

LABORATORY

ELECTRICAL ROOM

HOSPITAL

DATA CENTER

PRECISION CONTROLLED AIR CONDITIONING SYSTEMS

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Hybrid

**Precision Controlled Air
Conditioning**

*Cooling Capacity
(up to 7-120kW)*

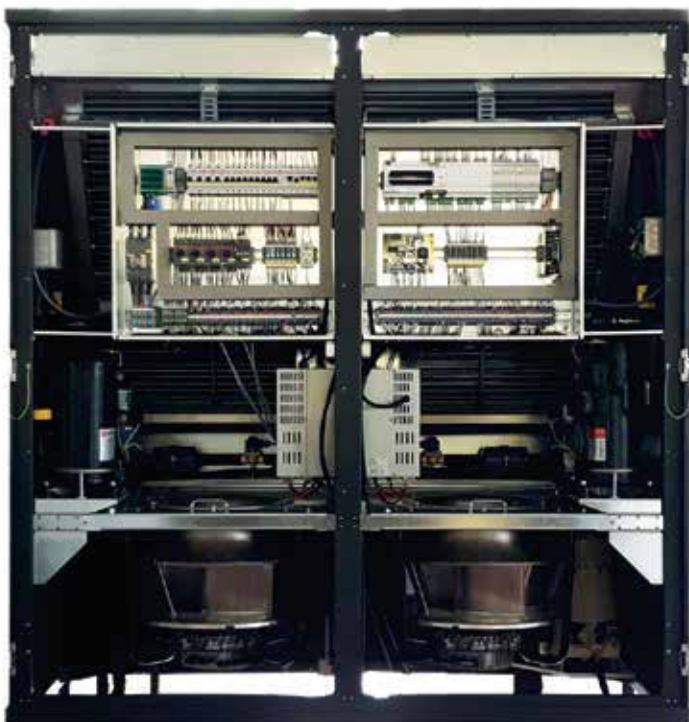


Precision Controlled Air Conditioning

It is an industrial type, high-efficiency precision controlled air-conditioning device used in applications where precision-controlled air conditioning is required to control temperature and humidity. Precision air conditioners designed on the basis of operation 365 days and 24 hours a year, provide the necessary temperature, humidity and filtration of dust in the environment, increasing the operation life and efficiency of electronic equipment.

With its modular structure, Hybrid Precision Controlled Air Conditioning is designed for easy installation by considering various needs including raised floors, lowered ceilings and air duct systems. It has a cooling capacity ranging from 7-120kW and performs precision cooling.

- Cooling capacity range from 7 kW to 120 kW
- R410A refrigerant specification
- Teamwork with up to 8 devices
- Intervention of all equipment from the front (Except device with option)
- Filter and fan control manager
- Sliding fan and filter structure
- Operation option according to pressure difference and temperature principle
- Suitable design for raised floor, low ceiling and air duct systems
- High efficiency system with direct free cooling and adiabatic cooling mode option

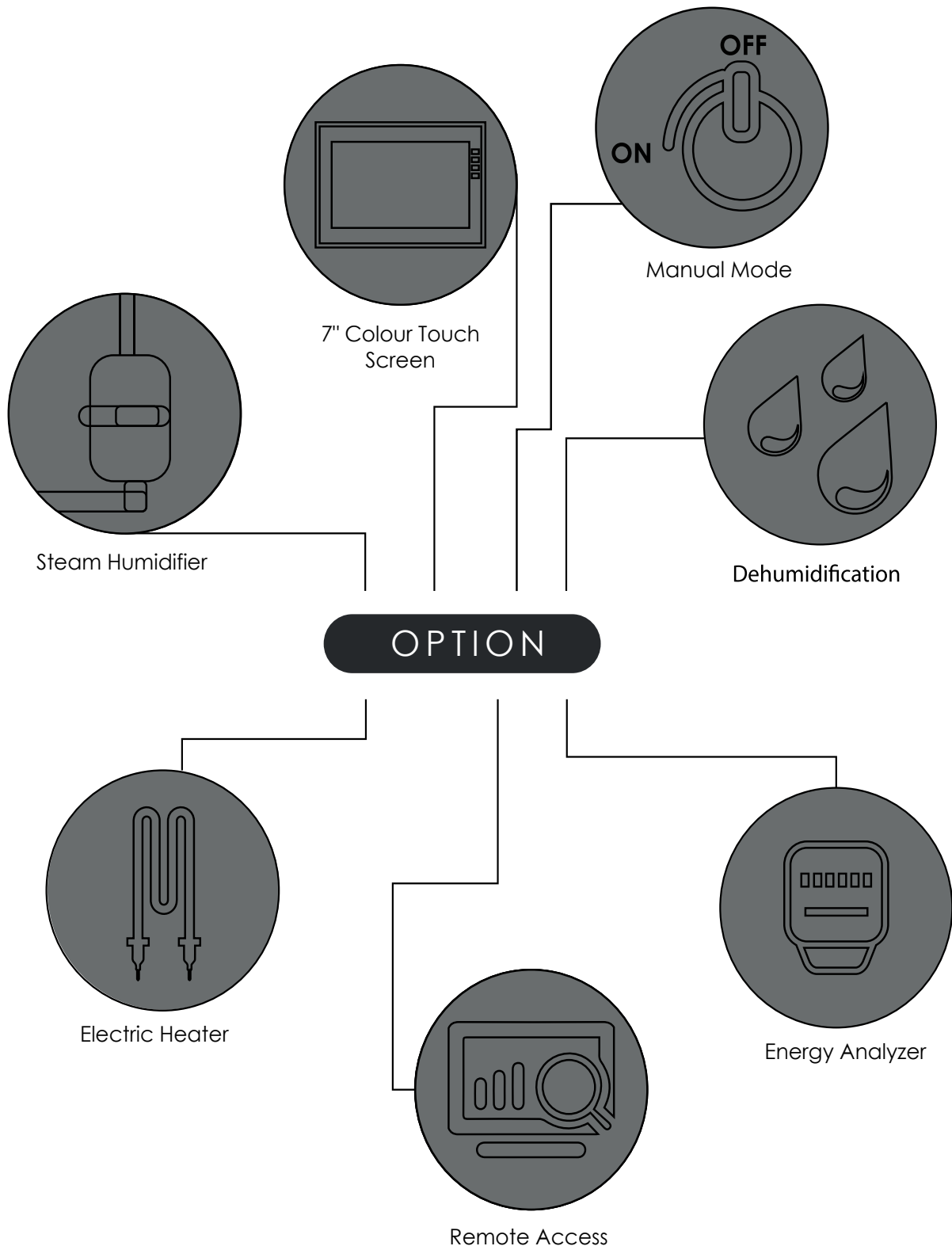


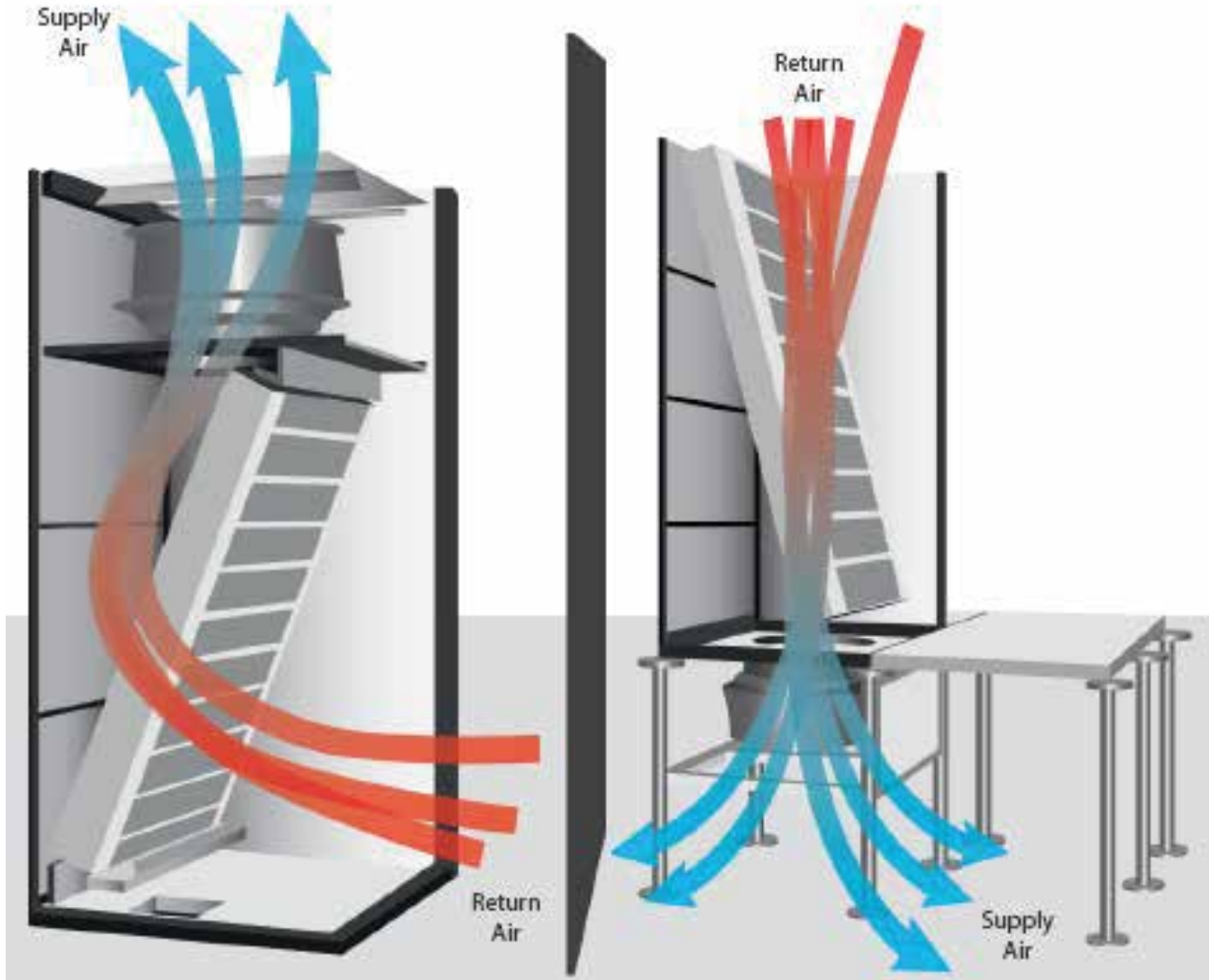
Hybrid precision air conditioners are designed to serve at the optimum point according to ASHRAE standards.

PRECISION CONTROLLED AIR CONDITIONING PRODUCT SPECIFICATIONS



OPTIONAL PRODUCTS





Top Blow

Bottom Blow

PRECISION CONTROLLED AIR CONDITIONING

Unit Configuration	
Primer Coat and 2 Layers Electrostatic Painted	●
Electrostatic Powder Coated Galvanized Case	●
EC Radial Fan with Back Curved Blades	●
G4 Class Air Filter	●
Temperature at Return Air Inlet	●
Hermetic Scroll Compressor	●
Vibration Absorber for Compressor	●
DX Based Heat Exchanger	●
Water Based Heat Exchanger -	-
Temperature Sensor at Supply Air Inlet	●
Fan Status Information Switch	●
Control Panel	●
Microprocessor Control	●

Note: "●"standard configuration, "○"option available, "—" option not available

PRECISION CONTROLLED AIR CONDITIONERS

Unit Configuration	
Outdoor Unit Fan Speed Control	•
High Pressure Sensor	•
Pressure Switch for High/Low Pressure Protection	•
BacNET	•
Modbus TCP/IP	○
Modbus RTU	•
Externally Balanced Thermostatic Expansion Valve	○
Liquid Line Solenoid	•
Dryer (Filter Dryer)	•
Liquid Tank	•
Sight glass	•
Motorized 3 Way Valve	•
Phase Protection Relay	•
Energy analyzer	-
Current Transformer	•
Manual Operation Mode (Device Continues to Operate When PLC Fails)	○
Electrical Heater	○
Steam Humidifier	○
Web Interface	○
SNMP Module	○
Air Pressure Switch for Filter Alarm Information	•
Motorized Damper in Top Blow Devices	○
Plenum Box in Top Blow Devices	○
Air Plenum in Bottom Blowing Devices	○
Non-Return Air Damper in Top Blow Devices	○
Adjustable Leg Installation Plinth Stand	○
Water Level Switch	•
Water Leak Alarm Kit	○
Mail Message Module	○
Electronic Expansion Valve	○
Free Cooling Kit (Free Cooling Box Kit)	○
Automatic Transfer Switch (ATS)	○
Air Shutter for Supply Air	○
Air Valve for Return Air	○
Gooseneck And Air Direction Louver	○
Remote On-Off (Dry Contact)	•
Remote On-Off (Via Web Interface)	○
Team work	○

Note: "•"standard configuration, "○"option available, "—" option not available

Power supply	V/ph/Hz	400/3+N/50							
Performance									
Gross Cooling Capacity ¹	kW	11,13	19	25,1	34,2	37,8	42,9	47,55	57,18
Sensible Cooling Capacity ¹	kW	10,51	17,7	23,5	31,9	35,2	40	44,5	53,7
SHR		1							
EER		3,52	3,38	3,45	3,61	3,48	3,54	3,59	3,70
Capacity Control		On / Off							
Minimum Capacity	%	100	100	100	100	100	100	100	100
Refrigerant									
Type		R 410A							
Control		Thermostatic Expansion Valve							
Circuit	N°	1							
Compressor									
Compressor Type		On / Off							
Number of Compressors	N°	1							
Comp. Consumption	kW	2,25	3,85	5,21	6,42	7,51	8,41	9,33	11,05
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	1	1	1	1	1	2	2	2
Air Flow	m³/h	5000	8500	10000	11700	12200	13800	15600	17600
Power Consumption	kW	0,73	1,3	1,6	2,4	2,6	2,9	3,05	3,48
Noise Level									
Sound Power	dBA	53	55	55	57	57	57	59	61
Indoor Unit Dimensions									
Weight	kg	202	295	334	368	442	552	632	691
Width	mm	675	950	950	950	1250	1250	1800	1800
Depth	mm	728	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Filter									
Type		G4							
Device Electric Information									
Nom. Operating Consumption	kW	3,44	5,7	8	10,1	11,15	13,23	14,48	17,73
Nom. Operating Current	A	7,56	11,2	15,02	18,93	21,25	25,7	29,82	36,26
Max. Operating Current	A	14,1	17,42	26,62	28,9	32,3	42,5	47,9	51,9
Outdoor Unit									
Air Flow	m³/h	5900	8350	11500	14000	15500	21000	22300	24000
Outdoor Unit Dimensions									
Weight	kg	39	59	73	73	85	103	103	135
Width	mm	900	1100	1530	1530	1750	2150	2150	2550
Depth	mm	400	450	530	530	500	500	500	500
Height	mm	800	1100	940	940	900	1000	1000	1400
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Power consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operating Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Level		3							
Capacity	kW	4,5	9	9	13,5	18	18	27	27
Maximum Operating Current	A	6,8	13,6	13,6	20,5	27,3	27,3	40,9	40,9
Power Input	V/ph/Hz	380/3/50							

Model									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Gross Cooling Capacity ¹	kW	42,25	51,74	57,4	65,4	78,2	82,1	88,6	113,38
Sensible Cooling Capacity ¹	kW	40	48,8	53,8	60,8	73,2	78	83,4	105,4
SHR		1							
EER		3,48	3,65	3,67	3,49	3,65	3,55	3,48	3,47
Capacity Control		On / Off + On / Off							
Minimum Capacity	%	50	50	50	50	50	50	50	50
Refrigerant									
Type		R 410A							
Control		Thermostatic Expansion Valve							
Circuit	N°	2							
Compressor									
Compressor Type		On / Off							
Number of Compressors	°N	2							
Comp. Consumption	kW	9,1	10,44	11,06	12,8	15,06	16,48	17,54	22,4
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	2	2	2	2	2	2	2	3
Air Flow	m³/h	16000	17300	19000	22400	27200	28200	27600	33200
Power Consumption	kW	2,41	2,83	3,6	4,7	5	5,54	6,38	6,81
Noise Level									
Sound Power	dBA	61	61	63	63	65	65	67	69
Indoor Unit Dimensions									
Weight	kg	650	679	702	734	782	823	884	992
Width	mm	1800	1800	1800	1800	2300	2550	2550	2550
Depth	mm	890	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Filter									
Type		G4							
Device Electric Information									
Nom. Operating Consumption	kW	12,51	14,37	15,86	18,75	21,56	23,38	25,74	31,31
Nom. Operating Current	A	24,3	29,52	32,12	38,46	44,74	47,94	52,54	65,85
Max. Operating Current	A	43,8	43,8	47,6	51,6	70,5	77,3	77,7	90,5
Outdoor Unit									
Air Flow	m³/h	10500	12500	14000	14000	15500	21000	22500	24000
Outdoor Unit Dimensions									
Weight	kg	72	72	72	73	85	103	103	135
Width	mm	1400	1600	1400	1550	1750	2150	2150	2550
Depth	mm	470	470	470	500	500	500	500	500
Height	mm	1000	1000	1000	1000	900	1000	1000	1400
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Power consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operating Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Level		3							
Capacity	kW	18	18	27	27	36	36	48	48
Maximum Operating Current	A	27,3	27,3	40,9	40,9	54,5	54,5	72,7	72,7
Power Input	V/ph/Hz	380/3/50							

Device Electrical Information									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	10,48	17,5	23,7	31,2	35,3	40	44,92	53,5
SHR		1	1	1	1	1	1	1	1
EER		3,38	3,33	3,44	3,36	3,31	3,36	3,39	3,36
Capacity Control		Inverter							
Minimum Capacity	%	25 ~100							
Refrigerant									
Fluid Type		R 410A							
Control		Electronic Expansion Valve							
Circuit	N°	1							
Compressor									
Compressor Type		Inverter							
Number of Compressors	N°	1							
Comp. Consumption	kW	2,37	3,95	5,28	6,88	8,08	9	10,2	12,45
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	1	1	1	1	1	2	2	2
Air Flow	m³/h	5000	8500	10000	11700	12200	13800	15600	17600
Power input	kW	0,73	1,3	1,6	2,4	2,6	2,9	3,05	3,48
Noise Level									
Sound Power	dBA	53	55	55	57	57	57	59	61
Weight and Dimensions									
Weight	kg	202	295	334	368	442	552	632	691
Width	mm	675	950	950	950	1250	1250	1800	1800
Depth	mm	728	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Filter									
Type		G4							
Device Electrical Information									
Nominal Operation Power	kW	3,575	5,79	8,12	10,56	11,72	13,82	15,23	18,01
Nominal Operation Current	A	6,71	10,13	14,65	19,7	20,52	27,3	28,86	33,56
Maximum Operation Current	A	19	18,3	29,42	33,7	33,7	44,7	43,1	60,9
The Outdoor Unit									
Air Flow	m³/h	5900	8350	11500	14000	15500	21000	22300	24000
Outdoor Unit Dimensions									
Weight	kg	39	59	73	73	85	103	103	135
Width	mm	900	1100	1530	1530	1750	2150	2150	2550
Depth	mm	400	450	530	530	500	500	500	500
Height	mm	800	1100	940	940	900	1000	1000	1400
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	4,5	9	9	13,5	18	18	27	27
Maximum Operation Current	A	6,8	13,6	13,6	20,5	27,3	27,3	40,9	40,9
Power Input	V/ph/Hz	380/3/50							

Device Electrical Information									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	41,96	50,1	54	62,3	73,3	78,8	85,6	105,1
SHR		1							
EER		3,60	3,70	3,54	3,32	3,44	3,42	3,47	3,39
Capacity Control		Inverter + Inverter							
Minimum Capacity	%	13 ~100							
Refrigerant									
Fluid Type		R 410A							
Control		Electronic Expansion Valve							
Circuit	N°	2							
Compressor									
Compressor Type		Inverter							
Number of Compressors	°N	2							
Comp. Consumption	kW	9,25	10,7	11,65	14,04	16,3	17,5	18,3	24,2
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	2	2	2	2	2	2	2	3
Air Flow	m³/h	16000	17300	19000	22400	27200	28200	27600	33200
Power input	kW	2,41	2,83	3,6	4,7	5	5,54	6,38	6,81
Noise Level									
Sound Power	dBA	61	61	63	63	65	65	67	69
Weight and Dimensions									
Weight	kg	650	679	702	734	782	823	884	992
Width	mm	1800	1800	1800	1800	2300	2550	2550	2550
Depth	mm	890	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Filter									
Type		G4							
Device Electrical Information									
Nominal Operation Power	kW	12,65	14,63	16,5	19,99	22,87	24,96	26,73	33,21
Nominal Operation Current	A	21,64	24,81	27,1	36,04	40,86	45,64	48,26	58,83
Maximum Operation Current	A	48,6	55,6	55,6	68	81,8	93	93	120,1
The Outdoor Unit									
Air Flow	m³/h	10500	12500	14000	14000	15500	21000	22500	24000
Outdoor Unit Dimensions									
Weight	kg	72	72	72	73	85	103	103	135
Width	mm	1400	1600	1400	1550	1750	2150	2150	2550
Depth	mm	470	470	470	500	500	500	500	500
Height	mm	1000	1000	1000	1000	900	1000	1000	1400
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	18	18	27	27	36	36	48	48
Maximum Operation Current	A	27,3	27,3	40,9	40,9	54,5	54,5	72,7	72,7
Power Input	V/ph/Hz	380/3/50							

Device Electrical Information									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	42,4	50	53,9	62,15	73,6	78,8	86,5	105,4
SHR		1							
EER		3,66	3,72	3,70	3,43	3,56	3,50	3,56	3,50
Capacity Control		On/Off + Inverter							
Minimum Capacity	%	13 ~100							
Refrigerant									
Fluid Type		R 410A							
Control		Electronic expansion valve							
Circuit	N°	2							
Compressor 1									
Compressor Type		On/Off							
Compressor Consumption	kW	4,55	5,22	5,53	6,42	7,54	8,24	8,77	11,2
Compressor 2									
Compressor Type		Inverter							
Compressor Consumption	kW	4,625	5,35	5,825	7,02	8,15	8,75	9,15	12,1
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	2	2	2	2	2	2	2	3
Air Flow	m ³ /h	16000	17300	19000	22400	27200	28200	27600	33200
Power input	kW	2,41	2,83	3,6	4,7	5	5,54	6,38	6,81
Noise Level									
Sound Power	dB(A)	61	61	63	63	65	65	67	69
Weight and Dimensions									
Weight	kg	650	679	702	734	782	823	884	992
Width	mm	1800	1800	1800	1800	2300	2550	2550	2550
Depth	mm	890	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Filter									
Type		G4							
Device Electrical Information									
Nominal Operation Power	kW	13,556	15,67	17,07	20,652	23,82	26,376	28,28	34,31
Nominal Operation Current	A	23,09	27,18	29,46	37,27	42,83	46,8	50,42	62,34
Maximum Operation Current	A	49,3	52,8	54	63,6	80,8	90,8	91	111,1
The Outdoor Unit									
Model									
Hava Debisi	m ³ /h	10500	12500	14000	14000	15500	21000	22500	24000
Dış Ünite Ölçüleri									
Weight	kg	72	72	72	73	85	103	103	135
Width	mm	1400	1600	1400	1550	1750	2150	2150	2550
Depth	mm	470	470	470	500	500	500	500	500
Height	mm	1000	1000	1000	1000	900	1000	1000	1400
Humidifier									
Humidifier Type		Steam Humid							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	18	18	27	27	36	36	48	48
Maximum Operation Current	A	27,3	27,3	40,9	40,9	54,5	54,5	72,7	72,7
Power Input	V/ph/Hz	380/3/50							

Model									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	11,23	19,45	25,5	33,2	38,27	42,2	48,1	55,5
Power consumption	kW	2,7	4,68	6,29	8,22	9,43	10,32	11,73	13,7
EER		4,16	4,16	4,05	4,04	4,06	4,09	4,10	4,05
Capacity Control		On/Off							
Minimum Capacity	%	100							
Refrigerant									
Fluid Type		R 410A							
Control		Thermostatic Expansion Valve							
Circuit	N°	1							
Compressor									
Compressor Type		Scroll							
Number of Compressors	N°	1							
Comp. Consumption	kW	1,97	3,38	4,69	5,82	6,83	7,42	8,68	10,22
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	1	1	1	1	1	2	2	3
Air Flow	m³/h	5000	8500	10000	11700	12200	13800	15600	17600
Power input	kW	0,73	1,3	1,6	2,4	2,6	2,9	3,05	3,48
Water Cooled Heat Exchanger - Condenser									
Heat Exchanger Type		Brazed Plate Heat Exchanger							
Water Flow	m³/h	2,31	4,00	5,24	6,82	7,87	8,67	9,89	11,41
Water Pressure Drop	kPa	36	38	35	37	39	40	42	41
Operation Range									
Water Side (Condenser)	°C	20-60							
Water Circuit									
Connection Type		Threaded							
Pipe Diameter	inç	1 1/4"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Noise Level									
Sound Power	dB(A)	53	55	55	57	57	57	59	61
Weight and Dimensions									
Weight	kg	202	295	334	368	442	552	632	691
Width	mm	675	950	950	950	1250	1250	1800	1800
Depth	mm	728	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6							
Maximum Operation Current	A	9,1							
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	4	4	6	6	6	9	9	9
Maximum Operation Current	A	6,1	6,1	9,1	9,1	9,1	13,6	13,6	13,6
Power Input	V/ph/Hz	380/3/50							

Model										
Power supply	V/ph/Hz	400/3+N/50								
Performance										
Sensible Cooling Capacity ¹	kW	44,6	52,05	56,5	65,5	77,5	84,6	95,9	110,9	
Power consumption	kW	10,55	12,21	13,46	16,34	18,66	20,38	22,22	27,25	
EER		4,23	4,26	4,20	4,01	4,15	4,15	4,32	4,07	
Capacity Control		On/Off + On/Off								
Minimum Capacity	%	50								
Refrigerant										
Fluid Type		R 410A								
Control		Thermostatic Expansion Valve					Electronic Expansion Valve			
Circuit	N°	2								
Compressor										
Compressor Type		Scroll								
Number of Compressors	N°	2								
Comp. Consumption	kW	8,14	9,38	9,86	11,64	13,66	14,84	15,84	20,44	
Fan										
Fan Type		EC Backward Curved Centrifugal Fan								
Number of Fans	N°	2	2	2	2	2	2	2	3	
Air Flow	m ³ /h	16000	17300	19000	22400	27200	28200	27600	33200	
Power input	kW	2,41	2,83	3,6	4,7	5	5,54	6,38	6,81	
Water Cooled Heat Exchanger - Condenser										
Heat Exchanger Type		Brazen Plate Heat Exchanger								
Water Flow	m ³ /h	9,17	10,70	11,61	13,46	15,93	17,39	19,71	22,79	
Water Pressure Drop	kPa	37	38	36	36	39	40	38	40	
Operation Range										
Water Side (Condenser)	°C	20-60								
Water Circuit										
Connection Type		Threaded								
Pipe Diameter	inç	2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
Noise Level										
Sound Power	dBA	61	61	63	63	65	65	67	69	
Weight and Dimensions										
Weight	kg	650	679	702	734	782	823	884	992	
Width	mm	1800	1800	1800	1800	2300	2550	2550	2550	
Depth	mm	890	890	890	890	890	890	890	890	
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970	
Moisturizer										
Humidifier Type		Steam Humidifier								
Number	°N	1								
Capacity	kg/h	8/15								
Electricity consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	
Power Input	V/ph/Hz	380/3/50								
Electric Heater										
Steps		3								
Capacity	kW	18	18	27	27	36	36	48	48	
Maximum Operation Current	A	27,3	27,3	40,9	40,9	54,5	54,5	72,7	72,7	
Power Input	V/ph/Hz	380/3/50								

Model									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	44	51,9	56,5	65,5	77,3	84,6	94,9	110,8
Power consumption	kW	10,4	12,12	13,7	16,54	18,99	20,77	23,86	27,57
EER		4,23	4,28	4,12	3,96	4,07	4,07	3,98	4,02
Capacity Control		On/Off + Inverter							
Minimum Capacity	%	13 ~100							
Refrigerant									
Fluid Type		R 410A							
Control		Electronic Expansion Valve							
Circuit	N°	2							
Compressor 1									
Compressor Type		Scroll							
Compressor Consumption	kW	4,07	4,69	4,94	5,82	6,83	7,42	8,68	10,22
Compressor 2									
Compressor Type		Inverter							
Compressor Consumption	kW	3,92	4,6	5,16	6,02	7,16	7,81	8,8	10,54
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	2							3
Air Flow	m³/h	16000	17300	19000	22400	27200	28200	27600	33200
Power input	kW	2,41	2,83	3,6	4,7	5	5,54	6,38	6,81
Water Cooled Heat Exchanger - Condenser									
Heat Exchanger Type		Braze Plate Heat Exchanger							
Water Flow	m³/h	9,04	10,67	11,61	13,46	15,89	17,39	19,51	22,77
Water Pressure Drop	kPa	37	38	36	36	39	40	38	40
Operation Range									
Water Side (Condenser)	°C	20-60							
Water Circuit									
Connection Type		Threaded							
Pipe Diameter	inç	2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Noise Level									
Sound Power	dBA	61	61	63	63	65	65	67	69
Weight and Dimensions									
Weight	kg	650	679	702	734	782	823	884	992
Width	mm	1800	1800	1800	1800	2300	2550	2550	2550
Depth	mm	890	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	18	18	27	27	36	36	48	48
Maximum Operation Current	A	27,3	27,3	40,9	40,9	54,5	54,5	72,7	72,7
Power Input	V/ph/Hz	380/3/50							

Model									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	11,23	19,45	25,5	33,2	38,27	42,2	48,1	55,5
Power consumption	kW	3,11	5,25	6,87	9,28	10,68	11,92	13,22	15,93
EER		3,61	3,70	3,71	3,58	3,58	3,54	3,64	3,48
Capacity Control		Inverter							
Minimum Capacity	%	25 ~100							
Refrigerant									
Fluid Type		R 410A							
Control		Electronic Expansion Valve							
Circuit	N°	1							
Compressor									
Compressor Type		Scroll							
Number of Compressors	N°	1							
Comp. Consumption	kW	2,38	3,95	5,27	6,88	8,08	9,02	10,17	12,45
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	1	1	1	1	1	2	2	2
Air Flow	m³/h	5000	8500	10000	11700	12200	13800	15600	17600
Power input	kW	0,73	1,3	1,6	2,4	2,6	2,9	3,05	3,48
Water Cooled Heat Exchanger - Condenser									
Heat Exchanger Type		Braze Plate Heat Exchanger							
Water Flow	m³/h	2,31	4,00	5,24	6,82	7,87	8,67	9,89	11,41
Water Pressure Drop	kPa	36	38	35	37	39	40	42	41
Operation Range									
Water Side (Condenser)	°C	20-60							
Water Circuit									
Connection Type		Threaded							
Pipe Diameter	inç	1 1/4"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Noise Level									
Sound Power	dBA	53	55	55	57	57	57	59	61
Weight and Dimensions									
Weight	kg	202	295	334	368	442	552	632	691
Width	mm	675	950	950	950	1250	1250	1800	1800
Depth	mm	728	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	4,5	9	9	13,5	18	18	27	27
Maximum Operation Current	A	6,8	13,6	13,6	20,5	27,3	27,3	40,9	40,9
Power Input	V/ph/Hz	380/3/50							

Model									
Power supply	V/ph/Hz	400/3+N/50							
Performance									
Sensible Cooling Capacity ¹	kW	43,6	51,75	56,5	65,5	77,1	84,6	93,9	110,7
Power consumption	kW	10,25	12,03	13,92	16,74	19,32	21,16	23,98	27,89
EER		4,25	4,30	4,06	3,91	3,99	4,00	3,92	3,97
Capacity Control		Inverter + Inverter							
Minimum Capacity	%	13 ~100							
Refrigerant									
Fluid Type		R 410A							
Control		Electronic Expansion Valve							
Circuit	N°	2							
Compressor									
Compressor Type		Inverter							
Number of Compressors	N°	2							
Comp. Consumption	kW	7,84	9,2	10,32	12,04	14,32	15,62	17,6	21,08
Fan									
Fan Type		EC Backward Curved Centrifugal Fan							
Number of Fans	N°	2	2	2	2	2	2	2	3
Air Flow	m³/h	16000	17300	19000	22400	27200	28200	27600	33200
Power input	kW	2,41	2,83	3,6	4,7	5	5,54	6,38	6,81
Water Cooled Heat Exchanger - Condenser									
Heat Exchanger Type		Braze Plate Heat Exchanger							
Water Flow	m³/h	8,96	10,64	11,61	13,46	15,85	17,39	19,30	22,75
Water Pressure Drop	kPa	37	38	36	36	39	40	38	40
Operation Range									
Water Side (Condenser)	°C	20-60							
Water Circuit									
Connection Type		Threaded							
Pipe Diameter	inç	2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Noise Level									
Sound Power	dB(A)	61	61	63	63	65	65	67	69
Weight and Dimensions									
Weight	kg	650	679	702	734	782	823	884	992
Width	mm	1800	1800	1800	1800	2300	2550	2550	2550
Depth	mm	890	890	890	890	890	890	890	890
Height	mm	1970	1970	1970	1970	1970	1970	1970	1970
Humidifier									
Humidifier Type		Steam Humidifier							
Number	°N	1							
Capacity	kg/h	8/15							
Electricity Consumption	kW	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25	6 / 11,25
Maximum Operation Current	A	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1	9,1 / 17,1
Power Input	V/ph/Hz	380/3/50							
Electric Heater									
Steps		3							
Capacity	kW	18	18	27	27	36	36	48	48
Maximum Operation Current	A	27,3	27,3	40,9	40,9	54,5	54,5	72,7	72,7
Power Input	V/ph/Hz	380/3/50							



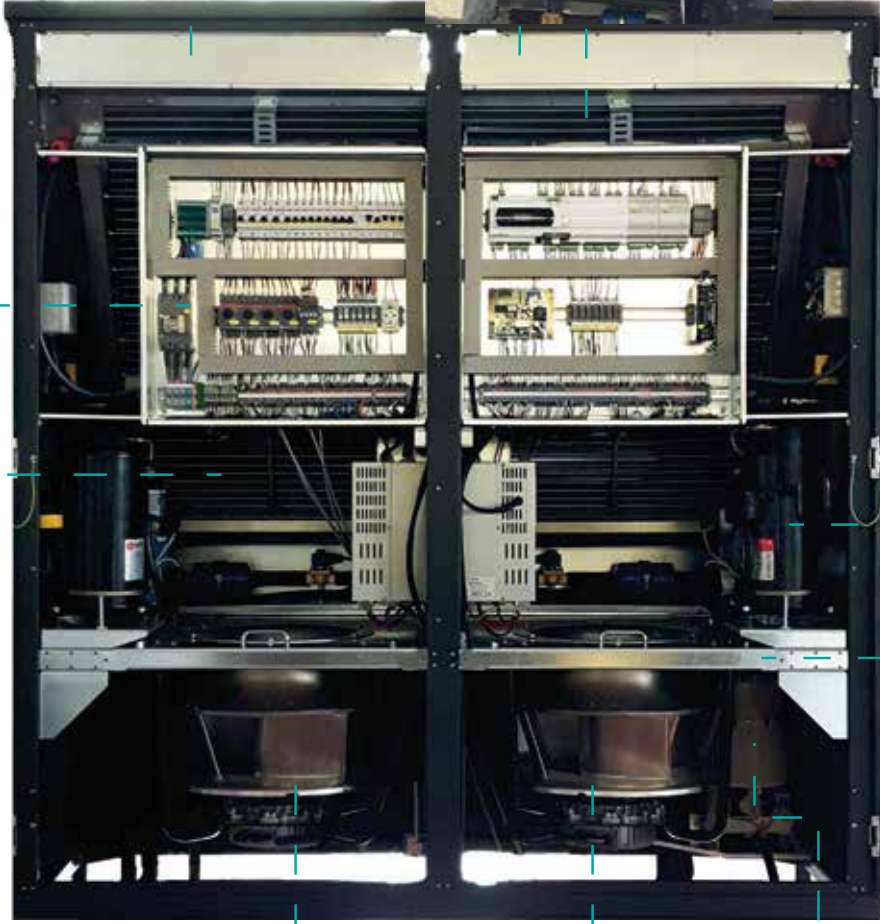
Sliding
G4 Filter



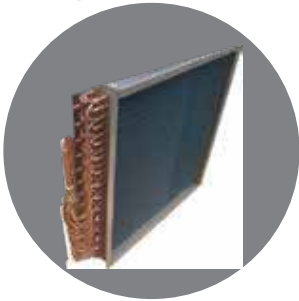
Compressor



Control
Panel



Sliding
Fan Design



Evaporador



Fan



Humidifier



Hybrid Engineering

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