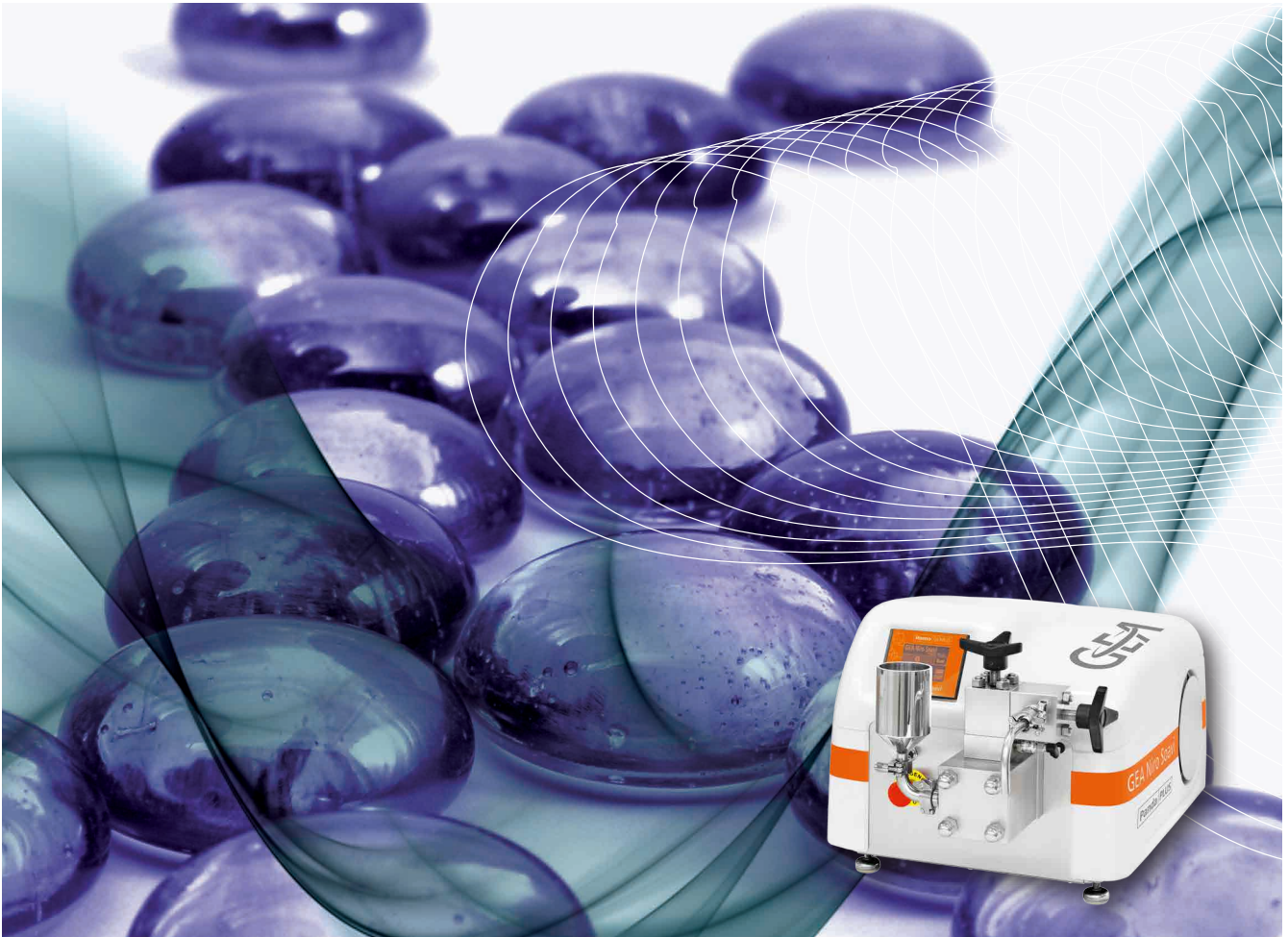


GEA Niro Soavi Homogenizers

Technical Leaflet PandaPLUS



PandaPLUS is the innovative laboratory homogenizer at your fingertips. Based on long-term experience and tradition, the new generation PandaPLUS offers simple and reliable use of high pressure energy for new production process development and

optimized product formulation. The table-top PandaPLUS is engineered for simple operations and reliable and consistent performances, for any laboratory application.

Research and development.

PandaPLUS for every lab duty.

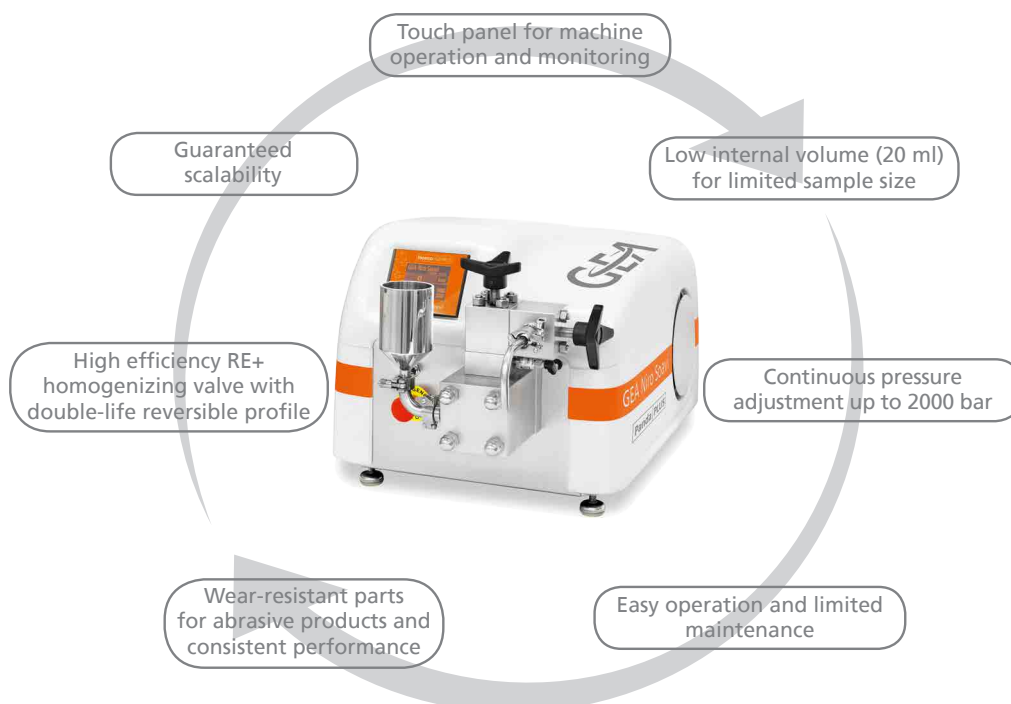
PandaPLUS is the best fit for any kind of application: food and dairy, pharma, biotech, cosmetic, and chemical, because of its native capability to test at lab size and scale-up to pilot or industrial production. The energy-efficient PandaPLUS high pressure homogenization technology provides maximum yield and effective particle size reduction.

It is the state-of-the-art solution for:

- nanoparticles
- nanoemulsions
- nanodispersions
- cells disruption and it can be used successfully for processing
- milk & dairy products
- fruit juices & food in general
- nutraceuticals
- specialty formulated products
- flavors and additives.

PandaPLUS can operate at any pressure up to 2000 bar on minimal sample volume. Pressure is adjusted manually, while homogenizing valve size and geometry are optimized based upon CFD modeling and extensive laboratory and product experience. This translates

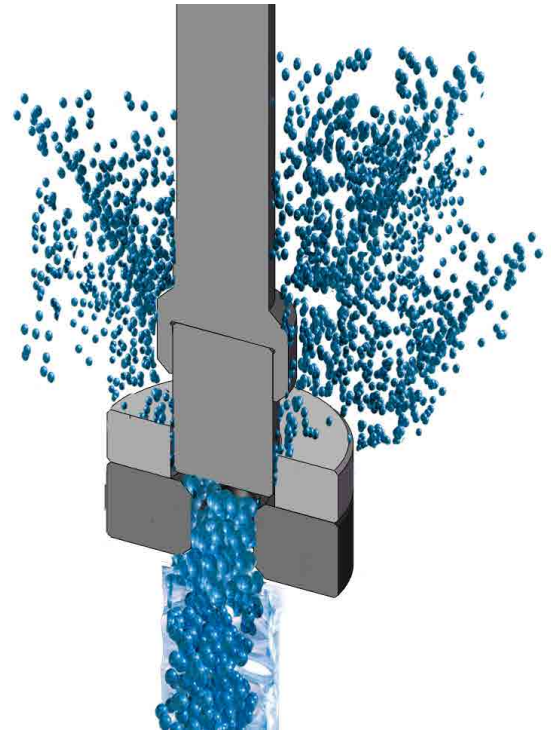
into guaranteed scalability of results so our customers can confidently make the shift from lab testing to industrial production. PandaPLUS is available in two versions, up to 1000 bar or up to 2000 bar maximum working pressure.



High pressure Homogenization.

GEA Niro Soavi is the global technology leader for high performance homogenizers and pumps. Choose all the advantages of our state-of-the-art solutions.

Homogenization technology uses efficient high pressure energy to break particles present in fluids to the smallest possible size, down to nanometer range. This process creates a stable emulsion or dispersion by forcing the product through a specifically engineered homogenizing valve under high density fluid-dynamic energy conditions thus improving product shelf life and performance.



Technical specifications.

PandaPLUS 1000

- Rated flow 20 l/h
- Max. operating pressure 1000 bar
- Min. sample volume 60 ml
- Dimensions 81x54x44 cm
 - Weight 98 kg
- Sound Pressure Level < 69 dB(A)
- Feeding Hopper Volume 0,4 l

PandaPLUS 2000

- Rated flow 9 l/h
- Max. operating pressure 2000 bar
- Min. sample volume 30 ml
- Dimensions 81x54x44 cm
 - Weight 98 kg
- Sound Pressure Level < 69 dB(A)
- Feeding Hopper Volume 0,4 l

Available Options:

- Aseptic execution
- Full pharmaceutical version (cGMP certification manual)
 - FDA approved gaskets
 - Jacketed feed tank
- Pneumatic pusher for feed tank

Technical specifications are not mandatory and subject to change without notice.

Customer satisfaction.

Full automation in your lab.

The new generation PandaPLUS, in its standard configuration, features a touch panel for easy control of all machine functions:

- Start/Stop
- Actual pressure readout, pressure trend diagram
- Built-in safety protection against overpressure

GEA Niro Soavi sales organization worldwide with their know-how and expertise, is available to respond to all questions and queries about homogenization issues. Please check GEA Niro Soavi website for the closest local branch.



- GEA Niro Soavi Hubs/Sales Offices
- GEA Group Offices and Local Agents

GEA Mechanical Equipment

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