

# HARTON **POD**

The hidden silent space saver

## The complete below ground pumping station for wholesome water

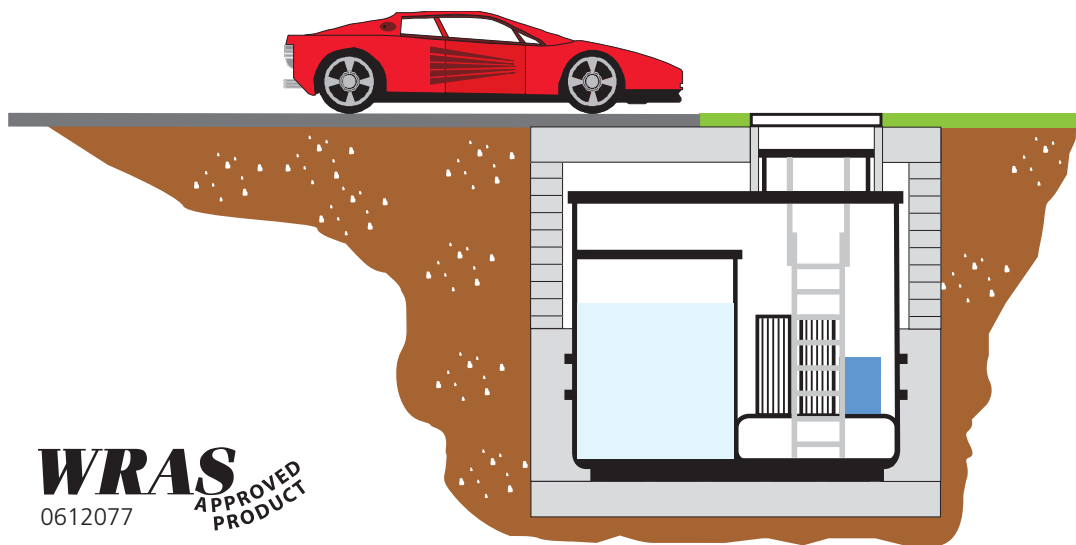
The Harton **POD** range are complete WRAS-approved tank and pump assemblies within their own plant room – all located fully below ground, with a system-monitoring panel sited elsewhere which can be linked to a telephone autodialler system or additional on-site alarms.

**PODs** can be described as silent because they transfer no pump noise or vibration to the properties they service.

**PODs** can be sited under any free area, even below a car park, thus maximising valuable above-ground usable space and avoiding the need for an expensive separate building, or planning permission.

Harton **POD** underground units are available with a range of storage capacities and pump combinations sufficient to provide guaranteed pressure and flow rates for wholesome water systems in major commercial or residential developments, right down to small schemes with a few dwellings.

They are built to the same demanding standards as the comprehensive tried-and-tested range of above-ground pump and booster combinations which Harton supply to major developers and are delivered to site with the plant room fully wired and plumbed and with all safety features factory fitted.



**WRAS**  
0612077  
APPROVED  
PRODUCT

### Harton Services Limited

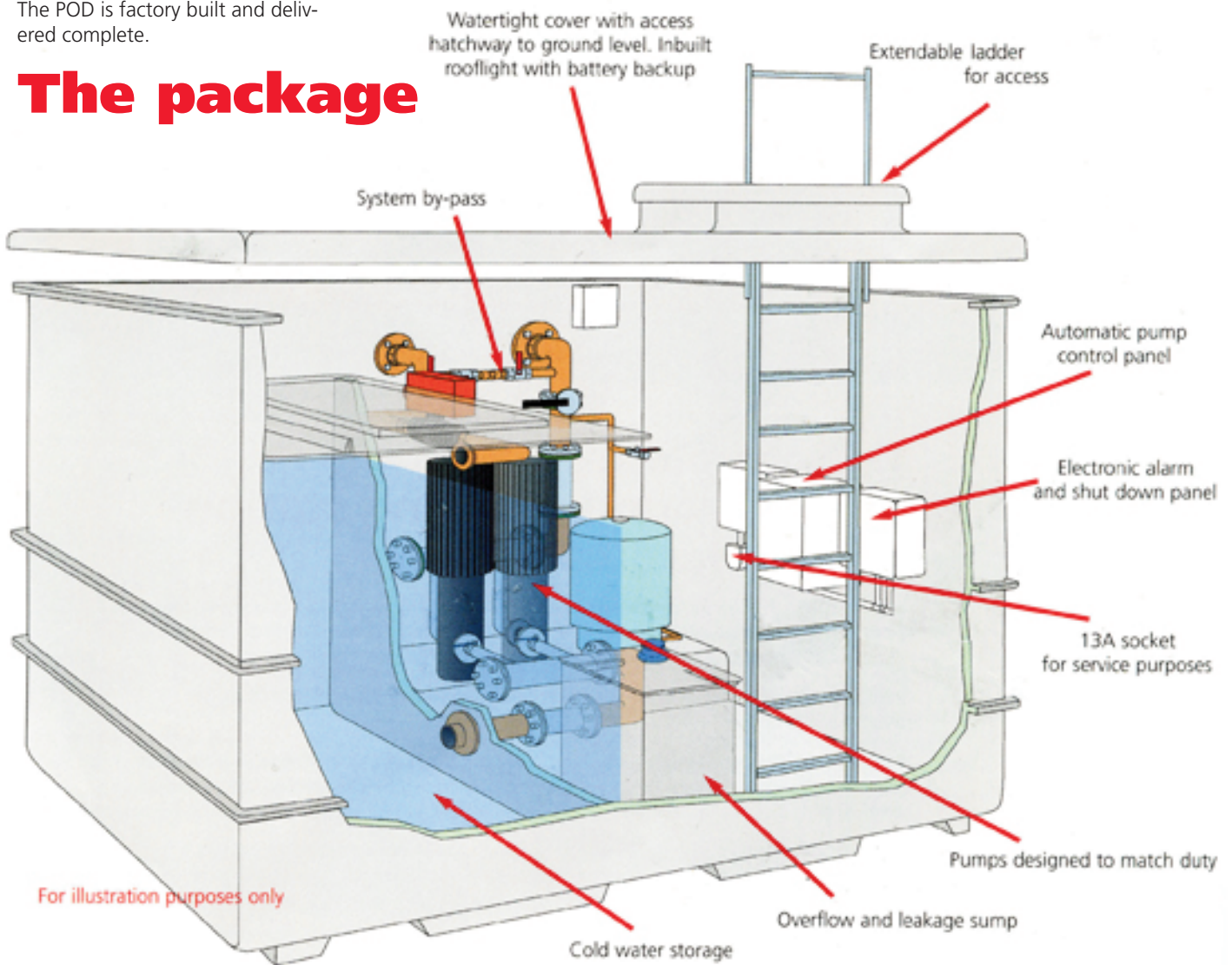
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The POD is factory built and delivered complete.

## The package



## The technicalities

Harton **POD** underground tank and pump systems are complete enclosed packages for siting fully below ground, with watertight enclosures and top access hatches accessible via loadbearing manhole covers at ground level.

The units are lowered onto a precast base and the construction of the units permits a concrete backfill to be poured directly around the housings. The unit is not designed for load carrying, therefore the base, concrete backfill and top span covering must be designed to withstand expected surface loadings from above.

See the Harton installation drawing (on application).

Storage sections on all **POD**s are fitted with either a 42mm or 50mm high-flow float valve depending on system demand.

**POD**s have a separate plant room section which houses multiple boosting pumps individually designed to suit site requirements. Pumps are fitted with anti-vibration connections and mountings and a tank-mounted low-water float switch in each water storage section protects the pumps against dry running.

The plant room also houses other fully fitted, pre-plumbed, pre-wired and factory tested equipment including a bulkhead light, a 13A socket for maintenance purposes and all necessary safety and cutout equipment. A ladder with safety extension is fitted as standard in each plant room.

### System by-pass

The POD has an internal system by-pass between the mains in the boosted out services. This allows mains pressure water into the distribution services during maintenance work.

### The POD comes in four sizes

#### Capacities, dimensions and approximate weights are:

<b>POD 1100:</b>	1100 lts of stored water 2680 x 2120 x 2575 high 850kg empty / 2000 kg full
<b>POD 2600:</b>	2600 lts of stored water 2680 x 3120 x 2575 high 1000 kg empty / 4000 kg full
<b>POD 5000:</b>	5000 lts of stored water 2680 x 4120 x 2575 high 1500 kg empty / 6500 kg full
<b>POD 7500:</b>	7500 lts of stored water 2680 x 5120 x 2575 high 2000 kg empty / 10,000 kg full

## External pipe connections

The following fittings are on the outside of the housing for site connection and all except the air vent and sump connection are grouped so that they can be located within a separate access chamber:

Refer to Harton installation drawing (on application).

**Mains water inlet:** 63mm Flanged Poly Connector

**Pumped water outlet:** 63mm Flanged Poly Connector depending on system loading. Some may have a larger sized pumped outlet.

**Sump pump discharge:** 50mm Poly Blanked Cap for connection of sump pump discharge pipe to be run to a physically protected and flood-free position above ground.

**Air vent:** 108mm for connection to an external vent at a physically protected and flood-free position above ground.

# Monitoring and alarm system

A remote wall mounted system monitoring panel is supplied with each unit for siting at a convenient above-ground location. This indicates by means of coloured lamps "SYSTEM ON" plus any or all of three alarm conditions and also provides four volt-free pairs of contacts for connection to any other external monitoring system, such as a telephone autodialler or to additional on-site alarms.

An electronic control system within the underground tank and pump unit detects water overflows or water from leakage or other sources and transmits this information to the remote system monitoring panel and to any external alarm system.

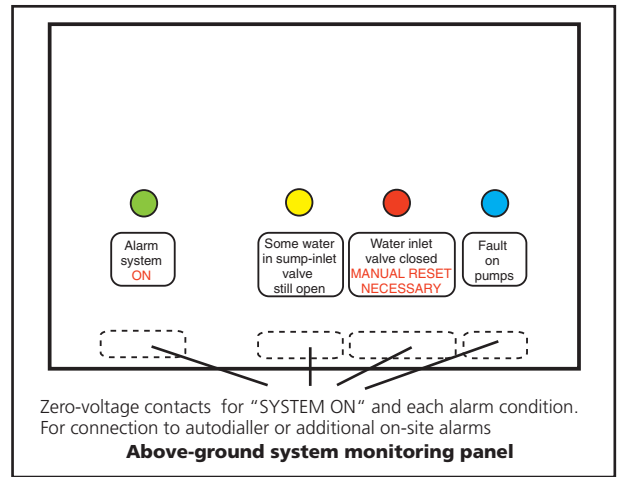
Where the quantity of water is significant, such as may be caused by a jammed float valve, the electronic controls automatically shut down the incoming water supply, activate a red alarm lamp on the remote panel and switch on a sump emptying pump which discharges above ground. The incoming water supply can then only be restored by manual resetting within the underground unit, thus ensuring that the cause of the fault will be properly investigated and rectified before the water supply is restored.

### Pumped supply continues with mains off

Although the mains water inlet is shut down when significant water quantities appear, the main pumps continue to operate until the storage in the main tank is used up and a low-level switch shuts off the pumps. This provides some continuity of supply for a period before the fault is rectified and the mains supply is reinstated.

### No shutdown for minor leakage

For smaller quantities of water appearing in the sump from minor leakages, such as from the pumps or slow letby from the float valve, the electronic unit first activates an amber lamp on the remote monitoring panel indicating that attention is needed, but does not close down the mains inlet valve and therefore leaves the system in full operation. Mains shut down then only occurs if the water continues to build up to a higher level.



### Auto-reset after power failure

On failure of the mains electrical supply the electronic controls automatically shut down the incoming mains water supply and activate both water sensing alarms. However, in the absence of any water in the sump, the system is automatically restored to normal operating condition once the power is reinstated, thus avoiding unnecessary callout.

## Electrical connections

### Mains electrical supply:

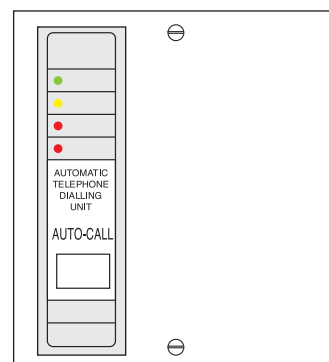
A two metre length of electrical cable extends outside the housing for the site connection of single or three-phase mains supply to the unit, including to the pumps. This cable is factory prewired to an isolator and safety cutout panel and to all the internal mains electrical accessories inside the housing. The total electrical loading depends on the pump duty.

### System monitoring connections:

A separate two metre length of five-core electrical cable extends outside the housing for connection to the 24V low-current remote monitoring panel located above ground. This cable is factory prewired to all necessary alarm connections inside the housing. For easy identification, each cable core is colour coded to match the terminal markings in the above-ground monitoring panel.

### Telephone autodialler

The external system monitoring panel is fitted with four pairs of volt free connections for "SYSTEM ON" plus each of the three alarm conditions. These connections can be linked to a telephone autodialler (supplied as an option) which automatically dials your chosen numbers and transmits the site location plus details of any fault condition(s). The vault free terminals can also be connected to a BMS system.



Telephone autodialler (available as an option)

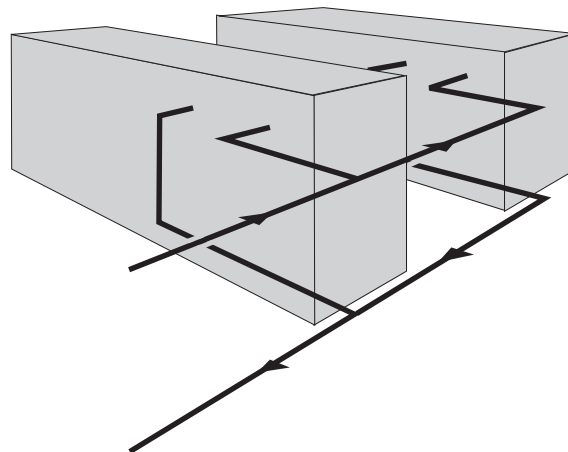
# PODs for larger projects

Harton **PODs** can be linked together to achieve any volume of water storage that may be required combining standard POD storage capacities of 1100, 2600, 5000 and 7500 litres.

The boosted discharge from any combination of **PODs** can be connected together to form a single common boosted outlet. This will allow water to be drawn from the combined **PODs** during periods of high demand.

During low demand the pumps in the lead **POD** would supply the demand, the lead **POD** changes automatically every 24 hours to ensure that stored water does not become stagnant.

Harton will advise on the best **POD** combination to suit your particular project.



## The backup

### Manufacturing quality

Each Harton tank and pump package is purpose designed to provide a clean potable water supply at an adequate pressure to supply the taps and water outlets in a building.

Best quality materials and equipment are used to ensure that after installation to normal codes of good practice the system will provide reliable service over a long period under normal working conditions. All materials used are suitable for potable water.

### Service

Pumps from leading quality manufacturers are fitted to all POD's and Harton work closely with the pump manufacturers specialist teams to ensure that highest technical standards are maintained.

### Landlord's Maintenance Warranties

For added reassurance Harton are also able to arrange ongoing service arrangements for subsequent years beyond the guarantee period, for example to meet the requirements of the Building Management company.

### Warranty

Subject to proper handling, installation to codes of good practice, use of all safety equipment provided, the use of clean water at all times and proper commissioning and usage under normal working conditions, the Harton **POD** underground tank and pump systems are guaranteed against faulty components or manufacture for a period of 18 months from the date of initial supply of the equipment by Harton, or 12 months from the commissioning date, whichever comes first.

In the event of a system breakdown during the warranty period, or subsequently where a service contract has been made, then our service number can be called.

### Above-ground Harton tank and pump sets too!

Harton have over sixty years experience in manufacturing high-quality plumbing units and are regular suppliers of complete tank and booster set systems and other plumbing equipment to a wide range of customers including many major developers.

As well as the **POD** underground systems, Harton also manufacture **above-ground tank and booster sets** individually designed to meet specific site performance needs and space constraints and these are also fully manufactured and plumbed for easy site installation.

The Harton Technical Team are happy to discuss your specific requirements with you.

## Harton Services Limited

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