PENTAIR

# TECHNICAL GUIDE

## PACKAGED PRODUCTS - COMMERCIAL & INDUSTRIAL SYSTEM SOLUTIONS

### 3-WAY VALVES FILTRATION KIT

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## 3-WAY VALVES FILTRATION KIT

### KIT DESCRIPTION

- All components and accessories included to build various types of filtration systems
- Suitable for a wide range of filter applications and adaptable to various vessel sizes: from 21x60 up to 48x82 inches

### PREMIUM KIT

#### TECHNICAL DATA

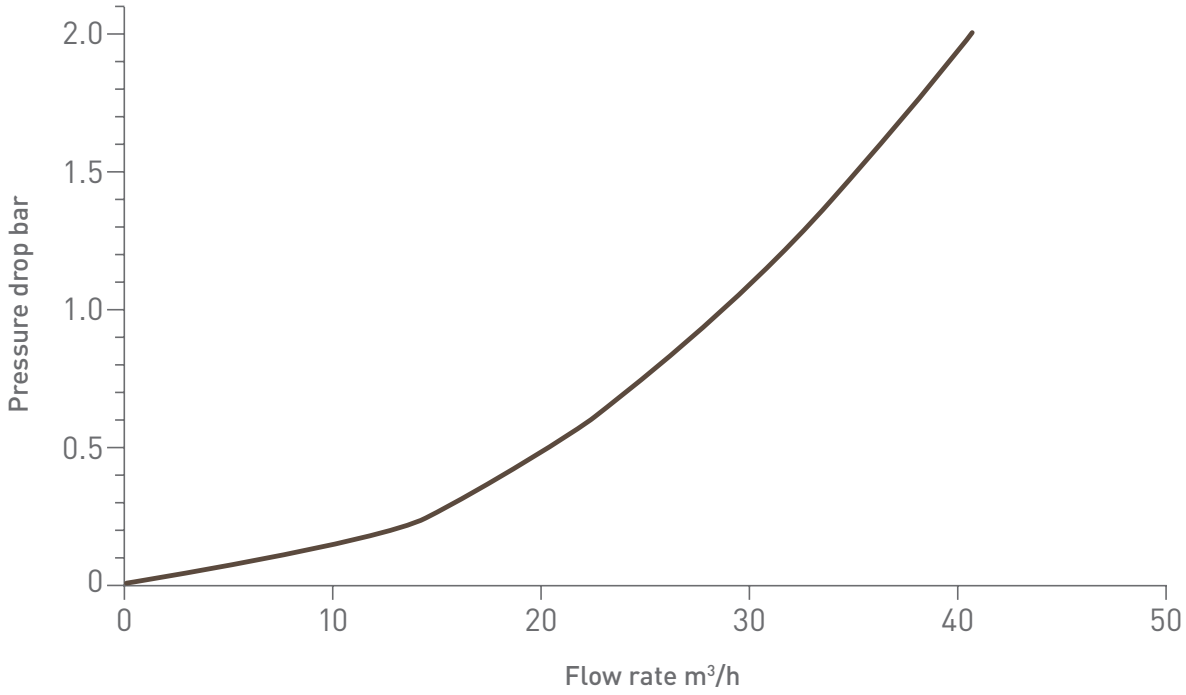
- Type of valve : 3V-63
- Controller type : SIATA SFE
- Voltage : 230 V 50/60 Hz - transformer 12 VAC 50/60 Hz
- Electrical power : 4 VA
- IP protection : 30
- Operating pressure : 1,5 - 6 bar
- Regeneration start mode :
  - Timeclock
  - Pressure drop start
  - Volume regeneration possible adding a water meter

#### FEATURES

- Pre-assembled DN 50 piping
- 1 x DN 50 ball valves for backwash flow regulation
- Differential pressure switch with setting from 1 to 2 bar included
- 2 x 3-Way valves
- 2 x 3-Way valves with one out closed for 2-way usage
- 63 mm PVC fittings with brass nuts
- Auxiliary microswitch

## PERFORMANCE

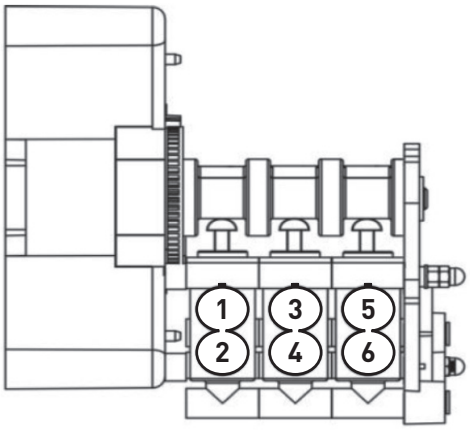
3-WAY valves kit performance in backwash single tank



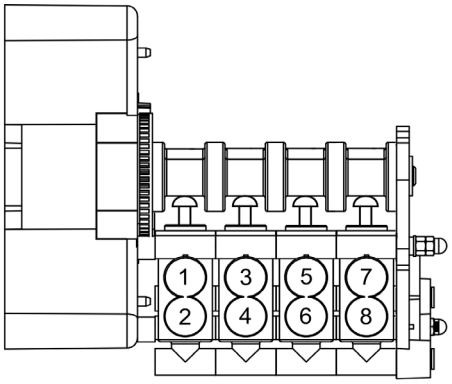

Note: The flow curve is calculated for the design shown on the next page.

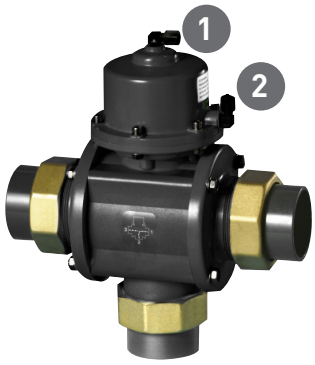
| Vessel Ø in inches | 21x60 | 24x69 | 30x72 | 36x72 | 42x78 | 48x82 |
|---|---|---|---|---|---|---|
| Backwash sand in m³/h [C.at 40 m/h] | 9,1 | 11,5 | 17,9 | 24,8 | 33,6 | No |
| Backwash birm in m³/h [C.at 30 m/h] | 6,8 | 8,6 | 13,5 | 18,6 | 25,2 | 36,1 |
| Backwash multi media & anthracite in m³/h [C.at 35 m/h] | 7,9 | 10,1 | 15,7 | 21,7 | 29,4 | No |
| Backwash GAC Cl & organics in m³/h [C.at 20 m/h] | 4,5 | 5,8 | 9,0 | 12,4 | 16,8 | 24,1 |
| Service flow multimedia in m³/h [C.at 25 m/h] | 5,7 | 7,2 | 11,2 | 15,5 | 21,0 | No |
| Service flow anthracite in m³/h [C.at 15 m/h] | 3,4 | 4,3 | 6,7 | 9,3 | 12,6 | No |
| Service flow GAC Cl in m³/h [C.at 8 m/h] | 1,8 | 2,3 | 3,6 | 5,0 | 6,7 | 9,6 |
| Service flow GAC organics in m³/h [C.at 3 m/h] | 0,7 | 0,9 | 1,3 | 1,9 | 2,5 | 3,6 |
| Service flow birm in m³/h [C.at 10 m/h] | 2,3 | 2,9 | 4,5 | 6,2 | 8,4 | 12,0 |
| Service flow with sand best filtration in m³/h [C.at 7 m/h] | 1,6 | 2,0 | 3,1 | 4,3 | 5,9 | NO |
| Service sand good filtration in m³/h [C.at 10 m/h] | 2,3 | 2,9 | 4,5 | 6,2 | 8,4 | No |
| Service sand low filtration in m³/h [C.at 15 m/h] | 3,4 | 4,3 | 6,7 | 9,3 | 12,6 | No |
| Service sand rough filtration in m³/h [C.at 20 m/h] | 4,5 | 5,8 | 9,0 | 12,4 | 16,8 | No |

## VALVES CONNECTIONS TO THE TIMER

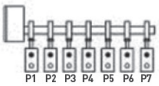



## MULTIPLE TANK INSTALLATION

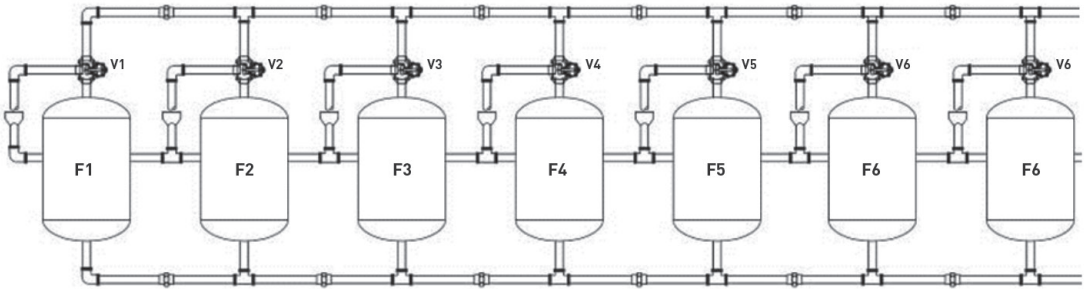




- Note: connections to the pilots are all the same, upper pilot connection to upper valve connection and lower pilot connection to lower valve connection. The structure allows the connection of 7 tanks maximum.




| HYDRAULIC CONNECTION | | | | | | | |
|---|---|---|---|---|---|---|---|
| PILOT | P1 | P2 | P3 | P4 | P5 | P6 | P7 |
| VALVE | V1 | V2 | V3 | V4 | V5 | V6 | V7 |



## CONNECTION OF THE DIFFERENTIAL PRESSURE SWITCH

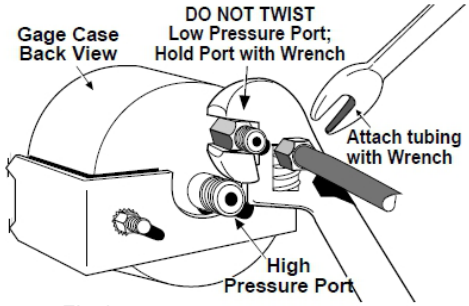
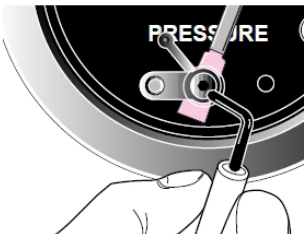
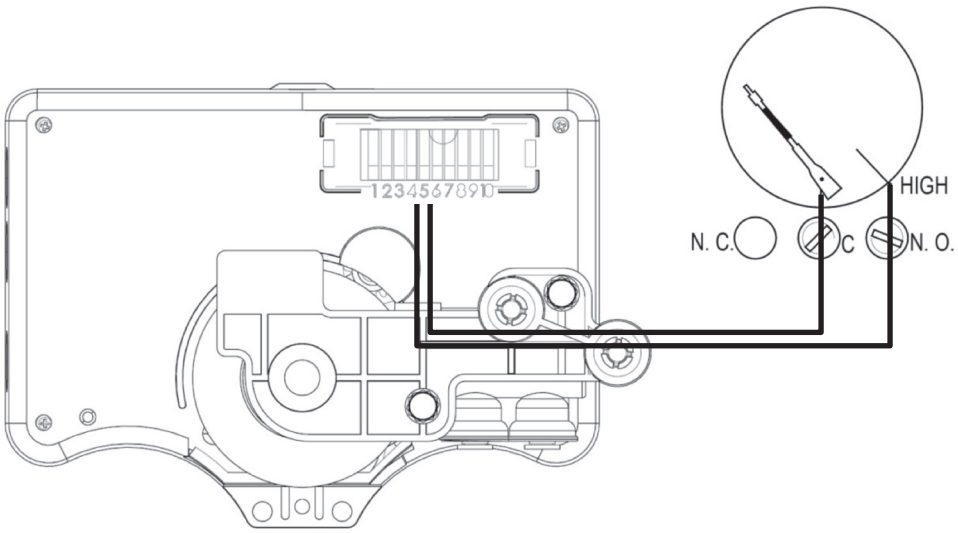


Fig.1

- The "High" pressure port (center mounted) is piped to the inlet side of the filter. The "Low" pressure port (top center mounted) is piped to the outlet side of the filter.

- You MUST use a second wrench on the low pressure port when tightening tube fittings (see Fig. 1)
- Notice that a wrench is used for holding the low pressure port while a second wrench will tighten the pressure tubing/hose fitting onto the port
- All contacts are set using a $^{1}/_{16}$ inch hex wrench. Rotate the contact until you reach the wanted setting. Set the contact slightly below the desired maximum differential pressure. Default setting is 2 bar.
- Connect the differential pressure switch contacts N.O. to the terminal strip 4-5 of the SFE as showed below






**Note**: Performance and flow settings advised by Pentair are calculated upon common media manufactures data sheets. We advise to always check with the filter media supplier the service and backwash velocities to use, and contact Pentair technical support whenever is needed to adapt the kit to different values from the ones specified in this document.

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