



SPIRAC[®]

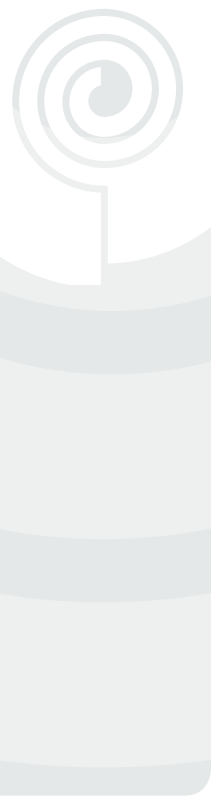
Solid Handling Solutions

INNOVATIVE HANDLING SOLUTIONS THAT WORK.

RELIABLE. TRUSTED. COST EFFECTIVE.

- ▶ Shaftless Spiral Conveyors
- ▶ Screening Solutions
- ▶ Grit Handling
- ▶ Inlet Works Packages
- ▶ Sludge Handling

WWW.SPIRAC.COM



SPIRAC® PROVIDES SOLIDS HANDLING SOLUTIONS FOR MUNICIPAL AND INDUSTRIAL WASTEWATER

Municipal screening, grit and sludge handling are our primary focus, but SPIRAC® also offers conveying, dewatering and washing solutions for industrial applications.

For over 40 years SPIRAC® has been specialised in shaftless screw conveyor systems for sewage treatment, paper, food, biomass and waste handling industries.

With offices located around the world, SPIRAC® has the ability to offer technical solutions gained from international experience, designed to suit local needs. Our experience ensures cost effective solutions are always possible.

Skilled engineers are available to assist with selection and specification at all times. Most importantly, SPIRAC® supports its equipment and takes pride in ensuring successful installations.

Your SPIRAC® team

SHAFTLESS SPIRAL CONVEYORS

SPIRAC® shaftless spiral conveyors are designed for the transport of otherwise difficult to handle materials, such as municipal dewatered sludge, wastewater screenings, grit, industrial sludges or other sticky, viscous, stringy materials.

The SPIRAC® shaftless design eliminates the need for intermediate and end bearings and allows higher filling rates and lower RPM's. This results in less wear and consequently less maintenance and down time. Although the spirals can be made of many different materials, our primary special steel from Sweden has mechanical properties which allow us to convey great distances in single troughs.

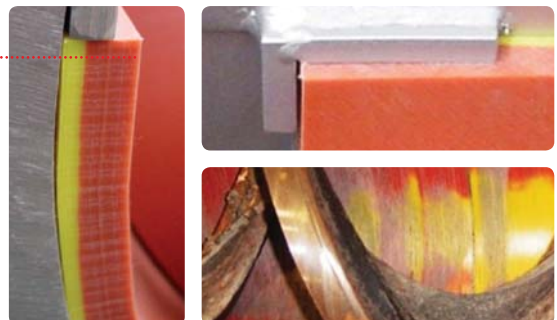


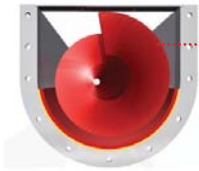
FEATURES AND BENEFITS

- ▶ Low RPM for long life expectancy to wear components
= Virtually maintenance free
- ▶ Low power usage= Energy savings
- ▶ Less wear = Less down time
- ▶ Space saving
- ▶ Eliminating intermediate and end bearings allows efficient and direct transfer into another conveyor
- ▶ Handling of large objects, up to trough diameter
- ▶ Totally enclosed troughs: fully sealed lids, gasketed joints for tight odour and mess containment
- ▶ Direct drive: long continuous runs on a single gearbox

LINER DURAFLO® TYPE SPX

SPIRAC's® proprietary liner, DURAFLO® Type SPX, is an ultra-high molecular weight polyethylene with special fillers for abrasion resistance and a low coefficient of friction manufactured with a convenient two color wear indicator. DURAFLO®, is designed specifically to ensure long life. The liner has a snap-in, snap-out feature enabling easy replacement.





U-trough

HORIZONTAL SHAFTLESS CONVEYORS

U-troughs are used for horizontal conveying and inclines up to 30 degrees

- ▶ Fully enclosed with bolted or quick release lids and inspection ports
- ▶ Commonly stainless steel, also available in mild steel painted, galvanized or FRP/GRP

HORIZONTAL SHAFTLESS CONVEYOR PROJECTS



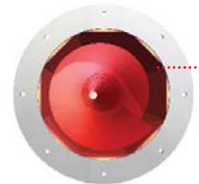
Long continuous sludge run



Truck outloading system



High capacity sludge outloading system



Octagonal
(OK-trough)

VERTICAL SHAFTLESS CONVEYORS

Octagonal (OK-trough) are used for steeper inclines or vertical transport

- ▶ Commonly stainless steel, also available in mild steel painted, galvanized or FRP/GRP

VERTICAL SHAFTLESS CONVEYOR PROJECTS



Typical two stage vertical lift sludge conveyors feeding a storage silo



72 degree and 40 degree inclined OK trough sludge conveyors

SCREENING SOLUTIONS

Operating primarily in the water and waste industries, however with experience in many other application fields, SPIRAC[®] has designed, installed and maintained systems worldwide for over 40 years. Key product areas of experience are screenings, grit and dewatered sludge handling.

SPIRAC's[®] screening handling equipment brings together our unique spiral technology to create systemised solutions that are streamlined and robust. SPIRAC[®] supplies solutions that can consist of a standalone unit, or a complete screening material handling system consisting of screens, conveyors, washers, dewaterers and SPIROTAINERS[®].

SPIROGUARD[®]



The SPIROGUARD[®] Compact Cleaner combines screening, conveying, dewatering and removal of solids from effluent and process streams in one compact machine.

The unit is robust, easy to install and, with only one moving part, virtually maintenance free. Slow speed combined with automatic intermittent operation ensures a reliable and efficient system.

STEPGUARD[®]



A Self-Cleaning Fine Screen for water treatment applications

The STEPGUARD[®] has been designed to start where the step screen finishes with its "stair shaped concept". The screen contains innovative design solutions for many of the outdated designs currently used on similar screen, and represents the strongest and most durable fine screen on the market.

SPIROWASH[®]



Typically, a washer dewaterer washes out the organic material, reduces the volume and weight of the screenings and compacts them.

The machine continuously washes out organic material whilst mechanically compacting and dewatering the remaining inorganic portion. The SPIROWASH[®] Dewaterer is a robust and simple machine, non-sensitive to varying qualities of screenings and contents of grit.

SPIROWASH[®] HI-IMPACT



A comprehensive means of achieving very high levels of screenings washing, dewatering and volume reduction.

The SPIROWASH[®] Hi-Impact system is designed for sites where very high degrees of cleanliness and odour removal are required. The system utilizes a two stage washing process and a separate screw compactor to achieve industry leading quality results.

SPIROPRESS®



The SPIROPRESS® (SP) Compactor Dewaterer Press is a simple yet effective dewaterer that combines conveying, dewatering and volume reduction in one compact unit.

The SPIROPRESS® is a conveyor with a press zone at one end which makes long conveying and simultaneous dewatering an ideal systems solution. The SPIROPRESS® offers high capacity and efficient operation resulting in low power consumption and minimal maintenance costs.

SPIROTAINER®

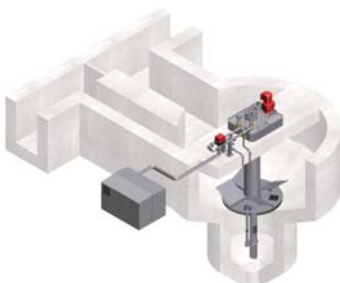


SPIROTAINER® is an autofilling containment and road transport system designed for the hygienic and automatic handling of foul or objectionable waste materials. SPIROTAINER® eliminates the need for a specialized screenings building. Extending system capacity is as easy as adding another SPIROTAINER®.

Combined with SPIRAC® spiral conveyors systems, offensive waste products are transported, stored and removed from site with no operator intervention, virtually odour, vermin and insect free. A permanent onboard spiral conveyor and control system provides automated filling and level control while a robust door sealing system ensures leak proof transport even with a large liquefied component.

GRIT HANDLING

As an industry leader and global supplier, SPIRAC® supplies well proven systems for the removal of grit from wastewater. Systems can be devised using an array of efficient products for separating, washing, conveying and finally storing and transporting in a SPIROTAINER®.



SPIRAC® GRIT VORTEX

A range of grit collection and outloading units suitable for pre-cast concrete structures or as a stand alone structure in stainless steel or painted carbon steel.

The SPIRAC® Grit Vortex is designed to separate high density grit particles from lower density organics by means of a rotary vortex impeller. Grit particles travel to the perimeter of the round tank and settle into the bottom sump where they are intermittently extracted by means of an airlift blower or grit pump. Organics and larger objects remain suspended and leave the chamber to be processed downstream. The simplicity, effectiveness and trouble free design of the SPIRAC® Vortex Grit will ensure many years of trouble free operation.



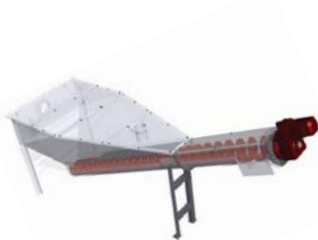
SANDWASH[®]



This is designed for those applications where any visible organics on the grit is unacceptable.

Fed from a vortex, aerated grit chamber, detritor tank, or any other means of grit separation either by airlift or grit pump, the SPIRAC[®] Grit Washer utilizes a multi-stage washing process to remove organics and other larger, lower density objects to be returned to the downstream biological treatment.

SANDSEP[®]



The SANDSEP[®] is a highly efficient unit designed to separate grit from process and effluent streams.

The design of the inlet section reduces turbulence to a minimum and creates an optimum flow pattern for efficient settling. The solids settle in the bottom of the classifier which contains a spiral. The spiral transports the sediment slowly to an included or vertical conveyor which then discharges the grit.

INLET WORKS PACKAGES

COMBIGUARD[®]



COMBIGUARD[®] has been developed to meet the requirements of small municipal communities for the inlet works in wastewater treatment plants for the removal of screenings and grit.

The COMBIGUARD[®] unit combines the features of the SPIROGUARD[®] Compact Cleaner (CC) Screen and SANDSEP[®]. Add to these features screenings washing, dewatering and flotation to create a complete inlet works system.

Type 1: Involves STEPGUARD[®] with or without manual bar screen by-pass, Mini Washer and SAL (Rectangular tank with horizontal & incline conveyors).

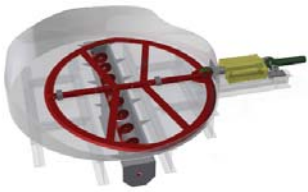
Type 2: Involves STEPGUARD[®] with or without manual bar screen by-pass, Mini Washer, Vortex Unit and SANDSEP[®]. We offer a wide range of equipment combinations, enabling this type of COMBIGUARD[®] to be adapted to any requested flow size.

Type 3: SPIROGUARD[®] "piggybacked" on a SANDSEP[®] with optional manual bar screen bypass.

Type 4: SPIROGUARD[®] with or without Manual Bar Screen by-pass and a SAL (Rectangular tank with horizontal & incline conveyors).

SLUDGE HANDLING

SPIRAC[®] supplies complete and robust sludge handling systems that are both low cost and low maintenance. Conveyors and storage systems combine the unique spiral technology with highly efficient design.



SLIDING FRAME SILOS

SPIRAC's[®] sliding frame silo systems complement our spiral conveyor live bottom expertise and expand our experience and competence in offering sludge storage solutions in the water and waste water industries as well as various industrial applications.

A SPIRAC[®] sliding frame is an extremely efficient extraction system that allows non-free flowing materials to be discharged from a flat bottom silo or receiveal bunker. These bulk materials can easily block the bottom of a silo by forming a bridge of material. The action of the hydraulically driven sliding frame breaks any bridges that may form over the extraction screw and pushes/pulls the material toward the centre of the silo for discharge.

LIVE BOTTOM SILOS

SPIRAC[®] have been the market leading supplier of live bottom silos and bunkers for the wastewater industry since the 80's. Hundreds of successful installations are in operation around the world, many in service for several decades.

SPIRAC[®] livebottom silos and hopper systems are custom designed for application in the wastewater industry, especially for the storage, transfer and unloading of dewatered sludges. While the silos and hoppers follow standardized design features, sizes and orientations can be customized to suit most customer requirements.

SPIRAC Limited

SPIRAC[®] House
Thorpe Way
Banbury OX16 4AB, UK

Tel: +44 (1) 295 270 335

Email: conveyors@spirac.co.uk

