

GEA Niro Soavi Technical Datasheet

Homogenizer & High Pressure Pump

Ariete NS3110

From the world leader in high pressure homogenization: absolute quality and reliability with advanced technical solutions for any process need.



The Ariete series is the state-of-the-art technology for powerful reliable high pressure machines and customized solutions. The Ariete machines, compliant to EU safety rules (CE standards) and built according to EN ISO 9001:2008 Quality System, are the best fit for pharmaceutical, dairy, food & beverage, biotechnology, chemical and cosmetics industries.

Liquid end

- High quality stainless steel and special high wear resistant materials for best mechanical and corrosion resistance performance
- 3-A and electropolished versions available
- Ball (PVB) and poppet valves (PVP) interchangeable into the same block design for maximum product handling flexibility
- Aseptic version compression block available as option, with sterile condensate packing flushing
- Various materials for pumping plungers
- Monoblock construction, up to 600 bar, or multiblock, up to 1500 bar forged high grade Duplex or Super Duplex SS alloy

Homogenizing valve

- One stage (standard on homogenizers) with pneumatic adjustment from the machine's control panel
- High efficiency homogenizing valve NanoVALVE™, based on advanced fluid dynamics concepts, available as option
- Engineered for easy maintenance and cleaning
- Second homogenizing stage as option
- Wear parts made of tungsten carbide, ceramics as option

Power end

- Heavy duty and reliable power frame housing the transmission elements
- AC motor drive
- Forced lubrication with gear pump, low oil pressure switch and oil cooling
- "V" belts drive and gearbox speed reduction unit

Casing

- Made of polished stainless steel with sound proof lining
- Easy access and maintenance with removable panels
- Noise reduction execution ($\leq 75\text{dB (A)}$) available as option

Tools and spare parts

- Ordinary maintenance tools and one set of emergency spare parts supplied with the machine
- O&M manual and spare part list on CD-ROM

Pump Valves

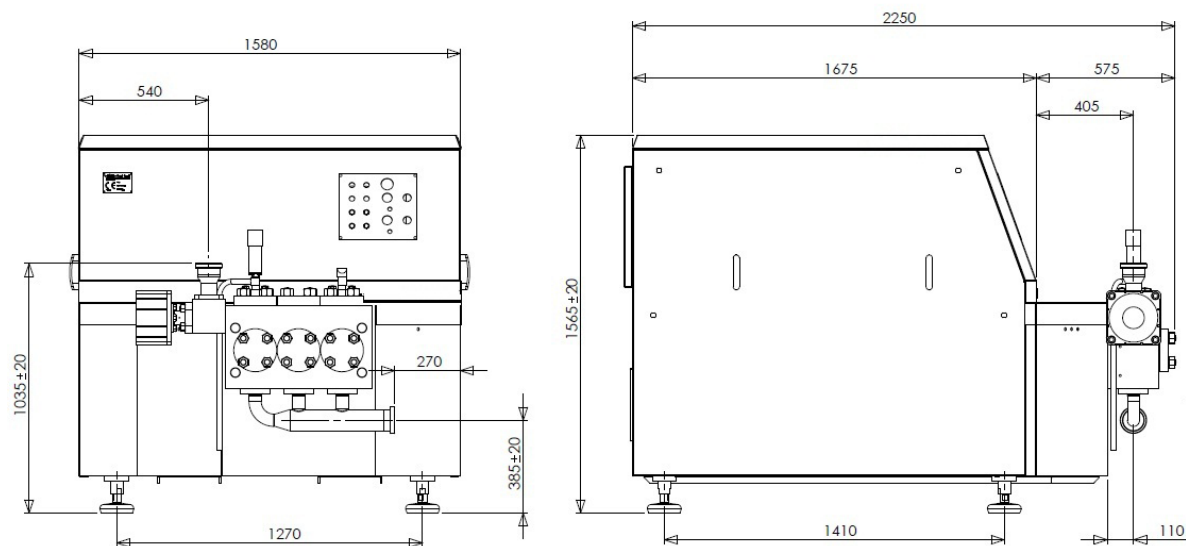
- High wear resistant Stellite™ alloy removable seats
- Ball type (PVB) or poppet type (PVP) in solid Stellite™
- Ceramic or tungsten carbide materials available as option

Plungers

- Chrome coated stainless steel
- Tungsten carbide coated stainless steel
- Solid ceramic
- HCR Chromium Carbide coated stainless steel

Ariete NS3110

Dimensional drawing



measure in mm

Available up to 1500 bar, suitable for CIP and SIP, the Ariete machines can be supplied with all necessary customizations for easy integration in any process line, sanitary or aseptic. The wide range of available materials, the low running speed and linear plunger velocity allow Ariete machines to perform at their best also on abrasive and viscous product.

Pressure measurement & control

- Sanitary design analog high pressure gauge
- Pressure transmitters and transducers available as option
- Overpressure relief valve installed on compression block

Product line connections

- DIN 11851, Tri-Clamp™, GEA Tuchenhagen Varivent™
- Others as option upon request

Power end

- Cast iron power frame
- Forced lubrication with low oil pressure switch
- Polished SS machine casing on painted steel frame

Main options on request

- High pressure pump version
- 2nd stage homogenizing valve
- Electric power board for fixed or variable capacity
- Machine automation and remote controls
- Aseptic execution
- 3-A execution, FDA approved gasket and cGMP documentation

PERFORMANCE

| Pressure (bar) | Max Flow Rate (l/h) |
|----------------|---------------------|
| 100 | 22000 |
| 150 | 22000 |
| 200 | 18000 |
| 250 | 15000 |
| 400 | 8700 |
| 600 | 5500 |
| 1000 | 3400 |
| 1200 | 2600 |
| 1500 | 1800 |

Each line refers to a different machine, which is designed for the specific maximum pressure and the specific maximum capacity.

TECHNICAL DATA

| | |
|-------------------------------|---------|
| Number of plungers | 3 |
| Stroke | 100 mm |
| Absorbed motor power up to | 110 kW |
| Net weight | 3500 kg |
| Gross weight | 3960 kg |
| Lubricating and cooling water | 120 l/h |
| Lubricating oil ISO VG 150 | 38 l |
| Gearbox oil EP 220 | 32 l |
| Gearbox cooling water | 700 l/h |

GEA Mechanical Equipment

GEA Niro Soavi

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