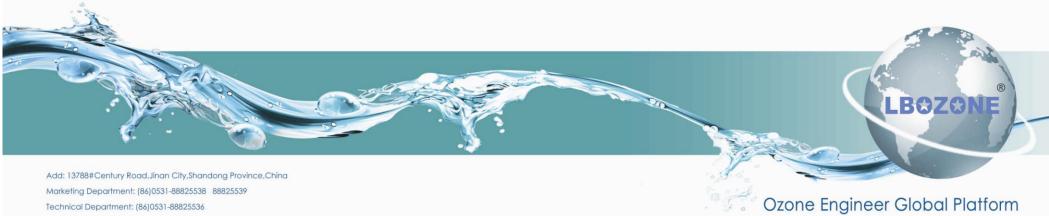
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Shandong Nippon Photoelectricity Equipment Co.,Ltd.

LBOZONE













>>>> Manufacture

Shandong Nippon works on ozone generator for nearly 20 years. Specialization and large scale of ozone generator production has been formulated. Research department and quality assurance department make a great contribution to high quality ozone generator. Shandong Nippon has professional production and assembly ability which makes more and more users come back to by ozone generator again. Ozone generators are produced by advanced machining equipment. Each working process has quality control step to make sure the stability of ozone generator quality.









The Core Technology

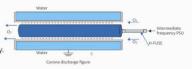
Large ozone production, highly effcient, steady quality.

Micro discharge gap technology

PSU medieum high frequency, IGBT inverter power technology.

Patent pressurized ozone generator

Ceramic and glass dielectric









Ozone Catalytic Experiment

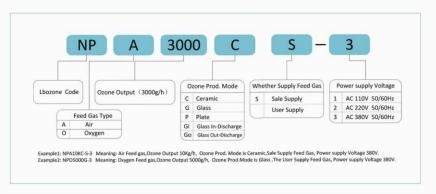
To do the small test or pilot test according to different water quality. Then, build the ozone catalytic experiment model, make sure qualitative and quantitative test. Build large ozone generator one-stop solution.







Ozone Equipment Selection Guide



Workshop Show

Shandong Nippon strictly follow the ISO9001 quality system in production and management. In order to improve the quality of ozone generator, Nippon introduce new equipment and new technology. Quality control is very strict in ozone generator production, it makes the steady quality of ozone generator.



Oxygen Feed Gas Horizontal Series



>>> Ozone Generator Features

Work on ozone for 20 years. Design for continuous operation.

Use advanced IGBT medium high frequency inverter technology.

Color LCD touch screen.

Advanced PLC control system.

Micro gap discharging technology saves your cost.

Online pressure and temperature monitor.

The dielectric is made by ceramic and borosilicate which is breakdown resistance.

According to the work curve and PID to track and correct the parameters.

Design for easy operating.



Name	NPO10 ~ 150KG-S-3 Technical Parameters										
1) Parameters											
Ozone Production(kg)	10	20	30	40	50	100	120	150			
Ozone Concentration				80 ~ 200 mg	/L,5 ~ 15wt %						
Feed Gas Source		Oxygen(O ₂)									
Feed Gas Flow(Nm³/h)	70	140	175	280	350	700	840	1050			
Inlet/Outlet Gas Pressure		$0.1\sim0.5$ MPa/ $0.05\sim0.1$ MPa, $1\sim5$ Bar/ $0.5\sim1$ Bar									
Gas Connector Size	DN40	DN50	DN65	DN80	DN100	DN125	DN125	DN150			
Ozone Adjust Range	10 ~ 100%										
②Technical Data											
Power Supply	3×400V, 50)/60Hz									
Power Consumption	$6\sim 8$ KWh/kgO $_{\scriptscriptstyle 3}$										
Power Factor	95 ~ 99%										
Cooling Type	Water coole	d									
Cooling Water Quantity	1.5 ~ 2 Nm	³/h									
Water Temp. Differences	5°C										
Cooling Connector Size	DN50	DN65	DN80	DN100	DN125	DN150	DN150	DN200			
Ambient Temperature	5 ~ 40°C /2	24h Average 35	'C								
Relative Humidity	Average Hur	midity≤65%, A	ccidental Humic	lity≤85%							
Degree of Protection	IP42 ~ IP54										
Noise (1meter)	≤65dB(A)										
③ Dimensions											
Length (mm)	3800	3800	4500	4500	5400	6300	7200	8100			
Width (mm)	2200	2500	3000	3200	3500	4200	4500	4500			
Height (mm)	2100	2100	2100	2200	2500	3000	3000	3500			
Weight (kg)	4500	9500	13000	16000	19500	30000	36000	46000			

NTP(1atm;Tcw=15°C);Oxygen Feed gas, Ozone Concentration145mg/L,10%.



Oxygen Feed Gas Vertical Series



>>> Ozone Generator Features

Work on ozone for 20 years. Design for continuous operation.

Use advanced IGBT medium high frequency inverter technology.

Color LCD touch screen.

Advanced PLC control system.

Micro gap discharging technology saves your cost.

Online pressure and temperature monitor.

The dielectric is made by ceramic and borosilicate which is breakdown resistance.

According to the work curve and PID to track and correct the parameters.

Design for easy operating.



Name			NPO30	$0 \sim 10000 { m C/G}$	Technical Para	ameters					
1) Parameters	Ceramic /Glass dielectric										
Ozone Production(g/h)	300	500	1000	2000	3000	5000	8000	10000			
Feed Gas Source		Oxygen(O ₃)									
Feed Gas Flow(Nm³/h)	2.0	3.4	6.7	13.5	20.1	33.3	53.5	66.6			
Cooling Water Quantity(m³/h)	0.5	0.8	1.5	3.0	4.5	7.5	12.0	15.0			
Power Consumption(KW)	2.1	3.5	7.0	14.0	21.0	35.0	56.0	70.0			
Gas Connector Size	3/4"	3/4"	DN25	DN25	DN25	DN32	DN40	DN40			
Cooling Connector Size	3/4"	3/4"	DN25	DN25	DN25	DN40	DN50	DN50			
② Dimensions											
Length (mm)	1200	1400	1600	1800	2800	2900	3800	3800			
Width (mm)	800	800	1100	1100	1100	1100	1100	1100			
Height (mm)	1900	1900	2000	2000	2000	2000	2100	2100			

Oxygen Feed gas, Ozone Concentration145mg/L,10%.



Air Feed Gas Horizontal Series



>>> Ozone Generator Features

Work on ozone for 20 years. Design for continuous operation.

Use advanced IGBT medium high frequency inverter technology.

Color LCD touch screen.

Advanced PLC control system.

Micro gap discharging technology saves your cost.

Online pressure and temperature monitor.

The dielectric is made by ceramic and borosilicate which is breakdown resistance.

According to the work curve and PID to track and correct the parameters.

Design for easy operating.



Name		NPA3 ~ 40KC-5-3 Technical Parameters										
① Parameters												
Ozone Production(kg)	3	5	10	15	20	25	30	40				
Ozone Concentration		20 ~ 57.2 mg/L, 1 ~ 4wt %										
Feed Gas Source		Air										
Feed Gas Flow(Nm³/h)	107	178	356	534	712	890	1068	1424				
Inlet/Outlet Gas Pressure		$0.1\sim0.5$ MPa/ $0.05\sim0.1$ MPa										
Gas Connector Size	DN40	DN50	DN65	DN80	DN100	DN100	DN125	DN150				
Ozone Adjust Range				10 ~	100%							
②Technical Data												
Power Supply	3×400V,50/60Hz											
Power Consumption	$14 \sim 16 \text{KWh/kgO}_3$											
Power Factor	95 ~ 99%	95 ~ 99%										
Cooling Type	Water cooled	d										
Cooling Water Quantity	2.5 ~ 3.5Nn	n³/h										
Water Temp. Differences	5℃											
Cooling Connector Size	DN50	DN65	DN80	DN100	DN125	DN125	DN150	DN200				
Ambient Temperature	5 ~ 40°C /2	4h Average 35	C									
Relative Humidity	Average Hun	nidity≤65%, Acc	cidental Humid	ity≤85%								
Degree of Protection	IP42 ~ IP54											
Noise (1meter)	≤65dB(A)											
③ Dimensions												
Length (mm)	3100	3100	3100	4500	4500	4500	5400	5400				
Width (mm)	2000	2100	2200	2300	2500	3300	4200	4500				
Height (mm)	1900	2000	2100	2200	2300	2700	3500	3500				
Weight(kg)	2600	4300	8200	10500	13500	18000	22000	25000				

NTP(1atm,Tcw=15℃),Air Feed gas Ozone Concentration 28mg/L;2%.

Air Feed Gas Vertical Series





Work on ozone for 20 years. Design for continuous operation.

Use advanced IGBT medium high frequency inverter technology.

Color LCD touch screen.

Advanced PLC control system.

Micro gap discharging technology saves your cost.

Online pressure and temperature monitor.

The dielectric is made by ceramic and borosilicate which is breakdown resistance.

According to the work curve and PID to track and correct the parameters.

Design for easy operating.



Name				NPA150	~ 2000C/G	Technical Par	ameters			
① Parameters					Ceramic /	Glass Series				
Ozone Production(g/h)	150	200	250	300	400	500	600	800	1000	2000
Feed Gas Source				A	ir					
Feed Gas Flow(Nm³/h)	5.3	7.2	8.9	10.7	14.4	17.8	21.4	28.8	35.6	70
Cooling Water Quantity(m³/h)	0.4	0.5	0.6	0.8	1.0	1.3	1.5	1.9	2.5	5
Power Consumption(KW)	2.5	3.3	4.2	5.0	6.5	8.0	9.6	12.0	16.0	32.0
Gas Connector Size	3/4"	3/4"	3/4"	3/4"	DN25	DN25	DN25	DN25	DN25	DN25
Cooling Connector Size	3/4"	3/4"	3/4"	3/4"	DN25	DN25	DN25	DN25	DN25	DN25
②Dimensions										
Length (mm)	1400	1400	1400	1400	1700	1700	1700	1900	1900	2900
Width (mm)	700	700	700	700	850	850	850	900	900	1100
Height (mm)	1800	1800	1800	1800	1800	1800	1800	1800	2000	2000

NTP(1atm, Tcw=15°C Air Feedgas Ozone Concentration 28mg/L,2%).

Small Cabinet High Ozone Concentration Series



Work on ozone for 20 years. Design for continuous operation: LED interface display: Adjustable ozone output, simple operation: Micro gap discharging technology saves your cost: High ozone making efficiency, lower power consumption: Design for easy operating: Smaller volume saves your space: Factory test ensure good quality: Design for laboratory and swimming pool.

>>> Technical Parameters

Name			NPO!	~ 150P Ted	hnical Paran	neters		
1 Parameters				Ceramic Pla	te Dielectric			
Ozone Production(g)	5	10	20	30	50	100	150	200
Ozone Concentration			8	~ 200 mg/	L, 5 ~ 15wt	%		
Feed Gas Source				Oxyge	en(O ₂)			
Feed Gas Flow (NL/h)	35	70	140	210	350	700	1050	1400
Inlet/Outlet Gas Pressure			0.1	~ 0.3 MPa/0	0.02 ~ 0.08	MPa		
Gas Connector Size		ф	8*6		ф1	0*8	1,	/2
Ozone Adjust Range				10 ~	100%			
2 Technical Data								
Power Supply	220V,50/6	0Hz						
Power Consumption	7 ~ 9Wh/	gO ₃						
Power Factor	95 ~ 99%							
Cooling Type	Air cooled							
Ambient Temperature	5 ~ 40°C	/24h Averag	ge 35°C					
Relative Humidity	Average H	umidity≤659	6, Accidental	Humidity≤85	%			
Degree of Protection	IP42 ~ IP	54						
Noise (1meter)	≤65dB(A)							
③ Dimensions								
Feed Gas Out (mm)			500*300*60	0			700*800*190	00
Feed Gas In (mm)			650*510*10	00		1	1400*800*19	00

NTP(1atm;Tcw=15°C);Oxygen Feed gas, Ozone Concentration145mg/L,10%.

Ozone generator products











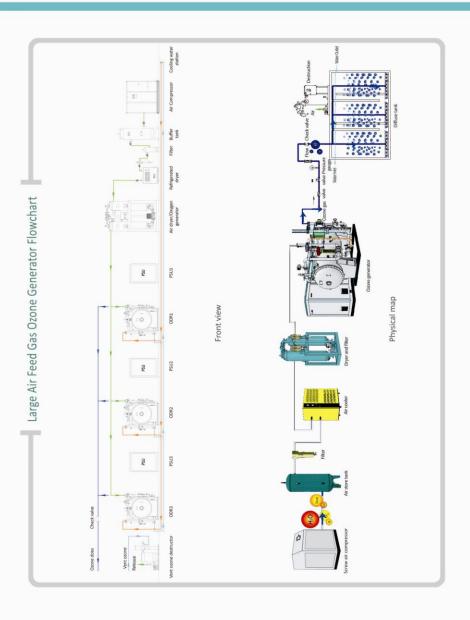


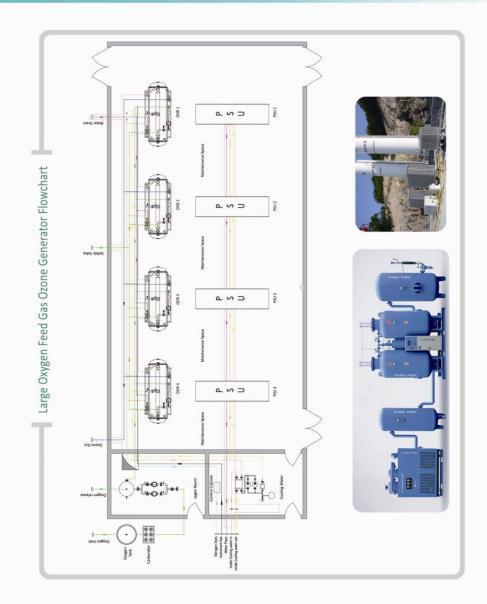






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Drinking Water Treatment

Ozone can be used in waterworks, food factory, and city water treatment. Because ozone has strong oxidability, it is usually used to remove color, remove odor, remove manganese and iron ions. Ozone is a succedaneum of chloride as a disinfector.



Xinjiang.China 10kg/h Yantai,China 5kg/h

■ Sample Cases:

		Quantity
Cape Town, South Africa	15kg/h	2set
Tashkent, Uzbekistan	10kg/h	4set
Jilin, China	5kg/h	3set
Shanxi,China	4.5kg/h	2set
Xuzhou, China	3kg/h	3set
Xinjiang, China	1kg/h	1set
Liangshan, Szechwan	1kg/h	2set

>>> Sewage Treatment

Ozone can be used in chemical plant, refinery, pharmaceutical factory, paper factory, distillery, etc. Because ozone has strong oidablility, it is usually used to reduce COD, remove color and heavy metal ions.





Baku, Azerbaijan 5kg/h

Tabriz, Iran 4.5kg/h

■ Sample Cases:

Yili,China	60kg/h	1set
Xinjiang Branch of CAS	10kg/h	2set
Henan, China	10kg/h	2set
Nei monggol, China	4.5kg/h	3set
Jiangsu, China	3.5kg/h	1set
Sichuan, China	2kg/h	1set
Binzhou, China	1kg/h	1set



>>>> Desulfurization and Denitrification

Ozone can be used to remove the nitrides of vent gas. It also has functions to reduce ammonia and hydrogen sulfide and other macromolecule. Carbon dioxide and water are the products in this process.



Qingdao,China 3kg/h Nanjing,China 2kg/h Shenhua Group 10kg/h

Sample Cases:

	Ozone output	Quantity
Beijing, China	1kg/h	3set
Hangzhou, China	10kg/h	4set
Qingdao, China	3kg/h	2set
Lanzhou, CHina	5kg/h	2set

>>> Advanced Oxidation

Because ozone has strong oxidation, it can be used in molecular synthesis of spice factory, and other area which has requirement of advance oxidation.



Shanxi,China 10kg/h Cnooc, China 5kg/h

■ Sample Cases:

	Ozone output	Quantity
Berlinwasser holding, China	12kg/h	2set
Changzhou, China	10kg/h	2set
Sinopec, China	5kg/h	1set
China academy of science, China	5kg/h	1set
Chifeng, China	5kg/h	1set
Cnooc, China	2kg/h	3set