OANG-PRO SERIES
PSA NITROGEN GENERATORS

ozen AIR TECHNOLOGY
EXCLUSIVELY COMPRESSED AIR SOLUTIONS

Industry Experience Of Half-A-Century

Ozen was founded in 1970 by Mehmet Özen.

The company's half a century of industrial machinery manufacturing experience starts with the production of welding machines and air compressors.

Today, they manufacture and install compressed air equipment at their state-of-the-art production plant, which is outfitted with world-class equipment.

In addition to the half a century of industrial experience that has now been passed on to the second generation, the company's innovative and customer-satisfaction-oriented work approach makes it possible to manufacture of reliable, durable and efficient products.

The company produces low- and medium-pressure piston and screw compressors, air dryers, air tanks and air accessories.

Being manufactured for all areas of life (automotive, chemical and petrochemical, textile, food, energy, health, logistics, glass industry, etc.), Ozen products address a wide range of industries.

The company is one of the leading producers in Eastern Europe and the Middle East. It has sales and service activities in 20 countries, through 100 distributors. Exports made to 45 countries constitute 30% of all sales.

In 2018, combining its half a century of industrial machinery manufacturing experience with American manpower and synergy, Ozen began assembling in Charlotte (NC) United States. Achieving rapid product delivery with one flow assembly line, Ozen is also stands by its customers in the United States with a wide range of spare parts and service support.

Ozen's half a century of experience is the greatest assurance of its sustainable growth in the American market.

OANG-PRO Nitrogen Generator

8.1-869.6 cfm @ 99,50 % Purity

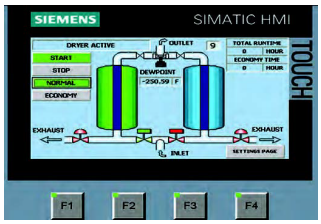
Pressure Swing Adsorption (PSA) type Nitrogen Generation System that is used to separate and enrich nitrogen from oxygen employs CMS (Carbon Molecular Sieve) as adsorbent.

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

The Nitrogen Generator consists of two adsorber vessels filled with CMS. Clean and dry air is directed to one of the adsorber 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).

Carbon Molecular Sieve (CMS)

- 1.8-2mm diameters
- 10+ year life in appropriate use conditions
- Can be regenerated
- Pore diameter about 3 Angstrom



Standard Features

- Siemens HMI color touch screen PLC for twin towers
- Activated Carbon Tower
- Compressed air filter (P grade) after the carbon tower
- Nitrogen Generator /Silencer
- Basic mini PLC for modular type
- Oxygen Analyzer / Nitrogen Purity Sensor
- Flow Meter
- Nitrogen Purity can be seen on screen

Optional Features

- Dew Point Sensor

> Nitrogen Applications

- Food & Beverage
- Electronics – Soldering
- Metal Fabrication - Laser Cutting
- Plastics
- Chemical Industry
- Prevent or Reduce the risk of fire and combustion

> Quality Equipment

- Ozen Air Technology uses components that comply with international standards and products that stand out for their performance and durability.

> Customer Service & Support

- The strategic positioning of product components provide ease of service and maintenance.
- 24/7 service support
- 24/7 emergency parts support
- All consumable, service, and emergency parts will be delivered from stock out of the Charlotte, NC, warehouse.

> Low Maintenance

Daily:

- Check for air and N_2 lines for leaks
- Check air pressure
- Check control monitor visually
- Check N_2 flow rate
- Check auto drains' function

Every 6 Months:

- Clean filter bowls against dust and oil residuals
- Replace pre-filter (P) elements (both inlet and outlet)
- Check leaks and apply repair

Annually:

- Replace coalescing filter elements (X and Y)
- Replace float type auto drains
- Replace Active Carbon Tower granules/ element
- Send the O_2 analyzer sensor for re-calibration

OANG-PRO Nitrogen Generator

Reference Conditions

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

Technical Specifications

Model	Air Demand @ Following Purity Level (cfm)									
	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
OANG-PRO-140	22,7	22,0	21,7	18,8	17,0	16,2	14,2	12,6	12,5	12,3
OANG-PRO-185	30,2	29,4	29,0	25,2	22,7	21,6	19,0	16,8	16,7	16,5
OANG-PRO-225	37,0	36,0	35,5	30,8	27,8	26,5	23,2	20,6	20,4	20,1
OANG-PRO-360	58,9	57,3	56,4	49,0	44,2	42,1	36,9	32,8	32,4	32,0
OANG-PRO-475	78,0	75,8	74,6	64,9	58,4	55,7	48,9	43,4	42,9	42,4
OANG-PRO-640	105,4	102,5	100,9	87,7	79,0	75,3	66,1	58,7	58,0	57,3
OANG-PRO-700	120,7	117,4	115,6	100,4	90,5	86,3	75,7	67,2	66,5	65,6
OANG-PRO-810	134,0	130,4	128,3	111,5	100,5	95,8	84,0	74,6	73,8	72,9
OANG-PRO-1065	175,4	170,6	168,0	146,0	131,5	125,4	110,0	97,7	96,6	95,4
OANG-PRO-1300	214,6	208,7	205,5	178,6	160,8	153,4	134,5	119,5	118,2	116,7
OANG-PRO-1580	260,9	253,7	249,8	217,1	195,5	186,5	163,6	145,2	143,7	141,9
OANG-PRO-1750	287,8	279,9	275,6	239,5	215,7	205,8	180,4	160,2	158,5	156,5
OANG-PRO-1940	318,9	310,2	305,4	265,4	239,0	228,0	199,9	177,5	175,6	173,5
OANG-PRO-2610	431,2	419,4	412,9	358,8	323,2	308,3	270,3	240,0	237,5	234,5
OANG-PRO-3050	502,8	489,1	481,5	418,4	376,8	359,5	315,4	280,0	277,0	273,6
OANG-PRO-3660	602,8	586,3	577,2	501,6	451,8	431,0	377,9	335,6	332,0	327,9
OANG-PRO-4500	743,5	723,1	712,0	618,7	557,3	531,6	466,2	413,9	409,5	404,4
OANG-PRO-5290	871,3	847,5	834,4	725,1	653,1	623,0	546,3	485,1	479,9	474,0
OANG-PRO-6100	1004,8	977,2	962,2	836,1	753,1	718,4	630,0	559,3	553,3	546,6
OANG-PRO-7340	1209,5	1176,4	1158,3	1006,5	906,6	864,9	758,4	673,4	666,3	658,4
OANG-PRO-9060	1493,0	1452,1	1429,7	1242,4	1119,1	1067,5	936,1	831,1	822,2	812,1
OANG-PRO-10780	1776,1	1727,5	1700,8	1478,0	1331,3	1270,0	1113,6	988,8	978,2	966,2
OANG-PRO-12100	1995,0	1940,2	1910,3	1660,0	1495,2	1426,4	1250,8	1110,5	1098,6	1085,2
OANG-PRO-14780	2436,5	2369,8	2333,6	2027,5	1826,3	1742,3	1527,7	1356,4	1341,8	1325,4

Technical Specifications

Model	Free Nitrogen Delivery @ Following Purity Level (cfm)									
	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
OANG-PRO-140	18,9	15,7	14,5	9,9	8,1	6,2	5,7	3,1	2,4	1,8
OANG-PRO-185	25,2	21,0	19,3	13,2	10,8	8,3	7,6	4,1	3,2	2,4
OANG-PRO-225	30,9	25,7	23,6	16,2	13,2	10,2	9,3	5,0	3,9	3,0
OANG-PRO-360	49,1	40,9	37,6	25,8	21,0	16,2	14,8	8,0	6,2	4,7
OANG-PRO-475	65,0	54,2	49,8	34,1	27,8	21,4	19,6	10,6	8,3	6,2
OANG-PRO-640	87,8	73,2	67,3	46,1	37,6	29,0	26,4	14,3	11,2	8,4
OANG-PRO-700	100,6	83,8	77,0	52,9	43,1	33,2	30,3	16,4	12,8	9,7
OANG-PRO-810	111,7	93,1	85,6	58,7	47,8	36,9	33,6	18,2	14,2	10,7
OANG-PRO-1065	146,2	121,9	112,0	76,8	62,6	48,2	44,0	23,8	18,6	14,0
OANG-PRO-1300	178,8	149,1	137,0	94,0	76,6	59,0	53,8	29,1	22,7	17,2
OANG-PRO-1580	217,4	181,2	166,5	114,3	93,1	71,7	65,4	35,4	27,6	20,9
OANG-PRO-1750	239,8	199,9	183,7	126,0	102,7	79,1	72,2	39,1	30,5	23,0
OANG-PRO-1940	265,7	221,5	203,6	139,7	113,8	87,7	80,0	43,3	33,8	25,5
OANG-PRO-2610	359,3	299,5	275,3	188,8	153,9	118,6	108,1	58,5	45,7	34,5
OANG-PRO-3050	419,0	349,3	321,0	220,2	179,4	138,3	126,2	68,3	53,3	40,2
OANG-PRO-3660	502,3	418,8	384,8	264,0	215,1	165,8	151,2	81,8	63,8	48,2
OANG-PRO-4500	619,6	516,5	474,6	325,6	265,4	204,5	186,5	101,0	78,7	59,5
OANG-PRO-5290	726,1	605,3	556,3	381,6	311,0	239,6	218,5	118,3	92,3	69,7
OANG-PRO-6100	837,3	698,0	641,4	440,1	358,6	276,3	252,0	136,4	106,4	80,4
OANG-PRO-7340	1007,9	840,3	772,2	529,7	431,7	332,6	303,3	164,2	128,1	96,8
OANG-PRO-9060	1244,1	1037,2	953,1	653,9	532,9	410,6	374,4	202,7	158,1	119,4
OANG-PRO-10780	1480,1	1233,9	1133,9	777,9	633,9	488,5	445,4	241,2	188,1	142,1
OANG-PRO-12100	1662,5	1385,9	1273,5	873,7	712,0	548,6	500,3	270,9	211,3	159,6
OANG-PRO-14780	2030,4	1692,7	1555,8	1067,1	869,6	670,1	611,1	330,8	258,0	194,9

A/N Ratios for All OANG-PRO Models (TBA)**

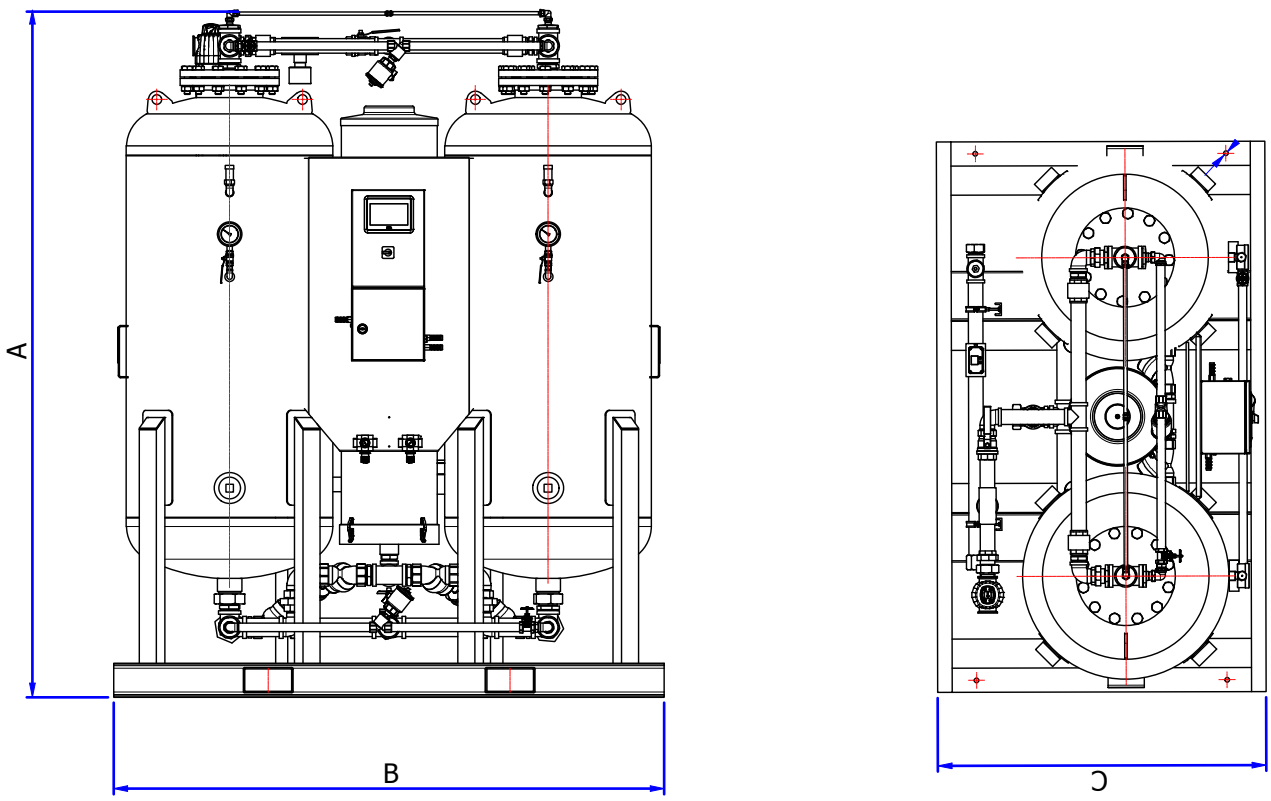
Purities	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
Air/N_2 Ratio	1,2 – 1,6	1,4 – 1,8	1,4 – 1,8	1,9 – 2,3	2,1 – 2,6	2,6 – 3,0	2,5 – 3,2	4,1 – 5,0	5,4 – 6,2	6,8 – 7,5

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

Technical Specifications

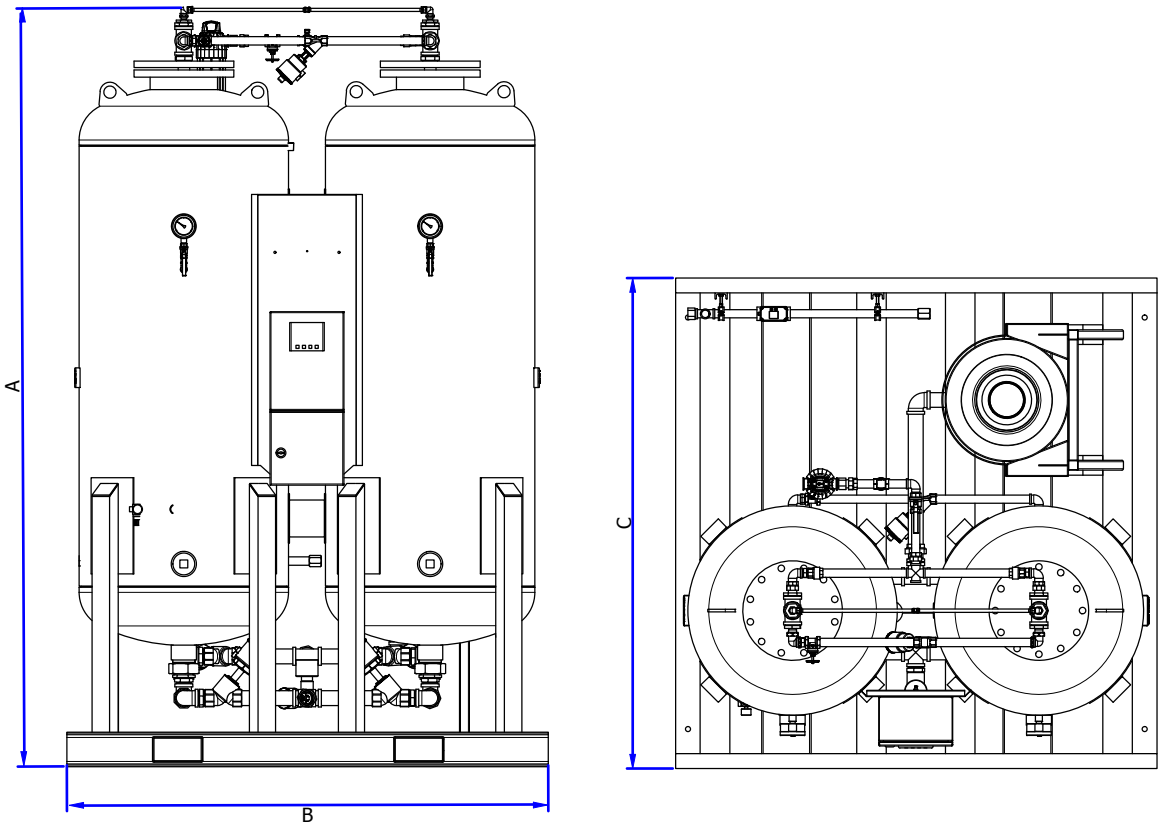
Model	Reccomended Buffer Tank Volumes (Gallons)									
	95%	97%	98%	99%	99,50%	99,90%	99,95%	99,99%	99,995%	99,999%
OANG-PRO-140	15,59	13,21	12,15	8,19	6,60	5,28	4,76	2,64	2,11	1,59
OANG-PRO-185	20,87	17,44	16,11	11,10	8,98	6,87	6,34	3,43	2,64	2,11
OANG-PRO-225	25,62	21,40	19,55	13,47	11,10	8,45	7,66	4,23	3,17	2,38
OANG-PRO-360	40,95	34,08	31,17	21,40	17,44	13,47	12,42	6,60	5,28	3,96
OANG-PRO-475	54,16	44,91	41,48	28,27	23,25	17,70	16,38	8,72	6,87	5,28
OANG-PRO-640	72,91	60,76	56,00	38,30	31,17	24,04	21,93	11,89	9,25	7,13
OANG-PRO-700	83,74	69,74	64,19	43,85	35,93	27,47	25,10	13,74	10,57	7,93
OANG-PRO-810	92,99	77,40	71,06	48,87	39,89	30,64	28,00	15,06	11,89	8,98
OANG-PRO-1065	121,52	101,44	93,25	63,93	52,04	40,15	36,72	19,81	15,32	11,62
OANG-PRO-1300	148,73	123,90	113,86	78,19	63,67	49,14	44,65	24,30	19,02	14,27
OANG-PRO-1580	180,69	150,84	138,43	95,10	77,40	59,70	54,42	29,59	22,98	17,44
OANG-PRO-1750	199,45	166,16	152,69	104,88	85,33	65,78	59,97	32,49	25,36	19,02
OANG-PRO-1940	221,11	184,13	169,33	116,24	94,57	72,91	66,57	35,93	28,00	21,13
OANG-PRO-2610	298,78	249,11	229,04	156,92	127,86	98,54	89,82	48,61	38,04	28,79
OANG-PRO-3050	348,44	290,59	267,08	183,07	149,26	114,91	104,88	56,80	44,38	33,55
OANG-PRO-3660	417,66	348,18	319,91	219,53	178,84	137,90	125,75	68,16	53,10	40,15
OANG-PRO-4500	515,14	429,54	394,67	270,78	220,58	170,13	155,07	84,01	65,51	49,40
OANG-PRO-5290	603,90	503,51	462,57	317,27	258,62	199,19	181,75	98,27	76,87	57,85
OANG-PRO-6100	696,36	580,39	533,36	365,88	298,25	229,83	209,49	113,33	88,50	66,84
OANG-PRO-7340	838,22	698,74	642,20	440,64	359,01	276,59	252,28	136,58	106,46	80,57
OANG-PRO-9060	1034,76	862,52	792,78	543,93	443,28	341,57	311,46	168,54	131,56	99,33
OANG-PRO-10780	1231,04	1026,31	943,09	646,96	527,29	406,30	370,37	200,51	156,39	118,08
OANG-PRO-12100	1382,68	1152,58	1059,07	726,74	592,27	456,23	416,07	225,34	175,67	132,61
OANG-PRO-14780	1688,59	1407,77	1293,91	887,35	723,30	557,40	508,27	275,00	214,51	162,20

NOTE : Buffer tank is required.



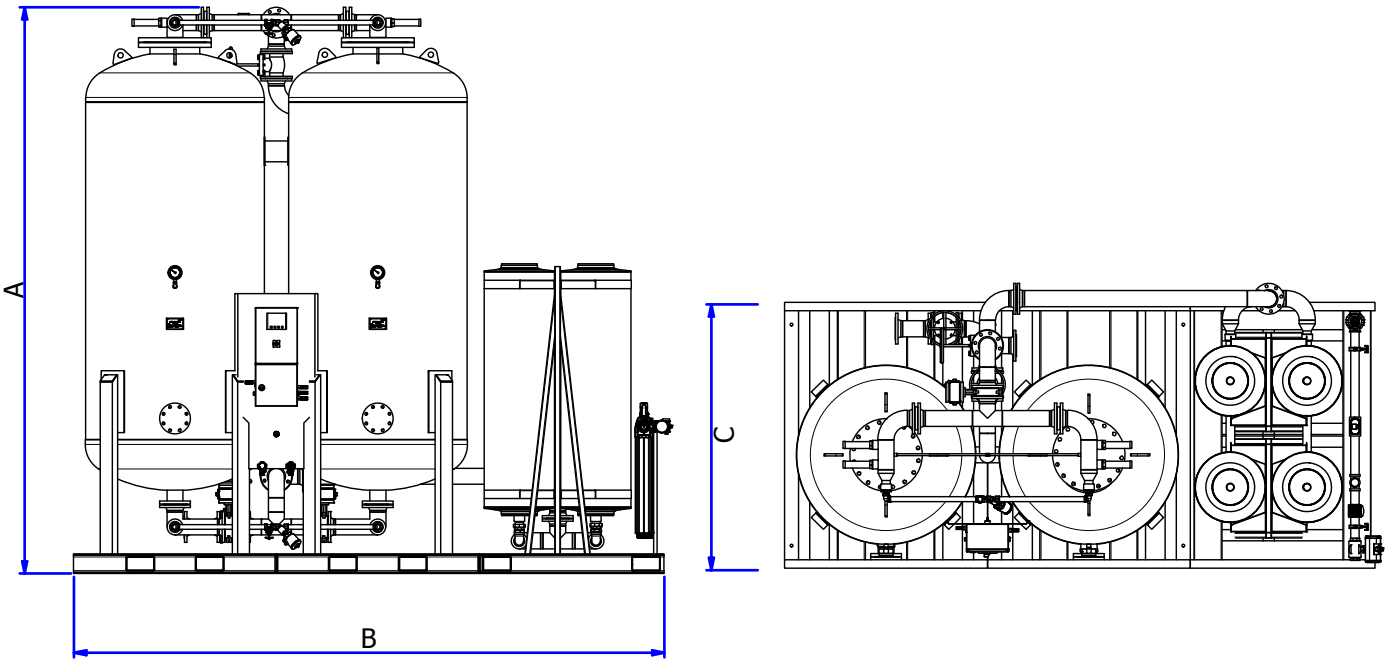
Model Dimensions

Model	A	B	C	Weight
OANG-PRO-185	1557mm (61.3")	900mm (35.4")	1220mm (48.0")	~630kg (1388lb)
OANG-PRO-140	1606,31mm (63.24")	860mm (33.9")	1195mm (47.0")	~501kg (1104lb)
OANG-PRO-640	2151,9mm (84.7")	1300mm (51.18")	1495mm (58.86")	~1300kg (2866lb)
OANG-PRO-475	2020,3mm (79.53")	1200mm (47.25")	1375mm (54.13")	~1135kg (2502lb)
OANG-PRO-360	2103,16mm (82.8")	1265mm (49.8")	1415mm (55.7")	~820 kg (1807lb)
OANG-PRO-225	1757,46mm (69.19")	900mm (35.43")	1250mm (49.21")	~680 kg (1499lb)
OANG-PRO-1300	2690mm (104.54")	1820mm (71.67")	1120mm (44.1")	~1950 kg (4.299 lb)
OANG-PRO-1065	2200mm(86.62")	1632mm (64.0")	1578mm (62.13")	~1608 kg (3.545 lb)
OANG-PRO-810	2281.56mm (89.83")	1507mm (59.33")	1410mm (55.51")	~1560 kg (3.439 lb)
OANG-PRO-700	2150mm (84.688")	1520mm (59.8")	1420mm (55.52")	~1440 kg (3.147 lb)
OANG-PRO-2610	2690mm (105.9")	2265mm (89.17")	1350mm (53.14")	~3000kg (6614 lb)
OANG-PRO-1940	3050mm (120.1")	3035mm (119.49")	1320mm (51.97")	~2850kg (6283 lb)
OANG-PRO-1750	2900mm (114.2")	1900mm (74.80")	1320mm (51.97")	~1900kg (4188 lb)
OANG-PRO-1580	2750mm (108.3")	3060mm (120.5")	1505mm (59.3")	~3040kg (6702 lb)



Model Dimensions

Model	A	B	C	Weight
OANG-PRO-3050	3087mm (121.6")	1954mm (76.93")	1991mm (78.38")	~3500 kg (7.716 lb)
OANG-PRO-3660	3033mm(119.43")	2100mm (82.67")	2019mm (79.48")	~4100 kg (9.038 lb)
OANG-PRO-4500	2650mm (104,33")	2480mm (97.63")	2250mm (88.58")	~4300 kg (9.479 lb)
OANG-PRO-5290	3000mm (118.11")	2480mm (97.63")	2250mm (88.58")	~4600 kg (10.141 lb)



Model Dimensions

Model	A	B	C	Weight
OANG-PRO-6100	3475mm (136.81")	3700mm (145.67")	2000mm (78.7")	~6300kg (13889lb)
OANG-PRO-7340	4070mm (160.24")	3830mm (150.79")	2000mm (78.7")	~6960kg (15344lb)
OANG-PRO-9060	4050mm (159.45")	4370mm (172.05")	1900mm (74,80")	~8640 kg (19047 lb)
OANG-PRO-10780	4350mm (171.26")	4600mm (181.1")	2200mm (86.6")	~11605 kg (25584 lb)
OANG-PRO-12100	4445.98mm (175.038")	4953mm (195")	2045mm (80.52")	~11143 kg (24.566 lb)
OANG-PRO-14780	4810.58mm (189.393")	5110mm (200.79")	2220mm (80.40")	~15292 kg (33.713 lb)

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

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

80 Psi Inlet - Air / 580 Psi Discharge - Nitrogen