

# MULTI PURPOSE FILTER VESSEL

## Introduction.

Many fluid handling systems require dirt or water removal from the process stream. At low flow rates, below approximately 200 Litres/Minute, small mass produced filter vessels are used. Large flow rates, typically above 1000 Litres/Minute, are dealt with by fabricating pressure vessels to order. However, these vessels are very expensive because they are designed and built in small quantities for specific applications. Until now there has been no sensibly priced filter vessel between the two extremes.

A typical application is aircraft refuelling. In this industry dirt and water levels must be kept very low, and filtration is specified by the fuel suppliers using internationally recognised standards. The mass produced vessels are ideal for refuelling small aircraft from kerbside pumps, but are totally inadequate for refuelling larger aircraft, or for road tanker offloading or fueller loading.

We set out to design a low cost filter vessel to fill this gap in the market, and the result is our Horizontal Multi Purpose Filter (HMPF). It is aimed at into aircraft refuelling, road tanker offloading, and fueller loading at flow rates up to 500 Litres/Minute, which is typical for a small to medium sized airport fuel depot.

## General Description.

The HMPF is a horizontal Stainless Steel filter vessel designed to accept 6" outside diameter by 3.1/2" inside diameter cylindrical filter elements. Microfilter or water absorbing monitor elements can be fitted depending on the application. Our vessel has been designed from the outset with cost as one of the primary considerations, but we have incorporated high quality materials and workmanship within the vessel. Further cost reductions were achieved because we build the vessels in batches, to a standard design, and for stock.



## Main Features.

**Higher Flow Rate.** 500 Litres/Minute.

**Low Cost.** Standard vessel manufactured for stock to reduce set up costs.

**High Quality.** Type 304 Stainless Steel shell, design and construction to BS PD:5500 Cat.3.

**Horizontal Design.** Low overall height with easy access for element changing.

**Easy Installation.** Integral support feet ready to bolt down, flanged inlet and outlet for leak free sealing.

**Short Delivery Time.** Available ex stock.

**Versatile.** Can be fitted with an EI qualified microfilter or water absorbing monitor elements.

## How To Order.

Simply quote the variant required :-  
HMPF1-UK12W suitable for use with 1 off 33" long EI qualified water absorbing monitor element, (Facet, Velcon or Faudi).

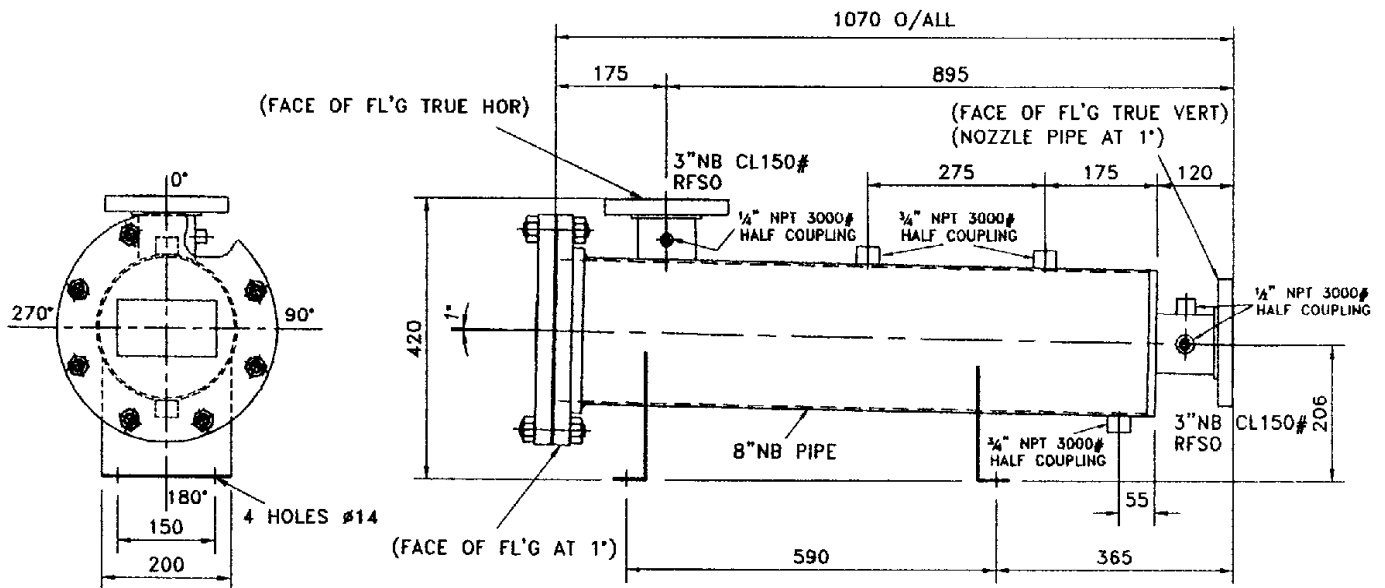
HMPF1-UK12M suitable for use with 1 off 28" long EI qualified microfilter element.

Elements are not included in the basic part number but can be supplied with the vessel.

## Options.

Stainless Steel pressure relief valve, automatic air eliminator, piston type differential pressure gauge, drain line with ball valve and Kamlok dust cap, contaminant test point (specify exact type required).

## General Arrangement Drawing.



## Detailed Specification.

Vessel Type:- Horizontal configuration with integral support feet, bolted end cover.

Working Pressure :-12.0 Bar.

Test Pressure:- 16.3 Bar.

Maximum Working Flow Rate:- 500 Litres/Minute.

Working Temperature:- -15 deg C to +60 degC.

Elements Fitted:- 1 off 6" diameter by 28" long EI qualified microfilter, or 1 off 6" diameter by 33" long EI qualified water absorbing monitor.

Design/Construction Code:- BS PD:5500 Cat. 3.

Material of Construction:- Type 304 Stainless Steel.

Finish:- External surfaces self colour with heat marks removed, internal surfaces bead blasted, all sharp edges removed.

Inlet and Outlet Connections:- Flanged 3" ANSI B16.5 150lb raised face.

Ancillary Connections:- 3/4" NPT threaded air vent, pressure relief and low point drain connections, 1/4" NPT and 1/2" NPT female threaded differential pressure gauge connections, 1/2" NPT female threaded line sample connection.

End Cover Seal:- 7mm diameter Nitrile O ring.

## Shipping Weights and Dimensions.

Nett weight:- Approximately 80 Kg (dry with no elements).

Overall Length:- 110 cm.

Overall Width:- 35 cm.

Overall Height:- 42 cm.