

6. Performance Data

6.2 Heating Operation

■ Maximum Heating Capacity (Include defrost effect)

◆ ZHBW056A1 [HM051MR U44]

Outdoor Temperature [°C DB]	Water flow rate 15.81 LPM								Water flow rate 9.9 LPM				Water flow rate 7.9 LPM			
	LWT 30 °C		LWT 35 °C		LWT 40 °C		LWT 45 °C		LWT 50 °C		LWT 55 °C		LWT 60 °C		LWT 65 °C	
	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP
-25	5.50	2.02	5.50	1.88	5.50	1.74	5.50	1.60								
-20	5.50	2.57	5.50	2.38	5.50	2.19	5.50	2.00	5.23	1.82						
-15	5.50	2.80	5.50	2.50	5.50	2.45	5.50	2.41	5.23	2.17	5.23	1.93				
-7	5.50	3.59	5.50	3.20	5.50	3.13	5.50	3.05	5.50	2.74	5.50	2.23	5.50	2.11		
-4	5.50	3.88	5.50	3.60	5.50	3.45	5.50	3.29	5.50	2.95	5.50	2.61	5.50	2.27	5.50	1.93
-2	5.50	4.31	5.50	3.80	5.50	3.63	5.50	3.46	5.50	3.11	5.50	2.75	5.50	2.39	5.50	2.03
2	5.50	4.73	5.50	4.20	5.50	4.00	5.50	3.80	5.50	3.41	5.50	3.02	5.50	2.63	5.50	2.24
7	5.50	5.26	5.50	4.70	5.50	4.47	5.50	4.23	5.50	3.80	5.50	3.36	5.50	2.93	5.50	2.49
10	5.50	5.87	5.50	5.41	5.50	4.95	5.50	4.49	5.50	4.03	5.50	3.57	5.50	3.11	5.50	2.64
15	5.50	6.43	5.50	5.92	5.50	5.42	5.50	4.91	5.50	4.41	5.50	3.91	5.50	3.40	5.50	2.90
18	5.50	6.76	5.50	6.23	5.50	5.70	5.50	5.17	5.50	4.64	5.50	4.11	5.50	3.58	5.50	3.05
20	5.50	6.98	5.50	6.43	5.50	5.89	5.50	5.34	5.50	4.79	5.50	4.25	5.50	3.70	5.50	3.15
35	5.50	8.65	5.50	7.97	5.50	7.30	5.50	6.62	5.50	5.95	5.50	5.27	5.50	4.60	5.50	3.92

◆ ZHBW076A1 [HM071MR U44]

Outdoor Temperature [°C DB]	Water flow rate 20.12 LPM								Water flow rate 12.6 LPM				Water flow rate 10.0 LPM			
	LWT 30 °C		LWT 35 °C		LWT 40 °C		LWT 45 °C		LWT 50 °C		LWT 55 °C		LWT 60 °C		LWT 65 °C	
	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP
-25	5.85	1.98	5.85	1.84	5.85	1.69	5.85	1.55								
-20	6.43	2.53	6.43	2.34	6.43	2.15	6.43	1.96	6.10	1.76						
-15	7.00	2.77	7.00	2.45	7.00	2.41	7.00	2.36	6.65	2.12	6.65	1.89				
-7	7.00	3.55	7.00	3.15	7.00	3.08	7.00	3.01	7.00	2.70	7.00	2.19	7.00	2.07		
-4	7.00	3.85	7.00	3.58	7.00	3.41	7.00	3.25	7.00	2.91	7.00	2.57	7.00	2.23	7.00	1.89
-2	7.00	4.27	7.00	3.78	7.00	3.60	7.00	3.42	7.00	3.07	7.00	2.71	7.00	2.35	7.00	1.99
2	7.00	4.69	7.00	4.19	7.00	3.98	7.00	3.76	7.00	3.37	7.00	2.98	7.00	2.59	7.00	2.20
7	7.00	5.22	7.00	4.70	7.00	4.45	7.00	4.19	7.00	3.76	7.00	3.32	7.00	2.89	7.00	2.45
10	7.00	5.83	7.00	5.37	7.00	4.91	7.00	4.45	7.00	3.99	7.00	3.53	7.00	3.06	7.00	2.60
15	7.00	6.38	7.00	5.88	7.00	5.38	7.00	4.87	7.00	4.37	7.00	3.87	7.00	3.36	7.00	2.86
18	7.00	6.72	7.00	6.19	7.00	5.66	7.00	5.13	7.00	4.60	7.00	4.07	7.00	3.54	7.00	3.01
20	7.00	6.94	7.00	6.39	7.00	5.85	7.00	5.30	7.00	4.75	7.00	4.21	7.00	3.66	7.00	3.11
35	7.00	8.60	7.00	7.93	7.00	7.25	7.00	6.58	7.00	5.90	7.00	5.23	7.00	4.55	7.00	3.88

◆ ZHBW096A1 [HM091MR U44]

Outdoor Temperature [°C DB]	Water flow rate 25.87. LPM								Water flow rate 16.2 LPM				Water flow rate 12.9 LPM			
	LWT 30 °C		LWT 35 °C		LWT 40 °C		LWT 45 °C		LWT 50 °C		LWT 55 °C		LWT 60 °C		LWT 65 °C	
	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP
-25	6.20	1.97	6.20	1.82	6.20	1.68	6.20	1.53								
-20	7.60	2.50	7.60	2.31	7.60	2.12	7.60	1.93	7.22	1.74						
-15	9.00	2.73	9.00	2.40	9.00	2.36	9.00	2.32	8.55	2.09	8.55	1.85				
-7	9.00	3.50	9.00	3.10	9.00	3.03	9.00	2.96	9.00	2.65	9.00	2.17	9.00	2.03		
-4	9.00	3.79	9.00	3.50	9.00	3.35	9.00	3.20	9.00	2.86	9.00	2.52	9.00	2.19	9.00	1.85
-2	9.00	4.20	9.00	3.70	9.00	3.53	9.00	3.36	9.00	3.01	9.00	2.66	9.00	2.30	9.00	1.95
2	9.00	4.61	9.00	4.10	9.00	3.90	9.00	3.70	9.00	3.31	9.00	2.92	9.00	2.54	9.00	2.15
7	9.00	5.13	9.00	4.60	9.00	4.36	9.00	4.11	9.00	3.68	9.00	3.26	9.00	2.83	9.00	2.40
10	9.00	5.72	9.00	5.27	9.00	4.82	9.00	4.36	9.00	3.91	9.00	3.46	9.00	3.00	9.00	2.55
15	9.00	6.26	9.00	5.77	9.00	5.27	9.00	4.78	9.00	4.28	9.00	3.79	9.00	3.29	9.00	2.80
18	9.00	6.59	9.00	6.07	9.00	5.55	9.00	5.03	9.00	4.51	9.00	3.99	9.00	3.47	9.00	2.95
20	9.00	6.80	9.00	6.27	9.00	5.73	9.00	5.20	9.00	4.66	9.00	4.12	9.00	3.59	9.00	3.05
35	9.00	8.43	9.00	7.77	9.00	7.11	9.00	6.44	9.00	5.78	9.00	5.12	9.00	4.46	9.00	3.80

Note

1. DB : Dry bulb temperature(°C), LWT : Leaving water temperature(°C), LPM : Liter per minute (ℓ/min)
2. TC : Total capacity(kW), EER: Energy efficiency ratio(kW/kW), COP : Coefficient of performance (kW/kW)
3. Direct interpolation is permissible. Do not extrapolate.
4. Measuring procedure follows EN14511.
 - Rated values are based on standard conditions, and it can be found on specifications.
 - Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
 - In accordance with the test standard(or nations), the results may vary.
5. The Shaded areas are not guaranteed continuous operation.

6. Performance Data

◆ ZHBW126A1 [HM121MR U34] / ZHBW128A1 [HM123MR U34]

Outdoor Temperature [°C DB]	Water flow rate 34.5 LPM								Water flow rate 21.6 LPM				Water flow rate 17.3 LPM			
	LWT 30 °C		LWT 35 °C		LWT 40 °C		LWT 45 °C		LWT 50 °C		LWT 55 °C		LWT 60 °C		LWT 65 °C	
	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP
-25	9.50	2.13	9.50	1.97	9.50	1.81	9.50	1.65								
-20	10.75	2.68	10.75	2.47	10.75	2.27	10.75	2.07	10.21	1.87						
-15	12.00	2.90	12.00	2.55	12.00	2.52	12.00	2.49	11.50	2.24	11.50	2.00				
-7	12.00	3.69	12.00	3.40	12.00	3.28	12.00	3.16	12.00	2.85	12.00	2.53	12.00	2.24		
-4	12.00	3.98	12.00	3.73	12.00	3.57	12.00	3.41	12.00	3.07	12.00	2.74	12.00	2.40	12.00	2.06
-2	12.00	4.18	12.00	3.78	12.00	3.68	12.00	3.58	12.00	3.22	12.00	2.87	12.00	2.51	12.00	2.16
2	12.00	4.57	12.00	4.19	12.00	4.05	12.00	3.91	12.00	3.52	12.00	3.14	12.00	2.75	12.00	2.36
7	12.00	5.34	12.00	4.90	12.00	4.62	12.00	4.33	12.00	3.90	12.00	3.47	12.00	3.04	12.00	2.61
10	12.00	5.95	12.00	5.50	12.00	5.04	12.00	4.58	12.00	4.13	12.00	3.67	12.00	3.21	12.00	2.76
15	12.00	6.50	12.00	6.00	12.00	5.50	12.00	5.00	12.00	4.50	12.00	4.00	12.00	3.50	12.00	3.01
18	12.00	6.83	12.00	6.30	12.00	5.78	12.00	5.25	12.00	4.73	12.00	4.20	12.00	3.68	12.00	3.15
20	12.00	7.04	12.00	6.50	12.00	5.96	12.00	5.42	12.00	4.88	12.00	4.34	12.00	3.80	12.00	3.25
35	12.00	8.68	12.00	8.01	12.00	7.34	12.00	6.68	12.00	6.01	12.00	5.34	12.00	4.67	12.00	4.00

◆ ZHBW146A1 [HM141MR U34] / ZHBW148A1 [HM143MR U34]

Outdoor Temperature [°C DB]	Water flow rate 40.25 LPM								Water flow rate 25.2 LPM				Water flow rate 20.1 LPM			
	LWT 30 °C		LWT 35 °C		LWT 40 °C		LWT 45 °C		LWT 50 °C		LWT 55 °C		LWT 60 °C		LWT 65 °C	
	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP
-25	10.00	2.09	10.00	1.93	10.00	1.78	10.00	1.62								
-20	12.00	2.62	12.00	2.42	12.00	2.23	12.00	2.03	11.40	1.83						
-15	14.00	2.84	14.00	2.50	14.00	2.47	14.00	2.44	13.30	2.19	13.30	1.95				
-7	14.00	3.61	14.00	3.34	14.00	3.21	14.00	3.09	14.00	2.78	14.00	2.47	14.00	2.16		
-4	14.00	3.90	14.00	3.65	14.00	3.49	14.00	3.33	14.00	3.00	14.00	2.67	14.00	2.33	14.00	2.00
-2	14.00	4.09	14.00	3.86	14.00	3.68	14.00	3.50	14.00	3.15	14.00	2.80	14.00	2.45	14.00	2.10
2	14.00	4.73	14.00	4.28	14.00	4.05	14.00	3.83	14.00	3.45	14.00	3.06	14.00	2.68	14.00	2.30
7	14.00	5.24	14.00	4.80	14.00	4.52	14.00	4.24	14.00	3.82	14.00	3.40	14.00	2.97	14.00	2.55
10	14.00	5.83	14.00	5.39	14.00	4.94	14.00	4.49	14.00	4.04	14.00	3.60	14.00	3.15	14.00	2.70
15	14.00	6.37	14.00	5.88	14.00	5.39	14.00	4.90	14.00	4.42	14.00	3.93	14.00	3.44	14.00	2.95
18	14.00	6.69	14.00	6.18	14.00	5.67	14.00	5.15	14.00	4.64	14.00	4.13	14.00	3.61	14.00	3.10
20	14.00	6.91	14.00	6.38	14.00	5.85	14.00	5.32	14.00	4.79	14.00	4.26	14.00	3.73	14.00	3.20
35	14.00	8.52	14.00	7.86	14.00	7.21	14.00	6.56	14.00	5.91	14.00	5.25	14.00	4.60	14.00	3.95

◆ ZHBW166A1 [HM161MR U34] / ZHBW168A1 [HM163MR U34]

Outdoor Temperature [°C DB]	Water flow rate 46.0 LPM								Water flow rate 28.8 LPM				Water flow rate 23.0 LPM			
	LWT 30 °C		LWT 35 °C		LWT 40 °C		LWT 45 °C		LWT 50 °C		LWT 55 °C		LWT 60 °C		LWT 65 °C	
	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP	TC	COP
-25	10.50	1.96	10.50	1.84	10.50	1.72	10.50	1.60								
-20	13.25	2.48	13.25	2.32	13.25	2.15	13.25	1.98	12.59	1.82						
-15	16.00	2.71	14.40	2.45	14.40	2.41	14.40	2.37	13.68	2.16	13.68	1.94				
-7	16.00	3.46	16.00	3.27	16.00	3.13	16.00	2.98	16.00	2.70	16.00	2.41	16.00	2.12		
-4	16.00	3.75	16.00	3.58	16.00	3.40	16.00	3.22	16.00	2.90	16.00	2.58	16.00	2.27	16.00	1.95
-2	16.00	4.16	16.00	3.78	16.00	3.58	16.00	3.38	16.00	3.05	16.00	2.72	16.00	2.38	16.00	2.05
2	16.00	4.57	16.00	4.19	16.00	3.95	16.00	3.71	16.00	3.35	16.00	2.98	16.00	2.62	16.00	2.25
7	16.00	5.08	16.00	4.70	16.00	4.41	16.00	4.13	16.00	3.72	16.00	3.31	16.00	2.91	16.00	2.50
10	16.00	5.67	16.00	5.24	16.00	4.80	16.00	4.37	16.00	3.94	16.00	3.51	16.00	3.08	16.00	2.65
15	16.00	6.20	16.00	5.73	16.00	5.26	16.00	4.79	16.00	4.32	16.00	3.84	16.00	3.37	16.00	2.90
18	16.00	6.52	16.00	6.03	16.00	5.53	16.00	5.04	16.00	4.54	16.00	4.04	16.00	3.55	16.00	3.05
20	16.00	6.74	16.00	6.23	16.00	5.71	16.00	5.20	16.00	4.69	16.00	4.18	16.00	3.66	16.00	3.15
35	16.00	8.35	16.00	7.71	16.00	7.08	16.00	6.44	16.00	5.81	16.00	5.17	16.00	4.54	16.00	3.90

Note

1. DB : Dry bulb temperature(°C), LWT : Leaving water temperature(°C), LPM : Liter per minute (ℓ/min)
2. TC : Total capacity(kW), EER: Energy efficiency ratio(kW/kW), COP : Coefficient of performance (kW/kW)
3. Direct interpolation is permissible. Do not extrapolate.
4. Measuring procedure follows EN14511.
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