



ENGLISH



We have been manufacturing homogenizers since 1987. Our evolution led us in 2000 to launch the Millennium Series, confirming our position at the highest quality levels on the market. In 2010 we introduced the Buffalo Series, machines so well conceived that since then they have required only minor detailed updates: what we are offering you is 17 years of production reliability.

Bruno Fattori – President and Founder

**H.P. Homogenizers
& Plunger Pumps**

Industrial Homogenizers N SERIES



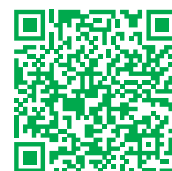
TECHNICAL DATA
SHEET MODELS:

FBF022N

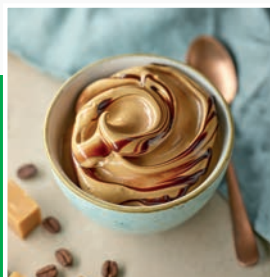
FBF030N

FBF037N

FBF045N



See the technical
data sheet



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COMPRESSION HEAD AND HOMOGENIZING VALVES

- **Compression head: 5-YEAR WARRANTY** against fatigue failure, thanks to an innovative structural design and the use of a one-piece forged Duplex stainless-steel block (Super Duplex for pressures above 300 bar).
- **Pumping plungers:** stainless steel with a dual coating: chrome + DLC (Diamond Like Carbon ~2,000 HV). Minimal friction and exceptional wear resistance.
- **Water chambers:** equipped with double guide bushings for the perfect alignment, cooling and lubrication of the pumping plungers. Thanks to the interconnected water passages, water consumption is extremely low (~120 l/h).
- **Valve assemblies:** reversible valve seats and hemispherical-profile valves; optimized fluid dynamics ensure maximum volumetric efficiency.
- **Homogenizing stage (standard):** high-efficiency homogenizing valves, controlled by a hydropneumatic unit specifically designed to prevent the onset of vibrations.
- **Pressure monitoring:** digital pressure gauge complete with sanitary diaphragm seal.
- **Safety:** spring-loaded overpressure valve in strict hygienic design, with quick-replacement wear components (valve seat and valve).

DRIVE SYSTEM

- **Pump body:** High-strength cast iron construction with reinforced sections, engineered to withstand high loads and minimize mechanical vibrations.
- **Crankshaft:** machined from solid special steel, ultrasonically tested, heat-treated and fully nitrided. The use of 5 roller bearings (4 cylindrical and 1 tapered) guarantees maximum structural rigidity.
- **Transmission:** two-stage reduction system, with a V-belt first stage featuring semi-automatic belt tensioning and a second stage consisting of helical gears integrated into the pump body. The low-speed gear is mounted directly on the crankshaft.
- **Lubrication System:** Hydraulic power unit with a dedicated tank to ensure constant pressurization, complete with level sensor

and alarms for abnormal pressure and temperature conditions, as well as a water/oil heat exchanger and filtration unit. Transmission components operate in an oil bath for optimal heat dissipation.

- **Electric Motors:** High-efficiency, 4-pole, three-phase AC main motor from leading manufacturers. Auxiliary motors for the hydraulic power unit and forced ventilation are also rated for continuous duty.
- **Internal ventilation:** electric fan dedicated to air exchange and hot air extraction from inside the machine to ensure optimal thermal dissipation.
- **Structure:** Load-bearing frame made of square-section tubular steel, surface pre-treated and protected by a two-layer powder coating. Fully enclosed with

brushed stainless-steel panels.

MACHINE EQUIPMENT

- **Control panel:** machine operation via an electromechanical push-button control panel.
- **Spare parts kit (initial supply):** complete set of gaskets, springs for valve assemblies and safety valve components.
- **Maintenance:** set of dedicated tools for routine maintenance.
- **Lubricating oil:** initial oil fill for pump body, gear reducer and hydraulic unit.
- **Documentation:** operation and maintenance manuals supplied digitally on USB drive.



OPTIONS AND CONFIGURATIONS

- **Second homogenizing stage:** servo-assisted by hydropneumatic unit, with dedicated digital pressure gauge.
- **Pulsation dampeners:** installed at product inlet and outlet, also available in a version specifically designed for aseptic processes.
- **Product inlet pressure gauge:** automatic disengagement of homogenizing pressure in case of product underfeeding.
- **Pumping plungers:** in chromium carbide or solid ceramic.
- **Flow rate control:** electrical control panel for fixed flow rate (indoor, painted steel enclosure) or variable flow rate (outdoor, stainless-steel enclosure).
- **Interface and automation:** local control via touchscreen or interfacing for remote control from the central PLC. Automatic or semi-automatic adjustment of homogenizing pressures.
- **Aseptic execution:** pumping plungers and impact heads flushed with sterile condensate generated by a dedicated integrated system.
- **High-pressure pump configuration:** available as a standalone positive displacement pump or in a combined configuration with a homogenizing stage.

N SERIES

PERFORMANCE

Pressure (bar)	Flow rate min-max (l/h)
130	6,100 - 10,500
150	6,100 - 9,000
180	5,100 - 7,000
200	4,600 - 6,750
230	3,600 - 6,000
250	3,600 - 5,500
300	3,100 - 4,500
400	2,200 - 3,000
600	1,250 - 1,800

TECHNICAL DATA

Number of pistons	3
Stroke (mm)	75
Dimensions WxDxH (cm)	140x190x130
Max net weight fixed flow rate (kg)	1,850
Cooling/lubrication water (l/h)	100-120
Lubricating oil ISO VG 150 (l)	34
FBF022N - main motor (kW)	22.0
FBF030N - main motor (kW)	30.0
FBF037N - main motor (kW)	37.0
FBF045N - main motor (kW)	45.0



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