



### Darcy-Weisbach Equation

Darcy-Weisbach Formula About Darcy and Weisbach Density of Liquids Design Table

Imperial ▾

Specify Pipe (Click for piping options)

Available Pipes
CPVC ASTM D2846
CPVC ASTM F441
CPVC ASTM F442, SDR 1
Copper Tubing, ASTM B8
PEX Tubing, ASTM F877
PVC Pipe, ASTM D2045

Nominal Size (inch)
1
1.25
1.5
2
2.5
3

Available Option/Schedule
K
L
M

Initial Flowrate:  gpm

Calculate Flowrate, Velocity and Friction Loss

Step Size:  gpm

Export Data By clicking this you will export data to desktop. Data will be saved in hw.xls

Flow Rate (gpm)	Velocity (ft/sec)	Pressure Loss (psi/100 ft)
47	4.92	1.7965
48	5.03	1.8738
49	5.13	1.9527
50	5.23	2.0332
51	5.34	2.1153
52	5.44	2.1991
53	5.55	2.2845
54	5.65	2.3715
55	5.76	2.4602

## Manning

Manning Formula About Robert Manning Manning Friction Factors Design Table

Imperial ▾

Specify Pipe (Click for piping options)

### Material

 ABS  
 Cast Iron  
 Copper  
 PVC  
 Steel

### Type

 DWV Schedule 40  
 Sewer Grade Pipe SDR 26  
 Sewer Grade Pipe SDR 35  
 Sewer Grade Pipe SDR 41

### Pitch

 0.0625  
 0.125  
 0.25  
 0.375  
 0.5

Calculate Fl...

Nominal Size (inch)	Inside Diameter (inch)	Full Flow Velocity (ft/s)	Full Flow (gpm)	Half Flow Velocity (ft/s)	Half Flow (gpm)
1.25	1.38	1.4	6.6	1.4	3.3
1.5	1.71	1.6	11.7	1.6	5.85
2	2.17	1.9	22.2	1.9	11.1
3	3.07	2.4	55.9	2.4	27.95
4	4.03	2.9	115.5	2.9	57.75
6	6.07	3.8	344.4	3.8	172.2
8	7.98	4.6	714.4	4.6	357.2
10	10.02	5.3	1310.9	5.3	655.45
12	11.94	6	2092.3	6	1046.15
15	14.55	6.8	3544.6	6.8	1772.3
18	17.7	7.8	5977.7	7.8	2988.85