



**Multi-purpose indoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent water circuits. These units are able to satisfy the demand for hot and cold water simultaneously through a system that does not require seasonal switching. Each circuit works with a semi-hermetic screw compressor using R513A, and three tube nest heat exchangers, a cold exchanger on the user side shared by both circuits that acts as an evaporator in the production of cold water, a heat exchanger on the user side that works as a condenser in the production of hot water, and a source side exchanger that works as either condenser or evaporator as required by the loads.**



## Refrigerant

## Versions

- Basic

## Features

### UNIQUE PROPOSAL

Unit designed to satisfy the cold and the hot side requirements simultaneously, for 4-pipe systems without any particular operation mode setting

### ENERGY SAVING

Energy saving guaranteed by the advanced operation's logic. The best operation mode is set completely automatically and independently by the unit's controller, in order to minimize the absorbed energy whatever the cooling and/or heating demand might be

### WIDE OPERATING RANGE

Supply of hot water in use up to 60°C, offering maximum versatility with respect to different plant engineering solutions

### INTEGRATED CONDENSATION'S CONTROL

A 2 way valve is supplied as standard for the condensing pressure control. For all the applications in which a constant waterflow through the condenser is needed, a 3-way valve option is also available under request.

## Accessories

- Integral acoustical enclosure (type base or plus)
- Electronic expansion valve
- Several devices for condensation's control
- Set-up for remote connectivity with ModBus/Echelon protocol cards

## Control



### Electronic control W3000TE

W3000TE controller feature a large format keyboard with wide LCD display in order to ensure an easy access to the machine setup and a complete view of unit's status. The assessment and intervention on the unit is managed through a multi-level menu, with selectable user's language. The led icons immediately show the operating status of various components.

As alternative, the innovative KIPLink user interface allows one to operate on the unit directly from the smartphone or tablet. The regulation operates on both water circuits featuring the step-wise regulation referred to the return water temperature with proportional logic. This allows to satisfy simultaneously the different requests of both cooling and heating, with no need of mode setting. Complete alarm management system is available, with the "black-box" and the alarm history display functions. Optional proprietary devices adjust the resources in systems made of several units. Consumption metering and performance measurement are available and supervision can be easily developed via proprietary devices or the integration in third party systems by means of the most common protocols as ModBus, Bacnet, Bacnet-over-IP, LonWorks.

Compatibility with the remote keyboard (up to 8 units). The programmable timer manages a weekly schedule organised into time bands (up to 10 daily time bands associated with different operating set points) to optimise unit performance by minimising power consumption during periods of inactivity.

Proprietary self-adaptive logic for the defrosting features the monitoring of several operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

ERACS2-WQ-G05		0802	1002	1102	1302	1502	
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	
<b>PERFORMANCE</b>							
<b>COOLING ONLY (GROSS VALUE)</b>							
Cooling capacity	(1)	kW	189,4	234,2	268,0	317,9	363,4
Total power input	(1)	kW	37,24	46,82	52,74	62,16	71,58
EER	(1)	kW/kW	5,091	5,004	5,085	5,111	5,075
<b>COOLING ONLY (EN14511 VALUE)</b>							
Cooling capacity	(1)(2)	kW	182,0	224,9	256,9	305,5	348,9
EER	(1)(2)	kW/kW	4,420	4,360	4,350	4,430	4,430
<b>HEATING ONLY (GROSS VALUE)</b>							
Total heating capacity	(3)	kW	207,2	257,0	293,8	347,1	396,3
Total power input	(3)	kW	47,65	59,29	68,60	79,47	90,51
COP	(3)	kW/kW	4,344	4,334	4,283	4,366	4,379
<b>HEATING ONLY (EN14511 VALUE)</b>							
Total heating capacity	(2)(3)	kW	207,9	258,0	295,2	348,5	397,8
COP	(2)(3)	kW/kW	4,180	4,150	4,060	4,160	4,200
<b>COOLING WITH TOTAL HEAT RECOVERY</b>							
Cooling capacity	(4)	kW	162,4	201,3	229,3	272,4	311,2
Total power input	(4)	kW	47,65	59,29	68,60	79,47	90,51
Recovery heat exchanger capacity	(4)	kW	207,2	257,0	293,8	347,1	396,3
TER		kW/kW	7,746	7,728	7,625	7,794	7,817
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
<b>Ambient refrigeration</b>							
Prated,c	(12)	kW	-	-	-	-	349
SEER	(12)(13)		-	-	-	-	5,10
Performance ηs	(12)(14)	%	-	-	-	-	196
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>							
PDesign	(5)	kW	251	311	355	421	-
SCOP	(5)(15)		5,48	5,45	5,09	5,37	-
Performance ηs	(5)(16)	%	211	210	195	207	-
Seasonal efficiency class	(17)		-	-	-	-	-
PDesign	(6)	kW	222	277	318	372	-
SCOP	(6)(15)		4,27	4,39	3,91	4,19	-
Performance ηs	(6)(16)	%	163	168	149	160	-
Seasonal efficiency class	(18)		-	-	-	-	-
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	8,732	10,79	12,33	14,66	16,73
Pressure drop	(1)	kPa	25,7	32,5	43,4	37,6	33,9
<b>HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	10,58	13,11	14,96	17,74	20,27
Pressure drop	(1)	kPa	37,7	47,9	63,8	55,1	49,7
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>							
Water flow	(4)	l/s	10,00	12,41	14,18	16,76	19,13
Pressure drop	(4)	kPa	33,7	42,9	57,3	49,1	44,3
<b>HEAT EXCHANGER SOURCE SIDE IN HEATING</b>							
Water flow	(3)	l/s	5,548	6,877	7,835	9,308	10,63
Pressure drop	(3)	kPa	10,4	13,2	17,5	15,2	13,7
<b>REFRIGERANT CIRCUIT</b>							
Compressors nr.		N°	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2
Refrigerant charge		kg	42,0	48,0	55,0	61,0	79,0
<b>NOISE LEVEL</b>							
Sound Pressure	(7)	dB(A)	62	63	65	65	65
Sound power level in cooling	(8)(9)	dB(A)	94	95	97	97	97
Sound power level in heating	(8)(10)	dB(A)	94	95	97	97	0
<b>SIZE AND WEIGHT</b>							
A	(11)	mm	3680	3680	3680	3680	3680
B	(11)	mm	1170	1170	1170	1170	1170
H	(11)	mm	1950	1950	1950	1950	1950
Operating weight	(11)	kg	2420	2470	2880	3580	3690

#### Notes

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 14°C/30°C.
- Values in compliance with EN14511
- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger water (in/out) 14°C/7°C.
- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C/45°C.
- Parameter calculated for LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]
- Parameter calculated for MEDIUM TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]
- Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Sound power on the basis of measurements made in compliance with ISO 9614.
- Sound power level in cooling, indoors.
- Sound power level in heating, indoors.
- Unit in standard configuration/execution, without optional accessories.
- Parameter calculated according to [REGULATION (EU) N. 2016/2281]
- Seasonal energy efficiency ratio
- Seasonal space cooling energy efficiency
- Seasonal coefficient of performance
- Seasonal space heating energy efficiency
- Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]
- Energy efficiency class referred to MEDIUM TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.

Certified data in EUROVENT

# ERACS2-WQ-G05

INTEGRA unit for 4-pipe systems, water source

0802 - 1502 189,4-363,4 kW

## Dimensional drawing

