NP eco Pumps

Energy-Efficient Ground Water Pumping

Revision 3.0 -13 January 2026
Code: NP4M, NP4A, NP7M, NP7A

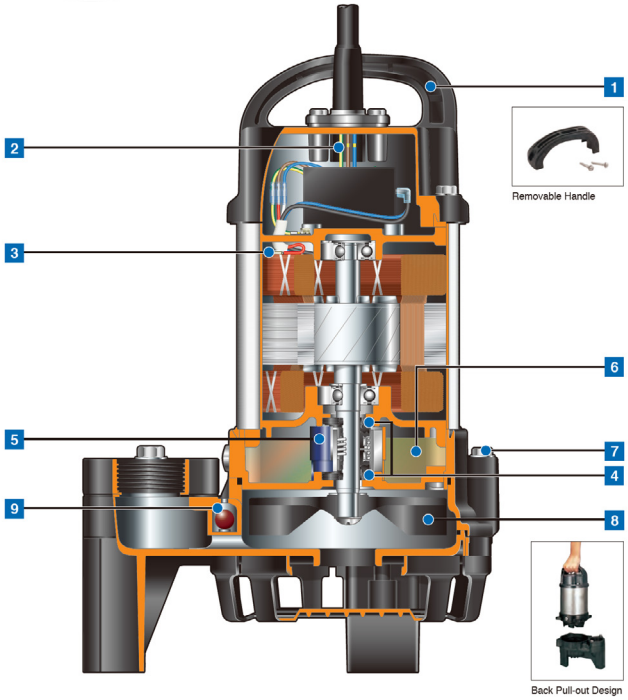
INTRODUCTION

Newton NP eco Pumps feature an energy-saving design that reduces power consumption by approximately 20% in comparison with competitor pumps of equivalent output class. Made from stainless steel and resins that are specifically designed for each of the pump components, the pumps are compact, lightweight, easy to handle, and exhibit excellent durability and corrosion resistance. Eco-friendly credentials are also enhanced by the use of food-grade liquid paraffin for lubricating oil.

Capable of continuous duty for many years, Newton NP eco Pumps are available with two motor sizes, 0.4 kW and 0.75 kW and are available in both automatic and manual versions, with the automatic pumps featuring the ubiquitous vertical float switch, fitted to Newton NP automatic pumps since 2003.

To ensure continued pumping during power outages these economical pumps are compatible with Newton Victron Power Inverters and our high capacity batteries, pumping more litres per Ah of stored energy than conventional pumps.

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



1. **Removable Handle:** The handle can be separated from the head cover, allowing just the handle itself to be replaced if damaged.
2. **Anti-Wicking Cable Entry:** Prevents water incursion due to capillary action should the cable sheath be damaged or the end of cable submerged. Also prevents moist air from infiltrating the motor housing and condensation from forming inside the housing due to temperature differences between the housing and outside air.
3. **Motor Protection:** Miniature Thermal Protector (0.4 kW) - Detects excess heat, therefore protecting the pump against overheating and dry-running. Circle Thermal Protector (0.75 kW) - Directly cuts the motor circuit if excessive heat builds up or overcurrent occurs in the motor.
4. **Dual Inside Mechanical Seals with Silicon Carbide Face:** Isolated in the oil chamber where a clean, non-corrosive and abrasion-free lubricating environment is maintained. Compared with the water-cooled outside mechanical seal, it reduces the risk of failure caused by dry-heating and adhering matter. The silicon carbide provides 5 times higher corrosion wear and heat resistance than tungsten carbide seals.
5. **Oil Lifter:** Provides lubrication and cooling of the seal faces down to 1/3 of normal oil level, to prolong seal life.
6. **Liquid Paraffin Oil:** This high-purity oil is commonly used in the cosmetics, pharmaceuticals and food processing equipment. Because it is a food grade lubricant, the pump can be safely used for water features in carp/koi ponds and fish farms.
7. **Back Pull-out Design:** Enables the motor and impellor to be separated from the pump base by removing the bolts between the oil casing and the pump casing. This design facilitates maintenance and inspection of the principal parts of the pump without disconnection from the rising main.
8. **Resin Semi-Vortex Impellor:** Resists wear caused by abrasive particles and enables the pump to maintain its original performance for an extended period of time.
9. **Air Release Valve:** Fitted into the pump casing to prevent air lock. When air flows through the valve, the ball stays at the bottom, but when the pumped water starts to flow, the ball closes the outlet because of its buoyancy.

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Opening Hours:
Monday to Friday 8:00am - 5:00pm

NP eco Pumps

Energy-Efficient Ground Water Pumping

TECHNICAL DATA

Features	NP400 eco	NP750 eco	Units
Purchase Code - Manual Version	NP4M	NP7M	
Purchase Code - Automatic Version	NP4A	NP7A	
Pump Design	Semi-vortex		
Outlet	2 inch - Female BSP		
Recommended Discharge Pipe Size	50/63		mm
Maximum Pumping Head	12.0	15.7	m
Maximum Flow Rate	280	333	litres/minute
Flow Rate at 4m Head	220	N/A	litres/minute
Flow Rate at 6m Head	175	295	litres/minute
Flow Rate at 8m Head	125	250	litres/minute
Pump Switching	Automatic by pump float or by separate pump control		
Float Switch	Fully adjustable vertical operation		
Pump Start Level	Fully adjustable		
Lowest Running Water Level	110		mm
Length	241	241	mm
Width	162	162	mm
Height - Top of handle	360	380	mm
Height - Top of cable radius	415	435	mm
Dry Weight	7.2	9.3	kg
Cable length	10		m
Cable Type	H07RN8-F 3Cx1		mm^2
Max Soft Solids Handling	10		mm
Clean Water Pumping	Yes		
Effluent Pumping	See Limitations section on page 5		
Sewage Pumping	No		
Fluid Temperature Range	0 to 40		°C
Power Supply - Single Phase	230		VAC
Frequency	50		Hz
Rated Power Output	0.4	0.75	kW
Rated Power Input	0.63	1.14	kW
Thermal Motor Protection (built in)	Miniature	Circle	
Starting mode	Capacitor		
Start Current	7.20	15.97	Amps
Rated Current	2.80	5.2	Amps
Best efficiency point	7	10	m
Best efficiency	45.2	53.1	%
Number of poles	2		
Motor speed	2765	2796	RPM
Insulation	E		
Body Material	Stainless Steel (304) & glass fibre reinforced resin		
Shaft Material	Stainless Steel (403)		
Primary Shaft Seal	Silicon carbide on ceramic		
Secondary Shaft Seal	Ceramic on carbon		

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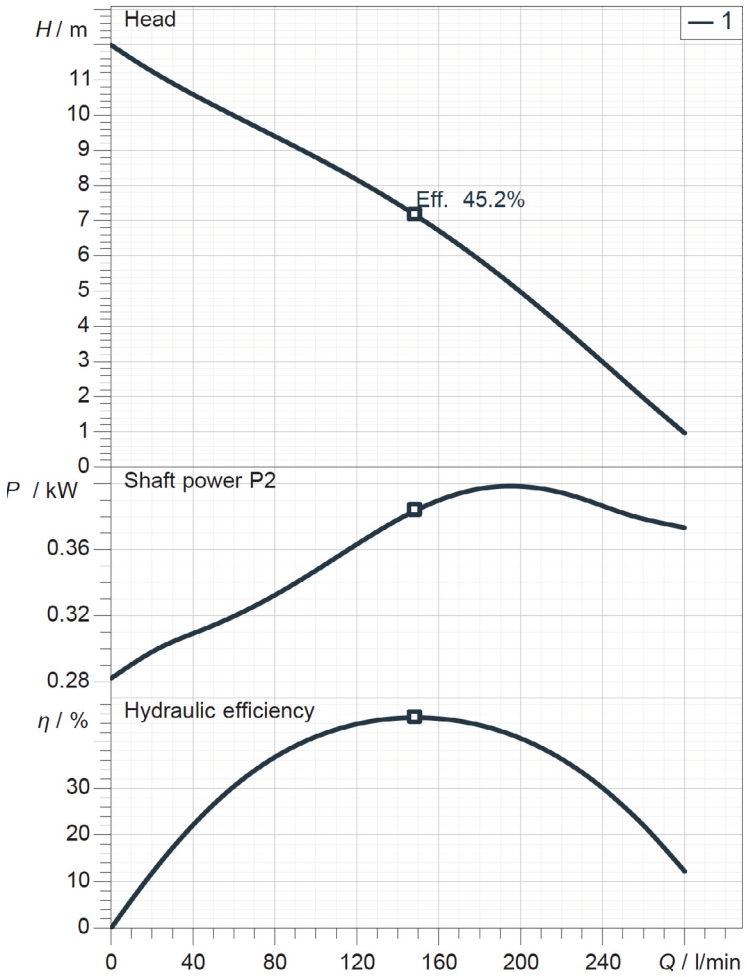
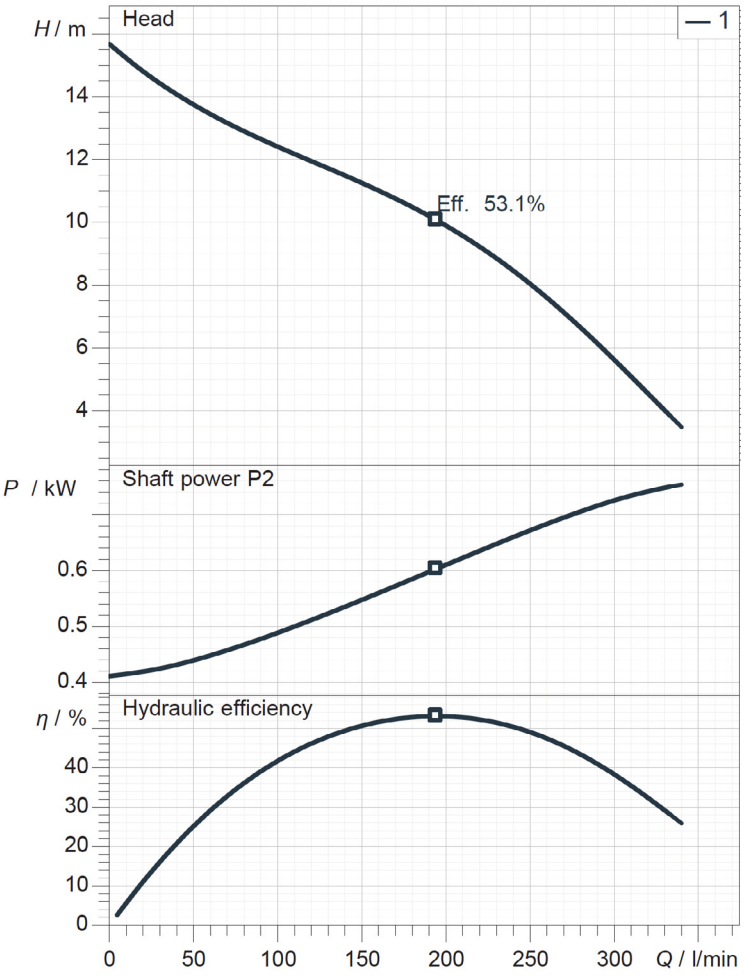
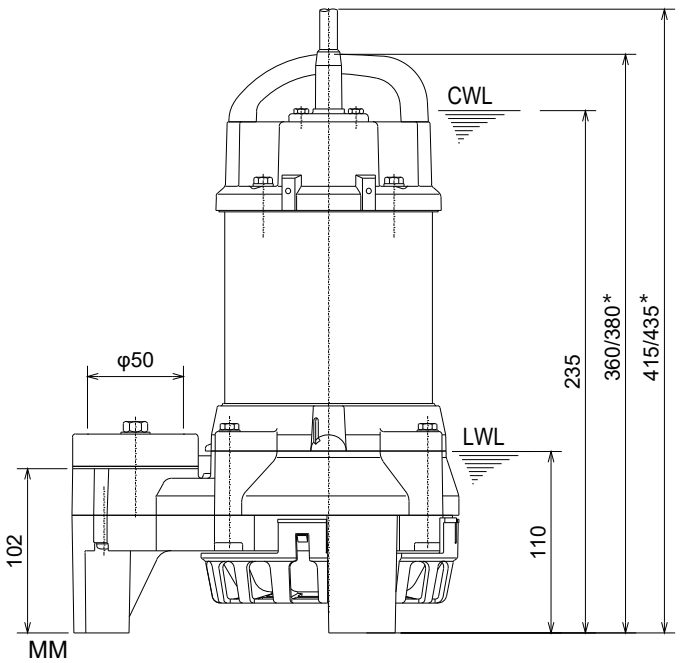
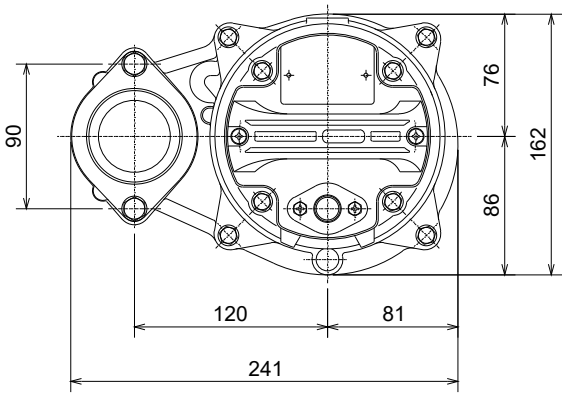
NP400 eco



NP750 eco







* Heights given are for the 400W and 750W pumps respectively. Please note, there is no difference in height between the automatic and manual versions of each pump.

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TYPICAL APPLICATIONS

Primarily designed to be used with Newton CDM pumping systems for the removal of ground water collected by the Newton CDM Type C basement waterproofing system, Newton NP eco Pumps are also suitable for:

- Flooded basements and cellars
- Surface water
- Water features/waterfalls
- Fish ponds/farms

KEY BENEFITS

- Up to 20% less power consumption than pumps with similar duty
- Food-grade lubrication oil is fish safe
- Upper portion of the pump, including impellor, can be removed from the base of the pump whilst still connected to the discharge pipe
- Class-leading performance at high pumping heads, especially with NP750 eco
- 3-year warranty
- Non-clogging semi-vortex impellor
- Thermal protection of the pump motor
- Double mechanical seals ensure increased durability against particle abrasion and wear
- Anti-airlock bleeding system ensures that the pump is able to remove trapped air even when the sump was previously dry
- Automatic versions fitted with a unique vertical float allowing full adjustment of the pump start and stop water levels

PUMP SIZING

To ensure a long and trouble-free service life, submersible pumps should operate efficiently. The duty graphs on page 3 confirm the optimum efficiency point for each pump and ideally the pump should not operate at too high or too low a pump head to ensure high efficiency and longer pump life. For example, the NP750 eco should only be used where the combined friction head and actual head is between 6 metres and 13 metres. Please speak with our technical team for guidance with pump sizing.

WARRANTY

Newton NP Pumps are supplied with a 3-year warranty from the date of installation or date of purchase if this cannot be verified. A 5-year warranty is available if the pumps are serviced at agreed intervals by a Newton approved service engineer. 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.

PIPE AND PIPE FITTINGS

The NP eco Pumps are not supplied with one-way-valves (check-valves) or any pipe fittings.

Pressure-rated pipe and pipe fittings, including a check-valve is required for these pumps to operate and can be ordered from Newton when the pump is purchased. Please see pipe and valve options on page 6.

CONNECTION OF PUMP TO RISING MAIN

Both pumps feature a 2" female BSP outlet ready to receive 2" male BSP threaded pipe fittings, including:

- 2" Male BSP to 50mm female socket - code PP33
- 2" Male BSP to 2" female socket - code PP30
- 2" Male BSP to 63mm female socket - code PP44

ELECTRICAL SUPPLY

Newton NP eco Pumps require single phase 230V AC power supply.

It is advisable that all pumps are connected to their own individual power supply directly from the consumer board so that each of the 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 connected to a separate supply from the consumer board, it is preferable that each pump is supplied from a separate circuit. If this is not possible, each pump 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 18th 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 pumps 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 - 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 the correctly sized fuse appropriate to the motor size of the connected pump:

- NP400 eco - 10 amps
- NP750 eco - 13 amps

A means of isolating the power supply to the pumps should be located in direct eye line of the sump and to the wall closest to the sump so that power to the pumps can be quickly isolated in an emergency.

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PUMPING SYSTEMS

Newton NP eco Pumps are available with the Newton CDM pumping system range as a fully built assembly. Refer to Newton Titan-Pro TDS for more information on built systems and the corresponding battery back-up system for operation during power outage.

SERVICING

Pumps should be serviced by trained and qualified pump engineers. Please call Newton Waterproofing for an approved service engineer in your area.

BATTERY BACK-UP SYSTEMS

The following battery back-up systems are available to ensure continued pumping during power outage:

Matched Battery Back-up Systems Including Battery			
Pump	Inverter	Battery	Battery Back-up Purchase Code
NP400 eco	12/800/35	38 Ah	BB1K38
NP400 eco	12/800/35	60 Ah	BB1K60
NP400 eco	12/800/35	115 Ah	BB1K115
NP750 eco	12/2000/80	60 Ah	BB18K60
NP750 eco	12/2000/82	115 Ah	BB18K115

Please note that the Victron Inverters and batteries that make up the Newton Battery Back-Up systems can also be sized and purchased separately for systems that require enhanced protection provided by larger batteries or banks of batteries. Please see below or refer to the Newton Victron MultiPlus Data Sheet.

AUTOMATIC VS MANUAL PUMPS

Automatic pumps are supplied with vertical float switches that allow for very flexible pump switching, allowing for adjustment of the ON & OFF positions of each pump, as well as the overall height of the pump switching.

Manual pumps must be matched to either the Newton Pump Controller (product code CP9) or NEX Series CE12 Duplex Control Panel (product code NEX-CDM).

Please see pump and pump controller data sheets for further information.

LIMITATIONS

The vertical float fitted to these pumps is suitable for clean water pumping only and Newton strongly recommend that is it not used for:

- Washing machine waste
- Effluent
- Sewage

Manual versions of the pump where the correct float is used with a pump controller or control panel could be used for effluent pumping. If this is required, please speak with our technical team who will correctly specify the system.

The pump is also not suitable for:

- Continuous pumping above 40ºC. Pumps can be used to evacuate hot water in an emergency and only for a maximum of 10 minutes pumping in one hour. For planned pumping of water above 40ºC, specially designed hot water capable pumps should be used - please contact Newton Waterproofing Systems for further information
- Water with pH value above 9 or below 3 (use pumps suitable for corrosive water - please contact Newton Waterproofing Systems for further information)
- Sea water (use sea water pumps - please contact Newton Waterproofing Systems for further information)
- Pumping of condensate - use condensate pumps

ANCILLARY OPTIONS

- High Water Level Alarm with 9VDC battery backup featuring alarm switch and 0-volt output to Pulse Monitoring System or BMS.

  Code: PA50-12/B - powered directly from the large 12VDC battery of the battery backup system, if fitted

  Code: PA50-12/M - powered by wall mains connected 12VDC adapter - 9VDC battery backup

- Pulse Monitoring System featuring cloud based monitoring of number of pump starts, pumped water volume plus time stamped records of power outages and alarm events with notifications sent to email and/or by push notification to mobile phones. A power lead for connection to the large 12VDC battery of a battery backup system is included.

  Code: Pulse

  If a battery backup system is not fitted, a wall mains connected 12VDC adapter is needed. Code: PA7.

PACKAGING & HANDLING

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

STORAGE

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

HEALTH & SAFETY

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

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uPVC PRESSURE RATED PIPE & FITTINGS

50mm pipe and fittings	*Product code*
• 2" Male BSP to 50mm female socket	PP33
• 50mm Pipe - 2.5m lengths	PP1
• 50mm Flexible pipe - 25 m coil	PP9
• 50mm Wall mount clips - Pack of 10	PP6
• 50mm 90-degree elbow - female to female socket	PP2
• 50mm 45-degree elbow - female to female socket	PP3
• 50mm Female to female socket	PP4
• 50mm Tee - female to female socket	PP5
• 50mm Union - female to female socket	PP46
50mm Valves	
• 50mm Cone check valve - female socket to female socket	V2
• 50mm Double union shut-off valve - female socket to female socket	V1
63mm pipe and fittings	
• 2" Male BSP to 63mm female socket	PP44
• 63mm Pipe - 2.5m lengths	PP10
• 63mm Flexible pipe - 25 m coil	PP19
• 63mm 90-degree elbows - female to female socket	PP11
• 63mm 45-degree elbows - female to female socket	PP12
• 63mm Female to female socket	PP13
• 63mm Tee -female to female socket	PP14
• 63mm Union - female to female socket	PP17
• 63mm wall mount clips	PP15
Glue and primer	
• uPVC Solvent-on Wet 'R Dry - 240ml	G2
• uPVC Pipe Primer - 473ml	G3

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