

F-4592 Chambers

Prepared by {enter your company name here} Printed 2/22/2023
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Type III 24-hr 100-Year Rainfall=9.01"

Pond 13P: Cultec C-100HD Chamber - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf
Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap
Row Length Adjustment= +0.50' x 1.86 sf x 1 rows

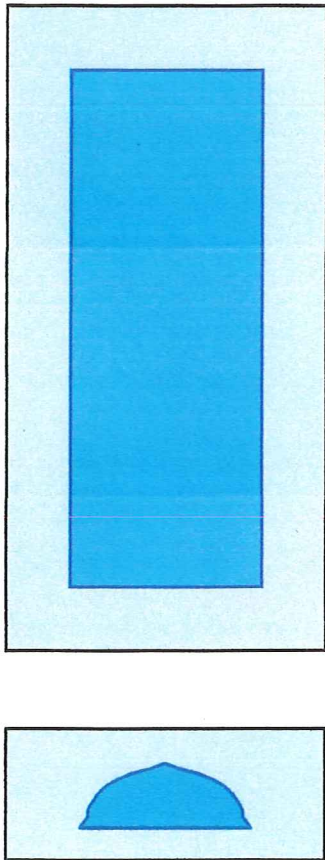
1 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 8.00' Row Length +12.0" End Stone x 2 = 10.00'
Base Length
1 Rows x 36.0" Wide + 12.0" Side Stone x 2 = 5.00' Base Width
6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

1 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 14.9 cf Chamber Storage

102.1 cf Field - 14.9 cf Chambers = 87.2 cf Stone x 40.0% Voids = 34.9 cf Stone Storage

Chamber Storage + Stone Storage = 49.8 cf = 0.001 af
Overall Storage Efficiency = 48.8%
Overall System Size = 10.00' x 5.00' x 2.04'

1 Chambers
3.8 cy Field
3.2 cy Stone



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CULTEC Contactor® 100HD Stormwater Chamber

The Contactor® 100HD is a 12.5" (318 mm) tall, low profile chamber and is typically used for installations with depth restrictions or when a larger infiltrative area is required. The Contactor 100HD has the side portal internal manifold feature. The HVLV® SFCx2 Feed Connector is inserted into the side portal of the Contactor 100HD to create the internal manifold.



Size (L x W x H)	8' x 36" x 12.5"
	2.44 m x 914 mm x 318 mm
Installed Length	7.5'
	2.29 m
Length Adjustment per Run	0.5'
	0.15 m
Chamber Storage	1.87 ft³/ft
	0.17 m³/m
	14.00 ft³/unit
	0.40 m³/unit
Min. Installed Storage	3.84 ft³/ft
	0.36 m³/m
	28.81 ft³/unit
	0.82 m³/unit
Min. Area Required	25 ft²
	2.32 m²
Chamber Weight	38.0 lbs
	17.24 kg
Shipping	55 chambers/skid
	2,195 lbs/skid
	16 skids/48' flatbed
Min. Center to Center Spacing	3.33'
	1.02 m
Max. Allowable Cover	12'
	3.66 m
Max. Inlet Opening in End Wall	10" HDPE, PVC
	250 mm HDPE, PVC
Max. Allowable O.D. in Side Portal	6" HDPE, PVC
	150 mm HDPE, PVC
Compatible Feed Connector	HVLV SFCx2 Feed Connector

Calculations are based on installed chamber length.
All above values are nominal.
Min. installed storage includes 6" (152 mm) stone base, 6" (152 mm) stone above crown of chamber and typical stone surround at 40"(1016 mm) center-to-center spacing.

	Stone Foundation Depth		
	6"	12"	18"
	152 mm	305 mm	457 mm
Chamber and Stone Storage Per Chamber	28.81 ft³	33.81 ft³	38.81 ft³
	0.82 m³	0.96 m³	1.10 m³
Min. Effective Depth	2.04'	2.54'	3.04'
	0.62 m	0.77 m	0.93 m
Stone Required Per Chamber	1.37 yd³	1.84 yd³	2.30 yd³
	1.05 m³	1.40 m³	1.76 m³

Calculations are based on installed chamber length.
Includes 6" (152 mm) stone above crown of chamber and typical stone surround.
Stone void calculated at 40%.

Contactor® 100HD Bare Chamber Storage Volumes

Elevation		Incremental Storage Volume				Cumulative Storage	
in.	mm	ft³/ft	m³/m	ft³	m³	ft³	m³
12	305	0.009	0.001	0.068	0.002	13.995	0.396
11	279	0.067	0.006	0.503	0.014	13.928	0.394
10	254	0.110	0.010	0.825	0.023	13.425	0.380
9	229	0.139	0.013	1.043	0.030	12.600	0.357
8	203	0.159	0.015	1.193	0.034	11.558	0.327
7	178	0.174	0.016	1.305	0.037	10.365	0.294
6	152	0.184	0.017	1.380	0.039	9.060	0.257
5	127	0.192	0.018	1.440	0.041	7.680	0.217
4	102	0.203	0.019	1.523	0.043	6.240	0.177
3	76	0.203	0.019	1.523	0.043	4.718	0.134
2	51	0.203	0.019	1.523	0.043	3.195	0.090
1	25	0.223	0.021	1.673	0.047	1.673	0.047
Total		1.866	0.173	13.995	0.396	13.995	0.396

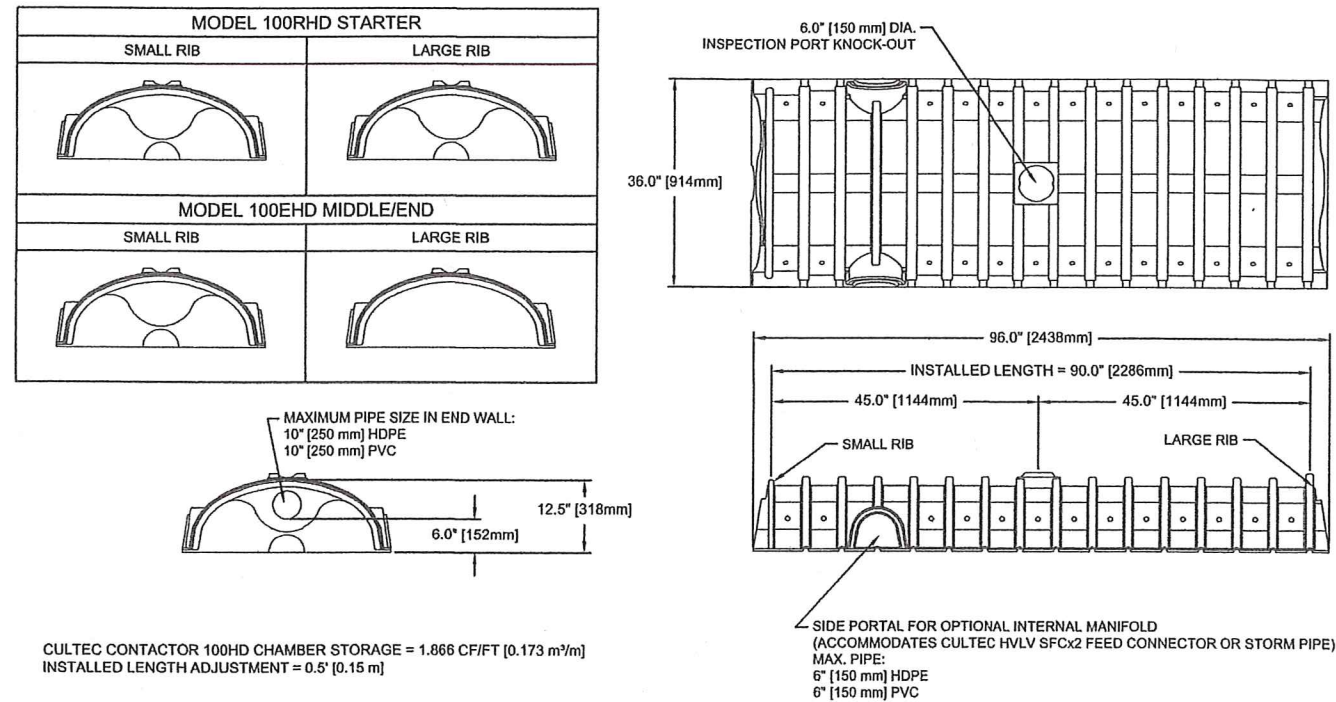
Calculations are based on installed chamber length.

Visit www.cultec.com/downloads.html for Product Downloads and CAD details.

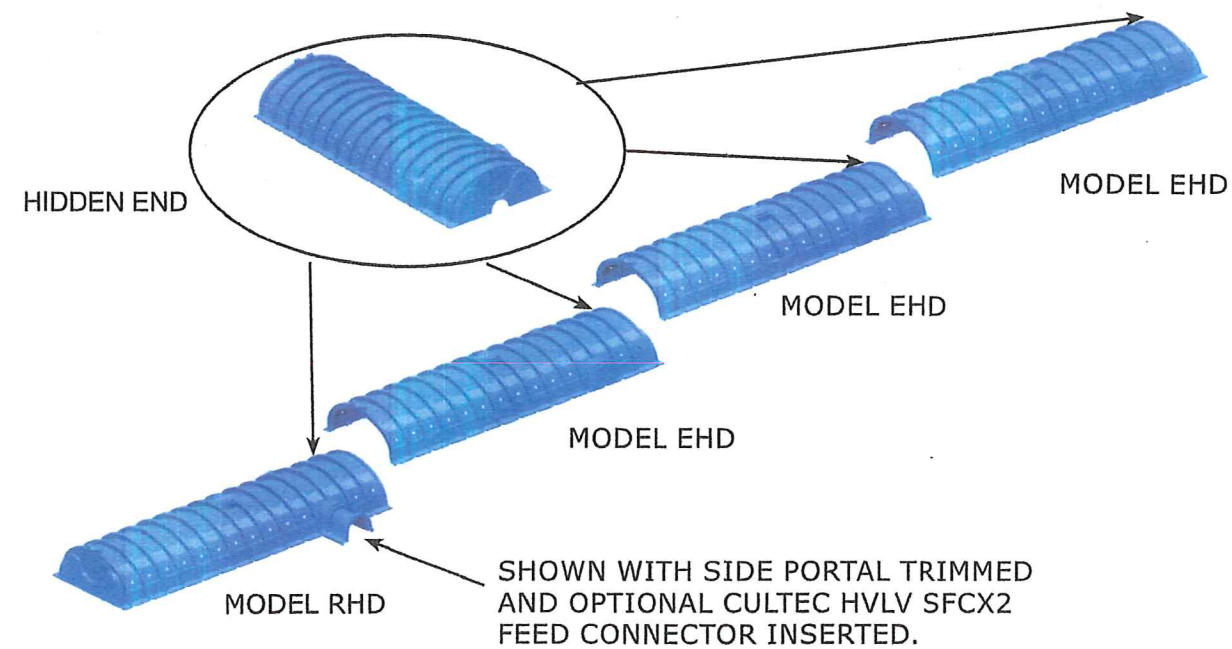


CULTEC Contactor® 100HD Stormwater Chamber

Three View Drawing



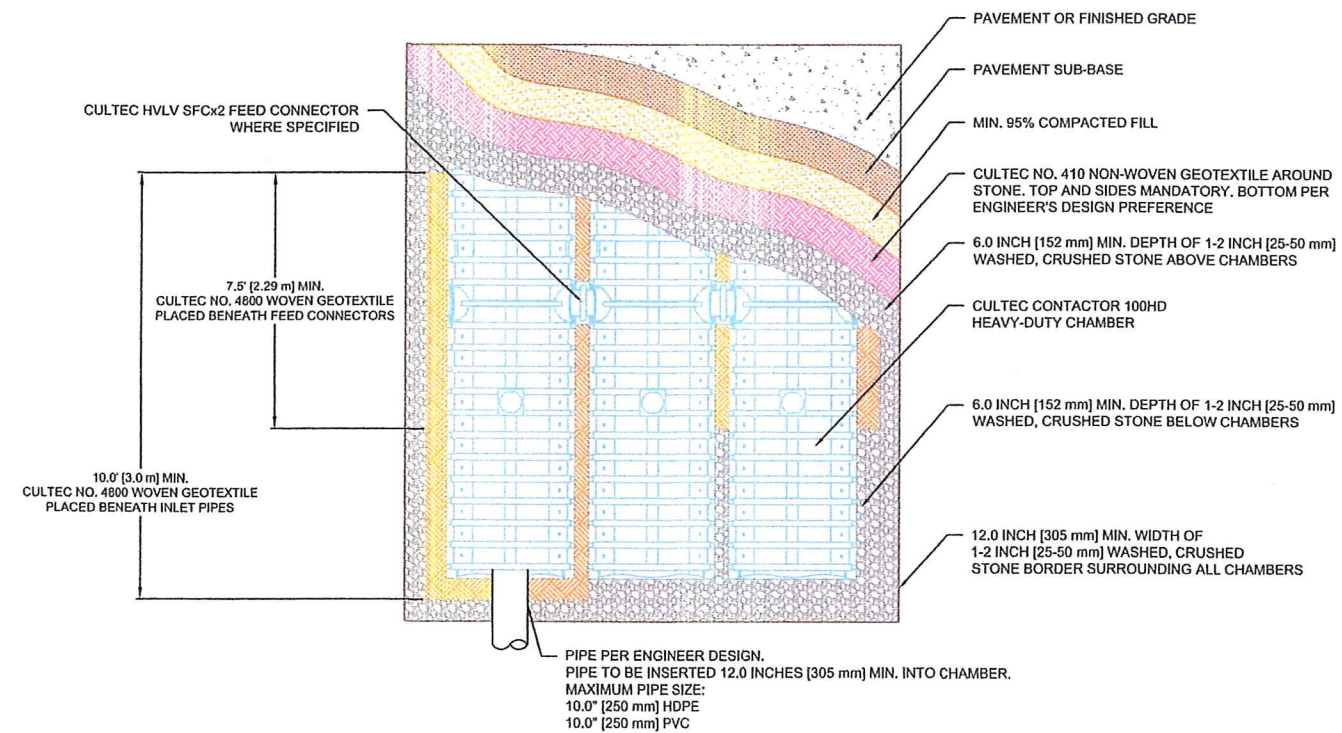
Typical Interlock Installation



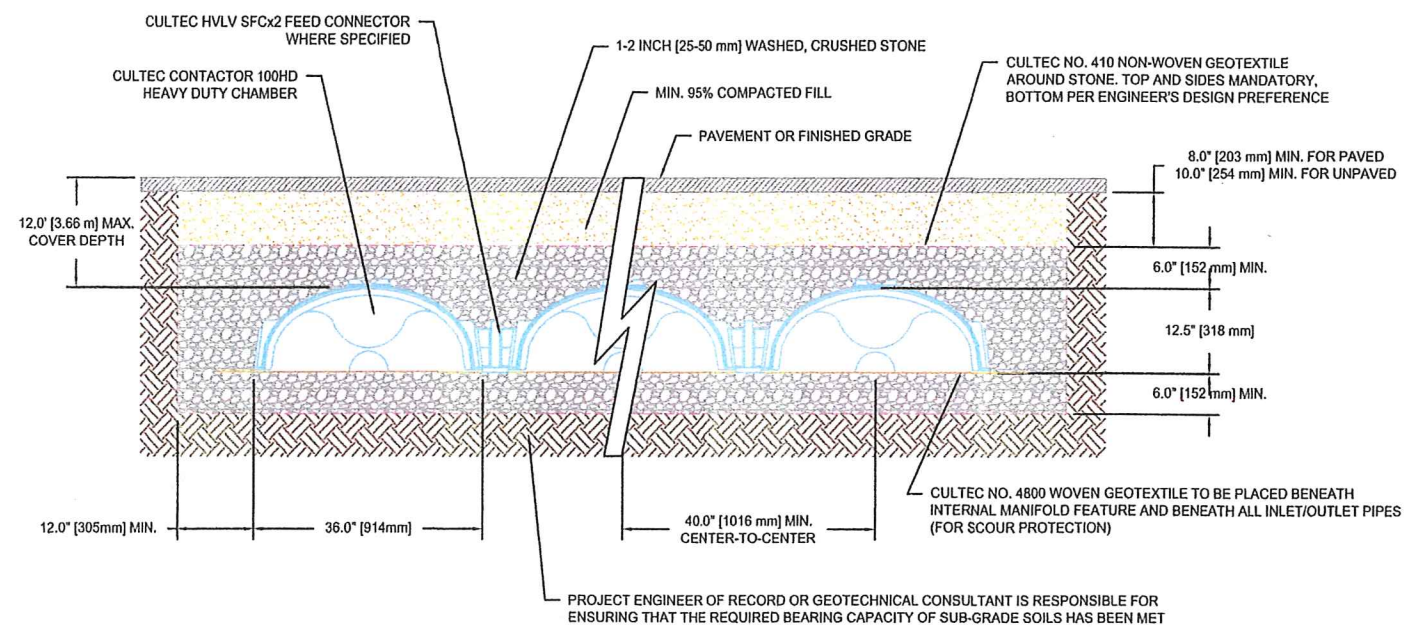


CULTEC Contactor® 100HD Stormwater Chamber

Plan View Drawing



Typical Cross Section for Traffic Application





CULTEC Contactor® 100HD Specifications

GENERAL

CULTEC Contactor® 100HD chambers are designed for underground stormwater management. The chambers may be used for retention, recharging, detention or controlling the flow of on-site stormwater runoff.

CHAMBER PARAMETERS

1. The chambers shall be manufactured in the U.S.A. by CULTEC, Inc. of Brookfield, CT (cultec.com, 203-775-4416).
2. The chamber shall be vacuum thermoformed of polyethylene with a black interior and blue exterior.
3. The chamber shall be arched in shape.
4. The chamber shall be open-bottomed.
5. The chamber shall be joined using an interlocking overlapping rib method. Connections must be fully shouldered overlapping ribs, having no separate couplings or separate end walls.
6. The nominal chamber dimensions of the CULTEC Contactor® 100HD shall be 12.5 inches (318 mm) tall, 36 inches (914 mm) wide and 8 feet (2.44 m) long. The installed length of a joined Contactor® 100HD shall be 7.5 feet (2.29 m).
7. Maximum inlet opening on the chamber end wall is 10 inches (250 mm) HDPE, PVC.
8. The chamber shall have two side portals to accept CULTEC HVLV® SFCx2 Feed Connectors to create an internal manifold. The nominal I.D. dimensions of each side portal shall be 5.75 inches (146 mm) high by 7.5 inches (191 mm) wide. Maximum allowable O.D. in the side portal is 6 inches (150 mm) HDPE, PVC.
9. The nominal chamber dimensions of the CULTEC HVLV® SFCx2 Feed Connector shall be 7.6 inches (194 mm) tall, 12 inches (305 mm) wide and 19.7 inches (500 mm) long.
10. The nominal storage volume of the Contactor® 100HD chamber shall be 1.866 ft³ / ft (0.173 m³ / m) - without stone. The nominal storage volume of a single Contactor® 100RHD Stand Alone unit shall be 14.93 ft³ (0.42 m³) - without stone. The nominal storage volume of a joined Contactor® 100EHD as an Intermediate unit shall be 13.995 ft³ (0.396 m³) - without stone. The nominal storage volume of the length adjustment amount per run shall be 0.93 ft³ (0.09 m³) - without stone.
11. The nominal storage volume of the HVLV® SFCx2 Feed Connector shall be 0.294 ft³ / ft (0.027 m³ / m) - without stone.
12. The Contactor® 100HD chamber shall have forty-four discharge holes bored into the sidewalls of the unit's core to promote lateral conveyance of water.
13. The Contactor® 100HD chamber shall have 16 corrugations.
14. The end wall of the chamber, when present, shall be an integral part of the continuously formed unit. Separate end plates cannot be used with this unit.
15. The Contactor® 100RHD Starter/Stand Alone unit must be formed as a whole chamber having two fully formed integral end walls and having no separate end plates or separate end walls.
16. The Contactor® 100EHD Middle/End unit must be formed as a whole chamber having one fully formed integral end wall and one fully open end wall and having no separate end plates or end walls.
17. The HVLV® SFCx2 Feed Connector must be formed as a whole chamber having two open end walls and having no separate end plates or separate end walls. The unit shall fit into the side portals of the Contactor® 100HD and act as cross feed connections.
18. Chambers must have horizontal stiffening flex reduction steps between the ribs.
19. The chamber shall have a raised integral cap at the top of the arch in the center of each unit to be used as an optional inspection port or clean-out.
20. The units may be trimmed to custom lengths by cutting back to any corrugation on the large rib end.
21. The chamber shall be manufactured in an ISO 9001:2015 certified facility.
22. The chamber shall be designed and manufactured to meet the material and structural requirements of IAPMO PS 63-2019, including resistance to AASHTO H-10 and H-20 highway live loads, when installed in accordance with CULTEC's installation instructions.
23. Maximum allowable cover over the top of the chamber shall be 12' (3.66 m) for the Heavy Duty version.
24. The chamber shall be designed to withstand traffic loads when installed according to CULTEC's recommended installation instructions.