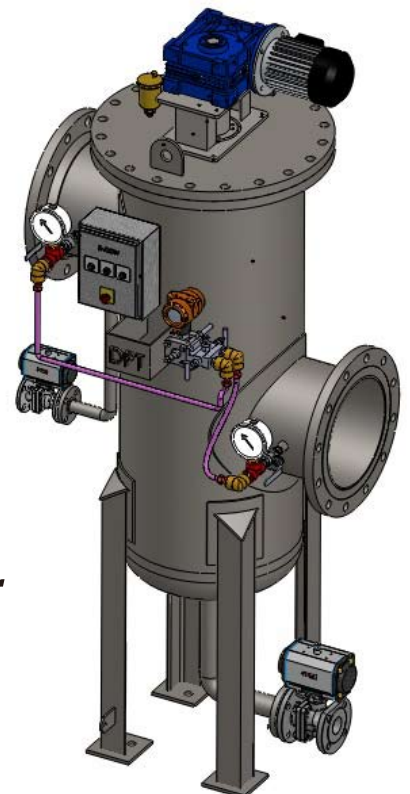




K-FLOW Engineering

Filtration & Separation

SCF
Scraper Type
Self-cleaning Filter



Ser.:SCF

Continuous filtration without interruption Filtration & separation specialist

Scraper type self-cleaning filters

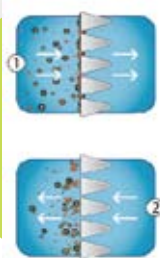
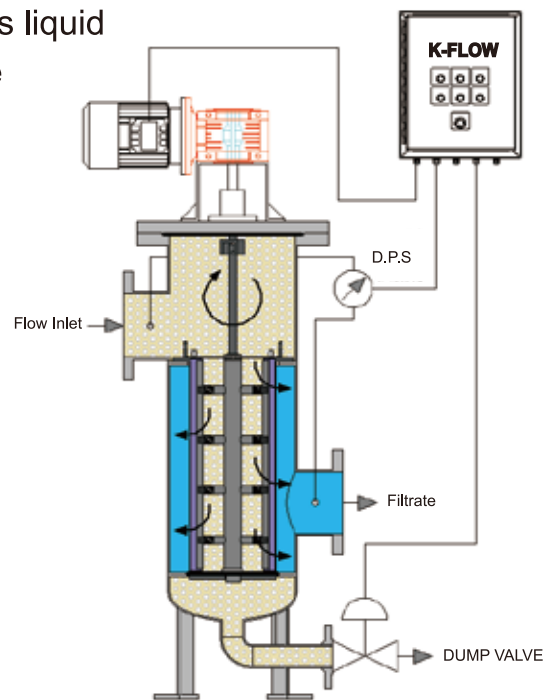
Series SCF from 2" to 16" , capacity up to 1,130, 000 kgs/h

SCF

Scraper type self-cleaning filter are designed with wedge wire (V-wire) screen and self-cleaning by the rotating scraper or brush to remove the debris on the surface of the screen . It can works continuous without interruption and no maintenance and running parts required .

Main Features

1. Continuous filtration , no need maintenance and extend the life time of filter cartridges or bags .
2. No disposable filter cartridges or bags , save cost and environment friendly .
3. Concentration of flushing liquid is high and prevent valuable liquid loss .
4. Suitable for the liquid with solids content and high viscosity liquid
5. Closed system , prevent any dangerous liquid leakage and loose , operating pressure up to 20 kg/cm²g and temperature up to 240 °C .
6. Special demand can be satisfied .
7. Control panel – Touch screen and PLC controlled , all the set points can be re-setting on-line .
8. Differential pressure switch with indicator and can be adjusted on-line .



Scraper type self-cleaning filters

Series SCF from 2" to 16" , capacity up to 1,130, 000 kgs/h

SCF scraper type self-cleaning filter is a continuous filter and no interruption in operation

Mechanical construction

Standard sizes	2" ,3" , 4" , 6" , 8" , 10" , 12" , 16" or upon requested
Filtration rating	50 , 80 ,100 , 130 , 200 ,300 , 500 , 800 , 1,000 and 2,000 μ m
Connection	Flanged and acc. to ANSI 150 LB or 300 LB or upon requested
Materials of housing	Stainless steel 304 ,316(L) Duplex UNS S32205 , carbon steel or carbon steel with seawater resistance coating or upon requested
Materials of screen	Stainless steel AISI 316L , 317 L ,UNSS32205 , Hastelloy , etc.
Explosion proof grade , upon requested	

Application

1. Suitable for the low and high viscous liquid .
2. From small capacity to high capacity .
3. From low pressure to high pressure .
4. From coarse filtration to the fine filtration down to 50 μ m .
5. Variable material combination and suitable for different liquid and economically .
6. Pressure drop from 0 ~ 1.5 kg/cm² and normally recommend 0.5 kg/cm² .

Typical liquids

Seawater , waste water , industrial oils , paint , coating , latex , chemical solvents , cooling water , edible oil , juice , beverage , etc .



Scraper type self-cleaning filters

Series SCF from 2" to 16" , capacity up to 1,130, 000 kgs/h

Automatic control system

1. *Start-up – There are two function (A + B) for the self-cleaning filter to start the self-cleaning procedure , A) Whenever the differential pressure reached the setting value , normally at 0.3 – 0.5 kg/cm² and it is adjustable . B) Whenever the running time reached the setting period of the time , 0-24 hours and normally 8 hours .*
2. *Self-cleaning time setting*
Self-cleaning period of the time is adjustable from 5 to 30 seconds and normally setting at 15 seconds .
3. *Stop*
Self-cleaning will stop itself after the cleaning time reached and the differential pressure value will go back to the clean condition . Suppose the filter is not self-cleaning well , it will start to self-cleaning it again .
4. *Drain system –*
Contaminants at the bottom of the filter vessel will be self-drained by the timer controlled valve and the drainage time can be adjusted.

Power supply

Motor (Horse power)	1/4 – 3/4 HP / 14 output R.P.M.
Control voltage (V)	DC 24 V
Power supply	3 phase , 220/380 / 460 V , 50 / 60 HZ
Insulation class	Water , dust and explosion proof IP 56 , 67 or NEMA Cl. 1 , div. 2 , Gr. B . C . D.
Differential pressure switches or transmitters	American , west Europe or Japanese master brands in the market

Mesh & Micron (μm)

Micron	840	420	250	177	149	130	100	80	50
Mesh	20	40	60	80	100	120	155	200	300

Scraper type self-cleaning filters

Series SCF from 2" to 16" , capacity up to 1,130, 000 kgs/h

Operation principle of the SCF

- 1. The flow passed through the nozzle of the filter and into the inside of the screen to the outside of the screen and it will create the pressure drop from the inlet nozzle to the outlet nozzle . When the contaminants start to blind the screen , 1) the pressure drop will goes up and after the pressure drop go up to the setting pressure drop value , the differential pressure switch will send a signal to the control panel and the control panel will tell the motor to start the self-cleaning procedure by the scraper or brush . At the mean time , the drain valve will also be opened and drain the contaminants to the discharge system . besides , the pressure drop control , if the pressure drop did not goes up to the setting value in 8 hours or the setting hours , the control panel will also send the signal to the motor and start to the self-cleaning procedure .*
- 2. The design of the filter is a continuous type and no interruption .*
- 3. wedge wire (V) screen will not clogged and easy self-cleaning by the back-flushing .*



Scraper type self-cleaning filters

Series SCF from 2" to 16" , capacity up to 1,130, 000 kgs/h

Technical Data

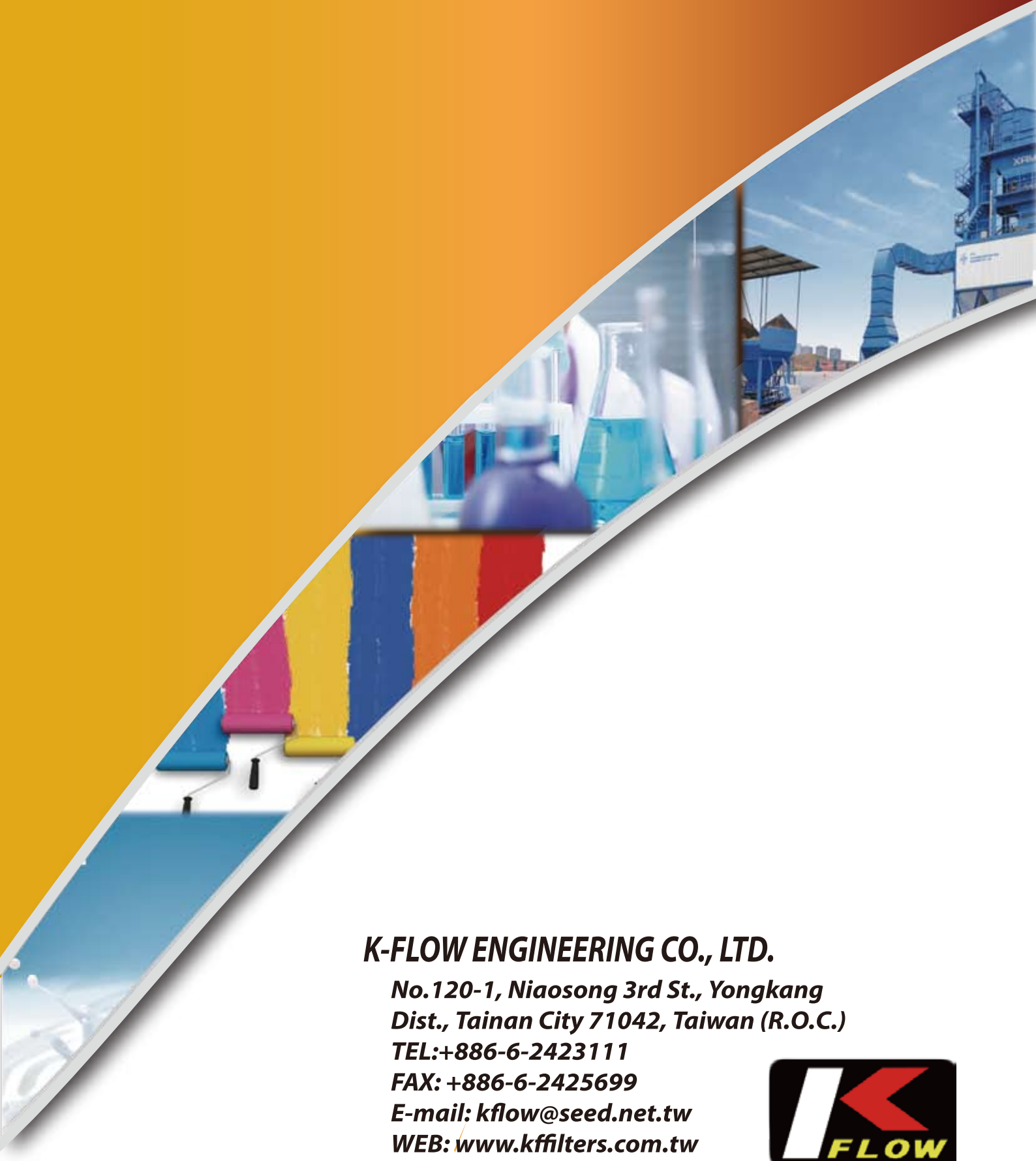
Standard operating conditions

Maximum Pressure 20 (kg/cm ²)		Maximum operating temperature 260 °C	
Design pressure (kg/cm ² G)		Hydrostatic test pressure (kg/cm ² G)	
10		15	
20		30	
Size	Connection	Open area	Recommended flow rate
		Cm ²	Tons/Hour
2"	Threaded	143	28
50A	Flanged		
3"	Flanged	143	40
80A	Flanged		
4"	Flanged	560	85
100A	Flanged		
6"	Flanged	560	165
150A	Flanged		
8"	Flanged	980	330
200A	Flanged		
10"	Flanged	1530	520
250A	Flanged		
12"	Flanged	2355	748
300A	Flanged		
16"	Flanged	3925	1130
400A	Flanged		

Remark: above operating data are only for reference .

Specification Sheet For Automatic Self-Cleaning Filter

Inquiry No.		Date	
Service		EQ. No.	
Type		Pages	1/2
Flow Capacity , Nor.	M3/h		
Operating / Design Pressure	Kg/cm2g		
Operating / Design Temperature	°C		
sp.gr. @ Operating Temperature			
Viscosity @ Operating temperature	Cp		
Allowable clean pressure drop	Kg/cm2		
Allowable / Maximum dirty pressure drop	Kg/cm2		
Particles name to be removed		Impurity	
Estimated concentration of suspended solid	P.P.M		
Particles sizes to be removed & distribution	Microns		
Design code	Mfg. Standard	Corrosion allowance	mm
Materials of construction			
Housing		Nozzle	Size(In.) Q'ty Rating & Connection
Cover		Inlet	ANSI 150 LB FF
Internal Parts		Outlet	ANSI 150 LB FF
Support Legs		Vent	By vendor
Nozzle		Drain	By vendor
Elements		DP SPort	By vendor
Seals & Gaskets			
Type of cover : <input type="checkbox"/> Hex.Bolt through <input type="checkbox"/> Eye-nut bolted <input type="checkbox"/> Clamp <input type="checkbox"/> Quick opening closure			
Painting Spec.: Interior & Exterior : <input type="checkbox"/> Sand blast <input type="checkbox"/> Pickling <input type="checkbox"/> Primer Coat <input type="checkbox"/> Inter media Coat <input type="checkbox"/> Finish Coat Color _____			
Electric Power Supply : VAC/ HZ/ Three Phase , Insulation Class :			
Accessories : <input type="checkbox"/> D.P. Indicator <input type="checkbox"/> D. P. switch <input type="checkbox"/> Air eliminator <input type="checkbox"/> Relief valve			
Spare Parts : <input type="checkbox"/> precommissioning & strat up <input type="checkbox"/> For two year's operation			
Inspection & Test Report : <input type="checkbox"/> MFG. Standard -including hydrostatic test , performance test , painting , flange protection , marking & material identification & preparation for shipment .			
Documentation			
With quotation			
Guarantee statement- 24 months after initial acceptance or 24 months after the date of shipment		Technical proposal with detailed description of data sheet	
Exception & deviation list		Special tools list	
Complete filter data sheet		Noise data sheet	
Catalogue		ISO certificate	
For approval			
Outline dimension drawings , including foundation loads , acceptable nozzle loads , lifting details & interface/connection detail		Cross section drawings , including materials grade and manufacturing parts no.	
Detail drawings of fabrication parts		Piping schematic / bill of materials	
Electrical and instrumentation schematics ,wiring diagrams and bill of materials		Electrical and instrumentation arrangement drawing and list of components	
Instrument data sheet & calculation (including set points)		Control logic and function diagram	
Final Certified			
Inspection & Test report	hydrostatic test ,pneumatic test , performance test , painting , flange protection , marking & positive material identification & preparation for shipment .		
Manuals	Installation , operation , maintenance		
Notes			
1. SCF operates continuously and backwashing can be manually , or regularly by high differential pressure or a timer . All related valve signal transmitted to DCS .			



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