

ECONODRAIN[®] #12 & PT-2 #12 SYSTEM - HYDRAULIC DATA

Standard Depth & Slope ¹		
EPS Form Number	[Slope [S _i] = 0.5% or 0.005 ft/ft]	
	Min. (in)	Max. (in)
1210	8	8 1/2
1211	8 1/2	9
1212	9	9 1/2
1213	9 1/2	10
1214	10	10 1/2
1215	10 1/2	11
1216	11	11 1/2
1217	11 1/2	12
1218	12	12 1/2
1219	12 1/2	13
1220	13	13 1/2
1221	13 1/2	14
1222	14	14 1/2
1223	14 1/2	15
1224	15	15 1/2
1225	15 1/2	16
1226	16	16 1/2
1227	16 1/2	17
1228	17	17 1/2
1229	17 1/2	18
1230	18	18 1/2
1231	18 1/2	19
1232	19	19 1/2
1233	19 1/2	20
1234	20	20 1/2
1235	20 1/2	21
1236	21	21 1/2
1237	21 1/2	22
1238	22	22 1/2
1239	22 1/2	23
1240	23	23 1/2
1241	23 1/2	24
1242	24	24 1/2
1243	24 1/2	25
1244	25	25 1/2
1245	25 1/2	26

Radius Bottom Trench (Std.)			
Q _{max} ² Flow (cfs)	Q _{max} ² Flow (gpm)	(F _k is not a Flow Rate)	
		F _k ³ (cfs)	F _k ³ (gpm)
1.66	743	22.95	10,302
1.85	829	25.59	11,484
2.04	915	28.25	12,681
2.23	1003	30.95	13,892
2.43	1091	33.67	15,114
2.63	1180	36.42	16,347
2.83	1269	39.19	17,588
3.03	1359	41.97	18,837
3.23	1450	44.77	20,094
3.43	1541	47.58	21,357
3.64	1633	50.41	22,625
3.84	1725	53.25	23,899
4.05	1817	56.09	25,177
4.25	1910	58.95	26,459
4.46	2002	61.82	27,746
4.67	2095	64.69	29,035
4.88	2189	67.57	30,328
5.08	2282	70.46	31,624
5.29	2376	73.35	32,923
5.50	2470	76.25	34,224
5.71	2564	79.15	35,527
5.92	2658	82.06	36,833
6.13	2753	84.98	38,140
6.34	2847	87.89	39,449
6.55	2942	90.81	40,760
6.77	3036	93.74	42,073
6.98	3131	96.67	43,387
7.19	3226	99.60	44,702
7.40	3321	102.53	46,019
7.61	3416	105.47	47,337
7.82	3511	108.41	48,656
8.04	3607	111.35	49,977
8.25	3702	114.29	51,298
8.46	3798	117.24	52,620
8.67	3893	120.19	53,943
8.89	3989	123.14	55,267

Rectangular Trench (Optional Custom)			
Q _{max} ² Flow (cfs)	Q _{max} ² Flow (gpm)	(F _k is not a Flow Rate)	
		F _k ³ (cfs)	F _k ³ (gpm)
2.01	900	27.80	12,478
2.19	985	30.41	13,650
2.39	1071	33.06	14,836
2.58	1157	35.72	16,034
2.77	1244	38.42	17,243
2.97	1332	41.13	18,461
3.17	1421	43.86	19,687
3.36	1510	46.61	20,921
3.56	1599	49.38	22,162
3.76	1689	52.16	23,410
3.97	1780	54.95	24,663
4.17	1871	57.75	25,922
4.37	1962	60.57	27,185
4.58	2053	63.39	28,453
4.78	2145	66.23	29,725
4.98	2237	69.07	31,001
5.19	2330	71.92	32,280
5.40	2422	74.78	33,563
5.60	2515	77.64	34,848
5.81	2608	80.51	36,137
6.02	2701	83.39	37,428
6.23	2794	86.27	38,721
6.43	2888	89.16	40,017
6.64	2982	92.05	41,315
6.85	3075	94.95	42,614
7.06	3169	97.85	43,916
7.27	3263	100.75	45,220
7.48	3358	103.66	46,525
7.69	3452	106.57	47,832
7.90	3546	109.48	49,140
8.11	3641	112.40	50,450
8.32	3736	115.32	51,761
8.53	3830	118.25	53,073
8.74	3925	121.17	54,387
8.96	4020	124.10	55,701
9.17	4115	127.03	57,017

- Standard Depth is measured from the top of the grate rail to the trench invert.
- Q_{max} is based on Manning's Equation n = 0.13 and S_i = 0.5%. The outlet end depth flow area is utilized and the grate area is excluded. The flow values shown do not include site grade slope.
- F_k is used to include site grade slope in trench flow calculations. The equation is: Flow, Q = F_k x (S_i + S_g)^{1/2} where S_g is the site slope and S_i is the trench form slope (ft/ft), (dimensionless).

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