

# GET IN THE MIX



## AJAX MIXERS

**AJAX DESIGN AND MANUFACTURE MIXERS  
FOR A WIDE RANGE OF SOLIDS AND LIQUOR  
PROCESSING PROJECTS IN THE UK AND  
INTERNATIONALLY**

# AJAX KNOWLEDGE AND EXPERIENCE COMBINE TO OFFER THE OPTIMAL MIXER FOR YOUR PROCESS.

## FROM CEREAL BAR PRODUCTION TO ASH CONDITIONING, MIXING PHARMACEUTICAL POWDERS AND COATING PARTICLES, BLENDING PASTES AND INCLUSIONS.

### BENEFITS OF CONTINUOUS MIXERS

AJAX mixers produce a high quality mix at the 'scale of scrutiny' because of the efficient multiple and progressive actions of LynFlow™ paddles or ribbons. Homogeneity is quickly achieved and the reduced work input means low energy requirements. Particle attrition and damage to sensitive products are also minimised. Product transfer is concurrent with the mixing process so segregation and quality issues associated with intermediate storage and separate, sequential operations can be avoided. Reduced handling and mix quality are built in, so the rejection of large quantities and inconsistencies that can arise from batch manufacture are prevented. Easy cleaning with the ability to both clean-in-place and quickly change over the mixing augers means that downtime is reduced and cross contamination avoided. AJAX LynFlow™ ribbon and paddle flights gently mix and positively combine solids and liquids that differ in flow properties, size, density, or other tendency that might provoke segregation to deliver the correctly proportioned ingredient mix.

#### AJAX Features:

- Blending and medium shear mixing of wet or dry multiple ingredients.
- Efficient mixing with gentle handling of delicate ingredients.
- Single and twin screw versions in a wide range of capacities.
- LynFlow™ Ribbons or Paddles for sticky and difficult to mix ingredients.
- Temperature controlled augers and casings.
- Hygienic design to BS EN 1672-2 and EHEDG.
- Quick release mixing elements for product change over and cleaning.
- Straightforward to operate and maintain.
- Easy and safe access with removable or hinged covers.

### RANGE OF CAPABILITIES

- Process capabilities from 50kg/hr pharmaceutical powder blending to 100TPH ash conditioning.
- Homogenising chocolate and other pastes and incorporating inclusions.
- Combining cereals, crispies, nuts, fruits with sweet binders for cereal bars and clusters.
- Coating large particles with fines and developing granulation.
- Agile performance with interchangeable AJAX LynFlow™ Ribbons and Paddles.



- Thermal control of mix using liquid nitrogen, water, steam or hot oil.
- Food and Pharma quality construction and finish.
- ATEX and PED compliant variants.
- Counterbalanced covers for easy inspection and quick cleaning.
- Wear resistant versions and replaceable paddles.
- Complete mixing systems with integrated feeders.
- Extensive range of test machines for hire and trials.

# AJAX

QUALITY BY PERFORMANCE  
PERFORMANCE BY DESIGN  
CELEBRATING 45 YEARS OF EXCELLENCE

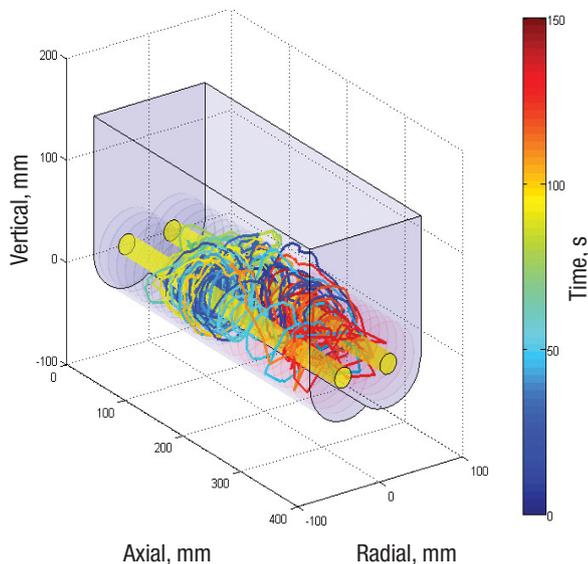


## OPTIMAL MIXING PERFORMANCE

AJAX technology for feeding and mixing is used in the UK government Advance Manufacturing Supply Chain Initiative (AMSCI) 'Project Chariot'.

Ajax is collaborating with several leading companies and universities to develop a novel system for fine particles using Ajax's continuous screw mixing technology. The University of Birmingham has been using Positron Emission Particle Tracking (PEPT) for the characterisation of mixing inside the AJAX Twin Screw Mixer. The testing and evaluation provides insight into forces and particle movements within the mixer and identifies key operational performance parameters for optimising mixing.

150 RPM and 0.6 m/s tip speed, Sulphate Powder



Positron Emission Particle Tracking (PEPT) for the Characterisation of Mixing Properties inside the AJAX Twin Screw Mixer.

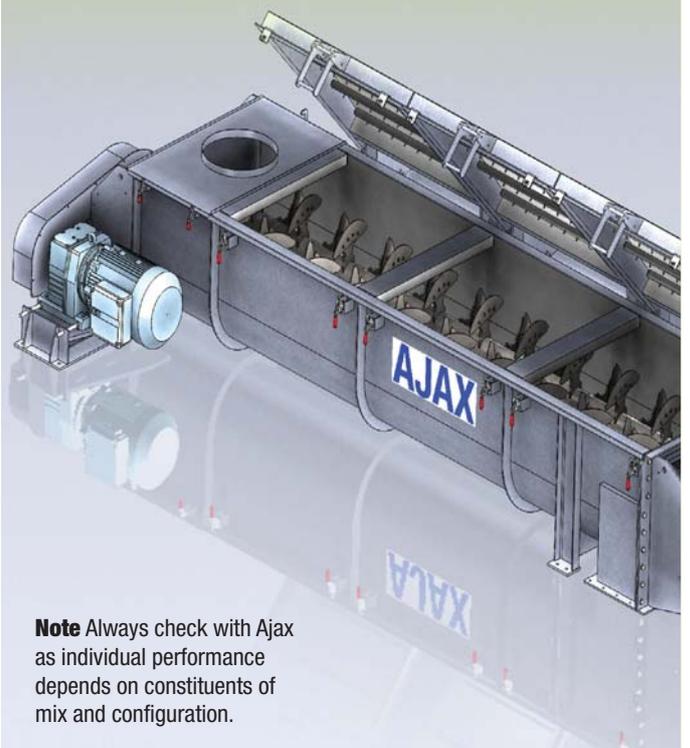
University of Birmingham, Project Chariot



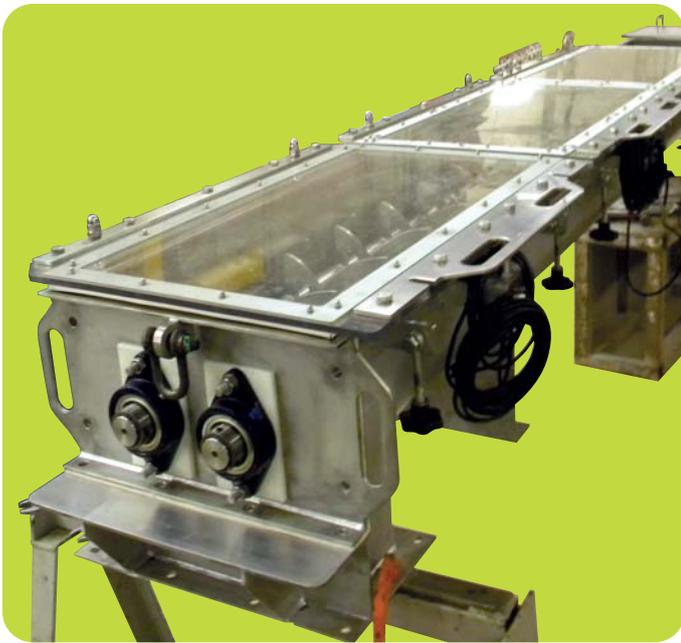
## HIGH CAPACITY COMPACT MIXERS

Many model sizes are available with a wide range of throughputs. A compact footprint and design flexibility makes for an easy fit into plant processes.

MODEL NO.	Throughput (m <sup>3</sup> /hr)
75	0.5
100	0.7
125	1
150	1.5
200	3.5
250	7
300	12
400	30
500	45
600	75
700	100



**Note** Always check with Ajax as individual performance depends on constituents of mix and configuration.



## AJAX MIXER FOR MULTI RECIPE PLASTICS PROCESSING

Leading Swedish plastics company Polykemi AB is using an AJAX mixer to combine plastic granulates with additives and pigments for a range of extrusion machines.



The Ajax continuous mixer replaces a batch mixer which was inflexible in the quantities processed and time consuming to clean. The new mixer significantly reduced downtime for cleaning equipment between production runs. The twin 'U' profile mixer features twin screws with LynFlow™ paddles for effective mixing of the powders and granulates. Further benefits include smaller footprint, greater control over the homogeneity and quality of the mixed granulate compound and the ability to process varying overall quantities and rates.

A period of running trials in Sweden demonstrated that the Ajax continuous mixer would be a solution. The mixer features a hygienic high quality standard of finish and quick release couplings ensuring thorough and easy cleaning of the machine. The mixer also has clear Makrolon covers which allow the mixing process to be monitored whilst running.

**"We were looking for ways to shorten our production downtime such as cleaning the equipment, especially with an increasing range of mix requirements. The Ajax works great."**

Roland Persson, Operations and Maintenance Manager, Polykemi



## MIXER FOR ORGANIC GRANOLA PRODUCTION IN GERMANY

One of Germany's leading organic food producers, Barnhouse GmbH, is using an AJAX continuous mixer and AJAX batch mixer for production of organic crunchy granola for breakfast cereals for a new Granola process line.



Granola is produced by mixing rolled oats, nuts, rice, oil, syrup and honey. An Ajax ribbon blender, is used to mix the dry ingredients which are then transferred to a buffer storage hopper providing a controlled feed to the Ajax twin-paddled, continuous mixer.

The Ajax continuous mixer is designed with multiple entry ports along the length of the mixer for adding honey, syrup and oil. This allows the mixer to handle a variety of cereals which absorb the liquors at different rates by varying the point at which these are added to the cereal blend. AJAX mixers are high quality construction in stainless steel, designed for hygienic operation and provide ease of cleaning in place.

**"We have used Ajax Equipment mixers for a number of years on various projects. They have always been reliable and performed well; and are particularly well-suited to meeting the exacting standards expected by Barnhouse."**

Neil Reen, Managing Director, Barnhouse GmbH

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POWDER TESTERS • HOPPER INSERTS • FLIGHTS & SCREWS • SACK TIP STATIONS**

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PERFORMANCE BY DESIGN

CELEBRATING 45 YEARS OF EXCELLENCE

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FIND OUT MORE**

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**+44 (0)1204 386 723  
sales@ajax.co.uk  
www.ajax.co.uk**

Ajax Equipment Limited, Milton Works,  
Mule Street, Bolton BL2 2AR, UK.