



## FILTER PUMP - water operated vacuum pump

Cat: CH1852-001 (hose fitting) CH1853-001 (screw tap fitting)

### DESCRIPTION:

This compact vacuum pump, which operates by water pressure, is used in the laboratory as a convenient source of vacuum for speeding the filtering process from a funnel to a filter flask or for other purposes. It is nickel plated brass construction and is a compact design that operates normally with a rubber hose at least 200mm long fitted to the rifled outlet tail. This outlet hose creates the 'water seal' to ensure reliable operation and it lies in the bottom of the sink to prevent water splashing.

As water passes under pressure through the pump body, a vacuum appears at the side arm. The side arm is usually connected to the load by a heavy wall rubber hose which will not flatten under vacuum.

When the evacuation is complete, it is normal for the vacuum hose to be closed off with a pinch clip before the water to the pump is turned off. The side arm, which connects by rubber hose to the device requiring the vacuum, contains a non-return valve. If the water is turned off while the pump is still connected to the load, this non-return valve has two important functions:

- Prevents water being sucked from the wet pump body into the load.
- Holds the vacuum secure in the load for a short time.

**CH1852-001 hose fitting**



**CH1853-001 tap fitting**



### Physical size:

CH1852-001 120x75x22mm LxWxT Weight: 0.14kg.

CH1853-001 120x75x30mm LxWxT Weight: 0.20kg.

**THE TWO MODELS:**

**CH1852-001:** This model has a 15mm to 10mm diameter tapered barbed inlet fitting to accept water from a rubber hose pushed tightly over this fitting. If the water pressure is high, a hose clip will also be required to prevent the hose from blowing off. Being on a rubber hose, this model pump can be remote from the tap or can lie in the sink while being used.

The outlet water should be passed through a short length of hose before passing into the sink. This length of outlet hose (say 200mm long) helps to prevent air passing backwards into the pump when a good vacuum is being pulled.

**CH1853-001:** This model screws directly to a threaded 1/2" tap fitting (standard 3/4" BSP thread) in the same manner as a garden hose. Regardless of water pressure, this pump will remain secure on the water source, but the pump will always be rigidly fixed to the tap pointing downward into the sink. To avoid splashing and to ensure reliable operation when under higher vacuums, a short length of outlet hose should be fitted.

**PERFORMANCE:**

Atmospheric pressure is about 100kPa, thus a perfect vacuum is -100kPa as indicated on a normal vacuum gauge. If the water pressure is good, vacuum at about -85kPa to -90kPa can be obtained with this pump.

**NOTE:** during evacuation of certain loads, if acids or other corrosive materials are drawn through the pump body, corrosion inside the pump body will destroy the performance.

**Designed and manufactured in Australia**