

I/A Series® Hardware NEMA 4/4X Hardened Enclosure



This NEMA 4/4X Hardened Enclosure provides a rugged environmentally-secure housing for a 50 Series or 70 Series workstation. This enclosure is dustproof, waterproof, oilproof, and resistant to most contaminants. It is suitable for “hosedown” applications.

Depending upon the options chosen, the enclosure meets the stringent requirements of food processing applications (no glass) and pharmaceutical applications (stainless steel construction and no glass). In addition, the enclosure, together with its cooling system and operator input device, is CE-compliant.

Each enclosure includes a cooling system that maintains the acceptable internal temperature needed for continuous operation.

Two shock-mounted shelves and clamping hardware inside the enclosure fasten the monitor and computer equipment in place. The monitor is viewed through a 20-inch diagonal window. Operator interaction is via a hardened pointing device or hardened keyboard/pointing device mounted on a shelf attached to the enclosure. The operator input device has a rubber membrane cover over full-travel keys.

Although the enclosure’s tight construction provides the climate control necessary to protect its contents from high temperature and contaminants, quick access to the interior of the enclosure is provided. A top-front door offers easy access to the monitor. Full rear access is via a second door, which facilitates wiring during setup.

The enclosure’s built-in thermostat can be connected to an alarm device to monitor the enclosure’s internal temperature.

CONFIGURATION

The enclosure is available in 304 stainless steel with a #4 brushed finish.

The enclosure has a viewing window that is available in polycarbonate (lexan) or safety glass.

Polycarbonate is typically used for pharmaceutical and food-processing applications.

Two air cooling systems are available: a vortex cooler (for NEMA 4X applications) and an air conditioner (for NEMA 4 applications). Each air cooling system is integrated into the enclosure. The compact vortex cooler operates off of compressed air and has no moving parts. The air conditioner provides cool air by means of a refrigerant’s liquid/gas phase change.

Cabling to the enclosure is through one of two user-selectable choices: waterproof cabling ports or user-supplied conduit mounts. The waterproof cabling ports include an easy-to-assemble kit, enabling cable passage through the enclosure, while maintaining the enclosure’s NEMA 4/4X rating. The signal cabling port enables the passage of signal cables up to 0.50 inch diameter. The power cabling port enables passage of a power cable (up to 0.70 inch diameter).

The conduit mount option is for sites that need to mount conduit directly to the enclosure. The user is responsible for cutting apertures and securely mounting the conduit, while ensuring a NEMA 4/4X seal.

For operator input, an environmentally hardened pointing device or a hardened keyboard/pointing device is supported. Both are rated NEMA 4X. A standard keyboard can also be used, or it can be removed for security and/or protection from the environment.



FUNCTIONAL SPECIFICATIONS

Enclosure Power Requirements

- LINE VOLTAGE
120 or 240 V ac, +10%, -15%
- LINE FREQUENCY
50 and 60 Hz (nominal), +/-5%
- ac POWER
1000 W (8 A at 120 V) maximum, running

NOTE

Power consumption includes power for the computer, monitor, and air conditioner cooling system.

Air Conditioner Power Requirements

- POWER (RUNNING)
6 A at 120 V (4 A at 230 V)
- POWER (STARTING SURGE)
35 A at 120 V (15 A at 230 V)

Vortex Air Cooler Power Requirements

- ac POWER
6.1 W

ENVIRONMENTAL SPECIFICATIONS

Operating (Ambient) Outside Temperature

- Up to 45°C (113°F)

Maximum Internal Temperature

- Up to 32°C (89°F)

Storage Temperature

- 40°C to 70°C (-40°F to 158°F)

Vibration (Operation)

- 5 - 200 Hz at 0.1 G

Humidity

- Up to 100%, condensing

IEC IP56, NEMA 4/4X

- Waterproof, dustproof, oilproof, and resistant to contaminants.
- Vortex-configured systems are rated NEMA 4X.
- Systems configured with an air conditioner are rated NEMA 4.

PHYSICAL SPECIFICATIONS

Enclosure Mass (without a Workstation)

WITH VORTEX COOLER

118 kg (260 lbs)

WITH AIR CONDITIONER

159 kg (350 lb)

Enclosure Body (without External Shelf)

HEIGHT

With Air Conditioner (including lifting eyebolts)

1765 mm (72.5 in)

With Vortex Cooler

2070 mm (84.5 in)

WIDTH

600 mm (24 in)

DEPTH

600 mm (24 in)

Shelf

WIDTH

590 mm (23.25 in)

DEPTH

300 mm (12 in)

Viewing Window

MATERIAL

Polycarbonate or safety glass

COLOR

Clear

HEIGHT

294 mm (11.5 in)

WIDTH

388 mm (15.3 in)

Access

Front access via 1 door; rear access via 1 door

Construction

304 stainless steel with #4 brushed finish

Keyboard/Pointing Devices

DIMENSIONS

Height

36 mm (1.4 in)

Width

515 mm (20.25 in)

Depth

200 mm (7.8 in)

NEMA RATING

4X

MATERIAL

Stainless steel

COVERING

Rubber membrane

Pointing Device Only

DIMENSIONS

Height

36 mm (1.4 in)

Width

122 mm (4.8 in)

Depth

122 mm (4.8 in)

NEMA RATING

4X

MATERIAL

Stainless steel

COVERING

Rubber membrane

Vortex Cooler

COOLING CAPACITY

2800 BTU/hour

INPUT AIR

Type

Instrument air

Pressure

80-110 psig

Flow rate

40 SCFM at 100 psi

Fitting size

1/4 National Pipe Thread (NPT)

Airline size

Refer to manufacturer's documentation
supplied with the enclosure.

DIMENSIONS

Height

~300 mm (12 in)

Width

~100 mm (4 in)

Depth

~100 mm (4 in)

Air Conditioner

COOLING CAPACITY

2400 BTU/hour

FAN LIFE

50-60,000 hours (L-10 method)

COMPRESSOR LIFE

100,000 hours

DIMENSIONS

Height

625 mm (25 in)

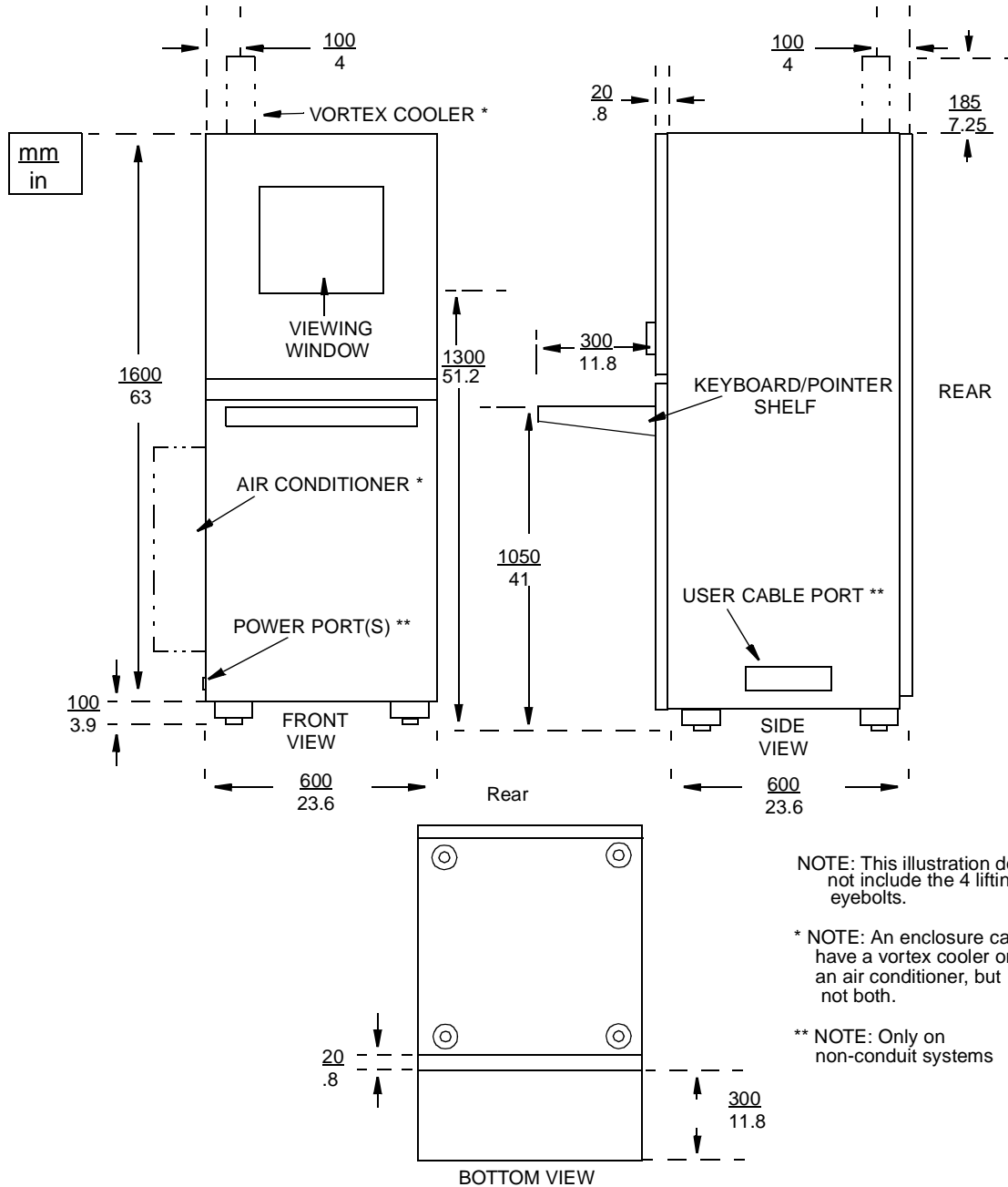
Width

400 mm (16 in)

Depth

250 mm (10 in)

DIMENSIONS – NOMINAL



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