



**WATER DISCHARGE**  
**FLOW OF WATER THROUGH 100 FOOT LENGTHS HOSE, STRAIGHT-SMOOTH BORE**  
**U.S. GALLONS PER MINUTE**

Psi at Hose Inlet	Nominal Hose Diameters — Inches											
	1/2	5/8	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8
20	4	8	12	26	47	76	161	290	468	997	2895	6169
30	5	9	15	32	58	94	200	360	582	1240	3603	7679
40	6	11	18	38	68	110	234	421	680	1449	4209	8970
50	7	12	20	43	77	124	264	475	767	1635	4748	10118
60	8	14	22	47	85	137	291	524	846	1804	5239	11165
75	9	15	25	53	95	154	329	591	955	2035	5910	12595
100	10	18	29	62	112	180	384	690	1115	2377	6904	14712
125	11	20	33	70	126	203	433	779	1258	2681	7788	16595
150	12	22	36	77	139	224	478	859	1388	2958	8593	18313
200	15	26	42	90	162	262	558	1004	1621	3455	10038	21390

Figures are to be used as a guide since the hose inside diameter tolerance, the type of fittings used, and orifice restriction all influence the actual discharge. Thus, variations plus or minus from the table may be obtained in actual service.

C value is the Hazen-Williams coefficient; smaller values must be used for rougher tube surfaces.

$$Q = 0.443 Cd \frac{(P_1 - P_2)^{.54}}{L}$$

Where: Q = quantity in U.S. gallons per minute  
 C = 140 for clean, extremely smooth bore and straight hose  
 d = inside diameter of hose in inches  
 P<sub>1</sub> - P<sub>2</sub> = pressure change in lbs. per square inch  
 L = length of hose in feet

Source: Rubber Manufacturers Association, Hose Handbook

*Compliant, Contained, Cost Effective*