

**This manual is to be left  
with the pump station or  
the homeowner**

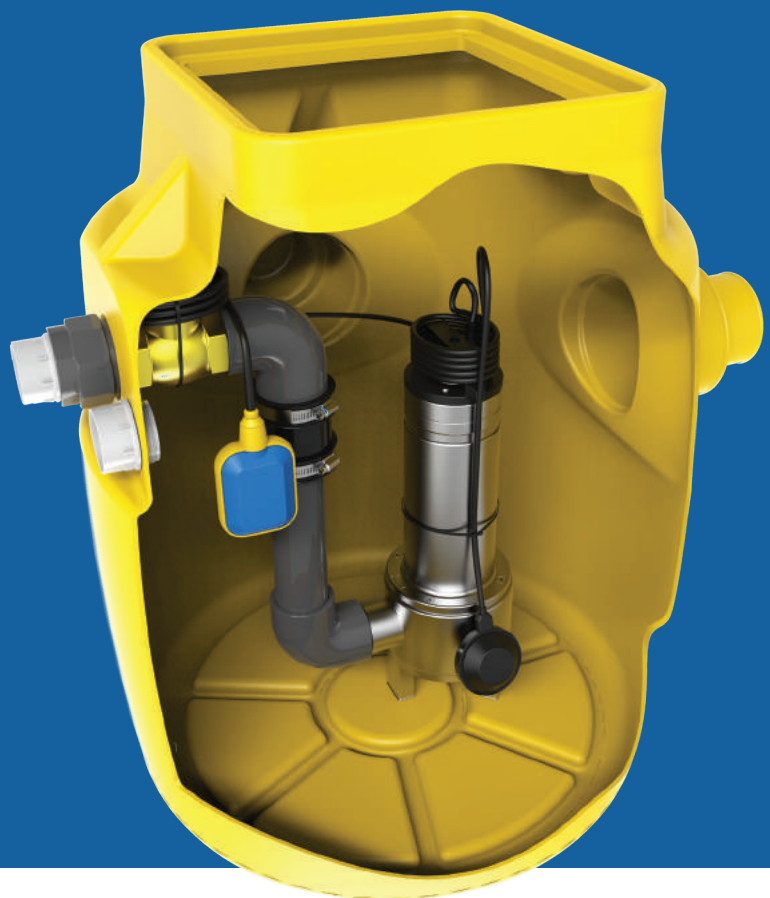


## **Delta Foul V3 (DMS-165-1)**

For Foul Water Applications

### **Installation Instructions**

Foul Water Pump Station



# Delta Foul V3

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# Delta Foul V3

## 1.0 Foul V3 Overview

The Delta Foul V3 is a packaged pump station designed to collect foul water. Typically, the Foul V3 would be used to collect and discharge foul water from a basement fitted with a bathroom and utility room. This pump station is not designed to collect ground water from a cavity membrane system (see Delta Dual V3 - DMS 164). For kitchen applications we recommend fitting a grease trap prior to the pump station.

The pump station has been specifically designed for below ground applications. The chamber is manufactured from HDPE and when installed correctly, it is able to withstand hydrostatic forces encountered in high water tables.

The pump station is delivered as a complete package including all internal pipework and a D10SA foul vortex pump. It is designed to be installed by contractors with competent building, plumbing and electrical skills.

An AlertMaxx2 (DMS-299) is offered as a recommended extra to alert the property occupant when the water level in the chamber becomes too high. Please see section 2.1 for more details about optional extras designed for the Foul V3 pump station.

## 2.0 Parts Included



Chamber  
902 x 800mm deep



2" Internal Pipework



D10SA Pump  
(DMS-120)



2" Vent, Cable Duct &  
Discharge Male Iron  
for temp. site installation

## 2.1 Optional Extras



AlertMaxx2 High Level  
Alarm (DMS-299)



2" Discharge Pipework and  
various fittings  
(see page 5)

### 3.0 Discharge Pipework & Fittings

A selection of discharge pipework and fittings are available for the Foul V3 pump station.

Should you require to place an order for any of these items, please complete the form below, scan and email to [purchasing@deltamembranes.com](mailto:purchasing@deltamembranes.com) to allow us to process your order.

Part Description	Part No.	Qty Req.
2" Pipe - 3m Length (Class E)	DMS-0154	
2" 90° Elbow - Plain/Plain	DMS-0155	
2" 45° Elbow - Plain/Plain	DMS-0156	
2" Socket - Plain/Plain	DMS-0157	
2" Socket - BSP Female Thread/BSP Female Thread	DMS-339	
2" Male Iron - Plain/BSP Male Thread	DMS-0153	
2" Male Iron - Plain/BSP Male Thread (Non-pressure)	DMS-335	
110mm to 2" Adaptor	DMS-341	
Saddle Clamp - 110mm to 2" (BSP Female Thread) including 2" Male Iron	DMS-0151	
Saddle Clamp - 160mm to 2" (BSP Female Thread) including 2" Male Iron	DMS-0152	
2" Pipe Clip	DMS-0159	
500ml PVC Solvent Cement	DMS-0158	

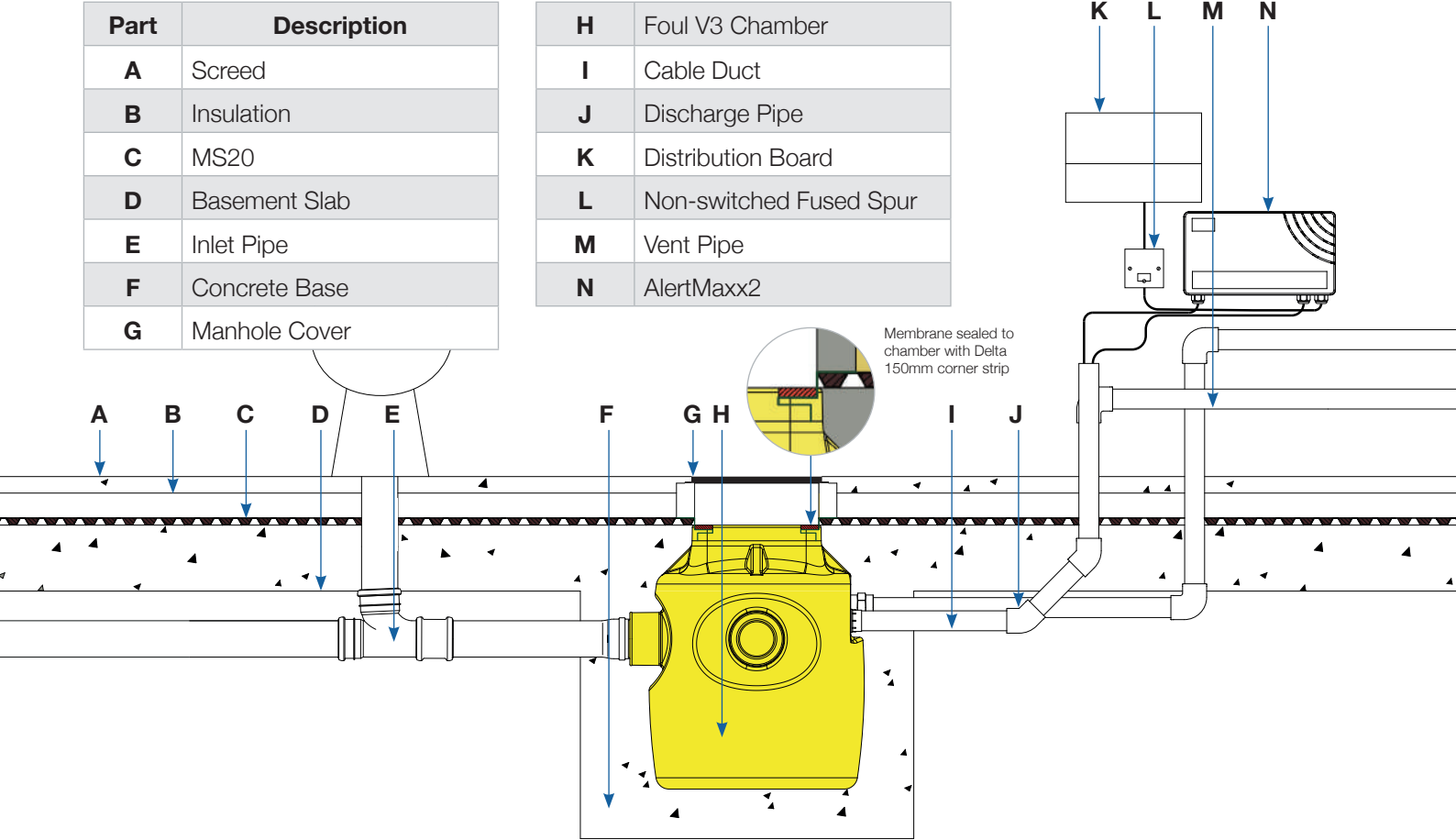
<b>Name:</b>	
<b>Company Name:</b>	
<b>Site Address:</b>	
<b>Email:</b>	
<b>Phone No.:</b>	<b>Mobile No.:</b>
<b>Sign:</b>	
<b>Date:</b>	

# Delta Foul V3

## 4.0 Chamber Overview

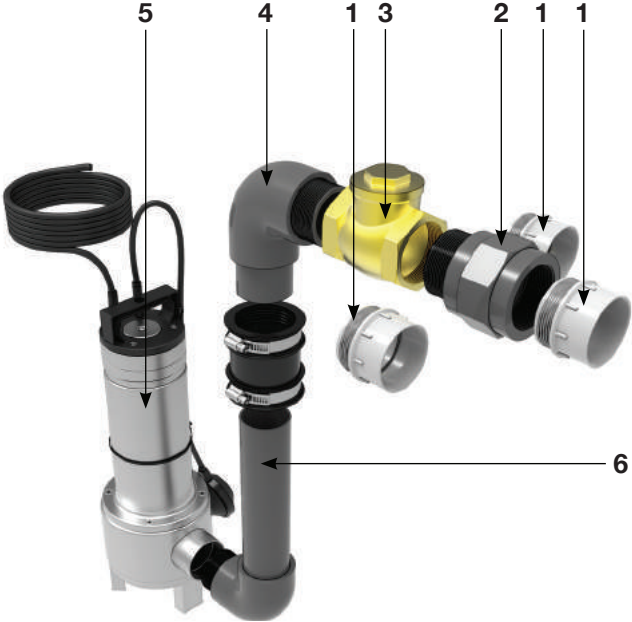
Part	Description
A	Screed
B	Insulation
C	MS20
D	Basement Slab
E	Inlet Pipe
F	Concrete Base
G	Manhole Cover

H	Foul V3 Chamber
I	Cable Duct
J	Discharge Pipe
K	Distribution Board
L	Non-switched Fused Spur
M	Vent Pipe
N	AlertMaxx2



## 5.0 Spare Parts

Part	Description	Part No.
1	2" Male Iron (Non-pressure)	DMS-335
2	2" Female - 2" Male Adaptor	DMS-337
3	2" Non Return Valve	DMS-327
4	Foul V3 Discharge Bend	DMS-334
5	D10SA Pump	DMS-120
6	Discharge Arm c/w DC65 Connector	DMS-129



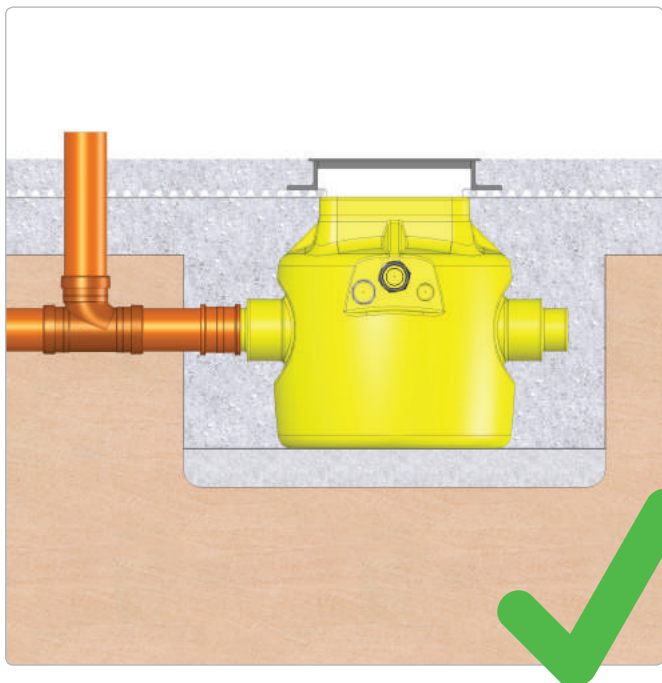
## 6.0 Technical Information

Pump Specification			
Pump Type			D10SA
Typical Duty (l/s)	Head (m)	3	8.30
		4	7.50
		5	6.30
		6	5.00
		7	3.70
		8	2.30
Power		P <sub>1</sub> (kW)	1.15
		P <sub>2</sub> (kW)	0.75
Current (a)			5.88
Power Phase			Single
Non-switched Fuse Spur Rating (a)			13
RCBO Rating (a)			16
Cable Length (m)			10
Max. Temperature (°C)			35
Weight (kg)			13

Chamber Specification		
Chamber Material	High Density Polyethnylene - ICO1314 grade	
Size (mm)	Chamber Diameter	660
	Overall Diameter	902 (across spigots)
	Depth	800
Volume (L)	Below Inlet	137
	Total	273
Inspection Cover	Not supplied	
Clear opening to chamber (mm)	310 x 310	
Fixed Inlets	3 x 110 / 160mm	
Cable Duct (mm)	50	
Vent (mm)	50	
Discharge Connection	2" / 50mm SP Male - External to chamber	
Internal Pipework Manifold	2" / 50mm BSP Class E	

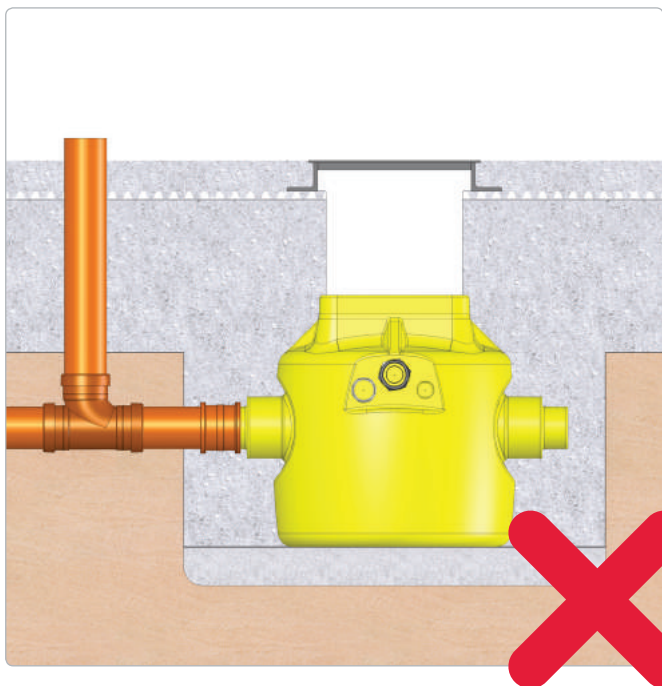
## 7.0 Pump Chamber Depth Limits

If the inlet does not allow the pump chamber to be within depth limits, please contact PPS on 01279 757400 to discuss chamber options.



< 500mm

The pump chamber must be installed no more than 500mm below floor finishes.



> 500mm

A pump chamber installed more than 500mm below floor finishes cannot be serviced safely in accordance with CDM regulations.



## 8.0 Installation Guidelines

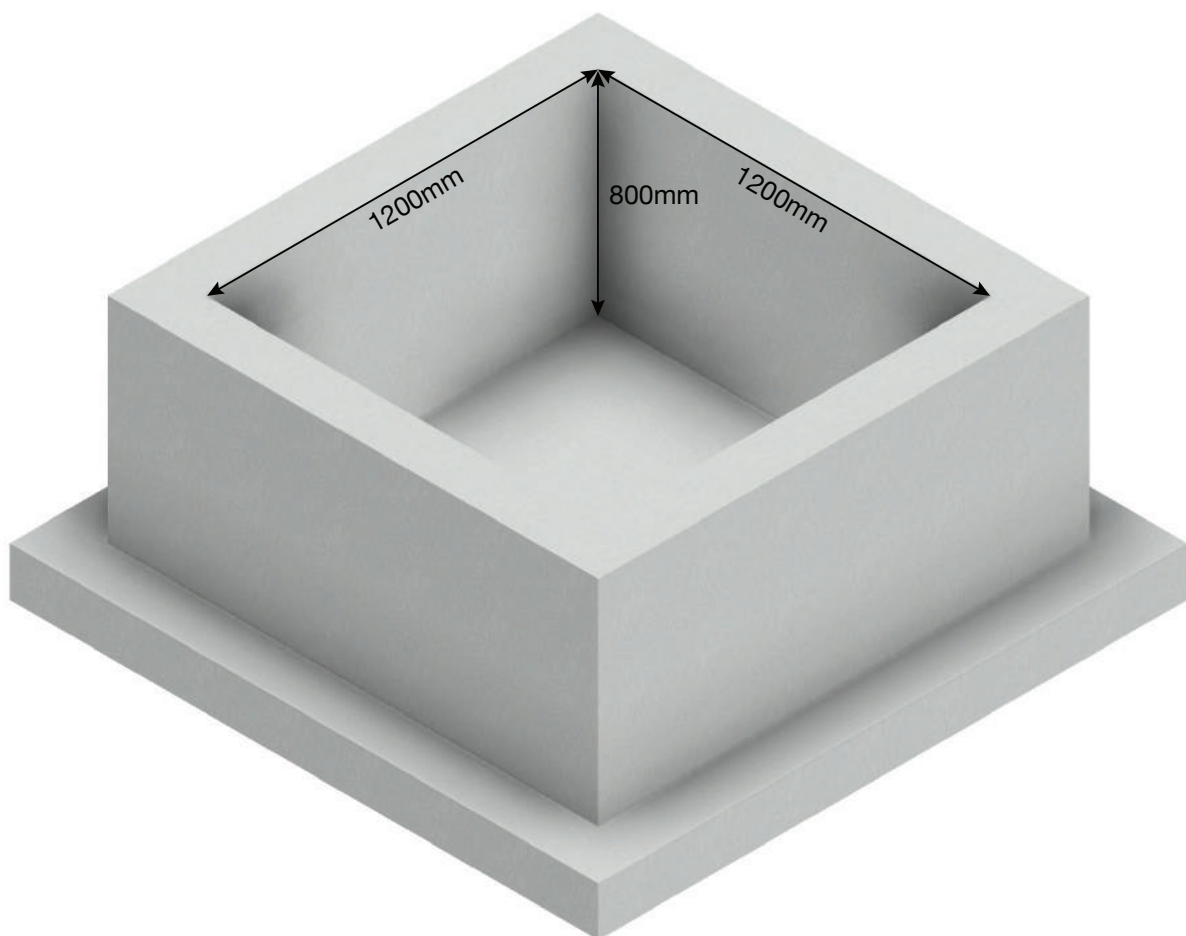
The following instructions are for guidance only and it is the contractors responsibility to ensure that the installation is in accordance with the prevailing ground conditions and good building practice, to eliminate any potential damage to the pump station either during or after installation.

Please read these instructions carefully prior to installing the chamber. If there is anything that is unclear, our technical help desk is available on 01279 757400.

## 9.0 Pump Station Location

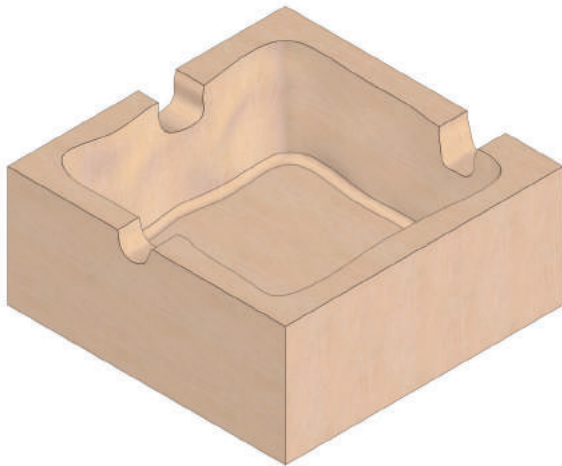
This station requires routine maintenance, therefore it is important that careful consideration is taken to position the chamber in a location that allows permanent access to the chamber.

## 10.0 RC Box Dimensions



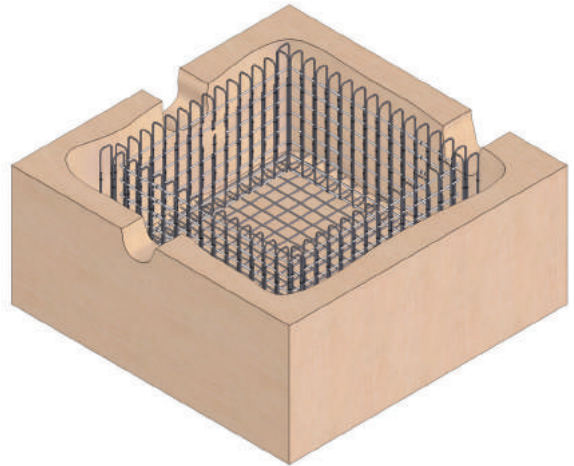
### Construction of reinforced concrete box

1



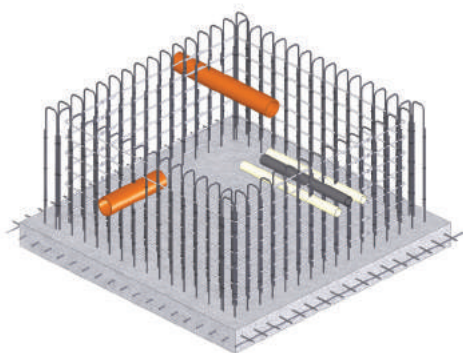
Excavate hole for chamber. Refer to section 10.0 for RC box internal dimensions.

2



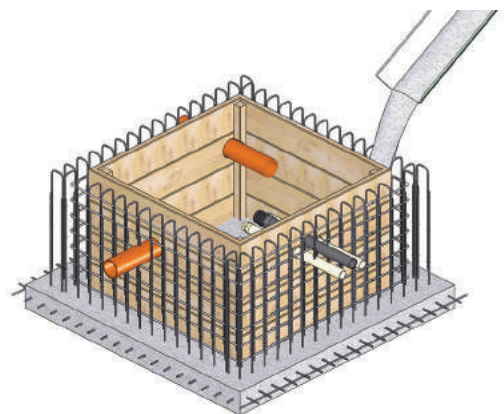
Install re-bar as per structural engineer's drawings.

3



Lay inlet and discharge pipework. Allow pipework to protrude into RC box by a minimum of 100mm.

4



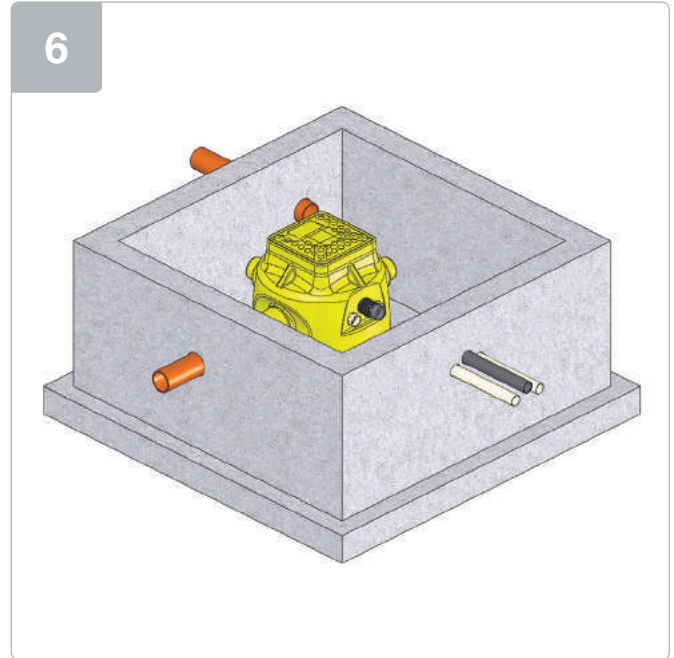
Pour concrete to form RC box as per structural engineer's drawings.

## 11.0 Installation of Chamber - Section B

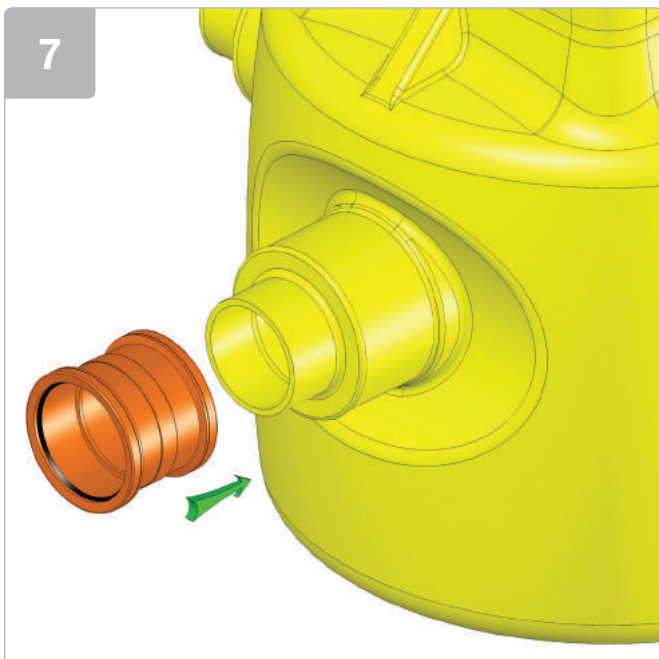
## Connecting 110mm inlet pipework



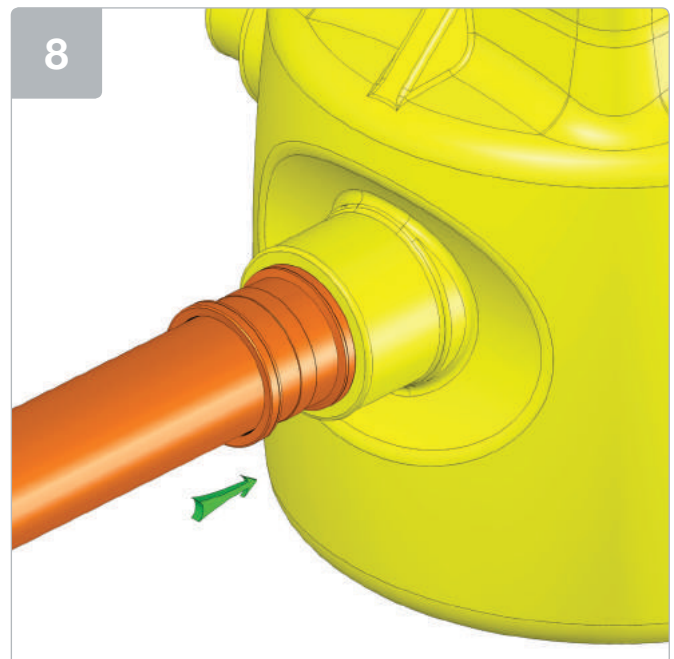
Saw off socket end/s, where inlet pipe/s are to be connected.



Position chamber in RC box.



Fit push fit coupler.



Connect inlet pipework to the required chamber spigot.

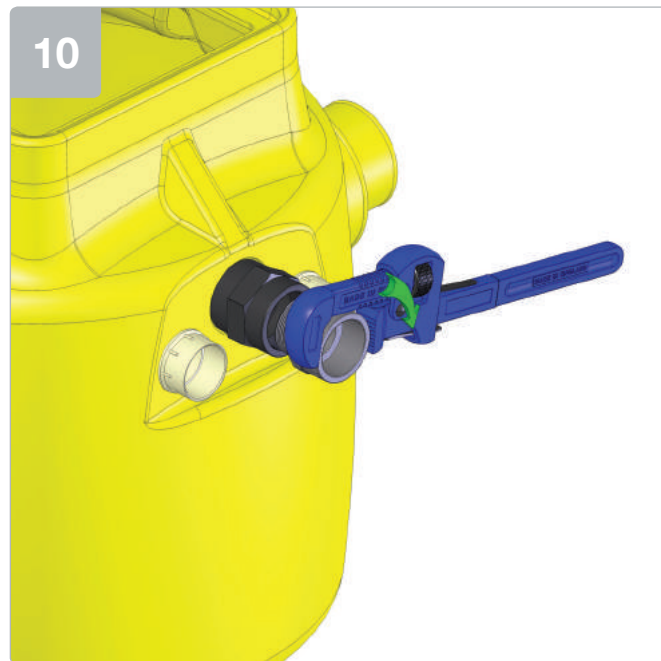
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## 11.0 Installation of Chamber - Section C

### Connecting discharge, cable duct and vent



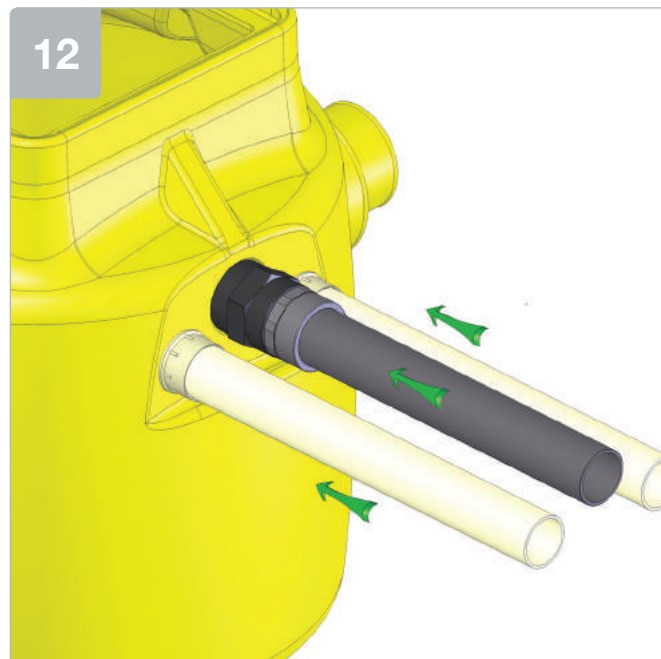
Wrap the thread on a high pressure male iron with PTFE tape.



Screw the high pressure male iron into the socket.



Apply high pressure glue around the first 20mm of the external face of the discharge, cable duct and vent pipe and internal side of their respective male iron.



Push discharge, cable duct and vent pipe into their respective male iron, twisting the pipe as it is pushed into the male iron to remove any trapped air.

**11.0 Installation of Chamber - Section C cont.****Connecting discharge and cable duct**

Ensure a draw cord is pulled through the cable duct as the cable duct is built.

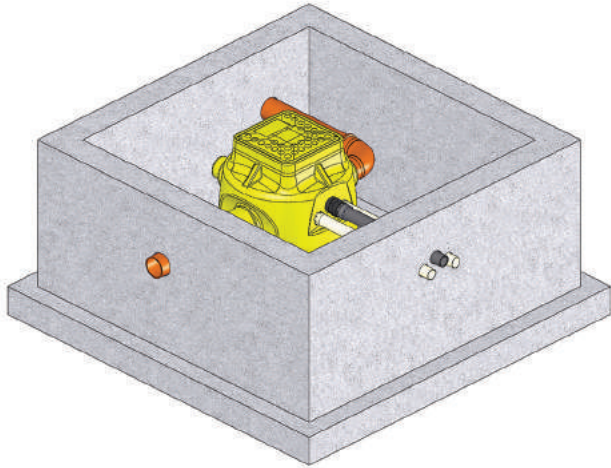


## 11.0 Installation of Chamber - Section D1

### Backfill around chamber with concrete

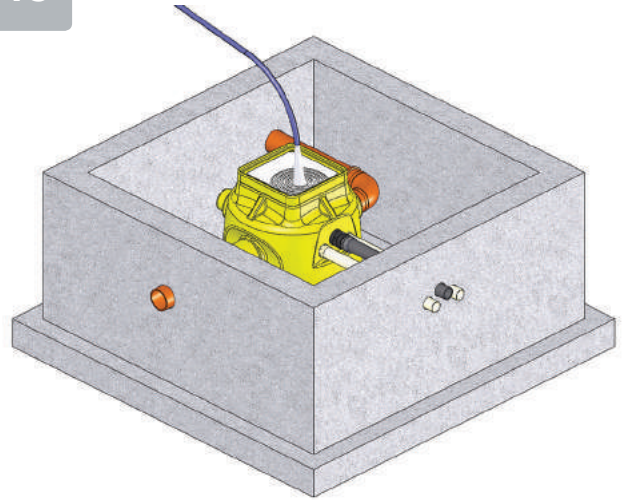
To be followed when installing chamber in an RC box.

14



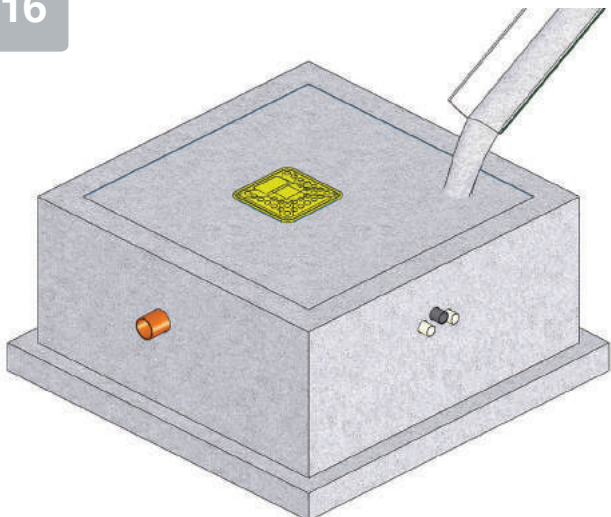
Check all pipes are connected to the chamber correctly.

15



Completely fill chamber with water.

16



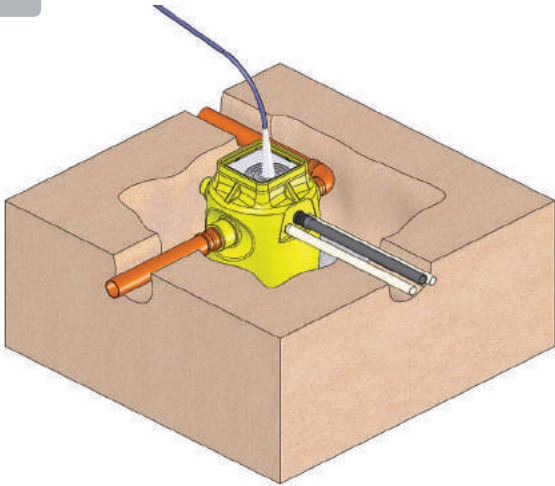
Fill void between RC box and chamber with concrete (min. C35 grade) or as per engineer's drawings.

## 11.0 Installation of Chamber - Section D2

**Backfill around chamber with concrete**

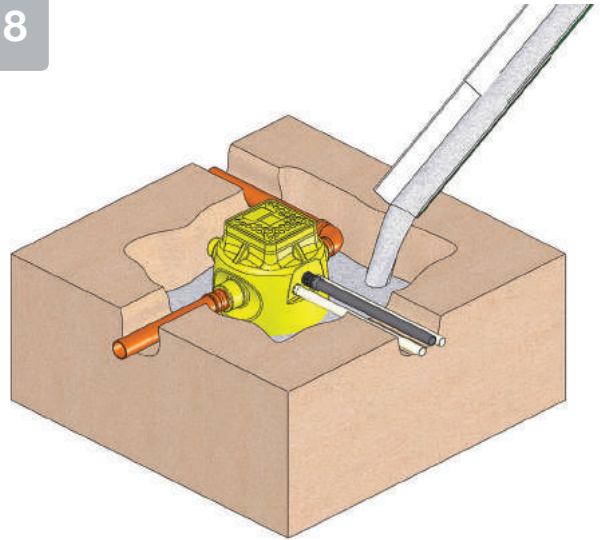
To be followed when installing chamber in the ground.

17



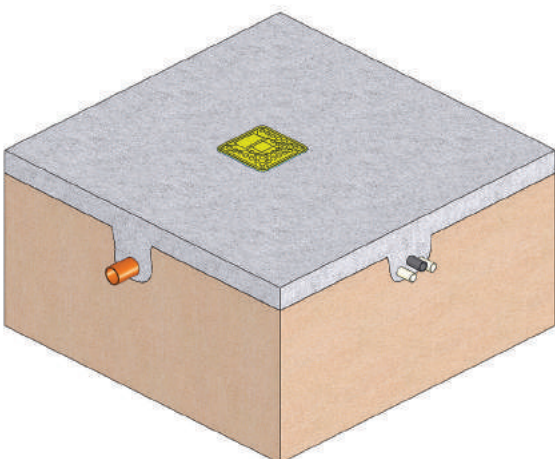
Completely fill chamber with water.

18



Fill void between soil and chamber with concrete (min. C35 grade) or as per engineer's drawings.

19



Allow concrete to cure.

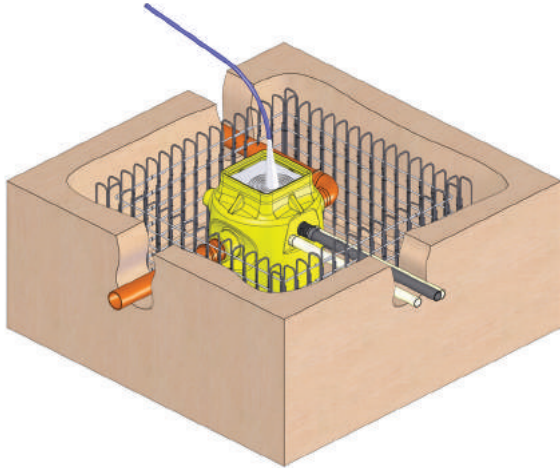
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## 11.0 Installation of Chamber - Section D3

### Backfill around chamber with concrete

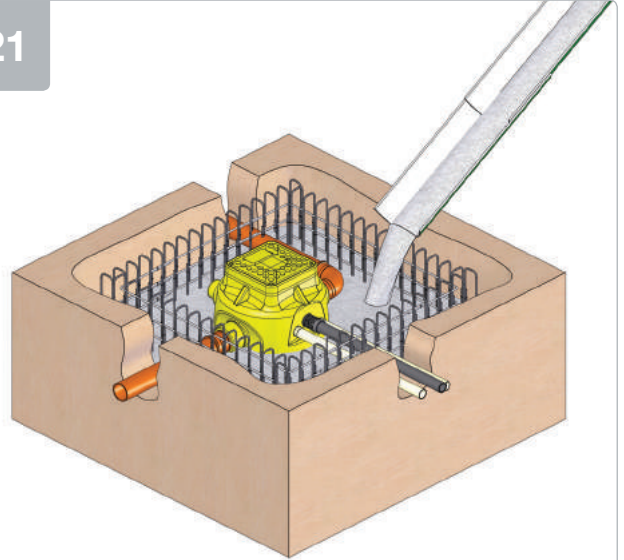
To be followed when installing chamber in the ground with a reinforced cage.

20



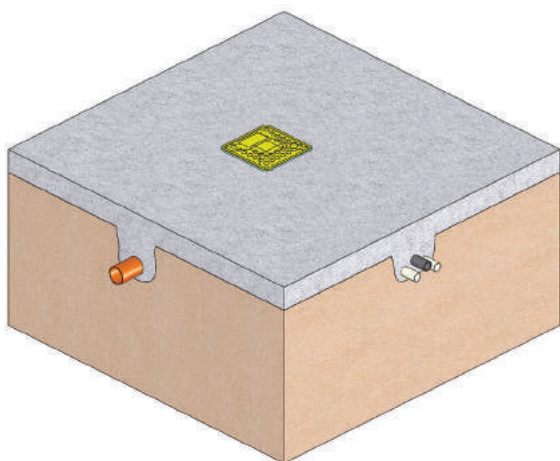
Completely fill chamber with water.

21



Fill void between soil and chamber with concrete (min. C35 grade) or as per engineer's drawings.

22



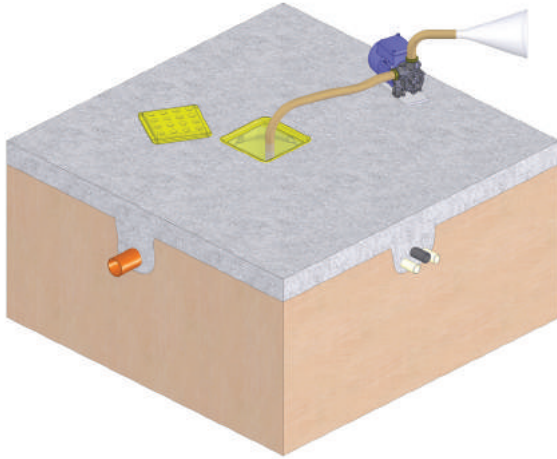
Allow concrete to cure.



## 11.0 Installation of Chamber - Section E

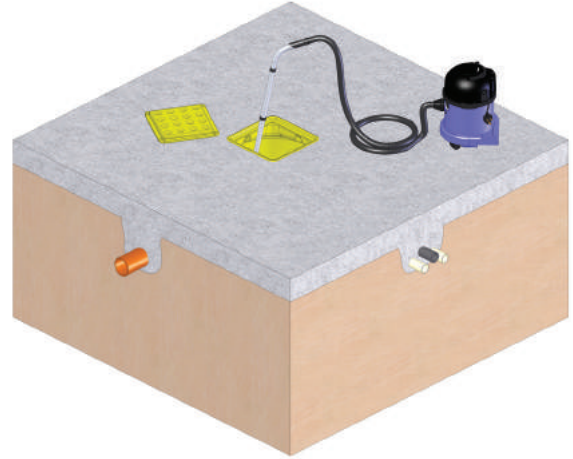
## Preparing chamber for installation of pump

23



Pump out water from chamber.

24



Manually remove any debris from chamber and residual water using a wet vac.

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## 11.0 Installation of Chamber - Section F

### Fitting discharge to pump

25



Wrap the thread on the nipple glued in to the 90° bend with PTFE tape.

26

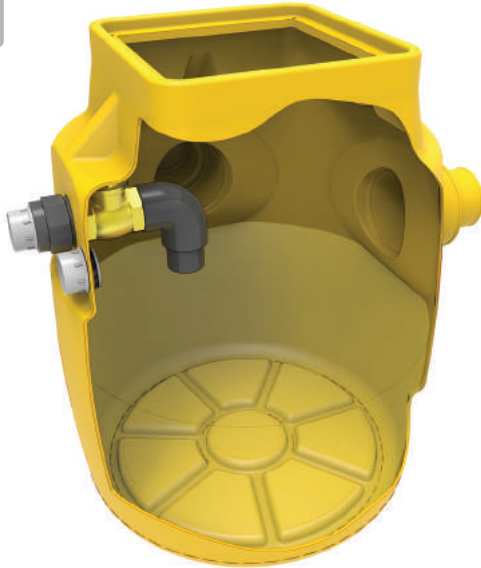


Hand tighten the discharge arm into the pump discharge outlet.

## 11.0 Installation of Chamber - Section G

### Installing pump and high level alarm in chamber

27



Fill chamber half full with water.

28



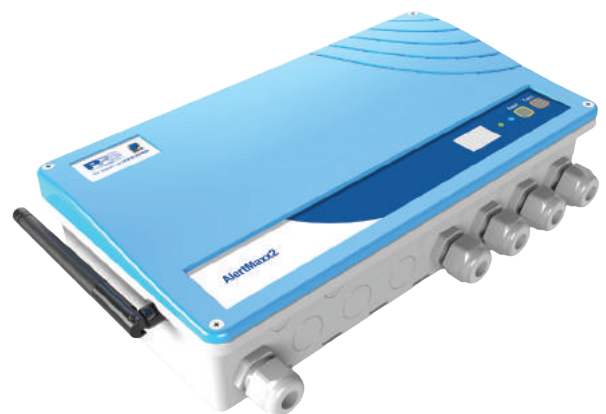
Slide the DC65 over the discharge arm and lower the pump in to chamber to release any trapped air. Slide the DC65 up to join the manifold to the discharge arm.

29



Tighten the two screws on the DC65 to seal the pipework.

30



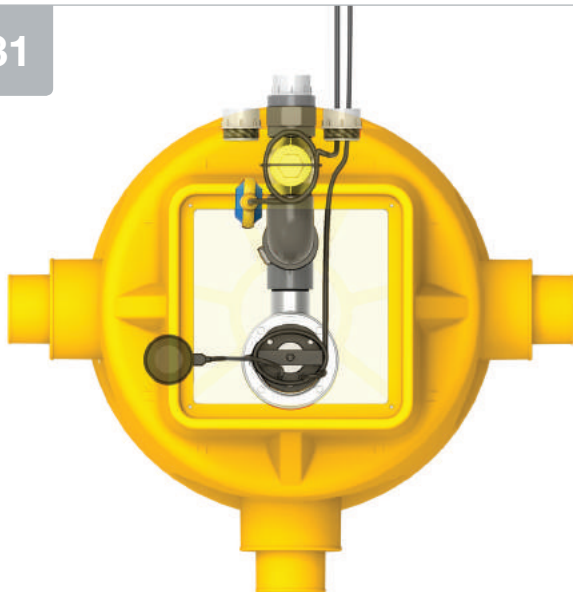
When installing a high level alarm, refer to the high level alarm installation instructions.

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## 11.0 Installation of Chamber - Section G cont.

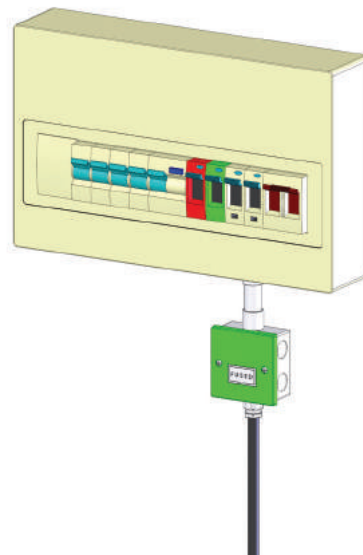
### Installing pump and high level alarm in chamber

31



Pull the pump and high level alarm cables through the cable duct. Coil 1m of pump and alarm cable inside the chamber to allow for maintenance.

32



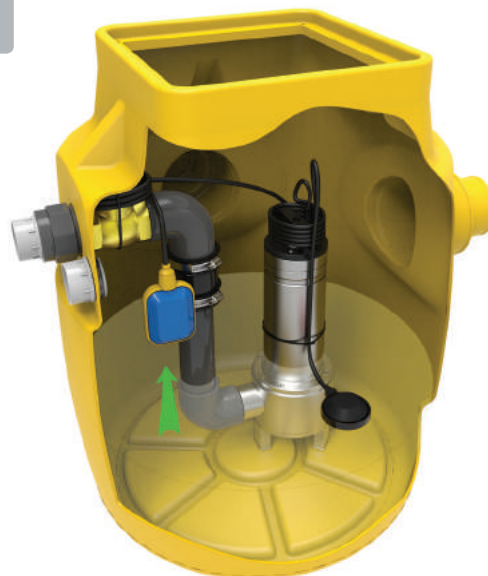
Isolate mains supply and connect the pump and high level alarm according to the wiring diagram overleaf.

33



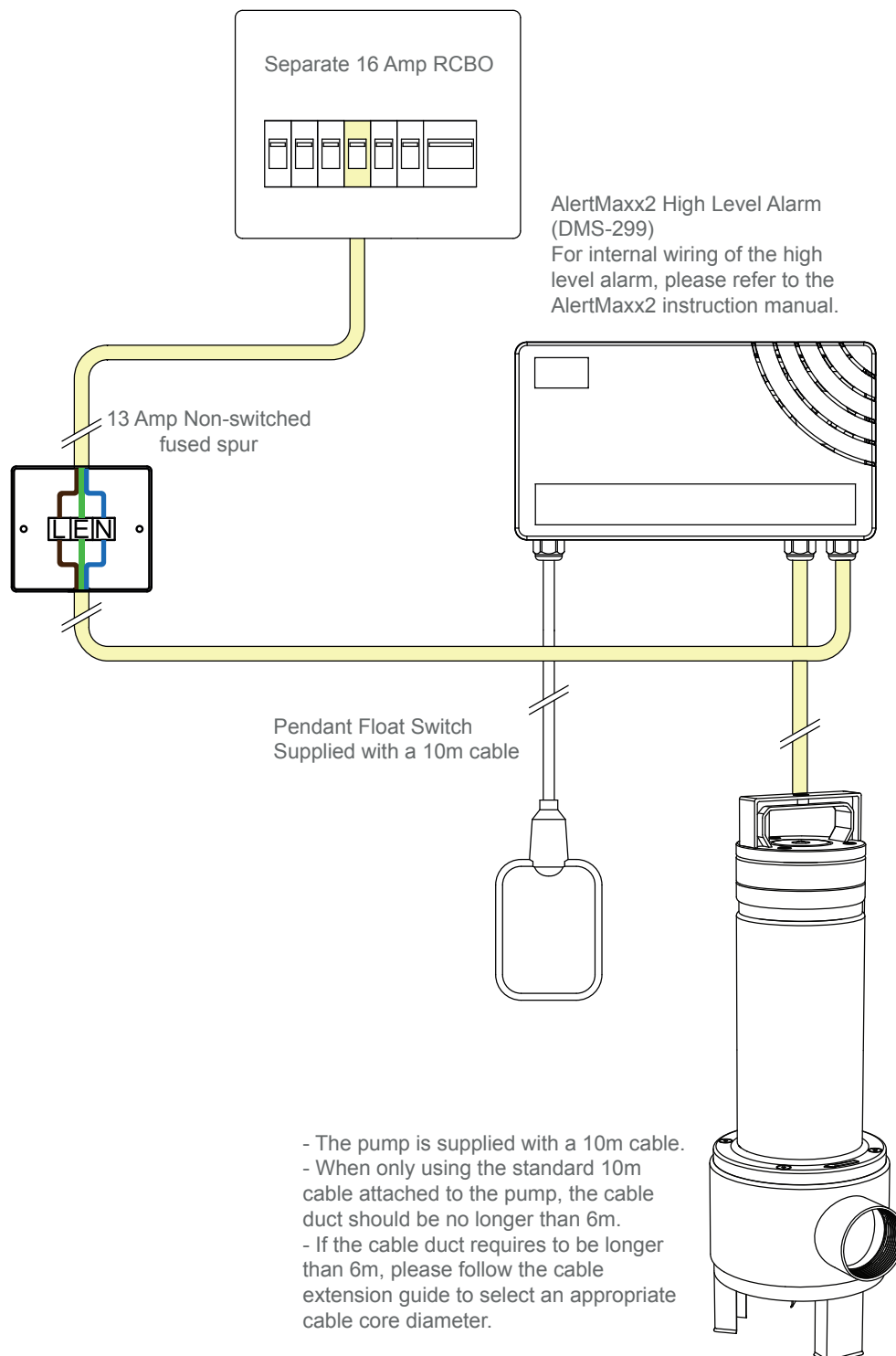
Turn mains supply on and lift the pump float to test the water is discharging correctly.

34



To test float switch, refer to the high level alarm installation instructions.

## 12.0 Wiring Diagram (inc. AlertMaxx2)



**The electrical installation must comply with the requirements of  
BS 7671:2008 'Requirements for  
Electrical Installations' incorporating amendment 3:2015**

# Delta Foul V3

## 13.0 Maintenance

Sump pumps must be maintained. We recommend a qualified engineer examines and services equipment every year. Pumps running frequently due to higher water table, water drainage, or weather conditions should be examined more frequently, we recommend every 6 months. Sump pumps, being mechanical devices, may fail if not maintained which could lead to a flooded basement and costly repairs.

Regular servicing of sump pumps will increase efficiency and extend the life of the pump. All Delta Membrane pump systems can be maintained by our partners, Packaged Pump Systems (PPS) or installing contractor.

## 14.0 Health and Safety

In order to minimise the risk of ill health or accidents when installing and/or servicing pump chambers, workers must be fully trained, competent and follow the health and safety guidelines below:

- Do not work without a risk assessment being in place.
- Work in accordance with the control measures identified in the risk assessment.
- All personnel must be vaccinated against diseases to which they may be exposed to, i.e. Tetanus, Polio, Hepatitis A&B, etc.
- At the time of writing, due to there being no vaccine against leptospirosis/weil's disease, where rats may be present, ensure appropriate personal protective equipment (skin protection) is worn and ensure any cuts or abrasions are fully covered.
- There should be no eating or drinking during works and only afterwards following a change of clothing and washing.
- Ensure electrical power to the pump is turned off/isolated before carrying out installation or maintenance.
- A suitable first aid kit must be close to hand.

## 15.0 Guarantee

The Foul V3 pump chamber is offered with an 18 month component guarantee. This guarantee only covers any defects in workmanship, construction or material. This guarantee does not cover, defects caused by incorrect installation, installer error, abnormal working conditions, misuse or neglect.

Pump chambers that have not been commissioned have a 18 month component guarantee from date of delivery. Pump chambers that have been commissioned by Packaged Pump Systems (PPS) have an 18 month component guarantee from date of commissioning.

Any defects or malfunctions should be reported to Delta Membranes immediately to avoid any damage to other components. All broken components must be sent to Delta Membranes at the customers cost.

To make a pump warranty claim, please visit: [www.ppsgroupuk.com/servicing/pump-warranty-claim](http://www.ppsgroupuk.com/servicing/pump-warranty-claim)

To make an accessory warranty claim, please visit: [www.ppsgroupuk.com/servicing/accessory-warranty-claim](http://www.ppsgroupuk.com/servicing/accessory-warranty-claim)

We exclude all liability for any consequential or other damage or losses which may occur. We will not be liable if the pumping system fails due to it having been incorrectly specified (e.g. where a pump is subjected to flow rates higher than recommended or where a pump is used to discharge inappropriate fluids/solids, such as building debris or materials).

## 16.0 Troubleshooting

Please ensure the installation process has been completed thoroughly and all steps have been followed correctly.

Use the table below to assist with troubleshooting and if problems still occur, please contact the PPS Technical Department on **01279 757400** from 9:00am - 5:00pm or email **info@ppsgroupuk.com**.

Fault	Cause
Water leaking from DC65.	Screws not tightened sufficiently.
Pump isn't running.	<p>Pump hasn't got power - check wiring with reference to section 12.0 wiring diagram.</p> <p>Float isn't lifting - check float is free moving and not catching on chamber - make sure pump is positioned as diagram 41.</p>
Pump running but not pumping water or discharging very slow (more than 25 seconds to empty chamber).	<p>Pump is air locked - make sure there is a level of water to the top of the pump, remove pump from DC65 and lower back into water, lift float to activate pump before reconnecting the DC65.</p> <p>Discharge pipe is blocked - a drainage company is required.</p>
Pump is tripping.	Pump is wired incorrectly or not on a separate supply - refer to section 12.0 wiring diagram.
High Level Alarm not functioning.	Refer to the high level alarm installation & operating instructions.

