

CHANNEL DRAINS

Durable

Designed for maximum durability and drainage, NDS Channel Drains are a proven alternative to traditional concrete drains. UV inhibitors in the grates, channel and component parts prevent fading and cracking from the sun. All plastic grate and channel components are **chemically resistant, rust-proof, and maintenance-free.**

Simple

NDS Channel is light-weight and easy to install. Grates are removable for easy clean-out and replacement. Channel Grates may be held in place with NDS screws or hold down clips. A complete line of accessories is available for each channel.

NDS Channel Systems operate on the same principle as a roof gutter. Our "Profile Series" of channel drains connect like PVC pipe. Our "Modular Pro Series" Injection Molded Channel has mechanical interlocking joints. All NDS channel easily connects to sewer and drain pipe and fittings or SCH 40 pipe and fittings.

Versatile

To blend with surrounding surfaces, our Channel Grates are available in six colors, as well as solid brass for the Mini Channel. Cast iron and rolled steel grates are available for the Dura Slope and Pro Series Channel. A steel or PVC frame is also available for the Dura Slope.

The Channel System also offers a choice of outlets. Water can be evacuated from the bottom of the channel or from the end or sides of the channel.

Efficient

Channel Drain eliminates the need for grading a deck surface to a low area. Instead, the deck is gradually sloped in one direction or plane, and the channel drain acts as a perimeter drain at the edge of the slope.

Most hardscapes experience more runoff than landscapes due to the lack of water absorption. Channel Drain systems provide more overall open surface area than conventional area grates.

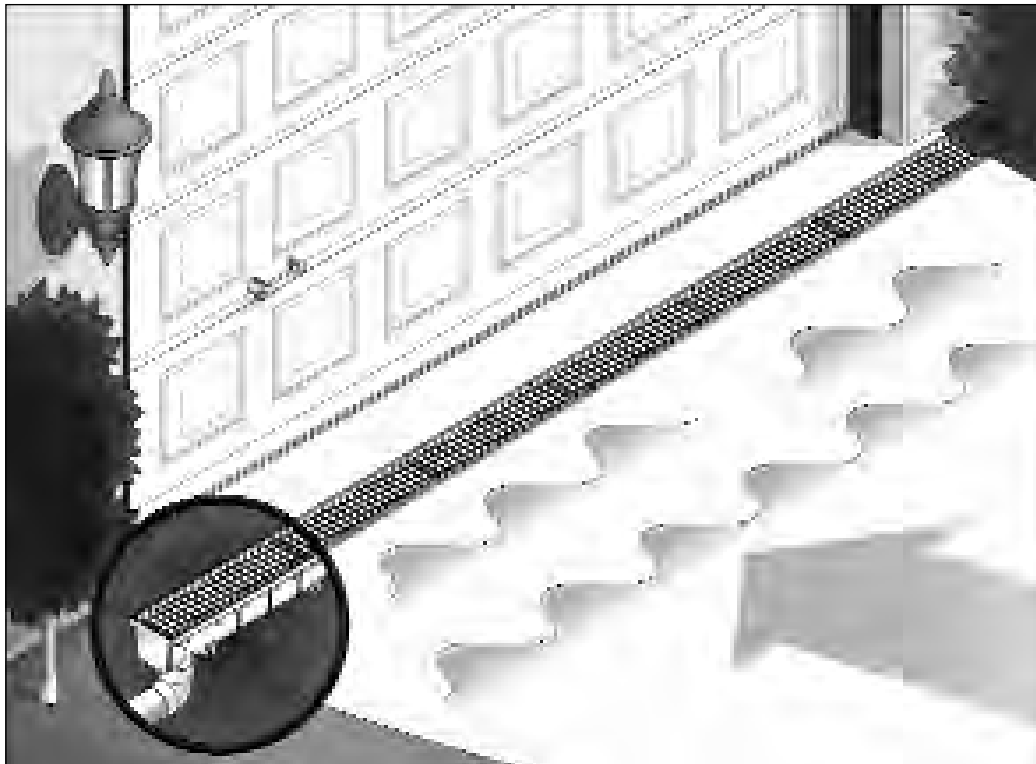
Non-Sloped Channel System Advantages

NDS offers non-sloped channel system advantages; less expensive, simplifies inventory, eliminates need to stock various sloping channel sections. Multiple outlets provide safety through redundancy, should any individual outlet become clogged. Proper flow is assured by use of sloped drain pipe.

Recommended Applications

- Driveways*
- Parking Lots*
- Warehouses
- Swimming Pools & Spas
- Washdown Areas
- Tennis Courts
- Sidewalks
- Patios
- Sports Facilities
- Nurseries & Greenhouses

*Refer to page 27 for specific asphalt installation instruction.



Installation

1. Standard Installation

Excavate a trench to accommodate the channel and bedding concrete. Erect a string line at each end of the drain run as a guide for laying the channels to the required level. Begin channel installation at the evacuation or discharge end of the run where the outlet or outlets are located.

Install channel end-to-end PVC cementing sections together. Design bottom or end outlets into the channel run in the appropriate location and glue to the drain pipe or fittings. PVC cement end caps where appropriate.

Using either NDS stakes, 1/2" or 5/8" rebar or wood stakes, anchor channel to the trench bed every 24" on each side of channel. Backfill with either concrete, sand, or soil depending on the application. Pour slab to grade and finish concrete.

Figure 1A illustrates a light vehicular installation in which a concrete base may not be required. Compacted soil and a 1" sand base may be used in place of concrete.

Figure 1B illustrates a concrete base underneath the channel recommended for heavy load applications or freeze/thaw zones where heaving may be a problem.

2. Suspended Installation

Suspended installation is ideal for retrofit installations with an existing concrete slab or new construction where forms can be used to suspend the channels. Prepare the trench excavation. Using 2" x 4" boards span the width of the trench and bolt the channel grates to the boards. Pour and compact concrete under and around the channels. Finish to the proper grade. Figure 2

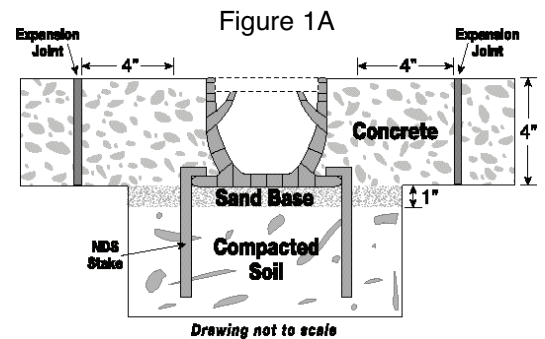
3. Slurry Installation

This installation may be used in lieu of the standard installation. Prepare the trench excavation and pull a stringline to the proper elevation. Pour a slurry of concrete in the trench to a depth that will insure at least 4" of concrete underneath the channels. Lay the channels in the bedding slurry. Check the channel alignment and grade again. After the slurry sets, concrete can be poured around the channel and finished to the proper grade. Figure 3

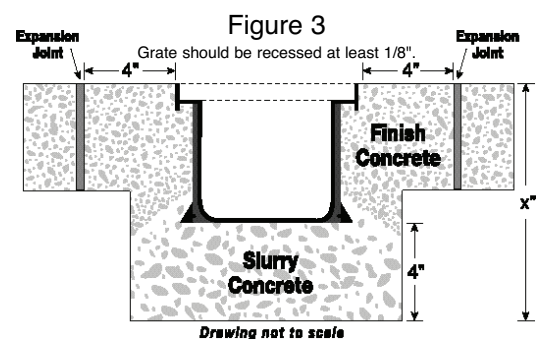
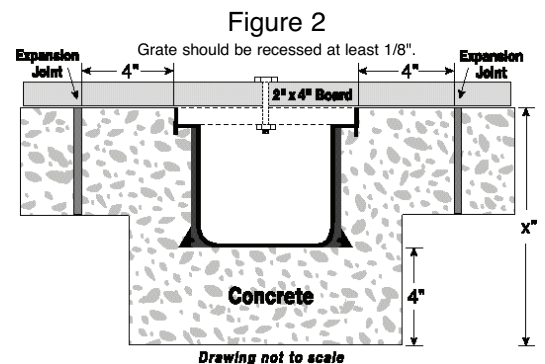
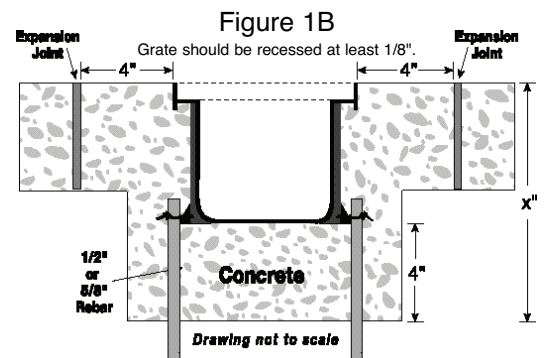
Important Installation Notes:

1. Refer to load classification chart for proper application.
2. PVC primer and medium body fast set PVC solvent cement must be used to cement all components.
3. Grate must be installed prior to pouring concrete or backfill.
4. Grates should be taped prior to pouring concrete to prevent debris from entering channel during installation.
5. **Grate should be recessed 1/8" below finish grade in non traffic applications. Grate should be recessed 1/4" in traffic applications.**
6. In asphalt or hot mastic applications, the channels must be encased in concrete for strength and to prevent distortion of the channel.
7. Expansion joints must be provided parallel, but not immediately adjacent to each side of the drain run and crack control joints utilized at right angles to the channel for installation in concrete.
8. Grate must be installed and screwed down on channel at all times except for cleaning.

Mini and Spee-D® Channel Only



Mini, Spee-D® and Pro Series Channel



PROFILE CHANNEL DRAINS

Details

- Unique patented flying buttress design provides load bearing support from both sides as well as underneath.
- Available in four sizes: Dura Channel for traffic applications and large flow capacities, Spee-D® for driveways, large decks and commercial areas, Mini for landscapes, pools or decks and Micro for residential pools and spas.

Installation

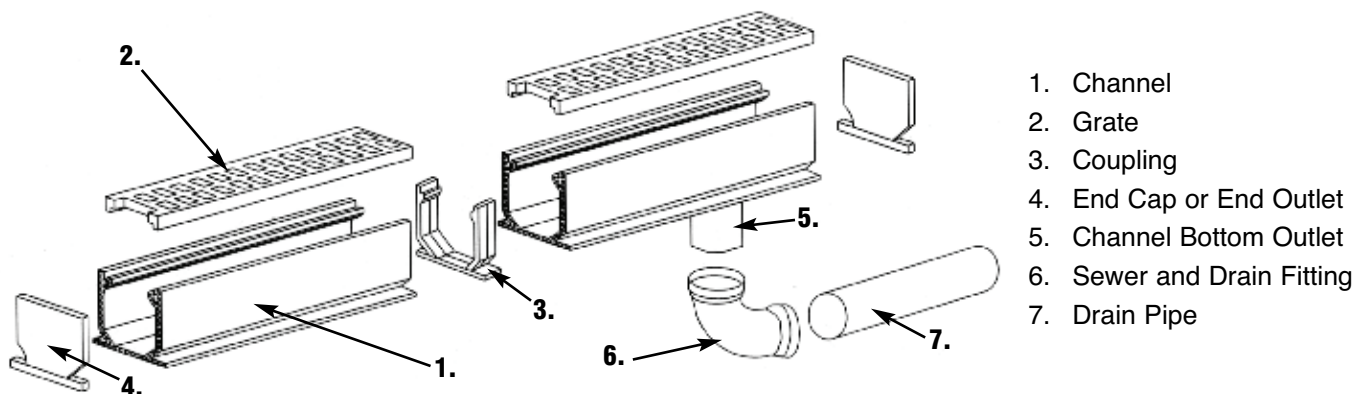
- Unique flanges on the bottom of the channel provide an anchoring lip for straight installation and prevents floating.
- Refer to page 28 for specific installation instructions.

Materials and Standards

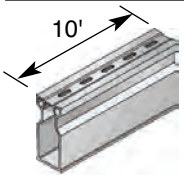


- Profile channel can be cut to any length and solvent-welded like PVC pipe. Sold by the foot.
- Grates available in six colors - see individual products for details.
- Mini Channel Grate also available in solid brass.
- Channel system offers choice of bottom, end or side water evacuation.
- Concrete is not required under some channels for light vehicular applications. Standards vary per product - see individual section for details.



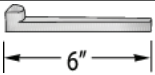

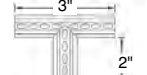




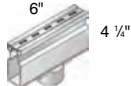



Mini and Spee-D® Channel System Components



- Excellent performance at lowest possible cost. • Designed for residential applications including swimming pools, spas and patios.
- Unique design features grate openings parallel to channel length and recessed grate for strength and effective water runoff.

| | Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | Product Class | Specifications |
|--|----------|---|-------|-----------|----------------|---------------|---|
|  <p>10'</p> <p>3/16" x 5/8" Grate Opening</p> | 8001 | 10 ft. Long Micro Channel | White | 100Ft | 5.00 | 25PF | NDS #8001, #8002, and #8003, 10 ft. Micro Channel with Recessed Reinforced Grate Area, Parallel Drain Slots with UV inhibitor. Open surface area 2.50 square inches per linear foot. 3.28 GPM per foot. |
| | 8002 | Includes 1 coupling | Sand | 100Ft | 5.00 | 25PF | |
| | 8003 | | Gray | 100Ft | 5.00 | 25PF | |
|  <p>1 1/2"</p> <p>3 1/2"</p> <p>1 1/2"</p> | | | | | | | |
| | |  <p>(See pg. 47)</p> <p>ADA Compliant/Heel-proof</p> | | | | | |

MICRO ACCESSORIES

| | Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | Product Class |
|---|----------|---|-------|-----------|----------------|---------------|
|  <p>6"</p> | 230 | 6" Channel Installation Stake | Gray | 24 | 0.04 | 25PF |
|  <p>3"</p> | 8301 | Micro Channel 45° Elbow | White | 5 | 0.30 | 25PF |
| | 8302 | | Sand | 5 | 0.30 | 25PF |
| | 8303 | | Gray | 5 | 0.30 | 25PF |
|  <p>3"</p> <p>2"</p> | 8371 | Micro Channel Tee | White | 5 | 0.40 | 25PF |
| | 8372 | | Sand | 5 | 0.40 | 25PF |
| | 8373 | | Gray | 5 | 0.40 | 25PF |
|  <p>3"</p> | 8381 | Micro Channel 90° Elbow | White | 5 | 0.40 | 25PF |
| | 8382 | | Sand | 5 | 0.40 | 25PF |
| | 8383 | | Gray | 5 | 0.40 | 25PF |
|  | 8461 | Micro 1-1/2" Sch. 40 Spigot End Outlet | White | 10 | 0.10 | 25PF |
| | 8462 | | Sand | 10 | 0.10 | 25PF |
| | 8463 | | Gray | 10 | 0.10 | 25PF |
|  | 8471 | Micro End Plug | White | 20 | 0.05 | 25PF |
| | 8472 | | Sand | 20 | 0.05 | 25PF |
| | 8473 | | Gray | 20 | 0.05 | 25PF |
|  | 8481 | Micro Channel Couplings only Fits Inside Channel | White | 20 | 0.10 | 25PF |
|  <p>6"</p> <p>4 1/4"</p> | 8501 | Micro 1-1/2" Sch. 40 Spigot Bottom Outlet | White | 10 | 0.35 | 25PF |
| | 8502 | | Sand | 10 | 0.35 | 25PF |
| | 8503 | | Gray | 10 | 0.35 | 25PF |
|  <p>6"</p> | 8511 | Micro 1-1/2" Sch. 40 Spigot Side Outlet | White | 10 | 0.35 | 25PF |
| | 8512 | | Sand | 10 | 0.35 | 25PF |
| | 8513 | | Gray | 10 | 0.35 | 25PF |
|  | 8601 | Micro Hold Down Clips Use with Channel Stakes to Hold Channel in Place | White | 20 | 0.10 | 25PF |
|  <p>4"</p> | 8651 | Micro Channel Clean Out | White | 10 | 0.30 | 25PF |
| | 8652 | | Sand | 10 | 0.30 | 25PF |
| | 8653 | | Gray | 10 | 0.30 | 25PF |

MINI CHANNEL™ DRAINS

Patented

PROFILE CHANNEL DRAINS

- Low-cost alternative to Spee-D® Channel.
- Excellent for light duty applications including residential pools, patios, spas and tennis courts.

| | Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | List Price (EA) | Product Class | Specifications |
|--|---------------|--|----------------------------------|--|----------------|-----------------|---|---|
| | 540 | 3 ft. Channel Grate | White | 48ft | .688 | 16.51 | 25PF | NDS #540, #541, #542, #543, #544, #551, 3 ft. Structural Foam Polyolefin Channel Grate with UV inhibitor. Open surface area 11.30 square inches per foot. 14.80 GPM per foot. |
| | 541 | | Gray | 48ft | .688 | 16.51 | 25PF | |
| | 542 | | Green | 48ft | .688 | 16.51 | 25PF | |
| | 543 | | Black | 48ft | .688 | 16.51 | 25PF | |
| | 544 | | Sand | 48ft | .688 | 16.51 | 25PF | |
| | 551 | | Brick Red | 48ft | .688 | 16.51 | 25PF | |
| | 552B 553PB | 1 ft. Brass Channel Grate | Satin Brass 12 Polished Brass | 1.25 12 | 103.52 1.25 | 25PF 25PF | NDS #552B or #553PB, 1 foot Mini Channel Solid Brass Grate with brass screws. Open surface area 10.00 square inches per foot. 13.10 GPM per foot. | |
| | 500 | 6 ft. Mini Channel Drain | Gray | 48ft | 4.00 | 50.54 | | 25PF |
| | | Requires 4 screws per Grate ADA Compliant/Heel-proof Fits #500 Mini Channel. ADA Compliant/Heel-proof | | | | | | |
| | | Brass Grate Plastic Grate | | NDS #500, 6 ft. PVC Mini Channel Drain with inverse flying buttress design, bottom flange, patented honeycomb reinforced walls and UV inhibitor. | | | | |
| | | Grate should be recessed 1/8" below finish grade in non traffic applications. Grate should be recessed 1/4" in traffic applications. | | | | | | |

MINI CHANNEL ACCESSORIES

| | Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | Product Class |
|--|----------|--|-----------|-----------|----------------|---------------|
| | 529 | Stainless Steel Screws, FH #4 x 5/8" | Steel | 64 | 0.10 | 25PF |
| | 230 | 6" Channel Installation Stake | Gray | 24 | 0.04 | 25PF |
| | 532 | 2" Sch. 40 Hub to 3" S&D Spigot Adapter | White | 20 | 0.20 | 30PV |
| | 533 | 2" Sch. 40 Hub to 4" S&D Spigot Adapter | White | 20 | 0.35 | 30PV |
| | 546 | Spigot End Outlet for 2" Sch. 40 Pipe Fitting | Gray | 10 | 0.30 | 25PF |
| | 547 | 3" Channel End Cap | Gray | 20 | 0.15 | 25PF |
| | 548 | 3" Channel Coupling | Gray | 20 | 0.20 | 25PF |
| | 550 | 3' Long Channel with 2" Sch. 40 Spigot Bottom Outlet | Gray | 6 | 2.17 | 25PF |
| | 5300 | Fabricated 45° Elbow with Grate | Gray | 1 | 0.40 | 25PF |
| | 5301 | | Green | 1 | 0.40 | 25PF |
| | 5303 | | Sand | 1 | 0.40 | 25PF |
| | 5370 | Fabricated Tee with Grate | Gray | 1 | 0.50 | 25PF |
| | 5372 | | Black | 1 | 0.50 | 25PF |
| | 5374 | | Brick Red | 1 | 0.50 | 25PF |
| | 5380 | Fabricated 90° Elbow with Grate | Gray | 1 | 0.40 | 25PF |
| | 5383 | | Sand | 1 | 0.40 | 25PF |

Note: All dimensions are nominal. All weights are for shipping purposes only. Availability is subject to change.

PROFILE CHANNEL DRAINS

SPEE-D® CHANNEL DRAINS

Patented

- Ideal for commercial as well as residential applications.
- Effective in everything from patios to light vehicular traffic areas.

| | Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | Product Class | Specifications |
|--|----------|--|-----------|-----------|----------------|---------------|---|
| | 240 | 2 ft. Channel Grate | White | 24ft | 1.42 | 25PF | NDS #240, #241, #242, #243, #244, #251, 2 ft. Structural Foam Polyolefin Secured Channel Grate with UV inhibitor. Open surface area 19.30 square inches per foot. 25.28 GPM per foot. |
| | 241 | | Gray | 24ft | 1.42 | 25PF | |
| | 242 | | Green | 24ft | 1.42 | 25PF | |
| | 243 | (See pg. 47) | Black | 24ft | 1.42 | 25PF | |
| | 244 | | Sand | 24ft | 1.42 | 25PF | |
| | 251 | | Brick Red | 24ft | 1.42 | 25PF | |
| | | Requires 4 screws per grate ADA Compliant | | | | | |

| | | | | | | | |
|--|--------|---|------|------|-------|------|---|
| | 400 | 4 ft. Channel Drain | Gray | 24ft | 4.83 | 25PF | NDS #400, 4 ft. PVC Spee-D® Channel Drain with Inverse Flying buttress design, bottom flange, patented honeycomb reinforced walls and UV inhibitor. |
| | 400-10 | 10 ft. Channel Drain | Gray | 60ft | 11.00 | 25PF | |
| | | Grate should be recessed 1/8" below finish grade in non traffic applications. Grate should be recessed 1/4" in traffic applications. | | | | | |

SPEE-D® ACCESSORIES

| | Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | Product Class |
|--|----------|---|---------------------------------|-----------|----------------|---------------|
| | 229 | Stainless Steel Screws, FH #8 x 1" | Steel | 48 | 0.06 | 25PF |
| | 230 | 6" Channel Installation Stake | Gray | 24 | 0.04 | 25PF |
| | 234 | 2' long fabricated 3" & 4" Spigot Bottom Outlet with Strainer. Fits 3" or 4" Sewer and Drain Fittings. Grates not included. | Gray | 12 | 2.67 | 25PF |
| | 245 | Channel Strainer Coupling | Gray | 20 | 0.35 | 25PF |
| | 246 | 2" Schedule 40 SPT End Outlet | Gray | 10 | 0.40 | 25PF |
| | 247 | Channel End Cap | Gray | 10 | 0.40 | 25PF |
| | 248 | Channel Coupling | Gray | 20 | 0.40 | 25PF |
| | 249 | 3" & 4" Offset End Outlet (connects to 3" S&D Pipe, 4" S&D Fittings) | Gray | 10 | 0.50 | 25PF |
| | 2301 | Fabricated 45° Elbow with grate | Gray | 1 | 2.00 | 25PF |
| | 2302 | | Green | 1 | 2.00 | 25PF |
| | 2361 | Fabricated Cross and Grate | Gray | 1 | 3.00 | 25PF |
| | 2370 | Fabricated Tee with Grate | White | 1 | 3.00 | 25PF |
| | 2371 | | Gray | 1 | 3.00 | 25PF |
| | 2372 | | Green | 1 | 3.00 | 25PF |
| | 2381 | | Fabricated 90° Elbow with grate | Gray | 1 | 3.00 |



Note: All dimensions are nominal. All weights are for shipping purposes only. Availability is subject to change.

For customer service, please send your fax to: 1-800-726-1998 or call 1-800-726-1994.