

THINKY ARV-310P Mixing and Vacuum Degassing Machine, Planetary Centrifugal Vacuum Mixing



Description

The **THINKY ARV-310P** is an industrial non-contact “planetary” mixer suitable for all engineering compounds. This vacuum degassing machine mixes, disperses and degasses up to 310g of material to high levels in seconds to minutes, removing any micro-bubbles using an integral vacuum function. Mixing takes place in a sealed or lid-less container such as a jar, beaker, syringe tube or cartridge. The non-contact mixing principle makes it possible to formulate compounds from very small amounts such as 0.5ml to large production scales.

Ordinarily, when manually degassing using a vacuum, caution must be taken to prevent foaming and messy overflows. The **THINKY ARV-310P** is able to avoid this issue as the mixed material is forced to the sides of the container during the simultaneous mixing procedure. This mitigates the potential requirement for deep cleaning workspaces after use.

“The THINKY mixer and Fisnar robotic dispenser enabled us to achieve high accuracy process windows, due to the consistency of the mix and the positioning of the dispense, which are both critical to the light output.” – Carl Withers, Plessey Semiconductors

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Normal vacuum degassing after mixing



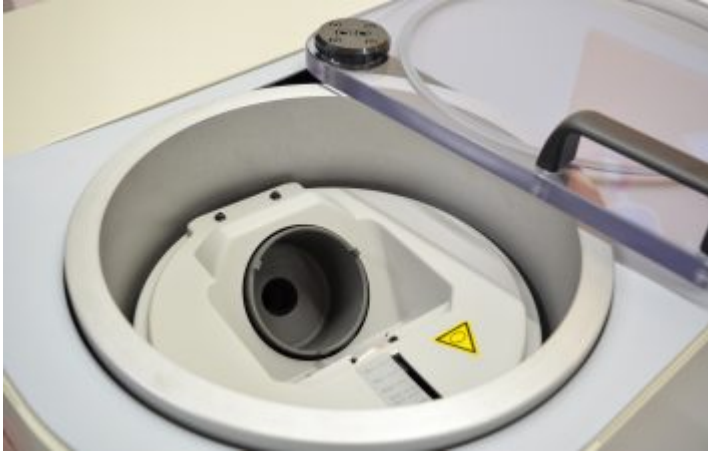
Rotation, revolution & vacuum mixing

Features & Benefits

- Mix material to be homogeneous and bubble-free in seconds to minutes

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- Non-invasive
- No cleaning between batches
- 4.3-inch touch panel enables easy command input
- Mix in your product container
- Up to 20 recipes containing 5 steps can be registered
- Degas and remove bubbles at the same time
- Real-time status and progress displayed during operation
- Multi-step mixing
- Process from 0.5ml of material
- RS-232C connection ensures better traceability through an external terminal
- Consistent results achieved through all digital controls
- Ability to mix from low viscosity to semi-solid materials
- Fast mixing
- Hands-free mixing

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Applications



After mixing – completely homogeneous (2000rpm @ 0.7kPa for 5 minutes)



After curing – 100x magnification (2000rpm @ 0.7kPa for 5 minutes)

Our customers use the mixer to formulate and mix a multitude of different products including:

- adhesives
- sealants
- moulding compounds

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- lubricants
- slurries
- coatings
- inks
- paints
- abrasives
- bio-chemicals
- cements
- medical compounds
- cosmetics/personal care materials
- detergents
- conductive pastes
- dental materials
- foods
- any other materials which are hard to mix, degas, or wet

Specifications

Specification	
Method	Vacuum type propellerless rotation and revolution mixing method

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Specification	
Range of operation time	From 00 minutes 00 seconds to 30 minutes 00 seconds (The total operation time can be set at maximum 30 minutes in units of 1 second)
Revolution speed	Maximum 2000 rpm
Rotation speed	Maximum 1000 rpm
Number of programmes	20 memories (five steps can be registered in each)
Container	300ml and 150ml
Maximum mixing volume – Atmospheric pressure	When using 300ml container: 250ml / 310g 150ml container: 120ml / 310g
Maximum mixing volume – Vacuum operation	When using 300ml container: 200ml / 310g 150ml container: 100ml / 310g
Vacuum chamber	Rotary part vacuum chamber system
Working environmental conditions	-10 to 35°C 35 to 85% RH (no condensation) Altitude lower than 2000m

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Specification	
Dimensions	H 450 x W 555 x D 645mm
Weight	Approximately 90kg
Power supply	Single-phase AC 100V +/- 10% 50Hz / 60Hz
Power consumption	On standby: approximately 50 VA During operation: maximum 1200 VA
Display unit	Touch panel (4.3 inches)
Communication function	Data collection function (Traceability function) Operation start and stop Recipe editing and saving Using an external terminal
Other	Real-time display of rpm during operation Ability to assign recipe names

Other Information

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See how the **THINKY ARV-310** works as part of a real application in these metering and mixing [Case Studies](#):

<p>CASE STUDY</p>  <p>THINKY ARV-310 LED mixer Industrial non-contact "planetary" mixer</p> <p>Fisnar F7300NV robot Precision dispensing benchtop robot</p> 	<p>Material mixing and dispensing prove key for LED production quality</p> <p>Plessey Semiconductors transitioned to a full production phase of their LEDs by using automated mixing and dispensing equipment.</p>
<p>CASE STUDY</p>  <p>THINKY ARV-310 mixer Industrial non-contact "planetary" vacuum mixer</p> 	<p>Degassing times reduced by up to 90%</p> <p>For a manufacturer of compound semiconductors, the process of hand mixing the multi-part resins in which to encapsulate them was causing an inconsistent, labour intensive final product.</p>

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<p>CASE STUDY</p> <p>intertronics adhesives, coatings, sealants & equipment for your manufacturing and technology applications</p> <p>THINKY ARV-310 Vacuum mixing and degassing machine</p> 	<p><u>Manufacture of NMC electrodes for lithium-ion batteries with high active material content</u></p> <p>The manufacture of electrodes is a crucial step in the production of Lithium-ion batteries, especially the mixing and coating processes, which are involved. Using a ARV-310, the Technical University of Munich homogeneously mix NMC inks in a few minutes.</p>
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	<p><u>Getting to know THINKY Mixers</u></p> <p>Download a presentation which describes how THINKY Mixers work, and what benefits they can deliver to you.</p>
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Our [Technical Bulletins](#) page has links to:

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- Technical Bulletin: [Vacuum Mixing & Degassing](#)

Ordering Information

Part number	Description
THIARV-310-P	THINKY Mixer ARV-310P Mixing and Vacuum Degassing Machine Includes 3 x THI300ML-HOLE 300ml jars, 1 x THI150ML-HOLE 150ml jar and 1 x THI250AD-201 adapter

Supplied by:



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