CULTEC CONTACTOR 100HD CHAMBER PRODUCT 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 BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBERS SHALL BE DESIGNED AND TESTED VIA FINITE ELEMENT ANALYSIS IN ACCORDANCE WITH THE 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 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 MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   b. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95.
4. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
5. THE CHAMBER SHALL BE ARCHED IN SHAPE.
6. THE CHAMBER SHALL BE OPEN-BOTTOMED.
7. 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.
8. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC CONTACTOR 100HD SHALL BE 12.5" (318 mm) TALL, 36" (914 mm) WIDE AND 8' (2.44 m) LONG. THE INSTALLED LENGTH OF A JOINED CONTACTOR 100HD SHALL BE 7.5' (2.29 m).
9. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 10" (250 mm).
10. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® SFCX2 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL INSIDE DIMENSIONS OF EACH SIDE PORTAL SHALL BE 5.75" (146 mm) HIGH BY 7.5" (191 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 6.9" (175 mm).
11. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV SFCX2 FEED CONNECTOR SHALL BE 7.6" (194 mm) TALL, 12" (305 mm) WIDE AND 19.7" (500 mm) LONG.
12. 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 JOINED CONTACTOR 100HD SHALL BE 13.995 FT³ / UNIT (0.396 m³ / UNIT) - WITHOUT STONE.
13. THE NOMINAL STORAGE VOLUME OF THE HVLV SFCX2 FEED CONNECTOR SHALL BE 0.294 FT³ / FT (0.027 m³ / m) - WITHOUT STONE.
14. THE CONTACTOR 100HD CHAMBER SHALL HAVE TWENTY-FOUR DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
15. THE CONTACTOR 100HD CHAMBER SHALL HAVE 16 CORRUGATIONS.
16. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, SHALL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
17. THE CONTACTOR 100RHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
18. THE CONTACTOR 100EHD MIDDLE/END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
19. 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.
20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
21. 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.
22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY.
24. MAXIMUM ALLOWED COVER ON TOP OF UNIT SHALL BE 8.0 FEET [2.44 m]
25. THE INSTALLED CHAMBER SYSTEM SHALL BE STRUCTURALLY DESIGNED TO PROVIDE RESISTANCE TO LIVE LOADS AS DEFINED BY THE AASHTO H-20/HL-93 SPECIFICATION WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

CULTEC HVLV SFCx2 FEED CONNECTOR

GENERAL

CULTEC HVLV SFCx2 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC CONTACTOR STORMWATER CHAMBERS.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
3. THE CHAMBER SHALL BE ARCHED IN SHAPE.
4. THE CHAMBER SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV SFCX2 FEED CONNECTOR SHALL BE 7.6" (194 mm) TALL, 12" (305 mm) WIDE AND 19.7" (500 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV SFCX2 FEED CONNECTOR SHALL BE 0.294 FT3 / FT (0.027 m³ / m) - WITHOUT STONE.
7. THE HVLV SFCX2 FEED CONNECTOR CHAMBER SHALL HAVE 3 CORRUGATIONS.
8. 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 STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS

THE GEOTEXTILE SHALL:

1. BE PROVIDED BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. BE BLACK IN APPEARANCE.
3. HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632.
5. HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632.
6. HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786.
7. HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833.
8. HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241.
9. HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533.
10. HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751.
11. HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491.
12. HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491.
13. HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355.

ADS PLUS-US WOVEN GEOTEXTILE

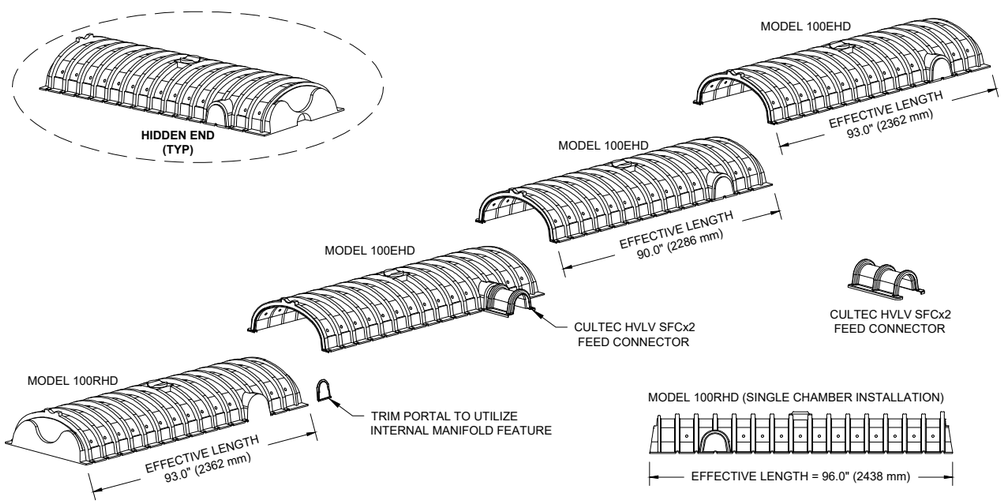
ADS PLUS-US WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW/ADS ISOLATOR ROW PLUS TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS

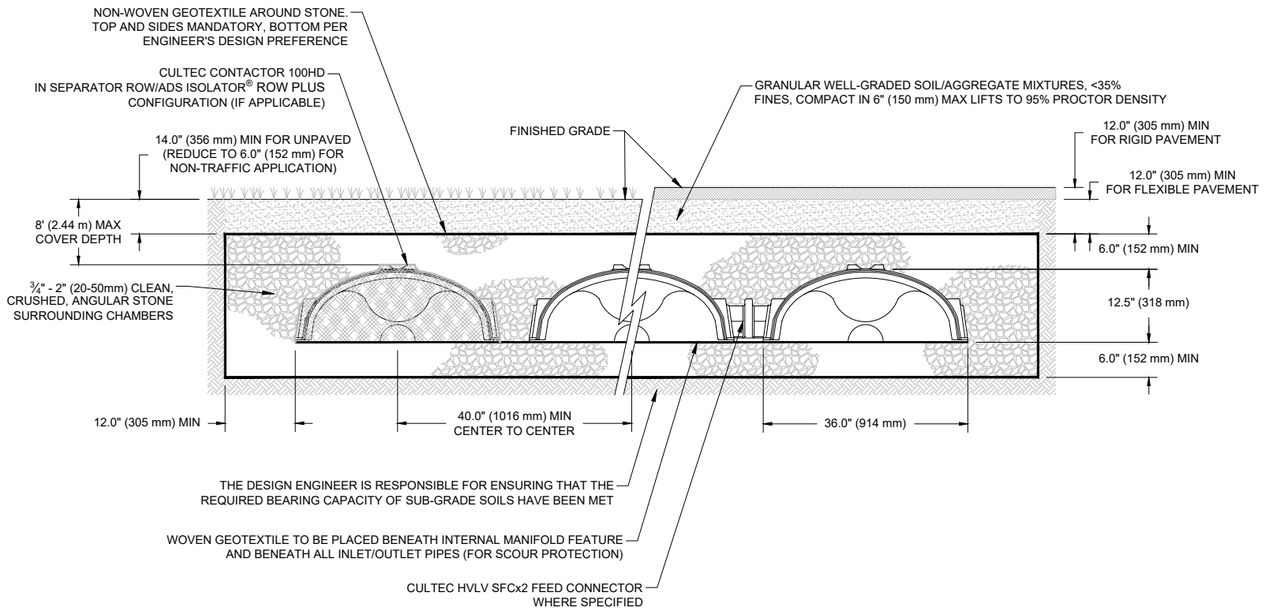
THE GEOTEXTILE SHALL:

1. BE PROVIDED BY CULTEC OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. BE BLACK AND WHITE IN APPEARANCE.
3. HAVE A MARV WEIGHT OF 8.0 OZ/YD² PER ASTM D5261.
4. HAVE A GRAB TENSILE STRENGTH OF 325 X 325 LBS (1,445 X 1,445 N) PER ASTM D4632.
5. HAVE A ELONGATION @ BREAK RESISTANCE OF 15 X 15% PER ASTM D4632.
6. HAVE A CBR PUNCTURE RESISTANCE OF 1,124 LBS (5,000 N) PER ASTM D6241.
7. HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 125 X 125 LBS (556 X 556 N) PER ASTM D4533.

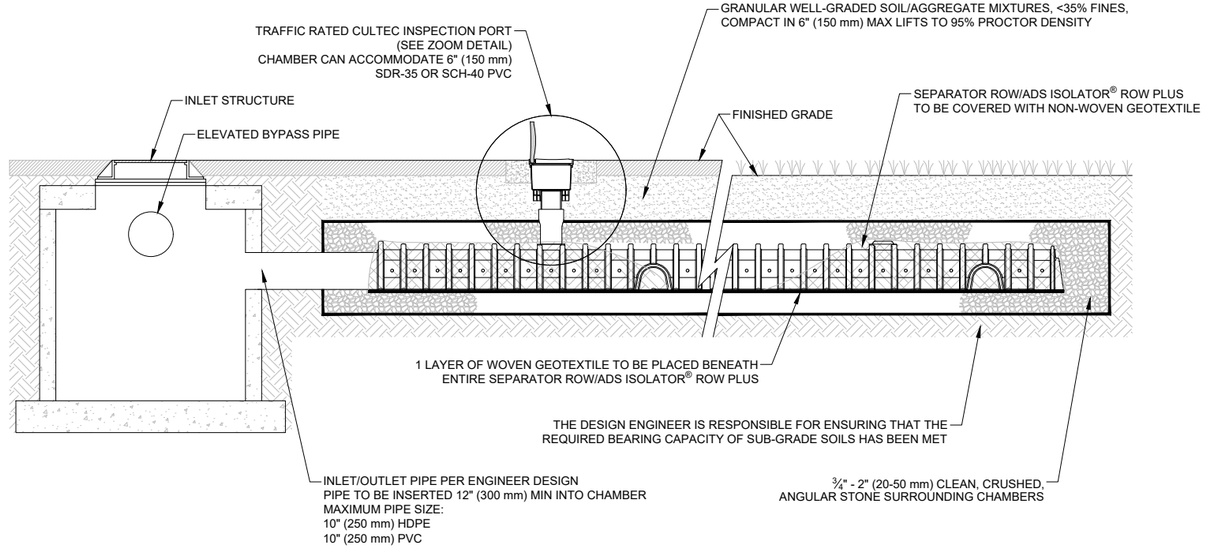
GENERAL NOTES



CULTEC CONTACTOR 100HD HEAVY DUTY TYPICAL INTERLOCK



CULTEC CONTACTOR 100HD HEAVY DUTY CROSS SECTION



CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)

STANDARD CHAMBER DETAILS
CULTEC 100HD

DESIGNED BY: SMW
CHECKED BY: -
DATE: 10/09/2026
DRAWING #: 730-100
SHEET 1 OF 1

DATE	DWN	CHK

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THESE DRAWINGS WERE PREPARED TO SUPPORT THE SITE DESIGN ENGINEER'S PROPOSED STORMWATER MANAGEMENT SYSTEM DESIGN. IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE SITE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM DESIGN AND ITS INSTALLATION ARE IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS. DO NOT SCALE DRAWINGS FOR DESIGN PURPOSES.