

4-5. Capacity Tables

▼Outdoor unit HWS-804H-E
 Hydro unit HWS-804XWH**-E

Rated heating capacity and power input

Rated condition LWT=35°C dT=5deg	Capacity	kW	8.0
	Power input	kW	1.79
	COP	W/W	4.46
	Rated water flow rate	ℓ/min	22.9

* Rated heating capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - return water temperature

Average heating capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	3.71	3.61	3.57	—	—	—
	-15	4.40	4.28	4.23	4.13	—	—
	-7	5.15	5.00	4.91	4.82	4.73	—
	-2	5.88	5.76	5.69	5.63	5.56	5.43
	2	6.48	6.37	6.35	6.34	6.33	6.24
	7	8.75	8.52	8.32	8.13	7.93	7.70
	10	9.28	9.01	8.76	8.50	8.24	8.11
	12	9.81	9.52	9.25	8.99	8.72	8.67
	15	10.33	10.01	9.73	9.46	9.18	9.03
20	11.73	11.32	11.03	10.75	10.46	10.22	

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	1.42	1.52	1.76	—	—	—
	-15	1.49	1.60	1.85	2.12	—	—
	-7	1.73	1.85	2.15	2.45	2.75	—
	-2	1.76	1.89	2.20	2.51	2.82	3.10
	2	1.77	1.91	2.22	2.53	2.85	3.13
	7	1.82	2.01	2.21	2.42	2.62	2.81
	10	1.79	1.97	2.17	2.38	2.58	2.82
	12	1.78	1.96	2.16	2.36	2.56	2.83
	15	1.76	1.94	2.19	2.43	2.68	2.97
20	1.75	1.93	2.17	2.42	2.66	3.00	

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.61	2.37	2.03	—	—	—
	-15	2.95	2.68	2.29	1.95	—	—
	-7	2.98	2.70	2.28	1.97	1.72	—
	-2	3.35	3.04	2.59	2.24	1.97	1.75
	2	3.67	3.34	2.86	2.50	2.22	2.00
	7	4.81	4.24	3.76	3.36	3.03	2.74
	10	5.18	4.57	4.03	3.58	3.20	2.87
	12	5.50	4.85	4.28	3.80	3.40	3.06
	15	5.88	5.16	4.45	3.88	3.42	3.04
20	6.71	5.87	5.08	4.45	3.93	3.41	

- * Heating capacity and power input are include defrost cycle data.
- * Heating capacity and power input are shown at maximum compressor operating frequency
- * Power input does not include water pump power.
- * Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%
 LWT : Leaving water temperature (°C)

Heating peak capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	3.88	3.78	3.74	—	—	—
	-15	4.59	4.47	4.41	4.31	—	—
	-7	5.89	5.74	5.65	5.55	5.29	—
	-2	6.81	6.60	6.48	6.35	6.23	5.84
	2	7.70	7.46	7.34	7.23	7.01	6.77
	7	8.75	8.52	8.32	8.13	7.93	7.70
	10	9.28	9.01	8.76	8.50	8.24	8.11
	12	9.81	9.52	9.25	8.99	8.72	8.67
	15	10.33	10.01	9.73	9.46	9.18	9.03
20	11.73	11.32	11.03	10.75	10.46	10.22	

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	1.44	1.55	1.89	—	—	—
	-15	1.53	1.65	2.01	2.28	—	—
	-7	1.55	1.68	2.04	2.41	2.56	—
	-2	1.57	1.71	2.06	2.42	2.62	2.74
	2	1.56	1.71	2.05	2.38	2.62	2.76
	7	1.82	2.01	2.21	2.42	2.62	2.81
	10	1.79	1.97	2.17	2.38	2.58	2.82
	12	1.78	1.96	2.16	2.36	2.56	2.83
	15	1.76	1.94	2.19	2.43	2.68	2.97
20	1.75	1.93	2.17	2.42	2.66	3.00	

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.68	2.44	1.98	—	—	—
	-15	3.00	2.71	2.20	1.89	—	—
	-7	3.79	3.41	2.76	2.30	2.07	—
	-2	4.34	3.86	3.15	2.63	2.38	2.13
	2	4.94	4.37	3.59	3.03	2.68	2.45
	7	4.81	4.24	3.76	3.36	3.03	2.74
	10	5.18	4.57	4.03	3.58	3.20	2.87
	12	5.50	4.85	4.28	3.80	3.40	3.06
	15	5.88	5.16	4.45	3.88	3.42	3.04
20	6.71	5.87	5.08	4.45	3.93	3.41	

* Heating capacity and power input are shown peak value during operation.

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

▼Outdoor unit **HWS-804H-E**
 Hydro unit **HWS-804XWH**-E**

Rated cooling capacity and power input

Rated condition LWT=7°C dT=5deg	Capacity	kW	6.0
	Power input	kW	1.94
	EER	W/W	3.10
	Rated water flow rate	ℓ/min	17.2

* Rated cooling capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Return water temperature - leaving water temperature

Cooling capacity and power input

Capacity (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	7.34	7.91	8.49	8.95	9.64
	27	7.18	7.74	8.30	8.75	9.43
	30	7.11	7.67	8.23	8.67	9.34
	35	7.00	7.55	8.10	8.53	9.19
	40	6.41	6.91	7.42	7.82	8.42
	43	5.39	5.75	6.13	6.43	6.85

Power input (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	1.65	1.68	1.71	1.73	1.77
	27	2.01	2.04	2.08	2.11	2.15
	30	2.16	2.20	2.24	2.27	2.32
	35	2.42	2.46	2.51	2.54	2.59
	40	2.62	2.66	2.71	2.74	2.80
	43	2.37	2.38	2.38	2.38	2.40

COP		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	4.45	4.71	4.97	5.17	5.46
	27	3.57	3.79	3.99	4.15	4.38
	30	3.29	3.48	3.67	3.82	4.03
	35	2.89	3.06	3.23	3.36	3.55
	40	2.45	2.60	2.74	2.85	3.01
	43	2.27	2.42	2.58	2.71	2.85

* Cooling capacity and power input are the data at rated compressor operating frequency of rated condition 1

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

Heating capacity and input specifications

▼Outdoor unit HWS-1104H-E
 Hydro unit HWS-1404XWH**-E

Rated heating capacity and power input

Rated condition LWT=35°C dT=5deg	Capacity	kW	11.2
	Power input	kW	2.30
	COP	W/W	4.88
	Rated water flow rate	ℓ/min	32.1

* Rated heating capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - return water temperature

Average heating capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	5.42	5.25	5.10	4.94	—	—
	-15	6.79	6.57	6.38	6.19	—	—
	-7	8.31	8.04	7.81	7.58	7.35	—
	-2	9.79	9.48	9.21	8.94	8.67	7.62
	2	10.44	10.10	9.81	9.53	9.24	8.12
	7	15.12	14.63	14.12	13.62	13.11	10.98
	10	16.03	15.51	14.97	14.43	13.89	11.64
	12	16.95	16.24	15.68	15.12	14.55	12.19
	15	18.30	17.20	16.13	15.07	14.00	11.72
	20	21.09	19.44	18.24	17.03	15.83	13.26

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.34	2.52	2.91	3.31	—	—
	-15	2.44	2.62	3.03	3.44	—	—
	-7	2.68	2.89	3.34	3.79	4.23	—
	-2	2.64	2.84	3.29	3.73	4.17	4.13
	2	2.60	2.80	3.24	3.67	4.11	4.07
	7	3.00	3.24	3.50	3.76	4.02	3.99
	10	2.99	3.22	3.48	3.74	4.00	3.96
	12	2.98	3.20	3.47	3.73	3.99	3.95
	15	2.93	3.16	3.33	3.50	3.67	3.64
	20	2.91	3.14	3.31	3.48	3.65	3.61

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.31	2.08	1.75	1.49	—	—
	-15	2.78	2.50	2.10	1.80	—	—
	-7	3.10	2.78	2.34	2.00	1.74	—
	-2	3.71	3.33	2.80	2.40	2.08	1.85
	2	4.01	3.60	3.03	2.59	2.25	1.99
	7	5.03	4.52	4.04	3.62	3.26	2.75
	10	5.37	4.82	4.31	3.86	3.48	2.94
	12	5.70	5.07	4.52	4.06	3.65	3.09
	15	6.24	5.45	4.85	4.31	3.82	3.22
	20	7.25	6.20	5.51	4.90	4.34	3.67

* Heating capacity and power input are include defrost cycle data.

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Heating peak capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	6.36	6.20	6.08	5.84	—	—
	-15	7.72	7.52	7.36	7.12	—	—
	-7	9.95	9.67	9.44	9.16	8.83	—
	-2	11.52	11.18	10.89	10.57	10.26	8.60
	2	12.84	12.42	12.07	11.72	11.38	9.53
	7	15.12	14.63	14.12	13.62	13.11	10.98
	10	16.03	15.51	14.97	14.43	13.89	11.64
	12	16.95	16.24	15.68	15.12	14.55	12.19
	15	18.30	17.20	16.13	15.07	14.00	11.72
	20	21.09	19.44	18.24	17.03	15.83	13.26

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.23	2.36	2.75	3.11	—	—
	-15	2.39	2.53	2.95	3.34	—	—
	-7	2.47	2.64	3.06	3.48	3.89	—
	-2	2.51	2.69	3.12	3.54	3.97	3.92
	2	2.51	2.71	3.13	3.56	3.98	3.95
	7	3.00	3.24	3.50	3.76	4.02	3.99
	10	2.99	3.22	3.48	3.74	4.00	3.96
	12	2.98	3.20	3.47	3.73	3.99	3.95
	15	2.93	3.16	3.33	3.50	3.67	3.64
	20	2.91	3.14	3.31	3.48	3.65	3.61

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.85	2.63	2.21	1.88	—	—
	-15	3.24	2.97	2.49	2.13	—	—
	-7	4.03	3.66	3.09	2.63	2.27	—
	-2	4.59	4.15	3.49	2.98	2.59	2.19
	2	5.11	4.59	3.86	3.29	2.86	2.42
	7	5.03	4.52	4.04	3.62	3.26	2.75
	10	5.37	4.82	4.31	3.86	3.48	2.94
	12	5.70	5.07	4.52	4.06	3.65	3.09
	15	6.24	5.45	4.85	4.31	3.82	3.22
	20	7.25	6.20	5.51	4.90	4.34	3.67

* Heating capacity and power input are shown peak value during operation

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Cooling capacity and input specifications

▼Outdoor unit HWS-1104H-E
 Hydro unit HWS-1404XWH**-E

Rated cooling capacity and power input

Rated condition 1 LWT=7°C dT=5deg	Capacity	kW	10.0
	Power input	kW	3.26
	EER	W/W	3.07
	Rated water flow rate	ℓ/min	28.9

* Rated cooling capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Return water temperature - leaving water temperature

Cooling capacity and power input

Capacity (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	11.14	12.04	12.95	13.67	14.75
	27	10.72	11.62	12.52	13.24	14.32
	30	10.54	11.44	12.34	13.05	14.13
	35	10.24	11.14	12.03	12.75	13.82
	40	9.18	9.98	10.78	11.42	12.38
	43	7.06	7.67	8.29	8.78	9.53

Power input (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	2.15	2.16	2.17	2.17	2.19
	27	2.68	2.71	2.74	2.76	2.79
	30	2.91	2.95	2.98	3.01	3.05
	35	3.29	3.34	3.39	3.43	3.49
	40	3.57	3.57	3.58	3.62	3.69
	43	3.06	3.05	3.05	3.07	3.10

COP		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	5.18	5.58	5.97	6.29	6.75
	27	4.00	4.29	4.57	4.80	5.12
	30	3.62	3.88	4.14	4.34	4.63
	35	3.11	3.33	3.55	3.72	3.96
	40	2.57	2.79	3.01	3.16	3.36
	43	2.30	2.51	2.72	2.86	3.07

* Cooling capacity and power input are the data at rated compressor operating frequency of rated condition 1

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

Heating capacity and input specifications

▼Outdoor unit HWS-1404H-E
 Hydro unit HWS-1404XWH**-E

Rated heating capacity and power input

Rated condition 1 LWT=35°C dT=5deg	Capacity	kW	14.0
	Power input	kW	3.11
	COP	W/W	4.50
	Rated water flow rate	ℓ/min	40.1

* Rated heating capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - return water temperature

Average heating capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	5.92	5.69	5.36	5.03	—	—
	-15	7.61	7.31	6.89	6.47	—	—
	-7	8.98	8.63	8.13	7.64	7.14	—
	-2	10.47	10.07	9.49	8.91	8.33	7.84
	2	11.08	10.65	10.04	9.43	8.81	8.30
	7	17.42	16.74	15.50	14.26	13.02	11.67
	10	18.29	17.58	16.28	14.97	13.67	12.26
	12	19.53	18.58	17.21	15.83	14.45	12.96
	15	20.96	19.56	17.68	15.80	13.92	12.48
	20	23.26	21.29	19.24	17.20	15.15	13.58

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.60	2.81	3.07	3.32	—	—
	-15	2.74	2.96	3.23	3.51	—	—
	-7	3.05	3.29	3.59	3.89	4.19	—
	-2	3.01	3.25	3.54	3.84	4.13	4.16
	2	2.96	3.20	3.49	3.78	4.07	4.10
	7	3.65	3.95	3.97	4.00	4.03	4.06
	10	3.66	3.95	3.97	4.00	4.03	4.06
	12	3.64	3.93	3.93	3.94	3.95	3.98
	15	3.62	3.90	3.89	3.88	3.87	3.89
	20	3.42	3.68	3.67	3.65	3.64	3.66

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.27	2.02	1.75	1.52	—	—
	-15	2.77	2.47	2.13	1.85	—	—
	-7	2.94	2.62	2.26	1.96	1.70	—
	-2	3.48	3.10	2.68	2.32	2.02	1.88
	2	3.74	3.33	2.88	2.49	2.16	2.02
	7	4.77	4.24	3.90	3.56	3.23	2.87
	10	5.00	4.45	4.09	3.74	3.39	3.02
	12	5.36	4.73	4.38	4.02	3.66	3.26
	15	5.79	5.01	4.54	4.07	3.60	3.21
	20	6.80	5.78	5.25	4.71	4.17	3.71

- * Heating capacity and power input are include defrost cycle data.
- * Heating capacity and power input are shown at maximum operating frequency
- * Power input does not include water pump power.
- * Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%
 LWT : Leaving water temperature (°C)

Heating peak capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	6.56	6.36	6.04	5.64	—	—
	-15	8.62	8.34	7.90	7.37	—	—
	-7	11.19	10.79	10.21	9.59	8.93	—
	-2	12.98	12.50	11.80	11.09	10.37	8.88
	2	14.14	13.59	12.81	12.02	11.26	9.63
	7	17.42	16.74	15.50	14.26	13.02	11.67
	10	18.29	17.58	16.28	14.97	13.67	12.26
	12	19.53	18.58	17.21	15.83	14.45	12.96
	15	20.96	19.56	17.68	15.80	13.92	12.48
	20	23.26	21.29	19.24	17.20	15.15	13.58

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.51	2.65	2.92	3.15	—	—
	-15	2.66	2.83	3.11	3.36	—	—
	-7	2.83	3.03	3.32	3.59	3.87	—
	-2	2.89	3.11	3.40	3.69	3.98	4.00
	2	2.89	3.11	3.40	3.68	3.98	4.01
	7	3.65	3.95	3.97	4.00	4.03	4.06
	10	3.66	3.95	3.97	4.00	4.03	4.06
	12	3.64	3.93	3.93	3.94	3.95	3.98
	15	3.62	3.90	3.89	3.88	3.87	3.89
	20	3.42	3.68	3.67	3.65	3.64	3.66

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.62	2.39	2.07	1.79	—	—
	-15	3.24	2.95	2.54	2.19	—	—
	-7	3.96	3.56	3.08	2.67	2.31	—
	-2	4.49	4.02	3.47	3.01	2.61	2.22
	2	4.89	4.36	3.77	3.27	2.83	2.40
	7	4.77	4.24	3.90	3.56	3.23	2.87
	10	5.00	4.45	4.09	3.74	3.39	3.02
	12	5.36	4.73	4.38	4.02	3.66	3.26
	15	5.79	5.01	4.54	4.07	3.60	3.21
	20	6.80	5.78	5.25	4.71	4.17	3.71

* Heating capacity and power input are shown peak value during operation

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Cooling capacity and input specifications

▼Outdoor unit HWS-1404H-E
 Hydro unit HWS-1404XWH**-E

Rated cooling capacity and power input

Rated condition 1 LWT=7°C dT=5deg	Capacity	kW	11.0
	Power input	kW	3.81
	EER	W/W	2.89
	Rated water flow rate	ℓ/min	31.5

* Rated cooling capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Return water temperature - Leaving water temperature

Cooling capacity and power input

Capacity (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	13.29	14.40	15.50	16.38	17.71
	27	12.59	13.55	14.52	15.29	16.45
	30	12.28	13.19	14.09	14.82	15.90
	35	11.78	12.59	13.39	14.03	15.00
	40	9.46	10.10	10.75	11.26	12.05
	43	7.29	7.79	8.28	8.69	8.90

Power input (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	2.88	2.88	2.88	2.88	2.88
	27	3.44	3.44	3.44	3.44	3.44
	30	3.67	3.67	3.67	3.67	3.67
	35	4.07	4.07	4.07	4.07	4.07
	40	3.83	3.76	3.70	3.71	3.68
	43	3.24	3.15	3.11	3.08	3.05

EER		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	4.61	5.00	5.38	5.69	6.15
	27	3.66	3.94	4.23	4.45	4.79
	30	3.34	3.59	3.84	4.03	4.33
	35	2.89	3.09	3.29	3.45	3.69
	40	2.47	2.69	2.90	3.04	3.27
	43	2.25	2.47	2.67	2.82	2.91

* Cooling capacity and power input are the data at rated compressor operating frequency of rated condition 1

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

Heating capacity and input specifications

▼Outdoor unit HWS-1104H8-E, HWS-1104H8R-E
 Hydro unit HWS-1404XWH**-E

Rated heating capacity and power input

Rated condition 1 LWT=35°C dT=5deg	Capacity	kW	11.2
	Power input	kW	2.34
	COP	W/W	4.80
	Rated water flow rate	ℓ/min	32.1

* Rated heating capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - return water temperature

Average heating capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	5.39	5.20	5.13	5.06	—	—
	-15	7.05	6.79	6.71	6.61	—	—
	-7	8.35	8.04	7.93	7.81	7.70	—
	-2	9.51	9.13	8.98	8.84	8.69	8.13
	2	11.15	10.46	10.13	9.81	9.48	8.86
	7	15.32	14.73	14.33	13.93	13.53	12.56
	10	16.36	15.73	15.37	15.02	14.66	13.85
	12	17.05	16.39	16.02	15.64	15.26	14.57
	15	17.90	17.21	16.76	16.30	15.85	15.03
	20	20.04	19.27	18.83	18.38	17.94	16.85

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.15	2.31	2.59	2.88	—	—
	-15	2.40	2.58	2.91	3.23	—	—
	-7	2.68	2.88	3.26	3.64	4.01	—
	-2	2.64	2.84	3.22	3.59	3.97	4.17
	2	2.70	2.90	3.24	3.59	3.93	4.13
	7	2.92	3.14	3.45	3.76	4.08	4.36
	10	2.92	3.14	3.46	3.79	4.12	4.43
	12	2.91	3.13	3.47	3.81	4.15	4.48
	15	2.90	3.11	3.47	3.82	4.17	4.48
	20	2.88	3.10	3.46	3.83	4.20	4.55

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.51	2.25	1.98	1.76	—	—
	-15	2.94	2.63	2.31	2.04	—	—
	-7	3.11	2.79	2.43	2.15	1.92	—
	-2	3.60	3.21	2.79	2.46	2.19	1.95
	2	4.13	3.61	3.12	2.73	2.41	2.14
	7	5.24	4.69	4.15	3.70	3.32	2.88
	10	5.61	5.02	4.44	3.96	3.56	3.13
	12	5.85	5.23	4.61	4.10	3.68	3.25
	15	6.18	5.53	4.83	4.27	3.80	3.36
	20	6.96	6.22	5.44	4.80	4.28	3.70

* Heating capacity and power input are include defrost cycle data.

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Heating peak capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	6.38	6.12	6.01	5.90	—	—
	-15	7.60	7.29	7.16	7.03	—	—
	-7	9.90	9.50	9.33	9.17	8.92	—
	-2	11.30	10.86	10.69	10.52	10.22	9.44
	2	12.99	12.49	12.13	11.78	11.26	10.40
	7	15.32	14.73	14.33	13.93	13.53	12.56
	10	16.36	15.73	15.37	15.02	14.66	13.85
	12	17.05	16.39	16.02	15.64	15.26	14.57
	15	17.90	17.21	16.76	16.30	15.85	15.03
	20	20.04	19.27	18.83	18.38	17.94	16.85

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	1.91	2.06	2.37	2.69	—	—
	-15	2.21	2.38	2.74	3.11	—	—
	-7	2.37	2.55	2.94	3.34	3.73	—
	-2	2.42	2.60	3.00	3.42	3.82	4.06
	2	2.54	2.74	3.12	3.52	3.90	4.14
	7	2.92	3.14	3.45	3.76	4.08	4.36
	10	2.92	3.14	3.46	3.79	4.12	4.43
	12	2.91	3.13	3.47	3.81	4.15	4.48
	15	2.90	3.11	3.47	3.82	4.17	4.48
	20	2.88	3.10	3.46	3.83	4.20	4.55

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	3.34	2.97	2.54	2.19	—	—
	-15	3.44	3.07	2.61	2.26	—	—
	-7	4.18	3.73	3.18	2.75	2.39	—
	-2	4.68	4.17	3.56	3.07	2.67	2.33
	2	5.12	4.56	3.89	3.35	2.89	2.51
	7	5.24	4.69	4.15	3.70	3.32	2.88
	10	5.61	5.02	4.44	3.96	3.56	3.13
	12	5.85	5.23	4.61	4.10	3.68	3.25
	15	6.18	5.53	4.83	4.27	3.80	3.36
	20	6.96	6.22	5.44	4.80	4.28	3.70

* Heating capacity and power input are shown peak value during operation.

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Cooling capacity and input specifications

▼Outdoor unit HWS-1104H8-E, HWS-1104H8R-E
 Hydro unit HWS-1404XWH**-E

Rated cooling capacity and power input

Rated condition 1 LWT=7°C dT=5deg	Capacity	kW	10.0
	Power input	kW	3.26
	EER	W/W	3.07
	Rated water flow rate	ℓ/min	28.9

* Rated cooling capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Return water temperature - leaving water temperature

Cooling capacity and power input

Capacity (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	11.15	11.95	12.75	13.38	14.34
	27	10.69	11.46	12.24	12.86	13.78
	30	10.49	11.25	12.02	12.63	13.55
	35	10.16	10.91	11.66	12.25	13.15
	40	9.39	10.09	10.78	11.33	12.01
	43	8.93	9.59	10.25	10.78	11.33

Power input (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	2.10	2.11	2.12	2.13	2.14
	27	2.60	2.62	2.65	2.67	2.70
	30	2.81	2.84	2.87	2.90	2.94
	35	3.17	3.21	3.25	3.29	3.34
	40	3.50	3.55	3.59	3.63	3.67
	43	3.70	3.75	3.80	3.84	3.87

COP		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	5.32	5.67	6.02	6.29	6.70
	27	4.12	4.37	4.62	4.82	5.11
	30	3.73	3.96	4.18	4.36	4.61
	35	3.21	3.40	3.58	3.73	3.94
	40	2.68	2.84	3.00	3.12	3.27
	43	2.41	2.56	2.70	2.81	2.93

* Cooling capacity and power input are the data at rated compressor operating frequency of rated condition 1

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

Heating capacity and input specifications

▼Outdoor unit HWS-1404H8-E, HWS-1404H8R-E
 Hydro unit HWS-1404XWH**-E

Rated heating capacity and power input

Rated condition 1 LWT=35°C dT=5deg	Capacity	kW	14.0
	Power input	kW	3.16
	COP	W/W	4.44
	Rated water flow rate	ℓ/min	40.1

* Rated heating capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - return water temperature

Average heating capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	5.79	5.59	5.48	5.36	—	—
	-15	7.58	7.30	7.15	7.00	—	—
	-7	8.98	8.64	8.46	8.27	8.09	—
	-2	10.22	9.81	9.59	9.36	9.13	8.53
	2	11.74	11.01	10.66	10.31	9.96	9.30
	7	16.35	15.77	15.42	15.07	14.72	13.64
	10	17.61	17.14	16.74	16.35	15.95	15.04
	12	18.37	17.86	17.50	17.14	16.77	15.81
	15	19.39	18.86	18.31	17.77	17.22	17.21
	20	21.41	20.90	20.37	19.83	19.30	18.75

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.39	2.51	2.81	3.11	—	—
	-15	2.66	2.80	3.15	3.49	—	—
	-7	2.97	3.14	3.53	3.93	4.32	—
	-2	2.92	3.09	3.48	3.88	4.27	4.49
	2	3.03	3.21	3.55	3.89	4.23	4.45
	7	3.29	3.55	3.89	4.24	4.58	4.86
	10	3.29	3.55	3.91	4.27	4.63	4.93
	12	3.29	3.55	3.91	4.29	4.67	4.98
	15	3.31	3.55	3.93	4.31	4.68	5.09
	20	3.34	3.58	3.97	4.36	4.75	5.18

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.42	2.23	1.95	1.73	—	—
	-15	2.84	2.60	2.27	2.00	—	—
	-7	3.02	2.76	2.39	2.11	1.87	—
	-2	3.50	3.18	2.75	2.41	2.14	1.90
	2	3.88	3.44	3.00	2.65	2.35	2.09
	7	4.98	4.44	3.96	3.56	3.21	2.81
	10	5.36	4.83	4.29	3.83	3.44	3.05
	12	5.59	5.03	4.47	3.99	3.59	3.17
	15	5.86	5.31	4.66	4.13	3.68	3.38
	20	6.41	5.83	5.13	4.55	4.06	3.62

* Heating capacity and power input are include defrost cycle data.

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Heating peak capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	7.15	6.85	6.68	6.50	—	—
	-15	8.51	8.16	7.96	7.75	—	—
	-7	11.08	10.64	10.38	10.12	9.76	—
	-2	12.66	12.16	11.88	11.61	11.19	10.33
	2	14.25	13.70	13.30	12.90	12.33	11.39
	7	16.35	15.77	15.42	15.07	14.72	13.64
	10	17.61	17.14	16.74	16.35	15.95	15.04
	12	18.37	17.86	17.50	17.14	16.77	15.81
	15	19.39	18.86	18.31	17.77	17.22	17.21
	20	21.41	20.90	20.37	19.83	19.30	18.75

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.24	2.41	2.76	3.13	—	—
	-15	2.59	2.78	3.19	3.62	—	—
	-7	2.77	2.98	3.42	3.88	4.32	—
	-2	2.83	3.05	3.50	3.98	4.43	4.71
	2	3.01	3.25	3.67	4.11	4.52	4.80
	7	3.29	3.55	3.89	4.24	4.58	4.86
	10	3.29	3.55	3.91	4.27	4.63	4.93
	12	3.29	3.55	3.91	4.29	4.67	4.98
	15	3.31	3.55	3.93	4.31	4.68	5.09
	20	3.34	3.58	3.97	4.36	4.75	5.18

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	3.19	2.85	2.42	—	—	—
	-15	3.29	2.94	2.49	2.14	—	—
	-7	4.00	3.57	3.03	2.61	2.26	—
	-2	4.48	3.99	3.39	2.92	2.53	2.20
	2	4.73	4.21	3.62	3.14	2.73	2.37
	7	4.98	4.44	3.96	3.56	3.21	2.81
	10	5.36	4.83	4.29	3.83	3.44	3.05
	12	5.59	5.03	4.47	4.00	3.59	3.17
	15	5.86	5.31	4.66	4.13	3.68	3.38
	20	6.41	5.83	5.13	4.55	4.06	3.62

* Heating capacity and power input are shown peak value during operation

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Cooling capacity and input specifications

▼Outdoor unit HWS-1404H8-E, HWS-1404H8R-E
 Hydro unit HWS-1404XWH**-E

Rated cooling capacity and power input

Rated condition 1 LWT=7°C dT=5deg	Capacity	kW	11.0
	Power input	kW	3.81
	EER	W/W	2.89
	Rated water flow rate	ℓ/min	31.5

* Rated cooling capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)
 LWT : Leaving water temperature (°C)
 dT : Delta temperature (deg)
 Return water temperature - leaving water temperature

Cooling capacity and power input

Capacity (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	13.27	14.18	15.10	15.83	16.92
	27	12.69	13.57	14.46	15.17	16.23
	30	12.44	13.31	14.19	14.88	15.93
	35	12.02	12.88	13.73	14.41	15.44
	40	11.27	12.07	12.87	13.38	14.18
	43	10.82	11.59	12.36	12.75	13.43

Power input (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	2.82	2.82	2.82	2.82	2.82
	27	3.43	3.46	3.49	3.52	3.55
	30	3.70	3.74	3.78	3.82	3.87
	35	4.13	4.20	4.26	4.31	4.39
	40	4.58	4.65	4.72	4.75	4.80
	43	4.84	4.92	5.00	5.00	5.04

COP		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	4.70	5.02	5.35	5.61	6.00
	27	3.69	3.92	4.14	4.31	4.57
	30	3.37	3.56	3.75	3.90	4.12
	35	2.91	3.07	3.22	3.34	3.52
	40	2.46	2.60	2.73	2.82	2.96
	43	2.23	2.35	2.47	2.55	2.67

* Cooling capacity and power input are the data at rated compressor operating frequency of rated condition 1

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

Heating capacity and input specifications

▼Outdoor unit HWS-1604H8-E, HWS-1604H8R-E
 Hydro unit HWS-1404XWH**-E

Rated heating capacity and power input

Rated condition 1 LWT=35°C dT=5deg	Capacity	kW	16.0
	Power input	kW	3.72
	COP	W/W	4.30
	Rated water flow rate	ℓ/min	45.8

* Rated heating capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Leaving water temperature - return water temperature

Average heating capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	6.07	5.85	5.72	5.58	—	—
	-15	7.94	7.65	7.47	7.28	—	—
	-7	9.40	9.05	8.83	8.61	8.39	—
	-2	10.71	10.28	10.01	9.74	9.47	8.85
	2	12.38	11.61	11.18	10.76	10.33	9.65
	7	17.43	16.76	16.26	15.77	15.28	14.12
	10	18.63	17.92	17.47	17.01	16.56	15.57
	12	19.41	18.68	18.23	17.78	17.32	16.53
	15	20.63	19.82	19.30	18.78	18.27	17.23
20	23.10	22.08	21.54	21.01	20.47	19.13	

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.59	2.72	3.02	3.32	—	—
	-15	2.88	3.03	3.39	3.73	—	—
	-7	3.21	3.39	3.79	4.20	4.60	—
	-2	3.16	3.34	3.74	4.15	4.55	4.78
	2	3.27	3.46	3.81	4.16	4.51	4.74
	7	3.61	3.89	4.24	4.58	4.93	5.22
	10	3.61	3.89	4.25	4.62	4.98	5.30
	12	3.61	3.89	4.26	4.64	5.02	5.35
	15	3.63	3.90	4.30	4.70	5.10	5.46
20	3.66	3.93	4.34	4.76	5.17	5.55	

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.35	2.15	1.89	1.68	—	—
	-15	2.75	2.52	2.21	1.95	—	—
	-7	2.93	2.67	2.33	2.05	1.82	—
	-2	3.39	3.08	2.67	2.35	2.08	1.85
	2	3.79	3.36	2.94	2.59	2.29	2.04
	7	4.83	4.30	3.84	3.44	3.10	2.70
	10	5.17	4.61	4.11	3.69	3.32	2.94
	12	5.38	4.80	4.28	3.83	3.45	3.09
	15	5.69	5.09	4.49	4.00	3.58	3.16
20	6.31	5.62	4.96	4.42	3.96	3.45	

- * Heating capacity and power input are include defrost cycle data.
- * Heating capacity and power input are shown at maximum operating frequency
- * Power input does not include water pump power.
- * Heating capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C) RH85%
 LWT : Leaving water temperature (°C)

Heating peak capacity and power input

Capacity (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	7.56	7.25	7.04	6.84	—	—
	-15	9.00	8.63	8.39	8.15	—	—
	-7	11.73	11.25	10.94	10.64	10.22	—
	-2	13.39	12.87	12.53	12.20	11.72	10.82
	2	15.17	14.59	14.09	13.60	12.91	11.93
	7	17.43	16.76	16.26	15.77	15.28	14.12
	10	18.63	17.92	17.47	17.01	16.56	15.57
	12	19.41	18.68	18.23	17.78	17.32	16.53
	15	20.63	19.82	19.30	18.78	18.27	17.23
	20	23.10	22.08	21.54	21.01	20.47	19.13

Power input (kW)		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	2.45	2.63	3.00	3.38	—	—
	-15	2.83	3.04	3.46	3.91	—	—
	-7	3.03	3.26	3.71	4.19	4.64	—
	-2	3.09	3.33	3.80	4.29	4.76	5.06
	2	3.28	3.54	3.98	4.43	4.86	5.16
	7	3.61	3.89	4.24	4.58	4.93	5.22
	10	3.61	3.89	4.25	4.61	4.98	5.30
	12	3.61	3.89	4.26	4.64	5.02	5.35
	15	3.63	3.90	4.30	4.70	5.10	5.46
	20	3.66	3.93	4.34	4.76	5.17	5.55

COP		LWT (°C)					
		30	35	40	45	50	55
TO (°C)	-20	3.09	2.76	2.35	2.02	—	—
	-15	3.19	2.84	2.42	2.09	—	—
	-7	3.87	3.46	2.95	2.54	2.20	—
	-2	4.34	3.87	3.30	2.84	2.46	2.14
	2	4.62	4.12	3.54	3.07	2.66	2.31
	7	4.83	4.30	3.84	3.44	3.10	2.70
	10	5.17	4.61	4.11	3.69	3.33	2.94
	12	5.38	4.81	4.28	3.83	3.45	3.09
	15	5.69	5.09	4.49	4.00	3.58	3.16
	20	6.31	5.62	4.96	4.42	3.96	3.45

* Heating capacity and power input are shown peak value during operation

* Heating capacity and power input are shown at maximum compressor operating frequency

* Power input does not include water pump power.

TO : Outdoor temperature (DB°C) RH85%

LWT : Leaving water temperature (°C)

Cooling capacity and input specifications

▼Outdoor unit HWS-1604H8-E, HWS-1604H8R-E
 Hydro unit HWS-1404XWH**-E

Rated cooling capacity and power input

Rated condition 1 LWT=7°C dT=5deg	Capacity	kW	13.0
	Power input	kW	4.80
	EER	W/W	2.71
	Rated water flow rate	ℓ/min	37.3

* Rated cooling capacity and power input are the data at rated compressor operating frequency

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)

dT : Delta temperature (deg)

Return water temperature - Leaving water temperature

Cooling capacity and power input

Capacity (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	14.39	15.37	16.34	17.12	18.29
	27	13.67	14.60	15.54	16.28	17.40
	30	13.36	14.27	15.19	15.92	17.02
	35	12.84	13.73	14.62	15.33	16.39
	40	11.53	12.32	13.29	14.12	14.92
	43	10.72	11.53	12.49	13.33	14.24

Power input (kW)		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	3.25	3.26	3.27	3.28	3.29
	27	3.89	3.94	3.99	4.02	4.08
	30	4.17	4.23	4.29	4.34	4.42
	35	4.63	4.72	4.81	4.88	4.98
	40	4.95	5.05	5.15	5.24	5.35
	43	5.16	5.28	5.42	5.51	5.68

EER		LWT (°C)				
		7	10	13	15	18
TO (°C)	20	4.43	4.71	5.00	5.22	5.56
	27	3.51	3.71	3.90	4.05	4.27
	30	3.20	3.37	3.54	3.67	3.85
	35	2.78	2.91	3.04	3.14	3.29
	40	2.33	2.44	2.58	2.69	2.79
	43	2.08	2.18	2.31	2.42	2.50

* Cooling capacity and power input are the data at rated compressor operating frequency of rated condition 1

* Power input does not include water pump power.

* Cooling capacity and power input are measured in accordance with EN14511.

TO : Outdoor temperature (DB°C)

LWT : Leaving water temperature (°C)