

ECOTROC® GEN2 Nitrogen Generators

Solutions for Generating Gaseous
Nitrogen from Compressed Air



Rev 01_0121

החברה לטכנולוגיות אויר דחוס בע"מ
מערכות ייבוש וסינון
מחוללי חמצן וחנקן
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Individual and high-tech

KSI nitrogen generators of the **ECOTROC® GEN2** series use the adsorption process to separate the nitrogen molecules from the oxygen molecules in the compressed air supplied. The resulting high quality nitrogen is now ready to be used in a wide variety of systems. With the three options, TPD control (Touch Premium Device), Autopure (start-up device) and GEN-Premium-Sens (pressure dew point sensor, pressure sensor, temperature sensor), KSI Filtertechnik offers the right unit for every requirement. Nitrogen purities from 95.0% to 99.999% (class 5.0) and volume flows (depending on the design) from 0.4 Nm³/h to 1,424.80 Nm³/h are possible (higher volume flows up to 4,111.0 Nm³/h on request).

Options

- compressed air treatment
- modern housings for specific models available
- flow measurement, pressure dew point measurement, inlet pressure measurement, temperature measurement
- redundant components

The ECOTROC® GEN2 Plus-Effects +++

- + 2-stage inlet filtration with pressure regulator included
- + easy installation, plug & play
- + low maintenance, high quality components
- + continuous measurement of nitrogen purity
- + clear and advanced control panel (TPD)
- + efficient process
- + redundancy, modular extensions and different versions (Atex, ASME etc.) allow a generator perfectly tailored to your needs
- + savings in compressed air supply due to PAN process
- + optimum use of the adsorbent material

- load change control
- modular extensions
- high pressure version up to 300 bar
- stainless steel edition
- Ex-protection, Atex, IP 65, ASME

ECOTROC® GEN2

Nitrogen Generators



ECOTROC® GEN2

The KSI nitrogen generators of the **ECOTROC® GEN2** series use the so-called **pressure swing** adsorption process. With the help of an adsorbent bed in the pressure vessels, oxygen molecules are bound as the clean compressed air flows through. The remaining nitrogen molecules are directed into the product tank, where they are now available for further use.

The resulting high-quality nitrogen is now ready to be used in a wide variety of systems.

All KSI nitrogen generators of the **ECOTROC® GEN2** series are equipped with a two-stage pre-filtration (SMA / CA) and an inlet pressure regulator as standard. An output filter (dust filter of the DMF series) with a needle valve for volume flow adjustment is optionally available.

The **GEN2 1150-1650** series is capable of producing nitrogen with a purity of 95% to 99.999% in an energy-efficient and thus cost-effective manner. Depending on the design of the unit, a delivery rate of 0.4 Nm³/h up to 84 Nm³/h can be achieved.

The **GEN2 9000-9940** series increases efficiency and saves energy costs due to new flow technology combined with innovative vortex technology. This makes it possible to obtain more nitrogen with lower compressed air requirements. Depending on the design of the unit, a delivery rate of 10.7 Nm³/h up to 2,740 Nm³/h can be achieved.

The features of this KSI product include the simple design, which allows plug-and-play installation. Continuous measurement of nitrogen purity ensures quality throughout. Low-maintenance operation is ensured by design measures and the use of quality components.

The pressure change process regenerates the adsorbent bed during the desorption process, i.e. the bound oxygen molecules are dissolved again and transported away.

With this process, a purity of 95% up to 99.999% (class 5.0) can be achieved. Depending on the design of the unit, the available volume flow is 0.4 Nm³/h up to 1,424.8 Nm³/h, larger volume flows up to 4,111 Nm³/h on request.

Special features of the **Touch Premium Device** control (TPD) include the fact that it is Ethernet-capable and that all available measured values are not only clearly displayed but also stored for 30 days.

A special feature of this control unit is the optional **remote control** function, with which all information can be called up from any PC or iPad via the Internet.

Control from any device with an Internet connection is thus also possible. Alternatively, the control unit has Modbus TCP, Modbus RTU and Profinet.

Thus, the **Touch Premium Device** control unit (TPD) is equipped with the most modern control technology and allows safe and convenient operation.

In order to tailor the system to your individual requirements, we offer the option of integrating redundant systems, modular extensions and high-pressure variants.

GEN2 1150 – 1650

Type	Purity	95%	97%	98%	99%	99,5%	99,9%	99,99%	99,995%	99,999%
GEN2 1150	Capacity Nm ³ /h	5,7	4,7	4,1	3,2	2,6	1,6	0,9	0,7	0,4
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	10,83	9,87	9,43	8,32	7,54	6,24	4,95	4,9	4
	Comp. air m ³ /h	11,8	10,75	10,27	9,06	8,21	6,8	5,39	5,34	4,36
	Product vessel (l)	150	150	150	150	150	90	90	90	90
	Comp. air vessel (l)	150	150	150	150	150	150	150	150	150
GEN2 1250	Capacity Nm ³ /h	10,8	8,7	7,9	5,8	5,1	3,2	1,3	1,1	0,85
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	20,52	18,27	18,17	15,08	14,79	12,48	7,15	7,7	8,5
	Comp. air m ³ /h	22,36	19,91	19,8	16,43	16,11	13,6	7,79	8,39	9,26
	Product vessel (l)	150	150	150	150	150	150	90	90	90
	Comp. air vessel (l)	150	150	150	150	150	150	150	150	150
GEN2 1280	Capacity Nm ³ /h	16,5	13,4	12	9	7,7	4,8	2,4	1,8	1,3
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	31,35	28,14	27,6	23,4	22,33	18,72	13,2	12,6	13
	Comp. air m ³ /h	34,16	30,66	30,07	25,49	24,33	20,4	14,38	13,73	14,16
	Product vessel (l)	150	150	150	150	150	150	90	90	90
	Comp. air vessel (l)	150	150	150	150	150	150	150	150	150
GEN2 1350	Capacity Nm ³ /h	20,8	17,1	15,8	12,6	9,5	6,3	3,2	2,5	1,8
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	39,52	35,91	36,34	32,76	27,55	24,57	17,6	17,5	18
	Comp. air m ³ /h	43,06	39,12	39,59	35,69	30,02	26,77	19,18	19,07	19,61
	Product vessel (l)	270	270	270	150	150	150	90	90	90
	Comp. air vessel (l)	270	270	270	270	270	270	270	270	270
GEN2 1450	Capacity Nm ³ /h	31,2	25,6	23,7	18,9	14,2	9,5	4,8	3,6	2,4
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	59,28	53,76	54,51	49,14	41,18	37,05	26,4	25,2	24
	Comp. air m ³ /h	64,59	58,57	59,39	53,54	44,87	40,37	28,76	27,46	26,15
	Product vessel (l)	270	270	270	270	270	150	150	150	150
	Comp. air vessel (l)	270	270	270	270	270	270	270	270	270
GEN2 1550	Capacity Nm ³ /h	49,2	40,1	35,6	28,4	22,1	12,6	6,3	4,8	3,2
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	93,48	84,21	81,88	73,84	64,09	49,14	34,65	33,6	32
	Comp. air m ³ /h	101,85	91,75	89,21	80,45	69,83	53,54	37,75	36,61	34,86
	Product vessel (l)	500	500	500	270	270	270	150	150	150
	Comp. air vessel (l)	500	500	500	500	500	500	500	500	500
GEN2 1650	Capacity Nm ³ /h	84	59,9	53,8	46,6	37,8	23,2	11,7	8,8	5,8
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,9	5,5	7	10
	Comp. air Nm ³ /h	159,6	125,79	123,74	121,16	109,62	90,48	64,35	61,6	58
	Comp. air m ³ /h	173,88	137,05	134,81	132	119,43	98,58	70,11	67,11	63,19
	Product vessel (l)	750	750	750	500	500	500	270	270	270
	Comp. air vessel (l)	1.000	1.000	1.000	750	750	750	500	500	500

GEN2 9000 – 9600

Type	Purity	95%	97%	98%	99%	99,5%	99,9%	99,99%	99,995%	99,999%
GEN2 9000	Capacity Nm ³ /h	105	84	76	64	52	37,6	23,6	16,8	10,7
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	199,5	176,4	174,8	166,4	150,8	123,33	108,8	85,85	70,51
	Comp. air m ³ /h	217,35	192,19	190,44	181,29	164,3	134,37	118,53	93,53	76,82
	Product vessel (l)	1.000	1.000	1.000	750	750	750	500	500	500
	Comp. air vessel (l)	1.500	1.500	1.500	1.000	1.000	1.000	1.000	1.000	1.000
GEN2 9100	Capacity Nm ³ /h	141	117	98	80	68	48,2	27,9	21	14,2
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	267,9	245,7	225,4	208	197,2	158,1	128,62	107,31	93,58
	Comp. air m ³ /h	291,88	267,69	245,57	226,62	214,85	172,25	140,13	116,91	101,95
	Product vessel (l)	1.500	1.500	1.500	1.000	1.000	1.000	750	750	750
	Comp. air vessel (l)	1.500	1.500	1.500	1.500	1.500	1.500	1.000	1.000	1.000
GEN2 9200	Capacity Nm ³ /h	211	174	146	115	100	71,9	41,8	31,5	21,3
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	400,9	365,4	335,8	299	290	235,83	192,7	160,97	140,37
	Comp. air m ³ /h	436,78	398,1	365,85	325,76	315,95	256,94	209,94	175,37	152,93
	Product vessel (l)	1.500	1.500	1.500	1.000	1.000	1.000	1.000	1.000	1.000
	Comp. air vessel (l)	2.000	2.000	2.000	2.000	2.000	2.000	1.500	1.500	1.500
GEN2 9300	Capacity Nm ³ /h	260	215	188	143	120	86	50,5	38,5	26,5
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	494	451,5	432,4	371,8	348	282,08	232,81	196,74	174,64
	Comp. air m ³ /h	538,21	491,91	471,1	405,08	379,15	307,33	253,64	214,34	190,26
	Product vessel (l)	2.000	2.000	2.000	1.500	1.500	1.500	1.500	1.500	1.500
	Comp. air vessel (l)	3.000	3.000	3.000	3.000	3.000	3.000	2.000	2.000	2.000
GEN2 9400	Capacity Nm ³ /h	372	308	270	206	170	128	74,1	56	38
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	706,8	646,8	621	535,6	493	419,84	341,6	286,16	250,42
	Comp. air m ³ /h	770,06	704,69	676,58	583,54	537,12	457,42	372,17	311,77	272,83
	Product vessel (l)	3.000	3.000	3.000	2.500	2.500	2.500	2.000	2.000	2.000
	Comp. air vessel (l)	4.000	4.000	4.000	3.000	3.000	3.000	2.500	2.500	2.500
GEN2 9500	Capacity Nm ³ /h	440	366	320	240	200	151,5	88	66,5	45
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	836	768,6	736	624	580	496,92	405,68	339,82	296,55
	Comp. air m ³ /h	910,82	837,39	801,87	679,85	631,91	541,39	441,99	370,23	323,09
	Product vessel (l)	5.000	5.000	5.000	4.000	4.000	4.000	2.500	2.500	2.500
	Comp. air vessel (l)	6.000	6.000	6.000	5.000	5.000	5.000	4.000	4.000	4.000
GEN2 9600	Capacity Nm ³ /h	630	522	457	350	285	216,8	125,7	94,8	64
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	1.197,00	1.096,20	1.051,10	910	826,5	711,1	579,48	484,43	421,76
	Comp. air m ³ /h	1.304,13	1.194,31	1.145,17	991,44	900,47	774,75	631,34	527,78	459,51
	Product vessel (l)	7.000	7.000	7.000	5.000	5.000	5.000	4.000	4.000	4.000
	Comp. air vessel (l)	8.000	8.000	8.000	7.000	7.000	7.000	6.000	6.000	6.000



GEN2 9700 – 9940

Type	Purity	95%	97%	98%	99%	99,5%	99,9%	99,99%	99,995%	99,999%
GEN2 9700	Capacity Nm ³ /h	910	756	661	505	420	312,9	181	137	93
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	1.729,00	1.587,60	1.520,30	1.313,00	1.218,00	1.026,31	834,41	700,07	612,87
	Comp. air m ³ /h	1.883,74	1.729,69	1.656,36	1.430,51	1.327,01	1.118,17	909,09	762,73	667,72
	Product vessel (l)	9.000	9.000	9.000	6.000	6.000	6.000	5.000	5.000	5.000
	Comp. air vessel (l)	11.000	11.000	11.000	9.000	9.000	9.000	7.000	7.000	7.000
GEN2 9800	Capacity Nm ³ /h	1.142,00	945	826	630	540	391,6	226,7	171,3	116
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	2.169,80	1.984,50	1.899,80	1.638,00	1.566,00	1.284,45	1.045,09	875,34	764,44
	Comp. air m ³ /h	2.363,99	2.162,11	2.069,83	1.784,60	1.706,15	1.399,40	1.138,62	953,68	832,86
	Product vessel (l)	12.000	12.000	12.000	8.000	8.000	8.000	6.000	6.000	6.000
	Comp. air vessel (l)	14.000	14.000	14.000	12.000	12.000	12.000	8.000	8.000	8.000
GEN2 9900	Capacity Nm ³ /h	1.370,00	1.134,00	992	756	650	470,2	272,5	206,2	140
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	2.603,00	2.381,40	2.281,60	1.965,60	1.885,00	1.542,26	1.256,23	1.053,68	922,6
	Comp. air m ³ /h	2.835,96	2.594,53	2.485,80	2.141,52	2.053,70	1.680,29	1.368,66	1.147,99	1.005,17
	Product vessel (l)	14.000	14.000	14.000	9.000	9.000	9.000	7.000	7.000	7.000
	Comp. air vessel (l)	17.000	17.000	17.000	14.000	14.000	14.000	11.000	11.000	11.000
GEN2 9910	Capacity Nm ³ /h	1.600,00	1.323,00	1.157,00	882	740	561,5	323	244,7	166,5
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	3.040,00	2.778,30	2.661,10	2.293,20	2.146,00	1.841,72	1.489,03	1.250,42	1.097,24
	Comp. air m ³ /h	3.312,08	3.026,95	2.899,26	2.498,44	2.338,06	2.006,55	1.622,30	1.362,33	1.195,44
	Product vessel (l)	16.000	16.000	16.000	11.000	11.000	11.000	8.000	8.000	8.000
	Comp. air vessel (l)	20.000	20.000	20.000	16.000	16.000	16.000	13.000	13.000	13.000
GEN2 9920	Capacity Nm ³ /h	1.827,00	1.512,00	1.323,00	1.008,00	850	625,8	362	274	186
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	3.471,30	3.175,20	3.042,90	2.620,80	2.465,00	2.052,62	1.668,82	1.400,14	1.225,74
	Comp. air m ³ /h	3.781,98	3.459,38	3.315,24	2.855,36	2.685,61	2.236,33	1.818,18	1.525,45	1.335,44
	Product vessel (l)	18.000	18.000	18.000	12.000	12.000	12.000	10.000	10.000	10.000
	Comp. air vessel (l)	22.000	22.000	22.000	18.000	18.000	18.000	14.000	14.000	14.000
GEN2 9930	Capacity Nm ³ /h	2.283,00	1.890,00	1.653,00	1.260,00	1.039,00	738,2	453,4	342,6	232
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	4.337,70	3.969,00	3.801,90	3.276,00	3.013,10	2.421,30	2.090,17	1.750,69	1.528,88
	Comp. air m ³ /h	4.725,92	4.324,22	4.142,16	3.569,20	3.282,77	2.638,00	2.277,24	1.907,37	1.665,71
	Product vessel (l)	24.000	24.000	24.000	16.000	16.000	16.000	12.000	12.000	12.000
	Comp. air vessel (l)	28.000	28.000	28.000	24.000	24.000	24.000	18.000	18.000	18.000
GEN2 9940	Capacity Nm ³ /h	2.740,00	2.268,00	1.984,00	1.512,00	1.260,00	940,4	545	412,4	280
	Comp. air factor	1,9	2,1	2,3	2,6	2,9	3,28	4,61	5,11	6,59
	Comp. air Nm ³ /h	5.206,00	4.762,80	4.563,20	3.931,20	3.654,00	3.084,51	2.512,45	2.107,36	1.845,20
	Comp. air m ³ /h	5.671,93	5.189,06	4.971,60	4.283,04	3.981,03	3.360,57	2.737,31	2.295,97	2.010,34
	Product vessel (l)	28.000	28.000	28.000	18.000	18.000	18.000	14.000	14.000	14.000
	Comp. air vessel (l)	34.000	34.000	34.000	28.000	28.000	28.000	22.000	22.000	22.000