



caleva

TECHNICAL SPECIFICATIONS

LABORATORY

CALEVA

MIXER - GRANULATOR - BLENDER

Effectively mix, blend or granulate small batches of your powders, wet masses, gels, waxes, slurries and pastes etc. on your desktop

TECHNICAL SPECIFICATIONS

One unit, many options



DESCRIPTION

The Caleva Mixer, Granulator, Blender (MGB) is designed to allow the mixing, blending and granulation of small batches of a wide range of product types on the laboratory bench-top. It is used for advanced teaching and research in a range of industries. It is a further development of the widely used Caleva Multi Lab but focussing on the mixing, blending and granulating component. The Caleva MGB by offering a range of bowl and blade configuration options is one of the most flexible and adaptable "mixers" available in a single compact base machine.

This is ideal for mixing, blending and granulating in a wide range of applications and industries such as pharmaceuticals, ceramics, cosmetic, catalysts, chemical, food (including fish food) and other related industries.

GENERAL USE

The volumes that can be effectively mixed depend on the bulk density of the materials being used but current experience has demonstrated that this equipment can be used successfully with batches from approximately 10 to 150 grams. Not all products can be used throughout this range.

Talk to us for specific advice about your requirements.

○ **Equipment design**

The MGB is designed to be robust in operation as well as "tool-less" in general use and fully interlocked for operator safety.

OPERATING MODES

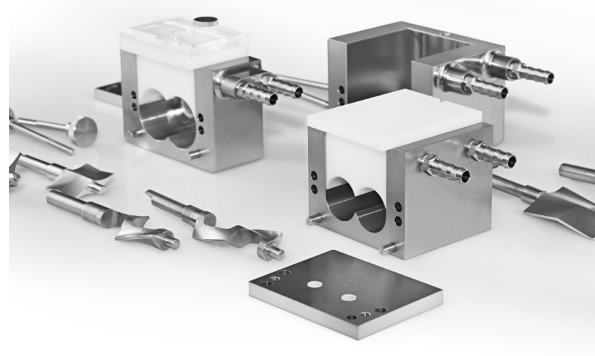
○ **General operation**

Two blades rotating at different speeds and in opposite directions are able to provide a high shear granulation for standard products or highly efficient mixing with standard blades and with the sigma blades designed for more viscous products offering a mixing system with lower levels of shear.

○ **Bowl, blade and insert options**

A range of bowl and blade configurations are available so that you can choose the one best suited for your application. Please talk to us about your application to allow us to help you assess the best options for your products.

We are happy to test samples of your product.



MIXER - GRANULATOR - BLENDER --- TECHNICAL SPECIFICATIONS

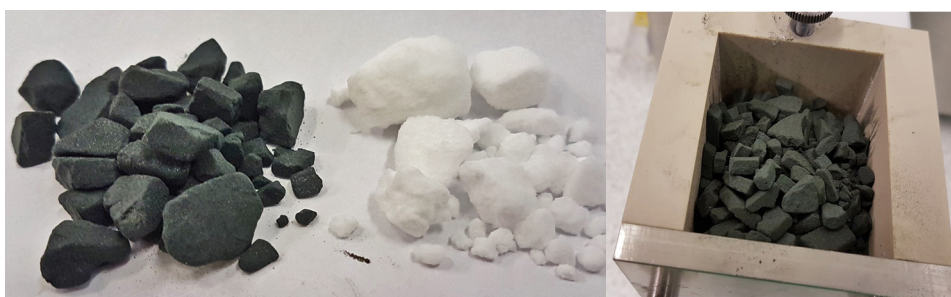
○ Torque Limiting Protection

The mixer is fitted with a torque-limiting coupling. When the output shaft operating torque exceeds a factory pre-set level, the motor will automatically disengage to prevent damage to the machine.

Drive disengagement will become apparent as there will be an audible clicking.

DE-LUMPING AND DE-AGGLOMERATION

The mixer can be used to effectively de-lump compressed or compacted products but the mixer is not suitable for "breaking rocks". The pictures below show a simple trial to mix small samples of "clumped" or "compressed" material.

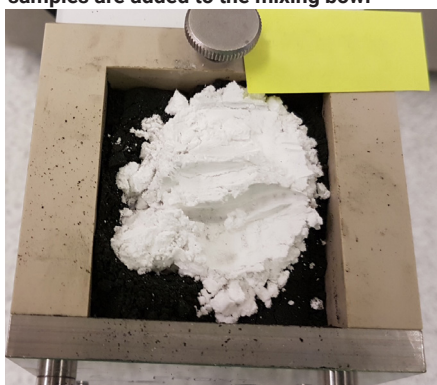


Samples from the two compacted products that were "de-lumped" separately and then added together for blending

MIXING AND BLENDING OF POWDERS

Two powders were mixed together efficiently and effectively as shown below. When the quantities of materials to be blended are very different (for example a 20:1 blend by weight) similar results can be obtained. Contact us for a trial report showing this type of use.

After de-agglomeration the two powder samples are added to the mixing bowl



Mixing at high speed for about 30 seconds offers a high efficiency blending



GRANULATION

The granulation of dry powders with binder solutions to make a wet mass is an established use for this mixing bowl and blade system. Dry powder granulation with a binder liquid is the standard application for this equipment.

BLENDING OF VISCOUS LIQUID MATERIALS

Viscous material can be mixed together and a video of a liquid blending trial can be see at this link <https://www.youtube.com/watch?v=7aNFD-8Z2LE>.

STANDARD CONFIGURATION

- **Physical Specification**
 Size of base machine: 450 mm H x 365 mm W x 375 mm D
 Weight: 34.2 kg (230 V) 36.4 kg (110 V)
 Cabinet: Brushed 304 Stainless Steel
 Product Contact Parts: 316 and/or 316 L Stainless Steel, Acetyl and Acrylic
 The Sigma blades are 431-QT900 Stainless Steel
 Power requirement 230 Volts 50 hertz, 6.3 amps or 110v, 50 hertz, 10 amps
 Single phase

- **Additional and full information can be found in the product manual. Please contact us at info@caleva.com and request a manual or talk to us directly for specific questions.**

- **Typical Capacity Range**
 The MGB is designed to work with an ideal small batch size. Not all products can be used throughout the range and some additional options may be necessary. Actual capacities will depend on the bulk density of the product.

- **The total mixer chamber volume with different bowl and blade configurations**

Bowl and blade configuration	Mix chamber volume
Standard full size bowl with blades and without insert	Up to 275 ml
Standard full sized bowl with blades and with insert	Up to 241 ml
Half size bowl with blades and without insert	Up to 71 ml
Half size bowl with blades and with insert	Up to 52 ml
Sigma bowl and blade set with blades and without insert	Up to 113 ml
Sigma bowl and blade set with blades and with insert	Up to 74 ml

The mixing chamber volumes given above are the total volumes of the bowls the maximum operational capacity will be a little less that this.

TALK TO US

Please call us without obligation

+44 (0) 1258 471122

info@caleva.com



Cert No. 1503
ISO 9001