

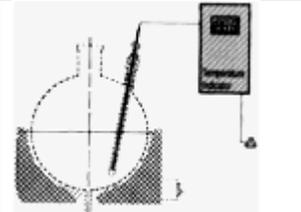
## Industrial Glass -Measurement and Control

In this part we have introduced equipment for efficient measure and control like Digital temperature indicators and controllers, Electromagnet and timers for reflux control and Liquid level controller.

### DIGITAL TEMPERATURE INDICATOR

This instrument is mainly used to monitor the temperature of liquid in a glass vessel in a typical glass distillation unit. The instrument consists of a Temperature indicator and a Resistance Temperature Detectors (RTD). The instrument works on 230V, 50Hz power supply. This displays the temperature in degree Centigrades in three and half digits of 12.5mm character height.

Cat. Ref.	Vessel size	RTD Length
TI20	20	400
DTI50	50	500
DTI100	100	600
DTI200	200	700

A schematic diagram showing a digital temperature indicator connected to a glass vessel. The indicator is a rectangular box with a digital display and a control knob. A probe is inserted into the vessel, connected to the indicator. The vessel is shown in cross-section with a vertical tube inside.

## TWO POINT DIGITAL TEMPERATURE INDICATOR

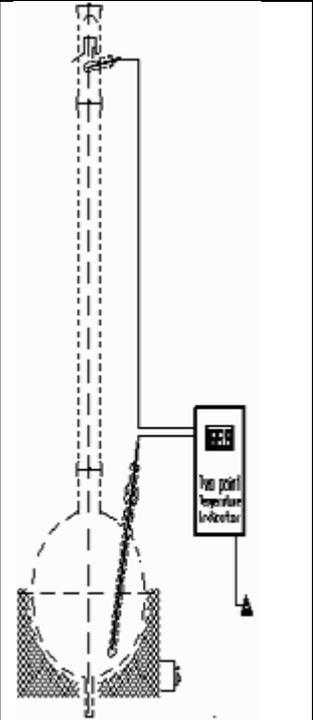
This instrument is mainly used to monitor the temperature of liquid in a glass vessel and temperature of vapours at reflux divider in a typical glass distillation unit. The instrument consists of a Temperature indicator and two Resistance temperature detectors (RTDs). The instrument works on 230V, 50Hz power supply. This displays the the temperature in degree Centigrades in three and half digits of 12.5mm character height. A switch is provided to see the two temperatures alternatively.

Cat. Length	Ref.	Vessel size	RTD Length for vessel	RTD Length for reflux divider
DTT20	20		400	200
DTT50	50		500	225
DTT100	100		600	250
DTT200	200		700	300

## ELECTRO-MAGNETS

Electro-magnets are used to operate Magnetically operated Reflux dividers. When 'On' the magnet attracts the swinging funnel of the reflux divider so that distillate can be taken off. Electro-magnets are to be mounted outside the glass column, just near to the reflux divider, with the help of adjustable fittings. These are designed to use with Timers to maintain correct ration between 'Off' and 'On' timings of its activation. Electro-magnets work on 220V DC power supply, for which a output socket is provided in the Timers.

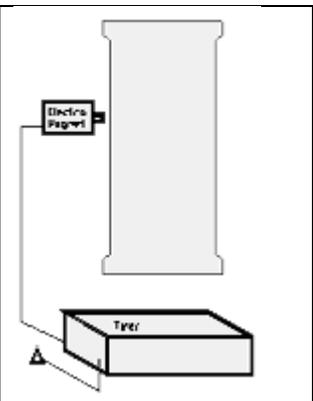
Cat. Ref.	Type
RPM*	Non-flameproof
RPF	Flameproof



## TIMERS

Timers are designed to use with Electro-magnets to provide a correct ratio of reflux and distillate when operating a Magnetically operated reflux divider. Timers work on a power supply of 230V, 50Hz.

Cat. Ref.	Type
RPM*	Non-flameproof
RPF	Flameproof

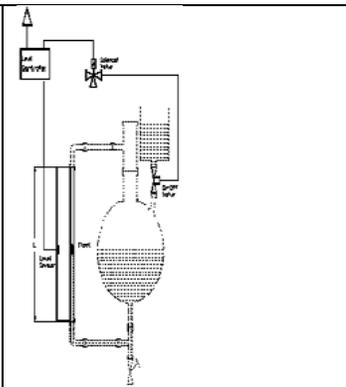


## AUTOMATIC LEVEL CONTROLLERS

This system is used for automatic control of liquid level in a glass vessel. The system consists of a Level float, a Level sensor, a Level controller, A solenoid valve and a Shut-off valve. All the parts which come in contact of liquid in the vessel are made of either Glass or PTFE. The vessel is connected to a glass pipe section in which a glass embedded metallic float is inserted. The float moves up and down according to the level of liquid in the vessel. The level sensor is mounted on an adjustable support, facing towards the glass pipe section. When the float reaches in the level of sensor, sensor gives signal to the level controller, which in turn operate the solenoid valve. Solenoid valve stops the air supply in the shut-off valve and shut-off valve gets close. This stops further feeding of the liquid in the vessel. As liquid level decreases due to vapourisation or drain, the float falls down out of the sensor level and shut-off valve opens. This starts the feeding of liquid in the vessel again. The system can be reversed so that shut-off valve can be installed on outlet of the vessel, instead of inlet, for automatic control of drain of the liquid from the vessel.

The system works on 230V 50Hz power supply. All the glass fittings used in the system are of 25DN size.

Cat. Ref.	Vessel size	L
ALC20	20	375
ALC50	50	500
ALC100	100	600
ALC200	200	750



## CONTINUOUS TEMPERATURE CONTROLLER

This instrument displays and controls the temperature continuously by switching the power supply on and off in an electrical heating equipment as per the initial settings of heating temperature, band width and reset temperature. The instrument consists of a Temperature controller, a series magnetic controller and a Resistance temperature detector (RTD). RTD is put into the Thermometer Pocket of the glass vessel and desired settings are done. As the temperature in the vessel reaches to the set heating temperature, the temperature controller cuts the power in heating equipment off. Power starts on again as the temperature goes down as per the settings of band width and reset temperature. This instrument works on power supply of 230V 50Hz and can be used with heating mantles and heating baths of all the size. It displays the temperature in degree Centigrade in three and half digits of 12.5mm character height

Cat. Ref.	Vessel size	RTD Length
CTC20	20	400
CTC50	50	500
CTC100	100	600
CTC200	200	700

\* marked items are available fast.

