



Portasilo[®]
Bulk Handling Systems

Chemical sector

Bulk storage and handling solutions for the chemical industry

Bespoke bulk storage and handling systems individually designed for safe, efficient, fully controlled handling of dry bulk chemicals. With 60 years of design and manufacturing expertise, Portasilo can devise the optimum solution for even the most abrasive, volatile or cohesive chemical materials.





OPTIMUM HANDLING SYSTEMS FOR EVERY

DRY BULK CHEMICAL

Portasilo designs, manufactures and installs complex storage and handling systems for every type of dry bulk chemical product – and we've been doing it for more than 60 years.

Chemical industry clients

Portasilo has supplied bespoke storage and handling systems for leading names in the chemical handling industries worldwide, including:

- » Asian Paints
- » Akzo Nobel
- » BASF
- » Berger Paints
- » Colin Stewart Minchem
- » Dupont
- » Glaxo Smithkline
- » Henkel
- » Huntsman
- » Katon
- » Lotte Chemicals
- » Sigma Paints

Industry leaders in bulk material storage, discharge, conveying and dosing.

That means you can rely on our expertise to design the optimum safe, efficient, cost-effective handling system for your powdered chemicals, no matter how explosive, dusty, cohesive or corrosive.

In our experience, supplying systems to customers worldwide, we have overcome every challenge in chemical material handling, from aggressive and abrasive materials to project specific, such as accelerated leadtimes or complex site installations. Our combined knowledge, experience and resources enable us to supply tailored solutions to meet your individual requirements.

How can we help you?

Contact our specialists to find out how we can design, manufacture and install a complete storage and handling system for your dry chemical materials. To provide a responsive service to customers worldwide, we have offices in the UK and India.



UK

+44 (0)1904 624 872



INDIA

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Everything we supply, from silos to dischargers and conveying systems, is manufactured in our own purpose-built workshops, giving us full control over the quality and specification of your systems.



Quality-assured, safe, efficient chemical handling solutions



Portasilo storage, discharge, metering, weighing and conveying systems can handle everything from very fine dust to pelletised products. We can supply ATEX-rated equipment to protect against the risk of explosions, as well as a host of silo safety systems to safeguard employees, site visitors and the wider environment.



We have particular expertise in providing solutions for the following types of chemical:

- » Paint powders
- » Sealants, adhesives and building products
- » Fertilisers
- » Petrochemicals
- » Plastics and rubbers

Everything we supply, from silos to dischargers and conveying systems, is manufactured in our own purpose-built facilities, giving us full control over the quality and specification of your systems. The complete storage and handling solutions we design and install can help to improve the efficiency and safety of your plant, and reduce your running costs.

Portasilo

The bulk handling specialists

Portasilo is a leading global manufacturer and supplier of storage and handling systems and plant for dry bulk materials. With the manufacturing resources and technical expertise we have built up over more than 60 years, you can rely on us to design, manufacture, install and maintain complete, bespoke bulk-handling systems for every type of particulate material.

Portasilo is part of the Shepherd Group, one of the UK's leading family-owned businesses, with a 120-year history of quality craftsmanship in the construction and manufacturing sectors.



STORAGE, DISCHARGE AND CONVEYING



Storage

Silos designed for safe, uncontaminated storage



Choosing the correct silo size and geometry for the material you need to store is essential. Portasilo can advise you on the optimum vessel design, and manufacture precisely the silos you need to store your materials safely and without deterioration.

Our robust, high-performance silos range from sack-tip hoppers to large-volume silos up to 15 metres in diameter, with capacities from 10m³ up to 5,000m³. Silos up to 4.6 metres in diameter can be manufactured in one piece and delivered by road. Larger silos are fabricated in sections, then assembled on site.

Each silo is designed specifically for your project, and you can choose from carbon steel, stainless steel or aluminium, depending on the nature of the material you wish to store and your budget.

Discharge

Effective, efficient, controllable discharge systems



Portasilo manufactures and installs an extensive range of silo discharge systems, including mechanical, vibratory and aeration systems to suit all types of material.

The market-leading low-profile Rotoflo discharger offers a highly controlled, reliable means of discharging difficult materials from silos. If you are storing hygroscopic, potentially cohesive materials like titanium dioxide, the Rotoflo discharger promotes efficient outflow at a controlled rate, while minimising preferential flow and preventing the formation of stagnant zones within the silo.

Our experienced technicians will be able to advise you on the most appropriate discharge system for your material, operational requirements and budget.

Conveying

Conveying systems tailored to your operational needs



Portasilo manufactures a range of vacuum, dense-phase and pneumatic conveying systems, as well as mechanical screw conveyors for highly controlled material transfer.

Your conveying systems can be completely enclosed, to provide a clean, safe and environmentally friendly solution. Portasilo has a long track record of providing safe, effective conveying systems for hazardous chemical powders and granular materials.

For example, we devised a closed-loop nitrogen pneumatic conveying system for transferring highly explosive adipic acid, eliminating the risk of dust explosions. For a plastics handling plant, we designed and installed a high-pressure, low-velocity transfer system to prevent the formation of 'angel hairs' when conveying PET (polyethylene terephthalate) pellets.



“The market-leading low-profile Rotoflo discharger offers a highly controlled, reliable means of discharging difficult materials from silos.”

CASE STUDY

Materials handled

Portasilo bulk-handling systems can be designed to handle any dry bulk material. Here's a sample of the materials we have handled in various sectors:



Paint

- » TiO₂ (titanium dioxide)
- » China clay
- » Calcite
- » Talc
- » Dolomite



Sealants, adhesives and building products

- » Gypsum
- » OPC (Ordinary portland cement)
- » GGBS (Ground granulated blast furnace slag)
- » Snowcal
- » Limestone filler
- » Adipic acid



Fertilizers

- » Urea prill & fines
- » Potash
- » Sodium nitrate
- » Calcium sulphate
- » Copper carbonate
- » Zinc oxide



Petrochemicals

- » Sodium carbonate
- » Sulphur pellets
- » Ash
- » Hydrated lime



Plastics and rubbers

- » High density polyethylene E pellets
- » PET
- » Polystyrene
- » PVC granules

COMPLEX POWDER-HANDLING SYSTEMS DELIVERED FOR MAJOR NEW PAINT PLANT

When India's largest paint company wanted to construct a major new paint manufacturing facility, it chose Portasilo for its expertise in handling difficult powders, its ability to design bespoke bulk-handling systems and its complete turn-key service package.

The scale of the project was such that construction was planned in three phases, allowing the plant to begin operations as quickly as possible. Work began with the installation of seven 180m³ powder storage silos, pneumatic conveying systems, weigh hoppers and charge bins. Rotoflo dischargers were specified to guarantee an accurate, controllable flow of hygroscopic titanium dioxide powder from the silos.

Phase one was completed on schedule, creating a plant with a capacity of 35,000kl per year. Phase two saw the installation of five more 180m³ silos, and two further charge bins, bringing capacity up to 50,000kl per year.

A year later, Portasilo was commissioned to complete phase three, which involved installing 14 silos with a capacity of 200m³ each and two 350m³ vessels, all fitted with Rotoflo dischargers, feeding into seven weigh hoppers.

This brought the plant up to its target capacity of 150,000kl per year. Phases two and three were completed while the plant was operational, with no interruption to normal processes.



FULL TURN-KEY SERVICE PACKAGE

– MAKING YOUR LIFE EASIER

“They delivered what they said and provided back-up throughout, responding to any issues we had. There were no problems and the aftersales has been excellent.”

Full suite of services

- » Design
- » Delivery
- » Civil engineering
- » Electrical and instrumentation
- » Installation
- » Commissioning
- » Project management
- » Servicing and maintenance
- » Spare parts supply
- » Repairs
- » Plant upgrades

When you work with Portasilo you will have access to a complete package of products and services, giving you a single supplier for your entire project.

As well as supplying all components for your storage and handling solution, our specialists will design, deliver, install and commission the complete system.

We can handle all civil engineering works, electrical control systems and install all electrical and instrumentation equipment. We will project manage every part of the process, ensuring you get precisely the bulk handling system you need, delivered on schedule and to budget.

After-sales support – keeping your plant running at optimum efficiency

Our services do not end once your system is installed. You can call on us at any time to carry out maintenance or repair work, and to provide regular servicing to keep your plant working at optimum efficiency.

We stock a comprehensive inventory of spares, and offer a rapid response if you need a replacement part – helping to minimise any downtime. Our engineers can also complete plant upgrades and modifications, where required, to ensure your plant keeps pace with changing operational requirements or new legislation.



Portasilo®

Bulk Handling Systems



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