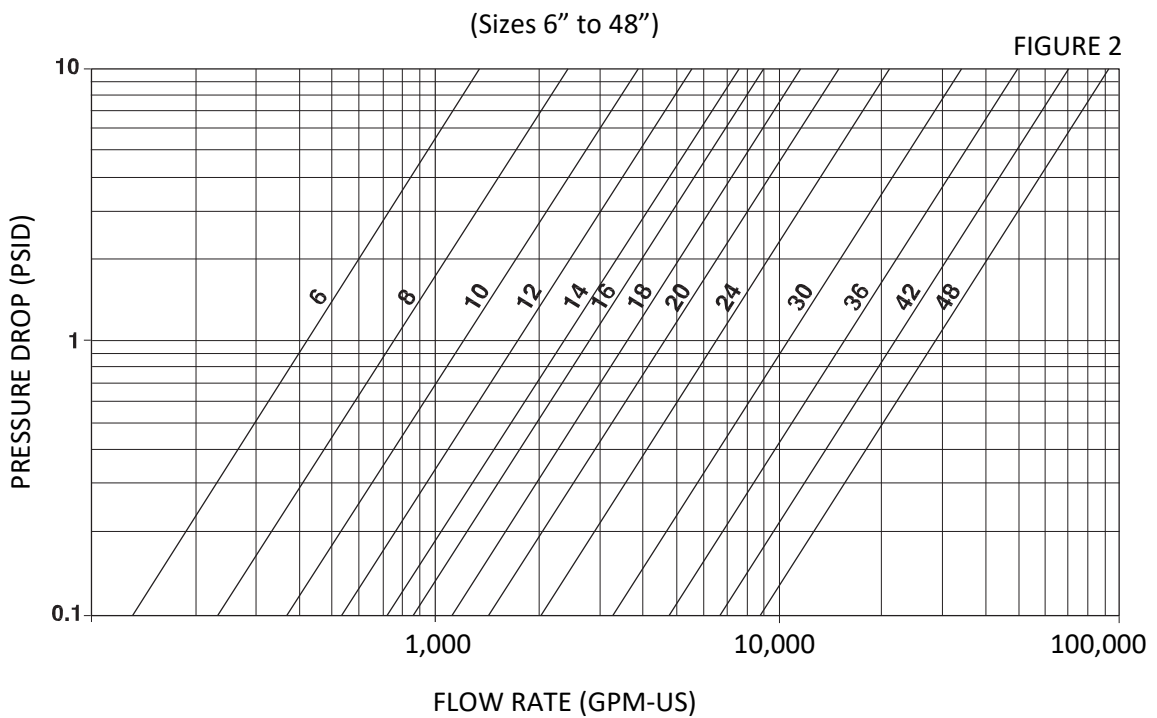
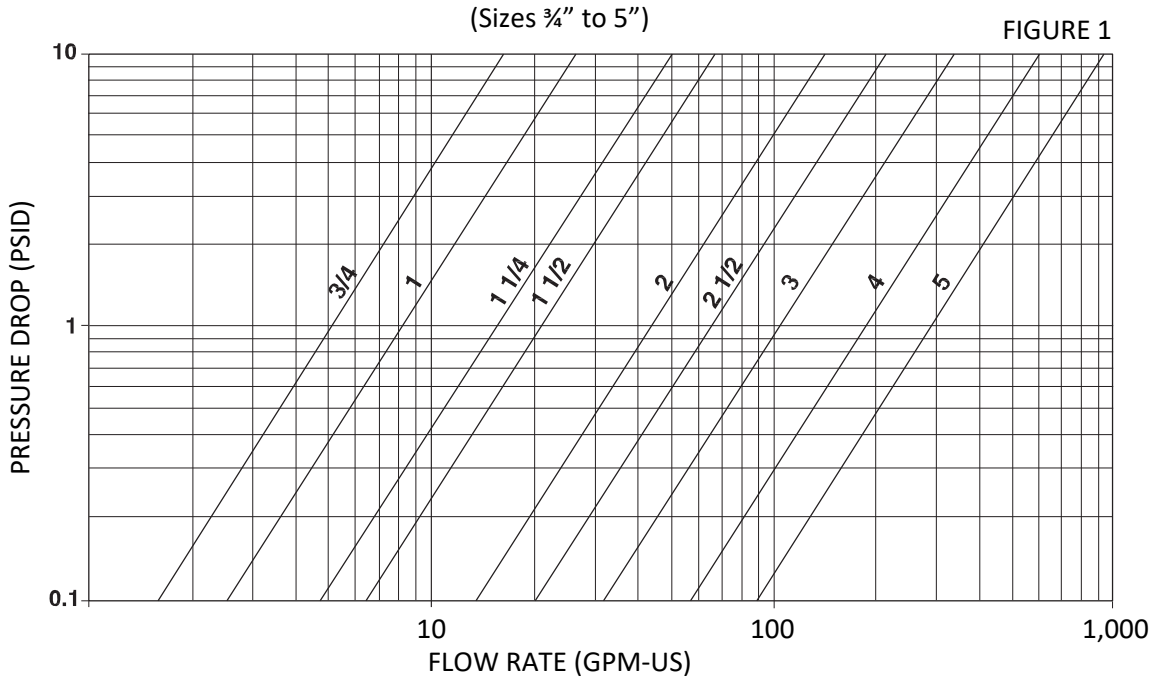


**MTB AND MTP SERIES**

**PRESSURE DROP VS FLOW RATE**

Water Service Clean Screen, Perforated Screen with 40% open area



These curves are theoretical; actual results may vary depending on installation conditions and other variables. Use these values for reference only.

1 lt/min = 0.264 gallon/min (US)

1 gallon/min (US) = 3.785 lt/min

### Correction Factor Chart (For Non-Standard Screens)

Multiply values obtained from figure 1 thru 2 by the appropriate values shown below

**Chart 1**

Size Range	SCREEN OPENINGS					See Screen Material pages for % Open Areas of perforated plate.
	Perforated Plate					
	% Screen Material Open Area					
	60%	50%	40%	30%	20%	
1/4" – 1-1/2"	0.45	0.55	0.7	1	1.15	
2" - 48"	0.65	0.8	1	1.4	2.15	

**Notes**

Standard screens for sizes 3/4" to 1-1/2" is approximately a 30% open area screen media.  
Standard screens for sizes 2" and larger is approximately a 40% open area screen media.

**Example 1**

<b>Strainer Size</b>	4"	(1) Use Figure 1, the DP is 1.25 psid for standard screen (with 40% open area material) (2) Multiply x Specific Gravity: 1.25 x 1.0 = 1.25 psid (3) Multiply 1.25 psid x 0.8 to correct for the open area of 3mm perf material = 1.0 psid Answer is: 1.0 psid  Notes: (3)-(refer to Screen Material , 3mm x 4mm has an open area of 50%)
<b>Filtration</b>	3mm x 4mm pitch	
<b>Flow rate</b>	200 GPM	
<b>Service</b>	Water	
<b>S.G.</b>	1	
<b>Viscosity</b>	30 SSU	

### Pressure Drop Correction Factor Chart

Mesh Lined Baskets and /or Fluids with a Viscosity other than Water

**Chart 2**

Viscosity Centistokes	SSU	Perf only	Aperture of Mesh Layer (mm)					
			0.900	0.145	0.530 0.310	0.260 0.150 0.130 0.100	0.210 0.190	0.080 0.063 0.053 0.045
2	30	1	1.05	1.2	1.4	1.6	1.7	2
100	500	1.6	1.7	1.9	2.1	2.4	2.6	3.1
216	1000	1.7	2	2.2	2.4	2.6	2.8	3.3
433	2000	1.9	2.2	2.4	2.7	2.9	3.2	3.8
650	3000	2	2.3	2.6	2.9	3.2	3.5	4.1
1083	5000	2.2	2.6	3	3.5	4	4.5	5.3
2200	10000	2.5	3	3.5	4.2	5	6	7.1

Water = 30 SSU

**Example 2**

<b>Strainer Size</b>	4"	(1) Use Figure 1, the DP is 1.25 psid for standard screen (with 40% open area material) (2) Multiply x Specific Gravity: 1.25 x 0.8 = 1.0 psid (3) Multiply 1.0 psid x 0.8 to correct for the open area of 3mm perf material = 0.8 psid (4) Multiply x Viscosity/Mesh Layer factor: 0.8 x 2.4 = 1.92 psid Answer is: 1.92 psid  Notes: (3) - (refer to Screen Material, 3mm x 4mm has an open area of 50%) (4) - (refer to Chart 2 for correction factor)
<b>Filtration</b>	3mm x 4mm pitch 150 micron mesh layer	
<b>Flow rate</b>	200 GPM	
<b>Service</b>	SAE 10 Oil @ 18°C	
<b>S.G.</b>	0.8	
<b>Viscosity</b>	500 SSU	

Correction Factors for Clogged Screens

Chart 3

% Clogged	Ratio of Free Screen Area to Pipe Area						
	10 : 1	8 : 1	6 : 1	4 : 1	3 : 1	2 : 1	1 : 1
10							3.15
20						1.15	3.9
30						1.4	5
40						1.8	6.65
50					1.25	2.5	9.45
60				1.15	1.8	3.7	14.5
70				1.75	2.95	6.4	26
80		1.1	1.75	3.6	6.25	14	58
90	2.3	3.45	6	13.5	24	55	

Multiply values obtained from Pressure Drop Charts by the appropriate values shown below

Example 3

Strainer Size	6"	(1) Use Figure 2, the DP is 0.13 psid for standard screen (with 40% open area material) (2) Multiply x Specific Gravity: $0.13 \times 1.0 = 0.13$ psid (3) Multiply $0.13 \times 14.5 = 1.885$ psid Answer is: 1.885 psid
Filtration	2mm x 3mm pitch	
Flow rate	200 GPM	
Service	Water	Notes: The Effective Area of cone is 100% or 1:1 ratio (3) Using Chart above we read the correction factor of 1:1 to be 14.5 at 60% clogged.
S.G.	1	
Viscosity	30 SSU	

These curves are theoretical; actual results may vary depending on installation conditions and other variables. Use these values for reference only.

**Perforated Metal**

Material Grade	Hole Type	Hole Size mm	Pitch mm	Open Area %	Thickness mm
304	Round	0.5	1	23	0.4
304	Round	0.8	1.5	25	0.5
316	Round	0.8	1.5	25	0.5
304	Round	1	2	23	0.5
304	Round	1	2	23	0.75
304	Round	1	2	23	1
316	Round	1.1	2	23	0.75
304	Round	1.5	2.75	26	1
316	Round	1.5	2.75	26	1
304	Round	2	3.5	30	1
304	Round	2	3.5	30	1.5
304	Round	2	3.5	30	0.5
316	Round	2	3.5	30	1
304	Round	2	3	40	1
304	Round	3	4	50	1
316	Round	3	4	50	1
304	Round	3	5	32	1
304	Round	3	5	32	1.5
316	Round	3	5	32	1
304	Round	3	5	32	2
304	Round	3	5	32	0.5
316	Round	3	5	32	1.5
304	Round	3	5	32	1
304	Round	3	5	32	1.5
316	Round	3	5	32	2
304	Round	4	5	58	1
304	Round	4	6	40	1
304	Round	4	7	29	1.5
304	Round	4	7	29	2
316	Round	4	7	29	1.5
316	Round	4	7	29	2
304	Round	5	10	23	3
304	Round	5	6	63	1

**Perforated Metal**

Material Grade	Hole Type	Hole Size mm	Pitch mm	Open Area %	Thickness mm
304	Round	5	6	63	1.5
304	Round	5	7	45	0.5
304	Round	5	7	45	1
316	Round	5	7	45	1
304	Round	5	8	35	1.5
304	Round	5	8	35	2
316	Round	5	8	35	1.5
304	Round	5	8	35	1
304	Round	5	8	35	1.5
316	Round	5	8	35	1
304	Round	6	12	23	3
304	Round	6	8.5	45	0.5
304	Round	6	8.5	45	1
304	Round	6	9	40	1
304	Round	6	9	40	2
304	Round	6	9	40	1.5
304	Round	8	11	47	1
316	Round	8	11	47	1
316	Round	8	11	47	1.5
304	Round	8	12	40	1.5
304	Round	8	12	40	2
304	Round	8	12	40	3
304	Round	10	13	53	1
304	Round	10	13	53	1
304	Round	10	15	40	1.5
304	Round	10	15	40	2
304	Round	10	15	40	3
316	Round	10	15	40	1.5
304	Round	10	15	40	1.5
304	Round	12	17	45	1.5
304	Round	15	20	50	1
304	Round	15	21	46	1.5
304	Round	15	21	46	3

**Woven Wire Mesh**

Material Grade	Aperture mm	Wire Dia. mm	Mesh Imp	Open Area %
316	0.9	0.37	20	50
316	0.53	0.31	30	39
316	0.415	0.22	40	42
316	0.31	0.2	50	38
316	0.26	0.16	60	35
316	0.21	0.15	70	34
316	0.19	0.125	80	34
316	0.15	0.1	100	36
316	0.13	0.08	120	37
316	0.1	0.063	150	37
316	0.08	0.05	200	38
316	0.063	0.04	250	38
316	0.053	0.04	300	32
316	0.045	0.032	325	34