



## Horizontal Plate Filters



Unexcelled quality to the end of each cycle.

Higher flow rates per square foot of area.

Totally enclosed filter plates – no leaking or evaporation.

Convenient operation:

- Portable.
- Complete with pump, motor and inter-connecting piping if desired.

Compact: occupies minimum floor space.

Low cost operation:

- Low cost paper media and filter aid.
- Easy and quick to clean – cleaning time reduced 50 percent.
- Minimum of unfiltered residue at end of run. (See Scavenger Plate.)

Engineered to use modern, diatomaceous earth filter aids to the best possible advantage.

Patented Scavenger Plate. This feature facilitates batch filtration. At the end of each run, the main outlet valve is closed and Scavenger Plate valve is opened. Residue is then filtered through the Scavenger Plate by means of air or gas pressure through the air vent.

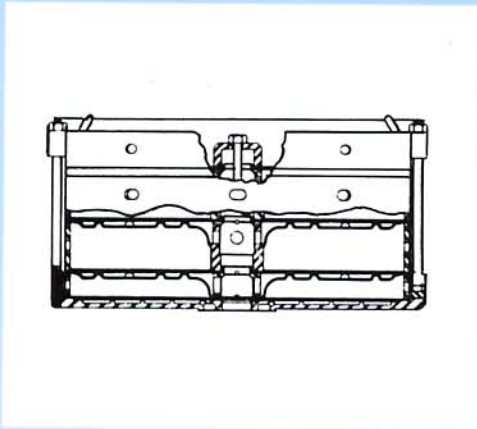


**For All Fine Filtration**

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# THREE BASIC DESIGNS TO CHOOSE FROM

## 1. STANDARD HORIZONTAL PLATE CARTRIDGE . . . . .



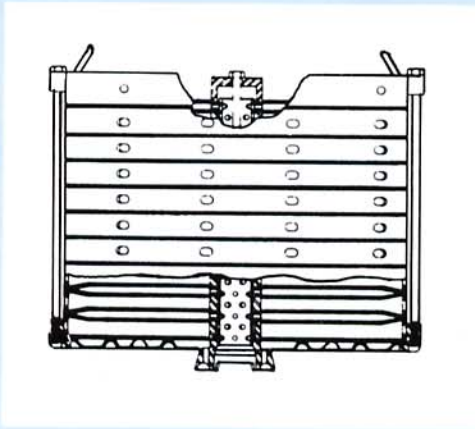
Sparkler horizontal plate filters are particularly suited for fine filtration and polishing operations. They are equally efficient for continuous or intermittent operation.

Complete recovery of product is obtained by "washing" or by "blow-down" of the cake. No danger of loss of cake or slippage. Any kind of filter media – fabric, metallic wire cloth, or filter paper is available.

All types of filter aids, activated carbons or Fuller's earths are also adaptable with maximum efficiency.

Due to horizontal position of the plates, only a very thin precoat of filter aid is necessary. The cake is evenly distributed, assuring economical operation and uniform clarity.

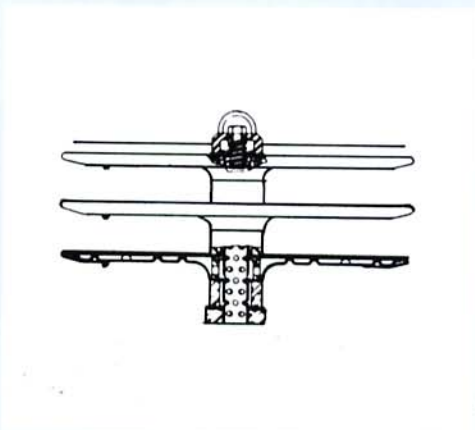
## 2. VR AND V DUAL DISC CARTRIDGES . . . . .



Sparkler VR trap filters are designed for processes which require the removal of all traces of solids. Large area at an unusually small investment, coupled with low operating cost. Only the filter paper or cloth is discarded, thereby offering greater economy than "one-time-use" cartridges. Versatile selection for varying porosities are available.

The V type filter cartridge is similar to the VR type. The outer ring of the VR cartridge is left out and cloth media is sewn on the V type plate. This is advantageous for multiple use of cloth media.

## 3. WASH-OFF CARTRIDGE . . . . .



Sparkler wash-off filters offer cake stability, plus low first cost, less labor, fast cleaning, and savings in materials for real filtration economy with no sacrifice in quality. Cake is removed by simply "hosing off" without disassembling the cartridge.

Even thickness, uniform precoating, a total absence of any danger of the cake dropping or cracking is assured. The filter can be completely shut down and filtering resumed without any cake damage.

A semi-permanent synthetic cloth or wire screen filtering media covers the plates which filter through the top side only. The media is available in a variety of materials and weaves suitable to the product filtered.

Can be furnished for use in any 18" or 33" horizontal plate filter tank. A pivot rack for holding cartridge in position during cleaning is available.

This filter is proving very popular in every field where fabric or metallic cloth can be used in place of filter paper.



# WIDE SELECTION OF AREA AND CAKE CAPACITY

*Gravity Flow, – the cake is stable even with interrupted flow.*

CARTRIDGE	AREA SQ. FT.	*CAKE CAPACITY CU. FT.	WT. OF CAKE IN LBS. AT 50 LBS. PER CU. FT.	WT. CART. LESS MEDIA (W/ SCAV.)	WT. CART. LESS MEDIA (W/O SCAV.)	CARTRIDGE	AREA SQ. FT.	*CAKE CAPACITY CU. FT.	WT. OF CAKE IN LBS. AT 50 LBS. PER CU. FT.	WT. CART. LESS MEDIA (W/ SCAV.)	WT. CART. LESS MEDIA (W/O SCAV.)
14 S 4	3.56	.131	6.55	53	41	18 D 16	25.76	3.104	155.20	296	278
14 S 7	6.23	.229	11.45	72	60	33 S 7	39.41	2.46	123.00	405	366
14 D 4	3.52	.445	22.25	68	55	33 S 9	50.67	3.17	158.50	484	430
18 S 4	6.48	.237	11.85	93	75	33 S 11	61.93	3.87	193.50	564	521
18 S 7	11.34	.414	20.70	125	107	33 S 14	78.82	4.93	246.50	683	640
18 D 4	6.44	.776	38.80	107	88	33 D 7	39.27	5.84	292.00	460	417
18 S 11	17.82	.651	32.55	173	155	33 D 9	50.49	7.50	375.00	558	515
18 S 15	24.30	.887	44.35	219	200	33 S 19	107.0	6.68	334.00	881	838
18 D 6	9.66	1.164	58.20	138	120	33 D 12	67.32	10.00	500.00	705	662
18 D 8	12.88	1.552	77.60	169	151	33 S 28	157.64	9.85	492.50	1238	1195
18 S 23	37.26	1.360	68.00	310	291	33 D 17	95.37	14.17	708.50	950	907
18 D 12	19.32	2.328	116.40	233	214						
18 S 30	48.60	1.774	88.70	390	371						

\*CAKE CLEARANCE 1/4"

*Provides brilliant polish, – uses inexpensive paper.*

CARTRIDGE	AREA SQ. FT.	*CAKE CAPACITY CU. FT.	WT. OF CAKE IN LBS. AT 50 LBS. PER CU. FT.	WT. CART. LESS MEDIA (W/ SCAV.)	WT. CART. LESS MEDIA (W/O SCAV.)	CARTRIDGE	AREA SQ. FT.	*CAKE CAPACITY CU. FT.	WT. OF CAKE IN LBS. AT 50 LBS. PER CU. FT.	WT. CART. LESS MEDIA (W/ SCAV.)	WT. CART. LESS MEDIA (W/O SCAV.)
VR 12 3	4.71	.073	3.65	52	43	V 17 33	104.94	1.638	81.90	256	250
VR 12 6	9.42	.147	7.35	74	66	VR 32 10	109.90	2.575	128.75	535	500
V 12 3	4.71	.073	3.65	18	14	V 32 10	109.90	2.575	128.75	286	260
V 12 6	9.42	.147	7.35	29	26	VR 32 14	153.86	3.605	180.25	696	663
VR 17 6	19.08	.298	14.90	123	106	V 32 14	153.86	3.605	180.25	388	362
V 17 6	19.08	.298	14.90	54	48	VR 32 19	208.81	4.893	244.65	905	870
VR 17 12	38.16	.596	29.80	200	183	VR 32 23	252.77	5.923	296.15	1064	1029
V 17 12	38.16	.596	29.80	100	92	V 32 19	208.81	4.893	244.65	515	490
VR 17 18	57.24	.894	44.70	280	263	V 32 23	252.77	5.923	296.15	617	590
VR 17 24	76.32	1.192	59.60	354	337	VR 32 28	307.72	7.210	360.50	1266	1231
V 17 18	57.24	.894	44.70	137	130	VR 32 32	351.68	8.240	412.00	1429	1394
V 17 24	76.32	1.192	59.60	190	182	V 32 28	307.72	7.210	360.50	744	717
VR 17 33	104.94	1.638	81.90	469	452	V 32 32	351.68	8.240	412.00	845	820

\*CAKE DEPTH—"V"—"VR" 12 & 17 3/16" — 32 9/32"

*Flow is with gravity, – reduces cleaning time to a minimum.*

CARTRIDGE	AREA SQ. FT.	*CAKE CAPACITY CU. FT.	WT. OF CAKE IN LBS. AT 50 LBS. PER CU. FT.	WT. CART. LESS MEDIA (W/ SCAV.)	WT. CART. LESS MEDIA (W/O SCAV.)	CARTRIDGE	AREA SQ. FT.	*CAKE CAPACITY CU. FT.	WT. OF CAKE IN LBS. AT 50 LBS. PER CU. FT.	WT. CART. LESS MEDIA (W/ SCAV.)	WT. CART. LESS MEDIA (W/O SCAV.)
WO 2 18	3.00	.342	17.10	N.A.	16	WO 18 D 4	6.20	.773	38.65	46	39
WO 4 18	6.00	.684	34.20	N.A.	27	WO 18 D 6	9.30	1.160	58.00	63	55
WO 6 18	9.00	1.026	51.30	N.A.	38	WO 18 D 8	12.40	1.547	77.35	80	72
WO 8 18	12.00	1.368	68.40	N.A.	50	WO 18 D 12	18.60	2.320	116.00	113	105
WO 12 18	18.00	2.052	102.60	N.A.	73	WO 18 D 16	24.80	3.093	154.65	146	139
WO 18 18	27.00	3.078	153.90	N.A.	107	WO 33 D 7	37.03	5.40	270.00	251	224
WO 5 33	26.60	3.74	187.00	N.A.	163	WO 33 D 9	47.61	6.95	347.50	312	287
WO 7 33	37.24	5.24	262.00	N.A.	224	WO 33 D 12	63.48	9.26	463.00	405	379
WO 11 33	58.52	8.24	412.00	N.A.	348	WO 33 D 17	89.95	13.12	656.00	559	533
WO 13 33	69.16	9.73	486.50	N.A.	410						
WO 19 33	101.08	14.23	711.50	N.A.	593						
WO 24 33	127.68	17.97	898.50	N.A.	748						

\*CAKE CLEARANCE 1/4"



# ENGINEERING DATA

## MATERIALS OF CONSTRUCTION

Standard materials of construction include mild steel, 304 and 316 stainless steel. Inventories assure quick delivery. Materials such as elc, monel, hastelloys, titanium and nickel are not stocked, and delivery is subject to availability.

Standard equipment, if other than mild steel, unless noted will be furnished with all wetted parts of the material specified. Non-wetted parts, such as swing bolts, external tank supports, etc., are mild steel.

## PRESSURE VESSEL DESIGN

Standard design pressure and test pressure as well as design temperature for standard materials are as follows:

MATERIAL	DESIGN PRESSURE	TEST PRESSURE	DESIGN TEMPERATURE*
M.S.	60 PSIG	90 PSIG	650° F
304 S.S.	60 PSIG	105 PSIG	350° F
316 S.S.	60 PSIG	95 PSIG	350° F

\*Design temperature refers to vessel design, not to gasket material.

Higher pressure vessels are available upon request. Standard vessels are built to A.S.M.E. specifications and include coded material. Inspection and code stamp are

included at no extra cost when required by state law. A.S.M.E. design is for non-nuclear service. Vessel design for this service is available upon special request.

## DESIGN PRESSURE – FILTER PLATES

Standard design for allowable pressure drop across the plates is 50 PSID. Higher pressure differential plates are available upon request.

## GENERAL INFORMATION

All SPARKLER HORIZONTAL PLATE FILTERS are available with various types of mountings. Standard units include flanged pipe leg mountings. Vessel wall gusset mountings are available for "through floor" installation and are available on request. Other mountings include portable bases that are available with pump,

motor and all interconnecting piping when required. Transfer piping is available on complete portable equipment. Precoat and bodyfeed tanks complete with necessary filter aid feeding devices may be included and mounted on a common base with the filter or independently mounted.

**SPARKLER also manufactures a complete line of Horizontal Plate Filters, Vertical Plate Filters, Horizontal (dual position) Plate Filters, and Manual/Auto Nutsche Filters.**



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