



LR7-54HJD(Dual Glass)

495~510M (250_{W/m²})

First Choice For High-End Residential

- ▶ **Ultimate Efficiency, 25%+**
- ▶ **More Power Generation**
Exclusive HBC technology, higher power generation in all scenarios
- ▶ **Longer Module Life**
Butyl rubber seals for better water resistance
- ▶ **Enhanced Safety Function**
Optimized Anti-Shading and Prevent Localized Overheating
- ▶ **Higher Hurricanes and Snow Resistance**
Enhanced Mechanical Load: 6000Pa/3600Pa
- ▶ **Low Carbon and Environmentally Friendly**
Low carbon for the whole lifecycle,
more environmentally friendly

Complete System and Product Certifications

IEC61215, IEC 61730

ISO9001: Quality Management System

ISO14001: Environment Management System

ISO45001: Occupational Health and Safety Management System

IEC62941: Quality System for PV Module Manufacturing

30

30-Year Warranty for
Materials and Processing

30

30-Year Warranty for Extra
Linear Power Output



Residential PV Modules, Choose BC

LR7-54HJD 495~510M

25.0%
MAX MODULE
EFFICIENCY

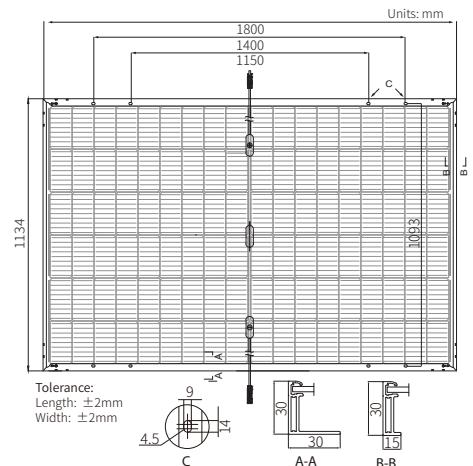
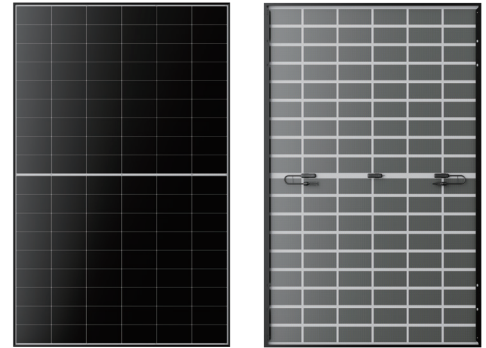
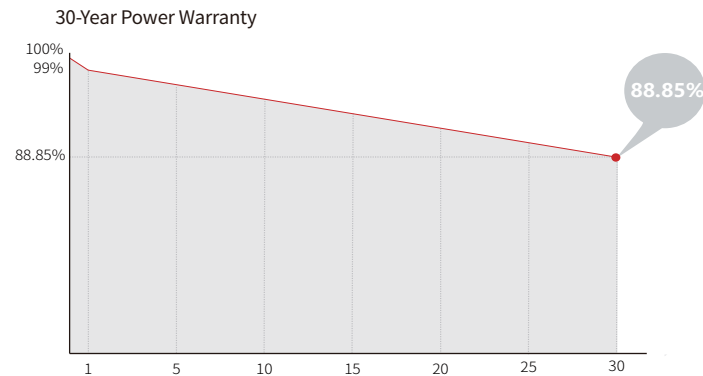
0~3%
POWER
TOLERANCE

<1%
FIRST YEAR
POWER DEGRADATION

0.35%
YEAR 2-30
POWER DEGRADATION

BC-CELL
LOWER OPERATING
TEMPERATURE

Additional Value



Mechanical Parameters

Cell Orientation	108 (6×18)
Junction Box	IP68
Output Cable	4mm ² , +400, -200mm/±1200mm length can be customized
Glass	Double glass 2.0mm semi-tempered glass+1.6mm semi-tempered glass
Frame	Black anodized aluminum alloy frame
Weight	23.5kg
Dimension	1800×1134×30mm
Packaging	36pcs per pallet / 216pcs per 20' GP / 864pcs per 40' HC

Electrical Characteristics

STC : AM1.5 1000W/m² 25°C

NOCT : AM1.5 800W/m² 20°C 1m/s

Test uncertainty for Pmax: ±3%

Module Type	LR7-54HJD-495M		LR7-54HJD-500M		LR7-54HJD-505M		LR7-54HJD-510M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	495	377	500	380	505	384	510	388
Open Circuit Voltage (Voc/V)	41.25	39.21	41.35	39.30	41.45	39.40	41.55	39.49
Short Circuit Current (Isc/A)	15.19	12.20	15.30	12.29	15.41	12.38	15.52	12.46
Voltage at Maximum Power (Vmp/V)	34.07	32.37	34.17	32.47	34.27	32.56	34.37	32.66
Current at Maximum Power (Imp/A)	14.53	11.64	14.63	11.72	14.74	11.80	14.84	11.89
Module Efficiency(%)	24.3		24.5		24.7		25.0	

Electrical characteristics with different rear side power gain (reference to 505W front)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
530	41.45	16.18	34.27	15.47	5%
556	41.45	16.95	34.27	16.21	10%
581	41.55	17.72	34.37	16.90	15%
606	41.55	18.49	34.37	17.63	20%
631	41.55	19.26	34.37	18.37	25%

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	IEC Class C

Mechanical Loading

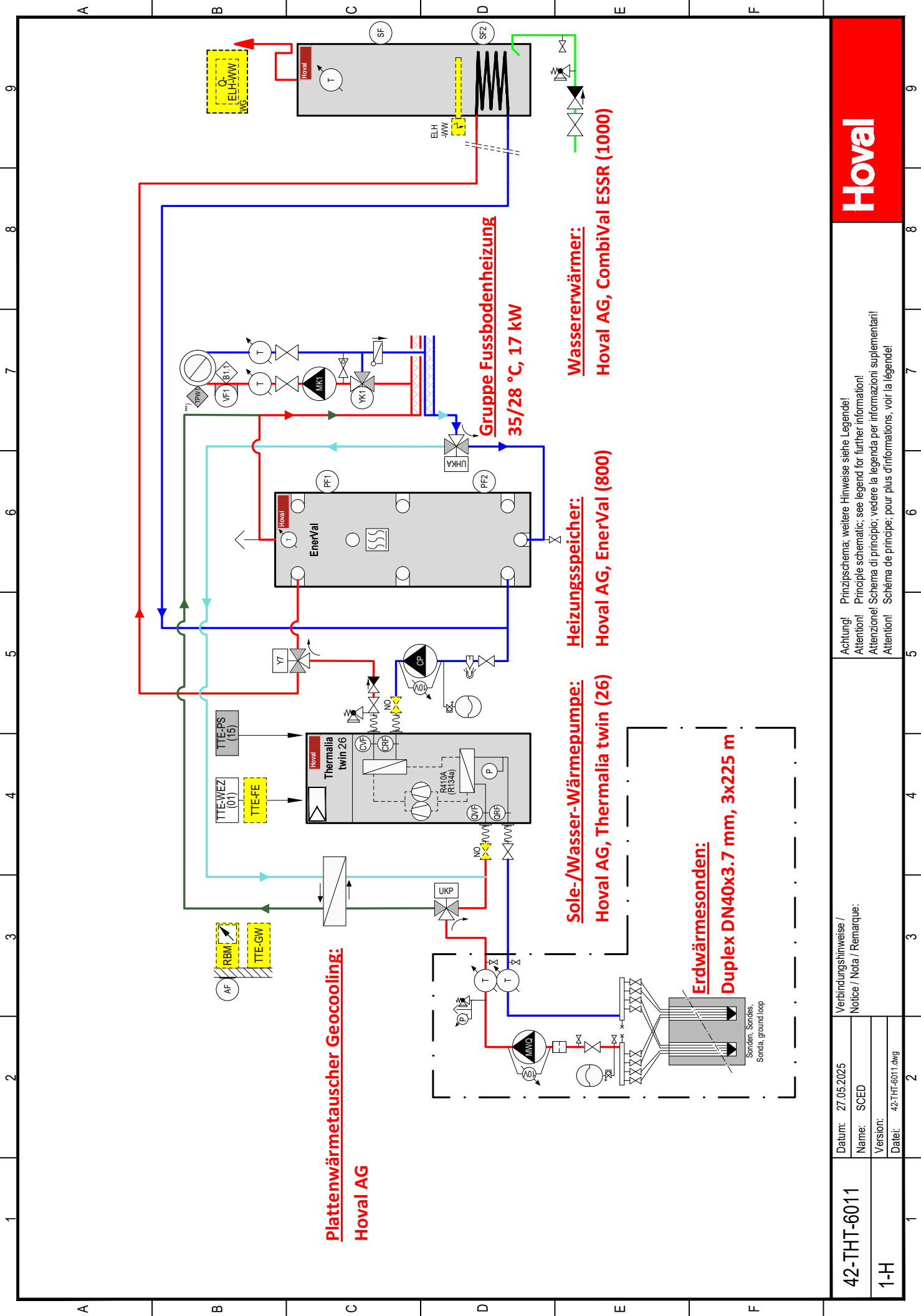
Front Side Maximum Static Loading	6000Pa
Rear Side Maximum Static Loading	3600Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.210%/°C
Temperature Coefficient of Pmax	-0.240%/°C



Specifications included in this datasheet are subject to change without notice. LONGi reserves the right of final interpretation. (BGV02 20250515)



Hoval

Achtung! Prinzipschema; weitere Hinweise siehe Legende!
Attention! Principle schematic; see legend for further information!
Attenzione! Schema di principio; vedere la legenda per informazioni supplementari!
Attention! Schéma de principe; pour plus d'informations, voir la légende!

Verbindungshinweise /
Notice / Nota / Remarque:

Datum: 27.05.2025
Name: SCED
Version:
Datei: 42-THT-6011.dwg

42-THT-6011

1-H

Thermalia® twin (20-42) mit R410A

Typ		(20)	(26)	(36)	(42)
Sole/Wasser-Anwendung B0W35					
• Energieeffizienzklasse der Verbundanlage mit Regelung	35 °C/55 °C	A+++/A++	A+++/A++	A+++/A+++	A+++/A++
• Raumheizungs-Energieeffizienz «mittleres Klima» 35 °C η_S ^{1), 2)}	%	202	198	206	203
• Raumheizungs-Energieeffizienz «mittleres Klima» 55 °C η_S ^{1), 2)}	%	138	138	148	135
Wasser/Wasser-Anwendung W10W35					
• Energieeffizienzklasse der Verbundanlage mit Regelung	35 °C/55 °C	A+++/A+++	A+++/A+++	A+++/A+++	A+++/A+++
• Raumheizungs-Energieeffizienz «mittleres Klima» 35 °C η_S ^{1), 2)}	%	277	274	270	259
• Raumheizungs-Energieeffizienz «mittleres Klima» 55 °C η_S ^{1), 2)}	%	183	180	191	176
• Saisonale Leistungszahl mittleres Klima (Sole) 35 °C/55 °C	SCOP	5.2/3.6	5.2/3.6	5.4/3.9	5.3/3.6
Max. Leistungsdaten Heizen nach EN 14511					
• Heizleistung B0W35	kW ³⁾	20.4	26.2	35.3	42.0
• Leistungszahl B0W35	COP	4.9	4.8	5.0	4.8
• Heizleistung W10W35	kW	27.3	35.1	46.4	55.4
• Leistungszahl W10W35	COP	6.6	6.4	6.4	6.1
Nennvolumenstrom und Druckverlust Sole/Wasser					
Heizung ($\Delta T = 7\text{ K}$)	m ³ /h	2.5	3.3	4.4	5.2
• ΔP Druckverlust Kondensator	kPa	5.3	7.3	5.0	5.3
Wärmequelle ($\Delta T = 3\text{ K}$)	m ³ /h	4.9	6.2	8.5	10.0
• ΔP Druckverlust Verdampfer	kPa	12.0	13.0	14.0	14.0
Nennvolumenstrom und Druckverlust Wasser/Wasser					
Heizung ($\Delta T = 7\text{ K}$)	m ³ /h	3.4	4.3	5.7	6.8
• ΔP Druckverlust Kondensator	kPa	9.8	12.5	8.5	9.0
Wärmequelle ($\Delta T = 5\text{ K}$) ⁴⁾	m ³ /h	4.0	5.0	6.8	8.0
• ΔP Druckverlust Verdampfer	kPa	5.0	5.5	6.5	6.0
Betriebsgrenzwerte					
siehe Diagramm Einsatzbereich					
• Max. Betriebsdruck wasserseitig	bar	6	6	6	6
• Max. Betriebsdruck solesseitig	bar	6	6	6	6
• Aufstellungsort Betrieb ⁵⁾	°C (min./max.)	5/35	5/35	5/35	5/35
• Lagerung	°C (min./max.)	-15/50	-15/50	-15/50	-15/50
• Verdichter, Typ			2 x Scroll (Spiral)-hermetisch		
• Kältemittelfüllmenge (R410A)	kg	6.5	7.1	8.2	9.0
- Verdichteröltyp: EMKARATE RL 32-3MAF					
• Verflüssiger/Verdampfer			Plattenwärmetauscher		
• Material			Chromstahl V4A, AISI 316, 1.4401		
• Anschlüsse	R	1½"	1½"	2"	2"
• Rohranschlüsse mit flex. Anschlussschlauch	Rp	1½"	1½"	2"	2"
Elektrische Daten ⁶⁾					
• Spannung	V	3~400	3~400	3~400	3~400
• Frequenz	Hz	50	50	50	50
• Spannungsbereich	V	380-420	380-420	380-420	380-420
• Max. Betriebsstrom Kompressor	A	13.1	16.9	24.0	29.3
• Anlaufstrom mit Anlaufstrombegrenzer ⁷⁾	A	25.4	32.7	44.5	55.1
• Hauptstrom (externe Absicherung) bei Soleanlagen	A	16	20	32	32
- Typ		C,D,K	C,D,K	C,D,K	C,D,K
• Hauptstrom (externe Absicherung) bei Grundwasseranlagen	A	20	25	32	40
- Typ		C,D,K	C,D,K	C,D,K	C,D,K
• Steuerstrom (externe Absicherung)	A	13	13	13	13
- Typ		B,C,D,K,Z	B,C,D,K,Z	B,C,D,K,Z	B,C,D,K,Z
Gewicht					
• Betriebsgewicht ca.	kg	280	286	298	310

¹⁾ Für die Klasse II Wärmepumpe inkl. Regelung können 2 % addiert werden.

²⁾ Für die Klasse IV Wärmepumpe inkl. Regelung und Raumthermostat können 4 % addiert werden.

³⁾ kW = Normwerte nach EN 14511, B0W35-Werte mit 25 % Ethylenglykol (Antifrogen N)

⁴⁾ ΔT gemäss regionalen Vorschriften. Die Temperaturspreizung ist von 3 bis 6 Kelvin einstellbar. Die Pumpe regelt den Volumenstrom auf die eingestellte Temperaturspreizung.

⁵⁾ < 10 °C Kurbelgehäuseheizung notwendig

⁶⁾ Die Angaben für die elektrischen Daten gelten für eine Versorgungsspannung von 3~400 V

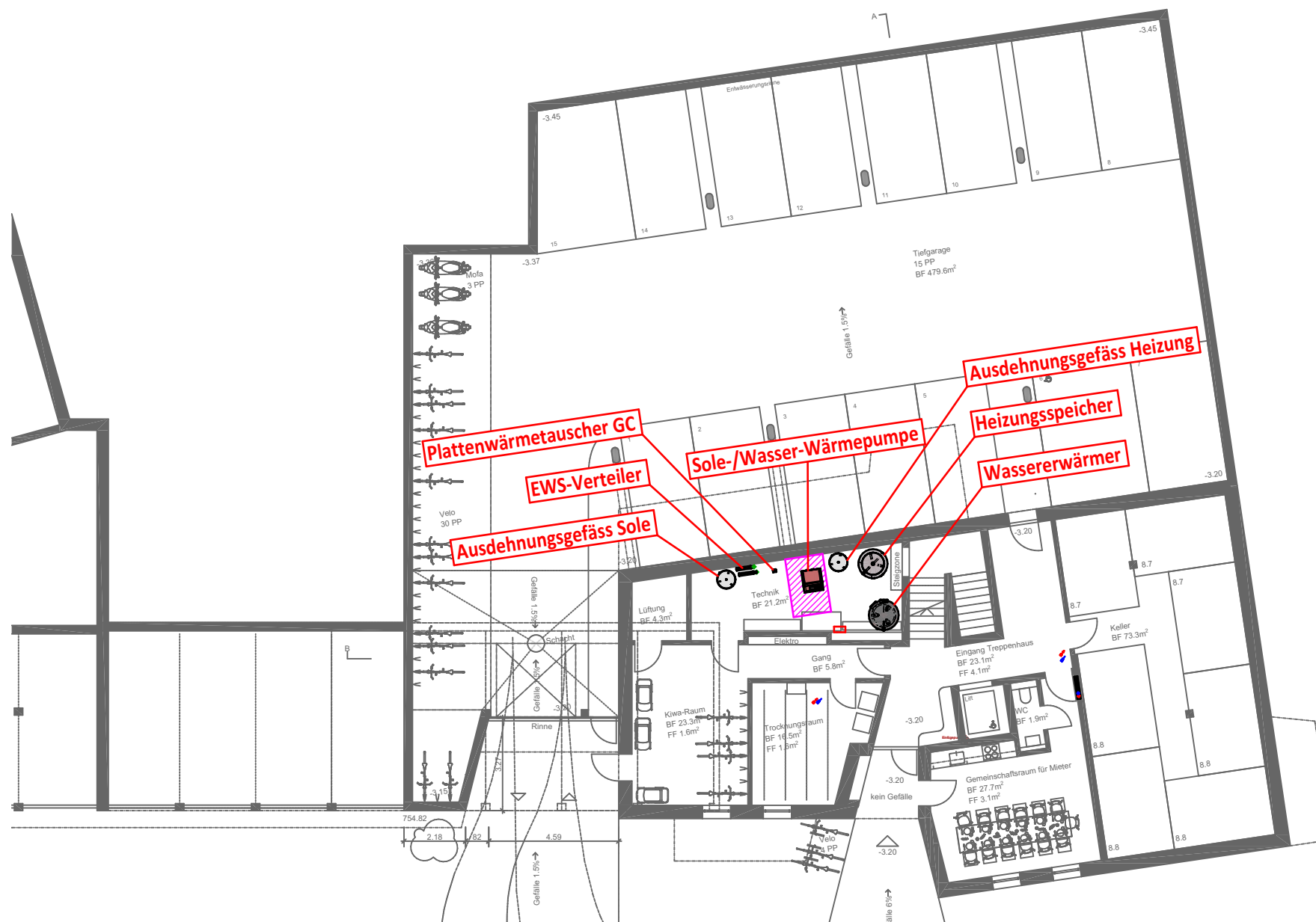
⁷⁾ Effektivwert, Betriebsstrom Verdichter 1 + Anlaufstrom mit Anlaufstrombegrenzer

Leistungsdaten - Heizung
Thermalia® twin (20-42)
Angaben gemäss EN 14511

Typ	t _{VL} °C	t _a °C	Q _h kW	(20) P kW	COP	Q _h kW	(26) P kW	COP	Q _h kW	(36) P kW	COP	Q _h kW	(42) P kW	COP
30	Brine (Sole)	-5	18.1	3.7	4.9	23.3	4.9	4.8	31.4	6.3	5.0	36.8	7.9	4.7
		-2	19.8	3.7	5.3	25.4	4.9	5.2	34.2	6.3	5.4	40.3	7.9	5.1
		0	20.9	3.7	5.6	26.8	4.9	5.5	36.1	6.3	5.7	42.5	7.9	5.4
		2	22.0	3.7	6.0	28.2	4.8	5.8	38.0	6.3	6.0	44.8	7.9	5.7
		5	23.8	3.7	6.5	30.4	4.8	6.3	40.8	6.3	6.5	48.1	7.9	6.1
	Wasser	8	26.3	3.6	7.3	33.7	4.7	7.2	44.4	6.4	7.0	54.5	8.0	6.8
		10	27.8	3.6	7.8	35.7	4.7	7.6	47.2	6.4	7.4	56.7	8.0	7.1
		12	29.3	3.6	8.2	37.6	4.7	8.0	49.0	6.3	7.7	58.9	8.0	7.4
		14	30.8	3.6	8.6	39.5	4.7	8.4	50.8	6.3	8.0	60.1	8.0	7.7
		15	31.6	3.6	8.9	40.5	4.7	8.7	51.9	6.3	8.2	62.2	8.0	7.7
35	Brine (Sole)	-5	17.8	4.2	4.2	22.8	5.5	4.2	30.8	7.1	4.4	36.7	8.8	4.2
		-2	19.4	4.2	4.6	24.8	5.5	4.5	33.5	7.1	4.7	39.9	8.8	4.5
		0	20.4	4.2	4.9	26.2	5.5	4.8	35.3	7.1	5.0	42.0	8.8	4.8
		2	21.6	4.2	5.2	27.6	5.5	5.0	37.1	7.1	5.2	44.0	8.8	5.0
		5	23.4	4.2	5.6	29.7	5.5	5.4	39.8	7.2	5.6	47.0	8.8	5.4
	Wasser	8	25.8	4.2	6.2	33.1	5.5	6.0	43.8	7.3	6.1	53.0	9.1	5.8
		10	27.3	4.2	6.5	35.1	5.5	6.4	46.4	7.2	6.4	55.4	9.1	6.1
		12	28.8	4.2	6.9	37.0	5.5	6.8	48.4	7.2	6.7	57.8	9.1	6.3
		14	30.3	4.2	7.3	38.9	5.5	7.3	51.4	7.3	7.1	61.4	9.2	6.7
		15	31.1	4.2	7.5	39.9	5.5	7.5	52.4	7.3	7.3	62.4	9.2	6.7
40	Brine (Sole)	-5	17.6	4.8	3.7	22.5	6.2	3.6	30.5	7.9	3.9	36.3	9.9	3.7
		-2	19.2	4.8	4.0	24.5	6.2	4.0	33.1	7.9	4.2	39.4	9.9	4.0
		0	20.2	4.8	4.2	25.9	6.2	4.2	34.8	8.0	4.4	41.5	9.9	4.2
		2	21.3	4.8	4.5	27.3	6.2	4.4	36.6	8.0	4.6	43.5	9.9	4.4
		5	23.0	4.7	4.9	29.3	6.2	4.7	39.3	8.1	4.9	46.6	9.9	4.7
	Wasser	8	25.4	4.8	5.3	32.6	6.3	5.2	43.2	8.1	5.3	51.5	10.3	5.0
		10	26.8	4.8	5.6	34.5	6.3	5.5	45.6	8.1	5.6	54.0	10.3	5.3
		12	28.3	4.8	5.9	36.4	6.3	5.8	47.7	8.2	5.9	56.6	10.3	5.5
		14	29.8	4.8	6.3	38.3	6.3	6.3	50.9	8.2	6.2	60.5	10.3	5.9
		15	30.5	4.8	6.4	39.2	6.3	6.3	50.9	8.2	6.2	60.5	10.3	5.9
45	Brine (Sole)	-5	17.5	5.3	3.3	22.2	6.9	3.2	30.3	8.7	3.5	36.0	11.0	3.3
		-2	19.0	5.4	3.6	24.2	6.9	3.5	32.7	8.8	3.7	39.0	11.0	3.5
		0	20.0	5.4	3.7	25.6	6.9	3.7	34.3	8.9	3.9	41.0	11.0	3.7
		2	21.1	5.4	3.9	26.9	6.9	3.9	36.1	8.9	4.1	43.1	11.0	3.9
		5	22.7	5.3	4.3	29.0	6.9	4.2	38.9	9.0	4.3	46.2	11.0	4.2
	Wasser	8	24.9	5.4	4.6	32.0	7.1	4.5	42.6	9.0	4.8	49.9	11.4	4.4
		10	26.4	5.4	4.9	33.8	7.1	4.8	44.8	9.0	5.0	52.7	11.4	4.6
		12	27.8	5.4	5.2	35.7	7.1	5.1	47.1	9.1	5.2	55.5	11.4	4.9
		14	29.3	5.4	5.6	37.6	7.1	5.5	49.5	9.1	5.5	59.9	11.4	5.2
		15	30.0	5.4	5.6	38.5	7.0	5.5	50.4	9.1	5.5	59.6	11.4	5.2
50	Brine (Sole)	-5	17.0	6.0	2.8	21.8	7.8	2.8	29.6	9.6	3.1	34.5	12.5	2.8
		-2	18.4	6.0	3.1	23.6	7.8	3.0	32.1	9.7	3.3	37.4	12.6	3.0
		0	19.4	6.1	3.2	24.9	7.8	3.2	33.8	9.8	3.5	39.4	12.6	3.1
		2	20.4	6.1	3.4	26.1	7.7	3.4	35.2	9.8	3.6	41.6	12.6	3.3
		5	22.0	6.0	3.7	28.0	7.7	3.6	37.2	9.7	3.8	44.7	12.4	3.6
	Wasser	8	24.0	6.1	3.9	30.8	8.0	3.8	42.1	10.1	4.2	48.7	13.0	3.8
		10	25.4	6.1	4.2	32.6	8.0	4.1	44.2	10.1	4.4	51.3	12.9	4.0
		12	26.8	6.1	4.4	34.4	8.0	4.3	46.3	10.2	4.6	53.8	12.9	4.2
		14	28.3	6.1	4.7	36.3	8.0	4.6	48.4	10.3	4.8	56.9	12.9	4.5
		15	28.9	6.1	4.7	37.1	8.0	4.6	49.5	10.3	4.8	57.6	12.9	4.5
55	Brine (Sole)	-5	16.4	6.6	2.5	21.4	8.8	2.4	29.0	10.6	2.7	33.0	14.1	2.3
		-2	17.8	6.7	2.7	23.1	8.7	2.7	31.6	10.7	3.0	35.9	14.2	2.5
		0	18.8	6.7	2.8	24.2	8.6	2.8	33.3	10.8	3.1	37.9	14.2	2.7
		2	19.8	6.7	2.9	25.3	8.6	3.0	34.2	10.6	3.2	40.1	14.1	2.8
		5	21.3	6.7	3.2	26.9	8.5	3.2	35.6	10.4	3.4	43.3	13.9	3.1
	Wasser	8	23.1	6.9	3.4	29.7	9.0	3.3	41.5	11.2	3.7	47.5	14.5	3.3
		10	24.5	6.9	3.6	31.4	9.0	3.5	43.6	11.2	3.9	49.9	14.5	3.5
		12	25.8	6.9	3.8	33.2	9.0	3.7	45.6	11.3	4.0	52.2	14.4	3.6
		14	27.3	6.8	4.1	35.1	9.0	4.0	47.7	11.4	4.3	55.7	14.4	3.9
		15	27.9	6.8	4.1	35.8	9.0	4.0	48.6	11.4	4.3	55.7	14.4	3.9
60	Brine (Sole)	-5	16.0	7.8	2.1	20.3	10.4	2.0	27.7	13.1	2.1	32.5	16.9	1.9
		-2	17.4	7.8	2.2	22.1	10.3	2.1	30.0	13.2	2.3	35.2	16.8	2.1
		0	18.3	7.8	2.3	23.3	10.3	2.3	31.6	13.3	2.4	37.0	16.8	2.2
		2	19.3	7.8	2.5	24.6	10.3	2.4	33.1	13.4	2.5	39.0	16.6	2.4
		5	20.8	7.9	2.7	26.4	10.3	2.6	35.5	13.5	2.6	42.0	16.2	2.6
	Wasser	8	21.9	7.9	2.8	28.1	10.3	2.7	37.9	13.5	2.8	45.9	16.6	2.8
		10	23.2	7.9	2.9	29.7	10.3	2.9	40.6	13.5	3.0	47.9	16.6	2.9
		12	24.4	7.9	3.1	31.4	10.3	3.0	43.5	13.4	3.2	49.9	16.5	3.0
		14	25.9	7.9	3.3	33.3	10.3	3.3	45.5	13.4	3.5	52.9	16.5	3.2
		15	26.3	7.9	3.3	33.8	10.3	3.3	46.5	13.4	3.5	52.9	16.5	3.2

t_{VL} = HeizungsVorlauftemperatur (°C)
t_a = Quellentemperatur (°C)
Q_h = Heizleistung bei Vollast (kW), gemessen nach Standard EN 14511
P = Aufnahmeleistung Gesamtgerät (kW)
COP = Leistungszahl Gesamtgerät nach Standard EN 14511

Tägliche Stromunterbrüche beachten!
siehe «Projektierung Wärmepumpen
allgemein»





– 15.10.2025

