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A TRADITION OF INNOVATION

With over twenty-five years of experience, Solitec is a pioneer in the solids handling industry. Worldwide patents confirm Solitec's innovative approach. Using the very latest technology, the company earns respect for its designs, development, manufacturing and commissioning skills.

An extensive list of 'blue-chip' customers reveals a special ability to meet high quality standards of both equipment production and systems installation. Experienced engineers, based in Blaenavon, Gwent, control all aspects of the design and construction of complete solids handling and processing plant anywhere in the world - from oil rigs in the North Sea, to tea blending in the USA, complying with the most demanding international codes of practice and specifications.

Solitec - the solids handling and processing specialists with a tradition of innovation.

SOLIDS TECHNOLOGY

Solitec's skilled team of engineers constantly seek new solutions to solids handling problems.

Every detailed change, new product specifications and complete plant installation designs are processed by a sophisticated CAD system, permitting fast reaction to customer needs. Application records and equipment specifications are stored on a network of microcomputers, providing instant accessibility for reference and exacting standards of spare parts.

Solitec's dedication to problem solving extends to a fully equipped Test Plant. Here customers may try any solid handling equipment with samples of material before making investment decisions, or joint development programmes may be undertaken.

MANUFACTURING

Solitec's modern, 5,000 square metre factory at Blaenavon in South Wales is well stocked and fully equipped with fabrication facilities to produce processing equipment in mild and stainless steel, aluminium, plastics and rubber.

The CAD systems not only speed up initial design work, but enhance manufacturing accuracy and improve quality control.

All Solitec products are rigorously examined by trained quality control staff to the highest international standards.



Solibin for the North Sea

CAD technology



Silo fabrication

DISCHARGERS

In many cases of materials stored in silos and hopper, discharging leads to problems such as rat-holing, bridging, degradation and segregation. The discharge of powder and bulk solids in a controlled manner is vitally important to modern process systems. Effective discharge is only possible through understanding the properties of the material and analysing the whole system.

With over twenty-five years of experience in this field of technology, Solitec have an unrivaled data bank and a wide range of dischargers, from which to select the most practical solution to meet any discharge need.

BIN ACTIVATORS

Solitec has sold in excess of 30,000 Bin Activators worldwide. Using total system approach, the correct specification induces mass flow, providing gentle controlled discharge. Solitec has supplied activators up to 4.3m in diameter and for silos up to 18,000 tonnes, to withstand 1 bar pressure and with flow of 100 tonnes/hour, handling glass, wet sand, rubber crumb and food stuffs.



Soliflo

SCREW BIN DISCHARGERS

Combining variable speed drives with a wide variety of configurations to suit the hopper shape and material characteristics. Solitec's Screw Bin Dischargers offer an efficient means of positive extraction and feed rate control.

Taper or straight screws in single or multi flight combinations, rectangular and circular shaped inlet and outlets. Specifications available are as varied as your needs. Our systems approach, considering all aspects of the installation, will reveal the precise Screw Bin Discharger for the application.

SOLIFLO

The Soliflo is a novel discharge aid evolving from the Bin Activator. In this pneumatically operated device the inner cone raises and lowers automatically, offering infinitely variable flow, if required. With the cone in its fully lowered position, the Soliflo becomes a shut off valve. Vibrators can also be applied and the design is readily adaptable to round, square and rectangular shaped bins and silos, and is fabricated in various materials in sizes ranging from 775mm to 1766mm.

BIN AGITATORS

Bin Agitators produce a fully live bottom bin effect through a contra-flow action which continuously conditions material in store.

Standard size is normally 3 metres long. In any multiple of twin-flights widths. Through experiment and calculation, the ratio of height to width is chosen to produce maximum effect, generally with a fixed speed drive.

Continuous ribbon flights formed from round bar are frequently used whilst adjustable paddle blades can be specified to allow for on-site adjustments to cope with product changes.



Paddle Bin Agitator

CONVEYING AND ELEVATING

Solitec are specialists in conveying and elevating for the Solids handling industries. With their vast experience on Screw Conveyors and Bucket Elevators, and the innovative approach that has brought about the novel Cleanveyor. Solitec can identify and solve your conveying needs.



CLEANVEYOR

Cleanveyor is an anti spill, anti dust belt conveyor, which uses low friction side plates instead of rollers, eliminating noise and vibration. The material pressure assists the sealing of the belt, preventing spillage. This lack of spillage reduces friction losses, which allows for steeper angles of ascent and saves on power consumption. A totally enclosed version with dust extraction is available.



Screw conveyors available as custom built or X-Stok

SCREW CONVEYOR

Solitec's Screw Conveyors are available as custom built or X-Stok. At the factory or depots troughs, flights and ancillary components of all sizes are comprehensively stocked to ensure quick delivery of standard equipment. For custom built machines. CAD facilities accelerate the design and manufacturing service.

BUCKET ELEVATOR

The Bucket Elevator is the most simple and efficient machine for elevating bulk solids in most processing and handling systems. The Solitec Bucket Elevator consists of an assembly of modular components, which can be arranged to cope with internal free-standing lift heights of up to 50 metres, with handling capacities from 23-27 cubic metres per hour.



Bucket Elevator

WEIGH FEEDERS

The demand for high accuracy, continuous weighing equipment in the dry material handling industry has increased considerably in recent years. So much that a range of weighing systems, collectively known as Soliweigh, have been launched. This range includes Screw Feeders, Vibratory Tray Feeders, IBC Feeders, Carousel Systems and Multi Ingredient, Multi Recipient Systems, suitable for batch or continuous weighing.

SOLIWEIGH - SCREW FEEDERS

The Soliweigh Continuous Gravimetric Weigh Feeder consists of four basic units; the Microprocessor Controller, the Motor Control Box, a Loadcell Platform and Solitec's proven Screw Feeder. It has been designed to operate in most handling systems offering average feed rate accuracies of $\pm 0.5\%$ (or better) of set rate over an output range of 10 to 5000 kilogrammes per hour. For larger volumes or greater weights, the Solitec Metering Screw Feeder is specified.

SOLIWEIGH - IBC SYSTEMS

The system makes use of the controlled discharge from the Solibin IBC System. The discharge station has a variable conical probe which lifts and vibrates, promoting smooth flow. With the bin on load cells accuracies of 0.05% can be achieved.

SOLISPIN

The Solispin is a centrifugal de-watering unit used mainly for surface drying of extruded plastics. It de-waters on a continuous flow basis, obtaining a final water content as low as 0.04%. The Solispin design concept produces attractive savings in space and initial capital and running cost compared with other drying methods.

SIMPRO

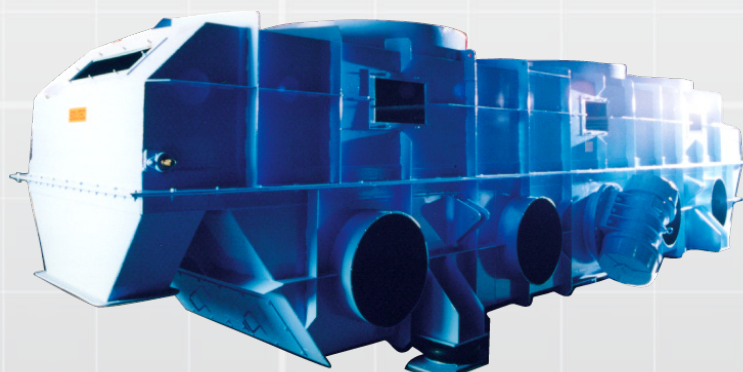
The Simpro Vibrating fluid Bed Processor has been developed as a versatile machine capable of adaption to a number of important continuous process where intimate contact is required between a gas and a solid. Applications for this machine are the cooling, drying and heating of solids.

SOLIWEIGH - VIBRATORY TRAY FEEDERS

For high accuracy (0.05%) weigh feeding in small quantities of dry material. Vibration breaks down the shear strengths of the material forcing it into the tray in a very controlled manner. It is suitable for both batch and continuous operation.



Solispin



MIXERS

Solitec's wide range of mixing systems covers every process industry needed, from small continuous mixers to very large batch systems with load cells integrated into computer controllers. Powders, pastes, granular and fibrous materials are all thoroughly mixed to exacting quality control standards with absolute reliability and repeatability, and Solitec's long experience in solids handling technology ensures smooth, controlled discharge into vehicles, bags or process plants.

CONTINUOUS MIXERS



Continuous Mixer

Built specifically to meet the precise requirements of the application, this mixer features close clearance adjustable paddles arranged on single or twin horizontal shafts.

Material is fed in at one end of the mild or stainless steel vessel, mixed by a predetermined 'back mixing' action, and then discharged continuously at the other end of the unit.

A range of Continuous Mixers from 250mm to 1300mm diameter in single or twin paddle agitator construction fabricated in mild or stainless steel as required.

HORIZONTAL BATCH RIBBON MIXERS

A standard range of interrupted spiral mixers available in sizes from 600L to 10,000L working capacity. The interrupted ribbon agitators ensure optimum efficiency, whilst stuffing box shaft seals with outboard bearings, avoid product contamination.

Jackets can be fitted for heating or cooling applications. Sealed bearings and covers also available to suit vacuum and gas purge requirements.

Cutting wires facilitate efficient mixing of pastes and powders such as fat in flour and oil in fish meal.

PLOUGHSHARE MIXERS

For high shear applications in a range of sizes from 200L to 6,000L working capacity and available in either mild or stainless steel as required. They have a soft start action, yet high speed mixing capacity with excellent dispersion of very small quantities of additives. Agglomerate may be broken down by fitting side cutters to the trough. Mixes in seconds.



Ploughshare Mixer

FOUNTAIN MIXERS

Primarily used for batch blending and live storage, Fountain Mixers are custom-built from stainless steel or mild steel in any size up to 60,000L to suit application.

VERTICAL SQUARE MIXERS

High speed operation Vertical Square Mixers for free-flowing powders. They feature a free standing square body with a specially designed conical bottom into which is fitted a tapered helical screw. A combination of carefully researched screw design and vessel shape ensures even material distribution in short times.

IBC SYSTEMS

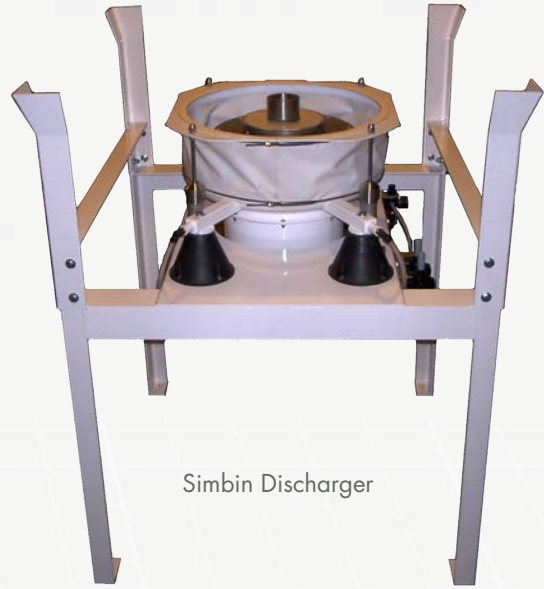
The Solibin is an IBC System based on the proven principle of the Soliflo discharger valve. It has a spin steel cone which seats in the bottom of the bin providing an effective seal until it is lifted and vibrated by the probe on the discharge station. This induces mass flow, and discharges difficult products smoothly and completely. The flow can be preset or variable and part empty bins can be removed without risk or leakage. The Simbin is similar to the Solibin, only it uses the principle of the Bin Activator as its means of discharge. The Simbin, too, promotes mass flow and complete discharge, but does not offer the degree of control of the Solibin, as it is only capable of preset discharge rates.

BINS

Standard containers are available in Mild or Stainless Steel, Polyethylene or Aluminium in 1, 1 1/2, 2, 2 1/2 and 3 cubic foot capacities. They are designed for total transportability and storability. They can be moved by fork lift, crane, pallet jack or on rails and can be stacked on top of each other.

WASHING STATIONS

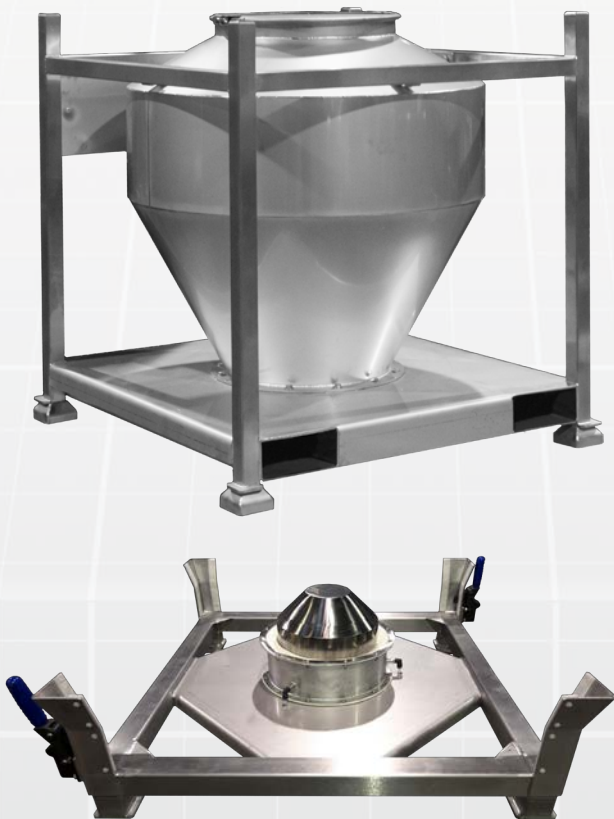
Working facilities can be provided to pharmaceutical standards. Manual or fully automatic operations are available, and working may include any combination of hot or cold, internal or external cycles, and rapid hot air drying.



Simbin Discharger

TUMBLE BLENDING

These systems are available to blend up to 3 tons using single or multiple axis technology. Multi axis blenders may be fitted with auto load systems for enhanced productivity. A multi operational system provides a quiet blending action whilst lifting and positioning the container for discharge.



Stainless Steel Solibin



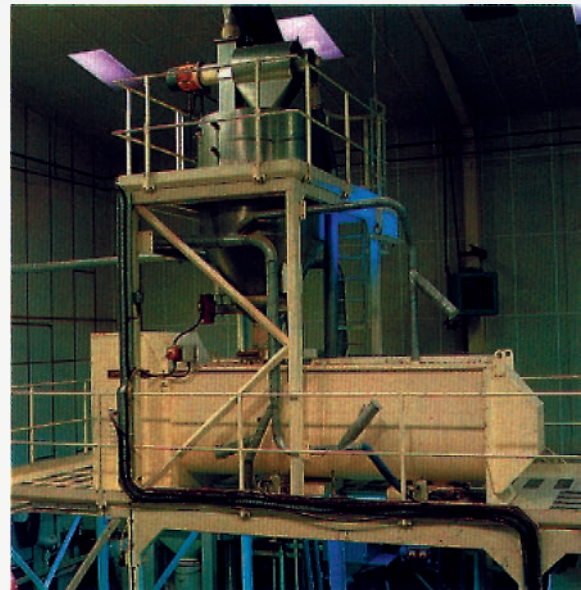
Tumble Blending System

PROCESS PLANT ENGINEERING

In the fields of bulk and intermediate storage, discharging, feeding, conveying, elevating, mixing and processing, Solitec can best meet the solution to any bulk handling need. Each product is designed to complement the others, forming a formidable array of equipment ideal for integration into complete plant systems, or a single components in an existing installation.

Adopting a systems approach, the company produces highly efficient plant designed for maximum operational economy. Freedom from sub-system design, specification and purchasing allows turnkey customers to confidently concentrate on wider aspects of plant management.

All major contracts are assigned a senior engineer in charge of a project team. This team works closely with the customer to ensure all design requirements and performance standards are met, documentation is accurate, commissioning is on time and operating and maintenance staff are trained.



Mixing Plant



Conveying and Elevating Plant



Simpro System