



Liquid Monitoring & Control

Mains Powered Drainector System

Operation & Maintenance

Mains Powered Draintector Unit

Operation & Maintenance

Welcome

Thank you for purchasing a Darcy Spillcare Draintector system, the most advanced drain closure and pollution security device available today.

Your updated Draintector™ system quickly and effectively seals drains within seconds and retains spillages or firewater. It tells you it is sealed and automatically tests itself monthly or weekly so you can have complete peace of mind.

Draintector™ with Watchdog™ (an automated monitoring system) gives complete peace of mind that your Draintector™ is always primed and ready for activation. Watchdog™ automatically tests both the control panel and the in-drain closure system without having to access the manhole. Ready state is reported back to the user via either GSM modem or at the panel.

The Watchdog testing and reporting system helps meet the requirements of ISO14001 environmental management standards.

It is essential that your system is installed and serviced by an approved engineer. The system should be serviced ***at least*** annually and we would recommend that if used in a pollution incident the system is serviced after the event.

System Information

Number of Systems Installed:	
Drainage Size(s)	
Client:	
Installation Site	
Date of Installation:	

In line with the above information, this manual is applicable to the following unit

Standard		High Capacity		Check Valve	
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The following GSM Modem Telephone Numbers have been added to the unit(s):

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It is helpful to have the above information to hand whenever contacting Darcy Spillcare regarding this Draintector as it will speed up any response to your enquiry.

Installation Engineer:

Signed:

Unit Overview

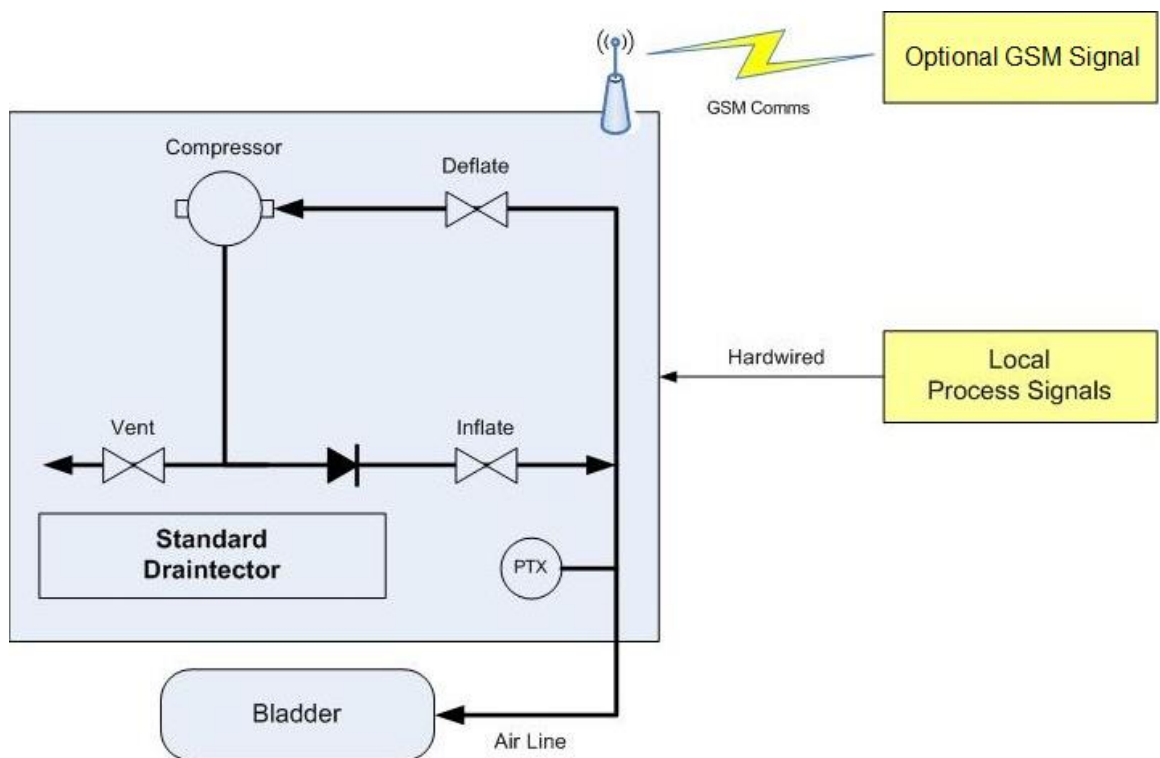
The Draintector Unit is available in three options

- Standard Unit with Bladder System
- High Capacity Unit with Bladder System
- Check Valve Operation System

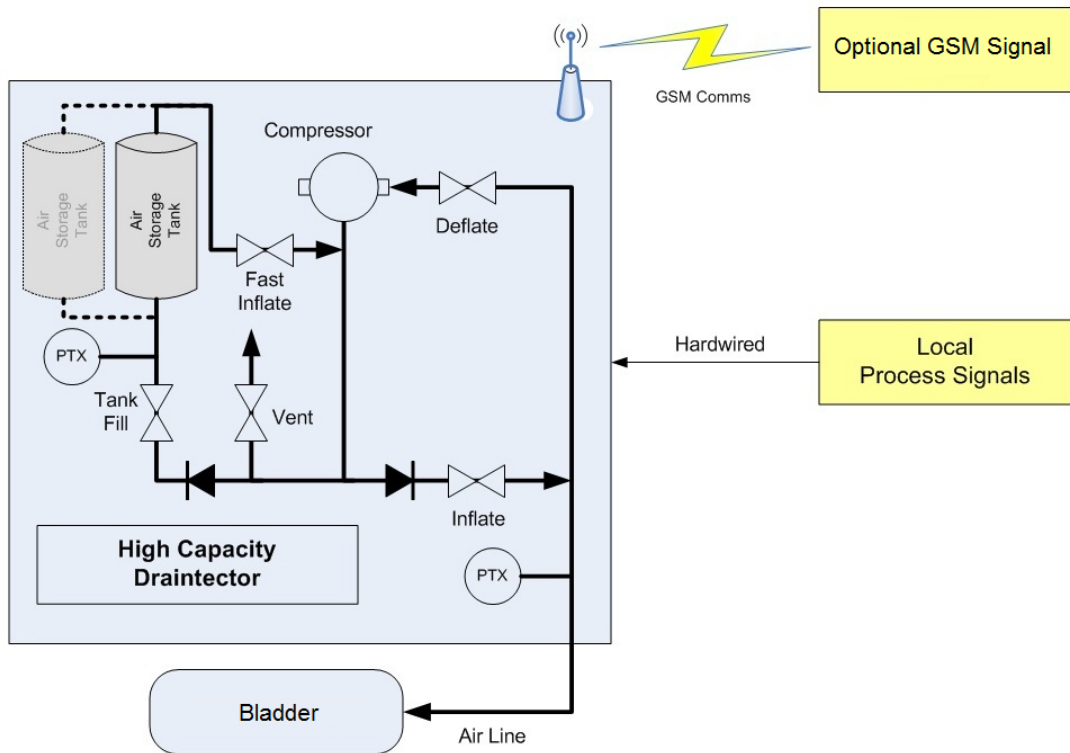
The Draintector comprises of the following components:

- 1 off Drain Blocking Bladder or 1 off Closure Check Valve
- 1 off Compressor and valve arrangement
- 1 off Siemens LOGO 8 programmable logic module
- 1 off Siemens LOGO 8 TD Text display
- 1 off Siemens LOGO 8 GSM Modem Interface (OPTIONAL)
- 1 off Air Storage Tank (HIGH CAPACITY UNIT)

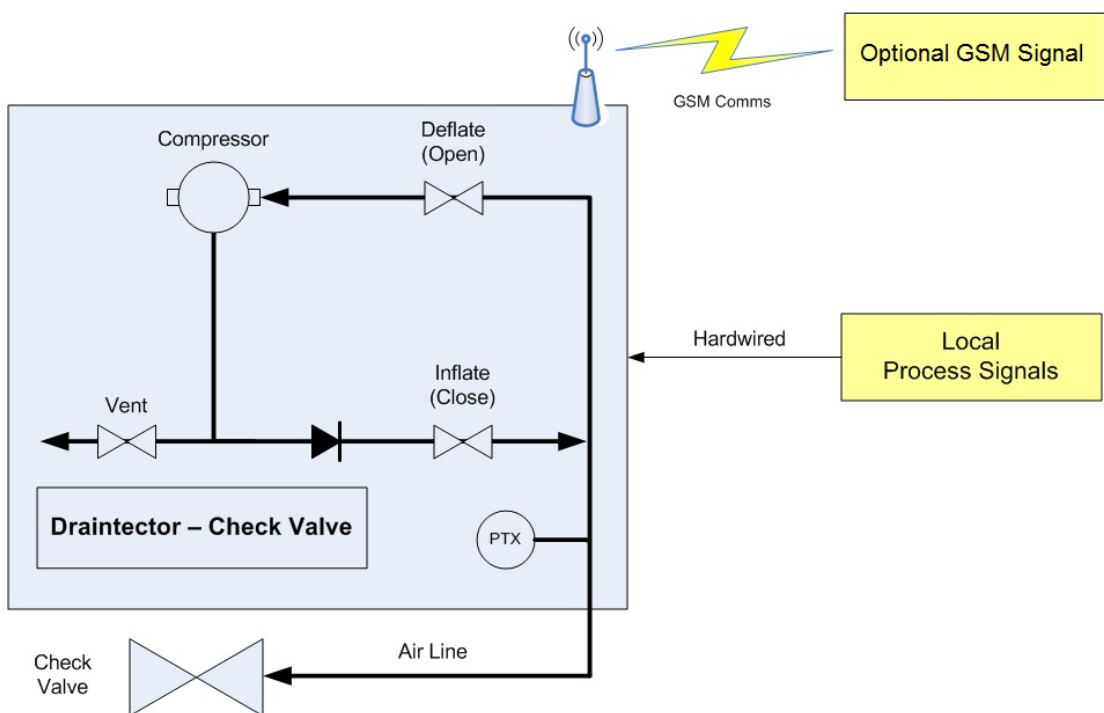
Standard Draintector System Overview



High Capacity Draintector System Overview

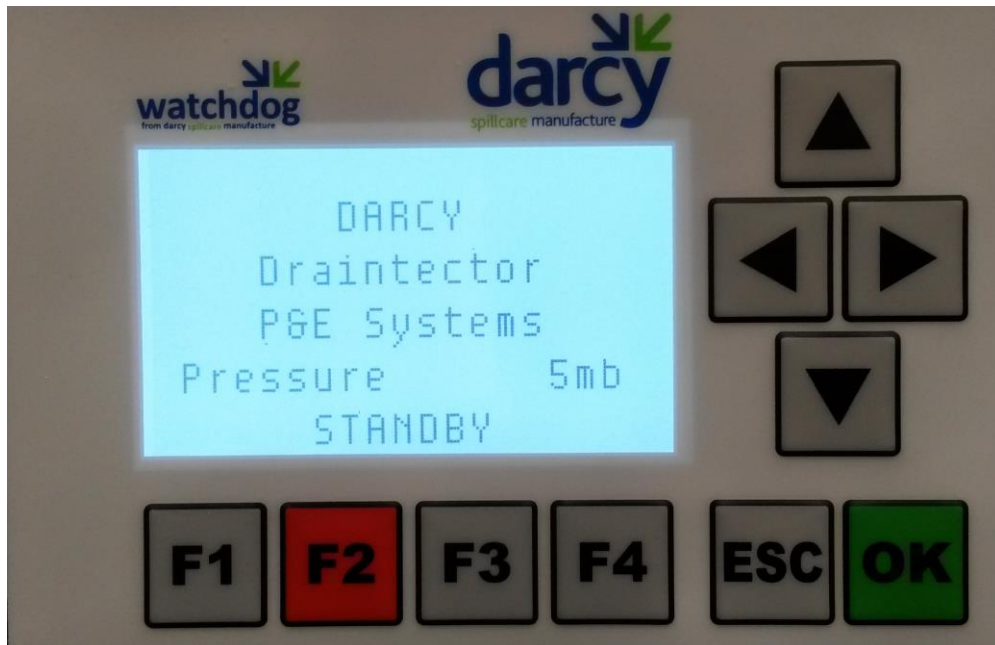


Check Valve Draintector System Overview



Main Screen

The control panel contains all the equipment needed to inflate and deflate the bladder



The above picture shows the default screen, when the unit is idle.
The pressure indicator allows the operator to know the status of the bladder.
An Orange backlit screenshows system is Activated
A Red backlit screen indacates a fault condition.
Backlight switches off after 5mins, press any button to illuminate

Operation

F1 = Test, F2 = Activate, F3 = Deflate F4=Stop / Alarm Reset

Activation

Activation cannot be started if the unit is already in “Test” Mode

The system is primarily activated by pressing F2 button or by the hardwired process Inputs (3 in quantity) or by the optional GSM interface by sending the following SMS text message text to the telephone number of the installed SIM card.

5335 ;ACTIVATE (see Page 9)

The system will remain activated (inflated) until the local operator presses F3 on the HMI, or by the hardwired process Input or by the optional GSM interface by sending the following SMS text message to the telephone number of the installed SIM card.

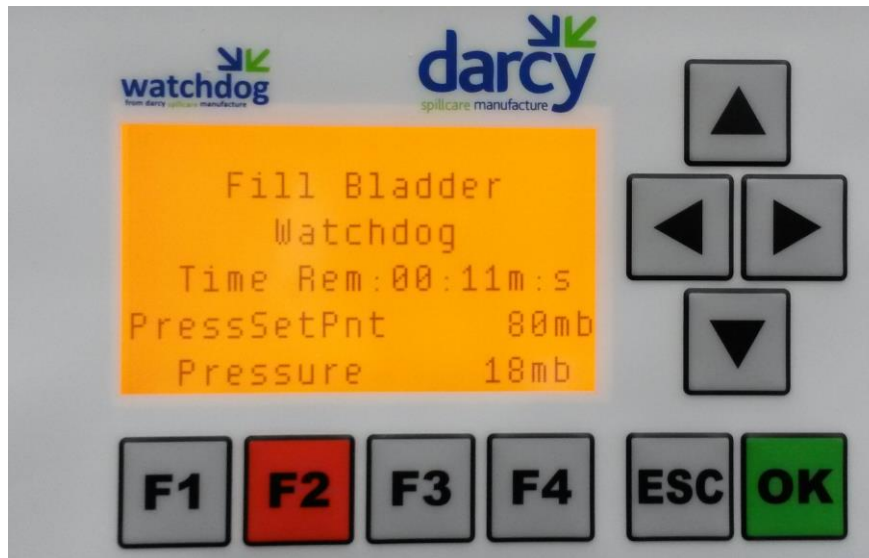
5335 ;DEACTIVATE (see Page 9)

Activating the Unit

Activation Mode Screens

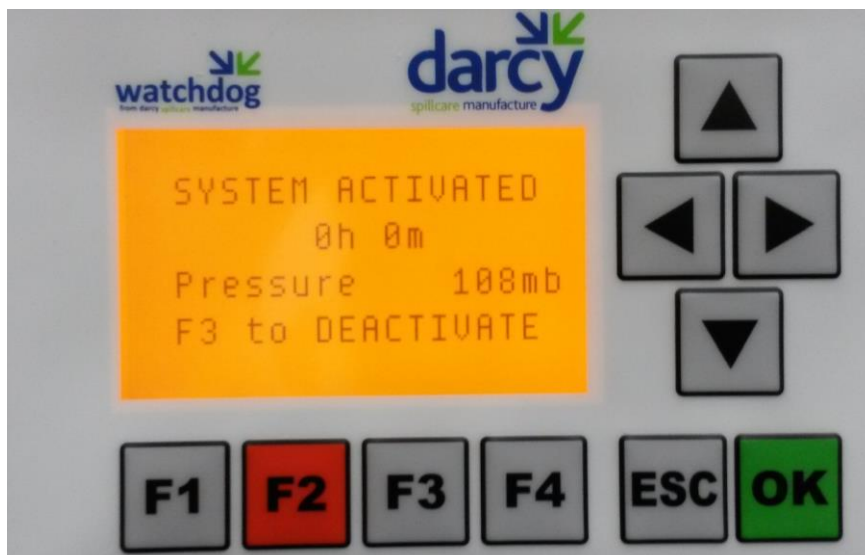
The following screens are utilised during **Activation**

1. Inflating



This screen shows the time remaining to full pressure

2. Inflated



The time indicates how long the system has been in an Activated state.

If the Bladder pressure falls below the “set point” for a period of time,
The compressor will start in order to top it up.

The following screens are utilised during **Deactivation**

Deactivate press F3



Deflating Rem shows the time remaining to complete deflation

Pressure is shown for information only on this screen and has no influence on the deflation time.

Please Note the following conditions.

Pressing F4 while inflating stops the inflation process. Bladder must be deflated by pressing F3 before inflating can begin again.

Deflation cannot normally be stopped until deflation timer expires.

To reset the unit F4 must be held for 6 secs.

Testing the Unit

To Run Test Sequence press F1

The system has a test sequence which can be initiated locally by Pressing **F1** button on the HMI or remotely via the optional GSM interface by sending the following SMS text message to the telephone number of the installed SIM card.

5335 ;TEST (see Page 9)

In addition the system has a timer which can be set to trigger a test at a set time on any day of the week.

The Test sequence cannot be started if the unit is already in “Activated” Mode or if there are any errors (except battery faults, the system will try and operate for as long as possible while on running in battery mode).

The sequence is the same irrespective of how it is initiated

Activation Mode Screens

The following screens are utilised during **Test Cycle**

1. Inflating



2. Decay Test



When the Bladder has reached the desired inflation set point, the pressure is monitored for a “decay” period to ensure that there are no leaks in the system. Should the pressure not be maintained then a Test Fault will be indicated.

3. Test Completed OK



4. Deflating Timer



Deflation will occur for the duration of the countdown time shown.
Pressure is shown for information only on this screen and has no influence on the deflation time.

SMS Control Via Optional Modem

1. Modem must be set up during installation and commissioning.
2. SIM cards must be set for DATA as well as Phone and Messages and kept topped up.
3. Only authorised pre-programmed telephone numbers can activate the unit.
4. Commands must be spelt out correctly with correct punctuation for commands to be recognised.
5. Only authorised pre-programmed telephone numbers can receive messages from the unit.

To Activate the unit from an authorised telephone number send
5335;ACTIVATE
by SMS message to the modem telephone number

To De-activate the unit from an authorised telephone number send
5335;DEACTIVATE
by SMS message to the modem telephone number

To Test the unit from an authorised telephone number send
5335;TEST
by SMS message to the modem telephone number

The following optional* messages can be returned to any authorised number in the modem

BLADDER – Unit Activated
BLADDER – Unit De-activated
BLADDER – Test Operation Completed OK
BLADDER – Test Failed
BLADDER – Mains Power Failed
BLADDER – System Service Due
BLADDER – Battery Low Voltage
BLADDER – Battery Voltage High
BLADDER – Unit Faulty
BLADDER – Battery Charger Failed

CHKVALVE – Valve Failed to Close

**To be chosen during commissioning.*

On Site Servicing Requirements

- Test the system using the F1 button which completes a full cycle test from Inflate to Deflate.
- If the test fails then revert to the trouble shooting guide or call a Darcy to speak to an Engineer.
- Ensure Power supply to the system is maintained.
- Check battery voltage monthly to ensure the back-up system is in standby mode with sufficient voltage of 13-14V. **See troubleshooting guide for further important information on the battery.**
- Ensure all of the circuit breakers inside of the panel are switched on. **(if they have tripped follow the trouble shooting guide or call Darcy to speak to an Engineer)**
- Ensure airlines on the underside of the cabinet are connected and not blocked.
- Ensure the LCD screen is showing a display, press any button to illuminate. **(If not call Darcy to speak to an Engineer).**
- Ensure the system, airlines, Bladder or Valve hasn't been tampered with and the system is Operational as per the commissioned state it was left in on the installation. **(If not call Darcy to speak to an Engineer).**
- Check the drain for debris surrounding the Bladder or Valve. (ensure the area is clear)
- If the system has been activated, check the pressure gauge on the system as the pressure will show around 230Mb (Milli-bar or 3.5psi). If the system doesn't maintain pressure **call Darcy to speak to an Engineer.**
- If the system is a check valve system, the valve will be fully closed in the over lock position and the Watchdog LCD screen will show System Activated, Valve Closed.

Troubleshooting

1) Battery Charging Failed / Low Battery Warning

- **Messages relating to the battery must not be ignored.** When either of the above messages are displayed, the panel must be inspected as soon as possible. The battery should be isolated using the screw clamp terminal and a call made to Darcy technical support for advice. If the battery shows any physical signs of damage, please also deactivate the panel at the main isolator AND

***** KEEP THE AREA WELL VENTILATED *****

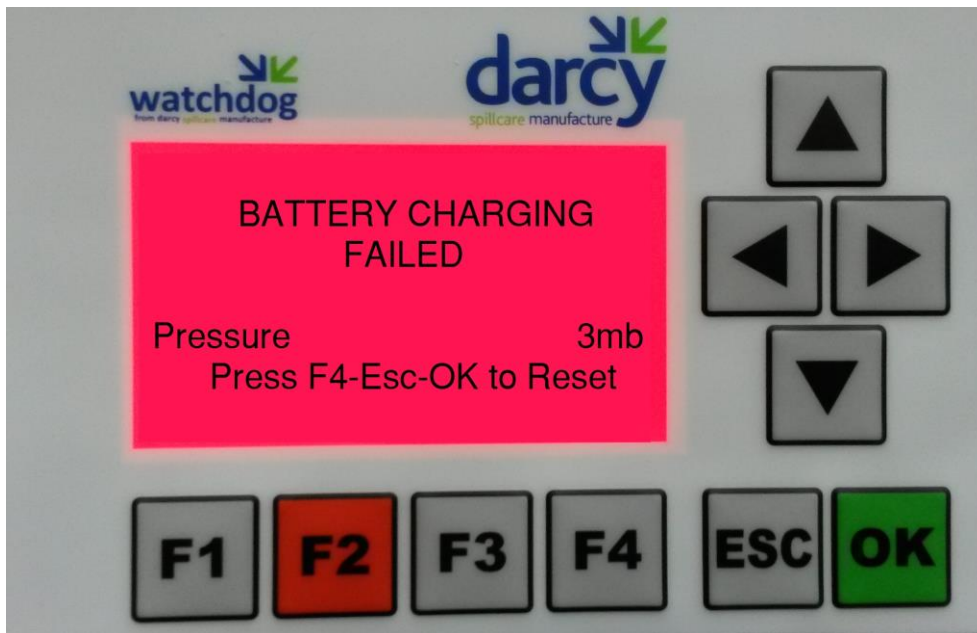
2) Pressure Switch Failed

Messages relating to the pressure switch must not be ignored. When the above message is displayed, the panel must be inspected as soon as possible. The pressure switch pipe should be checked. If no air pressure from the pipe is identified pipe should be thoroughly checked for blockages and a call made to Darcy technical support for advice.

3) Test Failed

Messages relating to the Test Failed must not be ignored. When the above message is displayed, the panel must be inspected as soon as possible. The Bladder should be deflated by pressing F3 and a new Test performed by pressing F1. Should the test fail this can indicate a number of potential problems. A call should be made to Darcy technical support for advice.

5. Fault Screen example



All Fault Screens all have a Red backlight.

**IF, FOR ANY REASON, YOU ARE IN DOUBT OF THE
DRAINECTORS OPERATIONAL STATE, PLEASE CALL
DARCY TO SPEAK WITH THE SERVICE TEAM ON
01732 762 338**

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The Darcy Group



Spillcare Manufacture



Liquid Monitoring & Control



Industrial Marine



Environmental Services

Established in 1935, The Darcy Group is at the forefront of Environmental Protection and specialises in the manufacture and provision of solutions helping sites to achieve environmental and ISO compliance and care for the environment in increasingly demanding circumstances.