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Clarke®

QUALITY PRODUCTS



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From DIY to industrial. Plus air tools, spray guns and accessories.

GENERATORS
Prime duty or emergency standby for business, home and leisure.

POWER WASHERS
Hot and cold, electric and engine driven - we have what you need.

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Cranes, body repair kits, transmission jacks for all types of workshop use.

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Submersible, electric and engine driven for DIY, agriculture and industry.

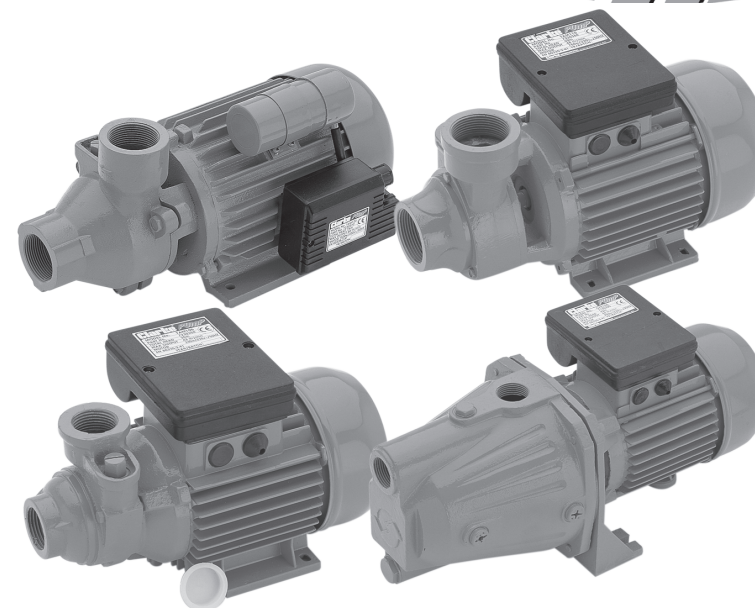
POWER TOOLS
Angle grinders, cordless drill sets, saws and sanders.

STARTER/CHARGERS
All sizes for car & commercial use.



Clarke®

PUMP



**TAM 105 - 110 - 120
&
CPE10S**

**OPERATING & MAINTENANCE
INSTRUCTIONS**

Clarke INTERNATIONAL

For spare parts and servicing, please contact your nearest dealer, or Clarke International on

020 - 8988 - 7400

e-mail: Parts@clarkeinternational.com e-mail: Service@clarkeinternational.com

Hemnal Street, Epping, Essex CM16 4LG





Thank you for purchasing this CLARKE Water Pump, which is a general purpose pump, suitable for a variety of applications involving the transfer of clean, cold water ONLY.

The CPE10S differs from other models in that it is a self priming pump, and is commonly referred to as a Jet Pump..

To help ensure long, trouble free performance and the protection afforded by the Warranty, please follow carefully all the instructions and recommendations given in this booklet.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase. This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase. No product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

SAFETY PRECAUTIONS

1. Ensure the pump is installed in a horizontal position with the outlet facing vertically upwards, and that it is firmly anchored via its fixing screws.
2. Ensure there is an adequate air flow around the pump. DO NOT mount it in an enclosed atmosphere.
3. Ensure all water pipes - supply or discharge, are adequately supported where necessary, so as not to put a strain on the pump connections.
4. DO NOT allow the pump to run dry, as this will cause serious damage to the pump seals.
5. Ensure the inlet to the pump is completely unrestricted.
6. Ensure the pump is protected from the elements, neither the motor nor the electrical terminal box is intended to be waterproof.
7. Ensure that all pipes are protected against damage where necessary, and that they are suitably lagged to avoid the possibility of freezing during cold weather.

ACCESSORIES

	1"	1.5"
Foot Valve Filter	7950561	7950565
BSP Spigot Hose Connector	7950210	7950215
I.D. Reinforced Hose for suction and delivery.	7955010	7955015
I.D. Layflat Hose for delivery only.	7955110	7955115

	TAM105	TAM110	TAM120	CPE10S
Motor	230V 50Hz 1ph	230V 50Hz 1ph	230V 50Hz 1ph	230V 50Hz 1ph
Power	330Watts	750Watts	1500Watts	950Watts
Current	1.4Amps	2.5Amps	6.2Amps	4Amps
Capacitor	8uF 450V	16uF 450V	33uF	20uF 450V
Speed	2800rpm	2850rpm	2800rpm	2850rpm
Max. Head	35M	60M	65M	55M
Max. Lift (Suction)	7M	7M	7M	7M
Bore Size	1"BSP	1.5"BSP	1.5"BSP	1"BSP
Max. Output	40L/min	59L/min	75L/min	45L/min
Weight	7.2kg	11kg	24kg	17.5kg
Part No.	7230350	7230360	7230370	7120300

Please note that as the pumping head is increased, so the flow rate of water will decrease.

The details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice.

SPARE PARTS AND SERVICE CONTACTS

For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

NOTE: As the filler hole is quite small, it is recommended that you fill the inlet pipe with water before it is connected to the pump, and top up through the filler plug once the pipe is connected.

2. Adjust any device which may be fitted to the outlet side of the pump, so as to ensure as great a flow as possible.
3. Switch on the pump. Water should start to flow through the system. Check for leaks and adjust the flow if necessary using the gate valve (or other type of restriction) on the delivery side of the pump. Remember that some resistance (head) is required on the outlet side of the pump to prevent motor overload.

B. CPE10S

It is only necessary to fill the pump body with water prior to starting for the first time, or if the water has been completely drained from the system during maintenance etc. This is carried out through the filler plug on top of the pump.

Do not allow the pump to run dry, otherwise the seal between the pump and motor may be damaged. If a leak is noticed at this point it may indicate that the seal is worn and therefore in need of replacement. Contact your CLARKE dealer, or the Clarke International Service Department for advice.

TROUBLE SHOOTING

If the system is set up properly, there is little likelihood of problems arising, but if water will not flow as it should then check the following points:-

1. The suction hose and connections including the filler plug need to be completely air tight, otherwise air will be drawn in and either reduce or completely stop the flow of water.
2. Ensure that the system has been fully primed with water up to the level of the filler plug (TAM Pumps only).
3. Check to see that no foreign matter is fouling the intake system - in the case of the TAM pumps check the filter is not blocked or obstructed.
4. Check that the vertical height between the level of the water intake and the ultimate discharge point does not exceed the stated maximum head for your pump, (see Specifications on page 7). If this should be the case then the height must be reduced.
5. Should the pump be idle for a considerable period of time, it is possible for fur build up to occur, preventing the impeller from turning when eventually the pump is switched on. By turning the impeller by some means, usually frees it up sufficient for the pump to operate normally.

As a precaution, if it is known that the pump will not be used for some time, it should be disconnected from the system and thoroughly reversed flushed using clean water, drained completely, then stored in a clean dry environment.

Should you still have problems with your pump, consult your local Clarke dealer, or Clarke International Service department.

ELECTRICAL CONNECTIONS

Installation should be carried out by a qualified electrician in accordance with I.E.E. Regulations. However, in the further interests of safety we would emphasise the following :-

This product should be connected to a standard domestic 13 amp, 230 volt (50Hz), electrical supply and we strongly recommend that this be done through a Residual Current Device.

IMPORTANT: Should the supply be taken from a normal 13 amp socket, then the plug used must be to BS 1363 standard, and the wires should be wired up in accordance with the following colour code:

- Green & Yellow Earth or marked with a letter "E" or Earth symbol "⏏".
- Blue Neutral or terminal marked with a letter "N"
- Brown Live or terminal marked with a letter "L"

WARNING: THIS MACHINE MUST BE EARTHED.

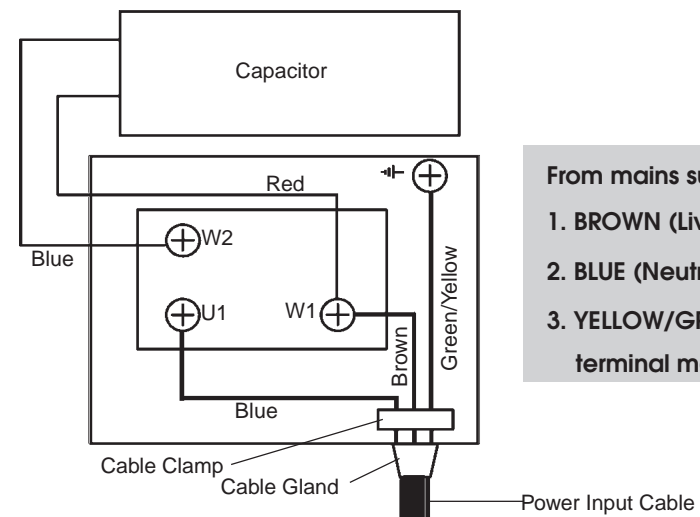
FUSE RATING

The fuse in the plug must be rated as follows:

- TAM105, TAM110 and CPE10S 5 amps
- TAM120 13 amps

WIRING CONNECTIONS FOR TAM105 - TAM110 & CPE10S

Make electrical connections inside the terminal cover as per the diagram.

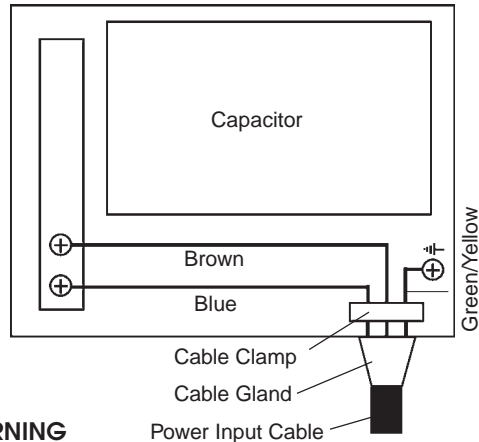


From mains supply, connect:-

1. BROWN (Live) to terminal W1
2. BLUE (Neutral) to terminal U1
3. YELLOW/GREEN (Earth) to screw terminal marked "⏏".

WIRING CONNECTIONS FOR TAM120

Make electrical connections inside the terminal cover as per the diagram.



WARNING

Do not attempt electrical installation work if you are in any doubt as to how it should be done properly. Consult a qualified electrician.

WATER CONNECTIONS

IMPORTANT: The pump must not be connected to the power supply until the hose/pipe installation is completed.

If any part of the system is to be connected to the mains water supply, do ensure that you comply with your local water authority regulations.

Because of the variety of possible installations, no plumbing accessories are supplied as standard with your pump. However, accessories designed specifically for this range of pumps are available from your CLARKE dealer and are listed on page 7.

The pump must always be installed and operated in a horizontal position i.e. with the outlet port facing vertically upwards. The fixing holes in the base should be used as necessary to secure the pump firmly in its operating position. Also, ensure that there is adequate air circulation around the motor.

Avoid situations where there is the risk of water coming into contact with the outside of the pump. Neither the motor or the terminal box are intended to be waterproof.

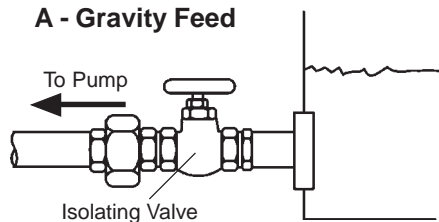
These notes are for guidance on how to achieve a proper working system.

The schematic diagrams illustrate possible methods of pipework installation. Water intake can be by means of either:-

A. Gravity Feed or B. Suction Lift

Water being taken in by the pump should, whenever possible, be fed by means of gravity (Method A).

A - Gravity Feed



However, if this is not possible then water may be drawn from a lower level by means of suction (Method B).

The suction lift i.e. the vertical distance between the water level and the pump should not exceed distance specified for your pump (see Specifications on page 7).

When using this method, a foot valve, must be fitted to the lower end of the suction hose, (as illustrated below), so as to help retain water in the suction system.

NOTE: This does NOT apply to the CPE10S - commonly referred to as a Jet pump.

The delivery head i.e. the vertical distance between the pump and the point of discharge should be at least 5 feet. If this cannot be achieved naturally, then it can be simulated by restricting the outlet flow from the pump.

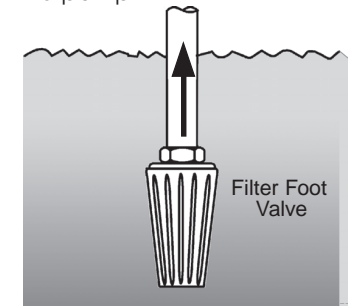
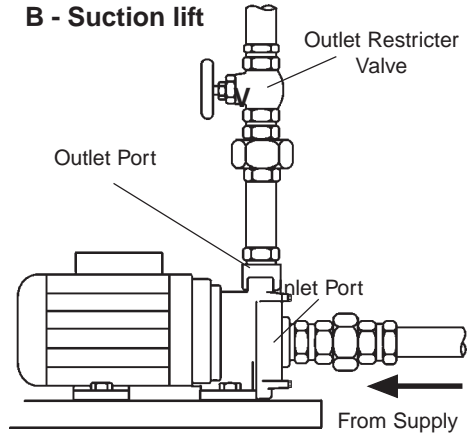
The illustration shows a gate valve V installed in-line on the delivery side of the pump which can be set as required to regulate the flow of water.

Do not place any such restriction on the suction side of the pump unless it serves only to isolate a gravity fed water supply.

To prevent unnecessary strain or possible distortion to the pump, ensure that adequate support is provided to the hoses and/or pipes. Remember they will be considerably heavier when filled with water.

Should sand, chemical or other contaminant come into contact with the pump, flush through with cold clean water as soon as possible.

Protect the pump and pipework from freezing. The formation of ice may cause serious damage.



PRIMING

When suction lift is used to draw water into the pump it is essential that all connections and hoses are completely air tight, otherwise the system will not work.

A. TAM Pumps

Before pumping will start it is necessary to completely fill the suction side with water. This is known as priming the pump and is carried out as follows :-

1. With the pump, all pipes/hoses and the foot valve in position, unscrew the priming plug (small hexagon nut on top of pump body, adjacent to the pump outlet) and fill to capacity with clean water. Replace the priming plug.