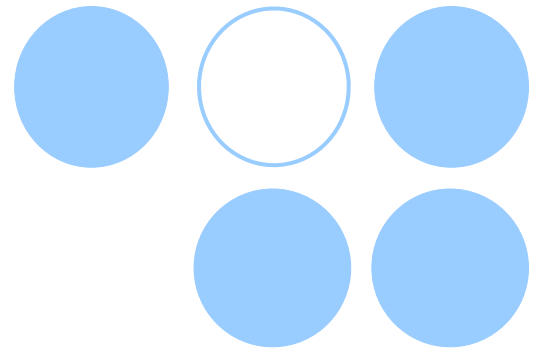


WPL Diamond



No worries sewage treatment



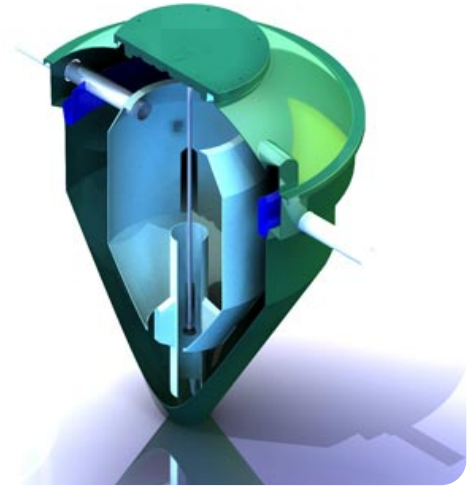
TKS EnviroCare

The Diamond

The WPL Diamond sewage treatment range is specifically designed for domestic properties situated away from wastewater mains drainage.

The Diamond is CE marked and type tested in accordance to BS EN12566-3:2005, the new European standard covering wastewater treatment plants, making it fully compliant with UK Building Regulations.

Utilising a unique design, each purposely sized plant offers high quality, discreet wastewater treatment whilst ensuring value for money, low ongoing running costs and complete peace of mind.



Benefits

- Outstanding **value for money**
- **Reliable operation** with its simple design and no internal moving parts
- **Low running cost** of small, quiet air blower
- Continuous bacterial digestion gives the DMS range up to **3 year desludge intervals** (the DMC range generally requires annual desludging)
- **No odours** as the process does not require primary settlement
- **Excellent performance** meeting normal consented standard
- **Low visual impact** with small lid, flush with ground
- **Easy Installation** as the unique design minimises labour and materials
- **Robust construction** reduces need for concrete backfill where ground conditions permit
- **Compact design** does not require large plant for excavation or handling
- **Reduced soakaway** requirement
- Over **40,000 units installed** worldwide
- **CE marked**
- **Irish Agreement certified**

Optional Integral Pump Chamber

All the existing features of the Diamond plant, but with an integral pump chamber. Specially designed for sites which require a means of delivery for treated effluent where the existing terrain and invert levels of the pipework prevent normal gravitational discharge.

Applications include sites with an incline, a high water table or a distance to the soakaway.

The Diamond Internal Pump Chamber comes complete with a submersible pump which can deliver up to 80 litres per minute of effluent at a head of 3.5m, and has a standard invert of 500mm.

Integral Pump Chamber Consists of:

- 240v, 0.25kw submersible pump, integral float switch, with stainless steel internals and non-return valves
- High level float switch and mounting tube
- High level alarm beacon with 1m of lead and plug
- Float switch adaptor socket
- Extension kit for an increased invert to 800mm (optional extra)



Model Range & Flow Rates

Model	DMS 2	DMS 3	DMS 4	DMS 5	DMC 6	DMC 7	DMC 8	DMC 9
Population range persons)*	1-6	5-11	10-15	14-20	21-27	28-35	36-45	46-55
Maximum organic loading BOD5/day (grams)	360	660	900	1,200	1,620	2,100	2,700	3,300
Maximum average daily flow (litres)**	1,200	2,200	3,000	4,000	5,400	7,000	9,000	11,000
Blower power consumption (kW h)***	0.12	0.14	0.17	0.24	0.55	0.75	0.75	0.75

* A British Water Loading Guide providing further information for non-domestic applications is available

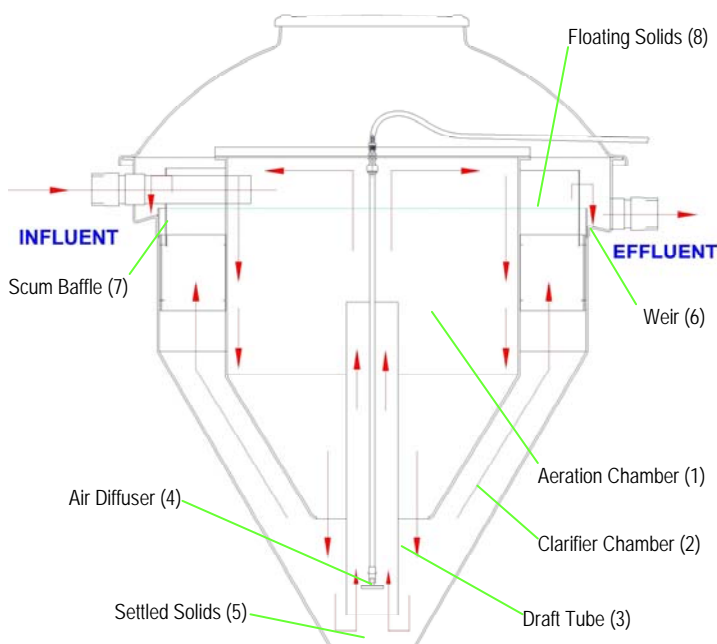
** Peak flow must not exceed 3 x total flow for no more than 1/2 an hour in any 2 hour period

*** Compressor manufacturer's data is an approximation to plant conditions

Process performance is subject to strict adherence to WPL's installation, operation & maintenance manuals, user guide and a start up period of 6-12 weeks depending upon plant loadings and water temperature. WPL provides a full brochure that details consents to discharge and how to calculate whether your soakaway area or discharge point (drainage ditch or stream) will meet the requirements. Please contact TKS EnviroCare for more information.

The **Diamond** system consists of two treatment chambers within a single tank.

- The central aeration chamber (1) is a circular tank with a sloped open base, which empties into the bottom of the outer clarifier chamber (2).
- Located in the centre of the aeration chamber is a 200mm diameter draft tube (3), which extends to 100mm from the bottom of the clarifier. Air is released at the bottom of the draft tube through a disc plate diffuser (4).
- As the diffused air rises in the draft tube it causes an upward flow of process fluid. This draws the settled solids (5) from the bottom of the clarifier up through the draft tube where they are discharged at the surface of the aeration chamber.
- The design of the draft tube ensures continuous and complete mixing of oxygen with the sewage. This oxygenation allows the various aerobic organisms that biologically degrade the wastewater contaminants to grow.
- Gravity causes the aerated solids to settle at the bottom of the tank where they are again drawn back up through the draft tube.
- As raw sewage enters the aeration chamber, it displaces biological solids from the aeration compartment to the clarifier. Less turbulent conditions in the clarifier allow the digested solids to settle to the base where they are returned back to the aeration compartment.
- The clarified (treated) effluent flows slowly up through the clarifier and over a weir (6), which extends around the periphery of the tank.
- The effluent collects in an outer trough where it is discharged through a 110mm-pipe connection. The scum baffle (7) located inside the overflow weir prevents floating solids (8) from passing over the weir.



Process Performance

The Diamond is designed to "clean" the wastewater to a standard of 20mg/l Biological Oxygen Demand (BOD) and 30mg/l Suspended Solids (SS) 20mg Ammoniacal Nitrogen (AMM-N) on a 95 percentile basis. Additional filtration equipment is available to extend the treatment process to meet standards as high as 10mg/l BOD and 15 mg/l SS. If more stringent environmental requirements are specified, please contact TKS EnviroCare for details.

TKS EnviroCare also provides a data sheet to assist you with soakaway construction.

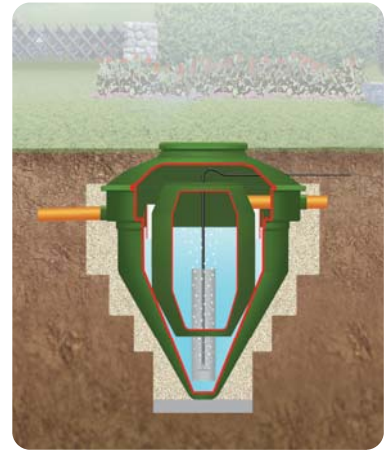


Caring for your environment

Technical Data and Dimensions

Model	Outside diameter	Height to inlet	Inlet invert depth	Height to outlet	In ground depth	Weight empty	Total capacity
DMS 2	1.85m	1.69m	570mm	1.59m	2.26m	120 Kg	2,271 litres
DMS 3	2.10m	1.85m	700mm	1.73m	2.55m	160 Kg	3,028 litres
DMS 4	2.10m	2.04m	700mm	1.92m	2.74m	210 Kg	3,974 litres
DMS 5	2.10m	2.04m	700mm	1.92m	2.74m	210 Kg	3,974 litres
DMC 6	3.20m	2.67m	590mm	2.57m	3.26m	380 Kg	9,056 litres
DMC 7	3.20m	2.67m	590mm	2.57m	3.26m	380 Kg	9,056 litres
DMC 8	3.20m	3.37m	590mm	3.27m	3.96m	460 Kg	15,038 litres
DMC 9	3.20m	3.37m	590mm	3.27m	3.96m	460 Kg	15,038 litres

* Deeper inverts can be accommodated with our standard invert extensions.



Blower Installation

Each blower is supplied complete with an alarm and an enclosure to protect it from outdoor conditions. It should be connected to a single-phase supply (240v) via a suitable IP55 rated weatherproof socket or fused spur (not supplied) by a competent electrician. Included is 10m of airline to connect between the blower and the tank, however, blower installations of up to 30m from the tank can be accommodated. Please contact TKS EnviroCare for advice.

Service & Maintenance

Each unit is supplied complete with a service and maintenance manual. The system requires less than two hours annual maintenance. Service and maintenance agreements are available from TKS EnviroCare. Continuous bacterial digestion gives the DMS range up to 3 year desludging intervals (the DMC range generally requires annual desludging).

WPL Ltd. has a policy of continual product development and the above information may be subject to change without notice

Availability

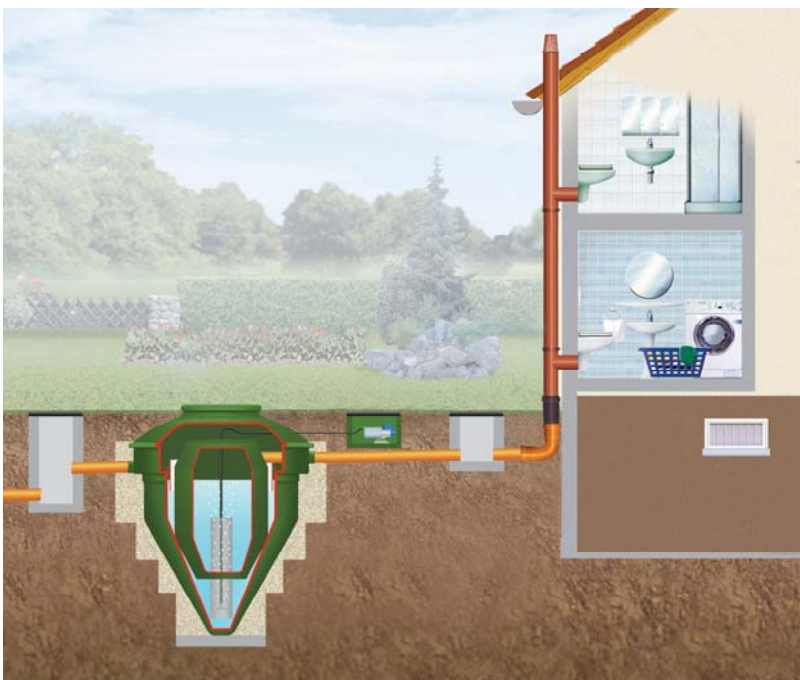
WPL manufactures the full range and units are delivered ex-stock.

Guarantee

The Diamond DMS range comes with a comprehensive five year parts and workmanship warranty on the blower and plant. The Diamond DMC range comes with a comprehensive two year parts and workmanship warranty on the blower and plant. The unit's sturdy Glass Reinforced Plastic (GRP) construction and WPL's quality assurance procedures permit a minimum life expectancy of 25 years.

Installation

Stepped excavation minimises the amount of backfill material required and the Diamond's lightweight design allows for ease of movement around the site.



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