



Eltech Engineers Pvt Ltd

An ISO 9001 - 2015 Company

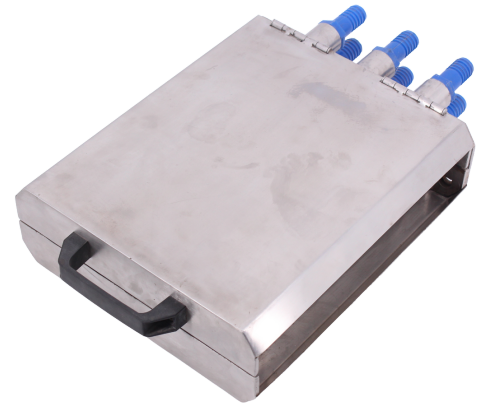
Non-Contact Web Cleaning System



Operating Manual & Information

About us ,

ELTECH ENGINEERS PVT LTD , established in 1992 is an ISO 9001:2015 certified Indian Company engaged in the manufacturing activity of Corona treater, Plasma Treatment Systems, Static Charge Eliminator, Static Chargers, Static Meters, Ionizing Air gun, Blowers etc. Our clients always look upto us for their different requirements because of our high quality standards, superior performance, zero defect products, timely deliveries and very reasonable price.



About Web Cleaning System

- The Eltech web cleaning system has been designed in response to increased demand for a compact, high performance, non-contact web cleaning system.
- Through the application of advanced computational fluid dynamics, Eltech has optimised the cleaning efficiency to remove and extract contamination to below 1 micron.
- The system comprises three main components; the cleaning head, active static control and an Air Handling Unit.

Applications :

- **Coating**
- **Printing**
- **Laminating**
- **Slitting & Rewinding**
- **Food / Medical Packaging**
- **Paper Making & Converting**



Problems :

- Dirty webs causing loss of profit and customer dissatisfaction.
- Excessive down time on printing presses.
- High reject rates in laminating processes.
- Unacceptable quality in pharmaceutical or food packaging.



**Elech - 308
Dust collector system**

Technical Specifications :

- **Model :** Eltech - 308
- **Capacity (m³ / hr) :** 212
- **Vacuum (mm of H₂O) :** 2100
- **Power/voltage :** 1.5 HP/415V
- **Duty :** Continuous
- **Reservoir capacity(Lts.) :** 25
- **Machine Inlet (mm) :** 50



**Eltech - 305
HV Shockless Electrode**

Technical Specifications :

- Supply voltage :** 230 V AC , 50 Hz , 25 Watts
- Output voltage :** 7 kv
- Output short circuit current :** (Ik) < 5 mA
- Power consumption :** approx. 50 VA
- Maximum load :** 10 m (HV cable incl. electrode)
- Frequency :** 50 - 60 Hz
- Mains cable length :** approx. 2.5 meter with earthing -pin plug.
- Weight :** 3 kg



**Elech - 335
Power Unit**

Working Principle

The double sided non-contact cleaning head has been designed to provide excellent contamination removal, whilst minimising any risk of web recontamination. On each side of the web there is a powerful blowing airflow that strips the boundary layer and contamination from the web surface. Two vacuum airflows catch all the turbulent air and contamination from within the cleaning head. Each head incorporates four shockless AC ionising bars; two positioned on either side of the web, one on entry to and one on exit from the head. Ionising bars ensure neutralisation of any static charges on the web that are holding contaminants to the web surface. The risk of re-attraction of contaminants to the cleaned web surfaces is also minimised.

Features

- **Non Contact Cleaning**
- **Compact design**
- **Integrated static control**
- **Air balancing**
- **Hinged, clam shell design**
- **No consumable items**

Benefits

- **Eliminates risk of surface marking and damage. No interference with web tension or web tracking.**
- **Flexible positioning & easy installation.**
- **Neutralises static charges to optimise cleaning performance and prevent re-contamination.**
- **Allows complete control of the bias between blowing and vacuum airflows.**
- **Allows unit to open for easy threading of the web.**
- **Lower ongoing costs**

Ionizing Dust Collector (AHU)



How it works ?

- ***The web passes through a cloud of ionisation on entry to the head, which neutralises any static charges.***
- ***The web is then subject to a force of turbulent air created by the blowing and vacuum airflows within the head unit***
- ***High frequency micro-movements of the web are created by the turbulent air***
- ***The combination of the high frequency micro-movements and turbulent air shatters the web boundary air layer, releasing the contamination into the vacuum airflows.***
- ***As the web exits the head, it passes through a second cloud of ionisation to prevent re-contamination of the web***

Technical Specifications :

- **Maximum web width**

600 mm

- **Static control (active)**

Hv Shockless electrodes, 230V AC, 50/60Hz

- **Standard opening**

Manual with gas strut and end hinges

- **Optional opening upgrade**

Pneumatic

Suggested Order of Installation

For ease of installation, it is recommended that the system components be installed in the following order:

1. Position and mount the head unit (the web must enter the head unit so that it reaches the aerodynamic flap before the blowing air slot).
2. Position and mount the Air Handling Unit (in free air to avoid overheating and considering the available ducting lengths).
3. Position and mount the control box (note the distance to the head and AHU and check the required cable lengths are available).
4. Make all the electrical connections.
5. Make all compressed air connections (if required).
6. Connect all ducting.

Connecting the Active Ionisation Equipment

The system is supplied with the following active ionisation equipment:

- 4 x Eltech-305 Ionising Bars that are installed in the head unit.
- 2x Eltech-331 Ionising Power Supply for systems to suit web widths up to 1,000mm.



IMPORTANT

The web must be kept under tension whilst the unit is running.

AHU unit

- 4x Vaccum ducts
- 2x Air Blow ducts
- 4x High voltage electrode connections

Front panel of AHU controls :

- Vaccum Pump ON/OFF
- Static Eliminator ON/OFF
- Auto / Manual switch
- LED light for vaccum pump & Ionization

Inspection

The system will perform without serious deterioration, giving many years of service, providing the following visual inspection is made weekly.

Head Unit

Check for any external damage and the alignment of the head unit. Wipe over to remove any contamination present. Inspect that the cables from the ionising bars to the ionising power supplies are secure, free from damage and that they do not have any tight bends in them.

Vacuum System

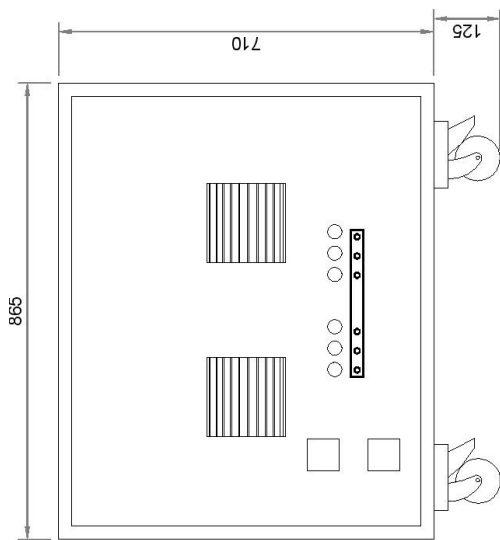
Listen for any sounds that are not 'normal' i.e, grinding or scraping.

Filtration

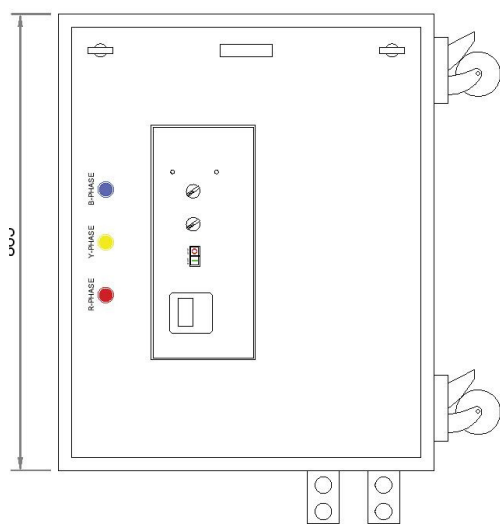
Check that the filter . Check for any external damage to the filter media, i.e. rips. Check to make sure the filter bag is not blocked.

Ducting

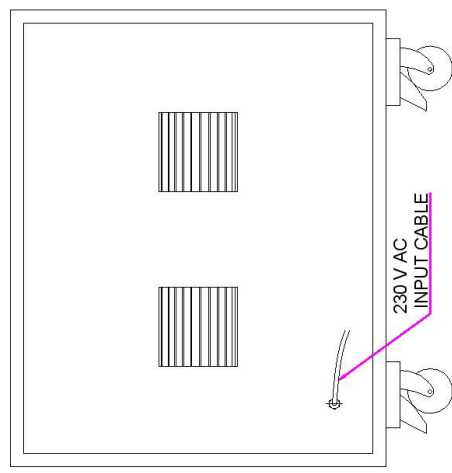
Visually inspect the ductwork look for any loose sections or holes. Check to make sure the ducting is not blocked



L SIDE VIEW



FRONT VIEW



R SIDE VIEW

NOTE:-
 >DO NOT SCALE THE DRAWING. IF IN DOUBT ASK.
 >ALL DIMENSION ARE IN MM. UNLESS OTHERWISE STATED.
 >REMOVE ALL SHARP EDGES AND CORNER.
 >ENTRY CHAMFER OF 0.8 mm x 45° TO BE PROVIDED IN ALL BORE. UNLESS OTHERWISE STATED.
 >REMOVE ALL WEIRDING SYMBOLS AND ADHERE TO ENIGLU

DRAWN	D.S.S	DATE	21-2-2020
CHECKED	H.J.C		
MGR APPR	R.N.C		
		NAME	
		DATE	
ELTECH ENGINEERS			
		TITLE	
		SIZE	DWG NO
			A3
		MODEL:-	REI



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Since 1992