Drain®

The ready-made solution to subsoil drainage
Most road, railtrack and slope failures can be attributed to the presence of subsurface water. With increasing costs of transport, labour and suitable aggregate, there is a need for a more economical subsoil drainage solution.

Applications
The Flo-Drain® can be successfully used in the lowering of the water table or intercepting seepage in a wide range of applications.
- Roadside edge drains
- Railtrack formation edge drainage
- Sportsfields, golf courses, tennis courts and bowling greens
- Behind retaining walls and bridge abutments
- Behind flexible retaining wall structures
- Around buildings and structures
- Courtyards, embankments and driveways
- Agricultural lands

Advantages
Many important advantages can be provided when deciding whether to use a conventional aggregate drain or a premanufactured Flo-Drain® system in any application.

Economic Considerations
- Material costs influenced by:
  - availability of good quality natural drainage materials
  - cost of material and transport
  - ease of handling and placing
  - wastage of drainage material
- Excavation costs
- Reduced trench widths
- Availability of suitable selected backfill
- Removal of spoil
- Supervision

Design Considerations
(For effective draw down of the phreatic surface)
- Depth of drain
- Frequency (spacing)
- Permeability of the soil

Practical Considerations
- Site access
- Soil conditions
- The use of trenching equipment
- Speed of installation
- Confined areas
- Resistant to biological action and most chemicals

Benefits
- Prefabricated system
- Ease of installation
- Flexible system
- Lightweight product
- Quality assurance

On site assembly and installation
See adjacent photographs 1, 2 and 3 for assembly.
- The Flo-Drain® fin is supplied pre-assembled (Kaypipe® separately).
- The Kaypipe® geopipe is positioned at the base of the fin, solid channel down, and the geotextile flap firmly secured around it, joined by means of a wire, twine, or stapling.
- The Flo-Drain® is placed vertically into the trench. With selected fill, set the Flo-Drain® against the downstream face of the trench. With unselected fill, set the Flo-Drain® against the upstream face.

Backfill must be well compacted in layers. Backfill must be a well-graded, free-draining material.
Specifications

Transmissivity - ISO 12958

<table>
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<tr>
<th>Flow Rate (ℓ/s/m - width)</th>
<th>Pressure (kPa)</th>
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<tr>
<td>0.40</td>
<td>0</td>
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<tr>
<td>0.30</td>
<td>100</td>
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<td>0.10</td>
<td>300</td>
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<tr>
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Flo-Drain MD
Flo-Drain AD
(Between layers of bidim® A2)

Water Head
Test Sample
Hydraulic Gradient

h = 300 mm
l = 300 mm
i = h/l = 1

Drainage Core

Constituent Polymer | Flo-Drain™ 500 HP
HDPE F 7650

Vicat Softening Point (50N) °C | 70 | ISO 306/B50
Maximum Service Temperature °C | 85
Overall Thickness @ 2 kPa mm | 4.0 | ISO 9863
Mass per unit area g/m² | 500 | ISO 9864
Tensile Yield Strength MPa | 23 | ISO 527
Tensile strength MD kN/m | 5.0 | ISO 10319
| AD | 5.0 | ISO 10319
Mesh angle ° | 55
Environmental Stress-Crack Resistance Hours | >1000 | ASTM D1693

Geotextile Filter Jacket

A continuous filament needlepunched nonwoven polyester geotextile. For detailed specification consult your Kaytech representative.

Flo-Drain® Sizes

Standard Height (h) | Between 400mm and 2000mm
Length of Roll | 30 m

Kaypipe® Geopipe

70% of the Kaypipe® surface area is perforated, giving unmatched infiltration capacity. Kaypipe® is supplied in 65, 100, and 150 mm ID and 6 m lengths. See Kaypipe® geopipe brochure.

Chemical Resistance: Resistant to most chemicals and organisms normally encountered in natural soils or when immersed in fresh or salt water.

DISCLAIMER: The application, handling and conditions of use of our products are critical and beyond our control. Information given by us in our documentation or orally, or by any employee or agent and any advice, recommendation or assistance, is given in good faith but without creating any obligation or warranty.

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