Cee® X-Pro Workstation

Cost Effective Equipment

Mini Environment

The Cost Effective Equipment mini environment combines customized exhaust enclosures that integrate with stand-alone chemical cabinets to create a virtual clean room environment (commonly known as a mini-environment).

Serving the Semiconductor Industry Since 1987

Overview

The Cost Effective Equipment X-Pro mini environment combines customized exhaust enclosures that integrate with their stand-alone cabinets to create a virtual clean room environment. The upper enclosures can be designed for ductless or ducted exhaust for preventing vapor fumes from contaminating the ambient lab environment. The standard enclosure features a fan filter unit (FFU) for vertical laminar flow through a particle filter (ULPA, HEPA, or carbon amine). When used with Cee® X-series or Apogee™ equipment, the hood is also compatible with optional programmable meters for detecting and logging environmental conditions including air pressure, velocity, flow, humidity, and temperature stability and uniformity. The X-series software will automatically monitor these conditions in real time and provide users with the ability to program error limit warning thresholds. Each work-station seamlessly combines Cee® precision equipment with these enhancements to create optimal turnkey processing solutions and deliver increased production yields in a small-scale setting.

Standard Enclosure Options:

Option 1: Fan filter unit (FFU) in covered enclosure
Option 2: Ductless recirculation system
Option 3: Ducted exhaust enclosure with access sash

Stand-Alone Stainless Steel Exhausted Cabinet with Sliding Drawer (for Chemical Storage):
The Cost Effective Equipment X-Pro mini environment includes a matching stainless steel exhausted cabinet that provides secondary containment for all process chemicals, including the waste tank. The result is a fully capable stand-alone equipment system that can be shipped fully assembled. This option is standard for the X-PRO workstation and can be purchased separately for other benchtop tools to control vapor fumes and/or create a mini-environment. The optional exhausted cabinet and upper enclosure are SEMI S2 and CE compliant.

Cee® 300XD Developer within a Cee® X-PRO Workstation

Benefits

- A virtual clean room environment for advanced prototyping and/or pilot-line production
- A completely stand-alone system with safety-compliant chemical storage
- Enclosed spin chamber with exhaust port for preventing process fumes from contaminating ambient lab environment
- Compact design for minimized footprint
- Variety of filtration options including ULPA, HEPA, and carbon amine (upstream concentration: 10 ppb; downstream concentration: 1 ppb)
- Internal recessed lighting with yellow filters
- Controlled by host Cee® X-series equipment (onboard PC); continuously polls environmental conditions and records in-process data (pressure, velocity, flow, humidity, and temperature)
- Optional ductless recirculation system
- Optional ducted exhaust enclosure with access sash

Utility Requirements and Dimensions

- Dimensions: 42" W x 33" D x 78" H
- Voltage ranges: 100, 110-125, 208-240 VAC, 50/60 Hz
- Power requirements:
  - Option 1: 100-120 VAC, 400 W (4 amps) (50/60 Hz) unless specified
    208-240 VAC, 400 W (2 amps) (50/60 Hz) unless specified
  - Option 2: 100-120 VAC, 1040 W (12 amps) (50/60 Hz) unless specified
    208-240 VAC, 1040 W (5 amps) (50/60 Hz) unless specified
  - Option 3: No electrical power required
    Upper enclosure exhaust (standard duct): 8" OD duct (540 cfm)

Package Specification Options, Utilities, and Dimensions

Option 1: Fan Filter Unit Enclosure

1. ULPA Filtration (single pass):
   > 90% coverage
   Expanded PTFE membrane
   Urethane gel seal
   Bottom loaded
   99.99995% at MPPS
   Aluminum frame

2. Amine Filtration (single pass):
   Carbon filter with dopants
   Upstream concentration before filter: 10 ppb
   Downstream concentration after filter: 1 ppb

3. Utilities:
   100-120 VAC, 400 W (4 amps) (50/60 Hz) unless specified
   208-240 VAC, 400 W (2 amps) (50/60 Hz) unless specified
   Chemical cabinet exhaust: 4" OD tube (20-50 cfm)
   Optional monitor communication

4. Dimensions: 42" W x 33" D x 78" H

Option 2: Ductless Recirculation System

1. Filtration Based on Customer Specifications:
   > 90% coverage
   ULPA
   HEPA
   Carbon amine

2. Air Flow:
   135 cfm
   100 fpm face velocity (0.047 m/s)

3. Utilities:
   100-120 VAC, 1040 W (12 amps) (50/60 Hz) unless specified
   208-240 VAC, 1040 W (5 amps) (50/60 Hz) unless specified
   Chemical cabinet exhaust: 4" OD tube (20-50 cfm)

4. Dimensions: 42" W x 33" D x 81" H

Option 3: Ducted Exhaust Enclosure with Access Sash

1. No Filtration:
   > 90% coverage

2. Negative Air Flow:
   540 cfm
   0.5 m/s fpm face velocity

3. Utilities:
   No electrical power required
   Upper enclosure exhaust: 8" OD tube (540 cfm)
   Chemical cabinet exhaust: 4" OD tube (20-50 cfm)

4. Dimensions:
   42" W x 33" D x 69" H

Effective Date: 10/08/2017