



Solutions for Demanding Applications

## 19.0" Enclosed Purged Workstation for Class 1 Div 2 Environments

The VT900ESW is a NEMA 4X system designed to meet Class 1, Div 2 protection. The purge system uses an automatic pressure switch to automatically trigger alarms in case of pressure loss.

Ideal for extreme environments, the VT900ESW 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 2 environments. The VT900ESW is engineered for extremely rugged conditions, both indoors and out.



### FEATURES

- ◆ Designed to Meet Class 1, Div 2
- ◆ 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
- ◆ LCD screen shielded by a Tempered Glass Protective Overlay

### SPECIFICATIONS

#### Video

19" active matrix TFT LCD display, 350 nits, 1280 x 1024 SXGA, LCD screen shielded by a Tempered Glass Protective Overlay

#### Processor

T4500 2.30 GHz 800MHz FSB Intel Dual Core

#### BIOS

Award PnP 4MB Flash ROM BIOS

#### O/S

Windows XP Professional (optional Windows Embedded Standard)

#### System Memory

SO-DIMM DDRII 667/533/400 2 GB

#### Chip Set

Intel® GME965+ICH8M/EM

#### VGA

Intel® GME965 GMCH Gen4 integrated graphics engine

#### Hard Drive

320 GB SATA High Performance

#### PCI Expansion

Optional PCI Express  
Optional 1 or 2 32 bit PCI Slots

#### Power Input

100-240VAC 1.5A 50/60 HZ

#### Power Connector

Standard Power Inlet (IEC320 C14)

#### Dimensions

20" W x 18" D x 11" H

#### 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

2 RS-232 COM port  
(Optional RS-422\485 port)  
2 LAN ports  
6 USB 2.0  
2 Audio jacks

#### Firewire Ports

2 x IEEE 1394a

#### Enclosure

Easy-open, 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  
-20°C to 55°C, IP67

#### Construction

*Enclosure Only:*  
20" H x 24" W x 17" D, ~75 lb  
*Purge Kit Only:*  
15" (H) x 11" (W) x 7.5" (D), 15 lb  
Unit with Computer: 96.8 lb  
Shipping Weight w/ Computer: 117 lb

### CONTACT

#### HEADQUARTERS

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### OPTIONS

- Purge System Mounting to Side (L/R), Top or Bottom
- Windows Embedded Standard

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Purge System w/  
Pressure Switch

## Purge System w/ Pressure Switch (Class 1, Div 2 Protection)

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. 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

Polycarbonate

#### Enclosure Pressure Gauge

Alum. w/ Enamel Finish

#### Tube Fittings

316 SS Forged Body

#### Tubing

316 SS 1/4" .035 Welded

#### System Nameplates

Silk screened Lexan® & SS

#### Fastener Hardware

Alum. & Stainless Steel

#### Mounting Plate

316 14 Ga #3 Brush SS

#### EXP Pressure Switch Body

Anodized Cast Aluminum

#### Enclosure warning Nameplate

Silk screened SS

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

### Specifications

#### Weight

15lb

#### 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 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

#### Exchange Time

1min/ft<sup>3</sup>

#### System Supply Port

1/4" FPT

#### Enclosure Supply Fitting

1/4" tube fitting

#### Enclosure Reference Fitting

1/4" tube fitting

#### Switch Setting (Decr)

.15" ± .02"

#### Switch Conduit Port Size

1/2" FPT

#### Switch Contact Rating

120 VAC, 15A

#### Dimensions

15" (H) x 11" (W) x 7.5" (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 enclosure power to be de-energized. The enclosure protection vent must be tested and the enclosure(s) must be sealed. The enclosure pressure control valve is then used to set a safe reading on the enclosure pressure indicator. When safe pressure is stable, the Rapid Exchange® control valve must be fully engaged. Upon completion of the Rapid Exchange® cycle, (5 minutes minimum) the Rapid Exchange® control valve must be disengaged to return to a safe enclosure pressure. Power can then be energized to the protected enclosure(s). Loss of safe pressure requires immediate attention, unless power is de-energized. The purge system includes an explosion proof differential pressure switch with form "C" contacts for audible or visual alarm systems.

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