

DRAPER®

INSTRUCTIONS FOR 800W 230V Stainless Steel Booster Pump

Stock No.31561

Part No.BP2A

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



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GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

1. TITLE PAGE

1.1 INTRODUCTION:

USER MANUAL FOR:

800W 230V STAINLESS STEEL BOOSTER PUMP

Stock no. 31561

Part no. BP2A

1.2 REVISIONS:

Date first published November 2014

As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://www.drapertools.com/b2c/b2cmanuals.pgm>

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1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:

WARNING! Information that draws attention to the risk of injury or death.

CAUTION! Information that draws attention to the risk of damage to the product or surroundings.

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2.1 CONTENTS

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3. GUARANTEE

3.1 GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

A proof of purchase must be provided with the tool.

Should the machine develop any fault, please return the complete tool to your nearest authorized warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England. Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

NOTE: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12 month period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited

4. INTRODUCTION

4.1 SCOPE

This machine is designed as a surface mounting booster pump suitable for domestic water and gardening applications. Any other application is considered mis-use.

4.2 SPECIFICATION

Stock no	31561
Part no	BP2A
Motor:	
Rated voltage	230V~
Rated frequency	50Hz
Rated input	800W
Maximum flow rate	53L/min
Maximum head height	40m
Expansion tank	20L
Output elbow size.....	1"/25mm
Power cable length	1.2m
Sound power level	83db(A)
Weight	10.46kg

4.3 HANDLING & STORAGE

The environment will have a negative result on its operation if you are not careful. If the air is damp, components will rust. If the machine is unprotected from dust and debris; components will become clogged: And if not cleaned and maintained correctly or regularly the machine will not perform at its best.

5. HEALTH & SAFETY INFORMATION

5.1 GENERAL SAFETY INSTRUCTIONS FOR BOOSTER PUMP

When using any type of power tool there are steps that should be taken to make sure that you, as the user, remain safe.

Common sense and a respect for the tool will help reduce the risk of injury.

Read the instruction manual fully. Do not attempt any operation until you have read and understood this manual.

Most important you must know how to safely start and stop this machine, especially in an emergency.

Keep the work area tidy and clean. Attempting to clear clutter from around the machine during use will reduce your concentration. Mess on the floor creates a trip hazard. Any liquid spilt on the floor could result in you slipping.

Find a suitable location. If the machine is bench mounted; the location should provide good natural light or artificial lighting as a replacement. Avoid damp and dust locations as it will have a negative effect on the machine's performance.

If the machine is portable; do not expose the tool to rain. In all cases do not operate power tools near any flammable materials.

Beware of electric shock. Avoid contact with earthed surfaces; because they can conduct electricity if there is an electrical fault with the power tool. Always protect the power cable and route it away from danger.

Keep bystanders away. Children, onlookers and passers by must be restricted from entering the work area for their own protection. The barrier must extend a suitable distance from the tool user.

Unplug and house all power tools that are not in use. A power tool should never be left unattended while connected to the power supply. They must be housed in a suitable location, away locked up and from children.

Do not overload or misuse the tool. All tools are designed for a purpose and are limited to what they are capable of doing. Do not attempt to use a power tool (or adapt it in any way) for an application it is not designed for. Select a tool appropriate for the size of the job. Overloading a tool will result in tool failure and user injury: This covers the use of accessories.

5. HEALTH & SAFETY INFORMATION

Wear personal protective equipment (PPE). Dust, noise, vibration and swarf can all be dangerous if not suitably protected against. If the work involving the power tool creates dust or fumes; wear a dust mask. Vibration to the hand, caused by operating some tools for longer periods must be protected against. Wear vibration reducing gloves and allow long breaks between uses. Protect against dust and swarf by wearing approved safety goggles or a face shield. These are some of the more common hazards and preventions; however, always find out what hazards are associated with the machine/work process and wear the most suitable protective equipment available.

Do not breathe contaminated air. If the work creates dust or fumes; connect the machine (if possible) to an extraction system either locally or remotely. Working outdoors can also help if possible.

Move the machine as instructed. If the machine is hand held, do not carry it by the power supply cable. If the product is heavy; employ a second or third person to help move it safely or use a mechanical device. Always refer to the instructions for the correct method.

Do not overreach. Extending your body too far can result in a loss of balance and you falling. This could be from a height or onto a machine and will result in injury.

Maintain your tools correctly. A well maintained tool will do the job safely. Replace any damaged or missing parts immediately with original parts from the manufacturer. As applicable; keep blades sharp; moving parts clean, oiled or greased; handles clean; and emergency devices working.

Wait for the machine to stop. Unless the machine is fitted with a safety brake; some parts may continue to move due to momentum. Wait for all parts to stop; then unplug it from the power supply before making any adjustments, carrying out maintenance operations or just finishing using the tool.

Remove and check setting tools. Some machinery requires the use of additional tools or keys to set, load or adjust the power tool. Before starting the power tool always check to make certain they have been removed and are safely away from the machine.

Prevent unintentional starting. Before plugging any machine in to the power supply, make sure the switch is in the OFF position. If the machine is portable; do not hold the machine near the switch and take care when putting the machine down; that nothing can operate the switch.

Carefully select an extension lead. Some machines are not suitable for use with extension leads. If the tool is designed for use outdoors; use an extension lead also suitable for that environment. When using an extended lead, select one capable of handling the current (amps) drawn by the machine in use. Fully extend the lead regardless of the distance between the power supply and the tool. Excess current (amps) and a coiled extension lead will both cause the cable to heat up and can result in fire.

Concentrate and stay alert. Distractions are likely to cause an accident. Never operate a power tool if you are under the influence of drugs (prescription or otherwise), including alcohol or if you are feeling tired. Being disorientated will result in an accident.

5. HEALTH & SAFETY INFORMATION

5.2 SPECIFIC SAFETY INSTRUCTIONS FOR A BOOSTER PUMP

Have this tool repaired by a qualified person. This tool is designed to conform to the relevant international and local standards and as such should be maintained and repaired by someone qualified; using only original parts supplied by the manufacturer: This will ensure the tool remains safe to use.

1. Before connecting to the power supply:
 - i. A residual current circuit breaker (RCD) must be used for all applications.
 - ii. The electrical supply should be the same as stated on the rating plate.
2. Surface mounted pumps should always be transported and stored horizontally on the base plate.
3. Always ensure that hands are dry when connecting and disconnecting the power supply.
4. Never operate the pump dry.
5. The area being pumped should be kept clear, nobody should enter area while pump is operating.

THE FOLLOWING ADDITIONAL INSTRUCTIONS MUST BE FOLLOWED AT ALL TIMES. FAILURE TO DO SO COULD INVALIDATE THE GUARANTEE OF THIS SUBMERSIBLE WATER PUMP.

1. The float switch must be clamped in position using cable clamp recess (see page 9, fig.10).
2. Clean water pumps are not suitable for use in dirty water.
3. These water pumps are designed for pumping water only.
The addition of any chemicals, chlorine or additives to the water could damage the pump, this would be considered misuse and would not be covered under warranty.
4. When using clean water pumps in a pond or where there is gravel, mud, leaves, etc.
NOTE: The pump, should be suspended using a rope or chain or stood on a brick to prevent any gravel, etc., being sucked into the pump.
5. If the pump fails to operate, disconnect from mains supply. Remove output elbow and turn the impeller using a screwdriver or finger. Check for obstruction in the impeller, i.e. stones/gravel, etc.
6. The float switch fitted to this pump is not suitable for continuous use as an on/off switch.

IMPORTANT: ANY PUMP RETURNED TO DRAPER TOOLS UNDER WARRANTY MUST BE CLEAN. IF A PUMP IS RECEIVED THAT IS NOT, OR HAS NOT BEEN CLEANED, IT WILL BE RETURNED TO YOU AT YOUR COST.

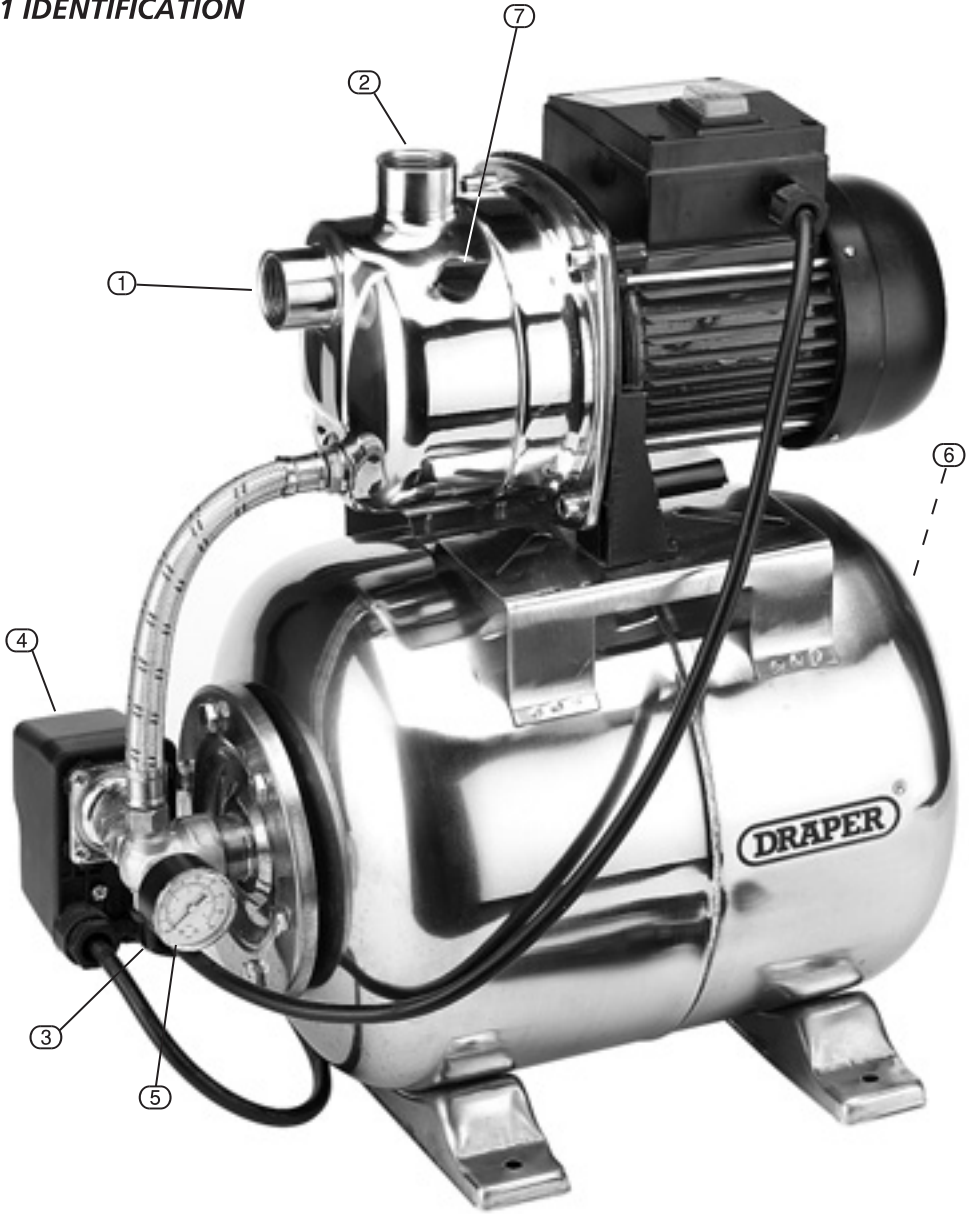
5.3 CONNECTION TO THE POWER SUPPLY

Make sure the power supply information on the machine's rating plate are compatible with the power supply you intend to connect it to.
This booster pump comes supplied with a UK standard 3 pin plug fitted. It is designed for connection to a domestic power supply rated at 230V AC.

Apart from replacing the fuse in the plug, no other electrical work is recommended on this booster pump.

6. TECHNICAL DESCRIPTION

6.1 IDENTIFICATION



- ① Inlet connection
- ② Outlet connection
- ③ Release screw
- ④ Pressure switch

- ⑤ Pressure gauge
- ⑥ Tank Valve
- ⑦ Filling screw

7. UNPACKING & CHECKING

7.1 PACKAGING

Carefully remove the pump from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing; please contact the Draper Helpline (the telephone number appears on the Title page) and do not attempt to use the pump.

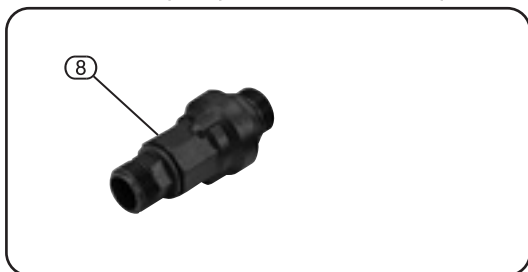
The packaging material should be retained at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.

If any of the packaging is to be thrown away, make sure they are disposed of correctly; according to local regulations.

7.2 WHAT'S IN THE BOX?

As well as the pump; there are several parts not fitted or attached to it.



⑧ Non-return valve

8. ASSEMBLY

NOTE: If this booster pump is to be fitted into the mains, follow any local water authority regulations.

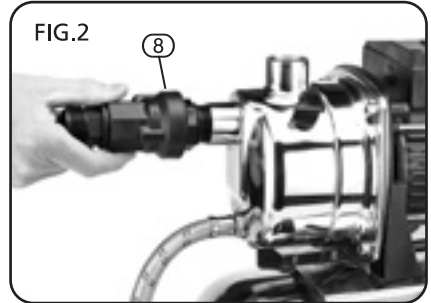
8.1 SECURING BOOSTER PUMP - FIG. 1

Find a suitable level, solid, dry and well ventilated area to mount the pump to. The pump must be mounted horizontally to function correctly. When a suitable location has been found, secure in place using four nuts, bolts and washers (not supplied).
NOTE: The motor and terminal box are not water proofed.



8.2 NON-RETURN VALVE - FIG. 2

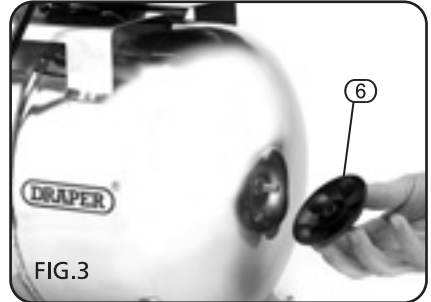
Screw the non-return valve (8) into the inlet port (1), ensuring the non-return valve has the arrow pointing in the direction of the inlet, the valve must be watertight, but avoid overtightening the valve as it may damage the threads.



8.3 PRESSURISING THE TANK - FIG. 3

On the back of the tank is cover (6). Remove by unscrewing anti-clockwise to reveal the air valve. Pressurise the tank to 1.5bar. This should be checked occasionally and maintained at 1.5bar.

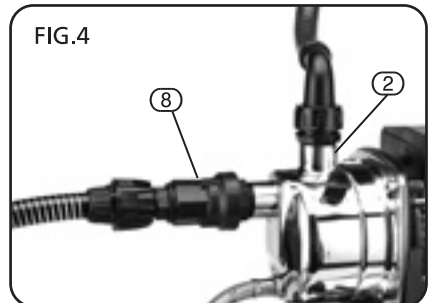
NOTE: This must be done prior to connecting to the water supply. When complete, refit the cap. Do not overtighten the cap.



8.4 FITTING THE HOSE CONNECTIONS - FIG. 4

The diameter of the suction and delivery hoses must correspond to the diameter of the connections on the pump housing 25mm (1") BSP. Do not use any metal connections directly on the pump.

- A Fit the suction hose after the one way valve (8). Depending on the source of water, a pick-up filter (Draper Stock No.56389) may be requested.
- B Next, attach the outlet elbow (not supplied) to the outlet (2) then fit the delivery hose (Draper Stock No.28703).



9. PUMP OPERATION

9.1 PRIMING THE PUMP - FIG. 5

WHEN USING THE BOOSTER PUMP FOR THE FIRST TIME OR AFTER DRAINING FOR MAINTENANCE THE PUMP MUST BE PRIMED.

NOTE: If the water supplying the pump is pressurised or fed by gravity to the pump, priming it will not be necessary as the air will be purged from the system. Remove the bung (7) and fill the pump slowly. Allow time for the air to pass out of the system and then top up. When the pump and tank are full, refit bung (7).



9.2 PRESSURE SWITCH - FIG. 6

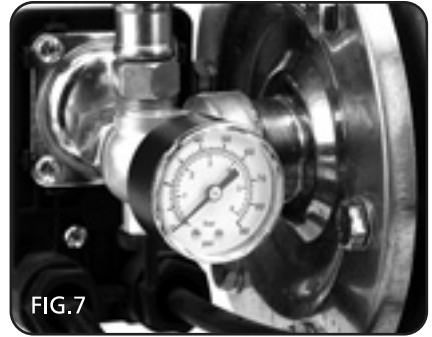
The booster pump is fitted with a pressure switch (4) which is factory set. The pump will start at 2bar and cuts out at 3.5bar. This can be adjusted to suit. Plug the pump in and activate it from the mains socket switch. When the pump is running, check for leaks etc.



9.3 PRESSURE GAUGE - FIG. 7

The pressure gauge (5) should be monitored after initial operation to ensure the switch is operating within the preset parameters.

NOTE: If the pump gauge raises above the switch's preset, switch the pump off and have the switch reset.



10. OPTIONAL ACCESSORIES

PART No.: BPOE1
DESCRIPTION: Output elbow
STOCK No. 34035

PART No.: ASWP2
DESCRIPTION: Layflat hose
SIZE: 25mm I.D
LENGTH: 5M
STOCK No. 28703

PART No.: ASWP3A
DESCRIPTION: Layflat hose
SIZE: 25mm I.D
LENGTH: 10M
STOCK No. 45343

PART No.: ASP4
DESCRIPTION: Solid Wall Suction Hose Assembly
LENGTH: 4M
STOCK No. 56389

PART No.: ASP7
DESCRIPTION: Solid Wall Suction Hose Assembly
LENGTH: 7M
STOCK No. 56390

11. TROUBLESHOOTING

11.1 TROUBLESHOOTING

WARNING:

Before carrying out any maintenance or repair procedures, switch the booster pump off and remove the plug from the mains supply.

HELPLINE (023) 8049 4344

The pump does not run	<ol style="list-style-type: none">1. No mains voltage2. Shaft blocked	<ol style="list-style-type: none">1. Check the voltage and/or the plug2. Unplug the pump. Return to Service Agent
The pump runs but does not deliver	<ol style="list-style-type: none">1. Air in the pump housing no water in pump2. Air bubbles in the suction pipe	<ol style="list-style-type: none">1. Unplug the pump. Take out discharge pipe; shake the pump and suction pipe. Fill up suction housing with water: fit discharge pipe and switch on the pump2. Verify that suction pipe and fittings are fixed tight and that the water level is not below the pump level
Thermal overload protector switches off the pump	<ol style="list-style-type: none">1. Voltage does not correspond to indications shown on rating plate2. A solid blocked impeller3. Pump ran with hot water4. Pump ran dry or discharge tap was closed	<ol style="list-style-type: none">1. Unplug the pump and remove the cause of the overheating. Wait until thermal protector switches back on
Pump switches on incorrectly	<ol style="list-style-type: none">1. Pressure in the reservoir too little	<ol style="list-style-type: none">1. Pressure max. 1.5bar
Quantity being pumped too little or none at all	<ol style="list-style-type: none">1. Max. suction level exceeded. Dirty suction filter2. Water level too low. Air in the pump housing	<ol style="list-style-type: none">1. Check the max. suction level2. Clean the suction filter3. Check that the suction valve is below water4. Release air by loosening the hose connectors5. Refill the pump housing with water via the filter plug
The pump starts and stops irregularly or continuously	<ol style="list-style-type: none">1. The pressure in the tank is not sufficient or the membrane is broken	<ol style="list-style-type: none">1. Increase the pressure up to 1.5bar through the tank valve or return to Service Agent

12. MAINTENANCE

12.1 MAINTENANCE

The pump is completely maintenance free. If the pump becomes clogged, you should clean it out by running clean water through it. While the water is running through, start up the pump several times for approximately 2-3 seconds. This operation should remove any obstruction.

When there is a danger of cold or freezing temperatures, the pump must be completely emptied.

Before any long period of inactivity or storage, it is recommended that you clean the pump with water, drain completely, and store in a dry place.

Before the next use, check that the pump runs freely by running it briefly, then fill the pump as instructed.

13. EXPLANATION OF SYMBOLS

13.1 EXPLANATION OF SYMBOLS



Warning!
Read the instruction manual



Warning! Disable the machine
before attempting to maintain it.



WEEE
Do not dispose of Waste Electrical
& Electronic Equipment in with
domestic rubbish

14. DISPOSAL

14.1 DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE* as unsorted municipal waste.



* Waste Electrical & Electronic Equipment.

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For aftersales servicing or warranty repairs, please contact the Draper Tools Helpline for details of an agent in your local area.

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