

The HFR2 Humidity Controlled Cabinet

The HFR2 Humidity Controlled Cabinet is designed as an accessory for the HFR2 to allow tests to be carried out at constant temperature and relative humidity. The cabinet temperature can be controlled electronically from the prevailing ambient temperature up to 50°C with stability of $\pm 1^\circ\text{C}$. The relative humidity within the cabinet can also be adjusted between 0% and 100% R.H. using appropriate non-toxic salt solutions. Particular combinations of temperature and salt solution are available which will give an internal absolute vapour pressure of 1.4kPa. [This is the "standard" AVP as defined in CEC-F-06-A-96.]

Rapid air circulation over the desiccant tray and support platform combined with a large heat dissipating back plate promotes quick and even heat distribution within the unit. The plate glass door features a spring-loaded mechanism which maintains an air-tight seal, ensuring that the internal atmosphere remains constant.

Humidity is recorded using a Testo 625 humidity measuring instrument (supplied), allowing measurement of 5 to 95% RH within a 0 to 50°C range. [System accuracy at 25°C, $\pm 3\%$ RH, $\pm 0.4^\circ\text{C}$]

Proven by a third party test house to meet the requirements of the European EMC Directive, the unit also complies with the safety requirements of the Machinery and Low Voltage Directives.



Preliminary tests using the humidity controlled cabinet show increased repeatability and reduced scatter.

The cabinet, which is supplied with a stainless steel stand for the HFR2 test head and a stainless steel desiccant tray, is easy to use and virtually maintenance free.

Examples of saturated salt solutions and control temperatures are given below,

Ambient temperature	Recommended salt	Cabinet Temp. ($^\circ\text{C}$)
Less than 20°C	Sodium bromide (NaBr)	20
Less than 25°C	Potassium carbonate (K ₂ CO ₃)	25
Less than 30°C	Magnesium chloride (MgCl ₂)	30

SIZE

External(overall)	640 x 390 x 630mm
Internal	530 x 350 x 500mm
Door aperture	425 x 325mm

CONSTRUCTION

Cabinet	Stainless steel
Fittings	Plated/Painted steel
Door	Plate glass

FINISH

Interior	Stainless steel
Exterior	Powder coated

POWER SUPPLY

Voltage	220/240volts 50Hz
Power	200 watts

WEIGHT

Net	17 kg
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NB. This cabinet as supplied is NOT SUITABLE for gasoline testing. Please consult PCS for further information concerning gasoline tests.

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