

Channel Drains

Frequently Asked Questions

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General channel questions

Which type of channel do I need?

Automobile traffic, runoff, and application are some of the factors to consider when choosing which channel to install. The advantages to each channel are listed below.

Micro Channel

- Slim 1 ¼" width
- Designed for residential applications including pools, spas, and patios
- 10 ft. long pieces reduces installation time and connections
- Channel and grate are one integral piece

Mini Channel

- 3" wide grates
- Decorative brass grate available
- Similar uses as Micro Channel with more drainage capacity
- Automobile and light truck rated

Speed-D Channel

- 4" wide grates
- Effective in everything from patios to light vehicular traffic areas
- 4' and 10' long channel sections
- Fabricated 45°, 90°, cross, and tee pieces available

Pro Series Channel

- Available in 3", 5", 8", and 12" widths. 5", 8", and 12" are available in shallow or deep channels
- 5" channel is compatible with new radius coupling that allows smooth bends as small as 30" radius
- Ideal for locations with heavier traffic loads. PVC, reinforced nylon, and cast iron grates available
- Bottom drain or end cap drain available on each channel

Dura Slope

- 6" wide
- Easy to assemble with snap together locking joints
- Manufactured from durable, lightweight, and chemical resistant HDPE material
- 0.7% built-slope is perfect for flat areas
- Tested to loads up to XXX psi when coupled with the ductile iron frame and grate

Micro Channel Drains

What lengths are available?

The Micro Channel only available in 10' sections. The channel can be easily cut to any length.

What is the Micro Channel load rating?

The Micro Channel is rated for pedestrian traffic (up to 60 psi) only.

3- What colors are available?

The Micro Channel is available in white, sand and grey.

Do I need to purchase a separate grate?

No. The Micro Channel and grate are one integral part.

How much water can the Micro Channel drain?

The Micro Channel has 2.5 square inches of open space per foot of channel. The channel itself will hold about the same volume of water as a 2" diameter pipe. This channel is ideal for areas surrounding pool, spas, and patios.

Does the Micro Channel ship with any accessories?

No. The Micro Channel ships in 10 foot sections. Each section ships with 1 coupling. All other accessories are sold separately

Can the Micro Channel make bends?

Yes. Prefabricated 45°, 90°, and tee's can be purchased. The channel can also be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of Micro Channel can be connected together using the Micro Channel Coupling (NDS part # 8481).

How does the water drain out of the Micro Channel?

There are three options to drain the water out of the Micro Channel; the end of the channel, the bottom of the channel, or the side of the channel. Each outlet connects to 1-1/2" schedule 40 pipe. Drainage from the channel is limited by the outlets. The outlets have the same open area as a 1-1/4" pipe.

How do I clean out the inside of the Micro Channel?

A section of the Micro Channel Clean Out would have to be installed to clean out the inside of the channel. The top of the clean out can be removed to allow for debris to be cleaned from the channel.

Can I use rebar or any other method to stake the channel sections instead of the 6" channel installation stakes?

Yes. The recommended method install the channel is to drive a piece of 1/2" or 5/8" piece of rebar into the ground in the trench. Then drill small holes in the bottom flange of the channel. Next, insert tie wire into the hole and twist it onto the rebar such that the top of the channel sits 1/8" below the finished edge of the concrete.

Mini Channel Drains

What lengths are available?

The Mini Channel only available in 6' sections. The channel can be easily cut to any length.

What colors grates are available?

The Mini Channel grates are available in white, grey, green, black, sand, and brick red.

Are metal grates available?

Satin brass and polished brass grates are available for the Mini Channel.

What is the Mini Channel load rating?

The plastic grates are rated to support automobiles, light trucks, and medium-duty pneumatic tires (up to 175 psi) at speeds less than 20 m.p.h. The brass grates are rated for pedestrian traffic (up to 60 psi).

Does the Mini Channel ship with any accessories?

No. The Mini Channel ships in 6 foot sections. All accessories are sold separately.

Can the Mini Channel make bends?

Yes. Prefabricated 45°, 90°, and tee's can be purchased. The channel can also be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of Mini Channel can be connected together using the Mini Channel Coupling (NDS part # 548).

How does the water drain out of the Mini Channel?

There are two options to drain the water out of the Mini Channel; the end of the channel or the bottom of the channel. Each outlet connects to a 2" schedule 40 pipe. The bottom drain channel comes with an atrium grate pre-inserted in the channel to prevent debris from entering the storm drain system.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.

How much water can the channel hold?

The channel itself will hold about the same volume of water as a 3" diameter pipe.

How do I glue on the accessories?

The Mini Channel is made from PVC. PVC glue can be used to glue all pieces together.

Can I use rebar or any other method to stake the channel sections instead of the 6" channel installation stakes?

Yes. The recommended method install the channel is to drive a piece of ½" or 5/8" piece of rebar into the ground in the trench. Then drill small holes in the bottom flange of the channel. Next, insert tie wire into the hole and twist it onto the rebar such that the top of the channel sits 1/8" below the finished edge of the concrete.

How are the grates connected to the channel?

The grates can be screwed to the channel using NDS part # 529 – Stainless Steel Screws, Phillips Head #4 x 5/8" screws (screws sold separately).

Spee-D Channel Drains

What lengths are available?

The Spee-D Channel is available in 4 foot and 10 foot sections. The channel can be easily cut to any length.

What colors grates are available?

The Spee-D Channel grates are available in white, grey, green, black, sand, and brick red.

Are metal grates available?

No. Only plastic grates are available for the Spee-D Channel.

What is the Spee-D Channel load rating?

The plastic grates are rated to support automobiles, light trucks, and medium-duty pneumatic tires (up to 175 psi) at speeds less than 20 m.p.h.

Does the Spee-D Channel ship with any accessories?

No. All accessories are sold separately.

Can the Spee-D Channel make bends?

Yes. Prefabricated 45°, 90°, tee's, and crosses can be purchased. The channel can also be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of Spee-D Channel can be connected together using either the Channel Strainer Coupling (NDS part # 245) or the Channel Coupling (NDS part # 248).

How does the water drain out of the Mini Channel?

There are two options to drain the water out of the Spee-D Channel; the end of the channel or the bottom of the channel. There are two end caps that can be installed to the end of the channel. NDS part # 245 connects to 2" schedule 40 pipe and part # 249 connects to both 3" sewer and drain pipe and 4" sewer and drain fittings. The bottom drain channel comes with an atrium grate pre-inserted in the channel to prevent debris from entering the storm drain system. The bottom drain fits 3" or 4" sewer and drain fittings.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.

How much water can the channel hold?

The channel itself will hold about the same volume of water as a 4" diameter pipe

Can I use rebar or any other method to stake the channel sections instead of the 6" channel installation stakes?

Yes. The recommended method install the channel is to drive a piece of ½" or 5/8" piece of rebar into the ground in the trench. Then drill small holes in the bottom flange of the channel. Next, insert tie wire into the hole and twist it onto the rebar such that the top of the channel sits 1/8" below the finished edge of the concrete.

How are the grates connected to the channel?

The grates can be screwed to the channel using NDS part # 229 – Stainless Steel Screws, Phillips Head #8 x 1" screws (screws sold separately).

3" Pro Series Channel Drains

What lengths are available?

The 3" Pro Series Channel only available in 39-3/8" (3.28') sections. The channel can be easily cut to any length.

What colors grates are available?

The 3" Pro Series Channel grates are only available in light grey.

Are metal grates available?

No. The only grate available for the 3" Pro Series Channel a high impact PVC grate.

What is the 3" Pro Series Channel load rating?

The plastic grate is rated to support automobiles, light trucks, and medium-duty pneumatic tires (up to 175 psi) at speeds less than 20 m.p.h.

Does the 3" Pro Series Channel ship with any accessories?

The 3" Pro Series Channel can be purchased in a kit that includes the channel, 2 grates, an end cap, and an end cap with outlet (NDS part # 764). The channel, end caps, end cap with outlets, and grates can also be purchased separately.

Can the 3" Pro Series Channel make bends?

There are no prefabricated accessories for the 3" Pro Series Channel to make bends, however, the channel can be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of 3" Pro Series Channel can be connected using the interlocking end joints.

How does the water drain out of the 3" Pro Series Channel?

There are two options to drain the water out of the 3" Pro Series Channel; the end of the channel or the bottom of the channel. Each outlet connects to a 3" sewer and drain pipe.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.

How much water can the channel hold?

The channel itself will hold about the same volume of water as a 4" diameter pipe.

How do I glue on the accessories?

The 3" Pro Series Channel is made from PVC. PVC glue can be used to glue all pieces together.

How are the grates connected to the channel?

The grates can be screwed to the channel using NDS part # 229 – Stainless Steel Screws, Phillips Head #8 x 1” screws (screws sold separately).

5" Pro Series Channel Drains

What lengths are available?

The 5" Pro Series Channel is available in shallow and deep profile. The shallow profile is 19-11/16" and the deep profile is 39-3/8". The channel can be easily cut to any length.

What colors grates are available?

The 5" Pro Series Channel plastic grates are available in light grey, green, black, sand, brick red, and white.

Are metal grates available?

Yes. Cast iron grates are available.

What is the 5" Pro Series Channel load rating?

The plastic grate is rated to support automobiles, light trucks, and medium-duty pneumatic tires (up to 175 psi) at speeds less than 20 m.p.h. The reinforced nylon grate is rated to support heavy-duty pneumatic tire forklifts and tractor trailers (up to 325 psi) at speeds less than 20 m.p.h. The cast iron grate is rated to support heavy-duty hard tire forklifts (up to 575 psi) at speeds less than 20 m.p.h.

Does the 5" Pro Series Channel ship with any accessories?

The 5" Pro Series Channel (deep profile) can be purchased in a kit that includes the channel, 2 grates, an end cap, and an end cap with outlet (NDS part # 864). The channel, end caps, end cap with outlets, grates, and other accessories can also be purchased separately.

Can the 5" Pro Series Channel make bends?

Yes. 90° and 45° elbows are available for the deep profile 5" Pro Series Channel. The new radius coupling (NDS part # XXXX) easily connects to the deep profile section to allow for bends as small as 30" radius. The channel can also be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of 5" Pro Series Channel can be connected using the interlocking end joints.

How does the water drain out of the 5" Pro Series Channel?

1. Shallow profile: End caps can be purchased that connects to a 1-1/2" schedule 40 spout. NDS part # 822 has knockouts that can be used to drain water out of the sides of the channel. The side outlets have to 3" sewer and spout and the bottom has an 1-1/2" schedule 40 spout.
2. Deep profile: End caps can be purchased that connected to a 3" sewer and storm drain pipe hub or a 4" sewer and drain pipe fitting.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.

How much water can the channel hold?

The shallow channel will hold about the same volume of water as a 3" diameter pipe. The deep channel will hold about the same volume of water as a 5" diameter pipe.

How do I glue on the accessories?

The shallow profile 5" Pro Series Channel is made from PVC. PVC glue can be used to glue all pieces together. The deep profile 5" Pro Series Channel is made from HDPE. Welder contact adhesive by Homax Products Inc. can be used to glue the accessories to the deep profile.

How are the grates connected to the channel?

The grates can be screwed to the channel using NDS part # 229 – Stainless Steel Screws, Phillips Head #8 x 1" screws (screws sold separately).

8" Pro Series Channel Drains

What lengths are available?

The 8" Pro Series Channel is available in shallow and deep profile. Both profiles are available in 19-11/16" lengths. The channel can be easily cut to any length.

What colors grates are available?

The 8" Pro Series Channel plastic grates are available in light grey.

Are metal grates available?

Yes. Cast iron grates are available.

What is the 8" Pro Series Channel load rating?

The plastic grate is rated to support automobiles, light trucks, and medium-duty pneumatic tires (up to 175 psi) at speeds less than 20 m.p.h. The reinforced nylon grate is rated to support heavy-duty pneumatic tire forklifts and tractor trailers (up to 325 psi) at speeds less than 20 m.p.h. The cast iron grate is rated to support heavy-duty hard tire forklifts (up to 575 psi) at speeds less than 20 m.p.h.

Does the 8" Pro Series Channel ship with any accessories?

The 8" Pro Series channels and accessories are sold individually.

Can the 8" Pro Series Channel make bends?

There are no prefabricated accessories for the 8" Pro Series Channel to make bends, however the channel can be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of 8" Pro Series Channel can be connected using the interlocking end joints.

How does the water drain out of the 8" Pro Series Channel?

1. Shallow profile: End caps can be purchased that connects to a 3" sewer and drain pipe. NDS part # 832 has knockouts that can be used to drain water out of the sides of the channel. The side outlets have to 3" sewer and spout and the bottom drain fits 4" sewer and drain pipe and 3" sewer and drain fittings.
2. Deep profile: End caps can be purchased that has a 3" or 4" sewer and storm spout.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.

How much water can the channel hold?

The shallow channel will hold about the same volume of water as a 6" diameter pipe. The deep channel will hold about the same volume of water as a 8" diameter pipe.

How do I glue on the accessories?

The 8" Pro Series Channel is made from PVC. PVC glue can be used to glue all pieces together.

How are the grates connected to the channel?

The grates can be screwed to the channel using NDS part # 229 – Stainless Steel Screws, Phillips Head #8 x 1" screws (screws sold separately).

12" Pro Series Channel Drains

What lengths are available?

The 12" Pro Series Channel is available in shallow and deep profile. Both profiles are available in 19-11/16" lengths. The channel can be easily cut to any length.

What colors grates are available?

The 12" Pro Series Channel plastic grate is available in grey.

Are metal grates available?

Yes. Cast iron grates are available.

What is the 12" Pro Series Channel load rating?

The plastic grate is rated to support automobiles, light trucks, and medium-duty pneumatic tires (up to 175 psi) at speeds less than 20 m.p.h. The cast iron grate is rated to support heavy-duty pneumatic tire forklifts and tractor trailers (up to 325 psi) at speeds less than 20 m.p.h.

Does the 12" Pro Series Channel ship with any accessories?

The 12" Pro Series channels and accessories are sold individually.

Can the 12" Pro Series Channel make bends?

There are no prefabricated accessories for the 12" Pro Series Channel to make bends, however, the channel can also be cut to any angle using a miter saw. The same angle will need to be cut into another piece of channel. Glue the pieces together and secure the joint before encasing in concrete.

How do I connect the channels together?

Sections of 12" Pro Series Channel can be connected using the interlocking end joints.

How does the water drain out of the 12" Pro Series Channel?

The only way to drain from the 12" Pro Series Channel is out of the end of the channel. The end cap has a 4" sewer and drain spout.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.

How much water can the channel hold?

The shallow channel will hold about the same volume of water as an 8" diameter pipe. The deep channel will hold about the same volume of water as a 12" diameter pipe.

How do I glue on the accessories?

The 12" Pro Series Channel is made from PVC. PVC glue can be used to glue all pieces together.

How are the grates connected to the channel?

First the Grate Security Clip (NDS part # 849) must be inserted into the slot on the side of the channel. The grate is then placed onto the clips and screwed into place.

Dura Slope Channel Drains

What is the load that the Dura Slope Channels are designed to hold?

The Dura Slope Channel and grates have been tested to the AASHTO M-306 and EN 1433 (DIN 1958) test methods by an independent AASHTO accredited lab. The channels strength exceeds the standards set forth by these tests. This rating is suitable for _____ traffic.

What about the Dura Slope Ductile Iron Frame (DS-200)?

Adding the DS-200 to the Dura Slope system increases the load capacity by _____%. This rating is suitable for _____ traffic. DS-225 screws (sold separately) must be used to secure the grates.

How do I attach the Universal End Cap (DS-224) or Universal End Outlet (DS-227) to the Dura Slope Channel?

If added to the upstream (female) end, slide the Universal End Cap or Universal End Outlet into the slot on the end of the channel. If added to the downstream (male) end, NDS part # DS-123 Phillips head #6 x 3/4" screws must be used to screw the Universal End Cap or Universal End Outlet to the Dura Slope Channel (screws sold separately).

Do the Dura Slope Channels have to be installed in a particular order?

Yes. All channel segments are clearly labeled with and NDS part number sticker. The channels must be installed in ascending numerical order starting with the smallest part number. The part number sticker also shows the number of the segment to be installed upstream and downstream of segment.

How do I connect to the bottom drain?

If connecting to 4" sewer and drain (SDR35) pipe, cut out the bottom drain and insert the DS-126 Bottom Outlet Adapter. If using 4" schedule 40 pipes, connect NDS part # 56-44 flexible coupling to the 4" pipe and then to the bottom drain of the channel. Tighten the clamps to secure in place. Other diameter pipes can be connected using the appropriate flexible coupling.

How do I prevent concrete from filling the channel during the pour?

All Dura Slope Channels come with a removable cover. Put tape over the slots and screws prior to pouring concrete. After concrete has been finished and cured, remove and discard the covers. The screws are used to secure the grates to the channel.

Can the Dura Slope Channel make bends?

Yes. The Dura Slope Channel can make bends as small as 30" radius using the Dura Slope Radius Couplings.

What is the built-in slope?

The fall in each sloped section of Dura Slope channel is 0.34". Each section comes with a built-in 0.7% slope. The neutral sections have flat bottoms.

What are the depths of the channels?

Each channel section is different. The shallowest channel is 3.99" from the bottom of the grate to the flow line in the channel. The deepest channel is 12.06" from the bottom of the grate to the flow line. All Dura Slope grates are 3/4" thick.

What is the longest run that can be done using Dura Slope Channels?

Without the use of neutral sections (no bottom slope), the maximum length run is 96 feet. With the use of one neutral section in its designed place, the maximum length run is 132 feet. There will be 8.07" of fall in these runs. The channel can be lengthened by adding additional neutral sections. We do not recommend connecting more than 4 consecutive neutral segments together to allow for proper flow and prevent standing water in the channel.

Do I need to worry about expansion and contraction of the grates?

We recommend a 1/8" gap be left between grates during installation to allow for expansion of the grates.