



DWY

Submersible Drainage Pumps



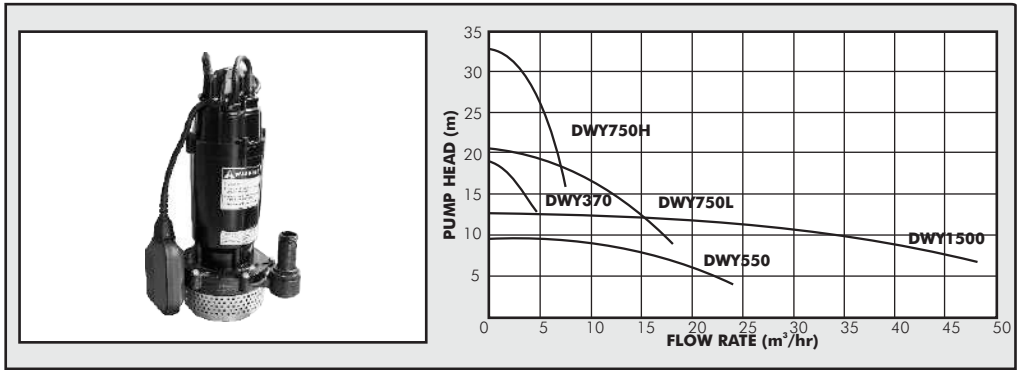
Installation & Operating Manual

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Congratulations on selecting a Dayliff DWY Submersible Drainage Pumps. They are manufactured to the highest standards and if installed and operated correctly will give many years of efficient and trouble free service. Careful reading of this Installation Manual is therefore important, though should there be any queries they should be referred to the equipment supplier.

1. PUMP SPECIFICATIONS



PUMP

The Dayliff DWY range of portable submersible pumps are designed for well pumping and drainage of clean water containing minimal impurities for domestic and small scale water supply applications. They are of closed impeller type, all major components being manufactured from cast aluminium. All models are supplied with 8m of cable and level switch for automatic operation

MOTOR

Pumps are supplied with two pole single phase squirrel cage motors with integral thermal overload protection and can be directly connected to the mains through a 10A fuse or MCB (13A for 1.5kW motor)

Enclosure Class:IP68

Insulation Class:F

Voltage:1x240V

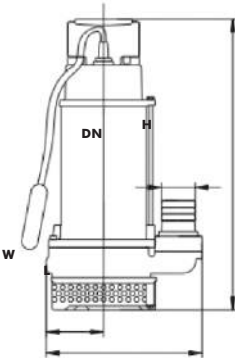
Speed:2850rpm

OPERATING CONDITIONS

- Pumped Liquid:** Thin, clean, chemically non-aggressive liquids with max. sand content of 0.1%
- Max. Fluid Temperature:** +40°C
- Max. Ambient Temperature:** +40°C
- Max. Immersion Depth:** 10m
- Particle Size:** <1.1kw; ≤3.3mm and >1.5kw; ≤5.5mm

PUMP DATA

Model	Motor		Current (A)	Dimensions (mm)			DN (")	Weight (kg)
	kW	HP		W	H	L		
DWY370	0.37	0.5	2.8	75	195	340	1	7
DWY550	0.55	0.75	4.2	80	235	380	2	10
DWY750L	0.75	1	6.1	85	230	390	1.5	11
DWY750H			6.3	95	235	390	1	11
DWY1500	1.5	2	9.1	90	270	465	3	20



2. SYMBOLS & WARNINGS



Pump must be reliably grounded before using. Must be installed with leakage protection, overload and over current protection device.



Running the pump without must be avoided.

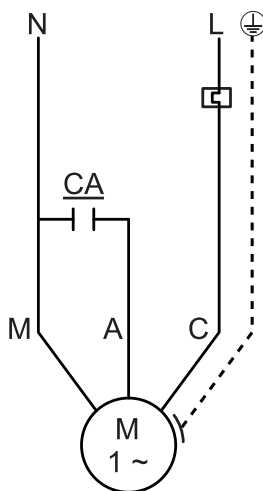


Never touch the water near the pump when it is running.



To prevent electric shock, turn off the power before maintaining and cleaning the electric pump.

3. WIRING



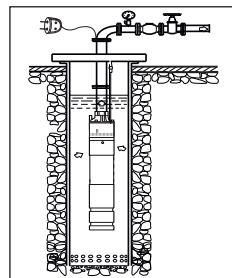
With Capacitor Connection

4. INSTALLATION



Submersible pump must be used within the range of the recommended head, so as to prevent motor damage due to overload operation. To select the pump head, user should consider pipeline and bend losses.

- After unpacking, check if there is any damage on the pump during transportation and storage, for example, if the cables or plugs are intact, if the joints are tight without oil leakage etc.
- Before using the pump, check that the insulation resistance and the cold insulation resistance is less than $100M\Omega$
- Prior to installation, check if the inner diameter of the well matches the minimum diameter of the pump.
- For a new well, remove debris and dirt using an air compressor or an old well pump, then check if the water quality and temperature matches the conditions of the well pump. Install the pump only when the water level reaches the threshold for use.

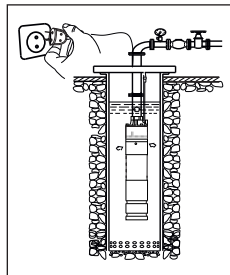


- To install the pump in a pond, hoist it with a tripod.
- Do not place it directly at the well bottom or the motor may ingest mud and cause blockage or run at high temperature and burn the motor.



The submersible depth of electric pump should be about 2m below the dynamic water level, if too shallow, the pumped quality will be poor due to reduced water level, even causing motor failure due to running without water

- The electric pump must be used at the right appropriate voltage.
- If the power supply is far from the place where the electric pump is used, the extended cables used should be appropriately sized.
- Before installing the pump in the well, turn on the power for 3s for test run.
- The cable should be strictly selected as per the wiring diagram indicated on the motor or the control box and should be wired by the corresponding colors.



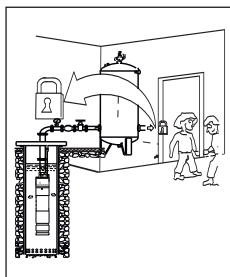
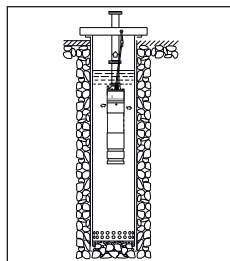
Incorrect wiring will cause the pump to work abnormally and may damage the motor.

- To lift the pump out of water, user must hold the handle with a rope.



Never pull the cable at random.

- When operating the motor, it is preferable to keep the cable off the ground, so as to avoid crushing it when heavy equipment pass on the ground, causing accidents.
- When using the pump, use nylon rope to fasten and support pump in position. Do not use water pipes as they may drop the pump.
- If float switch or liquid level detector and other protective measures are not provided, the pump should be installed and operated by a qualified person, to ensure running with water.
- In case of abrupt reduction of water, abnormal sound or violent vibration, immediately turn off the power, and stop using it until the cause is identified and corrected.



5. TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The pump does not deliver water and the motor does not start.	No electricity	Await resumption of supply
	Plug not inserted correctly	Check and correct
	Automatic switch tripped	Check and correct error
	Overload protection tripped	Automatically reset after the motor has cooled
	Current protection tripped	The micro circuit breaker resets automatically
The pump does not deliver water but the motor is running	Intake flange obstructed	Clean intake
	Delivery pipe clogged	Clean delivery pipe
	Check valve jammed	Clean valve
	Water level too low	Correct pump installation depth
The pump delivers low water	Intake flange partially obstructed	Clear intake flange
	Clogging in delivery pipes	Clean delivery pipe
	Incorrect rotation direction	Check and correct rotation direction
The pump stops after brief periods of operation. The built in overload switch is tripped	Foreign bodies prevent the pump from rotating freely	Clear dirt and debris
	Clogging in delivery pipes	Clean delivery pipes
	Liquid temperature too high	Wait for water to cool
	Internal defect	Return product back to Dayliff retailer for repair

6. MAINTENANCE & SERVICE

In any of the following circumstances, stop the pump immediately and restart only after the environmental conditions are improved or the problems solved

- If the working current of the pump exceeds the rated current of the motor
- If the pumping amount is abnormal, water is intermittently pumped with increased sediment concentration.
- If the insulation resistance of the motor is less than $0.5\text{ M}\Omega$.
- If the unit has obvious noise with intensified vibration
- If the grid voltage is inadequate and the protection mechanism of the motor is frequently triggered.
- If the water pipeline is damaged.

Before repairing and servicing, make sure that the pump is flushed with clean water.

The normal operation of the pump should be checked at least once a year. If the liquid pumped is turbid or the sediment concentration is large, shorten the time intervals of checking the pump.

The following points should be checked:

- Energy consumption: if there is anomaly, check if the circuit is significantly increased.
- Oil condition: if the oil contains water, there may be a leakage of mechanical seal.
- Cable: make sure that the cable is still sealed without obvious bending or shrinking.
- Over-current: check if the impeller or pump housing is worn.
- Bearing: check if the bearing is damaged or its rotation inflexible.

7. TERMS OF WARRANTY

i) General Liability

- In lieu of any warranty, condition or liability implied by law, the liability of Dayliff (hereafter called the Distributor) in respect of any defect or failure of equipment supplied is **limited to making good by replacement or repair** (at the Distributor 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 Distributor 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 Distributors reasonable control. Also, any repair or attempt at repair carried out by any other party **invalidates all warranties.**

ii) Standard Warranty

General Terms

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

The warranty on equipment supplied or installed by others is conditional upon the defective unit **being promptly returned free to a Davis & Shirtliff 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**
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for details of the nearest branch or stockist