

GEA Niro Soavi Homogenizers

Technical Leaflet: Pharma Skid



Pharma Skid represents the homogenization turnkey solution for pharmaceutical and biotech applications. It provides the highest micronization performance, aseptic and safe production

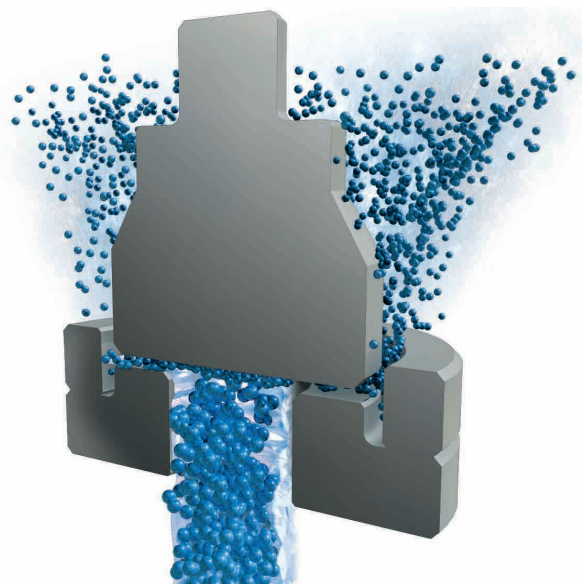
for aerosol, vaccines and injectable preparations. Ready to plug & play, these small plants are able to test and record all relevant homogenization parameters.

Turnkey solution in cell rupture and nanoparticles

Homogenizer systems for pharmaceutical and biotech productions

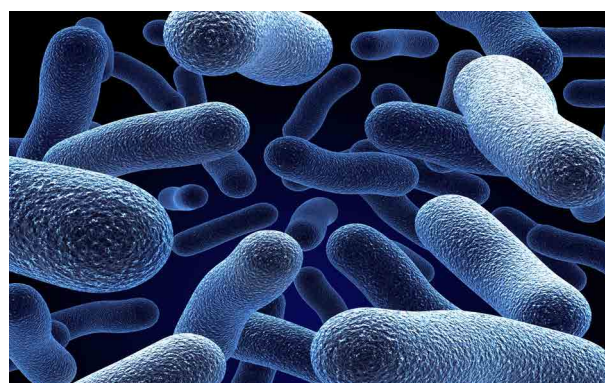
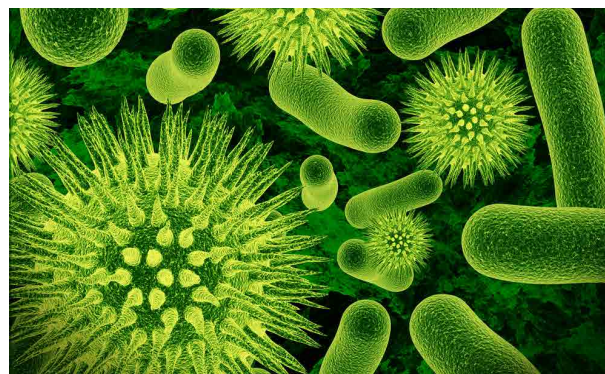
Today, pharmaceutical, food and even chemical manufacturers are demanding safe and ultra clean turnkey solutions, able to work in aseptic condition and fully compliant with all pharmaceutical requirements and regulations. Pharma Skid features an highly customized homogenizer, allowing a wide range of applications up to 1500 bar.

Our skids are able to achieve excellent results: effective particle size reduction, maximum efficiency and optimal yield in cell rupture. With nanoparticle and nanoemulsion productions skids allow excellent performances and energy saving, compared to other systems. The unit is suitable for the realization of batch and continuous flow processes, which are often used for emulsions, dispersions and liposomes, cosmetic and food and beverage applications.



Main advantages:

- Maximum efficiency and optimal yield in cell rupture.
- Energy saving in nanoparticles and nanoemulsions production
- The complete Skid is fully compliant with all pharmaceutical requirements and cGMP regulations
- Suitable for batch and continuous flow processes (emulsions, dispersions and liposomes, cosmetic and food and beverage applications)



GEA Niro Soavi high pressure Skid plug & play systems

	NS2006HS	NS3006HS	NS3015HS	NS3030HS
Pressure Range (bar)	700÷1500	700÷1500	700÷1500	700÷1500
Capacity Range (l/h)	35÷80	50÷120	250÷600	330÷1100
Variable Capacity	Optional	Optional	Optional	Optional
CIP-able	Yes	Yes	Yes	Yes
SIP-able	Yes	Yes	Yes	Yes
System dimensions (mm) (Width x Length x Height)	1480(*)x1730(*) x2620(*)	1480(*)x1730(*) x2620(*)	2480x2170x1870(*)	2480x2310(*) x1870(*)
System Weight (Kg)	1000(*)	1200(*)	2000(*)	2300(*)

(*) Note: dimensions and weight can change according to machine specific configuration

Complete Pharma Skid to meet your needs

Find the right skid to meet your needs

Skids are available for small and medium size homogenizers from the GEA Niro Soavi Ariete range. In their standard configuration, they are composed of feed pump, homogenizer, electrical power board and heat exchanger, and they have a long list of available options to easy-fit any customer's need. Optionally, they can be equipped with a tubular heat exchanger before and after homogenization, in order to cool down the product back to the inlet temperature value, they also can be cleaned (CIP) and sterilized (SIP) in place.

From lab to industry, evolution takes its place

The growing success of laboratory plug & play skids, brings GEA Niro Soavi to carry on a new project to develop a skid not only for laboratory units, but also extended to industrial homogenizers. High Pressure Pharma Skids for industrial production are available upon request (see Image 2 on the right). Specilized engineer team study and design specific high pressure Skids solution according to customers needs.

Materials are selected according to the suitable application, in order to always guarantee reliable and long-lasting components.



Image 1: PharmaSkid ArieteNS2006HS

Main Features:

- Adjustable variable capacity for different batch sizes
- Product cooler after homogenizing valve
- Temperature measurement at inlet, outlet of the homogenizer and outlet of the cooler
- Digital data recording of process data (nominal capacity, pressure and temperatures) suitable also for validated processes under cGMP regulations
- Process parameters recording and data storage according to 21CFR Part 11
- FAT includes, upon request, homogenizer tests for CIP and SIP procedures and the latest design developments allow for easier sterilization validation of the product path.
- Tailor-made Pharma Skid are also available and studied working hand in hand with our customers.



Image 2: Tailor-made industrial Pharma Skid with Ariete NS3037H able to work in continuous 1,400 l/h @ 900 bar



Image 3: Customized and flexible Pharma Skid with Ariete NS3015H able to homogenize 250l/h @ 1.500 bar

Take advantage of our knowledge

Expert's support guarantees validation

For pharmaceutical formulations under qualified conditions, we supply the full documentation package and support for qualification (IQ/OQ) on site. From the initial feasibility study and throughout the entire life cycle of the machine, our clients are supported by skilled personnel, offering customized solutions, product tests (FAT-SAT) on the machine, and the documentation required to secure the most stringent certifications (cGMP-EUGMP – US GMP).

Get the best performance

Customers' services guarantee constant updates, high quality spare parts availability, customer training on the machine to maximize machine operating condition. After sales service include also maintenance programs and to optimize original spare parts investments, minimizing the risk of downtimes while improving machine efficiency.

Innovation & Technology Center at customer support

Innovation & Technology Center, located next to GEA Niro Soavi production plant, provides more and more groundbreaking answers and skills.

Our experts are regularly supporting customers to evaluate their processes needs; for this reason the homogenizing valve is configured and selected by GEA Niro Soavi to meet the best performance for that specific applications.

The Innovation center hosts three different areas at customer support:

- PILOT PLANT AREA – equipped for the simulation of the treatment of our clients' products through pilot-scale production (around 300 l/h to be replicated on a mass-scale);
- PHARMA CERTIFICATION AREA – where we draft and check all necessary documentation and system certification (cGMP validation, FAT, SAT, IQ, OQ support);
- R&D AREA – dedicated both to the test and develop prototypes for the study of new homogenization technologies for specific applications and the realization of new models.



GEA Mechanical Equipment

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