



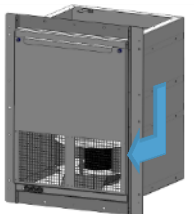
SA (code) = **S**traight **A**ir flow
CA (code) = **C**urved **A**ir flow



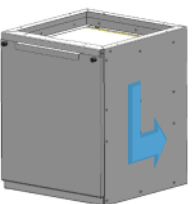
Flexibox 450/48SA
Flexibox 450/230SA



Flexibox 450/48CA
Flexibox 450/230CA



Flexibox 450/48TWCA
Flexibox 450/230TWCA



Flexibox 450/48ODCA
Flexibox 450/230ODCA

FLEXIBOX 450 FREE COOLING FOR ELECTRONICS

Flexibox 450 is a compact free air cooler with flexible air intake specifically designed to control the internal environment of communications enclosures. The unit is designed to remove excess heat from temperature sensitive electronic equipment, where the temperature is required to be maintained within defined limits to achieve optimum performance and to maximise component service life.

The Flexibox is suitable for both new and existing sites, where existing equipment needs replacement or completion with energy savings from free cooling. You can connect the Flexibox to existing AC units, extend the air conditioner's service life and create immense power savings. Ask Dantherm for power savings in your network.

The Flexibox is available for 48 V DC or 230 V AC power supply.

FEATURES AND BENEFITS

Energy efficiency and environment

- Total heat management: designed for energy efficiency with maximum use of controlled ventilation.

Cabinet

- Flexible mounting and flexible air intake
- Versions for indoor, through-wall and outdoor mounting
- Door mounting option; in combination with Air Intake Grille 400x500
- Constructed of sheet metal (Aluzinc AZ150)
- G4 Compact fine filter

Controller

- ACUE 3000 – 48 VDC Controller, wall mounted (see datasheet)
- TKS3000AEC – 230 VAC Controller, wall mounted (see datasheet)
- Control of up to two cooling units (NB; only one for ACUE 3000)
- Control of external heater
- Control of motorised dampers
- LCD Display with status and alarm functions in clear text
- Timer function for service personnel
- Communication port RS 232, Modbus protocol
- Filter monitor
- Self-test function

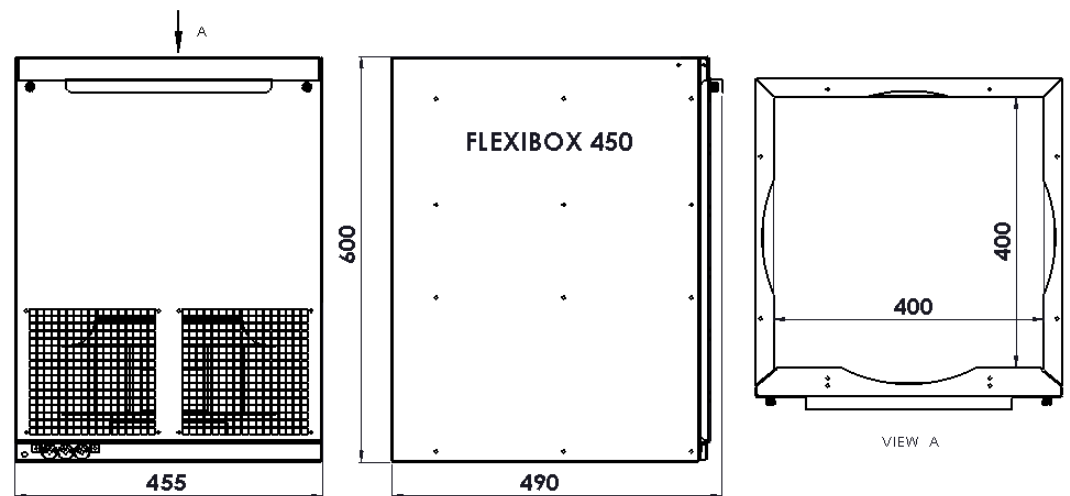
Optional features

- Outdoor temperature sensor – to be used with air conditioner
- F5 & F7 compact filter

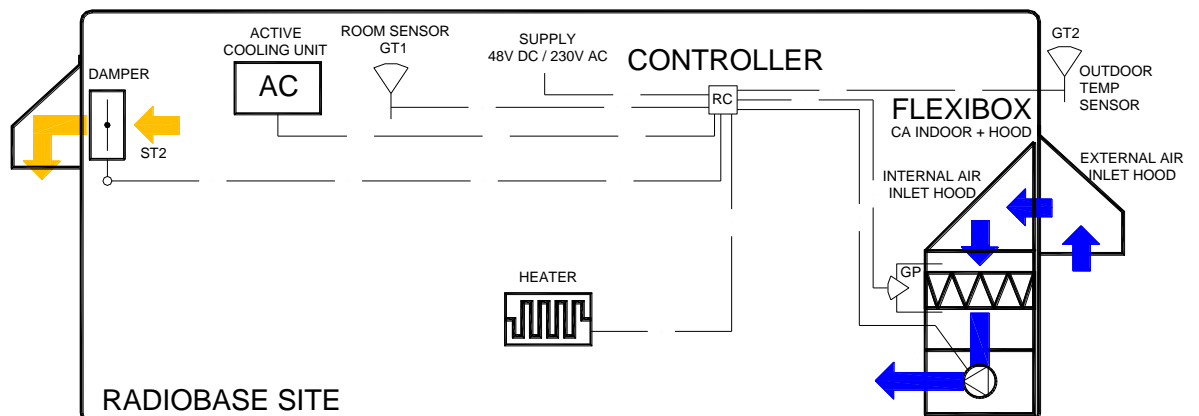
TECHNICAL DATA FLEXIBOX 450

Version	Unit	24V DC (EC-fan)	48V DC (EC-fan)	230V AC (EC-fan)
Maximum air flow	l/s	692	648	825
Maximum air flow	m ³ /h	2490	2333	2970
Cooling capacity at $\Delta t=7^{\circ}\text{C}$	kW	5.9	5.7	6.9
Cooling capacity at $\Delta t=5^{\circ}\text{C}$	kW	4.1	4.1	5.0
Cooling capacity in W / K ($\Delta t = 1$)	W / K	840	782	990
Fan nominal voltage	AC/DC	24V DC	48V DC (38-60V DC)	230V AC
Fan max. current	A	12.38	6.1	3.1
Fan max. power consumption at nominal voltage	W	296	329	450
Fan power consumption at 50% speed	W	65	69	110
Sound pressure at 5m distance from shelter	dB(A)	45	45	45
Filter	Class	G4 Compact (optional F5, F7)	G4 Compact (optional F5, F7)	G4 Compact (optional F5, F7)
Filter area	m ²	0.75	0.75	0.75
Height	mm	600	600	600
Width	mm	455	455	455
Depth	mm	490	490	490
Weight	Kg	22	22	22
Intake air cut out dimensions in wall/floor	mm	395x395 (W x H)	395x395 (W x H)	395x395 (W x H)
Intake air cut out dimensions (with inlet hood)	mm	400x500 (W x H)	400x500 (W x H)	400x500 (W x H)
Intake air cut out dimensions (with duct $\varnothing 400$)	mm	$\varnothing 405$	$\varnothing 405$	$\varnothing 405$



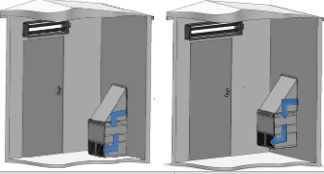




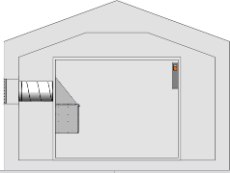
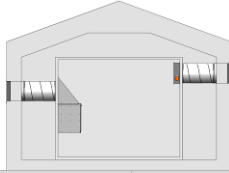
DIMENSIONS



FLOW CHART - CA



MOUNTING ALTERNATIVES

			
External air inlet hood	299653	External air inlet hood	299653
Internal air inlet hood	298421	Flexibox SA /230 or 48	Straight air flow
Flexibox SA /230 or 48	Straight air flow	Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)
Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)		Exhaust air rain hood
Exhaust air rain hood	299941		
Air grille YG300x300	299575	External air inlet hood	299653
Internal air inlet hood	298421	Internal air inlet hood	298421
Flexibox SA /230 or 48	Straight air flow	Flexibox CA /230 or 48	Curved air flow
Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)	Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)
Exhaust air rain hood	299941	Exhaust air rain hood	299941
			
Air inlet net 10x10mm	299647	External air inlet hood	299653
Flexibox CA /230 or 48	Curved air flow	Mounting brackets	2 x 299650
Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)	Flexibox CA /230 or 48	Curved air flow
		Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)
Exhaust air rain hood	299941	Exhaust air rain hood	299941
			
Rain hood for Flexibox through-wall	299777	Rain hood	299651
Flexibox TWCA/ 230 or 48	Curved air flow	Air inlet net 10x10mm	299647
Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)	Flexibox ODCA/ 230 or 48	Curved air flow
		Motorised exhaust air damper	074612 (24/48V DC motor) 074613 (230V AC motor)
Exhaust air rain hood	299941	Exhaust air rain hood	299941
			
Air grille YG400x400	299947	Air grille YG400x400	299947
Duct connection Ø400	299648	Duct connection Ø400	299648
Duct connection Ø400 for mounting on inlet hood	299698	Duct connection Ø400 for mounting on inlet hood	299698
Internal air inlet hood	298421	Internal air inlet hood	298421
Flexibox SA /230 or 48	Straight air flow	Flexibox SA /230 or 48	Straight air flow
Motorised exhaust damper SP400x411	074603 (24/48V DC motor) 074602 (230V AC motor)	Motorised exhaust damper SP400x411	074603 (24/48V DC motor) 074602 (230V AC motor)
		Duct connection Ø400	299648
		Duct connection Ø400	299648
		Air grille YG400x400	299947

MOUNTING ACCESSORIES

FLEXIBOX 450

Product selection (all inside dimensions, if no remarks)	Article number	Illustration
Duct connection Ø400 on top of Flexibox Measurements: 450x450x70 (HxWxD)	299648	
Mounting bracket, 4 pieces required for duct connection Measurements: 275x50x40 (HxWxD)	299673	
Internal air inlet hood (Aluzinc AZ150) Measurements: 538x440x434 (HxWxD)	298421	
Duct connection Ø400 for mounting on inlet hood Measurements: 630x500x70 (HxWxD)	299698	
Air inlet net 10x10mm (Aluzinc AZ150) Measurements: 450x450x0,8 (HxWxD)	299647	
External air inlet hood with net 10x10mm (Aluzinc AZ150) Measurements: 513x565x440(HxWxD)	299653	
Air intake grille with net 6x6mm (Galvanized) Measurements: 500x400x48 (HxWxD)	299575	
Mounting bracket for horizontal mounting, 2 pieces required Measurements: 202x452x42 (HxWxD)	299650	
Rain hood with net (10x10mm) for Flexibox 450 TWCA (Aluzinc AZ150) Measurements: 496x758x463 (HxWxD)	299777	
Exhaust air damper with motor actuator SP1000x211 Aluminium profiles w/rubber gasket Air outlet above door	074612 (24/48V DC motor) 074613 (230V AC motor)	
Exhaust air rain hood (Aluzinc) Measurements: 230x1100x444 (HxWxD) Placement recommended: above door in shelter.	299941	
Exhaust air damper with motor actuator SP400x411 Aluminium profiles w/rubber gasket.	074603 (24/48V DC motor) 074602 (230V AC motor)	
Air grille 400x400 (Galvanized)	299947	
External electrical heater 1300W with built-in fan 230V AC.	299879	
Outdoor temperature sensor, UG	299906	