NG SERIES

NITROGEN GENERATORS

operating pressure	**6** to **10** bar
operating temp.range	**5** to **40** °C
ambient air temp.	**5** to **45** °C
dew points (atmosph.)	**-40**°C

APPLICATIONS

- Blanketing of Chemicals and 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

DESCRIPTION

The NG 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 modules of two molecular sieve beds, which alternatively switch between the adsorption and the regeneration phase.

Under normal operating conditions and with correct maintenance the molecular sieve beds will have an almost indefinite lifetime.

STANDARD EQUIPMENT

- Set of External Feed Air Filters
- Adsorber Vessel Module(s) in Anodised Aluminium
- Pneumatic Valves
- Internal Piping & Fittings in Stainless Steel 316
- Maintenance-free Exhaust Silencers
- Air and Nitrogen Pressure Regulation
- Local Instrumentation
- Control System with Rockwell/Allen-Bradley PLC
- Touch Screen Operator Interface with Datalogging
- Pressure Switch for Automated Idle-Mode

OPTIONAL EQUIPMENT

- Dual Bank Slave Unit(s)
- Supporting Frame for Air Filters
- 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
- Telemetry
- Nitrogen Booster
- Nitrogen Cylinder Filling System

TECHNICAL DATA

Type	Connection		Dimensions [mm]			Mass
	In	Out	L	B	H	kg
NG 8	1''	1/2''	637	520	1345	210
NG 16	1''	1/2''	865	520	1345	315
NG 24	1''	1/2''	1093	520	1345	420
NG 32	1''	1/2''	1321	520	1345	525
NG 40	1''	1/2''	1549	520	1345	630
NG 48	1''	1/2''	1777	520	1345	735
NG 56	1''	1/2''	2005	520	1345	840
NG 64	1''	1/2''	2233	520	1345	945

PERFORMANCE

Type	Inlet pressure	Discharge press.	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	-[1]	-[1]
			Residual Argon [vol. %]						
			1,00	1,03	1,13	1,33	1,43	-[1]	-[1]
			Total inert gas purity [vol. %]						
			97	98	99	99,5	99,9	99,99	99,999
NG 8	8	7,5	11,1	9,8	8,0	6,9	3,7	2,2	1,4
	Feed air consumption [Nm³/h]		12,6	12	14,4	19,2	18,6	21	22,2
	10	8	14,1	13,4	10,0	7,6	3,9	2,6	1,2
	Feed air consumption [Nm³/h]		15,6	13,8	15	21	24	28,8	28,2
NG 16	8	7,5	22,1	19,6	16,0	13,8	7,4	4,4	2,7
	Feed air consumption [Nm³/h]		24,6	23,4	28,8	38,4	37,8	42	44,4
	10	8	28,2	26,8	20,1	15,1	7,8	5,1	2,5
	Feed air consumption [Nm³/h]		30,6	28,2	30,6	42,6	47,4	57,6	57
NG 24	8	7,5	33,2	29,4	24,0	20,6	11,1	6,5	4,1
	Feed air consumption [Nm³/h]		36,6	35,4	43,2	57,6	56,4	63	66,6
	10	8	42,3	40,2	30,1	22,7	11,7	7,7	3,7
	Feed air consumption [Nm³/h]		46,2	42	45,6	63,6	71,4	87	85,2
NG 32	8	7,5	44,3	39,2	32,0	27,5	14,8	8,7	5,4
	Feed air consumption [Nm³/h]		49,2	47,4	57,6	76,8	75	84	88,8
	10	8	56,4	53,7	40,2	30,3	15,6	10,3	5,0
	Feed air consumption [Nm³/h]		61,2	55,8	61,2	84,6	94,8	115,8	113,4
NG 40	8	7,5	55,4	49,1	40,0	34,4	18,5	10,9	6,8
	Feed air consumption [Nm³/h]		61,2	58,8	72	95,4	94,2	105	111
	10	8	70,5	67,1	50,2	37,9	19,5	12,9	6,2
	Feed air consumption [Nm³/h]		76,8	70,2	76,2	106,2	118,8	144,6	142,2
NG 48	8	7,5	66,4	58,9	48,0	41,3	22,2	13,1	8,2
	Feed air consumption [Nm³/h]		73,8	70,8	86,4	114,6	112,8	126	133,2
	10	8	84,6	80,5	60,2	45,4	23,4	15,4	7,5
	Feed air consumption [Nm³/h]		92,4	84	91,2	127,2	142,8	173,4	170,4
NG 56	8	7,5	77,5	68,7	56,0	48,1	25,9	15,2	9,5
	Feed air consumption [Nm³/h]		85,8	82,2	100,2	133,8	131,4	147	154,8
	10	8	98,7	93,9	70,3	53,0	27,3	18,0	8,7
	Feed air consumption [Nm³/h]		107,4	97,8	106,8	148,2	166,2	202,2	198,6
NG 64	8	7,5	88,6	78,5	64,0	55,0	29,6	17,4	10,9
	Feed air consumption [Nm³/h]		97,8	94,2	114,6	153	150,6	168	177
	10	8	112,8	107,3	80,3	60,6	31,2	20,6	10,0
	Feed air consumption [Nm³/h]		123	112,2	121,8	169,8	190,2	231	227,4

[1] 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. Please consult the latest version of the BT-Sizer System Sizing Software for flow rates at different ambient conditions. All values for a single Nitrogen Generator without Dual Bank(s).