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
THI ARV-310P

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

Normal vacuum degassing after mixing

Rotation, revolution & vacuum mixing

Features & Benefits

- Process material in seconds to minutes
- 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
THINKY ARV-310P Mixing and Vacuum Degassing Machine, Planetary Centrifugal Vacuum Mixing

- 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
- Vacuum-less processing, degassing and de-aeration
- Consistent results achieved through all digital controls
- Ability to mix from low viscosity to semi-solid materials
- Fast mixing
- Hands-free mixing

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
- lubricants
- slurries
- coatings
- inks
THI ARV-310P

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

- 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

<table>
<thead>
<tr>
<th>Method</th>
<th>Vacuum type propellerless rotation and revolution mixing method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of operation time</td>
<td>From 00 minutes 00 seconds to 30 minutes 00 seconds</td>
</tr>
<tr>
<td></td>
<td>(The total operation time can be set at maximum 30 minutes in units of 1 second)</td>
</tr>
<tr>
<td>Feature</td>
<td>Specification</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Revolution speed</td>
<td>Maximum 2000 rpm</td>
</tr>
<tr>
<td>Rotation speed</td>
<td>Maximum 1000 rpm</td>
</tr>
<tr>
<td>Number of programmes</td>
<td>20 memories (five steps can be registered in each)</td>
</tr>
<tr>
<td>Container</td>
<td>300ml and 150ml</td>
</tr>
<tr>
<td>Maximum mixing volume – Atmospheric pressure</td>
<td>When using 300ml container: 250ml / 310g 150ml container: 120ml / 310g</td>
</tr>
<tr>
<td>Maximum mixing volume – Vacuum operation</td>
<td>When using 300ml container: 200ml / 310g 150ml container: 100ml / 310g</td>
</tr>
<tr>
<td>Vacuum chamber</td>
<td>Rotary part vacuum chamber system</td>
</tr>
<tr>
<td>Working environmental conditions</td>
<td>-10 to 35°C 35 to 85% RH (no condensation) Altitude lower than 2000m</td>
</tr>
<tr>
<td>Dimensions</td>
<td>H 450 x W 555 x D 645mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Approximately 90kg</td>
</tr>
<tr>
<td>Power supply</td>
<td>Single-phase AC 100V +/- 10% 50Hz / 60Hz</td>
</tr>
</tbody>
</table>
## THI ARV-310P

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

| Centrifugal Vacuum Mixing | On standby: approximately 50 VA  
During operation: maximum 1200 VA |
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Display unit</td>
<td>Touch panel (4.3 inches)</td>
</tr>
</tbody>
</table>
| 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

See how the **THINKY ARV-310** works as part of a real application in this metering and mixing [Case Study](#):
Plessey Semiconductors transitioned to a full production phase of their LEDs by using automated mixing and dispensing equipment.

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Material mixing and dispensing prove key for LED production quality

Getting to know THINKY Mixers

Download a presentation which describes how THINKY Mixers work, and what benefits they can deliver to you.
THI ARV-310P

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

Our Technical Bulletins page has links to:

- Technical Bulletin: Vacuum Mixing & Degassing

Ordering Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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:

INTERTRONICS
12a Station Field Industrial Estate, Banbury Road, Kidlington
Oxfordshire England OX5 1JD
t 01865 842842  e info@intertronics.co.uk
THI ARV-310P

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

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