

Your answer to a **reliable** CO₂ supply



Technical Datasheet Skytree Cumulus

TDC20_v2409041



Product Specifications

Skytree Cumulus system

CO ₂ capture per day ^{1 2}	Up to 20 kg (44 lbs)
CO ₂ purity	>90% CO ₂
Airflow	3.600 m ³ per hour (2120 CFM)
Process water per day	Up to 20L (5.3 gal)
Total energy consumption	4 kWh per kg CO ₂ (1,82 kWh per lb CO ₂)
Installation environment	Indoor use only
System footprint (LxW)	6 m x 5 m (20 ft x 6.56 ft)
Optimum temperature	5°C to 30°C (41°F to 86°F)
Storage temperature	5°C to 40°C (41°F to 104°F)
Optimum humidity	10-80% relative humidity
Noise rating	80 dB
Data connection	Ethernet
Rating & certificates	IP21, CE
Max operational altitude	2000 m (6500 ft)

Main Unit

Dimensions (LxWxH)	3.09 m x 1.4 m x 1.17 m (10.14 x 1.4 ft x 3.84 ft)
Weight	700 kg (1550 lbs)
Peak power	45 kW
Nominal power	20 kW

Control Unit

Dimensions (LxWxH)	1.81 m x 1.28 m x 1.8 m (5.94 x 4.2 ft x 5.91 ft)
Weight	650 kg (1450 lbs)
Peak power	15 kW
Nominal power	10 kW
External chiller (LxWxH)	0.705 m x 0.61 m x 1.18 m (2.31 x 2.01 ft x 3.87 ft)

Electrical grid connection³

Regions	Phase	Voltage	Frequency	Max current Main unit	Max current Control unit
EU, UAE, AUS, NZL	3	400V	50Hz	60A	20A
KOR	3	380V	60Hz	69A	23A
USA, CAN	3	208V	60Hz	125A	42A
JPN	3	200V	50Hz	130A	44A

1. CO₂ capture efficiency varies with temperature, humidity, and altitude due to changes in atmospheric conditions.

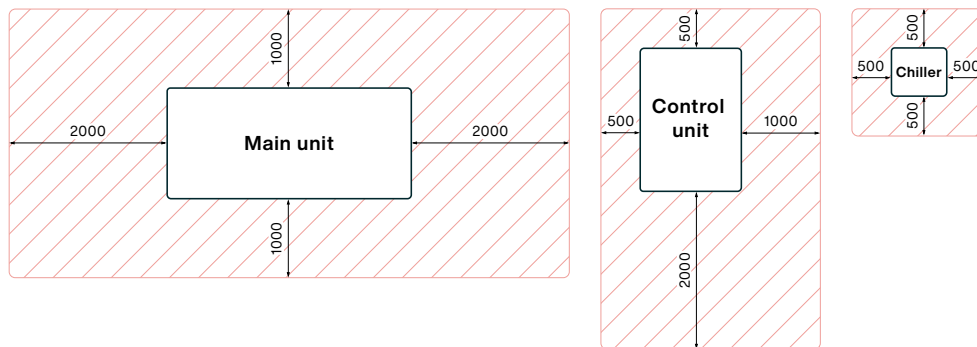
2. Results are based on tests conducted at 20°C (68°F), 420 ppm CO₂, at sea level.

3. Other electrical connections can be supplied on request.

Installation Site Specifications

Space requirements

Installation location	Indoor technical area with minimal foot traffic.
Installation height	Main Unit to be placed 1 m (3ft) above the ground.
Airflow requirements	Provide an unobstructed airflow of fresh air (3,600m ³ /h or 2120 CFM).
Chiller	Max distance from Control Unit to Chiller is 2.5 m (8 ft).
Storage tank	Max distance from Control Unit to Storage Tank is 9 m (30 ft).
Minimum clearance	The following illustration shows the space needed for the system:



Connections required

CO₂ output connections	90% CO ₂ , Remaining is air and moisture
Waste water drainage	1 L (0.3 gal) standard drain water per 1 kg (2.2 lbs) of CO ₂
Connectivity	Ethernet (Router provided on request), USB A/B (local diagnostics)

Materials required for installation

Power input connections	2x 3 phase cable of 6 mm ² diameter per phase
Terminal connection	6x ferrules
Output connections	1x CO ₂ output hose under 9 m length with G ¹ / ₄ to 2" adapter
Wastewater tubes	2x DN32mm extension to bucket or wastewater collection
Tank Anchor bolts	3x M12 x 80 mm
Fuse box⁴	1x 5 terminals from 1x 63A supply (3ph, NULL & PE) 1x 5 terminals from 1x 32A supply (3ph, NULL & PE)
Loctite	1x 150 ml Loctite 577
Hose clamp	1x 35 mm hose clamp
Forklift	Rated to lift 1000kg (2205 lbs)
Coolant container	1x 12L (3.2 gal)
Coolant	To be added on site
Coolant composition	Ethylene Glycol 20% and water 80%

4. This configuration is for a 3-phase 400V, 50Hz power supply.