

## Air jet



## General specifications of Air jet

The Air jet is designed and built to separate concentrate particles. In the design of this device all the efforts have been made that sieving be done in a micrometer unit. The device uses 220 V with a current of 15 amps for safety and minimum dangers. Input power is managed by a contactor. After the contactor, power is supplied to the four miniature switches, and the miniature switches are cut off in case of any connection or power leakage. 220V power is used only for the stepper motor and the rest of the equipment and switches and the electronic board uses a 12 V electricity. Of course, this electricity is connected to consumers through transformers. Attempts have been made to observe the electrical safety of the device, all cables have passed through the duct, are integrated and are not available at operator performance path.

The Air jet device consists of seven parts, including:

- 1 - The body of the device
- 2 - Sieve
- 3 - Nozzle
- 4 - Stepper Motor
- 5 - Electrical panel and electronic board
- 6 - Display
- 7 - Vacuum tube

**Sieve :** Device sieve is a 45-micron mesh that must be properly placed with the complete specifications of the sieve are marked on it. The sieve and the device are separate and must be provided separately. The nozzle of the device is made of durable and stainless steel. Suction air is blown up from the gap inside it,

causing the grains to move. The stepper motor rotates the nozzle, which is connected by a shaft and two bearings. This device uses a powerful five-phase stepper motor to prevent any disruption in the work process.

**Electrical panel :** It is responsible for controlling and supplying electricity to different parts of the device. Different parts of the panel include the following:

- Miniature single bridge fuse: a 10 amp fuse for input power
- PLC: Process control
- Stepper motor drive: control the speed and direction of the stepper motor
- Power supply: 24V PLC power supply and stepper motor drive
- Relay: To turn the vacuum cleaner on and off

## **Advantages**

- Simple and convenient operation for operator
- Save time due to the high test speed of the device
- Adjustable accuracy of the desired amount of vacuum
- Lightness (high quality of the body) and small size for convenience