

Albinus Wash Down Pumps WD 3.4 12V, WD 5.2 12V / 24V

Albinus 300-series 3-chamber diaphragm and 500-series 5-chamber Wash Down Pumps, with cut-off pressure of 5 bar (70 psi), are ideal for efficient deckwash and wash down duties! Our WD pumps supply continuous, pulsation-free, pressurized flow; inlet strainer 40 mesh and spray nozzle included.

- Easy to install
- Integrated extra heavy duty sealed pressure switch
- Smooth & Pulsation-free flow
- Quiet operation
- 5 bar (70 PSI) pressure for optimal deck wash function
- Self-priming up to 2.5 m (8.2 feet)
- Quick disconnect ports
- Connection with ½" hose
- Click-on 40 µm-mesh strainer and spray nozzle included
- Composite base mount for even quieter operation (WD 3.4)
- Manufactured according to CE standard; EN55014-1, ISO 88461 & ISO10133. Under approval

part no. 02-04-014 Wash Down Pump WD 3.4 12.9 L/min (3.4 GPM) 12V 15A ½" hose
 part no. 02-04-015 Wash Down Pump WD 5.2 20 L/min (5.2 GPM) 12V 20A ½" hose
 part no. 02-04-016 Wash Down Pump WD 5.2 20 L/min (5.2 GPM) 24V 10A ½" hose

Operation:

When the pump is activated, for example using the included spray nozzle, the water pressure increases until it reaches the factory-set cut off pressure of 5 bar (70 psi), where the integrated pressure switch turns the pump off. As the pressurized water in the system is depleted the pressure will drop. At the factory-set cut-in pressure of 3.7 bar (54 psi) the WD pump's integrated pressure switch will automatically turn on the pump to boost the water system pressure, providing continuous, pulsation free flow.

A check valve on the outlet maintains the pressure in the water system between uses so that pressurized water is always available.

Technical Specifications:

Body: Nylon/Polyamide
Valve housing: Polypropylene/Polyamide
Valves: Nitrile
Diaphragm: Santoprene
Connection: ½" hose
Inlet strainer: 40 µm mesh, included
Max. liquid temperature: Max +50°C/+120°F
Fasteners: Stainless steel
Max. suction lift: WD 3.4 – 2 m/6.5 ft
 WD 5.2 – 2.5 m/8.2 ft
Cut in pressure: 3.7 bar (54 psi)
Cut-off pressure: 5 bar (70 psi)
Duty cycle: Intermittent, max 20 min
Motor: WD 3.4 – 140W
 WD 5.2 – 190W
 12 / 24V DC with built in thermal protection

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Installation:

The pump must be mounted in a dry, ventilated location and must not be submerged. *Selection of a cool ventilated location will generally extend pump motor life.* Mount the pump horizontally with space for maintenance. If you choose to mount the pump vertically, mount with the motor pointing upwards.

Mark screw positions and drill pilot holes (see drilling template). Mount the pump using stainless steel screws and with the accompanying washers; do not over tighten the screws so that the vibration dampening of the composite base / rubber feet is not compromised.

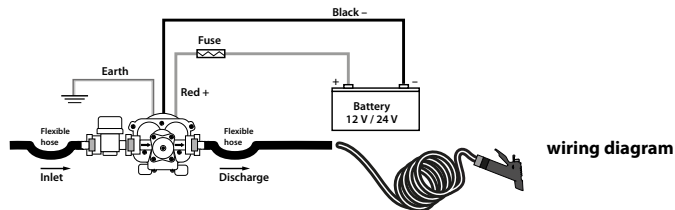
For connecting to the water piping, it is recommended to use reinforced, high pressure flexible tubing. If rigid piping is used for the connection, a length of flexible tubing (225 mm / 9 inches minimum) should be installed between the pump and the rigid pipe. This will stop noise and/or damage caused by any vibrations transmitted to rigid pipe. Use stainless steel hose clamps to secure tubing to the quick disconnect fittings and any other hose barbs present in the system.

NOTE:

The included strainer must be installed at the pump intake, to prevent debris from entering pump, causing damage and interfering with the proper functioning of valves.

Electrical connections:

The pump must be installed according to SS-EN ISO 10133 (Small craft – Electrical system – Extra low voltage DC installation for continuous current). Note: The fuse must be ignition protected. The motor is equipped with built-in thermal protection to prevent the motor from overheating. The protection is automatically reset when the motor has cooled. If the pump is connected with a separate earth lead, connect it to metallic part of the motor. See the wiring diagram for correct installation. In keeping with standard electrical nomenclature, the Negative wire must be black and the Earth lead (if used) should be yellow / green. Choose wire size in accordance with total wire length.



wiring diagram

Connect black wire to negative (-) terminal of battery. The red wire should run to the positive (+) terminal of battery, with a properly sized fuse must be placed between the battery's positive terminal (+) and the pump. Other electrical devices, such as switches or circuit breaker, must be installed between the pump and the positive (+) lead on the battery (on the red wire). Use proper wire size as determined by wire table below. Wiring must comply with applicable electrical standards.

All wire connections must be sealed with a marine sealant. Note! Before the installation of electrical control systems, check that the capacity of the equipment to be used is of sufficient rating to accept the amperage draw of the motor. Low voltage will cause the motor to overheat.

WD 3.4

Wire size (based on 3% voltage drop)	Max wire length (total distance from the battery to the pump and back to the battery)	
	12V	
2.5mm ² (14 ga)	3 m (9.8')	
4mm ² (12 ga)	6 m (19.7')	
6mm ² (10 ga)	8 m (26.2')	
10mm ² (6 ga)	14 m (45.9')	

WD 5.2

Wire size (based on 3% voltage drop)	Max wire length (total distance from the battery to the pump and back to the battery)	
	12V	24V
2.5mm ² (14 ga)	3 m (9.8')	16 m (52.5')
4mm ² (12 ga)	6 m (19.7')	25 m (82')
6mm ² (10 ga)	8 m (26.2')	38 m (124.7')
10mm ² (6 ga)	14 m (45.9')	63 m (206.7')
16mm ² (4 ga)	22 m (72')	100 m (328')

Start-up procedure

After installing the pump, initiate the system as follows:

1. Connect the water source to the pump suction intake. **Follow the manufacturer's instructions for installing any through-hull fittings!** Connect the washdown hose with spray nozzle.
2. Open the spray nozzle and turn on the pump
3. Close spray nozzle once the water begins flowing and the spitting stops as air is purged from the system.
4. If additional hoses/spray nozzles together with the pump, open each nozzle until all air has been purged from system.
5. The pump will shut off after the nozzles are closed and pressure builds to the pre-set cut-off pressure of the integrated pressure switch

Winterizing

If water is not drained from the system at freezing ambient temperatures, damage will occur to the water pipes / hoses and in the pump. To prevent this follow these instructions:

1. Disconnect suction intake hose from water source; if connected to a water tank, drain the water tank.
2. Open all spray nozzles.
3. Run the pump until the remaining water is expelled from the system.
4. Disconnect the inlet and outlet tubing.
5. Run the pump briefly to confirm that all water has been expelled.
6. Switch off the electrical power to the pump.
7. Keep the nozzles open and the pump fittings disconnected until temperatures are above freezing again.
8. To re-instate the pump, follow the directions under "Start up procedure"

Never start a frozen pump. Even when drained it might contain a small amount of ice that will lock the pump.

Self-priming

The pump is self-priming up to 2 m (6.5 ft) for WD 3.4 and 2.5 m (8.2 ft) WD 5.2. The inlet pipe must be airtight to ensure self-priming.

Dry running

Pump will not be damaged by shorter periods of dry running. It will, however, unnecessarily reduce your battery power.

Temperature

Max liquid temperature: +50°C/+120°F
Max ambient temperature: +60°C/+140°F



Keep all wire connections above the highest water level. Wires must be joined with butt connectors and a marine grade sealant to prevent wire corrosion.



Disconnect power from the system before working on the unit to avoid personal injury, damage to the surrounding environment and/or damage to the unit.



Always install proper fuse size to prevent damage to product should a short occur. Failure to install proper fuse could increase risk of pump malfunction potentially resulting in personal injury and/or fire hazard.



Do not pump gasoline, solvents, thinners, highly concentrated or organic acids. Use with hazardous, caustic, or corrosive material could result in damage to the pump and the surrounding environment, possible exposure to hazardous substances and injury.

Trouble shooting

Pump does not run? Check the following:

- Fuse blown? Motor overheated? Allow motor to cool down before restarting.
- Battery fully charged? Check all wiring.
- Faulty pressure switch? Replace switch.
- Faulty motor? Replace pump.
- Frozen pump / motor? Thaw the pump and system and check for ice damage

Pump does not prime? Check the following:

- Not connected to water source? Empty water tank?
- Debris under the valves? Gently flush the valves in direction of flow with tap water.
- Perforated diaphragm? Replace diaphragm kit.
- Leakage on inlet side of pump? Check tightness of hose connections at pump, filter and tank
- Check inlet and outlet piping for restrictions.

Pump cycles on and off rapidly when a nozzle is opened? Check the following:

- Restriction / too high pressure on outlet side of pump? Outlet tubing is too small, must be same diameter as outlet connection.

Pump cycles on and off rapidly when no nozzle is open? Check the following:

- Leakage on outlet side of pump? Tighten connections and check hose for possible damage.

Pump continues running after nozzle is closed? Cut-off pressure not achieved? Check the following:

- Leakage on inlet or outlet side of pump? Tighten connections and check hoses for possible damage.
- Perforated diaphragm? Replace diaphragm kit.
- Faulty connection to water source? Empty water tank?
- Faulty pressure switch? Replace switch.
- Low voltage to pump? Charge / replace battery.

Low flow / pressure? Check the following:

- Leakage on inlet or outlet side of pump? Tighten connections and check hoses for possible damage.
- Perforated diaphragm? Replace diaphragm kit.
- Faulty motor? Replace pump.
- Debris under the valves? Gently flush the valves in direction of flow with tap water.

Pump is excessively noisy? Check the following:

- Pump connected directly to rigid piping? Install flexible pipe according to instructions under "Installation"
- Pump head or mount loose on motor? Tighten screws.
- Pump mounting too rigid? Use flexible tubing on the inlet and outlet connections, make sure you are using the provided composite base
- Faulty motor? Replace pump.

Pump performance WD 3.4 and WD 5.2

WD 3.4

Pressure			Flow L/min	GPM	Amperage 12V
Bar	kpa	psi			
0	0	0	12.7	3.4	5.1
1.0	80	14.5	11.2	3.0	6.8
2.0	200	29.0	10.0	2.6	8.7
3.0	300	43.4	9.0	2.4	10.4
4.0	400	58.0	7.7	2.0	12.0
5.0	500	72.5	6.6	1.7	13.4
Recommended Fuse					15 A

WD 3.4 at 13.6V (battery charge)

Pressure			Flow L/min	GPM	Amperage 13.6V
Bar	kpa	psi			
0	0	0	13.7	3.6	5.5 A

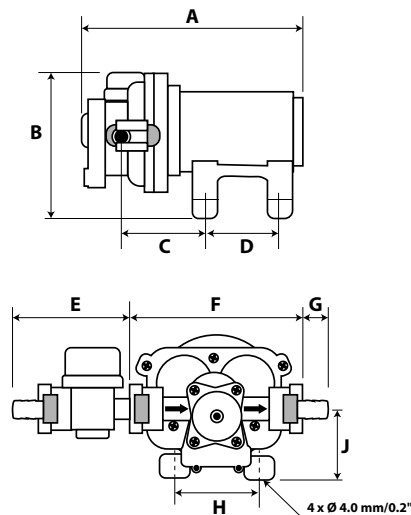
WD 5.2

Pressure			Flow L/min	GPM	Amperage	
Bar	kpa	psi			12V	24V
0	0	0	19.0	5.0	6.8	2.7
1.0	80	14.5	16.5	4.4	9.1	3.8
2.0	200	29.0	14.4	3.8	11.6	4.8
3.0	300	43.4	12.7	3.4	14.0	5.9
4.0	400	58.0	11.2	3.0	16.4	6.9
5.0	500	72.5	9	2.4	18.9	7.5
Recommended Fuse					20 A	10 A

WD 5.2 at 13.6V & 27.2V (battery charge)

Pressure			Flow L/min		GPM		Amperage	
Bar	kpa	psi	12V	24V	12V	24V	13.6V	27.2V
0	0	0	20.4	19.6	5.4	5.2	7.1 A	2.8 A

Dimensions and weight



Dimension	mm		inch	
	WD 3.4	WD 5.2	WD 3.4	WD 5.2
A	245	215	9.6	8.5
B	105	112	4.1	4.4
C	71	63	2.8	2.49
D	72.5	63.4	2.9	2.5
E	82		3.2	
F	117	122	4.6	4.8
G	20		0.8	
H	82.5	108	3.2	4.3
J	63.4	70	2.5	2.75

WD 3.4 3 kg / 6.6 lbs
WD 5.2 2.5 kg / 5.5 lbs



Waste handling & material recycling
At the product's end of life, please dispose of the product according to applicable law. Where applicable, please disassemble the product and recycle the parts according to material.

Albin Group

since 1928

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WARRANTY
Two year limited warranty