



Falls Filtration
Technologies, Inc

"Manufacturer of Airmaze Products"

OIL BATH

INDUSTRIAL AIR INTAKE FILTERS



OIL BATH INTAKE AIR FILTERS

Capacities up to 6500 CFM

High Efficiency

The combination of oil scrubbing action and baffle impingement principles provides exceptionally high dirt arrestment. Laboratory tests with various types of dust show efficiencies ranging from 95.4% to 98.6%.

Quickly Disassembled for Complete Cleaning

Unscrewing a wing nut permits complete disassembly of filter for inspection or cleaning. To clean filter, empty dirty oil from sump and replace with clean oil (SAE 10 to 30 in cold weather, SAE 30 to 50 in hot weather). Filter element may be removed and cleaned if dirty.

Resistance

The resistance graph below is of a typical Falls Filtration Oil Bath Filter (less base) showing an increase in pressure drop as the percentage of rated filter capacity increases.

Lower Resistance to Air Flow

More filter area per capacity results in much lower air resistance through Falls Filtration Technologies filters. While conventional filters utilize only the filter area equivalent to the base of a cylinder, Falls Filtration Technologies employs the entire cylinder wall. In the case of a cylinder 5" O.D. by 8" high, base area is only 19.63 sq. in., whereas area of cylinder wall is 125.66 sq. in. – more than 6 times as great. Actual pressure drop through a Falls Filtration Technologies oil bath filter depends on size of mounting base used and percentage of total filter capacity used. Resistance on average Falls Filtration Technologies filter application ranges from 3" to 5" water gauge.

The FFT Oil Cycle

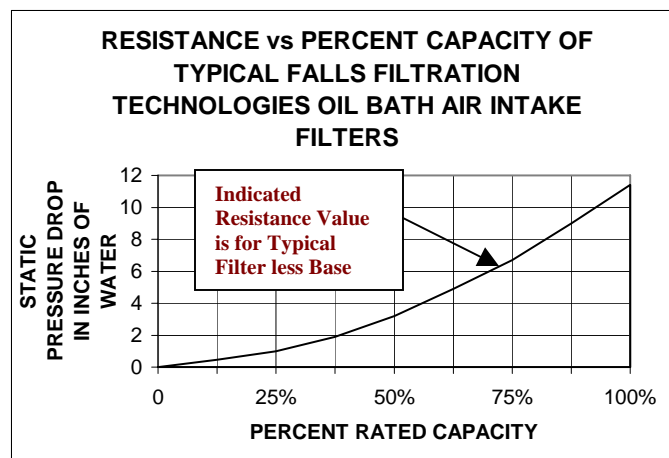
Because of the vertical filter element and oil control ring, Falls Filtration oil bath filters do not hold oil suspended in the element at high air flows. Oil automatically returns to sump for recirculation. The oil washing action takes place at all speeds; from idle to full throttle.

Flexibility of Mounting

Because of basic design, Falls Filtration Filters offer greatest installation flexibility. They may be mounted directly on top of, or suspended directly from the intake pipe. When used with a mounting bracket, they can be placed in a remote location and air piped from the cleaner to the intake.

All Metal Construction

The wire mesh element cannot pack down or change density. There is nothing to break off and enter the air stream. Metal construction resists vibration and affords complete



HOW TO DETERMINE CORRECT SIZE FILTER

<u>TABLE A:</u> 4 – CYCLE SINGLE ACTING ENGINES				<u>TABLE B:</u> BLOWERS, TURBOCHARGERS, ROTARY COMPRESSORS			
No. of Cyl.	Maximum Engine Speed – R.P.M.			Find maximum C.F.M. free air rating of equipment under Blower C.F.M. column in selection table “F.” Read across to the right and select correct size filter from column specifying type required.			
1	Over 2400 Key 1	2400-1601 Key 2	1600-1 Key 6				
2	Over 1200 Key 1	1200-801 Key 2	800-1 Key 5				
3	Over 800 Key 1	800-533 Key 2	532-1 Key 4				
4	Over 600 Key 1	600-401 Key 2	400-1 Key 3				
5	Over 480 Key 1	480-321 Key 2	320-1 Key 2				
6	Over 400 Key 1	400-267 Key 2	266-1 Key 2				
7	Over 343 Key 1	343-229 Key 2	228-1 Key 2				
8 or more	Over 300 Key 1	300-201 Key 1	200-1 Key 1				
<u>TABLE C:</u> SINGLE ACTING AIR COMPRESSORS				<u>TABLE D:</u> DOUBLE ACTING AIR COMPRESSORS			
No. of LP. Cyl.	Maximum Compressor Speed – R.P.M.			No. of LP. Cyl.	Maximum Compressor Speed – R.P.M.		
1	Over 1200 Key 1	1200-801 Key 2	800-1 Key 5	1	Over 600 Key 1	600-401 Key 2	400-1 Key 3
2	Over 600 Key 1	600-401 Key 2	400-1 Key 3	2	Over 300 Key 1	300-201 Key 2	200-1 Key 2
3	Over 400 Key 1	400-267 Key 2	266-1 Key 2	3	Over 200 Key 1	200-134 Key 2	133-1 Key 2
4	Over 300 Key 1	300-201 Key 1	200-1 Key 1	4	Over 150 Key 1	150-101 Key 1	100-1 Key 1

TABLE E

P.D.C.F.M. (Piston Displacement Cubic Feet per Minute)
<i>For Engines</i> = Cubic Inch Displacement x Max. R.P.M. x .00029
<i>For Compressors</i> = Cubic Inch Displacement x Max. R.P.M. x .00058
NOTE: Cubic Inch Displacement = Bore x Bore x Stroke x No. Cylinders x .7854. For Double Acting Engines and Compressors; Multiply by 2.

HOW TO DETERMINE CORRECT TYPE FILTER

TABLE F SELECTION TABLE

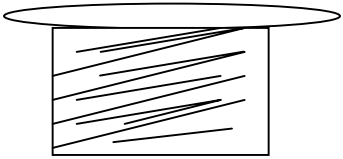
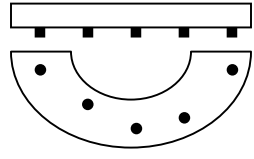
Key 1	Key 2	Key 3	Key 4	Key 5	Key 6	Blower CFM	Bottom Opening Type with No Relief Valve	Bottom Opening Type with Relief Valve	Max. Base Size	Min. Base Size
80	53	40	27	20	10	64	F80S	FV83S	2"	½"
140	93	70	47	35	18	112	F140S	FV143S	2 ½"	1"
250	167	125	83	63	32	200	F250S	FV253S	3"	1¼"
350	233	175	117	88	44	280	F350S	FV353S	4"	1½"
550	367	275	183	138	69	440	F570S	FV550S	5"	2"
850	567	425	283	213	107	680	F858S	FV858S	6"	3"
1200	800	600	400	300	150	960	F1208S	FV1208S	8"	4"
1700	1133	850	567	425	213	1360	F1708S	FV1708S	12"	6"
2800	1867	1400	933	700	350	2240	F2808S	FV2808S	14"	8"
4000	2667	2000	1333	1000	500	3200	F4008S	FV4008S	18"	10"
6500	4333	3250	2167	1625	813	5200	F6508S	FV6508S	22"	16"

*These models furnished as assemblies of two large oil bath filters and manifolds. Dimension details on request.

NOTE: All of the above models have Full Hoods. For application where space limitations do not permit full hood, units are available with special tops.

NOTE: All units listed have fixed skirt settings 1/8" below oil level except units with relief valves. Relief valve units have skirt set 3/8" above oil level.

TABLE G TYPES AND SIZES OF BASES AVAILABLE

																							
		MALE PIPE THREAD										FLANGE TYPE MOUNTING											
STANDARD PIPE SIZES		½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"
Code No. For – Male Pipe Thread		GC	GB	GA	GJ	GK	GL	GM	GN	GE	GS	GQ	GT	GV	GW	GX	GY	GO	GZ	GZZ	-	-	-
*American 125-lb. Std. Flange		-	-	-	-	-	-	-	-	-	ES	EQ	ET	EV	EW	EX	EY	EO	EZ	EZZ	EXZ	EYZ	EOZ

*Units furnished with studs to match American 125-lb. Standard or Taylor Standard pipe flanges. (Companion flanges not furnished by Falls Filtration.)

τ Available for sizes F80S through F350S only.

SIZES - DIMENSIONS - WEIGHTS

TABLE H

Bottom Opening Model	Diameter	Height (less Base)	Approx Oil Cap. (pints)	Shipping Weight in Lbs.
F80S	6"	5"	1/3	4
F140S	8 ¼"	6 5/8"	1	8
F250S	10 ¾"	8 1/8"	1 ½	12
F350S	11 ½"	9"	2 ¾	15
F570S	13 ¾"	11"	6	25
F858S	16 ¾"	13 ¼"	7	45
F1208S	21"	18 3/8"	30	160
F1708S	24"	20 ½"	39	195
F2808S	32 ½"	24 7/8"	68	325
F4008S	38"	29 ¾"	104	510
F6508S	52"	35 ¼"	168	800

(See Table G for Bases Available)

TABLE J

Bottom Opening With Relief Valve	Diameter	HEIGHT (Less base)	Approx. Oil Capacity (In Pints)	Shipping Weight in Lbs.
FV83S	6"	6 1/8"	1/3	5
FV143S	8 ¼"	8 1/8"	1	8
FV253S	10 ¾"	9 5/8"	1 ½	12
FV353S	11 ½"	11"	2 ¾	17
FV570S	13 ¾"	13"	6	28
FV858S	16 ¾"	15 3/8"	7	50
FV1208S	21"	21 ¾"	30	185
FV1708S	24"	23 7/8"	39	225
FV2808S	32 ½"	28 ½"	68	395
FV4008S	38"	33 ½"	104	555
FV6508S	52"	41"	168	825

NOTE: All of the above models have Full Hoods. For applications where space limitations do not permit full Hood, units are available with special tops.



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Falls Filtration Technologies reserves the right to change
any model or specification at any time without notice