

CoverCat HMI Monitoring and Control System

Typical HMI System mounted in a Containerised Spray System



The CoverCat HMI Monitoring System may be connected to any CoverCat Spray or Pipelining System as a stand alone or integrated piece of equipment.

The Computer control allows the client to monitor, record and analyse a range of system inputs and various items of daily batch and job record information.

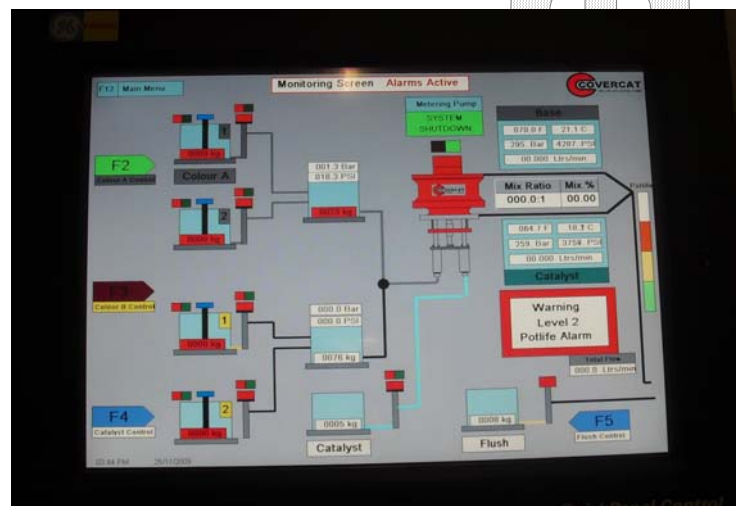
There are several levels of access including supervisor and manager routines which allow management functions to be controlled without access by the daily operator. The system is secure and uses solid state computer processors to provide reliable and stable operation.

The Colour TFT screen provides a clear indication in schematic format with information presented in text box form at suitable and logical locations on the screen allowing the user to easily monitor ongoing performance.

All data is refreshed 60 times per minute.

Alarm function and status is clearly displayed when active.

A **POT LIFE ALARM** is a new and special feature which when set will warn the user when the material in the mixed section of the system is in danger of reaching an unusable state.



System Requirements, Sizes & Weights

Compressed Air: 5cfm (0.16m³/min) @ 110psi (7.7kg/cm²) minimum (system control functions)

Electrical: 1x 230V or 110V Option.
1 ph, N + E, 6amp 50/60Hz, 500w maximum load,



Picture shows the PLC Control installation within an ATEX Enclosure



Picture shows the general arrangement of a typical CoverCat HMI system

Approx. Size:

Approx. Size: 1500mm (60") x 600mm (24") x 1650mm (66") high.

Approx. Weight : 250kg (550 lbs)

Specification and arrangement subject to change without notice.



Picture shows the flow meter panel with ATEX rated Coriolis flow meters

Two options are available for the system computer display.

A large (15") TFT Colour Screen with schematic display of the system or a smaller 10" display with reduced text display.

Operation may be carried out through a touch screen or a series of push buttons on the panel with a keyboard for additional duty.

A manual abort function and emergency stop is also provided.

A buzzer and flashing beacon are installed for warning of alarm and abort conditions.

All critical data is displayed in real time in information panels on the screen.

During Spray / lining mode all necessary data is printed on an on-board thermal printer and saved on the system memory. This includes any alarm condition that may occur. (Not available on ATEX Systems)

There are several management access levels from operator, supervisor, manager and engineering or technical support requirement. Each is accessed via a user name and password. These may be changed as required at higher access levels.

Management functions and information displays are opened through the system management function and displays are only available at the relevant access levels.

Two options on keyboards are available, being either touch screen or an industrial keyboard to enter data of job number, location and other useful information.

Alarm functions and limits are available for all devices on the system and may be set at supervisor level as necessary. Alarm levels and limits are entered through the keyboard.

The computer includes the facility of total memory for upto 1 Gb of information and ability for downloading of present and previous linings using a USB data key.

Saved data stored on the system may be remotely accessed using the optional on-board modem where service permits or through a direct network link to a remote PC.

Service and calibration frequency may be set as required upto a maximum of 3 months, the calibration interval may be either a time based interval or a volume consumption based interval.

The control system is calibrating during routine service intervals by the CoverCat maintenance technician. Measurements of the materials at different flow rates and other data is recorded and this recalibrates the control functionality. The printer, where fitted, will print out a calibration certificate, which is also saved to the system memory for reprinting or downloading to a USB key.

No data may be edited for security purposes.



During Operation or lining mode recordings can be made and stored within the systems memory of following parameters:

Spray time

Flow rate delivery to application head

Mix ratio by volume

Base & Activator output pressure

Lining speed & lining thickness applied and/or Volume consumption

Elapsed time from start of operation

Material Consumption

Date & real time

Unique rig identification number

Out of ratio alarm

Pipeline units record and display Percentage of the lining that is within a preset limit e.g. 5% of required mix ratio and Percentage of the lining which is above the minimum required thickness and above 0.9 x required thickness

Alarm parameters will be set and have adjustable levels.

The objective of the CoverCat control and data logging system is to:

- Ensure weight checking is properly undertaken.
- Confirm mix ratio is correct at all times to avoid mix ratio errors.
- Allow safe operation and reduce potential errors to absolute minimum levels
- Give alarm and warning in event of malfunction.
- Automatic abort on alarm condition.
- Provide reliability / repeatability of high quality lining.
- To provide a printed record of lining performance.
- Record all printed records to memory for later re-printing and downloading.



Pictures show typical 15" TFT Colour Screen Display Model with keyboard and thermal printer option