OPENCHANNELFLOW

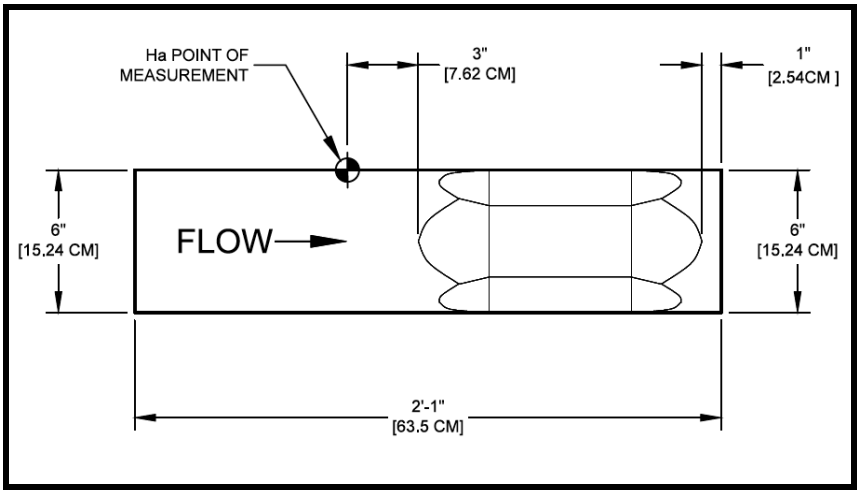
6-Inch Palmer-Bowlus Flume Discharge Table

85% Submergence Transition

Formulas (H in feet): CFS = 2.18 $H_{ft.}^{1.9}$ GPM = 978.4 $H_{ft.}^{1.9}$ MGD = 1.41 $H_{ft.}^{1.9}$

Formulas (H in meters): L/S = 607.7 $H_{m}^{1.9}$ M3/HR = 2112.6 $H_{m}^{1.9}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.01	0.12	0.0030	Excessive error due to fluid-flow properties and boundary conditions				
0.02	0.24	0.0061					
0.03	0.36	0.0091					
0.04	0.48	0.0122					
0.05	0.60	0.0152					
0.06	0.72	0.0183					
0.07	0.84	0.0213	0.0156	7.001	0.0101	0.4418	1.590
0.08	0.96	0.0244	0.0196	8.796	0.0127	0.5551	1.997
0.09	1.08	0.0274	0.0240	10.77	0.0155	0.6797	2.446
0.10	1.20	0.0305	0.0288	12.93	0.0186	0.8156	2.935
0.11	1.32	0.0335	0.0339	15.21	0.0219	0.9600	3.454
0.12	1.44	0.0366	0.0394	17.68	0.0255	1.116	4.015
0.13	1.56	0.0396	0.0454	20.38	0.0293	1.286	4.626
0.14	1.68	0.0427	0.0517	23.20	0.0334	1.464	5.268
0.15	1.80	0.0457	0.0584	26.21	0.0377	1.654	5.951
0.16	1.92	0.0488	0.0656	29.44	0.0424	1.858	6.685
0.17	2.04	0.0518	0.0732	32.85	0.0473	2.073	7.459
0.18	2.16	0.0549	0.0813	36.49	0.0525	2.302	8.284
0.19	2.28	0.0579	0.0898	40.30	0.0580	2.543	9.151
0.20	2.40	0.0610	0.0989	44.39	0.0639	2.801	10.08
0.21	2.52	0.0640	0.1085	48.69	0.0701	3.073	11.06
0.22	2.64	0.0671	0.1186	53.23	0.0767	3.359	12.09
0.23	2.76	0.0701	0.1293	58.03	0.0836	3.662	13.18
0.24	2.88	0.0732	0.1405	63.06	0.0908	3.979	14.32
0.25	3.00	0.0762	0.1523	68.35	0.0984	4.313	15.52
0.26	3.12	0.0792	0.1646	73.87	0.1064	4.661	16.77
0.27	3.24	0.0823	0.1774	79.62	0.1147	5.024	18.08
0.28	3.36	0.0853	0.1907	85.59	0.1232	5.401	19.43
0.29	3.48	0.0884	0.2045	91.78	0.1322	5.791	20.84
0.30	3.60	0.0914	0.2187	98.15	0.1413	6.194	22.29



Note: Formulas fit data within 1% of full scale

Sources: Isco Open Channel Flow Measurement Handbook, 6th Edition

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Formulas (H in meters): L/S = 607.7 $H_{m}^{1.9}$ M3/HR = 2112.6 $H_{m}^{1.9}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.2334	104.7	0.1508	6.610	23.78
0.32	3.84	0.0975	0.2484	111.5	0.1605	7.035	25.31
0.33	3.96	0.1006	0.2637	118.3	0.1704	7.468	26.87
0.34	4.08	0.1036	0.2793	125.3	0.1805	7.910	28.46
0.35	4.20	0.1067	0.2951	132.4	0.1907	8.357	30.07

Note: Formulas fit data within 1% of full scale

Sources: Isco Open Channel Flow Measurement Handbook, 6th Edition