

WASP PFS Ltd

Fuel Pumps, Fuel Additives, Dip Slides and Oil Change Systems Catalogue

Rev 1901

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The information contained in this catalogue is correct to the best of our knowledge; however always check with WASP PFS Ltd for the precise data relating to any given product.

Occasionally products are updated or have subtle re-designs. Given we produce a catalogue ever year to eighteen months; it is not always possible to include these changes. Speaking to WASP PFS Ltd is always the easiest way to ensure you have the latest information. Alternately you can visit our web site at www.wasp-pfs.com

Information in this document is for reference only, E&OE.

All data, including sizes and weights are approximate.

Note: The manufacturer reserves the right to change or amend specifications without notice.

Range Overview

Fuel Pumps

Model	Type	Flow*	Voltage	Current	Pressure	Ports	Weight
W-GPDC-08-12vdc	Gear	8 l/m	12v DC	3.2 a	1.5 bar	3/8" BSP	1.2 kg
W-GPDC-08-24vdc	Gear	8 l/m	24v DC	1.6 a	1.5 bar	3/8" BSP	1.2 kg
W-GPAC-12-220vac	Gear	10 l/m	220v AC (0.12kw)	0.9 a	6 bar	3/8" BSP	4.6 kg
W-CPAC-10	Centrifugal	10 – 40 l/m	220v AC (0.3kw)	2.5 a	1.8 bar	1" BSP	11kg
W-GPDC-14-12vdc	Gear	14 l/m	12v DC	10 a	6 bar	3/8" BSP	1.5 kg
W-GPDC-14-24vdc	Gear	14 l/m	24v DC	5 a	6 bar	3/8" BSP	1.5 kg
W-IPAC-15	Impeller	15 l/m	220v AC (0.37kw)	3.2 a	4 bar	3/4" BSP	9 kg
W-GPDC-18-12vdc	Gear	18 l/m	12v DC	11.5 a	7 bar	3/8" BSP	1.5 kg
W-GPDC-18-24vdc	Gear	18 l/m	24v DC	5.5 a	7 bar	3/8" BSP	1.5 kg
W-GPDC-26-12vdc	Gear	26 l/m	12v DC	15 a	2 bar	1/2" BSP	3.1 kg
W-GPDC-26-24vdc	Gear	26 l/m	24v DC	7.5 a	2 bar	1/2" BSP	3.1 kg
W-GPAC-28-220vac	Centrifugal	28 l/m	220v AC (0.55kw)	3.8 a	4 bar	1/2" BSP	10.6 kg
W-IPAC-30	Impeller	30 l/m	220v AC (0.55kw)	4.4 a	4 bar	1" BSP	9.2 kg
W-GPDC-40-12vdc	Gear	40 l/m	12v DC	19 a	2.5 bar	1/2" BSP	4.3 kg
W-GPDC-40-24vdc	Gear	40 l/m	24v DC	11 a	2.5 bar	1/2" BSP	4.3 kg
W-GPAC-40-220vac	Gear	40 l/m	220v AC (0.55kw)	3 a	4 bar	3/4" BSP	8 kg
W-CPAC-40	Centrifugal	40 -70 l/m	220v AC (0.46kw)	1.2 a	1.9 bar	1" BSP	11kg
W-VPDC-45-12vdc	Vane	45 l/m	12v DC	15 a	1.2 bar	25mm	2 kg
W-VPDC-45-24vdc	Vane	45 l/m	24v DC	7.5 a	1.2bar	25mm	2 kg
W-VPAC-45-220ac	Vane	45 l/m	220vac (0.87kw)	4.5a	8 bar	1" BSP	10 kg
W-VPAC-60-220vac	Vane	60 l/m	220vac (1.1kw)	5.5 a	8 bar	1" BSP	14.5 kg
W-CPAC-60	Centrifugal	60-100 l/m	220v AC (0.5kw)	3.8 a	1.9 bar	1" & 1.25" BSP	12 kg
W-IPAC-60	Impeller	60 l/m	220v AC (0.55kw)	4 a	4 bar	1" BSP	9.2 kg
W-IPAC-90	Impeller	90 l/m	220v AC (1.1kw)	8.8 a	5 bar	1.25" BSP	13 kg

* Flow rate can be affected by external factors (eg head, lift)

Liquid Fuel Additives

Model	Size	Dosing Ratio Preventative	Dosing Ratio Moderate	Dosing Ratio Heavy Contamination
WASP Biokem SP15	50ml	10,000:1	5,000:1	3,000:1
	250ml			
	5 litres			
WASP FTR	50ml	4,000:1	-	2,000:1
	250ml			
	5 litres			
Kathon FP15	5 Litres	10,000:1	5,000:1	3,000:1

Dip slides

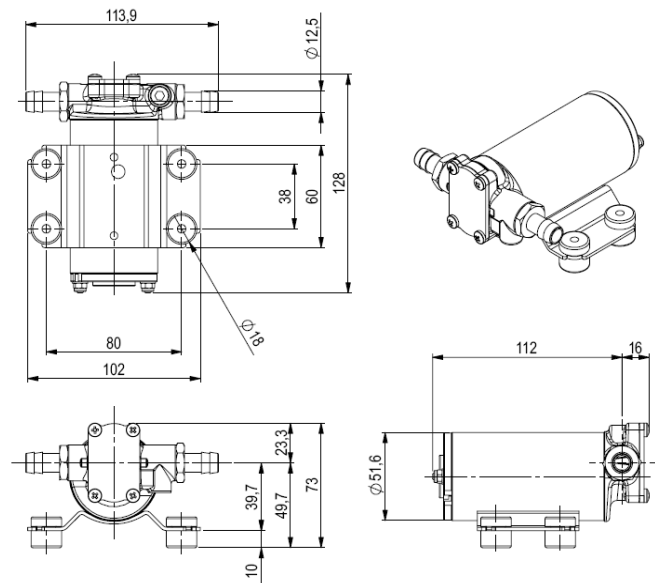
see product pages for more information

Oil Change Systems

Model	Voltage	Number of ports	Oil flow rate	Port Size
GP-3013-24v	24v dc*	3	15 lit/min max	½" BSP
GP-3014-24v	24v dc*	4		
GP-3015-24v	24v dc*	5		
GP-3016-24v	24v dc*	6		

* 12v DC available on request

W-GPDC-08 (12 and 24v DC)



Technical Specifications

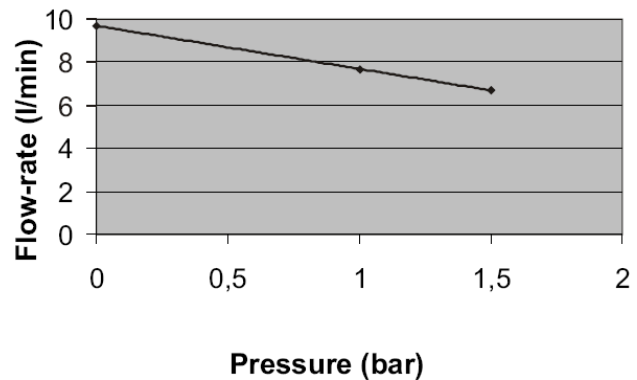
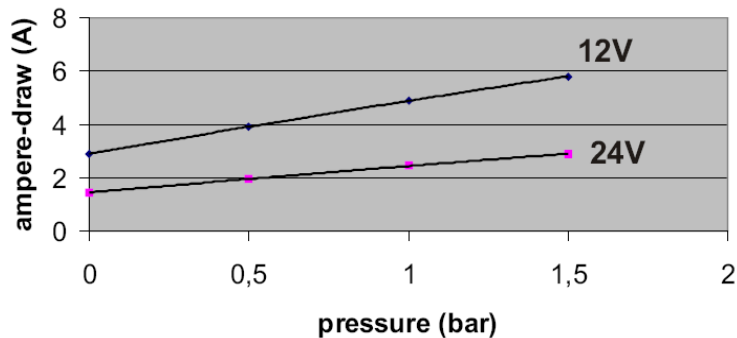
Model: W-GPDC-08-12vdc
 Power: 12v DC
 Fuse: 7.5a

Model: W-GPDC-08-24vdc
 Power: 24v DC
 Fuse: 7.5a

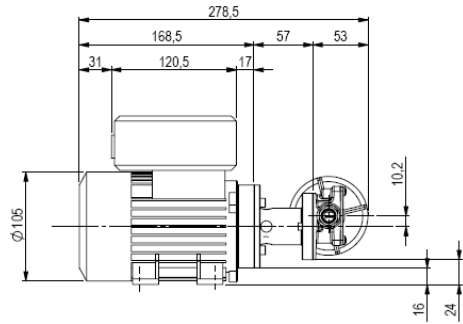
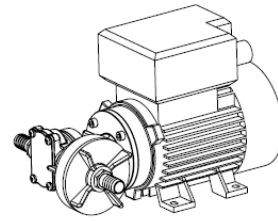
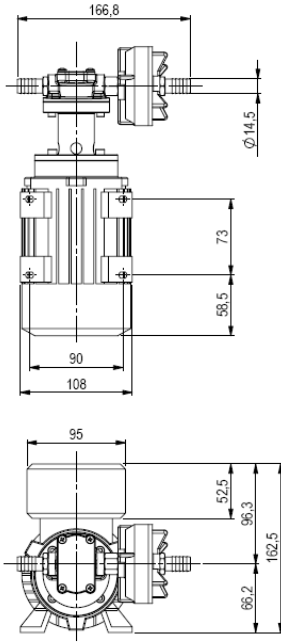
Flow rate: 10lit/min max (8lit/min typical)
 Operating pressure: 1.5 bar
 Weight: 1.2 kg
 Operating temp.: Min -10°C Max +40°C
 Operating humidity: Max 90%
 Protection: IP65
 Max lift: 1.5m
 Port thread size: 3/8" BSP
 Life: Replace the brushes in this pump every 500/700 hrs

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-GPAC-12-220vac

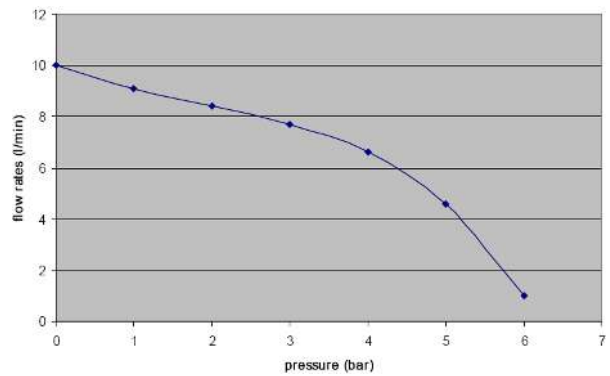
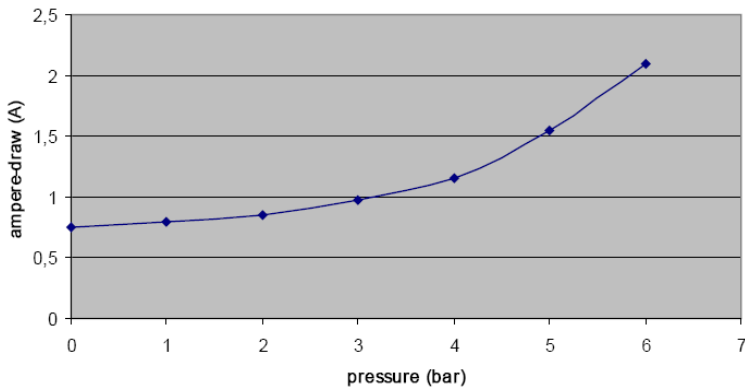


Technical Specifications

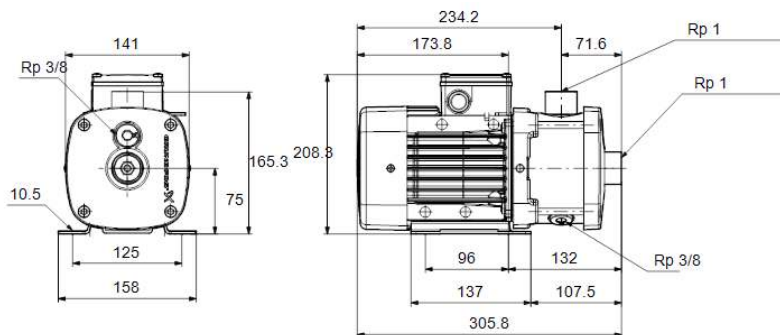
Model	W-GPAC-12-220vac
Power	220v Ac 50Hz – 0.12kw
Fuse	1.2a
Flow rate	10lit/min max
Operating pressure	6 bar
Weight	4.6 kg
Operating temp.	Min -10°C Max +60°C
Operating humidity	Max 90%
Protection	IP55
Max lift	1.5m
Port thread size	3/8" BSP

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-CPAC-10

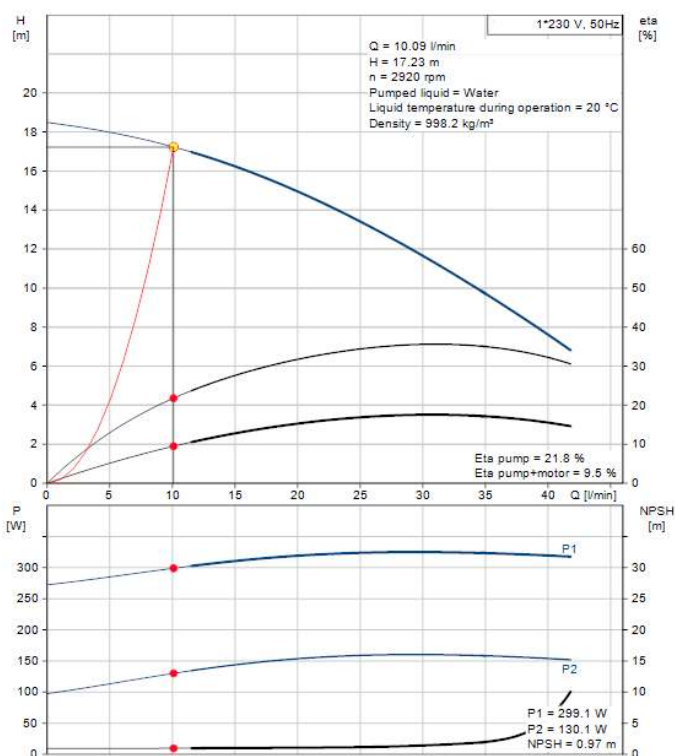


Technical Specifications

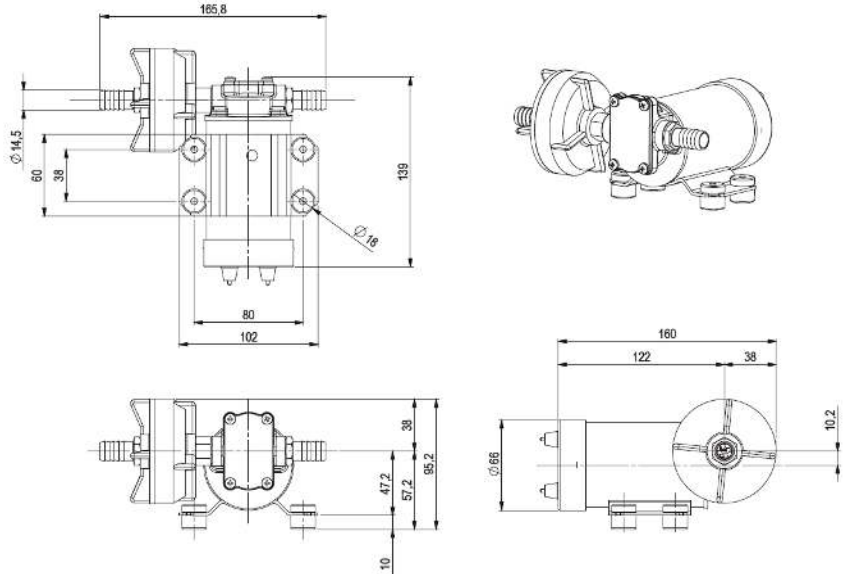
Model	W-CPAC-10
Power	220v Ac 50Hz – 0.3kw
Fuse	2.5a
Flow rate	10 – 40 lit/min
Operating pressure	1.8 bar
Weight	11kg
Operating temp.	Min -10°C Max +55°C
Operating humidity	Max 90%
Protection	IP55
Max lift	1.5m
Port thread size	1" BSP

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids: Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-GPDC-14 (12 and 24v DC)



Technical Specifications

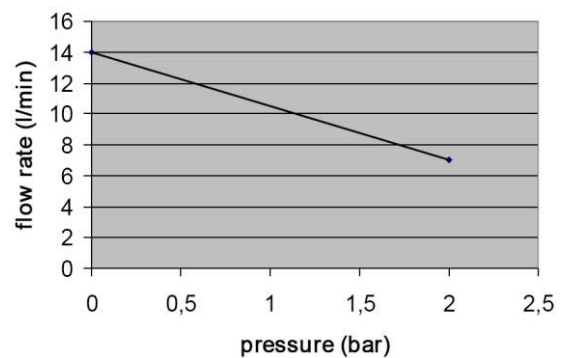
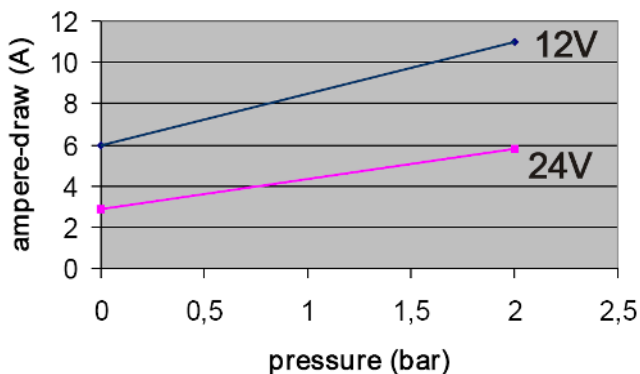
Model W-GPDC-14-12vdc
 Power 12v DC
 Fuse 10a

Model W-GPDC-14-24vdc
 Power 24v DC
 Fuse 5a

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Flow rate 14 lit/min max
 Operating pressure 2 bar
 Weight 1.5 kg
 Operating temp. Min -10°C Max +60°C
 Operating humidity Max 90%
 Protection IP55
 Max lift 1.5m
 Port thread size 3/8" BSP (or hose tails as above)
 Life: Replace the brushes in this pump every 500/700 hrs

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-IPAC-15

Viton impeller pump for diesel compatibility and high self-priming

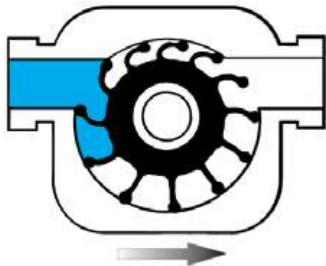
Flexible impeller pumps are displacement pumps. The rotor with flexible vanes is mounted concentrically in a circular housing which has a flattened area at one side. This provides the eccentric path for the impeller, thereby squeezing the flexible blades on this side.



Max flow 15 l/min

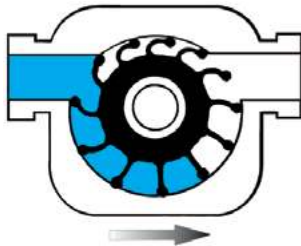
1. suction:

The impeller rotation and the straightening of the vanes upon leaving the cam creates a vacuum on the suction side drawing the fluid into the pump chamber.



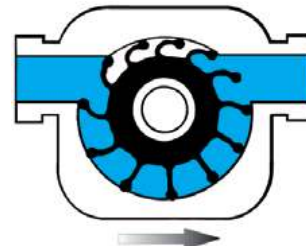
2. transfer:

The rotating impeller transfers the liquid from the inlet to the outlet port of the pump.



3. Press:

On the pressure side the impeller vanes are compressed and the fluid is discharged constantly from the pump.

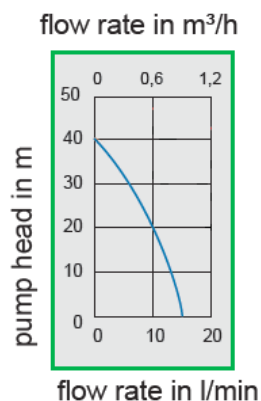


Temp range -10 to +90 deg C
 Self-prime 3m (dry)
 Max lift 7m (over 3m, must be manually primed)
 Weight 9kg

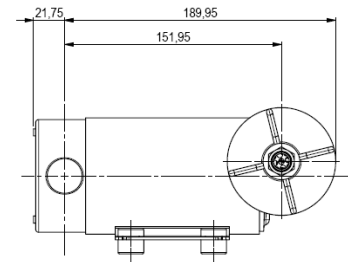
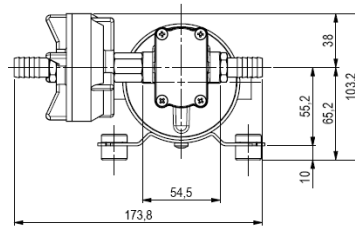
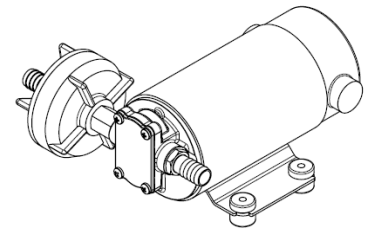
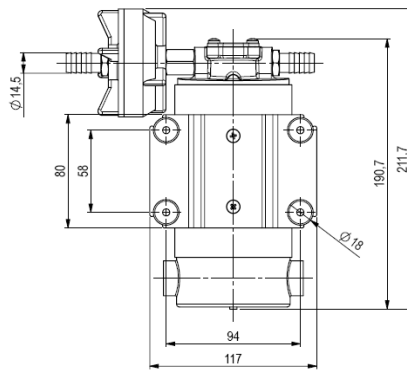
Power 220-240v AC (0.37kw)
 Current 3.2 a
 Max pressure 4bar
 Ports 3/4"

Fluids

- diesel fuel, biodiesel
- water, seawater
- waste water
- vegetable oils
- heating and motor oil
- detergents
- antifreeze
- heat transfer fluid
- cooling lubricants



W-GPDC-18 (12 and 24v DC) High pressure pump



Technical Specifications

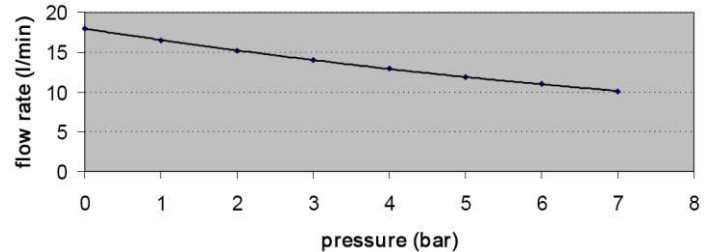
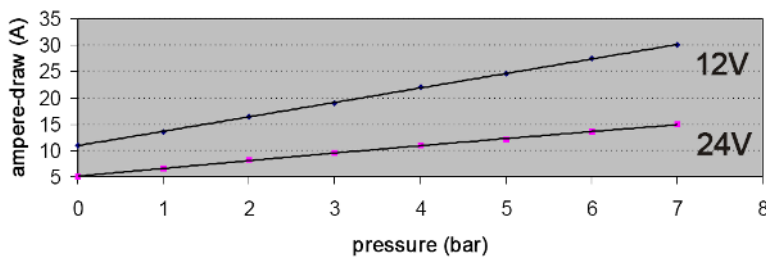
Model W-GPDC-18-12vdc
 Power 12v DC
 Fuse 30a

Model W-GPDC-18-24vdc
 Power 24v DC
 Fuse 20a

Flow rate 18 lit/min max
 Operating pressure 7 bar
 Weight 3.8 kg
 Operating temp. Min -10°C Max +60°C
 Operating humidity Max 90%
 Protection IP55
 Max lift 4m
 Port thread size 3/8" BSP (or hose tails as above)
 Life: Replace the brushes in this pump every 500/700 hrs

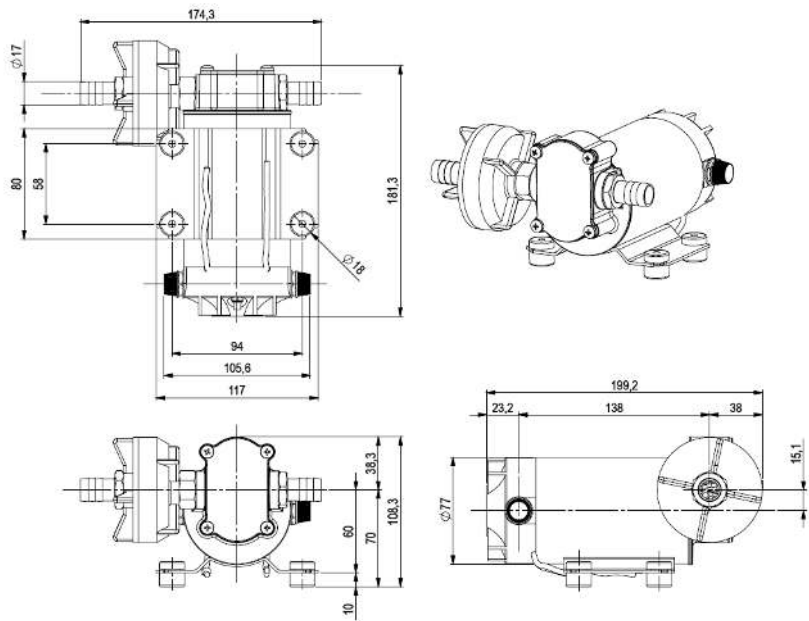
Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-GPDC-26 (12 and 24v DC)

W-GPDC-26
Shown here with
optional input strainer



Technical Specifications

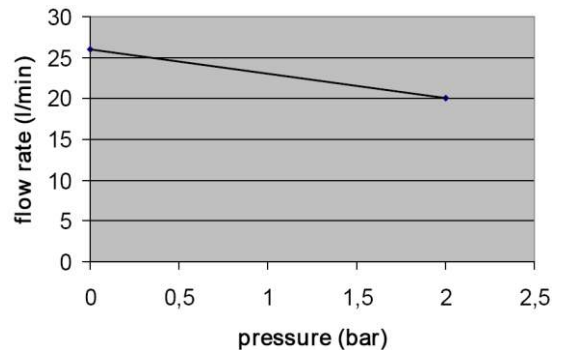
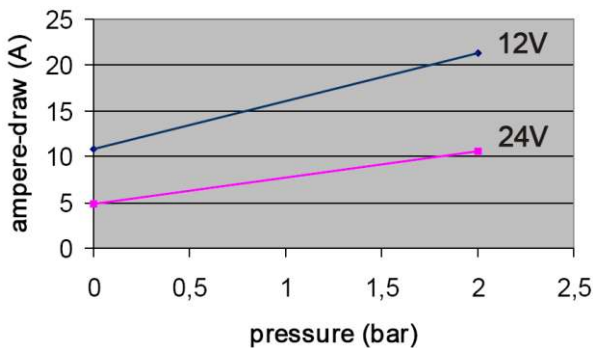
Model W-GPDC-26-12vdc
Power 12v DC
Fuse 15a

Model W-GPDC-26-24vdc
Power 24v DC
Fuse 7.5a

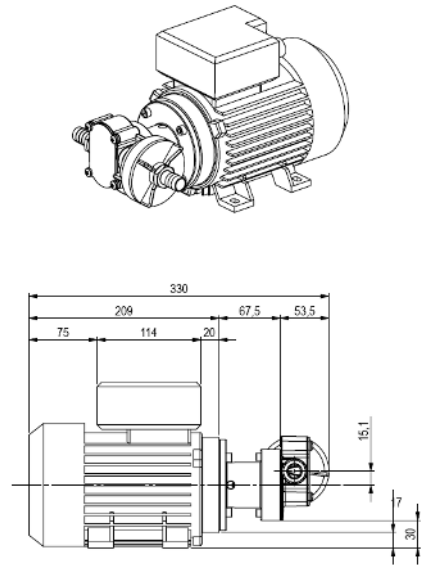
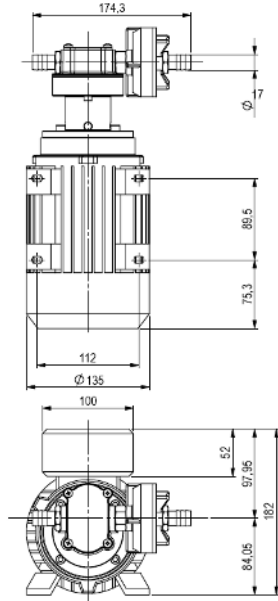
Flow rate 26 lit/min max
Operating pressure 2 bar
Weight 3.1 kg
Operating temp. Min -10°C Max +60°C
Operating humidity Max 90%
Protection IP55
Max lift 1.5m
Port thread size 1/2" BSP (or hose tails as above)
Life: Replace the brushes in this pump every 500/700 hrs

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
Fresh water
Sea water

Prohibited liquids:
Petrol/Gasoline
Flammable liquids with PM below 55 °C
Liquids with a viscosity above 20cSt
Foodstuffs
Corrosive chemical products
Solvents



W-GPAC-28-220vac

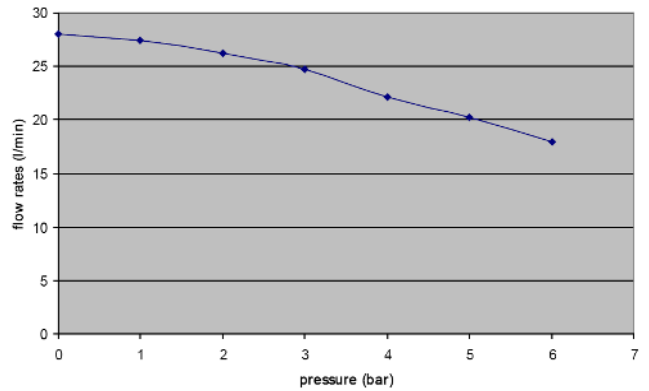
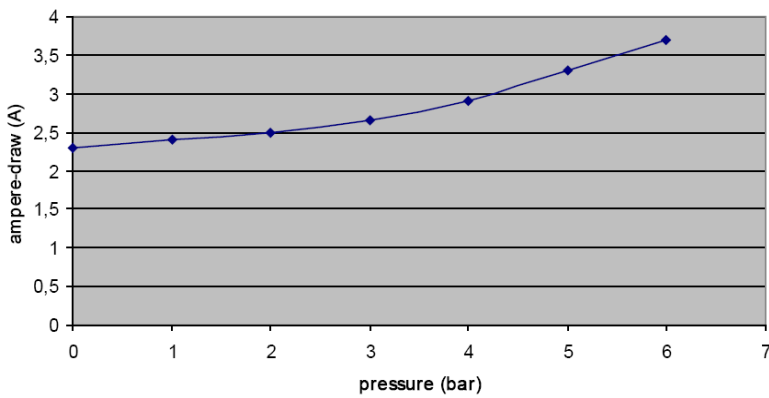


Technical Specifications

Model	W-GPAC-28-220vac
Power	220v Ac 50 Hz 1 phase
Fuse	3a
Fuel rate	28lit/min
Operating pressure	4 bar
Weight	10.6kg
Operating temp.	Min -10°C Max +60°C
Operating humidity	Max 90%
Protection	IP55
Max lift	1.5m
Port thread size	½" BSP

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-IPAC-30

Viton impeller pump for diesel compatibility and high self-priming

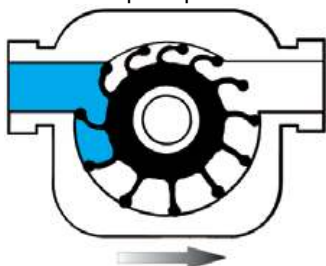
Flexible impeller pumps are displacement pumps. The rotor with flexible vanes is mounted concentrically in a circular housing which has a flattened area at one side. This provides the eccentric path for the impeller, thereby squeezing the flexible blades on this side.



Max flow 30 l/min

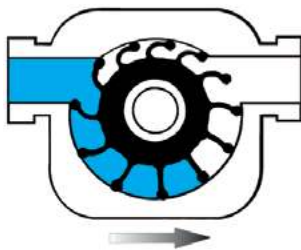
1. suction:

The impeller rotation and the straightening of the vanes upon leaving the cam creates a vacuum on the suction side drawing the fluid into the pump chamber.



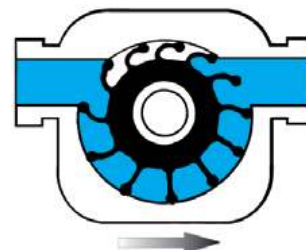
2. transfer:

The rotating impeller transfers the liquid from the inlet to the outlet port of the pump.



3. Press:

On the pressure side the impeller vanes are compressed and the fluid is discharged constantly from the pump.

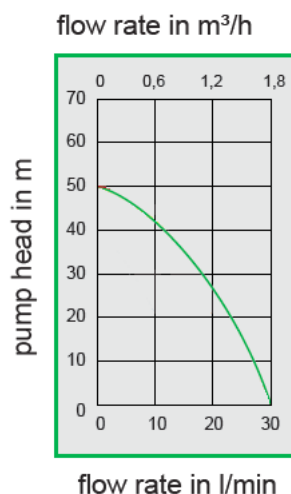


Temp range -10 to +90 deg C
 Self-prime 3m (dry)
 Max lift 7m (over 3m, must be manually primed)
 Weight 9.2kg

Power 220-240v AC (0.55kw)
 Current 4.4 a
 Max pressure 4bar
 Ports 1"

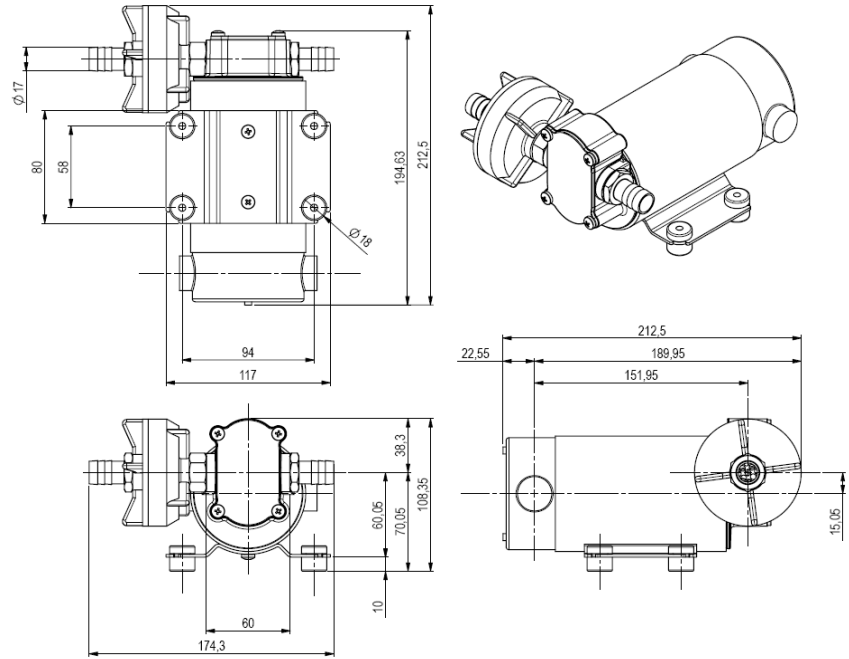
Fluids

- diesel fuel, biodiesel
- water, seawater
- waste water
- vegetable oils
- heating and motor oil
- detergents
- antifreeze
- heat transfer fluid
- cooling lubricants



W-GPDC-40 (12 and 24v DC)

W-GPDC-40
Shown here with
optional input strainer



Technical Specifications

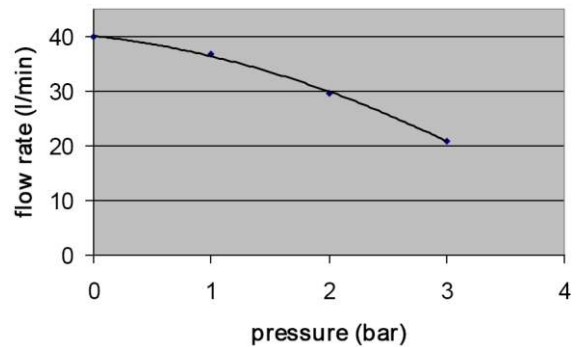
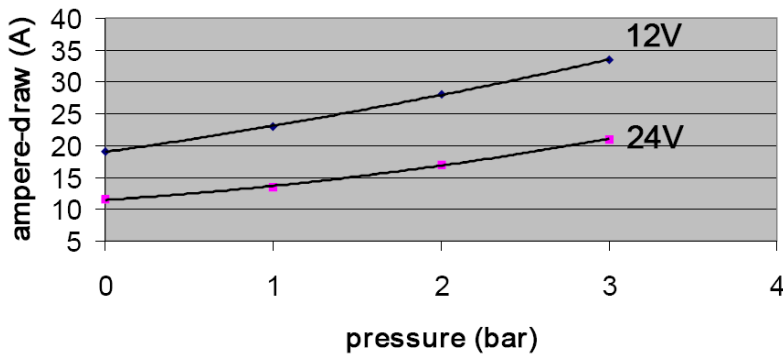
Model: W-GPDC-40-12vdc
Power: 12v DC
Fuse: 30a

Model: W-GPDC-40-24vdc
Power: 24v DC
Fuse: 15a

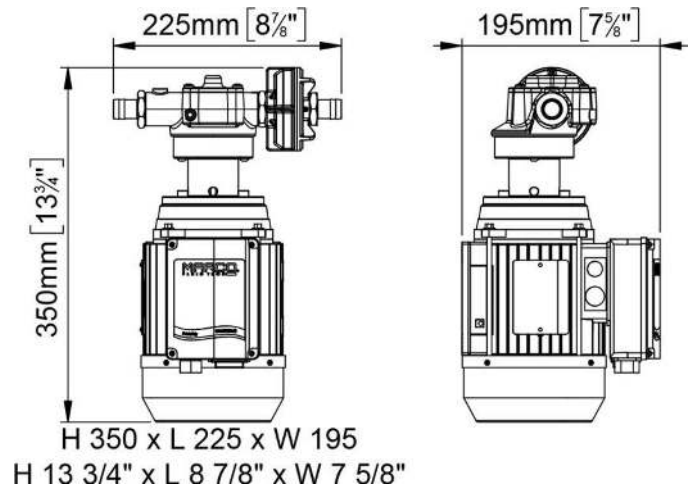
Flow rate: 40 lit/min max
Operating pressure: 2.5 bar
Weight: 4.3 kg
Operating temp.: Min -10°C Max +60°C
Operating humidity: Max 90%
Protection: IP55
Max lift: 4m
Port thread size: 1/2" BSP (or hose tails as above)
Life: Replace the brushes in this pump every 500/700 hrs

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
Fresh water
Sea water

Prohibited liquids:
Petrol/Gasoline
Flammable liquids with PM below 55 °C
Liquids with a viscosity above 20cSt
Foodstuffs
Corrosive chemical products
Solvents



W-GPAC-40-220



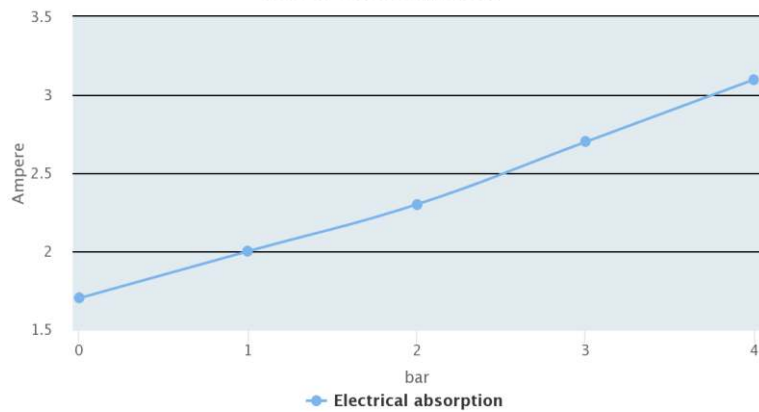
Technical Specifications

Model	W-GPAC-40-220vac
Power	220v Ac 50 Hz 1 phase
Fuse	3a
Fuel rate	40lit/min
Operating pressure	4 bar
Weight	8.1kg
Operating temp.	Min -10°C Max +60°C
Operating humidity	Max 90%
Protection	IP55
Max lift	1.5m
Port thread size	3/4" BSP

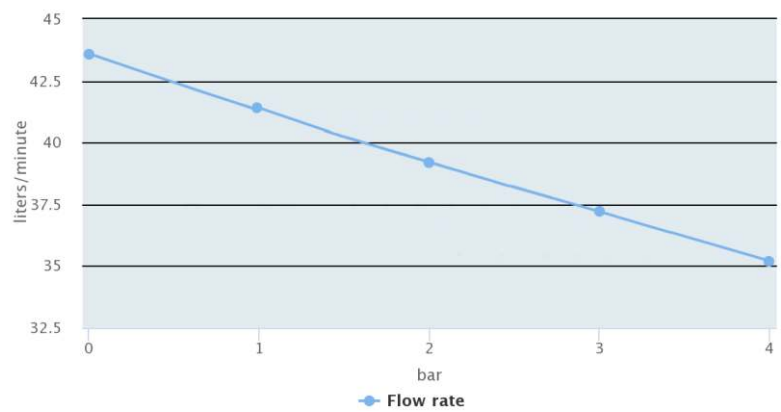
Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents

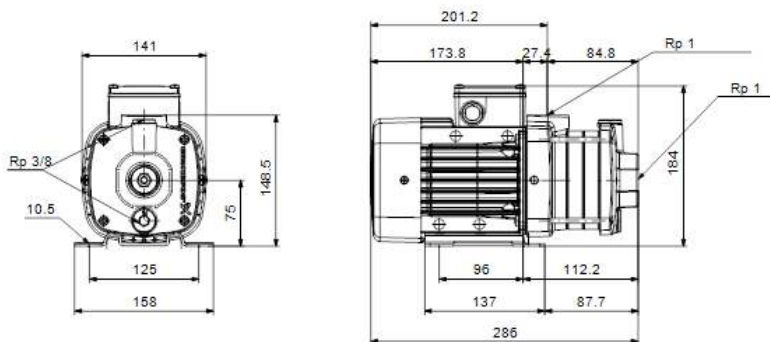
Electrical absorption



Flow rate



W-CPAC-40

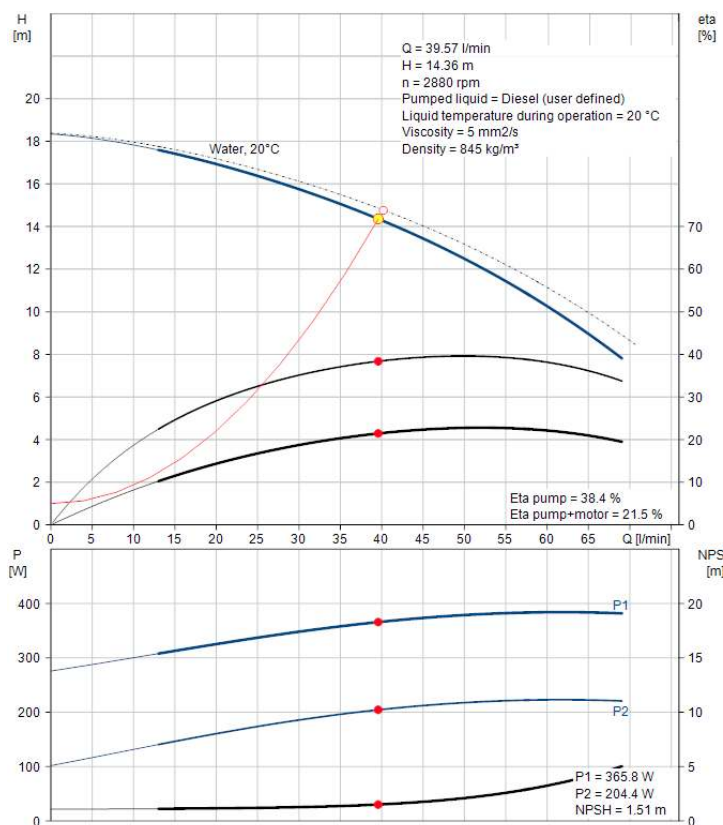


Technical Specifications

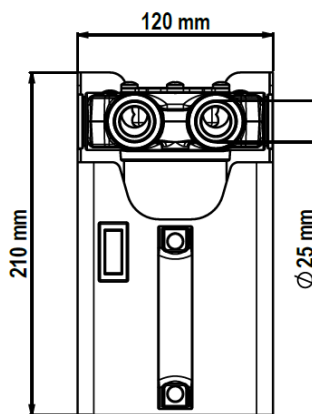
Model	W-CPAC-40
Power	220v Ac 50Hz – 0.46kw
Fuse	1.2a
Flow rate	40 -70 lit/min
Operating pressure	1.8 bar
Weight	11kg
Operating temp.	Min -10°C Max +55°C
Operating humidity	Max 90%
Protection	IP55
Max lift	1.5m
Port thread size	1" BSP

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids: Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-VPDC-45 (12 and 24v DC)



H=161

- Self-priming electric vane pump with integrated bypass valve
- Aluminium body
- Two options quick-fit connection for 25mm pipe
- Rotor and vanes made of resin for long life and low friction
- Brush holder with EMI filter

Technical Specifications

Model W-VPDC-44-12vdc
 Power 12v DC
 Fuse 15a

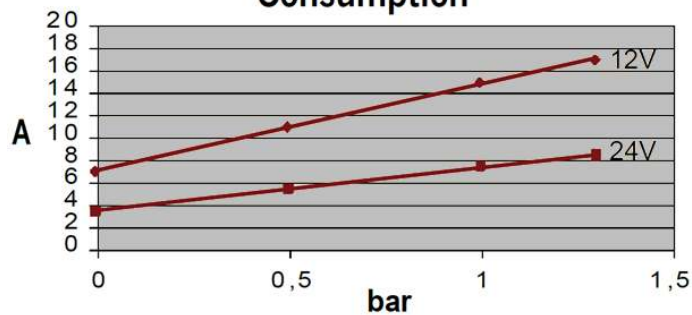
Model W-VPDC-45-24vdc
 Power 24v DC
 Fuse 7a
 Flow rate 44 lit/min max
 Operating pressure 1.2 bar
 Weight 2 kg
 Operating temp. Min -10°C Max +60°C
 Operating humidity Max 90%

Protection IP55
 Max lift 4m
 Port size 25mm hose tail or 25mm port
 Ports can be mounted on top or side of the pump to suit.
 Life: Brush replacement in 4500 hours approx

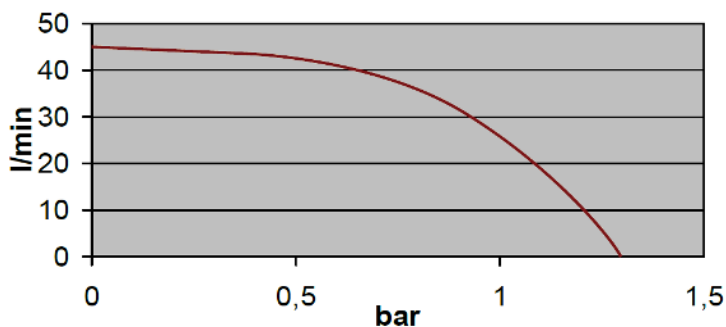
Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids:
 Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products

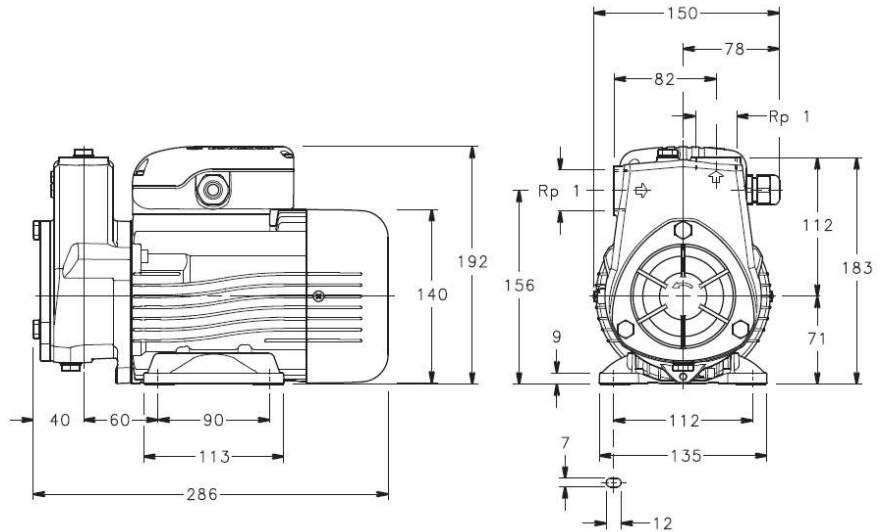
Consumption



Flow rate



W-VPAC-45-220vac



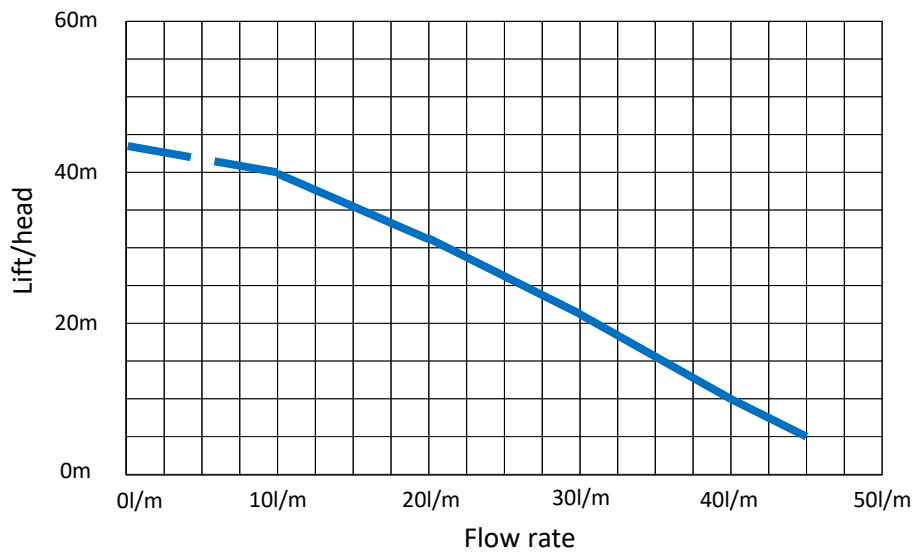
Model: W-VPAC-45-220vac

SPECIFICATIONS

Max flow:	45 lit/min
Ports:	1" BSP female
Voltage:	220v AC 50hz single phase
Current:	4.5a max
Power:	0.87kw (3/4Hp)
Max head/Lift:	50m
Flow will reduce with head pressure, min flow at max head:	5.7 lit/min
Insulation class:	F
Protection:	IP55
Max pressure:	8 bar

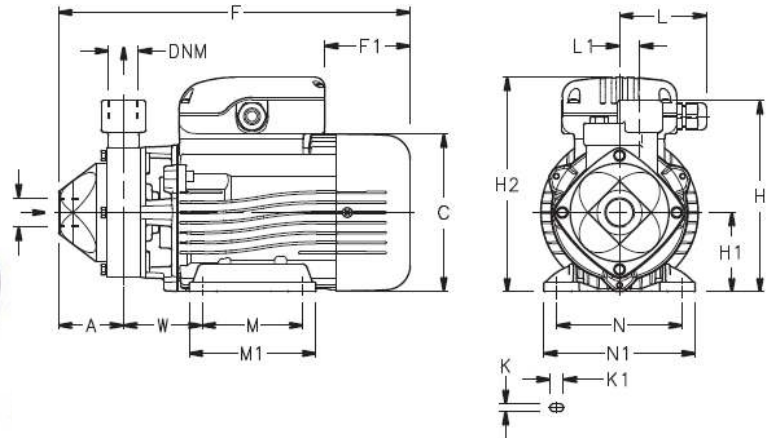
MATERIALS

Pump body:	Cast iron
Motor/pump support:	Cast iron
Impeller:	Nickel-plated brass
Front flange:	Brass
Rear diffuser plate:	Brass
Mechanical seal:	Ceramic/Carbon/NBR
Fill plug:	Brass
Elastomers:	NBR



W-VPAC-60-220vac

Peripheral pump capable of developing high head at low power.



Model:W-VPAC-60-220vac

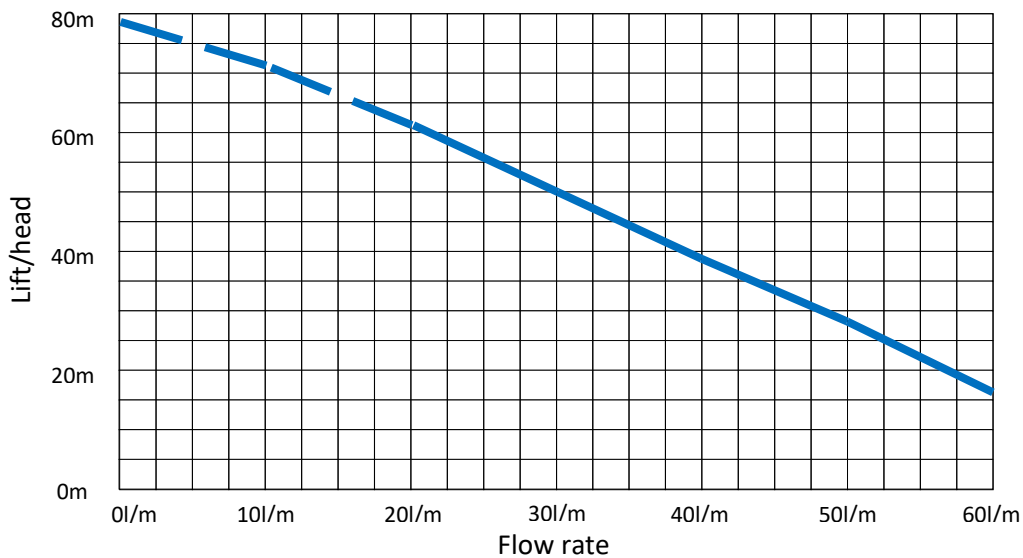
SPECIFICATIONS

Deliver	up to 62 lit/min
Head	up to 80 m
Voltage	220v AC 1ph 50 Hz
Power	1.1 kW
Current	5.3 a
Maximum operating pressure	8 bar
Liquid Temperature	-10°C to +40°C
Max Ambient Temp	40°C
Insulation class	F
Protection:	IP55
Ports	1" BSP female
Weight (dry)	14.2kg

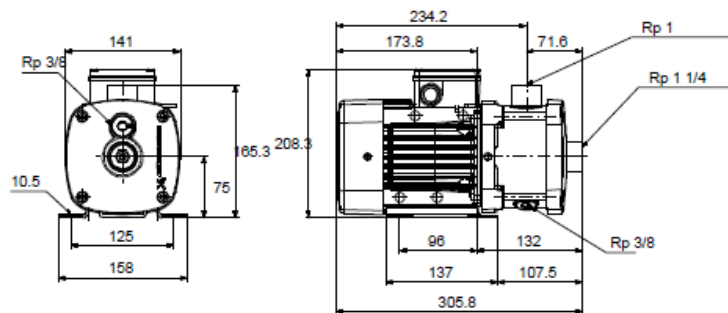
Dimensions (mm)							
A	C	F	F1	H	H1	H2	L
58	155	354	113	180	80	209	78
L1	M	M1	N	N1	K	K1	W
20	100	124	125	153	9	12	83

MATERIALS

Pump body:	Cast iron
Adapter:	Cast iron
Impeller:	Bronze
Mechanical seal:	Ceramic/Carbon/Viton
Fill plugs:	Brass
Gaskets:	Viton



W-CPAC-60

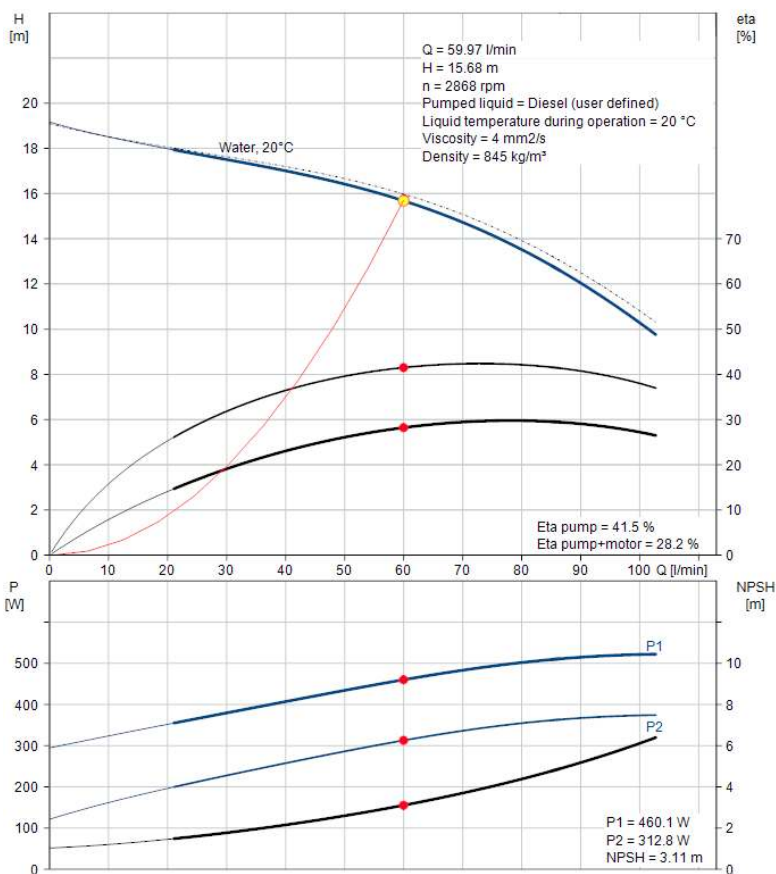


Technical Specifications

Model	W-CPAC-60
Power	220v Ac 50Hz – 0.5kw
Fuse	3.8a
Flow rate	60lit/min max
Operating pressure	1.95 bar
Weight	11kg
Operating temp.	Min -10°C Max +55°C
Operating humidity	Max 90%
Protection	IP55
Max lift	5m
Port thread size	1" BSP out, 1 1/4" BSP in

Allowed liquids: Diesel fuel with viscosity between 2 and 5.35cSt (at 37.8 °C) min flashpoint (PM) 55 °C
 Fresh water
 Sea water

Prohibited liquids: Petrol/Gasoline
 Flammable liquids with PM below 55 °C
 Liquids with a viscosity above 20cSt
 Foodstuffs
 Corrosive chemical products
 Solvents



W-IPAC-60

Viton impeller pump for diesel compatibility and high self-priming

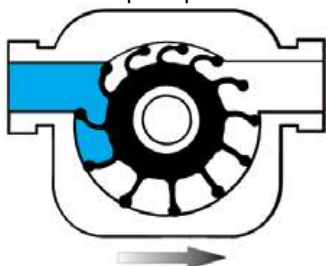
Flexible impeller pumps are displacement pumps. The rotor with flexible vanes is mounted concentrically in a circular housing which has a flattened area at one side. This provides the eccentric path for the impeller, thereby squeezing the flexible blades on this side.



Max flow 60 l/min

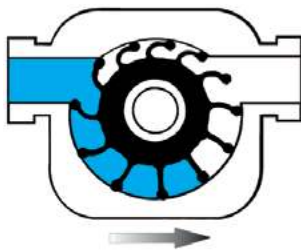
1. suction:

The impeller rotation and the straightening of the vanes upon leaving the cam creates a vacuum on the suction side drawing the fluid into the pump chamber.



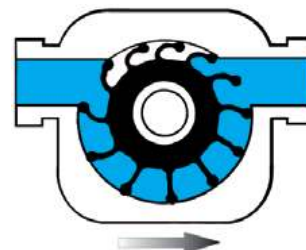
2. transfer:

The rotating impeller transfers the liquid from the inlet to the outlet port of the pump.



3. Press:

On the pressure side the impeller vanes are compressed and the fluid is discharged constantly from the pump.

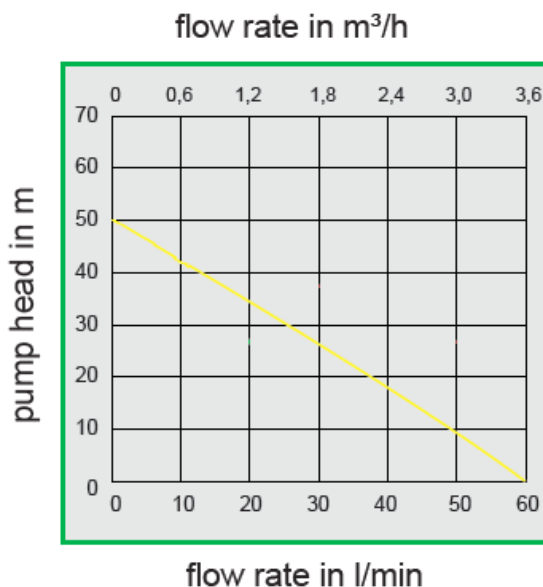


Temp range -10 to +90 deg C
 Self-prime 3m (dry)
 Max lift 7m (over 3m, must be manually primed)
 Weight 9.2kg

Power 220-240v AC (0.55kw)
 Current 4 a
 Max pressure 4bar
 Ports 1"

Fluids

- diesel fuel, biodiesel
- water, seawater
- waste water
- vegetable oils
- heating and motor oil
- detergents
- antifreeze
- heat transfer fluid
- cooling lubricants



W-IPAC-90

Viton impeller pump for diesel compatibility and high self-priming

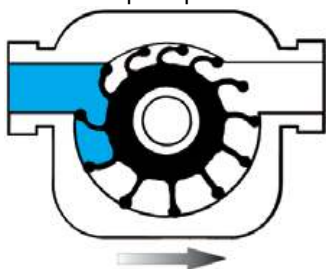
Flexible impeller pumps are displacement pumps. The rotor with flexible vanes is mounted concentrically in a circular housing which has a flattened area at one side. This provides the eccentric path for the impeller, thereby squeezing the flexible blades on this side.



Max flow 90 l/min

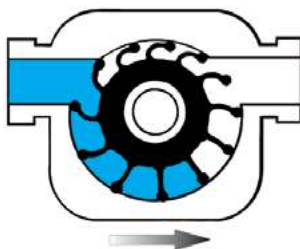
1. suction:

The impeller rotation and the straightening of the vanes upon leaving the cam creates a vacuum on the suction side drawing the fluid into the pump chamber.



2. transfer:

The rotating impeller transfers the liquid from the inlet to the outlet port of the pump.



3. Press:

On the pressure side the impeller vanes are compressed and the fluid is discharged constantly from the pump.

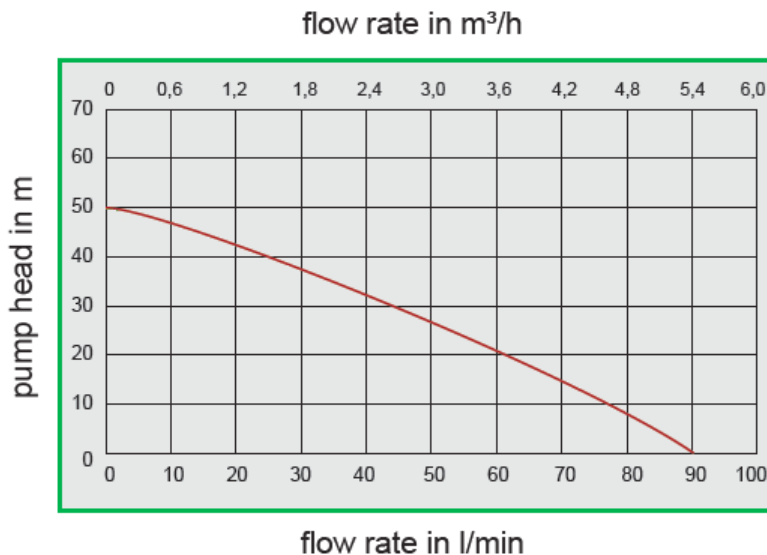


Temp range -10 to +90 deg C
 Self-prime 3m (dry)
 Max lift 7m (over 3m, must be manually primed)
 Weight 13kg

Power 220-240v AC (1.1kw)
 Current 8.8 a
 Max pressure 5bar
 Ports 1.25"

Fluids

- diesel fuel, biodiesel
- water, seawater
- waste water
- vegetable oils
- heating and motor oil
- detergents
- antifreeze
- heat transfer fluid
- cooling lubricants



WASP Biokem SP15 Fuel Additive

Fuel micro-biocide for the treatment of *Cladosporium Resinae* and *Pseudomonas aeruginosa* (fuel bug)

WASP® BIOKEM SP15 is a concentrated effective biocide/fungicide designed for all fuel oils. Rapidly destroys micro-organisms and provides long term protection against further infection.

- Effective at high dilution
- Nitrite free
- Universal application
- Good material compatibility
- Long Lasting
- Supports anti-corrosive properties
- Low toxicity
- Boosts pH level
- Extremely versatile and economic in use
- Can also be used as a wash to pre-treat surfaces.



Can I use WASP® BIOKEM SP15 to prevent a bacterial infection?

Yes, and we suggest doing so to avoid the costly expense of finding out about the infection when it is too late to be treated resulting in the need to replace storage equipment and your stored fuel.

Prevention is better than cure!

Do I need to remove the bacteria already there?

WASP® BIOKEM SP15 will kill live bacteria but to remove it completely, you will need to filter out the bacteria which is already in your fuel. It is worth noting other similar products claim to remove existing infections. While the majority of similar products may break down the infection (including BIOKEM), and prevent further infection, none will completely remove the matter already there. If you intend to use BIOKEM for a boat, it may already have a filter which can be run to clean out the matter.

- Part no: W-Biokem-5L 5kg (5 lit approx.) bottles
- Part no: W-Biokem-250ml 250ml bottles
- Part no: W-Biokem-50ml 50ml bottles

Recommended dosage for diesel

Contamination Level	Dose	50ml will treat	250ml will treat	5L will treat
Preventive	10,000:1	500 litres of fuel	2500 litres of fuel	50,000 litres of fuel
Moderate contamination	5,000:1	250 litres of fuel	1250 litres of fuel	25,000 litres of fuel
Heavy contamination	3,000:1	150 litres of fuel	750 litres of fuel	15,000 litres of fuel

Treat as per table above and re-treat periodically at 5000:1 to 10000:1 to control re-infection. Best results are obtained if the fuel system can be re-circulated to fully disperse the biocide.

When dosing with WASP® Biokem SP15, always mix the required dose with a greater quantity of fuel before adding to the fuel tank. This ensures a quick and efficient dilution with the infected fuel.

For **bio-diesel** we recommend double-dosing, so a 250ml bottle is enough to treat 375 litres of fuel with heavy contamination (1500:1).

WASP FTR Fuel Additive

WASP Fuel Treatment Red (FTR) is a highly concentrated mixture of carefully formulated additives and solvents designed to easily mix with gas oils, diesel and fuel oils used for marine pleasure and ocean-going vessels, road haulage fleets, mechanical plant and agricultural units.

What WASP FTR can do for you?

- Improves combustion
- Disperses and inhibits sludge
- Reduces gums & resins
- Improves spray patterns
- Extends filter life
- Lowers fuel consumption
- Improves power output
- Reduces carbon deposits
- Inhibits microbial growth
- Reduces smoke emissions
- Reduces mechanical wear
- Inhibits tank corrosion
- Cleans injectors & fuel system

Fuel optimisation

At today's higher fuel prices, it is essential customers obtain greater value for money by optimising fuel performance in the most cost effective way. Each litre of fuel burned needs to be in pristine condition to enhance engine performance and reduce mechanical wear.

Engines convert fuel or 'chemical energy' into mechanical energy, heat and emissions. The condition of the fuel plays an important role in the efficiency of the energy conversion process. Optimal fuel quality will enhance combustion, extend maintenance intervals and the useful life of filters and injectors, and help to keep tanks clean. Additives in WASP FTR restore 'stale' fuels to peak combustibility ensuring continuous clean burning and optimising fuel efficiency, and when used in conjunction with a Separ Fuel Polishing System for water and contaminate removal, it represents the most powerful and efficient cleaning solution for fuel in storage

Stored fuels naturally deteriorate; fuels, being organic, are susceptible to natural deterioration. Oxidation, water, and microbes all contribute to reducing fuel quality and forming tank sludge. Bacterial build up can also be a major problem. Water ingress and air-borne contaminants like dirt and grit all combine with oxidised fuel particles to form sludge. These unwanted by-products cause clogged filters and fuel lines, resulting in unwanted downtime and costly maintenance. Worse – potential engine failure at sea or vehicle breakdown in remote areas! In use, contaminated fuel can corrode injectors, pumps (and tanks) leading to incomplete combustion, carbon build up, smoke, loss of power and even engine failure.

Where the Fuel Polishing Systems remove the bacterial content and water from a tank, the addition of WASP FTR fuel treatment and improvement catalyst eliminates any fungal growth and bacterial build up, improves the fuels combustibility and restores it to pristine condition. It also enhances lubricity, inhibits corrosion and reduces harmful exhaust emissions.

- Part no: W-FTR-5L 5kg (5 lit approx.) bottles
- Part no: W-FTR-250ml 250ml bottles
- Part no: W-FTR-50ml 50ml bottles



Recommended dosage

Contamination Level	Dose	50ml will treat	250ml will treat	5L will treat
Preventive	4,000:1	200 litres of fuel	1000 litres of fuel	20,000 litres of fuel
Heavy contamination	2,000:1	150 litres of fuel	500 litres of fuel	10,000 litres of fuel

Kathon FP1.5 Fuel Additive

Kathon FP 1.5 is a patented high performance antimicrobial agent developed specifically to combat problems of microbial contamination and spoilage in hydrocarbon fuels.

Kathon is accredited for both aircraft and offshore use.

Basic details

The effectiveness of Kathon FP1.5 has been proven over a number of years and it has extensive approvals endorsing its use in a wide range of fuel types. It combines exceptional activity with broad spectrum performance, consequently it is effective at very low use levels against all commonly occurring fuel contaminants (bacteria, fungi and yeast).



Kathon FP1.5 is supplied in 5kg (approx. 5L) bottles and remains effective for approximately 2 to 3 months.

Basic Usage

Kathon FP1.5 should not be added directly into the fuel tank. It should first be diluted with approximately 5 litres of fuel and then added to achieve an even dilution with the contaminated fuel.

Part no: Kathon-5kg	5kg (5 lit approx.) bottles
Part no: Kathon-20kg	20kg (20 lit approx.) bottles

Recommended dosage

Contamination Level	Dose	100ml will treat
Preventive	10,000:1	1000 litres of fuel
Moderate contamination	5,000:1	500 litres of fuel
Heavy contamination	3,000:1	300 litres of fuel

Where possible water and sludge should be removed from the bottom of fuel tanks before and/or 12 hours after dosing Kathon FP1.5. If this is not feasible, Kathon FP1.5 can still be dosed, but filters should be checked 2 or 3 times in the first week.

Micro-Dip Slides for fuel testing

Detection of microbial infection

Stored fuel is at risk of infection such as bacteria, which can quickly multiply and if left untreated, can lead to failure of backup systems which could be disastrous in an emergency situation.

Water can form in any fuel tank, typically from condensation, poor ventilation or water ingress (especially common in marine vessels). Water, while a contamination itself, is the main cause of formation of all other forms of contaminations, such as bacteria, yeast and moulds.

Infections then quickly multiply and can lead to blocked fuel filters, damaged injectors, engine failure and can be potentially life threatening if back up power supplies fail.

We therefore recommend fuel is checked regularly for signs of contamination, so any infection can be treated early on.

A simple dip slide test can give results within 1 – 5 days, allowing you to treat the contamination appropriately before it takes over.

Quick, Simple and cost-effective testing. The Micro Dip Slides are easy to use and test for bacteria, yeast and moulds. The Micro Dip Slides are available to buy in units of 1 or in a pack of 10. The dip slide is held within a container which keeps the agar clean before and during processing. An instruction sheet and a growth chart are also included. For most accurate results, we recommend using an incubator to keep the sample at a consistent temperature of between 30 and 35 Degrees Centigrade.



Part no: MCD	Single slide
MCD-10pk	Pack of 10 slides

Treating an infection

We highly recommend treating any bacterial infection as early as possible with WASP® BIOKEM SP15 to prevent further spreading of the bacteria. WASP® BIOKEM SP15 can be used to prevent further spreading of bacteria even with very heavy growth, but please note, it will not remove the residue already there. To remove existing residue, a fuel filtering system should be used.

More Detailed Testing.

If you would like professional and detailed fuel testing, please contact us to discuss having fuel samples taken and sent to our lab for analysis.

Preventative measures

With the introduction of Biodiesel, the risk of contamination from bacteria is even higher.

Bio-fuel is hygroscopic and attracts water, the cause of all microbial growth.

We recommend regularly treating your fuel with WASP® BIOKEM SP15 as a preventative measure to avoid microbial growth.

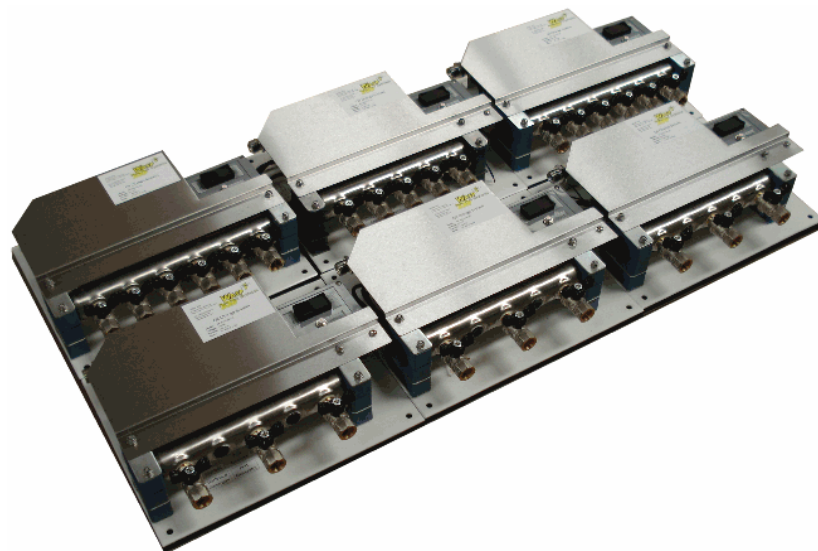
Oil Change Systems

The quicker and cleaner option

Changing oil can be a difficult, time consuming, and mucky task. Getting under the sump, draining, waiting for everything to clear; and if you have multiple sumps (ie. a generator, air-conditioning system, engine, etc) it could take the day.

The WASP PFS Ltd range of oil change systems remove the difficulty and save valuable time.

The quick and easy system just needs each sump connected to the ports of our system, select the drain option and no more waiting, all your old oil is removed. And refilling? Just as simple, attach our system to your clean oil supply and switch to "fill".



Customised to your requirements

Depending on how many ports you require for your sumps, we can customise the system from the typical 3 ports right up to 8 ports and based on your power requirements.

Technical Detail

Pump inlet:	1/2" BSP Male - 60-degree cone for hose
Valves:	1/2" BSP Female
Weight:	9.9Kg
Maximum flow:	15lit/min*
Power:	24v DC (7.5a) 12 v DC units available on request (15a)



Ordering numbers

3 port 24v DC	GP-3013-24
3 port 12v DC	GP-3013-12
4 port 24v DC	GP-3014-24
4 port 12v DC	GP-3014-12
5 port 24v DC	GP-3015-24
5 port 12v DC	GP-3015-12
6 port 24v DC	GP-3016-24
6 port 12v DC	GP-3016-12

