



# **DDA Submersible Well Pumps**



**DDA 1200**



**DDA 900**

## **Installation & Operating Manual**

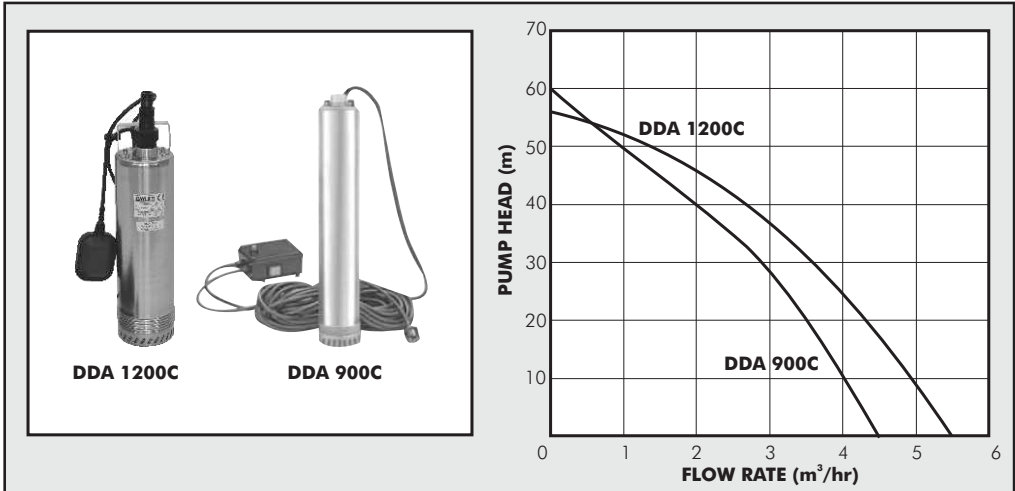


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Thank you for choosing Dayliff DDA pump. The pump has been manufactured to the highest standards and if operated correctly should give many years of efficient and trouble free service. Careful reading of this instruction manual is therefore extremely important and if you have any queries please refer them to your retailer.

# 1. PUMP SPECIFICATIONS



## PUMP

DAYLIFF DDA submersible multistage centrifugal pumps are designed for pumping clean, non-aggressive water in various domestic and light duty applications. They are particularly suitable for wells and boreholes, though can also be used for water transfer from tanks, irrigation and pressure boosting applications as an alternative to a conventional dry mounted pump. A particular design feature is the jacketed motor arrangement which provides excellent cooling and allows the pump to work semi-submerged. Other innovative features are single mechanical seal in an intermediate oil chamber for greater pump reliability, a built in capacitor for simplified installation, low level float switch with adjustment clamp and 20m drop cable.

Pump construction is Polypropylene impellers and diffusers and stainless steel pump casing. The pump can be fitted with a pressure controller for automatic operation.

DDA900C comes with an external control box which includes an isolator, run light, overload protection and start capacitor.

## MOTOR

Enclosed and rewindable liquid cooled, non-overloading induction motor designed for continuous operations incorporating a thermal cut-out in the windings to protect against overloading. The pump can be connected directly to the mains power supply through a 10A fuse or MCB.

**Enclosure Class:** X8

**Voltage:** 1x240V

**Insulation Class:** B

**Speed:** 2900rpm

## OPERATING CONDITIONS

**Pumped Liquids:** Thin, chemically non aggressive liquids without solids or fibres

**Max. Liquid temperature:** 35°C

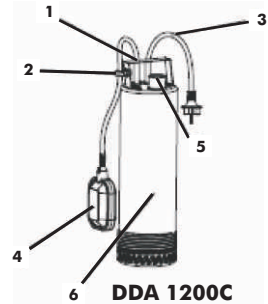
**Max. Immersion Depth:** DDA1200C - 7m, DDA900C - 16m

**Max. Particle Size:** 1.5mm

## PUMP DATA

Model	Power		Max. Current (A)	Outlet (")	Dimensions (mm)		Weight (kg)
	kW	HP			H	W	
DDA 1200C	1.2	1.5	5	1	487	128	12
DDA 900C	0.9	1.2	3.9	1	645	100	11

1. Carrying Handle
2. Float switch height adjustment
3. Mains cable and plug
4. Float switch (if fitted)
5. Pump outlet
6. Pump casing



## APPLICATION

- The pump is intended for pumping rainwater, fresh water, mains water and chlorinated swimming pool water.
- Explosive, flammable, aggressive or health-hazardous substances and faecal matter must not be pumped.
- The pump is not suitable for commercial or industrial use.
- The pump is not suitable for continuous running (e.g permanent circulation in filter systems). It is also not suitable for use with liquids containing abrasive materials (e.g sand) or containing mixtures of dirt, sand, mud or clay.

## 2. INSTALLATION



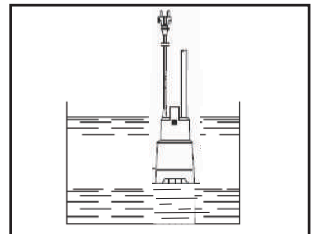
***The rope must be checked regularly for wear and replaced if necessary***

- Attach a sufficiently long and strong rope to the handle and lower the pump until it is submerged into the well.
- Connect the discharge using a suitable water hose. The use of rigid pipes with a non-return valve is recommended for use at a fixed locations. This prevents return flow of the water when the pump is switched off.
  - i) Screw pressure line onto the pressure connection. All threaded connections must be sealed with thread sealing tape (e. g. Teflon® tape).
  - ii) When using a hose, screw a suitable hose adapter onto the pump outlet and secure the hose with a clamp.
- DDA 900C needs an area of at least 50 × 50 cm (the floatswitch must be able to move freely so that it functions properly).
- DDA 1200C is more applicable for use in boreholes and shallow wells and lower level controls should be provided by a separate floatswitch or level panels.
- DDA 1200C is supplied with a separate control unit which can be connected directly to mains power after 10A MCB or fuse.
- DDA 900C is fitted with an inbuilt capacitor and thermal control and can be connected to mains power directly after a 10A MCB or fuse.
- The pump can be submerged under water up to the allowable submerged operating depth as mentioned in the technical data.
- Install the pump so that the suction openings cannot be blocked by foreign bodies.



***Do not lift the pump with the cable or pressure hose as these are not designed to carry the weight of the pump.***

- Using a strong rope submerge the pump at an angle into the water so that no air pocket forms on the underside of the pump. Once the pump is submerged drop it vertically.





**For operation with rope:**

- **Do not operate the pump without pressure hose**
- **Avoid the pump twisting around its longitudinal axis**

- After the pump has been connected to the mains power supply, it is ready for use.

### 3. MAINTENANCE



**When fitted the float switch must be able to move so that the submersible pump does not run dry**

Periodically, suggested monthly, when permanently installed the following should be carried out

- Check casing and cables for damage through visual inspection.
- Check float switch operation by lifting and shaking the switch to check the free movement of the contained weights.
- Rinse the pump with clean water to remove particles, a brush and detergent being suggested. Submerge the pump in a container with clean water and switch on for a short time to rinse the inside of the pump.
- Clean all accessible areas of the casing. Remove fibres which may be wound around the rotor shaft by opening the pressure connection.
- Before using the pump again, first “soak” it so that any possible dirt residues are removed.

# 4. TROUBLE SHOOTING

## PROBLEM

## POSSIBLE CAUSE

## SOLUTION

Pump does not run	No power	Check connections and power supply
	Motor overheats due to: i) Liquid temperature being too high ii) Blocking by foreign bodies	Eliminate the cause of overheating
	Residual current circuit breaker (RCCB) triggered	Reset RCCB
	Motor defective	Check motor
Pump runs with no delivery	Suction openings blocked	Clear blockage
	Pump drawing in air	Keep the pump at an angle while submerged
	Pump blocked by foreign bodies	Clean the suction area
Pump runs no delivery at outlet	Delivery height too great	Readjust to allowable delivery height
	Pressure line diameter too small	Use pressure line with larger diameter
	Suction openings blocked	Clean suction opening
	Pressure line kinked	Straighten pressure line
	Pressure line leaks	Seal pressure line, tighten threaded connections
Pump runs very loudly	Pump drawing in air	Ensure there is sufficient water present Keep the pump at an angle when submerged



## 5. TERMS OF WARRANTY

### i) General Liability

- In lieu of any warranty, condition or liability implied by law, the liability of Davis & Shirliff (hereafter called the Company) in respect of any defect or failure of equipment supplied **is limited to making good by replacement or repair** (at the Company's discretion) defects which under proper use appear therein and arise solely from faulty design, materials or workmanship within a specified period. This period commences **immediately after the equipment has been delivered to the customer** and at its termination all liability ceases. Also the warranty period will be assessed **on the basis of the date that the Company is informed of the failure**.
- This warranty applies solely to equipment supplied and **no claim for consequential damages**, however arising, will be entertained. Also the warranty specifically excludes defects caused by fair wear and tear, the effects of careless handling, lack of maintenance, faulty installation, incompetence on the part of the equipment user, Acts of God or any other cause beyond the Company's reasonable control. Also, any repair or attempt at repair carried out by any other party **invalidates all warranties**.

### ii) Standard Warranty

If equipment failure occurs in the normal course of service having been competently installed and when operating within its specified duty limits warranty will be provided as follows:-

- **Up to two years - The item will be replaced or repaired at no charge.**
- **Over two years, less than three years - The item will be replaced or repaired at a cost to the customer of 50% of the Davis & Shirliff market price.**

The warranty on equipment supplied or installed by others is conditional upon the defective unit **being promptly returned free to a Davis & Shirliff office** and collected thereafter when repaired. No element of site repair is included in the warranty and any site attendance costs will be payable in full at standard chargeout rates. Also proof of purchase including the purchase invoice must be provided for a warranty claim to be considered.





**DAYLIFF** is a brand of **Davis & Shirtliff**

for enquiries contact

**Davis & Shirtliff, Ltd.**

P.O. Box 41762 - 00100, Nairobi, Kenya

Tel: 6968000/ 0711 079 000

or visit

**[www.dayliff.com](http://www.dayliff.com)**

for details of the nearest branch or stockist