

Specialists in mechanical powder processing and particle technology for over 80 years

Contract Powder Processing

Equipped with a variety of mills and classifiers and supported by our own analytical laboratory, British Rema has experience in handling many diverse materials, from specialist minerals to application-critical composite resins for the aerospace industry. Accredited with ISO9001, we have externally validated quality systems, use standard operating procedures and have a dedicated quality control function.

Working with particle sizes from 1 micron to several millimeters, British Rema Processing offers customers a cost-effective and efficient service tailor-made to their requirements.

Processes and particle sizes

Opposed jet mills: a type of air micronizer for the superfine grinding of a wide range of materials. Feed material is hard or relatively fine. Accurate and controllable product sizes can be achieved with sharp cut-off and a typically narrow size-distribution.

Output particle sizes range from 2 to 150 microns.

Rotary impact mills: are used for less abrasive applications of up to 3 Mohs hardness. A rotary impact mill is a versatile high speed impact grinder. Some mills include an integrated classifier system that can extend the particle size range and narrow the particle size distribution.

Output particle sizes range from 10 to 300 microns.

Aerosplit classifiers: air-swept classifiers capable of accurately separating products of exceptional fineness over a wide range of feed variations.

This equipment works with particle sizes ranging from 3 to 150 microns.

Unit air separators: air-swept classifiers suitable for the classification of a wide range of high-volume materials. They are particularly suitable for the removal of small quantities of oversize material or the de-dusting of granular materials to remove undesirable "fines".

Typical operation is within the range from 25 to 300 microns.

Screens and sifters: mechanical screens and sifters are efficient and cost-effective units, normally suitable for larger particle sizes, and are capable of separating input material into multiple fractions in a single process by using a multi-tier system.

Operating from 100 microns to 5 mm.



Customers use our facility for many purposes; from small sample runs for R&D purposes, for intermittent requirements where investment in their own equipment would not be justified, through to fully out-sourced production.



Quality Systems: Accredited with ISO9001, British Rema has externally validated quality systems, uses standard operating procedures and has a dedicated quality control function. A strict Health & Safety Management System is operated whereby COSHH analyses and chemical task risk assessments are carried out for all materials. Safe Systems of Work are created for all processes and tasks. Due to high industry regulation we are accustomed to undergoing detailed supplier audits and can provide full product traceability.

Volumes: Processing volumes can range from a one-off batch of a few kilos to regular monthly production runs of many tonnes. The facility is equipped with different sizes of each machine type, guaranteeing consistency on scale-up between trial and production volumes.

British Rema Processing Ltd

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Applications & processes

British Rema Processing has expert knowledge and experience of the characteristics and behaviour of a wide range of particulate materials. This enables our technicians to decide the most efficient and cost effective method of production to obtain a specific product.

For all contract processing customers, quality control procedures, and appropriate measurements and sampling rates, are agreed in advance. Analytical results are carefully recorded and certificates of analysis can be provided. Where customers require other analysis to be carried out prior to shipment (such as chemical composition), British Rema has close relationships with external commercial analytical laboratories and can control the collation and reporting of data.

Laboratory & test facilities

Our laboratory provides particle size analysis facilities and analytical services to customers who do not have their own equipment.

The laboratory is equipped with a Malvern Mastersizer 2000 with both dry and wet units and a Coulter LS230 wet laser cell device, as well as air-jet sieving equipment. Together these provide the full range of standard analytical techniques relevant for the determination of particle size distributions in most industries.

Particle Size Grades

Size Grade	Particle Size		
	Micron (µm)	Millimeter (mm)	Mesh # BS 410: 1978 (approximate)
Very Coarse	>5,000	>5	2
Coarse	1,000 to 5,000	1 to 5	16 to 2
Medium fine	500 to 1,000	0.5 to 1	30 to 16
Fine	150 to 500	0.15 to 0.5	100 to 30
Very Fine	50 to 150	0.05 to 0.5	300 to 100
Superfine	10 to 50	0.01 to 0.050	1250 to 300
Ultrafine	<10	<0.01	<1250
Colloid	<1	<0.001	

Screening and Classification

- Screens normally operate in the fine to coarse range of size separation 100 microns and above.
- Air classifiers operate in the ultra fine to fine range between 3 and 200 microns

Typical materials

- Abrasives/super abrasives
- Advanced composites
- Adhesives
- Agricultural chemicals
- Animal feeds
- Carbon and graphite
- Cement
- Ceramics
- Clay
- Coal and coke
- Coatings
- Construction materials
- Cosmetics
- Detergents
- Dyestuffs
- Fertilizers
- Fillers
- Fine chemicals
- Frits, enamels, glazes
- Insecticides
- Marine feeds
- Metallic minerals and ores
- Metallic powders
- Minerals
- Pigments
- Pharmaceuticals
- Rare earths
- Resins
- Surface coatings
- Toners
- Waxes



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