

GO WITH THE FLOW

**AJAX DESIGN AND MANUFACTURE EQUIPMENT FOR
A WIDE RANGE OF SOLIDS HANDLING PROJECTS
IN ALL INDUSTRIES IN THE UK AND INTERNATIONALLY.**

AJAX IS WIDELY RECOGNISED AS AN INNOVATOR IN BULK SOLIDS HANDLING EQUIPMENT, FEATURING SUPERIOR DESIGN AND QUALITY MANUFACTURE.

Ajax Equipment Limited specialises in the design and manufacture of equipment to handle and process bulk solids. An independent, family owned company with a skilled, dedicated and conscientious staff, our facility of 3000 square metres incorporates technical support, a test centre, design engineering and extensive fabrication facilities for mild, stainless and special steels. Our design office uses 2D and 3D CAD technology to enhance the design process and technical services also provide consulting, powder and equipment tests. A strong customer focus is present throughout the whole company. Ajax applies over 45 years of in-depth knowledge of powder and solids handling to routinely solve process and operating problems such as poor flow and segregation. We exploit the latest developments in powder flow technology and our expert understanding of the fundamentals of helical screw mechanics. Demonstration and hire units are available for trials.

Benefits of working with Ajax:

- **Experienced engineering with in-house design and manufacture**
- **Efficient, reliable, solids handling equipment based on state-of-the-art technology**
- **Innovative and bespoke design**
 - **LynFlow™ technology for screw feeding, mixing and improving flow**
 - **Customised solutions including hopper design, our unique two-way feeder**

and more...

SCREW FEEDERS

AJAX provide an integrated approach to hopper and feeder interfacing including flow property assessment, screw geometry selection for effective discharge characteristics and unrivalled feeder performance. Feeders are made in mild steel, stainless and high duty alloys with a variety of finishes.

Features include:

- **Optimum flow regime generation**
- **Mass Flow feeders for gravity flow**
- **Application-specific single, twin, triple and multi screws for handling powders, granules, sticky and lumpy materials**
- **Excellent cleanability with retractable or quick release screws. SIP and CIP**
- **Agitated inlet hoppers for cohesive materials**
- **Direct End Discharge Facility with Integral Seal Valve Option**
- **Smooth output anti pulsing screws and LynFlow™ outlets**
- **Plug forming versions for thermal and process barriers**



Unique Lynflow™ Bi-directional feeders serving slot hopper outlets for:

- **Optimising holding capacity and extraction profile**
- **Delivering to two points, separately or simultaneously avoiding segregation and hang ups**



SCREW CONVEYORS

Ajax custom design screw conveyors with reliability, performance or process functions often beyond simple conveying. Specifically designed for awkward site installations including long conveyors without hanger bearings, delicate and difficult-to-handle materials or where containment, hygiene and cleanability are demanding.

Features available include:

- **LynFlow™ ribbon flights to resist build-up and clogging**
- **Positive transfer capability with even the most difficult materials**
- **Screw geometry and casing designs for successful handling of materials that are damaged or jam standard conveyors**
- **ATEX, Food and Pharma versions**
- **Wear resistant flight design for abrasive duties**
- **Pressurised and high containment**



AJAX
QUALITY BY PERFORMANCE
PERFORMANCE BY DESIGN

LUMP BREAKERS

Size reduction is a common feature of the chemical, pharmaceutical, food, mining and quarrying industries; from recycling polymers to preparing raw sugar for processing through to meeting stringent quality requirements for active pharmaceutical ingredients. Ajax lump breakers are ideal for reducing lumps, caked and bag set materials to a consistent particle size for ease of processing.



Features include:

- Range of sizes, rotor and grille designs
- Easy to operate and maintain
- Hopper, chute and sack tip versions
- Single and twin shaft models in mild, stainless and abrasion resistant steel

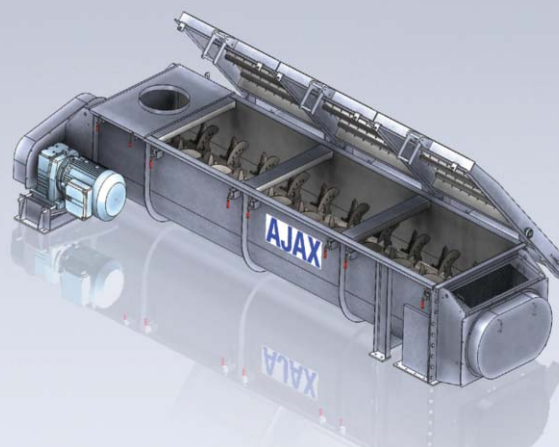
Ajax has an in-house lump breaking test facility. Hire units are available for on-site testing.

CONTINUOUS MIXERS

Can combine dry powders or mix with liquids, from cereal bars to ash conditioning. Single and twin screw versions configured for varying degrees of work to optimise mix quality. Liquid additions include pastes, syrups, foams, water or even nitrogen.

Features include:

- Ease of use and perfect mixing
- CIP, quick release augers, hinged and counter balanced covers
- Choice of Ribbon, Paddle and LynFlow™ flights for friable, sticky and awkward to mix ingredients
- Range of sizes from 75mm to over 1m dia. mixing screws
- Temperature controlled augers and casings using oil, steam and water
- Wear resistant and replaceable paddles for long-lasting use with abrasive products

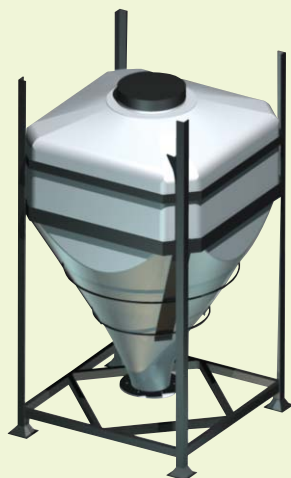


INTERMEDIATE BULK CONTAINERS

Ajax has two types of rigid IBC for the handling of even the most difficult flow bulk materials.

LYNFLOW™ BINS

These are special seamless-moulded IBC's of conventional stackable form, except that the outlet section is constructed to optimise gravity flow. Available in various sizes up to 2 cubic metre holding capacity, they enable awkward flow materials to be handled without the need for special discharge stations. Mild and stainless steel versions are also available.



AJAX INVERTABINS

Bins are filled in one orientation and are tipped over for discharge.

This feature carries many advantages:

- Flat base and profiled entry point secures maximum holding capacity
- Filling profile accommodates materials repose condition
- Provides an optimum hopper shape for discharge
- Single opening upwards during transit means no leakage
- Inverting upsets any time consolidation and gives reliable discharge



The inverting equipment can also be used for mixing or blending the bin contents.



DRUM EMPTYING

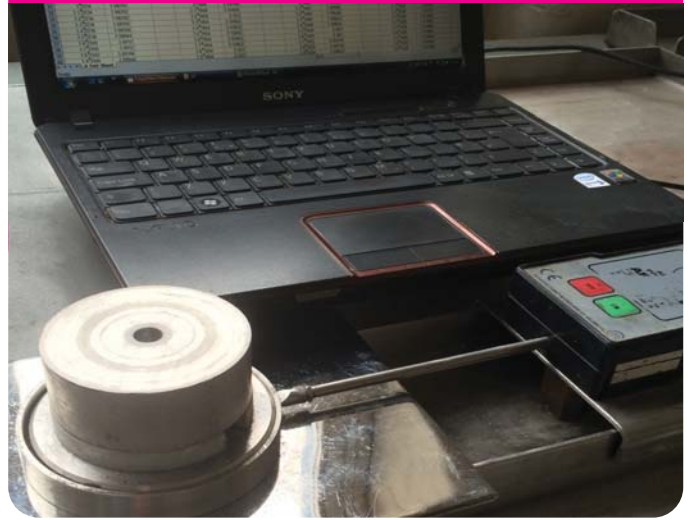
AJAX drum emptying system uses a screw to safely and positively extract the contents from a drum for further processing. No personnel handling of the keg is required, apart from removal of the top of the drum (or keg). It is then tipped through 90 degrees and brought into contact with the screw tip. As the screw penetrates the drum, material is transferred along the screw and delivered in a controlled manner into another container or process for subsequent use. Capable of handling containers up 300kg/200L and with screws of various designs, the discharge station can typically handle 12 or so drums an hour.

POWDER TESTING

Establishing a material's flow properties is important for understanding handling characteristics and for equipment design. Important properties are bulk density, wall friction and shear strength. Ajax perform tests in our facility or at customer's site. We have a range of feeders, conveyors, elevators, mixers and lump breakers for trials. We offer consultancy and supply retrofit solutions.

Ajax also manufactures a range of powder test machines:

- Wall Friction
- Vertical Shear
- Tensile Test
- Shear and Attrition
- Cohesion
- Compacted Bulk Density



HOPPERS

Ajax has wide experience in hopper design for handling a variety of materials: from large bulk chemical ingredients to fine pharma powders.

Ajax can:

- **Problem solve any inability to discharge on demand**
- **Avoid inventory being irretrievable due to 'ratholing'**
- **Counter time consolidation, segregation, density variations or uncontrolled 'flushing'**
- **Retrofit with Lynflow™ anti-segregation and flow promoting inserts to improve existing plant**
- **Provide a complete flow path approach to design solutions**



DESIGN CAPABILITY

Ajax offers a full solids handling equipment design service, from production of detailed arrangement designs through to final production drawings and 3D renders. With over 45 years' experience, Ajax is able to advise on potential interface issues with other equipment and how to avoid them.



Ajax can develop and provide project-specific handling systems. Equipment is supplied with CE mark or declaration of incorporation and can be certified for ATEX and PED. For food duties EU Hygienic Design standards, including BS EN 1672-2 (2005) and EHEDG are used. Ajax also produces in compliance with other international regulations and codes.

AJAX

QUALITY BY PERFORMANCE
PERFORMANCE BY DESIGN

CELEBRATING 45 YEARS OF EXCELLENCE

**KEEP IN TOUCH AND
FIND OUT MORE**

Register for our enewsletter and
Top Tips on solids handling

www.ajax.co.uk/mailgroup.htm

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