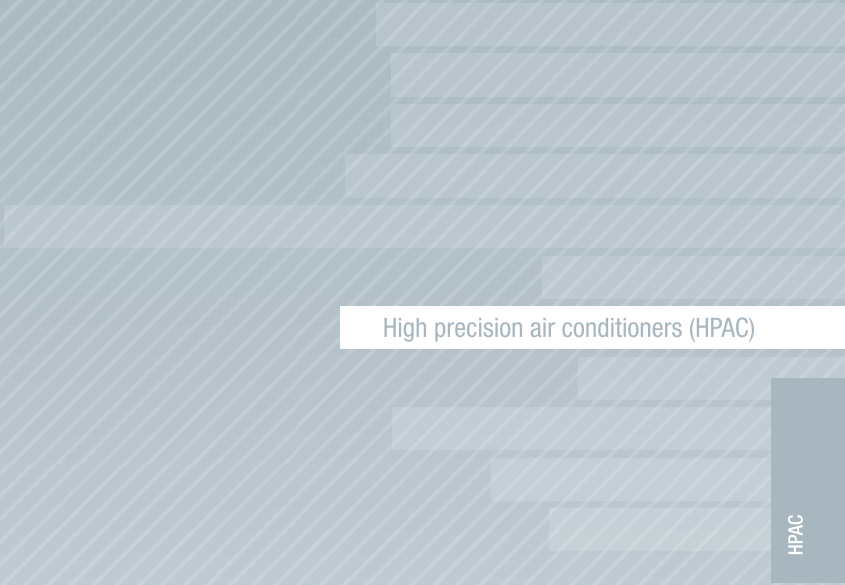




# High precision air conditioners (HPAC)

- i-AX 12 - 150
- i-AW 12 - 150
- i-AD 20 - 130
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- AX 05 - 90
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- DATACENTER MANAGER
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- CLIMA CENTER



High precision air conditioners (HPAC)

HPAC

## High precision air conditioners (HPAC)

# i-AX 12 - 150



### Close control unit, direct expansion air cooled with INVERTER compressor 11,1-152 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control.

Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads and optimizing the power absorbed and eliminating the start current.

Units fitted with electronic expansion valve and EC INVERTER fans, upflow or downflow.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneusness

#### Version

BASIC	With condensing control, for i-BRE rem. condenser
MOD	With condensing control, for BRE rem. condenser
LT	Low temperature with condensing control for i-BRE

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Refrigerant circuit consisting in the standard version of a electronic expansion valve, liquid solenoid valve, high/low pressure switch, sight glass liquid indicator, drier filter and oil separator in order to guarantee the right lubrication of the compressor at the low speed.

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board

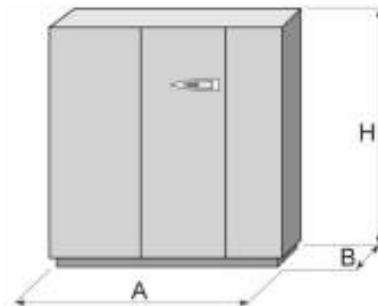




ACCURATE i-AX / BASIC / MOD / LT			12	18	20	29	50	70	90	130	150
Frame			F02	F02	F03	F03	F04	F05	F06	F07	F07
Power supply		V/ph/Hz	230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE MAX</b>											
Total cooling capacity gross	(1)	kW	11,1	16,6	19,3	28,1	55,0	70,2	86,5	136	152
Sensible cooling capacity gross	(1)	kW	10,6	16,6	19,3	28,1	51,1	68,1	85,5	116	124
Total power input (Comp.+fans)	(1)	kW	2,89	4,93	5,79	8,94	16,4	20,3	26,4	37,7	41,9
EER (Indoor unit)	(1)		3,84	3,37	3,33	3,14	3,35	3,46	3,28	3,61	3,63
SHR	(2)		0,95	1,00	1,00	1,00	0,93	0,97	0,99	0,85	0,82
<b>PERFORMANCE MIN</b>											
Total cooling capacity gross	(1)	kW	4,34	5,65	7,23	9,56	22,5	18,9	21,5	24,7	24,7
Sensible cooling capacity gross	(1)	kW	4,34	5,65	7,23	9,56	22,5	20,9	21,5	24,7	24,7
<b>COMPRESSORS</b>											
Compressors nr.		N°	1	1	1	1	1	2	2	3	3
No. Circuits		N°	1	1	1	1	1	2	2	2	2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	2	2	1	1	2	3	3	3	3
Air flow	(3)	m³/h	3500	4900	6500	8000	13500	19000	25000	30000	30000
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	69	73	76	80	84	88	88	90	90
Noise Pressure Level	(4)	dB(A)	49	53	56	60	64	67	67	69	69
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	1000	1000	1000	1000	1550	2100	2650	2650	2650
Dimension B	(3)	mm	500	500	790	790	790	790	790	890	890
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	2195	2195
Weight	(3)	kg	282	282	406	406	537	785	946	1110	1270
<b>COUPLING UNIT EXTERNAL</b>											
Standard remote condenser linked			i-BRE027m	i-BRE027m	i-BRE044m	i-BRE044m	i-BRE065m	i-BRE100b	BRE116b	i-BRE190b	i-BRE190b
Voltage			230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
Quantity		N°	1	1	1	1	1	1	1	1	1

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Condensing temperature 45°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field



## High precision air conditioners (HPAC)

# i-AW 12 - 150



### Close control unit, direct expansion water cooled with INVERTER compressor 11,7-161 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control.

Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads and optimizing the power absorbed and eliminating the start current.

Units fitted with electronic expansion valve and EC INVERTER fans, upflow or downflow.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	With fans speed regulation, for i-BDC dry cooler
MOD_A	With condensing control, for BDC dry cooler
MOD_B	With cond. control by pressostatic valve, for open circuit

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Condensing control for maximum low noise (optional).

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Refrigerant circuit consisting in the standard version of a electronic expansion valve, liquid solenoid valve, high/low pressure switch, sight glass liquid indicator, drier filter and oil separator in order to guarantee the right lubrication of the compressor at the low speed.

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board





ACCURATE i-AW / BASIC / MOD_A			12	18	20	29	50	70	90	130	150
Frame			F02	F02	F03	F03	F04	F05	F06	F07	F07
Power supply		V/ph/Hz	230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE MAX</b>											
Total cooling capacity gross	(1)	kW	11,7	17,4	20,4	29,3	56,7	73,9	93,3	142	159
Sensible cooling capacity gross	(1)	kW	10,9	17,0	20,4	28,6	51,5	70,2	90,5	119	128
Total power input (Comp.+fans)	(1)	kW	2,47	4,52	5,21	8,18	15,3	18,1	24,7	34,5	38,6
EER (Indoor unit)	(1)		4,74	3,85	3,92	3,58	3,71	4,08	3,78	4,12	4,12
SHR	(2)		0,93	0,98	1,00	0,98	0,91	0,95	0,97	0,84	0,81
<b>PERFORMANCE MIN</b>											
Total cooling capacity gross	(1)	kW	4,78	6,69	7,87	10,9	23,9	19,6	23,5	26,4	26,4
Sensible cooling capacity gross	(1)	kW	4,78	6,69	7,87	10,9	23,9	22,1	24,2	26,4	26,4
<b>PLATE CAPACITOR</b>											
Capacitors nr.		N°	1	1	1	1	1	2	1	1	1
Condenser fluid flow		m³/h	2,40	3,65	4,21	6,18	11,9	15,2	19,4	29,5	33,0
Condenser's pressure drop		kPa	0,73	5,73	9,32	21,5	54,5	24,3	34,2	27,0	39,3
<b>COMPRESSORS</b>											
Compressors nr.		N°	1	1	1	1	1	2	2	3	3
No. Circuits		N°	1	1	1	1	1	2	2	2	2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	2	2	1	1	2	3	3	3	3
Air flow	(3)	m³/h	3500	4900	6500	8000	13500	19000	25000	30000	30000
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	69	73	76	80	84	88	88	90	90
Noise Pressure Level	(4)	dB(A)	49	53	56	60	64	67	67	69	69
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	1000	1000	1000	1000	1550	2100	2650	2650	2650
Dimension B	(3)	mm	500	500	790	790	790	790	790	890	890
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	2195	2195
Weight	(3)	kg	294	294	420	420	562	819	1007	1160	1160
<b>COUPLING UNIT EXTERNAL</b>											
Standard dry cooler linked			i-BDC030m	i-BDC030m	i-BDC039m	i-BDC039m	i-BDC062m	i-BDC092m	i-BDC123m	i-BDC190m	i-BDC190m
Voltage		V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
Quantity		N°	1	1	1	1	1	1	1	1	1

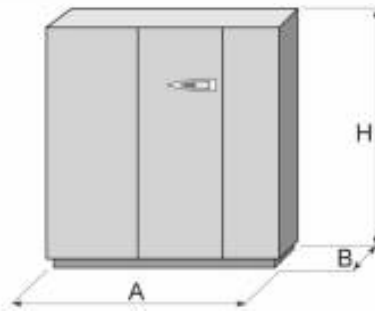
Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 30°C/35°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field

ACCURATE i-AW / MOD_B			12	18	20	29	50	70	90	130	150
Frame			F02	F02	F03	F03	F04	F05	F06	F07	F07
Power supply		V/ph/Hz	230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE MAX</b>											
Total cooling capacity gross	(1)	kW	12,0	17,4	20,9	30,0	58,4	75,2	97,1	144	161
Sensible cooling capacity gross	(1)	kW	11,0	17,1	20,5	28,9	52,1	70,7	92,0	120	129
Total power input (Comp.+fans)	(1)	kW	2,32	4,51	5,05	7,78	14,2	17,3	22,5	33,6	37,6
EER (Indoor unit)	(1)		5,17	3,86	4,14	3,86	4,11	4,35	4,32	4,29	4,28
SHR	(2)		0,92	0,98	0,98	0,96	0,89	0,94	0,95	0,83	0,80
<b>PERFORMANCE MIN</b>											
Total cooling capacity gross	(1)	kW	4,86	6,99	8,30	11,5	24,3	19,7	23,8	26,9	26,9
Sensible cooling capacity gross	(1)	kW	5,12	6,99	8,30	11,5	24,3	22,4	25,0	27,8	27,8
<b>PLATE CAPACITOR</b>											
Capacitors nr.		N°	1	1	1	1	1	2	1	1	1
Condenser fluid flow		m³/h	0,81	1,21	1,41	2,07	3,99	5,07	6,54	9,85	11,1
Condenser's pressure drop		kPa	0,52	4,05	9,68	21,3	37,0	16,6	25,5	10,5	12,9
<b>COMPRESSORS</b>											
Compressors nr.		N°	1	1	1	1	1	2	2	3	3
No. Circuits		N°	1	1	1	1	1	2	2	2	2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	2	2	1	1	2	3	3	3	3
Air flow	(3)	m³/h	3500	4900	6500	8000	13500	19000	25000	30000	30000
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	69	73	76	80	84	88	88	90	90
Noise Pressure Level	(4)	dB(A)	49	53	56	60	64	67	67	69	69
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	1000	1000	1000	1000	1550	2100	2650	2650	2650
Dimension B	(3)	mm	500	500	790	790	790	790	790	890	890
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	2195	2195
Weight	(3)	kg	294	294	420	420	562	819	1007	1160	0

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 15°C/30°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field







## High precision air conditioners (HPAC)

# i-AD 20 - 130



### Close control unit dual fluid INVERTER, air cooled direct expansion 24,3-126 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general. DUAL FLUID unit has to be connected to an external chiller for PRIMARY circuit. The direct expansion circuit with INVERTER compressor, secondary or BACK-UP circuit, is air cooled and has to be connected with a remote condenser. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads and optimizing the power absorbed and eliminating the start current. Units fitted with electronic expansion valve and EC INVERTER fans, upflow or downflow.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	With condensing control, for i-BRE rem. condenser
MOD	With condensing control, for BRE rem. condenser
LT	Low temperature with condensing control for i-BRE

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Condensing control for maximum low noise (optional).

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Refrigerant circuit consisting in the standard version of a electronic expansion valve, liquid solenoid valve, high/low pressure switch, sight glass liquid indicator, drier filter and oil separator in order to guarantee the right lubrication of the compressor at the low speed.

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board

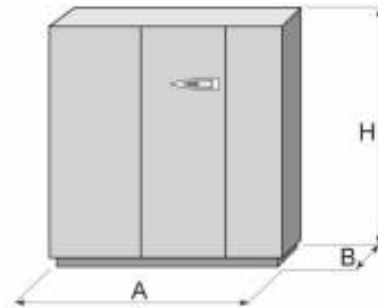




ACCURATE i-AD / BASIC / MOD / LT			20	29	50	70	90	130
Frame			F03	F03	F04	F05	F06	F07
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>								
<b>DIRECT EXPANSION</b>								
<b>PERFORMANCE MAX</b>								
Total cooling capacity gross	(1)	kW	18,9	27,5	53,2	69,1	91,4	124
Sensible cooling capacity gross	(1)	kW	18,9	27,5	50,2	67,4	86,0	109
Total power input (Comp.+fans)	(1)	kW	5,61	8,63	16,6	20,6	27,0	37,7
EER (Indoor unit)	(1)		3,37	3,19	3,20	3,35	3,39	3,29
SHR	(2)		1,00	1,00	0,94	0,98	0,94	0,88
<b>PERFORMANCE MIN</b>								
Total cooling capacity gross	(1)	kW	7,20	10,7	22,7	18,8	24,6	23,9
Sensible cooling capacity gross	(1)	kW	7,20	10,7	22,7	20,9	24,6	23,9
<b>CHILLED WATER</b>								
Total cooling capacity gross	(3)	kW	24,3	29,5	51,4	67,6	91,0	126
Sensible cooling capacity gross	(3)	kW	20,1	27,6	47,5	64,5	85,0	98,5
SHR	(2)		0,83	0,94	0,92	0,95	0,93	0,78
Fluid flow	(3)	m <sup>3</sup> /h	4,19	5,08	8,85	11,6	15,7	21,6
Total pressure drop (Coil + Valve)	(3)	kPa	29,5	48,1	55,5	60,3	57,8	67,7
<b>COMPRESSORS</b>								
Compressors nr.		N°	1	1	1	2	2	3
No. Circuits		N°	1	1	1	2	2	2
<b>FANS</b>								
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	2	3	3	3
Air flow	(4)	m <sup>3</sup> /h	6500	8000	13500	19000	24000	28000
<b>NOISE LEVEL</b>								
Noise Power		dB(A)	76	80	84	88	88	90
Noise Pressure Level	(5)	dB(A)	56	60	64	67	67	69
<b>SIZE AND WEIGHT</b>								
Dimension A	(4)	mm	1000	1000	1550	2100	2650	2650
Dimension B	(4)	mm	790	790	790	790	790	890
Dimension H	(4)	mm	1980	1980	1980	1980	1980	2195
Weight	(4)	kg	368	368	459	742	877	1270
<b>COUPLING UNIT EXTERNAL</b>								
Standard remote condenser linked			i-BRE044m	i-BRE044m	i-BRE065m	i-BRE100b	i-BRE116b	i-BRE190b
Voltage			230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
Quantity		N°	1	1	1	1	1	1

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Condensing temperature 45°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field



## High precision air conditioners (HPAC)

# i-AT 20 - 130



### Close control unit dual fluid INVERTER, water cooled direct expansion 24,3-126 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general. DUAL FLUID unit has to be connected to an external chiller for PRIMARY circuit. The direct expansion circuit with INVERTER compressor, secondary or BACK-UP circuit, is water cooled and has to be connected with a remote dry cooler or to city water net. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads and optimizing the power absorbed and eliminating the start current. Units fitted with electronic expansion valve and EC INVERTER fans, upflow or downflow.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	With fans speed regulation, for i-BDC dry cooler
MOD_A	With condensing control, for BDC dry cooler
MOD_B	With cond. control by pressostatic valve, for open circuit

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Condensing control for maximum low noise (optional).

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Refrigerant circuit consisting in the standard version of a electronic expansion valve, liquid solenoid valve, high/low pressure switch, sight glass liquid indicator, drier filter and oil separator in order to guarantee the right lubrication of the compressor at the low speed.

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board





ACCURATE i-AT / BASIC / MOD_A			20	29	50	70	90	130
Frame			F03	F03	F04	F05	F06	F07
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>								
<b>DIRECT EXPANSION</b>								
<b>PERFORMANCE MAX</b>								
Total cooling capacity gross	(1)	kW	19,4	28,6	55,1	73,0	94,5	130
Sensible cooling capacity gross	(1)	kW	19,4	28,4	51,0	69,2	87,1	111
Total power input (Comp.+fans)	(1)	kW	5,33	7,95	15,4	18,3	25,2	34,3
EER (Indoor unit)	(1)		3,64	3,60	3,58	3,99	3,75	3,79
SHR	(2)		1,00	0,99	0,93	0,95	0,92	0,85
<b>PERFORMANCE MIN</b>								
Total cooling capacity gross	(1)	kW	7,75	13,1	24,4	19,4	22,7	25,2
Sensible cooling capacity gross	(1)	kW	7,75	13,1	24,4	22,4	24,3	25,4
<b>CHILLED WATER</b>								
Total cooling capacity gross	(3)	kW	24,3	29,5	51,4	67,6	91,0	126
Sensible cooling capacity gross	(3)	kW	20,1	27,6	47,5	64,5	85,0	98,5
SHR	(2)		0,83	0,94	0,92	0,95	0,93	0,78
Fluid flow	(3)	m³/h	4,19	5,08	8,85	11,6	15,7	21,6
Total pressure drop (Coil + Valve)	(3)	kPa	29,5	48,1	55,5	60,3	57,8	67,7
<b>PLATE CAPACITOR</b>								
Capacitors nr.		N°	1	1	1	2	1	1
Condenser fluid flow	(1)	m³/h	4,05	6,02	11,6	15,0	19,7	27,3
Condenser's pressure drop	(1)	kPa	13,5	21,4	29,7	25,4	34,5	28,9
<b>COMPRESSORS</b>								
Compressors nr.		N°	1	1	1	2	2	3
No. Circuits		N°	1	1	1	2	2	2
<b>FANS</b>								
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	2	3	3	3
Air flow	(4)	m³/h	6500	8000	13500	19000	24000	28000
<b>NOISE LEVEL</b>								
Noise Power		dB(A)	76	80	84	88	88	84
Noise Pressure Level	(5)	dB(A)	56	60	64	67	67	63
<b>SIZE AND WEIGHT</b>								
Dimension A	(4)	mm	1000	1000	1550	2100	2650	2650
Dimension B	(4)	mm	790	790	790	790	790	890
Dimension H	(4)	mm	1980	1980	1980	1980	1980	2195
Weight	(4)	kg	390	390	468	737	861	1270
<b>COUPLING UNIT EXTERNAL</b>								
Standard dry cooler linked			i-BDC039m	i-BDC039m	i-BDC062m	i-BDC092m	i-BDC123m	i-BDC190m
Voltage	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
Quantity		N°	1	1	1	1	1	1

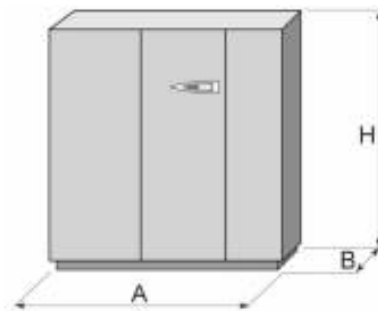
## Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 30°C/35°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field

ACCURATE i-AT / MOD_B		20	29	50	70	90	130
Frame		F03	F03	F04	F05	F06	F07
Power supply	V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>							
<b>DIRECT EXPANSION</b>							
<b>PERFORMANCE MAX</b>							
Total cooling capacity gross	(1) kW	20,4	29,4	56,5	74,2	97,1	132
Sensible cooling capacity gross	(1) kW	20,4	28,7	51,5	69,7	88,2	112
Total power input (Comp.+fans)	(1) kW	4,90	7,51	14,4	17,5	23,7	33,4
EER (Indoor unit)	(1)	4,16	3,91	3,92	4,24	4,10	3,95
SHR	(2)	1,00	0,98	0,91	0,94	0,91	0,85
<b>PERFORMANCE MIN</b>							
Total cooling capacity gross	(1) kW	0.00	12,4	24,6	19,5	22,6	26,4
Sensible cooling capacity gross	(1) kW	0.00	12,4	24,6	22,7	24,6	26,8
<b>CHILLED WATER</b>							
Total cooling capacity gross	(3) kW	24,3	29,5	51,4	67,6	91,0	126
Sensible cooling capacity gross	(3) kW	20,1	27,6	47,5	64,5	85,0	98,5
SHR	(2)	0,83	0,94	0,92	0,95	0,93	0,78
Fluid flow	(3) m³/h	4,19	5,08	8,85	11,6	15,7	21,6
Total pressure drop (Coil + Valve)	(3) kPa	29,5	48,1	55,5	60,3	57,8	67,7
<b>PLATE CAPACITOR</b>							
Capacitors nr.	N°	1	1	1	2	1	1
Condenser fluid flow	(1) m³/h	1,38	2,02	3,89	5,02	6,60	9,11
Condenser's pressure drop	(1) kPa	1,21	20,9	22,8	17,4	28,4	10,9
<b>COMPRESSORS</b>							
Compressors nr.	N°	1	1	1	2	2	3
No. Circuits	N°	1	1	1	2	2	2
<b>FANS</b>							
Fans type		EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°	1	1	2	3	3	3
Air flow	(4) m³/h	6500	8000	13500	19000	24000	28000
<b>NOISE LEVEL</b>							
Noise Power	dB(A)	76	80	84	88	88	90
Noise Pressure Level	(5) dB(A)	56	60	64	67	67	69
<b>SIZE AND WEIGHT</b>							
Dimension A	(4) mm	1000	1000	1550	2100	2650	2650
Dimension B	(4) mm	790	790	790	790	790	890
Dimension H	(4) mm	1980	1980	1980	1980	1980	2195
Weight	(4) kg	390	390	468	737	861	1270

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 15°C/30°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field





## High precision air conditioners (HPAC)

# i-AF 20 - 130



### Close control unit free-cooling INVERTER, water cooled direct expansion 19,4-130 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general. Direct expansion FREE-COOLING unit with INVERTER compressor is water cooled and it has to be connected to a remote dry cooler. The INVERTER compressor allows the cooling capacity modulation according to the real internal load, particularly efficient at the partial loads and optimizing the power absorbed and eliminating the start current. Units fitted with electronic expansion valve and EC INVERTER fans, upflow or downflow.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	With fans speed regulation, for i-BDC dry cooler
MOD_A	With condensing control, for BDC dry cooler

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Condensing control for maximum low noise (optional).

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Refrigerant circuit consisting in the standard version of a electronic expansion valve, liquid solenoid valve, high/low pressure switch, sight glass liquid indicator, drier filter, head pressure valve for condensing control and oil separator in order to guarantee the right lubrication of the compressor at the low speed.

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board

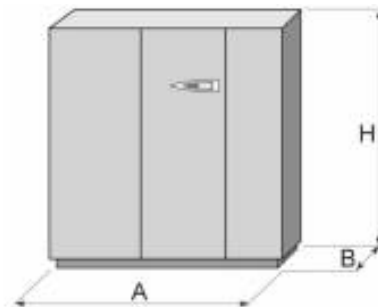




ACCURATE i-AF / BASIC / MOD_A			20	29	50	70	90	130
Frame			F03	F03	F04	F05	F06	F07
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>								
<b>DIRECT EXPANSION</b>								
<b>PERFORMANCE MAX</b>								
Total cooling capacity gross	(1)	kW	19,4	28,6	55,1	73,0	94,4	130
Sensible cooling capacity gross	(1)	kW	19,4	28,4	51,0	69,2	87,2	111
Total power input (Comp.+fans)	(1)	kW	5,36	7,95	15,4	18,3	25,2	34,3
EER (Indoor unit)	(1)		3,62	3,60	3,58	3,99	3,75	3,79
SHR	(2)		1,00	0,99	0,93	0,95	0,92	0,85
<b>PERFORMANCE MIN</b>								
Total cooling capacity gross	(1)	kW	7,75	12,2	24,4	19,4	22,7	25,2
Sensible cooling capacity gross	(1)	kW	7,75	12,2	24,4	22,4	24,3	25,4
<b>FREECOOLING</b>								
FC total capacity	(3)	kW	19,6	22,5	43,6	58,1	78,1	94,1
FC sensible capacity	(3)	kW	19,6	22,5	43,6	58,1	78,1	94,1
SHR	(2)		1,00	1,00	1,00	1,00	1,00	1,00
<b>PLATE CAPACITOR</b>								
Capacitors nr.	N°		1	1	1	2	1	1
Condenser fluid flow	m³/h		4,05	6,02	11,6	15,0	19,6	27,3
Condenser's pressure drop	kPa		8,79	21,4	29,7	25,4	37,6	27,9
<b>COMPRESSORS</b>								
Compressors nr.	N°		1	1	1	2	2	3
No. Circuits	N°		1	1	1	2	2	2
<b>FANS</b>								
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		1	1	2	3	3	3
Air flow	(4)	m³/h	6500	8000	13500	19000	24000	28000
<b>NOISE LEVEL</b>								
Noise Power		dB(A)	76	80	84	88	88	90
Noise Pressure Level	(5)	dB(A)	56	60	64	67	67	69
<b>SIZE AND WEIGHT</b>								
Dimension A	(4)	mm	1000	1000	1550	2100	2650	2650
Dimension B	(4)	mm	790	790	790	790	790	890
Dimension H	(4)	mm	1980	1980	1980	1980	1980	2195
Weight	(4)	kg	407	407	498	778	924	924
<b>COUPLING UNIT EXTERNAL</b>								
Standard dry cooler linked			i-BDC039m	i-BDC039m	i-BDC062m	i-BDC092m	i-BDC123m	i-BDC190m
Voltage	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
Quantity	N°		1	1	1	1	1	1

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 30°C/35°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor air (in) 24°C - R.H. 50%; Water (in) 10°C and water flow of DX mode; ESP = 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field





## High precision air conditioners (HPAC)

# AX 05 - 90



### Close control unit, air cooled, direct expansion 4,96-95,4 kW

Ductable close control air-conditioners for vertical installation and cooling only, with optional heating by means of heating element or hot water, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for air-conditioning technological, server and CED rooms and all technological applications in general. Units fitted with EC INVERTER fans, upflow or downflow. External air condenser. Power supply 400V/3ph+N/50Hz (all models).

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	Without condensing control
MOD	With condensing control, for BRE rem. condenser
LT	Low temperature with condensing control for BRE

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions; available BASIC or HIGH PRESSURE version.

Condensing control for maximum low noise (optional).

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Refrigerant circuit consisting in the standard version of a thermostatic valve with external equalization (electronic expansion valve available as option), liquid solenoid valve, high/low pressure switch, sight glass liquid indicator and drier filter.

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board
- Electronic expansion valve





ACCURATE AX / BASIC / MOD / LT			05	07	10	15	18	20	26	29	30
Frame			F01	F01	F01	F02	F02	F03	F03	F03	F04
Power supply	V/ph/Hz		230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>											
Total cooling capacity gross	(1)	kW	4,96	7,21	9,60	16,3	19,1	23,3	28,9	31,8	33,4
Sensible cooling capacity gross	(1)	kW	4,95	7,21	9,23	16,3	18,2	23,3	28,8	29,9	33,4
Total power input (Comp.+fans)	(1)	kW	1,38	2,09	2,60	4,48	5,15	6,28	7,80	8,73	8,56
EER (Indoor unit)	(1)		3,59	3,45	3,69	3,64	3,71	3,71	3,71	3,64	3,90
SHR	(2)		1,00	1,00	0,96	1,00	0,95	1,00	1,00	0,94	1,00
<b>COMPRESSORS</b>											
Compressors nr.	N°		1	1	1	1	1	1	1	1	2
No. Circuits	N°		1	1	1	1	1	1	1	1	2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		1	1	1	2	2	1	1	1	2
Air flow	(3)	m³/h	1800	2500	2500	4900	4900	6500	8000	8000	10500
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	63	70	70	73	73	76	80	80	79
Noise Pressure Level	(4)	dB(A)	43	50	50	53	53	56	60	60	59
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	600	600	600	1000	1000	1000	1000	1000	1550
Dimension B	(3)	mm	500	500	500	500	500	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	131	131	146	212	224	265	316	334	366
<b>COUPLING UNIT EXTERNAL</b>											
Standard remote condenser linked			BRE014m	BRE014m	BRE014m	BRE027m	BRE027m	BRE044m	BRE044m	BRE044m	BRE051m
Voltage			230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°		1	1	1	1	1	1	1	1	1

ACCURATE AX / BASIC / MOD / LT			39	40	50	55	60	70	80	90
Frame			F04	F04	F04	F05	F05	F05	F06	F06
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>										
Total cooling capacity gross	(1)	kW	41,0	46,2	52,3	60,3	68,1	73,2	87,8	95,4
Sensible cooling capacity gross	(1)	kW	41,0	46,2	49,9	60,3	68,1	70,1	87,8	91,8
Total power input (Comp.+fans)	(1)	kW	11,1	13,0	15,2	16,5	18,4	20,2	23,8	27,4
EER (Indoor unit)	(1)		3,69	3,55	3,44	3,65	3,70	3,62	3,69	3,48
SHR	(2)		1,00	1,00	0,95	1,00	1,00	0,96	1,00	0,96
<b>COMPRESSORS</b>										
Compressors nr.	N°		1	2	2	2	2	2	2	2
No. Circuits	N°		1	2	2	2	2	2	2	2
<b>FANS</b>										
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		2	2	2	3	3	3	3	3
Air flow	(3)	m³/h	13500	13500	13500	19000	19000	19000	25000	25000
<b>NOISE LEVEL</b>										
Noise Power		dB(A)	84	84	84	88	88	88	88	88
Noise Pressure Level	(4)	dB(A)	64	64	64	67	67	67	67	67
<b>SIZE AND WEIGHT</b>										
Dimension A	(3)	mm	1550	1550	1550	2100	2100	2100	2650	2650
Dimension B	(3)	mm	790	790	790	790	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	426	421	444	580	620	640	708	738
<b>COUPLING UNIT EXTERNAL</b>										
Standard remote condenser linked			BRE051m	BRE051m	BRE051m	BRE100b	BRE100b	BRE100b	BRE116b	BRE116b
Voltage			230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°		1	1	1	1	1	1	1	1

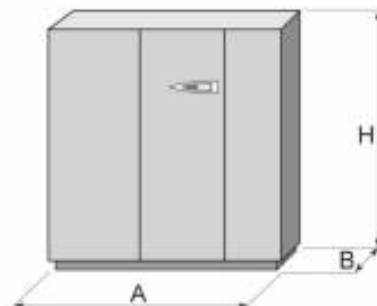
Notes:

1 Indoor conditions (in) 24°C - R.H. 50%; Condensing temperature 45°C; ESP= 20Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field



## High precision air conditioners (HPAC)

# AW 05 - 90



### Close control unit, water cooled direct expansion 5,26-103 kW

Ducted close-control air-conditioners for vertical installation and cooling only, with optional reheating by means of heating element or hot water, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for air-conditioning technological, server and CED rooms and all technological applications in general. Units fitted with EC INVERTER fans, upflow or downflow, and incorporated water-cooled condenser. External Dry Cooler. Power supply 400V/3ph+N/50Hz (for all units).

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	Without condensing control
MOD_A	With condensing control, for BDC dry cooler
MOD_B	With cond. control by pressostatic valve, for open circuit

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions; available BASIC or HIGH PRESSURE version.

Condensing control for maximum low noise (optional).

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Refrigerant circuit consisting in the standard version of a thermostatic valve with external equalization (electronic expansion valve available as option), liquid solenoid valve, high/low pressure switch, sight glass liquid indicator and drier filter.

Switchboard to IEC 204-1/EN60204-1

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board
- Electronic expansion valve





ACCURATE AW / BASIC / MOD_A			05	07	10	15	18	20	26	29	30
Frame			F01	F01	F01	F02	F02	F03	F03	F03	F04
Power supply	V/ph/Hz		230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>											
Total cooling capacity gross	(1) kW		5,26	7,51	9,80	16,9	19,8	24,5	29,2	33,0	34,8
Sensible cooling capacity gross	(1) kW		5,08	7,51	9,30	16,9	18,3	23,8	28,3	29,9	34,8
Total power input (Comp.+fans)	(1) kW		1,26	1,87	2,31	4,10	4,77	5,63	7,17	8,04	7,72
EER (Indoor unit)	(1)		4,17	4,02	4,24	4,12	4,15	4,35	4,07	4,10	4,51
SHR	(2)		0,97	1,00	0,95	1,00	0,92	0,97	0,97	0,91	1,00
<b>PLATE CAPACITOR</b>											
Capacitors nr.	N°		1	1	1	1	1	1	1	1	2
Condenser fluid flow	(1) m³/h		1,10	1,56	2,03	3,49	4,11	4,98	5,99	6,80	7,14
Condenser's pressure drop	(1) kPa		2,77	8,03	13,9	5,03	6,96	22,9	30,0	26,7	23,6
<b>COMPRESSORS</b>											
Compressors nr.	N°		1	1	1	1	1	1	1	1	2
No. Circuits	N°		1	1	1	1	1	1	1	1	2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		1	1	1	2	2	1	1	1	2
Air flow	(3) m³/h		1800	2500	2500	4900	4900	6500	8000	8000	10500
<b>NOISE LEVEL</b>											
Noise Power	dB(A)		63	70	70	73	73	76	80	80	79
Noise Pressure Level	(4) dB(A)		43	50	50	53	53	56	60	60	59
<b>SIZE AND WEIGHT</b>											
Dimension A	(3) mm		600	600	600	1000	1000	1000	1000	1000	1550
Dimension B	(3) mm		500	500	500	500	500	790	790	790	790
Dimension H	(3) mm		1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3) kg		131	131	148	212	224	265	316	334	366
<b>COUPLING UNIT EXTERNAL</b>											
Standard dry cooler linked			BDC013m	BDC013m	BDC013m	BDC030m	BDC030m	BDC039m	BDC039m	BDC039m	BDC062m
Voltage	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°		1	1	1	1	1	1	1	1	1

ACCURATE AW / BASIC / MOD_A			39	40	50	55	60	70	80	90
Frame			F04	F04	F04	F05	F05	F05	F06	F06
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>										
Total cooling capacity gross	(1) kW		43,0	48,5	54,5	62,6	70,8	77,4	90,6	99,3
Sensible cooling capacity gross	(1) kW		43,0	48,4	49,9	62,6	69,1	71,1	90,0	92,8
Total power input (Comp.+fans)	(1) kW		10,1	11,7	14,0	15,3	16,9	18,0	22,0	25,2
EER (Indoor unit)	(1)		4,26	4,15	3,89	4,09	4,19	4,30	4,12	3,94
SHR	(2)		1,00	1,00	0,92	1,00	0,98	0,92	0,99	0,93
<b>PLATE CAPACITOR</b>										
Capacitors nr.	N°		1	2	2	2	2	2	1	1
Condenser fluid flow	(1) m³/h		8,64	9,88	11,3	12,7	14,4	15,7	18,4	20,5
Condenser's pressure drop	(1) kPa		29,7	21,0	29,8	33,0	29,7	25,3	30,6	38,2
<b>COMPRESSORS</b>										
Compressors nr.	N°		1	2	2	2	2	2	2	2
No. Circuits	N°		1	2	2	2	2	2	2	2
<b>FANS</b>										
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		2	2	2	3	3	3	3	3
Air flow	(3) m³/h		13500	13500	13500	19000	19000	19000	25000	25000
<b>NOISE LEVEL</b>										
Noise Power	dB(A)		84	84	84	88	88	88	88	88
Noise Pressure Level	(4) dB(A)		64	64	64	67	67	67	67	67
<b>SIZE AND WEIGHT</b>										
Dimension A	(3) mm		1550	1550	1550	2100	2100	2100	2650	2650
Dimension B	(3) mm		790	790	790	790	790	790	790	790
Dimension H	(3) mm		1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3) kg		426	421	444	580	620	640	708	738
<b>COUPLING UNIT EXTERNAL</b>										
Standard dry cooler linked			BDC062m	BDC062m	BDC062m	BDC092m	BDC092m	BDC092m	BDC123m	BDC123m
Voltage	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°		1	1	1	1	1	1	1	1

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 30°C/35°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field

ACCURATE AW / MOD_B			05	07	10	15	18	20	26	29	30
Frame			F01	F01	F01	F02	F02	F03	F03	F03	F04
Power supply	V/ph/Hz		230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>											
Total cooling capacity gross	(1)	kW	5,32	7,62	9,71	17,1	19,8	24,6	29,4	32,1	35,9
Sensible cooling capacity gross	(1)	kW	5,10	7,52	9,10	17,1	18,3	23,8	28,3	29,8	35,9
Total power input (Comp.+fans)	(1)	kW	1,23	1,79	2,40	3,94	4,74	5,54	6,89	7,88	7,08
EER (Indoor unit)	(1)		4,33	4,26	4,05	4,34	4,18	4,44	4,27	4,07	5,07
SHR	(2)		0,96	0,99	0,94	1,00	0,92	0,97	0,96	0,93	1,00
<b>PLATE CAPACITOR</b>											
Capacitors nr.		N°	1	1	1	1	1	1	1	1	2
Condenser fluid flow	(1)	m³/h	0,37	0,52	0,67	1,16	1,37	1,66	1,99	2,20	2,40
Condenser's pressure drop	(1)	kPa	1,02	3,97	7,04	2,99	3,02	21,2	21,0	26,1	12,0
<b>COMPRESSORS</b>											
Compressors nr.		N°	1	1	1	1	1	1	1	1	2
No. Circuits		N°	1	1	1	1	1	1	1	1	2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	1	2	2	1	1	1	2
Air flow	(3)	m³/h	1800	2500	2500	4900	4900	6500	8000	8000	10500
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	63	70	70	73	73	76	80	80	79
Noise Pressure Level	(4)	dB(A)	43	50	50	53	53	56	60	60	59
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	600	600	600	1000	1000	1000	1000	1000	1550
Dimension B	(3)	mm	500	500	500	500	500	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	131	131	148	212	224	265	316	334	366

ACCURATE AW / MOD_B			39	40	50	55	60	70	80	90
Frame			F04	F04	F04	F05	F05	F05	F06	F06
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>										
Total cooling capacity gross	(1)	kW	44,3	48,9	54,6	63,6	73,2	78,2	93,9	103
Sensible cooling capacity gross	(1)	kW	44,3	48,6	49,9	63,6	70,1	71,7	91,2	92,8
Total power input (Comp.+fans)	(1)	kW	9,59	11,5	13,3	14,9	15,6	17,1	20,4	22,9
EER (Indoor unit)	(1)		4,62	4,25	4,11	4,27	4,69	4,57	4,60	4,50
SHR	(2)		1,00	0,99	0,91	1,00	0,96	0,92	0,97	0,90
<b>PLATE CAPACITOR</b>										
Capacitors nr.		N°	1	2	2	2	2	2	1	1
Condenser fluid flow	(1)	m³/h	2,92	3,29	3,72	4,26	4,85	5,23	6,23	6,90
Condenser's pressure drop	(1)	kPa	17,2	21,2	20,0	22,2	13,0	15,0	21,0	26,9
<b>COMPRESSORS</b>										
Compressors nr.		N°	1	2	2	2	2	2	2	2
No. Circuits		N°	1	2	2	2	2	2	2	2
<b>FANS</b>										
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	2	2	2	3	3	3	3	3
Air flow	(3)	m³/h	13500	13500	13500	19000	19000	19000	25000	25000
<b>NOISE LEVEL</b>										
Noise Power		dB(A)	84	84	84	88	88	88	88	88
Noise Pressure Level	(4)	dB(A)	64	64	64	67	67	67	67	67
<b>SIZE AND WEIGHT</b>										
Dimension A	(3)	mm	1550	1550	1550	2100	2100	2100	2650	2650
Dimension B	(3)	mm	790	790	790	790	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	426	421	444	580	620	640	708	738

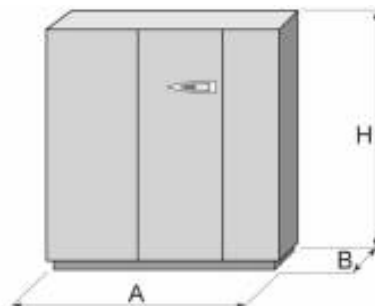
Notes:

1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 15°C/30°C; ESP= 20Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field





## High precision air conditioners (HPAC)

# AD 20 - 90



### Close control unit dual fluid, air cooled direct expansion 23,8-91,0 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control.

Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general.

Units fitted with EC INVERTER fans, upflow or downflow.

DUAL FLUID unit has to be connected to an external chiller for PRIMARY circuit.

The direct expansion circuit, secondary or BACK-UP circuit, is air cooled and has to be connected with a remote condenser.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	Without condensing control
MOD	With condensing control, for BRE rem. condenser
LT	Low temperature with condensing control for BRE

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board
- Electronic expansion valve

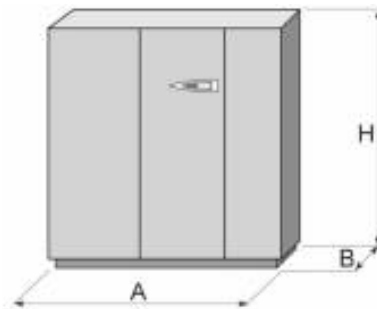




ACCURATE AD / BASIC / MOD / LT		20	26	29	30	39	40	50	60	70	80	90
Frame		F03	F03	F03	F04	F04	F04	F04	F05	F05	F06	F06
Power supply	V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>												
<b>DIRECT EXPANSION</b>												
Total cooling capacity gross	(1) kW	23,7	29,4	32,7	36,7	42,2	47,6	55,1	62,2	75,5	86,3	98,8
Sensible cooling capacity gross	(1) kW	21,8	27,9	30,2	36,2	42,2	47,0	50,7	62,2	71,0	86,1	91,0
Total power input (Comp.+fans)	(1) kW	6,28	7,81	8,55	8,45	11,1	13,1	14,9	16,5	19,9	23,8	27,5
EER (Indoor unit)	(1)	3,77	3,76	3,82	4,34	3,80	3,63	3,70	3,77	3,79	3,63	3,59
SHR	(2)	0,92	0,95	0,92	0,99	1,00	0,99	0,92	1,00	0,94	1,00	0,92
<b>CHILLED WATER</b>												
Total cooling capacity gross	(3) kW	23,8	28,1	29,5	41,0	50,0	50,0	51,4	65,0	67,6	91,0	91,0
Sensible cooling capacity gross	(3) kW	21,8	26,4	27,6	37,0	46,3	46,3	47,5	62,2	64,5	85,0	85,0
SHR	(2)	0,92	0,94	0,94	0,90	0,93	0,93	0,92	0,96	0,95	0,93	0,93
Fluid flow	(3) m³/h	4,10	4,84	5,08	7,06	8,61	8,61	8,85	11,2	11,6	15,7	15,7
Total pressure drop (Coil + Valve)	(3) kPa	26,9	35,4	48,1	31,2	45,6	45,6	61,2	37,2	42,0	47,5	47,5
<b>COMPRESSORS</b>												
Compressors nr.	N°	1	1	1	2	1	2	2	2	2	2	2
No. Circuits	N°	1	1	1	2	1	2	2	2	2	2	2
<b>FANS</b>												
Fans type		EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°	1	1	1	2	2	2	2	3	3	3	3
Air flow	(4) m³/h	6000	7500	8000	10000	13000	13000	13500	18000	19000	24000	24000
<b>NOISE LEVEL</b>												
Noise Power	dB(A)	76	80	80	79	84	84	84	88	88	88	88
Noise Pressure Level	(5) dB(A)	56	60	60	59	64	64	64	67	67	67	67
<b>SIZE AND WEIGHT</b>												
Dimension A	(4) mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	2650
Dimension B	(4) mm	790	790	790	790	790	790	790	790	790	790	790
Dimension H	(4) mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(4) kg	284	331	349	400	460	455	480	690	710	825	855
<b>COUPLING UNIT EXTERNAL</b>												
Standard remote condenser linked		BRE044m	BRE044m	BRE044m	BRE065b	BRE065b	BRE065b	BRE065b	BRE100b	BRE100b	BRE116b	BRE116b
Voltage		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°	1	1	1	1	1	1	1	1	1	1	1

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Condensing temperature 45°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field





## High precision air conditioners (HPAC)

# AT 20 - 90



### Close control unit dual fluid, water cooled direct expansion 23,8-91,0 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control.

Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general.

Units fitted with EC INVERTER fans, upflow or downflow.

DUAL FLUID unit has to be connected to an external chiller for PRIMARY circuit.

The direct expansion circuit, secondary or BACK-UP circuit, is water cooled and has to be connected with a remote dry cooler or to city water net.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	Without condensing control
MOD_A	With condensing control, for BDC dry cooler
MOD_B	With cond. control by pressostatic valve, for open circuit

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board
- Electronic expansion valve





ACCURATE AT / BASIC / MOD_A		20	26	29	30	39	40	50	60	70	80	90
Frame		F03	F03	F03	F04	F04	F04	F04	F05	F05	F06	F06
Power supply	V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>												
<b>DIRECT EXPANSION</b>												
Total cooling capacity gross	(1) kW	24,9	30,6	32,3	38,1	47,3	50,0	54,5	70,3	76,7	91,8	102
Sensible cooling capacity gross	(1) kW	22,8	28,3	30,0	36,7	46,9	47,9	50,7	66,8	71,1	88,2	92,2
Total power input (Comp.+fans)	(1) kW	5,75	7,20	7,91	7,74	11,2	11,8	13,7	16,8	17,8	22,1	25,4
EER (Indoor unit)	(1)	4,33	4,25	4,08	4,92	4,22	4,24	3,98	4,18	4,31	4,15	4,02
SHR	(2)	0,92	0,92	0,93	0,96	0,99	0,96	0,93	0,95	0,93	0,96	0,90
<b>CHILLED WATER</b>												
Total cooling capacity gross	(3) kW	23,8	28,1	29,5	41,0	50,0	50,0	51,4	65,0	67,6	91,0	91,0
Sensible cooling capacity gross	(3) kW	21,8	26,4	27,6	37,0	46,3	46,3	47,5	62,2	64,5	85,0	85,0
SHR	(2)	0,92	0,94	0,94	0,90	0,93	0,93	0,92	0,96	0,95	0,93	0,93
Fluid flow	(3) m³/h	4,10	4,84	5,08	7,06	8,61	8,61	8,85	11,2	11,6	15,7	15,7
Total pressure drop (Coil + Valve)	(3) kPa	26,9	35,4	48,1	31,2	45,6	45,6	61,2	37,2	42,0	23,6	23,6
<b>EXCHANGERS</b>												
Capacitors nr.	N°	1	1	1	2	1	2	2	2	2	1	1
Condenser fluid flow	(1) m³/h	5,07	6,24	6,65	7,71	9,58	10,2	11,3	14,3	15,6	18,7	21,0
Condenser's pressure drop	(1) kPa	23,8	31,4	27,4	26,5	30,2	20,7	31,6	29,8	27,2	32,4	40,0
<b>COMPRESSORS</b>												
Compressors nr.	N°	1	1	1	2	1	2	2	2	2	2	2
No. Circuits	N°	1	1	1	2	1	2	2	2	2	2	2
<b>FANS</b>												
Fans type		EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°	1	1	1	2	2	2	2	3	3	3	3
Air flow	(4) m³/h	6000	7500	8000	10000	13000	13000	13500	18000	19000	24000	24000
<b>NOISE LEVEL</b>												
Noise Power	dB(A)	76	80	80	79	84	84	84	88	88	88	88
Noise Pressure Level	(5) dB(A)	56	60	60	59	64	64	64	67	67	67	67
<b>SIZE AND WEIGHT</b>												
Dimension A	(4) mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	2650
Dimension B	(4) mm	790	790	790	790	790	790	790	790	790	790	790
Dimension H	(4) mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(4) kg	304	355	371	417	477	464	489	690	705	759	829
<b>COUPLING UNIT EXTERNAL</b>												
Standard dry cooler linked		BDC039m	BDC039m	BDC039m	BDC062m	BDC062m	BDC062m	BDC062m	BDC092m	BDC092m	BDC123m	BDC123m
Voltage	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°	1	1	1	1	1	1	1	1	1	1	1

Notes:

1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 30°C/35°C; ESP= 20Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa

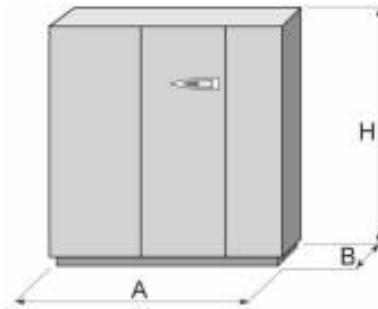
4 Unit in standard configuration/execution, without optional accessories.

5 Measured at 1,5m height, 2m in front of the unit in free field

ACCURATE AT / MOD_B		20	26	29	30	39	40	50	60	70	80	90	
Frame		F03	F03	F03	F04	F04	F04	F04	F05	F05	F06	F06	
Power supply	V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	
<b>PERFORMANCE</b>													
<b>DIRECT EXPANSION</b>													
Total cooling capacity gross	(1)	kW	24,6	30,6	34,3	44,8	38,7	49,3	59,5	74,5	81,9	95,5	106
Sensible cooling capacity gross	(1)	kW	22,7	28,3	28,9	39,4	38,7	47,6	50,1	68,4	68,8	89,7	92,2
Total power input (Comp.+fans)	(1)	kW	5,75	7,20	8,20	8,10	9,30	12,1	13,9	16,3	17,9	21,4	24,3
EER (Indoor unit)	(1)		4,28	4,25	4,18	5,53	4,16	4,07	4,28	4,57	4,58	4,46	4,36
SHR	(2)		0,92	0,92	0,84	0,88	1,00	0,97	0,84	0,92	0,84	0,94	0,87
<b>CHILLED WATER</b>													
Total cooling capacity gross	(3)	kW	23,8	28,1	29,5	41,0	50,0	50,0	51,4	65,0	67,6	91,0	91,0
Sensible cooling capacity gross	(3)	kW	21,8	26,4	27,6	37,0	46,3	46,3	47,5	62,2	64,5	85,0	85,0
SHR	(2)		0,92	0,94	0,94	0,90	0,93	0,93	0,92	0,96	0,95	0,93	0,93
Fluid flow	(3)	m³/h	4,10	4,84	5,08	7,06	8,61	8,61	8,85	11,2	11,6	15,7	15,7
Total pressure drop (Coil + Valve)	(3)	kPa	26,9	35,4	48,1	31,2	45,6	45,6	61,2	37,2	42,0	23,6	23,6
<b>EXCHANGERS</b>													
Capacitors nr.		N°	1	1	1	2	1	2	2	2	1	1	
Condenser fluid flow	(1)	m³/h	1,67	2,07	2,34	2,97	2,58	3,35	4,04	4,97	5,49	7,15	
Condenser's pressure drop	(1)	kPa	20,2	19,3	25,5	11,8	16,6	5,95	19,5	12,6	14,6	20,3	
<b>COMPRESSORS</b>													
Compressors nr.		N°	1	1	1	2	1	2	2	2	2	2	
No. Circuits		N°	1	1	1	2	1	2	2	2	2	2	
<b>FANS</b>													
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	
Quantity		N°	1	1	1	2	2	2	2	3	3	3	
Air flow	(4)	m³/h	6000	7500	8000	10000	13000	13000	13500	18000	19000	24000	
<b>NOISE LEVEL</b>													
Noise Power		dB(A)	76	80	80	79	84	84	84	88	88	88	
Noise Pressure Level	(5)	dB(A)	56	60	60	59	64	64	64	67	67	67	
<b>SIZE AND WEIGHT</b>													
Dimension A	(4)	mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	
Dimension B	(4)	mm	790	790	790	790	790	790	790	790	790	790	
Dimension H	(4)	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	
Weight	(4)	kg	304	355	371	417	477	464	489	690	705	759	

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 15°C/30°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field





## High precision air conditioners (HPAC)

# AF 20 - 90



### Close control unit free-cooling source, water cooled direct expansion 24,9-102 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control.

Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general.

Units fitted with EC INVERTER fans, upflow or downflow.

FREE-COOLING unit water cooled has to be connected with a remote dry cooler or an external chiller.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	Without condensing control
MOD_A	With condensing control, for BDC dry cooler

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the compressor and all the other parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board
- Electronic expansion valve

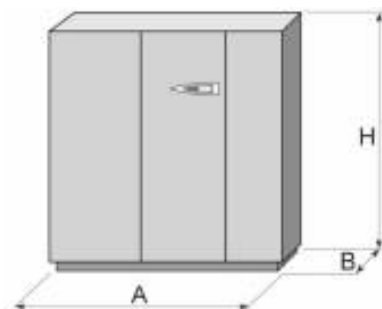




ACCURATE AF / BASIC / MOD_A		20	26	29	30	39	40	50	60	70	80	90
Frame		F03	F03	F03	F04	F04	F04	F04	F05	F05	F06	F06
Power supply	V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>												
<b>DIRECT EXPANSION</b>												
Total cooling capacity gross	(1) kW	24,9	30,6	32,3	38,1	47,3	50,0	54,5	70,3	76,7	91,8	102
Sensible cooling capacity gross	(1) kW	22,8	28,3	30,0	36,7	46,9	47,9	50,7	66,8	71,1	88,2	92,2
Total power input (Comp.+fans)	(1) kW	5,75	7,20	7,91	7,74	11,2	11,8	13,7	16,8	17,8	22,1	25,4
EER (Indoor unit)	(1)	4,33	4,25	4,08	4,92	4,22	4,24	3,98	4,18	4,31	4,15	4,02
SHR	(2)	0,92	0,92	0,93	0,96	0,99	0,96	0,93	0,95	0,93	0,96	0,90
<b>FREECOOLING</b>												
FC total capacity	(3) kW	19,9	24,0	25,1	33,6	40,9	41,5	43,8	56,6	58,0	76,7	78,2
FC sensible capacity	(3) kW	19,9	24,0	25,1	33,6	40,9	41,5	43,8	56,6	58,0	76,7	78,2
SHR	(2)	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
<b>PLATE CAPACITOR</b>												
Capacitors nr.	N°	1	1	1	2	1	2	2	2	2	1	1
Condenser fluid flow	(1) m³/h	5,07	6,24	6,65	7,71	9,58	10,2	11,3	14,3	15,6	18,7	21,0
Condenser's pressure drop	(1) kPa	23,8	31,4	27,4	26,5	30,2	20,7	31,6	29,8	27,2	32,4	40,0
<b>COMPRESSORS</b>												
Compressors nr.	N°	1	1	1	2	1	2	2	2	2	2	2
No. Circuits	N°	1	1	1	2	1	2	2	2	2	2	2
<b>FANS</b>												
Fans type		EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°	1	1	1	2	2	2	2	3	3	3	3
Air flow	(4) m³/h	6000	7500	8000	10000	13000	13000	13500	18000	19000	24000	24000
<b>NOISE LEVEL</b>												
Noise Power	dB(A)	76	80	80	79	84	84	84	88	88	88	88
Noise Pressure Level	(5) dB(A)	56	60	60	59	64	64	64	67	67	67	67
<b>SIZE AND WEIGHT</b>												
Dimension A	(4) mm	1000	1000	1000	1550	1550	1550	1550	2100	2100	2650	2650
Dimension B	(4) mm	790	790	790	790	790	790	790	790	790	790	790
Dimension H	(4) mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(4) kg	319	370	388	439	499	494	519	726	746	862	892
<b>COUPLING UNIT EXTERNAL</b>												
Standard dry cooler linked		BDC039m	BDC039m	BDC039m	BDC062m	BDC062m	BDC062m	BDC062m	BDC092m	BDC092m	BDC123m	BDC123m
Voltage	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Quantity	N°	1	1	1	1	1	1	1	1	1	1	1

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 30°C/35°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Indoor air (in) 24°C - R.H. 50%; Water (in) 10°C and water flow of DX mode; ESP = 20Pa
- 4 Unit in standard configuration/execution, without optional accessories.
- 5 Measured at 1,5m height, 2m in front of the unit in free field



## High precision air conditioners (HPAC)

# AC 05 - 221



### Close control unit chilled water 8,50-225 kW

Ductable close control air-conditioners for vertical installation and cooling only, with optional heating by means of heating element or hot water, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for air-conditioning technological, server and CED rooms and all technological applications in general. Units fitted with EC INVERTER fans, upflow or downflow. These units are provided with 3way valve and servomotor. Unit has to be connected with an external chiller.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC	Basic
HT	High Temperature

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the all parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions; available BASIC or HIGH PRESSURE version.

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board





ACCURATE AC / BASIC			05	07	09	14	19	25	30	34	41	50
Frame			F01	F01	F01	F02	F02	F03	F03	F04	F04	F04
Power supply		V/ph/Hz	230/1/50	230/1/50	230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>												
Total cooling capacity gross	(1)	kW	5,10	8,50	10,1	15,7	20,4	28,4	33,8	37,4	48,5	57,7
Sensible cooling capacity gross	(1)	kW	5,10	8,50	9,50	15,7	19,0	28,4	30,9	37,4	48,5	52,8
Fans power input	(1)	kW	0,16	0,40	0,40	0,80	0,80	1,80	1,80	3,20	3,20	3,20
SHR	(2)		1,00	1,00	0,94	1,00	0,93	1,00	0,91	1,00	1,00	0,92
Fluid flow	(1)	m³/h	0,88	1,46	1,74	2,70	3,51	4,89	5,82	6,44	8,35	9,93
Total pressure drop (Coil + Valve)	(1)	kPa	39,1	35,3	39,1	42,2	65,6	61,7	71,0	49,3	74,9	77,6
<b>FANS</b>												
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	1	2	2	1	1	2	2	2
Air flow	(3)	m³/h	1800	2500	2500	4900	4900	8000	8000	13500	13500	13500
<b>NOISE LEVEL</b>												
Noise Power		dB(A)	63	70	70	73	73	80	80	84	84	84
Noise Pressure Level	(4)	dB(A)	43	50	50	53	53	60	60	64	64	64
<b>SIZE AND WEIGHT</b>												
Dimension A	(3)	mm	600	600	600	1000	1000	1000	1000	1550	1550	1550
Dimension B	(3)	mm	500	500	500	500	500	790	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	96	96	106	155	165	214	229	276	286	296

ACCURATE AC / BASIC			60	70	80	90	131	151	171	191	221
Frame			F05	F05	F06	F06	F06	F07	F07	F08	F08
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>											
Total cooling capacity gross	(1)	kW	69,0	82,6	88,7	104	131	155	178	197	225
Sensible cooling capacity gross	(1)	kW	69,0	73,7	88,7	97,0	106	127	136	156	168
Fans power input	(1)	kW	4,50	4,50	6,10	6,10	6,10	4,90	4,90	6,70	6,70
SHR	(2)		1,00	0,89	1,00	0,93	0,81	0,82	0,76	0,79	0,75
Fluid flow	(1)	m³/h	11,9	14,2	15,3	18,0	22,6	26,7	30,7	33,9	38,7
Total pressure drop (Coil + Valve)	(1)	kPa	71,9	78,9	75,3	81,2	112	94,5	114	159	149
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	3	3	3	3	3	3	3	3	3
Air flow	(3)	m³/h	19000	19000	25000	25000	25000	30000	30000	36000	36000
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	88	88	88	88	88	90	90	91	91
Noise Pressure Level	(4)	dB(A)	67	67	67	67	67	69	69	70	70
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	2100	2100	2650	2650	2650	2650	2650	3200	3200
Dimension B	(3)	mm	790	790	790	790	790	890	890	890	890
Dimension H	(3)	mm	1980	1980	1980	1980	1980	2180	2180	2180	2180
Weight	(3)	kg	410	420	468	478	478	642	652	740	750

Notes:

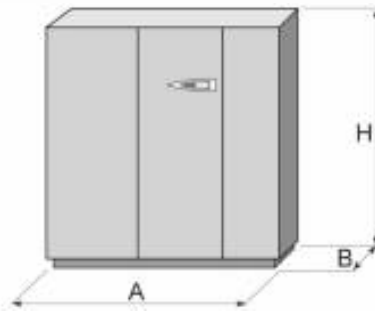
- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field

ACCURATE AC / HT			25	30	34	41	50	60	70	80	90
Frame			F03	F03	F04	F04	F04	F05	F05	F06	F06
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>											
Total cooling capacity gross	(1)	kW	30,8	37,1	44,5	52,2	63,2	73,3	87,4	97,4	108
Sensible cooling capacity gross	(1)	kW	30,8	37,1	44,5	52,2	63,2	73,3	87,4	97,4	108
Fans power input	(1)	kW	1,80	1,80	3,20	3,20	3,20	4,50	4,50	6,10	6,10
SHR	(2)		1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Fluid flow	(1)	m³/h	5,31	6,40	7,68	9,00	10,9	12,6	15,1	16,8	18,6
Total pressure drop (Coil + Valve)	(1)	kPa	50,1	63,8	48,4	50,4	75,7	40,5	45,2	75,8	79,2
<b>FANS</b>											
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	2	2	2	3	3	3	3
Air flow	(3)	m³/h	8000	8000	13500	13500	13500	19000	19000	25000	25000
<b>NOISE LEVEL</b>											
Noise Power		dB(A)	80	80	84	84	84	88	88	88	88
Noise Pressure Level	(4)	dB(A)	60	60	64	64	64	67	67	67	67
<b>SIZE AND WEIGHT</b>											
Dimension A	(3)	mm	1000	1000	1550	1550	1550	2100	2100	2650	2650
Dimension B	(3)	mm	790	790	790	790	790	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	214	229	276	286	296	410	420	468	478

Notes:

- 1 Indoor conditions (in) 33°C - R.H. 40%; Water temperature (in/out) 15°C/20°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field







## High precision air conditioners (HPAC)

# AB 20 - 140



### DUAL COIL close control unit, chilled water type 22,5-148 kW

Ductable close control units air-conditioners for vertical installation and cooling only, with optional heating by means of heating elements and hot water, optional humidifier and dehumidifier for precise temperature and humidity control.

Particularly suitable for air conditioning technological, servers and IT rooms and all technological applications in general.

Units fitted with EC INVERTER fans, upflow or downflow. These units are provided with two independent chilled water circuits, each one with 3way valve and servomotor. Units has to be connected to 2 complete independent circuit each one in back-up to the other one.

#### Commands

##### EVOLUTION

Semi-graphic display 132 x 64 pixel, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Compressor FIFO management, Integral LAN system, Standby management, Automatic rotation, Serious alarms, Operating contemporaneousness

#### Version

BASIC          Basic

#### Features

Unit for installing inside or outside the room to be air-conditioned.

Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels.

The reliability and functionality of the all parts are guaranteed by partners who are world leaders in their sector.

NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions.

Standard G2/G4 filtering section, F6-F8 optional, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing.

The microprocessor controls the compressor activation times with FIFO logic, thereby regulating the cooling capacity; it also controls the operating alarms with the possibility of interfacing to supervisor and remote-servicing systems.

Switchboard to IEC 204-1/EN60204-1

Capillary Pre and After sales service.

#### Accessory

- Remote user terminal
- Electric heating coil
- Water heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Air distribution plenum
- Sound absorber plenum for air outlet
- Interface electronic board



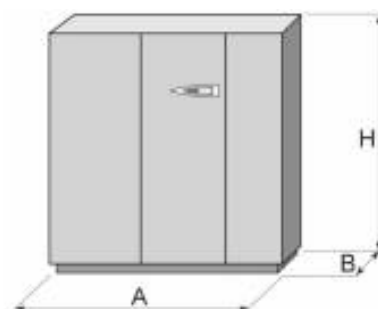


ACCURATE AB / BASIC			20	25	30	40	45	55
Frame			F03	F03	F04	F04	F05	F05
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>								
Total cooling capacity gross	(1)	kW	22,5	29,0	41,2	50,5	54,2	66,4
Sensible cooling capacity gross	(1)	kW	22,5	27,7	41,2	47,5	54,2	64,5
Fans power input	(1)	kW	1,80	1,80	3,20	3,20	4,50	4,50
SHR	(2)		1,00	0,96	1,00	0,94	1,00	0,97
Fluid flow	(1)	m <sup>3</sup> /h	3,87	4,99	7,09	8,69	9,33	11,4
Total pressure drop (Coil + Valve)	(1)	kPa	51,2	72,4	41,0	44,7	40,1	55,9
<b>FANS</b>								
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	2	2	3	3
Air flow	(3)	m <sup>3</sup> /h	8000	8000	13500	13500	19000	19000
<b>NOISE LEVEL</b>								
Noise Power		dB(A)	80	80	84	84	88	88
Noise Pressure Level	(4)	dB(A)	60	60	64	64	67	67
<b>SIZE AND WEIGHT</b>								
Dimension A	(3)	mm	1000	1000	1550	1550	2100	2100
Dimension B	(3)	mm	790	790	790	790	790	790
Dimension H	(3)	mm	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	357	357	504	504	730	762

ACCURATE AB / BASIC			60	75	105	120	130	140
Frame			F06	F06	F07	F07	F08	F08
Power supply	V/ph/Hz		400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE</b>								
Total cooling capacity gross	(1)	kW	76,6	94,3	105	125	131	148
Sensible cooling capacity gross	(1)	kW	76,6	89,9	102	112	128	137
Fans power input	(1)	kW	6,10	6,10	4,90	4,90	6,70	6,70
SHR	(2)		1,00	0,95	0,97	0,90	0,98	0,93
Fluid flow	(1)	m <sup>3</sup> /h	13,2	16,2	18,0	21,5	22,6	25,5
Total pressure drop (Coil + Valve)	(1)	kPa	43,1	52,2	91,7	81,6	54,6	55,6
<b>FANS</b>								
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	3	3	3	3	3	3
Air flow	(3)	m <sup>3</sup> /h	26000	26000	30000	30000	36000	36000
<b>NOISE LEVEL</b>								
Noise Power		dB(A)	88	88	90	90	91	91
Noise Pressure Level	(4)	dB(A)	67	67	69	69	70	70
<b>SIZE AND WEIGHT</b>								
Dimension A	(3)	mm	2650	2650	2650	2650	3200	3200
Dimension B	(3)	mm	790	790	890	890	890	890
Dimension H	(3)	mm	1980	1980	2180	2180	2180	2180
Weight	(3)	kg	760	841	905	915	944	954

Notes:

- 1 Indoor conditions (in) 24°C - R.H. 50%; Water temperature (in/out) 7°C/12°C; ESP= 20Pa
- 2 SHR = Sensible cooling capacity gross / Total cooling capacity gross
- 3 Unit in standard configuration/execution, without optional accessories.
- 4 Measured at 1,5m height, 2m in front of the unit in free field



# High precision air conditioners (HPAC) CRCX 0051 - 0121



## Direct expansion Rack Cooler unit 10,6-33,0 kW

The indoor vertical air conditioning units CLIMAVENETA RACK COOLER is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack up and over 40 kW/m<sup>2</sup> rack.

The use of EC fan systems, featuring last-generation electronic-switching brushless motors, assures excellent performance and low consumption. Available as standard with the dynamic management of N +1 EC fans to optimize consumption and redundancy of the cooling system.

Coupled with outdoor condensing unit i-HCAT air-cooled type with axial-flow fans, fitted with INVERTER-DRIVEN HERMETIC SCROLL compressor for operation on R410A refrigerant, mounted on rubber vibration dampers, complete with oil charge, supplied with oil separator to ensure correct lubrication even at minimum speed, and fitted with thermal protector. The i-HCAT is available on versions BASIC and LT for low external temperature.

### PRINCIPLE OF OPERATION

These individual units to be positioned between the racks in the row so as to act locally in order to dissipate the load of servers. In InRow versions (CRC-I) by treating the air is sucked in the back of the unit directly from hot aisle of data center (35 ° C) with significant benefits from the point of view of energy efficiency and cooling capacity, to be cooled and sent on the cold aisle (18-20 ° C) that is in front of the racks where it is sucked by the same. In Enclosure versions (CRC-E) servers and conditioner are hermetically housed within the same Rack closed structure thus avoiding phenomena of mixing air with the outside, with obvious loss of efficiency in the conditioning. The air is sucked directly into the rack from the back closed directly by the servers (46 ° C) and sent from the front once cooled (25-30 ° C) directly to the servers with considerable savings of energy due to the smaller amount treated air.

### Commands

#### EVOLUTION

Semi-graphic display 132 x 64 pixel, 6 backlit buttons, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Integral LAN system, Standby management, Automatic rotation, Serious alarms, 2 configurable Output alarm.



### Version

ENCLOSURE Basic, ENCLOSURE air flow configuration  
IN-ROW Basic, IN-ROW air flow configuration

### Features

#### EFFICIENCY

The CRC unit combines the efficiency of use of last EC fans generation and a direct expansion system with inverter compressor (fitted in condensing unit i-HCAT) allowing a great EER value. Thanks to the adoption of inverter DC brushless compressors, these units can reduce by 50% consumptions at part load, if compared to a traditional ON/OFF compressor. This is made possible also thanks to the advantages of variable air flow enabled by EC fans.

#### FLEXIBILITY

The InRow and Enclosure are both equipped with predisposition for passing refrigerant connections and power supply from both above and below, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of a raised floor.

#### IDM - INTEGRATED DYNAMIC MANAGEMENT OF TEMPERATURE

The units are supplied with a new management algorithm called IDM-INTEGRAL DYNAMIC MANAGEMENT able to prevent stratification of temperature within the rack through the use of 4 sensors (2 on the suction and 2 on the outlet) integrated and independent on the basis the real load in the single stratified BLADE work to optimize the ventilation only when required so as to maximize energy benefits. The IDM also provides the optimal management of the outlet temperatures of the treated integrating the various resources in a DYNAMIC and INTELLIGENT way to avoid unpleasant condensation ensuring (SHR = 1).

#### MODULARITY

CRC units, with their characteristics of dimensional standardization based on the rack, are ideal for all those datacentres where SCALABILITY of the system is a strategic factor.

#### COMPARTIZATION

Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.



<b>CRCX - DX Rack Cooler / IN-ROW</b>			<b>0051</b>	<b>0071</b>	<b>0121</b>
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>					
Total cooling capacity gross	(1)	kW	10,6	16,6	28,6
Sensible cooling capacity gross	(1)	kW	9,61	15,7	27,4
Total power input (Comp.+fans)	(1)	kW	3,10	5,46	9,23
EER (Indoor unit)	(1)		3,42	3,04	3,10
SHR	(2)		0,91	0,95	0,96
<b>FANS</b>					
Fans type			EC FAN	EC FAN	EC FAN
Quantity		N°	2	4	5
Air flow	(3)	m³/h	1500	2700	4200
<b>NOISE LEVEL</b>					
Noise Power		dB(A)	80	80	86
Noise Pressure Level	(4)	dB(A)	60	60	66
<b>SIZE AND WEIGHT</b>					
Dimension A	(3)	mm	300	300	300
Dimension B	(3)	mm	1000	1000	1000
Dimension H	(3)	mm	2085	2085	2085
Weight	(3)	kg	175	190	193
<b>COUPLING UNIT EXTERNAL</b>					
Power supply	V/ph/Hz		230/1/50	400/3+N/50	400/3+N/50
<b>COMPRESSORS</b>					
Compressors nr.		N°	1	1	1
Compressors power absorbtion		kW	2,63	4,56	7,19
<b>FANS</b>					
Quantity		N°	2	1	2
Air flow for fan		m³/h	3200	8640	7884
Fan power input		kW	0,16	0,60	0,60
<b>SIZE AND WEIGHT</b>					
Dimension A		mm	900	1450	1450
Dimension B		mm	420	550	550
Dimension H		mm	1240	1200	1700
Weight		kg	108	182	247

Notes:

1 Indoor conditions (in) 35°C - R.H. 27,0%; Outdoor air temperature 35°C; ESP= 0Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field

<b>CRCX - DX Rack Cooler / ENCLOSURE</b>			<b>0051</b>	<b>0071</b>	<b>0121</b>
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>					
Total cooling capacity gross	(1)	kW	11,8	18,7	33,0
Sensible cooling capacity gross	(1)	kW	11,8	18,7	33,0
Total power input (Comp.+fans)	(1)	kW	3,14	5,54	9,44
EER (Indoor unit)	(1)		3,76	3,38	3,50
SHR	(2)		1,00	1,00	1,00
<b>FANS</b>					
Fans type			EC FAN	EC FAN	EC FAN
Quantity		N°	2	4	5
Air flow	(3)	m³/h	1500	2700	4200
<b>NOISE LEVEL</b>					
Noise Power		dB(A)	80	81	86
Noise Pressure Level	(4)	dB(A)	60	61	66
<b>SIZE AND WEIGHT</b>					
Dimension A	(3)	mm	300	300	300
Dimension B	(3)	mm	1200	1200	1200
Dimension H	(3)	mm	2085	2085	2085
Weight	(3)	kg	185	200	203
<b>COUPLING UNIT EXTERNAL</b>					
Power supply	V/ph/Hz		230/1/50	400/3+N/50	400/3+N/50
<b>COMPRESSORS</b>					
Compressors nr.		N°	1	1	1
Compressors power absorbtion		kW	2,68	4,65	7,40
<b>FANS</b>					
Quantity		N°	2	1	2
Air flow for fan		m³/h	3200	8640	7884
Fan power input		kW	0,16	0,60	0,60
<b>SIZE AND WEIGHT</b>					
Dimension A		mm	900	1450	1450
Dimension B		mm	420	550	550
Dimension H		mm	1240	1200	1700
Weight		kg	108	182	247

Notes:

1 Indoor conditions (in) 46°C - R.H. 16%; Outdoor air temperature 35°C; ESP= 0Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field

# High precision air conditioners (HPAC) CRCD 0051 - 0071



## Rack Cooler units direct expansion Dual Fluid 10,9-16,7 kW

The indoor vertical air conditioning units CLIMAVENETA RACK COOLER is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack 'up and over 40 kW/m<sup>2</sup> rack.

The use of EC fan systems, featuring last-generation electronic-switching brushless motors, assures excellent performance and low consumption.

The Rack Cooler Dual Fluid unit provides redundancy in cooling capacity also in emergency situations: to be connected to an external chiller for primary chilled water circuit, and to condensing unit i-HCAT for the secondary or back up circuit in direct expansion type.

The condensing unit i-HCAT air-cooled type with axial-flow fans, fitted with INVERTER-DRIVEN HERMETIC SCROLL compressor for operation on R410A refrigerant, mounted on rubber vibration dampers, complete with oil charge, supplied with oil separator to ensure correct lubrication even at minimum speed, and fitted with thermal protector. The i-HCAT is available on versions BASIC and LT for low external temperature.

### PRINCIPLE OF OPERATION

These individual units to be positioned between the racks in the row so as to act locally in order to dissipate the load of servers.

In InRow versions (CCRC-I) by treating the air is sucked in the back of the unit directly from hot aisle of data center (35 ° C) to be cooled and sent on the cold aisle (18-20 ° C) in front of the racks.

In Enclosure versions (CCRC-E) servers and conditioner are hermetically housed avoiding phenomena of mixing air with the outside, with obvious loss of efficiency in the conditioning.

The air is sucked directly into the rack from the back closed directly by the servers (46 ° C) and sent from the front once cooled (25-30 ° C) directly to the servers with considerable savings of energy due to the smaller amount treated air.

### Version

ENCLOSURE Basic, ENCLOSURE air flow configuration  
IN-ROW Basic, IN-ROW air flow configuration

### Features

#### EFFICIENCY

The CRC unit combines the efficiency of use of last EC fans generation and a direct expansion system with inverter compressor (fitted in condensing unit i-HCAT) allowing a great EER value. Thanks to the adoption of inverter DC brushless compressors, these units can reduce by 50% consumptions at part load, if compared to a traditional ON/OFF compressor. This is made possible also thanks to the advantages of variable air flow enabled by EC fans.

#### FLEXIBILITY

The InRow and Enclosure versions are both arranged with hydraulic/refrigerant connections and electric supply from top or bottom side, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of a raised floor.

#### IDM - INTEGRATED DYNAMIC MANAGEMENT OF TEMPERATURE

The units are supplied with a new management algorithm called IDM-INTEGRAL DYNAMIC MANAGEMENT able to prevent stratification of temperature within the rack through the use of 4 sensors (2 on the suction and 2 on the outlet) integrated and independent on the basis the real load in the single stratified BLADE work to optimize the ventilation only when required so as to maximize energy benefits. The IDM also provides the optimal management of the outlet temperatures of the treated integrating the various resources in a DYNAMIC and INTELLIGENT way to avoid unpleasant condensation ensuring (SHR = 1).

#### MODULARITY

CRC units, with their characteristics of dimensional standardization based on the rack, are ideal for all those datacentres where SCALABILITY of the system is a strategic factor.

#### COMPARTIZATION

Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.

### Commands

#### EVOLUTION

Semi-graphic display 132 x 64 pixel, 6 backlit buttons, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Integral LAN system, Standby management, Automatic rotation, Serious alarms, 2 configurable Output alarm.



<b>CRCD-I</b>			<b>0051</b>	<b>0071</b>
Power supply	V/ph/Hz		230/1N/50	230/1N/50
Refrigerant			R410A	R410A
No. Circuits	N°		1	1
<b>PERFORMANCE</b>				
Total cooling capacity gross	(1)	kW	11,0	14,0
Sensible cooling capacity gross	(1)	kW	10,2	14,0
SHR			0,94	1,00
EER (total)			3,36	2,87
<b>PERFORMANCE (CW)</b>				
Total cooling capacity gross	(2)	kW	9,53	17,7
Sensible cooling capacity gross	(2)	kW	9,53	17,7
Condenser fluid flow		m³/h	1640	3040
Condenser's pressure drop		kPa	15,0	46,0
<b>FANS</b>				
Air flow		m³/h	1500	3360
Abs power		kW	0,32	0,69
Quantity		N°	2	4
Noise Pressure Level	(3)	dB(A)	52	53
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	300	300
Dimension B	(4)	mm	1000	1000
Dimension H	(4)	mm	2059	2059
<b>COUPLING UNIT EXTERNAL</b>				
Power supply	V/ph/Hz		230/1N/50	400/3N/50
Compressors power absorption	(1)	kW	2,63	3,58
<b>FANS</b>				
Air flow for fan		m³/h	3200	8640
Fan power input		kW	0,16	0,60
Quantity		N°	2	1
Noise pressure level	(3)	dB(A)	61	64
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	900	1450
Dimension B	(4)	mm	420	550
Dimension H	(4)	mm	1240	1200

Notes:

- 1 Indoor conditions (in) 35°C U.R. 27%; Outdoor air temperature 35°C
- 2 Indoor conditions (in) 35°C U.R. 27%; Water temperature (in/out) 10/15°C
- 3 Measured at 1,5m height, 2m in front of the unit in free field
- 4 Unit in standard configuration/execution, without optional accessories.

<b>CRCD-E</b>			<b>0051</b>	<b>0071</b>
Power supply	V/ph/Hz		230/1N/50	230/1N/50
Refrigerant			R410A	R410A
No. Circuits	N°		1	1
<b>PERFORMANCE</b>				
Total cooling capacity gross	(1)	kW	12,7	16,7
Sensible cooling capacity gross	(1)	kW	12,7	16,7
SHR			1,00	1,00
EER (total)			3,80	3,38
<b>PERFORMANCE (CW)</b>				
Total cooling capacity gross	(2)	kW	12,1	22,6
Sensible cooling capacity gross	(2)	kW	12,1	22,6
Condenser fluid flow		m³/h	1740	3240
Condenser's pressure drop		kPa	16,0	50,0
<b>FANS</b>				
Air flow		m³/h	1500	3360
Abs power		kW	0,32	0,69
Quantity		N°	2	4
Noise Pressure Level	(3)	dB(A)	52	53
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	300	300
Dimension B	(4)	mm	1000	1000
Dimension H	(4)	mm	2059	2059
<b>COUPLING UNIT EXTERNAL</b>				
Power supply	V/ph/Hz		230/1N/50	400/3N/50
Compressors power absorption	(1)	kW	2,71	3,65
<b>FANS</b>				
Air flow for fan		m³/h	3200	8640
Fan power input		kW	0,16	0,60
Quantity		N°	2	1
Noise pressure level	(3)	dB(A)	61	64
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	900	1450
Dimension B	(4)	mm	420	550
Dimension H	(4)	mm	1240	1200

Notes:

- 1 Indoor conditions (in) 46°C U.R. 16%; Outdoor air temperature 35°C
- 2 Indoor conditions (in) 46°C U.R. 16%; Water temperature (in/out) 14/20°C
- 3 Measured at 1,5m height, 2m in front of the unit in free field
- 4 Unit in standard configuration/execution, without optional accessories.



# High precision air conditioners (HPAC) CRCF 0051 - 0071



## Rack Cooler units direct expansion with Indirect FreeCooling 11,3-17,5 kW

The indoor vertical air conditioning units CLIMAVENETA RACK COOLER is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack up and over 40 kW/m<sup>2</sup> rack. The use of EC fan systems, featuring last-generation electronic-switching brushless motors, assures excellent performance and low consumption. The Rack Cooler Rack unit CRCF, coupled with the condensing water unit i-HCFT, combines the direct expansion system with the use of indirect free cooling water to ensure the cooling capacity required by the server with the maximum energy savings. The CRCF works in free cooling mode when the outside temperature permits using outdoor air as a source of indirect cooling, allowing the simultaneous operation between direct expansion system and water to maximize efficiency. For an easy integration in the plant, the water condensing unit i-HCFT fitted with plate heat exchanger, is equipped with dry cooler axial fans, circulation pump and expansion vessel. Fitted with INVERTER-DRIVEN HERMETIC SCROLL compressor for operation on R410A refrigerant, mounted on rubber vibration dampers, complete with oil charge, supplied with oil separator to ensure correct lubrication even at minimum speed, and fitted with thermal protector.

### PRINCIPLE OF OPERATION

These individual units to be positioned between the racks in the row so as to act locally in order to dissipate the load of servers. In InRow versions (CRCF-I) by treating the air is sucked in the back of the unit directly from hot aisle of data center (35 ° C) to be cooled and sent on the cold aisle (18-20 ° C) in front of the racks. In Enclosure versions (CRCF-E) servers and conditioner are hermetically housed avoiding phenomena of mixing air with the outside, with obvious loss of efficiency in the conditioning. The air is sucked directly into the rack from the back closed directly by the servers (46 ° C) and sent from the front once cooled (25-30 ° C) directly to the servers with considerable savings of energy due to the smaller amount treated air.

### Commands

#### EVOLUTION

Semi-graphic display 132 x 64 pixel, 6 backlit buttons, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Integral LAN system, Standby management, Automatic rotation, Serious alarms, 2 configurable Output alarm.

### Version

ENCLOSURE Basic, ENCLOSURE air flow configuration  
IN-ROW Basic, IN-ROW air flow configuration

### Features

#### EFFICIENCY

The CRCF unit combines the efficiency of use of last EC fans generation and a direct expansion system with inverter compressor (fitted in water condensing unit i-HCFT) and the integration of indirect freecooling allowing a great EER value. Thanks to the adoption of inverter DC brushless compressors and the advantages of variable air flow enabled by EC fans, these units, compared to a traditional ON/OFF compressor, can reduce by 50% consumptions at part load, and more than 60% with indirect freecooling use.

#### FLEXIBILITY

The InRow and Enclosure versions are both arranged with hydraulic/refrigerant connections and electric supply from top or bottom side, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of a raised floor.

#### IDM - INTEGRATED DYNAMIC MANAGEMENT OF TEMPERATURE

The units are supplied with a new management algorithm called IDM-INTEGRAL DYNAMIC MANAGEMENT able to prevent stratification of temperature within the rack through the use of 4 sensors (2 on the suction and 2 on the outlet) integrated and independent on the basis the real load in the single stratified BLADE work to optimize the ventilation only when required so as to maximize energy benefits. The IDM also provides the optimal management of the outlet temperatures of the treated integrating the various resources in a DYNAMIC and INTELLIGENT way to avoid unpleasant condensation ensuring (SHR = 1).

#### MODULARITY

CRC units, with their characteristics of dimensional standardization based on the rack, are ideal for all those datacentres where SCALABILITY of the system is a strategic factor.

#### COMPARTIZATION

Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.



<b>CRCF-I</b>			<b>0051</b>	<b>0071</b>
Power supply	V/ph/Hz		230/1N/50	230/1N/50
Refrigerant			R410A	R410A
No. Circuits	N°		1	1
<b>PERFORMANCE</b>				
Total cooling capacity gross	(1)	kW	11,3	14,7
Sensible cooling capacity gross	(1)	kW	10,4	14,7
SHR			0,92	1,00
EER (total)			3,02	2,73
<b>FREECOOLING</b>				
FC total capacity	(2)	kW	9,89	17,7
FC sensible capacity	(2)	kW	9,89	17,7
FC Coil's fluid flow		m³/h	2370	3040
<b>FANS</b>				
Air flow		m³/h	1500	3360
Abs power		kW	0,32	0,69
Quantity		N°	2	4
Noise Pressure Level	(3)	dB(A)	52	53
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	300	300
Dimension B	(4)	mm	1000	1000
Dimension H	(4)	mm	2059	2059
<b>COUPLING UNIT EXTERNAL</b>				
Power supply	V/ph/Hz		230/1N/50	400/3N/50
Compressors power absorption	(1)	kW	2,41	3,08
Pump power input	(1)	kW	0,41	0,41
<b>FANS</b>				
Air flow for fan		m³/h	8640	7884
Fan power input		kW	0,60	0,60
Quantity		N°	1	2
Noise pressure level	(3)	dB(A)	61	64
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	1470	1450
Dimension B	(4)	mm	570	550
Dimension H	(4)	mm	1200	1700

Notes:

- 1 Indoor conditions (in) 35°C U.R. 27%; Condensing water 30/35°C
- 2 Indoor conditions (in) 35°C U.R. 27%; Input water FC 10°C
- 3 Measured at 1,5m height, 2m in front of the unit in free field
- 4 Unit in standard configuration/execution, without optional accessories.

<b>CRCF-E</b>			<b>0051</b>	<b>0071</b>
Power supply	V/ph/Hz		230/1N/50	230/1N/50
Refrigerant			R410A	R410A
No. Circuits	N°		1	1
<b>PERFORMANCE</b>				
Total cooling capacity gross	(1)	kW	12,9	17,5
Sensible cooling capacity gross	(1)	kW	12,9	17,5
SHR			1,00	1,00
EER (total)			3,38	3,24
<b>FREECOOLING</b>				
FC total capacity	(2)	kW	12,5	22,8
FC sensible capacity	(2)	kW	12,5	22,8
FC Coil's fluid flow		m³/h	2670	3570
<b>FANS</b>				
Air flow		m³/h	1500	3360
Abs power		kW	0,32	0,69
Quantity		N°	2	4
Noise Pressure Level	(3)	dB(A)	52	53
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	300	300
Dimension B	(4)	mm	1000	1000
Dimension H	(4)	mm	2059	2059
<b>COUPLING UNIT EXTERNAL</b>				
Power supply	V/ph/Hz		230/1N/50	400/3N/50
Compressors power absorption	(1)	kW	2,50	3,11
Pump power input	(1)	kW	0,41	0,41
<b>FANS</b>				
Air flow for fan		m³/h	8640	7884
Fan power input		kW	0,60	0,60
Quantity		N°	1	2
Noise pressure level	(3)	dB(A)	61	64
<b>SIZE AND WEIGHT</b>				
Dimension A	(4)	mm	1470	1450
Dimension B	(4)	mm	570	550
Dimension H	(4)	mm	1200	1700

Notes:

- 1 Indoor conditions (in) 46°C U.R. 16%; Condensing water 30/35°C
- 2 Indoor conditions (in) 46°C U.R. 16%; Input water FC 14°C
- 3 Measured at 1,5m height, <30143> in front of the unit in free field
- 4 Unit in standard configuration/execution, without optional accessories.

# High precision air conditioners (HPAC) CRCC 0020 - 0036



## Chilled Water Rack Cooler unit 16,1-31,2 kW

The indoor vertical air conditioning units CLIMAVENETA RACK COOLER is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack up and over 40 kW/m<sup>2</sup> rack.

In hydronic version where the cooling is ensured by the use of an external chiller.

The use of EC fan systems, featuring last-generation electronic-switching brushless motors, assures excellent performance and low consumption. Available as standard with the dynamic management of N +1 EC fans to optimize consumption and redundancy of the cooling system.

### PRINCIPLE OF OPERATION

These individual units to be positioned between the racks in the row so as to act locally in order to dissipate the load of servers.

In InRow versions (CRCC-I) by treating the air is sucked in the back of the unit directly from hot aisle of data center (35 ° C) with significant benefits from the point of view of energy efficiency and cooling capacity, to be cooled and sent on the cold aisle (18-20 ° C) that is in front of the racks where it is sucked by the same.

In Enclosure versions (CRCC-E) servers and conditioner are hermetically housed within the same Rack closed structure thus avoiding phenomena of mixing air with the outside, with obvious loss of efficiency in the conditioning.

The air is sucked directly into the rack from the back closed directly by the servers (46 ° C) and sent from the front once cooled (25-30 ° C) directly to the servers with considerable savings of energy due to the smaller amount treated air.

### Commands

#### EVOLUTION

Semi-graphic display 132 x 64 pixel, 6 backlit buttons, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Integral LAN system, Standby management, Automatic rotation, Serious alarms, 2 configurable Output alarm.



### Version

IN-ROW Basic, IN-ROW air flow configuration  
ENCLOSURE Basic, ENCLOSURE air flow configuration

### Features

#### EFFICIENCY

The CRCC unit combines the efficiency of a hydronic system for the extraction of heat with the use of last generation fans EC electronic commutated, to obtain values of EER more than 100. The reduction of the temperature of the air exhausted allows the use of H<sub>2</sub>O very high cooling 14-20 ° C by the CRCC, that if on the one hand prevents unpleasant phenomena of condensation (SHR = 1) will allow the other use of only the external system in chillers Freecooling Climaveneta.

#### FLEXIBILITY

The InRow and Enclosure versions are both arranged with hydraulics connections and electric supply from top or bottom side, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of a raised floor.

#### IDM - INTEGRATED DYNAMIC MANAGEMENT OF TEMPERATURE

The units are supplied with a new management algorithm called IDM-INTEGRAL DYNAMIC MANAGEMENT able to prevent stratification of temperature within the rack through the use of 4 sensors (2 on the suction and 2 on the outlet) integrated and independent on the basis the real load in the single stratified BLADE work to optimize the ventilation only when required so as to maximize energy benefits. The IDM also provides the optimal management of the outlet temperatures of the treated integrating the various resources in a DYNAMIC and INTELLIGENT way to avoid unpleasant condensation ensuring (SHR = 1).

#### REDUNDANCY

Both the Enclosure and InRow are developed to ensure maximum RELIABILITY the system by total REDUNDANCY cooling system guaranteed by the new version DUAL COIL dual power supply, dual battery raffreddamento and double regulating valve completely independent to ensure 100 % back up in the air conditioning system.

This allows you to connect your new version be DUAL COIL from one side to the primary system FREECOOLING (Circuit 1) and the other to a chiller chilled water in total Back up.

#### MODULARITY

CRCC units, with their characteristics of dimensional standardization based on the rack, are ideal for all those datacentres where SCALABILITY of the system is a strategic factor.

#### COMPARTIZATION

Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.

#### INTEGRATION

INTEGRATION with all the HYDRONIC products in the CLIMAVENETA range via supervision software.



CRCC / IN-ROW			0020	0025	0035	0036
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>						
Total cooling capacity gross	(1)	kW	16,1	20,5	24,6	21,0
Sensible cooling capacity gross	(1)	kW	16,1	20,5	24,6	21,0
Fans power input	(1)	kW	0,50	0,67	0,83	0,83
SHR	(2)		1,00	1,00	1,00	1,00
Fluid flow	(1)	m <sup>3</sup> /h	2,78	3,54	4,24	3,61
Total pressure drop (Coil + Valve)	(1)	kPa	13,5	20,9	29,1	55,2
<b>FANS</b>						
Fans type			EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		3	4	5	5
Air flow	(3)	m <sup>3</sup> /h	2520	3360	4200	4200
<b>NOISE LEVEL</b>						
Noise Power	dB(A)		84	85	86	86
Noise Pressure Level	(4)	dB(A)	64	65	66	66
<b>SIZE AND WEIGHT</b>						
Dimension A	(3)	mm	300	300	300	300
Dimension B	(3)	mm	1000	1000	1000	1000
Dimension H	(3)	mm	2085	2085	2085	2085
Weight	(3)	kg	190	193	195	205

Notes:

1 Indoor conditions (in) 35°C - R.H. 27,0%; Water temperature (in/out) 10°C/15°C; ESP= 0Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field

CRCC / ENCLOSURE			0020	0025	0035	0036
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>						
Total cooling capacity gross	(1)	kW	20,4	26,1	31,2	26,8
Sensible cooling capacity gross	(1)	kW	20,4	26,1	31,2	26,8
Fans power input	(1)	kW	0,51	0,67	0,84	0,84
SHR	(2)		1,00	1,00	1,00	1,00
Fluid flow	(1)	m <sup>3</sup> /h	2,94	3,75	4,49	3,85
Total pressure drop (Coil + Valve)	(1)	kPa	14,3	22,5	31,5	60,4
<b>FANS</b>						
Fans type			EC FAN	EC FAN	EC FAN	EC FAN
Quantity	N°		3	4	5	5
Air flow	(3)	m <sup>3</sup> /h	2520	3360	4200	4200
<b>NOISE LEVEL</b>						
Noise Power	dB(A)		84	85	86	86
Noise Pressure Level	(4)	dB(A)	64	65	66	66
<b>SIZE AND WEIGHT</b>						
Dimension A	(3)	mm	300	300	300	300
Dimension B	(3)	mm	1200	1200	1200	1200
Dimension H	(3)	mm	2085	2085	2085	2085
Weight	(3)	kg	200	203	205	215

Notes:

1 Indoor conditions (in) 46°C - R.H. 16%; Water temperature (in/out) 14°C/20°C; ESP= 0Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field

# High precision air conditioners (HPAC) **CCD 0030R - 0036T**



## Chilled Water Cooling Door unit 26,6-39,1 kW

The CCD unit is the most innovative and efficient system for managing Hot spots inside data centers, in other words, HIGH DENSITY racks up to and over 40 kW/m<sup>2</sup> per rack. The Cooling door unit is housed at the rear of the rack and is managed by a DYNAMIC system, especially designed to handle the rack exhaust air, which SELF-ADAPTS to rack requirements. MAIN CARATTERISTICS - New generation EC fans - 42U / 48U racks adaptability - Can be supplied with with rack - Dinamic control of Air stratification - Configuration R (N+1) and T - Integration into DUAL CIRCUIT, FREECOOLING + BACK UP system - Dehumidification Less Management

**WORKING MODE** The CCD unit is to be considered both as a stand alone cooling unit for the exhaust air of the single rack in the small data center as a system for managing Hot spots in large data center for integration of hot and cold aisle or compartization structures. While the cooling of RACK is delegated to the perimetral conditioning units that provide cold air 18-20 ° C in the cold aisle, the cooling door CCD handles rack at higher thermal load (called HOT SPOTS) generally due to the use of modern blade servers.

### Version

STD	Single chilled water coil
DUAL	Double chilled water coil

### Features

#### EFFICIENCY

The CCD unit combines the efficiency of a hydronic heat extraction system with the use of last-generation electronic-switching EC fans in order to achieve EER values of over 100. The reduction in the temperature of the exhaust air allows the CCD to use cooling water with higher temperatures (14-20°C). This feature prevents unwanted condensation phenomena (SHR=1) whilst allowing just the Freecooling system to be used on external Climaveneta chillers.

#### FLEXIBILITY

To assure quick and easy installation, the CCD unit is fitted with flexible steel connectors on the water side and the electrical power input at the bottom. This allows the CCD to be comfortably opened and closed like a normal door for access to the rack at any time and without any difficulties in wiring, servicing and expanding the servers.

#### FOR EVERY KIND OF RACK

Climaveneta can supply the CCD complete with Rack or just the CCD for installation in different types of rack using a "surround" which self-adapts to every kind of rack.

#### REDUNDANCY

CCD is designed to ensure maximum reliability of the system through full redundancy of the cooling system guaranteed by the new DUAL version with dual power feed, dual battery and dual valve, which are completely independent; the result is the 100% back-up in conditioning system. This allows you to connect the new DUAL version from one side to a primary FREECOOLING system (Circuit 1) and the other to a chiller in total back up.

#### MINIMUM FLOORSPACE OCCUPANCY

The great advantage of the CCD lies in the fact that it is installed at the back of the RACK (hot island) without occupying space that can be used for the racks, unlike other solutions which, instead, reduce the number of racks per row.

#### DYNAMIC RACK CONTROL

Optimal control of temperature stratification depending on the load of individual BLADES using 4 independent temperature probes connected to the 4 fans operating in the MODULATING and INDEPENDENT modes.

#### MODULARITY

As CCD units must ONLY cater for the T° GRADIENT, they are required to dissipate much less heat than local conditioning units (in the row ) and therefore, unlike the latter, they never risk having a limited cooling capacity.

#### COMPARTIZATION

Perfect integration with compartization systems as, being installed on the hot island, they do not require an entrance in the cold corridor for maintenance.

#### INTEGRATION

INTEGRATION with all the HYDRONIC products in the CLIMAVENETA range via supervision software.

### Commands

#### EVOLUTION

Semi-graphic display 132 x 64 pixel, 6 backlit buttons, Programmable software, Record storage of 100 alarms, General alarm, Automatic reset after blackout, Integral LAN system, Standby management, Automatic rotation, Serious alarms, 2 configurable Output alarm.





<b>CCD / BASIC</b>			<b>0030R</b>	<b>0030T</b>	<b>0035R</b>	<b>0035T</b>
Frame						
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>						
Total cooling capacity gross	(1)	kW	26,6	31,8	32,2	39,1
Sensible cooling capacity gross	(1)	kW	26,6	31,8	32,2	39,1
Fans power input	(1)	kW	0,16	0,28	0,17	0,29
SHR	(2)		1,00	1,00	1,00	1,00
Fluid flow	(1)	m³/h	3,83	4,57	4,62	5,61
Total pressure drop (Coil + Valve)	(1)	kPa	58,5	80,3	44,3	63,1
<b>FANS</b>						
Fans type			AXIAL	AXIAL	AXIAL	AXIAL
Quantity		N°	4	4	4	4
Air flow	(3)	m³/h	5040	6520	4790	6200
<b>NOISE LEVEL</b>						
Noise Power		dB(A)	66	70	67	70
Noise Pressure Level	(4)	dB(A)	46	50	47	50
<b>SIZE AND WEIGHT</b>						
Dimension A	(3)	mm	600	600	600	600
Dimension B	(3)	mm	260	260	260	260
Dimension H	(3)	mm	2020	2020	2020	2020
Weight	(3)	kg	79	79	84	84

## Notes:

1 Indoor conditions (in) 46°C - R.H. 16%; Water temperature (in/out) 14°C/20°C; ESP= 0Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field

<b>CCD / DUAL</b>			<b>0036R</b>	<b>0036T</b>
Frame				
Power supply	V/ph/Hz		230/1/50	230/1/50
<b>PERFORMANCE</b>				
Total cooling capacity gross	(1)	kW	29,1	35,8
Sensible cooling capacity gross	(1)	kW	29,1	35,8
Fans power input	(1)	kW	0,17	0,29
SHR	(2)		1,00	1,00
Fluid flow	(1)	m³/h	4,19	5,14
Total pressure drop (Coil + Valve)	(1)	kPa	41,6	60,4
<b>FANS</b>				
Fans type			AXIAL	AXIAL
Quantity		N°	4	4
Air flow	(3)	m³/h	4140	5520
<b>NOISE LEVEL</b>				
Noise Power		dB(A)	69	72
Noise Pressure Level	(4)	dB(A)	49	52
<b>SIZE AND WEIGHT</b>				
Dimension A	(3)	mm	600	600
Dimension B	(3)	mm	330	330
Dimension H	(3)	mm	2020	2020
Weight	(3)	kg	95	95

## Notes:

1 Indoor conditions (in) 46°C - R.H. 16%; Water temperature (in/out) 14°C/20°C; ESP= 0Pa

2 SHR = Sensible cooling capacity gross / Total cooling capacity gross

3 Unit in standard configuration/execution, without optional accessories.

4 Measured at 1,5m height, 2m in front of the unit in free field

High precision air conditioners (HPAC)

# CLIMAVENETA RACK



**High quality cabinets for the protection and housing of servers**

### Version

- GLASS** Cabinet with front door with tempered GLASS 4mm rounded, complete with handle with key lock quarter turn with 4 locking points. Possibility of reversing the direction of the door opening. BLIND double swing rear door with lock quarter-turn and three locking points.
- GRILL** Cabinet with front door ventilated (GRILL) and rounded complete with handle with key lock quarter turn with 4 locking points. Possibility of reversing the direction of the door opening. Rear door double doors ventilated (GRILL) with quarter-turn lock and three locking points.
- HYBRID** Cabinet with front door with tempered GLASS 4mm rounded full handle with key lock quarter turn with 4 locking points. Possibility of reversing the direction of the door opening. Rear door ventilated (GRILL) double doors with lock quarter-turn and three locking points.

### Features

- Glass frontal door or with perforated mesh (drilled more than 80%)
  - Rear double doors with perforated mesh (drilled more than 80%) or blind
  - Side panels and bottom are not included, see options
  - Painted with black epoxy powders (RAL 9005)
  - Capacity 2000 kg
  - 20 / 10 supporting sheet thickness
  - 4 adjustable feet
  - 4 swivel castors integrated
  - IP20 protection rating
  - Complete with two front and two rear uprights
  - Earthing-ready
  - Doors with locked handles
- DIMENSIONS:**
- Depth 800 mm or 1000 mm or 1200 mm
  - Width 600 mm or 800 mm
  - Height 42U (2100 mm ) or 47U (2300 mm)

CLIMAVENETA RACK are floor-standing cabinets suitable for the housing of the server. The supporting structure is made of sheet steel with a thickness of 20/10 and can reach a capacity of 2000 kg. The cabinet is fully inspected and adaptable to all environments. Equipped with 4 wheels for easy handling and adjustable feet.

**ADVANTAGES:**

- Strong and sturdy
- Can be dismantled in a few minutes
- Suitable for different kinds of servers
- Easily access to cables

Options	
Modular roof for the insertion of fan groups	opt
Side Wire duct kit	opt
Joining racks plate kit	opt
Grounding with copper bar kit	opt
Anti-Rollover plate	opt
Closure plate bottom	opt
Closure plate Bottom Rack with brushes	opt
Side panel double level	opt
Floor fixing bracket	opt

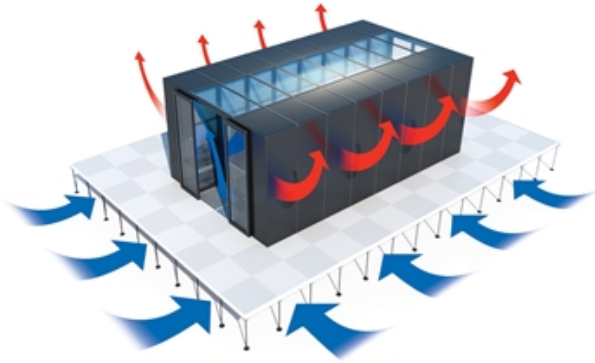
High precision air conditioners (HPAC)

# AISLE CONTAINMENT

## Features

Available for corridors:

- Width 1000
- Width 1200
- Width 1500
- Width 1800
- 42U height
- 47U height



## Aisle Containment solution for high density applications

This mix results in airflow with an uncontrolled temperature that reduces the performance of the Data Center. Therefore, it is necessary to provide the physical separation of the hot and cold air streams.

This is achieved by using the 'Aisle Containment System', a simple system of modular and scalable panels that prevent hot and cold air mixing. It is a simple and effective solution that guarantees the servers will be fed with cold air and the cooling system to be more efficient.

In "Cold Aisle" cold air is confined within the closed structure, this architecture provides the desired temperature constant at all heights, on the face of the various rack.

The hot air is extracted from the fans inside the server, it is placed in the external environment and from there recovered, cooled and fed into the corridor.

The Climaveneta Aisle Containment System is now available with the dual purpose of containing the hot thermal island (hot aisle containment) and the cold island (cold aisle containment) as well.

### Options

Sliding doors for aisle	opt
Closure aisle panel	opt
Bridge cable duct for aisle	opt
Polycarbonate bridge cable duct for aisle	opt
Roof cable module for rack	opt
Anti-mixing frontal/back panel for rack	opt
Anti-mixing side panel for rack	opt
Bend cables module for roof	opt



## High precision air conditioners (HPAC) **i-BRE 014m - 190b**



### Version

BASIC	Basic
LN	Low noise
LT	Low temperature

### Features

**ELECTRIC FANS** of an axial type, statically and dynamically balanced on two levels, with blades in an inoxidable material and external rotor motor suitable for adjusting the speed, all mounted on a metal supporting grid in conformity with safety regulations. The motors are to VDE 0530-12.84. The protection rating is IP54 to DIN40050.

**CONDENSING COIL:** the combination of innovative corrugated fins with the use of smooth pipes on the exchanger ensures excellent heat transfer with a minimum amount of fluid. The heat exchangers consist of aluminium fins and copper pipes.

**REFRIGERANT CIRCUIT CONNECTIONS** are arranged along one side of the unite and are to be welded for safe connection that prevents any fluid leak.

### Accessory

- Legs kit for vertical air flow
- Copper-Copper coil
- Epoxy coated coil (for fins only)
- Cataphoresys coil treatment

### Remote condenser for R410A with EC axial fans 13,4-187 kW

Remote condensers with axial-type fan(s) for outdoor installation. Installation may be vertical with a horizontal air outflow or, using special brackets, horizontal with an upward air outflow. The EC motor fans with very low noise and adjustable-speed fans are excellent for use in both technological and civil applications. i-BRE units operate with a single-phase 230V/1ph/50Hz and 400V/3ph/50Hz (only for i-BRE190b) power supply totally independent and separate from the indoor unit ACCURATE. These condensing units are therefore also suited for use without being directly connected to indoor units. i-BRE units are not provided with integrated fans speed regulator per standard. However, CLIMAVENETA can provide such fans speed regulator as OPTIONAL, by installing it directly inside the indoor unit ACCURATE.



i-BRE / BASIC			014m	022m	027m	044m	051m	054b	065b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1) kW		13,4	21,7	26,6	43,5	50,4	65,1	65,1
No. Circuits	N°		1	1	1	1	1	2	2
Total power input	(1) kW		0,17	0,64	0,64	1,28	1,28	1,28	1,92
<b>FANS</b>									
Air flow	m³/h		5000	8200	7200	16400	15200	24600	24600
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2) dB(A)		40	46	46	49	49	51	51
<b>SIZE AND WEIGHT</b>									
Dimension A	(3) mm		1240	1360	1360	2360	2360	3360	3360
Dimension H	(3) mm		764	1070	1070	1070	1070	1070	1070
Dimension B	(3) mm		494	580	580	580	580	580	580
Weight	(3) kg		72	85	102	137	153	191	191

i-BRE / BASIC			065m	076b	100b	116b	134b	190b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW		53,3	76,2	100	116	134	187
No. Circuits	N°		1	2	2	2	2	2
Total power input	(1) kW		1,92	1,92	2,56	3,20	3,20	3,90
<b>FANS</b>								
Air flow	m³/h		14400	22800	28800	38000	35850	53000
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)		49	51	52	53	53	53
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm		2360	3360	4360	5360	5360	4815
Dimension H	(3) mm		1070	1070	1070	1070	1070	1328
Dimension B	(3) mm		580	580	580	580	580	965
Weight	(3) kg		167	213	302	339	374	550

Notes:

1 Exchanger air (in) 35 °C; ΔT = 13 K

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

i-BRE / LN			014m	022m	027m	044m	051m	054b	065b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1) kW		14,1	20,0	28,2	42,3	50,0	73,1	73,1
No. Circuits	N°		1	1	1	1	1	2	2
Total power input	(1) kW		0,16	0,16	0,32	0,48	0,48	0,48	0,64
<b>FANS</b>									
Air flow	m³/h		6000	6500	12000	18000	16500	22000	22000
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2) dB(A)		37	35	39	41	41	42	42
<b>SIZE AND WEIGHT</b>									
Dimension A	(3) mm		1360	2120	2360	3360	3360	4360	4360
Dimension H	(3) mm		1070	764	1070	1070	1070	1070	1070
Dimension B	(3) mm		580	494	580	580	580	580	580
Weight	(3) kg		85	125	137	191	213	276	276

i-BRE / LN			065m	076b	100b	116b	134b	190b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW		55,3	75,5	99,1	118	118	187
No. Circuits	N°		1	2	2	2	2	2
Total power input	(1) kW		0,64	0,64	0,80	1,00	1,00	2,72
<b>FANS</b>								
Air flow	m³/h		16000	20300	27050	28560	28560	58000
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)		41	42	43	43	43	45
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm		3360	4360	5360	5560	5560	6290
Dimension H	(3) mm		1070	1070	1070	1070	1070	1328
Dimension B	(3) mm		580	580	580	615	615	965
Weight	(3) kg		235	302	339	358	391	661

Notes:

1 Exchanger air (in) 35 °C; ΔT = 13 K

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

i-BRE / LT			014m	022m	027m	044m	051m	054b	065b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1)	kW	13,4	21,7	26,6	43,5	50,4	65,1	65,1
No. Circuits		N°	1	1	1	1	1	2	2
Total power input	(1)	kW	0,17	0,64	0,64	1,28	1,28	1,28	1,92
<b>FANS</b>									
Air flow		m³/h	5000	8200	7200	16400	15200	24600	24600
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2)	dB(A)	40	46	46	49	49	51	51
<b>SIZE AND WEIGHT</b>									
Dimension A	(3)	mm	1240	1360	1360	2360	2360	3360	3360
Dimension H	(3)	mm	764	1070	1070	1070	1070	1070	1070
Dimension B	(3)	mm	494	580	580	580	580	580	580
Weight	(3)	kg	72	85	102	137	153	191	191

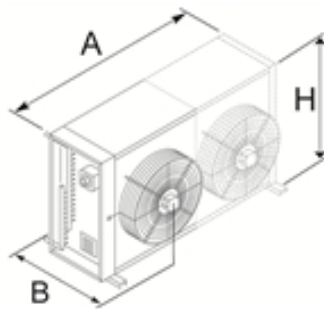
i-BRE / LT			065m	076b	100b	116b	134b	190b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1)	kW	53,3	76,2	100	116	134	187
No. Circuits		N°	1	2	2	2	2	2
Total power input	(1)	kW	1,92	1,92	2,56	3,20	3,20	3,90
<b>FANS</b>								
Air flow		m³/h	14400	22800	28800	38000	35850	53000
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2)	dB(A)	49	51	52	53	53	53
<b>SIZE AND WEIGHT</b>								
Dimension A	(3)	mm	2360	3360	4360	5360	5360	4815
Dimension H	(3)	mm	1070	1070	1070	1070	1070	1328
Dimension B	(3)	mm	580	580	580	580	580	965
Weight	(3)	kg	167	213	302	339	374	550

Notes:

1 Exchanger air (in) 35 °C;  $\Delta T = 13 K$

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.





High precision air conditioners (HPAC)

**BRE 007m - 190b**

### Remote condenser for R410A with AC axial fans 6,93-187 kW

Remote condensers with axial-type fan(s) for outdoor installation. Installation may be vertical with a horizontal air outflow or, using special brackets, horizontal with an upward air outflow. The very low noise, adjustable-speed fans are excellent for use in both technological and civil applications. BRE units operate with a single-phase 230V/1ph/50Hz and 400V/3ph/50Hz (only for BRE190b) power supply totally independent and separate from the indoor unit ACCURATE. These condensing units are therefore also suited for use without being directly connected to indoor units. BRE units are not provided with integrated fans speed regulator per standard. However, CLIMAVENETA can provide such fans speed regulator as OPTIONAL, by installing it directly inside the indoor unit ACCURATE.

**Version**

BASIC	Basic
LN	Low noise
LT	Low temperature

**Configurations**

-	basic function
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**Features**

**ELECTRIC FANS** of an axial type, statically and dynamically balanced on two levels, with blades in an inoxidable material and external rotor motor suitable for adjusting the speed, all mounted on a metal supporting grid in conformity with safety regulations. The motors are to VDE 0530-12.84. The protection rating is IP54 to DIN40050.

**CONDENSING COIL:** the combination of innovative corrugated fins with the use of smooth pipes on the exchanger ensures excellent heat transfer with a minimum amount of fluid. The heat exchangers consist of aluminium fins and copper pipes.

**REFRIGERANT CIRCUIT CONNECTIONS** are arranged along one side of the unite and are to be welded for safe connection that prevents any fluid leak.

**Accessory**

- Legs kit for vertical air flow
- Copper-Copper coil
- Epoxy coated coil (for fins only)
- Cataphoresys coil treatment



BRE / BASIC			007m	014m	022m	027m	044m	051m	054b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1) kW		6,93	13,4	21,7	26,6	43,5	50,4	53,3
No. Circuits	N°		1	1	1	1	1	1	2
Total power input	(1) kW		0,18	0,27	0,60	0,60	1,20	1,20	1,20
<b>FANS</b>									
Air flow	m³/h		2300	5000	8200	7200	16400	15200	14400
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2) dB(A)		43	40	46	46	49	49	49
<b>SIZE AND WEIGHT</b>									
Dimension A	(3) mm		753	1240	1360	1360	2360	2360	2360
Dimension H	(3) mm		584	764	1070	1070	1070	1070	1070
Dimension B	(3) mm		320	494	580	580	580	580	580
Weight	(3) kg		20	72	85	102	137	153	167

BRE / BASIC			065b	065m	076b	100b	116b	134b	190b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1) kW		65,1	65,1	76,2	100	116	134	187
No. Circuits	N°		2	1	2	2	2	2	2
Total power input	(1) kW		1,80	1,80	1,80	2,40	3,00	3,00	5,82
<b>FANS</b>									
Air flow	m³/h		24600	24600	22800	28800	38000	35850	53000
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2) dB(A)		51	51	51	52	53	53	53
<b>SIZE AND WEIGHT</b>									
Dimension A	(3) mm		3360	3360	3360	4360	5360	5360	4815
Dimension H	(3) mm		1070	1070	1070	1070	1070	1070	1328
Dimension B	(3) mm		580	580	580	580	580	580	965
Weight	(3) kg		191	191	213	302	339	374	550

Notes:

1 Exchanger air (in) 35 °C; ΔT = 13 K

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

BRE / LN			007m	014m	022m	027m	044m	051m	054b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1) kW		9,60	14,1	20,0	28,2	42,3	50,0	55,3
No. Circuits	N°		1	1	1	1	1	1	2
Total power input	(1) kW		0,13	0,33	0,26	0,66	0,99	0,99	0,99
<b>FANS</b>									
Air flow	m³/h		3600	6000	6500	12000	18000	16500	16000
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2) dB(A)		30	37	35	39	41	41	41
<b>SIZE AND WEIGHT</b>									
Dimension A	(3) mm		1240	1360	2120	2360	3360	3360	3360
Dimension H	(3) mm		764	1070	764	1070	1070	1070	1070
Dimension B	(3) mm		500	580	494	580	580	580	580
Weight	(3) kg		61	85	125	137	191	213	235

BRE / LN			065b	065m	076b	100b	116b	134b	190b
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
<b>PERFORMANCE</b>									
<b>NOMINAL SPECIFICATIONS</b>									
Rated capacity	(1) kW		73,1	73,1	75,5	99,1	118	134	187
No. Circuits	N°		2	1	2	2	2	2	2
Total power input	(1) kW		1,32	1,32	1,32	1,65	2,52	2,52	3,20
<b>FANS</b>									
Air flow	m³/h		22000	22000	20300	27050	28560	28560	58000
<b>NOISE LEVEL</b>									
Noise Pressure Level	(2) dB(A)		42	42	42	43	43	43	45
<b>SIZE AND WEIGHT</b>									
Dimension A	(3) mm		4360	4360	4360	5360	5560	5560	6290
Dimension H	(3) mm		1070	1070	1070	1070	1070	1070	1328
Dimension B	(3) mm		580	580	580	580	615	615	965
Weight	(3) kg		276	276	302	339	358	391	661

Notes:

1 Exchanger air (in) 35 °C; ΔT = 13 K

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

BRE / LT		007m	014m	022m	027m	044m	051m	054b
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW	6,93	13,4	21,7	26,6	43,5	50,4	53,3
No. Circuits	N°	1	1	1	1	1	1	2
Total power input	(1) kW	0,18	0,27	0,60	0,60	1,20	1,20	1,20
<b>FANS</b>								
Air flow	m³/h	2300	5000	8200	7200	16400	15200	14400
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)	43	40	46	46	49	49	49
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm	753	1240	1360	1360	2360	2360	2360
Dimension H	(3) mm	584	764	1070	1070	1070	1070	1070
Dimension B	(3) mm	320	494	580	580	580	580	580
Weight	(3) kg	20	72	85	102	137	153	167

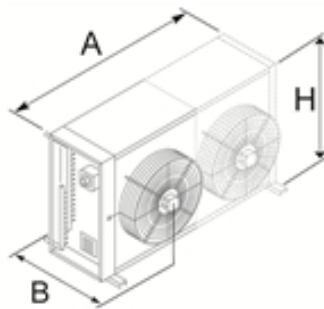
BRE / LT		065b	065m	076b	100b	116b	134b	190b
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW	65,1	65,1	76,2	100	116	134	187
No. Circuits	N°	2	1	2	2	2	2	2
Total power input	(1) kW	1,80	1,80	1,80	2,40	3,00	3,00	5,82
<b>FANS</b>								
Air flow	m³/h	24600	24600	22800	28800	38000	35850	53000
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)	51	51	51	52	53	53	53
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm	3360	3360	3360	4360	5360	5360	4815
Dimension H	(3) mm	1070	1070	1070	1070	1070	1070	1328
Dimension B	(3) mm	580	580	580	580	580	580	965
Weight	(3) kg	191	191	213	302	339	374	550

Notes:

1 Exchanger air (in) 35 °C; ΔT = 13 K

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.







High precision air conditioners (HPAC)

# BREC M1D - M4F\_B



## Version

BASIC	Basic
MOD	With condensing control

## Features

CONDENSING COIL with high efficiency made by innovative corrugated fins and copper pipes with grooved internal surface.

FANS with double-inlet, with vibration-isolation mountings, with protection rating IP44 and insulation class F.

## Accessory

- Legs kit for horizontal air flow
- Legs kit for vertical air flow
- Copper-Copper coil

## Remote condenser for R410A with centrifugal fans 16,1-108 kW

Condensing unit with centrifugal fan with very low noise level are excellent for use in both technological and civil applications, designed for ductable installation with max ESP 150Pa. The possibility to remove the side panel made easier the cleaning operation and the air flow configuration. The BREC units operate with a 230V/1ph/50Hz and 400V/3ph+N/50Hz power supply totally independent and separate from the indoor unit ACCURATE. These units are therefore also suited for use without being directly connected to indoor units.

BREC / BASIC / MOD		M1D	M2B	M2C	M2D	M2F_B	M3C
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>							
<b>NOMINAL SPECIFICATIONS</b>							
Rated capacity	(1) kW	16,1	19,8	24,7	32,0	37,2	48,1
No. Circuits	N°	1	1	1	1	2	1
Total power input	(1) kW	0,59	1,10	1,18	1,18	1,77	1,77
<b>FANS</b>							
Air flow	m³/h	3230	4560	6460	6460	10560	9690
<b>NOISE LEVEL</b>							
Noise Pressure Level	(2) dB(A)	35		37	37	39	39
<b>SIZE AND WEIGHT</b>							
Dimension A	(3) mm	960	1220	1560	1560	2160	2260
Dimension H	(3) mm	845	520	845	845	845	845
Dimension B	(3) mm	950	800	950	950	950	950
Weight	(3) kg	87	83	121	135	162	183

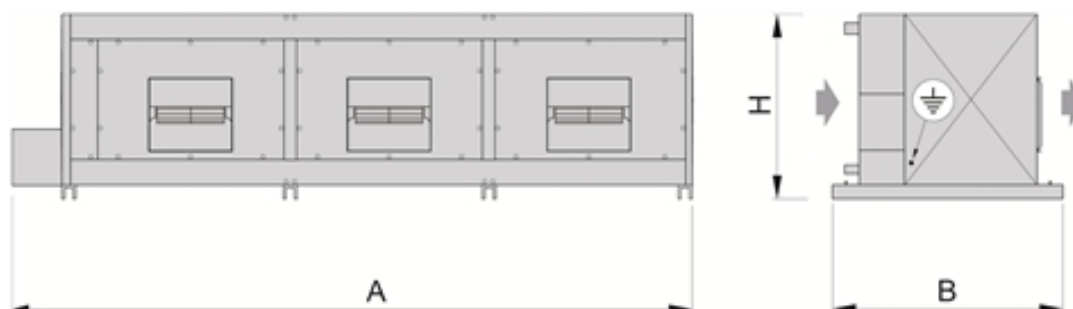
BREC / BASIC / MOD		M3D	M3D_B	M3F_B	M3G_B	M4E_B	M4F_B
Power supply	V/ph/Hz	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>							
<b>NOMINAL SPECIFICATIONS</b>							
Rated capacity	(1) kW	48,1	54,0	70,4	81,7	88,8	108
No. Circuits	N°	1	2	2	2	2	2
Total power input	(1) kW	1,77	2,60	3,90	3,90	5,20	5,20
<b>FANS</b>							
Air flow	m³/h	9690	12380	17490	18570	26240	24760
<b>NOISE LEVEL</b>							
Noise Pressure Level	(2) dB(A)	39	46	48	48	49	49
<b>SIZE AND WEIGHT</b>							
Dimension A	(3) mm	2260	2260	2260	3210	4160	4160
Dimension H	(3) mm	845	845	845	845	845	845
Dimension B	(3) mm	950	950	950	950	950	950
Weight	(3) kg	183	208	216	293	344	378

Notes:

1 Exchanger air (in) 35 °C; ΔT = 13 K

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.



## High precision air conditioners (HPAC) **i-BDC 013m - 210m**



### **Dry Cooler with EC axial fans 14,0-210 kW**

Dry Cooler with EC axial-type fan(s) for outdoor installation. Installation may be vertical with a horizontal air outflow or, using special brackets, horizontal with an upward air outflow. The very low noise, adjustable-speed fans are excellent for use in both technological and civil applications. BDC units operate with a single-phase 230V/1ph/50Hz and 400V/3ph/50Hz (only for i-BDC190m-210m) power supply totally independent and separate from the indoor unit ACCURATE. These units are therefore also suited for use without being directly connected to indoor units. i-BDC units are not provided with integrated fans speed regulator per standard. However, CLIMAVENETA can provide such fans speed regulator as OPTIONAL, by installing it directly inside the indoor unit ACCURATE.

#### **Version**

BASIC	Basic
LN	Low noise
LT	Low temperature

#### **Features**

**HOUSING:** designed to allow easy access to internal components, is made from prepainted galvanized sheet steel, and it:

- offers high corrosion strength and impact resistance;
- is resistant at low temperatures;
- is non toxic;
- does not produce polluting debris;
- is completely covered in a protective plastic film.

**ELECTRIC FANS** of an axial type, statically and dynamically balanced on two levels, with blades in an inoxidable material and external rotor motor suitable for adjusting the speed, all mounted on a metal supporting grid in conformity with safety regulations. The motors are to VDE 0530-12.84. The protection rating is IP54 to DIN40050.

**HEAT EXCHANGER:** the combination of innovative corrugated fins with the use of smooth pipes on the exchanger ensures excellent heat transfer with a minimum amount of fluid. The heat exchangers consist of aluminium fins and copper pipes.

**HYDRAULICS CIRCUIT CONNECTIONS** are arranged along one side of the unit and are to be welded for safe connection that prevents any fluid leak.

**ISOLATING SWITCH,** contained in an electric box with protection rating IP54, with switch control accessible from the outside and connecting terminals.

#### **Accessory**

- Legs kit for vertical air flow
- Copper-Copper coil
- Epoxy coated coil (for fins only)
- Cataphoresis coil treatment

i-BDC / BAS			013m	030m	039m	052m	062m	078m	092m	103m	123m	190m	210m
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
<b>PERFORMANCE</b>													
<b>NOMINAL SPECIFICATIONS</b>													
Rated capacity	(1)	kW	17,0	33,0	40,5	61,0	68,0	83,0	98,5	121	135	176	210
No. Circuits		N°											
Total power input	(1)	kW	0,64	1,28	1,28	1,92	1,92	2,56	3,84	3,84	3,84	5,20	6,50
<b>FANS</b>													
Air flow		m³/h	8780	17560	16820	25230	23610	33640	52680	50460	47220	71920	93300
<b>NOISE LEVEL</b>													
Noise Pressure Level	(2)	dB(A)	48	51	51	53	53	54	56	56	56	54	55
<b>SIZE AND WEIGHT</b>													
Dimension A	(3)	mm	1325	2425	2425	3525	3525	4625	3658	3658	3658	6290	7765
Dimension H	(3)	mm	1168	1168	1168	1168	1168	1168	2286	2286	2286	1328	1328
Dimension B	(3)	mm	630	630	630	630	630	630	760	760	760	965	965
Weight	(3)	kg	90	167	177	253	293	337	490	519	601	731	774

Notes:

1 Water temp.: 35/30°C ; Ext. Temp.: 24°C

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

i-BDC / LT			013m	030m	039m	052m	062m	078m	092m	103m	123m	190m	210m
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
<b>PERFORMANCE</b>													
<b>NOMINAL SPECIFICATIONS</b>													
Rated capacity	(1)	kW	17,0	33,0	40,5	61,0	68,0	83,0	98,5	121	135	176	210
No. Circuits		N°											
Total power input	(1)	kW	0,64	1,28	1,28	1,92	1,92	2,56	3,84	3,84	3,84	5,20	6,50
<b>FANS</b>													
Air flow		m³/h	8780	17560	16820	25230	23610	33640	52680	50460	47220	71920	93300
<b>NOISE LEVEL</b>													
Noise Pressure Level	(2)	dB(A)	48	51	51	53	53	54	56	56	56	54	55
<b>SIZE AND WEIGHT</b>													
Dimension A	(3)	mm	1325	2425	2425	3525	3525	4625	3658	3658	3658	6290	7765
Dimension H	(3)	mm	1168	1168	1168	1168	1168	1168	2286	2286	2286	1328	1328
Dimension B	(3)	mm	630	630	630	630	630	630	760	760	760	965	965
Weight	(3)	kg	90	167	177	253	293	337	490	519	601	731	774

Notes:

1 Water temp.: 35/30°C ; Ext. Temp.: 24°C

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

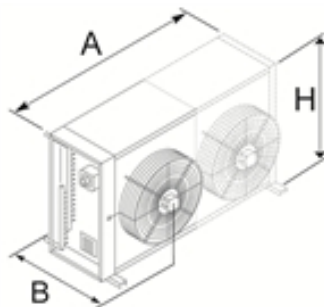
i-BDC / LN			013m	030m	039m	052m	062m	078m	092m	103m	123m	190m	210m
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
<b>PERFORMANCE</b>													
<b>NOMINAL SPECIFICATIONS</b>													
Rated capacity	(1)	kW	14,0	32,0	40,5	54,0	65,5	82,0	96,0	107	129	184	203
No. Circuits		N°											
Total power input	(1)	kW	0,16	0,32	0,48	0,64	0,64	0,80	0,96	1,28	1,28	2,40	2,40
<b>FANS</b>													
Air flow		m³/h	6410	12160	19230	25640	24320	30400	36480	51280	48640	76420	67170
<b>NOISE LEVEL</b>													
Noise Pressure Level	(2)	dB(A)	38	41	43	44	44	45	46	47	47	42	42
<b>SIZE AND WEIGHT</b>													
Dimension A	(3)	mm	1325	2425	3525	4625	4625	5725	3658	4758	4758	6290	6290
Dimension H	(3)	mm	1168	1168	1168	1168	1168	1168	2286	2286	2286	2393	2393
Dimension B	(3)	mm	630	630	630	630	630	630	760	760	760	965	965
Weight	(3)	kg	90	177	239	320	337	363	519	640	675	1194	1334

Notes:

1 Water temp.: 35/30°C ; Ext. Temp.: 24°C

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.



## High precision air conditioners (HPAC) **BDC 008m - 210m**



### **Dry Cooler with AC axial fans 7,50-210 kW**

Dry Cooler with axial-type fan(s) for outdoor installation. Installation may be vertical with a horizontal air outflow or, using special brackets, horizontal with an upward air outflow. The very low noise, adjustable-speed fans are excellent for use in both technological and civil applications. BDC units operate with a single-phase 230V/1ph/50Hz and 400V/3ph/50Hz (only for BDC190m-210m) power supply totally independent and separate from the indoor unit ACCURATE. These units are therefore also suited for use without being directly connected to indoor units. BDC units are not provided with integrated fans speed regulator per standard. However, CLIMAVENETA can provide such fans speed regulator as OPTIONAL, by installing it directly inside the indoor unit ACCURATE.

#### **Version**

BASIC	Basic
LN	Low noise
LT	Low temperature

#### **Features**

**HOUSING:** designed to allow easy access to internal components, is made from prepainted galvanized sheet steel, and it:

- offers high corrosion strength and impact resistance;
- is resistant at low temperatures;
- is non toxic;
- does not produce polluting debris;
- is completely covered in a protective plastic film.

**ELECTRIC FANS** of an axial type, statically and dynamically balanced on two levels, with blades in an inoxidable material and external rotor motor suitable for adjusting the speed, all mounted on a metal supporting grid in conformity with safety regulations. The motors are to VDE 0530-12.84. The protection rating is IP54 to DIN40050.

**HEAT EXCHANGER:** the combination of innovative corrugated fins with the use of smooth pipes on the exchanger ensures excellent heat transfer with a minimum amount of fluid. The heat exchangers consist of aluminium fins and copper pipes.

**HYDRAULICS CIRCUIT CONNECTIONS** are arranged along one side of the unit and are to be welded for safe connection that prevents any fluid leak.

**ISOLATING SWITCH,** contained in an electric box with protection rating IP54, with switch control accessible from the outside and connecting terminals.

#### **Accessory**

- Legs kit for vertical air flow
- Copper-Copper coil
- Cataphoresis coil treatment
- Epoxy coated coil (for fins only)

<b>BDC / BASIC</b>			<b>008m</b>	<b>013m</b>	<b>030m</b>	<b>039m</b>	<b>052m</b>	<b>062m</b>
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW		7,90	17,0	33,0	40,5	61,0	68,0
No. Circuits	N°		1	1	1	1	1	1
Total power input	(1) kW		0,29	0,60	1,20	1,20	1,80	1,80
<b>FANS</b>								
Air flow	m³/h		4410	8780	17560	16820	25230	23610
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)		39	48	51	51	53	53
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm		1175	1325	2425	2425	3525	3525
Dimension H	(3) mm		872	1168	1168	1168	1168	1168
Dimension B	(3) mm		510	630	630	630	630	630
Weight	(3) kg		45	90	167	177	253	293

<b>BDC / BASIC</b>			<b>078m</b>	<b>092m</b>	<b>103m</b>	<b>123m</b>	<b>190m</b>	<b>210m</b>
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW		83,0	98,5	121	135	176	210
No. Circuits	N°		1	1	1	1	1	1
Total power input	(1) kW		2,40	3,60	3,60	3,60	6,56	8,20
<b>FANS</b>								
Air flow	m³/h		33640	52680	50460	47220	71920	93300
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)		54	56	56	56	54	55
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm		4625	3658	3658	3658	6290	7765
Dimension H	(3) mm		1168	2286	2286	2286	1328	1328
Dimension B	(3) mm		630	760	760	760	965	965
Weight	(3) kg		337	490	519	601	731	774

Notes:

1 Water temp.: 35/30°C ; Ext. Temp.: 24°C

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

<b>BDC / LN</b>			<b>008m</b>	<b>013m</b>	<b>030m</b>	<b>039m</b>	<b>052m</b>	<b>062m</b>
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW		7,50	14,0	32,0	40,5	54,0	65,5
No. Circuits	N°		1	1	1	1	1	1
Total power input	(1) kW		0,14	0,33	0,66	0,99	1,32	1,32
<b>FANS</b>								
Air flow	m³/h		2930	6410	12160	19230	25640	24320
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)		31	38	41	43	44	44
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm		1175	1325	2425	3525	4625	4625
Dimension H	(3) mm		510	1168	1168	1168	1168	1168
Dimension B	(3) mm		872	630	630	630	630	630
Weight	(3) kg		50	90	177	239	320	337

<b>BDC / LN</b>			<b>078m</b>	<b>092m</b>	<b>103m</b>	<b>123m</b>	<b>190m</b>	<b>210m</b>
Power supply	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
<b>PERFORMANCE</b>								
<b>NOMINAL SPECIFICATIONS</b>								
Rated capacity	(1) kW		82,0	96,0	107	129	184	203
No. Circuits	N°		1	1	1	1	1	1
Total power input	(1) kW		1,65	1,98	2,64	2,64	3,00	3,00
<b>FANS</b>								
Air flow	m³/h		30400	36480	51280	48640	76420	67170
<b>NOISE LEVEL</b>								
Noise Pressure Level	(2) dB(A)		45	46	47	47	42	42
<b>SIZE AND WEIGHT</b>								
Dimension A	(3) mm		5725	3658	4758	4758	6290	6290
Dimension H	(3) mm		1168	2286	2286	2286	2393	2393
Dimension B	(3) mm		630	760	760	760	965	965
Weight	(3) kg		363	519	640	675	1194	1334

Notes:

1 Water temp.: 35/30°C ; Ext. Temp.: 24°C

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.

<b>BDC / LT</b>		<b>008m</b>	<b>013m</b>	<b>030m</b>	<b>039m</b>	<b>052m</b>	<b>062m</b>
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
<b>PERFORMANCE</b>							
<b>NOMINAL SPECIFICATIONS</b>							
Rated capacity	(1) kW	7,90	17,0	33,0	40,5	61,0	68,0
No. Circuits	N°	1	1	1	1	1	1
Total power input	(1) kW	0,29	0,60	1,20	1,20	1,80	1,80
<b>FANS</b>							
Air flow	m³/h	4410	8780	17560	16820	25230	23610
<b>NOISE LEVEL</b>							
Noise Pressure Level	(2) dB(A)	39	48	51	51	53	53
<b>SIZE AND WEIGHT</b>							
Dimension A	(3) mm	1175	1325	2425	2425	3525	3525
Dimension H	(3) mm	872	1168	1168	1168	1168	1168
Dimension B	(3) mm	510	630	630	630	630	630
Weight	(3) kg	45	90	167	177	253	293

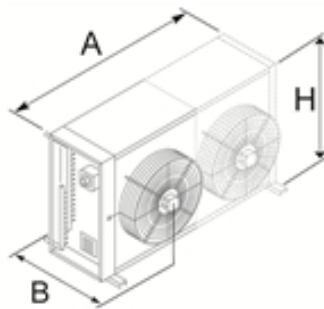
<b>BDC / LT</b>		<b>078m</b>	<b>092m</b>	<b>103m</b>	<b>123m</b>	<b>190m</b>	<b>210m</b>
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
<b>PERFORMANCE</b>							
<b>NOMINAL SPECIFICATIONS</b>							
Rated capacity	(1) kW	83,0	98,5	121	135	176	210
No. Circuits	N°	1	1	1	1	1	1
Total power input	(1) kW	2,40	3,60	3,60	3,60	6,56	8,20
<b>FANS</b>							
Air flow	m³/h	33640	52680	50460	47220	71920	93300
<b>NOISE LEVEL</b>							
Noise Pressure Level	(2) dB(A)	54	56	56	56	54	55
<b>SIZE AND WEIGHT</b>							
Dimension A	(3) mm	4625	3658	3658	3658	6290	7765
Dimension H	(3) mm	1168	2286	2286	2286	1328	1328
Dimension B	(3) mm	630	760	760	760	965	965
Weight	(3) kg	337	490	519	601	731	774

Notes:

1 Water temp.: 35/30°C ; Ext. Temp.: 24°C

2 Sound pressure measured at 10 m in open field conditions

3 Unit in standard configuration/execution, without optional accessories.







High precision air conditioners (HPAC)

# DATACENTER MANAGER



## Features

- Ease of installation thanks to the all-in-one solution
- 8.4" Touch-screen display, 65536 colours
- Security - password-protected data access
- Balancing of single unit operating hours
- Multi-language interface
- Possibility of selecting the type of regulation and the reference probe for regulation
- Possibility of selecting the type of distribution of the requests of the group regulation device to the machines according to the needs of the system
- Some units can be given priority
- Possibility of choosing the number of units on standby - dynamic standby
- Device and unit alarm display
- Management of an additional serial connection for the integration of existing BMS

## DATACENTERS's group regulation device

DATACENTER MANAGER is a centralized management and control system specifically design for Datacenters applications that provide up to a 70% efficiency improvement into the air conditioning system with a substantial global benefit & drastic increasing of the datacenter's global PUE value (Power Usage Effectiveness).

DATACENTER MANAGER combine the optimized management of the indoor Climaveneta CRAC units ACCURATE on chilled water version inside the datacenters, together with the external Climaveneta Chillers.

It managed up to 10 internal unit and up to 8 external units with the same or different power ratings, on 2 pipes systems. The indoor ACCURATE units regulation is demanded to the Master units that through a clever algorithm named ADS (Adaptive Set Point ) recognized the real instantaneous heat load inside the Datacenter and transfer such info to the external group of chillers in order for them to optimized their functioning and resources in order to provide maximum global efficiency. DATACENTER MANAGER great advantage is to provide continue cooling capacity modulation of the external chillers based on the real Datacenter's heat load noticed from indoor ACCURATE units.

The DATACENTER MANAGER has an 8.4" touch-screen user interface, allowing access to all information and the sending of commands with a few simple touches. Communication between DATACENTER MANAGER and the machines is accomplished by means of an RS485 serial connection. It has its own adjustment probes to be placed in suitably prepared pockets in the hydraulic system pipes. Various additional appliances, to be chosen according to the characteristics, needs and availability of remote connection at the place of installation of the units, can be supplied in the same industrial box as the DATACENTER MANAGER: modem/router for connection to a fixed ADSL line, modem for connection to a fixed PSTN, modem for connection to GPRS.

High precision air conditioners (HPAC)

# CLIMA GUARD



## Features

- Log data for up to one year (with 15 min sampling)
- A Guardian program that boosts and improves system reliability
- Possibility to export data (alarms, events, system and model configurations and variable reports) using a USB memory key (the data are downloaded in a format that is compatible with Microsoft® Excel and Microsoft® Word)
- 3 output relays, for alarm signals or activating lights
- Display graphs
- Proximity sensor that activates the display without the user needing to open the cover
- External buzzer management
- Complete alarm configuration
- Phone book for SMS contacts, fax numbers, e-mail addresses
- Possibility for multiple users to access the system, with different privileges (administrator, normal user, user with privileges)
- Instrument suitable for technical environments, no moving parts

## Monitoring and supervising device for DATACENTERS

CLIMA GUARD is an electronic device used to monitor and supervision a network of CLIMAVENETA conditioning units up to 30 units connected.

Complete network and alarm configuration, simple navigation and an attractive design are some of the features that make CLIMA GUARD the cutting edge product in its category. A colour LCD touchscreen, and the use of practical menus, guide the user simply and intuitively, without the use of a PC (however a PC can be connected if necessary), thus providing a practical solution for all those environments that do not have room for a computer.

## High precision air conditioners (HPAC) **CLIMA CENTER**



### Features

CLIMA CENTER ensures complete control of the system in all stages of operation:

- Setup: centralized configuration of all the parameters for f the instruments installed, unit monitoring on commissioning
- Daily operation: system interface, data logging, reports, activity scheduling, automatic optimization of operation
- Maintenance: remote access, alarm management with automatic signals and actions
- Optimization and monitoring of system: performance specific functions to increase system efficiency and analysis trends in energy consumption
- Manual and scheduled creation of detailed and complete graphs and reports on the system variables
- Detection and signalling (e-mail, fax, sms) of all alarm situations, with remote interaction for efficient management of maintenance and service operations
- Control of variations in critical parameters ensures the system configuration is optimised at all times

A user-friendly and easily configurable calendar can be used to schedule centralised functions, such as:

- Switch on / switch off air conditioner
- Adjust set points

## Supervisory device for DATACENTERS

CLIMA CENTER is the global solution to manage and supervise all parameters inside Datacenters realized with the use of High Precision Air Conditionig units type ACCURATE di Climaveneta.

It provide a wide range of customizations for parameters visualizations.

CLIMA CENTER grant REMOTE access to all units connected on the plant. Tank to its web server features can easily managed the internet connections and access. Due to the importance of its functions and the information managed, the product guarantees absolute reliability and security of data.

The supervisory system includes all the field and remote connections required to manage the system, it is supplied in Box version for more versatile assembly to suit different requirements.

CLIMA CENTER can be connected via RS485 lines using Modbus RTU protocol and the communication over TCP/IP is also supported. Using CLIMA CENTER , the system can be managed from a remote site simply and completely.

The Web interface, the same available to the user on the local CLIMA CENTER , allows complete monitoring and configuration of the system: from the office or whatever the user's current location, a simple internet connection allows access to all the system information.

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