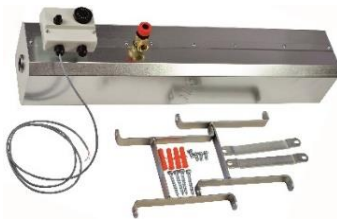


RTC 6i Air-to-water Heat Pump

Main Features	
Application	heating and cooling
Description	the heat pump gains energy from the ambient air (at outdoor temperatures as low as - 25°C), the energy is then “pumped” to a higher temp. and transferred into heating water, the flue temperature can reach up to 55°C; equipped with modulating compressor control
Working fluid	R410A (cooling circuit), water (heating circuit)
Installation	the heat pump must be installed together with a pump station and controller (code 18145), see Accessories table
Code	17735



Optional accessories



In Line Heater



Braided hose

Technical data	
Nominal output ¹	6,21 kW
Nominal power input ¹	1,53 kW
COP ¹	4,06
Steady current	7,0 A
Starting current	2,4 A
Nominal current	12A
Power supply	1/N/PE ~ 230V 50Hz
Recommended circuit breaker	B16A 1f
Ingress protection (IP)	IPX4
Max. flow temperature	55 °C
Max. temperature in heating system	100 °C
Max. heating water working pressure	3 bar
Heating water volume in heat pump	4,5 l
Min. volume of non-closable heating system	60 l
Min. flow rate through HP	680 l/h
Min. surface area of heat exchanger in storage	1 m ²
Working air temperature for heating mode	- 25 to 45°C
Working air temperature for cooling mode	0 to 55 °C
Max. flow rate	2700 m ³ /h
Number of fans	1
Fan speed	variable
Fan input power	65 W
Compressor / oil type	twin rotary / FV50S
Refrigerant	R410A (GWP 2088)
Refrigerant quantity	1,30 kg
CO ₂ equivalent ²	2,71 t
Refrigerant max. working pressure	42 bar
Connections	G 1"
Weight	66 kg

1) for temp. A+7/W35 at max. speed

2) not covered by the annual check for leaking refrigerant (EU No 517/2014)

Sound data (according to EN 12 102)	
Sound power level	57,3 dB(A)

Energy efficiency data	
(for low-temperature applications under average climatic conditions, others see the Product Fiche)	
Seasonal Energy Efficiency	176%
Energy Efficiency Class	A+++
SCOP	4,47

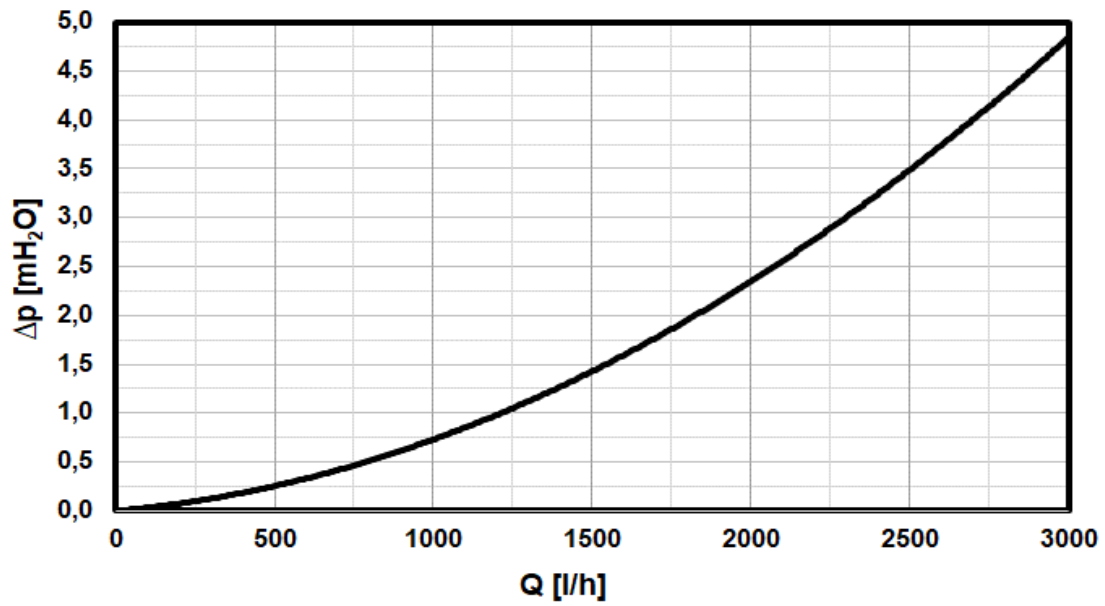
RTC 6i Air-to-water Heat Pump

Accessories	
Compensator for heat pump	part of delivery (code 16757)
CSE TC W Pump Station & IR14 RTC Controller	code 18145
In Line Heater	code 16166
Braided hose	for available variants with codes see the Catalogue

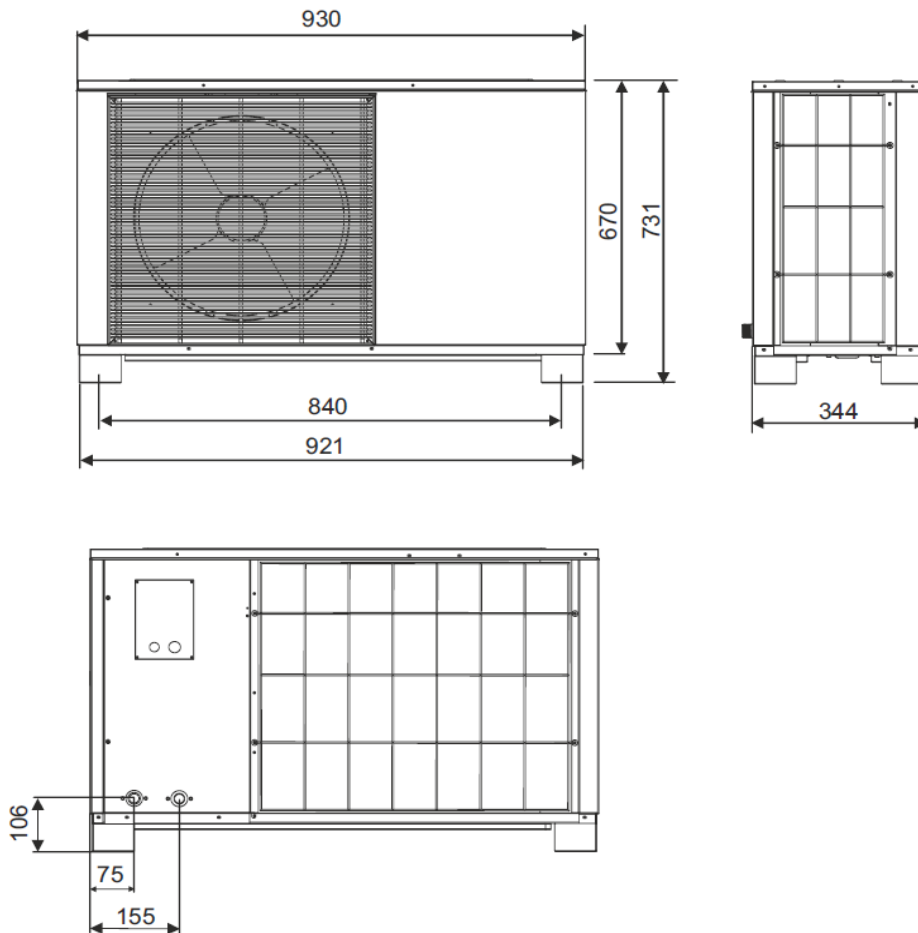
Output parameters ³					
HEATING					
RPS	Air temperature	Flow temperature	Output [kW]	Power input [kW]	COP [-]
85 Hz	7 °C	35 °C	5,42	1,44	3,77
		45 °C	5,17	1,71	3,02
		55 °C	4,89	2,04	2,40
	2 °C	35 °C	5,30	1,42	3,75
		45 °C	5,03	1,66	3,03
		55 °C	4,84	1,94	2,49
	-7 °C	35 °C	4,03	1,31	3,09
		45 °C	3,46	1,45	2,39
		55 °C	3,48	1,78	1,96
	-15 °C	35 °C	3,16	1,21	2,62
		45 °C	2,90	1,38	2,10
		55 °C	2,62	1,63	1,61
50 Hz	12 °C	35 °C	3,71	0,75	4,98
		45 °C	3,48	0,94	3,69
		55 °C	3,75	1,15	3,25
	7 °C	35 °C	3,24	0,75	4,33
		45 °C	3,10	0,93	3,35
		55 °C	2,81	1,11	2,53
	2 °C	35 °C	3,15	0,75	4,23
		45 °C	2,82	0,91	3,12
		55 °C	-	-	-
	-7 °C	35 °C	2,27	0,72	3,14
		45 °C	2,01	0,85	2,38
		55 °C	1,79	1,00	1,79
-15 °C	35 °C	1,72	0,69	2,50	
	45 °C	-	-	-	
	55 °C	-	-	-	
36 Hz	12 °C	35 °C	2,73	0,53	5,20
		45 °C	2,47	0,67	3,71
		55 °C	2,62	0,83	2,63
	7 °C	35 °C	1,60	0,50	3,25
		45 °C	-	-	-
		55 °C	1,85	0,80	2,30
	2 °C	35 °C	2,18	0,53	4,10
		45 °C	2,00	0,65	3,06
		55 °C	-	-	-
COOLING					
	Air temperature	Flow temperature	Output [kW]	Power input [kW]	EER [-]
	35 °C	23 °C	5,81	2,10	2,77
		12 °C	4,50	1,74	2,59

³ The values of output parameters are measured at the manufacturer's test lab.

Condenser pressure drop graph



Dimensions



Supplier's name *REGULUS spol. s.r.o.*
 Supplier's model identifier *RTC 6i*

Model:	RTC 6i
Air-to-water heat pump:	yes
Water-to-water heat pump:	no
Brine-to-water heat pump:	no
Low-temperature heat pump:	yes
Equipped with supplementary heater:	no
Heat pump combination heater:	no

Parameters declared for low-temperature application and average climate.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	5	kW	Seasonal space heating energy efficiency	η_s	176	%
<i>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j.</i>				<i>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T_j.</i>			
$T_j = -7\text{ °C}$	P_{dh}	4,70	kW	$T_j = -7\text{ °C}$	COP_d	2,64	-
$T_j = +2\text{ °C}$	P_{dh}	2,90	kW	$T_j = +2\text{ °C}$	COP_d	4,48	-
$T_j = +7\text{ °C}$	P_{dh}	2,20	kW	$T_j = +7\text{ °C}$	COP_d	5,88	-
$T_j = +12\text{ °C}$	P_{dh}	3,50	kW	$T_j = +12\text{ °C}$	COP_d	7,09	-
$T_j = \text{bivalent temperature}$	P_{dh}	4,70	kW	$T_j = \text{bivalent temperature}$	COP_d	2,64	-
$T_j = \text{operation limit temperature}$	P_{dh}	4,70	kW	$T_j = \text{operation limit temperature}$	COP_d	2,39	-
For air-to-water heat pumps:	P_{dh}	-	kW	For air-to-water heat pumps:	COP_d	-	-
$T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$)				$T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$)			
Bivalent temperature	T_{biv}	-7	°C	For air-to-water heat pumps:	T_{OL}	-10	°C
Cycling interval capacity for heating	P_{cvc}	-	kW	operation limit temperature			
Degradation co-efficient (**)	C_{dh}	0,99	-	Cycling interval efficiency	COP_{cvc}	-	-
<i>Power consumption in modes other than active mode</i>				Heating water operating limit temp.	W_{TOL}	55	°C
Off mode	P_{OFF}	0,009	kW	<i>Supplementary heater</i>			
Thermostat-off mode	P_{TO}	0,009	kW	Rated heat output (*)	P_{sup}	0,00	kW
Standby mode	P_{SB}	0,009	kW	Type of energy input		electric	
Crankcase heater mode	P_{CK}	0,040	kW	For air-to-water heat pumps:			
<i>Other items</i>				rated air flow rate, outdoors			
capacity control		variable		For water/brine-to-water heat pumps:			
Sound power level, indoors / outdoors	L_{WA}	57	dB	Rated brine or water flow rate, outdoor heat exchanger			

Contact details **REGULUS spol. s r.o. Do Koutů 1897/3, 143 00 Praha 4** www.regulus.eu

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the capacity for heating $sup(T_j)$.

(**) If C_{dh} is not determined by measurement then the default degradation is $C_{dh} = 0,9$.