



Installation Instructions

For SC-34 & SC-44
NDS® StormChamber®



NDS® StormChamber® Installation Instructions

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BEFORE YOUR STORMCHAMBERS ARRIVE

Materials needed

- **Drywall screws** – 3" (75 mm)
To secure overlap of chambers at their base.
- **Crushed, washed, hard stone** – ¾" – 2" (20 mm – 50 mm)
For trench base and backfill above and around the StormChamber system.
- **Schedule 40 or SDR 35 PVC pipes** – 10" (250 mm)*
For connecting adjacent chambers.
- **Schedule 40 or SDR 35 PVC pipes** – 10" (250 mm)*
One for each cleanout riser.

Equipment needed

- **Long chain/cable/rope** (to remove oversized pallets from an enclosed truck)
- **Wire cutters** (to cut bands securing chambers to pallets)
- **Forklift** (with extended forks, to remove oversized pallets from truck)
- **Excavator**
- **Battery or power operated screw guns** (to screw together overlap of chambers at their base)
- **Transit or laser**
- **Stone bucket**
- **Sawzall, router bit on a drill, or keyhole saw** (to cut chamber as needed)
- **Light-weight, tracker dozer**
Not exceeding 1,100 lbs (500kg) per square foot to spread stone over chambers.
- **Hand-operated compactor, vibratory roller, or tracked vehicle** (for compaction of soil backfill).
Not exceeding 1,100lbs (500kg) per square foot.

*Or as specified

WHEN YOUR STORMCHAMBERS ARRIVE

Unloading the pallets

Use a forklift, chain, cable or strap to drag the pallets off the enclosed van. Use a forklift with extended blade to remove chambers from a flat-bed truck.

Count the materials

Check your list of materials and make sure the number you have matches your purchase order. The list should include, but may not be limited to, the following:

- | | |
|-------------------|------------------------------|
| • Start Chambers | • SedimenTraps |
| • Middle Chambers | • Non-Woven Filter Fabric |
| • End Chambers | • Woven Stabilization Fabric |
| • Closed Chambers | • Manhole Frames and Covers |

Check the materials for damage. **CONTACT NDS IMMEDIATELY IF ANY MATERIALS ARE MISSING OR DAMAGED.** We maintain pictures of your pallets as they appear when loaded for delivery.

NOTE: Do not be concerned if the narrow shipping strips at the end wall of the chambers appear damaged. You remove them as part of the installation.

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!!HEAT ADVISORY!!

In hot weather conditions, if possible, store all chambers and backfill stone in a shaded area until they are ready to be installed. Our recommendation is that the system be laid out and all pipes connected the day prior to backfilling with stone. **Backfilling of stone should be restricted to cooler morning periods only, when temperature is 80-85° F**

TRENCH PREPARATION

Make sure there's no forecast of rain between when you excavate the trench and when you cover the stone above the chambers with filter fabric.

Excavate the trench

Make sure the bottom of the trench is level. There should be enough room for the StormChamber system, plus at least one foot of border stone. If you can't excavate from outside the trench, back the excavator out as you excavate to avoid compacting the soil.

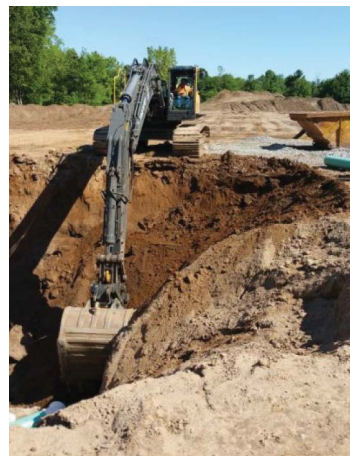
Excavate for SedimenTraps™*

Excavate a hole approximately 5' deep by 5' wide by 5' long wherever SedimenTraps are specified. SedimenTraps must be aligned directly below the riser pipe. Place at least 6" of stone at the bottom of each excavated hole.

Line the trench walls with non-woven filter fabric

Line the trench walls (not the trench bottom) with provided non-woven filter fabric. Make sure the filter fabric overlaps by at least two feet.

**SedimenTraps must be centered below the defined top portal of the chamber/riser pipe. The 44" does not have a defined top portal - contractor to cut a portal on the crown of the chamber at the defined distance from the end.*



INSTALLING THE NDS® STORMCHAMBER® SEDIMENTRAPPS™

Most StormChamber systems include SedimenTraps to capture and help remove sediment.

Place the SedimenTraps

Place a SedimenTrap in each of the holes. Only the top corrugation should be exposed above the height of the stone base.

Secure with stone

Fill any extra space around the SedimenTrap with ¾" – 2" crushed, washed, hard stone.

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INSTALLING BASE ROCK & FILTER FABRIC

1. Add hard stone

Cover bottom of trench with $\frac{3}{4}$ " – 2" crushed, washed, hard stone, to the depths specified.

2. Level it out

If necessary, you can use a light-weight tracked dozer to level the stone. Dozer should not exceed 1,100 lbs (500kg) per square foot to avoid soil compaction.

3. Place woven stabilization netting fabric

Place woven stabilization netting underneath the entire row(s) of StormChamber's receiving inlet storm drain pipes. Cut a hole so that the netting fits snugly under the top corrugation of the SedimenTrap.



PLACING THE STORMCHAMBERS

Cut off shipping strips

Cut off the narrow shipping strips at the end walls of the middle & end chambers to allow the chambers to overlap. Do not cut off the weir-wall of the start chamber.

Place chambers

Place all Start Chambers first. Make sure the closed ends of the Start Chambers are at least 1 foot from the facing trench wall. Next build the chamber rows by placing the first rib of a Middle Chamber over the last rib of each Start Chamber. Extend all rows equally rather than one at a time. Finish each row with an End Chamber placed at least 1 foot from the end of the trench.

Screw chambers together

As you overlap the first rib of the next chamber over the last rib of the previous chamber, screw the chambers together at the foot of the overlapped ribs with 3 inch drywall screws. Include one screw on each side, making sure to bring the chambers close enough so no stone can pass through during the backfilling process.

To minimize installation time, begin placing pipe and backfilling as the remaining chambers are being placed.



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INSTALLING PIPES

Cut out the side portal holes

After placing the Start Chambers, cut open the side portals along the indentation guides for the lateral connecting pipes, as specified.

Insert row connecting pipes*

Mark the midpoints of each connecting pipe and insert them between the adjacent chambers so the midpoint is centered between the two chambers. The connecting pipes must be inserted about 6" into each chamber. This requires 4 or 5 ft. pipe sections.

Cut hole for riser pipes*

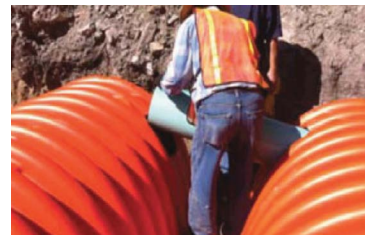
Cut out the top portals along the indentation guides as specified. **

Install cleanout risers*

Install the cleanout risers using 10" PVC pipes, and manhole frames and lids (supplied).

****If there's more than 1/2 inch gap between the pipe-hole and the pipe, cut an "X" sized just short of the hole diameter in one or more pieces of filter fabric and place it over the pipe hole before inserting the pipe. Keep repeating this process until the gap is filled and a tight seal is achieved.***

*****SC-44 lacks a defined top portal. The hole should be centered over the SedimenTrap™ and sized for the riser pipe.***



BACKFILLING THE SYSTEM

Backfill the hard stone

Deposit the 3/4" – 2" crushed, washed, hard stone **directly along the centerline of the StormChamber rows to prevent shifting of the rows.** Level the hard stone with a tracked vehicle not exceeding 1,100 lbs (500kg) per square foot. Make sure to keep at least 6" of stone under the tracks at all times.

Cover stone with non-woven filter fabric

Cover the backfill stone with non-woven filter fabric, making sure to overlap sheets by at least 2'.

Backfill with soil or as specified

Backfill the installation with soil and compact in lifts 6 to 8 inches high to at least 95% Standard Proctor. Make sure the pressure of the tracked dozer does not exceed 1,100 lbs (500kg) per square foot. Start at one corner of the system when grading lifts and keep at least 1 foot of under the tracks at all times. After compacting the backfill and setting the final grade, avoid traversing over the area with heavy equipment until paved.



IMPORTANT:

These instructions assume acceptable construction procedures, and that trucks do not exceed specified DOT load limits. Uncustomary loads or improper load distributions in vehicles may require additional cover. Contact NDS for installation under abnormal conditions. Installations not in compliance with these instructions will void the warranty. Contact NDS for technical assistance at 1.888.825.4716 or email us at TechService@ndspro.com

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TERMS AND CONDITIONS OF SALE

Terms: Standard terms are 2% NET 30 days. A 1 1/2% per month (18% per annum) service charge will be added to all past due accounts.

All invoices are to be paid in US Currency. Title and risk of loss pass to buyer upon shipment.

Freight Allowance: Freight prepaid on orders of \$1250.00 NET or more. Prepaid freight levels are based on shipments to one location only. It is the responsibility of the customer to determine if his purchase order meets the minimum freight allowance required. NDS reserves the right to select the carrier and point of shipment.

Alaska and Canada Orders: Freight prepaid on orders of \$2,500.00 (US\$) NET or more.

Hawaii Orders: Freight prepaid on orders of \$3,500.00 NET or more.

The above freight policies apply to the continental US and Canada only. For other areas please contact NDS.

Errors & Claims: All claims for shortage in shipment or damaged material must be noted on the "Bill of Lading" and a written request for credit submitted to NDS within 15 days of shipment. NDS responsibility ceases upon delivery to the carrier.

Returned Goods: Returned goods will be accepted only after written approval and shipping instructions are received from NDS.

A return goods authorization number is required and must be on all cartons, documents, and correspondence. All returns are subject to a 25% restocking charge, freight cost of returned goods (plus "out freight if applicable"). A higher restocking charge may be assessed against any return requiring extraordinary handling costs.

Minimum Order: \$100.00 minimum order net billing. A 25% broken box charge will be added for other than full box quantities.

21DI Drip Components, 25DS Drua Slope Channel and 25FC Filcoten Channel are excluded from this policy.

Limited One Year Warranty: The liabilities of NDS are limited solely and exclusively to replacement as set forth in our standard "Statement of Warranty", alone and do not include any liability for incidental, consequential or other damage of any kind whatsoever, whether any claim is based upon theories of contract, warranty, negligence or tort and without any limitations and do not include shipping charges, labor, installation or any other losses or expenses incurred in operation of any replacement specialty item or fitting. NDS drainage products are designed to be used for exterior surface drainage only.

Limited Lifetime Warranty: NDS warrants to the original owner of its NDS catch basins, grates, channel and Pro Series valve boxes, subject to the conditions set forth in this warranty, that NDS catch basins, grates, channel and Pro Series valve boxes will remain free from manufacturing defects.

All NDS products are guaranteed against defects resulting from faulty workmanship or materials. Claims for labor costs and other expenses required to replace defective products or repair of any damage resulting from the use thereof will not be allowed by NDS.

Our liability is limited to replacement of products acknowledged by NDS to be defective.

Exclusive Warranties and Remedies: The foregoing remedies are exclusive and are given and accepted in lieu of (i) any and all other warranties, expressed or implied, including without limitation the implied warranties of merchantability and fitness for particular purpose; and (ii) any obligation, liability, right, claim or remedy in contract or tort, whether or not arising from NDS, Inc.'s negligence, actual or imputed. The remedies of customer shall be limited to those provided herein to the exclusion of any and all other remedies including, without limitation, incidental or consequential damages. No agreement varying or extending the foregoing warranties or these limitations will be binding on NDS, Inc., unless such is signed in writing by an authorized officer of NDS, Inc.

The liability of NDS, Inc., hereunder shall be limited to restoring to good working order, provided that NDS, Inc., is not required to restore the product to good working order when such failure is due to causes beyond NDS, Inc.'s control, including but not limited to, acts of God, acts of civil or military authority, priorities, strikes, floods, epidemics, war, riots, and other causes that are beyond the manufacturers control.

These provisions are complete and exclusive statements of all terms and conditions between NDS, Inc., and the consumer. These provisions may not be varied, supplemented, qualified or interpreted by any prior course of dealings, written or oral or by trade usage. No NDS, Inc. agent, officer or employee has authority to make any representation, promise or warranty concerning these provisions.

FOR TECHNICAL INFORMATION, CONTACT: Technical Services, (888) 825-4716, TechService@ndspro.com

Stormwater Management brought to you by NDS



DesignWorx™ by NDS: NDS civil engineers and expert technicians are available to help make your project a success. We can evaluate and help you with the preparation of submittal drawings and specs to align with best stormwater practices. **(888) 825-4716** | ndspro.com/submityourdesign

Onsite support: Our customer support team will provide free on-site installation assistance, as needed.

More questions? Call **(800) 726-1994** (option 3)

Visit ndspro.com for: Downloads, instructions, detail sheets, configurations and more.