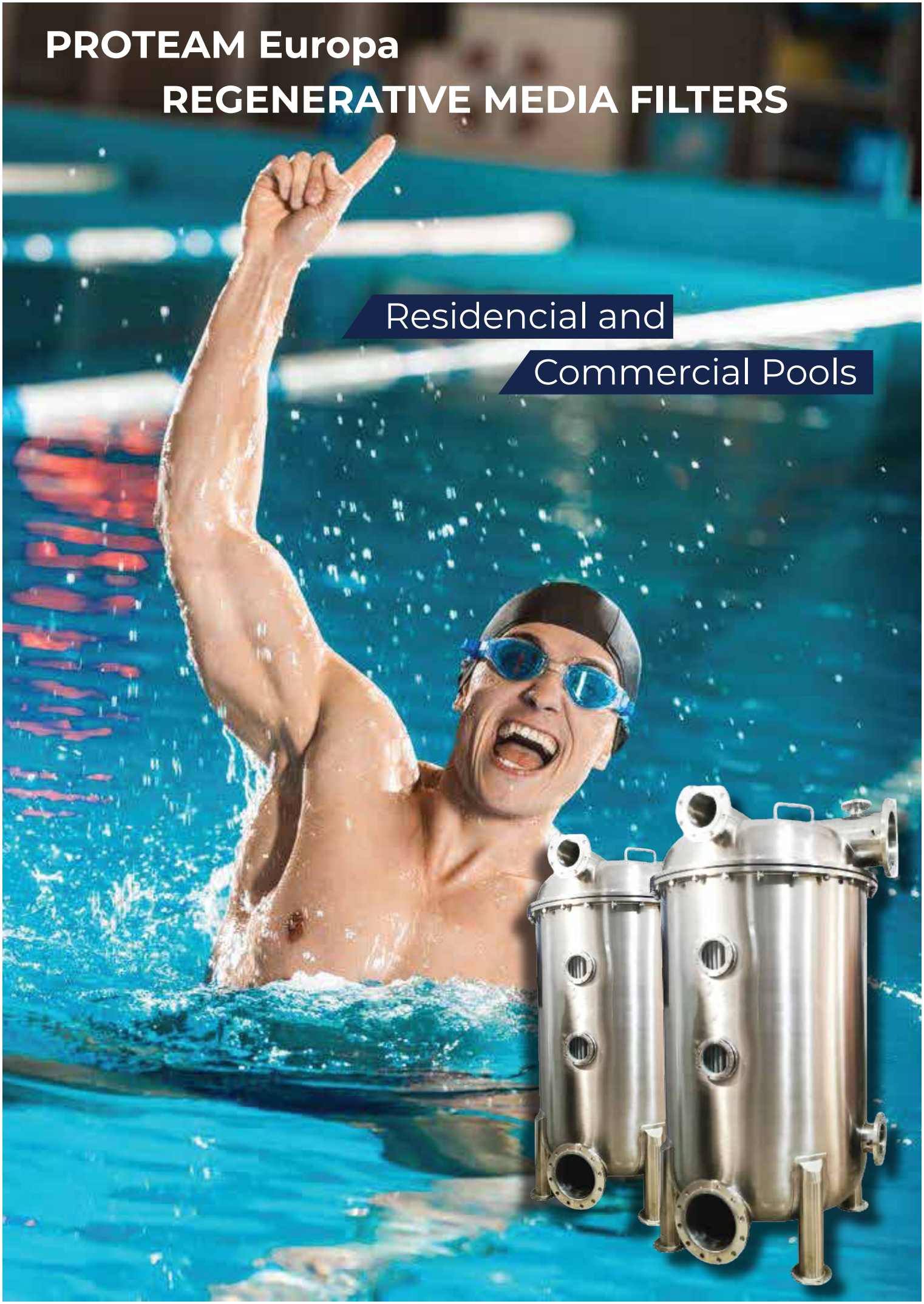
# PROTEAM Europa

# REGENERATIVE MEDIA FILTERS

## Residencial and Commercial Pools



## Regenerative Media Filter Model

### Filtration of Extremely Small Particles as small as 1 Micron

Proteam Regenerative Media Filter is a more efficient alternative to sand or D.E. filtration. It's capable of filtering out materials as small as the 1 to 5 micron size range, while traditional sand filters can only remove particles in the 15 to 20 micron range. A micron is one millionth of a millimeter. A human hair is about 50 microns in diameter. Regenerative Media Filter is the only category of swimming pool filter that may capture viruses since viruses are too small to be effectively captured by more traditional sand filtration it can remove parasites such as cryptosporidium(crypto) most of these harmful bacteria will be captured and removed from the pool water. Traditional sand filters will rarely capture these tiny microorganisms (crypto is on the order of 3 to 5 microns in size). The ultra fine filtration of the Regenerative Media Filter will produce safer and cleaner water in your swimming pool. This can be observed visually and in testing we have observed a measured value of 0.02 NTU. Most standards around the world are 0.2 NTU meaning the Regenerative Media Filter is cleaning the water of suspended solids 10 times above the standards required.

### High Level of Water Conservation

Proteam Regenerative Media Filters have high level of water conservation, only water loss associated with the Regenerative Media Filter is twice the volume of the filter tank itself usually once a month with a correctly sized filter. usually once a month with a correctly sized filter. When it is time to replace the perlite material in the tank, after several regenerative cycle the volume of an entire tank is wasted to removal of all dirty perlite. The Regenerative Media Filter cleaning will use approximately a tanks volume to clean the tubes of any remaining perlite and debris. This water loss is magnitudes less than with a traditional sand filter that requires a backwash rate generally 1.5 times the filter flow rate for a period of 3 to 5 minutes at least once a week. With a sand filter this must occur every time the filter needs to be backwashed. Water savings are more than 90% compared to equivalent sand filters.

### Energy saving and Spaces & amp; Construction saving

Proteam Regenerative Media Filter operates at lower head pressure throughout the filter cycle reducing power demand. And the elimination of backwash waste associated with sand filtration provides significant wastewater treatment savings. Compare with traditional sand filters, Regenerative Media Filter has more effective filter area. In the same filter area, Regenerative Media Filter takes up 1/4 to 1/6 of the space required by an equivalently sized sand system. This saves both space and construction costs.

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## Regenerative Media Filter Model

### Proteam Regenerative Media Filter Model - FS Series

| Model | Tank SIze mm | 4Hr Turnover @3m³/m²/hr | Perlite Kg | Filter Area m² | Flow m³/hr | Influent Efluent SIze |
|---|---|---|---|---|---|---|
| FS-450 | 450 | 66 | 2.1 | 6 | 17 | DN50 |
| FS-500 | 500 | 85 | 2.7 | 7 | 21 | DN80 |
| FS-550 | 550 | 107 | 3.4 | 9 | 27 | DN80 |
| FS-600 | 600 | 130 | 4.2 | 11 | 33 | DN80 |
| FS-660 | 660 | 156 | 5.0 | 13 | 39 | DN100 |
| FS-710 | 710 | 185 | 5.9 | 15 | 46 | DN100 |
| FS-760 | 760 | 215 | 6.9 | 18 | 54 | DN100 |
| FS-810 | 810 | 249 | 8.0 | 21 | 62 | DN150 |

### Regenerative Media Filter Model - FM Series

| Model | Tank SIze mm | 4Hr Turnover @3m³/m²/hr | Perlite Kg | Filter Area m² | Flow m³/hr | Influent Efluent SIze |
|---|---|---|---|---|---|---|
| FM-660 | Φ660 | 221 | 7.1 | 18 | 55 | DN100 |
| FM-710 | Φ710 | 261 | 8.4 | 22 | 65 | DN150 |
| FM-760 | Φ760 | 305 | 9.8 | 25 | 76 | DN150 |
| FM-810 | Φ810 | 352 | 11.3 | 29 | 88 | DN150 |
| FM-860 | Φ860 | 403 | 12.9 | 34 | 101 | DN150 |
| FM-920 | Φ920 | 456 | 14.6 | 38 | 114 | DN200 |
| FM-970 | Φ970 | 514 | 16.4 | 43 | 128 | DN200 |
| FM-1020 | Φ1020 | 574 | 18.4 | 48 | 144 | DN200 |

### Regenerative Media Filter Model - FT Series

| Model | Tank SIze mm | 4Hr Turnover @3m³/m²/hr | Perlite Kg | Filter Area m² | Flow m³/hr | Influent Efluent SIze |
|---|---|---|---|---|---|---|
| FT-810 | Φ810 | 559 | 17.9 | 47 | 140 | DN200 |
| FT-860 | Φ860 | 639 | 20.5 | 53 | 160 | DN200 |
| FT-920 | Φ920 | 725 | 23.2 | 60 | 181 | DN200 |
| FT-970 | Φ970 | 816 | 26.1 | 68 | 204 | DN200 |
| FT-1020 | Φ1020 | 912 | 29.2 | 76 | 228 | DN250 |
| FT-1070 | Φ1070 | 1013 | 32.4 | 84 | 253 | DN250 |
| FT-1120 | Φ1120 | 1119 | 35.8 | 93 | 280 | DN250 |
| FT-1180 | Φ1180 | 1231 | 39.4 | 103 | 308 | DN250 |

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# Filtration

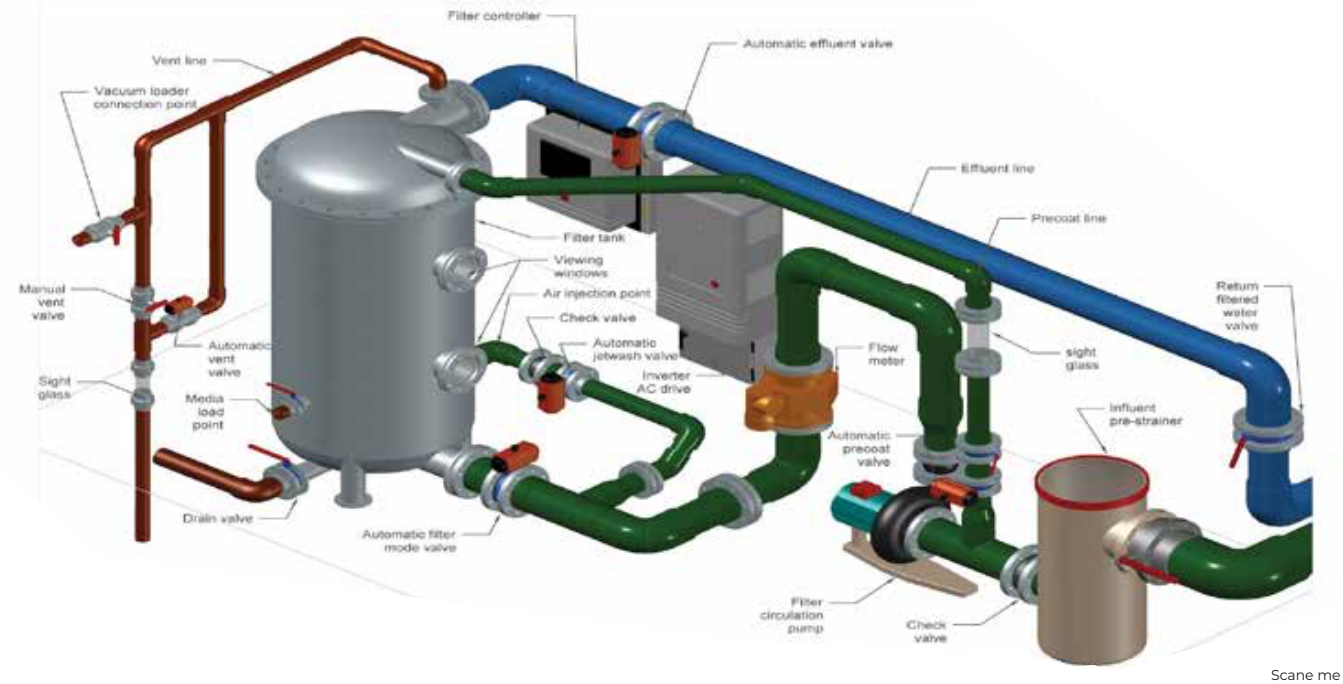
### Regenerative Media Filter Model - FT Series

| Model | Tank SIze mm | 4Hr Turnover @3m³/m²/hr | Perlite Kg | Filter Area m² | Flow m³/hr | Influent Efluent SIze |
|---|---|---|---|---|---|---|
| FT-1230 | ϕ 1230 | 1348 | 43.2 | 112.4 | 337.1 | DN250 |
| FT-1280 | ϕ 1280 | 1471 | 47.1 | 123 | 368 | DN250 |
| FT-1330 | ϕ 1330 | 1601 | 51.3 | 133 | 400 | DN250 |
| FT-1380 | ϕ 1380 | 1735 | 55.6 | 145 | 434 | DN300 |
| FT-1440 | ϕ 1440 | 1874 | 60.0 | 156 | 469 | DN300 |
| FT-1490 | ϕ 1490 | 2018 | 64.6 | 168 | 505 | DN300 |

### Features

Stainless Steel 304 or optional 316L Filter shell and internals. Designed for reduce height installations. Tallest filter in the range is only 2500mm when installed. Air scour perlite removal and no moving parts. Precoat line has independent flanged connection to the filter. System allow operators to clean the tubes during media replacement. Filters can be custom made to suit the installation. Flange connections and windows can be moved in the design phase. Two windows to better see what is happening inside the filter. Windows are glass. May be shipped and moved laying down. This simplifies shipping and work site movement. Packed in ply wood box to protect during shipping. Automatic air purge in the vent system. Large range of sizes from 16.5 to 307.7 m³/hour. There is a filter size for every installation.

## Schematic Regeneration Media Filter

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## Regenerative Media Filter Model

### Automatic Controller with Remote Access Ability

Proteam Regeneration media filter comes with automatic control system which using a 10" high resolution LCD touch screen control panel with on screen menus to make operation quick and easy. Automatic control system provides a platform for data collection like filter pressures, water flow rates, events and faults that is stored both locally within each units and in I- cloud based servers for later analysis. with information and control. You can achieve the most efficient operations, saving energy, chemicals and labor.

## Features

10 inch industrial touch screen. | View all installed components from a single screen. | Flow switch inputs. Integrated with our inverter pump controllers. | Pneumatic valve position feedback. | 1 or 2 pump controls for filter. | Duty cycle system is built in for filter circulation pumps. | Pump control for chemical circulation circuit. | Dry contact enable signal for chemical systems | pump control for heat circulation circuit. Optional inverter control for large installations. | Dry contact enable signal for heating systems. | Integrated flow meter. | Water temperature monitoring which can control heater circulation to setpoint. | Phase failure monitoring. | Air pressure monitoring. | Filter pressure monitoring. | Balance tank level and water makeup. Timed lighting control outputs. | Power saving mode by time of day to reduce filter flow. | Peak/Off peak input to control heating systems.

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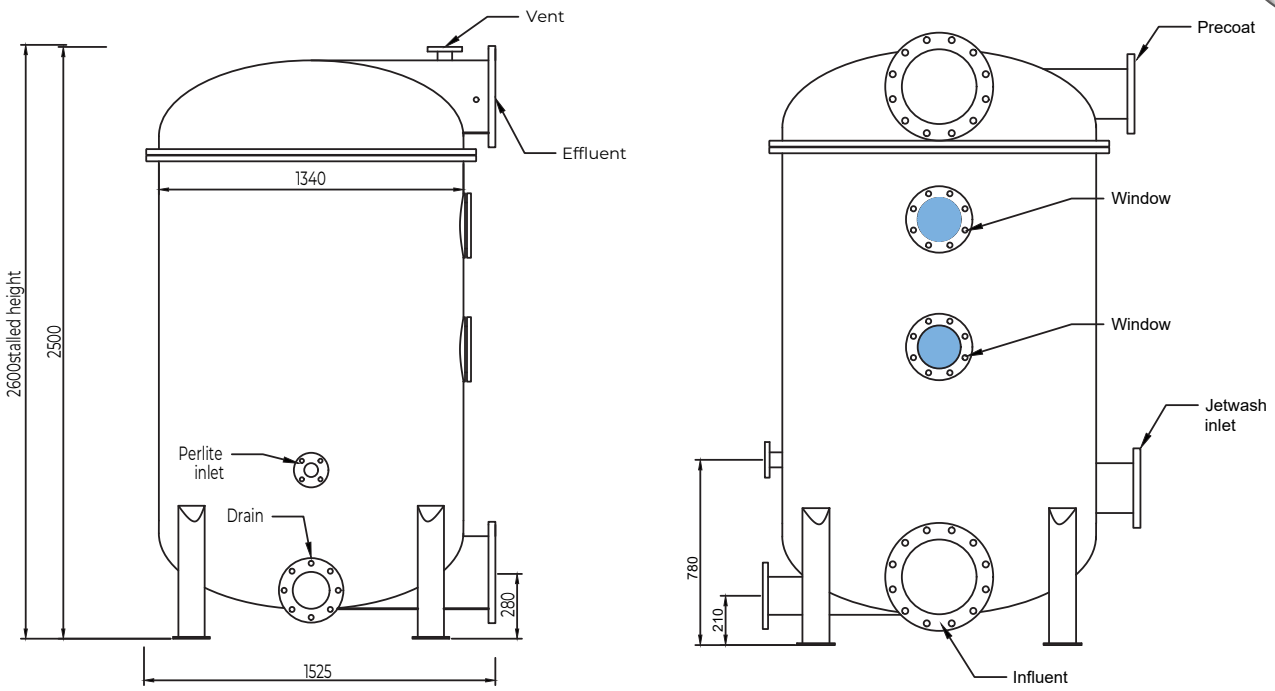
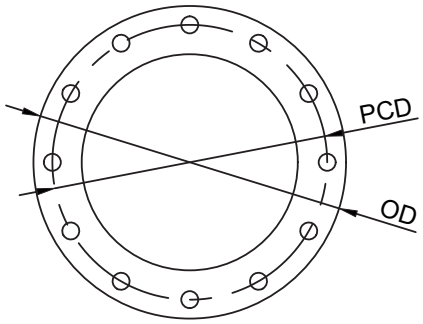
# Filtration

## Regenerative Media Filter Model




**Proteam FT-1330**




| FT1330 | |
|---|---|
| Flow rate | 162.6 to 399.8 m³/ hr |
| Area | 133.3 m² |
| Tank volume | 2640 litres |
| Filter Dry Weight | 990 kg |
| Perlite load | 51.2 kg |

| Flanges | | | | |
|---|---|---|---|---|
| Number Holes | Size | OD | PCD | |
| Influent | DN300 | 455 | 406 | 12 |
| Effluent | DN300 | 455 | 406 | 12 |
| AT System | DN200 | 335 | 292 | 8 |
| Precoat | DN200 | 335 | 292 | 8 |
| Drain | DN150 | 280 | 235 | 8 |
| Perlite Inlet | DN50 | 150 | 114 | 4 |
| Vent | DN50 | 150 | 114 | 4 |

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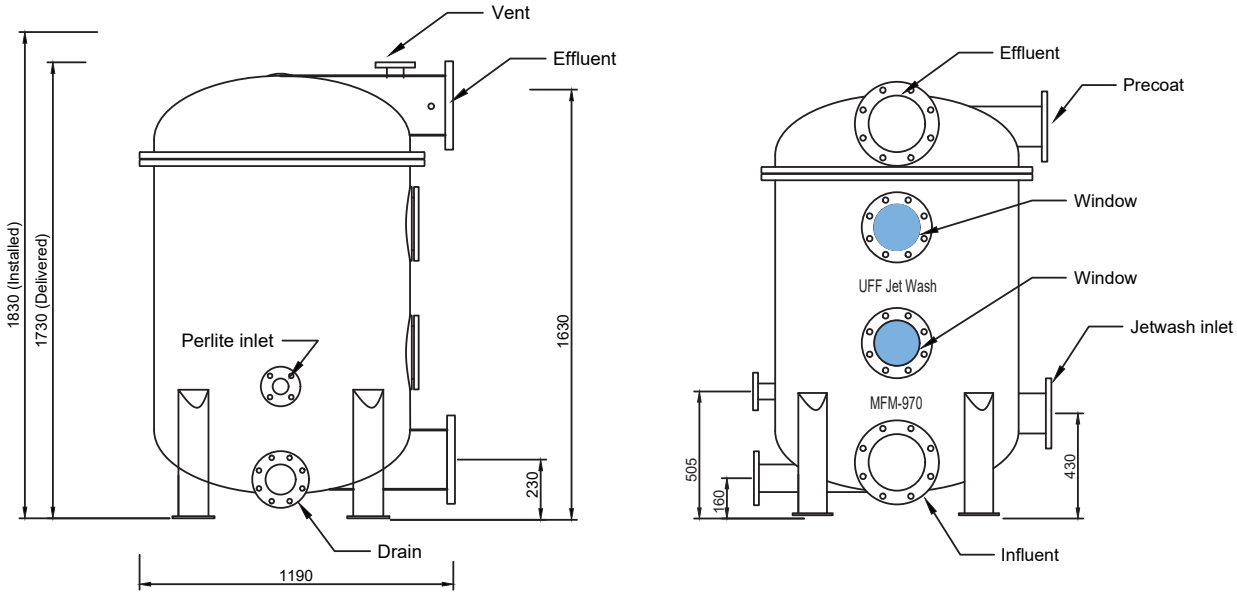
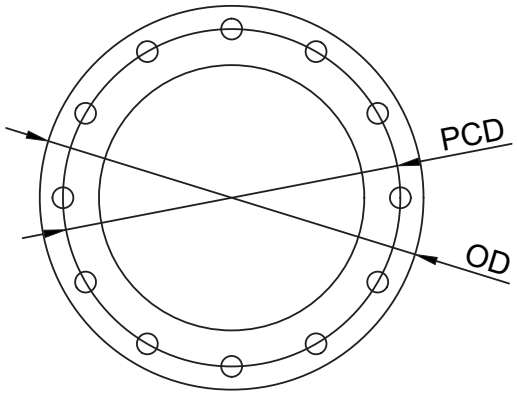
## Regenerative Media Filter Model




**Proteam FM-970**




| FM970 | |
|---|---|
| Flow rate | 52.2 to 128.4 m³/hr |
| Area | 42.8 m² |
| Tank volume | 1035 litres |
| Perlite load | 16.4 kg |
| Influent Effluent flanges | DN200 |
| Precoat Jetwash flanges | DN150 |
| Drain flange | DN80 |
| Vent flange | DN50 |

| Flanges | | | | |
|---|---|---|---|---|
| | Size | OD | PCD | Number Holes |
| Influent | DN200 | 335 | 292 | 8 |
| Effluent | DN200 | 335 | 292 | 8 |
| AT System | DN150 | 280 | 235 | 8 |
| Precoat | DN150 | 280 | 235 | 8 |
| Drain | DN150 | 280 | 235 | 8 |
| Perlite Inlet | DN50 | 150 | 114 | 4 |
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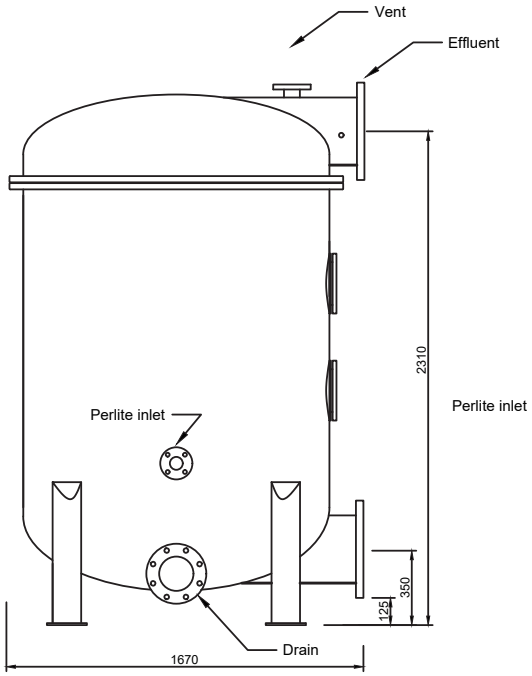
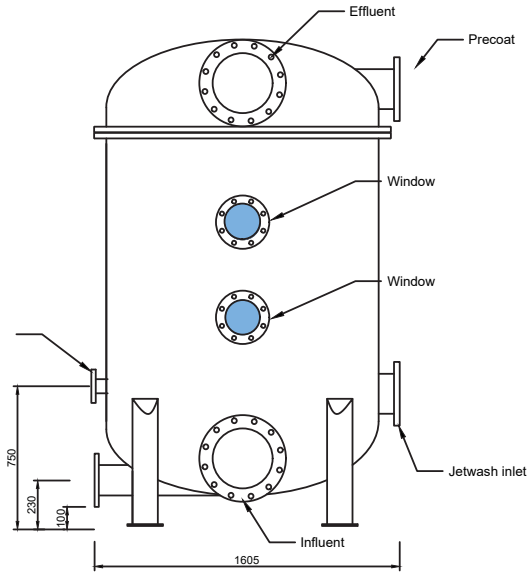
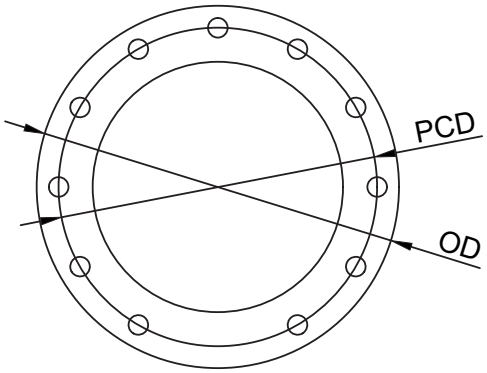
## Regenerative Media Filter Model




**Proteam FT-1440**




| FT-1440 | |
|---|---|
| Flow rate | 190.6 to 468.6 m³/hr |
| Area | 156.2 m² |
| Tank volume | 3094 litres |
| Perlite load | 60 kg |

| Flanges | | | | |
|---|---|---|---|---|
| | Size | OD | PCD | Number Holes |
| Influent | DN300 | 455 | 406 | 12 |
| Effluent | DN300 | 455 | 406 | 12 |
| At System | DN200 | 335 | 292 | 8 |
| Precoat | DN200 | 335 | 292 | 8 |
| Drain | DN150 | 280 | 235 | 8 |
| Perlite Inlet | DN50 | 150 | 114 | 4 |
| Vent | DN50 | 150 | 114 | 4 |

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