

Solids and materials handling

The UK boasts a multi-billion pound industry in this area



It covers the design, supply, manufacture and support for equipment used in the moving of bulk commodities, with a strong emphasis on engineered solutions. The UK sector includes around 500 companies and exports up to 40 per cent of its products, including conveyors and conveying systems; dust collection and control equipment; load cells and level control systems; process instrumentation and control; and granulation, grinding and weighing equipment.

The solids handling industry serves customers in a wide range of sectors, including chemicals, plastics, minerals and coal, pharmaceutical, cement, water treatment, quarrying, iron and steel, oil and gas, foods (including flour and grain) and animal feeds.

RESEARCH, TRAINING AND TECHNOLOGY

The UK is home to leading centres of research and development which have extended the industry's capability to tackle the engineering and technological challenges of materials handling. The Wolfson Centre, at Greenwich University, for example, has more than 30 years' experience in solving materials handling

problems, and offers expertise in many areas of the industry from hopper and silo design to instrumentation and control. Equipment suppliers and users regularly collaborate with the centre's researchers on investigations of issues such as particle erosion and degradation, wear prediction and online flow property measurement, to name but a few.

BULK MATERIALS HANDLING

The UK sector comprises a range of companies that specialise in the design, manufacture and installation of bulk materials handling and storage systems and equipment including conveyors, chutes, hoppers, silos, metering systems and associated cylinder-filling equipment.

Leading companies in the field produce, supply install and maintain plant for the bulk storage and handling of particulate materials for customers around the globe. They supply full systems including silos, conveying, mixing, batching and weighing equipment. Retrofit solutions to improve existing heavy industrial plant are also designed and installed. ➡



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SOLIDS AND MATERIALS HANDLING

SPECIALIST: MATERIALS HANDLING

The UK also boasts some of the best in specialist materials handling equipment manufacturers offering fully integrated ranges of equipment. Systems are also designed to meet

specific requirements of customers in the technologically advanced, hygiene and safety-critical food, chemicals, plastics, pharmaceuticals and minerals industries.



Some of the world's foremost specialist materials handling equipment manufacturers are to be found in the UK

The sector boasts companies that offer a comprehensive service in providing turnkey bulk handling solutions whether they be rail or ship unloading systems, biomass handling systems or coal chute design.

Others specialise in supplying to the power generation sector, offering heavy-duty conveying systems, stacker reclaimer and bucket wheel coal handling equipment. Solutions tailored for the power generation market include new, upgraded and replacement mill and conveyor drives, installation, inspection and commissioning and the repair and overhaul of existing drives.

Other businesses offer lining services to the bulk materials handling and mineral processing industries. A wide range of technically advanced materials, to provide long-lasting solutions to the problems caused by abrasive wear, is available.

Producers of bulk bags, bag filling machines, palletising equipment, big bag/ sack sealing machines can also be found in the UK.

CONVEYORS AND BELTS

UK conveyor and belt manufacturers have an international reputation for quality and reliability. The sector aggregates many years of experience in the design, manufacture and supply of a wide range of equipment, including screw conveyors, conveyor belts, pneumatic conveyors, bucket, belt and chain systems, portable conveyors, industrial vibrators and vibrating feeders.

Manufacturers offer single conveyors or complete packages, handling tonnages in excess of 5,000 TPH. Specialists include manufacturers of steep incline conveyor belts, which enable the transportation of loose bulk materials up to incline angles of 90 degrees with no spillage or transfer points.

In addition, the UK has highly experienced consultants who design bespoke conveyor systems, and have a reputation for solving the most challenging materials

The UK boasts extensive expertise in the design and manufacture of load cells and level-control equipment. In addition, loading systems are available for road tankers, open-top vehicles, ships, rail wagons and containers



handling requirements. Design capabilities range from small conveyor systems to complex high-capacity stockyard systems and long overland conveyors.

DUST COLLECTION AND CONTROL SYSTEMS

Customers seeking dust extraction and control systems will find in the UK suppliers of equipment for a range of purposes in this field, including dust extraction, filters, monitors and, of course, filter media.

The sector includes designers and manufacturers of complete ranges of dust collectors and centralised vacuum cleaning systems.

Dust control systems are designed to suit customers' specific needs, which allows other features such as explosion-protection systems, noise-reduction measures, stainless steel construction, flame proofing and spark minimising to be incorporated easily into any given design.

GRANULATION AND GRINDING EQUIPMENT

Another feature of the UK industry is the long and successful track record of companies that specialise in the design, manufacture and supply of bespoke systems for

granulation, grinding and coarse crushing; also pulverisers, systems for size reduction, fine-impact milling, classifier milling, jet milling and attrition milling.

The sector includes world leaders with decades of experience in providing process plant for drying, deagglomeration, fine milling, surface modification, micronising and classification of powders originating as filter cakes, slurries, sludges, granulates or coarse particles.

UK companies have supplied plant to thousands of sites across the globe and provide a range of complete systems based on multirotor cell mills, coarse grinding and pre-breaker mills, classifier mills, micronising mills, cone mills opposed jet mills, air classifiers and centrifugal sifters.

Equipment is suitable for the processing of a wide variety of minerals, chemicals, pharmaceuticals, food, plastics and waste products, with full installation, commissioning and support services. As a whole, the industry has a wealth of experience meeting clients' needs for turnkey solutions.

Some UK companies also offer the option of testing equipment and processes at their own test facilities. ➡



UK machine tool companies can offer customers the best solutions for improving productivity and remaining competitive

LOAD CELLS

The UK boasts extensive expertise in the design and manufacture of load cells and level control equipment. Loading systems are also available for road tankers, open-top vehicles, ships, rail wagons and containers, among others. Firms have the experience and expertise to design bespoke load cells or modify existing systems to improve performance.

PROCESS INSTRUMENTATION AND CONTROL

The UK offers a full range of process instrumentation and control equipment for materials handling applications. Products include level control and indication systems, industrial process instrumentation, moisture analysis, capacitance probes and metal detection equipment.

UK companies are renowned for innovation in stack particulate monitoring technology, compliance measurement instruments, filter performance and baghouse monitoring, as well as weighing and force sensing load cells. Strain gauges are also available for custom projects for harsh environments.

WEIGHING SYSTEMS

The latest weighing technology is used to create innovative, market-focused solutions. Products made in the UK include gravimetric feeders and weighers, batch/belt weighing systems, industrial weighing equipment, pressure sensors, force measurement systems, strain gauges and accelerometers.

Finally, the UK designs, manufactures and services equipment such as vessel monitoring systems, hazardous area equipment and a wide range of ancillary and software systems. ■

i FOR MORE INFORMATION

Solids Handling and Processing Association

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