

---

# Sump and Pump Systems



# Sump and Pump | 1

## The need for a Sump and Pump

Internally applied cavity drainage systems are an increasingly popular choice for waterproofing new and existing basements. Instead of physically holding back water pressure (like traditional tanked systems), these systems divert any groundwater passing through the fabric of the building to a suitable discharge point – usually a sump and pump.

The sump and pump forms the heart of the drainage system so it is essential that it is of a high quality and capacity in order to cope with anticipated levels of water entering the basement. The range of sumps, pumps and accessories have been designed with this in mind to provide a solution for basements of any size.

### BS8102 and “Dry Basements”

In situations where a property owner believes that their basement is merely “damp” and has never flooded, the necessity for a sump and pump is often questioned or ignored. However, it should be noted that the British Standard that covers basement waterproofing (BS8102) states that it must be assumed that water will come to bear against the basement (or the structure) at some point during its lifetime.

For this reason, professional basement waterproofing companies are likely to insist that a sump and pump is included as part of any cavity drainage basement waterproofing system. Furthermore, failure to incorporate an adequate form of drainage (usually in the form of a sump and pump) is likely to affect the validity of any insurance-backed guarantee issued to cover the basement waterproofing system.

### Sump and Pump Systems

No mechanical sump and pump system can ever be 100% risk free. However by using high quality components and through thoughtful design, the risk can be minimised. For this reason, all Safeguard sump systems benefit from the following features:

Large pump capacity sump chamber

Low/High capacity pumps

Dual power mains/battery alarm

Ama Drainer 303 pumps have been chosen because of their high engineering standards and high capacity discharge capabilities.

These pumps can provide high pumping capacity even in situations where water needs to be discharged several metres above pump level (a common requirement in basement situations).



Sentry™ Sump Systems being used as part of a basement cavity drainage system.

### Which Sump and Pump System Should I Choose?

The choice of sump system essentially comes down to two major considerations:

#### Anticipated water ingress

#### Potential consequences of the basement flooding (risk versus cost)

Whilst our entry level “Single System” is likely to be sufficient for most domestic basements, homeowners may wish to consider the dual system model which benefits from an additional battery powered pump which can function for a period of time in the event of a power cut. Where additional security is required or where higher than normal levels of water ingress are anticipated (such as in larger basements) the “Twin” model may be preferred to provide enhanced backup and/or additional pumping capacity. Where particularly high levels of water ingress are anticipated, several sumps and pumps may be required. As your basement waterproofing contractor we will be able to suggest the most appropriate solution for your basement.

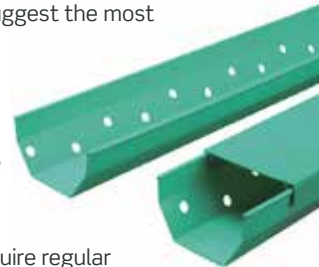
#### Drainage Channel

Perimeter drainage channel is laid around the perimeter of the basement at the floor-wall junction and is designed to direct water to the sump and pump chamber and pump.

#### Maintenance

Pumps are mechanical items, and as such, require regular servicing if they are to continue to perform to their optimum capabilities.

As a professional basement waterproofing company we offer pump service contracts and are able to advise on an appropriate service interval.



BS8102:1990 Code of Practice for protection of structures against water from the ground. ISBN 0580 17897 8



# Sump and Pump | 2

## Six reasons for choosing Sump and Pump systems



### 1: Aquadrain Inlet Socket

Pre-formed inlet socket for easy installation of Aquadrain drainage channel system.

### 2: Full-size 11-4 " Output Pipe

Allows pump to work at full capacity. Integral quick fit connectors allow rapid installation of internal pipework.

### 3: Tough 100 litre Capacity Chamber

Reduces the frequency that the pump is activated – prolonging the life of the pump. Manufactured from robust impact-resistant polyethylene.

### 4: Integral Fixing Bracket

For easy internal fixing of float switches.

### 5: High Capacity Sump Pump

High specification Ama Drainer 303 Sump Pump.

### 6: Raised, grooved step

Raised step for backup pump is grooved to act as a silt trap.

# Sump and Pump | 3

## The Sentry™ range of sump systems



### Sentry™ Single Pump System 1:

The standard Sentry™ Single System has been designed to suit typical domestic basement waterproofing projects\*. The Sentry™ Single System benefits from a large 100 litre sump chamber, an Ama Drainer 303 pump and a dual power alarm. All internal plumbing is supplied.

The sump chamber has been specifically designed for basement waterproofing applications and benefits from a 450mm x 450mm square opening – allowing standard sized access covers to be used.

#### Standard System includes:

- Sentry™ Sump Chamber
- 1 x Ama Drainer 303 High Capacity Pump
- 1 x Dual Power Alarm
- 1 x Access Cover



### Sentry™ Twin Pump System 2:

The Sentry™ Twin Pump System is designed for situations where a higher level of water ingress is anticipated – for example, on larger basement projects or where additional backup is required. Two pumps provide additional pumping capacity and backup (in the event of failure of one of the pumps). The pumps are set at different levels in the sump chamber to help balance the demand between the two pumps – minimising the stress put on each pump. Dual outlet pipes allow pumps to operate at full capacity.

#### Twin System includes:

- Sentry™ Sump Chamber
- 2 x Ama Drainer 303 High Capacity Pump
- 1 x Dual Power Alarm
- 1 x Access Cover



### Sentry™ BB (Battery Backup) Pump System 3:

The Sentry™ BB System has the same benefits and efficiency of the standard Sentry™ Single System with the added reassurance of a Battery Backup pump in the event of a failure such as a power cut. This ensures that the sump is able to operate for a period of time allowing peace of mind against the risks of flooding, especially when power failure is more common in times of heavy storm weather.

#### Battery Backup System includes:

- Sentry™ Sump Chamber
- 1 x Ama Drainer 303 High Capacity Pump
- 1 x 24V Battery Backup Pump
- 1 x Dual Power Alarm (incorporated in pump control panel)
- 1 x Access Cover



# Sump and Pump | 3

## Sentry™ Sump Systems components



### Ama Drainer 303 Pump Performance

All the Sentry™ Sump Systems utilise the same Ama Drainer 303 high capacity pumps benefiting from the following features:

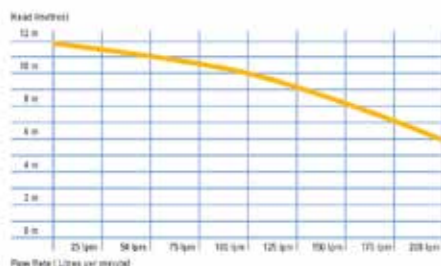
- 🔊 Quiet operation
- 🔒 Built-in non-return valve
- 💧 High flow rate

#### Ama Drainer 303 Specification:

Power Supply	230V/1/50Hz
Outlet Diameter	1 1/4 "
Solids	10mm
Maximum Flow Rate	200 Litres/min
Head of Water	12 metres

Full pump specifications available on request.

#### Flow rate against head of water



### Dual Power Alarm System Reassurance

All models in the Sentry™ range feature Edincare dual power alarms as standard. These alarms run on mains power, but switch to battery power in the event of a power cut or other mains failure. The battery is tricklecharged and will last for several years before it needs replacing. The alarm is triggered if the water rises above the normal operating level. On the Sentry™ BB model the dual power alarm is incorporated into the control panel (see below).



Mains/battery high-level alarm module (included with the Sentry™ Single and Sentry™ Twin sump systems).

### Battery Back-up Pump Option

The Sentry™ BB sump system includes a battery-powered back-up pump, dual power alarm and control unit. This allows water to be pumped away for a period of time in the event of a power cut or failure of the primary pump. The system is triggered if the water rises above the normal operating level within the sump chamber, activating the alarm and 24V battery-powered backup pump. A full technical specification is available on request.



Battery backup module incorporating mains/battery alarm (included with the Sentry™ BB sump system).

\* Where consequences of water entering the basement are severe, consideration should be given to a backup system such as the Sentry™ Twin and Sentry™ BB sump systems. Your basement waterproofing contractor will be able to suggest the most appropriate system for your basement.

As we are continually making improvements to our range, actual supplied units may vary slightly from illustrations.