



# COLTON **C-MAP** STEAM QUALITY MONITORING SYSTEM

## COLTON **C-MAP** SPECIFICATION FOR STEAM QUALITY MONITORING APPLICATION AND PROCESS CONTROL

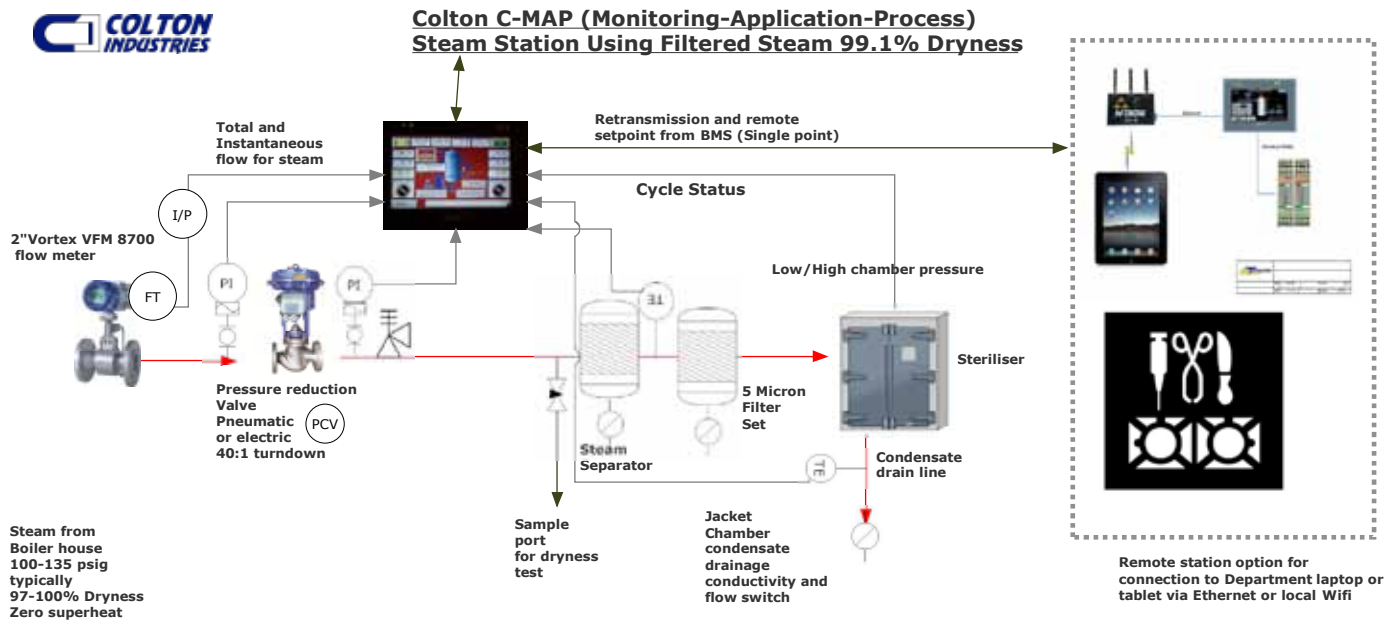
The **C-MAP** is a modular system designed to work in conjunction with the control system on your cage washer or steriliser. It designed to give the real time information for the troubleshooting and management of steam quality in order to minimise wet pack issues within the machines and maximise throughput.

The **C-MAP** system will gather data to record and enable Monitoring Application and Process Control.

The system will record up to 256 MB of data. The **C-MAP** is designed to deliver stable pressure, maximise the dryness of steam and reduce the effects of cycling on the boiler plant and distribution system.

The **C-MAP** system can be specified with 304 or 316L clean steam filters which can filter down to 1 micron. A vertical clean steam generator is available for Amine free steam which offers an extremely small footprint (4'x4") and is based on a pharmaceutical design.

## FILTERED STEAM **C-MAP**



The system is designed to offer minimal footprint and can be engineered as a retrofit or as part of a new construction project. The controls can be electric for DDC compatibility or pneumatic.

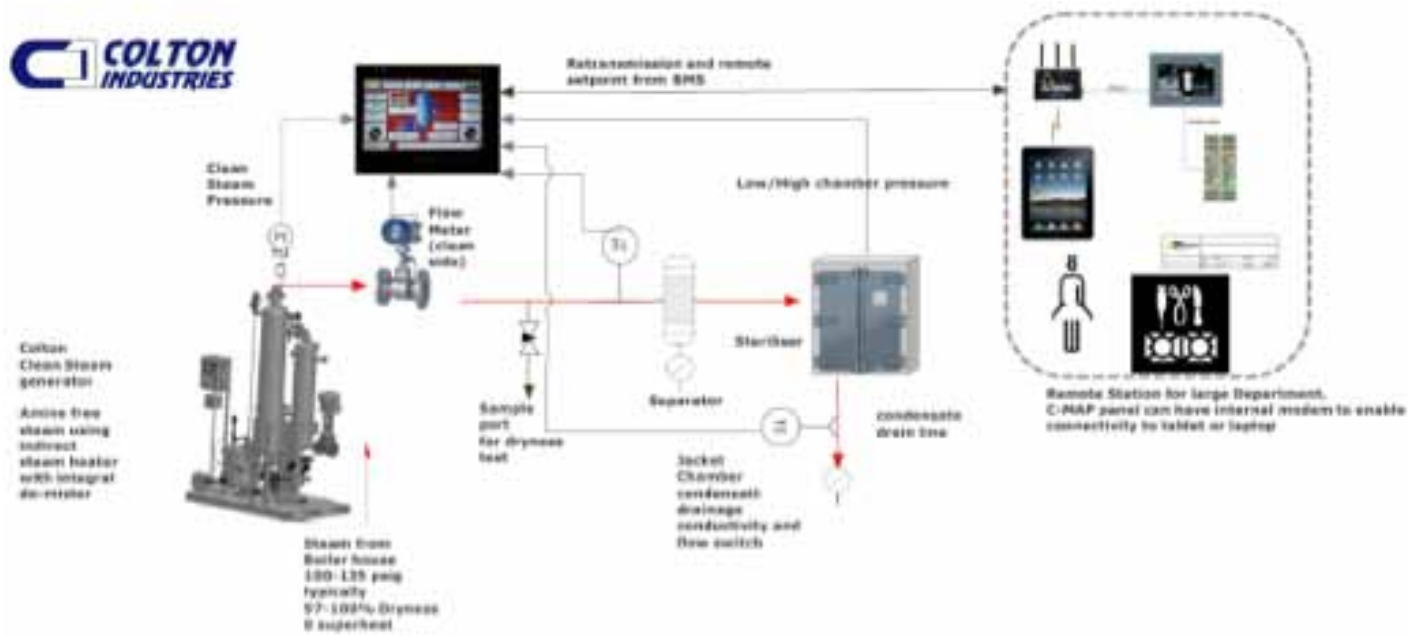
The **C-MAP** system communicates through Modbus or BACnet and can be designed with remote stations for large departments. Configured tablets are available.

Leasing and service agreement options are available for Hospitals wishing to have third party steam dryness testing carried out.

The **C-MAP** HMI panel is directly connected to the control panels of the machines and will trend cycle status on the **C-MAP** HMI.

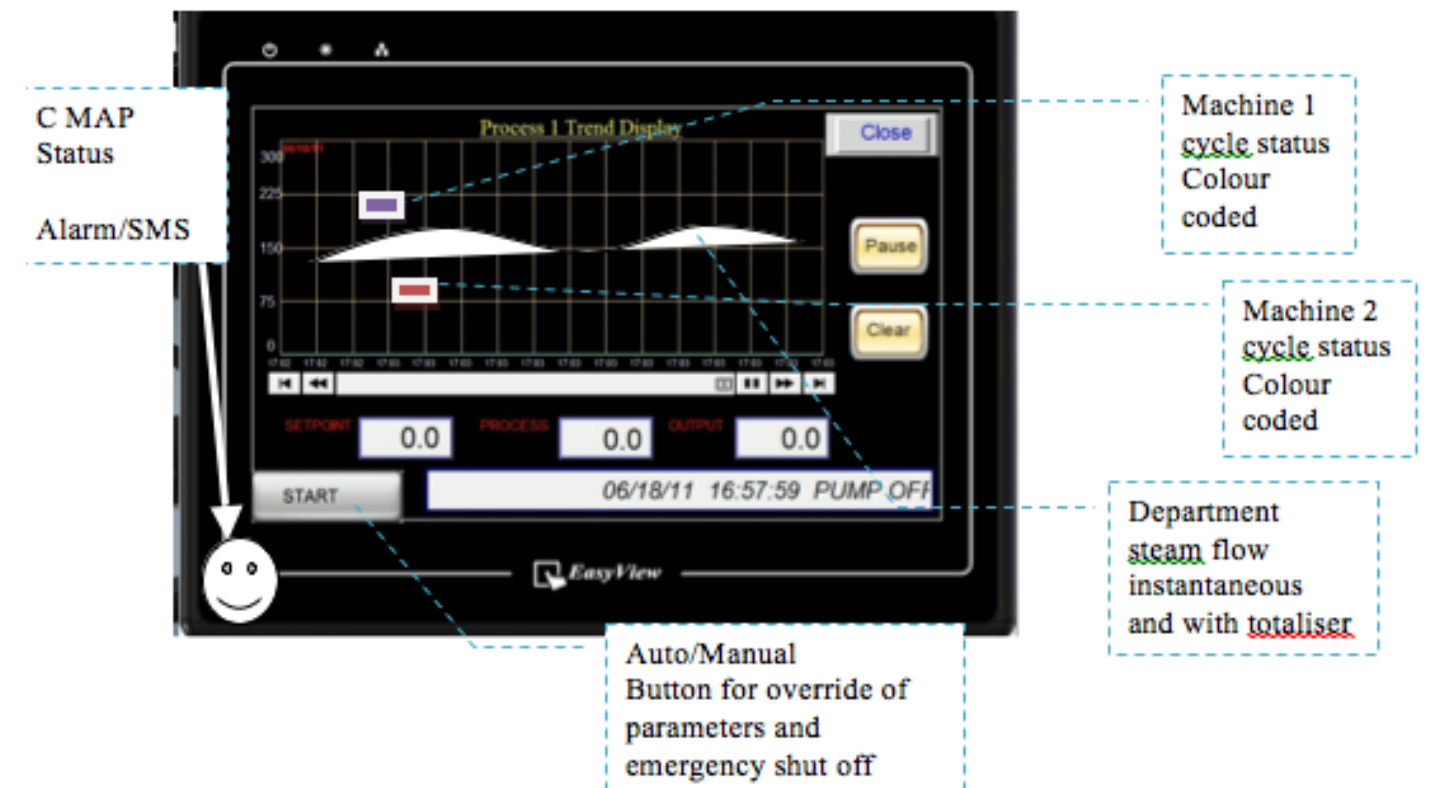
The outputs of the panel can be connected through a single gateway to the building management system. The cost of the system is significantly less compared to a custom programmed solution. The install cost is significantly reduced when compared to a centralised control system.

For a no obligation site survey please contact Steam Specialty and ask for the **C-MAP team**.



SYSTEM SUMMARY

- 1 Inlet pressure to the department measured and controlled using a high turndown 40:1 Ecotrol control valve which can be electric or pneumatic.
- 2 Temperature of the steam is monitored to indicate presence of superheat. This will reduce the number of failed cycles.
- 3 Conductivity of the condensate leaving the machine will indicate if the machine outlet trap is backing up.
- 4 Steam flow into the department is measured using a high accuracy Vortex flow meter with temperature compensation.
- 5 The cycle status of the machines can be trended on the **C-Map**.
- 6 Connectivity to BMS system through BACnet gateway or Modbus communication. The C-MAP can also be combined with a tablet for key users.
- 7 The **C-Map** system is modular so future machines can be added to the panel.
- 8 Auto/Manual override button with E stop.
- 9 20x16 NEMA 4 enclosure wall mountable stainless steel enclosure.
- 10 Dryness testing would be done via the existing sample cooler on the machines. A dryness test kit is required for this.



## TYPICAL SCOPE OF SUPPLY

- 1 Electric or Pneumatic PRV which will guarantee constant pressure normally 80 psig( 5.5 barg) into the department. The turndown of the valve is 40:1 and the valve is not affected by moisture or dirt. The valve is controlled in conjunction with a Wika pressure transducer type A10.
- 2 Vortex flow meter 150# wafer or flanged body for steam flows up to 150000 lb/hr. The meter has temperature compensation and outputs instantaneous and totalised flows to the panel. The meter has a local digital display as standard.

- 3 **C-Map** panel for measurement of flow, pressure, temperature and conductivity. The 20x16 NEMA 4 enclosure is brushed stainless steel and is CSA approved and fed with 120/1/60 supply.

The control hardware is PLC based and is expandable. The stainless steel HMI panel comes standard with the latest PAC technology from Ascon Inc Technologic. The software is open PCS IEC61131 based and can be fully interfaced with existing BMS hardware. Remote stations are available for large departments.

## SYSTEM OVERVIEW DIAGRAM

