

Universal Filtration Bag Filter System Installation & Operation Manual For Automatic Self Cleaning Filter



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1. General Information

- a. Working Principle- filtration & Cleaning cycle

USCF filter is a fully automated self cleaning filter system, the whole system consists of filtration media in Stainless Steel mesh structure, fitted with a set of nozzles that connected to the cylinder, at the another end of the vessel body installed a solenoid valve controlled discharge valve for draining purpose, during the filtration operation, dirt will be retained at the inner surface of the screen and once the differential pressure build up and exceed the setting differential pressure value (usually set at 10 psid), it send a signal to control panel to switch on the discharge valve for drain to perform cleaning to remove the dirt,

the nozzle will then rotate and clean up the dirt that retained on the screen inner surface and flow out from drain valve, during the cleaning cycle, filtration is still on without any disruption.

b. Application

USCF is commonly used for the following application where very little maintenance are required.

Cooling Water filtration in cooling tower, air conditioning system, Heat Exchanger to ensure system heat efficiency

Source Water Filtration in river water, lake water, sea water, Well water, under ground water to ensure large particles likes Sands, leave, Stone, Algae removal before treatment.

Industrial use water filtration before pump, polishing machinery, mills, valves, nozzles, heat exchanger to ensure no particles that will cause damage to the expensive equipment.

Pulp & Paper Industry etc.

2. Mode of Operation

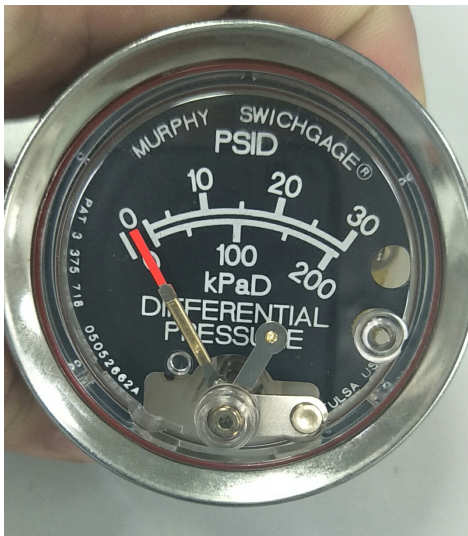
Control Panel



There are three operation modes that you can select,

A) Timing Mode – for high dirt content situation, you want to activate cleaning cycle only at set interval, for example, cleaning every say **20 minutes** and discharge valve opening and close in **10 sec time**. In this case, you have to set these two value on the screen.

B) Differential Pressure Mode – for low dirt content situation, you only want to activate cleaning only when differential pressure reach your setting at the gauge, and only value to set is the discharge valve opening and closing time, usually in **10 sec**.



Differential Pressure gauge for you to set the differential pressure to perform cleaning operation, recommend to set at **10 psid**.

C) Manual Mode

That is for manual operation to turn on and off of the discharge valve, usually use for testing or maintenance purpose.

3. Installation guide

Before Installation

- There are a few important instructions that you have to take note before doing set up.
- Please make sure you read the manual first before installation
- Please ensure the filter is install at safe, non hazard location.

- Try to install this filter near to the pressure source, likes short distance to pump, to avoid too low inlet pressure occurred to perform cleaning cycle
- Make sure the filter installed area has enough space to carry out maintenance and operation work
- To ensure inlet pressure to the filter must be more than 3 bar during operation , and not less than 0.1 bar during the cleaning cycle
- To ensure the inlet connecting pipe to the filter having the same diameter as filter inlet connection
- Install valves at inlet, outlet and by pass line prior to the filter
- In situation of water hammering and water back flow along the pipeline, you need to install check valve after our filter.
- Ensure the water flow consistence between filter and general piping
- Ensure you have enough head or sideways space to remove the screen for maintenance purpose
- If filter used for hot water application, please ensure you have proper insulation to avoid direct contact with human hand or skin.
- During installation, use proper lifting devices and ensure no other person nearby for safety reason
- Wear Safety Helmet during installation and maintenance.

b. System Set up and running

- After checking to ensure all connection wiring are proper, you may switch on the power source, turn on the power switch at control panel, the screen on panel should be now on.
- Cleaning cycle should be in less than 40 sec, observe to see if the discharge valve is open properly, after cleaning, the discharge should be now closing.

In case of Power Failure

- Check Power Cable Connection
- If panel screen not working, check the power voltage
- Check all wiring
- During servicing, please ensure work to be carried out by qualified electrician
System construction

4) Maintenance after long period of not using the system

- You should perform the following if you do not intend to use the filter system for more than 1 month period of Perform one cleaning cycle, if possible switch off the inlet valve o Off the power source of control panel
- Release all pressure inside the filter, drain out all the water.
- Restart the system after a long break or Change the brush and sealing material
- Connect the power source and check the complete filtration and cleaning cycle to ensure it is functioning properly
- Yearly maintenance, you need at least once per year
- Check if the system has any leaking issue, open up and check all the sealing, change if not using for long time or damage
- Check the brush contacting surface with the screen, if is not in proper contact, you need to remove the screw and do some adjustment.