ENERAMA
Environmental Technologies

DRAGON

WORLD'S MOST EFFICIENT & POWERFUL CLIMATE CONTROL SYSTEM

CANNABIS

HUMIDITY

Transpiration is the process of water evaporation from plant leaves, usually through the pores beneath the leaves called stomata. This process affects the rise of moisture and nutrients from the roots to the leaves, providing the necessary water for photosynthesis in food production. In addition, the process prevents overheating of plant cell tissue and provides the moisture necessary to spread carbon dioxide to plant cells and provide oxygen emissions. The amount of water transpired by a plant is staggeringly large. For every kilogram (2.2 lbs.) of plant tissue gained in growth, a plant will transpire 200-1000 kilograms (441 – 2,205 lbs.) of water. Transpiration is a passive process largely controlled by the humidity of the surrounding atmosphere and the moisture content in the Rhizosphere (root zone).

Due to continuous transpiration in the greenhouses humidity level increases. The most important parameter of plant health and yield quality is balancing the humidity accumulated in the greenhouse.

LOW COST - HIGH SENSITIVITY

Compared to other alternative products in commercial and industrial applications, ***Dragon Dehumidification System*** offers more economic, sensitive and optimized solutions for humidity control. Optionally, cooling unit can be included to the system to reduce the ambient temperature. Thanks to providing ideal indoor weather conditions, there is no need to ventilate the greenhouse by opening the windows. Thereby, the penetration of harmful particles from the windows is prevented. Also escape of CO_2 gas is significantly restricted. Dragon provides the utmost in excellence in professional HVAC and dehumidification services, without using expensive filtration systems. The water absorbed from the air is clean and can be used for various purposes to make significant contributions to the environment.

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REMOTE MONITORING AND MANAGEMENT SYSTEM

Thanks to the specially designed electronic control system, individual grow sections can be controlled and managed separately. Operation reports can be received and alarms can be displayed instantly. Remote monitoring, management and maintenance procedures can be performed easily with advanced and intelligent ***EMS*** (***E***quipment ***M***onitoring ***S***ystem) technology. ***Mekasera*** Remote Monitoring and Management System is compatible with smart tablets, smart phones, PC and Mac computers and easily accessible through web sign in.

MODULAR & FLEXIBLE DESIGN

Regenerators are replaced in an external environment and the air handling units are installed in the indoor environment hangin on the side walls, ceiling as a duct system or under bench or ceiling units preventing space loss of in the greenhouse production area. Thanks to its modular and flexible structure, ***Dragon*** can be specially designed and adapted to different projects. Several ***Dragons*** can be combined under the same network.

PATENTED TECHNOLOGY

With its unique technology ***Dragon*** is the most efficient and economical dehumidification and moisture balancing system available on the market, specially developed for large areas. Thanks to our automatic control system, ***Dragon*** reduces the ambient humidity to the desired level by separating and absorbing the moisture in the air. High efficiency, safe, stable "***Dragon Dehumidification System***" is certified by a CE certificate

DRAGON CLIMATE CONTROL SYSTEM

REGENERATOR

Model	DRREG2010U	DRREG2020U	DRREG2030U	DRREG2040U	DRREG2060U	DRREG2070U	DRREG2080U	DRREG2120U
Casing	FRP							
Refrigerant	R407C							
Cooling capacity	10 RT	20 RT	30 RT	40 RT	60 RT	70 RT	80 RT	120 RT
Dehumidification capacity	13 gal/h	26 gal/h	39 gal/h	52 gal/h	79 gal/h	92 gal/h	105 gal/h	158 gal/h
Compressor type	Scroll	Scroll	Screw	Screw	Screw	Screw	Screw	Screw
Condenser type	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE
Evaporator type	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE
Rated compressor power	10 kW	20 kW	30 kW	40 kW	60 kW	70 kW	80 kW	120 kW
Regenerator pump power	1.5 kW	3 kW	4 kW	4 kW	7.5 kW	7.5 kW	15 kW	15 kW
Conditioner pump power (*)	2.2 kW	4 kW	7.5 kW	7.5 kW	7.5 kW	7.5 kW	15 kW	15 kW
COP	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Power circuit voltage	480 V/3 Ph/60 Hz							
"RLA (including regeneration tower' power requirement)"	28 A	50 A	75 A	90 A	127 A	137 A	183 A	262 A
LRA/MCA/MOP	175 / 35 / 63 A	300 / 63 / 112 A	290 / 93 / 168 A	390 / 112 / 202 A	630 / 158 / 285 A	680 / 169 / 307 A	910 / 227 / 410 A	1300 / 326 / 587 A
Length	91 in	91 in	131 in	131 in	131 in	131 in	171 in	171 in
Width	75 in	75 in	75 in	75 in	75 in	75 in	75 in	75 in
Height	87 in	87 in	87 in	87 in	87 in	87 in	87 in	87 in
Weight	1750 lb	2200 lb	8000 lb	8100 lb	8600 lb	8700 lb	8900 lb	9200 lb

* Conditioner pump might be replaced according to the facility plan.

REGENERATOR TOWER

Model	DRRTW1030	DRRTW2030
Casing	FRP	
Fan power	4 kW	
Air flow rate	17,500 cfm	
Noise pressure level (*)	90 dB(A)	
Spacing	78 in	
Length	78 in	78 in
Width	78 in	78 in
Height	113 in	113 in
Weight	1014 lb	1367 lb

* Power demand is supplied by regenerator. Regenerator power information includes the required power of Towers.

CONDITIONER

Model	DRCND1007U	DRCND1015U	DRCND1030U
High Ceiling Ready	No	Yes	No
Casing	FRP		
Fan drive type	VFD	DOL	DOL
Fan power	1.7 kW	2.2 kW	5.5 kW
Air flow rate	4100 cfm	8800 cfm	17500 cfm
Power circuit voltage	220 V/1 Ph/60 Hz	480 V/3 Ph/60 Hz	480 V/3 Ph/60 Hz
RLA	9.6 A	3.3 A	8.2 A
LRA/MCA/MOP	25.0 / 12.0 / 21.0 A	19.0 / 4.0 / 7.4 A	50.0 / 12.0 / 22.5 A
Length	98 in	92 in	88 in
Width	41 in	57 in	75 in
Height	24 in	44 in	73 in
Weight	450 lb	705 lb	1014 lb

PUMP STATION

Model	DRPS1075	DRPS1150
Casing	Steel	Steel
Motor Power	7.5 kW	15 kW
Length	48 in	48 in
Width	20 in	40 in
Height	39 in	39 in
Weight	352 lb	706 lb

* Pump Station is an equipment that operates as conditioner pump

ALL TECHNICAL DETAILS ARE SUBJECT TO CHANGE

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GENERAL FEATURES

- Consistently achieve optimum climate conditions to maximize product quality and to minimize product loss
- Unmatched energy consumption at 1.32 gallons per 1 kWh
- Consistent performance independent of most outdoor and indoor condition
- Considerable energy savings from the efficient use and transfer of latent energy
- No unwanted heat transfer during dehumidification
- Contributes dynamically to cooling or heating based on needs
- Prevent humidity driven biohazards including mold, fungi, bacteria and pests among many others
- Destroy considerable airborne pathogens during the liquid desiccant dehumidification
- Closed circuit liquid desiccant system with built in regenerative properties to eliminate running material costs
- Self diagnosis, remote support and in depth troubleshooting to streamline maintenance and to minimize downtime

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