



## Relative Humidity

### About JKG

We learn from each other by sharing and listening & together to solve problems, create new products and improve processes. Our broad range of perspectives helps us stay innovative and consider all angles. This project is a collaboration between JKG Make in India Efforts.

### Addition of Relative Humidity Control

Adding relative humidity (RH) control to an incubator Chamber is crucial for experiments that require precise environmental conditions such as plant growth, microbial controls, tissue culture and material testing. Below is a detailed breakdown of how RH is added and managed in incubators/ Chambers.

### How Relative humidity is added in a Chamber

There are a few common methods used to add humidity:

A) Pan-Type Humidifier (Basic System):

- A water pan sits inside the chamber.
- Heat causes the water to evaporate and increase RH.
- Controlled through temperature and airflow.
- Low-cost and rugged.

B) Ultrasonic Humidifier:

- Uses high frequency vibrations to create a fine water mist.
- Offers high precision and fast response.
- Usually paired with a high accuracy RH.

C) Controlled system (Sensor + Controller):

- Most incubators use a digital RH sensor connected to a microprocessor controller
- Allows user to set target RH values (typically from Above Ambient to 80% with NO light.)

## Relative Humidity (RH) Control Options

Option Code	Description	RH Range	Precision
JKG-RH Kit-PAN	Pan-type humidifiers with electronic RH sensor	Ambient to 90% $\pm$ 10% Lights OFF	Basic
JKG-RH Kit-Ultra	Ultrasonic humidifier + electronic RH sensor	Up to 90% Lights OFF	for High RH

