

AURORA CEA RANGE

- Advanced Seed Health Systems for CEA
- Cold plasma kills pathogens and boosts seed health
- Chemical free, using only air and electricity
- Options for 1kg and 2.5kg batch size
- Low operating power consumption (typically <200W)
- Designed for Vertical Farms & Greenhouses

Designed for the needs of vertical farms and greenhouses, Aurora CEA systems are intended to be a “biosecurity gatekeeper” – protecting the growing space of the farm from seed-borne pathogens, while simultaneously boosting seed vigour.

Using very low power, they operate from a standard office power outlet (110V or 240V options). Treatment costs are amongst the cheapest in the industry and are significantly lower than chemical-free alternatives.

THE AURORA PROCESS

Zayndu's Aurora seed health process uses cold plasma to remove pathogens and boost overall seed health. It is effectively a priming process, improving germination rates and speed, while at the same time reducing the pathogen load on the plant – ensuring increased yield for the grower.

In the process, seeds are placed in a drum, containing only air. The Aurora system generates cold plasma within the drum. This in turn creates “Activated Air”, which is a blend of Reactive Oxygen and Nitrogen Species (or RONS for short). This is both a powerful disinfectant – disabling many pathogens – and a powerful boost to seed vigour. At the end of the process, the Activated Air is returned back to normal atmospheric air.

Process control is critical. Sensors measure humidity, temperatures, pressures, and gas concentrations throughout the system and use sophisticated control algorithms designed to deliver consistent results. The monitoring systems also highlight areas which may need maintenance in the future, helping to ensure that every treatment is done effectively.

The treatment is both cool and dry – no water is introduced in the process, and the advanced cold-plasma systems used ensure the seeds are not exposed to heat.



CLOUD ENABLED

Aurora systems are cloud-connected, which enables Zayndu's remote machine monitoring service – detecting issues before they become problems. The cloud connection enables remote control of the system, bringing the possibility of both remote monitoring - or training new staff without a Zayndu engineer coming on-site. Note that the systems use the cloud connection dynamically to check licences, download software updates and report their status to the monitoring service. Operation without an internet connection is not possible.

VERSIONS

Z10

- 10 Litre Drum
- Treatment Capacity 2 Litres
- Single Plasma Generator System†

Z25

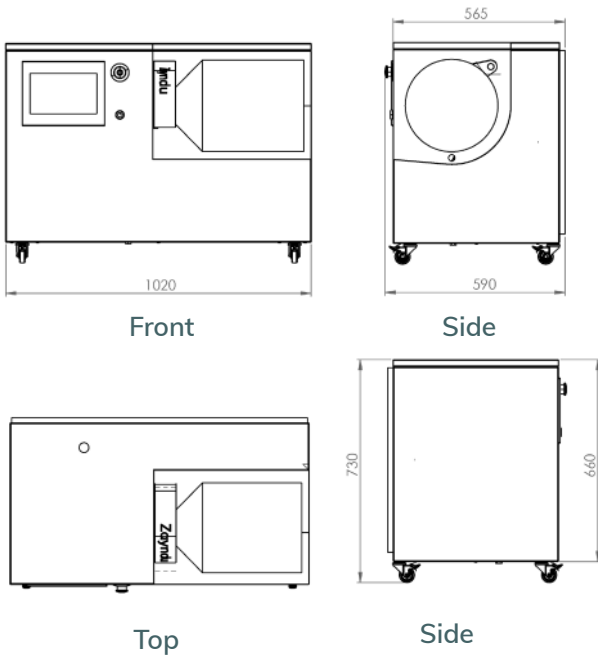
- 25 Litre Drum
- Treatment Capacity 5 Litres
- Dual Plasma Generator System

Upgrading capacity from the Z10 to the Z25 is straightforward, growing with your farm's requirements.

† System can be upgraded to dual plasma on request.

PRODUCT SPECIFICATION

Drum Size	Z10 Z25	10 litres 25 litres
Treatment Capacity	Z10 Z25	2 Litres (approx 1Kg) 5 Litres (approx 2.5Kg)
Treatment Times	Programmable from 30 minutes to 48 hours	
Drive System	Belt-driven geared variable speed motor	
User Interface	10.4" touchscreen control panel	
Warm-Up Time	Approximately 5 minutes from power-on	
Network connection	1Gbps Ethernet or 802.11 WiFi (built in); optional 4G connection Options for remote management and integration into factory automation systems.	
License Management	Cloud based	
Dimensions	Length: 1015mm (39.9") Depth: 605mm (23.8") Height without feet: 660mm (25.9") Height with wheels: 725mm (28.5") Weight: 135Kg (298 lbs) All dimensions approximate.	
Operating Environment	5°C to 30°C (41°F to 86°F) 40% to 90% RH, non-condensing	
Power Requirements	Single Phase Typical 200W operation UK & EU versions: 240V AC UK, EU & US versions: 110V AC	
Certification	UKCA & CE Approved. UL Approval Pending	



ORDER INFORMATION

Product Code	ZCEA	
Version	Version Number	Set to 000 unless ordering an older version
Capacity	Drum Size in Litres	010 025
Generators	Number of Plasma Systems	001 (for 10-litre only) 002
Network	Internet Connection Type	LAN WIFI 4G
Region	Version (including regulatory scheme and operating voltage)	US (UL compliant, 110V) EU (CE compliant, 240V) UK (UKCA compliant, 240V)

Example: A 25-litre system (which must have two plasma generators), operating at 110V and UL compliant for the US market – with a LAN connection – would be: ZCEA-000-025-002-LAN-US