

AMPS-Arched Mesh Pipe System

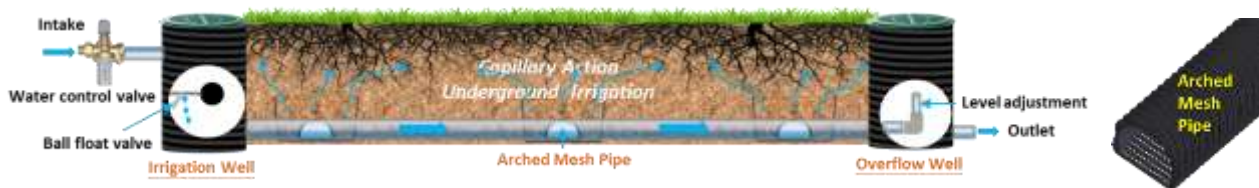
Golf Course Underground Drainage & Irrigation



"AMPS-Arched Mesh Pipe System" The irrigation water infiltrates into the soil through the AMP-Arched Mesh pipe, and uses the capillary action of the soil to replenish the water to the root group. It save 60% of irrigation water, increase fertilizer efficiency by 40%, and reduce irrigation manpower by 50%. The AMP-Arched Mesh pipe removes supersaturated water from the soil and an excessively high water table. The AMP-Arched Mesh pipe does not require filter materials such as gravel and non-woven fabric, and the mesh pipe does not block. The installation is easy, the cost is low, and the subsequent maintenance and management is simple.

AMPS-Arched Mesh Pipe underground irrigation and drainage system is the best system for golf courses

AMPS-Arched Mesh Pipe System- Structure



Water Intake "Irrigation Well" and the Wicking of irrigation pipe "AMP- Arched Mesh Pipe " and Outlet " Overflow Well" composed "AMPS-Arched Mesh Pipe System".

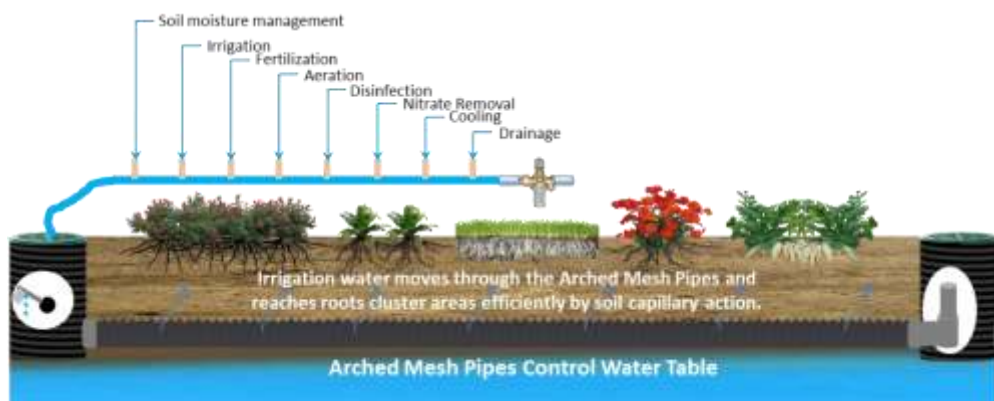
Irrigation Well- Water Intake containing water control valve to control the water level.

AMP- half-moon shape design. The half-moon part is impermeable layer and the flat part is permeable layer.

When constructing, the flat part of the mesh lies down. It results in soil particles sinking due to gravity and not going with water into the aqueduct. Therefore AMP-Arched Mesh Pipe can solve the problem of underground drainage pipe blocking without filter material and clog-resistant.

Overflow Well- Containing water regulator to adjust the permeability of underground irrigation of capillary action of water and height.

AMPS- main functions



Irrigation: Irrigation water through AMP-Arched Mesh Pipe into the soil, using soil capillary action, supply to the Root cluster area.

Drainage: AMP-Arched Mesh Pipe penetration exclude supersaturated soil water and high water level.

Retention: let rainwater penetration temporarily stored in the network, and then slowly infiltrate natural way to penetrate the soil.

Saving energy: Save 50~80% irrigation water, fertilizer effect increase 40 %, reduction in irrigation manpower 60%.

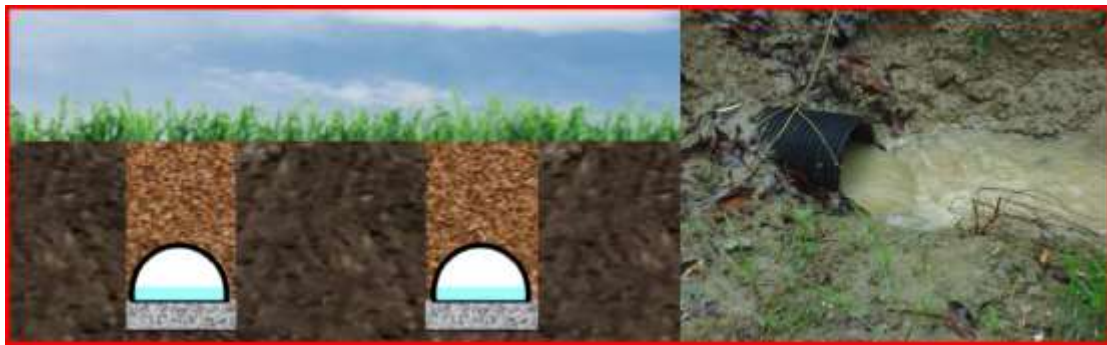
Reduce the heat island effect: AMP-Arched Mesh Pipe provides underground space to allow air convection, reduce surface temperature, reducing heat island effect.

Mitigation subsidence: AMP-Arched Mesh Pipe promote rainwater infiltration, groundwater recharge, slow subsidence.

Dengue prevention: Subsurface irrigation, surface is dry, it will not produce mosquito breeding problem.

Create a comfortable environment for the growth of plants: AMP-Arched Mesh Pipe underground space in soil moisture management, drainage, irrigation, fertilization, ventilation, temperature control, sterilization, ranked salt and other functions to create a comfortable environment for the growth of plants.

AMPS-Arched Mesh Pipe System-Feature



The underground irrigation drainage system uses capillary action to irrigate from the ground up, the ground is moist, the surface is dry, so its weeds are not easy to grow, and because the surface is dry, the air environment is also very dry, so compare There is no problem with pests and diseases.

The stratum soil contains irrigation water, which prolongs the watering time by 3~5 times, saves manpower and has little evaporation loss.

Compared with other irrigation systems, it also has the characteristics of low energy consumption, water delivery, irrigation, and high water efficiency.

Because of its slow irrigation rate, low irrigation volume, low water pressure and low fertilizer consumption, this system not only has low energy consumption, but also has obvious effects on ecological environment protection.

Since the deep leakage of soil is significantly reduced, the dissolved fertilizer and soil disinfectant will not pollute the groundwater resources, and the system will not damage the soil structure.



Amp-Arched Mesh Pipe- Structure



What Is the AMP-Arched Mesh Pipe ?

Subsoil drainage pipe is used to remove excess ground water.

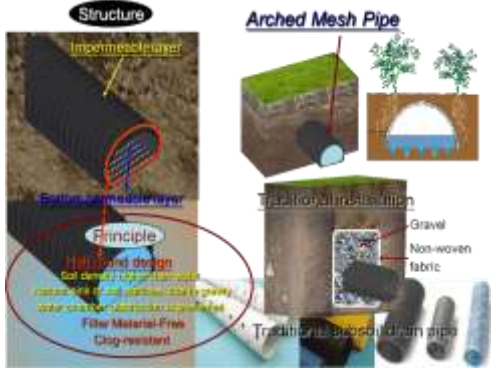
AMP-Arched Mesh Pipe is a new type of drainage pipe that remains clog-free without additional filter material required.

AMP-Arched Mesh Pipe Description

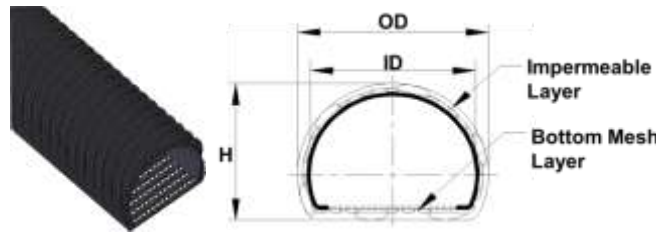
Traditional subsoil drainage pipe installations require additional excavation to surround the pipes with gravel to provide sufficient drainage and the addition of filter material to prevent pipe blockages.

“AMP-Arched Mesh Pipe“ is impermeable on the upper arched surface and permeable on the lower flat surface. Soil particles sink through the permeable layer due to the gravity rather than traveling with the water in the aqueduct.

“AMP-Arched Mesh Pipe“ remains clog-resistant and prevents drainage pipe blockage without gravel installation or filter coatings required.



AMP-Arched Mesh Pipe Specifications



Size	Code	ID*OD*H ±3.0%mm	Pitch ±3.0%mm	Length m
2"	HPT-50A	50*62*54	11.5mm	5m
2½"	HPT-65A	63*76*70	12.5mm	5m
3"	HPT-75A	79*92*82	12.5mm	5m
4"	HPT-100A	96*114*94	12.5mm	5m
6"	HPT-150A	149*167*136	14.0mm	5m
8"	HPT-200A	193*216*170	14.5mm	5m
10"	HPT-250A	239*267*197	15.0mm	5m
12"	HPT-300A	290*318*223	15.5mm	5m

* The Company reserves the right to modify

Irrigation Well · Overflow Well Specifications

Irrigation Well Specifications

Size	Connector	H	H1
12" Well	3"or 4"	40cm	30cm
12" Well	3"or 4"	50cm	40cm
12" Well	3"or 4"	60cm	50cm
12" Well	3"or 4"	75cm	65cm
12" Well	3"or 4"	90cm	80cm

Irrigation Well

Overflow Well Specifications

Size	Connector	H	H1	H2
12" Well	3"or 4"	40cm	30cm	30cm
12" Well	3"or 4"	50cm	40cm	40cm
12" Well	3"or 4"	60cm	50cm	50cm
12" Well	3"or 4"	75cm	65cm	65cm
12" Well	3"or 4"	90cm	80cm	80cm

Overflow Well

AMPS-Golf Course Underground Drainage & Drainage

1. Bunker Drainage
2. Bunker Slope Irrigation
3. Putter Green Drainage, Irrigation, ventilation
4. Fairway, Teeing Drainage & Irrigation

1. Bunker Drainage



AMP-Arched Mesh Pipe using water infiltration and soil gravity separation principle, such as non-woven filter without clogging is not easy to produce, ecological engineering construction, long life, is to solve the problem of clogging the underground drainage pipe through the best set of drainage materials.

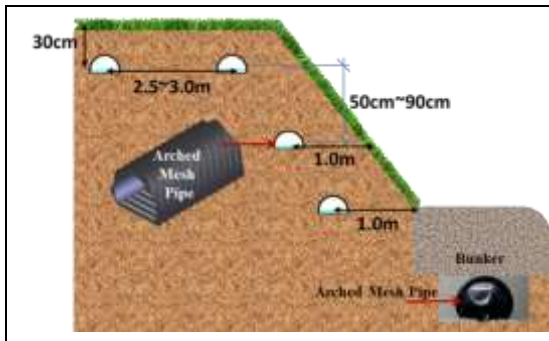
The AMP-Arched Mesh Pipe is directly buried, the pipe is not blocked, the construction cost and the filter material cost are saved, and the sand is not lost due to rain, and is the best material for the sand pit.

2. Bunker Slope Irrigation



The slope of the tee or the slope of the bunker is sprinkled with water spray. The water is lost with the slope, and it is difficult to reach the root. The turf of the slope is withered and the slope is easily washed by the rain, resulting in soil landslide.

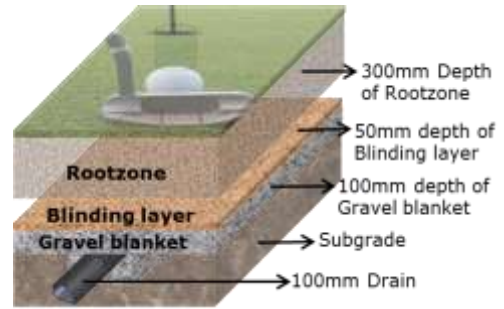
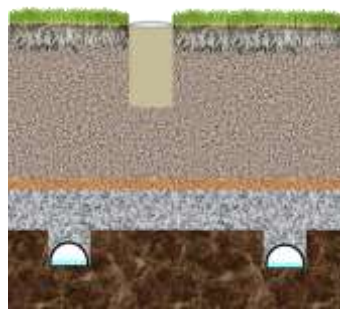
The underground irrigation and drainage system of the AMP- Arched Mesh pipe allows the irrigation water to infiltrate into the soil through the infiltration pipe, and utilizes the capillary action of the soil to replenish the water to the root group.



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3. Putter Green ventilated irrigation 、 drainage 、 Ventilation



The main key to maintaining healthy greens is irrigation, drainage, ventilation, and fertilization. Most of the current irrigation uses high-pressure sprinkler systems, draining pipes, and fertilizing the ground.

AMPS- Putter green underground irrigation:

The AMPS-underground irrigation and drainage system of the infiltration network pipe has no pressure to infiltrate the irrigation water into the soil through the AMP-Arched Mesh Pipe. By using the capillary action of the soil to replenish the water to the root group, it can save 60% of the irrigation water, improve the fertilizer effect by 40%, and reduce the irrigation manpower by 50%.

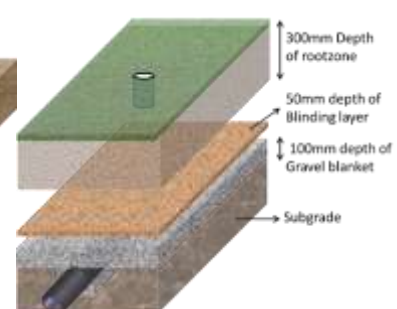
The AMPS-underground irrigation drainage system uses capillary action to irrigate from the ground up, the ground is moist, the surface of the earth is dry, so its weeds are not easy to grow, and because the surface is dry, the air environment is also very dry, not It will cause problems with pests and diseases.

The stratum soil contains irrigation water, which prolongs the watering time by 3~5 times, saves manpower and has little evaporation loss.

Compared with other irrigation systems, it also has the characteristics of low energy consumption, water delivery, irrigation, and high water efficiency.

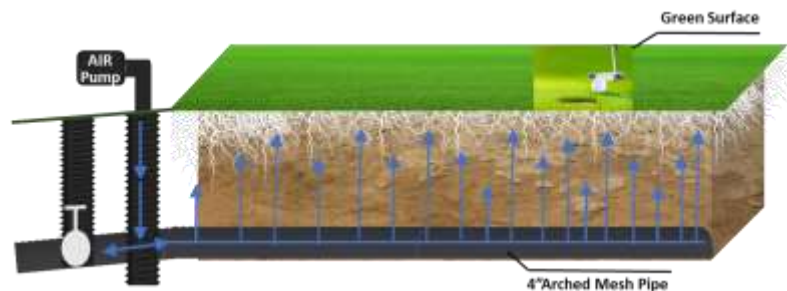
Because of its slow irrigation rate, low irrigation volume, low water pressure and low fertilizer consumption, this system not only has low energy consumption, but also has obvious effects on ecological environment protection.

Since the deep leakage of the soil is significantly reduced, the dissolved fertilizer and soil disinfectant will not pollute the groundwater resources, and the system will not damage the soil structure.



- They are water-efficient, use between 40 ~ 50% less water than a conventional garden bed.
- Watering from the bottom up prevents the evaporation of surface water.
- Harder for weeds to establish as the soil on the surface is drier.
- Very labor-efficient, they are self-watering, so it is possible to go away for two or three weeks at a time without your garden bed drying out.
- They can be watered by a low pressure water system. It can be directly connected to a water tank without the use of a pressure pump.
- They provide a lot of drainage when there is a heavy downpour.
- Large reservoir of water reduces the need for frequent watering.
- Evaporation is reduced to a minimum with thick mulching.
- Harder for weeds to establish as the mulch covered surface is drier.
- Soil life is improved. Nutrients are not flown away to the subsoil when the garden bed is watered.
- No salting and evaporation; no mineral is left in the soil.
- No permanent stale water; there is no mosquito larvae or anaerobic conditions.

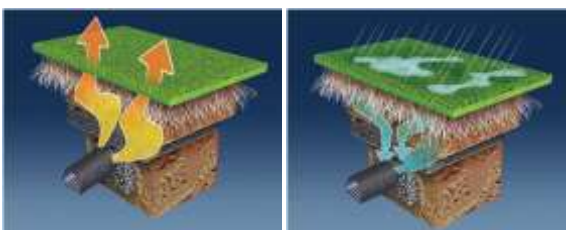
AMPS- Putter green underground ventilation:



When our greens were built in 1996, they were built with the best materials, products, and ideas available at the time. All of our greens have drain pipes below the surface to help quickly move excess water from the green. This drainage system is what allows our greens to firm up quickly for play after a heavy rain. Some of these drain pipes lead directly down into a body of water. Unfortunately, new research shows these submerged drain pipes can cause a major problem. Water can back up in the pipes trapping gases such as hydrogen sulfide, methane, and nitrogen from the decomposing matter in the pipe. (Remember: Plants need oxygen to complete the respiration process.) When organic materials decompose, they can consume what little oxygen may exist in these drain pipes after that the process continues anaerobically.

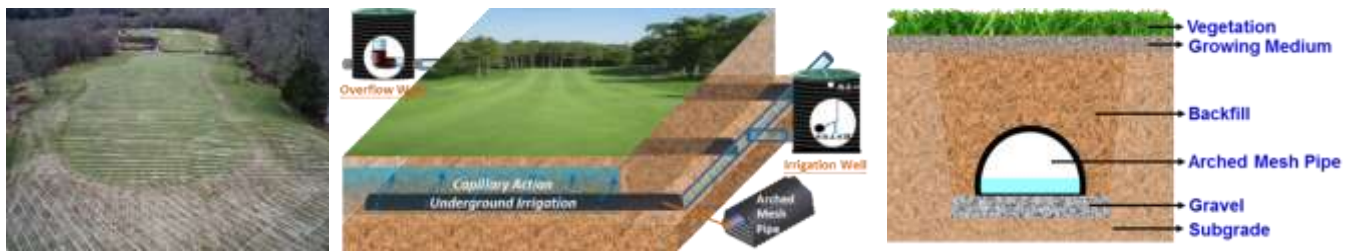
These past few weeks, crew members have been installing parts that will solve these issues. Valves and vents were placed on the pipes near the bodies of water allowing these gases to escape out of the pipe before making its way into the soil underneath the green. From this installation, we can also close the newly installed gate valve to blow fresh air (using a back-pack blower) into the drain pipes to move oxygen-rich air through the pipe. This process can also help lower the soil temperature during the hot summer months.

Putter Green drainage, ventilation, fertilization:



AMP-Arched Mesh Pipe provides underground space for soil moisture management, drainage, irrigation, fertilization, ventilation, temperature control, disinfection, and salt removal.

4. AMPS– Fairway, Teeing area drainage & Irrigation



Arched Mesh pipe underground irrigation drainage system (AMPS) water non-pressurization and gravity-driven management system, irrigation water infiltrated into the soil through the infiltration network pipe, the use of soil capillary action, replenish water to the root group area. It can save 50% of irrigation water, increase fertilizer efficiency by 40%, and reduce irrigation manpower by 60%.

AMP-Arched Mesh pipe does not require filter materials such as gravel and non-woven fabric, and the pipe does not block.

Golf course fairways and teeing areas generally use permeable drain drainage, plus high-pressure spray watering system, use AMP-Arched Mesh pipe underground irrigation drainage system to reduce investment costs, water saving, energy saving, fertilizer saving, no irrigation time limit, easy management and maintenance .

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