



## WB CLASSIC FUEL POLISHING



Product Catalogue

WB Classic Product Range rev1902





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## INTRODUCTION

When you rely on back-up power in case of a mains failure, or when you replay ion your engine to power your vehicle or vessel; it is essential your stored remains clean to prevent failures.

The results of complete power failure depend on the industry. It could, for example, be a cost of millions of pounds in a data centre, a loss of all chilled food stored in a supermarket, a stranded yacht or a devastating cost of lives in a hospital.

Fuel is likely to be stored for months or years without being used. In that time, fuel can become contaminated with the likes of water and bacteria, resulting in engine failure or damage.

In the case of a UPS (Uninterrupted Power Supply), when a power occurs, this contamination means the backup system fails to work, leaving a complete loss of power and possible devastating consequences.

Marine vessels or boats can also be affected when refuelling in countries without strict fuel specifications. Any water or contamination in the fuel can cause engine issues.



## WHAT IS FUEL POLISHING?

**Fuel polishing is the technological cleaning process which removes water and particulates from diesel fuel stored for the medium to long term.**

This process keeps the fuel in optimum condition and helps prevent fuel related engine and generator failures.

There are many different stages in the fuel polishing process which follow one after the other in a specific sequence. This ensures the water, sludge, sediment, bacteria and other contaminate is removed from the fuel.



*Right-before fuel polishing, Left- after fuel polishing*

WASP PFS Ltd have two fuel polishing ranges.

Firstly, the W-PFS Premium range which removes contamination to 2 micron as well as both free and emulsified water. Controlled with an interactive touch screen, BMS connectivity and have a large catalogue of "add-ons" available.

Secondly, the WB Classic range removes contamination and free water to 10 micron. An ideal entry level system to suit basic cleaning needs and budget. Ranging from 10 to 40 litres per minute, all WASP WB systems have the same key features in common. Simplicity, ease of use and a precise efficient functionality are vital.



## THE BEST PROTECTION

**With over 25 years' experience, WASP PFS Ltd are the pioneers of the fuel polishing industry.**

We are constantly testing and innovating new media as well as being ISO9001:2015 certified, which makes us the obvious choice for getting quality built products and service.

Our systems are better developed, faster, more efficient and have significantly more functionality that any other in the market today.

What makes us unique is by **designing and building our own systems**, we have the **flexibility and expertise** to design and manufacture products specific to your **budget, requirements and specifications**.



## HOW DOES IT WORK?

By removing the bacterial content and neutralising any residual micro-fine particles, the infection simply cannot return; thus ensuring that the WASP Pure Fuel Systems are not only the most effective way of maintaining fuel quality, but is environmentally friendly too, as no chemicals or biocides are used in this process.

### PLC CONTROL

Easy to use, manual and auto set up, BMS control

### SENSORS

Trigger alerts when filters need to serviced

### PUMP



\*above picture shows white board mounted option

### FILTER

Large particulate removal

### CENTRIFUGE

Free water and sludge removal

### MAGNETIC CONDITIONER

Bacteria neutralisation



## WHICH SYSTEM DO I NEED?

If you are new to fuel polishing, trying to decipher which system will best suit your requirements and budget can be quite daunting.

The system you require will vary based on the following factors:

- Tank size and fuel amount
- The speed which it needs to be cleaned
- Power (12v, 24v, 220v)
- Type of generator/engine
- Location of fuel tank i.e. internal or external
- Any of our "Add-On" features

The screenshot shows the WASP Pure Fuel Systems website. The navigation menu includes: HOME, PRODUCTS, GALLERY & MEDIA, INFO, INTERNATIONAL, COMPANY INFO, CONTACT US, and a blue button for PRODUCT SELECTOR. The main heading is "Product Selector Widget" with the subtext "Select the right system for you". Below this is a section titled "Fuel Cleaning Product Selector Widget" with a descriptive paragraph and a form with three dropdown menus: "10,001 to 30,000 l", "220v AC", and "Portable (ie trolley)", followed by a "Search" button. Contact information for the sales team is provided below the form.

We highly recommend using the "Product Selector" tool on our website, [www.wasp-pfs.com](http://www.wasp-pfs.com) as it has been designed to ensure finding your ideal system is as easy as possible.

The infographic is titled "Choosing your ideal system.. is easy as 1, 2, 3". It features three columns representing key factors:
 

- CLEANING SPEED**: Represented by a lightning bolt icon, with a range of "From 10 lit/min – 40 lit/min".
- POWER**: Represented by a battery icon, with options "12vDC, 24v DC or 220v AC?".
- ADD-ONS**: Represented by a plus sign icon, with examples "Need a drip tray, trolley option, enclosure...".

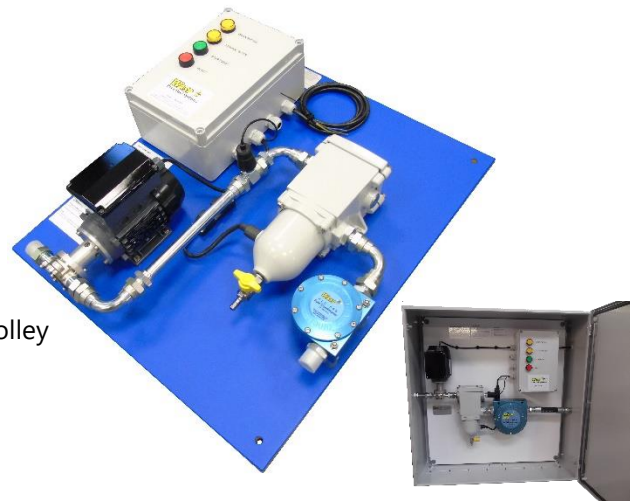
 A dark blue sidebar on the left contains the text "Need help? Contact us".



# WB-10 CLASSIC FUEL CLEANING SYSTEM

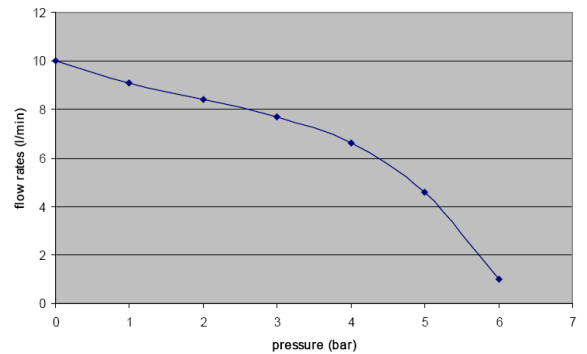
10 litres per/min fuel polishing system, cleaning fuel to 10 micron, removing free water, bacteria and particulate.

- Advanced fuel filter/water separation technology
- 5 stage centrifugal filtration process (see more)
- 10 litres per minute flow rate
- Ideal for up to 12,500 litre fuel tanks
- 220v 50hz 1ph AC, 24v DC or 12vDC
- 1 x BMS Output 2 x BMS Inputs
- Mounting options include wall, enclosure, frame or portable trolley
- Automatic shutdown when servicing is required
- Manual and Automatic mode
- Simple remote monitoring

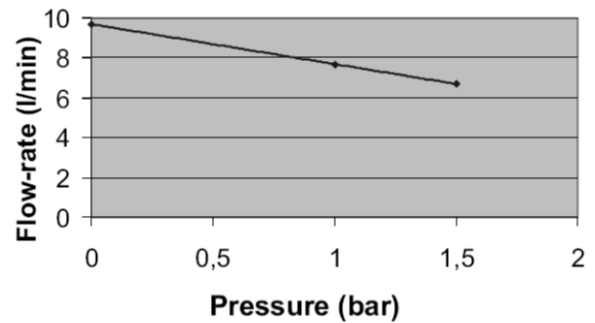


<b>Model</b>	<b>WB-10</b>
<b>Flow rate</b>	up to 10 lit/min
<b>Recommended tank size</b>	up to 12,500 Litres
<b>Power options</b>	12v DC, 24vDC, 220vAC (0.15kw)
<b>Finish options</b>	Wall Mounted, Enclosure, Trolley, Frame mounted
<b>Particulate removal to</b>	10 Micron
<b>Control unit</b>	PLC Control
<b>BMS** outputs</b>	1
<b>BMS** inputs</b>	2
<b>Fuse</b>	220vAC 4a / 12vDC 6a / 24vDC 3a
<b>Typical current</b>	220vAC 1a / 12vDC 2a / 24vDC 1a
<b>Port sizes</b>	3/4" BSP-P male (60 deg. cone)
<b>Pump body</b>	Brass
<b>Pump type</b>	PTFE Gear
<b>Shaft</b>	Stainless steel
<b>Seal</b>	Flouoroelastomer
<b>Dimensions (wall mounted) *</b>	700x600x240mm
<b>Weight *</b>	19kg approx. (AC) 16kg approx. (DC)
<b>Suction capability</b>	5m max vertical with light spring non-return valve and priming

AC unit flow/pressure



DC unit flow/pressure



### CLEANING SPEED

10 lit/min - ideal for tank sizes up to 12,500 litres



### POWER

220vAC  
24vDC  
12vDC



### INSTALLATION

Wall Mounted, stair climbing trolley, weather-proof casing, frame mounted



### ADD-ONS

Drip tray, stainless steel or powder coated mild steel enclosure. frame mounting, beacon and sound alarms, portable options, pre-strainer, and white mounting board.

\* Measurements are for the wall mounted version. Please enquire for measurements for others.

\*\*BMS -Building Management System



# WB-25 CLASSIC FUEL CLEANING SYSTEM

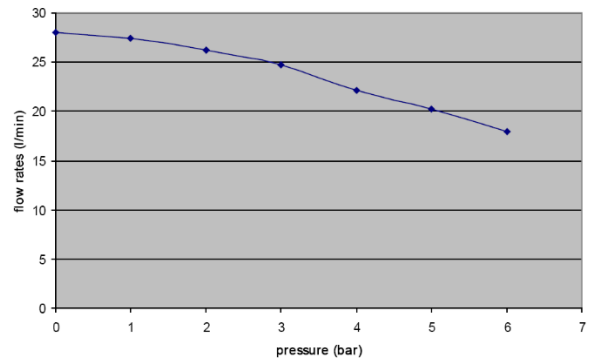
25 litres per minute fuel polishing system, cleaning fuel to 10 micron, removing free water, bacteria and particulate.

- Advanced fuel filter/water separation technology
- 5 stage centrifugal filtration process (see more)
- 25 litres per minute flow rate
- Ideal for 10,000 - 30,000 litre fuel tanks
- 220v 50hz 1ph AC, 24v DC or 12vDC
- 1 x BMS Output 2 x BMS Inputs
- Automatic shutdown when servicing is required
- Manual and Automatic modes
- Simple remote monitoring

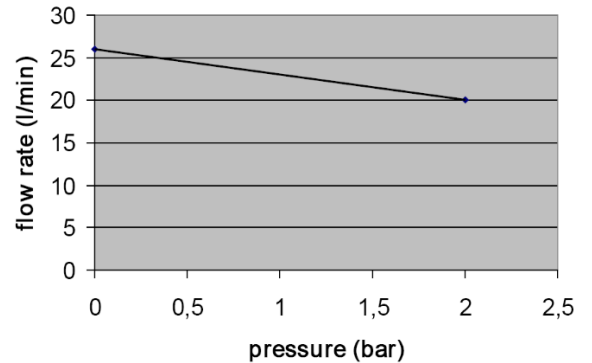


<b>Model</b>	<b>WB-25</b>
<b>Flow rate</b>	up to 25 lit/min
<b>Recommended tank size</b>	up to 30,000 Litres
<b>Power options</b>	12v DC, 24vDC, 220vAC (0.55kw)
<b>Finish options</b>	Wall Mounted, Enclosure, Trolley, Frame mounted
<b>Particulate removal to</b>	10 Micron
<b>Control unit</b>	PLC Control
<b>BMS outputs</b>	1
<b>BMS inputs</b>	2
<b>Fuse</b>	220vAC 2.5a / 12vDC 5a / 24vDC 2.5a
<b>Typical current</b>	220vAC 1.5a / 12vDC 2.2a / 24vDC 1a
<b>Port sizes</b>	1" BSP-P male (60 deg. cone)
<b>Pump body</b>	Brass
<b>Pump type</b>	PTFE Gear
<b>Shaft</b>	Stainless steel
<b>Seal</b>	Flouoroelastomer
<b>Dimensions (wall mounted) *</b>	700x700x350mm
<b>Weight *</b>	21kg approx. (AC) 19kg approx. (DC)
<b>Suction capability</b>	5m max vertical with light spring non-return valve and priming

AC unit flow/pressure



DC unit flow/pressure



### CLEANING SPEED

25 lit/min - ideal for tank sizes up to 30,000 litres



### POWER

220vAC  
24vDC  
12vDC



### INSTALLATION

Wall Mounted, stair climbing trolley, weather-proof casing, frame mounted



### ADD-ONS

Drip tray, stainless steel or powder coated mild steel enclosure. frame mounting, beacon and sound alarms, portable options, pre-strainer, and white mounting board.

\* Measurements are for the wall mounted version. Please enquire for measurements for others.





# WB-40 CLASSIC FUEL CLEANING SYSTEM

40 litres per/min fuel polishing system, cleaning fuel to 10 micron, removing free water, bacteria and particulate.

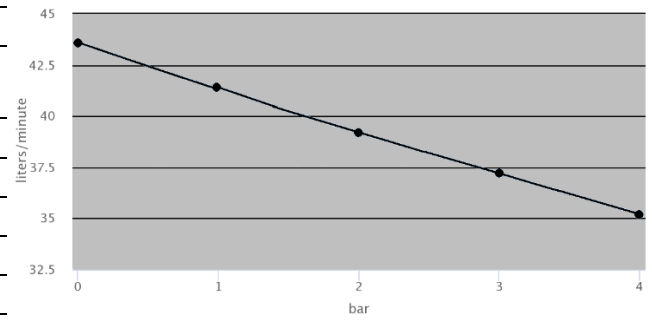
- Advanced fuel filter/water separation technology
- 5 stage centrifugal filtration process (see more)
- Ideal for 25,000 - 50,000 litre fuel tanks
- 220v 50hz 1ph AC or 24v DC
- 1 x BMS Output 2 x BMS Inputs
- Mounting options include wall mounting, mild steel enclosure or portable trolley
- Automatic shutdown when servicing is required
- Manual and Automatic modes
- Simple remote monitoring



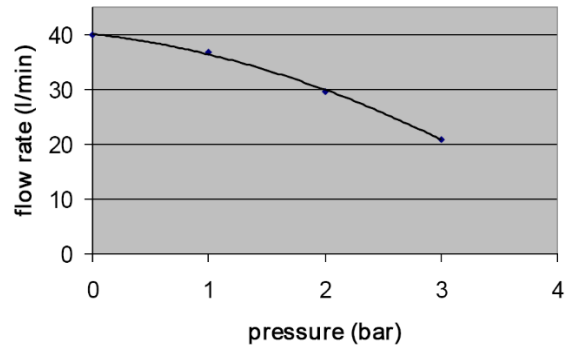
<b>Model</b>	<b>WB-40</b>
<b>Flow rate</b>	up to 40 lit/min
<b>Recommended tank size</b>	up to 50,000 Litres
<b>Power options</b>	12v DC, 24vDC, 220vAC (0.55kw)
<b>Finish options</b>	Wall Mounted, Enclosure, Trolley, Frame mounted
<b>Particulate removal to</b>	10 Micron
<b>Control unit</b>	PLC Control
<b>BMS outputs</b>	1
<b>BMS inputs</b>	2
<b>Fuse</b>	220vAC 2.5a / 24vDC 2.5a
<b>Typical current</b>	220vAC 1.5a / 24vDC 1a
<b>Port sizes</b>	1" BSP-P male (60 deg. cone)
<b>Pump body</b>	Brass
<b>Pump type</b>	PTFE Gear
<b>Shaft</b>	Stainless steel
<b>Seal</b>	Fluoroelastomer
<b>Dimensions (wall mounted) *</b>	600x900x350mm
<b>Weight *</b>	29kg approx. (AC) 26kg approx. (DC)

**Suction capability** 5m max vertical with light spring non-return valve and priming

AC unit flow/pressure



DC unit flow/pressure



### CLEANING SPEED

40 lit/min - ideal for tank sizes up to 50,000 litres



### POWER

220vAC  
24vDC  
12vDC



### INSTALLATION

Wall Mounted, stair climbing trolley, weather-proof casing, frame mounted



### ADD-ONS

Drip tray, stainless steel or powder coated mild steel enclosure. frame mounting, beacon and sound alarms, portable options, pre-strainer, and white mounting board.

\* Measurements are for the wall mounted version. Please enquire for measurements for others.



## ADD-ON OPTIONS

**We realise each application may have different requirements and have therefore developed a range of “Add-ons” to customise a fuel polishing solution to tick all the boxes.**

The list below covers options for the WB Classic Range only. It is worth noting, the W-PFS Premium Range includes a much larger catalogue of “Add-ons” including automatic biocide dosing, automatic multiple tank changeovers, particulate counters, automatic priming pumps, automatic water drains, mobile and internet connectivity and Modbus BMS.

As we have an in-house team of experienced engineers, we can offer solutions which are not covered on the list. If something you require is not listed, please contact us.



### POWDER COATED MILD STEEL ENCLOSURE

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Weather proofing your system for mounting outside, this IP66 rated enclosure is the perfect solution to ensure your fuel polishing system can be placed as close to your tank as possible. This, our standard WB range enclosure, also features a locking door.

### STAINLESS STEEL ENCLOSURE

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For more prestigious locations and where mounting outside is critical, we offer an optional stainless-steel enclosure. This IP54 enclosure also is supplied with thermostatic ventilation, a frost protection heater and a leak detection system.



### STAINLESS STEEL MOUNTING FRAME

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The WB range is designed to be wall mounted, but the standard and enclosed units can also be supplied with this sturdy stainless-steel frame to allow for simple floor mounting. (Example shows “Powder Coated Mild Steel Enclosure” and “Stainless Steel Mounting Frame” Add-ons).

### TROLLEY MOUNTING

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Wall mounted systems are designed for use with fixed tanks, however for multiple tanks a portable solution is also available. This option allows you to take your WB range fuel polishing system with you, it is also supplied with 2x 5m of hose to connect to your fuel tank.





### DRIP TRAY

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If your system is installed in a location where spills may occur, this stainless-steel drip tray, mounted to the bottom edge of the system, is an effective and attractive solution to avoid spills.



### BEACONS/ SOUNDERS

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The WB range has lamps on the control panel to indicate service requirements, but an external beacon or sounder can also be added via the internal volt-free contact. This allows the alert to be raised in a different room, or control area.



### WHITE MOUNTING BOARD

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Our standard blue board helps to instantly recognise a WB range unit, however in some environments (for example yacht engine rooms), a white base may be more suited to the end customer expectations.

### PRE-STRAINER

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If your fuel is very dirty, you may wish to consider a WASP pre-strainer, before the input of your system. A 100-micron strainer will catch large contaminate, protecting your system and preserving the life of your filter element.





## CUSTOM BUILT SYSTEMS

Our in-house team of electrical and mechanical engineers have the expertise to custom build systems to your own specific requirements. If our standard range is not quite what you are looking for, please contact us and ask about our custom-built service. Here are some previous examples:

### ATEX APPROVED

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For use with Kerosene and liquids which require ATEX approved electronics or for use in ATEX zones, this polishing system is the ideal mix of simplicity and high-level filtration.

Specifically designed with our class leading filtration solution, this simple to operate unit includes a fuel conditioning stage, a 100-micron pre-strainer, centrifugal fuel cleaning, water/sludge removal and a 10- or 30-micron final stage.

A visual indication gauge gives filter life feedback, the unit is supplied with 2x 5m of hose and an ATEX approved 40 lit/min pump ensures compatibility with the appropriate standards.



### PORTABLE WITH PRE-STRAINER

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Our mobile solutions offer class leading filtration, but for some applications it is possible that the fuel quality is so poor, you may wish to remove the sludge and similar. To aid with this, we offer a 100 micron

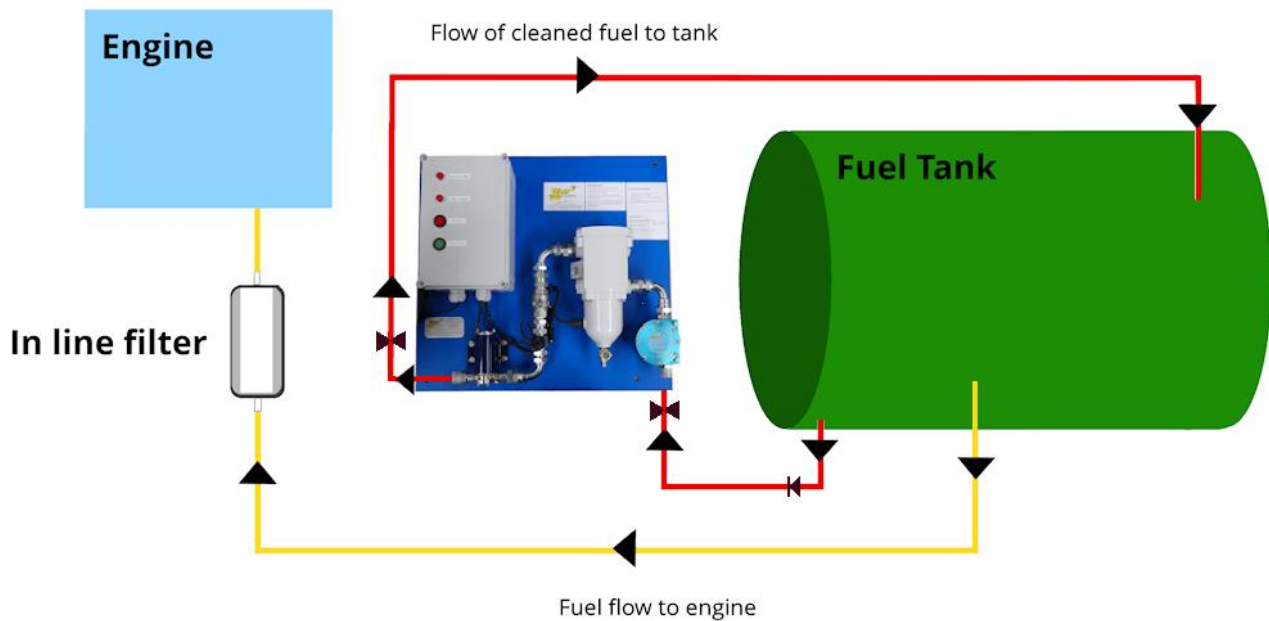
Washable pre-strainer filter. As the first thing the fuel reaches, this stainless-steel mesh filter removes large particulate and sludge before the fuel reaches the main filtration stages.

To clean this unit, simply remove the internal stainless-steel element, clean in with fresh diesel and replace it.

There is a larger collection of custom made systems within the WB Classic Range. To see more examples, go to [www.wasp-pfs.com](http://www.wasp-pfs.com) and view the **gallery**.



## INSTALLATION GUIDE



- Ensure the system is securely fastened to a wall or other suitable solid structure.
- The unit should have unique pipe work, i.e. not the feed to the engine.
- The input to the WASP system should feed from the bottom of the fuel tank (via a ball valve and a foot valve / non-return valve with an opening pressure of 0.05bar or less).
- The system should pick-up fuel from the lowest point of the tank at one end, (below the level of the fuel feed to your engine) and ideally return it to the highest point at the opposite end.
- In any typical fuel tank, the pipe feeding fuel to the engine is not at the bottom, however to successfully clean fuel, the pickup pipe going to the WB unit should be right at the bottom of the tank, below the engine feed.
- The output should return to the tank at the top, ideally the opposite end to the input.
- The unit can be controlled via BMS (Building Management System), however it is capable of self-operation and monitoring.
- System must be primed before use and operation. It must also be primed after servicing; although with the foot or non-return valve installed, priming should only need to be done once, after installation.
- With power applied, please ensure the system's time and date have been correctly set.

- We recommend an internal pipe diameter of 3/4" for WB-10 models, 1" for the WB-25/WB-40 models. Larger diameters will assist the unit as this reduces the frictional losses but will make priming more difficult. Small diameters, long pipe runs or many bends in the pipe work will cause high frictional losses and cause the system to run slower than its maximum speed, or in extreme cases cause it to stop. Likewise, high fuel lifts or fuel heads will also cause the unit to run slower,



## MORE INFO

Our website has been designed to provide all the information you require in relation to fuel polishing and WASP PFS systems. We recommend you read our **Guide to Fuel Polishing**, get an insight in to **what fuel polishing is**, learn now about **contaminations** and their effects, **learn how our units work** and about the **add-on options** we can provide. Our "**Product Selector**" is a helpful tool to find the system which best suits your requirements.

[www.wasp-pfs.com](http://www.wasp-pfs.com)



## SERVICE INTERVAL

Your WB range fuel polishing system should be serviced every 12 months, or sooner should the system ask for it.

The service interval is 12 months; at that point a new set of elements and gaskets should be installed.

Should a service requirement for element change arise before then, please start your 12-month count from the insertion of a new element.

We also recommend you check the quality of your gaskets every 6 months and replace every 12 - 36 months or at first signs of wear and tear.

Separate to the regular service, the system will flag if it requires any servicing or spare parts. This is via its built-in automatic monitoring system.

Your annual service should include:

- Grey Filter
- Element Replacement (Part required- see table below)
- Check gasket and replace if required (Part required- see table above)
- Drain water

The required spare parts for regular servicing are as follows:

	WB-10	WB-25	WB-40
<b>Primary (grey filter) Element Part No</b>	01010	01810	04010
<b>Primary (grey filter) Seal Kit Part No</b>	10528	30979	30980

30 Micron elements and 60-micron stainless steel elements are also available if required.

WASP PFS <sup>®</sup> Ltd - the market leaders in fuel filtration equipment.

We invent, design and manufacture customised fuel filtration equipment, including innovative fuel polishing systems and absolute polishing products.

Services include fuel testing, consultation and training.

For more information on the product range, please visit the website: [www.wasp-pfs.com](http://www.wasp-pfs.com)

email: [info@wasp-pfs.com](mailto:info@wasp-pfs.com)

**WASP PFS Ltd - For all your fuel cleaning requirements.**

If you require further information, please contact Technical Support at WASP on 01923 606 600 or email [info@wasp-pfs.com](mailto:info@wasp-pfs.com).

