

# Titan-Pro

## CDM Pumping System

Revision 6.0 - 27<sup>th</sup> September 2021

### INTRODUCTION

The [Newton Titan-Pro](#) is a sump chamber designed specifically to be used with the [Newton CDM](#), Type C, cavity drain waterproofing system. The adjustable neck allows for the sump to be installed at a fixed height relative to the slab so that the connection in from the [Newton BaseDrain](#) drainage system and the pump rising main are made above the concrete, and always at the same height relative to the slab or raft.

Please see below for details of the pumping systems built with the Newton Titan-Pro chamber.

### BENEFITS

- Compatible with Newton CP and NP and NP eco pumps
- Adjustable neck ensures that the lid is always at the correct height, regardless of floor finishes
- Supplied with sealed and locked recessed lid. High end finish lids and frames are available as cost options (see page 4)
- Flat areas to side of chamber, ready for wall flanges to receive incoming 110 mm drainage pipes. Wall flanges are available as cost options (see page 4)
- Large foot to base of chamber to prevent flotation
- Anti-Drip system available for the inside of the chamber
- Sump is always set into the slab at the same height, meaning connections in from Newton Basedrain System and connections out of the chamber are at the same height with every installation

### TYPICAL APPLICATIONS

- The Titan-Pro is specifically designed to be used with Newton System CDM, 'Type C' cavity drain waterproofing system
- Basements and cellars
- Light-wells
- Surface water pumping receiving water from gullies and surface slot drainage

### PRODUCT LIFE EXPECTANCY

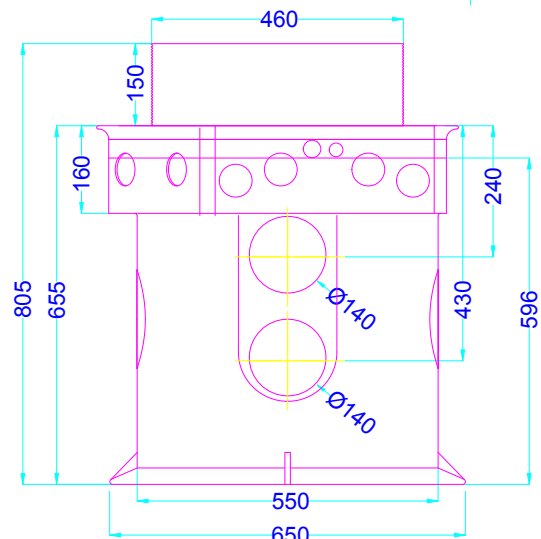
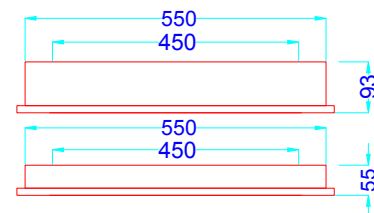
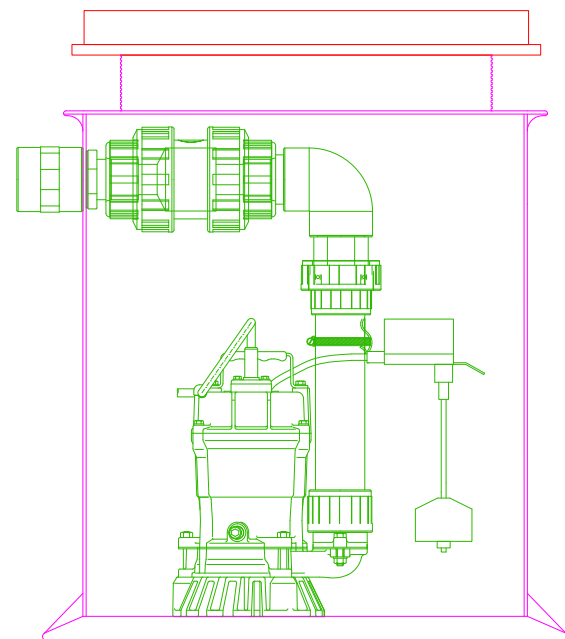
The Titan-Pro chamber is made from robust HDPE and should provide, under normal service conditions, a chamber for the life of the building. Please refer to the relevant data sheets for confirmation of the guarantees for the pumps and ancillaries used within the pumping systems confirmed below.

### PUMPING SYSTEMS & PURCHASE CODES

The Titan-Pro chamber can be purchased as a bare sump or as a fully built pumping system. As a bare sump, it can be supplied with or without lid and frame and either pre-drilled or un-drilled.

Please see list of purchase options and codes on page 2.

Where increased pump flow (pump duty assist) is required, twin rising main systems should be considered.

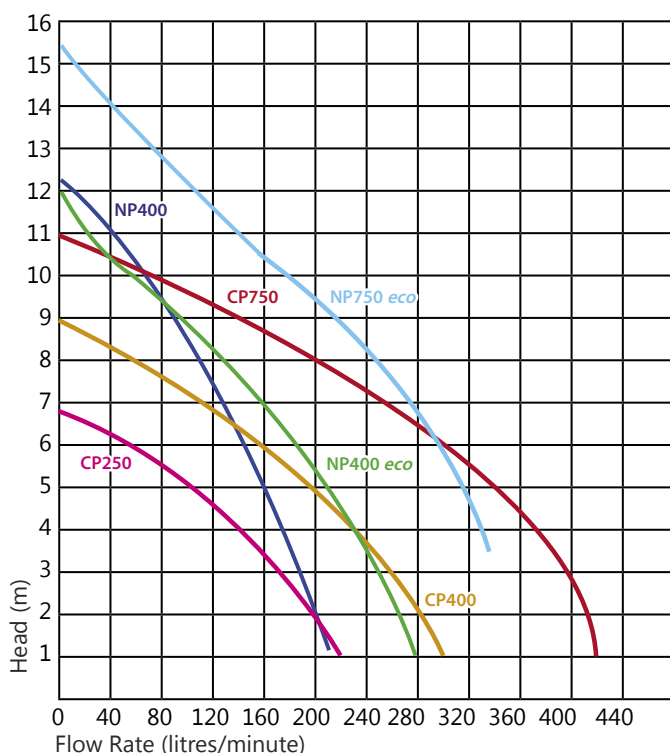


| Titan-Pro Sump Chamber     | Purchase Code |
|----------------------------|---------------|
| Chamber only               | TPC           |
| Chamber only - Drilled     | TPCD          |
| With Lid & Frame - Bare    | TPC&L         |
| With Lid & Frame - Drilled | TPCD&L        |

| Built Systems - Twin pumps - 1 x Rising main |                |              |                  |               |
|--|----------------|--------------|------------------|---------------|
| Pumps  | Auto or Manual | No. of pumps | No. rising mains | Purchase Code |
| CP250  | Auto           | 2            | 1                | CDM1          |
| CP250  | Manual         | 2            | 1                | CDM2          |
| CP400  | Auto           | 2            | 1                | CDM3          |
| CP400  | Manual         | 2            | 1                | CDM4          |
| NP400  | Auto           | 2            | 1                | CDM5          |
| NP400  | Manual         | 2            | 1                | CDM6          |
| NP400 eco                                    | Manual         | 2            | 1                | CDM5 eco      |
| NP400 eco                                    | Auto           | 2            | 1                | CDM6 eco      |
| CP750  | Auto           | 2            | 1                | CDM7          |
| CP750  | Manual         | 2            | 1                | CDM8          |
| NP750 eco                                    | Auto           | 2            | 1                | CDM11 eco     |
| NP750 eco                                    | Manual         | 2            | 1                | CDM12 eco     |

| Built Systems - Twin pumps - 2 x Rising main |                |              |                  |               |
|--|----------------|--------------|------------------|---------------|
| Pumps  | Auto or Manual | No. of pumps | No. rising mains | Purchase Code |
| CP750  | Auto           | 2            | 2                | CDM9          |
| CP750  | Manual         | 2            | 2                | CDM10         |
| NP750 eco                                    | Auto           | 2            | 2                | CDM13 eco     |
| NP750 eco                                    | Manual         | 2            | 2                | CDM14 eco     |

### PUMP PERFORMANCE CURVES



### PUMPING SYSTEM BENEFITS

- Fully built pumping system featuring high quality, Newton CP and NP and NP eco pumps
- Includes all internal pipe and pipe fittings ready for connection to 63 or 50 mm rising main
- One-way valve for each pump included
- Quick release coupling for each pump for easy installation and removal for servicing
- Newton [PA50 High Water Level Alarm](#) included with automatic pump systems

### CHOOSING THE CORRECT PUMP

Newton CDM pumping systems can be purchased with a variety of pumps to ensure safe and efficient removal of water collected by the Newton CDM System.

Less powerful motors have less pumping performance than pumps with larger motors. The pump discharge size and impeller shape will influence how quickly and to what height (head) the water is pumped. Generally, a pump is either high-head and low volume or lower head and higher volume. The performance of the pump options is shown on the graph over the page.

The majority of Newton CDM Systems are installed within single depth basements, with the pumping head or lift, measured from base of sump to street level termination of the rising main at about 4 metres.

Pumps operate more efficiently and with longer pump life at duties falling within the middle two-thirds of the pump duty curve. At 4 metre head, the CP250, CP400, NP400 eco and CP750 pumps are operating within the middle two-thirds of their duty curve and so should be considered, depending on the volume of water to be pumped.

For high pumping volumes at low pumping head, the Newton CP750 should be used.

With double depth basements the pumping head could be at 7 or 8 metres, and so more powerful pumps with higher pump heads such as the NP400 eco, NP750 eco or CP750 should be chosen.

At a 10 metre pumping head, the NP750 eco is still able to remove 180 litres per minute.

Where extreme pumping head is needed, specialist pumps will need to be used. Please contact the Newton Technical Team for assistance.

### AUTOMATIC VS MANUAL PUMPS

Automatic pumps are supplied with Vertical Float Switches that allow for 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 the [DAB E.Box](#) control panel, [Newton Pump Controller](#) or [Newton Control Panel-Pro](#).

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

### MATCHED BATTERY BACK-UP SYSTEMS

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

| Matched Battery Back-up Systems |            |         |               |
|---------------------------------|------------|---------|---------------|
| Pumping System                  | Inverter   | Battery | Purchase Code |
| CDM1 & 2                        | 12/500/20  | 40 Ah   | BBS1          |
| CDM1 & 2                        | 12/500/20  | 60 Ah   | BBS2          |
| CDM3,4, 5 & 6                   | 12/800/35  | 60 Ah   | BBS3          |
| CDM3,4, 5 & 6                   | 12/800/35  | 100 Ah  | BBS4          |
| CDM3,4, 5 & 6                   | 12/800/35  | 200 Ah  | BBS5          |
| CDM7 to CDM14                   | 12/1600/70 | 100 Ah  | BBS6          |
| CDM7 to CDM14                   | 12/1600/70 | 200 Ah  | BBS7          |

### BATTERY BACK-UP SYSTEMS - INVERTERS

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 Inverters TDS](#).

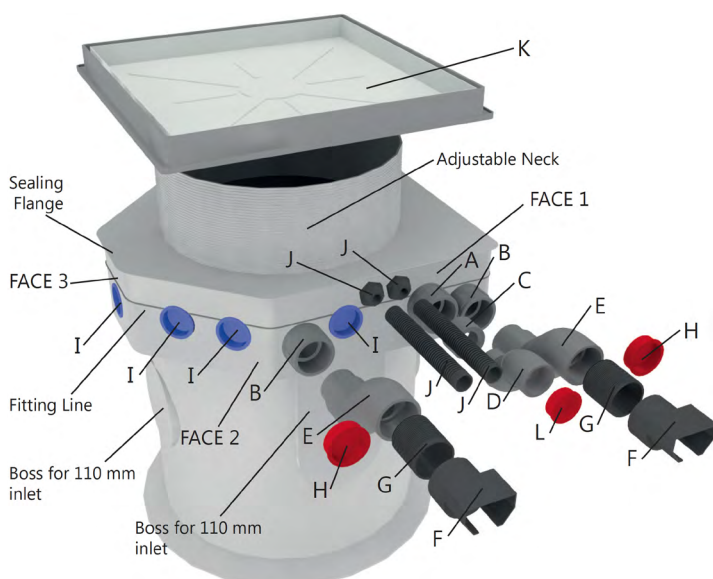
#### Inverters

- For 250 w pumps: [12/500/20](#) - Code BB5
- For 400 w pumps: [12/800/35](#) - Code BB1
- For 750 w pumps: [12/1600/70](#) - Code BB11

#### Batteries

- 40 Ah battery - Code BB23
- 60 Ah battery - Code BB20
- 100 Ah battery - Code BB21
- 200 Ah battery - Code BB22

### INCLUDED PARTS



### BARE SUMP

- Codes TPC & TPCD - Sump only
- Codes TPC&L & TPCD&L - Sump plus locked & sealed lid & frame with 46 mm recess

### BUILT PUMPING SYSTEMS

#### Pumps & Alarm

- Two Newton CP or NP pumps as ordered
- 1 x check valve (NRV) per pump
- 50 mm uPVC pressure-rated pipe and pipe fittings
- 1 x PA50 High Water Level Alarm (automatic pump options only)

#### Sump Parts

Sump, pre-drilled ready for all incoming and outgoing connections

- 63 mm uPVC Bulk-Head fitting ready for connection of the rising main - two are supplied with twin rising main systems
- 2 x 63 mm uPVC Bulk-Head fittings ready for connection from the Basedrain or Floordrain drainage system
- 1 x 63 mm to 50 mm uPVC reducer (one for each rising main)
- 50 mm uPVC discharge line 'S' bend for the raising of the discharge line to the slab level (one per discharge line). **NOTE:** 63 mm rising main option - Parts C, D and L are removed from the build and are replaced with 63 mm parts. **If 63 mm discharge pipe is to be used, this must be confirmed at order**
- 2 x 63 mm uPVC Inlet line 'S' bends for the lowering of the drainage in line from the slab level to the sump
- 2 x Newton Drainage Adaptors for connection of Newton Floordrain to the 63 mm drainage inlet
- 2 x 63 mm flexi connecting pipe for connection of the Drainage Adaptors to the 63 mm 'S' Bends of the drainage inlets
- 2 x 63 mm blanks for sealing the inlet to the 63 mm 'S' Bends to protect from concrete ingress during installation
- 4 x 60 mm blanks for the blanking off of unused inlet and outlet holes drilled to the sump. When twin pumps with separate discharge pumps are ordered, this outlet will be fitted with a second Bulk-Head connection with a single union ready for the connection of the second pump
- 1 x 32 mm and 1 x 40 mm, 5 m conduits and connection to sump for pump power cables and alarm cable (exploded)
- 1 x 450 x 450 mm Polypropylene Frame with Galvanised 46 mm Recessed Lid - (alternative lids available - see page 6)
- 1 x 50 mm blank for sealing to pump discharge line to protect from concrete ingress during installation

### **TYPE C - CDM WATERPROOFING SYSTEMS**

The Newton CDM range of pumping systems are designed to be used with the [Newton CDM System](#) of Type C, cavity drain waterproofing. The CDM pumping systems include everything needed to enable simple 'plug-and-play' connection of incoming drainage and outgoing rising main and electrical conduit, with all connections into and out of the sump always at the same height, regardless of the depth of the floor build.

### **VENT**

When used with the Type C, Newton CDM System, the incoming drainage connection acts as a vent and so additional vents are not required.

### **OPERATING MANUAL**

Please refer to the Operational Manual which is supplied in paper form with the product, or available from our website.

### **LIMITATIONS**

Suitable for ground water and surface water only. Please contact the Newton Technical Department for advice on pumping of sewage, grey or other water types.

### **STORAGE**

Store in dry conditions at temperatures between +5°C and +25°C with containers fully sealed. Do not expose to freezing conditions. Do not allow pumps to freeze.

### **HEALTH & SAFETY**

Use appropriate PPE for the environment the system is installed within. Product should only be used as directed. Pumps contain lubricating oil. The relevant pump TDS and SDS should be read carefully prior to installation of the pumping system.

All TDS and SDS are available upon request from Newton Waterproofing Systems or online via our website.

### OPTIONS

The CDM pumping systems are designed to be used with the Newton CDM waterproofing system and receives water from the Basedrain Drainage System the Newton CDM System. You will need Newton BaseDrain (Product Code D1) and [Newton FloorDrain](#) (Product Code D3) to connect this sump pump system to the Newton CDM waterproofing system. **Please note: If 63 mm pipe is to be used for the discharge line(s), this must be confirmed at order as the standard build is supplied with 50 mm connections for 50 mm rising main only.**

### ANCILLARIES

#### *uPVC Pressure Rated Discharge Pipe*

|                                       | Product Code |
|---------------------------------------|--------------|
| 50 mm Pipe - 2.5m 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          |
| 1½" BSP to 50 mm Hosetail             | PP28         |
| 1½" BSP to 50 mm Socket               | PP43         |
| 63 mm to 50 mm female reducer/adaptor | PP35         |
| 63 mm Pipe - 2.5m 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-on 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 lid with 450 x 450 mm opening            | TPSL4 |
| Aluminium edged, triple-sealed recessed lid with 450 x 450 mm | TPSL7 |

#### *General Options*

|   |      |
|---|------|
| Anti-Drip Kit - extends the two drainage inlets to the bottom of the sump to prevent dripping noises - NOTE: Not suitable for corner installation | TPK1 |
| Wet Install Kit - Includes three shut off valves  | TPK6 |

#### *Wall Flanges*

|  |       |
|--|-------|
| Wall flange for 50 mm diameter vent and conduit pipe | WF50  |
| Wall flange for 63 mm inlet                          | WF63  |
| Wall flange for 110 mm inlet                         | WF110 |

#### *Hole Cutters*

|   |       |
|---|-------|
| 82 mm Hole Cutter for 50 mm wall flange   | HC82  |
| 95 mm Hole Cutter for 63 mm wall flange   | HC95  |
| 140 mm Hole Cutter for 110 mm wall flange | HC110 |
| Arbor for hole cutter                     | PA33  |

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