

System Sump and Pump

NEWTON TROJAN PUMPING SYSTEM

Multi-Use Pumping System

Rev 5.1 - 10 July 2017

PRODUCT CODE - TR13 - TR49

INTRODUCTION

The [Newton Trojan](#) is a specialist pumping system suitable for a variety of pumping tasks, ranging from the lifting of sewage from basements to a higher level sewage system, to the removal of ground water and surface drainage. The sump is available in depths of 1 m and 1.5 m. Please see page 3 for dimensions.

When used for sewage, the system does not provide 24 hour storage capabilities and is therefore not capable of receiving all of the house sewage. One of our larger 'whole house' pumping systems should be specified instead.

PUMP OPTIONS

CLEAN WATER

[Newton CP400 - P32](#) - The [Newton CP400](#) is a medium head and medium performance clean water pump.

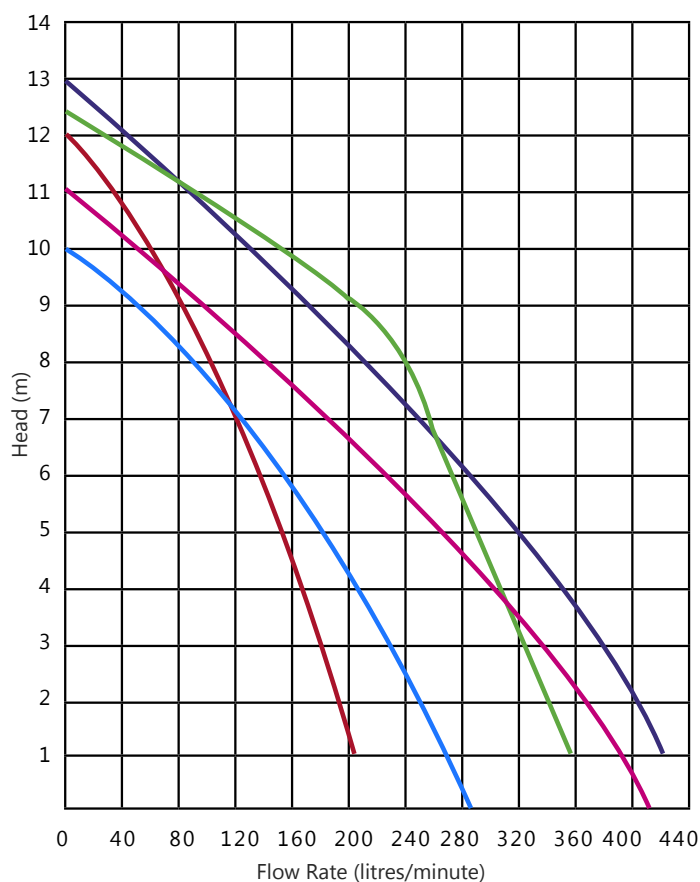
[Newton NP400 - P2 & P3](#) - The [Newton NP400](#) is a high head and medium performance clean water pump.

[Newton CP750 - P33](#) - The [Newton CP750](#) is a medium head and high performance clean water pump.

[Newton NP750 - P5 & P6](#) - The [Newton NP750](#) is a high head and high performance clean water pump.

SEWAGE

[Newton SP750 - P35 & P36](#) - The [Newton SP750 Cutter](#) - P35 & P36, is a high quality sewage pump incorporating a tungsten carbide tipped cutting impellor that rotates against a serrated suction cover in order to cut solid waste before pumping. This results in a much lower risk of blockage than similar sized vortex impellor sewage pumps.



PRODUCT HIGHLIGHTS

- Choice of clean water and sewage pumps
- Supplied with internal pipe and fittings, including check and shut-off valves and release couplings
- 1 x 110 mm invert flange with hole cutter included
- Large foot to base of chamber to prevent flotation
- Locked & sealed lid and frame supplied
- Lifting chain(s) supplied
- 2 x 50 mm wall flanges ready for conduit
- Vent pipe option for sewage systems
- Choice of alarms and control systems

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TECHNICAL DATA

Features	CP400	NP400	CP750	NP750	SP750 Cutter	Units
Pump Design	Vortex	Semi-Vortex	Vortex	Vortex	Cutter	
Discharge Bore	50	50	80	50	50	mm
Max. Soft Solids Handling	10	7	15	35	20 (cut by pump)	mm
Recommended Discharge Pipe	50/63	50/63	63	63	63	mm
Pumping Head (Max.)	10.0	12.2	11.0	12.5	13.0	m
Flow Rate (Max.)	290	220	410	360	430	litres/min
Flow Rate at 4 m Head	220	160	295	320	360	litres/min
Pump Switching	Auto	Auto or Panel	Auto	Auto or Panel	Auto or Panel	
Float Switch	Vertical	Vertical	Vertical	Vertical	Sewage Paddle	
Pump Start Level (auto)	Fully Adjustable	Fully Adjustable	Fully Adjustable	Fully Adjustable	675	mm
Min. Stop Water Level (auto)	80	90	127	115	145	mm
Length	215	241	260	236	255	mm
Width	155	185	160	173	190	mm
Height	395	328	434	380	445	mm
Weight	12.0	11.3	15.0	8.5	19.9	kg
Clean Water Pumping	Yes	Yes	Yes	Yes	No	
Effluent Pumping	No	No	No	Yes*	Yes	
Sewage Pumping	No	No	No	No	Yes	
Fluid Temperature Range	0 to 40	0 to 35	0 to 35	0 to 35	0 to 35	°C
Motor Output	400	400	750	750	750	W
Power Supply	Single Phase	Single Phase	Single Phase	Single Phase	Single Phase	
Starter	Capacitor Type	Capacitor Type	Capacitor Type	Capacitor Type	Capacitor Type	
Body Material	Stainless Steel	Cast Aluminium	Stainless Steel	Stainless Steel	Stainless Steel	
Shaft Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	
Shaft Seals	Carbon Ceramic	Silicon Carbide	Carbon Ceramic	Silicon Carbide	Carbon Ceramic	

* Only applicable to manual pumps with control panel and sewage type paddle floats.

APPLICATIONS

The Trojan packaged Sump System is ideally suited as a sewage lifting station for when the sewage invert is below the height of the main sewage system. When used for sewage, the Newton Trojan should only be used where the other toilet facilities are pumped to gravity. When storage of sewage is required to accommodate the requirement of Drainage and Waste Disposal Building Regulations 2000 Part H (150 litres per person, per day), full size sewage systems are available - please speak to our Technical Department.

The Trojan is also clean water and effluent capable when supplied with the correctly specified pump and therefore suitable for the large volume removal of ground and surface water delivered by gullies and surface drains.

TRAINING AND COMPETENCY OF INSTALLER

The chamber is surrounded by concrete, requiring a builder/ground worker with experience of placing well compacted concrete.

The pumps should be connected to the electricity supply by a person suitably qualified for the type of connection being made.

Please refer to the Operational Manual at all times during installation of this pumping system.

LIMITATIONS

- Order the correct pump for the water type and duty
- Not suitable as a whole house sewage system where 24 hour storage capability is required

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Pump Model	Pump Type	Water Type	Number of pumps	Discharge Lines	Chamber Depth	
					1.0m Code	1.5m Code
CP400 P32	Auto 50mm Vortex	Clean	One	One	TR17	TR19
			Two	One	TR18	TR20
NP400 P2	Auto 50mm Vortex	Clean	One	One	TR21	TR23
			Two	One	TR22	TR24
NP400 P3	Manual 50mm Vortex	Clean	One	One	TR30	TR32
			Two	One	TR31	TR33
CP750 P33	Auto 80mm Vortex	Clean	One	One	TR34	TR36
			Two	One	TR35	TR37
NP750 P5	Auto 50mm Vortex	Clean	One	One	TR38	TR40
			Two	One	TR39	TR41
NP750 P6	Manual 50mm Vortex	Clean	One	One	TR42	TR44
			Two	One	TR43	TR45
SP750 Cutter P35	Auto 50mm Cutter	Sewage	One	One	TR13	TR15
			Two	One	TR14	TR16
SP750 Cutter P36	Manual 50mm Cutter	Sewage	One	One	TR46	TR48
			Two	One	TR47	TR49

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 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](#).

Our website also has a range of both PDF and DWG drawings available for download in [Technical Drawings](#).

ANCILLARIES

Please refer to page 4.

Alarm

The system is not supplied with an alarm, this must be ordered with the system. The following products include an alarm:

- Newton Control Panel-Pro - CP2 & CP7
- Newton Pump Controller - CP9
- Sewage Control Panel - CP8

If a pump control system is not ordered, please order the correct alarm:

- For clean water - 9V Alarm - PA50
- For sewage and effluent - Sewage Alarm - CP5

Vent Pipe & Conduit

The system is not supplied with a vent pipe.

It is a requirement of pumping systems to ensure that air replaces the volume of water removed by the pumps. The vent pipe must be of at least DN 50 mm. Where the pumping system is receiving water from Newton Basedrain/Floordrain, a vent pipe is not required as the two 63 mm connections provide the required venting. In all other cases a vent pipe of at least 50 mm is required.

The Trojan is supplied with three 50 mm rubber wall flanges: one for the vent pipe; one for high voltage conduit and one low voltage conduit.

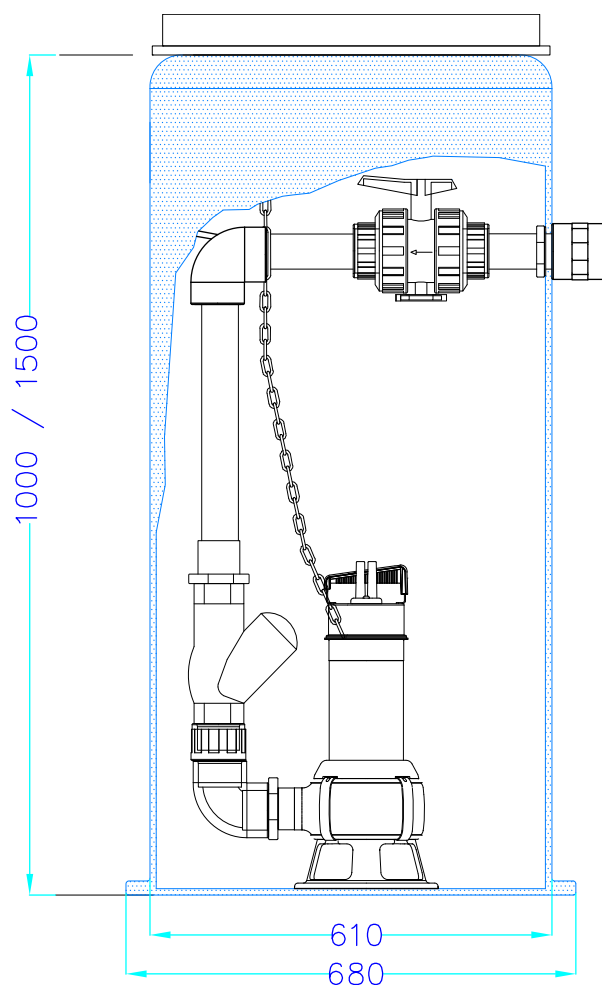
The supplied 50 mm wall flanges will receive 50 mm waste pipe, either push fit or glue fit, both of which are suitable for use as conduit or venting.

Lid & Frame

The system is supplied with a basic locked and sealed lid and frame. Where a deeper lid and frame are required, or where a higher standard of finish is required, please order one of the lids confirmed on page 4.

HEALTH & SAFETY

Use appropriate PPE for the environment the system is installed within.



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ANCILLARIES & OPTIONS

uPVC Pressure Rated Discharge Pipe

50 mm Pipe - 2.5 m lengths	PP1
50 mm 90 degree elbows	PP2
50 mm 45 degree elbows	PP3
50 mm female-female sockets	PP4
50 mm Tee	PP5
50 mm wall mount clips	PP6
50 mm diameter vent pipe - 10 m	TPK2
1 ½" BSP to 50 mm Hosetail	PP28
1 ½" BSP male to 50 mm socket	PP43
63 mm Pipe - 2.5 m lengths	PP10
63 mm 90 degree elbows	PP11
63 mm 45 degree elbows	PP12
63 mm female-female sockets	PP13
63 mm Tee	PP14
63 mm wall mount clips	PP15
uPVC Solvent - Wet 'R Dry - 240ml	G2
uPVC Pipe Primer 473ml	G3

Alternative Frame and Lid

Galvanised steel frame recessed lid with 450 x 450 mm opening	TPSL2
Stainless steel edged recessed lid with 450 x 450 mm opening	TPSL3
Brass edged recessed recessed lid with 450 x 450 mm opening	TPSL4
Alulite triple-sealed recessed lid with 450 x 450 mm	TPSL7

Sump Options

Wet Install Kit - Included three shut-off valves, Tremie Pipe and Water plug	TPK9
Wall flange for 63 mm inlet - supply only	TP01
Wall flange for 110 mm inlet - supply only	TP02
Wall flange for 50 mm diameter vent and conduit pipe	TP03

Power backup

800W Victron MultiPlus Battery Backup System for pumps up to 250W	BB1
1200W Victron MultiPlus Battery Backup System for pumps up to 400W	BB2
3000W Victron MultiPlus Battery Backup System for pumps up to 750W	BB3
3000W Victron Quattro Generator Battery Backup System for pumps up to 750W	BB4

Alarm Options

9V battery alarm - Clean water alarm	PA50
Sewage Alarm - Alarm with sewage float	CP5
Sewage Alarm with Beacon - Alarm with sewage float	CP6
Newton Control Panel-Pro - Sophisticated twin pump control with alarm	CP2 & CP7
Sewage Control Panel - Twin pump panel with alarm for sewage systems	CP8
Newton Pump Controller - Twin pump panel with weekly start cycle and alarm	CP9

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