



## HepvO Waste Valve Long-term cycling tests

Final Report – January 5th, 2015

**10 Years continuous cycling test with no reduction in sealing performance after more than 3.9 million openings/closings**

The test rig completed 36 overall cycles per day and ran for a total of 3655 days. Total completed overall cycles was **131,580**

A cycle comprises:-

Flushing water of varying durations – This opens the valve  
Negative air of varying pressures – This opens the valve  
Positive air pressure - This tightly closes the valve.

There are 4 valves 2 x 32mm(1 ¼”) and 2 x 40mm(1 ½”) installed horizontally and vertically.

The rig runs 24 hours per day and has periods of high/medium/low/no activity to simulate typical operating conditions in a 3 storey building.

**It ran continuously for 10 years in a certified laboratory.**

### 1. SUBJECT TO FLUSHING WATER

32mm(1 ¼”) Horizontal & Vertical - 15 times per cycle - 1,973,700 openings

40mm(1 ½”) Horizontal & Vertical - 9 times per cycle - 1,184,220 openings

### 2. SUBJECT TO AIR PRESSURE ( both + and - )

#### **Negative Pressure - Opens Valve**

All Valves - 15 per cycle – 1,973,700 times

#### **Positive Pressure - Closes Valve**

All Valves – 15 per cycle – 1,973,700 times

### 3. EACH VALVE HAS OPENED IN TOTAL (BY WATER OR AIR)

32mm(1 ¼”) Horizontal & Vertical – **3,947,400 times**

40mm(1 ½”) Horizontal & Vertical – **3,157,920 times**