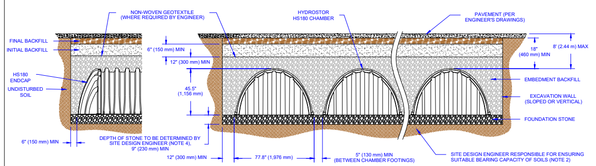

NOTES:

1. HYDROSTOR HS180 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418. HS180 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION GUIDELINES.
2. SUBGRADE: TRENCH BOTTOMS WITH UNSTABLE OR UNYIELDING MATERIAL SHALL BE EXCAVATED TO A DEPTH DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL. FOR UNSTABLE MATERIALS, GEOTEXTILE MAY BE USED TO STABILIZE THE TRENCH BOTTOM, IF DIRECTED BY THE ENGINEER. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING SUBGRADE SUITABILITY WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
3. GEOTEXTILE: AN AASHTO M288 CLASS 2 OR 3 NON-WOVEN GEOTEXTILE SHOULD BE USED FOR EMBEDMENT BACKFILL MATERIAL 3/4 TO 2 INCH (19 - 51 MM). GEOTEXTILE FILTER FABRIC IS PLACED AROUND THE SYSTEM TO PREVENT NATIVE SOIL FROM MIGRATING INTO THE EMBEDMENT BACKFILL MATERIAL. TO ENSURE FABRIC IS SUITABLE WITH IN SITU SOILS, A GEOTECHNICAL ENGINEER SHOULD BE CONSULTED.
4. FOUNDATION STONE: SUITABLE MATERIAL SHALL BE A 3/4 - 2 INCH (19 - 51 mm), CLEAN, CRUSHED ANGULAR STONE, OR AASHTO M43 SIZES (3, 357, 4, 467, 5, 56, 57) WITH CLEAN, CRUSHED, ANGULAR STONE ADDED TO THE GRADATION, e.g., CLEAN, CRUSHED, ANGULAR #3 (AASHTO M43) STONE. COMPACTION SHOULD BE DONE IN LIFTS OF NO MORE THAN 9 INCHES (230 mm). THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE ALLOWABLE BEARING CAPACITY OF THE SUBGRADE SOIL AND DETERMINING THE FOUNDATION STONE THICKNESS. REFER TO PRINSCO'S HYDROSTOR DESIGN GUIDE SECTION 4.1 FOR ADDITIONAL GUIDANCE.
5. EMBEDMENT BACKFILL: SUITABLE MATERIAL SHALL BE A 3/4 - 2 INCH (19 - 51 mm), CLEAN, CRUSHED ANGULAR STONE, OR AASHTO M43 SIZES (3, 357, 4, 467, 5, 56, 57) WITH CLEAN, CRUSHED, ANGULAR STONE ADDED TO THE GRADATION, e.g., CLEAN, CRUSHED, ANGULAR #3 (AASHTO M43) STONE. EMBEDMENT BACKFILL SHALL EXTEND FROM TOP OF BEDDING TO NOT LESS THAN 12 INCHES (300 mm) ABOVE THE TOP OF THE CHAMBER. NO COMPACTION IS REQUIRED BUT AN EFFORT SHOULD BE MADE TO HAND KNIFE STONE IN BETWEEN ALL CORRUGATIONS.
6. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE A GRANULAR, WELL GRADED SOIL WITH LESS THAN 35% FINES OR AASHTO M43 SIZES (3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10). MOST PAVEMENT SUBBASE MATERIALS FALL WITHIN THIS GRADING CRITERIA. INITIAL BACKFILL SHALL EXTEND FROM TOP OF EMBEDMENT BACKFILL TO NOT LESS THAN 18 INCHES (460 mm) ABOVE THE TOP OF THE CHAMBER. COMPACT TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
7. FINAL BACKFILL: SUITABLE MATERIALS SHALL BE ANY SOIL DIRECTED BY THE ENGINEER. FINAL BACKFILL SHALL EXTEND FROM TOP OF INITIAL BACKFILL TO NO MORE THAN 8 FEET (2.44 m) ABOVE THE TOP OF THE CHAMBER. COMPACTION LEVELS SHOULD FOLLOW ENGINEERS RECOMMENDATIONS.
8. MINIMUM COVER: FOR TRAFFIC APPLICATIONS A MINIMUM COVER OF 18 INCHES (460 mm) IS REQUIRED, MEASURED FROM THE TOP OF THE CHAMBER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR TO THE TOP OF RIGID PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING MAY OCCUR, INCREASE COVER TO 24 INCHES (610 mm) FOR H-20 LOADING. ADDITIONAL COVER MAY BE REQUIRED FOR CONSTRUCTION LOADS.
9. MAXIMUM COVER: A COVER HEIGHT OF OVER 8 FEET (2.44 m) IS NOT RECOMMENDED. COVER HEIGHT IS MEASURED FROM THE TOP OF THE CHAMBER TO THE TOP OF THE PAVEMENT.
10. LOAD RATING: HS180 CHAMBERS ARE TRAFFIC RATED FOR H-20 VEHICLES WITH ADDITIONAL CONSIDERATION FOR LANE LOADING, COMMONLY REFERRED TO AS HL-93 LOAD RATING (AASHTO DESIGN TRUCK).

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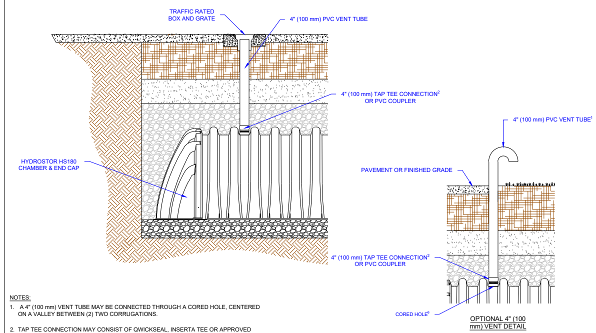
TITLE: HYDROSTOR HS180 - CROSS SECTION | DRAWN BY: AED | DATE: 12-Jan-24 | DRAWING NUMBER: D-7-200A | SCALE: NTS | SHEET: 1 OF 1

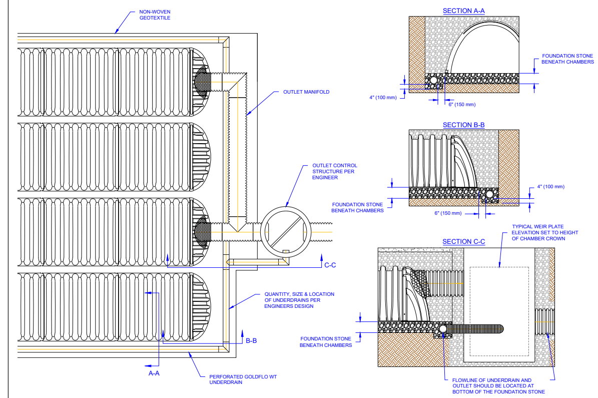


OPTIONAL 4" (100 mm) VENT DETAIL

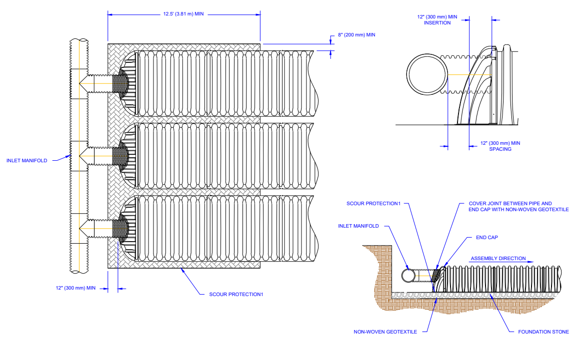
NOTES:

1. A 4" (100 mm) VENT TUBE MAY BE CONNECTED THROUGH A CORED HOLE, CENTERED ON A VALLEY BETWEEN (2) TWO CORRUGATIONS.
2. TAP TEE CONNECTION MAY CONSIST OF QWICKSEAL, INSERTA TEE OR APPROVED EQUAL.
3. ALL PVC FITTINGS TO BE SOLVENT CEMENTED.
4. PVC MAY BE EITHER SDR 35 or SCH 40.
5. PVC PIPE MAY BE SOLID OR PERFORATED PER ENGINEER.
6. CORE HOLE SIZE AS FOLLOWS: 4" (100 mm) CUT TO 5" (125 mm)

TITLE: HYDROSTOR HS180 - VENT TUBE | DRAWN BY: AED | DATE: 13-Sep-21 | DRAWING NUMBER: D-7-208 | SCALE: NTS | SHEET: 1 OF 1



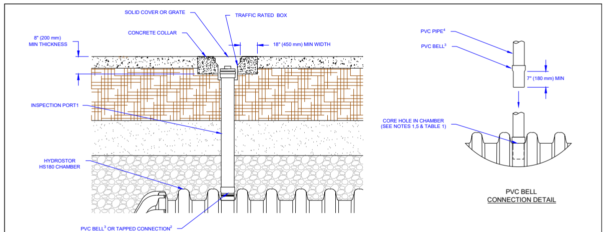
TITLE: HYDROSTOR HS180 - UNDERDRAIN | DRAWN BY: RMA | DATE: 09-Feb-24 | DRAWING NUMBER: D-7-206 | SCALE: NTS | SHEET: 1 OF 1



NOTES:

1. SCOUR PROTECTION SHOULD USE A WOVEN GEOTEXTILE. GEOTEXTILE SHOULD MEET AASHTO M288 CLASS 1 SPECIFICATION.
2. SCOUR PROTECTION IS ONLY NEEDED WITH CHAMBER ROWS CONNECTED TO THE INLET MANIFOLD.

TITLE: HYDROSTOR HS180 - SCOUR PROTECTION | DRAWN BY: AED | DATE: 08-Dec-25 | DRAWING NUMBER: D-7-207 | SCALE: NTS | SHEET: 1 OF 1



PVC BELL CONNECTION DETAIL

NOTES:

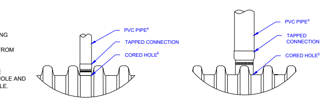
1. REFER TO TABLE 1 FOR DETAILS.
2. TAPPED CONNECTION CAN CONSIST OF EZ-TEE, QWIKSEAL, OR APPROVED ENGINEERING EQUIVALENT.
3. PVC FITTING CAN CONSIST OF BELL OR OTHER CONNECTION WHICH PREVENTS PIPE FROM SLIDING INTO THE CHAMBER. ALL PVC FITTINGS TO BE SOLVENT CEMENTED.
4. PVC MAY BE EITHER SDR 35 OR SCH 40.
5. HOLES SHOULD BE CUT WITH A HOLE SAW, ALTHOUGH A RECIPROCATING SAW MAY BE NEEDED FOR 6" AND 8" HOLES ON THIS CHAMBER. IF NEEDED, START WITH SMALLER HOLE AND SLOWLY CUT OUT MORE EVENLY FROM SIDES UNTIL TIGHT FIT OF CONNECTION IN HOLE.

TABLE 1

CORED HOLE SIZE ESTIMATES (CONFIRM DIMENSIONS PRIOR TO CUTTING)

CONNECTION	4" (100 mm) PVC INSPECTION PORT	6" (150 mm) PVC INSPECTION PORT	8" (200 mm) PVC INSPECTION PORT	10" (250 mm) PVC INSPECTION PORT
PVC SDR 35*	~4-1/4" (108 mm) hole centered in valley of corrugation.	~6-3/8" (162 mm) hole centered on corrugation crest.	~8-1/2" (216 mm) hole centered on corrugation crest.	N/A
PVC SCH 40*	~4-5/8" (117 mm) hole centered in valley of corrugation.	~6-3/4" (172 mm) hole centered on corrugation crest.	~8-3/4" (222 mm) hole centered on corrugation crest.	N/A
QWIKSEAL	5" (125 mm) hole centered in valley of corrugation. P/N: QS-4	Not recommended	9" (230 mm) hole centered on corrugation crest. P/N: QS-8	N/A
EZ-TEE	4-1/2" (114 mm) hole centered on corrugation crest.	6-1/2" (165 mm) hole centered on corrugation crest.	8-3/4" (222 mm) hole centered on corrugation crest.	10-7/8" (276 mm) hole centered on corrugation crest.

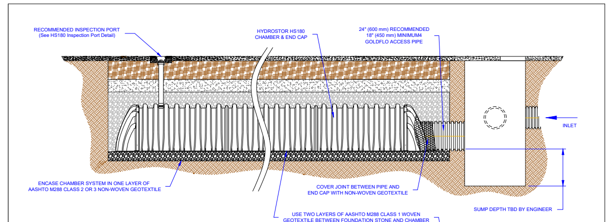
*CONFIRM O.D. OF PIPE PRIOR TO CUTTING TO ENSURE HOLE IS TIGHT FITTING AROUND PVC PIPE. CUT HOLE TO MATCH O.D. AS CLOSE AS POSSIBLE.



CENTERED IN VALLEY OF CORRUGATION CONNECTION DETAIL

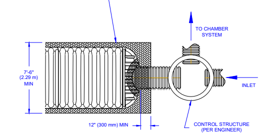
CENTERED ON CORRUGATION CREST CONNECTION DETAIL

TITLE: HYDROSTOR HS180 - INSPECTION PORT | DRAWN BY: RMA | DATE: 07-Aug-25 | DRAWING NUMBER: D-7-203 | SCALE: NTS | SHEET: 1 OF 1



NOTES:

1. HYDROSTOR HS180 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418. HS180 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION GUIDELINES.
2. GEOTEXTILE: TWO DIFFERENT GEOTEXTILES WILL BE USED IN CREATING A FUNCTIONING SEDIMENT ROW. TO ENSURE FABRIC IS SUITABLE WITH IN SITU SOILS, A GEOTECHNICAL ENGINEER SHOULD BE CONSULTED.
   - AN AASHTO M288 CLASS 2 OR 3 NON-WOVEN GEOTEXTILE SHOULD BE USED FOR EMBEDMENT BACKFILL MATERIAL 3/4 TO 2 INCH (19 - 51 MM). GEOTEXTILE FILTER FABRIC IS PLACED AROUND THE SYSTEM TO PREVENT NATIVE SOIL FROM MIGRATING INTO THE EMBEDMENT BACKFILL MATERIAL. TO ENSURE FABRIC IS SUITABLE WITH IN SITU SOILS, A GEOTECHNICAL ENGINEER SHOULD BE CONSULTED.
   - TWO LAYERS OF AN AASHTO M288 CLASS 1 WOVEN FABRIC IS PLACED BETWEEN THE FOUNDATION AND THE CHAMBER FOR THE CREATION OF THE SEDIMENT ROW. THE TWO LAYERS PROVIDE A PROTECTIVE BARRIER FOR THE EMBEDMENT BACKFILL BUT STILL ALLOW WATER TO INFILTRATE INTO THE SYSTEM. THE WOVEN GEOTEXTILE IS DURABLE ENOUGH TO ALLOW JETTING TO CLEAN THE SEDIMENT ROW.
3. INSPECTION AND MAINTENANCE: INSPECTION OF THE SYSTEM SHOULD OCCUR BIANNUALLY TO ENSURE LARGE AMOUNTS OF SEDIMENT OR DEBRIS HAVE NOT BEEN DEPOSITED IN THE SEDIMENT ROW. DURING THE FIRST YEAR INSPECTION SHOULD OCCUR MORE FREQUENTLY DUE TO CONSTRUCTION SEDIMENT LOADING. TO CLEAN THE SYSTEM, A JET/VAC PROCESS CAN BE USED TO REMOVE SEDIMENT AND DEBRIS FROM THE SEDIMENT ROW. FOR MORE INFORMATION, REFER TO PRINSCO'S "RETENTION/DETENTION CLEANING AND MAINTENANCE" TECHNICAL NOTE.
4. ACCESS PIPE: PRINSCO RECOMMENDS A 24 INCH (600 mm) DIAMETER ACCESS PIPE TO THE SEDIMENT ROW. CONTACT YOUR LOCAL SALES REPRESENTATIVE WITH ANY QUESTIONS.



TITLE: HYDROSTOR HS180 - SEDIMENT ROW | DRAWN BY: AED | DATE: 04-Jun-25 | DRAWING NUMBER: D-7-202 | SCALE: NTS | SHEET: 1 OF 1

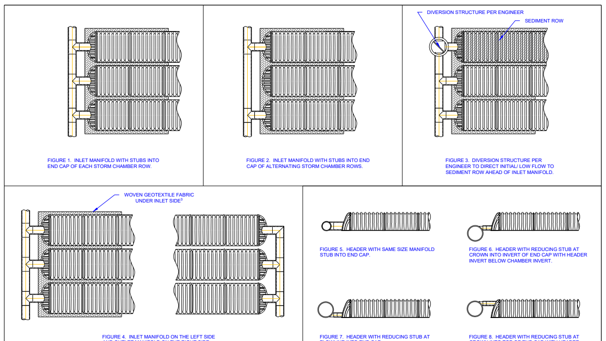


FIGURE 1. INLET MANIFOLD WITH STUBS INTO END CAP OF EACH STORM CHAMBER ROW.

FIGURE 2. INLET MANIFOLD WITH STUBS INTO END CAP OF ALTERNATING STORM CHAMBER ROWS.

FIGURE 3. DIVERSION STRUCTURE PER ENGINEER TO DIRECT INITIAL/ LOW FLOW TO SEDIMENT ROW AHEAD OF INLET MANIFOLD.

FIGURE 4. INLET MANIFOLD ON THE LEFT SIDE AND OUTLET MANIFOLD ON THE RIGHT SIDE.

FIGURE 5. HEADER WITH SAME SIZE MANIFOLD STUB INTO END CAP.

FIGURE 6. HEADER WITH REDUCING STUB AT CROWN INTO INVERT OF END CAP WITH HEADER INVERT BELOW CHAMBER INVERT.

FIGURE 7. HEADER WITH REDUCING STUB AT FLOWLINE INTO END CAP.

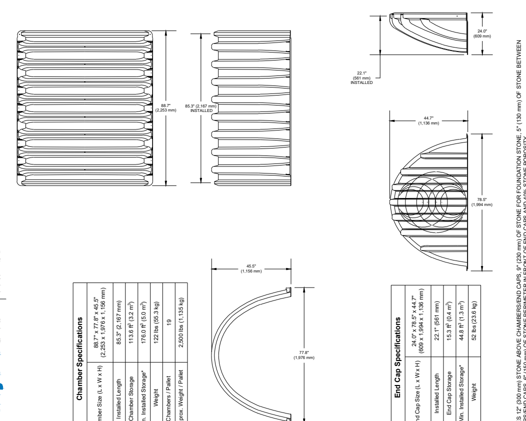
FIGURE 8. HEADER WITH REDUCING STUB AT CROWN INTO TOP OF END CAP WITH HEADER INVERT AT OR BELOW STUB INVERT.

NOTES:

1. THERE ARE MANY INLET HEADER AND OUTLET HEADER POSSIBILITIES. THE CONFIGURATIONS SHOWN ON THIS DRAWING ARE JUST A FEW OF THE OPTIONS.
2. INLET AND OUTLET MANIFOLDS SHALL BE INSERTED AT LEAST 12" (300 mm) INTO CHAMBER END CAPS. MANIFOLD HEADERS SHALL BE AT LEAST 12" (300 mm) FROM THE BASE OF THE END CAPS.
3. PRINSCO RECOMMENDS A SCOUR CONTROL MEASURE AT INLETS SUCH AS A WOVEN GEOTEXTILE FABRIC TO PROTECT FOUNDATION STONE. REFER TO PRINSCO'S SCOUR PROTECTION DETAIL.

TITLE: HYDROSTOR CHAMBER - HEADER CONFIGURATIONS | DRAWN BY: AED | DATE: 13-Sep-21 | DRAWING NUMBER: D-7-100 | SCALE: NTS | SHEET: 1 OF 1

HydroStor® | HS180



Chamber Specifications	
Chamber Size (L x W x H)	88.7" x 77.8" x 45.5" (2,253 x 1,976 x 1,156 mm)
Installed Length	85.3" (2,167 mm)
Chamber Storage	113.6 ft^3 (3.2 m^3)
Min. Installed Storage*	176.0 ft^3 (5.0 m^3)
Weight	122 lbs (55.3 kg)
Chambers / Pallet	19
Approx. Weight / Pallet	2,500 lbs (1,135 kg)

End Cap Specifications	
End Cap Size (L x W x H)	24.0" x 78.5" x 44.7" (609 x 1,994 x 1,136 mm)
Installed Length	22.1" (561 mm)
End Cap Storage	15.3 ft^3 (0.4 m^3)
Min. Installed Storage*	44.8 ft^3 (1.3 m^3)
Weight	52 lbs (23.6 kg)

*ASSUMES 12" (300 mm) STONE ABOVE CHAMBERS/END CAPS, 9" (230 mm) OF STONE FOR FOUNDATION STONE, 5" (130 mm) OF STONE BETWEEN CHAMBERS/END CAPS, 6" (150 mm) OF STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

TITLE: HYDROSTOR HS180 - SPECIFICATION | DRAWING NUMBER: D-7-201

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TITLE: HYDROSTOR HS180 - DATA SHEET

DRAWN BY: AED	DATE: 12-Dec-25	DRAWING NUMBER: D-7-209
SCALE: NTS	SHEET: 1 OF 1	