



ELECTROSTATIC PRECIPITATOR CELL

MODEL:SC-DS465



SEJIN
Specification



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Electrostatic Precipitator

Clean Air System (E.P, Electrostatic Precipitator) is based on principle of electrostatic. E.P makes contaminated particles to be electrostatic materials and to be collected. Clean Air System is structured by Pre Filter, Cell and After Filter. Cell is organized the Ionizer and the Collector. So what is called Two Stage charge. The function of Pre Filter filters large contaminated particles. At ionizer, it makes contaminated particles to ionize by corona discharge which is applied high voltage (DC 10 kV ~ 12 kV), and then ionized particles is collected at collector. High voltage (DC 5 kV ~ 7 kV) is supplied to Collector which is plate collected at regular distance. more than $0.01 \mu\text{m}$ contaminated particle collected at Collector. At the same time, After Filter makes clean air coming out and prevents collected particle from coming out. Clean Air System has benefit to filter $0.01 \mu\text{m}$ particles. The ratio of efficiency is more than 97%.

Electrostatic precipitators have the following advantages

- They have high efficiencies (exceeds 97% in some Application)
- Fine dust particles are collected efficiently
- Can function at high temperatures (as high as 700 degree F–1300 degree F)
- Pressure and temperature changes are small
- Difficult material like acid and tars can be collected
- They withstand extremely corrosive material



**Electrostatic Precipitator
Collection Plates**



- Low power requirement for cleaning
- Dry dust is collected making recovery of lost product easy
- Large flow rates are possible

The **efficiency** of electrostatic precipitators can be increased by:

- Larger collection surface areas and lower air flow rates give more time and area for dust particles to collect
- increased speed of dust particles towards collection electrodes
- Factors That Affect Efficiency

Some factors that could affect efficiency of the electrostatic precipitator are as follows:

- Other gases in the air stream could affect efficiency
- Some dusts have high charge and greater forces may be required to attract them to the collection plates
- Sulfur compounds in boiler gas increase collector efficiency
- Pressure drop usually in the range of 2.0 to 0.5 inches

In the Two Stage Precipitator grounded plates are placed about an inch apart with an intermediate plate that is also charged. With the two-stage system, instead of 4000–6000 DC supply, it has 10000–12000 Volt supply with immediately supply at 7500 volts. Dust load in this system is normally between 0.01 to 0.1 grains per 1000 cu.ft

Special Features of CELL specification

Electrical specification :

(1) Input Voltage

Ionizer Voltage : DC 12KV ± 10%

Collector Voltage : DC 6KV ± 10%

Mechanical specification :

(1) Shape of ionizer part : saw type



(2) Efficiency of electrical precipitator

	Separated wire type
Air flow(m ³ /min)	2200~3300CFM
Efficiency	97%

Remark : The ratio of efficiency come to heel regulation of the D.O.P



(3) Circumstance condition for the use of production.

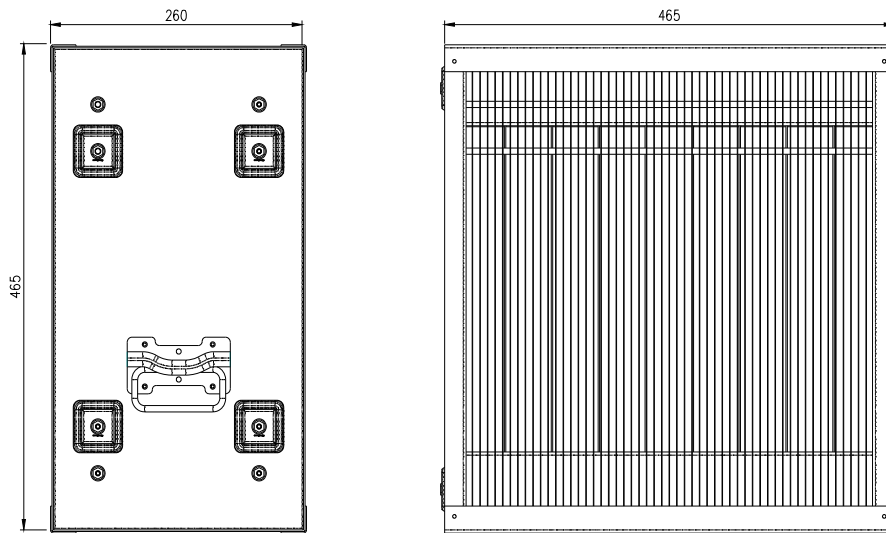
	Separated wire type
Temperature	0 ~ 60 °C
Humidity	64% RH ↓

(4) Outward size (Separated wire type)

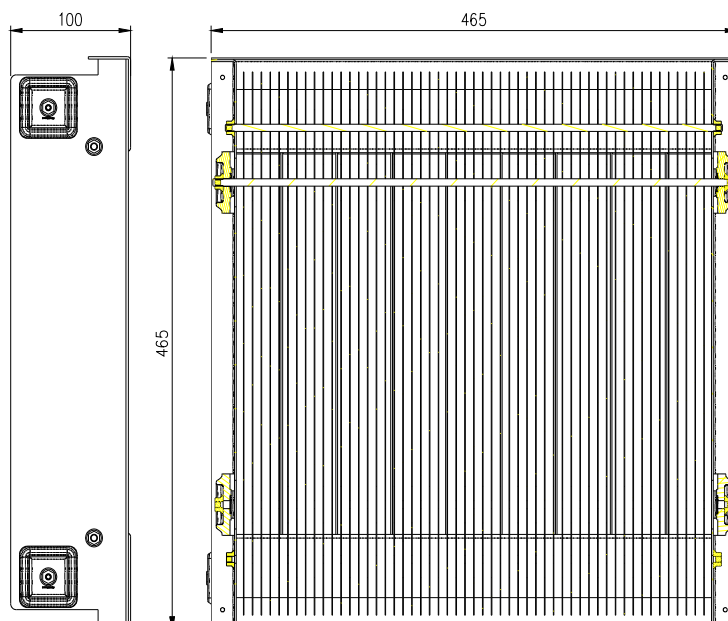
	Collector part	Ionizer part
Size	465 x 465 x 260 (mm)	465 x 465 x 100 (mm)
Weight	10.4Kg±2%	2.4Kg±2%

CELL Dimension & Figure

Collector Part :



Ionizer Part :





ELECTROSTATIC PRECIPITATOR CELL LIMITED WARRANTY



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SEJIN company warrants its electrostatic precipitator cell to be free from defects in workmanship or materials, under normal use and service, for a period of One Year from the date of purchase by the original owner. If at any time during the warranty period, the product is found to be defective or malfunctions, SEJIN company will repair or replace the defective part (at its option) and provide the shop labor to repair this electrostatic precipitator cell. This warranty shall not apply if it is shown by SEJIN that the defect or malfunction was caused by neglect or abuse during operation by consumer. The repaired or replaced part or unit will be shipped by SEJIN Company to the purchaser, freight prepaid. The warranty on any repaired or replacement part shall be for a duration of time no longer than the remaining or unexpired term of the original warranty.

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