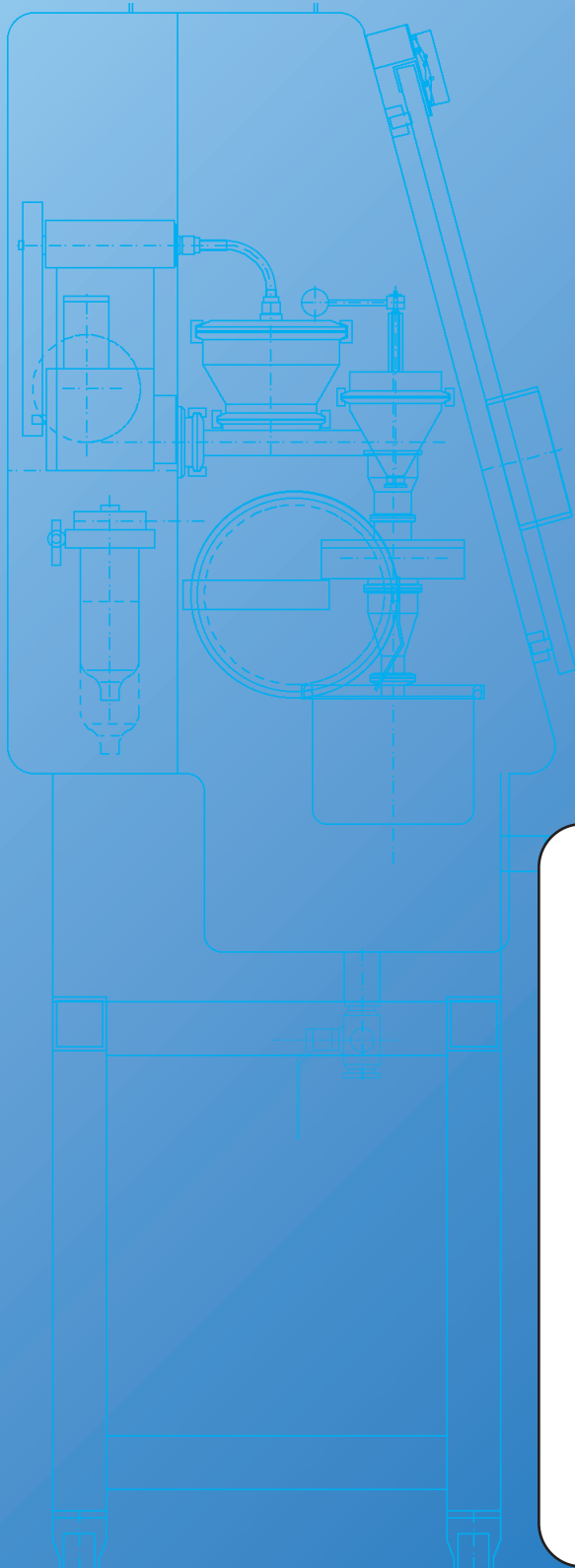


APT™

ADVANCED POWDER TECHNOLOGY
AND MICRONISATION

ISOPAK-1



Safe Purity for
Laboratory and
R&D Applications



SUPERJET MICRONISER

SuperJet Isopak-1 ...

Sanitary, USDA-accepted design characterizes Isopak-1 series. They feature sophisticated designs, in line with Good Manufacturing Practice and the most demanding pharmaceutical specifications worldwide.

Isopak-1 is the typical machine for R&D and laboratory applications with toxic, sterile and high active pharmaceuticals.

For other applications, argon-inerted glove-boxes are used with reactive chemicals to prevent risk of explosion.

In production since 1991, this machine was repeatedly improved in terms of versatility and compactness.

PROCESS EQUIPMENT

All process equipment are located in the safe, contained environment:

- SuperJet microniser with direct collection of the product from the grinding chamber, without risk of fiber contamination. It has a nozzle ring with optimized grinding angles, a horizontal venturi feeding system that avoids metal contamination and built-in, static classifying system that assures very narrow, particle size distribution

- Twin-shaft feeder, volumetric type, with concave-profile, self-cleaning, screws, able to break the agglomerates and to assure an accurate feeding of poor flowing products, for the whole batch.

- High-efficiency, dust separator combining inertial and static effects, with membrane filter cartridge, reverse-pulse, automatic cleaning and final, safety HEPA that exhausts breathing air quality to the atmosphere.



ISOPAK-1, FRONT WINDOW OPENED FOR SERVICING



Process equipment are AISI316 stainless steel and hand polished with extrafine, mirror finish 320-360 grit, Ra 0.25-0.32µm. Super-mirror finish of contact parts, 400-600 grit Ra 0.16-0.25µm is also available.

TOTALLY SAFE ISOLATOR

The new concept of total containment technology is applied to Isopak-1 that features a modular design glove-box. It holds all the process equipment and is kept negative or positive pressures, to avoid contamination of the product or of the environment.

Inside the glove-box, the working areas are Class 1000 or better, with laminar flows and high-speed, air recirculation through HEPA filters to capture the ultra-fine dust released during the disassembling and cleaning operations.

Purified water shower, washing sink, vacuum and ultrasonic cleaners and trapped drains allow perfect cleaning of all components, inside the contained environment, without risk of cross-contamination.

The dialogue with the external room is made through airlocks that are kept at differential pressure in respect to the working environment and to the room.

Clean-in-place, on and off-line steam sterilized equipment along with sterile, contained environments are used for highly sensitive products.

CAREFUL ERGONOMICS

The glove-box design is subject of a particular ergonomic study to assure that all the process equipment and air filtration systems can be serviced without breaking the containment.

The working areas are easily accessible through gloves and feature service and stand-by lights that are built into the ceiling to assure perfect working conditions according to all GMPs.

OPTIONS

Due to the modular design, the following options can be applied, at any time:

- high-precision, electronic pressure controls that monitor the microniser with proportional pressure regulators, specifically dimensioned for very quick response and steady operation



SUPERJET ISOPAK-1, CUSTOMIZED

- synoptic and LCD-alarm display with fault messages in plain english, to signal pressure drops on the microniser lines and across the filters.

- electronic motor controller allowing stepless regulation of feed screw speeds across the specified range and features adjustable current limiting circuit factory-set to prevent overloading

- sterilizing air filters for each process line, USDA-approved and certified.

- batch validation equipment including 4-20mA pressure transducers and multi-pen process recorder that document each event and alarm.

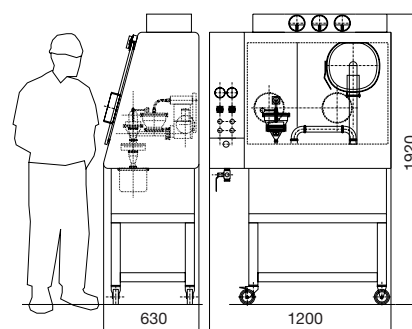
SuperJet Isopak-1 can be customized according to the product specification. Complete powder processing and laboratory transfer lines are also available.



SUPERJET ISOPAK-1, WITH INERT-GAS SYSTEM

TECHNICAL CHARACTERISTICS

SuperJet Microniser	JM1
Nominal size	4 inch
	105 mm
Air/Inert gas @ 7bar	0.8 Nm ³ /min
	28 scfm
Supply (rec'd)	10 bar
	145 psi
Installed power	1.5/2 kW/HP
Expected output	0.2-1.5 kg/hr



... what a high-tech microniser should be