

# Engineering Data

## Correction Factors for Clogged Screens

### Directions:

1. Determine the pressure (PI) through the strainer with water flow and standard screens.
2. If non-standard screens (i.e. 40 mesh, etc.) are being used applied factors in Chart A to determine the correct pressure drop (P2).
3. Multiply PI or P2 (if used) by the specific gravity of the fluid actually flowing through the strainer to get P3.
4. Using Chart B multiply P3 by the appropriate Component Factor (CF) to get P4.
5. Let P5 = P3 - P4.
6. Multiply P4 by the appropriate Body Loss Factor (BF) in Chart C to get P4.
7. Multiply P5 by the appropriate Screen Loss Factor (PF or MF) in Chart C to get P7.
8. Total pressure drop P8 = P6 + P7.

**Chart A**

Percent 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	-

**Chart B**

Size Ranged	Component Factor (CF)
3/4" - 1 1/2"	0.25
2" - 48"	0.35

**Chart C**

Viscosity Cp	Body Loss Factor (BF)	Screen Loss Factor			
		Perf alone (PF)	20 Mesh Lined (MF)	30, 40 Mesh Lined (MF)	60 to 300 Mesh Lined (MF)
10	1	1.15	1.3	1.4	1.5
25	1.2	1.25	2	2.2	2.5
100	1.6	1.4	3	4	6.5
200	2.2	1.5	4.5	7	11.5
500	4.4	1.6	10	15	25
1000	8	1.7	15	30	50
200	15.2	1.9	30	60	100

Note: Refer to published submittals for standard screen materials

JOB NAME _____
LOCATION _____
CONTRACTOR _____
CONTRACTOR P.O. NO. _____

ITEMS	QUANTITY
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



2701 W. Concord Street  
 Broken Arrow, OK 74012  
 Toll Free: 866-204-5229  
 PH: 918-317-0401  
 FAX: 918-317-0407  
 www.wheatleyhvac.com  
 e-mail: sales@globalflowproducts.com