

DRAINTUBE™

A close-up photograph of a soccer player's legs. The player is wearing white socks with two black stripes at the top and red and white cleated shoes. A soccer ball is positioned on the ground in front of the right foot. The ground is a mix of red and white, with a yellow drainage grate visible in the lower right. The background is dark.

**For sports field
applications**

A low-cost and environmentally friendly drainage solution.

For many years, 150mm of washed stone protected by two layers of geotextile has been considered as the state of the art drainage solution for synthetic sports fields.

Today, **DRAINTUBE™ Sport FT** drainage geocomposite offers a better, more effective solution for drainage with the following advantages:

- significant cost reductions,
- simple installation,
- variable design options,
- improved performance,
- a better environmental footprint through a significant reduction of GHG.

“Good sports fields need good drainage”

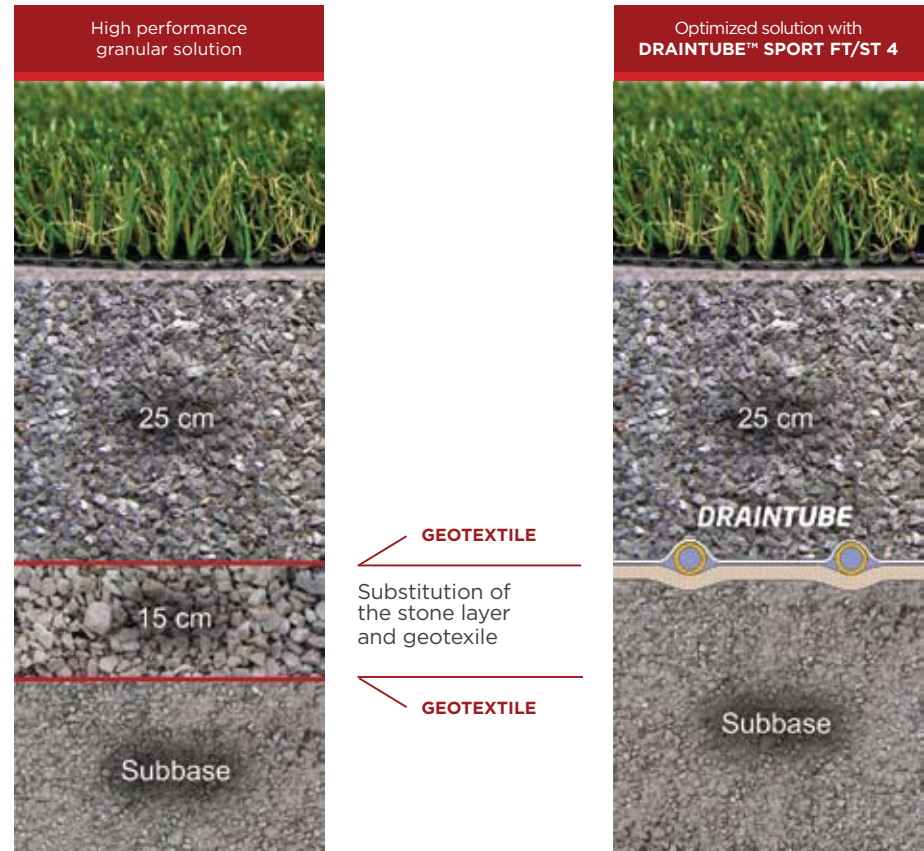
DRAINTUBE™
The drainage you want!

Comparison between a stone layer and the DRAINTUBE™ Sport FT/ST 4

Transmissivity comparison

(Sagéos Laboratory testing - 2006)

Tests were conducted at the CTT Group - Sageos Laboratory, in June, 2006. The objective was to compare the hydraulic behavior of **DRAINTUBE™** to 150 mm of clean stone under various gradient pressures and loads. The results indicate that **DRAINTUBE™ FT/ST 4** is equal in performance for a 0.01 gradient (1% slope). Clean stone = **DRAINTUBE™** = $10^{-2} \text{m}^3 / \text{s/m}$.



Performance comparison

(Defargo-Sagéos bench test - January 2007)

Large scale rainfall bench tests were conducted in January 2007, with the support of Defargo, Inc - Carignan (Qc) under the independent control of the Sagéos laboratory. Large scale rainfall bench tests were conducted. The results indicate equivalent Flow Rate capacity under continuous flow, which resulted in no saturation of the systems despite significant rainfall events.

Calculated performance

(Using Lymphéa® Software)

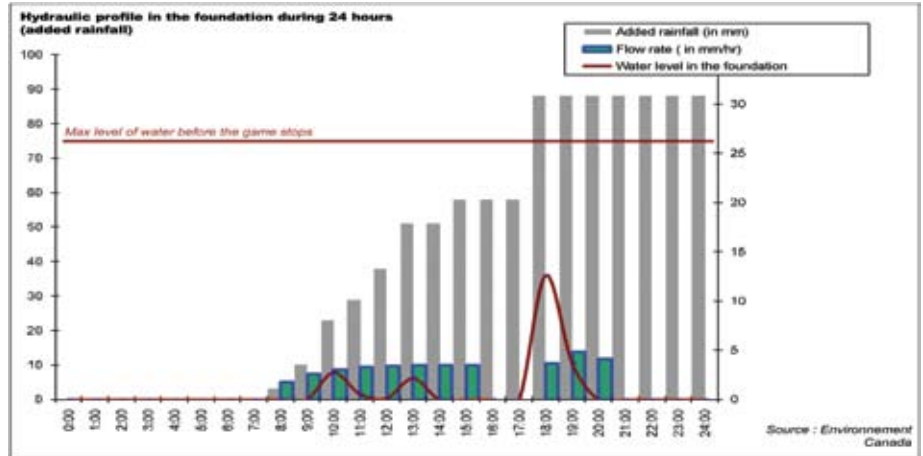
The Lymphéa® software was developed in association with the University of Grenoble and le Laboratoire des Ponts et Chaussées (France) to calculate the requirements for **DRAINTUBE™** in civil applications. The performance of both systems was comparable in typical hydraulic conditions for standard sports applications.



Expected performance

(simulation under critical conditions)

Using the data obtained in the various tests, the behavior of **DRAINTUBE™ SPORT FT/ST 4** in real meteorological conditions can be predicted. In the example shown here, the red curve indicates the water level in the foundation during an actual rain event on July 31, 2004. Around 75 % of the fields were flooded during that day, but the hydraulic profile using **DRAINTUBE™** would have allowed them to remain 50% playable during a thunderstorm at 6:00 p.m. The structure would have dried out within the hour.



Quality control

Natural resources

The variability of granular material is well-known. Even the same batch of material from the same location can be different.

Vs

Manufactured resources

Minimal transportation expenses mean sizeable cost savings. Material resources are abundant. **DRAINTUBE™** is available throughout the year.

Cost control

Natural resources

Costs vary depending on how far away the gravel pit is situated. Costs vary according to the availability of resources. Costs vary due to the time of year.

Vs

Manufactured resources

The quality of **DRAINTUBE™** is assured at the factory. The product delivered is the product ordered. QA/ QC is both easier and more certain.

Environnemental balance

(sustainable development)

Natural resources

NON RENEWABLE

The excavation and replacement of 150 mm of material over a 10,000 m² area requires 240 trucks.

Vs

Manufactured resources

RENEWABLE

The installation 10,000 m² of **DRAINTUBE™** FT/ST 4 requires only 1 truck and 3 labourers working for 2 days.



Replacing 150 mm of stone with the drainage geocomposite

DRAINTUBE™ SPORT FT/ST 4
can :

- Save 15% or more on the cost of building a granular foundation
- Reduce construction delays, social disruptions (traffic, noise, dust)
- Significantly reduce greenhouse gas emissions



DRAINTUBE™ offers:

- ▶ 3 perforated pipes size options (16, 20 and 25 mm)
- ▶ 4 perforated pipe spacing options (2 m, 1 m, 1/2 m, 1/4 m)
- ▶ Multiple geotextile options
- ▶ Available transmissivity between $2.5 \cdot 10^{-4}$ to $4 \cdot 10^{-3}$ m²/s at $i=0.1$
- ▶ No change in transmissivity between 20 kPa and 2500 kPa
- ▶ Low creep reduction factor
- ▶ No geotextile intrusion
- ▶ Standard roll size - 3.98 m x 75 m
- ▶ Faster and easier to install than other types of geocomposites, no tying required!
- ▶ Consistent QA/QC
- ▶ Competitively priced!

Produced by

AFITEX • Texel
LE DRAINAGE SUR MESURE • THE DRAINAGE YOU WANT

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Contacts

British Columbia

2704-1211 Melville Street, Vancouver, Bc V6E 0A7
Phone: 604 558-2900
Fax: 604 558-2901

United States

7 Pond View Drive, Auburn, NH 03032
Phone: 206-550-9117

Quebec

160-2, Boulevard Industriel, Boucherville, Qc J4B 2X3
Phone: 450 650-0100 #310
Fax: 450 650-0104

info@draitube.net
WWW.DRAINTUBE.NET