

Achieving a fast, repeatable mixing process without air bubbles

Transforming multiple parts of liquids, pastes and powders into homogeneous, ready-to-use materials which are air and bubble free – that's what our [**THINKY planetary mixers**](#) do.

Our newly released [**Technical Bulletin *Achieving a fast, repeatable mixing process without air bubbles***](#) summarises the capabilities of these machines:

- Planetary mixing
- Degassing
- Mixing under vacuum

Which capabilities you need is driven by the materials themselves, and your own tolerance for entrapped air. We have a range of mixers, and if you need help in deciding which one to use – and why – let us know.

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TECHNICAL BULLETIN



How to choose a THINKY mixer

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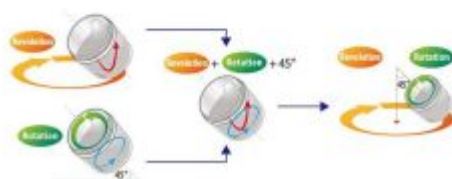
Our THINKY blenders have three types of function or capability to help you mix your liquids, pastes and powders, with complete uniformity and without air bubbles.

- 1) Planetary mixing
- 2) Degassing
- 3) Mixing under vacuum

Choosing the correct mixer with the right capabilities will often depend on the materials you need to mix – how prone are they to retain air (perhaps due to high viscosity), how much air is already trapped in them, how much air is brought into the mix from the powders you are adding, etc. A simple blend of low viscosity liquids mixes very well with no or little air bubbles. More complex mixes involving differing viscosities and/or powders will be more difficult to achieve an air-free mix without extra help. For critical applications, where even micro-bubbles are unacceptable, then mixing under vacuum may be required.

The mixing principle

The fundamental and common technology of all the THINKY range is "planetary centrifugal mixing". This mixing action does not use blades, paddles or other invasive tools. The technique involves rotating containers around their central axis, at a 45° angle, whilst at the same time revolving them around a central point similar to the way the earth moves around the sun, giving us both days and seasons. In the THINKY, these rotations and revolutions are very fast: ~1,000's of RPM. This generates mixing forces of about 400G, giving powerful material movement in the container. The ratio of revolution to rotation is critical to providing the optimal mixing forces.



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