

HUB RADIATOR MINI 6.0 - 8.0 - 11.0 - 16.0

Patented high efficiency direct exchange thermodynamic boiler
refrigerant / water to produce domestic hot water and heating for small users



ENERGY RATING



Technical and construction features

The patented HUB RADIATOR MINI represents the most innovative product on the market created to produce heating and DHW using renewable energy as a primary source of supply (100% RES). This new boiler concept is able to provide more efficiency and more energy savings to the home during the domestic heating and domestic hot water production phases. The great creativity of our technicians has allowed us to design a compact thermodynamic system with direct refrigerant / water exchange that does not burn methane, has no flame or flue and can be used with any type of system terminals. This system today represents the best possible solution to produce thermal energy by increasing the energy performance index of buildings and fully enjoys all the tax benefits provided by Italian law on the matter.

Hub Radiator Mini is composed by:

- Indoor unit with 70 liter technical water accumulator in which the refrigerant / water condensers are inserted
- immersion and the double coil DHW exchanger.
- One or two external moto-evaporators in Booster cascade that close the refrigeration circuit and transfer the heat taken from the external air to the technical water of the sequential accumulators of the system placed in the internal hanging unit.
- High efficiency inverter electronic circulation pump.
- Control panel and electronic microprocessor control.
- 1.5 kW back-up resistor.
- DHW circuit priority diverter valve.
- The indoor hanging unit presents itself as a perfect balance between compact size, energy efficiency and innovative design. This system uses one or two capacitors on board connected separately and independently to one or two external units. HUB RADIATOR MINI during the period of use uses the electronic inverter pump to circulate the heat transfer fluid both for the production of DHW and for space heating. At the same time, the diverter valve activated by a special thermostat comes into operation which gives priority to the use of the domestic hot water over the heating circuit.



PATENTED SYSTEM



RENEWABLE ENERGY



ENERGY SAVING



INVERTER CIRCULATOR



COMPACT DIMENSIONS



ECOLOGICAL GAS



PHOTOVOLTAIC COMBI



DHW WITHOUT LEGIONELLA





HEATING UP TO 58 °C



PLUG & PLAY INSTALLATION


















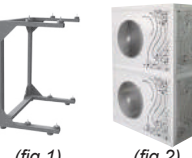
Modello	Codice	€
HUB RADIATOR MINI 6.0 Booster doppio 3.0 + 3.0	76800790	6.890,00
HUB RADIATOR MINI 8.0 Booster singolo 7.8	76800800	6.990,00
HUB RADIATOR MINI 11.0 Booster doppio 7.8 + 3.0	76800811	8.770,00
HUB RADIATOR MINI 16.0 Booster doppio 7.8 + 7.8	76800810	10.300,00

Accessories HUB RADIATOR MINI

	First mandatory start-up of 1 to 2 HR Boosters (net price)	35639901	200,00
	Command and remote control panel	mod. built-in mod. Wall	75100005 75100028
			90,00 110,00

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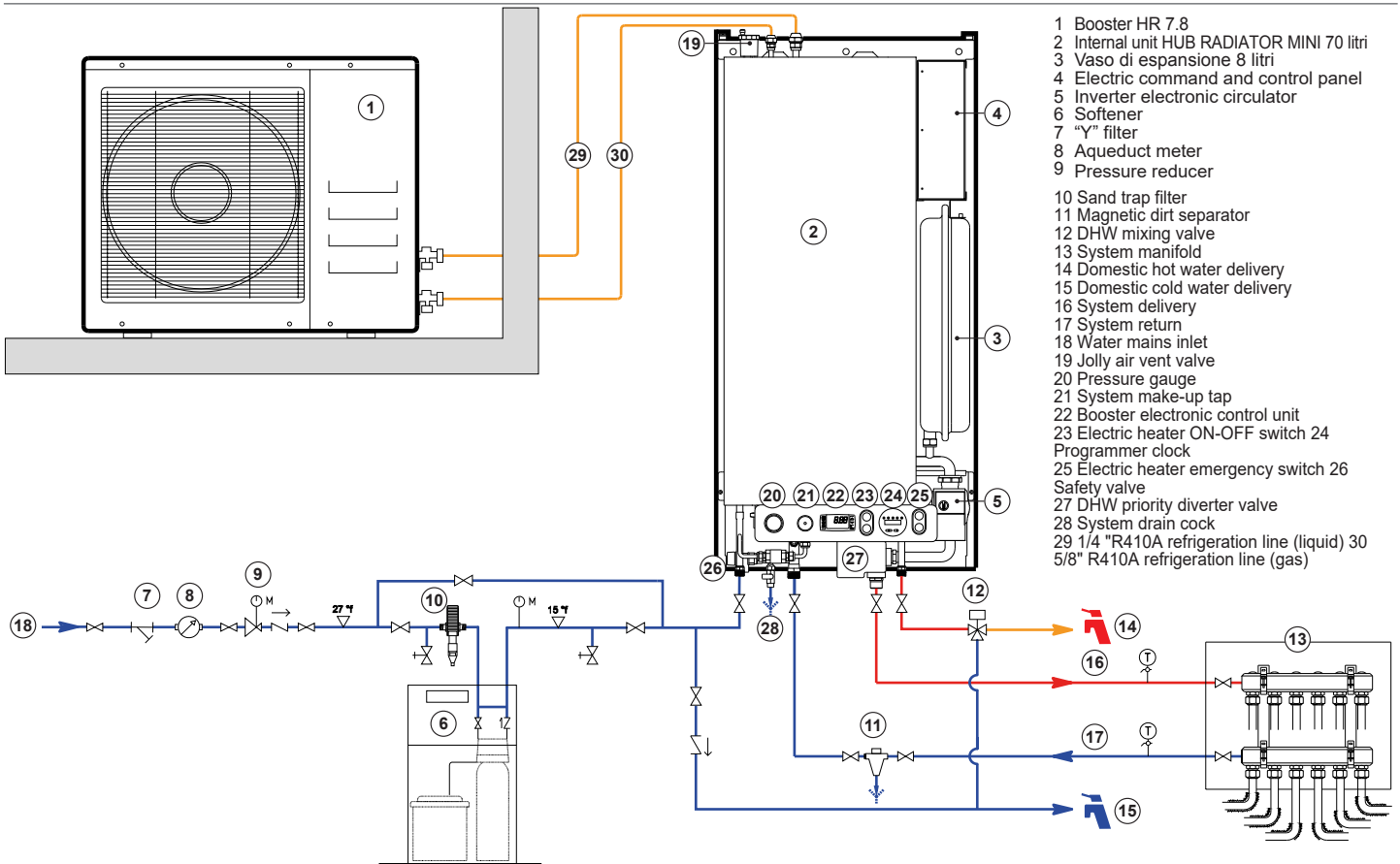
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Accessori HUB RADIATOR MINI			Codice	€
	Load control relay for managing the absorbed power	mod. BUS connection mod. Radio frequency	37081062 37081063	148,00 336,00
	Mixing valve for radiant systems	mod. fixed mechanical adjustment mod. motorized adjustment	75101032 75101033	90,00 530,00
	Additional condenser for heat only HR Booster		26505565	300,00
	Anchoring shelf for external Booster including rubber anti-vibration mounts	mod. Booster HR 3.0 mod. Booster HR 7.8	37081060 37081061	50,00 90,00
	Anchoring bracket for inclined roof for external Booster mod. HR 3.0 - 7.8 including rubber anti-vibration mounts		37081064	130,00
	Antivibration floor base in vulcanized rubber (height from the ground mm 95) with level and screws for Booster HR 3.0 - 7.8 (pack of 2 pieces)		75100018	94,00
	Anti-vibration kit for installation on shelves		75100022	18,00
	Spring anti-vibration kit in stainless steel complete with bolts, washers and nuts (pack of 2 pieces)	mod. HR 3.0 mod. HR 7.8	37081065 37081066	52,00 56,00
	Condensate anti-freeze heating cable with thermal sensor, factory fitted	mod. 3 meters 90 W mod. 6 meters 120 W	37081067 37081068	56,00 66,00
	Auxiliary basin for installation under shelf equipped with 90 W heating cable	mod. HR 3.0 mod. HR 7.8	37081069 37081070	252,00 272,00
	Floor support complete with auxiliary pod equipped with 90 W heating cable	mod. HR 3.0 H fixed mod. HR 7.8 H fixed mod. HR 7.8 H variable	37081071 37081073 37081074	308,00 330,00 354,00
	1/2 "DHW mixing valve kit		75100023	146,00
	Electronic management kit and additional heat generator connection sleeves		75100024	194,00
	Anti-vibration flexible joint kit with flare and straight union	mod. HR 7.8 (5/8") mod. HR 3.0 (3/8")	75100014 75100015	120,00 60,00
	Anti-vibration flexible joint kit with connecting flange and 90 ° curved union	mod. HR 7.8 (5/8") mod. HR 3.0 (3/8")	75100016 75100017	120,00 60,00
	Compulsory cover box for the installation of the indoor unit outside the building HUB RADIATOR MINI made of insulated white prepainted galvanized steel Height 156 cm - Width 64 cm - Depth 43 cm		75100019	270,00
	Dima da incasso da esterno per unità interna HUB RADIATOR MINI realizzata in lamiera zincata Altezza 160 cm - Larghezza 70 cm - Profondità 28 cm		75101019	280,00
	<i>External recessed template for indoor unit MINI RADIATOR HUB made of galvanized sheet metal Height 160 cm - Width 70 cm - Depth 28 cm</i>		75060406 75060306	240,00 890,00

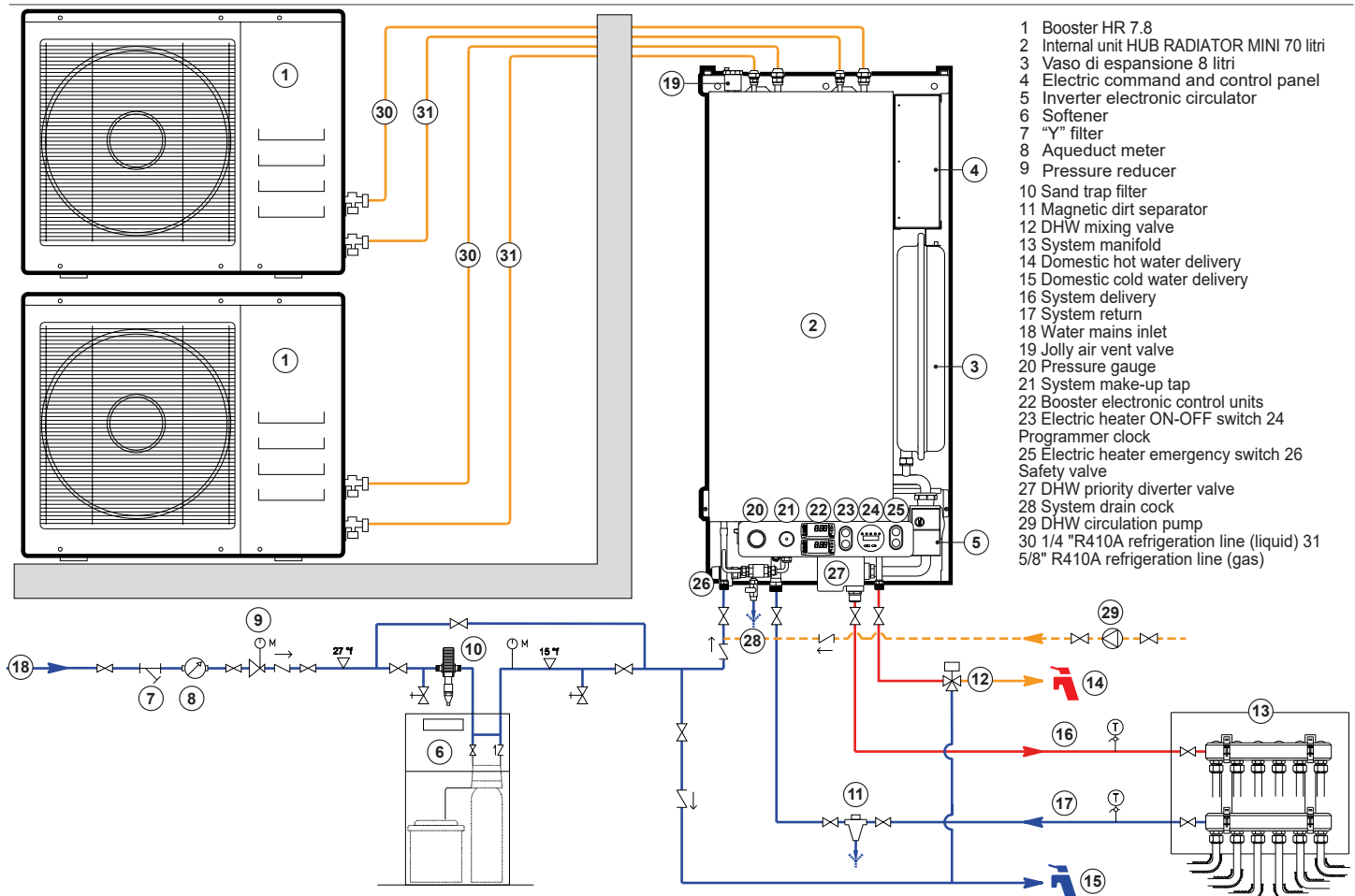
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Application example HUB RADIATOR MINI 8.0



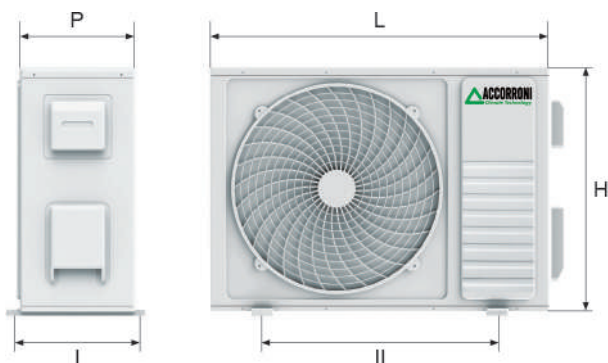
Application example HUB RADIATOR MINI 16.0



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Outdoor unit dimensions Booster HUB RADIATOR MINI



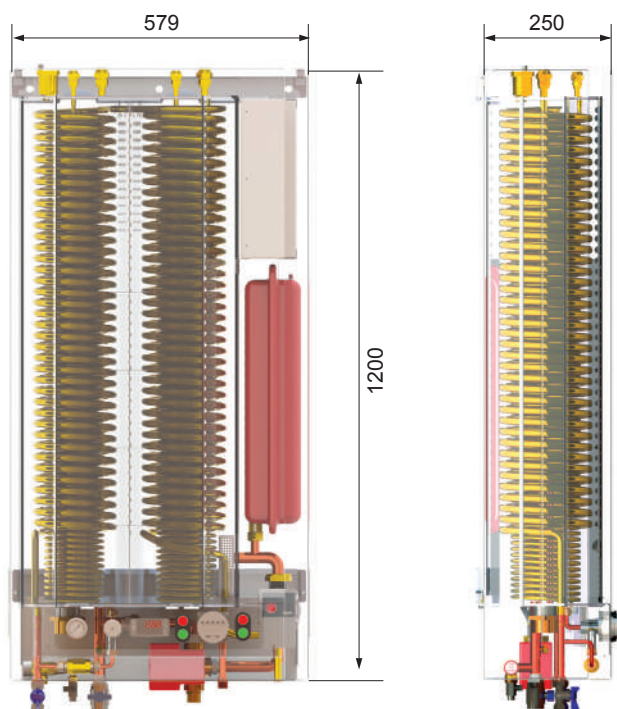
Booster	L mm	H mm	P mm	I mm	II mm
HR 3.0	700	552	256	275	435
HR 7.8	830	585	300	330	515

Booster technical data

	U.M.	HR 3.0	HR 7.8
Refrigerant quantity	Kg	1,1	2,0
Refrigerant gas connections		3/8"	5/8"
Coolant fluid connections		1/4"	1/4"
Power supply		230V/1/50Hz	
Sound power (1)	dB(A)	65,1	68,4
Sound pressure at one meter (2)	dB(A)	51,2	54,7
Weight	Kg	33	43

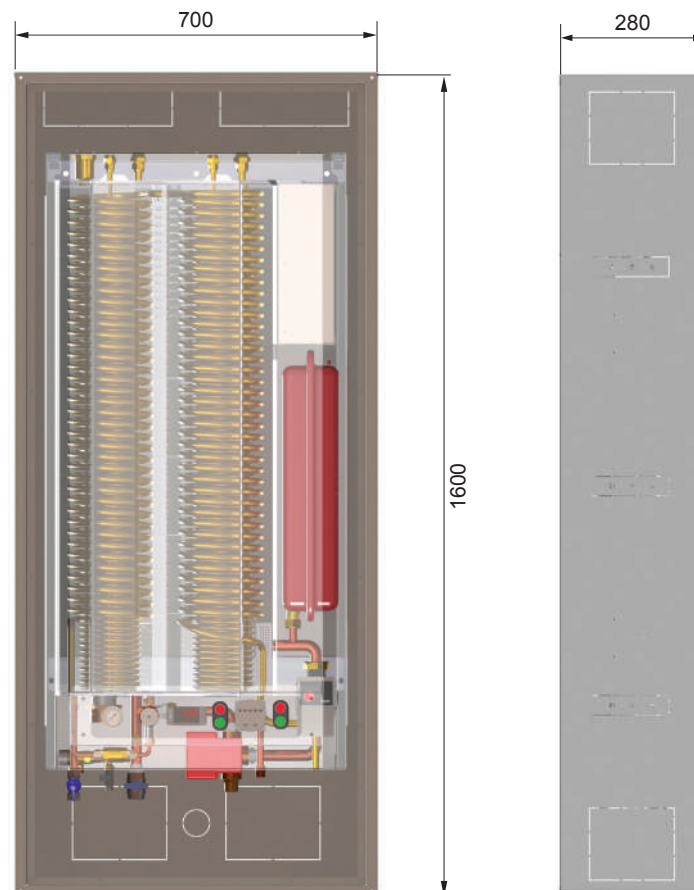
(1) Measurements carried out according to UNI EN 14511 i - heating 30/35 ° C - Ext. 7 ° C b.s./6 ° C b.u. (2) Value calculated according to ISO 3744: 2010

Indoor hanging unit HUB RADIATOR MINI



values expressed in mm

Built-in indoor unit HUB RADIATOR MINI



Withdrawals table ACS HUB RADIATOR MINI

DESCRIPTION	U.M.	6.0	8.0	11.0	16.0**
DHW withdrawal at 40 ° C - storage at 55 ° C - inlet water at 10 ° C	l	50	51	52	54
DHW withdrawal at 40 ° C - storage at 55 ° C - inlet water at 15 ° C	l	60	62	64	66
HP recovery time from 38 ° C to 55 ° C - Outdoor temp. 7 ° C *	min	21	18	14	8
HP recovery time + resistance from 38 ° C to 58 ° C - External temp. 7 ° C *	min	17	15	11	7
Water withdrawal at 40 ° C with storage at 62 ° C with inlet water at 10 ° C	l	62	63	65	67
Water withdrawal at 40 ° C with storage at 62 ° C with inlet water at 15 ° C	l	76	77	80	82
HP recovery time + resistance from 38 ° C to 62 ° C - External temp. 7 ° C *	min	25	22	16	10
Recovery time from 10 ° C to 55 ° C - Outdoor temp. 7 ° C *	min	45	39	30	19

*Data calculated with the heating system off

** Continuous domestic hot water supply on a single user of 7 liters per minute (water inlet 10 ° C - outlet 40 ° C - external temperature 7 ° C)

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Technical data table HUB RADIATOR MINI

DESCRIPTION	U.M.	HR MINI 6.0	HR MINI 8.0	HR MINI 11.0	HR MINI 16.0
Thermal power (1)	kW	6,22	8,12	11,23	16,24
Absorbed power(1)	kW	1,48	1,96	2,70	3,92
C.O.P. (1)	W/W	4,20	4,14	4,16	4,14
Thermal power (2)	kW	5,94	7,75	10,72	15,50
Absorbed power(2)	kW	1,88	2,52	3,46	5,04
C.O.P. (2)	W/W	3,16	3,07	3,10	3,07
Thermal power(3)	kW	5,16	6,73	9,31	13,46
Absorbed power(3)	kW	1,48	2,00	2,74	4,00
C.O.P. (3)	W/W	3,48	3,37	3,40	3,37
Thermal power (4)	kW	4,94	6,44	8,91	12,88
Absorbed power (4)	kW	1,88	2,54	3,48	5,08
C.O.P. (4)	W/W	2,67	2,53	2,56	2,53
Thermal power (5)	kW	4,22	5,52	7,63	11,04
Absorbed power (5)	kW	1,50	2,00	2,75	4,00
C.O.P. (5)	W/W	2,81	2,76	2,77	2,76
Thermal power (6)	kW	3,98	5,20	7,19	10,40
Absorbed power (6)	kW	1,88	2,53	3,47	5,06
C.O.P. (6)	W/W	2,11	2,05	2,07	2,06
S.C.O.P. (7)	W/W	3,78	3,71	3,72	3,71
Seasonal heating efficiency (η_s)	%	153,1	150,3	150,6	150,3
Energy efficiency (8)		A / A++			
Defrosting method		Reverse cycle with immersion condenser			
Type of refrigerant		R410A			
Technical water temperature min / max	°C	+ 30 / + 58			
Refrigerant quantity (pre-inserted)	kg	1,1 x 2	1,5	1,5 + 1,1	1,5 x 2
Min distance between outdoor and indoor unit	m	3			
Max distance between outdoor and indoor unit without charging	m	5			
Max distance between outdoor and indoor unit with recharge	m	15			
Max difference in height between outdoor and indoor unit	m	5			
Refrigerant gas line connection		3/8" x 2	5/8"	5/8" - 3/8"	5/8" x 2
Coolant fluid line connection		1/4" x 2	1/4"	1/4" - 1/4"	1/4" x 2
External temperature operating limits	°C	-15 / +45			
Indoor unit technical water content	l	70			
Max flow rate electronic inverter circulator	m ³ /h	3,3			
Max head of electronic inverter circulator	m	6,2			
Electric absorption of electronic inverter circulator	W	3 - 45			
Expansion vessel volume	l	8			
Expansion vessel preload	bar	1			
Safety valve calibration	bar	3			
Back up electric heater	W	1500			
Power supply		230V/1/50Hz			
Cold water inlet and DHW outlet hydraulic connections		1/2" M			
System delivery and return hydraulic connections		3/4" M			
Internal unit accumulation heat loss	kWh/24h	1,82			
Transport / operating indoor unit weight	kg	79 / 134	70 / 125	79 / 134	79 / 134
Outdoor unit weight	kg	33 x 2	55	55 + 33	55 x 2

(1) Heating: external air temperature 7 °C d.b. - 6 °C b.u. ; inlet / outlet water temperature 30/35 °C

(2) Heating: external air temperature 7 °C d.b. - 6 °C b.u. ; inlet / outlet water temperature 40/45 °C

(3) Heating: external air temperature 0 °C d.b. ; inlet / outlet water temperature 30/35 °C

(4) Heating: outside air temperature 0 °C d.b. ; inlet / outlet water temperature 40/45 °C

(5) Heating: outside air temperature -7 °C d.b. ; inlet / outlet water temperature 30/35 °C

(6) Heating: external air temperature -7 °C d.b. ; inlet / outlet water temperature 40/45 °C

(7) Heating: average climatic conditions; inlet / outlet water temperature 30/35 °C

(8) Water 35 °C / 55 °C