

FL COEFFICIENTS	
Hose Size	Coupling Size
3/4"	1000
1"	150
1 3/4"	15.5
2"	8
2 1/2"	2
3"	0.8
Two 3"	0.2
4"	0.2
5"	0.08

GPM FLOW	
FL per 100 FT	GPM
Hose # lines	100 125 150 175 200 250 350 500 1000 1500 2000
1 3/4"	1 15 25 35 50
2"	1 20 30 50
2 1/2"	1 15 25
3"	1 5 20
3"	2 5 20
4"	1 5 20 40
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FORMULAS	
Pump Discharge Pressure	Flow Rate (hundreds of gpm)
PDP=NP+TPL	Q=gpm/100
Friction Loss (coefficient)	Water Flow (straight bore)
FL=CQ ² L	Gpm=29.7 x d ² x \NP
Elevation Pressure	Fog Nozzle Kickback
EP=0.5 x H	NR=0.5 x gpm
Area of circle	Solid Stream Kickback
A=π r ² OR d ² x 0.7854	NR=1.5 x d ² x NP
Volume of Round Tank	Available H ₂ O at Hydrant
d ² x 6 x L=volume	First digit of static x 1.2.3
	(> or = to static - residual #)

FACTS	
Base Pressure For Every Foot Of Rise	0.434 psi
Gallons per Cu. Ft.	Lbs. Per Cu. Ft.
7.5 gallons	62.5 pounds
National Fire Academy Fire Flow Formula	Lbs. Per Gallon
(Length X Width of involved area) divided by 3 X # of Floors	8.33 pounds
Result = 100%. For 75% divided by 3.4, 50% by 1.2, 25% by 1/4	
During Supply Operations (Raise / Lower PDP)	
For Supply Lines	For Attack Lines
Increments of 25 psi	Increments of 10 psi
Hose Clamps: 20 ft from rig, 6 ft from coupling on supply side	

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