

APT™

ADVANCED POWDER TECHNOLOGY
AND MICRONISATION

KOMPAK-N₂



**Closed-Loop
Inert Gas Systems
for Safe Micronisation**



SUPERJET MICRONISER

SuperJet inert-gas systems ...

The SuperJet Micronisers can process organic compounds, reactive chemicals and metal alloys that present high risk of dust explosion.

Inerted machines that employ compressed nitrogen from liquid storage or closed-loop systems are alternative to the intrinsically safe, 10-bar pressure shock resistant design.

In production since 1989, these machines are continuously improved in terms of versatility and compactness.

All the construction versions feature the following equipment:

- 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. Speed is controlled by a stepless, mechanical variator.



SUPERJET KOMPAK-2, OPERATED WITH COMPRESSED NITROGEN



SUPERJET KOMPAK-2, WITH CLOSED-LOOP, NITROGEN SYSTEM

- 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.
- Venturi silencer with sight glass and PTFE wiper, actuated by hand
- Standard controls, integrated in the front panel, include process pressure regulators, pressure gages and differential gages to monitor the filters.
- Full stainless steel construction and simple, modular design allowing easy access to internal parts that are hand polished with extrafine, mirror finish 320-360 grit, Ra 0.25-0.32µm.

The closed-loop nitrogen systems employ lubricated, screw compressors that are customized for this special operation. To assure steady pressures at the microniser, APTM developed special devices, such as relief valves able to operate at 8-12 mmH₂O.

Automatic controls enable unattended running and monitor continuously the factory supply lines to stop the process in case of failures.

Due to different product requirements, the SuperJet Micronisers that are operated with inert gases must be customized to every specification.



DETAIL OF CONTROL PANEL



N₂-INERTED SYSTEM, CLASS 1000 ENVIRONMENT



SuperJet Micronisers	Nominal Size		Inert Gas @7bar/100psi		Superheated Steam @14bar/200°C		Expected Output kg/hr
	inch	mm	Nm ³ /min	scfm	kg/hr	lbs/hr	
JM/SM-3	12	305	6.9	245	295	650	1.5-80
JM-4	16	405	12.8	450	495	1090	3.5-150
JM-5	20	505	17.9	630	765	1690	5.0-350
JM-6	24	610	25.7	910	990	2180	8.0-550
JM-7	30	760	39.5	1395	1650	3640	25-1200
JM-8	36	910	54.5	1925	2350	5180	40-2000
JM-9	42	1070	82.0	2895	3200	6950	90-3700

... what a high-tech microniser should be