

Sample acquisition, preparation & filtrate delivery...

raw & waste water solutions

PPM manufacture three types of sample preparation systems for analytical measurement. Cross Flow Filtration, Paper Band Filtration & Membrane Filtration. Selection is determined by the application, the temperature & physical water quality i.e. the concentration of suspended solids, biology, oils, fat & grease. Depending upon sample quality, we would typically select an appropriate submersible or industrial peristaltic pump, to deliver sample to the filtration system, unless a positive sample head is available.

Cross Flow Filtration

Filtration: CFF

Description: The CFF comprises a stainless steel outer body & filter element that has a dog tooth mesh. Filtration to a nominal 50 micron. Ideal as a precautionary screen to protect analysers, from occasional particulate ingress.

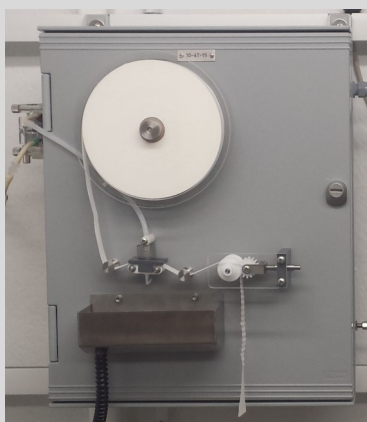


Sample Supply: Circa 1-3L/min
Filtrate rate: 10ml/min
Sample Temperature: 0-60°C
Max Suspended Solids: 50 mg/L

Paper Band Filtration

Filtration: PBF

Description: The PBF comprises a surface mount enclosure containing a peristaltic sample pump, delivering sample through a continuous moving filter paper. Sample is filtered to a nominal 20 micron. Ideal for sample containing small amounts of fat, grease or glycol ethylene.



Sample Supply: Circa 1-5L/min
Filtrate rate: 10ml/min
Sample Temperature: 0-50°C
Max Suspended Solids: 250 mg/L

Membrane Filtration

Filtration: Panel Filter

Description: The membrane panel is a double sided filter element housed within a stainless steel panel. The filter removes solids & biology above a nominal 0.45 micron; ideal for sample with limited fat or grease.



Sample Supply: Circa 1-10L/min
Filtrate rate: 10-20ml/min
Sample Temperature: 0-45°C
Max Suspended Solids: 1,000 mg/L



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www.pollution-ppm.co.uk

Southern Sales & Service Centre (Head Office)

Units 18 & 19 Bourne Enterprise Centre,
Borough Green, Kent TN15 8DG.
tel: 01732 882044
mail: TOC@pollution-ppm.co.uk

Northern Service Office

Unit 9 High Hazel Court, Coombe Road, Newthorpe,
Nottinghamshire. NG16 3SU.
tel: 01773 717318
mail: service@ppm-north.co.uk

Direct Membrane Filtration

Filtration: DMF

Description: The membrane filter may be installed directly into the sample chamber, using a special stainless steel plate suspended from a chain & hand rail bracket. Suitable for mixed liquor & final effluents.



Filtrate Rate: 10-20ml/min
Sample Temperature: 0-45°C
Max Suspended Solids: 20,000 mg/L

Filtrate Delivery Pump

Pump: Peristaltic Filtrate Pump

Description: The surface-mount pump, continuously delivers the filtered sample from the membrane filter (panel or DMF version) to a filtrate header, from which the analyser draws sample for analysis. One or two pump tubes, may be fitted depending upon configuration.



Filtrate Supply: 10ml-20ml/min
Max Sample Lift: 3.0m (1/4" hose)
Max Distance: 5.0m (1/4" hose)
Power Supply: 110/230VAC

Sample Delivery Systems

Pump: Submersible Pumps

Description: Sample pump selection is dependent upon the sample type & operation conditions. We provide various submersible pumps for effluents & surface water, capable of different sample lifts. Pumps may be fitted with automatic float switches, as a precaution against dry flows.

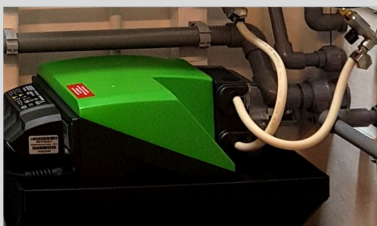


Sample Supply: 25-50L/min
Max Sample Lift: 5-11.0m
Versions: Manual or Auto
Power Supply: 110/230VAC

Sample Delivery Systems

Pump: Peristaltic Pumps

Peristaltic sample pumps may be used with an inlet strainer to deliver problematic sample or intermittent flows. Integration of compressed air back-purging can minimise ragging.



Sample Strainers

Strainers: Ingress Protection

To reduce the risk of blockage, stainless steel strainers, screen sample to 3mm & connect to 3/8" ID flexible hose. Low cost versions available for 1/4" ID flexible hose.

Short Strainer 3/8": 250 x 44 mm
Long Strainer 3/8": 500 x 44 mm
Small Strainer 1/4": 110 x 50 mm
Large Strainer 1/4": 150 x 85 mm



Kiosks, Panels & Tanks

Bespoke: Measurement Systems

PPM specialise in bespoke systems - instruments pre-mounted into kiosks, on PVC panels, sensors in PVC tanks, flow cells & pre-formed pipework.



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