

# Drainage Installation Guide

## 1. Identify and Mark area to be Drained

Determine where drainage needs to be placed (wet areas), size and layout for the **drenotube**<sup>®</sup> system. Mark off the drain line before digging. If the area is large, it may be necessary to install more than one line or install a herringbone pattern.

## 2. Digging the Trench

Start digging the trench at the point where the water will be discharged or connected to a central drain line. This will allow you to determine the necessary grade to insure proper water flow. The bottom of the trench needs a minimum slope of 1 per cent without any dams, stepdowns or other water stops. Open up a trench about 300 mm (for DR300L3/6) or 400 mm (for DR370L3/6) wide. This not only saves labor in excavation, but also provides better load-bearing capacity after back-filling is complete. Normally trench depth will be determined by its length and range between 0,4 to 3 meters (maximum depth is 10 meters).

## 3. Installation of the Pipe

Remove the protective **drenotube**<sup>®</sup> shipping bag prior to placing bundle in the trench. Remove any plastic bags in the trench before system is covered. Place the **drenotube**<sup>®</sup> units end to end along the top of the trench. Units are printed longitudinally with a line displaying the words "This side up". Segments must be installed positioning this line upwards. The uncovered part (1/4) must be placed facing the bottom of the trench. Connect the pipe with the external coupling being sure that they are fully inserted to insure proper coupling. In case you need a shorter segment to end the installation units can be cut and retied with the original tie, wire or duct tape. Excess beads can be dumped into the trench. Cover the upper end of the pipe with the end cap to prevent soil or sand from getting into the pipe. Drop sections of pipe into the trench (be sure precisely positioning "This side up" and connect at the discharge point. **drenotube**<sup>®</sup> bundles are flexible and can fit in curved trenches as may be necessary to avoid trees, boulders, or other obstacles.

## 4. Trench closure / Backfilling

Before backfilling the trench be sure there is no plastic bags on top of the **drenotube**<sup>®</sup>. Check again the longitudinal line displaying the words " This side up" is positioning upwards. Fill the trench with a permeable soil. Do not backfill with impervious soils like limestone or clay. Backfill can be compacted by either manual or mechanical means. Never exceed the ring stiffness of the corrugated pipe.