Automatic Drainage Pumps with Electrode Control Device
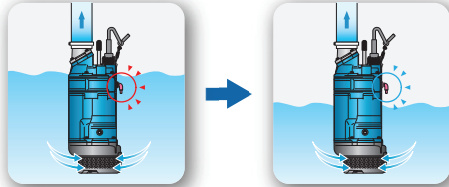
Contributing to reduction of power consumption, prevention of dry-running and extension of operating life.

KTZE

Automatic Operation

I

Pump continues to run while the electric probe remains submerged.
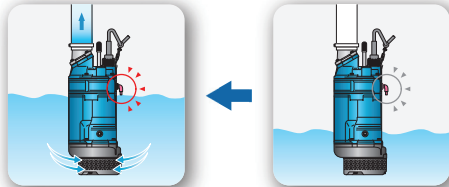
II

When the water surface falls below the electric probe, timer starts to count about one minute.

The process is repeated.

IV

When the water level rises to contact the electric probe, pump starts operating again.

III

Pump stops in about one minute after the water level falls.

40 % Reduction in Power Consumption

Electrode Control Device

Tsurumi has developed a unique automatic control device utilizing an electrode. It consists of an electric probe and relay unit. When the water level rises to contact the electric probe, electric continuity is produced between the electrode and the pump body, and the relay unit built into the pump turns on the pump.

The relay unit includes a timer function. The pump stops automatically in about one minute after the water surface falls below the electric probe. If the water level rises again to contact the electric probe within the run time, the pump continues to run for one more minute.

Since this mechanism eliminates dry-running, the pump can reduce power consumption by up to 40 percent compared with non-automatic pumps (Tsurumi comparison). It also prevents chattering caused by a turbulent water surface and extends operating life.
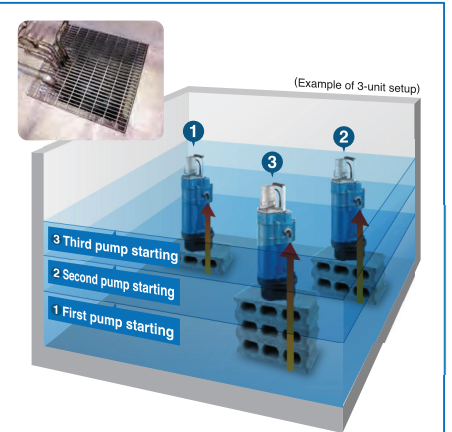
It is possible to set a lower starting water level by using an extension probe (optional accessory). The starting water level is adjustable because the extension probe can be cut to the desired length as it is made of coil spring.

Electrode Probe

Extension Probe

Cuttable to Desired Length
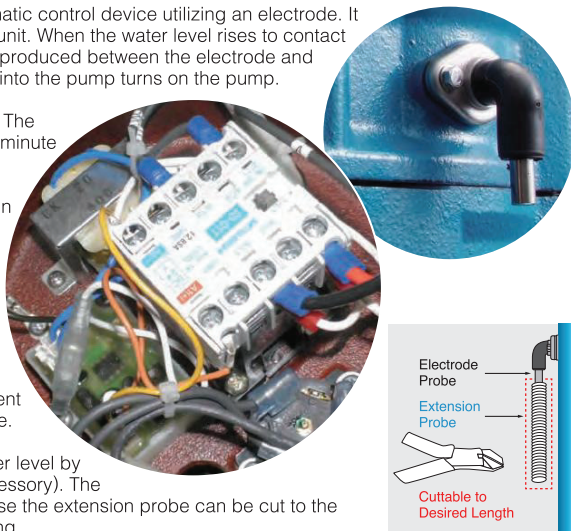
Example of use of automatic pumps in an underground car park

Simply connect the pumps to a power supply for automatic operation.

By setting up multiple Tsurumi automatic pumps at different height levels, these pumps prevent damage caused by submersion in flood water resulting from heavy rain. These pumps do not require any complex setting or installation work. Installation is as easy as positioning the pumps and connecting them to a power supply. If flooding occurs and the water level increases, the pumps automatically start pumping out water.

(Example of 3-unit setup)

3 Third pump starting
2 Second pump starting
1 First pump starting

For an underground car park where flood water may enter, Tsurumi automatic pumps can effectively prevent damage caused by submersion.

Adjusting the start water level by setting up multiple automatic pumps

The pumps automatically start pumping out water when the water level rises, and also automatically stop when the water level decreases. Simply raise or lower the pump position using blocks or bricks to set the water level at which the pump starts operation.