

NP400LLPS

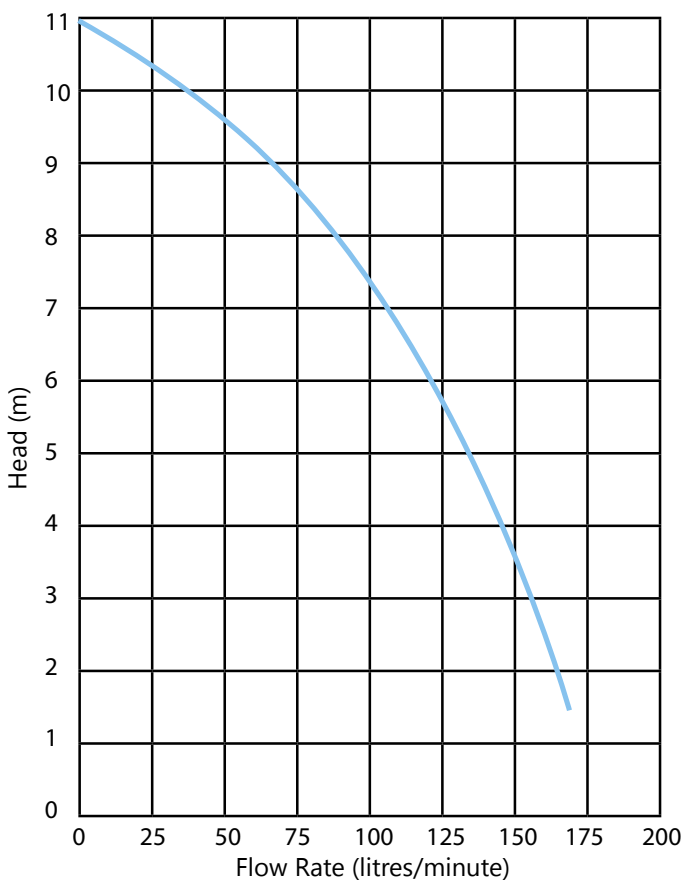
Clean Water Low Level Pumping System

INTRODUCTION

The [Newton NP400LLPS](#) is a fixed installation pumping system based around the [Newton NP400PP](#) puddle pump. Conventional switching of puddle pumps is difficult because they are dealing with very low levels of water. The NP400LLPS has a small control panel and low level switching module added to the NP400PP puddle pump that will give accurate and safe switching of water levels at just 10mm, pumping all the way down to just 1mm of water depth. For temporary pumping of flooded areas or removal of water from pools, the switching panel is not required and the NP400PP should be used.

The pump has a built in one way check valve and is suitable for use with 50mm rising mains. The pumping system is suitable for use with [Newton Victron Power Inverter 12/1200/50](#) to give continual pumping during power outage.

Newton NP Pumps are supplied with a 3-year manufacturers warranty or a 5-year back-to-base warranty if the pumps are serviced by a Newton approved service engineer.



TYPICAL APPLICATIONS

Switched removal of water from:

- Shallow sumps within basements and cellars
- Light-wells
- Surface drainage collection vessels
- Working pits
- Flat roofs

SUPPLIED FITTINGS

The Newton NP400LLPS has a 2" BSP Male threaded fitting attached to the pump and comes supplied with a 2" BSP Female to 2" BSP Female threaded fitting.

There is the option to discharge via 50mm uPVC Pressure Pipe, 2" Suction Hose, or 2" Layflat Hose. Please see details on page 2.



KEY BENEFITS

- Integrated check valve
- Automatic switching at very low water levels
- 3-year warranty
- Thermal overload protection against motor burnout
- Pumps down to just 1mm
- Double mechanical seals ensure increased durability against particle abrasion and wear
- High performance and efficiency even with a low current

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PUMP TECHNICAL DATA

Features	Result	Units
Pump Design	Vortex	
Outlet	50	mm
Pumping Head (Max)	11	m
Flow Rate (Max)	170	litres/minute
Flow Rate at 4m Head	140	litres/minute
Soft Solid Passage	6	mm
Length	196	mm
Width	196	mm
Height	316	mm
Lowest or Stop Water Level	1	mm
Dry Weight	12	kg
Fluid Suitability	Rain water, ground water	
Fluid Temperature Range	0 to 40	°C
Motor Output	400	W
Power Supply	Single Phase	
Starter	Capacitor Type	
Vortex Impellor Speed	3000	rpm
Body Material	Pressed Steel. Rubber Base Plate	
Shaft Material	403 Stainless Steel	
Shaft Seals	Double Silicon Carbide	
Float Switch	Probe with control via panel	

DISCHARGE OPTIONS

50MM uPVC PRESSURE RATED PIPE AND FITTINGS

The following is not supplied, and if required, will need to be purchased separately where 50mm uPVC Pressure Pipe is to be used:

2" BSP Male - 50mm Socket - Newton Code PP33 - to connect 50mm uPVC Pressure Pipe to the pump

The following 50mm pipe and fittings are available:

- 50mm Pipe - 2m lengths - Newton Code PP1
- 50mm 90 Degree Elbows - Newton Code PP2
- 50mm 45 Degree Elbows - Newton Code PP3
- 50mm Female-Female Sockets - Newton Code PP4
- 50mm Tee - Newton Code PP5
- 50mm Wall Mount Clips - Newton Code PP6
- uPVC Pipe Primer - 473ml - Newton Code G3
- Weld on Wet & Dry Glue 240ml - Newton Code G2

2" SUCTION HOSE

The following are not supplied and if required, will need to be purchased separately where 2" Suction Hose is to be used:

2" BSP female - 1½" BSP Female - Newton Code PP47

1½" BSP to 50mm Hose Tail - Newton Code PP28

2" Suction Hose (sold per metre) - Newton Code 137150

Hose Clip 40mm-60mm - Newton Code 139108

2" LAYFLAT HOSE

The following is not supplied and if required, will need to be purchased separately where 2" Suction Hose is to be used:

2" BSP Female - 1½" BSP Female - Newton Code PP47

1½" BSP to 50mm Hose Tail - Newton Code PP28

2" Layflat Hose (sold per metre) - Newton Code 137052

Hose Clip 40mm - 60mm - Newton Code 139108

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INSTALLATION & MAINTENANCE

During installation the pump should be primed, which can be achieved by pouring water down the discharge pipe. The non-return valve at the base of the pump (labelled 203 in the drawing to the right) should prevent the water from spilling out of the pump.

If the pump is not primed prior to use it will self-prime but not until the water level reaches approximately 130mm up the outside of the pump.

If the pump is not in a sump chamber of at least the same depth as the pump itself, then consideration should be given during the installation to how the discharge pipe can be periodically checked/topped up to ensure the pump remains primed.

The system should be checked regularly to ensure that the pump remains primed, and the sump should be kept clean and free from debris that could result in the check level on the pump being trapped open. This would allow water to flow back into the chamber and the pump to lose its prime.

To ensure a fully reliable low-level operation it is also important to keep the probe rods free of debris. Anything that will prevent the passes between the conductive probes in the liquid could prevent the pump from starting or stopping at the desired water levels. Always check these regularly.

As well as regular visual inspections a service schedule should be agreed with the service engineer based on the installation and the impact of the pump failing to operate. We advise a minimum service schedule of every 6 months, with the first inspection within 3-6 months of the installation date.

INSTALLATION INSTRUCTIONS

Please see pump Operational Manual supplied within pump packaging (also available from our website)

ASSOCIATED PRODUCTS

- Newton [High Level Alarm](#) - PA50
- Victron [Inverter and Battery Back-Up System](#)
- Newton Text and Speech [Dialer](#) - PA5

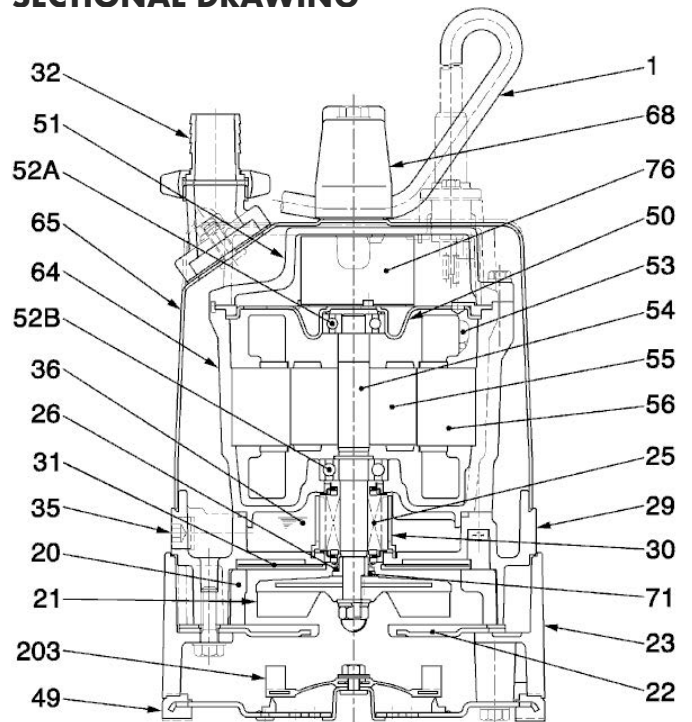
SPECIFICATION

Newton Waterproofing Systems work in partnership with RIBA NBS who publish our products on [NBS Source](#). The platform integrates seamlessly into project workflows, providing all product data from Newton's NBS BIM Objects, NBS Plus Clauses and RIBA Product Selector into one single source of product information.

NBS Source also hosts a large selection of Newton [case studies](#), as well as product [literature and certifications](#).

A wide range of drawings are available [on our website](#).

SECTIONAL DRAWING



1. Cable
20. Pump casing
21. Impeller
22. Suction cover
23. Strainer
25. Mechanical seal
26. Oil seal
29. Oil casing
30. Oil distributor
31. Attrition plate
32. Discharge coupling
35. Oil screw
36. Lubricant
49. Bottom plate
50. Motor cover
51. Main cover
- 52A. Upper bearing
- 52B. Lower bearing
53. Miniature protector
54. Shaft
55. Rotor
56. Stator
64. Motor frame
65. Outer cover
68. Handle
71. Shaft protection sleeve
76. Condenser
203. Non-return valve

STORAGE

Store in dry conditions at temperatures between 5°C and 35°C. Do not expose to freezing conditions.

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PACKAGING & HANDLING

Pumps are supplied in reinforced and protective cardboard boxes. Please handle with care.

WARRANTY

Newton NP Pumps are supplied with a 3-year manufacturers warranty from the proven date of installation or the date of purchase if this cannot be verified. In all cases, the warranty is 'back-to-base'. Newton Waterproofing Systems have a returns policy and any issues regarding pumps under warranty should in the first instance be referred to our Head Office by contacting 01732 360 095. Please see our Terms & Conditions of Sale for further information.

ELECTRICAL SUPPLY

The Newton NP400LLPS requires a single phase 230V AC power supply. It is advisable that if two NP400LLPS are used together, that each pump is connected to its own individual power supply directly from the consumer board so that both pumps does not share a consumer board supply with the other pump or with any other electrical circuit or device. In reality, this is normally only achievable with new-build properties or where fundamental refurbishment of the whole property or the electrical supply is to be undertaken.

Where it is not planned or possible to have each pump system connected to a separate supply from the consumer board, it is preferable that each system is supplied from a separate circuit. If this is not possible, each system should be connected to a separate fused and switched spur or socket.

Each separate circuit should have its own RCD protection as required by the 17th Edition Wiring Regulations. The RCD should be correctly sized at 30mA so as not to trip during normal pump start or pump run parameters.

It is preferable for the system to be wired to the rear of a spur. The spur should be switched and have a neon light confirming the 'on' position. Pumps may be plugged into wall sockets and again these should be switched and have neon light notification of the 'on' position. It is recommended that the spur or socket have a label confirming that the switch must not be switched off unless in an emergency.

The spur or socket should be fitted with a 10 amp fuse.

SERVICING

Newton pumps should be serviced by trained and qualified pump engineers only. It is recommended that pumps are serviced within 6 months of installation and then at service engineers discretion, but with at least one inspection or service every 6 months.

Please call Newton Waterproofing for an approved service engineer in your area.

LIMITATIONS

Not suitable for:

1. Effluent or washing machine waste (use [NP400W](#))
2. Sewage (Use SP750 Cutter)
3. Continuous pumping above 40°C. Pumps can be used to excavate hot water from boiler leaks etc, but only for a maximum of 10 minutes pumping in one hour (use hot water capable pumps - please contact Newton Waterproofing Systems for further information).
4. Water with pH value above 10 or below 4 (use pumps suitable for corrosive water - please contact Newton Waterproofing Systems for further information)
5. Sea water (use sea water pumps - please contact Waterproofing Systems for further information)
6. The pump should not be placed directly onto a concrete base

HEALTH & SAFETY

Product should only be used as directed. Pumps contain lubricating oil. We always recommend that the Material Safety Data Sheet (MSDS) is carefully read prior to use of the pump. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The MSDS is available upon request from Newton Waterproofing Systems or online via our website. Please see contact details below.

Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our [website](#) for the latest versions.