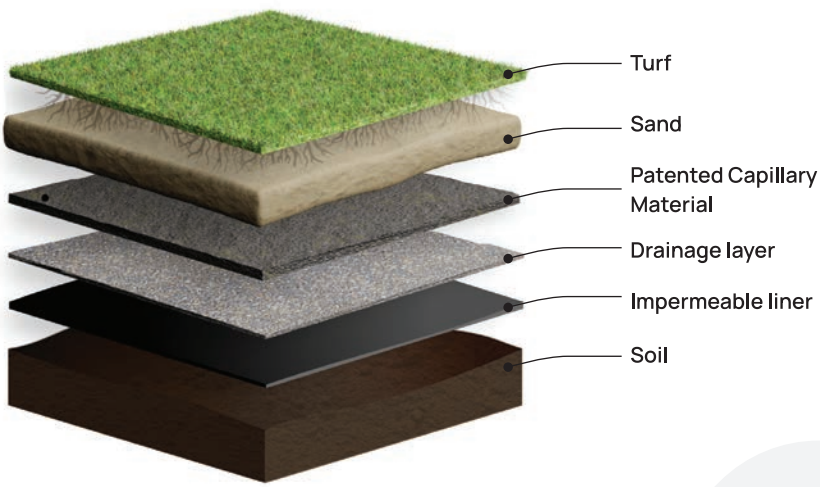
Capillary Hydroponics®

CENTAUR ASIA PACIFIC
Hong Kong | Singapore | Malaysia | Australia
Email: info@centaur-asiapacific.com
Website: www.centaur-asiapacific.com

Hydroponic greens, tees and fairways for perfected performance

The Capillary Hydroponics system enables growth of turfgrass with properties to detailed specifications. The grass is stronger and more durable with significantly less maintenance and environmental impact.

Proprietary technology creates optimal moisture level and drainage for growing stronger turf grass



- Stronger and more resilient turfgrass
- A more open porosity root-zone allows for faster drainage and better oxygen exchange
- Greatly improved oxygen-gas exchange creates stronger roots while maintaining a dryer turfgrass surface.
- Surface moisture can be kept at a minimum through subsurface watering that never reach top layers
- Practically zero leaching of fertilizers or pesticides to environment
- Can be installed on any ground profile

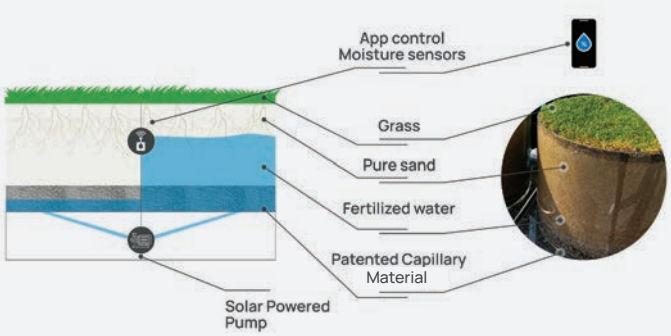
How it works

Using Capillary Hydroponics® system for turfgrass

The green, tee or fairway area is divided into two equally large sections with a pond-liner below. The Capillary Hydroponics® system moves fertilized water between the two sections for subsurface irrigation and oxygenation. When the water moves and enters or exits the pores of the root-zone material, the gas exchange increases greatly, with up to 6.000%.

Evaporation is kept at a minimum and water savings are up to 85% and still the system drains any amount of rainfall.

The Patented Capillary Material ensures a perfectly flat and level base beneath the root-zone, which is crucial for the functioning of the system.



A solar-powered air-pump drives an air-lift pump in a basin to move fertilized water between sections and create the ultimate growing conditions for grass-plants.

CapillaryFlow

A revolution in turf

Soil-grown turf

- Surface moisture depends on root-zone materials
- Fluctuating ground conditions due to soil and overhead irrigation
- Overhead irrigation created too moist surface environment which is more prone to disease and weed incidence
- Overhead irrigation consumes large volumes of water
- An open system and overhead distribution of fertilizers and pesticides leads to leaching and increased consumption & costs
- Compaction is a problem and CO2 accumulation in air-filled porosity of root-zone causes root growth decline.

Capillary Hydroponics®

- Surface performance and moisture levels can be designed purely for purpose of user or sports application
- Consistent ground conditions due to inorganic root-zone materials and subsurface irrigation
- Watering from below is a superior way to hydrate turfgrass and still create a firm and dry surface which leads to less weed and disease pressure
- By irrigating from below, there is less surface water reducing evaporation decreasing water loss and consumption by up to 85%
- Distribution of fertilizers and pesticides through the water in circulation allows for lower total consumption and near zero leaching
- A constant change of water table allows for better oxygen exchange, up to 6000 % which increase root growth.

Installation instructions

1. Excavate sub base, prepare a stone-free and flat-bottom cavity with vertical walls 16 inches deep, divide it in two with a divider and cover both hydroponic chambers with a pond-liner.

2. Connect pipes in a herring-bone pattern inside each section, and cover them with gravel.

3. Connect the Hydroponic chambers to each side of the basins, seal pipework correctly and water test before proceeding.

4. Level the gravel surface and pour 2 inches of Capillary Concrete on top. Make sure to level the Capillary technology with laser grading equipment.

5. Install the coarse sand growing medium as root-zone material and shape the surface as desired, allowing for a maximum of 8 inches of difference in height.

6. Make final adjustments to the controller and water levels in the Hydroponic chamber and seed or sprig grass to establish.