

Smart Dilution System

Smart Dilution System

Remotely troubleshoot and control the system from anywhere

Special Features

- Fully integrated microprocessor based dilution sample system
- Touch panel (HMI) display for operator control, trending and alarms (logged)
- Remote server access for both SHS & analyzers: control, status & alarms
- Email critical alarms – to the technician
- Modbus TCP/IP communications, fiber optics also available
- Modbus communications to analyzers
- Validations, % drift calculation & reporting
- Dynamic RMB dilution ratio calculations
- Alarms for low calibration gas pressures & leak detect
- Track calibration gas bottle consumption & pressures
- Bias check routine & alarming
- Heated filter temp/blow-back control
- System integrated into a 4X fiberglass enclosure or wall mount SS or AI Plate

Application

The M&C Smart Dilution System is designed to control M&C series SP2000H, SP2006H or EPM dilution probes, as well as dilution probes supplied by other manufacturers. This unit is used to control all pneumatic, electric and communication routines associated with CEMS and other forms of compliance and process gas monitoring systems in hot, wet and high particulate environments for industries such as: Refineries, Chemical, Power Generation and several others requiring a reliable, clean and diluted sample gas for analysis.

The microprocessor system offers server based remote troubleshooting and control (mimics local HMI) of parameters such as system status; probe, validations; analyzer values and status.

Description

The M&C Dilution System serves as a reliable, totally pre-designed, integrated sampling system, which continuously provides a clean and diluted gas sample for CEMS & process control analysis.

Emails can be sent to alert the responsible technician, or supervisory personal of system critical alarms.

Anything that you can view or control when in front of the analyzer can be performed remotely. M&C's technician-friendly design allows for remote troubleshooting from their desk (or anywhere) of system and analyzer parameters before heading for the Analyzer Shelter; or while on the stack, a calibration sequence can be started or analyzer readings can be checked. Remote checks of Alarm Log & resetting of Alarm Log, Calibration Gases introduced, Pressures checked and Validation Drifts can be verified & Re-Initiated remotely.

Unique sample system design includes double block & bleed, with leak detection of calibration gases; all monitored & alarmed.

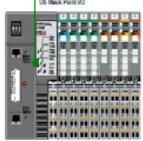
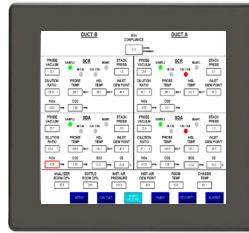
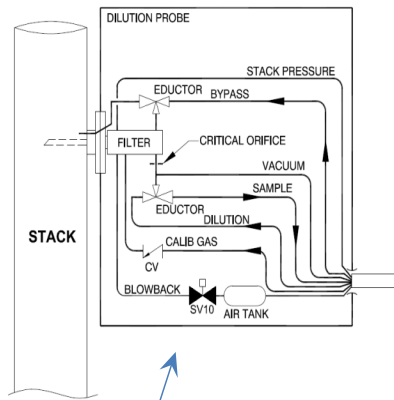
The Smart System can optionally include NIST traceable, Precision Mass Flow Controllers to blend on-demand any number of calibration gases (both pure and pre-blended) to perform a wide range of gas combinations for analyzer validations and calibrations. The component gas blend percentages are fully adjustable through the Smart System HMI. Now there is no longer a need for a bank of pre-blended gas bottles as all of your calibration/verification gas combinations can be generated as required with accuracy to 0.8% (0.4% optional) of the reading. Eliminate the hassle of ordering pre-blended gas bottles with this optional feature.

Additional options include:

- Environmentally controlled enclosure
- Remote access/control via PC (Server Based), tech pad or smart phone
- Custom PLC programming to suit your requirements
- Blend calibration gases on-demand

Technical Data

COLOR TOUCH SCREEN REMOTE WEB ACCESS



Modbus TCP/IP
Controls/Monitors SHS, HSL & Probe



**ALLEN BRADLEY
MICRO 850**

Modbus
Analyzer Values & Status



**Sick Maihak
Extractive Gas Analyzers**

Modbus
Analyzer Values & Status

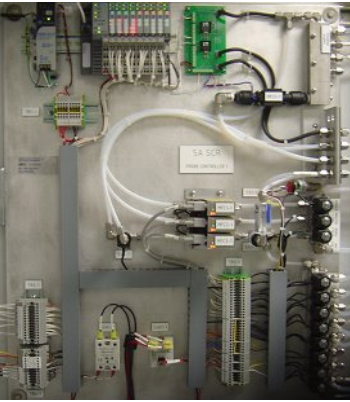


**Thermo Environmental
Extractive Gas Analyzers**

**Remote
Access**



Supported Analyzers are, but not limited to:
ABB – API – CAI – Sick – Teledyne M/L
Thermo Environmental



Specifications

Ambient Temperature	32 °F to 100 °F (0 °C to 37.78 °C)
Ambient Humidity	5 % to 95 %, non-condensing
Air Consumption	20 LPM scrubbed air
Analyzer Accommodation	5 analyzers*
Communications	Modbus TCP/IP (fiber optics optional)
Cal Gases	9 max (including 'zero gas')*
Power	115 V AC*
Remote Access	Anywhere with Web Access

*Standard. Other configurations available upon request