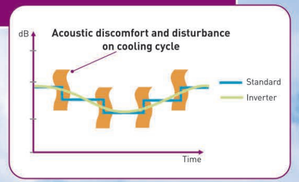
➔ Acoustic comfort

› Low noise level
› Soft starter in fans and compressors
› External inverter motor-fan

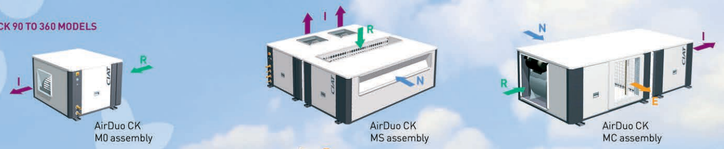


➔ Easy installation

› Assemblies

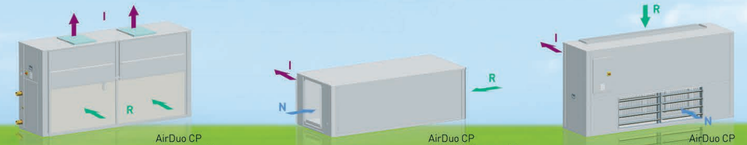
The multiple assembly configurations and air flow directions for indoor units ensure that the equipment adapts to installation requirements with incomparable ease.

CK 90 TO 360 MODELS



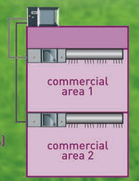
CK 420 TO 600 MODELS

CP INDOOR UNITS



CP 90 TO 360 MIXING BOXES

CP 182 TO 360 MIXING BOXES



Legend

I = Outlet(*) — N = External air inlet
R = Return — E = Exhaust air

(*)In mixing boxes outlet air goes to main unit inlet

› High available pressure
› Extensive air flow operating range
› Long distance option (+50m)
› Installation 2x1 (1 outdoor unit x 2 indoor units)

Technical characteristics

	MODEL		90	100	120	160	180	182	200	240	320	360	420	485	540	600
SK - CK	COOLING MODE SK-CK (kW)	Cc [1]	20,8	23,1	27,3	36,2	38,7	41,1	54,8	62,0	80,1	94,2	107,5	117,8	130,4	142,3
		Pa [3]	7,1	8,2	9,3	13,6	15,1	14,3	17,1	20,2	28,3	29,4	32,1	36,9	42,2	48,1
		EER	2,9	2,8	2,9	2,7	2,6	2,9	2,8	2,6	2,5	2,8	3,2	3,0	3,0	2,9
	HEATING MODE SK-CK (kW)	Hc [2]	22,6	25,4	30,9	40,2	44,3	46,4	54,8	62,0	80,1	94,2	107,5	117,8	130,4	142,3
		Pa [3]	6,6	7,5	9,2	11,8	13,9	14,6	16,7	19,8	25,1	31,1	32,4	37,4	40,4	44,6
		COP	3,4	3,4	3,4	3,4	3,2	3,2	3,3	3,1	3,2	3,0	3,3	3,2	3,2	3,2
SK - CP	COOLING MODE SK-CP (kW)	Cc [1]	20,7	23,0	26,9	35,7	-	41,0	47,9	52,7	70,8	82,3	-	-	-	-
		Pa [3]	7,1	8,3	9,6	14,0	-	14,4	17,2	20,9	29,2	30,6	-	-	-	-
		EER	2,9	2,8	2,8	2,5	-	2,8	2,8	2,5	2,4	2,7	-	-	-	-
	HEATING MODE SK-CP (kW)	Hc [2]	22,9	25,8	31,2	41,1	-	46,5	55,0	62,7	81,0	95,5	-	-	-	-
		Pa [3]	6,6	7,6	9,5	12,2	-	14,7	16,8	20,5	26,0	32,4	-	-	-	-
		COP	3,4	3,4	3,3	3,4	-	3,2	3,3	3,1	3,1	3,0	-	-	-	-
	DIMENSIONS SK (mm)	length	1.511	1.511	1.511	1.511	1.511	1.511	1.811	1.811	1.811	2.201	2.201	2.201	2.201	2.201
		width	1.066	1.066	1.066	1.066	1.066	1.066	1.066	1.066	1.066	2.069	2.069	2.069	2.069	2.069
		height	1.088	1.088	1.413	1.413	1.413	1.413	1.763	1.763	2.063	1.966	1.966	1.966	1.966	1.966

CK INDOOR UNIT		90	100	120	160	180	182	200	240	320	360	420	485	540	600
AIR FLOW INDOOR CIRCUIT	(m^3/h)	4.000	4.600	5.200	7.000	7.000	8.000	9.200	10.300	14.000	15.500	18.000	18.200	20.400	24.000
AVAILABLE PRESSURE	(mmWC)	7,0	7,0	9,0	9,0	9,0	8,0	7,0	7,0	10,0	10,0	13,5	11,2	12,7	12,7
DIMENSIONS (mm)	length	1.190	1.190	1.190	1.520	1.520	2.144	2.144	2.144	2.804	2.804	2.853	2.853	2.853	2.853
	width	950	950	950	1.028	1.028	950	950	950	1.028	1.028	2.160	2.160	2.160	2.160
	height	731	731	731	731	731	731	731	731	800	800	1.524	1.524	1.524	1.524
1 SK OUTDOOR UNIT & 2 CK INDOOR UNITS								200 + 2X100	240 + 2X120	320 + 2X160	360 + 2X180				

CP INDOOR UNIT		90	100	120	160	180	182	200	240	320	360
AIR FLOW INDOOR CIRCUIT	(m^3/h)	4.000	4.600	5.200	7.000	-	8.000	9.200	10.300	14.000	15.500
AVAILABLE PRESSURE	(mmWC)	7,0	7,0	9,0	9,0	-	8,0	7,0	7,0	10,0	10,0
DIMENSIONS (mm)	length	1.141	1.141	1.141	1.471	-	2.091	2.091	2.091	2.731	2.731
	width	859	859	859	859	-	859	859	859	859	859
	height	1.284	1.284	1.284	1.422	-	1.284	1.284	1.284	1.422	1.422
1 SK OUTDOOR UNIT & 2 CP INDOOR UNITS								200 + 2X100	240 + 2X120	320 + 2X160	360 + 2X182

(1) Cooling capacity given for indoor temperature conditions 27°C, 50% RH (19°C WB) and 35°C outdoor temperature.
(2) Heating capacity given for indoor temperature conditions 20°C and 6°C WB outdoor temperature.
(3) Total power input by compressor and motorised fans.

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universal comfort

reversible air-to-air split units
capacity up to 145 kW

R-410A

➔ Air-to-air split units

AirDuo
Air quality & energy efficiency

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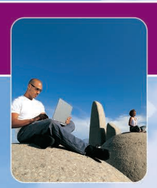
Comfort



➔ Reliability

Designed to meet air conditioning requirements in compliance with current regulations for commercial premises.

› Avant / Avant+

AVANT/AVANT+ controls are equipped with the following main functions as standard:

- Electronic control for different operating modes and operational parameters.
- Anti-short-cycle management.
- Control of supply air temperature (Proportional Integral Control).
- Intelligent "DEGIPAC" defrosting management (heat pump units).
- Control of condensation temperature and evaporation temperature of outdoor coil through pressure sensors.
- Weekly and daily programming.
- Backup of operating hours and start-ups of outlet fan, compressors and electric heaters.
- Diagnosis of faults and general alarms.

Various communication possibilities as option (BMS, LON, KNX...) and a new, customer-oriented TCO thermostat with numerous functions.

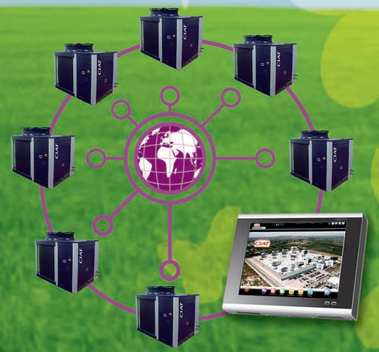
› Avant Pro

- Includes all functions of Avant/Avant+.
- pCO3 Local Area Network, pLAN, allows information and data to be exchanged between up to 15 units.
- Serial field bus interface, using the optional board, ensures connection to controlled field devices, tLAN.
- Serial communication RS485 by expansion card (one card per unit) with the following protocols:
  · Carel & Modbus · Ethernet & BACnet Ethernet · Konnex
  · Lonworks · BACnet
- pGD¹ Remote control panel.
- PlantVisorPRO 2, supervision software.
- External air management via air quality sensors.
- Control of humidifier.

➔ Easy maintenance

› Accesibility

AirDuo has been designed to ensure easy access to the various sections to facilitate cleaning and maintenance.



› Remote maintenance. PlantVisorPRO 2

Centralised management of the installations means significant savings in terms of maintenance and operating costs.

PlantVisorPRO 2 provides you with the tools necessary for controlling main operating parameters and for managing the energy of several installations from one single workstation. A simple internet connection provides access to all the information relating to the installation.

Its many options adapt to the needs and characteristics of the existing installation with ease.

The touch screen version PlantVisorPRO 2 "Touch" (see photo) is particularly ergonomic and user-friendly.

Indoor air quality

➔ High quality filtration

› Filtration and cleaning

There are two filtration stages, a first gravimetric (up to G4) or opacimetric (F6 or F7) stage plus an additional opacimetric stage (from F6 to F9). Sensors monitor the degree of filter fouling.

The easy-access filters facilitate maintenance with side or bottom extraction. The registers on the ventilation sections provide easy access to the fans, batteries and condensate pans for cleaning and maintenance.

F7 FILTER

F6 + F8 FILTRATION ASSEMBLY

➔ Fresh air management

› Air renewal

AirDuo features outdoor air inlets, a mixing box and CO_2, VOC and exhaust concentration sensors to ensure the correct concentration of air constituents.

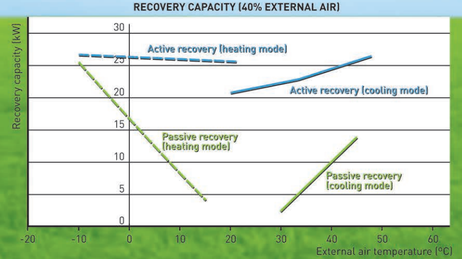
CO_2 + VOC SENSORS

Energy optimisation

➔ Active recovery

Active recovery as opposed to conventional recovery systems (static) increases both recovery capacity and efficiency when the external temperature is moderate. A specific thermodynamic energy circuit integrated into the unit allows energy to be recovered from exhaust air (MRC assembly) which results in greater energy savings.

RECOVERY CAPACITY (40% EXTERNAL AIR)



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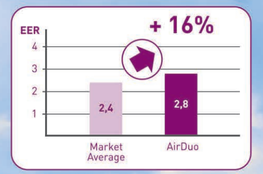
Energy optimisation

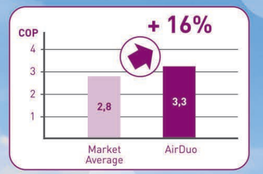
➔ R-410A

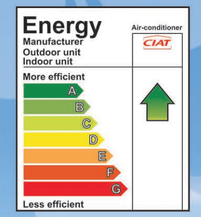
AirDuo uses R-410A, a refrigerant with an ODP=0 and a low TEWI, which respects the environment and the future for generations to come. Its high efficiency significantly reduces refrigerant load and CO_2 emissions.

➔ Energy efficiency

› At the cutting edge of efficiency







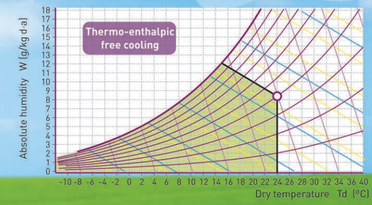
➔ Free cooling

Free cooling functions included in controls allows fresh air to be introduced more efficiently while consuming less energy.

The new function which manages the external air damper improves the machine's operation.

› Thermo-enthalpic free cooling

This allows a more efficient management of external air to cool and dehumidify the return air.



➔ Outdoor electronic inverter fan

The inverter fan fitted to outdoor units adapts to installation requirements and reduces the absorbed power, with the installation running in full load for only 3% of its operating time.

➔ Plug-fan

New technology of backward-curved propylene-blade impellers which continually adapt to pressure drops from the duct system and filters in order to meet the commissioned air flow rate.

- EC (Electronically Commutated) HEE technology motor significantly increases efficiency and extends the system's lifecycle.
- Direct coupling eliminates the use of pulleys and belts, thereby reducing losses and eradicating maintenance costs.
- Increased efficiency of the ventilation system reduces energy consumption by up to 30%.