



### Available range

#### Unit type

- SR Condensing unit
- SP Heat pump condensing unit (reversible on the refrigerant side)

#### Version

- VB Base version
- VD Desuperheater version
- VR Total recovery version

#### Acoustic setting up

- AB Base setting up
- AS Low noise setting up

#### Source temperature level

- M Medium temperature level
- A High temperature level

### Unit description

This series of condensing units satisfies the cooling and heating requirements of residential plants of medium size.

All the units are suitable for outdoor installation and can be connected to a remote heat exchanger properly designed in order to transfer to the plant all the cooling (and heating for reversible units) power generated.

The refrigerant circuit, contained in a compartment protected from the air flow to simplify the maintenance operations, is equipped with scroll compressors mounted on

damper supports, thermostatic expansion valve (only for SP), reverse cycle valve, double inlet centrifugal fans with forward curved blades, finned coil made of copper pipes and aluminium louvered fins with subcooling section. The circuit is protected by a safety gas valve, high and low pressure switches.

All the units can be equipped with variable speed fans control that allows the units to operate with low outdoor temperatures in cooling and high outdoor temperature in heating and permits to reduce noise emissions in such operating conditions.

The low noise acoustic setting up (AS) is obtained, starting from the base setting up (AB), mounting sound jackets on the compressors and the technical compartment is clad with soundproofing material of suitable thickness.

All the units are supplied with a management and control electrical panel containing general switch, phase presence and correct sequence controller, microprocessor controller with display and all the other electrical components with IP54 minimum protection degree.

All the units are accurately built and individually tested in the factory.

All the units are supplied with refrigerant charge inside.

Only electric and refrigerant connections (between condensing unit and remote heat exchanger) are required for installation.

### Options

#### Compressor starting

- standard (contactors)
- soft starter

#### Fans control

- on-off control
- modulating control INVERTER (condensation / evaporation control)

#### Compressor power factor correction

#### Electrical load protection

- fuses
- thermal magnetic circuit breakers

#### Coil condensate tray

(standard for SP)

### Accessories

#### Rubber vibration dampers

#### Spring vibration dampers

#### Coil protection grilles

#### Remote control

#### Modbus serial interface on RS485

#### Programmer clock

#### Phase sequence and voltage controller

#### Low temperature kit (standard for SP)

#### High and low pressure gauges

#### High temperature thermostat

#### Coil shut off valves

#### Outdoor air sensor

#### Remote plate heat exchanger

#### Liquid line

**NOMINAL performances**

SR	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5	Cooling capacity	48,9	57,8	63,3	74,3	85,0	98,3	110	121	136	154	171	194	216	kW
	Power input	15,5	18,4	20,5	23,7	27,6	32,1	35,5	39,4	44,5	50,8	56,3	63,7	70,6	kW
	EER	3,15	3,14	3,09	3,14	3,08	3,06	3,10	3,07	3,06	3,03	3,04	3,05	3,06	W/W
SR	Low noise setting up (AS)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5	Cooling capacity	48,9	57,8	63,3	74,3	85,0	98,3	110	121	136	154	171	194	216	kW
	Power input	15,5	18,4	20,5	23,7	27,6	32,1	35,5	39,4	44,5	50,8	56,3	63,7	70,6	kW
	EER	3,15	3,14	3,09	3,14	3,08	3,06	3,10	3,07	3,06	3,03	3,04	3,05	3,06	W/W
SP	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5	Cooling capacity	47,3	57,1	62,1	72,6	80,0	96,3	107	119	132	149	166	192	214	kW
	Power input	15,3	18,6	20,4	23,8	26,7	31,9	35,3	39,3	43,9	49,7	55,6	62,7	70,3	kW
	EER	3,09	3,07	3,04	3,05	3,00	3,02	3,03	3,03	3,01	3,00	2,99	3,06	3,04	W/W
A7C50	Heating capacity	47,8	57,5	62,6	73,8	82,3	98,7	109	124	135	153	171	195	214	kW
	Power input	15,3	18,5	20,3	23,7	26,9	32,6	35,0	40,0	43,7	50,5	55,4	63,4	69,8	kW
	COP	3,12	3,11	3,08	3,11	3,06	3,03	3,11	3,10	3,09	3,03	3,09	3,08	3,07	W/W
A7C45	Heating capacity	52,6	63,3	68,9	81,2	90,5	109	120	136	149	168	188	215	235	kW
	Power input	13,5	16,3	17,9	20,9	23,7	28,7	30,8	35,2	38,5	44,4	48,8	55,8	61,4	kW
	COP	3,90	3,88	3,85	3,89	3,82	3,80	3,90	3,86	3,87	3,78	3,85	3,85	3,83	W/W
SP	Low noise setting up (AS)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5	Cooling capacity	47,3	57,1	62,1	72,6	80,0	96,3	107	119	132	149	166	192	214	kW
	Power input	15,3	18,6	20,4	23,8	26,7	31,9	35,3	39,3	43,9	49,7	55,6	62,7	70,3	kW
	EER	3,09	3,07	3,04	3,05	3,00	3,02	3,03	3,03	3,01	3,00	2,99	3,06	3,04	W/W
A7C50	Heating capacity	47,8	57,5	62,6	73,8	82,3	98,7	109	124	135	153	171	195	214	kW
	Power input	15,3	18,5	20,3	23,7	26,9	32,6	35,0	40,0	43,7	50,5	55,4	63,4	69,8	kW
	COP	3,12	3,11	3,08	3,11	3,06	3,03	3,11	3,10	3,09	3,03	3,09	3,08	3,07	W/W
A7C45	Heating capacity	52,6	63,3	68,9	81,2	90,5	109	120	136	149	168	188	215	235	kW
	Power input	13,5	16,3	17,9	20,9	23,7	28,7	30,8	35,2	38,5	44,4	48,8	55,8	61,4	kW
	COP	3,90	3,88	3,85	3,89	3,82	3,80	3,90	3,86	3,87	3,78	3,85	3,85	3,83	W/W

The values are referred to units without options and accessories.  
**EER** (Energy Efficiency Ratio) = ratio of the total cooling capacity to the effective power input of the unit  
**COP** (Coefficient Of Performance) = ratio of the total heating capacity to the effective power input of the unit

**A35E5** = source : air in 35°C d.b. / plant : evaporation temperature (dew point) 5°C - superheating 5°C  
**A7C50** = source : air in 7°C d.b. 6°C w.b. / plant : condensation temperature (dew point) 50°C - subcooling 5°C  
**A7C45** = source : air in 7°C d.b. 6°C w.b. / plant : condensation temperature (dew point) 45°C - subcooling 5°C

### Acoustic performances

Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
Sound power level	88	88	89	89	89	91	91	91	96	97	97	98	98	dB(A)
Sound pressure level at 1 meter	70	70	71	71	71	73	73	73	78	79	79	80	80	dB(A)
Sound pressure level at 5 meters	61	61	62	62	62	65	65	65	69	70	70	71	71	dB(A)
Sound pressure level at 10 meters	56	56	57	57	57	59	59	59	64	65	65	66	66	dB(A)
Low noise setting up (AS)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
Sound power level	85	85	86	86	86	88	88	88	93	94	94	95	95	dB(A)
Sound pressure level at 1 meter	67	67	68	68	68	70	70	70	75	76	76	77	77	dB(A)
Sound pressure level at 5 meters	58	58	59	59	59	62	62	62	66	67	67	68	68	dB(A)
Sound pressure level at 10 meters	53	53	54	54	54	56	56	56	61	62	62	63	63	dB(A)

The values are referred to units without options and accessories.

The acoustic performances are referred to units operating in cooling mode at nominal conditions A35E5.

Unit placed in free field on reflecting surface (directional factor equal to 2).

The sound power level is measured according to ISO 9614 standard.

The sound pressure level is calculated according to ISO 3744 and is referred to a distance of 1/5/10 metres from the external surface of the unit.

### Technical data

Unit	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
Power supply	400 - 3 - 50													V-ph-Hz
Compressor type	scroll													-
N° compressors / N° refrigerant circuits	2 / 1													n°
Source side heat exchanger type	finned coil													-
Fans type	centrifugal													-
N° fans	1			2			3			4			n°	
Liquid line connection	7/8"			1 1/8"			1 3/8"			-			-	
Gas line connection	1 5/8"			2 1/8"			-			-			-	

### Electrical data

Standard unit	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
<b>FLA</b> - Full load current at maximum tolerated conditions	43,2	48,8	56,7	62,1	73,0	80,5	95,0	103	117	145	158	188	199	A
<b>FLI</b> - Full load power input at maximum tolerated conditions	25,2	28,0	33,0	35,6	40,8	47,3	58,3	63,8	72,8	88,7	96,3	113	120	kW
<b>MIC</b> - Maximum instantaneous current of the unit	137	147	152	177	216	269	264	272	278	370	383	384	420	A
<b>MIC SS</b> - Maximum instantaneous current of the unit with soft starter options	92,4	99,4	105	121	147	179	180	188	194	222	268	277	301	A

### Operative range

Temperature	Unit type	Cooling		Heating		
		min	max	min	max	
Outdoor air inlet temperature	SR, SP	-10*	48	-10	40*	°C
Evaporating temperature (dew point)	SR, SP	1	20	-	-	°C
Condensing temperature (dew point)	SP	-	-	35	60	°C
Water outlet temperature (VD)	SR, SP	30	70	30	70	(°C)
Water outlet temperature (VR)	SR	30	55	-	-	(°C)

\* with fans modulating control option (condensation / evaporation control)

### Aeraulic performance

Unit	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
Available static head	150	150	150	150	150	150	150	150	150	150	150	150	150	Pa

## VD and VR versions

These units allow to recover the heating power, otherwise wasted on air, through an additional heat exchanger. The **Desuperheater Version (VD)** allow the hot water production at temperatures between 30 and 70°C through the partial heat recovery of the condensation heat.

The **Total Recovery Version (VR)** allows the cold water production and, at the same time, the hot water production at temperatures between 30 and 55°C through the total recovery of the condensation heat.

### Desupeheater Version (VD) - NOMINAL performances

SR	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5 - W45	Cooling capacity	50,9	60,1	65,8	77,3	88,4	102	115	126	142	161	177	202	225	kW
	Total power input	15,1	17,9	19,8	23,0	26,8	31,1	34,4	38,2	43,1	49,3	54,7	61,8	68,4	kW
	EER	3,37	3,36	3,32	3,36	3,30	3,28	3,34	3,30	3,29	3,27	3,24	3,27	3,29	W/W
	Heating recovery capacity	14,8	17,4	19,1	22,4	25,6	29,6	33,2	36,5	41,0	46,6	51,5	58,6	65,1	kW
	Water flow rate recovery	0,70	0,83	0,91	1,07	1,22	1,42	1,59	1,74	1,96	2,23	2,46	2,80	3,11	l/s
	Water pressure drop recovery	7	11	13	17	22	18	22	12	16	20	24	20	24	kPa
SP	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5 - W45	Cooling capacity	49,2	59,4	64,6	75,5	83,2	100	111	124	137	155	173	200	222	kW
	Total power input	14,9	18,1	19,8	23,1	25,9	30,9	34,2	38,1	42,6	48,2	54,0	60,8	68,1	kW
	EER	3,30	3,28	3,26	3,27	3,21	3,24	3,25	3,25	3,22	3,22	3,20	3,29	3,26	W/W
	Heating recovery capacity	14,3	17,2	18,7	21,9	24,1	29,1	32,2	35,8	39,7	45,0	50,2	58,0	64,5	kW
	Water flow rate recovery	0,68	0,82	0,89	1,05	1,15	1,39	1,54	1,71	1,90	2,15	2,40	2,77	3,08	l/s
	Water pressure drop recovery	7	11	12	17	20	17	20	12	15	19	23	20	23	kPa

### Total Recovery Version (VR) - NOMINAL performances

SR	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
A35E5 - W45	Cooling capacity	50,9	60,1	65,8	77,3	88,4	102	115	126	142	161	177	202	225	kW
	Total power input	14,9	17,7	19,6	22,7	26,5	30,8	34,1	37,8	42,7	48,8	54,1	61,2	67,7	kW
	EER	3,42	3,40	3,36	3,41	3,34	3,31	3,37	3,33	3,33	3,30	3,27	3,30	3,32	W/W
	Heating recovery capacity	65,0	76,9	84,5	98,9	114	131	147	162	182	207	229	260	289	kW
	Water flow rate recovery	3,11	3,67	4,04	4,73	5,43	6,28	7,02	7,73	8,70	9,89	10,9	12,4	13,8	l/s
	Water pressure drop recovery	41	57	48	53	59	58	62	56	61	61	62	65	65	kPa

Data declared according to EN 14511. The values are referred to units without options and accessories.

**EER** (Energy Efficiency Ratio) = ratio of the total cooling capacity to the effective power input of the unit

**HRE** (Heat Recovery Efficiency) = ratio of the total capacity of the system (heating plus cooling capacity) to the effective power input

**A35W7 - W45** = source : air in 35°C d.b. / plant : water in 12°C out 7°C / Recovery : water in 40°C out 45°C

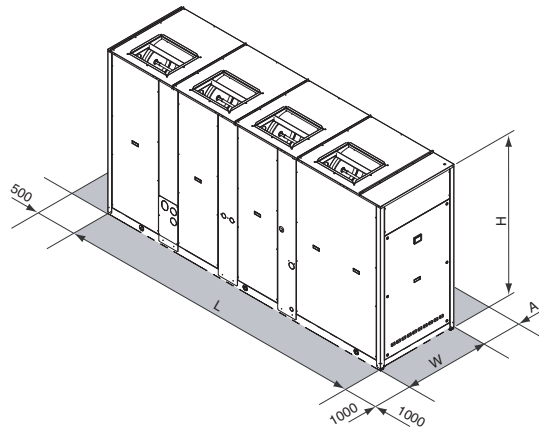
## CONTROL SYSTEM

The units are equipped with a controller designed to ensure energy saving and unit efficiency. Available functions :

- Adaptive function
- Dynamic defrost
- Sound management
- Climatic control in heating and in cooling mode
- Economy function
- Demand limit
- Integrative heating
- Remote stand by
- Remote cooling-heating



## DIMENSIONS - MINIMUM OPERATING AREA - WEIGHT



	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	200.2	
L			2501				3343			3343		4097		mm
W			954				1104			1104		1104		mm
H			1930				1793			2193		2193		mm
A			1600							2000				mm
Operating maximum weight	1078	1082	1102	1143	1168	1684	1765	1825	2000	2042	2094	2423	2467	kg

# > CGC HE

## CONDENSING UNITS FOR INDOOR INSTALLATION



### Available range

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 (reversible on the refrigerant side)

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 A High temperature level

### Unit description

This series of condensing units satisfies the cooling and heating requirements of residential plants of medium size.

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The refrigerant circuit, contained in a compartment protected from the air flow to simplify the maintenance operations, is equipped with scroll compressors mounted on

damper supports, thermostatic expansion valve (only for SP), reverse cycle valve, double inlet centrifugal fans with forward curved blades, finned coil made of copper pipes and aluminium louvered fins with subcooling section. The circuit is protected by a safety gas valve, high and low pressure switches.

All the units can be equipped with variable speed fans control that allows the units to operate with low outdoor temperatures in cooling and high outdoor temperature in heating and permits to reduce noise emissions in such operating conditions.

The low noise acoustic setting up (AS) is obtained, starting from the base setting up (AB), mounting sound jackets on the compressors and the technical compartment is clad with soundproofing material of suitable thickness.

All the units are supplied with a management and control electrical panel containing general switch, phase presence and correct sequence controller, microprocessor controller with display and all the other electrical components with IP54 minimum protection degree.

All the units are accurately built and individually tested in the factory.

All the units are supplied with refrigerant charge inside.

Only electric and refrigerant connections (between condensing unit and remote heat exchanger) are required for installation.

### Options

#### Compressor starting

- standard (contactors)
- soft starter

#### Fans control

- on-off control
- modulating control INVERTER (condensation / evaporation control)

#### Compressor power factor correction Electrical load protection

- fuses
- thermal magnetic circuit breakers

#### Coil condensate tray

(standard for SP)

### Accessories

Rubber vibration dampers

Spring vibration dampers

Coil protection grilles

Remote control

Modbus serial interface on RS485

Programmer clock

Phase sequence and voltage controller

Low temperature kit (standard for SP)

High and low pressure gauges

High temperature thermostat

Coil shut off valves

Outdoor air sensor

Remote plate heat exchanger

Liquid line

**NOMINAL performances**

SR	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5	Cooling capacity	51,2	60,7	68,5	76,7	90,5	103,0	116	131	145	166	188	214	kW
	Power input	14,8	17,0	19,7	21,8	27,0	30,9	34,3	38,3	42,3	49,5	54,8	63,9	kW
	EER	3,46	3,57	3,48	3,52	3,35	3,33	3,38	3,42	3,43	3,35	3,43	3,35	W/W
SR	Low noise setting up (AS)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5	Cooling capacity	51,2	60,7	68,5	76,7	90,5	103,0	116	131	145	166	188	214	kW
	Power input	14,8	17,0	19,7	21,8	27,0	30,9	34,3	38,3	42,3	49,5	54,8	63,9	kW
	EER	3,46	3,57	3,48	3,52	3,35	3,33	3,38	3,42	3,43	3,35	3,43	3,35	W/W
SP	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5	Cooling capacity	49,1	58,2	65,9	73,7	88,2	100,2	112	125	139	160	180	207	kW
	Power input	14,5	16,9	19,3	21,5	26,5	30,0	33,6	37,5	41,4	48,1	53,8	62,2	kW
	EER	3,39	3,44	3,41	3,43	3,33	3,34	3,33	3,33	3,36	3,33	3,35	3,33	W/W
A7C50	Heating capacity	49,2	58,0	65,6	73,6	87,9	99,8	112	125	140	160	180	206	kW
	Power input	15,3	17,8	20,4	22,9	27,4	31,0	34,8	39,0	43,5	50,0	55,9	64,2	kW
	COP	3,22	3,26	3,22	3,21	3,21	3,22	3,22	3,21	3,22	3,20	3,22	3,21	W/W
A7C45	Heating capacity	54,1	63,8	72,2	81,0	96,7	110	123	138	154	176	198	227	kW
	Power input	13,5	15,7	18,0	20,2	24,1	27,3	30,6	34,3	38,3	44,0	49,2	56,5	kW
	COP	4,01	4,06	4,01	4,01	4,01	4,03	4,02	4,02	4,02	4,00	4,02	4,02	W/W
SP	Low noise setting up (AS)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5	Cooling capacity	49,1	58,2	65,9	73,7	88,2	100,2	112	125	139	160	180	207	kW
	Power input	14,5	16,9	19,3	21,5	26,5	30,0	33,6	37,5	41,4	48,1	53,8	62,2	kW
	EER	3,39	3,44	3,41	3,43	3,33	3,34	3,33	3,33	3,36	3,33	3,35	3,33	W/W
A7C50	Heating capacity	49,2	58,0	65,6	73,6	87,9	99,8	112	125	140	160	180	206	kW
	Power input	15,3	17,8	20,4	22,9	27,4	31,0	34,8	39,0	43,5	50,0	55,9	64,2	kW
	COP	3,22	3,26	3,22	3,21	3,21	3,22	3,22	3,21	3,22	3,20	3,22	3,21	W/W
A7C45	Heating capacity	54,1	63,8	72,2	81,0	96,7	110	123	138	154	176	198	227	kW
	Power input	13,5	15,7	18,0	20,2	24,1	27,3	30,6	34,3	38,3	44,0	49,2	56,5	kW
	COP	4,01	4,06	4,01	4,01	4,01	4,03	4,02	4,02	4,02	4,00	4,02	4,02	W/W

The values are referred to units without options and accessories.  
**EER** (Energy Efficiency Ratio) = ratio of the total cooling capacity to the effective power input of the unit  
**COP** (Coefficient Of Performance) = ratio of the total heating capacity to the effective power input of the unit

**A35E5** = source : air in 35°C d.b. / plant : evaporation temperature (dew point) 5°C - superheating 5°C

**A7C50** = source : air in 7°C d.b. 6°C w.b. / plant : condensation temperature (dew point) 50°C - subcooling 5°C

**A7C45** = source : air in 7°C d.b. 6°C w.b. / plant : condensation temperature (dew point) 45°C - subcooling 5°C

**Acoustic performances**

Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
Sound power level	88	88	89	89	91	91	91	96	96	97	97	98	dB(A)
Sound pressure level at 1 meter	70	70	71	71	73	73	73	78	78	79	79	80	dB(A)
Sound pressure level at 5 meters	61	61	62	62	65	65	65	69	69	70	70	71	dB(A)
Sound pressure level at 10 meters	56	56	57	57	59	59	59	64	64	65	65	66	dB(A)
Low noise setting up (AS)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
Sound power level	85	85	86	86	88	88	88	93	93	94	94	95	dB(A)
Sound pressure level at 1 meter	67	67	68	68	70	70	70	75	75	76	76	77	dB(A)
Sound pressure level at 5 meters	58	58	59	59	62	62	62	66	66	67	67	68	dB(A)
Sound pressure level at 10 meters	53	53	54	54	56	56	56	61	61	62	62	63	dB(A)

The values are referred to units without options and accessories.

The acoustic performances are referred to units operating in cooling mode at nominal conditions A35E5.

Unit placed in free field on reflecting surface (directional factor equal to 2).

The sound power level is measured according to ISO 9614 standard.

The sound pressure level is calculated according to ISO 3744 and is referred to a distance of 1/5/10 metres from the external surface of the unit.

**Technical data**

Unit	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
Power supply	400 - 3 - 50												V-ph-Hz
Compressor type	scroll												-
N° compressors / N° refrigerant circuits	2 / 1												n°
Source side heat exchanger type	finned coil												-
Fans type	centrifugal												-
N° fans	1			2			3			4			n°
Liquid line connection	7/8"			1 1/8"			1 3/8"			-			-
Gas line connection	1 5/8"			2 1/8"			-			-			-

**Electrical data**

Standard unit	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
<b>FLA</b> - Full load current at maximum tolerated conditions	43,2	48,8	56,7	62,1	74,9	80,5	95,0	109	117	145	169	188	A
<b>FLI</b> - Full load power input at maximum tolerated conditions	25,2	28,0	33,0	35,6	41,9	47,3	58,3	67,3	72,8	88,7	103	113	kW
<b>MIC</b> - Maximum instantaneous current of the unit	137	147	152	177	218	269	264	278	278	370	394	384	A
<b>MIC SS</b> - Maximum instantaneous current of the unit with soft starter options	92,4	99,4	105	121	148	179	180	194	194	222	279	277	A

**Operative range**

Temperature	Unit type	Cooling		Heating		
		min	max	min	max	
Outdoor air inlet temperature	SR, SP	-10*	48	-15	40*	°C
Evaporating temperature (dew point)	SR, SP	1	20	-	-	°C
Condensing temperature (dew point)	SP	-	-	35	60	°C
Water outlet temperature (VD)	SR, SP	30	70	30	70	(°C)
Water outlet temperature (VR)	SR	30	55	-	-	(°C)

\* with fans modulating control option (condensation / evaporation control)

**Aeraulic performance**

Unit	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
Available static head	150	150	150	150	150	150	150	150	150	150	150	150	Pa

**VD AND VR VERSIONS**

These units allow to recover the heating power, otherwise wasted on air, through an additional heat exchanger.

The **Desuperheater Version (VD)** allow the hot water production at temperatures between 30 and 70°C through the partial heat recovery of the condensation heat.

The **Total Recovery Version (VR)** allows the cold water production and, at the same time, the hot water production at temperatures between 30 and 55°C through the total recovery of the condensation heat.

**Desuperheater Version (VD) - NOMINAL performances**

SR	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5 - W45	Cooling capacity	53,2	63,1	71,2	79,7	94,1	107	120	136	151	173	195	222	kW
	Total power input	14,4	16,5	19,1	21,1	26,2	30,0	33,2	37,2	41,1	48,0	53,2	62,0	kW
	<b>EER</b>	<b>3,69</b>	<b>3,82</b>	<b>3,73</b>	<b>3,78</b>	<b>3,59</b>	<b>3,57</b>	<b>3,61</b>	<b>3,66</b>	<b>3,67</b>	<b>3,60</b>	<b>3,67</b>	<b>3,58</b>	W/W
	Heating recovery capacity	15,4	18,3	20,7	23,1	27,3	31,1	34,9	39,4	43,6	50,2	56,7	64,5	kW
	Water flow rate recovery	0,74	0,87	0,99	1,10	1,30	1,48	1,67	1,88	2,09	2,40	2,71	3,08	l/s
	Water pressure drop recovery	8	12	15	18	25	20	24	14	18	24	29	24	kPa
SP	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5 - W45	Cooling capacity	51,1	60,5	68,5	76,6	91,8	104	117	130	145	166	188	216	kW
	Total power input	14,1	16,4	18,7	20,8	25,7	29,1	32,6	36,4	40,2	46,6	52,2	60,3	kW
	<b>EER</b>	<b>3,62</b>	<b>3,69</b>	<b>3,66</b>	<b>3,68</b>	<b>3,57</b>	<b>3,57</b>	<b>3,59</b>	<b>3,57</b>	<b>3,61</b>	<b>3,56</b>	<b>3,60</b>	<b>3,58</b>	W/W
	Heating recovery capacity	14,8	17,6	19,9	22,2	26,6	30,2	33,9	37,8	42,0	48,2	54,4	62,5	kW
	Water flow rate recovery	0,71	0,84	0,95	1,06	1,27	1,44	1,62	1,81	2,01	2,30	2,60	2,99	l/s
	Water pressure drop recovery	7	11	14	17	24	19	22	13	17	22	27	23	kPa

**Total Recovery Version (VR) - NOMINAL performances**

SR	Base setting up (AB)	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2	
A35E5 - W45	Cooling capacity	53,2	63,1	71,2	79,7	94,1	107	120	136	151	173	195	222	kW
	Total power input	14,2	16,4	18,9	20,9	25,9	29,7	32,9	36,8	40,6	47,5	52,6	61,4	kW
	<b>EER</b>	<b>3,75</b>	<b>3,85</b>	<b>3,77</b>	<b>3,81</b>	<b>3,63</b>	<b>3,60</b>	<b>3,65</b>	<b>3,70</b>	<b>3,72</b>	<b>3,64</b>	<b>3,71</b>	<b>3,62</b>	W/W
	Heating recovery capacity	66,8	78,7	89,1	99,6	119	135	151	171	189	218	245	281	kW
	Water flow rate recovery	3,19	3,76	4,26	4,76	5,68	6,47	7,23	8,16	9,03	10,42	11,7	13,4	l/s
	Water pressure drop recovery	43	60	54	53	64	61	65	63	66	67	71	76	kPa

Data declared according to **EN 14511**. The values are referred to units without options and accessories.  
**EER** (Energy Efficiency Ratio) = ratio of the total cooling capacity to the effective power input of the unit  
**HRE** (Heat Recovery Efficiency) = ratio of the total capacity of the system (heating plus cooling capacity) to the effective power input  
**A35W7 - W45** = source : air in 35°C d.b. / plant : water in 12°C out 7°C / Recovery : water in 40°C out 45°C

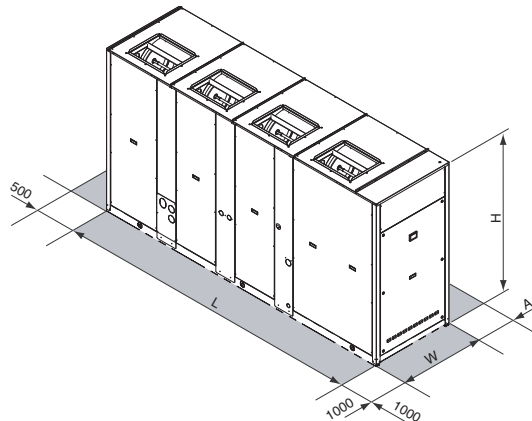
**CONTROL SYSTEM**

The units are equipped with a controller designed to ensure energy saving and unit efficiency. Available functions :

- Adaptive function
- Dynamic defrost
- Sound management
- Climatic control in heating and in cooling mode
- Economy function
- Demand limit
- Integrative heating
- Remote stand by
- Remote cooling-heating



**DIMENSIONS - MINIMUM OPERATING AREA - WEIGHT**



	40.2	50.2	60.2	70.2	80.2	90.2	100.2	115.2	130.2	145.2	160.2	180.2		
L		2501				3343			3343			4097		mm
W		954				1104			1104			1104		mm
H		1930				1793			2193			2193		mm
A		1600							2000					mm
Operating maximum weight	1121	1125	1146	1189	1670	1751	1836	2051	2080	2124	2478	2520	kg	