ELECTROPACK®

RANGE

Regulation, management
and control cabinet for
electrically-heated air
treatment units,
17 to 81 kW
Refreshment by cold water or direct expansion

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REGULATION CABINET ELECTROPACK®

APPLICATION

- Regulation, management and control of air treatment units fitted with electrically-heated coils for fresh air single flow, single flow recycling and double flow applications with or without heat recovery plates, with or without bypass.
- ▲ In addition to the electric heating function, the ELECTROPACK® also Enables management of the built-in unit cooling battery (cold water, direct expansion).
- Intended for air treatment units for offices, industrial premises or professional kitchens.
- ▲ "PLUG & PLAY", econological solution® complies with the recommendations of RT 2012 and in accordance with regulation EN15232 for for active building management.
- ▲ Communicative on MODBUS RS485, BACNET TCP/IP and WEB TCP/IP (choice of language activated on the website).

RANGE

- The ELECTROPACK® system is available in 2 models, the TA version for single flow air treatment applications and the DF version for double flow air treatment applications with plate-type heat exchangers with or without bypass. Each model covers 3 sizes for electrical heating applications up to 27 kW, from 28 to 54 kW and from 55 to 81 kW (three phase) for maximum motor powers of 7.5 kW. The ELECTROPACK® manages the overriding control and control of MONO or TRI motor fans.
- ▲ The ELECTROPACK® range is available with 4 finishes:

- ECO: designed to be fitted into 1 speed, 1 and 2 fixed speed units. The Start/ Stop and PV-GV (high-low speed) functions are controlled by the regulator for optimal energy consumption management but can also be remotely adjusted manually particularly for use in professional kitchens. Also for evolving use according to needs, the ECO version can be fitted with a remote potentiometer in order to allow speed alteration at user request.
- LOBBY: Air flow modulation at CONSTANT PRESSURE ensured by the regulator and the built-in pressure transmitter(s). The Start/ Stop functions are controlled by the regulator timers but can also be regulated manually.
- DIVA: Management of PROPORTIONAL modulation between 2 VARIABLE AIR FLOWS by built-in CO2 sensor. The Start/ Stop functions are controlled by the regulator timers but can also be regulated manually.
- MAC2: Management of the CONSTANT AIR FLOW/S modulation controlled by the regulator and the built in pressure transmitter(s). Functions The Start/ Stop and PV-GV (high-low speed) functions are controlled by the regulator timers but can also be regulated manually. This finish is only available for our COMBIBOX CONCEPT® range with CBZ EC motorization in single flow application.
- QUATTRO: Management of PROPORTIONAL modulation between 2 CONSTANT AIR FLOWS controlled by the regulator and the built-in pressure transmitters and CO2 sensor. Functions Start/ Stop are controlled by the regulator timers but can also be regulated manually. This finish is only available for our COMBIBOX CONCEPT® range with CBZ EC motorization in single flow application.

▲ The ELECTROPACK® is designed for all electrically-heated air treatment applications on the market. Ordered as an addition to our COMBIBOX CONCEPT®, CDFI/CDFP and CMH air treatment systems, the ELECTROPACK® is factory-installed, connected and tested on the associated unit.

FEATURES

- Designed and developed for air treatment applications with preheating and/or electric heating, the ELECTROPACK® provides regulation and carries out overall management of your tertiary installations and professional kitchens.
- ▲ This "PLUG & PLAY" system fitted with protection and safety systems for all electrical components (coil, fan(s)) complies with RT2012 and is one of CALADAIR's econological solutions®.
- ▲ THE ELECTROPACK® also enables management of your electric heating installation complete with a cold water or direct expansion battery. For a unit fitted with a cold battery the ELECTROPACK will control pump/ circulator management.
- ▲ The regulator built in to the ELECTROPACK® is factory-set to control the air supply temperature with compensation for the external temperature. An air temperature relationship is defined such that the air supply temperature changes according to the outside temperature.

- A weekly timer manages daily time and a yearly timer is used to define periods of non-occupation (public holidays, leave periods, etc.) with the option of activating particular features for these days (purge, air renewal, etc.). This "double clock" ensures your installation is operated according to the actual use of the building and then contributing to reductions in energy bills.
- ▲ For the applications double flow with heat exchanger, applications fitted with a bypass, ELECTROPACK® provides energy savings in compliance with RT2012.

  In Winter, the bypass closes proportionally in order to recover maximum calories via the plate-type heat exchanger. When this function no longer enables the setpoint temperature, ELECTROPACK® activates the electrical coil.

  In Summer, the ELECTROPACK® operates the bypass to provide a "free-cooling" function on day or "nightcooling" during the inactive nocturnal time slots.
- ▲ The ELECTROPACK® is fitted as standard with a fire safety function device enabling control of output and intake ventilators in accordance with 5 available modes within regulation parameters (function activated on the website). An alarm will then be displayed on the screen "Fire alarm":

  "Shutdown" : Complete station shutdown.

  "On" : Activation or continued operation of the station at High Speed. The fire function will take priority in the event of any other alarm.

  "Auto" : Continued station operation following website configuration (Shutdown/ Low Speed/ High Speed).

  "Output active" : Activation or continued high speed operation of the output ventilator (intake in shutdown).

  "Intake active" Activation or continued high speed operation of the intake ventilator (output in shutdown).

  Furthermore, the ELECTROPACK® features the digital input "External Shutdown" which enables manual command via a website. In this case, the external command takes priority over fire safety if subsequently activated by any of the 5 modes below.
- ▲ To ensure optimal internal air comfort, a dehumidification function (activated on the website) is available on

the ELECTROPACK®. Also, for your units fitted with a cold (water or single cold DX) battery and an electric battery, the regulator will automatically manage the cooling or warming effect necessary for dehumidification while maintaining an optimal functioning temperature. During a period where cold is requested, temperature management takes priority over dehumidification.

Size ELECTROPACK	Max. power heating battery kW	Model	Motorisations	Version
271	27	TA DF	M : 230 MONO T : 400V TRI	ECO : Fixed or adjustable speed(s) LOBBY : Constant pressure DIVA : Proportional CO_2 between 2 variable air flows MAC2* : Constant air flow(s) QUATTRO* : proportional CO_2 between 2 constant air flows
542	54			
813	81			

TA : single flow air treatment
DF : double flow air treatment with or without exchanger, with or without bypass. Module also intended for single flow CTA associated with an extraction unit managed by the ELECTROPACK.
** : versions only available for our COMBIBOX CONCEPT® range with CBZ EC motorisation in single flow TA application.*

CHARACTERISTICS ELECTROPACK®

Compulsory options
Optional extras M/A and (or) PV-GV manual remote control
Not compatible

			ECO		LOBBY including mount and pressure cable transmitter(s)		LOBBY including mount and pressure cable transmitter(s)		MAC2[1] including mount and pressure cable transmitter(s)		QUATTRO[1] including mount, pressure transmitter cabling and CO_2 sensor	
			Regulation motor	Remote control accessory	Regulation motor	Remote control accessory	Regulation motor	Remote control accessory	Regulation motor	Remote control accessory	Regulation motor	Remote control accessory
1 SPEED	MONO	Direct attack	STANDARD	CDC 1V2 (M/A manual)								
		Pulley belt / Plug Fan	STANDARD	CDC 1V2 (M/A manual)								
	TRI	Direct attack	STANDARD	CDC 1V2 (M/A manual)								
		Pulley belt / Plug Fan	STANDARD	CDC 1V2 (M/A manual)								
	EC	Electronic commutation										
1 FIXED SPEED	MONO[2]	Direct attack	VEC + MCC	CDC 1V2 (M/A manual)	VEC + MCC	CDC 1V2 (M/A manual)						
		Pulley belt / Plug Fan	CVFM + MCC	CDC 1V2 (M/A manual)	CVFM + MCC	CDC 1V2 (M/A manual)						
	TRI[2]	Direct attack										
		Pulley belt / Plug Fan	CVFT + MCC	CDC 1V2 (M/A manual)	CVFT + MCC	CDC 1V2 (M/A manual)						
	EC[3]	Electronic commutation	INCLUDED	CDC 1V2 (M/A manual)	INCLUDED	CDC 1V2 (M/A manual)			INCLUDED	CDC 1V2 (M/A manual)		
2 FIXED SPEEDS	MONO	Direct attack	CATM + MCC	CAR[4] + MCC (M/A + PV-GV manual)			VEC +MCC	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)				
			VEC +MCC	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)								
		Pulley belt / Plug Fan	CVFM + MCC	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)			CVFM + MCC	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)				
	TRI	Direct attack										
		Pulley belt / Plug Fan	CDA + MCC	CAR[4] + MCC (M/A + PV-GV manual)			CVFT + MCC	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by CVFT timers + ELECTROPACK MCC)				
			CVFT + MCC	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)								
	EC	Electronic commutation	INCLUDED	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)			INCLUDED	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)	INCLUDED	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)	INCLUDED	CDC 2V2 (M/A + PV/GV manual) or CDC 1V2 (Manual M/A & AUTO PV-GV by ELECTROPACK timers)

(1) The MAC2 and QUATTRO versions are only available with the COMBIBOX CONCEPT® CBZ EC
(2) Select POT230 for remote manual speed variation choice (The remote M/A can also be connected on the POT230)
(3) Select POT VF for remote manual speed variation choice (The remote M/A can also be connected on the POT VF).
(4) The CAR case includes the O/PV/GV remote control
Reminder Fire safety – The ELECTROPACK® is calibrated to activate an F400-120 dehumidification function for ERP applications or professional kitchens with or without induction.

GENERAL CHARACTERISTICS ELECTROPACK®

▲ The ELECTROPACK LOBBY® is compatible with our WONDEROOM® regulator for an optimal management of building zones.

CONSTITUTION

The ELECTROPACK® is fully wired and tested in the factory to make it a true "PLUG & PLAY" product designed and developed for interior or exterior installation integrating:

▲ Polycarbonate IP54 power command box RAL7035.

▲ Cable glands with protective cap to maintain IP54 protection index.

• Power supply 400V three-phase + Neutral + Ground.

▲ Local padlockable main breaker with handle on front panel.

▲ Safety devices for electrical components (electric coil, motors, etc.).

• Air-handling safety features (fan malfunction, coil overheating, etc.).

▲ Standard MODBUS, BACNET or WEB communicative controller.

. Probes built-in to the unit.

. IP41 remote control with LCD display delivered with 10m cable for interior installation. This command panel functions at a distance up to 100m or of 1km with repeater.

OPTIONS

. As standard, ELECTROPACK® has features for giving optimal control of your installation as well as cooling by water or direct expansion battery with regard to electrical preheating and/or heating to meet the recommendations of RT 2012.

▲ Options for maintenance (filters, pressure switches, etc.), operating convenience (damper or bypass servomotors, restart command, etc.) or for the econological® management of the building (regulation of MONOZONE® or MULTIZONES® air flows) are available and detailed in the table general specifications and version functionalities

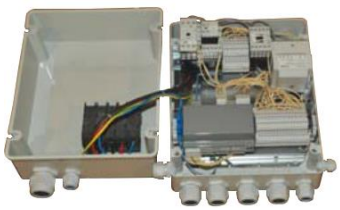
▲ ED-TOUCH touchscreen remote control with user interface and screens for the main functions (temperature control, restart, fault...) as well as a maintenance interface enabling access to general parameters (command panel works from a distance of 100m).

. Repeater for moving the remote control from 100 meters to 1 km away. LCD (not compatible with the touchscreen EDTOUCH control) or for up to 6 units on the same screen.

▲ General detailed description in the specifications table.

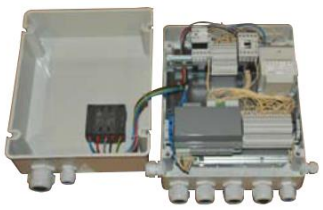
CHARACTERISTICS DIMENSIONS ELECTROPACK®

Model	Power Stage		Box control and power	Box control	Box power
	floor number	power stage	HxLxP (mm)	HxLxP (mm)	HxLxP (mm)
271	1	27	380 x 300 x 180	-	-
542	2	27 + 27	-	380 x 300 x 180	300 x 220 x 180
813	3	27 + 27 + 27	-	380 x 300 x 180	300 x 220 x 180

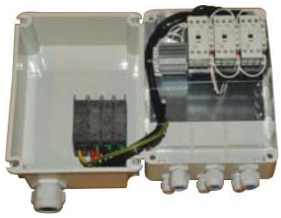


BOX CONTROL AND POWER

ELECTROPACK 271
(1 power stage)



BOX CONTROL



BOX POWER

ELECTROPACK 542 and 813
(2 or 3 power stages)

Remote control LCD

Touchscreen (option) with user interfaces and screen and / or maintenance interface (Up to 100 m)

ELECTROPACK®

MAIN FACTORY-INTEGRATED FUNCTIONS AND COMPONENTS	ELECTROPACK® TA	ELECTROPACK® DF
400V 3-phase power supply + Neutral + Earth (allow for 2 separate power supplies for the series 542 and 813)	✓	✓
Polycarbonate enclosure IP54 RAL7035	✓	✓
Lockable main switch with a front-mounted cabinet handle	✓	✓
Remote control IP41 - 24V LCD display cable 10 m – Fault indicator included (Can be mounted up to 100 m)	✓	✓
Cable glands with cap (retention of the cabinet index number IP54)	✓	✓
Integrated weekly timer for on/off control - PV&GV - activity	✓	✓
Yearly timer "public holidays" inactivity	✓	✓
Supply contactor (post-ventilation)	✓	✓
Return contactor (cascade start and stop for preheating exchanger and removal of condensates)	no	✓
Electric battery contactor	✓	✓
Electric battery powered by solid state contactors	✓	✓
Pressure switch with fresh airflow control for the ECO version	✓	✓
Fresh air pressure transmitter for the LOBBY / MAC2 and QUATTRO version	✓	✓
Return air pressure transmitter for the LOBBY version	no	✓
CO2 transmitter for the DIVA version	✓	✓
CO2 transmitter for the QUATTRO version	no	✓
Engine heat protection by PTI/PTO	✓	✓
Supply air sensor (used to control temperatures and replace the automatically reset safety thermostat)	✓	✓
Outdoor sensor	✓	✓
Defrost sensor (used to control the exchanger automatic defrost)	no	✓
Return temperature sensor	no	✓
Manually reset safety thermostat 90°C powered by electric battery	✓	✓
Temperature management "outdoor makeup air"	✓	✓
Temperature management "reset control"	no	✓
Safety door switch (series CMH)	✓	✓
PRESSURE SWITCH WITH RETURN AIRFLOW CHECK	**TA**	**DF**
Pressure switch with return airflow check	✓	✓
Pressure switch with fresh and/or return air filter clogging check	✓	✓
Defrost battery management	no	✓
Return sensor to monitor the air temperature of the TA models with full recirculation or with a 2-channel relay module	✓	no
Speed variation required for the LOBBY / DIVA / MAC2 and QUATTRO versions (see table of functionalities/versions)	✓	✓
Modulating actuator for Bypass management (free cooling, Night-cooling, heat recovery, defrost…)	no	✓
Modulating actuator and CO2 sensor for management of the 3-channel relay module (free cooling, heat recovery, recirculation, CO2…)	no	✓
Spring return actuator for management of the isolation damper (fresh air and return air)	no	✓
Autonomous smoke detection station CDAD	✓	✓
COMMUNICATION	**TA**	**DF**
Communicative controller MODBUS RS485 or TCP/IP, WEB TCP/IP, BACNET RS485 or TCP/IP	✓	✓

ON-SITE CABLING OPTIONS	TA	DF
Remote engine variation potentiometer, ECO version (see table of functionalities/versions)	✓	✓
Remote forced shutdown (see table of functionalities/versions)	✓	✓
Remote low speed manual override (see table of functionalities/versions)	✓	✓
Remote high speed manual override (excluding LOBBY / DIVA) (see table of functionalities/versions)	✓	✓
Red mushroom emergency push button enclosure BD for RFS function "Remote Fireman's Switch"	✓	✓
Fire ignition function (it allows you to display a default and control the fans)	✓	✓
Room sensor to monitor the air temperature of the TA models with complete outside air	✓	Standard
Solenoid valve kit for management of the cold water battery (see selection table for valve series AQUAPACK® page 206)	✓	✓
Management of the cold water battery pump/circulator	✓	✓
Remote alarm transfer	✓	✓
Humidity sensor for management of the dehumidifier function (impossible with the DIVA and QUATTRO version)	✓	✓