

# Sand Filters

Valveless Tertiary Treatment Information Pack

Innovating Wastewater Solutions



| temporary or long term solution | reduces suspended solids |  
| simple installation | low maintenance | reliable | low operating  
costs | | final stage treatment | up to 600 pe |

# Sand Filters

**Add-on filters to effectively meet stringent consent standards for new and existing sewage treatment plants.**



Population Equivalent	Max. Flow (m <sup>3</sup> /day)	Filter Area (m <sup>2</sup> )	Diameter (m)	Backwash Flow Required (m <sup>3</sup> /h)	Pumps Flow (m <sup>3</sup> /h)	Air Volume Required (m <sup>3</sup> /h)	Time for Backwash (min)	Max. Flow (m <sup>3</sup> /day)
70	42	0.28	1.6	10.2	18	20.4	4.5	42
200	120	0.79	2.45	28.3	36	6.5	4.5	120
300	180	1.33	2.7	47.8	42	95.6	4.5	180
600	360	2.01	3	72.4	81	144.8	4.5	360

## Benefits

- Acts as final stage treatment process to remove a minimum 60% Suspended Solids: 40% Biological Oxygen Demand (BOD)
- Can be installed above or below ground
- Low cost solution to improving existing treatment plants failing to meet current or new, more onerous, consent standards
- Tried and tested design incorporated into WPL's successful range of HiPAF treatment plant
- Population equivalents up to 600, multiples thereafter
- Timed backwash sequence incorporates air scour, combined air scour and backwash, and final rinse phases

## System design

- Influent can flow by gravity or be pumped into filter unit
- Backwash removes solids trapped in sand filter media and waste backwash water is returned to the plant for re-treatment
- Units are sized to tackle various flow rates
- An additional waste washwater holding tank can be incorporated to control return rate to works inlet
- No need to inhibit inflow to filter during backwash cycle plant sizes

WPL is recognised internationally as a principle designer and manufacturer of high quality package and turnkey sewage treatment systems, and grease management solutions.

It has over 15 years' industry experience and services an extensive customer portfolio comprising the UK's major water utilities, all areas of the commercial sector and the domestic market place.

The company's consistent focus on ecology, coupled with extensive research & development into new technology, have enabled it to far exceed all existing and proposed discharge consent standards enforced by the Environment Agency, SEPA and other regulatory authorities.



WPL Limited  
Units 1 & 2 Aston Road  
Waterlooville  
Hampshire PO7 7UX  
United Kingdom

Tel: (+44) 0 845 4504822  
Fax: (+44) 0 23 92242624  
email: [enquiries@wpl.co.uk](mailto:enquiries@wpl.co.uk)  
[www.wpl.co.uk](http://www.wpl.co.uk)

