

Your ETgage is fully assembled and ready to use. It was shipped with a Style # _____ cover mounted on the evaporator.

See instructions starting on page 1 for filling, priming and field

Diffusion Covers

The ETgage uses three different vapor diffusion covers to provide appropriate resistances for water vapor leaving the evaporator. They are identified as Style #30, Style #54 and Style #G2 (Gore-Tex). The number is written on the canvas fabric.

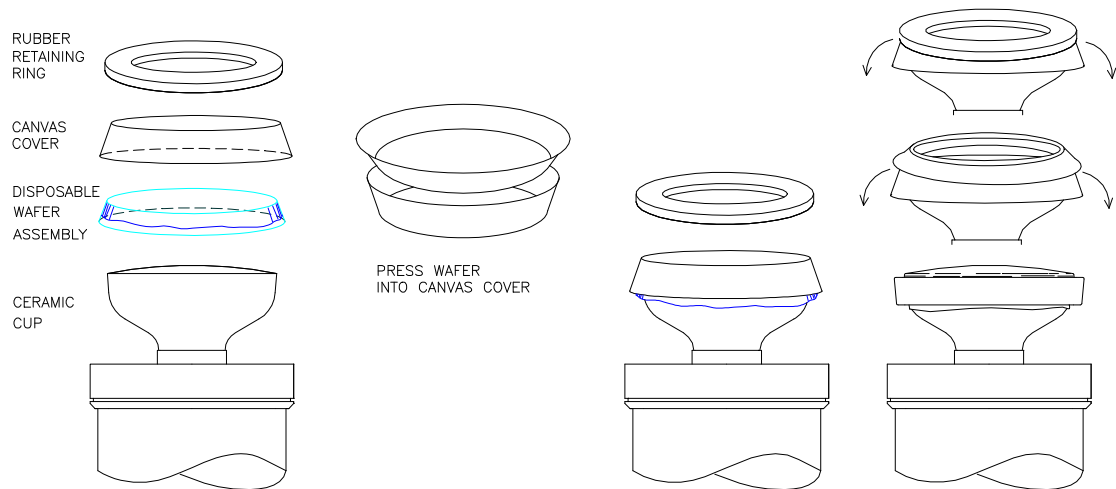
Canvas Covers

With a #30 canvas cover on the ceramic cup, evaporation readings will agree with grass reference evapotranspiration (ET_o). A #54 canvas cover gives ETgage readings 10-15% greater than Style #30, equating with alfalfa reference (ET_r). Each should be used with the evaporating surface of the ETgage one-meter above ground level. We recommend that one of these two canvas covers be the first choice when using the ETgage for irrigation management. Use the Style #30 for turf grass and the Style #54 for agricultural crops.

Gore-Tex[®] Cover

Style #G2 is a Gore-Tex[®] fabric. This material sheds rain but permits water vapor to pass through. It also has radiation absorption and thermal resistance qualities similar to vegetation. But it does not account for bulk air resistance between the top of a crop and the evaporation surface. Therefore, the evaporation surface (the top of the ETgage) should be in the crop and level with its canopy. Both canvas and Gore-Tex correctly simulate the reduction in plant ET caused by dew.

“Wafer” Evaporation Element for Canvas Covers



With both hands on the rubber ring, use your fingers to spread the ring in all directions, moving it out to the edge, and down the sides. The top of the rubber ring should be a little below the top edge of the ceramic. Keep the fabric tight; there must be no air space below it.

We recommend using the disposable wafer between the canvas cover and the ceramic evaporator surface. The wafer will protect the ceramic from accumulated contamination. When you remove a wafer, the ceramic should be visibly wet.

Any residues left from the evaporating water accumulate inside the wafer instead of on the surface of the ceramic, but you must still use distilled water to minimize contamination.

The wafer will last for about 12 months of continuous use.

If you see hard, crusty areas on the top of the wafer, these areas are no longer evaporating, and they will reduce the evaporation rate by an amount proportional to their size.

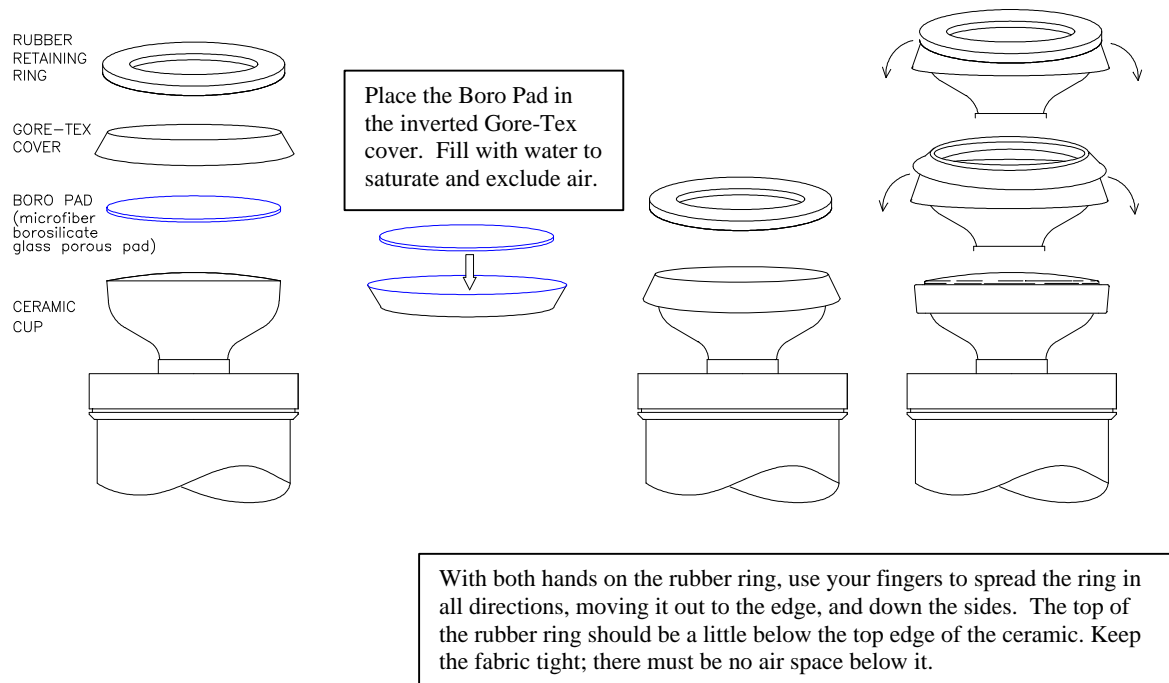
Replacing the wafer will bring the rate back up to the correct level.

The evaporation rate will be the same if you do not use a wafer, but without it, the ceramic surface will slowly become contaminated, and it will require vigorous sanding about every 4 months (use a medium grit silicon carbide abrasive paper under running water).

The top layer of the wafer sheds any rainwater that may get through the canvas. (This layer is made of porous PTFE. It allows water *vapor* to pass freely.)

Do not clean the porous ceramic surface or the wafer with soap or detergent. This would interfere with their water wicking properties.

“Boro pad” Evaporation Element for Gore-Tex® Covers



Use a “boro pad” between a *Gore-Tex cover* and the porous ceramic surface (do not use a wafer with Gore-Tex).

A pad will last for about 12 months of continuous use before it needs to be replaced.

When you remove the pad, the ceramic should be visibly wet. Any residues left from the evaporating water accumulate in the pad instead of on the surface of the ceramic.

The evaporation rate will be the same if you do not use a pad under Gore-Tex covers, but without it, the ceramic surface will slowly become contaminated, and require vigorous sanding about every 4 months (use a medium grit silicon carbide abrasive paper under running water).

Gore-Tex fabric has a special layer on its underside that sheds rainwater while allowing water vapor to pass freely, but it also has a layer that will not pass *air*. To avoid trapping air pockets under the Gore-Tex fabric, always use the mounting instructions above.

Do not clean the porous ceramic surface or the pad with soap or detergent. This would interfere with their water wicking properties.