

# RKSfluid<sup>®</sup>

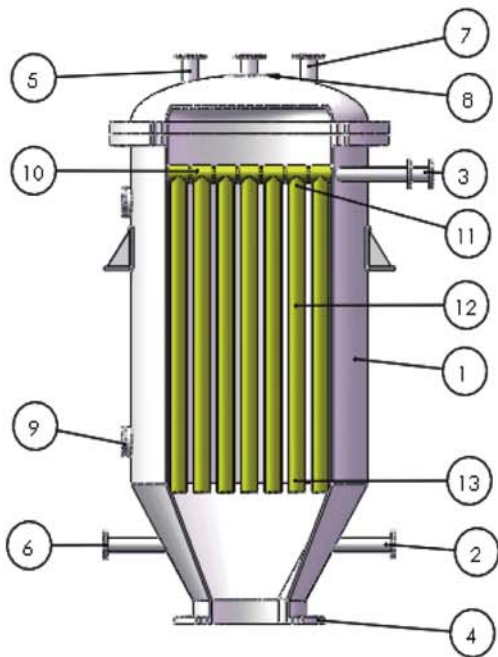
Proven Technology - Superior Features  
Legendary Value

## FACF Series

Full-Automatic Candle Filter



RKS Environmental Science & Technology (Shanghai) Co.,Ltd.



- 1, Pressure Vessel
- 2, Outlet
- 3, Outlet of clear liquid
- 4, Deslagging Port
- 5, Vent & Overflow port
- 6, Feed port
- 7, Connection port of instruments
- 8, Standby Port
- 9, Viewport
- 10, Liquid collection tube
- 11, Filtration unit
- 12, Filtration medium
- 13, Clamp for fixed the filter element

### Product Feature

- ◆ Multi-hole filter element is dismountable and easy to replace, clean, and maintain.
- ◆ the moisture content of discharged slag can be adjusted according to customer requirements, and filter cake is very easy to be broken, can be directly discharged into the beating tank, without the conveyor
- ◆ Full pressure-tight operation, both suitable for the filtration of general materials, can also be used for flammable, toxic or highly toxic dangerous products, and a fresh food which does not allow be polluted, biological products and pharmaceuticals, etc.
- ◆ the filter with an intelligent control system, greatly saving labor

### Operating Principle

When the candle filter is start to its filtering process, the slurry is fed into the filter by the pump. The liquid phase in the slurry passes through the filter medium and enters into the center of multi-hole filter element, and is discharged from the outlet of the clear liquid. Before the cake layer is formed, the relatively clean liquid is sent to the inlet of raw material slurry again to do a filtration process, until the filter cake layer is formed (or meet the requirements), and then, the control system will give a signal to stopping the recycle filtration. The clean liquid will be sent to next process through the control valve and execute the normal filtration process.

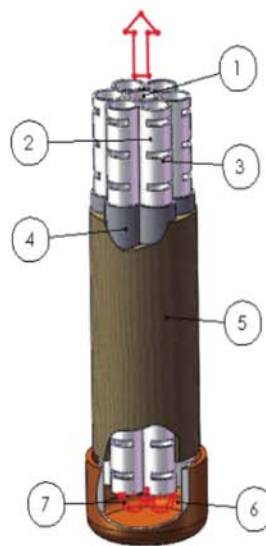
After a normal filtration period, the system automatically provides a signal to stopping feed and drain away the remaining liquid when the filter cake layer on outside surface of multi-hole filter element is reach to a certain thickness. And then, the control system provides the signal again to back flushing (compressed air, nitrogen or Saturated steam), the filter cake is stripping, the outlet of slag is open to discharge by the control system. Next filtration process will be executed again.

### Product Description

In order to solve the environmental pollution caused by the open-type filter and increase the dryness of the filter cake, we developed a completely pressure-tight.

The pressure-tight filter is placed some candle tubes, which is suitable for different occasions. Because there is no actuator device, and its structure is simple, so it is suitable for a operating condition of large filtration area. The filter device is fully automatic operation, no any leakage.

The filter element adopts a structure design of double plum blossom tube bank (internal stainless steel skeleton and external filter cloth). The middle drainage tube can help to drain the liquid in the filter tube, and, the remaining liquid can be drained away by the middle bleeder tube, and, the filter cake is blown off by back flushing of clean gas, its efficiency is obviously higher than other filter. The filter is suitable for the filtration of impurity content of 0.1% to 50%.



1. Central tube & Clear liquid collection tube
2. Filtration tube
3. A hole of filtration tube
4. Filtration medium
5. Filter cake
6. Collection chamber (connect the centre tube and filtration tube)
7. Clear liquid
8. Backflush gas



## Specifications

Length of element	Size of shell	Size of filter cake	15mm	30mm	60mm	Weight of shell(kg)
800	550	Qty of wick	7	6	4	124
		Filter area/ m <sup>2</sup>	1.6	1.3	0.9	
	600	Qty of wick	7	7	4	166
		Filter area/ m <sup>2</sup>	1.6	1.6	0.9	
	650	Qty of wick	13	7	4	185
		Filter area/ m <sup>2</sup>	2.9	1.6	0.9	
	700	Qty of wick	14	8	7	204
		Filter area/ m <sup>2</sup>	3.2	1.8	1.6	
1200	800	Qty of wick	19	14	7	284
		Filter area/ m <sup>2</sup>	6.4	4.7	2.4	
	900	Qty of wick	27	18	10	333
		Filter area/ m <sup>2</sup>	9.2	6.1	3.4	
	1000	Qty of wick	34	19	12	367
		Filter area/ m <sup>2</sup>	11.5	6.4	4.0	
1500	1100	Qty of wick	42	28	14	417
		Filter area/ m <sup>2</sup>	17.8	11.8	5.9	
	1200	Qty of wick	52	33	19	527
		Filter area/ m <sup>2</sup>	22.0	13.9	8.0	
	1300	Qty of wick	64	44	22	630
		Filter area/ m <sup>2</sup>	27.1	18.6	9.3	
	1400	Qty of wick	76	49	25	699
		Filter area/ m <sup>2</sup>	32.2	20.7	10.6	
2000	1500	Qty of wick	87	57	31	883
		Filter area/ m <sup>2</sup>	49.2	32.2	17.5	
	1600	Qty of wick	104	68	37	965
		Filter area/ m <sup>2</sup>	58.8	38.4	20.9	
	1700	Qty of wick	119	79	40	1402
		Filter area/ m <sup>2</sup>	67.2	44.6	22.6	
	1800	Qty of wick	138	87	44	1525
		Filter area/ m <sup>2</sup>	77.9	49.1	24.8	
2500	2000	Qty of wick	168	113	57	2076
		Filter area/ m <sup>2</sup>	118.6	79.8	40.2	
	2100	Qty of wick	188	123	66	2244
		Filter area/ m <sup>2</sup>	132.8	86.8	46.6	
	2200	Qty of wick	205	138	74	2563
		Filter area/ m <sup>2</sup>	144.8	97.5	52.2	

## Application

Bio-pharmaceuticals industry: Fermentation extracts, Antibiotics, Streptomycin, Citric acid ; Chemical industry: Amine liquid, Catalyst recovery, Sulfuric acid, polyhydric alcohols, Titanium dioxide, PTA particles, Polyglycol, Potassium carbonate, Epoxy resin Food & Beverage industry: Apple Juice, Grape Juice, Raw Syrup, Fruit Grape Pulp, Glucose Syrup, Sucrose, Beer, Olive Oil, Palm Oil, Soybean Oil, Corn Oil, Gelatin Metal processing: Cleaning agents, Coal tar, Machine cooling oil, Metal foil rolling oil.

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