



Solutions for Demanding Applications



## 15.0" Enclosed Purged Workstation for Class 1 Div 1 Environments

The VT550ESW is a NEMA 4X system designed to meet Class 1, Div 1 protection. The purge system uses an automatic pressure switch to automatically trigger alarms in case of pressure loss.

Ideal for extreme environments, the VT550ESW industrial computer and its predecessors are currently in use in coal mines, rock quarries, oil rigs, chemical manufacturing plants and production floors which are located in Class 1, Division 1 environments. The VT550ESW is engineered for extremely rugged conditions, both indoors and out.

## FEATURES

- ◆ Designed to meet Class 1, Div 1
- ◆ Purge with automatic pressure system
- ◆ Water Proof
- ◆ Dust Proof
- ◆ Corrosion Resistant
- ◆ Extreme Temperature Proof
- ◆ Shock and Vibration Proof
- ◆ Built-in NEMA 4x Keyboard with pointing device
- ◆ Easy-access Interior
- ◆ Intrinsically Safe Keyboard and Pointing Device

\*Supports all VESA standard video formats

## CONTACT

### HEADQUARTERS

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## SPECIFICATIONS

### Display

15" active matrix TFT LCD display, 350 nits, 1024 x 768 XGA

### Processor

T4500 2.30 GHz 800MHz FSB Intel Dual Core

### BIOS

Phoenix-Award 16Mbit (SPI) with RPL/PXE LAN Boot ROM, SmartView and customer CMOS backup

### O/S

Windows XP Professional (optional Windows Embedded Standard or Windows 7)

### System Memory

2 DDR2 533/667 SDRAM sockets, 2 GB standard, 4 GB optional (~3.25 recognizable)

### Graphics

Intel® GME965 GMCH Gen 4 Integrated graphics engine

### LAN

Integrated Intel Gigabit PCI Express LAN Chip

### Hard Drive

320 GB Fast Access SATA drive

### Power Input

12 VDC Optional: 12/24 VDC AC by available brick, 6 to 32V DC

### Power Connector

Standard Power Inlet (IEC320 C14)

### Power Consumption

40W max

### Dimensions

20" W x 18" D x 11" H

### PCI Expansion Slots

Optional PCI Express, Optional 1 or 2 32 bit PCI Slots

### DVD Drive (E-IDE / ATAPI)

DVD-R, DVD+R, DVD-RW, DVD+RW, DVD-R DL, DVD+R9, CD-R, CD-RW

### I/O Ports

**Back** - 3 RS-232 COM port (Optional RS-422\485 port), 2 LAN ports, 4 USB 2.0, 2 Audio jacks

**Front** - 2 USB 2.0

### Firewire Ports

2 x IEEE 1394a

### Enclosure

Lockable door

NEMA 4x, 316 stainless steel

Anodized aluminum heat sink

### Keyboard/Mouse

Industrial silicone rubber keyboard with integrated pointing device

### Environmental/Thermal

NEMA 4x

waterproof and dust proof

### Temperature

Operational: 41°F to 140°F/5°C to 60°C,

Storage: -40°F to 149°F/-40°C to 65°C

### Humidity

Operational: 10 ~ 80% (relative; non condensing)

### Enclosure

Easy-open, lockable door

NEMA 4x, 316 stainless steel

Anodized aluminum heat sink

### Construction

*Enclosure Only:*

20" H x 24" W x 16" D

*Purge Kit Only:*

22" (H) x 11" (W) x 13.75" (D), 47 lb

**\*\*Purge System w/Pressure Switch Next Page\*\***

## OPTIONS

- Purge System Mounting to Side (L/R), Top or Bottom
- Windows Embedded Standard or Windows 7
- 12/24 VDC AC by available brick, 6 to 32V DC
- Optional PCI Express, Optional 1 or 2 32 bit PCI Slots
- Optional RS-422\485 port



Purge System w/  
Pressure Switch

This Rapid Exchange® purging system operates on a supply of compressed instrument air or inert gas. It regulates and monitors pressure within sealed (protected) enclosure(s), in order to remove and prevent flammable gas or vapor accumulations. The system accomplishes four air exchanges and maintains a "safe" (0.25") pressure. The system includes an Electrical Power Control Unit (EPCU) that monitors system operation and controls enclosure power. All start-up requirements must be satisfied before the EPCU will energize power to the enclosure(s). These processes reduce the hazardous (classified) area rating within the enclosure(s), in accordance with the NEC - NFPA 70, Article 500, NFPA 496 and ISA 12.4.



## MATERIAL SPEC

### Regulator Body

Zinc w/ Enamel Finish

### Regulator Handle & Bowl

Polycarbonate

### Rapid Exchange Gauge

Poly Case & Brass Tube

### Rapid Exchange Solenoid

Brass w/ Enamel Finish

### Tube Fittings & Valves

316 SS Forged Body

### Tubing

316 SS 1/4" .035 Welded

### System Nameplates

Silk screened Lexan® & SS

### Fastener Hardware

SS Screws & Bolts

### Mounting Plate

316 14 Ga #3 Brush SS

### EPCU Enclosed Body

Bead Blast Cast Alum.

### Conduit & Fittings

Galvanized Steel

### Enclosure Warning

### Nameplate

Silkscreened SS

Lexan® is a registered trademark of the General Electric Company.

## Specifications

### Weight

47lb

### Temp. Range

-20F to 120F

### Supply Pressure Range

80 - 120 psi

### Capacity & Filtration

1.5 oz @ 20 Micron

### Supply requirements

Clean air or inert gas

### Safe Pressure Setpoint

.25" @ safe pressure

### Safe Pressure Flow Rate

0.1 - 3.5 SCFH - Enclosure integrity determines actual flow rate

### Exchange Pressure

3" - 5"

### Exchange Flow Rate

4 SCFM / 240 SCFH - With regulator set to 60 psi min. during exchange

### Exchang Time

1min/ft3

### System Supply Port

1/4" FPT

### Enclosure Supply Fitting

1/4" tube fitting

### Enclosure Reference Fitting

1/4" tube fitting

### EPCU Conduit Port Size

1/2" FPT

### EPCU Power Requirements

120 VAC 60Hz 10

### EPCU Power Consumption

500mA

### Dimensions

22" (H) x 11" (W) x 13.75" (D)  
Height & Width dimensions reflect mounting plate measurements. Depth dimensions reflects overall measurement of system, including components.

### Mounting

Side (L/R), Top or Bottom

## OPERATION

In accordance with system instructions, start-up requires air supply to be engaged and EPCU power to be energized. The enclosure protection vent must be tested and the enclosure(s) must be sealed. The EPCU power control switch must be activated and the system will self test. The enclosure pressure valve is then used to manually set a safe reading on the enclosure pressure indicator. When safe pressure is stable, the Rapid Exchange® control valve is fully engaged. Upon completion of the Rapid Exchange® cycle, (5 minutes minimum) the Rapid Exchange® control valve automatically disengages. Pressure returns to a safe setting and enclosure power is energized. Loss of safe pressure causes the EPCU to de-energize power to the protected enclosure(s). The purge system includes an explosion proof differential pressure switch with form "C" contacts for audible or visual alarm systems.

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