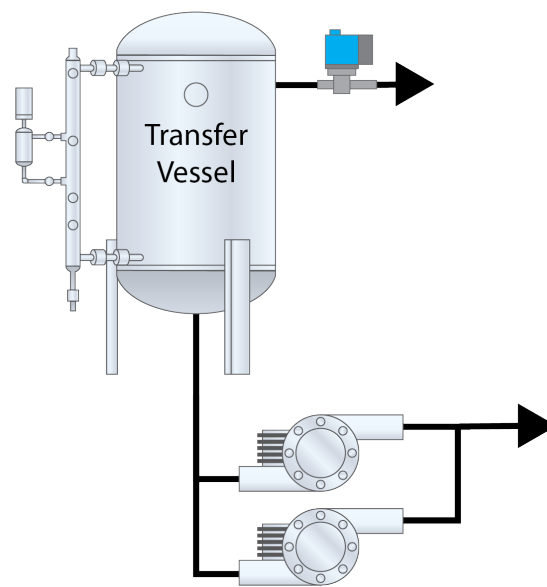


Transfer



Standalone Transfer Vessel

Standard Control Solution

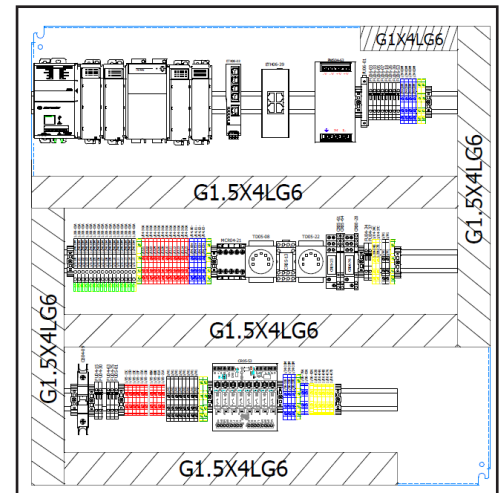
Standalone Transfer Vessel Standard Control System

SUMMARY

The EvapCORE Standalone Transfer Vessel System is a configurable control system. The system uses an Allen-Bradley PLC and a user-friendly Allen-Bradley Standard PanelView interface. The PanelView HMI allows the operator to configure the Transfer System as needed. The Standalone Transfer Vessel System panel is built to UL508A standards and is designed to be easily implemented into a new or existing supervisory system. A custom Engineered To Order (ETO) system can be quoted upon request.

STANDALONE TRANSFER PANEL

- Allen-Bradley PLC
- Allen-Bradley PanelView HMI
- Industrial Gateway – eWON COSY+:
 - Local Area Network of equipment
 - Pre-programmed IP Addresses
 - NAT routing configuration to facility network
 - Remote VPN connectivity for support and remote viewing
- Controls one Transfer System
- Hard-wired safety circuit to shut down Transfer Vessel:
 - Provides electrical cutout of pumps and configured solenoids
 - Intended for:
 - Gas detection hard-wired contacts such as CTI-EM2
 - Emergency Stops (Local and Remote)
 - Fire Detection
 - BMS
 - Dry contacts provided for shutdown of facility equipment
- Hard-wired high level safety circuit:
 - Dry contacts provided for compressor cutout circuits or facility equipment
- Hard-wired low level safety circuit:
 - Provides electrical cutout of pumps or transfer solenoid



Standalone Transfer Panel

NETWORK CONNECTIVITY

- Local Network:
- Operators can log into the HMI to configure the Standalone Transfer Panel
- eWON provides NAT Routing capabilities to allow for Customer integration into the facility network
- VNC Capable HMI for remote viewability and setpoint entry

DATA COLLECTION

- Ethernet/IP map for easy integration into a facility SCADA system or PLC controller:
 - All analog, status, and setpoint data is available per the Ethernet/IP map for trending or reporting data collection on a supervisory system
- Local data logging saves as .CSV files on a USB stick, provided by the customer, for all analog data:
 - Provided as date-stamped files in 3-minute intervals
 - Separate data files per day

Standalone Transfer Vessel Standard Control System

TRANSFER SYSTEM CONFIGURATIONS

- Transfer Control:
 - Can control transfer on an independent level probe or a Vessel level within the system
 - Can control on high/low transfer float inputs
 - Can transfer on single float input
 - Can transfer manually
- Pump Speed Control:
 - VFD Option is Standard
 - Settable fixed VFD Speed
 - Variable VFD speed to maintain pump outlet discharge pressure
- Transfer Style:
 - Pump or Solenoid configuration
 - Hot Gas and Vent Valve Configurations Available
- Pump Types Supported:
 - ATL (Across the line)
 - VFD (Variable Frequency Drive)
- User-Adjustable naming to allow operator to match PSMs:
 - Vessels
 - Pumps
 - Valves
 - Floats
 - Flow Switch

TRANSFER PANEL CAPABILITIES & FEATURES

- Pump Sequencing:
 - Selectable pump sequence
 - Runtime based sequence rotation available
- Pump HOA's Selectable:
 - Can be set to operate with physical HOA switches
 - Can be set to operate with software HOA switches
- Configurable transfer control methods:
 - Level
 - Float
 - Hot Gas and Vent Valve configurations
- Pump cavitation control selection
 - Flow switch input
 - Pump outlet pressure
 - Pump differential pressure

Standalone Transfer Vessel Standard Control System

SENSOR & HARDWARE OPTIONS¹

- Sensor options (All analog sensors are 4-20mA):
 - Pressure Transducers
 - Current Transmitters for Pump Motor Amps
 - Level Probes
 - Gas Detection Sensor (Polycarbonate & Stainless-Steel Options)
- Panel options:
 - Painted is the default standard (Ambient Temperature Rating: 45° - 80° Fahrenheit)
 - Stainless Steel (Ambient Temperature Rating: 45° - 80° Fahrenheit)
 - Heat/Filter Fan Kit for outdoor panel(s)²
 - Heater 120VAC, Ambient Temperature Rating: 0° - 80° Fahrenheit
 - Filter Fan Kit, Ventilation Fan 300CFM, Ambient Temperature Rating: 45° - 104° Fahrenheit
- Industrial Gateway – eWON COSY+:
 - If no eWON is requested, a deduct is provided
 - Panel to be standalone
 - An IP Address change option can be purchased if panel needs to be added to a facility network
- PanelView upgrade options:
 - 7" is the default standard
 - 10" upgrade is available with price adder
 - 15" upgrade is available with price adder
- Miscellaneous Hardware:
 - Emergency Stop
 - Switch Boxes
 - Horn & Strobes
 - Entrance Monitors
- When Ethernet Network Repeaters for Ethernet runs are greater than 300' including vertical and horizontal runs
 - Fiber Kit available for Fiber to Ethernet

1. Please see the price list document for more information regarding these Sensor & Hardware Options.

2. All panels are NOT to be mounted in direct sunlight, washdown areas, or outside the specified Temperature Ratings.

Standalone Transfer Vessel Standard Control System

STARTUP OPTIONS

- Onsite Startup
- Remote Startup (VPN or Active eWON required)

POWER SOLUTIONS

- Standard power panels are available upon request
- Custom standalone or integrated power solutions are available upon request

CUSTOM SOLUTIONS

- Supervisory Control and Data Acquisition (SCADA)
 - Integration services for new and existing facilities are available upon request
- Panel Solutions:
 - Custom panel sizes, layouts, and environmental conditions are available upon request
- Drawings/Documentation:
 - Custom drawings with equipment name and tag identifiers are available upon request
- Electrical Installation:
 - Turnkey electrical installation solutions available upon request

POST SERVICE SOLUTIONS

- Evapco SelectTech and CTI (Calibration Technologies) are working together to provide customers with exceptional post-service solutions! Contact our sales team today to coordinate discounted CTI services, as well as PSM report documents on the services provided.
 - CTI Onsite Tech Startup Calibration Services
 - CTI Onsite Tech Annual Calibration Services
 - Gas Detector Repair & Service

CONTACT INFORMATION

- Email: sales@evapcoselect.com
- Phone: (616) 866.6700

STANDARD VESSEL CONTROL SYSTEM CLARIFICATIONS

- The Allen-Bradley PLC is pre-programmed and specifically set up to be configured per the Inputs and Outputs (I/O) listed in the I/O Map section of this document. Any I/O customization will require a custom order request.
- The Standalone Transfer Panel comes with a 7" PanelView as standard. Upgrades to larger screens are available as listed in the Hardware & Sensor Options section of this document.
- The Standalone Transfer Panel comes with an eWON COSY+ as standard. This can be used as a NAT router to communicate with the facility network. The eWON COSY+ comes equipped with a 12-months-free account to be activated by the end customer, which is limited to 3GB of VPN data per month. After this period has passed, the customer will need to purchase a light or pro account from HMS Systems directly to get continued VPN capability. The NAT routing capability however, will still work without a subscription and if routed to the facility network, a facility VPN can be used to access the system remotely.
- Removal of the eWON will limit the ability for remote support if a customer VPN is not provided as an alternative to the eWON connection.

Standalone Transfer Vessel Standard Control System

STANDALONE TRANSFER PANEL I/O MAP

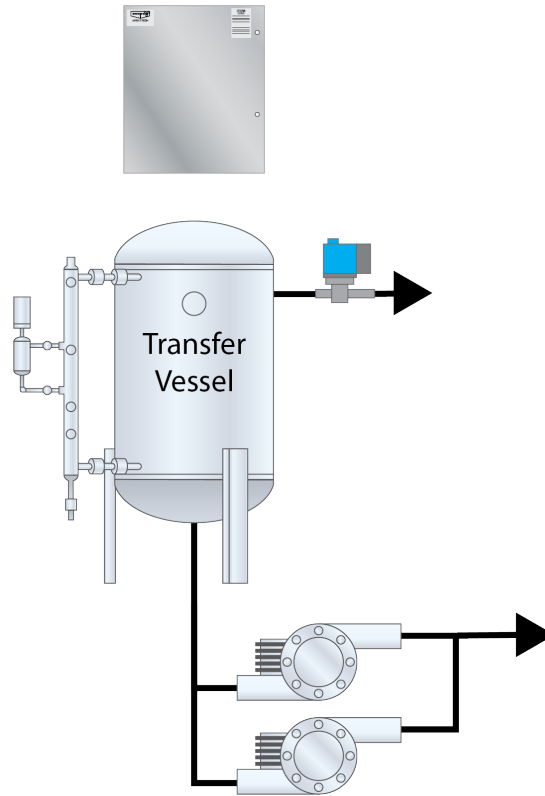
- Analog Inputs:
 - Slot 1
 - Pt.00: Pump 1 Discharge Pressure
 - Pt.01: Pump 2 Discharge Pressure
 - Pt.02: Vessel Level Probe (If Applicable)
 - Pt.03: Vessel Pressure (If Applicable)
 - Pt.04: Pump 1 Motor Amps
 - Pt.05: Pump 2 Motor Amps
 - Pt.06: Pump 1 Bearing Monitor
 - Pt.07: Pump 2 Bearing Monitor
 - Pt.08: PPM Detection
 - Pt.09: Spare Analog Input**
 - Pt.10: Spare Analog Input**
 - Pt.11: Spare Analog Input**
 - Pt.12: Spare Analog Input**
 - Pt.13: Spare Analog Input**
 - Pt.14: Spare Analog Input**
 - Pt.15: Spare Analog Input**
- Digital Inputs:
 - Slot 2
 - Pt.00: Safety Shutdown Input
 - Pt.01: Pump 1 Auto Position-From Starter
 - Pt.02: Pump 2 Auto Position-From Starter
 - Pt.03: Flow Switch
 - Pt.04: High Operating Float***
 - Pt.05: Low Operating Float
 - Pt.06: High Level Shutdown
 - Pt.07: Low Level Cutout
 - Pt.08: Relay Board Alarm Input
 - Pt.09: Spare Digital Input**
 - Pt.10: Spare Digital Input**
 - Pt.11: Spare Digital Input**
 - Pt.12: Spare Digital Input**
 - Pt.13: Spare Digital Input**
 - Pt.14: Spare Digital Input**
 - Pt.15: Spare Digital Input**
- Digital Outputs:
 - Slot 3
 - Pt.00: Pump 1 Start/Stop
 - Pt.01: Pump 2 Start/Stop
 - Pt.02: Hot Gas Solenoid
 - Pt.03: Pump 1 Vent Solenoid
 - Pt.04: Pump 2 Vent Solenoid
 - Pt.05: Transfer Solenoid
 - Pt.06: Power Up Reset
 - Pt.07: PPM Detection Output
- Analog Outputs:
 - Slot 4*
 - Pt.00: Pump 1 VFD Speed Control*
 - Pt.01: Pump 2 VFD Speed Control*
 - Pt.02: Spare Analog Output**
 - Pt.03: Spare Analog Output**

*Optional items based on order

**Spare I/O that is not allocated but cannot be used without a Engineered to Order (ETO)

***Used for both single float and operating floats transfer control

Transfer



PanelView is a trademark of Rockwell Automation



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