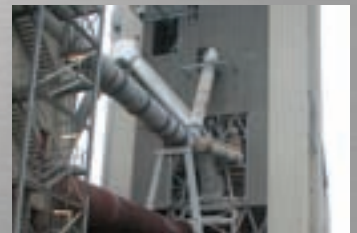


# ROBSON

HANDLING TECHNOLOGY



» World Class Materials Handling

Winners of The Sheffield Chamber of Commerce  
Outstanding Business of The Year Award





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## » World Class Materials Handling

From its origins in Sheffield the spiritual home of modern quality engineering over 100 years ago, Robson has grown to become a leading international designer and manufacturer of industrial bulk handling conveying systems and technology.



### Unrivalled expertise and experience

Over the years Robson has developed unrivalled expertise in the design, manufacture and installation of materials handling conveyors for airports, bulk handling companies, the cement and environmental industries, glassworks, sugar processors and many others.

Robson is continually developing and extending its capabilities in all its core markets and beyond. We have applied conveyor system solutions in almost every sector of business and industry including automotive, paper and postal, coal, steel and chemicals, brewing, building materials, newspapers and food production.

And all this is on a truly international scale including Europe, Africa, the Middle and Far East, including India and Hong Kong.

### Conveying confidence world-wide

The Robson Group is a profitable business that generates sales in excess of £30m and has the experience, resources, skills and finance to handle both individual and major turnkey projects in the UK, Europe and across the globe.

We pride ourselves on being a forward thinking organisation that continues to invest in the most up-to-date plant, equipment and systems. However, people are our most valuable asset





and Robson employs more than 250 highly trained staff with a wide range of innovative and practical skills that cover:

- > Expert advice through consultancy
- > Concept design and computer animated simulations
- > Manufacture, assembly and works testing
- > Quality control and accreditation
- > Turnkey project management
- > On-site management
- > Installation, commissioning and after sales
- > Responsive lifetime customer service

Our people take a hands-on approach to everything they do and work closely with client project teams, building long-term partnerships that ensure that every project delivers the most practical solutions – on time and on budget.

Plus, Robson's commitment to quality service continues throughout the life of the project and is supported by a complete range of after sales service facilities including maintenance, repair,

parts, and the facility to re-manufacture major sections or components if required. This has seen us win repeat business from many of our clients.

### Capability and quality

Our Sheffield factory and its nearby subsidiary RJD Engineering, have over 13,500sq.m of workshop space where we carry out all the manufacturing processes in-house including welding, profiling, drilling, sheet metal work, surface treatment, structural steel and stainless steel fabrications. We can also assemble complete handling systems in-house for testing before shipment, to ensure fast on-site assembly and reliability. And because it's all in-house we are able to impose and maintain rigorous quality standards, in line with our ISO 9001 quality accreditation.

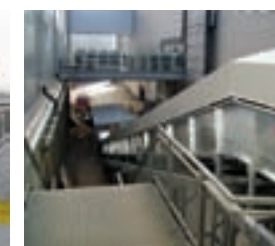
### Main industry sectors

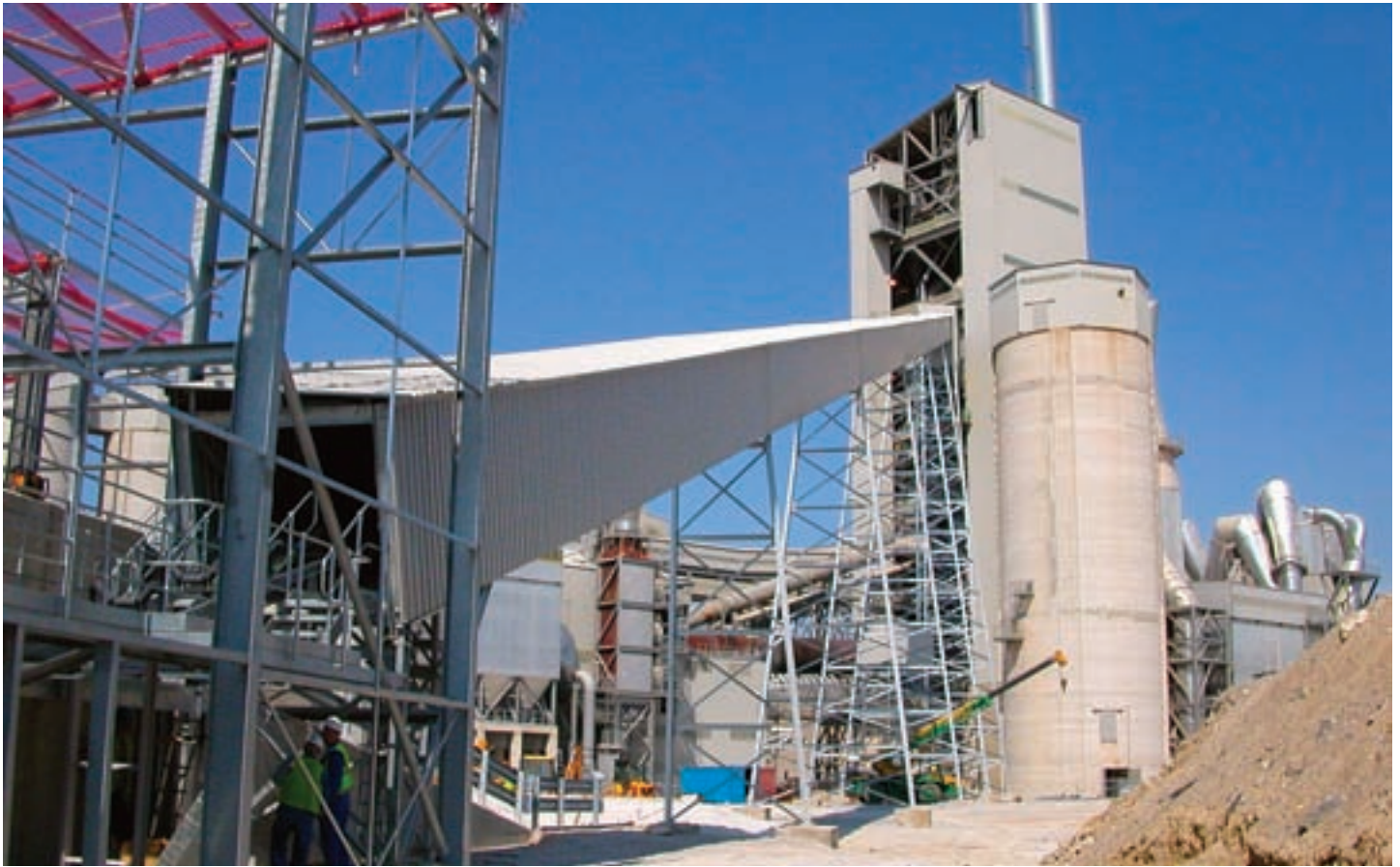
Robson has the design, manufacturing and installation expertise to supply almost any bespoke industrial conveying system to a wide range of clients worldwide.

Increasingly, Robson products are in highest demand in the following specific markets:

- > **Environmental:** Effective handling of hazardous or waste materials
- > **Glassworks:** Processing, distribution and recycling tasks
- > **Cement:** Raw material intake, distribution, cement manufacture and alternative fuel handling solutions
- > **Sugar:** Bespoke systems for beet, pulp, raw, wet and white sugar
- > **Airports:** Check-in, sortation, arrivals and X-ray systems
- > **Bulk Handling:** Conveyors, stackers and reclaimers for large quantities of bulk materials

For more information about our work in these main industry sectors visit our website [www.robson.co.uk](http://www.robson.co.uk). You can also see a summary of our extensive product ranges at the back of this brochure.





## » Environmental

With ever changing legislation and pressure from governments, environmental issues such as waste disposal, alternative fuels and industrial recycling have never been higher on the international agenda.

### Designing the future today

These are demanding times. The Environmental Industry is growing fast and Robson is well placed to offer future-proof solutions to companies that are involved in handling hazardous or waste materials and industrial recycling.

The production of alternative fuels is also a growing challenge as Governments look to the use of waste materials such as worn tyres and biomass as a source of 'Green' power. Robson is already meeting this challenge and is currently designing, manufacturing and installing equipment that is not only precision engineered, but robust enough to withstand the handling of tough materials, safely and carefully.

### Environmental conveyor systems

**Ash Handling Screw Conveyors:** These heavy-duty screws are designed to handle the ash, sand and incombustibles discharged at the bottom of fluidised bed incinerators and can withstand temperatures of up to 900°C.

**Sludge Cake Handling Conveyors:** A variety of troughed belt and screw conveyors, including push-plate units, designed to handle sludge cake from filter presses, belt presses and centrifuges.

**Solids Removal Conveyors:** For use in sewage treatment works, Robson produce inclined screw units for grit removal and side-walled belt conveyors to handle coarse stringy

screenings and retain liquid that is then drained away safely via a gradual fall. Stainless steel construction provides increased resistance to corrosion.

**Waste Feeders:** Designed primarily for controlled feed of raw domestic and industrial refuse into fluidised bed incinerators. These unite a number of features that detect and relieve potential blockages including a hydraulically movable shaft with monitoring devices, automatic stripper control and a hydraulically operated pusher quadrant fitted to the mouth of the feeder hopper.



## » Glassworks

From concept to completion Robson provides all types of equipment for handling glass batch and cullet. We have a reputation for quality of design and service, together with a comprehensive range of integrated purpose-built equipment

### Making a clear difference

Robson provides well designed, cost effective, low maintenance systems with detailed attention paid to conveyor interfaces, access to equipment for operation and maintenance, prevention of cross contamination and system flexibility for emergency situations. Allied to this we utilise the latest wear resistant materials that help to improve reliability, reduce maintenance and increase productivity.

Quality of batch and protection of plant are always foremost in our designs, for this reason our systems incorporate the latest technology in metal detection and magnetic separation, and provide a facility to reject extraneous objects.

Our services to the glass processing industry include design of complete batch plants, mixed batch distribution services, glass plant modernisation, weighing, dosing and mixing systems, hot and cold cullet handling systems and electrical control and management information, all complemented by a full training and back-up service.

### Glassworks conveyor systems

**Batch Plants:** Robson have extensive experience of working on batch plants producing the highest quality of batch requirements by utilising the latest technology to provide accurate weighing, dosing and mixing systems.

**Batch Distribution:** To complement the batch plant Robson can provide all the necessary equipment to transfer the mixed batch to the furnace. We can design everything from semi-manual systems for small capacity plants up to fully automated systems feeding furnaces with capacities of up to 900 tonnes per day, each receiving a different mix of batch and cullet.

**Environment and Safety:** 'Green' issues, legal requirements and the demands of the industry itself are a growing challenge. Robson applies its engineering skills to the design of Cullet recycling systems, dust extraction equipment and low noise level controlled venting systems that provide safer environments. We also design and build specialised systems to collect, process and return highly abrasive materials such as reject hot glass, containers or plate glass to the furnace for re-melting.





## »» Cement

Few industrial processes place a greater demand on conveying systems than cement manufacture. From the crushing and distribution of quarry stone through to the handling of abrasive materials and products, Robson can provide the right solution.

### Heavy duty solutions

In designing machinery and systems that operate in one of the toughest industrial environments we know, Robson's project engineering team combine years of in-depth industry knowledge and experience to produce the most cost-effective and productive solutions.

Our engineers utilise the latest computer simulation techniques when designing systems that cover the crushing, distribution, elevation and extraction processes of cement production. Alongside bespoke conveyor systems we also design and build ancillary products such as hoppers, silos, chutes, bunkers and feeder systems for every stage of cement manufacture and supply.

### Cement conveyor systems

#### Crushing, Screening and Sizing Conveyors:

For the transport of heavy duty raw material from primary and secondary crushing. Each conveyor section is designed to give the most effective handling of the size and composition of the raw material as it moves along the manufacturing process.

#### Elevating, Screw and Feed Conveyors:

Belt and chain drag conveyors, apron feeders, bucket elevators and centrifugal discharge elevators for handling between floors or at different levels, provide efficient, high speed, spill free transportation of raw materials.

**Extraction and Weighing:** Where 'loss of weight' measures are not practical, valves or slide gates beneath the hopper or the silo allow materials to feed on to a drag-out conveyor, apron feeder or vibro conveyor. Materials can then be weighed at a dedicated weigh feeder/conveyor, which regulates the extract rate from the silo hopper.

**Warehousing and Distribution:** For the final process where the cement is stored in unit loads in the form of bags and pallets, Robson powered roller and chain conveyors will work effectively from bulk store to fork truck handling and final shipment. We also supply a range of unit load/unload stations, gauging stations, positioning and centralisation stations, turntables and accumulation assemblies.





## » Sugar

With over 40 years experience in this sector leading manufacturers such as British Sugar and Tate & Lyle have confidence in Robson's ability to understand and react to their particular needs.

### Exceeding the demands

Robson are well aware that the food processing industry, especially sugar production, places extra demands on handling equipment. We meet and exceed these demands through our expertise in the design, manufacture, installation and commissioning of complete sugar handling complexes that process whole beet and pulp, raw and wet sugar.

Our work extends to civil and building works, mechanical handling plant, dust extraction equipment, air conditioning and PLC electrical work plus handling components such as screw conveyors, mixers, elevators and de-watering processes.

Because food processing is an ever evolving industry Robson operate a policy of continual research and development into the design and manufacturing techniques employed in the production of conveyor systems.

This ensures that our products provide reductions in maintenance and down-time, elimination of finished product contamination and lower lifetime costs.

### Sugar conveyor systems

**Whole and Pulp Beet Handling:** The way whole sugar beet is handled is of prime importance to the quality of finished products. In order to minimise degradation of whole beet we pay careful attention to the layout and design of our beet flumes, de-watering screw conveyors, troughed belt conveyors and chute work. This care also extends from beet slicers all the way through to the bagging and outloading stations, where Robson provide the very latest technologically advanced conveyor systems to handle the pulp.

**Raw Sugar Handling:** Extensive knowledge of raw and VHP sugar has enabled Robson to design, develop and install cost effective intake, storage and retrieval systems for sugar refiners across the world. Troughed belt conveyors, belt and bucket elevators, chain and bucket elevators, troughed 'tripper' conveyors, troughed shuttle conveyors and belt feeders are a small sample of the conveyors produced to handle raw sugar.

**Wet Sugar Handling:** Reliability of equipment is at its most crucial in the production and handling of wet sugar. Robson supply highly reliable wet sugar conveyor systems to some of the largest sugar producers in the world. Our systems include screw conveyors, mixers, elevators and belt conveyors, centrifuges and dryers. This reliability is also inherent in our white sugar handling systems.





## » Airport

The continuing rise in the movement of baggage and freight is placing huge stresses on airport infrastructure. Check-in or airside, departures or arrivals - Robson is a major player in the fast moving world of airport baggage handling systems.

### High flying technology

From its first contract in the early 1980's the demand for Robson's services has really taken off. To complement the skills of our in-house specialists in mechanical, structural and electrical engineering, we use simulation software to verify the capabilities of the systems we design. Robson also has its own test circuit where new designs can be assessed and showcased to potential clients.

### Baggage handling systems

**Check In Conveyors:** Check-in positions should not only be well designed and aesthetically appealing, they must also contribute to efficient baggage check-in areas.

Our installations incorporate automated weighing, labelling and despatch functions at each desk position and deliver bags onto a collecting conveyor leading to the airside baggage hall for X-Ray and sorting.

**X-ray:** Robson supply everything from simple manually operated units to multi-layered, fully automatic in-line smart X-ray systems. These systems include bag separation, overhead detection, secure tracking technology, integrated Level 1 & 2 screening and automatic Level 3 diversion.

**Sortation:** Baggage handling is a complex operation and our sortation systems ensure that every bag is directed to the correct flight.

This is achieved through a seamless link between our tilt tray sorters, high speed pushers and ploughs, vertical sortation units and carousels.

**Baggage Carousels:** The arrivals baggage reclaim area is a high profile public area where passengers rightly expect to collect their bags with minimum delay. Our 'behind the scenes' conveyors, complemented by flat and inclined reclaim carousels with overlapping slats and high quality stainless steel finishes, ensure that everything runs smoothly.



## » Vibration Technology

Robson design and manufacture standard and bespoke vibratory equipment that is used extensively in applications across all the main industry sectors we are involved in.

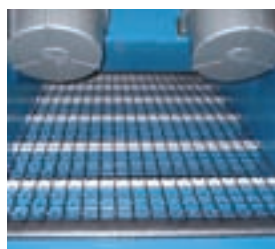
### Flexibility across the board

Supplied as part of an integrated turnkey project or as individual units, Robson vibratory feeders, screens and charges are suitable for a multitude of uses that offer true flexibility. Applications include scalping screens, de-watering systems, trough and tubular feeders, furnace chargers and silo discharges.

Robson will tackle any production challenge and create a suitable solution by designing and manufacturing the following types of equipment to meet a specific client brief.

- > Electro-magnetic vibratory feeders
- > Unbalanced motor vibratory feeders
- > Screens
- > Twist screens
- > Compact feeders

The simplicity and robust design of our vibratory equipment ensures dependable long-life performance that is backed up with our full lifetime service and support package. This includes the provision of a full replacement part service including controllers, trays and drives.





## » Bulk Handling Solutions

A demanding industry demands the best and Robson project engineers deliver innovative and precision-engineered bulk handling solutions to clients worldwide.

We believe that the main feature of a well designed system is the attention to detail given to conveyor interfaces, access to equipment, platforms and walkways for operation and maintenance and co-ordination between building and steelwork services.

We work readily as a production partner in every project we work on. As such, we take the bulk of the responsibility and put wholehearted commitment into achieving your objectives now and throughout the whole working life of the installation.

### Bulk handling conveyors

Robson conveyors are robust in construction, CAD designed and proven to provide cost effective, low maintenance conveying systems. These are just some examples of the range of bulk handling solutions machinery that we can supply.

- > Accumulator conveyors
- > Air conveyors
- > Belt conveyors
- > Bucket conveyors
- > Bulk material handling
- > Chain conveyors
- > Drag conveyors
- > Food handling conveyors
- > Gravity conveyors
- > Industrial screw conveyors
- > Scraper conveyors
- > Slat conveyors

In addition to these excellent products we also offer our Airglide and Push Floor handling systems.

**Airglide solutions:** The Robson 'Airglide' offers a reliable, cost-effective solution to bulk handling. Realistically priced, and with low installation costs, these systems can be installed very quickly. They also cost less to run and require minimum maintenance, therefore saving you time and money.

#### Other Airglide advantages

- > Safer than conventional conveyors
- > Lower inventory costs
- > Environmentally friendly
- > Reduced belt wear
- > Faster belt speed
- > No troughing rollers
- > Higher capacity

**Push Floor:** Robson's 'Push Floor' system is a cost effective solution engineered with the latest technology. It gives 100% guaranteed delivery of hard to handle material into or out of the process line with no over-spill or wastage.

Incorporated into a reception, buffer or export scheme the Robson 'Push Floor' uses a series of moving wedge profile frames controlling the migration of material to an outlet. A slow sustained motion ensures minimum strain on components thus promoting better performance and a longer life.



# Product Range

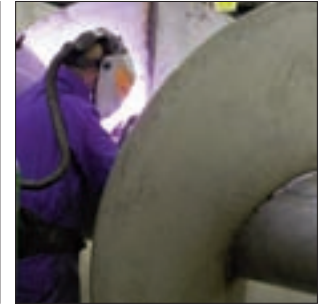
## Belt conveyors

- > Flat belt conveyors
- > Troughed belt conveyors
- > Sidewall belt conveyors
- > Shuttle conveyors
- > Tripper conveyors



## Screw conveyors

- > Full bladed
- > Ribbon type
- > Paddle type
- > Inclined
- > High temperature



## Chain conveyors

- > Scraper conveyor
- > Push-plate conveyor
- > Slat conveyor
- > Apron plate conveyor



## Roller conveyors

- > Accumulating
- > Powered
- > Gravity
- > Portable
- > Turntables



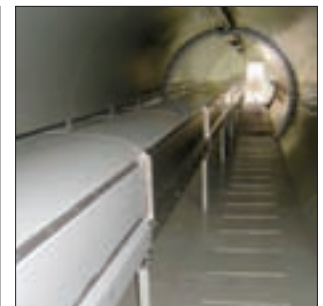
## Elevators

- > Belt and bucket
- > Chain and bucket
- > Magnetic
- > Sidewall belt



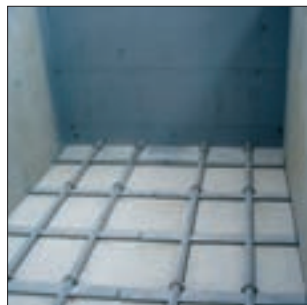
## Airslide conveyors

- > Realistically priced
- > Low installation cost
- > Faster and safer to run
- > Minimum maintenance
- > Save time and money



## Push floor

- > 100% guaranteed delivery of materials
- > No over-spill or wastage
- > Minimum strain on components
- > High performance and a longer life



## Vibration technology

- > Electro-magnetic vibratory feeders
- > Unbalanced motor vibratory feeders
- > Screens
- > Twist screens
- > Compact feeders



## Storage equipment

- > Hoppers
- > Silos
- > Live bin bottoms
- > Stockyard distribution systems



## Steelwork

- > Buildings
- > Support steelwork
- > Gantries and transfer towers
- > Access and walkway steelwork



For more information about Robson, its services and products visit: [www.robson.co.uk](http://www.robson.co.uk)

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» **Robson** – a truly global company



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