



# 2018

Product overview





## Project air conditioning

### Evolution goes on

During these years, the activity of **EMICON** has been developed with the production of liquid chillers for air conditioning and industrial applications, close control units, heat pumps, roof top and, thanks to its considerable production flexibility, special tailor-made units.

Presently, due to the great experience achieved in the market and the professionalism of its engineers, **EMICON** is a leader company between the international manufacturers, able to give adequate and effective answers to all requirements of civil and industrial air conditioning.

## The environment

### Efficiency and sustainability

The research of the environmental quality represents for **EMICON AC** a basic choice for all the technological applications realized each time. On this purpose, environmental compatibility means efficiency optimization, mainly facing two topical subjects: the sound level and the ozone problems.

It is the awareness of environmental issues who moved **EMICON AC** to persevere with research, development and certification, to add, to its catalogue, units that use new refrigerants with low environmental impact such as HFO 1234ze with very high efficiency and low GWP (= 6) or the ecological gas R290 (GWP = 3).

## Emicon Labs

### New climatic Chambers

Different type of units are carefully checked in available laboratories and climatic chambers:

- Laboratory for the performances check of air and water cooled close control units.
- Laboratory for the performances check of water cooled chillers and heat pumps and air cooled water chillers.
- Climatic chamber provided with a double circuit with chilled and hot water for testing air and water cooled chillers and heat pumps, with desuperheater or total heat recovery, 4-pipe and split units.
- Two areas for acoustic tests; one inside room for close control and small size units and a wider outside room for measurements on units up to 1.500 kW.

Thanks to some webcams, after agreements with the sales department, it's possible to remotely attend the standard factory test carried out on all units before their departure from our facilities.

## Environmental Policy

### Research & quality

In order to assure the end customer satisfaction, keeping a leadership position on the market and at the same time aiming to a continuous improvement of the company internal working conditions and of its environmental performances, **EMICON** intends to promote in its organization the culture of Quality and Environment Protection and it is therefore extremely important the pollution preventing and the constant respect of the environmental regulations.

**EMICON** is perfectly aware that the market requests are the driving motor of the company activity and that an organization methodically managed in its processes represents a topical factor for the customer satisfaction. In order to achieve such results, **EMICON** believes it is important to develop and to improve its Quality and Environmental Service as the basic tool for supporting all the company processes. On this purpose, it is really important for **EMICON**, for its own success, to aim to the training, the involvement and the motivations of the whole staff working in a healthy environment and with the necessary facilities for a correct execution of their own working activities.



## Emicon Innovation and Comfort

**EMICON** Innovation and Comfort ,which is an **EMICON** AC SPA directly controlled subsidiary, designs, develops, produces and supplies air cooled chillers mainly intended for residential air conditioning market.







**UNIVERSITY OF TURIN - HUMANISTIC FACULTY**  
 2012  
 Cooling Capacity KW 3.800  
 Air Cooled Chillers Model N° 4 Units RAH 912 U Ka – SP Screw



**VODAFONE MADRID**  
 2013/2014  
 Cooling Capacity KW 1.032  
 Close Control N° 68 Units ED.X



**EMIRATES IDENTITY AUTHORITY**  
 2014  
 Cooling Capacity KW 516  
 Close Control Unit Model N° 6 Units ED.X 1462 KA Scroll



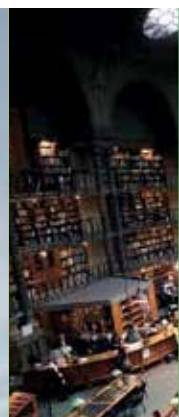
**TOUR D2 PARIS**  
 2012  
 Cooling Capacity KW 475  
 Close Control Unit N° 8 Units UW



**ISOZAKI MILAN TOWER**  
 2014/2016  
 Cooling Capacity KW 1.310  
 Close Control Unit Model N°7 Units ED.X + N°49 Units EDH



**OSTRODA ARENA**  
 2012  
 Cooling Capacity KW 1.668  
 Air Cooled Chillers N°5 Units RAE + Evaporating Units + Condensing Units



**BIBLIOTHEQUE NATIONALE**  
 2010  
 Cooling Capacity KW 1.032  
 Close Control N°65 Units ED.X



# Reference book



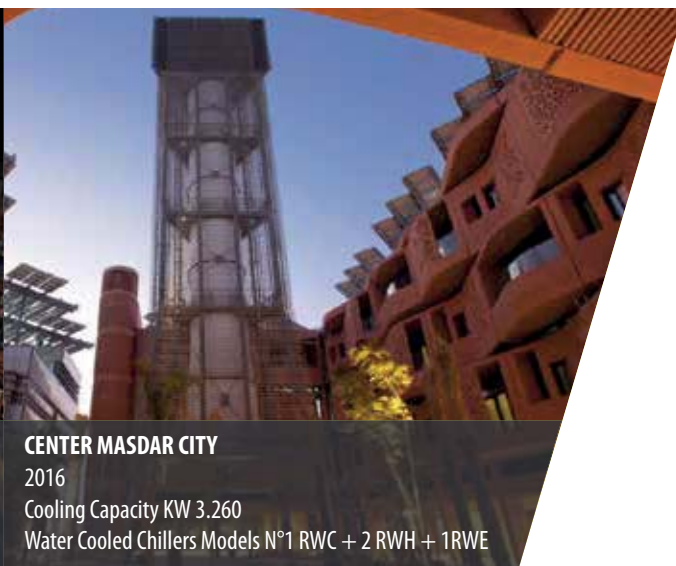
**PARK HOSPITAL ISTANBUL**  
2016  
Cooling Capacity KW 2.700  
Air Cooled Chillers Model N° 2 Units RAH 1102 T Ka Screw



**VW – WOLFSBURG**  
2009/2016  
Cooling Capacity KW 1.700  
Air Cooled Chillers Model N°2 Units RWE 4792 Kc Scroll - Water Cooled Chillers Model N°3 Units RAH 3602 FU Ka Screw



**ATIONALE DE FRANCE – PARIS**  
Cooling Capacity KW 2.266  
Water Cooled Chillers Model N°1 RWC + 2 RWH + 1RWE



**CENTER MASDAR CITY**  
2016  
Cooling Capacity KW 3.260  
Water Cooled Chillers Models N°1 RWC + 2 RWH + 1RWE

# ED Kc

## Direct expansion close control units with remote air condensers

Cooling capacity from 6,7 to 138 kW

### Versions

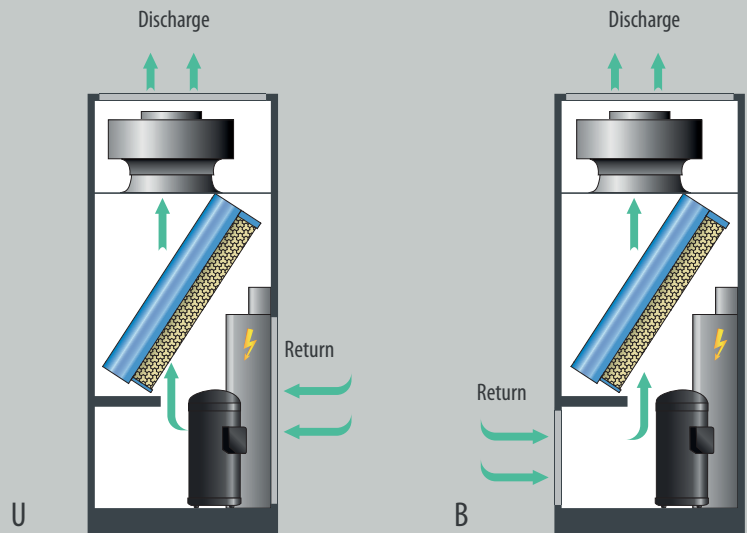
- ED.X** With remote air condenser
- ED.H** With water cooled condenser on board
- ED.E** With remote air condensing unit

### Configurations

- U** Front air return, upflow air discharge
- V** Bottom air return, upflow air discharge
- B** Back air return, upflow air discharge
- D** Top air return, downflow air discharge



Available configurations, related to the air return and discharge



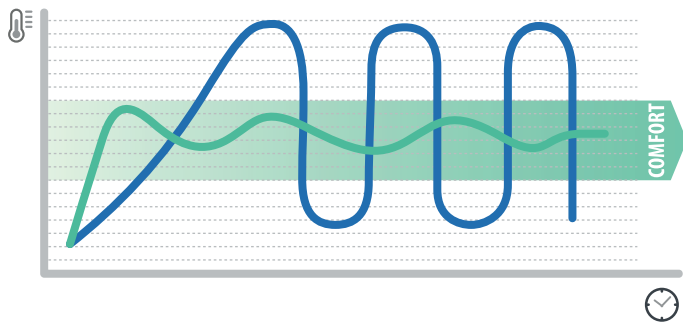
ED.X D		71	101	161	271	421	591	771	991	282	422	642	852	1122	1462
Total Cooling Capacity (24°C - 50% U.R.)	kW	6,7	9,3	15,8	24,8	39,5	55,6	72,5	94,1	24,6	40,2	61,1	80,1	104,2	138,4
Sensible Cooling Capacity (24°C - 50% U.R.)	kW	6,1	8,8	14,6	22,5	34,4	48,0	60,9	87,0	22,8	31,2	50,2	71,0	82,2	106,2
Input power	kW	1,7	2,2	3,8	5,5	9,5	12,3	16,2	21,3	5,8	9,7	14,5	19,1	25,2	32,5
SHR	%	91	94	92	91	87	86	84	92	93	78	82	89	79	77
EER	kW/kW	3,20	3,52	3,48	3,73	3,48	3,56	3,62	3,51	3,28	3,49	3,43	3,49	3,36	3,45
Air flow	m³/h	2.330	2.330	3.500	5.610	7.880	13.820	16.550	21.600	7.800	7.880	13.820	16.550	21.600	27.200



## Direct expansion close control units with Inverter regulation and remote air condenser

Cooling capacity from 5,5 to 29,2 kW

### INVERTER technology



### Operation limits

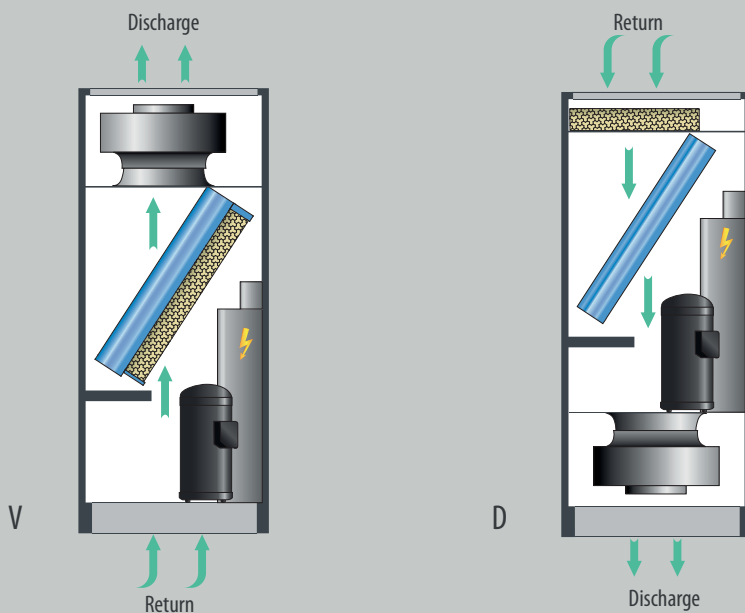
Ambient temperature from 18 to 35°C

### Features

- BLDC Compressors (inverter)
- Energy saving
- Wide range of options



ED.X VS Kc



ED.X VS		71	81	101	131	161	211	231	271	281	331	371	421
Total Cooling Capacity (24°C - 50% U.R.)	kW	5,5	8,0	10,6	12,5	16,4	20,5	23,1	26,5	26,2	30,5	32,8	39,0
Sensible Cooling Capacity (24°C - 50% U.R.)	kW	5,5	7,8	9,6	12,2	14,8	19,5	22,0	23,7	25,7	27,5	30,5	33,2
Input power	kW	1,2	2,0	2,3	2,8	3,7	5,4	4,9	6,1	6,1	7,1	7,2	9,3
SHR	%	100	97	90	97	90	95	95	89	98	90	92	85
EER	kW/kW	3,79	3,51	4,05	3,83	3,89	3,35	4,02	3,81	3,67	3,74	3,92	4,19
Air flow	m³h	2.580	2.580	2.580	3.800	3.800	6.050	6.050	6.050	8.150	8.150	8.150	8.150

# ED.F.Kc

## Direct expansion close control units and free cooling coil

Cooling capacity from 20,8 to 93,3 kW

### Versions

**ED.X.F** Free-cooling unit with remote air condenser

**ED.H.F** Free-cooling unit with water cooled condenser

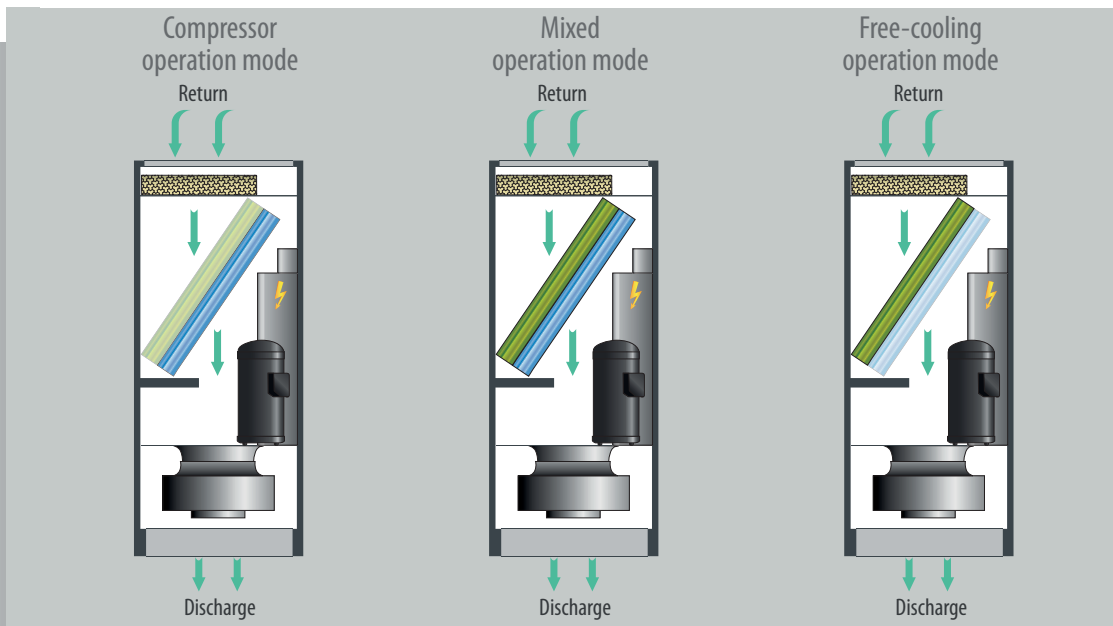


### Configurations

- U** Front air return, upflow air discharge
- V** Bottom air return, upflow air discharge
- B** Back air return, upflow air discharge
- D** Top air return, downflow air discharge

### Operation limits

Ambient temperature from 19 to 35°C



ED.X.F		211	331	501	771	921	332	502	772	922	1442	1462
Total Cooling Capacity (24°C - 50% U.R.)	kW	20,8	30,1	47,8	70,1	80,9	30,6	49,2	69,1	80,9	96,6	93,3
Sensible Cooling Capacity (24°C - 50% U.R.)	kW	20,2	28,3	47,8	65,2	76,6	28,5	49,2	64,8	76,6	94,3	92,9
Input power	kW	4,8	7,3	10,6	16,2	19,1	7,6	11,1	16,8	19,1	22,1	21,3
SHR	%	97	94	100	93	95	93	100	94	95	98	100
EER	kW/kW	3,50	3,31	3,39	3,45	3,31	3,26	3,36	3,31	3,31	3,32	3,30
Air flow	m³/h	5.200	5.200	13.300	16.200	16.200	7.100	13.300	16.200	19.300	24.300	24.300





## Direct expansion or chilled water close control units with free-cooling system for telecom centres

Cooling capacity from 6,5 to 23,0 kW

### Packaged version

- ED.P SF.E displacement air diffusion
- ED.P SF.U upflow
- ED.P SF.D downflow

### Split version with remote condenser

- ED.A SF.E displacement air diffusion
- ED.A SF.U upflow
- ED.A SF.D downflow

### Chilled water version

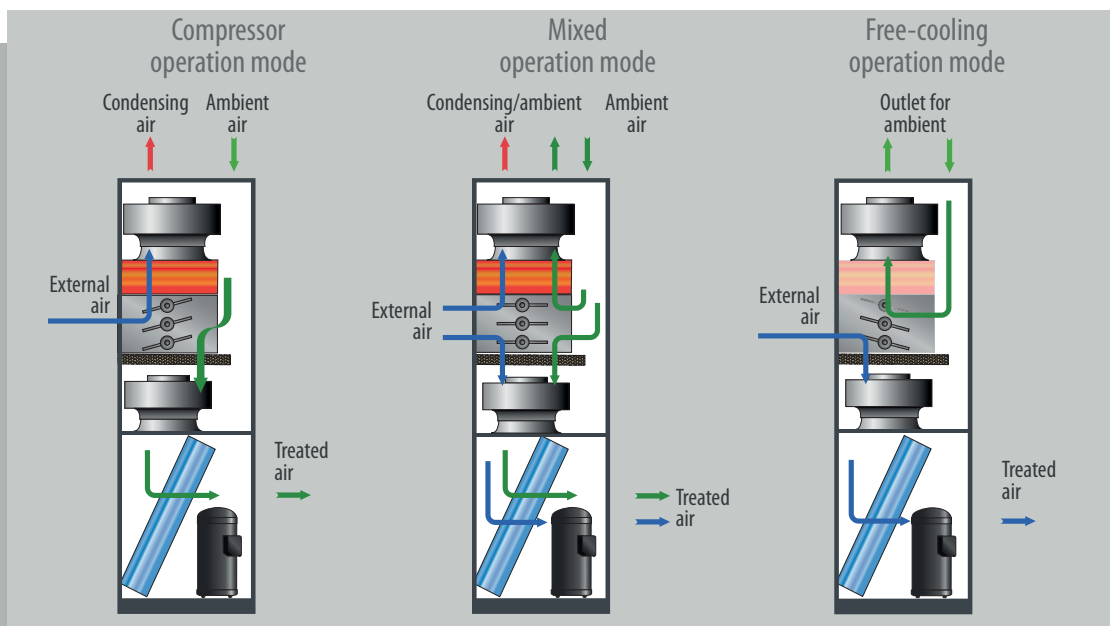
- UV SF.E displacement air diffusion
- UV SF.U upflow
- UV SF.D downflow

### Operation limits

Ambient temperature from 20°C to 37°C



ED SF Kc  
UV SF



ED.P		51	71	131	161	191	261
Total Cooling Capacity (27°C - 45% U.R.)	kW	6,5	8,8	11,9	14,5	18,5	22,3
Sensible Cooling Capacity (27°C - 45% U.R.)	kW	6,1	8,3	10,7	13,7	17,1	20,1
Input power	kW	2,0	3,0	4,1	5,2	6,1	8,0
SHR	%	93	94	89	94	92	90
EER	kW/kW	3,25	2,93	2,90	2,79	3,03	2,79
Air flow	m <sup>3</sup> h	1.600	2.200	2.400	3.000	3.400	3.900

## Close control units with chilled water coil

Cooling capacity from 5 to 210,5 kW

# UW

### Versions

- UW** Close control units with chilled water coil
- UWL** Close control units with chilled water coil **SLIM** version

### Configurations

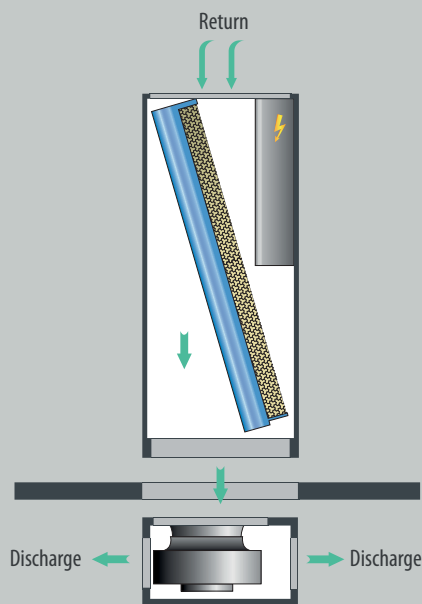
- U** Front air return, up flow air discharge (only UW)
- V** Bottom air return, upflow air discharge (only UW)
- D** Top air return, downflow air discharge

### Operation limits

Ambient temperature from 18 to 35°C



SLIM  
Version



Only in D configuration,  
available in two working modes:

**HP High performance:** setting of the fans, maximizing the heat exchange through the hydrophilically treated coil.

**ES Energy saving:** setting of the fans, maximizing their energy saving.

UW D/ UWL D		UW70	UW180	UW290	UW490	UW670	UW1240	UW1400	UW1810	UW2250	UWL860	UWL1700	UWL1900	UWL2400	UWL3000
Total Cooling Capacity (24°C - 50% U.R.)	kW	5,0	11,0	18,1	32,3	44,7	83,7	95,7	122,4	154,2	60,8	112,3	130,3	168,1	210,5
Sensible Cooling Capacity (24°C - 50% U.R.)	kW	5,0	8,9	14,6	25,7	36,1	67,4	76,0	98,3	124,2	48,9	89,8	103,9	136,1	169,2
Input power	m <sup>3</sup> h	0,8	1,9	3,1	5,5	7,7	14,4	16,4	21,0	26,5	10,4	19,3	22,4	28,8	36,1
SHR	%	100	81	81	80	81	81	79	80	81	80	80	80	81	80
Air flow	m <sup>3</sup> h	2.030	2.030	3.280	5.700	8.200	15.200	16.700	22.050	28.000	11.000	20.000	23.000	31.000	38.000



**Close control units INROW**  
**Direct expansion or cooled water**

Cooling capacity from 10 to 25 kw



**Configurations**

Hot aisle / cold aisle  
 Internal recirculation inside the rack cabinet

**Features**

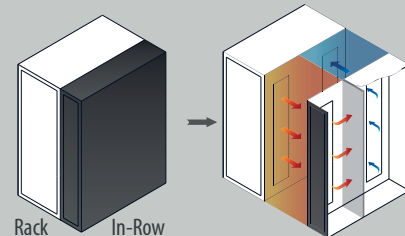
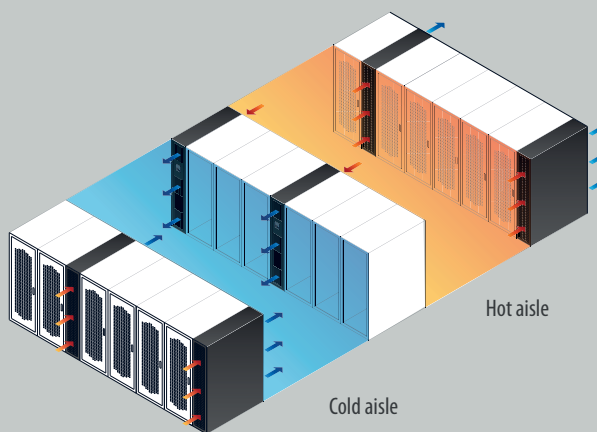
- Compressor with inverter technology – Brushles type - vers. Twin Rotary
- Precision temperature control with electronic PLC
- Condensation / evaporation fans of the EC type
- Electronic expansion valve
- High energy efficiency
- Remote connections for alarm management
- Acoustic attenuation of the optimized type

IR Kc



Hot aisle / cold aisle Mode

Internal recirculation inside rack cabinet mode



IR		10	15	20	25
Total cooling capacity (External Temperature 35°C - Internal Temperature 35°C - 30% U.R.)	kW	10,2	15,3	21,0	24,0
Sensible cooling capacity (External Temperature 35°C - Internal Temperature 35°C - 30% U.R.)	kW	9,2	13,8	18,9	21,6
Maximum input power	kW	4,45	6,60	9,00	11,00
SHR	%	90	90	90	90
Nominal air flow	m <sup>3</sup> h	2.500	3.200	4.000	4.500
Width	mm	300	300	300	300



## Air cooled chiller with scroll compressors and axial fans

Cooling capacity from 5 to 588,1 kW

# RAE Kc



### Versions

- RAE** Standard
- RAE S** Low noise
- RAE U** Ultra low noise
- RAE F** Standard with free cooling
- RAE FS** Low noise with free cooling
- RAE MC** Standard with microchannel coil aluminum/aluminum
- RAE MC S** Low noise with microchannel coil aluminum/aluminum
- RAE MC HE** High efficiency with microchannel coil aluminum/aluminum

Version with copper/aluminum coil arranged as an inverted "M" (RAE)

### Operation limits

#### Standard unit

Air: from 10 to 42°C; Water (out from evaporator): from 5 to 15°C

#### Free Cooling unit

Air: from 0 to 42°C; Water (out from evaporator): from 5 to 15°C (from -5 to 15°C with glycol)

RAE		901	951	1101	1201	1401	1602	1902	2402	2802	3102	3512	4002	4602	5102	5502	5902
Cooling capacity	kW	87,0	95,0	108,2	121,7	139,1	153,3	194,1	240,9	277,6	312,1	355,5	399,5	465,4	501,4	551,8	588,1
Absorbed power	kW	31,1	36,0	40,1	44,6	50,6	54,2	71,2	89,4	103,2	114,2	131,3	144,2	171,3	187,5	198,4	215,6
EER	kW/kW	2,8	2,64	2,7	2,73	2,75	2,83	2,73	2,69	2,69	2,73	2,76	2,77	2,72	2,67	2,78	2,73
Water flow	m <sup>3</sup> h	15,0	16,4	18,7	21,0	24,0	26,4	33,5	41,5	47,9	53,8	61,3	68,9	80,2	86,4	95,1	101,4
Pressure drop	kPa	26,1	30,5	29,7	30,0	31,1	31,0	48,0	58,0	56,0	71,0	58,5	53,5	47,5	55,0	62,0	73,0
Fans	n°	3	3	3	4	4	2	3	3	4	4	5	5	8	8	8	10
Sound pressure	dB(A)	65	66	68	69	69	69	69	70	71	71	71	72	72	72	72	73

Nominal condition referred to: air 35 °C - chilled water 7/12 °C



## Air cooled chillers with screw compressors and axial fans

Cooling capacity from 387 to 1220 kW



# RAH Ka RAH Kh

### Versions

<b>RAH</b>	Standard
<b>RAH S</b>	Low noise
<b>RAH F</b>	Standard with free cooling
<b>ERAH MC</b>	With microchannel coil aluminum/aluminum
<b>ERAH MC HE</b>	High efficiency with microchannel coil aluminum/aluminum

Version with copper/aluminum coil arranged as an inverted "M" (RAH)



### Operation limits

#### Standard unit

Air: from 15 to 45°C - Water (out from evaporator): from 5 to 15°C

#### Low noise unit:

Air: from 15 to 40°C - Water (out from evaporator): from 5 to 15°C

#### Free Cooling unit:

Air: from 0 to 42°C - Water (out from evaporator): from 5 to 15°C (from -5 to 15°C with glycol)

#### MC Unit:

Air: from 15 to 48°C - Water (out from evaporator): from 5 to 15°C

RAH		431	521	602	702	802	922	1032	1102	1202
Cooling capacity	kW	401,4	518,6	579,4	672,7	768,2	883,2	1015,6	1102,4	1187,0
Absorbed power	kW	117,8	156,6	181,2	217,4	247,2	289,2	321,8	359,2	395,6
EER	kW/kW	3,41	3,31	3,20	3,09	3,11	3,05	3,16	3,07	3,00
Water flow	m³h	69,0	89,1	99,6	115,7	132,3	152,0	174,6	189,5	204,1
Pressure drop	kPa	30	32	31	27	28	30	35	41	41
Fans	n°	8	8	10	10	10	12	14	16	16
Sound pressure	dB(A)	78	80	80	80	80	81	82	82	82

Nominal condition referred to: air 35°C - chilled water 12/7°C.

## Air cooled chillers with brushless oil-free compressors and axial fans

Cooling capacity from 359 to 1398 kW

# RAC Ka



### Versions

- RAC** Standard
- RAC U** Ultra low noise
- RAC HE** High-efficiency
- RAC FS** Low noise with Free Cooling

### Operation limits

- AIR: from -8°C to +42°C
- AIR: from -20°C to +42°C with EC brushless fans (option)
- WATER (out from evaporator): from 4 to 25°C

### Features

- External installation with very low sound level
- Cooling circuit with no lubricating oil entrainment
- High capacities and compact design
- Frequency controlled capacity regulation with a remarkable precision on the adjustment of the discharge temperature
- Slight inrush current
- Maximum efficiency with remarkable ESEER values



RAC		351	411	451	512	562	602	642	682	752	812	853	893	983	1083	1203	1283	1404
Cooling capacity	kW	359	410	445	510	560	604	640	680	750	810	850	892	984	1084	1190	1280	1398
Absorbed power	kW	92,3	113,0	121,0	135,8	151,0	159,2	161,4	173,4	195,0	220,6	221,1	237,9	245,1	271,8	308,7	350,1	367,6
EER	kW/kW	3,89	3,63	3,68	3,76	3,71	3,79	3,97	3,92	3,85	3,67	3,84	3,75	4,01	3,99	3,85	3,66	3,80
Water flow	m <sup>3</sup> /h	61,7	70,5	76,5	87,7	96,3	103,9	110,1	117,0	129,0	139,3	146,2	153,4	169,2	186,4	204,7	220,2	240,5
Pressure drop	kPa	26	21	24	60	68	52	59	65	64	73	53	58	69	61	73	68	81
Fans	n°	8	8	8	8	10	10	10	10	12	12	14	14	14	16	20	20	20
Sound pressure	dB(A)	71	71	71	72	74	74	74	74	74	74	74	74	74	76	75	75	75

Nominal condition referred to: air 35°C - chilled water 7/12°C





## Water cooled water chillers

Potenza frigorifera da 5 A 2104 kW

### RWE Kc - RWE Ka - With SCROLL compressors (from 5 to 475 kW)

#### Versions

**RWE Ka** with ecological refrigerant charge R134a

**RWE Kc** with ecological refrigerant charge R410A

#### Operation limits

EVAPORATOR (OUT): from 5 to 15°C

CONDENSER (OUT): from 30 to 55°C



RW Kc  
RW Ka

### RWH Ka - with SCREW compressors (from 280 to 1228 kW)

**RWH Ka** with ecological refrigerant charge R134a

#### Operation limits

(standard units)

EVAPORATOR (out): from 5 to 15°C

CONDENSER (out): from 30 to 58°C



### RWC Ka - With brushless oil-free compressors (da 282 a 2104 kW)

**RWC Ka** with ecological refrigerant charge R134a

#### Operation limits

(standard units)

EVAPORATOR (out): from 5 to 20°C

CONDENSER (out): from 25°C to 50°C



RWH Ka		281	321	361	421	452	491	562	551	601	642	732	852	992	1102	1202
Cooling capacity	kW	279,9	321,1	365,5	424,4	448,6	489,0	558,3	551,4	601,5	654,8	731,4	848,3	994,3	1111,3	1227,6
Absorbed power	kW	56,4	64,7	74,2	86,2	94,4	97,4	111,9	113,3	124,1	129,9	148,1	170,3	192,8	226,2	245,8
EER	kW/kW	4,96	4,96	4,93	4,92	4,75	5,02	4,99	4,87	4,85	4,97	4,94	4,98	5,16	4,91	4,99
Water flow	m³h	48,0	55,1	62,7	72,8	77,0	83,9	95,8	94,6	103,2	110,8	125,5	145,6	170,7	190,7	210,7
Pressure drop	kPa	15,6	18,0	22,3	29,9	22,7	19,9	32,1	23,9	28,8	38,7	30,8	36,5	43,3	50,1	36,3
Sound pressure	dB(A)	75,5	75,7	75,6	75,7	75,4	75,4	78,8	75,7	77,8	77,6	77,8	77,8	77,7	78,1	78,8

Nominal condition referred to: water 30/35 °C - chilled water 7/12 °C

## Air cooled water chillers

with semi-hermetic reciprocating compressors and axial fans, with natural refrigerant

Cooling capacity from 56 to 426 kW

# RAS Kp



### Versions

- RAS** Standard
- RAS S** Low noise
- RAS F** Standard with free cooling

### Operation limits

#### Standard unit

AIR: from 10°C to +40°C WATER (out from evaporator): from 5 to 15°C.

#### Free Cooling unit:

AIR: from 0°C to +40°C WATER: from 5 to 15°C (from -5 to +15°C with glycol).

### Features

- Liquid solution chillers.
- Outdoor installation.
- ATEX Semi-hermetic reciprocating compressors.
- Axial fans.
- Natural refrigerant units with no environmental impact.
- Maximum efficiency, minimum sound emissions.
- Wide range of options.

RAS		601	801	1301	1601	1701	2002	2302	2502	2802	3002	3302	3502	4304
Cooling capacity	kW	57,7	79,2	114,1	150,5	171,1	190,9	225,3	244,5	276,3	300,6	326,1	342,6	426,5
Absorbed power	kW	15,6	21,9	32,1	46,0	51,5	55,0	65,3	75,5	86,5	93,4	99,8	103,1	133,3
EER	kW/kW	3,70	3,62	3,55	3,27	3,32	3,47	3,45	3,24	3,19	3,22	3,27	3,32	3,20
Water flow	m³h	9,9	13,7	19,6	25,8	29,4	32,8	38,7	42,0	47,5	51,7	56,0	58,9	73,3
Pressure drop	kPa	56	33	46	57	56	32	35	36	38	39	36	36	35
Fans	n°	1	1	2	2	2	2	3	3	3	3	4	4	4
Sound pressure	dB(A)	68	70	72	74	75	74	73	75	76	76	76	76	76

Nominal condition referred to: air 35°C - water 7/12°C



## Air and water cooled chiller with brushless oil-free compressors and axial fans

RAC Kh: Cooling capacity from 320 to 1258 kW • RWC Kh: Cooling capacity from 250 to 1890 kW



RAC Kh  
RWC Kh



### Versions

- RAC** Standard
- RACU** Ultra low noise
- RACHE** High efficiency
- RACFS** Ultra low noise with Free Cooling

### Operation limits RAC Kh

AIR: from -8°C to +42°C with fans regulated by inverter  
 AIR: from -20°C to +42°C with EC brushless fans (option)  
 WATER (out from evaporator): from 4 to 25°C

### Operation limits RAC Kh

EVAPORATOR: Max water temperature inlet 25°C  
 CONDENSER: Min. /max. inlet water temperature 20°C / 50°C

### Operation limit for free-cooling version: RAC FS Kh

AIR: from -8°C a +42°C with fans regulated by inverter  
 AIR: from -20°C a +42°C with EC brushless fans (option)  
 WATER (out from evaporator): from 4 to 25°C

### Features

- External installation with very low sound level
- Cooling circuit with no lubricating oil entrainment
- High capacities and compact design
- Frequency controlled capacity regulation with a remarkable precision on the adjustment of the discharge temperature
- Slight inrush current
- Maximum efficiency with remarkable ESEER values



RAC Kh		512	562	602	853	893		
Cooling capacity (air 35°C - water 7/12°C)	kW	460	504	544	765	803		
Absorbed power (air 35°C - water 7/12°C)	kW	135,8	151,0	159,2	221,1	237,9		
EER	kW/kW	3,39	3,34	3,42	3,46	3,38		
Sound pressure	dB(A)	72	74	74	74	74		
RWC Kh		281	502	562	602	702	863	923
Cooling capacity (water 30/35°C - water 7/12°C)	kW	254,0	452,4	502,2	544,4	634,6	776,4	808,2
Absorbed power (water 30/35°C - water 7/12°C)	kW	52,6	91,4	103,8	116,6	127,0	161,7	177,9
EER	kW/kW	4,83	4,95	4,84	4,67	5,00	4,80	4,66
Sound pressure	dB(A)	75	78	78	78	79	80	80



## Air cooled heat pumps with SCROLL or SCREW compressors and axial fans

PAE Kc Heating capacity from 99 to 782 kW · PAH Ka Heating capacity from 197 to 778 kW

PAE Kc  
PAH Ka

### Versions

PAE Kc Standard  
PAE S Kc Low noise

### Operation limits

#### Summer mode:

AIR: from 10°C to +42°C WATER (out from evaporator): from 5 to 15°C

#### Winter mode:

AIR: from 20°C to -8°C WATER: (out from evaporator): max 40°C

AIR: from 20°C to -5°C WATER: (out from evaporator): max 45°C

AIR: from 20°C to 0°C WATER: (out from evaporator): max 50°C



### Versions

PAH Ka Standard  
PAH S Ka Low noise  
PAH U Ka Ultra low noise

### Operation limits

#### Summer mode:

AIR: from 10°C to +42°C WATER: (out from evaporator): from 5 to 15°C

#### Winter mode:

AIR: from 20°C to -8°C WATER: (out from evaporator): max 40°C

AIR: from 20°C to -5°C WATER: (out from evaporator): max 45°C

AIR: from 20°C to 0°C WATER: (out from evaporator): max 50°C



PAE Kc		801	1002	1302	1502	1702	2002	2302	2502	2902	3202	3402	3602	3802	4102	4902	5202	5602	6102
Heating capacity	kW	99,3	132,8	162,4	187,9	213,4	262,9	293,7	326,9	373,3	411,0	433,9	462,9	486,1	504,4	619,9	684,5	720,3	782,2
COP	kW/kW	3,5	3,1	3,2	3,4	3,4	3,4	3,4	3,4	3,5	3,5	3,4	3,5	3,5	3,6	3,5	3,5	3,5	3,6
Sound pressure	dB(A)	75	78	78	79	79	80	80	80	82	81	82	83	83	84	82	81	84	84
PAH Ka						431	521	602	702	802	922	1032	1102						
Cooling capacity	kW					463,8	595,0	678,6	795,6	901,3	1050,2	1189,1	1297,4						
COP	kW/kW					4,17	4,08	3,95	4,00	4,06	4,06	4,07	3,90						
Sound pressure	dB(A)					78	80	80	80	80	81	81	82						

Nominal condition referred to: air 10°C - water 40/45°C.



## Packaged air to air and air to water roof-top units with scroll compressors

Cooling capacity from 64 to 406 kW



# ROOF TOP K

### Versions

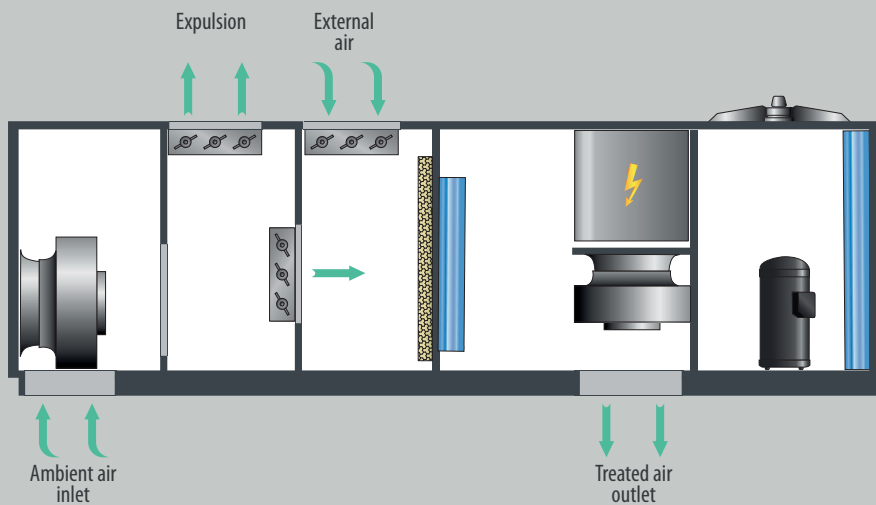
- RTR** Only cooling
- RTR W** Only cooling, water condensed
  
- RTP** Heat pump version heating/cooling mode
- RTP W** Heat pump version heating/cooling mode, water condensed

### Configurations

- 2S** Mixing of re-circulating and external air (2 dampers)
- 3S** Mixing of re-circulating and fresh air and exhaust of the exceeding internal air through a suitable fan (3 dampers)
- TR** All re-circulating air (no mixing between re-circulating and external air)
- TES** Possible mixing with heat recovery and free-cooling (not available for all units)



3S Configuration



RTR 2S		572	692	842	812	992	1102	1302	1292	1472	1662	1992	2322	2492	2802	3102	3662
Total cooling capacity *	kW	57,4	68,9	83,6	81,4	99,4	111,0	130,0	129,0	140,0	166,0	199,0	229,0	249,0	286,0	310,0	366,0
Sensible cooling capacity *	kW	40,8	51,6	62,8	58,2	73,6	79,1	92,7	91,9	105,7	129,6	146,5	168,6	178,5	202,7	219,3	253,0
Total absorbed power	kW	16,3	18,6	24,4	22,6	29,2	35,0	38,0	39,4	44,6	48,8	61,0	71,1	80,8	86,0	93,2	117,0
Air flow	m <sup>3</sup> h	11000	13200	15400	17600	19800	20900	22000	27500	30800	33000	38500	41000	44000	49500	55000	66000
Available pressure	kPa	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sound pressure	dB(A)	73	74	75	76	76	76	77	76	77	78	78	79	80	82	82	84

\* Ambient air temperature 27°C / 50% HR - External air 35°C



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