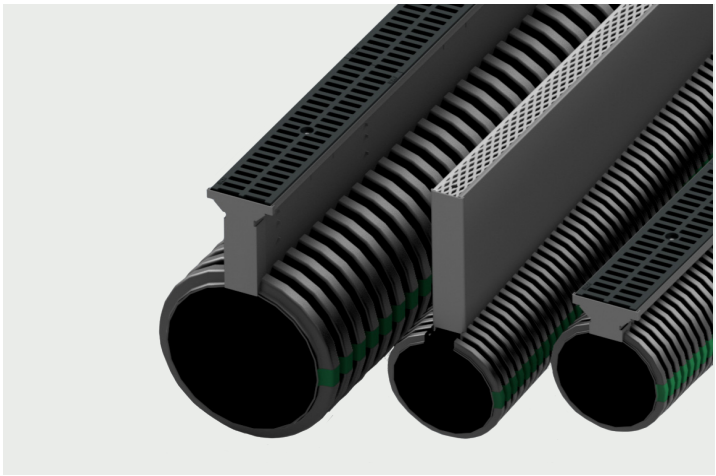
Duraslot and Duraslot XL Maintenance Guide

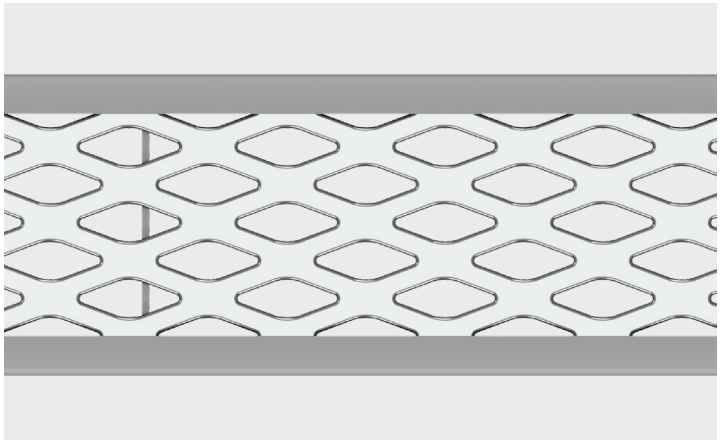
The maintenance of Advanced Drainage System's (ADS) linear drain products is essential for ensuring optimal performance throughout their lifecycle. Proper maintenance includes regular inspections, debris removal from the grate and pipe, and ensuring the grates are securely fastened.

Maintenance Frequency

Local or state regulations may specify particular intervals or methods, and these should always be followed. Generally, annual maintenance is recommended to prevent performance issues, system damage, and difficult cleanups. Ultimately, the maintenance schedule for ADS linear drains is determined by the owner. This frequency can depend on several factors when the system is being designed.

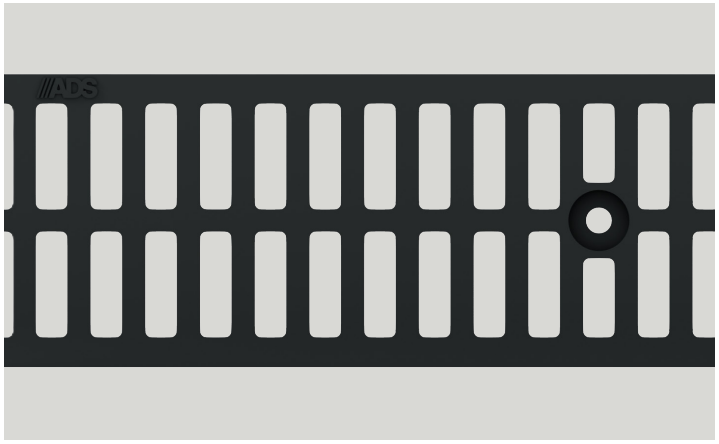


Surface maintenance frequency depends on the grate's environment, width, and open area. For example, a linear drain in an area with lots of foliage is more likely to be clogged by leaves. Larger grates can help prevent performance issues as they can still function partially clogged. Similarly, grates with larger openings allow small debris to pass through the grate and prevent surface clogging. Below are some images showing the grates supplied by ADS.

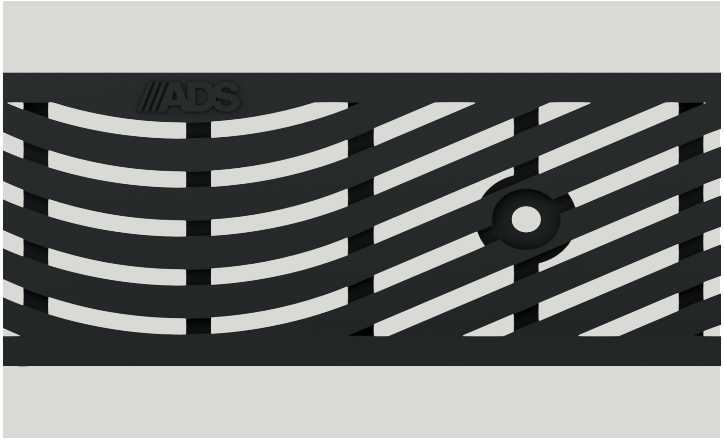


Duraslot Slotted Drain, 1.75" (42.5 mm) Wide Grate - 0.9" x 0.3" (22.5 x 7.5 mm) Diamond Pattern Opening

Duraslot Slotted Drain, 1.75" (42.5 mm) Wide Open Top



Duraslot XL Trench Drain, 5” (125 mm) Wide Standard Grate - 1.7” x 0.5” (42.5 x 12.5 mm) Slotted Opening



Duraslot XL Trench Drain, 5” (125 mm) Wide Pedestrian Grate - 0.25” (6.25 mm) Wide Opening

Underground maintenance intervals depend on the conveyance pipe slope, which may be different from the grade slope. ADS recommends a minimum 0.5% slope in the pipe for positive flow towards the outlet and some self-cleaning. To be considered self-cleaning, a 2% pipe slope is recommended. However, this may not always be possible as the height of the aluminum slot riser increases quickly and may exceed manufacturing tolerance (see “Technical Note 2.11 Duraslot & Duraslot XL Burial Depth and Backfill Conditions” for more details).

For optimal cleaning performance, a cleanout structure, such as a Nyloplast basin, should be placed at the low point of the linear drain. For long runs, additional cleanouts every 100’ (30 m) are advisable. Alternatively, Duraslot and Duraslot XL have removable grates for internal access. In this case, cleaning device inserts must be less than 2” (50 mm) to fit into the slot riser, which may limit their effectiveness.

Inspection

Inspection of the system should be conducted during or immediately after a rain event to identify any issues. The most common method is using a flashlight to peer through the grate openings to identify clogs or other problem areas. For deeper installations, larger pipe sizes, or if a more thorough inspection method is desired, a lit camera probe may be inserted in through the slot riser. Additionally, bolts and screws should be checked for tightness.

Cleaning Method

After an inspection, cleaning may be deemed necessary. Where no local or state regulation is provided, ADS recommends using a method similar to cleaning an underground storm drain system.

Jet-vac trucks (also known as vacuum trucks) are a common solution for cleaning large systems, like those that can be found on highways, airports or warehouses. These trucks can be specified to process large volumes of debris over long runs of linear drain. A local provider should be contacted to determine the needs for the site. While cleaning, splash back can push debris back onto the surface, but this can be prevented by covering the grate. For this cleaning method to be properly used, cleanout structures are necessary for getting larger hoses into the system and for removing debris on the downstream end.

Typical JetVac Truck

For small systems, such as those for a residential home, a commercial pressure washer, sewer jetter reel and appropriate nozzle may be more effective. Such devices allow a thin hose to be inserted through the aluminum slot riser opening without a cleanout structure. To clean, insert the hose into the high point of the linear drain and push it through until the nozzle reaches the end. Turn on the water and slowly pull the hose back up the pipe to breakup debris. While cleaning, splash back can push debris back onto the surface, but this can be prevented by covering the grate. This cleaning method may not work well for large linear drain systems or those that are severely clogged.

ADS does not recommend using hot water, cleaning agents, horizontal directional drills, or horizontal auger borings as they may damage the system.

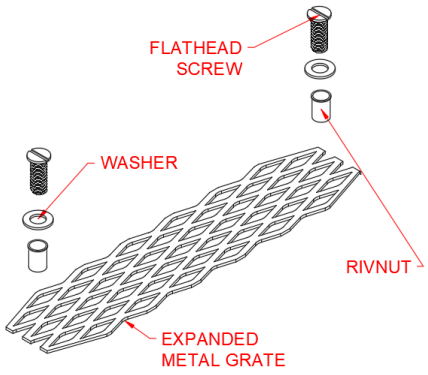
Hose Reel Components

Accessing the System

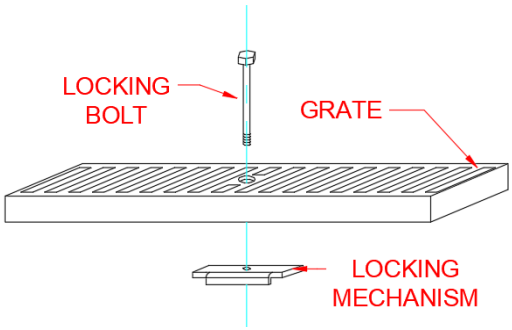
A cleanout structure, such as a Nyloplast basin, may be installed at the low point of a linear drain system. The grate or lid can simply be removed for easy access. However, Duraslot and Duraslot XL linear drains may also be accessed through the aluminum slot risers by removing the grates.

For Duraslot slotted drains covered with a mesh grating, a small section called a grate connector can be removed every 10’ (3 m) along the run. This piece may be removed to insert a camera probe or thin hose for maintenance using the following steps:

1. Secure the grate connector to prevent it accidentally falling into the bottom of the pipe when removed. This can be done using a pair of pliers or anchoring it with a piece of wire.
2. Using a flathead screwdriver, remove the two securing screws. Be careful to keep one hand on the screw so it does not accidentally fall into the bottom of the pipe.
3. Work the grate connector out from under the stationary mesh grating and proceed with any required maintenance.
4. Once complete, make sure to reinstall the grate and the screws are secured tightly.



Duraslot Slotted Drain Grate Connector and Hardware



Duraslot XL Locking Bolt

Duraslot XL trench drain grates are secured in place with a locking bolt in the center of the grate. To remove, simply unscrew the hex head bolt and use a tool to pry up the grate. Please note only a small amount of force is required. If the grate does not pop out easily, double check the locking bolt has been completely unscrewed.