



## NRD IONIZERS:

No adjustment. No calibration.

## ADVANTAGES:

- Ions perfectly balanced
- Quickly neutralizes static
- Removes surface particles
- Calibration not required
- Safe and easy to install and relocate
- External power source not required

NRD's Alpha Ionizer is a device used to neutralize static charge on any material. It produces ions (positively or negatively charged particles) in the surrounding air. These ions attract their counterparts in order to neutralize the charge on the material.

## ALPHA IONIZER APPLICATIONS:

- Temperature extremes (-40°C to 180°C)
- Areas with tight confines
- Class 0, highly static-sensitive parts, nanotechnology, electronics manufacturing, testing, pharmaceutical, and Explosives



Gun Handle Accessories for the P-2021

# NUCLECEL® Ionizing Air Nozzle Model P-2021



Simple, reliable, efficient, and effective, NUCLECEL® Ionizing Nozzle controls static while cleaning in compressed air or nitrogen line applications. It helps improve production yields and quality in a number of industries, including electronics, semiconductor, pharmaceutical, medical device, and industrial.

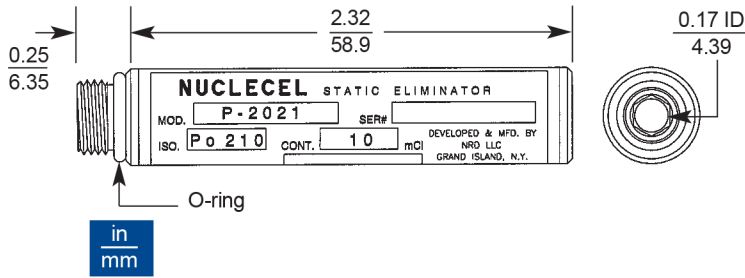
Easy to install on any clean, dry compressed air or inert gas line, the NUCLECEL® ionizer emits a powerful stream of ions to quickly neutralize electrostatic charges. The ion stream is balanced as it leaves the cell, and does not require a specific distance to achieve proper ion intermix. The device may operate continuously or intermittently with a remote air line control. It is safe to use in explosive or volatile environments, and gas flow can take place in either direction.

**Unlike other ionization technologies, alpha ionization offers:**

**Quick, efficient, and maintenance-free**

Gases are ionized as they pass through the NUCLECEL® unit to remove static charges that attract and hold dust and other contaminants. The air stream also removes particles clinging to surfaces and eliminates electrostatic re-attraction of contaminants. By design, NUCLECEL® ionizers never develop an ion imbalance, and do not require any adjustments or maintenance. The Model P-2021 Series is designed to easily install in your process or can be used with accessories such as a gun handle. We also offer various versions of the P-2021 Ionizer to fit different applications. Call us and we can provide a quotation.

# Model P-2021 NUCLECEL® Ionizing Air Nozzle



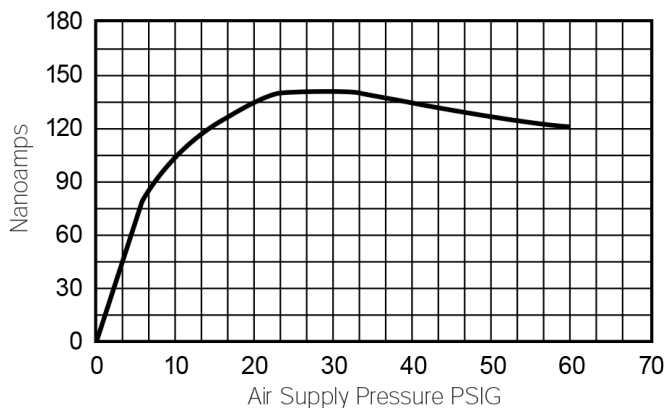
## P-2021 Series: Base Model + Extension Build Your Device: Example P-2021-Y000

Material	Handle	O-Ring	OSHA Compliant Tip
1 = 316 Stainless Steel	0 = None	0 = None	0 = None
2 = 316 Stainless Steel, Cleanroom Pkg	1 = NY1, Thumb Lever, Aluminum	1 = Yes	1 = TBR, Brass Tip
5 = 316 Stainless Steel, Electropolished, Cleanroom pkg	2 = ST1, Pistol Grip, Composite		2 = TEL, Stainless Steel Tip
Y = 316 Stainless Steel, Electropolished, Nickel Plated, Cleanroom pkg	3 = SA1, Pistol Grip, Cast Aluminum		5 = TDB, Delrin Tip
	4 = PK1, Pistol Grip, 556.6 Filter		
	5 = NY1, Thumb Lever, FS2 Housing, 530.4 Filter		
	7 = SA2, Pistol Grip, Bronze Aluminum		
	9 = SA4, Pistol Grip, White Aluminum		

### Specifications:

Diameter:	0.50" (12.7 mm)
Weight:	1.3 oz. (37 g)
Material:	Stainless steel
Gas:	Clean, dry compressed air or inert gas
Pressure:	Normal: <40 psig (2.8 Bar) Max: 100 psig (6.9 Bar)
Temperature:	Max Temperature 310° F (155°C)
Isotope:	Polonium-210
Emission:	Alpha
Activity:	10 mCi (370 MBq)
Line	
Connections:	1/8" - 27 NPSM thread male/female
Decay Rate:	0.7 sec. (per ESD Association Standard. 3.1 @ 30 psig, distance 12," 1000 to 10 volts).

### Air Flow



*\*Ion Flux Monitor 5" dia. electrodes spaced at 1" with 2 KV applied.  
Device to IFM 6". Pos. & neg. polarities balanced within ± 0.1%.  
Data corresponds to model P-2021-1000, as pictured.*

### Air Flow Rates

PSIG	(Bar)	SCFM	(m3/hr)
10	(0.7)	7.6	(12.9)
20	(1.4)	11.0	(18.7)
30	(2.1)	14.4	(24.5)
40	(2.8)	17.8	(30.2)
50	(3.4)	21.2	(36.0)
60	(4.1)	24.6	(41.8)
70	(4.8)	28.0	(47.6)

### Note on Ion Source

All NRD ion sources are encapsulated in precious metals by means of a special patented process. This results in a static eliminator which resists oxidation, solvents, heat, cold and vibration.