



N<sub>2</sub>

**M-MNG-PRO SERIES  
PSA MODULAR NITROGEN  
GENERATORS**

Manufacturing Forward





Mikropor began its journey in 1987 with a passion to create “Tomorrow’s Technology” and has become one of the leading manufacturers of atmospheric air filtration solutions and compressed air treatment systems for a variety of industries.

By closely following the latest developments in technology, Mikropor’s “Best in Class” products and solutions are appreciated by customers in more than 100 countries.

The company’s sustainable growth has been provided by its passion for innovation and commitment to quality, as well as its dedication to technology. Mikropor is an environmentally conscious company that values people, while developing products that extend the needs and expectations of customers.

With this mission, Mikropor continues to become one of the most recognized brands in the world by expanding its global penetration in the field of technological filtration and contributes to a healthier planet.

[www.mikroporamerica.com](http://www.mikroporamerica.com)

## M-MNG-PRO SERIES PSA MODULAR NITROGEN GENERATORS

Pressure Swing Adsorption (PSA) type Nitrogen Generation System that is used to separate and enrich nitrogen from oxygen employs CMS (Carbon Molecular Sieve) as adsorbent.

CMS adsorbs oxygen and water vapor molecules under a certain pressure while allowing nitrogen to pass through in the line.

### M-MNG-PRO Series is a Modular Adsorber System

The Nitrogen Generator consists of couple of modules filled with CMS. Clean and dry air is directed to adsorber module beds where oxygen and water vapor are adsorbed faster than nitrogen in the pore structure of the CMS, resulting in increased nitrogen purity of the product gas stream to the desired level (95-99.999% as required by customer).

### Applications

- Electronic industry
- Metal industry
- Chemical industry
- Cleaning Process
- Plastic industry
- Charge nitrogen gas in tires
- Production process and storage of food



# M-MNG-PRO SERIES PSA MODULAR NITROGEN GENERATORS

## FEATURES

### Standard

- Nitrogen Modules
- Silencer
- Mini PLC
- Manometers
- Proportional Valve
- Pressure Transmitter
- ECO Mode
- T Filter
- Piston Valves
- Valve Control Regulator

### Optional

- Dew Point Sensor Kit
- Flowmeter Kit
- Carbolescer
- Oxygen Analyzer Kit
- Pressure Regulator (Nitrogen Outlet)
- 3-Way By-Pass Valve Kit
- HMI Color Touch Screen PLC
- Oil Indicator

### Advantages

- Simple structure, compact design, full automated operation
- Replaces manifold usage (see pic .1)
- Touch Screen PLC for controlling the complete system (see pic. 2)
- PLC Screen for monitoring and visualizing the progress
- Rapid start-up and safety system
- Superior silencer design gives low noise levels during depressurization and purge
- Durable piston valves for long-life operation (see pic. 5)
- On-demand production with low costs
- High performance
  - \*The purity and capacity of nitrogen gas is designed to meet customer requirements (Nitrogen Purity 95%~99.999% is available)
- Minimum maintenance cost.
- Lower air-to-nitrogen (A/N) ratios and energy consumption
- Superior air distribution for the high-quality nitrogen gas production
- High-sensitive sensor technologies (see pic 3)
- Effective Integrated Filtration (see pic. 4)



Replaces Manifold Usage - Pic. 1



Mini PLC- Pic. 2



Dew Point Sensor - Pic. 3



Air Filter - Pic. 4



Long Life Piston Valve - Pic. 5

# M-MNG-PRO SERIES PSA MODULAR NITROGEN GENERATORS

## Reference Conditions

Pressure Drop	Inlet Compressed Air Pressure	Outlet Nitrogen Pressure	Ambient Temperature	Inlet Air Dew Point
22 psig	110 psig	87 psig	77°F	≤ 37°F

## Technical Specifications

Mikropor Model	Air Demand @ Following Purity Level (cfm)									
	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
M-MNG-PRO-20	4,1	3,7	3,4	3,1	2,4	2,5	2,5	2,1	2,1	1,9
M-MNG-PRO-40	6,6	5,9	5,5	5,0	4,8	4,1	4,1	3,4	3,3	3,1
M-MNG-PRO-70	12,1	10,8	10,2	9,2	8,3	7,5	7,5	6,2	6,1	5,7
M-MNG-PRO-123	20,2	18,1	17,0	15,3	14,3	12,5	12,4	10,4	10,2	9,5
M-MNG-PRO-210	34,7	31,1	29,2	26,4	24,8	21,5	21,4	17,8	17,5	16,4
M-MNG-PRO-285	46,4	41,5	39,0	35,2	33,1	28,7	28,6	23,8	23,4	21,9
M-MNG-PRO-340	56,8	50,8	47,8	43,1	40,5	35,1	35,0	29,1	28,7	26,8
M-MNG-PRO-555	90,4	80,8	76,0	68,6	64,4	55,8	55,7	46,4	45,6	42,7
M-MNG-PRO-735	119,6	107,0	100,6	90,8	85,3	73,9	73,7	61,4	60,3	56,5
M-MNG-PRO-990	161,6	144,6	136,0	122,7	115,2	99,8	99,7	83,0	81,5	76,4
M-MNG-PRO-1130	185,1	165,6	155,8	140,5	132,0	114,3	114,1	95,0	93,4	87,5
M-MNG-PRO-1260	205,6	183,9	173,0	156,1	146,6	127,0	126,8	105,5	103,7	97,2
M-MNG-PRO-1650	269,1	240,8	226,4	204,3	191,9	166,2	165,9	138,1	135,8	127,2

# M-MNG-PRO SERIES PSA MODULAR NITROGEN GENERATORS

## Technical Specifications

Mikropor Model	Free Nitrogen Delivery @ Following Purity Level (cfm)									
	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
M-MNG-PRO-20	2,6	2,3	2,0	1,7	1,2	1,0	0,9	0,4	0,4	0,3
M-MNG-PRO-40	4,1	3,7	3,2	2,7	2,4	1,6	1,5	0,7	0,7	0,4
M-MNG-PRO-70	7,6	6,8	5,8	5,0	4,2	3,0	2,8	1,3	1,2	0,8
M-MNG-PRO-123	12,6	11,3	9,7	8,3	7,2	5,0	4,6	2,2	2,0	1,3
M-MNG-PRO-210	21,7	19,5	16,7	14,2	12,6	8,6	7,9	3,7	3,5	2,2
M-MNG-PRO-285	29,0	26,0	22,4	19,0	16,8	11,4	10,6	5,0	4,7	2,9
M-MNG-PRO-340	35,5	31,8	27,4	23,2	20,5	14,0	12,9	6,1	5,7	3,6
M-MNG-PRO-555	56,6	50,6	43,5	37,0	32,7	22,3	20,6	9,7	9,1	5,7
M-MNG-PRO-735	74,8	66,9	57,6	48,9	43,2	29,5	27,3	12,8	12,1	7,6
M-MNG-PRO-990	101,2	90,5	77,9	66,1	58,4	39,8	36,8	17,3	16,3	10,3
M-MNG-PRO-1130	115,9	103,6	89,2	75,7	66,9	45,6	42,2	19,8	18,7	11,8
M-MNG-PRO-1260	128,7	115,1	99,1	84,1	74,3	50,7	46,9	22,0	20,7	13,1
M-MNG-PRO-1650	168,4	150,6	129,7	110,1	97,2	66,3	61,3	28,8	27,2	17,1

### A/N Ratios for All M-MNG-PRO Models (TBA)\*\*

Purities	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
Air/N <sub>2</sub> Ratio	1,2 – 1,6	1,4 – 1,8	1,4 – 1,8	1,9 – 2,3	2,1 – 2,6	2,6 – 3,0	2,5 – 3,2	4,1 – 5,0	5,4 – 6,2	6,8 – 7,5

\*\* The A/N Ratios are to be advised according to the desired models and purities.

# M-MNG-PRO SERIES PSA MODULAR NITROGEN GENERATORS

## Technical Specifications

Mikropor Model	Recommended Buffer Tank Volumes (Gallon)									
	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
M-MNG-PRO-20	5	5	5	1	5	1	1	1	1	1
M-MNG-PRO-40	5	5	5	5	5	1	1	1	1	1
M-MNG-PRO-70	10	10	10	5	5	5	5	1	1	1
M-MNG-PRO-123	15	15	15	10	10	5	5	5	5	1
M-MNG-PRO-210	25	20	20	15	15	10	10	5	5	5
M-MNG-PRO-285	30	25	25	20	20	15	15	5	5	5
M-MNG-PRO-340	35	35	30	25	25	15	15	10	10	5
M-MNG-PRO-555	60	50	45	40	35	25	25	15	10	10
M-MNG-PRO-735	75	70	60	50	45	30	30	15	15	10
M-MNG-PRO-990	100	90	80	65	60	40	40	20	20	10
M-MNG-PRO-1130	115	105	90	75	70	45	45	20	20	15
M-MNG-PRO-1260	130	115	100	85	75	50	50	25	20	15
M-MNG-PRO-1650	170	150	130	110	100	65	65	30	30	20

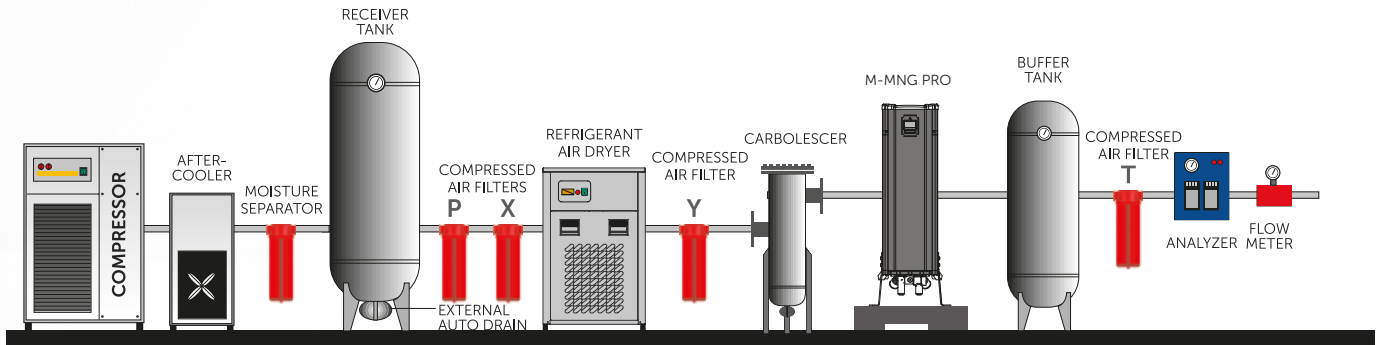
## Correction Factor

Inlet Pressure (psi)	F1	Ambient Temp. (°F)	F2
73	0,68	41	0,85
80	0,73	50	1
87	0,79	59	1
94	0,88	68	1
100	0,90	77	1
110	1	86	0,91
116	1,04	95	0,82
123	1,08	104	0,74
131	1,15	113	0,6
137	1,18	-	-
145	1,2	-	-

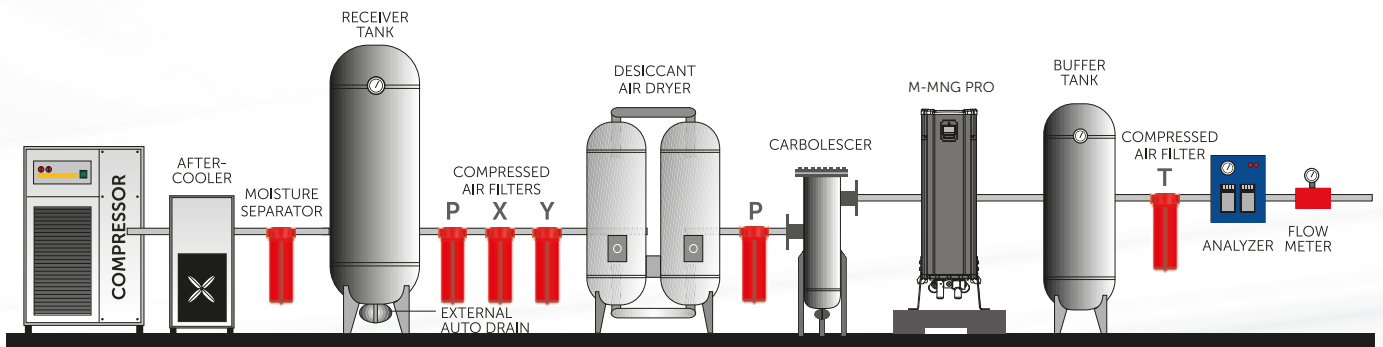
To determine the nitrogen generator model in the reference conditions divide the nitrogen flow rate to the factors mentioned in the correction table.

# M-MNG-PRO SERIES PSA MODULAR NITROGEN GENERATORS

## AIR LINE DESIGN



## AIR LINE DESIGN



"Mikropor reserves the right to change the design and/or dimensions and/or weight of his products at any time without any notice or liability."

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