

# Static Electricity Removing Unit IONIZER Bar Type



Koganei Brand

All products

**RoHS**-compliant



Width 350 to 2350 mm [13.78 to 92.52 in.]

**High-speed static charge removal for  
exceptionally wide workpieces!**

# Static Electricity Removing Unit IONIZER

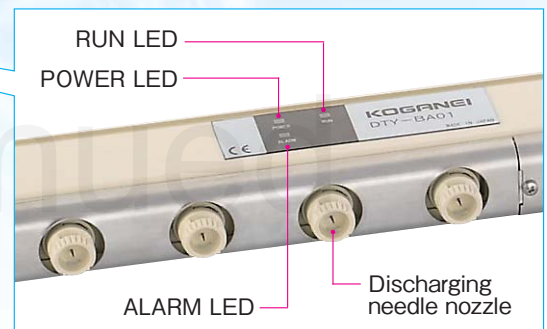
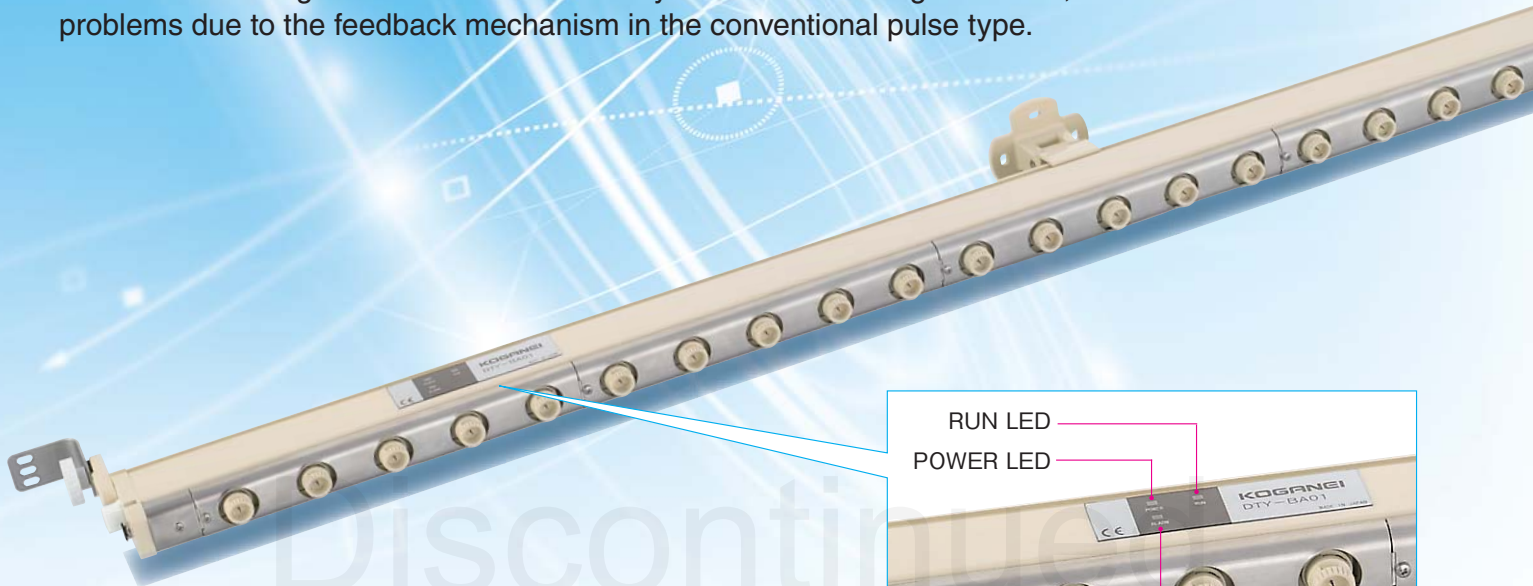
## Bar Type



Environmentally friendly **RoHS** compliant product!

### Enables evenly spread static charge removal over entire area!

Uses a newly developed AC method (repeated frequency of 200 Hz) to enable balanced, high-speed static charge removal through a large volume of evenly spread ions. Ensures constantly stable static charge removal not affected by the state of charged bodies, such as imbalance problems due to the feedback mechanism in the conventional pulse type.



#### ● Enables evenly spread, stable static charge removal over entire area

Supplies a constant, large volume of positive and negative ions evenly over the entire static charge removal area, to keep static charge removal fluctuation by area to a low minimum. Optimum for static charge removal of electronic devices that need delicate static charge removal.



#### ● Achieves reduced air consumption

Uniquely developed nozzle shape achieves a major reduction in air consumption and supports powerful, stable static charge removal. In addition, the discharging needle nozzle is designed for removal/attachment of it, enabling replacement when necessary.

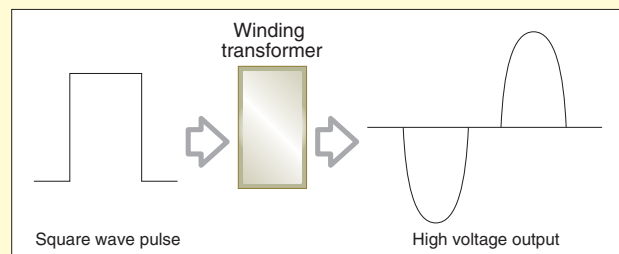


#### ● Error recognition of discharge and sparks

Safety function detects abnormal discharge due to shorting in the ionizer discharging needle, etc., and automatically shuts off the application of high voltage.

#### ● Newly developed AC method is high-powered, compact, and lightweight

Successfully developed an AC high-voltage power supply that inputs a square wave pulse to a winding transformer and obtains a high voltage of 20 kVp-p even at low frequencies, enabling a compact high-voltage transformer.



#### ● Reduces generation of ozone

Achieves a level of 0.002 ppm or less (based on Koganei measurement conditions).

#### ● Achieves long-term performance stability

Limits characteristic changes caused by contamination on the discharging needle to a minimum, allowing long-term stability even if not performing short-term cleaning.

#### ● CE marking compliant product

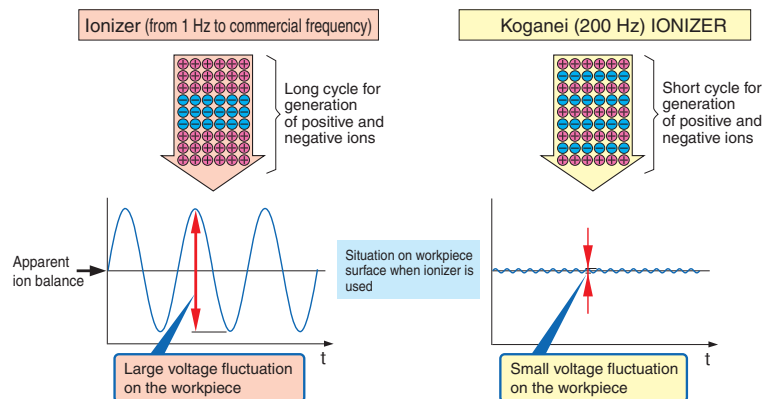


**Caution**

Always read the Safety Precautions in IONIZER Catalog No. BK-R0001 before use.

## Ion Balance and Voltage Fluctuation

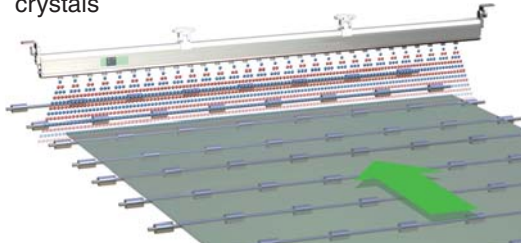
The ion balance fluctuates in synchronization with the ion generation cycle (voltage fluctuation). The lower the frequency, the higher the voltage fluctuation value. In general, the ion balance listed in the ionizer catalog does not take voltage fluctuation into account. As a result, control of the amount of charge on a workpiece should not rely only on the ion balance listed in the catalog, but should also take into account the effects of voltage fluctuation.



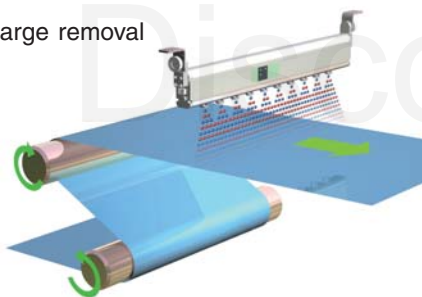
※ Even if the ion balance specification values are the same, comparison of the voltage waveforms can reveal major differences.

## Application Examples of Bar Type

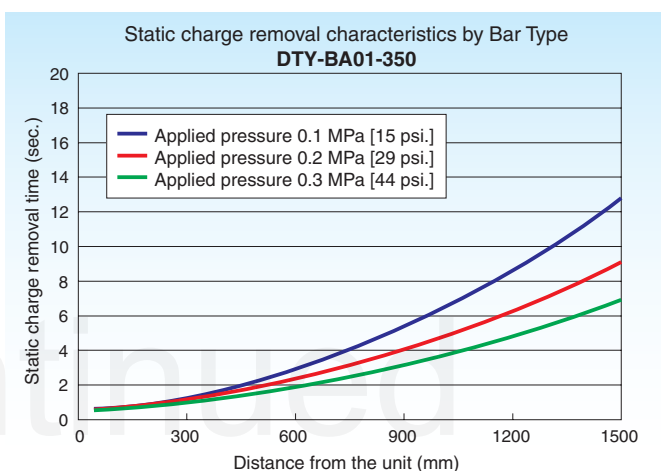
- Static charge removal during conveying liquid crystals



- Static charge removal on films



## Static Charge Removal Characteristics Graph



Notes: 1. The measurement method uses a 20 pF and  $\square$ 150 mm [5.91 in.] charged plate monitor, measured under Koganei's test standards.  
2. Static removal time means decay time from  $\pm 1000V$  to  $\pm 100V$ .  
3. The static charge removal characteristics were measured from the center of the fan outlet.

## Specifications

Model		DTY-BA01-350	DTY-BA01-600	DTY-BA01-850	DTY-BA01-1100	DTY-BA01-1350	DTY-BA01-1600	DTY-BA01-1850	DTY-BA01-2100	DTY-BA01-2350
Item										
Power supply		24VDC $\pm$ 5%								
Consumption current	mA	150								
Output voltage	kV	$\pm$ 10								
LED Indicator	POWER (green)	Lights up when power is on								
	RUN (green)	Lights up during normal operation								
	ALARM (red)	Lights up when discharge abnormality or circuit abnormality (overcurrent) occurs (RUN LED light goes out)								
Power safety circuit		Contact point outputs when ALARM LED lights up (b-contact(NC), 24VDC 50 mA MAX.)								
Ion balance	V	Within $\pm$ 30 (measurement distance 300 mm [11.81 in.], air supply pressure 0.3 MPa [44 psi.])								
Static charge removal time	sec.	0.9 or less (measurement distance 300 mm [11.81 in.], air supply pressure 0.3 MPa [44 psi.])								
Ozone generation amount	ppm	0.002 or less (measurement distance 50 mm [1.97 in.], air supply pressure 0.2 MPa [29 psi.])								
Installing distance		50 mm [1.97 in.]~								
Media		Air (clean air with moisture and oil content removed)								
Operating air pressure range	MPa [psi.]	0.01~0.3 [1.5~44]								
Consumption air flow rate <sup>Note1</sup>	ℓ/min [ft <sup>3</sup> /min.] (ANR)	40 [1.41]	50 [1.77]	75 [2.65]	95 [3.35]	120 [4.24]	135 [4.77]	150 [5.30]	175 [6.18]	195 [6.88]
Mass <sup>Note2</sup>	g [oz.]	650 [22.93]	800 [28.22]	1050 [37.04]	1300 [45.86]	1500 [52.91]	1750 [61.73]	2000 [70.55]	2200 [77.60]	2450 [86.42]
Number of discharging needle nozzles (pitch 50 mm [1.969 in.])		5	10	15	20	25	30	35	40	45
Environmental conditions		Indoors 0 to 40°C [32 to 104°F], 15 to 85% RH (no condensation)								
Accessories		Power and signal cable (3 m [118 in.]), supporting bracket(s) (number depends on the below column)								
Number of supporting brackets added		—	—	—	1	1	2	2	3	3

Notes: 1. Reference value, when air supply pressure is 0.3 MPa [44 psi.]

2. Does not include mounting bracket and supporting bracket.

Remark: Ion balance and static charge removal time were measured by Koganei test standards. Consult us for more details.



## Order Codes

### ●Main unit



## DTY - BA01 -



### Product model selection

<b>350</b> : Length350 mm [13.78 in.]	<b>1600</b> : Length1600 mm [62.99 in.]
<b>600</b> : Length600 mm [23.62 in.]	<b>1850</b> : Length1850 mm [72.83 in.]
<b>850</b> : Length850 mm [33.46 in.]	<b>2100</b> : Length2100 mm [82.68 in.]
<b>1100</b> : Length1100 mm [43.31 in.]	<b>2350</b> : Length2350 mm [92.52 in.]
<b>1350</b> : Length1350 mm [53.15 in.]	

### ●Options (to be ordered separately)

- Replacement discharging needle nozzle (Unit: 1 nozzle)  
**DTY-ZEM-BA01**



- AC adapter  
**DTY-ZPS1**

Rating  
Input: 100VAC to 240VAC  
50/60 Hz 0.6 A  
Output: 24VDC 750 mA  
Cable length: 1.8 m [71 in.]



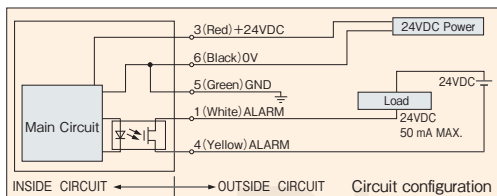
- Supporting bracket (Unit: 1 bracket)  
**DTY-ZBKS-BA01**



- Extension cable (3 m [118 in.])  
**DTY-ZCE3-BA01**



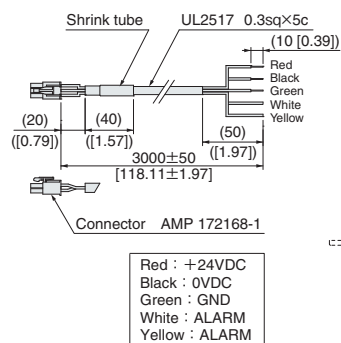
## Dimensions mm [in.]



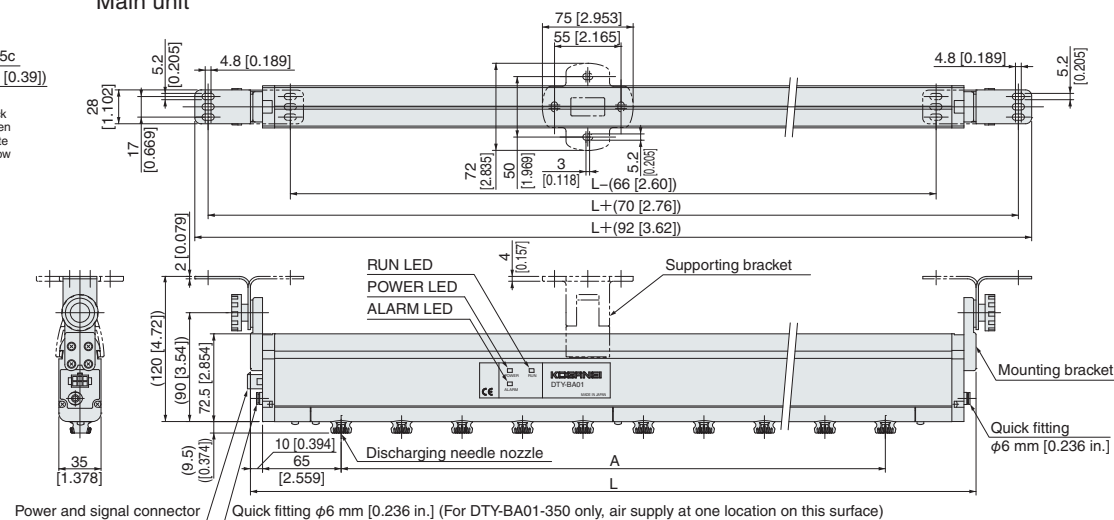
Note: Power ON/OFF to the IONIZER should be performed on the input side (+24VDC side).

Model	L	A	Number of discharging needle nozzles	Number of intermediate brackets
<b>DTY-BA01-350</b>	350 [13.78]	50p × 4 = 200 [7.87]	5	—
<b>DTY-BA01-600</b>	600 [23.62]	50p × 9 = 450 [17.72]	10	—
<b>DTY-BA01-850</b>	850 [33.46]	50p × 14 = 700 [27.56]	15	—
<b>DTY-BA01-1100</b>	1100 [43.31]	50p × 19 = 950 [37.40]	20	1
<b>DTY-BA01-1350</b>	1350 [53.15]	50p × 24 = 1200 [47.24]	25	1
<b>DTY-BA01-1600</b>	1600 [62.99]	50p × 29 = 1450 [57.09]	30	2
<b>DTY-BA01-1850</b>	1850 [72.83]	50p × 34 = 1700 [66.93]	35	2
<b>DTY-BA01-2100</b>	2100 [82.68]	50p × 39 = 1950 [76.77]	40	3
<b>DTY-BA01-2350</b>	2350 [92.52]	50p × 44 = 2200 [86.61]	45	3

### Power and signal cable



### Main unit



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