

THECHNICAL DATA SHEET

TC HeatPro SPLIT 9 kW Air to Water Heat Pump



Model	TC HeatPro SPLIT 9 kW	
Power Supply / Refrigerant	V/Hz/Ph	220-240/50/1 – R32
Max. Heating Capacity (1)	kW	9,2
C.O.P. (1)	W/W	4,48
Heating Capacity Min./Max. (1)	kW	4,3 ~ 9,2
Heating Power Input Min./Max. (1)	W	885 ~ 2055
C.O.P. Min/Max (1)	W/W	4,48 ~ 4,88
Max. Heating Capacity (2)	kW	8,6
C.O.P. (2)	W/W	3,46
Heating Capacity Min./Max. (2)	kW	3,9 ~ 8,6
Heating power input Min./Max. (2)	W	1120 ~ 2510
C.O.P. Min./Max. (2)	W/W	3,46 ~ 3,66
Max. Cooling Capacity (3)	kW	9,5
E.E.R (3)	W/W	4,31
Cooling Capacity Min./Max. (3)	kW	8,48 ~ 9,5
Cooling Power Input Min./Max. (3)	W	1860 ~ 2200
E.E.R. Min/Max. (3)	W/W	4,31 ~ 4,56
Max. Cooling Capacity (4)	kW	7,2
E.E.R (4)	W/W	2,8
Cooling Capacity Min./Max. (4)	kW	4,9 ~ 7,2
Cooling Power Input Min./Max. (4)	W	1768 ~ 2324
E.E.R. Min/Max. (4)	W/W	3,0 ~ 3,14
Circuit Breaker	A	25

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Model		TC HeatPro SPLIT 9 kW	
Workable Ambient Temperature Range		°C	-25 ~ 43
Min. System Water Temperature (Heating / Cooling)		°C	20/7
Min. Floor Area for installation, operation and storage		m ²	1,9
Min. Area of Pipe-work		m ²	1,9
Max. Operation High Pressure		MPa	4,2
Max. Operation Low Pressure		MPa	1,2
Compressor	Type - Quantity		Twin Rotary - 1
Refrigerant	Type / Amount	- / kg	R32/1,6 kg
Fan	Quantity	db	1
	Airflow	m ³ /h	3150
	Rated power	W	45
Noise Level	Indoor/Outdoor	dB(A)	45/53
Water Side Heat Exchanger	Type		Plate Heat Exchanger
	Water Pressure Drop	kPa	26
	Piping Connection	Inch	G1"
Allowable Water Flow	Min./Rated./Max.	L/S	0,3/0,43/0,56
Net Dimension(L×D×H)	Indoor Unit	mm	750x500x300
	Outdoor Unit	mm	1165x370x845
Net Weight	Indoor Unit	Kg	39
	Outdoor Unit	Kg	69

Note:

- (1) Heating condition: water inlet/outlet temperature: 30°C/35°C, Ambient temperature: DB 7°C/WB 6°C;
- (2) Heating condition: water inlet/outlet temperature: 40°C/45°C, Ambient temperature: DB 7°C/WB 6°C;
- (3) Cooling condition: water inlet/outlet temperature: 23°C/18°C, Ambient temperature: DB 35°C/WB 24°C;
- (4) Cooling condition: water inlet/outlet temperature: 12°C/7°C, Ambient temperature: DB 35°C/WB 24°C;
- (5) The specifications are subject to change without prior notice. For actual specifications of unit, please refer to the stickers on the unit.

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Test report of TC HeatPro SPLIT 9 kW (Heating/Cooling) at different ambient temperatures

Test report: Heating

Ambient temp. (°C)	Water Outlet temp. (°C)	Compressor Speed (Hz)	Heating Capacity (W)	Input Power (W)	COP (W/W)
DB12/WB10	55,0	79HZ	7963,46	2631,90	3,03
		67HZ	6737,90	2172,06	3,10
		55HZ	5413,72	1788,57	3,03
		43HZ	4042,20	1407,23	2,87
	45,0	79HZ	8639,90	2162,44	4,00
		67HZ	7239,85	1762,97	4,11
		55HZ	5990,05	1451,01	4,13
		43HZ	4500,32	1123,12	4,01
	35,0	79HZ	8855,88	1717,38	5,16
		67HZ	7708,95	1400,16	5,51
		55HZ	6340,91	1123,12	5,65
		43HZ	4731,31	873,70	5,42
DB7/WB6	55,0	90HZ	7916,58	3092,68	2,56
		79HZ	7051,42	2613,22	2,70
		67HZ	5856,01	2168,13	2,70
		55HZ	4796,62	1771,05	2,71
		43HZ	3504,84	1387,83	2,53
	45,0	90HZ	8684,38	2509,81	3,46
		79HZ	7671,01	2132,96	3,60
		67HZ	6438,89	1761,21	3,66
		55HZ	5275,84	1447,91	3,64
	35,0	43HZ	3938,69	1120,15	3,52
		90HZ	9217,13	2055,86	4,48
		79HZ	8067,10	1725,17	4,68
67HZ		6925,64	1422,89	4,87	
55HZ		5649,24	1157,02	4,88	
DB2/WB1	55,0	43HZ	4301,29	885,10	4,86
		90HZ	6850,77	3010,99	2,28
		79HZ	5915,42	2555,26	2,31
		67HZ	4931,50	2117,41	2,33
		55HZ	3821,85	1735,61	2,20
	45,0	43HZ	2872,45	1362,31	2,11
		90HZ	7402,17	2484,16	2,98
		79HZ	6479,77	2107,01	3,08
		67HZ	5496,80	1763,33	3,12
	35,0	55HZ	4450,88	1433,20	3,11
		43HZ	3239,17	1114,05	2,91
		90HZ	7878,12	2035,87	3,87
79HZ		7012,32	1726,90	4,06	
67HZ		5929,54	1421,97	4,17	
DB-7°C/WB-8°C	55,0	55HZ	4830,94	1165,21	4,15
		43HZ	3549,77	899,81	3,95
		90HZ	4883,38	2827,14	1,73
		79HZ	4158,34	2404,62	1,73
		67HZ	3431,02	2002,47	1,71

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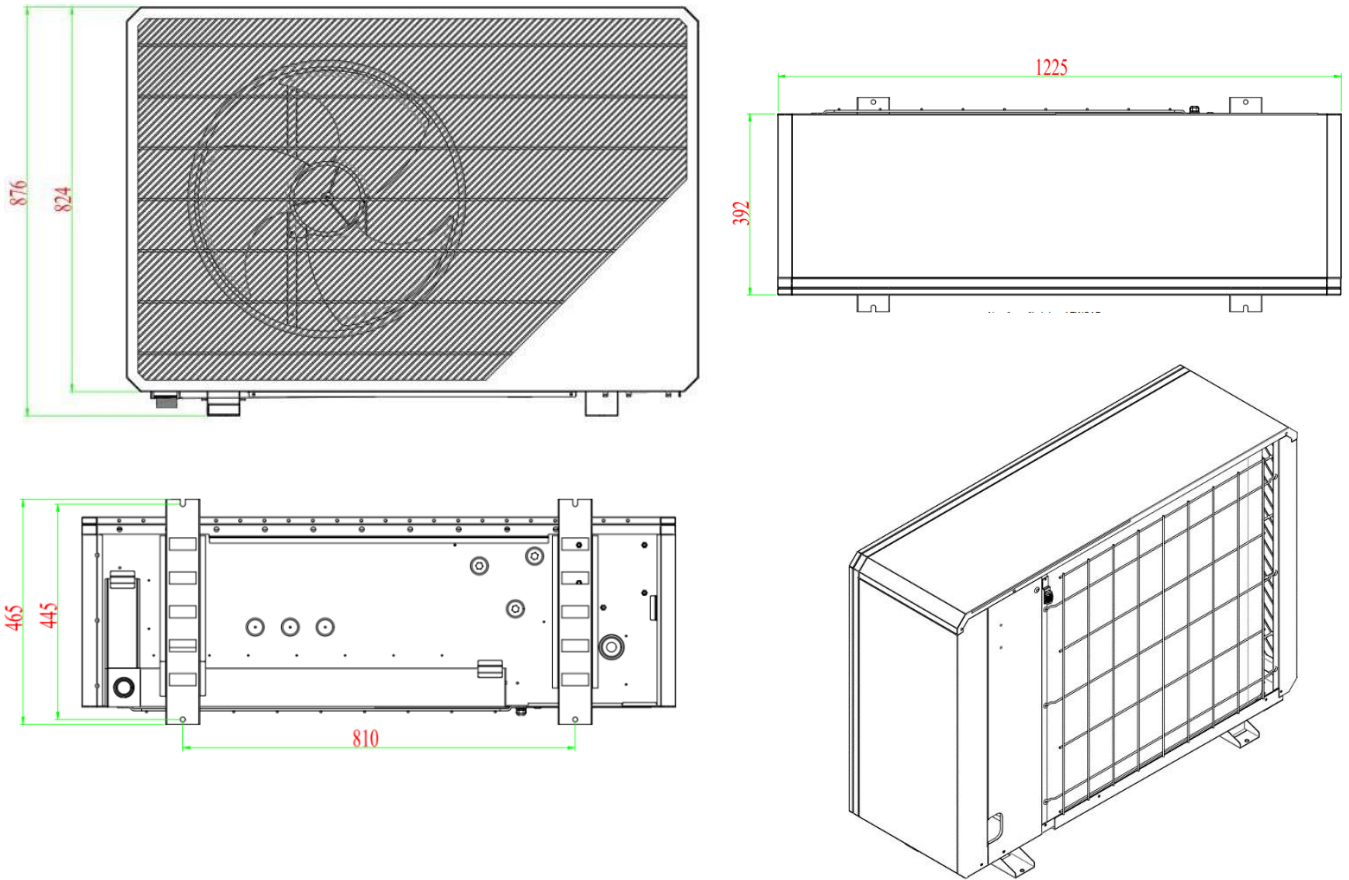
	45,0	55HZ	2662,99	1623,19	1,64		
		43HZ	1758,57	1268,39	1,39		
		90HZ	5295,73	2322,91	2,28		
		79HZ	4512,94	1980,93	2,28		
		67HZ	3743,75	1643,74	2,28		
		55HZ	3012,36	1352,20	2,23		
		43HZ	2140,66	1055,61	2,03		
	35,0	90HZ	5714,85	1923,30	2,97		
		79HZ	4951,20	1643,02	3,01		
		67HZ	4202,66	1386,78	3,03		
		55HZ	3366,63	1138,24	2,96		
		43HZ	2515,87	887,99	2,83		
		DB-15°C/WB-16°C	55,0	90HZ	3632,02	2607,25	1,39
				79HZ	2913,45	2216,46	1,31
67HZ	2358,94			1840,20	1,28		
55HZ	1740,00			1495,29	1,16		
43HZ	1070,35			1166,53	0,92		
45,0	90HZ		3974,03	2161,05	1,84		
	79HZ		3417,20	1866,47	1,83		
	67HZ		2645,47	1599,12	1,65		
	55HZ		2098,94	1278,95	1,64		
	43HZ		1366,64	994,69	1,37		
35,0	90HZ		4400,39	1836,24	2,40		
	79HZ		3756,19	1570,99	2,39		
	67HZ		3037,94	1300,64	2,34		
	55HZ		2325,43	1076,09	2,16		
	43HZ	1662,50	839,95	1,98			
DB-25°C/WB-26°C	55,0	90HZ	2576,03	2442,16	1,05		
		79HZ	2035,83	2089,42	0,97		
		67HZ	1568,40	1680,36	0,93		

Test report: Cooling

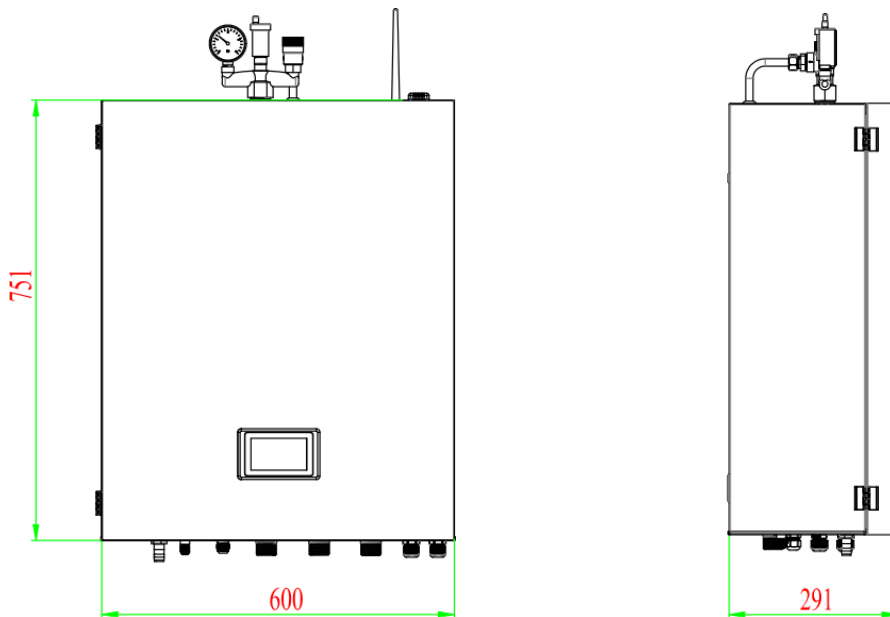
Ambient temp. (°C)	Water Outlet temp. (°C)	Compressor Speed (Hz)	Heating Capacity (W)	Input Power (W)	COP (W/W)
DB35/WB24	7,0	80HZ	6953,08	2324,11	2,99
		78HZ	6833,82	2214,56	3,09
		74HZ	6396,36	2039,98	3,14
		66HZ	5457,10	1768,42	3,09
DB35/WB24	18,0	74HZ	9484,71	2200,34	4,31
		66HZ	8483,92	1859,13	4,56

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TC HeatPro SPLIT 9 kW dimensions



TC HeatPro SPLIT 9 kW Indoor Unit dimensions:



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The values refer to use at low temperatures in average climatic conditions (W35).

Item	Symbol	Value	Unit
Rated Heat Output (1)	Prated	6,389	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj:			
Tj=-7°C	Pdh	5,562	kW
Tj=+2°C	Pdh	3,515	kW
Tj=+7°C	Pdh	3,362	kW
Tj=+12°C	Pdh	3,963	kW
Tj= bivalent temperature	Pdh	5,323	kW
Tj= operation limit temperature	Pdh	5,652	kW
For air-to-water heat pumps: Tj= -15°C (if TOL<-20°C)	Pdh	-	kW
Bivalent Temperature	Tbiv	-7	°C
Cycling interval capacity for heating	Pcyc	-	kW
Degradation co-efficient (2)	Cdh	0,9	-
Power Consumption in modes other than active mode:			
Off Mode	POFF	0,010	kW
Thermostat off mode	CTU	0,019	kW
Standby mode	PSB	0,010	kW
Crankcase heater mode	PCK	0,027	kW
Other Items			
Capacity Control		Variable	
Sound power level, indoor/outdoor	LWA	45/53	dB
Annual energy consumption	QHE	2864	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	181,3	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj:			
Tj=-7°C	COPd	3,19	-
Tj=+2°C	COPd	4,43	-
Tj=+7°C	COPd	6,36	-
Tj=+12°C	COPd	8,37	-
Tj= bivalent temperature	COPd	2,82	-
Tj= operation limit temperature	COPd	3,19	-
For air-to-water heat pumps: Tj= -15°C (if TOL<-20°C)	COPd	-	-
For air-to-water heat pumps: Operating limit temperature	TOL	-10	°C
Cycling interval efficiency	COPcyc	-	-
Heating water operating limit temperature			
	WTOL	57	°C
Supplementary heater			
Rated heat output	Psup	1,066	kW
Type of energy input		Electric	

The values refer to use at high temperatures in average climatic conditions (W55).

Item	Symbol	Value	Unit
Rated Heat Output (1)	Prated	5,971	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj:			
Tj=-7°C	Pdh	5,282	kW
Tj=+2°C	Pdh	3,045	kW
Tj=+7°C	Pdh	3,145	kW
Tj=+12°C	Pdh	3,727	kW
Tj= bivalent temperature	Pdh	4,798	kW
Tj= operation limit temperature	Pdh	5,282	kW
For air-to-water heat pumps: Tj= -15°C (if TOL<-20°C)	Pdh	-	kW
Bivalent Temperature	Tbiv	-7	°C
Cycling interval capacity for heating	Pcyc	-	kW
Degradation co-efficient (2)	Cdh	0,9	-
Power Consumption in modes other than active mode			
Off Mode	POFF	0,010	kW
Thermostat off mode	CTU	0,019	kW
Standby mode	PSB	0,010	kW
Crankcase heater mode	PCK	0,027	kW
Other Items			
Capacity Control		Variable	
Sound power level, indoor/outdoor	LWA	46/54	dB
Annual energy consumption	QHE	3720	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	129,6	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj:			
Tj=-7°C	COPd	1,94	-
Tj=+2°C	COPd	3,34	-
Tj=+7°C	COPd	4,60	-
Tj=+12°C	COPd	6,49	-
Tj= bivalent temperature	COPd	1,71	-
Tj= operation limit temperature	COPd	1,94	-
For air-to-water heat pumps: Tj= -15°C (if TOL<-20°C)	COPd	-	-
For air-to-water heat pumps: Operating limit temperature	TOL	-10	°C
Cycling interval efficiency	COPcyc	-	-
Heating water operating limit temperature			
	WTOL	57	°C
Supplementary heater			
Rated heat output	Psup	1,173	kW
Type of energy input		Electric	

- (1) For heat pump heaters and combined heat pump heaters, the rated thermal output Prated must equal the design heating load Pdesign, and the rated thermal output Psup of the auxiliary heater must equal the auxiliary heating output sup(Tj).
- (2) If the Cdh value is not determined by measurement, the default degradation coefficient is Cdh= 0.9.