How does water drain out from a curtain wall?

Water enters through the cap bead.

The cap bead fills the void between the pressure profile and the glass.

The cap bead needs to be soft enough to accommodate shifts in the system, but rigid enough to resist damaging environmental effects. It's usually made of neoprene, EPDM, or silicone. Since it is the first level of protection for the curtain wall, it is the area most prone to water infiltration.

Holes in the pressure plate allow for pressure equalization of the inner cavity without holes in the pressure profile, air pressure from wind and heat will drive water further into the system.

When holes are added to the pressure profile, the air flows in the direction of the water draining.

Without holes in the pressure profile, the air flows in the opposite direction of the water draining.

The choice of beauty cap also has an impact on water infiltration.

Silicone is the best material to use because of its excellent resistance to UV damage, while neoprene is the worst because it is prone to being stuck in compression - commonly referred to as compression set.

The cap bead must be installed in compression to allow for expansion of the metal beauty cap.

The corner block provides a seal for the gap between the glass and the pressure profile.

When water enters through the cap bead, it is directed through holes in the pressure profile. Water travels to holes in the beauty cap and last, escape through the Mullion to the Transom with help from the Corner Block.

To allow for expansion of the metal beauty cap, the cap beads must be soft enough to accommodate shifts in the system, but rigid enough to resist damaging environmental effects. It's usually made of neoprene, EPDM, or silicone. Since it is the first level of protection for the curtain wall, it is the area most prone to water infiltration.

The choice of beauty cap also has an impact on water infiltration.

Silicone is the best material to use because of its excellent resistance to UV damage, while neoprene is the worst because it is prone to being stuck in compression - commonly referred to as compression set.

When holes are added to the pressure profile, the air flows in the direction of the water draining.

Without holes in the pressure profile, the air flows in the opposite direction of the water draining.

The cap bead needs to be soft enough to accommodate shifts in the system, but rigid enough to resist damaging environmental effects. It's usually made of neoprene, EPDM, or silicone. Since it is the first level of protection for the curtain wall, it is the area most prone to water infiltration.

The choice of beauty cap also has an impact on water infiltration.

Silicone is the best material to use because of its excellent resistance to UV damage, while neoprene is the worst because it is prone to being stuck in compression - commonly referred to as compression set.