



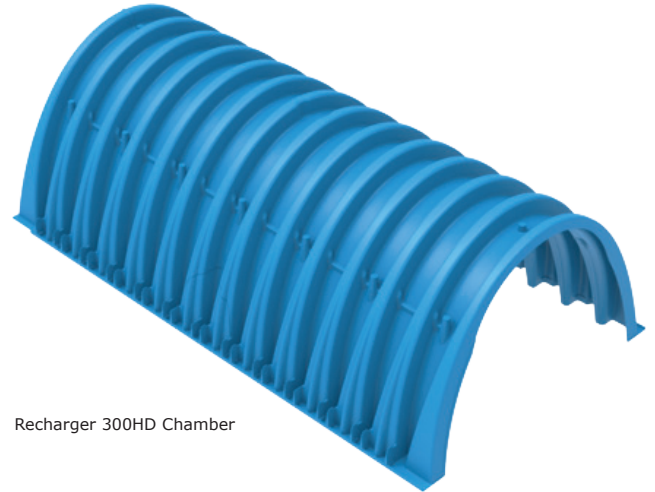
CULTEC RECHARGER® 300HD STORMWATER CHAMBER

The Recharger® 300HD is a 30" (762 mm) tall, high capacity chamber. Typically when using this model, fewer chambers are required resulting in less labor and a smaller installation area. The Recharger® 300HD has the side portal internal manifold feature. HVLV® FC-24 Feed Connectors are inserted into the side portals to create the internal manifold.

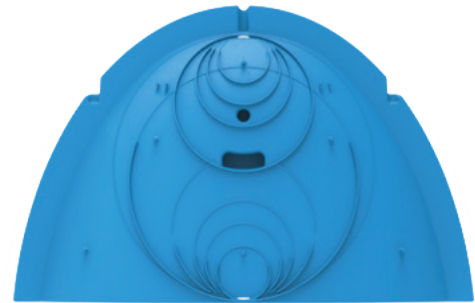
Recharger 300HD Chamber	
Size (L x W x H)	7.54' x 51" x 30"
	2.29 m x 1295 mm x 762 mm
Installed Length	7.08'
	2.16 m
Length Adjustment per Row - with two end caps installed	0.89'
	0.27 m
Length Adjustment per Row - when not using end caps	0.46'
	0.14 m
Chamber Storage	6.53 ft ³ /ft
	0.61 m ³ /m
	46.27 ft ³ /unit
	1.31 m ³ /unit
Min. Installed Storage	10.57 ft ³ /ft
	0.98 m ³ /m
	74.44 ft ³ /unit
	2.12 m ³ /unit
Min. Area Required	33.65 ft ²
	3.13 m ²
Chamber Weight	80.4 lbs
	36.47 kg
Shipping	25 chambers/skid
	12 skids/53' flatbed
Min. Center-to-Center Spacing	4.75'
	1.45 m
Max. Allowable Cover	12'
	3.66 m
Max. Allowable O.D. in Side Portal	10" HDPE, 12" PVC
	250 mm HDPE, 300 mm PVC
Compatible Feed Connector	HVLV FC-24 Feed Connector

Calculations are based on installed chamber length.
 All above values are nominal.
 Includes 6" (152 mm) stone above crown of chamber and typical stone surround at 4.75' (1.45 m) center-to-center spacing and stone foundation depth as listed in table.
 Stone void calculated at 40%.

	Stone Foundation Depth		
	6"	12"	18"
	152 mm	305 mm	457 mm
Chamber and Stone Storage Per Chamber	74.84 ft ³	101.94 ft ³	107.26 ft ³
	2.12 m ³	2.89 m ³	3.04 m ³
Min. Effective Depth	3.5'	6.00'	6.5'
	1.07 m	1.83 m	1.98 m
Stone Required Per Chamber	71.44 ft ³	88.25 ft ³	105.07 ft ³
	2.12 m ³	2.50 m ³	2.98 m ³



Recharger 300HD Chamber



Recharger 300HD End Cap

Recharger 300HD End Cap	
Size (L x W x H)	12.2" x 45.9" x 29.3"
	310 mm x 1166 mm x 744 mm
Installed Length	9.6"
	244 mm
End Cap Storage	3.32 ft ³ /ft
	0.31 m ³ /m
	2.565 ft ³ /unit
	0.08 m ³ /unit
Min. Installed Storage	16.95 ft ³ /ft
	1.57 m ³ /m
	13.56 ft ³ /unit
	0.38 m ³ /unit
End Cap Weight	13.7 lbs
	6.21 kg
Shipping	60 end caps/skid
	822 lbs/skid
	11 skids/48' flatbed
Max. Inlet Opening in End Cap	24" HDPE, 24" PVC
	600 mm HDPE, 600 mm PVC

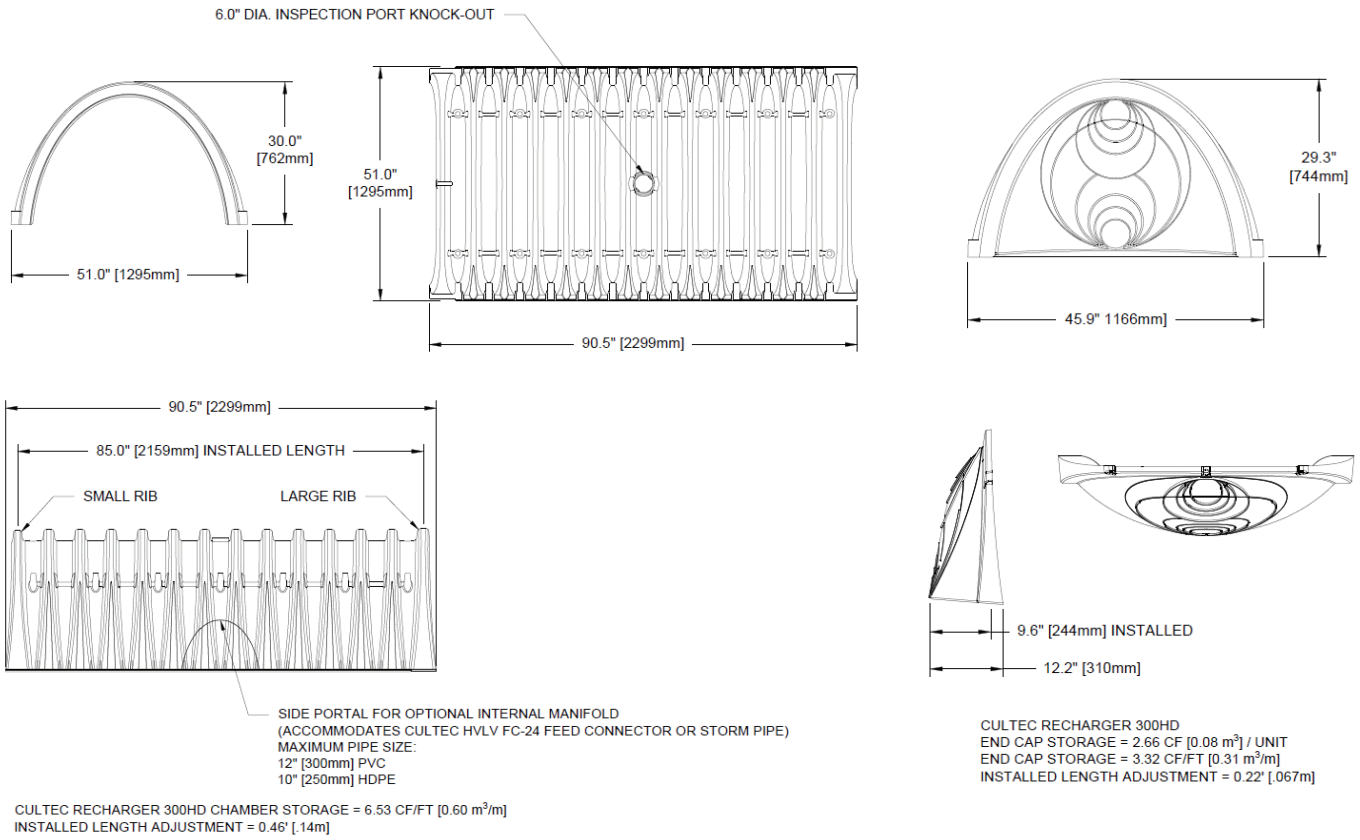
Calculations are based on installed chamber length.
 All above values are nominal.
 Min. installed storage includes 6" (152 mm) stone base, 6" (152 mm) stone above crown of chamber and typical stone surround at 4.75' (1.25 m) center-to-center spacing.

For more information, contact CULTEC at (203) 775-4416 or visit www.cultec.com.



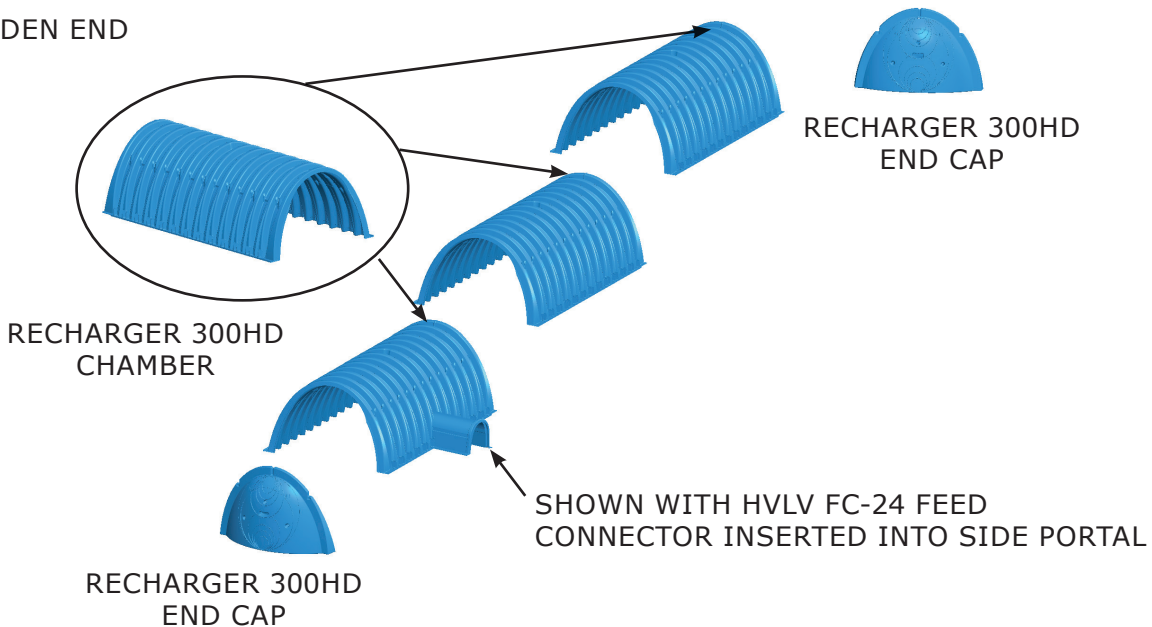
CULTEC RECHARGER® 300HD STORMWATER CHAMBER

Three View Drawing



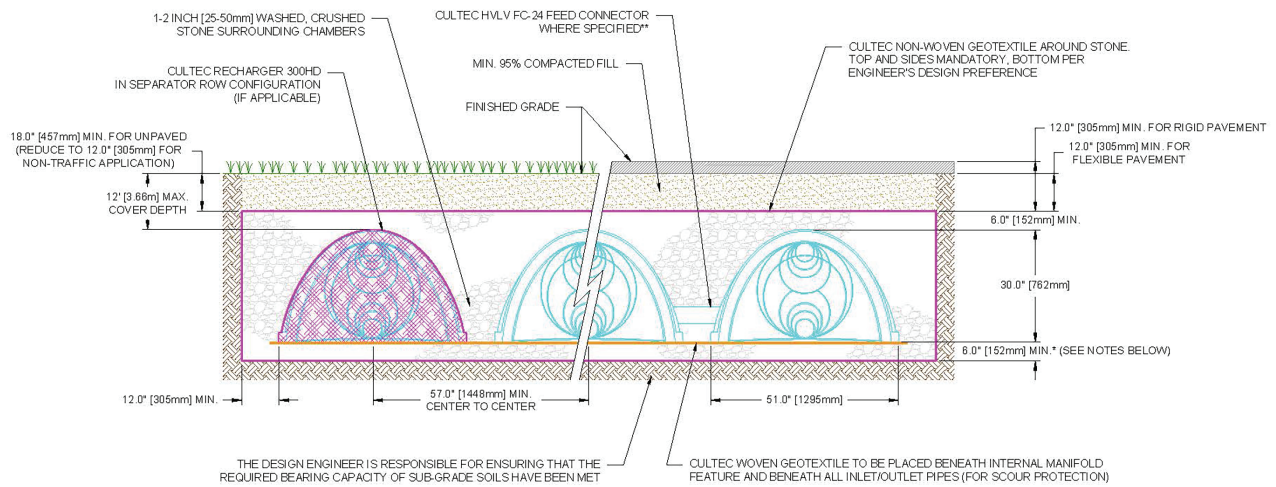
Typical Interlock Installation

HIDDEN END



For more information, contact CULTEC at (203) 775-4416 or visit www.cultec.com.

Typical Cross Section for Traffic Application

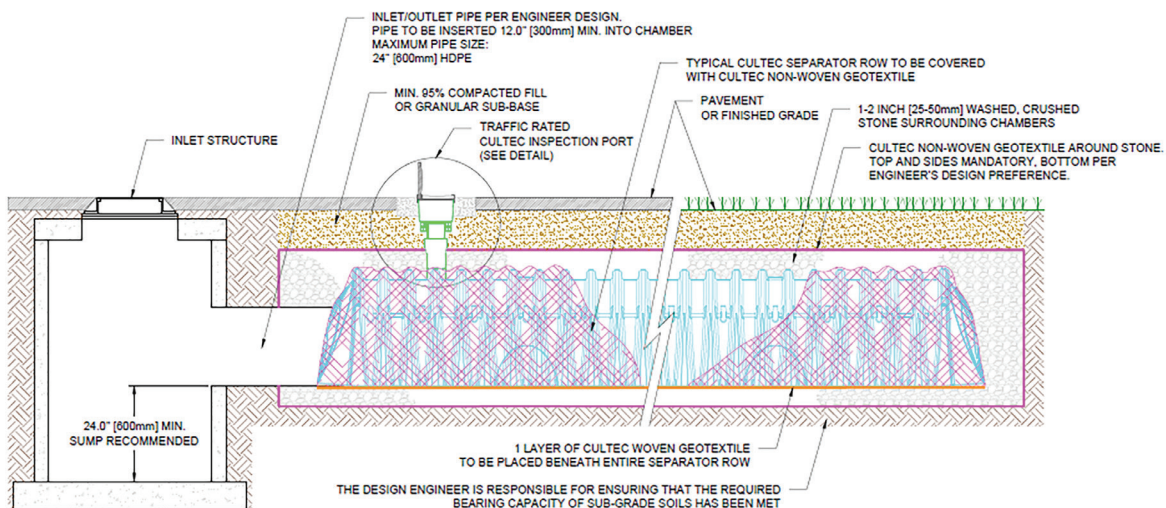


NOTES:

*FOR COVER DEPTHS FROM 18.0' - 8.0' (457mm - 2.44m), INCREASE DEPTH OF BEDDING STONE TO 9.0' (229mm) MIN. FOR COVER DEPTHS GREATER THAN 8.0' (2.44m)
 **UTILIZE H.V.L.V. FC-24 FEED CONNECTOR FOR 6" (152mm) ROW SPACING. UTILIZE H.V.L.V. FC-48 FEED CONNECTOR FOR ROW SPACING GREATER THAN 6" (152mm)

- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
- THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
- THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F2418
 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

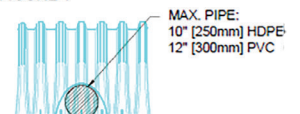
Typical Profile View for Traffic Application



NOTES:

- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
- THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
- THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
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 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

FIGURE 1





CULTEC RECHARGER® 300HD STORMWATER CHAMBER

Recharger® 300HD Bare Chamber Storage Volumes

Elevation		Incremental Storage Volume				Cumulative Storage	
in.	mm	ft ³ /ft	m ³ /m	ft ³	m ³	ft ³	m ³
30	762	0.0082	0.0008	0.06	0.002	46.268	1.310
29	737	0.0235	0.0022	0.17	0.005	46.210	1.309
28	711	0.0405	0.0038	0.29	0.008	46.044	1.304
27	686	0.0863	0.0080	0.61	0.017	45.757	1.296
26	660	0.1144	0.0106	0.81	0.023	45.146	1.279
25	635	0.1354	0.0126	0.96	0.027	44.336	1.256
24	610	0.1529	0.0142	1.08	0.031	43.377	1.228
23	584	0.1677	0.0156	1.19	0.034	42.294	1.198
22	559	0.1799	0.0167	1.27	0.036	41.106	1.164
21	533	0.1926	0.0179	1.36	0.039	39.832	1.128
20	508	0.2053	0.0191	1.45	0.041	38.468	1.089
19	483	0.2156	0.0200	1.53	0.043	37.013	1.048
18	457	0.2246	0.0209	1.59	0.045	35.486	1.005
17	432	0.2332	0.0217	1.65	0.047	33.895	0.960
16	406	0.2413	0.0224	1.71	0.048	32.244	0.913
15	381	0.2488	0.0231	1.76	0.050	30.535	0.865
14	356	0.2560	0.0238	1.81	0.051	28.772	0.815
13	330	0.2626	0.0244	1.86	0.053	26.959	0.763
12	305	0.2689	0.0250	1.90	0.054	25.099	0.711
11	279	0.2748	0.0255	1.95	0.055	23.195	0.657
10	254	0.2803	0.0260	1.99	0.056	21.248	0.602
9	229	0.2854	0.0265	2.02	0.057	19.263	0.546
8	203	0.2903	0.0270	2.06	0.058	17.241	0.488
7	178	0.2948	0.0274	2.09	0.059	15.185	0.430
6	152	0.2991	0.0278	2.12	0.060	13.097	0.371
5	127	0.3030	0.0282	2.15	0.061	10.978	0.311
4	102	0.3067	0.0285	2.17	0.062	8.831	0.250
3	76	0.3101	0.0288	2.20	0.062	6.659	0.189
2	51	0.3133	0.0291	2.22	0.063	4.462	0.126
1	25	0.3166	0.0294	2.24	0.064	2.243	0.064
Total		6.532	0.607	46.27	1.310	46.268	1.310

Calculations are based on installed chamber length of 7.08' (2.16 m).

Recharger® 300HD Bare End Cap Storage Volumes

Elevation		Incremental Storage Volume				Cumulative Storage	
in.	mm	ft ³ /ft	m ³ /m	ft ³	m ³	ft ³	m ³
30	762	0.0000	0.0000	0.0000	0.000	2.655	0.075
29	737	0.0000	0.0000	0.0000	0.000	2.655	0.075
28	711	0.0050	0.0005	0.0040	0.000	2.655	0.075
27	686	0.0075	0.0007	0.0060	0.000	2.651	0.075
26	660	0.0138	0.0013	0.0110	0.000	2.645	0.075
25	635	0.0237	0.0022	0.0190	0.001	2.634	0.075
24	610	0.0350	0.0033	0.0280	0.001	2.615	0.074
23	584	0.0463	0.0043	0.0370	0.001	2.587	0.073
22	559	0.0537	0.0050	0.0430	0.001	2.550	0.072
21	533	0.0688	0.0064	0.0550	0.002	2.507	0.071
20	508	0.0800	0.0074	0.0640	0.002	2.452	0.069
19	483	0.0900	0.0084	0.0720	0.002	2.388	0.068
18	457	0.1000	0.0093	0.0800	0.002	2.316	0.066
17	432	0.1113	0.0103	0.0890	0.003	2.236	0.063
16	406	0.1113	0.0103	0.0890	0.003	2.147	0.061
15	381	0.1250	0.0116	0.1000	0.003	2.058	0.058
14	356	0.1300	0.0121	0.1040	0.003	1.958	0.055
13	330	0.1425	0.0132	0.1140	0.003	1.854	0.053
12	305	0.1513	0.0141	0.1210	0.003	1.740	0.049
11	279	0.1425	0.0132	0.1140	0.003	1.619	0.046
10	254	0.1675	0.0156	0.1340	0.004	1.505	0.043
9	229	0.1738	0.0161	0.1390	0.004	1.371	0.039
8	203	0.1813	0.0168	0.1450	0.004	1.232	0.035
7	178	0.1888	0.0175	0.1510	0.004	1.087	0.031
6	152	0.1850	0.0172	0.1480	0.004	0.936	0.027
5	127	0.2013	0.0187	0.1610	0.005	0.788	0.022
4	102	0.2075	0.0193	0.1660	0.005	0.627	0.018
3	76	0.2125	0.0197	0.1700	0.005	0.461	0.013
2	51	0.2188	0.0203	0.1750	0.005	0.291	0.008
1	25	0.1450	0.0135	0.1160	0.003	0.116	0.003
Total		3.3188	0.308	2.655	0.075	2.655	0.075

Calculations are based on installed chamber length of 9.6" (244 mm).



CULTEC Recharger® 300HD Specifications

GENERAL

CULTEC Recharger® 300HD 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 of Brookfield, CT (cultec.com, 203-775-4416).
2. The chambers shall be designed and tested in accordance with ASTM F2787 "Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers". The load configuration shall include:
 - a. Instantaneous AASHTO Design Truck live load at minimum cover
 - b. Maximum permanent (50-year) cover load
 - c. 1-week parked AASHTO design truck load
3. The chambers shall meet the requirements of ASTM F2418 "Standard Specification for Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers".
4. The installed chamber system shall provide resistance to the loads and load factors as defined in the AASHTO LRFD Bridge Design Specifications Section 12.12, when installed according to CULTEC's recommended installation instructions. The structural design of the chambers shall include the following:
 - a. The Creep Modulus shall be 50-year as specified in ASTM F2418
 - b. The minimum safety factor for live loads shall be 1.75
 - c. The minimum safety factor for dead loads shall be 1.95
5. The chamber shall be structural foam injection molded of blue virgin impact-modified polypropylene.
6. The chamber shall be arched in shape.
7. The chamber shall be open-bottomed.
8. The chamber shall be joined using an interlocking overlapping rib method. Connections must be fully shouldered overlapping ribs, having no separate couplings.
9. The nominal chamber dimensions of the CULTEC Recharger® 300HD shall be 30 inches (762 mm) tall, 51 inches (1295 mm) wide and 90.5 inches (2299 mm) long. The installed length of a joined Recharger 300HD shall be 7.08 feet (2.159 m).
10. Multiple chambers may be connected to form different length rows. Each row shall begin and end with a separately formed CULTEC Recharger® 300HD End Cap. Maximum inlet opening on the end cap is 24 inches (600 mm) HDPE.
11. The chamber shall have two side portals to accept CULTEC HVLV™ FC-24 Feed Connectors to create an internal manifold. Maximum allowable pipe size in the side portal is 10 inches (250 mm) HDPE and 12 inches (300 mm) PVC.
12. The nominal chamber dimensions of the CULTEC HVLV™ FC-24 Feed Connector shall be 12 inches (305 mm) tall, 16 inches (406 mm) wide and 24.2 inches (615 mm) long.
13. The nominal storage volume of the Recharger 300HD chamber shall be 6.53 ft³ / ft (0.607 m³ / m) - without stone. The nominal storage volume of a joined Recharger 300HD shall be 46.27 ft³ / unit (1.310 m³ / unit) - without stone.
14. The Recharger 300HD chamber shall have 14 corrugations.
15. The chamber shall be capable of accepting a 6 inch (150 mm) inspection port opening at the top center of each chamber, centered on the corrugation crest.
16. The chamber shall be manufactured in a facility employing CULTEC's Quality Control and Assurance Procedures.
17. Maximum allowable cover over the top of the chamber shall be 12.0 feet (3.66 m).

END CAP PARAMETERS

1. The CULTEC Recharger® 300HD End Cap (referred to as 'end cap') shall be manufactured in the U.S.A. by CULTEC of Brookfield, CT (cultec.com, 203-775-4416).
2. The end cap shall be injection molded of blue virgin impact-modified polyethylene copolymers.
3. The end cap shall be arched in shape.
4. The end cap shall be joined at the beginning and end of each row of chambers using an interlocking overlapping rib method. Connections must be fully shouldered overlapping ribs, having no separate couplings.
5. The nominal dimensions of the end cap shall be 29.3 inches (744 mm) tall, 45.9 inches (1166 mm) wide and 12.2 inches (310 mm) long. When joined with a Recharger 300HD Chamber, the installed length of the end cap shall be 9.6 inches (244 mm).
6. The nominal storage volume of the end cap shall be 3.32 ft³ / ft (0.31 m³ / m) - without stone. The nominal storage volume of an interlocked end cap shall be 2.66 ft³ / unit (0.08 m³ / unit) - without stone.
7. Maximum inlet opening on the end cap is 24 inches (600 mm) HDPE.
8. The end cap shall provide resistance to the loads and load factors as defined in the AASHTO LRFD Bridge Design Specifications Section 12.12.