



AURAS HOLDING

EST 1996

# INDUSTRIAL HEAT PUMP WITH REFRIGERANT



## HIGH PERFORMANCE INDUSTRIAL HEAT PUMPS

### THE SOLUTION FOR YOU IF YOU WANT TO REPLACE YOUR:

- gas heating
- domestic hot water produced using gas
- demand for hot water for your technology, produced using gas

### Unmissable advantages:

- CO<sub>2</sub> refrigerant
- **energy efficient** - it converts heat energy extracted from the air into heating energy. (For example, reverse refrigerator)
- **wide power range** (8/14/40/75/120 kw-os)
- it can produce up to **90 °C**
- **environmentally friendly** - zero emissions
- **can be** immediately **integrated** into existing systems
- **3 years** comprehensive warranty
- **free survey** and call-out

### ADVANTAGES OF HIGH PRESSURE CO<sub>2</sub> TECHNOLOGY:

- **Climate-neutral** operation, as opposed to heat pumps charged with special air-conditioning gases that replace freon, since the CO<sub>2</sub> charge gas extracted from the air is the heat transfer medium. Under the EU's planned directive, all polluting "a/c gases" will be phased out by 2030.
- Thanks to the high-pressure CO<sub>2</sub> technology developed during 6 years of research and development, the COP value (air-to-water mode, 3.8 on average) is extremely high, resulting in energy-efficient operation.
- It is unique in its ability to produce continuous hot water supply up to 90°C in ambient temperatures between -25°C and 43°C, 24 hours a day. This means that heating circuits disconnected from district heating can be connected without any special modifications.

- **0 m<sup>3</sup> GAS CONSUMPTION!** The heating and domestic hot water system can be made independent of the gas supply.
- The high quality of the raw materials used as a requirement for the high pressure (120 bar) system ensures high reliability and long term trouble-free operation.
- Heat pumps can be in series, so that power demand higher than the output of individual units can be easily met. The individual units can be disconnected during maintenance without shutting down the system (thus ensuring a continuous supply of hot water).
- The control system ensures that only the required number of heat pumps are running, thus ensuring optimal electricity consumption.

Water temperature	COP values*								
	-20°C	-15°C	-10°C	-5°C	0°C	5°C	10°C	15°C	20°C
45 °C	2.5	2.9	3.1	3.8	4.1	4.2	4.7	5.2	5.4
50 °C	2.4	2.8	2.91	3.5	3.8	4.1	4.5	5.1	5.2
55 °C	2.3	2.7	2.82	3.4	3.6	3.9	4.3	4,9	5.1
60 °C	2.2	2.5	2.71	3.2	3.5	3.8	4.2	4.5	4.7
65 °C	2.1	2.3	2.6	3.1	3.4	3.6	4	4.3	4.5
70 °C	2.07	2.2	2.5	2.8	3.2	3.5	3.8	4.2	4.4
75 °C	1.91	2.1	2.4	2.7	3	3.3	3.7	4	4.1
80 °C	1.85	1.9	2.3	2.6	2.8	3.1	3.5	3.8	3.9
85 °C	1.51	1.6	2.1	2.4	2.6	2.9	3.3	3.5	3.7
90 °C	1.42	1.5	2	2.1	2.4	2.6	3	3.1	3.3
Outside temperature	-20°C	-15°C	-10°C	-5°C	0°C	5°C	10°C	15°C	20°C

**Input water temperature: 20 °C**

\* How many units of heating energy can be produced from one unit of electrical energy. I.e.: 1 kW of electricity, for example, can produce 2.5 times more heating energy.

Don't miss this unique solution which is unique for the whole of Europe, replace your increasingly expensive gas consumption with our environmentally friendly heat pump!

# TECHNICAL DATA SHEET

## RVS8

Model		RVS	RVS8
Power consumption		A	8
Normal temperature condition	Heat Output	kW	7.8
	Hot water performance	L/H	149
	Power consumption	kW	1.7
	COP	W/W	4.58
Low temperature condition	Heat Output	kW	7
	Hot water performance	L/H	118
	Power consumption	kW	1.7
	COP	W/W	4.1
Extremely low temperature condition	Heat Output	kW	6.5
	Hot water performance	L/H	109
	Power consumption	kW	1.71
	COP	W/W	3.8
Power supply	V / Ph / Hz		230–240V / 1Ph / 50/60Hz
Heating type			Direct
Nominal outlet water temperature		°C	45
Maximum outlet water temperature		°C	90
Ambient working temperature		°C	(-)25-43
Compressor	Type		Panasonic
Circulating water pump	Brand		Yuanbaobao (DC)
	Output	kW	0.05
Type of defrosting			Bypass
Water connection pipe size		mm	DN20
Water-side heat exchanger	Type		Tube-Tube type
Air-side heat exchanger	Type		High efficiency (extruded) copper tube embedded in aluminium profile
Refrigerant	Type		R744/CO <sub>2</sub>
Charge quantity		kg	2
Controller	Brand		CAREL (Italy)
Dimensions	Width	mm	910
	Depth	mm	430
	Height	mm	920
Noise level of the device		dB(A)	42
Net Weight		kg	130
Inverter			DC

Note:

1. Standard temperature condition: ambient temperature 20 °C, water temperature: inlet 15 °C, outlet 55 °C
2. Low temperature condition: ambient temperature 7 °C, water temperature: inlet 9 °C, outlet 55 °C
3. Ultra-low temperature condition: ambient temperature -7 °C, water temperature: inlet 9 °C, outlet 55 °C

# TECHNICAL DATA SHEET

## RVS14

Model		RVS	RVS14
Power consumption		A	13.6
Normal temperature condition	Heat Output	kW	13.6
	Hot water performance	L/H	259.8
	Power consumption	kW	3
	COP	W/W	4.6
Low temperature condition	Heat Output	kW	12.1
	Hot water performance	L/H	203.9
	Power consumption	kW	3
	COP	W/W	4.1
Extremely low temperature condition	Heat Output	kW	11.2
	Hot water performance	L/H	188.8
	Power consumption	kW	2.9
	COP	W/W	3.9
Power supply	V / Ph / Hz		230-240V / 1Ph / 50/60Hz
Heating type			Direct
Nominal outlet water temperature		°C	45
Maximum outlet water temperature		°C	90
Ambient working temperature		°C	(-)25-43
Compressor	Type		Panasonic
Circulating water pump	Brand		Yuanbaobao (DC)
	Output	kW	0.08
Type of defrosting			Bypass
Water connection pipe size		mm	DN20
Water-side heat exchanger	Type		Tube-Tube type
Air-side heat exchanger	Type		High efficiency (extruded) copper tube embedded in aluminium profile
Refrigerant	Type		R744/CO <sub>2</sub>
Charge quantity		kg	4
Controller	Brand		CAREL (Italy)
Dimensions	Width	mm	910
	Depth	mm	430
	Height	mm	1000
Noise level of the device		dB(A)	45
Net Weight		kg	181
Inverter			DC

Note:

1. Standard temperature condition: ambient temperature 20 °C, water temperature: inlet 15 °C, outlet 55 °C
2. Low temperature condition: ambient temperature 7 °C, water temperature: inlet 9 °C, outlet 55 °C
3. Ultra-low temperature condition: ambient temperature -7 °C, water temperature: inlet 9 °C, outlet 55 °C

# TECHNICAL DATA SHEET

## RVS40

Model		RVS	RVS40
Power consumption		A	18
Normal temperature condition	Heat Output	kW	40
	Hot water performance	L/H	764
	Power consumption	kW	9
	COP	W/W	4.4
Low temperature condition	Heat Output	kW	35
	Hot water performance	L/H	590
	Power consumption	kW	9.4
	COP	W/W	3.7
Extremely low temperature condition	Heat Output	kW	28
	Hot water performance	L/H	472
	Power consumption	kW	10.1
	COP	W/W	2.8
Power supply	V / Ph / Hz		400V / 3Ph / 50/60Hz
Heating type			Direct
Nominal outlet water temperature	°C		45
Maximum outlet water temperature	°C		90
Ambient working temperature	°C		(-)25-43
Compressor	Type		Dorin (Italy)
Circulating water pump	Brand		Wilo (Inverter AC)
	Output	kW	0.37
Type of defrosting			Bypass
Water connection pipe size	mm		DN20
Water-side heat exchanger	Type		Tube-Tube type
Air-side heat exchanger	Type		High efficiency (extruded) copper tube embedded in aluminium profile
Refrigerant	Type		R744/CO <sub>2</sub>
Charge quantity	kg		9
Controller	Brand		CAREL (Italy)
Dimensions	Width	mm	1803
	Depth	mm	830
	Height	mm	2100
Noise level of the device		dB(A)	49
Net Weight		kg	525
Inverter			AC

Note:

1. Standard temperature condition: ambient temperature 20 °C, water temperature: inlet 15 °C, outlet 55 °C
2. Low temperature condition: ambient temperature 7 °C, water temperature: inlet 9 °C, outlet 55 °C
3. Ultra-low temperature condition: ambient temperature -7 °C, water temperature: inlet 9 °C, outlet 55 °C

# TECHNICAL DATA SHEET

## RVS75

Model		RVS	RVS75
Power consumption		A	34
Normal temperature condition	Heat Output	kW	75.5
	Hot water performance	L/H	1442
	Power consumption	kW	16.7
	COP	W/W	4.5
Low temperature condition	Heat Output	kW	64
	Hot water performance	L/H	1079
	Power consumption	kW	16.8
	COP	W/W	3.8
Extremely low temperature condition	Heat Output	kW	49.1
	Hot water performance	L/H	826
	Power consumption	kW	16.8
	COP	W/W	2.9
Power supply	V / Ph / Hz		400V / 3Ph / 50/60Hz
Heating type			Direct
Nominal outlet water temperature		°C	45
Maximum outlet water temperature		°C	90
Ambient working temperature		°C	(-)25-43
Compressor	Type		Dorin (Italy)
Circulating water pump	Brand		Wilo (Inverter AC)
	Output	kW	0.55
Type of defrosting			Bypass
Water connection pipe size		mm	DN20
Water-side heat exchanger	Type		Tube-Tube type
Air-side heat exchanger	Type		High efficiency (extruded) copper tube embedded in aluminium profile
Refrigerant	Type		R744/CO <sub>2</sub>
Charge quantity		kg	15
Controller	Brand		CAREL (Italy)
Dimensions	Width	mm	2046
	Depth	mm	1106
	Height	mm	2300
Noise level of the device		dB(A)	54
Net Weight		kg	980
Inverter			AC

Note:

1. Standard temperature condition: ambient temperature 20 °C, water temperature: inlet 15 °C, outlet 55 °C
2. Low temperature condition: ambient temperature 7 °C, water temperature: inlet 9 °C, outlet 55 °C
3. Ultra-low temperature condition: ambient temperature -7 °C, water temperature: inlet 9 °C, outlet 55 °C

# TECHNICAL DATA SHEET

## RVS120

Model		RVS	RVS120
Power consumption		A	55
Normal temperature condition	Heat Output	kW	125.4
	Hot water performance	L/H	2396
	Power consumption	kW	26.6
	COP	W/W	4.7
Low temperature condition	Heat Output	kW	95
	Hot water performance	L/H	1602
	Power consumption	kW	24.3
	COP	W/W	3.9
Extremely low temperature condition	Heat Output	kW	78
	Hot water performance	L/H	1315
	Power consumption	kW	26
	COP	W/W	3
Power supply	V / Ph / Hz		400V / 3Ph / 50/60Hz
Heating type			Direct
Nominal outlet water temperature		°C	45
Maximum outlet water temperature		°C	90
Ambient working temperature		°C	(-)25-43
Compressor	Type		Dorin (Italy)
Circulating water pump	Brand		Wilo (Inverter AC)
	Output	kW	1.1
Type of defrosting			Bypass
Water connection pipe size		mm	DN25
Water-side heat exchanger	Type		Tube-Tube type
Air-side heat exchanger	Type		High efficiency (extruded) copper tube embedded in aluminium profile
Refrigerant	Type		R744/CO <sub>2</sub>
Charge quantity		kg	22
Controller	Brand		CAREL (Italy)
Dimensions	Width	mm	2468
	Depth	mm	1368
	Height	mm	2413
Noise level of the device		dB(A)	65
Net Weight		kg	1350
Inverter			AC

Note:

- Standard temperature condition: ambient temperature 20 °C, water temperature: inlet 15 °C, outlet 55 °C
- Low temperature condition: ambient temperature 7 °C, water temperature: inlet 9 °C, outlet 55 °C
- Ultra-low temperature condition: ambient temperature -7 °C, water temperature: inlet 9 °C, outlet 55 °C