



INFORMATION GUIDE

Installation, Commissioning and Future Maintenance of Basement Drainage Systems

www.deltamembranes.com



FOR HOMEOWNER

**THIS MANUAL SHOULD BE KEPT WITH
THE PRODUCT OR THE HOMEOWNER**

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1. Letter to homeowner



Delta House, Merlin Way
North Weald, Epping
Essex, CM16 6HR
Telephone: 01992 523 523
Email: info@deltamembranes.com

Dear Homeowner/Facilities Manager

Service and Maintenance Advice

Your home/a property you manage is fitted with a Delta Type C Cavity Drainage System.

By adopting a planned approach to maintenance of your Delta Type C System you will avoid the need for unplanned emergency repairs and will also have a property that retains or even enhances its value.

The Delta Type C waterproofing protection system has been designed to BS 8102:2022 (Protection of below ground structures against water ingress). Code of practice to be fully maintainable.

In following best practice advice, a maintenance schedule should be allocated to the Type C Cavity Drain Protection System.

Planned maintenance means a programme for maintenance that recognises the factors that can lead to the deterioration of materials and parts of the waterproofing protection system and ensures that they are maintained to prevent premature failure.

Good maintenance will require investment, but this investment can be planned, and the annual costs incurred will be quite modest. When whole-life costs are considered, the cost of a planned maintenance programme will be far less than the costs resulting from a series of unplanned emergency repairs.

This Guide is intended for owners or facilities managers in planning routine maintenance of the Delta Type C Waterproofing Protection System.

Keeping records is a key part of a maintenance programme. Records allow you to keep track of all inspections carried out, when they were carried out, the results of inspections, defects noted, and maintenance or remedial action implemented. A checklist is an important part of the exercise. It ensures that there is a structured approach and that all the important elements, components and features are inspected and assessed, whether or not a defect has been identified. It is also useful in alerting you to incipient decay or deterioration that needs to be monitored.

This maintenance programme will also assist in maintaining product guarantees which are offered by the manufacturer.

Delta offers via their Registered Installer Network a 30-year product guarantee on Type C Systems, when the Delta Type C System is Installed by a Delta Registered Installer.

Delta offers via their Delta Pumps Registered Service Provider Network a 5-year product guarantee on Sump pumps when the Basement Drainage system is commissioned and serviced by a Delta Pumps Registered Service Provider.

Have any questions or queries? You can rely on the Delta Team to ensure you get the right advice, support, and practical help at exactly the right time its required. Feel free to contact us on 01992 523 523 or email info@deltamembranes.com.

Yours faithfully

A stylized, handwritten-style signature of "Delta Membranes" in a dark grey or black ink.

Delta Membrane Systems Limited

2. What is Type C Waterproofing System

Delta Type C, Cavity Drained Protection Systems are water management systems. The Type C System manages water that penetrates the external shell of a structure by collecting it in a cavity formed between the external wall and an internal lining/wall. There is permanent reliance on this cavity to collect ground water seepage and direct it to a suitable discharge point. For Type C, Cavity Drainage Systems to function as intended, water ingress should be removed by a gravity drain/gravity drainage or mechanical pumping.

A key component of a Type C, Drained Protection System is the drainage system. Often referred to in the industry as 'basement drainage'.

Mechanical pumping stations in below ground application are often referred to as "Sump pumps" or "Sump and pump systems"

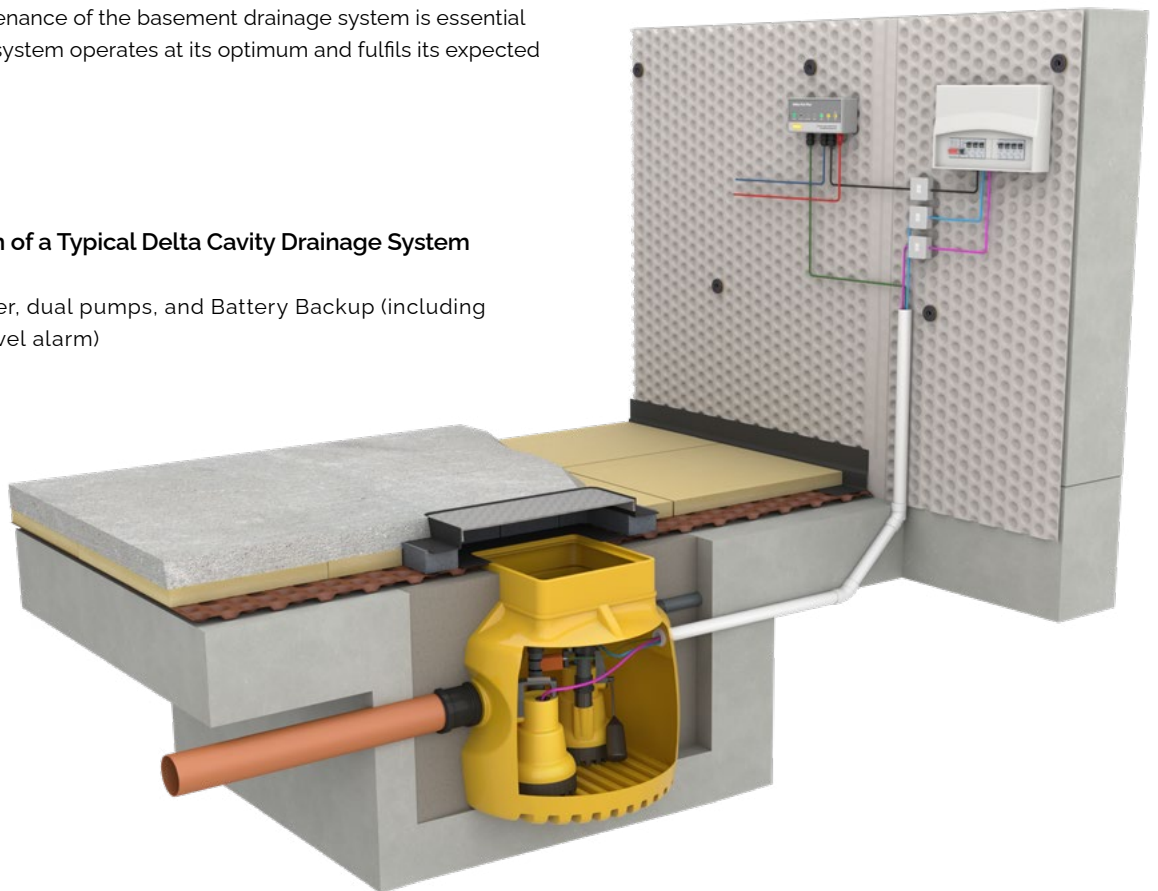
The purpose of a sump chamber is to collect and discharge any water ingress which has collected in the cavity drain membrane system.

Basement drainage systems will consist of perimeter drainage channel, a sump chamber, along with a primary and secondary sump pump, high level water alarm and/or control panel and battery backup.

Regular maintenance of the basement drainage system is essential to ensure the system operates at its optimum and fulfils its expected lifespan.

Cross Section of a Typical Delta Cavity Drainage System

Sump chamber, dual pumps, and Battery Backup (including high-water level alarm)



See page 9 for Site Inspection/Monitoring Form

3. Commissioning and Future Maintenance of Basement Drainage Systems

Commissioning of Pump Systems

We recommend Commissioning and Maintenance of Delta Basement Drainage Systems be undertaken by a Delta Pumps Registered Service Provider.

All sump pumps require commissioning. Commissioning provides peace of mind, knowing that the system is installed correctly and in compliance with warranty conditions. All Delta pump systems can be commissioned by our recommended Delta Pumps Registered Service Providers or installing contractor.

Scope of Commissioning Agent

- Installing pumps in chamber.
- Installing high-level alarms and battery backup system as applicable.
- Installing float switches and setting levels.
- Commissioning, if power and water is available.
- Certification of the installation to validate Delta Pump Warranty*.

*Standard Delta Membrane Systems Limited conditions apply. Delta HLA and Battery Backup warranty if commissioned by a Delta Registered Pump Service Provider, the 12-month warranty period shall start from date of commissioning, provided:

Standard Delta Pump(s) (V3, V4, V6 or Foul V3) are offered with a standard 24-month warranty from date of invoice. In other respects, the terms of the pump warranty are the same as the standard component warranty.

When a Delta V3, V4, V6 or Foul V3 Pump(s) is commissioned, and then serviced regularly by a Delta Registered Pump Service Provider an extended 5-year pump warranty is offered (subject to the terms and conditions):

- All services and associated systems are ready to enable commissioning to take place.
- The Delta Product is commissioned within 12 months from the date of invoice.
- The Delta Product is commissioned by a Delta Registered Pump Service Provider.
- The Delta Registered Pump Service Provider has logged Commissioning details of the Delta Product with Delta Membrane Systems Limited.
- The Delta Product is serviced by a Delta Registered Pump Service Provider with a minimum of a yearly Service (within 12 months from the date of commissioning/last service) depending on site specifications.

Pre-Commissioning Checks

Before Commissioning can be scheduled, we recommend the following pre-commissioning checks are undertaken and completed in accordance with installation manuals:

- ☐ Chamber has been installed correctly (including backfill).
- ☐ Verification of compliance to manufacturers installation instructions.
- ☐ Sump pump installation is complete, inspected and signed off by the engineer and/or main contractor.
- ☐ Inlets, discharge, and vent pipework are connected.
- ☐ Installation is coordinated with other services.
- ☐ Cable duct with draw chords from pump chamber are connected to control panel/mains power.
- ☐ Power supply cables to pump panels have been tested.
- ☐ High level water alarm and/or battery backup are wall mounted at suitable position.
- ☐ Installation of dedicated breakers in the distribution board complete with local isolation are complete.
- ☐ Chambers have been cleared of all debris and dewatered.
- ☐ All equipment is on site and accessible.
- ☐ Float switches are installed in accordance with manufacturers recommendations.
- ☐ Power supply and water is available to enable commissioning.

See page 12 for Pump Commissioning Certificate

Maintenance and Servicing of Basement Drainage Systems

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 and serviced by our recommended Delta Pumps Registered Service Providers or installing contractor.

Why Service Your Pump Equipment

- Validates building insurance
- Validates manufacturers product guarantees
- Reduces risk of mechanical failure
- Increase equipment life expectancy
- Reduce running costs

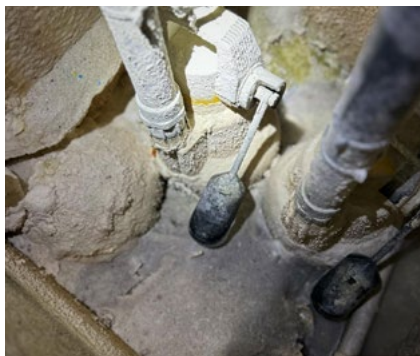
BS EN 12056-4 recommends that pump equipment should be maintained in intervals of:

- Residential dwelling – once per annum
- Residential dwelling at risk of a flood event – twice per annum
- Commercial premises – four times per annum

The images below highlight a build up of lime and mineral salts which were found on sump pumps which were not serviced. This level of lime and salts will reduce the efficiency of sump pumps and can lead to mechanical failure of the pumps.



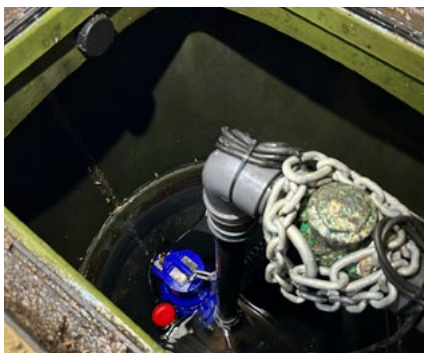
Sump pump prior to service



Sump pump in chamber prior to service



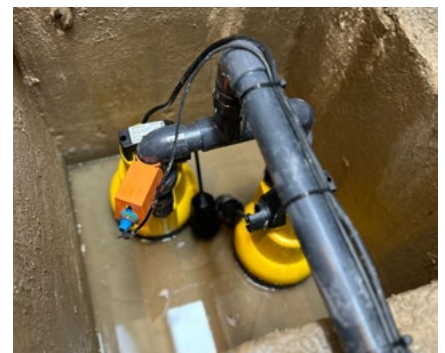
Sump pumps in chamber after service



Retrofitting a Delta Foul V3 Pump



Dual V3 pumps in chamber after service



Bespoke System after service

4. Site Inspection / Monitoring Form

Type C drained protection systems such as the Delta MS system requires design and installation in accordance with BS 8102:2022 Section 10 Drained Protection. This site inspection monitoring form covers the key aspects which should be checked and tested as part of the installation process. In addition a check list is provided at the end for key documentation which should be provided for the owners / clients O&M manual and / or warranty providers.

PLEASE COMPLETE USING BLOCK CAPITALS

Client / Main Contractor: (A)

Email

Warranty Provider: (B)

Email

Project / Job Ref:

Site / Project Address:

Waterproofing Design by:

Installing Contractor:

Installers Site Supervisor:

Install Site Supervisor
Contact Details

Registered Installer Ref:

Type of Drainage:

Recessed Channel:

Modular:

Combined Channel/Modular:

Other (Must be qualified)

Point of Discharge:

Sump System

Yes

No

Gravity

Yes

No

Sump Systems: Number:

Type:

4. Site Inspection / Monitoring Form

SUMP LOCATIONS

1.	
2.	
3.	
4.	

Indicate sumps which incorporate drainage from Lightwells & size of lightwell area (max 12 m²)

		Date / Completed By	Date / Checked By	Confirmation Email sent to A & B
1	110mm Modular Drainage Installed in Slab – Outlets 1 per 12m ² max			
2	Access Points installed to modular drainage			
3	Structural Defects addressed: (10.1')			
4	Anti Lime Coating application: (10.2.1.2 ')			
5	Initial floor flood test: (10.2.1.3 ')			
6	Additional levelling / flood re test :			
7	Installation of Perimeter Channel & Access ports: (10.2.1.4 ')			
8	Installation wall membrane: (10.2.1.5 ')			
9	Clean Dust and Debris from wall fixings			
10	Installation Floor membrane (20mm):			
11	Installation of access ports to Floor membrane			
12	System to be cleaned through and tested: (10.3.2')			
13	Installation & Commissioning of Site temporary pumps:			
14	Installation & Commissioning Warranted pumps: (10.3.2')			
15	Maintenance schedule set up: (10.3.1')			
16	Remote Pump Monitoring set up			

*Refers to relevant section numbers within BS 8102:2022

4. Site Inspection / Monitoring Form

Installation/Commissioned by:	
Date:	
1st Planned service visit:	
Agreed service intervals:	

Check List for O & M Manual / Warranty Provider:

☐	Plan of drainage layout and access point locations	☐	Remote Pump Monitoring
☐	Plan showing sump locations	☐	Operation Manuals for Pump System(s)
☐	Certificates / video /confirmation 1st flood test	☐	Manufacturer Product Guarantees
☐	Certificates / video /confirmation 2nd flood test	☐	Contractors guarantee
☐	Commissioning certificate pumps	☐	Insurance backed guarantee
☐	Maintenance schedule	☐	Information as above emailed to Contacts (A) & (B)

5. Pump Commissioning Certificate

PROPERTY ADDRESS		COMMISSIONING ENGINEERS	

CUSTOMER CONTACT DETAILS	
Contact Name	
Contact Tel. No.	

Equipment Installed	
Approved Installer	

Date of Commissioning	
Commissioning Engineer	
Status	Fully commissioned in accordance with the manufacturers instructions
Warranty Period	12 months from commissioning
Conditions	
Signature of Engineer	

6. Service Schedule

CUSTOMER / SITE DETAILS	
Client Name	
Site Address	
Installing Contractor	
Servicing Contractor	
Number/types of Pump Systems	
Type of Drainage System	
Date of Inspection/Service	

DELTA CHANNEL/MODULAR		
	Checked by:	Further action required?
Check for debris		
Check limescale/slit		
Check all inspection points		
Flush out Channel/Modular of loose debris if required		
Flush Channel through with Lime solution/Acetic Acid if required		
Other		

6. Service Schedule

DELTA SUMP SYSTEM(S)		
	Checked by:	Further action required?
Clean silt debris from sump		
Clean silt and debris from discharge pipes		
Check connections in discharge pipes		
Remove and inspect pump(s) for damage		
Clean pump(s) of limescale and debris		
Check one way valve, clean as required		
Check gate valve, clean as required		
Reinstate pump(s)		
Test pump(s) and discharge pipes - auto & manual - monitor performance		
Replace pump(s) if required		

ALARMS, CONTROL PANELS & BATTERY BACK-UP SYSTEMS		
Clean float mechanism, clean if required		
Test audio visual alarm elements		
Test telemetric/monitored connection/BMS Connection		
Check battery health, replace if necessary		

6. Service Schedule

FULL SYSTEM TESTING/RE-COMMISSIONING		
	Checked by:	Further action required?
Inspection Ports		
Delta Channel/Modular system		
Pump system(s)		
High level alarm(s)		
Battery back-up(s)		

COMMENTS/ADDITIONAL NOTES

FURTHER AGREED INSPECTIONS		
	Contractors Signature	Clients Signature
3 months		
6 months		
12 months		

7. Technical Guidance

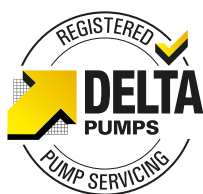
Servicing/Commissioning of Basement Drainage Sump Pump Systems

Sump pump systems must be maintained. We recommend a qualified engineer examines and services equipment every 12 months. Pumps running frequently due to a higher water table, water drainage, or weather conditions should be examined 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 improve efficiency and extend the life of the pumps.

All Delta pump systems can be maintained and serviced by our recommended service companies or installing contractor. All sump pumps will require commissioning. All Delta pump systems can be commissioned by our recommended service companies or installing contractor.

Listed below are useful contacts for Delta Registered Pump Service Providers who are able to offer Servicing and Commissioning services.



EDINCARE PUMPS

8 Heron Business Park
Eastmans Way
Hemel Hempstead, HP2 7FW
Tel: 01442 211 554
info@edincare.com

TW READ

2 Alderwood Close
Caterham
Surrey, CR3 6AT
Tel: 07805 552 372
twread22@gmail.com

TIMBERWISE UK LTD

t/a Basement Sump & Pump Company
1 Drake Mews
Gradbrook Park
Cheshire, CW9 7XF
Tel: 07970 602 022
lee@basementsumpsandpumps.co.uk

TT PUMPS

Onnerley Works
Newcastle Road
Woore
Cheshire, CW3 9RU
Tel: 01630 647 200
response@ttpumps.com

HATCHMORE SPACE

2 Leach Way
Riddlesden
West Yorkshire, BD20 5DB
Tel: 07970 805 886
phil@hatchmorespace.co.uk

SOVEREIGN SPECIALIST SERVICES

7 Epping Road
Ongar
Essex, CM5 0DF
Tel: 07525 288 056
Ben@sovereign.tv

BASEMENT SUMP & PUMP COMPANY

1 Drake Mews
Gadbrook Park
Cheshire, CW9 7XF
Tel: 07970 602 022
lee@basementsumpandpump.co.uk

TYWI DAMP PROOFING

Unit 1
Betws Colliery Industrial Park
Maesquarre Road
Ammanford, SA18 2LF
Tel: 01269 500 019
pumpservice@tywidampproofing.co.uk

GC PUMP SERVICE LTD

Unit 13 Mill Hall Business Estate
Mill Hall
Aylesford, ME20 7JZ
Tel: 07572 215 761
office@gc-services.co.uk

PUMPS & PITS

8 Pintolls
South Woodham Ferrers
Chelmsford
Essex, CM3 52B
Tel: 07956 906 096
info@pumpsnpits.ltd

BASEMENT PUMPS LIMITED

Morehouse Farm
Ditchling Road
Wivelsfield, RH17 7RE
Tel: 07795 433 963
rick@basementpumps-london.co.uk

PUMPSTU

17 Norfolk Way
Bishops Stortford
Hertfordshire, CM23 3PN
Tel: 07562 231 755
stuart@pumpstu.co.uk

PARAGON PUMPS

Unit 103395
Po Box 6945
London, W1A 6US
Tel: 0208 914 7915
help@pumpservicing-london.co.uk

LONDON BASEMENT PUMPS LIMITED

Unit One
Chessington Business Centre
Cox Lane
Chessington, KT9 1SE
Tel: 0800 009 2120
richard@lbpumps.co.uk

Your Service Provider's Contact Details:

Delta Membrane Systems Ltd, Delta House, Merlin Way, North Weald, Epping, Essex, CM16 6HR.

01992 523 523 info@deltamembranes.com www.deltamembranes.com

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