process involving the connection of suction and discharge pipes (camlock, victaulic or BSP), air hoses and then turning on the air supply.

Once running, units are controlled by simply varying the suction and discharge timers to suit the material being conveyed, the distance being recovered from and the transfer distance. This allows for fully automatic operation. Alternatively, units can be manually operated using a switch to control loading and discharge times.

### INTRINSICALLY SAFE

SX Solids Pumps require no electricity supply to operate and have been designed to safely operate in hazardous environments.

### SOUTHERN CROSS SX60-V "GUZZLA"



### SOUTHERN CROSS SX110-V "GLUTT'N"





There are no rotating parts and all moving parts are covered to prevent entanglement and reduce the risk of operator injury.

#### **MAINTENANCE AND SUPPORT**

With minimal moving parts and no electricity, troubleshooting is a quick and simple process. Parts are easily replaced and fitted using readily available tools.

Pentair Southern Cross provides global support for all SX Solids Pumps. Our expert operators can provide on-site demonstrations and training for new users and assist with product selection and troubleshooting.

#### **APPLICATIONS**

SX Solids Pumps have been utilised all over the world to provide effective solutions for a wide range of product transfer problems including:

- Coal and other mining slurries
- Thickener sludge
- Sump, shaft and pipeline cleaning
- Tank and drain cleaning
- Tailings and ash pond cleaning
- Oil spill capture and transfer
- Hazardous waste recovery
- Drilling mud and cuttings
- Agricultural product and waste
- Dam desilting
- Bentonite, sand
- Effluent and processing waste
- Pulp and paper mill waste
- Tunnelling and pneumatic excavation
- Barge, ballast tank and ship cleaning
- Wash plant and under belt cleaning

SX Solids Pumps are capable of pumping any flowable material including liquids, liquors, slurries, mud, slimes, sand, powders and many more. Where other pumps cannot operate, SX Solids Pumps provide a simple, safe and versatile solution.

# PNEUMATIC CONVEYING

## MATERIAL RECOVERY AND TRANSFER



### PURE VACUUM PUMPING

SX Solids Pumps have the capability of recovering material by two modes the first being 'pure vacuum' while the second is 'air conveying'.

As a general rule pure vacuum would be used for removing sludge from beneath liquid or for rapid liquid or slurry loading within close proximity to the machine. In this mode, the vacuum tube is totally submersed in the liquid and only material (no air) transports through the line.

The maximum vertical suction lift from the machine to the liquid surface cannot exceed 9.2 metres at sea level assuming water is the liquid. Horizontal suction distances would be greater. For materials of a higher density than water, these figures must be reduced accordingly. This mode

is a conventional pumping technique with the material being displaced by negative pressure.

However the SX Solids Pumps can transcend conventional pumping techniques by pneumatically conveying materials.

### PNEUMATIC CONVEYING

Pneumatic conveying is a method of handling materials by utilising high velocity airflow with a pipeline. This requires sufficient air velocity to pass the material being picked up to capture it and convey it through the vacuum tube to the machine.

The air velocity is kept up by not fully submersing the nozzle or by allowing air to the pick-up point via a snorkel tube attached to the nozzle.

The advantages of this technique are:

- Suction lifts up to 25 metres (82 feet)+ vertically can be achieved
- Materials can be liquid or dry
- Particle sizes of up to 80% of the suction hose diameter can be conveyed
- Horizontal suction distances maximum 50 metres (164 feet) can be achieved
- Fibrous, waxy and heavy sludge can be handled
- Powders and solids can be handled as well as wet materials

There are also applications where a vacuum fluidizing tube should be used which combines the benefits of pure vacuum and pneumatic conveyance when removal of material from beneath liquids is required where the distance exceeds the limitations of pure vacuum.

All SX Solids Pumps utilize high airflow and vacuum to ensure high performance.

The SX Solids Pumps are designed to convey recovered material under pressure through a pipeline or into a collection vessel. Alternatively, deadheads and cuttings carousels are available which absorb and dissipate the discharge pressure and allow the delivery of material under gravity to a confined location such as a conveyor belt or cuttings skip.

Two modes of positive pressure discharge are used in SX Solids Pumps; dense phase and lean phase pneumatic conveying. The later can achieve vertical heads in excess of 35 metres (115ft) and horizontal discharge distances up to 1000 metres (3280ft).

The absence of any electrical supply in SX Solids Pumps makes them useful in restricted or potentially hazardous areas.



SX280-V



# SX40

## COMPOSITE SLURRY PUMP



### SX40 COMPOSITE SLURRY PUMP

The SX40 Composite Slurry Pump is designed as a lightweight unit for the transfer of light slurries and being a 100% composite vessel material allows for pumping of extremely aggressive and corrosive slurry products.

This lightweight feature allows the operator to easily move the unit between sites and applications.

Utilizing only a 60cfm air requirement allows the SX40 Composite Slurry Pump to be coupled up to smaller sized air compressors or with sites that have limited air volumes.

The SX40 Composite Slurry Pump has several options available with regard to mounting, permitting it to be used in a variety of unstable surfaces.

### FEATURES

- Composite fibreglass construction
- 100% compressed air operation
- Intrinsically safe Fully automatic
- Versatile
- No internal moving components
- High vacuum and high airflow
- Recovers material from up to 30 metres (98 ft)
- Delivers up to 300 metres (984 ft)
- Pumps up to 7 m<sup>3</sup>/hr

### APPLICATIONS

- Sump cleaning
- Transfer of mining slurries and slimes
- Drain desilting
- Effluent transfer
- Hazardous waste transfer
- Pneumatic excavation
- Agricultural product and waste transfer
- Food and beverages
- Chemical processing

### TECHNICAL DATA

- Height 87 cm (34")
- Width 67 cm (26")
- Length 135 cm (53")
- Weight 32kg (71lb)
- Suction 75 mm (3")
- Discharge 75 mm (3")
- Air consumption minimum 60CFM between 85psi to 115psi+
- Vacuum Up to 25" Hg+ (85kPa)

# SX60

## PORTABLE SLURRY PUMP



### SX60 PORTABLE SLURRY PUMP

The SX60 Guzzla Portable Slurry Pump is designed to offer the operator a one man vacuum recovery, pressure discharge unit that can recover and transfer almost any flowable material.

The SX60 Guzzla Portable Slurry Pump is 100% air powered and operated and creates up to 25" Hg (85kPa) of vacuum using 150CFM at 85psi+.

The SX60 Guzzla Portable Slurry Pump is employed around the world moving mining slimes in Mexico and filter Media in South Africa, OBM in the UK and piggery waste in the USA.

### FEATURES

- 100% compressed air operation
- Intrinsically safe
- Fully automatic
- Versatile
- No internal moving components
- High vacuum and high airflow
- Recovers material from up to 50 metres (164ft)
- Delivers up to 500 metres (1640ft)
- Pumps up to 10 m<sup>3</sup>/hr (44USGPM)

### APPLICATIONS

- Sump cleaning
- Transfer of mining slurries and slimes
- Drain desilting
- Effluent transfer
- Drill cuttings and OBM transfer
- Hazardous waste transfer
- Pneumatic excavation
- Agricultural product and waste transfer

### TECHNICAL DATA

- Height 80 cm
- Width 70 cm
- Length 150 cm
- Weight 198 kg
- Air consumption minimum 150CFM at 85psi to 100psi
- Up to 25" Hg+ (85kPa) vacuum
- Suction 75 mm (3")
- Discharge 75 mm (3")
- Handles solids to 50 mm (2")
- Also available in 316 stainless steel

# SX60-V

## PORTABLE SLURRY PUMP



### SX60-V SLURRY PUMP

The SX60-V Guzzla Portable Slurry Pump is a one man vacuum loading, pressure discharge pump capable of recovering and transferring up to 10m<sup>3</sup>/hr (44USGPM) of almost any flowable material.

Able to generate 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 some powders and grains.

Employed worldwide – servicing farms, mines, drill rigs, construction sites, process and power plants and many more.

### FEATURES

- 100% compressed air operation
- Intrinsically safe
- Versatile
- No internal moving components
- Fully automatic
- High vacuum and high airflow
- Delivers up to 500 metres (1640 feet)
- High solids content transfer
- Skid mounted
- Also available in 316 stainless steel

### 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

### TECHNICAL DATA

- Height 110 cm
- Width 70 cm
- Length 90 cm
- Weight 198 kg
- Air consumption minimum 150CFM at 85psi to 100psi
- Up to 25" Hg+ (85kPa) vacuum
- Suction inlet 75 mm (3")
- Discharge outlet 75 mm (3")
- Handles solids to 50 mm (2")



# SX110-V

## SLURRY/SOLIDS PUMP



### SX110-V SLURRY/SOLID PUMP

The SX110-V Glutt'n Slurry/Solid Pump delivers over 25" Hg of vacuum whilst generating high inline convey velocities. The unit requires only 280CFM at 85psi to 100psi and can transfer heavy sediment with a high solids content up to a rate of 18 m<sup>3</sup>/hr (79USGPM).

The SX110-V Glutt'n Pump is a vacuum loading pressure discharge batch system that can recover from up to 50 metres (164ft) and deliver up to 1000 metres (3280ft) whilst remaining a one man or fully automatic operation.

The SX110-V's 100 mm inlet and outlet along with its conical tank design make it a formidable tool for the removal of aggregate and mud slimes behind today's tunnel boring machines or continuous mining machines.

Employed worldwide in the offshore drilling industry the SX110-V Pump is ideal for the rapid recovery of large scale spills.

### APPLICATIONS

- Thickener de-sludge
- Tunneling & 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

- 100% compressed air operation
- Intrinsically safe
- Fully automatic
- High vacuum and high airflow
- Delivers up to 1000 metres
- Skid mounted, wheel mounted or skid mounted with roll frame
- Robust construction

### TECHNICAL DATA

(MODEL ILLUSTRATED)

- Height 135 cm
- Width 66 cm
- Length 131 cm
- Weight 330 kg
- Air consumption minimum 280CFM at 85psi to 100psi
- Up to 25" Hg (85kPa)+ vacuum
- Suction inlet 100 mm (4")
- Discharge outlet 100 mm (4")
- Handles solids to 75 mm (3")
- Also available in Class 3 carbon, 316 stainless steel or polyurethane coated tanks

# SX250-V

## MINING SLIMES SYSTEM



### SX250-V SLURRY/SOLIDS PUMP

The SX250-V Mobile Sludge Pump is designed to transfer an extremely wide array of heavy sludges via 100mm suction and discharge lines.

The SX250-V has the ability to operate with various SX Jet Packs ranging from 150 to 750CFM depending on the operator's requirements.

The SX250-V Pump is a vacuum loading pressure discharge batch system that can recover flowable slurries from up to 50 metres (164ft) and deliver the same up to 1000 metres (3280ft) whilst remaining a one man or fully automatic operation.

The SX250-V Mobile Sludge Pump can transfer in excess of 30 m<sup>3</sup>/hr (132USGPM) depending on the required duty.

### FEATURES

- 100% compressed air operation
- Intrinsically safe
- Manual or fully automatic operation
- High vacuum and high airflow
- Throughput capacity up to and in excess of 30 m<sup>3</sup>/hr (132USGPM)
- Variable air consumption 150-750CFM
- Robust and compact
- Gravity feed capability
- Roll cage and weather cover (optional)

### APPLICATIONS

- Thickener desludge
- Petrochemical tank cleaning
- Heavy crude transfer
- Barge and hull cleaning
- Sump and shaft de-mucking
- Tailings and ash pond cleaning
- Raw effluent pond desludging
- Hazardous waste recovery
- Transfer of mining slurries

### TECHNICAL DATA

(MODEL ILLUSTRATED)

- Height 165 cm
- Width 129 cm
- Length 120 cm
- Weight 680 kg
- Air consumption 150-270-400-600-750CFM at 85psi to 100psi
- Up to 25" Hg (85kPa)+ vacuum
- Fork skid mounted
- Suction inlet 100 mm (4")
- Discharge outlet 100 mm (4")
- Handles solids to 75 mm (3")
- Also available in Class 3 carbon, 316 stainless steel or polyurethane coated tanks

# SX280-V

## HEAVY DUTY SOLIDS PUMP



### SX280-V HEAVY DUTY SOLIDS PUMP

The SX280-V Heavy Duty Solids Pump is a high velocity, heavy duty solids pump, capable of capturing high density slurries via a strong 25" Hg vacuum combined with high velocity airflows.

The SX280-V Heavy Duty Solids Pump can handle solids to 80% of the employed hose diameter and will transfer up to and in excess of 30 m<sup>3</sup>/hr (132USGPM) depending on the materials and distances involved.

The SX280-V Heavy Duty Solids Pump has no moving components that come in contact with the material being pumped and can pass rags, bolts and many other items that would render a standard impeller pump, inoperable.

### FEATURES

- 100% compressed air operation
- Intrinsically safe
- Manual or fully automatic operation
- Robust construction and low wear characteristics
- High vacuum and high airflow
- Delivers up to 1000 metres (3280ft) horizontally and 35 metres (115ft) vertically
- High solids content transfer

### APPLICATIONS

- Capture and transfer of drill cuttings
- Sump cleaning and desilting
- Tank bottoms and sludge extraction
- Tailings transfer or dewatering
- OBM transfer and pit cleaning
- Bentonite and sand transfer

### TECHNICAL DATA

- Height 151 cm
- Width 138 cm
- Length 130 cm
- Weight 720 kg
- Air consumption 600CFM at 85psi to 100psi
- Up to 25" Hg+ (85kPa) vacuum
- Suction inlet 100 mm (4")
- Discharge outlet 100 mm (4")
- Handles solids to 75 mm (3")

# SX300-V

## INDUSTRIAL VACUUM PUMP



### SX300-V INDUSTRIAL VACUUM PUMP

The SX300-V Industrial Vacuum Pump is a compact, robust, and efficient system capable of recovering material via 25"hg of vacuum and delivering up to 1000 metres (3280ft).

The SX300-V industrial vacuum pump does this through 100mm (4") suction and discharge lines, transferring up to and in excess of 30m<sup>3</sup>/hour (132USGPM) of oil sludge, mud slimes or coal slurry, whilst remaining a simple time saving one man operation.

The SX300-V is capable of transferring almost any flowable material and with reduced performances parameters, some non flowable products.

### FEATURES

- Simple manual or automatic operation
- 100% air powered and operated
- Intrinsically safe
- Exhaust Relief System
- High vacuum 25"hg+
- Compact, robust design
- 10+year tank working life
- Fork skid mounted frame
- Also available in 316 stainless steel or polyurethane coated tanks

### APPLICATIONS

- Thickener muck out
- Dam desilting
- Cleanup of under belt spillage
- Drive head or transfer point cleaning
- Sump and pit cleaning
- Effluent transfer, pond clearing
- Rapid spillage recovery
- High volume guck and slimes transfer
- Hazardous waste recovery/capture and transfer

### TECHNICAL DATA

- Height 155cm
- Width 100cm
- Length 145cm
- Weight 820kgs
- Air consumption 400CFM at 85psi to 100psi (optional 600CFM jet available)
- Suction inlet 100mm (4")
- Discharge outlet 100mm (4")
- Handles solids to 75mm (3")

# SX400 SOLIDS PUMP



## SX400 SOLIDS PUMP

The SX400 Solids Pump was primarily designed for the mining industry. The pump is capable of recovering up to 40m<sup>3</sup>/hour (176USGPM) of various materials under vacuum, and delivering the same via 100mm pipe some several hundred metres.

The SX400 Solids Pump can transfer mud, sludge and mining slurry along with heavy aqueous waste directly from the source to an array of destinations including skips, bulk tanks, further processing or return to belt if required.

Compact and with a relatively small footprint, when configured correctly the SX400 is capable of operating in an array of industries on a wide array of materials with a very high solids content suffering little or no wear.

## FEATURES

- 100% air powered operation
- Intrinsically safe
- No internal workings
- Generates 25"hg vacuum using 600CFM at 85psi to 100psi
- One man operation
- Optional top load/gravity feed
- 400, 600 and 750CFM Jet Packs available

## APPLICATIONS

- Slurry transfer
- Mud and tailings transfer
- Pit and sump cleaning
- Hazardous waste recovery
- Oil sludge, tank bottoms residue transfer
- Vacuum cleaning of Barge and Vessel bottoms
- Bulk tank transfer, load and unload
- Hazardous waste recovery and transfer

## TECHNICAL DATA

- Height 158cm
- Width 100cm
- Length 186cm
- Weight 1000kg
- Air consumption 600CFM at 85psi to 100psi
- Suction inlet 100mm (4")
- Discharge outlet 100mm (4")
- Handles solids to 75mm (3")

# SX500

## HIGH VOLUME MINING SLIMES PUMP



### SX500 HIGH VOLUME SLURRY/SOLIDS PUMP

The SX500 High Volume Mining pump is primarily designed to transfer up to 60m<sup>3</sup>/hour (264USGPM) of semi viscous muds and slimes. The unit operates via a twin tank system which allows one tank to fill whilst the other discharges giving virtually constant operation.

The SX500 High Volume Mining Slimes pump is completely air powered and operated which renders the unit intrinsically safe with a zone 1 approval rating. Both load and fill cycles can be adjusted via pneumatic timers to maximise product throughput.

### FEATURES

- High volume transfers up to 60m<sup>3</sup>/hr (264USGPM)
- No internal workings
- A one man manual or automatic operation
- Optional 400, 600 and 750CFM jet packs available
- No moving parts in contact with product
- Dual Fork/Crane frame standard
- Optional exhaust air box available

### APPLICATIONS

- Transfer of mining slurries
- Tailings pond cleaning
- Filter media transfer
- Hazardous waste recovery and transfer
- Thickner cleaning
- Effluent pond and digester clearing
- Power station ash pond cleaning
- High volume mud transfer

### TECHNICAL DATA

- Height 158cm
- Width 100cm
- Length 186cm
- Weight 1200kg
- Air consumption 600CFM at 85psi to 100psi
- Suction inlet 100mm (4")
- Dual discharge outlets 100mm (4")
- Handles solids to 75mm (3")

# SX700

## E-VAC IN LINE VACUUM PUMP



### SX700 E-VAC IN LINE VACUUM PUMP

The SX E-Vac In Line Vacuum Pump is designed as an in line system allowing the conversion of a standard pipeline into a fixed vacuum system.

The E-Vac can be fitted to a range of pipes including HDPE, steel or even flexible suction hose which offers considerable flexibility.

Operating on a variable range of air supplies the SX E-Vac In Line Vacuum Pump can consistently deliver up to 25" Hg+ of vacuum enabling the capture and transfer of most materials.

The unit can be installed with various nozzles ranging from 100CFM for viscous liquid transfer up to 280CFM at 85psi to 100psi for solids recovery.

The E-Vac must be installed on a 30 deg angle or higher but becomes a virtual straight through system ideal for tank cleaning, ship hull installation or hard access sumps with variable contents.

### APPLICATIONS

- Conveyor boot end trouble spots
- Sump cleaning
- Confined space installations
- Tank and pit cleaning
- Hazardous waste recovery
- Drilling mud transfer
- Open sump installations
- FPSO tank cleaning

### FEATURES

- 100% air powered operation
- Intrinsically safe
- No internal workings
- High vacuum and high airflow
- Fully automatic operation
- Can be fitted to any piping configuration
- Robust construction
- Ideal for use in confined spaces
- Also available in Class 3 carbon, 316 stainless steel or polyurethane coated tanks

### TECHNICAL DATA

- Height 60 cm
- Width 50 cm
- Weight 145 kg
- Air consumption 100-280CFM at 85psi to 100psi+
- Up to 25" Hg+ (85kPa) vacuum
- Suction inlet and Discharge outlet 75 mm (3") 100 mm (4")
- Discharge outlet 100 mm (4")
- Handles solids to 50 mm (2")

# SX1300-LRU

## LIQUID RECOVERY UNIT



### SX1300-LRU LIQUID RECOVERY UNIT

The SX1300-LRU Liquid Recovery Unit is a 100% compressed air powered centralised multipoint vacuum unit which offers the operator a combination of high velocity vacuum points.

The SX1300-LRU was designed to operate across a range of air supplies and can accommodate a combination of two 50 mm (2") and one 75 mm (3") vacuum lines which can be up to 50 metres (164ft) in length.

The SX1300-LRU Liquid Recovery Unit has no moving parts in contact with the material being pumped and can handle materials that would significantly reduce the performance of, or damage a standard vacuum unit.

### FEATURES

- 100% compressed air operation
- Intrinsically safe
- 1300 litre holding tank
- No internal moving components
- Manual or fully automatic operation
- High vacuum and very high airflow
- Low pressure discharge
- Multiple vacuum inlets
- No filtration or screening basket required

### APPLICATIONS

- Rig floor clean-up
- Shaker house clean-up
- A centralised vacuum unit
- Pit cleaning and mud transfer
- Spillage recovery

### TECHNICAL DATA

- Height 160 cm
- Width 180 cm
- Length 210 cm
- Weight 880 kg
- Air consumption 150-420CFM at 85psi to 100psi
- 25" Hg+ (85kPa) vacuum
- Suction inlet 2 x 50 mm (2") and 1 x 75 mm (3") Camlock
- Discharge outlet 100 mm (4")



# SX1000-V

## HIGH VOLUME SOLIDS PUMP



### SX1000-V HIGH VOLUME SOLIDS PUMP

The SX1000-V High Volume Solids Pump is a high velocity, heavy duty solids pump, capable of capturing high density slurries via a strong 25" Hg vacuum combined with high velocity airflows.

The SX1000-V can transfer up to 50 m<sup>3</sup>/hr (220USGPM) depending on the materials and distances involved.

The SX1000-V High Volume Solids Pump has no moving parts in contact with the material being pumped and can pass rags, bolts and many other items that would render a standard impeller pump, inoperable.

### FEATURES

- 100% compressed air operation
- Intrinsically safe
- Fully portable
- No internal moving components
- Manual or fully automatic operation
- High vacuum and very high airflow
- Delivers up to 1000 metres (3280ft)
- High solids content (up to 80%) transfer

### APPLICATIONS

- Spillage recovery and transfer
- Large dam desilting
- Sump cleaning and desilting
- Tank bottoms and sludge extraction
- Palm oil pond desludging
- OBM transfer and pit cleaning
- Bentonite and sand transfer

### TECHNICAL DATA

- Height 240 cm
- Width 180 cm
- Length 250 cm
- Weight 750 kg
- Air consumption 600 to 750CFM at 85psi to 100psi
- 25" Hg+ (85kPa) vacuum
- Suction inlet 100 mm (4")
- Discharge outlet 100 mm (4") or 150 mm (6") via NPT, BSP or Victaulic Coupling
- Handles solids to 75 mm (3")

# SX SMS

## SLURRY MANAGEMENT SYSTEM



### SX SLURRY MANAGEMENT SYSTEM

The SX Slurry Management System is a fully automatic slurry dewatering system that can take both solids laden slurry or fines laden water from several sources simultaneously, dewater and deliver a dry product back into the production system. The SMS can dewater around 30,000 litres of slurry per hour returning up to 30 m<sup>3</sup> (39 yd<sup>3</sup>) of material back to belt, skip or even bag per 24hour.

The SX SMS units are designed as stand alone operations capable of transforming what was previously a troublesome but unavoidable side effect of mining, slurry, into a saleable product exiting the pit. The benefits of employing as SMS increase greatly due to the amount of sediment removed from pump lines. This in turn significantly reduces wear and tear on a mine's normal centrifugal pumps.

Compact, robust and simple in design, manufactured in 316 stainless steel for durability, each unit has the capacity in throughput to operate 24/7 and be totally cost negative.

### FEATURES

- Intrinsically safe (ATEX compliant)
- Fully automatic
- Available in three sizes, 197 (10,000 L/PH), 280 (20,000 L/PH) and 366 (30,000 L/PH)
- High 30,000+ litre/hr throughput
- Air or electric operation
- Skid fork mounted
- Robust, compact and simple operation

### APPLICATIONS

- Longwall slurry control
- Tailings and ash pond cleaning
- Mining fines recovery
- Hazardous waste recovery
- Mine slurry dewatering
- Increasing tailings dam holding capacity
- Removing slurry hazards from work area
- Filter media dewatering

### TECHNICAL DATA (SMS 280)

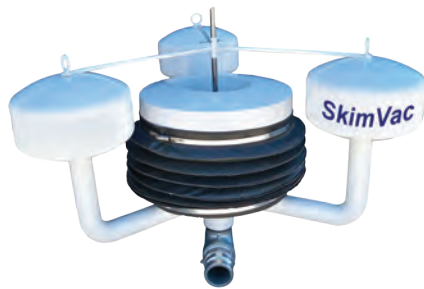
(MODEL ILLUSTRATED)

- Height 330cm (10'8")
- Width 153cm (5')
- Length 630cm (20'7")
- Weight 845kg (1863 lb)
- Inlet 2 x 50mm (2"), 1 x 75mm (3") and 1 x 100mm (4")
- Discharge outlet 100 - 150mm (4 - 6")
- Handles solids to 80mm (3")+
- Manufactured in 316 stainless steel
- SMS 366 and the SMS 197 models also available

# ACCESSORIES

## SUCTION AND DISCHARGE CONNECTIONS

### SKIM-VAC



The SkimVac is a liquid remediation unit that allows a measured amount of the surface material to be skimmed and recovered or removed via vacuum.

Manufactured in 316 stainless steel the SkimVac is a surface stabilised mobile unit that attaches directly to an SX60 or similar pump and will remove any floating material from a liquid surface.

With only one moving part, the SkimVac is ideal for the recovery or capture of oil spills or nearly all types of floating debris in applications such as algae removal, marina maintenance, surface remediation and power station water source maintenance. Units are 100% vacuum operated and do not require any other power source.

### PICKUP NOZZLES



Pentair Southern Cross manufactures a complete range of pick-up nozzles that can both assist and enhance the collection performance of SX Solids Pumps.

Lightweight and manufactured in 304 stainless steel as standard, nozzles are designed to be simple to connect and easy to use.

### SNORE BOXES AND STRAINERS



Pentair Southern Cross manufacture a range of snore boxes and strainers in a variety of sizes to prevent blockages when pumping with a submerged suction line.

The snore box is a simple means of capturing as much material as possible, whilst excluding oversize particles and ensuring the pumps keep transferring at maximum capacity

Snore boxes are available for 75mm and 100mm suction lines and feature a simple Camlock connection.

### FLOOR ATTACHMENTS



Southern Cross floor attachments are designed to maintain the high vacuum and excellent airflows supplied via SX Solids Pumps when cleaning liquids from smooth surfaces.

Manufactured in 304 stainless steel and robust in construction, the Hoover Heads maximise the suction area in contact with surface, ensuring the rapid capture of liquids on the deck or rig floor.

These units are ideal for the rapid recovery of spills of oil based mud or similar material.

Units are available to suit 50mm, 75mm and 100mm suction lines.

### "BOOSTA" AND AIR ASSIST NOZZLES



Southern Cross "Boosta" and Air Assist Nozzles were designed primarily to boost both pick up and in line convey velocities. The air enters the nozzle via either an anular eductor or Air Assist jet which whilst creating its own vacuum, accelerates the product and aerates the material as it passes down the tube into the convey line.

Variations are available or individual Eductor Nozzles can be developed for both task and material. All nozzles are manufactured in 304 stainless steel unless otherwise specified.

Both versions are available with either valve, remote or trigger actuation.

The "Boosta" allows for the accelerated recovery of extremely viscous products along with dryer material such as powders, fibres, grains and sand etc.

Southern Cross also manufacture both the "Boosta" and Air Assist attachments for direct coupling in-line. This can significantly increase both vertical lift and discharge capabilities of all Southern Cross SX Solids Pumps.



#### DISCHARGE DEAD HEADS



Pentair Southern Cross manufacture a complete range of gravity drop boxes "Dead Heads" in both tubular and rectangular arrangement. Designed to be either slung or hard piped and solid mounted, Southern Cross "Dead Heads" are a versatile and convenient way to deliver your recovered product exactly where you want it. With product delivered at pace, the "Dead Head" is designed to absorb the shock and then let gravity take its course.

Manufactured in powder coated mild steel, the unit's come with either Camlok, threaded, shouldered or grooved victaulic fittings. Installed correctly, the exit area is designed to deliver 100% of the product to an area, skip or moving conveyor belt no wider than 800mm.

#### CUTTINGS CAROUSEL

The Southern Cross SX800 Cuttings Carousel is designed to enable the controlled discharge of cuttings delivered from SX Solids Pumps to a skip or confined location.

The Cuttings Carousel can rotate through 360 degrees which in turn allows for the filling of multiple skips depending on the available space.

These units are adjustable for height and length, to suit the requirements of operators.

#### SUCTION AND DISCHARGE HOSES

Pentair Southern Cross can supply a range of suction, discharge and air supply hoses and associated fittings to operate the full range of SX Solids Pumps in a wide range of applications.

Hoses and fittings can be supplied individually or fully assembled with pump units.

A wide range of suction and discharge attachments and accessories are available to work with the SX Solids Pumps range. Pentair Southern Cross can supply fully integrated turn key solutions which are simple to set up and easy to use with a single operator.



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