

# Installation and Servicing Instructions

## WASP W-FLC-5000 range of fuel conditioners

Rev1701



Thank you for choosing the WASP W-FLC-5000 range, please follow the instructions carefully to ensure that this magnetic conditioning unit is fitted and maintained correctly.

Failure to follow these instructions will invalidate the warranty.



This is a magnetic conditioning unit for diesel and fuel oil systems in larger premises such as industrial, commercial, and municipal buildings. For other applications always consult the manufacturer before installing.



This product contains strong magnets. Care and attention should be taken always during installation and servicing. Do not place the magnetic cores on any ferrous surfaces or near ferrous objects.



Suitable personal protective equipment should be used during all installation and servicing.



This unit must be installed by a qualified person in accordance with all relevant current regulations.



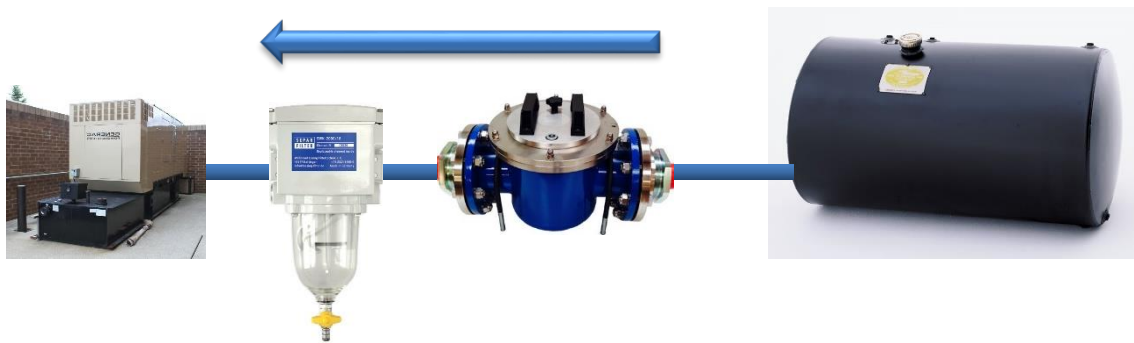
## Guide to Installation



Ensure the fuel system is isolated prior to carrying out installation or maintenance work.

### Where to Install

The WASPW-FLC-5000 range is typically installed on the feed line from the day or bulk tank, just before the primary fuel filter.



On larger systems, other W-FLC-5000 units may be installed elsewhere to give extra protection for day tanks or other fuel related products.

Please also ensure that the W-FLC-5000 is installed in a position which gives adequate access above to lift out the magnets during servicing and maintenance. Also access is required to the underneath of the unit to connect a hose or hold a bucket during draining.

## Venting Options

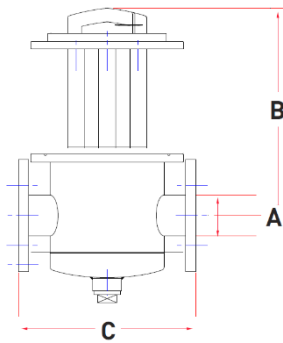
The W-FLC-5000 unit is fitted with a manual air vent in its lid. We do not recommend the use of automatic air vents in fuel systems.



### Installing

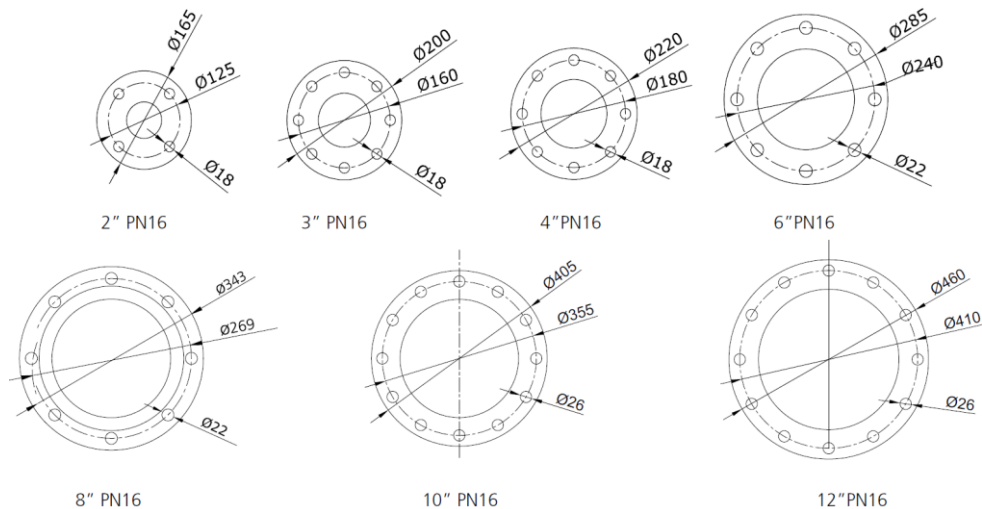
1. Identify a suitable location
2. Ensure enough clearance to carry out cleaning as the rods must be lifted out of the unit to clean. See dimensions in column B in the table below.
3. Mark and then cut out the correct length of pipe section to be removed to accommodate the unit and isolation valves. Ensure the cut is level and burr free. (Isolation valves are not included with the W-FLC-5000)
4. Install appropriate isolation valves to the pipework and fit the valves to the two PN16 flanges (see below for flange dimensions) or threaded fittings as appropriate.
5. Position the unit in place then align and secure the fittings to connect the unit to the valves.
6. Open the isolation valves and prime the fuel system
7. Run the fuel system at normal operating temperature and check installation integrity.

### Installation details



Part No	Inlet/Outlet (A)	B	Flange Spacing (C)
<b>W-FLC-5020</b>	2"	305mm	260mm
<b>W-FLC-5055</b>	3"	390mm	360mm
<b>W-FLC-5085</b>	4"	390mm	360mm
<b>W-FLC-5110</b>	6"	360mm	470mm
<b>W-FLC-5140</b>	8"	400mm	525mm
<b>W-FLC-5220</b>	10"	770mm	760mm
<b>W-FLC-5310</b>	12"	820mm	760mm

### Flange details



## Servicing & Maintenance Instructions



Cleaning and servicing must only be carried out by a qualified person in accordance with all relevant current regulations.

To maintain optimum efficiency, we recommend cleaning annually. However when a unit is fitted to an existing fuel system we recommend more regular checks as it is likely there will be a large build-up of black sludge and ferrous material to clear out.

To service and maintain your W-FLC-5000, please follow the instructions below

**Warning:** In step 3, for 8", 10" and 12" units, the weight may exceed safe single person lifting limits. Please check and if required do as 2 persons or alternatively as a mechanical lift.



1. Isolate the supply and close the isolation valves on either side of the unit.



2. Remove the black tricone positioned on the lid.



**Warning - see above**

3. Lift out the magnetic cores using the handle on top of the unit. Be careful not to place the cores on or near ferrous items.



4. Either place a bucket underneath or connect a hose to the 1 1/4" drain valve on the underside of the unit. Remove the drain plug and open the drain valve.



5. Partially open the inlet isolation valve and allow the contents to drain through the drain valve. When the draining water runs clear turn off the inlet isolation valve and allow the remaining contents to drain.



6. Close the drain valve and replace the plug.

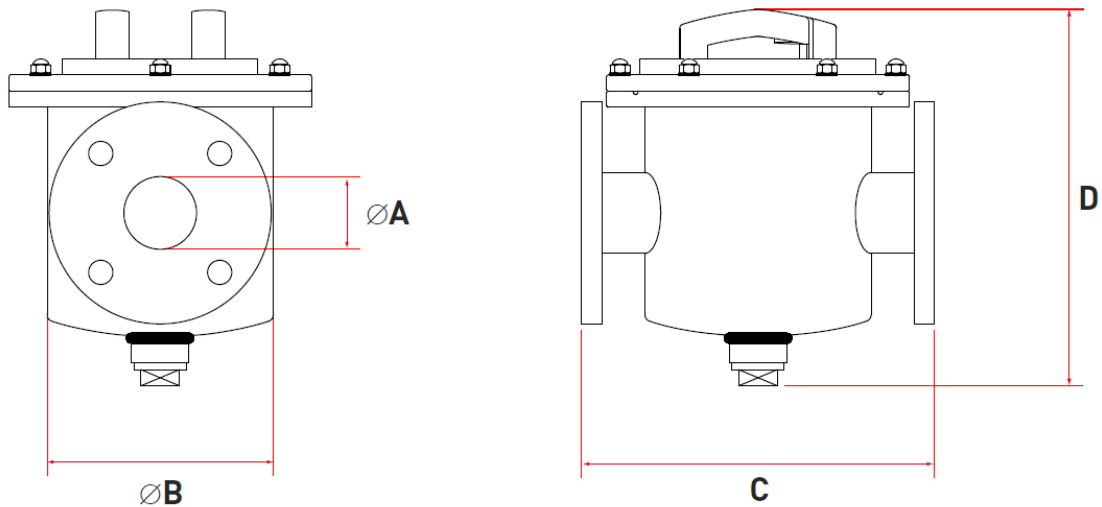


7. Replace the magnetic core and hand tighten the black tricone to retain.



8. Re-open both isolation valves. If required open the vent shown on the top of the unit to release any trapped air.





Model	Ports (A)	Flange (option)	Filter Diameter (B)	Flange Spacing (C)	Height (D)	Cores	Flow
<b>W-FLC-5020</b>	2" BSP female	DN50/PN16	170mm	260mm	280mm	5	20,000l/h (20m <sup>3</sup> /h)
<b>W-FLC-5055</b>	3" BSP female	DN80/PN16	220mm	360mm	335mm	7	55,000l/h (55m <sup>3</sup> /h)
<b>W-FLC-5085</b>	4" BSP female	DN100/PN16	220mm	360mm	335mm	7	85,000l/h (85m <sup>3</sup> /h)
<b>W-FLC-5110</b>	6" BSP female	DN150/PN16	325mm	470mm	420mm	9	110,000l/h (110m <sup>3</sup> /h)
<b>W-FLC-5140</b>	8" BSP female	DN200/PN16	325mm	525mm	460mm	9	140,000l/h (140m <sup>3</sup> /h)
<b>W-FLC-5220</b>	10" BSP female	DN250/PN16	406mm	760mm	600mm	16	220,000l/h (220m <sup>3</sup> /h)
<b>W-FLC-5310</b>	12" BSP female	DN300/PN16	406mm	760mm	675mm	16	310,000l/h (310m <sup>3</sup> /h)

## Performance

<b>Magnetic performance</b>	9,000 Gauss high strength
<b>Performance reading</b>	On tube surface
<b>Magnetic material</b>	Rare earth neodymium iron boron (NdFeB)
<b>Magnet grade</b>	N42SH – inspected and confirmed by hysteresis graph prior to use
<b>Temperature</b>	5° to 150°C
<b>Operating pressure</b>	12 bar
<b>Drain Valve</b>	1 1/4"
<b>Materials Housing</b>	304 grade stainless steel
<b>Magnet tube assembly</b>	316 grade stainless steel – aerospace quality
<b>Surface finish</b>	Internal - bead blast External - powder coated
<b>Sealing</b>	Viton o-ring

