



Precise Comfort Control
PCC-10C-30C

Precise Comfort Control PCC 10C - 30C

Standard Control Systems for
Heat Recovery Units



Manufactured
by Armcor





Understanding Control Systems

Heating, cooling and ventilation systems,
account for nearly half of the energy consumed
in small to large commercial buildings.

Ensuring your heat recovery equipment is operating efficiently is critical to reducing your building's energy consumption and cutting operational costs while maintaining occupant comfort.

Controls are one of the most important parts of the HVAC system since the control translates the human needs for heating and cooling into instructions to the heat recovery equipment.

Correct controllers selected for your heat recovery equipment can dramatically reduce unnecessary HVAC equipment operation, saving energy and extending equipment life.

Armcor manufactures an extensive range of heat recovery equipment from a small ceiling mounted unit to large commercial units, each requiring individual operation to function effectively and efficiently.

Armcor can provide a range of control options to suit your application and budget, from the simple point to point connection to advanced high level controllers (HLI) which can be incorporated into building management systems (BMS).



Standard Inclusions

Armcor Air Solutions, heat recovery units are fitted with an accessible electrical cabinet/control box containing all pre-wired components and controls.

Fan Control Card (All Units)

Every unit with EC Plug Fans is provided with a unique fan control card with various options for controlling the fan.

- 24v Remote enable
- 0-10v DC fan control

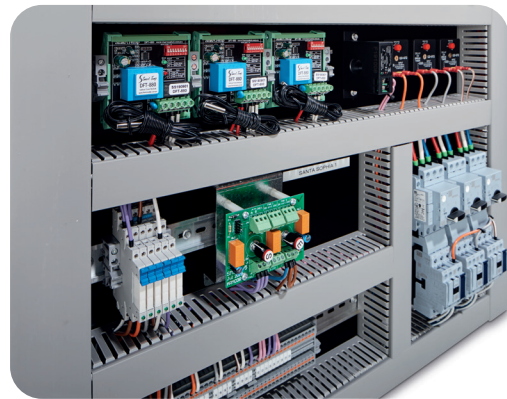


Switchboard

The accessible switchboard contains all necessary clearly labeled controls. Armcor provides standard screw-less easy to connect terminal strips which have universal compatibility to any controller from the simple wall mounted to high level control systems

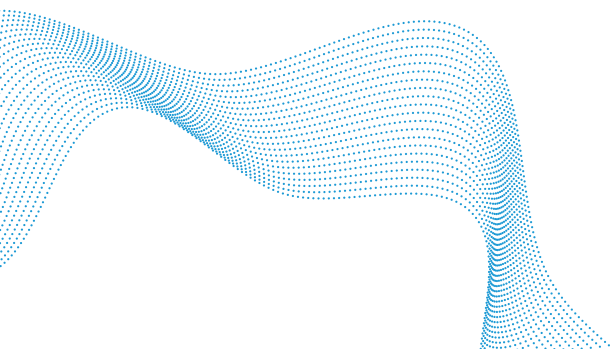
Standard connections include

- 24v ac active
- 24v ac neutral
- Fan enable 24v ac (speed set by pots) OR
- Fan speed controlled by 0-10vdc
- Compressor enable 24v
- Reversing valve enable 24v



Optional Connections Include

- Compressor speed 0 - 10vdc (VSD Compressor)
- Fan fault (volt free contact)
- Compressor fault (volt free contact)
- Fan Status (volt free contact)
- Economy cycle 0 - 10vdc
- Fresh air damper 0 - 10vdc
- Return air damper 0 - 10vdc
- Return air bypass damper 0 - 10vdc



Precise Comfort Control PCC-10C

Low Level Controller

Temperature control only
Used for XEP, XES, OAP and Units without reheat

The Armcor effective well priced controller PCC-10C suitable for the XEP Packaged Air Conditioning and the XES Swim Pool Units. It is mounted in the electrical panel of the heat recovery unit. The controller will operate up to 3 compressors, reversing valve, supply and exhaust fans on/off, compressor capacity control, time clock, lockable set points, night purge, mod-BUS compatibility, fault signals and many more features.

The controller comes with a range of internal functions and adjustable set points to suit many building requirements including adjustable dead-bands, sensor offsets, and time delay functions.

Low Level Outputs

Fan fault compressor fault fan status

PCC-10C
mounted in Unit



2 Wire
cable



Optional Remote
Sensor

Precise Comfort Control PCC-20C

Low Level Controller

Temperature control with Economy Cycle
Used for XEP, XES and OAP Units

The Armcor effective well priced controller PCC- 20 for suitable for the XEP Packaged Air Conditioning and the XES Swim Pool Units. It is mounted in the electrical panel of the heat recovery unit. The controller will operate up to 3 compressors, reversing valve, supply, and exhaust fans on/off, compressor capacity control, economy cycle, time clock, lockable set points, night purge, mod-BUS compatibility, fault signals, and many more features.

A range of sensors is available to suit any application including ambient temperature, supply or return air sensors, averaging sensors and wall-mounted LCD touch screen interaction and status window which displays the current operation of the unit.

The controller comes with a range of internal functions and adjustable set points to suit many building requirements including adjustable dead-bands, sensor offsets, and time delay functions.

Low Level Outputs

Fan fault compressor fault fan status



4 Wire connection



4 Wire connection

Internal Wiring by Armcor



Wall mounted Smart Controller

2 Wire cable

Optional Remote Sensor



Precise Comfort Control PCC-30C

High Level Controller

Used for XEP, XES, HTC and DHP Packaged Air Conditioning Units

Building Management Systems (BMS) are becoming more and more common place in commercial buildings. These systems control multiple building services from one central location.

These systems are expensive, require specialist control logic and knowledge, and are normally designed and programmed by a specialized control company. Armcor uses the Airtek DSC 8864B range of HLI inbuilt controllers to suit the BACnet connection to the central control system.

Used for a range of Armcor Units

- Temperature Control
- Humidity Control
- Economy Cycles
- CO₂ Control
- Condensor Reheat
- Early morning warm-up
- Night Purge

PCC-30 Controller



HLI Communication Cable



Building BMS



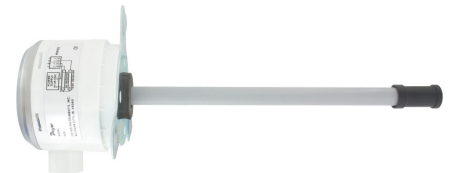
Duct mounted temperature sensor



Wall Mount Temperature Sensor



Filter Sensor



Temperature & Humidity Duct mount sensor

Various Sensors Available

Economy Cycle Dampers



Night Purge Function

A single input from an external source allows a night purge. WHO recommends that each public building be purged with fresh air two hours before opening and two hours after closing to reduce potential airborne transmissions

UV-C Germicidal Lights Function

ArmcOR units have UV-C lights as an option to kill virus and bacteria build up on the DX coil. Light fault indication and lamp replacement will be shown on the screen with fault outputs.

CO2 Function

The CO2 function operates on heat mode, based on CO2 levels. Low CO2 levels allow up to 50% of return air to bypass the heat exchanger providing further efficiencies.

Early Morning Warm-Up Function

This function is used to raise the indoor air temperature quicker to 15c (adjustable) and then reverting to full 100% fresh air mode.

Fault Function and Service Tool

Each unit comes with numerous fault and status functions that are shown on the controller display screen eg: time initiated filter change.



Fresh Air Indoors

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