

**6-10 bar**

operating pressure

5 to 35 °C

operating temperature range

up to 40 °C

ambient air temperature range

< -40 °C

dew points (atmospheric)

3 to 442,5 Nm³/h

capacity

up to 99,999 %

purity

DESCRIPTION

The N-GEN nitrogen generators extract the available nitrogen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology.

During the PSA process compressed, cleaned ambient air is led to a molecular sieve bed, which allows the nitrogen to pass through as a product gas, but adsorbs other gases. The sieve releases the adsorbed gases to the atmosphere, when the outlet valve is closed and the bed pressure returns to ambient pressure.

Subsequently the bed will be purged with nitrogen before fresh compressed air will enter for a new production cycle. In order to guarantee a constant product flow NG nitrogen generators use two molecular sieve beds, which alternatively switch between the adsorption and the regeneration phase.

APPLICATIONS

- Blanketing of Chemicals
- Pharmaceuticals
- Gas Assisted Injection Moulding (GAIM)
- Heat Treatment of Ferrous & Non-Ferrous Metals
- Inerting of Flammable Liquids
- Laser Cutting
- Prevention of Dust Explosions
- Re-flow and Wave Soldering of PCBs
- UV-Curing of Coatings
- Food processing

N-GEN SERIES

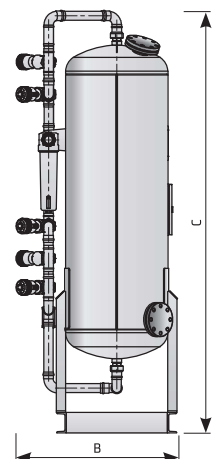
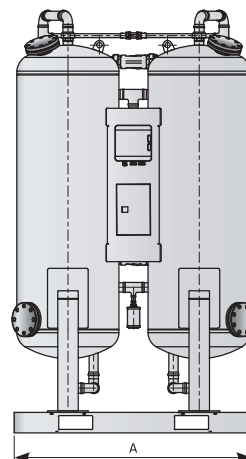
PSA NITROGEN GENERATORS

**STANDARD EQUIPMENT**

- Set of External Feed Air Filters
- Adsorber Vessels in Carbon Steel
- Long life Pneumatic Valves
- Internal Piping & Fittings zinc plated carbon steel
- Nitrogen flow Regulation
- Control System with SIEMENS PLC
- WebControl

OPTIONAL EQUIPMENT

- Oxygen Analyser with Zirconium-Oxide Sensor
- Electronic Product Flow Meter
- Feed Air / Product Moisture Analyser
- Feed Air / Product Pressure Transmitters
- Feed Air / Product Temperature Transmitters
- Nitrogen Sterile Filters
- Nitrogen Booster
- Nitrogen Cylinder Filling System



TECHNICAL DATA						
Type	Connection		Dimensions [mm]			Mass
	In	Out	A	B	C	kg
N-GEN 03	1/2"	1/2"	635	530	1650	110
N-GEN 05	1/2"	1/2"	635	530	1650	130
N-GEN 10	1/2"	1/2"	685	530	1650	190
N-GEN 15	1/2"	1/2"	795	545	1655	230
N-GEN 20	1"	1/2"	795	585	1920	295
N-GEN 25	1"	1/2"	845	660	1975	410
N-GEN 35	1"	1/2"	1040	780	2005	585
N-GEN 50	1"	1/2"	1040	795	2250	740
N-GEN 65	2"	1/2"	1150	795	2335	835
N-GEN 100	2"	1"	1425	945	2480	1260
N-GEN 150	2"	1"	1650	1100	2550	1590
N-GEN 200	2"	1"	1805	1160	2615	1905
N-GEN 250	3"	1"	2020	1190	2780	2430
N-GEN 300	3"	2"	2255	1280	2780	2810
N-GEN 400	3"	2"	2720	1470	2880	3640

PERFORMANCE										
Type		Discharge pressure	Discharge pressure	Residual Oxygen [vol. %]						
		barg	barg	3	2	1	0,5	0,1	0,01	0,001
				Residual Nitrogen [vol. %]						
				96,00	96,97	97,87	98,17	98,47	-(⁰)	-(⁰)
				Residual Argon [vol. %]						
				1,00	1,03	1,13	1,33	1,43	-(⁰)	-(⁰)
				Total inert gas purity [vol. %]						
				97	98	99	99,5	99,9	99,99	99,999*
N-GEN 03	N ₂ flow [Nm ³ /h]	7,5	6,2	5,23	4,27	3,62	3,00	1,99	0,99	0,61
		Feed air consumption [Nm ³ /h]		13,4	12,2	11,4	10,4	8,4	6,1	5,5
N-GEN 05	N ₂ flow [Nm ³ /h]	7,5	6,2	9,0	7,4	6,2	5,2	3,4	1,7	1,1
		Feed air consumption [Nm ³ /h]		23,2	21,0	19,7	18,0	14,5	10,5	9,5
N-GEN 10	N ₂ flow [Nm ³ /h]	7,5	6,2	15,2	12,4	10,5	8,7	5,8	2,9	1,8
		Feed air consumption [Nm ³ /h]		38,9	35,3	33,0	30,2	24,3	17,6	15,9
N-GEN 15	N ₂ flow [Nm ³ /h]	7,5	6,2	24,1	19,7	16,7	13,8	9,2	4,6	2,8
		Feed air consumption [Nm ³ /h]		61,8	56,1	52,5	48,0	38,6	28,0	25,3
N-GEN 20	N ₂ flow [Nm ³ /h]	7,5	6,2	30,2	24,6	20,9	17,3	11,5	5,7	3,5
		Feed air consumption [Nm ³ /h]		77,3	70,3	65,6	60,1	48,3	35,1	31,6
N-GEN 25	N ₂ flow [Nm ³ /h]	7,5	6,2	42,7	34,8	29,5	24,5	16,2	8,1	4,9
		Feed air consumption [Nm ³ /h]		109,4	99,4	92,8	85,0	68,4	49,6	44,7
N-GEN 35	N ₂ flow [Nm ³ /h]	7,5	6,2	67,4	55,0	46,6	38,6	25,6	12,8	7,9
		Feed air consumption [Nm ³ /h]		172,7	156,9	146,6	134,2	107,9	78,3	70,6
N-GEN 50	N ₂ flow [Nm ³ /h]	7,5	6,2	87,4	71,3	60,4	49,9	33,2	16,6	10,2
		Feed air consumption [Nm ³ /h]		224,0	203,5	190,1	173,4	140,0	101,6	91,6
N-GEN 65	N ₂ flow [Nm ³ /h]	7,5	6,2	111,9	91,4	77,4	64,2	42,6	21,2	13,1
		Feed air consumption [Nm ³ /h]		286,9	260,6	243,5	223,0	179,3	130,1	117,3
N-GEN 100	N ₂ flow [Nm ³ /h]	7,5	6,2	192,9	157,5	133,5	110,6	73,4	36,6	22,5
		Feed air consumption [Nm ³ /h]		494,5	449,3	419,7	384,4	309,1	224,3	202,2
N-GEN 150	N ₂ flow [Nm ³ /h]	7,5	6,2	259,4	211,8	179,5	148,7	98,7	49,1	30,2
		Feed air consumption [Nm ³ /h]		664,9	604,1	564,3	516,9	415,6	301,6	271,9
N-GEN 200	N ₂ flow [Nm ³ /h]	7,5	6,2	354,3	289,2	245,0	203,1	134,8	67,2	41,3
		Feed air consumption [Nm ³ /h]		907,9	824,8	770,6	705,8	567,5	411,8	371,3
N-GEN 250	N ₂ flow [Nm ³ /h]	7,5	6,2	434,1	354,4	300,3	248,9	165,1	82,3	50,6
		Feed air consumption [Nm ³ /h]		1112,6	1010,8	944,3	864,9	695,4	504,6	455,0
N-GEN 300	N ₂ flow [Nm ³ /h]	7,5	6,2	590,9	482,4	408,7	338,8	224,8	112,0	68,9
		Feed air consumption [Nm ³ /h]		1514,3	1375,8	1285,3	1177,2	946,5	686,9	619,3
N-GEN 400	N ₂ flow [Nm ³ /h]	7,5	6,2	771,8	630,0	533,8	442,5	293,6	146,3	90,0
		Feed air consumption [Nm ³ /h]		1977,9	1797,0	1678,8	1537,6	1236,3	897,1	808,9

* On request

(⁰) For concentrations at higher purity please contact manufacturer.

All flow rates valid for generator operation at ambient conditions 20 °C, 1.013,25 mbar and 60% RH. Performance ±5%.