



## DEKON Air to Water Mini Chiller & Heat Pump

Cooling capacity from 8.6 to 51.3 kW

Heating capacity from 9.5 to 58 kW

### Characteristics

#### Structure

Panels and base frame are made from galvanized steel protected with polyester powder painting to ensure total resistance to atmospheric agents

#### Compressor

Hermetic scroll type compressor, equipped with the crankcase heater and thermal protection with thermal overheat cut-out and crankcase heater mounted on rubber vibration isolators

#### Axial fan

External rotor type axial fans, equipped with single phase direct drive motors, low noise 6 poles, protection level IP54, provided with a protective outlet grille

#### Evaporator

High efficiency and low pressure drop stainless steel (AISI 316) water exchangers, with anti-freeze heating element (option) and differential pressure switch, factory insulated with flexible close cell material

#### Condenser

Coils are consisting of seamless copper tubes mechanically expanded into blue hydrophilic aluminum fins, 100% fully quality tested, sub cooling circuit to prevent freezing at the base (optional), protected with metal grill

#### Desuperheater

High efficiency stainless steel brazed plate heat exchanger, factory insulated with flexible close cell material (optional)

#### Refrigerant circuit

Copper tube connection with charge valve, filter, sight glass, gas-liquid separator, thermostatic expansion valve, low pressure switch with automatic reset, high pressure switch with manual reset

The heat pump unit is completed also with 4-way valve, liquid receiver and one-way valve

#### Water circuit

Built with air vent valve, water drain connection, and female-threaded hydraulic connectors

Water pump (BW-30KW), differential pressure switch  
Expansion tank (BW-30KW)

#### Electric panel

Consists of:

- Compressor contactor
- Compressor protection breaker
- Fan rotor protection breaker
- Control circuit protection breaker
- Phase sequence relay (only for 3-phase)
- Programmable microprocessor controller

#### Optional

Additional electric heater embodied in the coils for defrosting in low temperature ambient. It must be factory installed

Stainless steel covering

Remote condenser

Tube in tube heat exchanger

Water circuit electric heater

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### Technical Data

Model	Unit	08	10	12	16	20	25	30	35	40	50
<b>Cooling**</b>											
Cooling capacity	kW	8.6	11	14.3	18.3	21.2	25.7	30.8	35.5	39	51.3
Cooling input (without water pump)	kW	2.91	3.66	4.61	4.69	5.2	6.25	10.7	11	12.6	17.92
EEER		2.94	3.01	2.92	3.11	2.94	3.01	3.02	3.2	3.02	2.83
<b>Heating**</b>											
Heating capacity	kW	9.6	12.1	12.6	16.3	22.2	28.8	33.6	38	43	58
Heating input (without water pump)	kW	3.2	3.93	3.8	9.5	7.1	9.2	11.3	10.56	13.7	20
COP		3.0	3.0	3.47	2.98	3.1	3.1	2.98	3.6	3.14	2.9
<b>Hermetic compressor</b>											
Type		Scroll(R60-41V3D3P3034)									
Quantity/circuit		1	1	1	1	2	2	2	2	2	2
<b>Evaporator</b>											
Type		Plate heat exchanger									
Water flow	m <sup>3</sup> /h	1.5	1.9	2.2	2.5	3.0	4.4	5.3	6.2	7.1	8.6
Water side pressure drop	kPa	33	33	33	36	38	39	42	50	52	58
Water connection size	mm	DN25	DN25	DN25	DN25	DN25	DN40	DN40	DN40	DN40	DN40
<b>Circulating pump</b>											
Power input	kW	0.35	0.35	0.35	0.35	0.75	0.75	0.92	0.92	0.92	0.92
<b>Axial fans</b>											
Quantity		1	1	1	2	1	1	1	2	2	2
Airflow	m <sup>3</sup> /h	4500	4500	4500	9000	9000	9000	12580	11000	11000	22500
<b>Overall dimension</b>											
Length	mm	1250	1250	1250	1250	1500	1500	1500	2000	2000	2000
Width	mm	452	452	452	462	462	462	462	462	462	462
Height	mm	1180	1180	1180	1180	1080	1080	1080	1080	1080	1080
Noise level ***	(dB(A))	58	58	60	64	66	66	68	70	70	70
Net weight	kg	145	145	150	190	270	250	310	350	380	465

### Technical Data

Model	Unit	08	10	12	16	20	25	30	35	40	50
<b>Cooling**</b>											
Cooling capacity	kW	8.7	10.7	12.6	16.8	21.5	24.8	30	35.6	41	50.6
Cooling input (without water pump)	kW	3.2	4.01	4.50	5.79	6.2	6.93	9.39	13.2	15.02	18.3
EEER		2.72	2.69	2.74	2.9	2.62	2.73	2.9	2.7	2.73	2.69
<b>Heating**</b>											
Heating capacity	kW	10.3	13.3	14	17.8	26.2	28	31	41.1	47.3	61
Heating input (without water pump)	kW	3.5	4.55	4.59	5.81	4.7	6.23	6.43	14.3	15.57	20.45
COP		2.94	2.97	3.08	3.06	3.02	3.14	3.81	2.92	3.03	2.93
<b>Hermetic compressor</b>											
Type		Scroll(R60-41V3D3P3034)									
Quantity/circuit		1	1	1	1	2	2	2	2	2	2
<b>Evaporator</b>											
Type		Plate heat exchanger									
Water flow	m <sup>3</sup> /h	1.5	1.8	2.3	2.7	3.7	4.3	5.2	6.1	7.1	8.7
Water side pressure drop	kPa	33	33	33	36	38	39	42	50	52	58
Water connection size	mm	DN25	DN25	DN25	DN25	DN40	DN40	DN40	DN40	DN40	DN40
<b>Circulating pump</b>											
Power input	kW	0.35	0.35	0.35	0.35	0.75	0.75	0.92	0.92	0.92	0.92
<b>Axial fans</b>											
Quantity		1	1	1	2	1	1	1	2	2	2
Airflow	m <sup>3</sup> /h	4500	4500	4500	9000	9000	9000	12580	11000	11000	22500
<b>Overall dimension</b>											
Length	mm	1250	1250	1250	1250	1500	1500	1500	2000	2000	2000
Width	mm	452	452	452	462	462	462	462	462	462	462
Height	mm	1180	1180	1180	1180	1080	1080	1080	1080	1080	1080
Noise level ***	(dB(A))	58	58	60	64	66	66	68	70	70	70
Net weight	kg	145	145	150	190	270	250	310	350	380	465

\*\* Ambient temperature 35°C; user side water in/out 12/7°C.

\*\* Ambient temperature 7°C; user side water in/out 40/45°C.

\*\*\* Sound pressure measured at a distance of 1 m and a height of 1.5 m above the ground in an ideal field (fan side).