

Tables 1 and 2 provide the cumulative storage volumes for the HydroStor HS290 chamber and end cap. These tables can be used to calculate the stage-storage volumes for the retention or detention systems. Contact your local Prinsco Representative for more information regarding the stage storage volumes.

Table 1 – HS290 Incremental Storage Volume per Chamber

Depth of water in the System in. (mm)	Cumulative Single Chamber Storage ft ³ (m ³)	Cumulative Storage for System ft ³ (m ³)	Depth of water in the System in. (mm)	Cumulative Single Chamber Storage ft ³ (m ³)	Cumulative Storage for System ft ³ (m ³)
81 (2057)	↑ 109.67 (3.11)	164.51 (4.66)	40 (1016)	71.65 (2.03)	91.73 (2.6)
80 (2032)	109.67 (3.11)	163.29 (4.62)	39 (991)	69.57 (1.97)	89.26 (2.53)
79 (2007)	109.67 (3.11)	162.07 (4.59)	38 (965)	67.47 (1.91)	86.78 (2.46)
78 (1981)	109.67 (3.11)	160.85 (4.55)	37 (940)	65.35 (1.85)	84.29 (2.39)
77 (1956)	109.67 (3.11)	159.63 (4.52)	36 (914)	63.21 (1.79)	81.79 (2.32)
76 (1930)	Stone 109.67 (3.11)	158.41 (4.49)	35 (889)	61.05 (1.73)	79.28 (2.24)
75 (1905)	Cover 109.67 (3.11)	157.19 (4.45)	34 (864)	58.88 (1.67)	76.76 (2.17)
74 (1880)	109.67 (3.11)	155.97 (4.42)	33 (838)	56.69 (1.61)	74.23 (2.1)
73 (1854)	109.67 (3.11)	154.75 (4.38)	32 (813)	54.49 (1.54)	71.69 (2.03)
72 (1829)	109.67 (3.11)	153.53 (4.35)	31 (787)	52.28 (1.48)	69.15 (1.96)
71 (1803)	109.67 (3.11)	152.31 (4.31)	30 (762)	50.05 (1.42)	66.59 (1.89)
70 (1778)	↓ 109.67 (3.11)	151.09 (4.28)	29 (737)	47.81 (1.35)	64.03 (1.81)
69 (1753)	109.67 (3.11)	149.87 (4.24)	28 (711)	45.56 (1.29)	61.46 (1.74)
68 (1727)	109.67 (3.11)	148.65 (4.21)	27 (686)	43.3 (1.23)	58.89 (1.67)
67 (1702)	109.6 (3.1)	147.39 (4.17)	26 (660)	41.02 (1.16)	56.3 (1.59)
66 (1676)	109.42 (3.1)	146.06 (4.14)	25 (635)	38.73 (1.1)	53.71 (1.52)
65 (1651)	109.15 (3.09)	144.68 (4.1)	24 (610)	36.43 (1.03)	51.11 (1.45)
64 (1626)	108.8 (3.08)	143.25 (4.06)	23 (584)	34.12 (0.97)	48.51 (1.37)
63 (1600)	108.34 (3.07)	141.76 (4.01)	22 (559)	31.8 (0.9)	45.9 (1.3)
62 (1575)	107.62 (3.05)	140.11 (3.97)	21 (533)	29.47 (0.83)	43.28 (1.23)
61 (1549)	106.71 (3.02)	138.35 (3.92)	20 (508)	27.12 (0.77)	40.65 (1.15)
60 (1524)	105.67 (2.99)	136.51 (3.87)	19 (483)	24.76 (0.7)	38.02 (1.08)
59 (1499)	104.52 (2.96)	134.6 (3.81)	18 (457)	22.39 (0.63)	35.38 (1)
58 (1473)	103.28 (2.92)	132.64 (3.76)	17 (432)	20.01 (0.57)	32.73 (0.93)
57 (1448)	101.96 (2.89)	130.63 (3.7)	16 (406)	17.62 (0.5)	30.08 (0.85)
56 (1422)	100.56 (2.85)	128.57 (3.64)	15 (381)	15.22 (0.43)	27.42 (0.78)
55 (1397)	99.1 (2.81)	126.48 (3.58)	14 (356)	12.81 (0.36)	24.76 (0.7)
54 (1372)	97.57 (2.76)	124.34 (3.52)	13 (330)	10.39 (0.29)	22.09 (0.63)
53 (1346)	95.99 (2.72)	122.17 (3.46)	12 (305)	7.96 (0.23)	19.41 (0.55)
52 (1321)	94.36 (2.67)	119.97 (3.4)	11 (279)	5.51 (0.16)	16.72 (0.47)
51 (1295)	92.67 (2.62)	117.74 (3.33)	10 (254)	3.05 (0.09)	14.03 (0.4)
50 (1270)	90.94 (2.58)	115.48 (3.27)	9 (229)	↑ 0 (0)	10.98 (0.31)
49 (1245)	89.16 (2.52)	113.19 (3.21)	8 (203)	0 (0)	9.76 (0.28)
48 (1219)	87.35 (2.47)	110.89 (3.14)	7 (178)	0 (0)	8.54 (0.24)
47 (1194)	85.5 (2.42)	108.56 (3.07)	6 (152)	Stone 0 (0)	7.32 (0.21)
46 (1168)	83.61 (2.37)	106.21 (3.01)	5 (127)	Foundation 0 (0)	6.1 (0.17)
45 (1143)	81.69 (2.31)	103.84 (2.94)	4 (102)	0 (0)	4.88 (0.14)
44 (1118)	79.74 (2.26)	101.45 (2.87)	3 (76)	0 (0)	3.66 (0.1)
43 (1092)	77.76 (2.2)	99.04 (2.8)	2 (51)	0 (0)	2.44 (0.07)
42 (1067)	75.75 (2.15)	96.62 (2.74)	1 (25)	↓ 0 (0)	1.22 (0.03)
41 (1041)	73.71 (2.09)	94.18 (2.67)			

Notes: Calculations assume 12" (300 mm) of stone above chambers, 9" (230 mm) stone for foundation, 8.5" (216 mm) of stone between chambers and 40% stone porosity. Add 1.22 ft³ (0.035 m³) for each additional inch of stone foundation or stone cover.



Table 2 – HS290 Incremental Storage Volume per End Cap

Depth of water in the System in. (mm)	Cumulative Single Endcap Storage ft ³ (m3)	Cumulative Storage for System ft ³ (m3)	Depth of water in the System in. (mm)	Cumulative Single Endcap Storage ft ³ (m3)	Cumulative Storage for System ft ³ (m3)
81 (2057)	↑ 39.6 (1.12)	109.87 (3.11)	40 (1016)	28.62 (0.81)	59.69 (1.69)
80 (2032)	39.6 (1.12)	108.81 (3.08)	39 (991)	27.87 (0.79)	58.18 (1.65)
79 (2007)	39.6 (1.12)	107.75 (3.05)	38 (965)	27.11 (0.77)	56.66 (1.6)
78 (1981)	39.6 (1.12)	106.69 (3.02)	37 (940)	26.33 (0.75)	55.13 (1.56)
77 (1956)	39.6 (1.12)	105.63 (2.99)	36 (914)	25.53 (0.72)	53.59 (1.52)
76 (1930)	Stone 39.6 (1.12)	104.57 (2.96)	35 (889)	24.72 (0.7)	52.04 (1.47)
75 (1905)	Cover 39.6 (1.12)	103.51 (2.93)	34 (864)	23.89 (0.68)	50.48 (1.43)
74 (1880)	39.6 (1.12)	102.45 (2.9)	33 (838)	23.05 (0.65)	48.91 (1.38)
73 (1854)	39.6 (1.12)	101.39 (2.87)	32 (813)	22.2 (0.63)	47.34 (1.34)
72 (1829)	39.6 (1.12)	100.33 (2.84)	31 (787)	21.33 (0.6)	45.75 (1.3)
71 (1803)	39.6 (1.12)	99.27 (2.81)	30 (762)	20.45 (0.58)	44.16 (1.25)
70 (1778)	↓ 39.6 (1.12)	98.21 (2.78)	29 (737)	19.56 (0.55)	42.56 (1.21)
69 (1753)	39.6 (1.12)	97.15 (2.75)	28 (711)	18.66 (0.53)	40.96 (1.16)
68 (1727)	39.6 (1.12)	96.09 (2.72)	27 (686)	17.75 (0.5)	39.35 (1.11)
67 (1702)	39.58 (1.12)	95.01 (2.69)	26 (660)	16.83 (0.48)	37.73 (1.07)
66 (1676)	39.54 (1.12)	93.92 (2.66)	25 (635)	15.9 (0.45)	36.11 (1.02)
65 (1651)	39.47 (1.12)	92.81 (2.63)	24 (610)	14.96 (0.42)	34.48 (0.98)
64 (1626)	39.38 (1.12)	91.69 (2.6)	23 (584)	14.01 (0.4)	32.85 (0.93)
63 (1600)	39.27 (1.11)	90.56 (2.56)	22 (559)	13.05 (0.37)	31.21 (0.88)
62 (1575)	39.13 (1.11)	89.41 (2.53)	21 (533)	12.08 (0.34)	29.56 (0.84)
61 (1549)	38.95 (1.1)	88.24 (2.5)	20 (508)	11.1 (0.31)	27.91 (0.79)
60 (1524)	38.75 (1.1)	87.06 (2.47)	19 (483)	10.11 (0.29)	26.25 (0.74)
59 (1499)	38.51 (1.09)	85.85 (2.43)	18 (457)	9.12 (0.26)	24.59 (0.7)
58 (1473)	38.23 (1.08)	84.62 (2.4)	17 (432)	8.12 (0.23)	22.93 (0.65)
57 (1448)	37.91 (1.07)	83.36 (2.36)	16 (406)	7.11 (0.2)	21.26 (0.6)
56 (1422)	37.57 (1.06)	82.09 (2.32)	15 (381)	6.09 (0.17)	19.58 (0.55)
55 (1397)	37.2 (1.05)	80.8 (2.29)	14 (356)	5.07 (0.14)	17.9 (0.51)
54 (1372)	36.81 (1.04)	79.5 (2.25)	13 (330)	4.04 (0.11)	16.22 (0.46)
53 (1346)	36.39 (1.03)	78.18 (2.21)	12 (305)	3.01 (0.09)	14.54 (0.41)
52 (1321)	35.95 (1.02)	76.85 (2.18)	11 (279)	1.97 (0.06)	12.85 (0.36)
51 (1295)	35.47 (1)	75.5 (2.14)	10 (254)	0.92 (0.03)	11.16 (0.32)
50 (1270)	34.96 (0.99)	74.13 (2.1)	9 (229)	↑ 0 (0)	9.54 (0.27)
49 (1245)	34.43 (0.97)	72.75 (2.06)	8 (203)	0 (0)	8.48 (0.24)
48 (1219)	33.87 (0.96)	71.35 (2.02)	7 (178)	0 (0)	7.42 (0.21)
47 (1194)	33.29 (0.94)	69.94 (1.98)	6 (152)	Stone 0 (0)	6.36 (0.18)
46 (1168)	32.69 (0.93)	68.52 (1.94)	5 (127)	Foundation 0 (0)	5.3 (0.15)
45 (1143)	32.07 (0.91)	67.08 (1.9)	4 (102)	0 (0)	4.24 (0.12)
44 (1118)	31.42 (0.89)	65.63 (1.86)	3 (76)	0 (0)	3.18 (0.09)
43 (1092)	30.75 (0.87)	64.16 (1.82)	2 (51)	0 (0)	2.12 (0.06)
42 (1067)	30.06 (0.85)	62.68 (1.77)	1 (25)	↓ 0 (0)	1.06 (0.03)
41 (1041)	29.35 (0.83)	61.19 (1.73)			

Note: Calculations assume 12" (300 mm) of stone above chambers/end caps, 9" (230 mm) stone for foundation, 8.5" (216 mm) of stone between chambers/end caps, 6" (150 mm) of stone perimeter in front of the end caps and 40% stone porosity. Add 1.06 ft³ (0.03 m³) for each additional inch of stone foundation or stone cover.