



FLEXIBOX 900, OUTDOOR FREE COOLING FOR ELECTRONICS

Dantherm Flexibox Free Cooling is cost-effective controlled ventilation. The solution cools by means of ambient air without using a compressor, generating significant savings in all climates.

Flexibox Free Cooling 900 is designed with the Dantherm-developed CC3000 cooling controller, which allows settings configuration and live operation monitoring on any standard browser.

Free Cooling can be used stand-alone or combined with e.g. existing air conditioning. This ensures maximum use of passive cooling, prolongs the air conditioner service life and generates significant OPEX savings.

Contact Dantherm for non-binding, site-specific energy savings counselling in your network.



FEATURES AND BENEFITS

Benefits of Flexibox 900, indoor

- | | |
|--|--|
| • Significant energy savings: | Most energy-efficient cooling method within electronics cooling |
| • Total climate control: | Controls several external units |
| • Clean internal environment: | Overpressure system ensures no ingress of outside contaminants |
| • Long service life: | High-quality components |
| • Pollution ratio adaption: | Easy change of multiple filter types |
| • Prolongs service life of existing units: | Free Cooling operation reduces wear of other installed cooling units |
| • Operational safety: | Emergency cooling |
| • Wide geographical usage: | Ambient temperature operating range from -40 to +55°C |
| • Extended air inlet protection: | Ready for Dantherm AirMaze ^{pat.pend.} |

Installation and operation

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|-------------------------------|-------------------------------------|
| • Flexible installation: | Plug-and-play, new and legacy sites |
| • Minimum installation costs: | No need for cooling technician |

Controller

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|---------------------------------|---|
| • Solution-specific controller: | Dantherm-developed, wall-mounted |
| • Flexible configuration: | Live monitoring and configuration on any standard browser |
| • Energy-saving strategy: | Max. use of controlled ventilation |
| • Intelligent climate control: | Automated change of cooling mode |
| • Stable operation: | Stepless fan speed control |
| • User-friendly configuration: | Built-in SD card reader and digital colour display |
| • Service minimization: | Digital filter status detector |
| • Strategy evaluation/planning: | Complete data logging |

Application

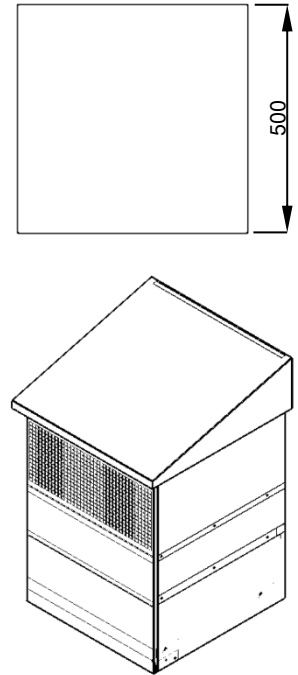
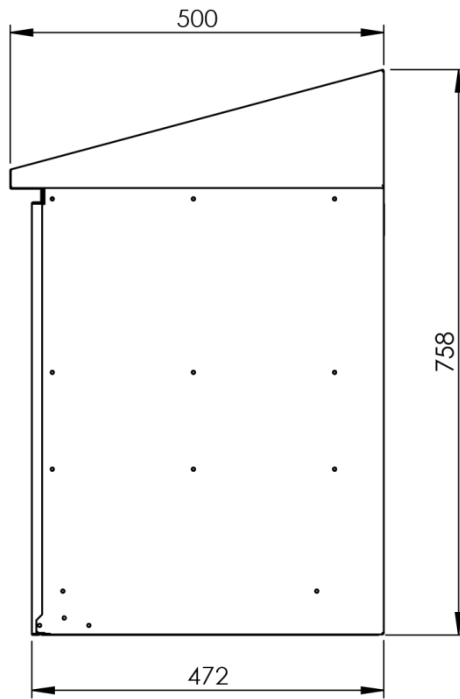
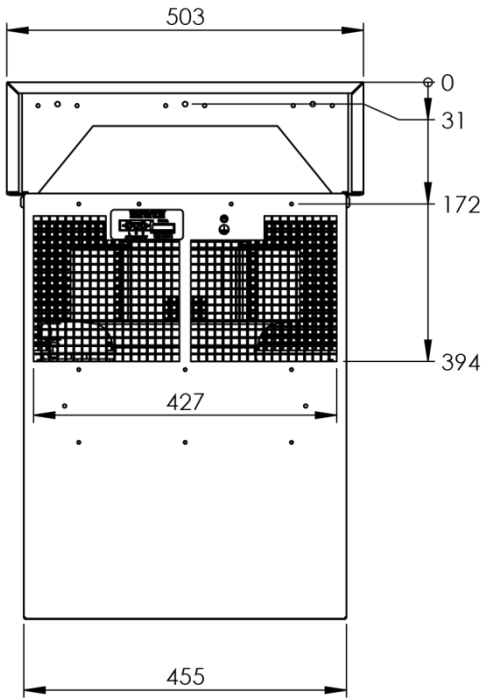
- Telecom shelters, enclosures and rooms
- Drive stations
- Automation control cabinets
- Hybrid Telecom sites
- DC-powered sites
- Regions with extreme temperature fluctuations



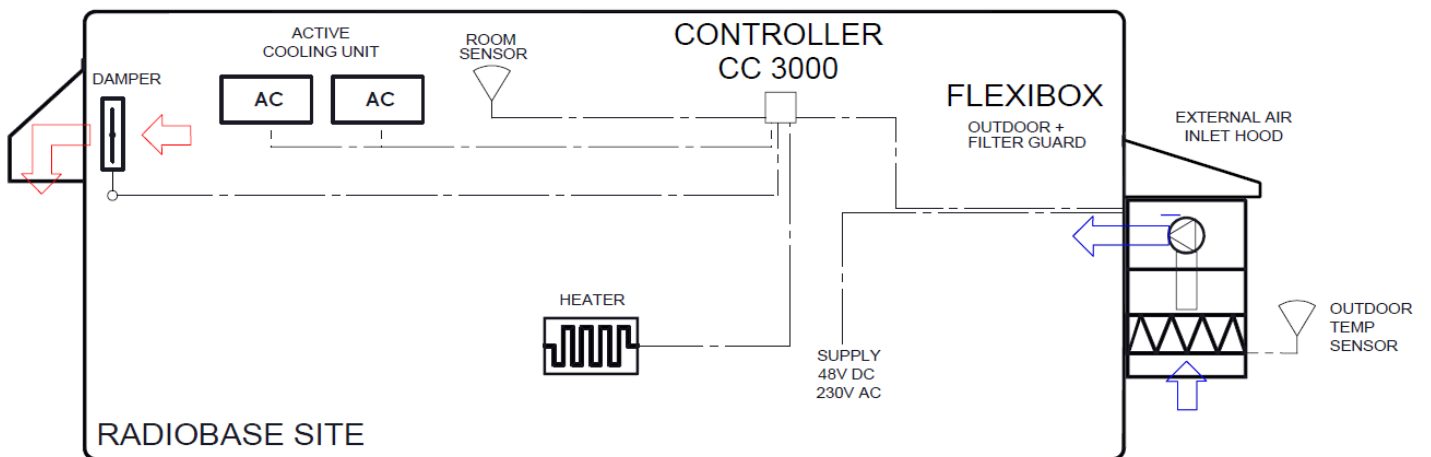
TECHNICAL SPECIFICATIONS
FLEXIBOX 900, OUTDOOR

Product overview		Category	
Flexibox Free Cooling 900, outdoor		Free Cooling	
Item number		368461	
Version		FB900-48V-G4	FB900-230V-G4
Capacity & Performance			
Operational temperature range, min./max.	°C	- 25 to + 55	- 25 to + 45
Cooling capacity at $\Delta t=10^{\circ}\text{C}$, 50/80%	W	4950 / 7210	5370 / 8340
Maximum cooling capacity at $\Delta t=10^{\circ}\text{C}$, 100%	W	8140	8610
Airflow, maximum	m ³ /h	2450	2590
Electrical connection	Type	Phoenix PC 4/2-STF-7.62	Ensto NAC32S.W
Input voltage range	VDC	48VDC (42-57VDC)	230V AC (200 to 277)
Power consumption 50/80/100%	W	78/239/366	71/284/400
Sound level, 50/80%, 3m distance*	dB(A)	47/56	49/59
Expected operation life	Min. years	10	10
*Sound power 50/80%	dB(A)	62/71	64/74
Shipment, Storage & Mounting			
Unit dimensions (height×width×depth)	mm	758 x 503 x 500	
Net weight	kg	25	
Single package weight incl. unit	kg	28.1	
Multi package weight incl. unit (standard pallet, 6 units)	kg	192	
Single packing dimensions (height×width×depth)	mm	790 x 530 x 530	
Multi packing dimensions (height×width×depth)	mm	1725 x 800 x 1200	
Storage relative humidity, min./max.	RH %	0 to 95	
Storage temperature, min./max.	°C	-40 to +80	
Mounting method	Type	Wall-mounted	
Service area dimensions	mm	500 x 666	
Filter	Item no.	077164	
Filter type	Class	Compact G4	
Filter area	m ²	0.75	
Controller details			
Dantherm Cooling Controller CC3000	Item no.	091210	
Communication interface	Type	Ethernet SNMP	
Mounting method	Type	Wall-mounted	
Certifications			
Protection according to EN 60529	IP class no.	X5	
Complies with standards	Code	EN 60950	
Colour	RAL	AlZn coated steel plate	

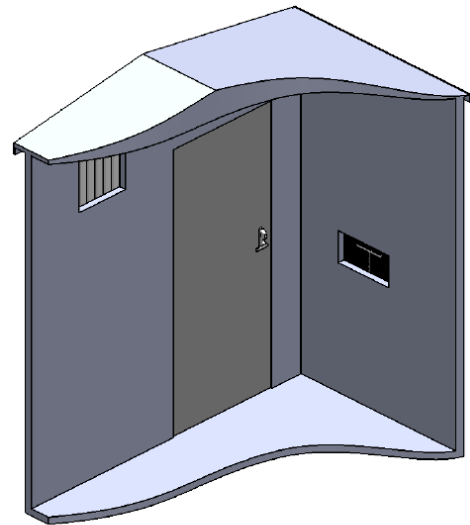
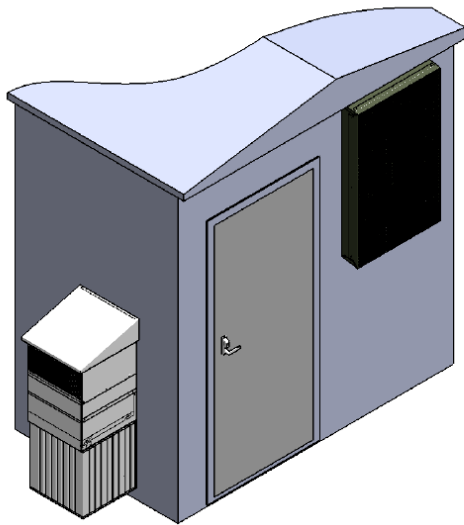
DIMENSIONS



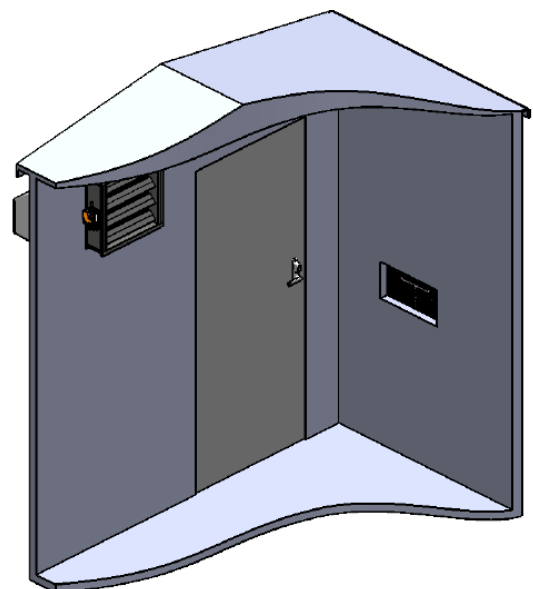
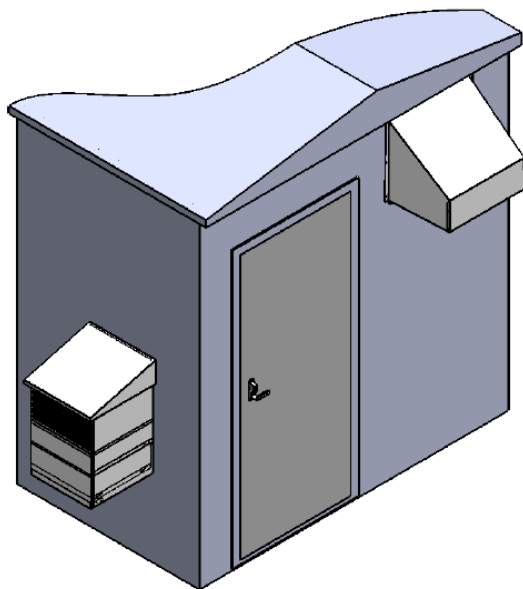
FLOW - & CONNECTION CHART



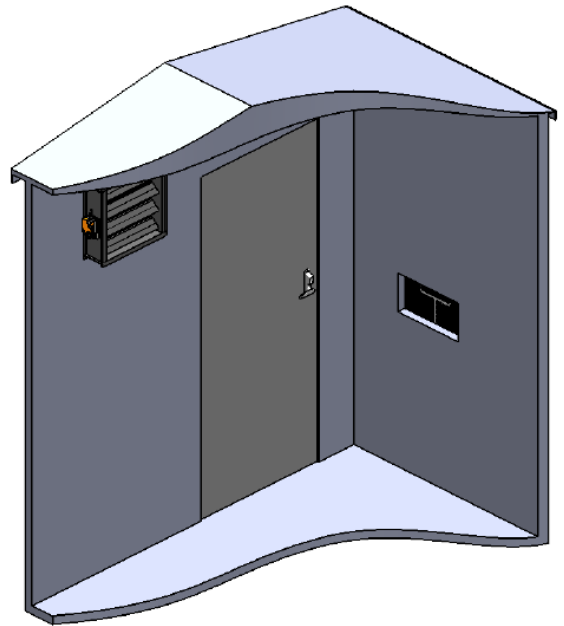
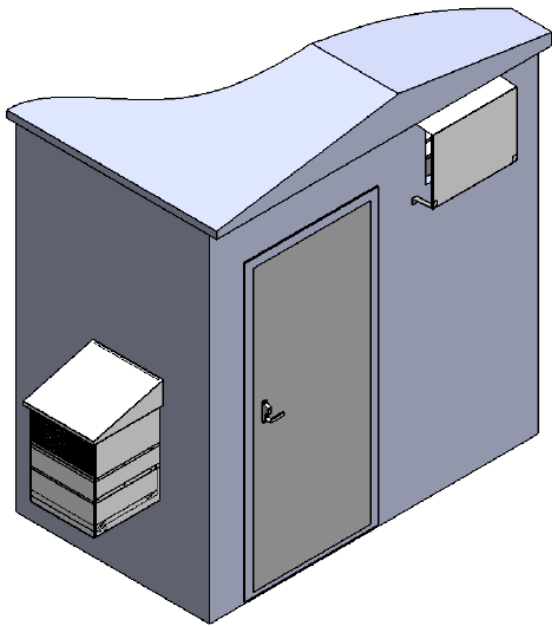
MOUNTING ALTERNATIVES



Mounting type accessories air inlet		Mounting type accessories air outlet	
AirMaze Cube for Outdoor Flexibox, unpainted	081993	Motorized damper Opening: [400 x 411mm]	074603
		Gravity Damper (ABS plastic) Opening: [407 x 407mm]	086964
		Gravity Damper (Aluminium) Opening: [400 x 400mm]	299943
		or	
		AirMaze, painted, with bug screen	086924
		AirMaze, unpainted	075575



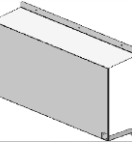





		Mounting type accessories air outlet	
		Motorized damper Opening: [400 x 411mm]	074603
		Gravity damper (ABS plastic) Opening: [407 x 407mm]	086964
		Gravity damper (Aluminium) Opening: [400 x 400mm]	299943
		External rain hood Measurements: [400 x 400]	299653



		Mounting type accessories air outlet	
		Motorized damper	074603
		Opening: [400 x 411mm]	
		Gravity damper (ABS plastic)	086964
		Opening: [407 x 407mm]	
		Gravity damper (Aluminum)	299943
		Opening: [400 x 400mm]	
		Damper rain/snow protection	087317
		Measurements: [452 x 600]	

MOUNTING ACCESSORIES

Product selection (all inside dimensions, if no remarks)	Item number	Product photo
Motorized damper Opening: [400 x 411mm] Measurements: [461 x 532 x 125]	074603	[Insert image]
Gravity damper (ABS plastic) Opening: [407 x 407mm] Measurements: [456 x 456 x 27]	086964	[Insert image]
Gravity damper (Aluminum) Opening: [400 x 400mm] Measurements: [442 x 442 x 50]	299943	
External rain hood Opening: [400 x 400mm] Measurements: [578 x 682 x 442]	299653	
Damper rain/snow protection Measurements: [500 x 600 x 151]	087317	
AirMaze Cube for Outdoor Flexibox Unpainted Measurements: [500 x 450 x 450]	081993	
AirMaze Panel Unpainted Measurements: [1149 x 735 x 120]	075575	
Airmaze Panel Painted*, with bug screen Measurements: [1160 x 703 x 137] *Not standard colour	086924	
Smoke and heat detector kit	081640	[Insert image]
Humidity sensor (indoor) on/off	Release Q4 2016	[Insert image]
DC/DC Converter 24/48VDC	840140	[Insert image]