ASI Technologies

Best Solutions to meet your needs

PRODUCT CATALOG

ASI-MN2 Series

Modular PSA Nitrogen Generators, 16 models, 2.2 to 60 Nm³/h at 99.999%

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Main function

The **ASI-MN2 series** generates nitrogen on site from clean compressed air by **pressure swing adsorption (PSA)** on carbon molecular sieve, with two adsorption towers working alternately for a continuous supply.

16 models cover **2.2 to 60 Nm³/h at 99.999%** and up to **220 Nm³/h at 99%**. Every unit has a **built-in N_2 buffer tank**, PLC control, a continuous oxygen analyzer and a touch screen, for SMT reflow, wave and selective soldering, component storage, laser processing and more.

16 models	2.2–60 Nm³/h	Up to 220	Built-in	220V
One modular platform	N_2 flow at 99.999%	Nm³/h at 99%	N_2 buffer tank	200W, 50Hz

Key Features

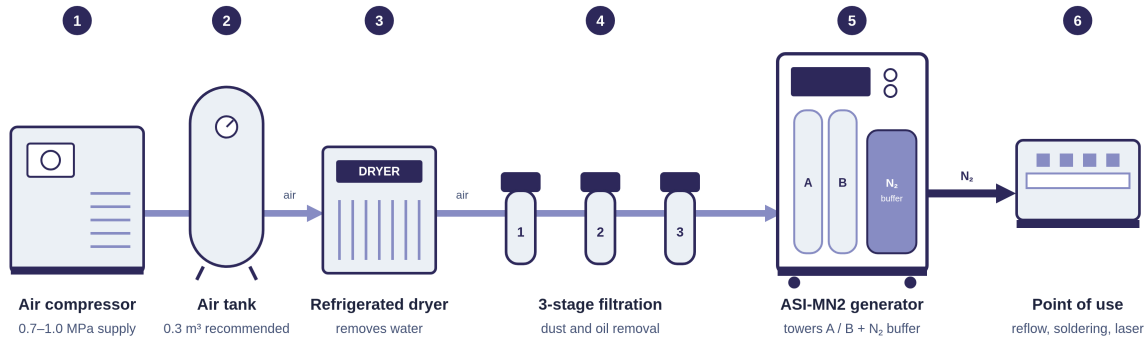
- **PSA** with carbon molecular sieve, two towers
- Purity from **99%** to **99.999%**
- **Built-in N_2 buffer tank** in every model
- Siemens **PLC** and continuous **oxygen analyzer**
- Off-spec nitrogen **vented automatically**
- Fault analysis and alarm, unattended operation
- Anodized aluminum adsorption towers
- Cloud platform connectable (mobile monitoring)
- Touch screen with English interface
- Modular, compact and mobile cabinets

תקציר בעברית: סדרת **ASI-MN2**: גנרטורי חנקן מודולריים בטכנולוגיית **PSA** (ספיחה בתנודות לחץ) על נפה מולקולרית פחמנית, מאוויר דחוס נקי. **16 דגמים** מ-**2.2 ועד 60 Nm³/h** בטוהר 99.999%, ועד 220 Nm³/h בטוהר 99%. בכל דגם מיכל חיץ לחנקן מובנה, בקר Siemens, אנלייזר חמצן רציף ומסך מגע. מתאים להלחמת Reflow, גל וסלקטיבית, לאחסון רכיבים, ללייזר, להדפסת מתכת, לטיפול תרמי, לאריזת מזון ולמעבדות.

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Typical system line



Compressed air is dried and filtered before the ASI-MN2 separates N_2 in towers A / B; the built-in buffer tank feeds the point of use.

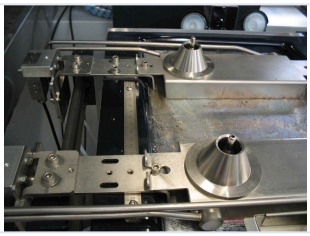
Where on-site nitrogen is used



SMT reflow soldering: inert oven atmosphere reduces oxidation and improves wetting. Typically 99.9–99.99% N_2 (1000–100 ppm O_2), ≤ 50 ppm for demanding work.



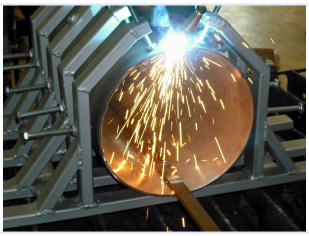
Wave soldering: N_2 over the solder pot cuts dross and improves wetting. Typically 99.9–99.99% (about 100 ppm O_2).



Selective soldering: N_2 shrouds the nozzle to keep the mini-wave clean and limit dross. Typically 99.99–99.999%.



Component storage: dry N_2 purge holds moisture-sensitive parts at ≤ 5–10% RH (IPC/JEDEC J-STD-033) and limits oxidation.



Laser cutting and welding: N_2 assist and shield gas gives bright, oxide-free edges. Typically 99.9–99.999%; cutting needs a booster for high pressure.



Metal 3D printing: inert build chamber protects the melt pool and powder. Typically 99.99% (≤ 100 ppm O_2); argon for titanium.



Heat treatment: N_2 furnace atmosphere prevents scaling and discoloration in annealing and brazing. Typically 95–99.999%.



Food packaging (MAP): N_2 replaces oxygen in the pack to extend shelf life. Typically 99–99.9%.



Pharma and laboratories: blanketing, inerting and packaging at 99–99.999%; LC-MS and sample evaporation at 95–99.5%.

Photo credits

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Models: N_2 output (Nm³/h) by purity, ports and size									
Model	**99%**	**99.9%**	**99.99%**	**99.995%**	**99.999%**	**N_2 outlet**	**Air inlet**	**L×W×H mm**	**kg**
ASI-MN2-2.2	8.1	5.4	3.5	2.9	**2.2**	Φ8	Φ16	580×500×1690	140
ASI-MN2-5	19.2	11.4	7.8	6.4	**5**	Φ8	Φ16	745×500×1690	200
ASI-MN2-8	28.8	17	11.7	9.9	**8**	Φ8	Φ16	907×500×1690	280
ASI-MN2-10	38	23	15	13	**10**	Φ8	Φ16	1070×500×1690	340
ASI-MN2-13	48	27	19	16	**13**	Φ8	G3/4	1230×500×1690	410
ASI-MN2-16	57	39	23	19	**16**	Φ12	G3/4	1390×500×1690	480
ASI-MN2-18	67	43	26	23	**18**	Φ12	G3/4	1560×500×1690	560
ASI-MN2-21	76	45	30	25	**21**	Φ12	G1	1720×500×1690	620
ASI-MN2-23	86	51	35	29	**23**	Φ16	G1	1880×500×1690	710
ASI-MN2-26	96	57	40	33	**26**	Φ16	G1	2040×500×1690	830
ASI-MN2-30	110	65	45	38	**30**	Φ16	G1-1/4	2200×500×1850	900
ASI-MN2-37	134	80	55	46	**37**	Φ16	G1-1/4	1710×990×1690	1230
ASI-MN2-42	152	90	65	52	**42**	Φ16	G1-1/2	1870×990×1690	1450
ASI-MN2-48	172	102	70	58	**48**	G3/4	G1-1/2	2030×990×1690	1600
ASI-MN2-54	192	114	80	66	**54**	G3/4	G1-1/2	2190×990×1690	1800
ASI-MN2-60	220	130	90	76	**60**	G3/4	G1-1/2	2350×990×1850	2000

Inlet air (all models)	
Feed gas	Clean compressed air, 0.7–1.0 MPa (optimum about 0.8 MPa)
Air quality	ISO 8573-1:2010 class 1-4-1; dew point ≤ 2–10 °C; oil ≤ 0.01 mg/m³
Air demand	> 0.6 Nm³/min (ASI-MN2-5); > 1 Nm³/min (ASI-MN2-8); other models on request

Nitrogen output and control	
Outlet pressure	0.6 MPa (ASI-MN2-5 and -8, with 0.1 MPa drop at the inlet); other models on request
N_2 buffer tank	Built-in in every model; no extra N_2 tank required
Monitoring	Flow meter (L/min), continuous oxygen analyzer (ppm), N_2 sampling port
Control system	Siemens PLC, pneumatic program valves, touch screen (English)
Power supply	220V / 200W / 50Hz
Site	10–35 °C, clean, dry and ventilated; 0.5 m clearance above the unit; ratings at altitude 0 m

Required upstream equipment (not included)	
Line	Air compressor, air tank, refrigerated dryer, three-stage filtration, then the generator
Air tank	0.3 m³ recommended for ASI-MN2-5 and -8; other models on request

Maintenance intervals	
Filters	Air filter element 4000 h; precision filters 4000–8000 h; N_2 filter element 1 year
Wear parts	Silencers (2) 1–2 years; pressure relief valves (2) 2 years; activated carbon 5–10 years

Ordering information	
Model	**Description**
ASI-MN2-<flow>	Modular nitrogen generator; <flow> = Nm³/h at 99.999% (see model table)

Specifications are subject to change without notice. Rev. history: Rev 01: first issue, series catalog, v2 flat look