FORM 1480F

HYDRONIC SECTION

Suction Diffusers

Design Features

- Designed for direct mounting to the suction side of a pump in either horizontal or vertical position.
- Integral straightening vanes reduce flow turbulence.
- Iron strainers are complete with FF flanges in accordance with ASME B16.1.
- Available with equal or reduced outlet flanges.
- All sizes come complete with O-Ring sealed knob covers.
- Cast on supporting pads for convenient mounting of a standard I.D. support foot.
- All strainers furnished with a removable type 304SS 20 mesh start-up screen.
- Drain connection furnished with plug as standard.
- Differential connections are optional.

Parts List and Standard Materials

Part	Cast Iron
Body	A126-B
Cover	A126-B
Studs (2)	A307-B
Knobs (2)	A395 Ductile Iron
Screen (1)	Type 304 SS
Gasket (1) (3)	Buna-N O-Ring
Plug (2)	A126-B

(1) Recommended Spares

(2) Materials of equivalent strength may be substituted at manufacturer's option.

(3) Other gasket materials are available.

Upper Pressure Limits (Non-Shock)

MEPCO Model	Body Material	M.A.W.P. psig (Bars)
SD	A126-B	200 (13.79)

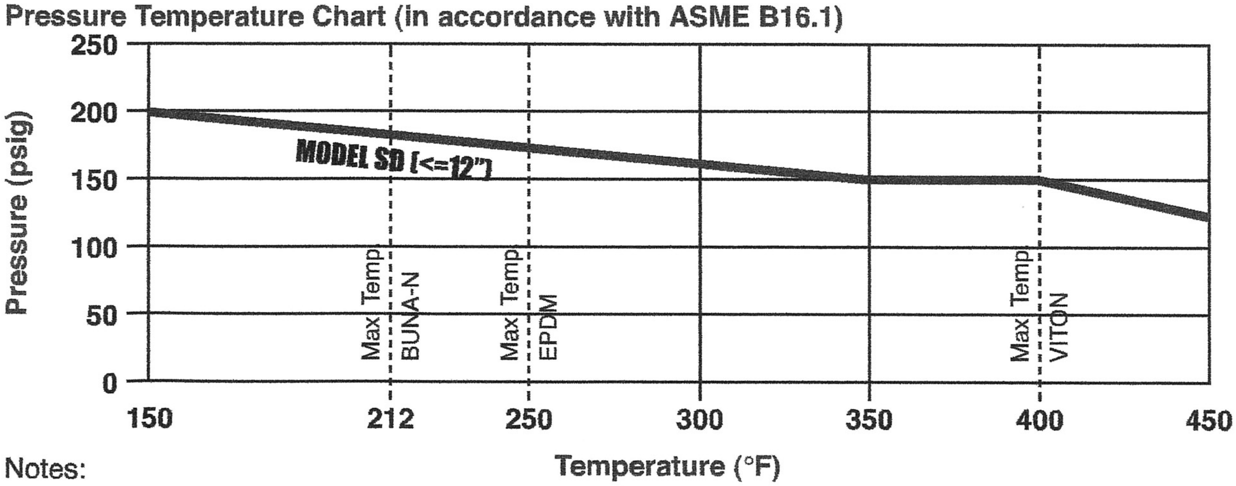
Upper Temperature Limits

Seal Material	Upper Limit °F (°C)
Buna-N	212 (100)
EPDM	250 (121)
Viton	400 (204)

Lower Temperature Limits

Body Material	Lower Limit °F (°C)
A126-B	-20 (-28.9)

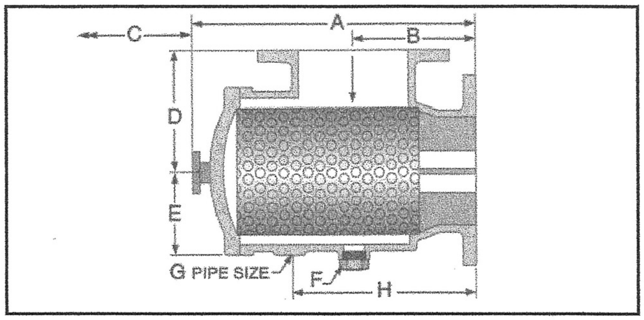
Pressure Temperature Chart (in accordance with ASME B16.1)



Notes:

(1) Max rating temperature limited by codes such as ASME B31.1, ASME B31.5, etc.

Upper Pressure Limits (Non-Shock)		
Size Range	Start-Up Opening	Permanent Opening
2" - 3"	0.032 in.	0.045 in.
50mm-80mm	0.8 mm	1.2 mm
4" - 12"	0.032 in.	0.125 in.
100mm - 300mm	0.8 mm	3.2 mm



Dimensional Data (Class 125)

Size		A	B	C (1)	D	E	F	G	H	Weight
Inlet in/(mm)	Outlet in/mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	Lb. Kg.
2 50	1 1/4 32	10.19 259	4.50 114	8.81 224	4.50 114	2.19 56	3/4 20	3/4 20	6.13 156	19 9
2 50	1 1/2 40	10.19 259	4.50 114	8.81 224	4.50 114	2.19 56	3/4 20	3/4 20	6.13 156	21 10
2 50	2 50	10.19 259	4.50 114	8.81 224	4.50 114	2.19 56	3/4 20	3/4 20	6.13 156	23 10
2 1/2 65	2 50	8.50 216	4.25 108	4.75 121	4.25 108	3.13 80	1/2 15	1 25	6.56 167	32 15
2 1/2 65	2 1/2 65	8.50 216	4.25 108	4.75 121	4.25 108	3.13 80	1/2 15	1 25	6.56 167	34 15
3 80	2 50	8.13 207	4.25 108	5.00 127	4.69 119	3.13 80	3/4 20	1 25	5.63 143	37 17
3 80	2 1/2 65	8.25 210	4.38 111	5.00 127	4.69 119	3.13 80	3/4 20	1 25	5.75 146	49 22
3 80	3 80	9.38 238	4.75 121	5.25 133	4.75 121	3.63 92	3/4 20	1 25	6.63 168	55 25
4 100	3 80	9.38 238	4.75 121	5.25 133	5.63 143	3.63 92	3/4 20	1 25	6.63 168	57 26
4 100	4 100	11.13 283	5.75 146	6.75 171	5.75 146	4.25 108	3/4 20	1 1/4 32	7.63 194	92 42
5 125	4 100	11.13 283	5.75 146	6.75 171	6.63 168	4.25 108	3/4 20	1 1/4 32	7.63 194	97 44
5 125	5 125	12.63 321	6.50 165	7.13 181	6.50 165	4.88 124	1 25	1 1/4 32	8.63 219	101 46
6 150	4 100	11.13 283	5.75 146	6.75 171	7.50 191	4.25 108	3/4 20	1 1/4 32	7.75 197	140 47
6 150	5 125	12.63 321	6.50 165	7.13 181	7.38 187	4.88 124	1 25	1 1/4 32	8.63 219	145 66
6 150	6 150	13.88 353	7.00 178	7.88 200	7.00 178	5.88 149	1 25	2 51	9.13 232	182 83
8 200	6 150	13.88 353	7.00 178	7.88 200	8.75 222	5.88 149	1 25	2 51	9.13 232	197 89
8 200	8 200	18.88 480	9.25 235	16.25 413	9.25 235	6.38 162	1 25	2 51	11.63 295	292 132
10 250	8 200	18.88 480	9.25 235	16.25 413	11.00 279	6.38 162	1 25	2 51	11.63 295	312 142
10 250	10 250	23.88 607	11.00 279	16.13 410	11.25 286	8.00 203	1 25	2 51	13.75 349	398 181
12 300	8 200	18.88 480	9.25 235	16.25 413	12.00 305	6.38 132	1 25	2 51	11.63 295	412 187
12 300	10 250	23.88 607	11.00 279	16.13 410	12.00 305	8.00 203	1 25	2 51	13.75 349	491 223
12 300	12 300	26.00 660	12.00 305	18.13 461	12.00 305	9.25 235	1 25	2 51	13.88 353	573 260

Notes: (1) Dimension "C" is distance for screen removal. (2) All strainers furnished with removable type 304SS 20 mesh start-up screen. (3) Dimensions shown are subject to change. Contact factory for certified prints when required. Other perforations and screen materials available. Please contact us. For pressure loss information, please see chart. Dimensions shown are subject to change. Consult us for certified prints when required.

FIGURE 1

SUCTION DIFFUSER PRESSURE DROP - LIQUIDS
(SIZES 2" x 1 1/4" - 5" x 4")

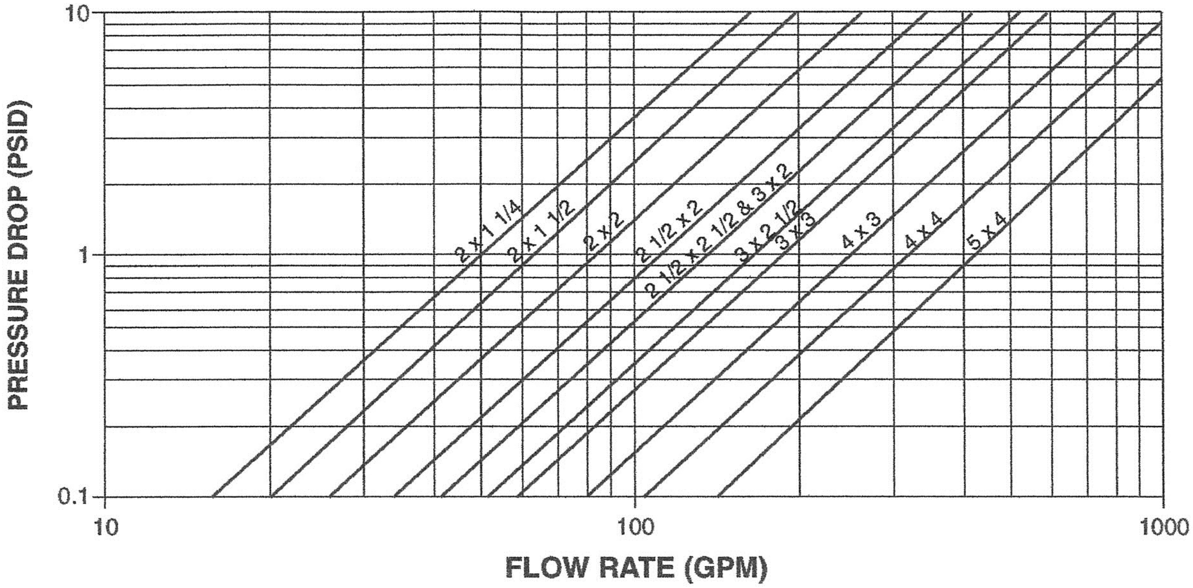
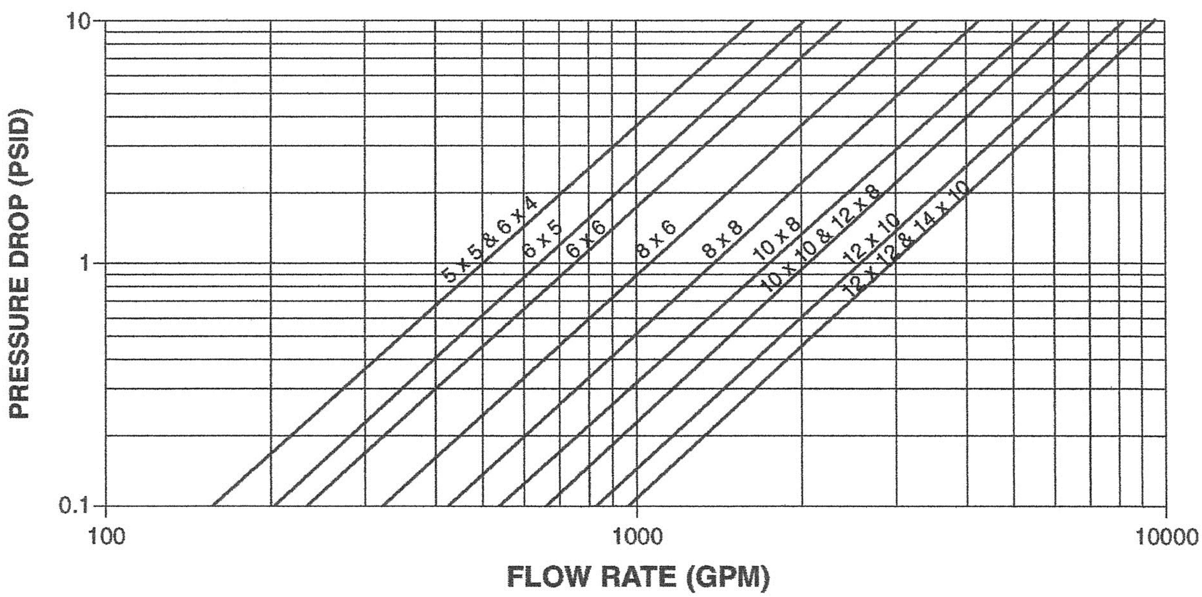


FIGURE 2

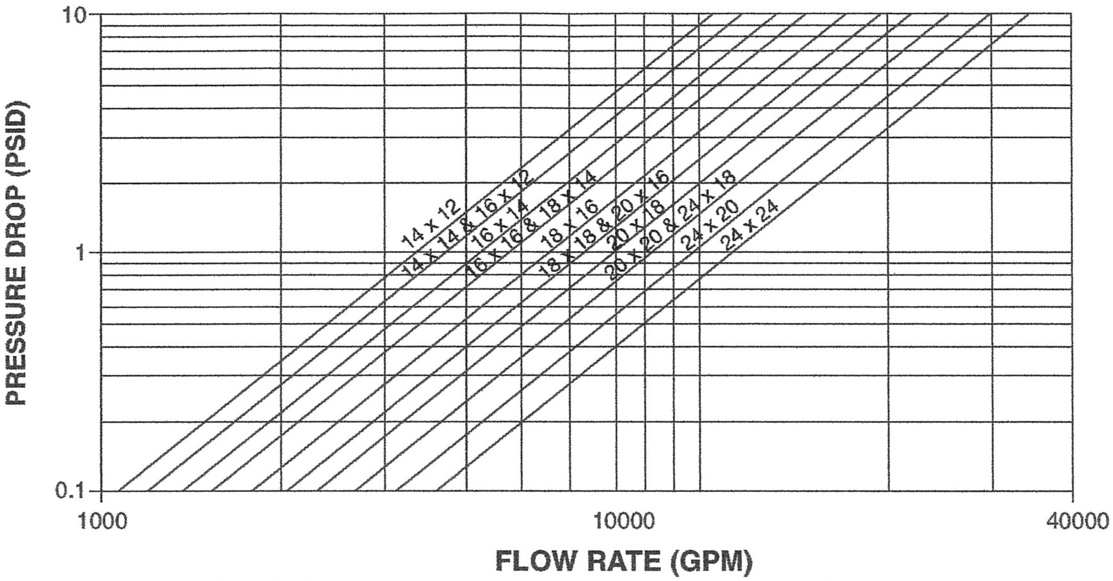
SUCTION DIFFUSER PRESSURE DROP - LIQUIDS
(SIZES 5" x 5" - 14" x 10")



Notes: 1. Pressure drop curves based on water flow with standard screens.

SUCTION DIFFUSER PRESSURE DROP - LIQUIDS
(SIZES 14" x 12" - 24" x 24")

FIGURE 3



Notes: 1. Pressure drop curves are based on water flow with standard screens.

Suction Diffuser Screen Effective Area's

SD Model 125SFIB

Size	Gross Screen Area (Sq. In.)	Free Area (Sq. In.)	Ratio Free Area to Outlet Pipe Area
2" x 1.25"	25	10	8.2
2" x 1.5"	25	10	5.7
2" x 2"	36	15	4.6
2.5" x 2"	36	15	4.6
2.5" x 2.5"	49	20	4.0
3" x 2"	36	15	4.6
3" x 2.5"	49	20	4.0
3" x 3"	60	24	3.4
4" x 3"	111	44	6.3
4" x 4"	105	42	3.3
5" x 4"	111	45	3.5
5" x 5"	176	70	3.6
6" x 4"	111	44	3.5
6" x 5"	245	98	5.0
6" x 6"	245	98	3.5
8" x 6"	245	98	3.5
8" x 8"	428	171	3.4
10" x 8"	428	171	3.4
10" x 10"	666	266	3.4
12" x 8"	428	171	3.4
12" x 10"	666	266	3.4
12" x 12"	739	296	2.6

Notes:
1. Values shown are approximate. Contact factory for exact ratios.
2. Values shown are for diffusers with standard screens.
3. The ratio of free area to outlet pipe area may be increased by changing perf. stagger or by using heavy wire mesh.

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