

GEA Niro Soavi Technical Datasheet

Homogenizer & High Pressure Pump

Ariete NS5180

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 noise reduction execution ($\leq 80\text{dB (A)}$)
- Easy access and maintenance with removable panels
- Fully separated liquid-end from drive end

Tools and spare parts

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

Pump Valves

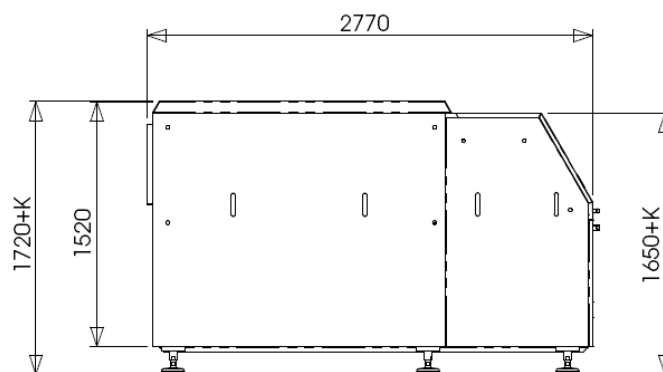
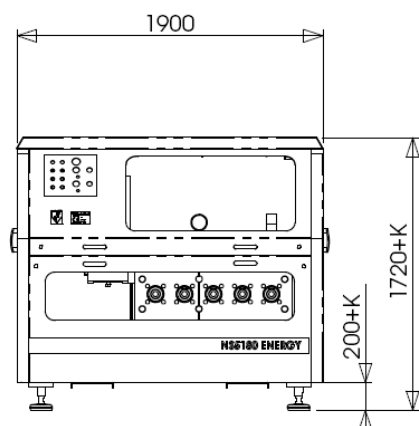
- High wear resistant Stellite™ alloy removable seats
- Ball type (PVB) or poppet type (PVP) in solid Stellite™
- Ceramic or tungsten carbide materials available as option

Plungers

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

Ariete NS5180

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 Tuchenhausen Varivent™
- Others as option upon request

Power end

- Cast iron power frame
- Forced lubrication with low oil pressure switch and oil cooling
- Painted steel frame in soundproof execution
- Polished SS panels removable for maintenance

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	37000
150	36000
200	28000
250	24000
400	14500
600	9500
1000	5500
1200	4200
1500	3000

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	5
Stroke	100 mm
Absorbed motor power up to	180 kW
Net weight	5400 kg
Gross weight	6100 kg
Lubricating and cooling water	500 l/h
Lubricating oil ISO VG 150	55 l
Gearbox oil EP 220	43 l
Gearbox cooling water	800 l/h

GEA Mechanical Equipment

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