

COSMOS 250

EMULSIFYING REACTOR SKID

High-performance, compact, plug-and-play system

Advanced process technology

The COSMOS 250 skid has been developed for the efficient production of fine emulsions, suspensions and high-viscosity products, integrating all the elements required for a complete process into a single system. Its design allows operation under vacuum or pressure, providing a robust and efficient solution that ensures maximum homogeneity, repeatability and ease of operation. Especially designed for companies seeking process reliability, consistent product quality and maximum return on investment.

Functions

Cleaning and inspection

CIP via recirculation and integrated spray balls, featuring a hygienic design and optimized access for maintenance operations.

Loading and discharging

System designed for efficient handling of liquids and solids under vacuum or pressure

Emulsification

Particle size reduction and efficient dispersion via high-shear inline processing.

Homogeneous mixing

Efficient agitation via FULLVISC laminar-flow mixing system with scrapers, designed for medium and high-viscosity products.



Equipment configuration

Main reactor

- 250-liter working capacity reactor
- Jacket for connection to customer thermal utilities
- Operating pressure up to 2 bar
- Integrated vacuum system (up to -950 mbar)
- Mirror-polished internal finish
- CIP spray balls for in-place cleaning
- Hydraulic lifting of the top head
- Load cells integrated into the support legs

Performance

- Processing of products up to 70,000 cP
- Final particle size down to 10 μm
- Complete processing of the entire product volume
- Vacuum powder intake system
- PLC and HMI touchscreen
- Manual or recipe-based automatic control
- Compact skid-mounted design
- Easy handling using pallet truck or forklift
- CE-compliant design
- AISI 316 stainless steel construction on all product-contact parts

Main applications



Cosmetics



Pharmaceutical



Chemical



Food

Optional accessories

- **Temperature control unit:** Independent unit for process heating and cooling.

FULLVISC mixing system

- Positive-displacement laminar agitator
- Exclusive 3-arm design with scrapers
- Efficient mixing of high-viscosity products
- Nominal speed: 40 rpm / Power: 4 kW

Inline homogenization system

- M.X.O.N. 120 high-shear emulsifier
- Excellent full-batch processing
- Mechanical seal with safety sealing system
- Nominal speed: 2,900 rpm / Power: 5.5 kW

