Subject to modification

GEA Ariete Homogenizer 5400

Homogenizer & High Pressure Pump
Technical datasheet

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 forged stainless steel and special high wear resistant materials for best mechanical and corrosion resistance performance
- Optimized cleanable design with 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
- Product outlet on the left side
- Monoblock construction, up to 700 bar, or multiblock, over 700 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 valves, based on advanced fluid dynamics concepts type NanoVALVE™ and Re+VALVE, available as standard
- Second homogenizing stage and aseptic execution as options

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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.

Power end

- Rugged cast iron power frame
- Heavy duty and reliable power frame housing the transmission elements with integrated planetary gearbox
- AC motor drive
- Forced lubrication with gear pump, low oil pressure switch and oil cooling
- "V" belts drive with belts tensioning system

Casing

- Made in polished stainless steel
- Inlet manifold fitted inside case ensures considerable noise reduction
- Noise level calculated on 65.000 l/h@200bar at a distance of 1 m is <85 db and calculated at 2 m the value is <82 db
- Easy access and maintenance with removable panels
- Fully separated liquid-end from drive end
- Safe access to the auxiliary systems on board the machine
- Large front doors offer a full visibility of the processing part

Plungers

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

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

Pump valves

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

Product line connections

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

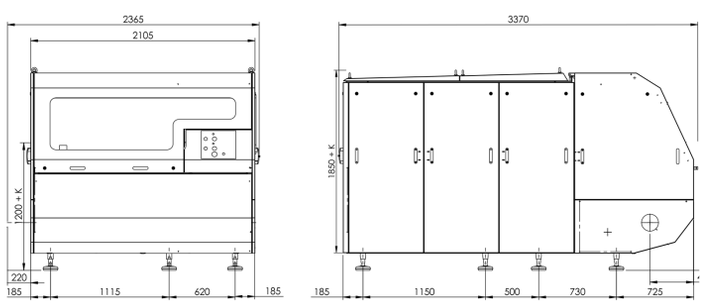
Saving options on request

- NiSoPURE saves 90% of water and steam in aseptic productions
- NanoVALVE reduces 30% of pressure (=energy)
- OPS prevents oil waste with service time & cost savings

Main options on request

- 2nd stage homogenizing valve
- Electric power board for fixed or variable capacity (with frequency converter)
- Aseptic execution available
- 3-A execution, FDA approved gasket and cGMP documentation
- Automatic front door opening system
- Acoustic based service monitoring systems
- Product outlet from right side
- Double inlet manifold
- Spare part packages

Dimensional drawing



Overall dimensions (mm)

Performance			
Pressure (bar)	Max Flow Rate (l/h)	Pressure (bar)	Max Flow Rate (l/h)
120	80.000	500	22.000
150	70.000	600	18.000
180	65.000	700	15.000
200	57.000	800	12.000
250	45.000	1000	10.000
300	38.000	1200	7.000
400	28.000	1500	5.000

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

Design features	
Number of plungers	5
Stroke	150 mm
Absorbed motor power up to	400 kW
Net weight	8600 kg
Gross weight	9600 kg
Lubricating Oil for crankcase and gearbox ISO VG 150	95 l
Lubricating/cooling water (inlet @ 14°C)*	± 430 l/h

* Air cooling unit for gearbox oil available

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