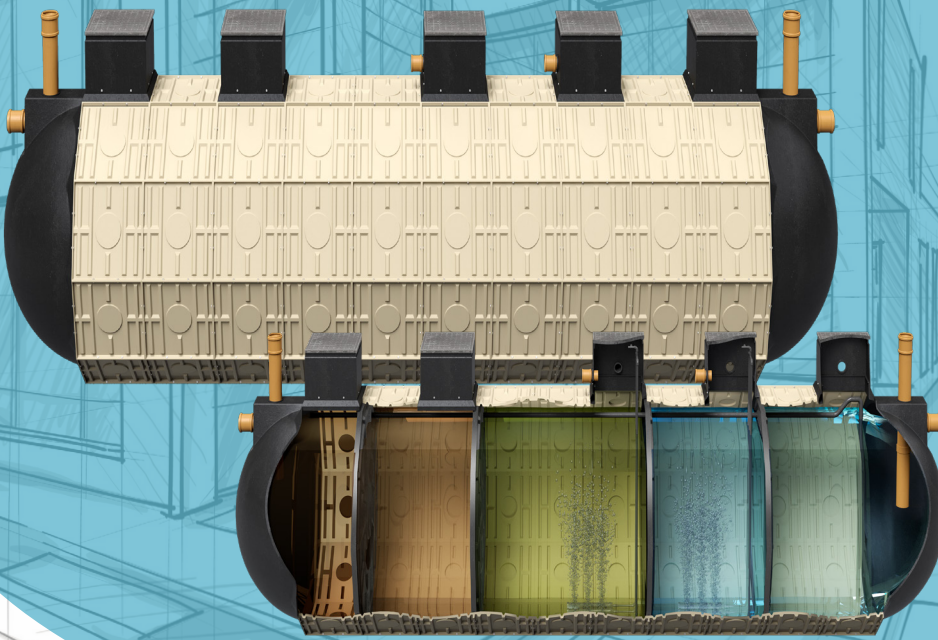



LARGE COMMERCIAL SEWAGE TREATMENT PLANTS

51 to 600
Population
Equivalent



Harlequin®
MANUFACTURING FOR TOMORROW

 @harlequinMFG
www.harlequinplastics.co.uk

A member of

BRITISH WATER



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LARGE COMMERCIAL SEWAGE TREATMENT PLANTS

Harlequin's Large Commercial Sewage Treatment Plants are designed specifically to deliver a high standard of effluent quality required for the safe discharge of wastewater. Manufactured using Sheet Moulding Compound (SMC) material they come in Octagon, Decagon and Dodecagon shapes tailor made to suit individual applications.

These industry leading systems are structurally strong and are equipped with super quiet linear diaphragm pumps / side channel blowers (depending on the size of the unit) in a suitable external blower housing unit. The unique Moving Bed Biofilm Reactor (MBBR) housed within the systems clean sewage waste to an extremely high degree suitable for discharge to both watercourse and drainage field.

They are perfectly suitable for a wide range of commercial applications including commercial buildings, hotels, caravan parks, camp sites, school, restaurants etc... with population ranging from 50 up to 600.



100 pop plant installed at a commercial establishment

KEY FEATURES

- ✓ Systems are manufactured using SMC panels ensuring structural strength and flexibility in product sizing.
- ✓ Unique Moving Bed Biofilm Reactor (MBBR) system maximises bacterial growth with no fixed media eliminating system blockages.
- ✓ No mechanical moving parts or electrical components within the plant allowing for safe and easy maintenance
- ✓ Extremely quiet pumps / blowers help minimise noise impact*
- ✓ Fully Secured Pedestrian duty non obtrusive manhole covers
- ✓ Designed in accordance with EN12255: 2002 design & testing standard
- ✓ 10-Year Extended Warranty**

HOW IT WORKS?

Primary Settlement Chamber - Wastewater feeds directly into the primary chamber of the treatment plant. Solid matter settles at the bottom of the plant where anaerobic bacteria break them down.

Aeration Chamber – Clarified water then enters the aeration chamber where it is mixed with freely moving plastic media that support large bacterial populations. As they come into contact with the media, it is purified by micro-organisms growing on the surface. The chamber is continuously aerated by high volume fine bubble diffusers which provide the oxygen to nourish the bacteria. The bubble air diffusers positioned at the bottom of the aeration chamber ensure that the media is always moving freely.

Final Settlement Chamber - The treated water finally flows through into a smaller final settlement chamber where any microscopic levels of suspended solids are collected via a sludge return and transferred back to the primary settlement chamber. From here, the completely treated water will be discharged back into the environment either directly to a watercourse or through an underground drainage field.

EXCEEDS STANDARD EFFLUENT QUALITY

Effluent designed to meet minimum efficiency standards on all plants:

Biological Oxygen Demand (BOD):

20mg/l

Suspended Solids (SS):

30mg/l

Ammoniacal-Nitrogen (NH₄-N):

20mg/l



Primary Settlement Chamber

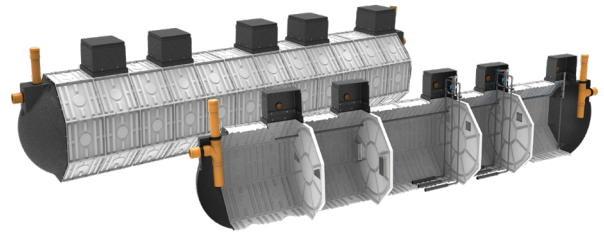
Aeration Chamber

Final Settlement Chamber

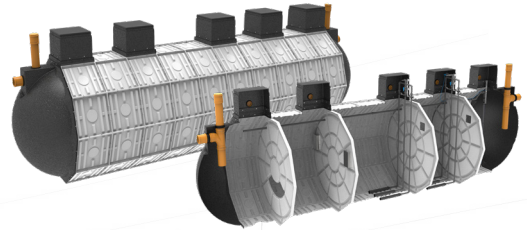
COMPLETE PRODUCT RANGE



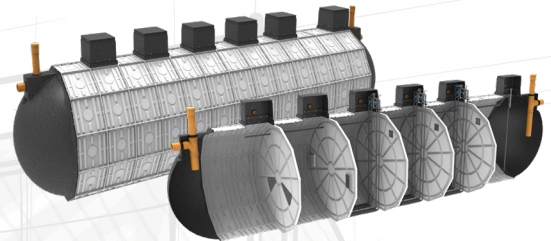
8-Sided (Octagon) Commercial Sewage Treatment Plant
Population Served: 51-70



10-Sided (Decagon) Commercial Sewage Treatment Plant
Population Served: 70-130



12-Sided (Dodecagon) Commercial Sewage Treatment Plant
Population Served: 120-600



SITE VISIT & COMMISSIONING STANDARD WITH ALL PLANTS***

APPLICATIONS INCLUDE



CARAVAN PARKS



HOTELS



COMMERCIAL BUILDING SITES



RETAIL STORES



CAMP SITES



CAFES & RESTAURANTS



SCHOOLS



GARDEN CENTRES

EXTERNAL BLOWER HOUSING

All systems are equipped with an external blower housing allowing for safe and easy maintenance.



Low Noise Impact

*When installed in accordance with manufacturers instructions
**10-year warranty only if registered
***Commissioning only verifies that the plant is set up correctly and does not carry out any other inspections or remedial works.

TECHNICAL SPECIFICATIONS

HARLEQUIN MANUFACTURING LTD

Northern Ireland

21, Clarehill Road
Moirá
BT670PB

England

Unit 1, Lancaster Business Park
East Kirkby, Lincolnshire
PE23 4BH

Model (HPOC 50-70)	HPOC-51	HPOC-60	HPOC-70
Population Served	Up to 51	51-60	61-70
Inlet Invert (mm)	900	900	900
Outlet Invert (mm)	975	975	975
Power Requirements (KWhr/Day)****	5.5	8.6	9.7
Length (mtrs)	7.5	9.6	10.3
Width (mm)	1800	1800	1800
Height (mm)	2350	2350	2350
Unit Weight (Kg)	1390	1640	1765
No of Turrets	5	5	5
Cover Sizes (mm)	600x600	600x600	600x600

Model (HPDE 70-130)	HPDE- 70	HPDE- 80	HPDE- 90	HPDE- 100	HPDE- 110	HPDE- 120	HPDE-130
Population Served	Up to 70	71-80	81-90	91-100	101-110	111-120	121-130
Inlet Invert (mm)	900	900	900	900	900	900	900
Outlet Invert (mm)	975	975	975	975	975	975	975
Power Requirements (KWhr/Day)****	9.7	10.8	10.9	11.0	14.2	17.3	17.3
Length (mm)	7.4	8.1	8.1	8.8	9.5	10.2	10.9
Width (mm)	2380	2380	2380	2380	2380	2380	2380
Height (mm)	2810	2810	2810	2810	2810	2810	2810
Unit Weight (Kg)	1625	1860	1920	2050	2190	2320	2460
No of Turrets	4	5	5	5	5	5	5
Cover Sizes (mm)	600x600	600x600	600x600	600x600	600x600	600x600	600x600

Model (HPDD 120-300)	HPDD-120	HPDD-140	HPDD-160	HPDD-180	HPDD-200	HPDD-220	HPDD-240	HPDD-260	HPDD-280	HPDD-300
Population Served	Up to 120	121 to 140	141-160	161-180	181-200	201-220	221-240	241-260	261-280	281-300
Inlet Invert (mm)	900	900	900	900	900	900	900	900	900	900
Outlet Invert (mm)	975	975	975	975	975	975	975	975	975	975
Power Requirements (KWhr/Day)****	17.3	19.4	21.6	22.8	25.9	30.2	32.4	34.6	36.7	38.9
Length (mm)	7.7	8.4	9.1	9.1	10.5	11.2	11.2	12.6	13.3	13.3
Width (mm)	2720	2720	2720	2720	2720	2720	2720	2720	2720	2720
Height (mm)	3270	3270	3270	3270	3270	3270	3270	3270	3270	3270
Unit Weight (Kg)	2180	2510	2710	2810	3100	3300	3390	3810	4130	4220
No of Turrets	4	5	5	5	5	5	5	6	7	7
Cover Sizes (mm)	600x600	600x600	600x600	600x600	600x600	600x600	600x600	600x600	600x600	600x600

Plants serving population of above 300 will need to be customised to requirements.

Turret invert depth can be increased with riser kits to a maximum of 1.7m / 2 risers.

****Please note that power usage may differ dependant on the requirements for the process return.

Please Note: Actual product colours may vary from colours shown. All information contained herein is understood to be correct at time of publication. Harlequin Manufacturing Ltd. reserve the right to amend product specifications without notice. Please check our website for the most up to date product information.

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