



# SEED **GERMINATORS**

MODEL NO. - ACM-78093-S



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We are manufacturers of seed germinators in India since more than two decades. Our equipments are conceptualized and designed to conduct various experiments on the germination of seeds in different controlled environmental conditions. All the crucial environmental parameters such as temperature, humidity and illumination are precisely controlled in our seed germinators by means of a advanced micro-processor based technology thus creating a nearly perfect and accurate environmental conditions for any given germination study, which yields highly accurate data. This data translates into excellent and accurate findings in any given research study. Beside the research based seed germinator, we are also manufacturing very economical commercial grade seed germinators, which are commonly used as sprouters in various agro-based industries and tissue culture industries.

The basic mechanism of these types of seed germinators is very similar to the basic research based

models of seed germinators, but the only difference being the control modules. The control modules of commercial seed germinators are electronic solid state based instead of sophisticated micro-processor based thus making them commercially viable and fit for rugged handling in production floors.

Beside the normal germination applications our seed germinators are fit to be used for various applications tests involving micro-organisms, plants, tissues, electronic components etc apart from various customized industrial and research applications.

Our seed germinators have a variety of usage in R & D laboratories, research studies and product testing facilities across the globe.

Apart from that, these seed germinator have a variety of usages in tissue culture applications, enzyme reaction studies, growth observation studies, fermentation analysis and various other general and specialized applications in various laboratories.



We specialize in both standard and customized models, specifically designed to meet the challenging demands of various scientists for individual and specialized research applications. Over a short period of time Weiber brand have been established as reliable exporters of seed germinator in India, catering to the vast markets in South East Asia, Middle East, Africa and Europe.

Apart from that we are supplying our seed germinator in India, catering to a variety of customers ranging from Defence Installations, Research Laboratories, Educational Institutes and various R& D laboratories of leading national and multinational companies.

## **SALIENT FEATURES**

- Reliable
- Precise Control Of Environmental Parameters
- Micro-processor based Controllers
- Aesthetically designed.
- Corrosion Resistant interior and exteriors
- Energy Efficient

- CFC free cooling
- Sturdy Construction
- Low Maintenance
- Light Weight

## **CONSTRUCTION**

Weiber seed germinator is double walled convection heated and cooled units (Double/Single chamber Units). Outer body of our seed germinator are constructed out of thick PCRC sheet duly pre-treated with primers and rust proofing and painted with long lasting stove enamel or elegantly powder coated. The inner chamber is made of heavy gauge stainless steel sheet of SS-304 grade or anodized aluminum sheet or G.I. (as per the customer's requirements). The gap between the walls is filled high grade mineral glass wool, which ensures maximum thermal efficiency in our walk in incubators.

The unit is provided with two doors, the inner door is made of thick plexi glass/float glass, to view the specimens/culture media/stocks, without disturbing the temperature of the



chamber. This door is provided with magnetic door closer.

The outer door is made of mild steel sheet lined with stainless steel from inside. This door is provided with lock and key arrangement. The unit is mounted on a sturdy steel frame the unit is provided with various customized shelves in various permutations and combinations to suit individual requirements. The triple walled back of our seed germinator are provided with two/Four/Six/Eight (size specific) air circulation fans for uniform maintenance of the temperature throughout the chamber. The unit is provided with 14 trays stainless steel (grades-304) in single chamber models and 28 stainless steel trays in double chambers. However we can customize the same as per the individual requirements.

## **HUMIDITY**

Indirect heating system is provided in our units, comprising of air heaters made of high grade Kanthal A-1 wires of suitable wattage. The warm air is evenly distributed throughout the chamber through efficient motor fans ensuring very good temperature sensitivity.

## **COOLING**

An energy efficient cooling unit is installed in our seed germinator to enable bio chemical demand, cyclic and growth studies at lower room temperatures. We use ISI marked high end CFC free compressors of Kirloskar/Tecumseh make, conforming to latest international standards and guidelines.

## **HUMIDITY RANGE**

From Ambient to 95% (As per the temperature Requirements).

## **HUMIDITY SENSITIVITY**

Humidity is controlled by mean of an electronic humidity controller cum indicator with an accuracy of + 5%.

## **TEMPERATURE CONTROL**

The temperature inside our seed germinator is controlled through programmable micro-processor based temperature controller cum indicator. Both the chambers



have their individual control modules.

## TEMPERATURE RANGE

Temperature range of our standard seed germinator models are 5° c above ambient to 60° c.(In one chamber) / 5° c to 60° c(in second chamber). However we have the capacity to modify the same to suit the individual specialized requirements of our customers.

## TEMPERATURE SENSITIVITY

Temperature inside our seed germinator is controlled with a sensitivity of + 0.5° c or better.

## ILLUMINATION

Our seed germinator are provided with door operated illumination system comprising of fluorescent lights, beside two panels of diffused fluorescent light panel located at the either side of the chamber to enable the user to conduct the photo periodic tests and experiments.

## ILLUMINATION CONTROL

The illumination is controlled through solid state cyclic timer to control the photoperiodic cycle of the chamber.

## FRONT PANEL

Front panel of our units comprises of on/off switches heating, cooling and mains indicator lamps, temperature controllers and voltmeters.

## TECHNICAL MATRIX

<b>Temperature Control</b>	-	-
Temperature Sensitivity	± °C	0.5 or better
Spatial Deviation In	±°C	0.5 or better
Temperature		
Readability	°C	0.1
Temperature range	°C	5°C to 60°C /5°C above ambient to90°C (Standard)
Temperature Sensor	-	PT-100
Temperature Controller	-	Solid State digital Controller/PID optional
Display	-	LED/LCD
Adjustable alarm limits	-	Optional With PID controller only
Water Quality	-	Distilled / Ionized





## ACQUISITION AND CONTROL SYSTEM FOR SEED GERMINATOR

This is unique module which can be incorporated with our seed germinator to log in temperature and environment related data with a help of a data logger unit which has a pc connectivity by means of RS232C interface. This data is then analyzed and formatted with the help of our unique user friendly analysis software to enable the user to get a formatted and analyzed reports of various inputs during the full operation cycle of the equipment. This is an ideal module for pharmaceutical laboratories, process control applications and high research projects where maintaining a viable record of the performance of the equipment is very essential.

## FEATURES

- Reliable
- Low maintenance
- PUF insulation
- Energy efficient
- RS232 interface
- Stainless steel interior
- Corrosion resistant

<b>Safety thermostats</b>	-	-
Temperature variation Adjustments	-	3 (With PID Controllers only)
Temperature Sensors	-	PT-100
Automatic temperature setting	<li style="height:35px;">-	Yes (With PID Controllers only)
Adjustable limits	-	Yes (With PID Controllers only)
<b>Light control</b>	-	-
Readability or Set ability	%	10% (optional feature)
Light intensity (Middle chamber)	Lux	As Desired (optional feature)
Light intensity (Both Sides)	Lux	As Desired (optional feature)
<b>Accessories</b>	-	-
Printer Report Program	-	Optional
2 x 24 characters LCD Display	-	Optional
Access Port 30 mm	-	Optional
Castors, lockable	-	Yes
<b>Accessories</b>	-	-
Printer Report Program		Optional
2 x 24 characters LCD Display		Optional
Access Port 30 mm		Optional
Castors, lockable		Yes
Power Consumption		-
Nominal Power	W	950
Nominal Voltage	V	220-230 Volts, 50 Hz Single Phase
Frequency	HZ	50



An ISO 9001 : 2208 | ISO 14001 : 2008 | ISO 13485

WHO: GMP Products | GLP Compliant Products

[www.acmasindia.com](http://www.acmasindia.com) | [www.cleanroom-equipments.com](http://www.cleanroom-equipments.com) | [www.test-chambers.com](http://www.test-chambers.com)

## **ACMAS TECHNOLOGIES PVT. LTD.**

### **CORPORATE OFFICE/ SHOWROOM (INDIA)**

Plot No. 352-353, Sector – 57

Phase- IV Kundli, Sonapat, HR 131028

Land Line No.: +91 - 11- 47619688,

Fax: +91-11-47619788

E-mail.: [info@acmasindia.com](mailto:info@acmasindia.com)

### **SALES OFFICE (HONG KONG)**

Unit D 28 11/F Wing Tat Comm,Bidg 97, Bonham Strand East,

Sheung Wan, Hong Kong (PRC)

Tel.: 0086-13929598046 | 0086- 18922303099

E-mail.: [hk@acmasindia.com](mailto:hk@acmasindia.com)

### **SALES OFFICE (RUSSIA)**

Inmed Trade Street Ozerkovsky Embankment,

Unit No 50, Straine- 1, Off- 502, Moscow, Russia

E-mail.: [info@acmasindia.com](mailto:info@acmasindia.com)

Tel.: 0049- 79592345 | Email: [russia@acmasindia.com](mailto:russia@acmasindia.com)