Simple & Reliable Wastewater Treatment

- Low running costs - only a 55 Watt air blower
- Simple aeration process that is low maintenance
- Easy to install in any site - even with high water tables / bad ground conditions
- Shallow dig tank for easy installation
- No moving parts in the tank
- GSM, audible and visual alarm systems available
- Certified to EN12566-3 and SR66
- Simple, reliable and trouble free operation
- Quiet, odourless operation
- Produces less sludge than other systems so has 30% longer desludging intervals
**Biocellwater.com sewage treatment plant specifications**

<table>
<thead>
<tr>
<th></th>
<th>Height</th>
<th>Diameter</th>
<th>Weight</th>
<th>Access Opening</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Power Supply</th>
<th>Material</th>
<th>Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1-8 PERSON</strong></td>
<td>1600mm</td>
<td>2250mm</td>
<td>3500kg</td>
<td>900mm</td>
<td>110mm/4&quot;</td>
<td>110mm/4&quot;</td>
<td>3 core cable</td>
<td>Concrete</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>9-12 PERSON</strong></td>
<td>1600mm</td>
<td>2550mm</td>
<td>4000kg</td>
<td>900mm</td>
<td>110mm/4&quot;</td>
<td>110mm/4&quot;</td>
<td>3 core cable</td>
<td>Concrete</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>12-20 PERSON</strong></td>
<td>2000mm</td>
<td>2500 W + 4500 L</td>
<td>10000kg</td>
<td>900mm</td>
<td>110mm/4&quot;</td>
<td>110mm/4&quot;</td>
<td>3 core cable</td>
<td>Concrete</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**How your sewage treatment plant works**

Final settlement of the clean water occurs in this final clarifier chamber. A pump can be positioned here for a system with the need for a pumped discharge. And final solids that settle out in this chamber are returned to the primary chamber by a small air powered siphon.

Raw sewage enters the primary chamber. Solids settle out here and fats, oils, greases separate from the sewage. Cleaner water then passes into the reactor chamber.

In the aeration chamber, bacteria grow on the plastic carrier material. This bacteria then feeds on the organic waste and cleans the wastewater to a very high level. The treatment process is totally natural.

**IRELAND SALES OFFICE**
Email: sales@biocell.ie
Office Phone: +353 (0) 91705964
Depot Address: Biocell Ireland, Unit 31, Ballybane Ind. Estate, Tuam Road, Galway City, H91 X239

**UK SALES OFFICE**
Email: sales@biocellwater.com
Office Phone: +44 (0) 2080128198
Depot Address: Biocell UK, Unit 2, Park House, 37 Ings Road, Leeds, West Yorkshire, LS9 9EJ
NOTES:
1 - Population design equivalent up to 8 persons
2 - Maximum hydraulic loading - 1200L/day
3 - Maximum organic loading - 480g BOD/day
4 - Effluent standards - <20mg/l BOD, <30mg/l SS, <20mg/l Ammonia
5 - Tank manufactured from reinforced precast concrete.
6 - Tank tested to EN12566 for durability, structural integrity and water tightness.
7 - Equipment tested to EN12566-3
8 - Complete system compliant with SR56, EPA standards and EN12566-3.
9 - Total system volume - 6000L.
10 - System weight c.3750kg with lid.
11 - Electrical supply - single phase, 220v.
12 - Inlet/outlet connections 110mm uPVC (32mm Ø for pumped)
13 - A firm, rock free level base is required. Installation as per manual.
14 - Visual and audible alarms available.
15 - Observe all safety regulations in regard to excavation and lifting requirements.
16 - Specify any non standard requirements/optional extras prior to ordering.
17 - Venting by client as per building regulations.
18 - All civil works by client.
19 - Plumbing connections and electrical connection by client.
20 - Equipment must be operated in accordance with operation manual.
21 - Do not scale from this drawing. Only for illustration purposes.
22 - Drawings and dimensions subject to change without notification. All dimensions +/- 25mm.
23 - This drawing is copyright. All rights reserved.
P 12 Gravity Version

NOTES:
1 - Population design equivalent up to 12 persons
2 - Maximum hydraulic loading - 1800L/day
3 - Maximum organic loading - 720g BOD/day
4 - Effluent standards - <20mg/lBOD, <30mg/l SS, <20mg/l Ammonia
5 - Tank manufactured from reinforced precast concrete.
6 - Tank tested to EN12566 for durability, structural integrity and water tightness.
7 - Equipment tested to EN12566-3
8 - Complete system compliant with SR66, EPA standards and EN12566-3.
9 - Total system volume - 9000L.
10 - System weight c.3750kg with lid.
11 - Electrical supply - single phase, 220v.
12 - Inlet/outlet connections 110mm uPVC (32mm Ø for pumped)
13 - A firm, rock free level base is required. Installation as per manual.
14 - Visual and audible alarms available.
15 - Observe all safety regulations in regard to excavation and lifting requirements.
16 - Specify any non standard requirements/optional extras prior to ordering.
17 - Venting by client as per building regulations.
18 - All civil works by client.
19 - Plumbing connections and electrical connection by client.
20 - Equipment must be operated in accordance with operation manual.
21 - Do not scale from this drawing. Only for illustration purposes.
22 - Drawings and dimensions subject to change without notification. All dimensions +/- 25mm.
23 - This drawing is copyright. All rights reserved.

P 12 Pumped Version

NOTES:
1 - Population design equivalent up to 12 persons
2 - Maximum hydraulic loading - 1800L/day
3 - Maximum organic loading - 720g BOD/day
4 - Effluent standards - <20mg/lBOD, <30mg/l SS, <20mg/l Ammonia
5 - Tank manufactured from reinforced precast concrete.
6 - Tank tested to EN12566 for durability, structural integrity and water tightness.
7 - Equipment tested to EN12566-3
8 - Complete system compliant with SR66, EPA standards and EN12566-3.
9 - Total system volume - 9000L.
10 - System weight c.3750kg with lid.
11 - Electrical supply - single phase, 220v.
12 - Inlet/outlet connections 110mm uPVC (32mm Ø for pumped)
13 - A firm, rock free level base is required. Installation as per manual.
14 - Visual and audible alarms available.
15 - Observe all safety regulations in regard to excavation and lifting requirements.
16 - Specify any non standard requirements/optional extras prior to ordering.
17 - Venting by client as per building regulations.
18 - All civil works by client.
19 - Plumbing connections and electrical connection by client.
20 - Equipment must be operated in accordance with operation manual.
21 - Do not scale from this drawing. Only for illustration purposes.
22 - Drawings and dimensions subject to change without notification. All dimensions +/- 25mm.
23 - This drawing is copyright. All rights reserved.
TREATMENT PERFORMANCE RESULTS

Initial type test performed by Bokatec
Distributed by PPU Umwelttechnik GmbH + Biocell Ireland
95448 Bayreuth, Germany / Galway, Ireland

EN 12566-3 Annex B
Results corresponding to EN 12566-3 and S.R. 66
PIA-SR66-1604-1049, shared it

Small wastewater treatment system Biocell-FBS
Fluidized bed process with throttle in final settlement chamber (initial type test) in combination with Shay Murtagh tanks

<table>
<thead>
<tr>
<th>Nominal organic daily load</th>
<th>0.27 kg/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal hydraulic daily load</td>
<td>0.75 m³/d</td>
</tr>
<tr>
<td>Treatment efficiency (nominal sequences)</td>
<td>Efficiency</td>
</tr>
<tr>
<td>COD</td>
<td>92.6 %</td>
</tr>
<tr>
<td>BOD₅</td>
<td>96.5 %</td>
</tr>
<tr>
<td>NH₄-N</td>
<td>74.0 %</td>
</tr>
<tr>
<td>SS</td>
<td>96.8 %</td>
</tr>
<tr>
<td>Number of desludging</td>
<td>Not more than once</td>
</tr>
<tr>
<td>Electrical consumption</td>
<td>0.46 kWh/d</td>
</tr>
</tbody>
</table>

Performance tested by:

PIA – Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
Hergenrather Weg 30
52074 Aachen, Germany

This document replaces neither the declaration of performance nor the CE marking.
TREATMENT PERFORMANCE RESULTS

Initial type test performed by **Shay Murtagh**
Distributed by **PPU Umwelttechnik GmbH + Biocell Ireland**

**EN 12566-3 Annex A and C**
Results corresponding to EN 12566-3 and S.R. 66
**PIA-SR66-1604-1049, shared itt**

**Concrete tank**
Concrete tanks for Fluidized bed process with throttle in final settlement chamber in combination with Biocell-FBS kit

<table>
<thead>
<tr>
<th>Material</th>
<th>Concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watertightness</td>
<td>Pass</td>
</tr>
<tr>
<td>Structural behaviour (vertical load test)</td>
<td>Pass (also wet conditions)</td>
</tr>
<tr>
<td>Durability</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Performance tested by:

**PIA – Prüfinstitut für Abwassertechnik GmbH**
(PIA GmbH)
Hergenrather Weg 30
52074 Aachen, Germany

This document replaces neither the declaration of performance nor the CE marking.

Elmar Lancé  November 2016
### FBS range shared ITT and its referring test reports:

<table>
<thead>
<tr>
<th>Population equivalent (PE)</th>
<th>Drawing of model of the range</th>
<th>Water-tightness (EN 12566-3 Annex A)</th>
<th>Treatment Efficiency (EN 12566-3 Annex B)</th>
<th>Structural Behaviour (EN 12566-3 Annex C)</th>
<th>Durability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial type test (ITT) 5</td>
<td>Not relevant</td>
<td>Not relevant</td>
<td>Pass</td>
<td>Not relevant</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Compared Tank 5</td>
<td><img src="image1" alt="Diagram" /></td>
<td>Pass</td>
<td>Shared ITT conformity check according to S.R. 66:2015</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td><img src="image2" alt="Diagram" /></td>
<td></td>
<td>For wet ground conditions also, 0.70 m installation depth from inlet invert</td>
<td>PIA2016-DH-1602-1025.01</td>
<td>PIA2016-DH-1602-1025.01</td>
</tr>
<tr>
<td>8</td>
<td><img src="image3" alt="Diagram" /></td>
<td>Pass</td>
<td>Range conformity according to S.R. 66:2015</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td><img src="image4" alt="Diagram" /></td>
<td></td>
<td>For wet ground conditions also, 0.70 m installation depth from inlet invert</td>
<td>PIA2016-DH-1602-1025.01</td>
<td>PIA2016-DH-1602-1025.01</td>
</tr>
<tr>
<td>12</td>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For wet ground conditions also, 0.70 m installation depth from inlet invert</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16</th>
<th>Pass</th>
<th>Pass</th>
<th>Pass</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PIA2016-WD-1602-1025.01</td>
<td>Range conformity according to S.R. 66:2015</td>
<td>PIA2016-DH-1602-1025.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For wet ground conditions also, 0.70 m installation depth from inlet invert</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20</th>
<th>Pass</th>
<th>Pass</th>
<th>Pass</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>For wet ground conditions also, 0.70 m installation depth from inlet invert</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>