

Using Jaga's low mass, low water content Low-H₂O heat exchanger combined with Jaga's DBE unit, the Knockonwood Freestanding DBE is perfect for use with low temperature heating systems



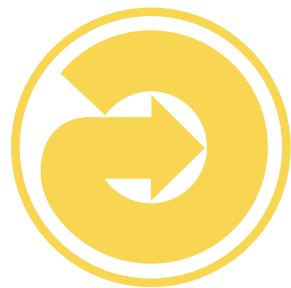
The Knockonwood Freestanding DBE is ideal for use in front of glazed facades and where trench or wall-mounted heating is not practical:

- Reception areas
- Entrance halls
- Offices
- Galleries
- Retail



Jaga's Knockonwood Freestanding DBE speaks for itself: 9 elegant wood finishes make this perimeter radiator as much a visual feature as it is an energy-efficient heater

Powerful, yet safe to touch. Not only will you save on energy bills, but you can rest assured that the Knockonwood Freestanding DBE is safe: all pipes and connections are hidden in the feet, whilst the casing is always at a safe temperature to touch



jaga





KNOCKONWOOD FREESTANDING DBE

stunning looks, great performance

Knockonwood Freestanding DBE

Outputs

Outputs in watts at 75/65/20°C, calculated in accordance with EN442



Height ▼	Type ▼	Length ▶				
			1100	1300	1700	2100
210	15	watt standby	1178	1414	1885	2356
		watt comfort	1678	2164	2885	3606
		watt boost	1878	2464	3285	4106

All dimensions in millimetres. See correction factor table opposite for other general conditions
For an explanation of standby, comfort and boost refer to the specification at the end of this section.

Acoustic Data

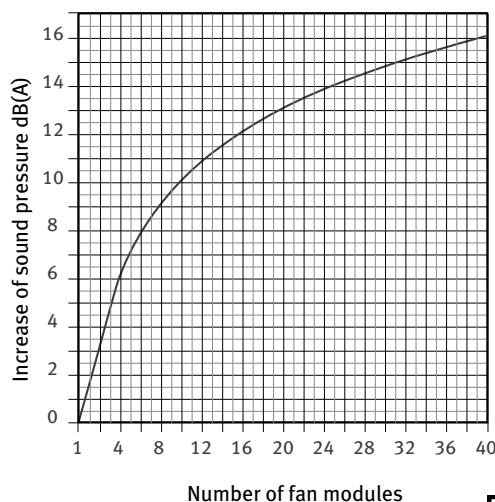
Pressure sound and correction factors

Several appliances with an equal sound level in a room

Number db(A)	Correction db(A)	
2	+3.0	$P2 = P1 + 10 \log n$ P1 = sound level one appliance P2 = sound level to be calculated n = number of appliances
3	+4.8	

Through the DBE communication software (DBED) it is possible to set up other activator speeds. In this way you can obtain other outputs and sound pressures. For more information, contact Jaga.

Combined sound level of multiple DBE units



Correction Factor Equations

Equation to determine the mean water temperature difference, minus ambient air (ΔT)

Equation to determine water mass flow rate (m)

T_F = Water flow temperature °C
 T_R = Water flow return temperature °C
 amb = Ambient temperature °C

Q = Total heat emitted by unit (kW)
 m = Water mass flow rate (kg/s)
 C_p = Specific heat capacity (4.187 kJ/kg °C) Approximate

$$\text{Equation 1: } \Delta T = \frac{T_F + T_R}{2} - \text{amb}$$

$$\text{Equation 2: } m = \frac{Q}{(T_F - T_R) \times C_p}$$

Knockonwood Freestanding DBE

Wood Finishes

All our wood finishes are from sustainable sources



Correction Factors

Outputs at 75/65/20°C, average correction factors calculated in accordance with EN442

TF ▼	TL ▼	TR►								
		30	35	40	45	50	55	60	65	70
80	20	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10
	24	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.97	1.02
75	20	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05
	24	0.57	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.95
70	20	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	
	24	0.52	0.57	0.62	0.67	0.72	0.77	0.82	0.87	
65	20	0.55	0.60	0.65	0.70	0.75	0.80	0.85		
	24	0.47	0.52	0.57	0.62	0.67	0.72	0.77		
60	20	0.50	0.55	0.60	0.65	0.70	0.75			
	24	0.42	0.47	0.52	0.57	0.62	0.67			
55	20	0.45	0.50	0.55	0.60	0.65				
	24	0.37	0.42	0.47	0.52	0.57				
50	20	0.40	0.45	0.50	0.55					
	24	0.32	0.37	0.42	0.47					
45	20	0.35	0.40	0.45						
	24	0.27	0.32	0.37						
40	20	0.30	0.35							
	24	0.22	0.27							

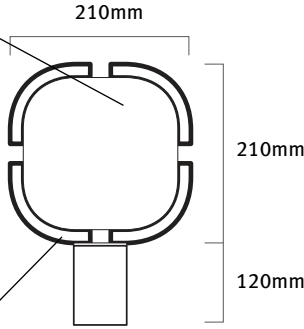


KEY
 TF = Flow temperature °C
 TR = Return temperature °C
 TL = Desired air temperature °C

The indicated outputs ΔT 50 °C are the exact outputs and are calculated in accordance with EN 442. An average correction factor is given in this table for outputs at other ΔT , and is applicable for all dimensions. For comprehensive correction factors table see page 83.

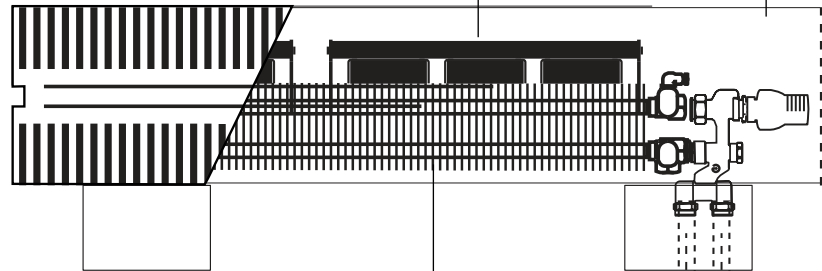
Knockonwood Freestanding DBE

Never in the way
Unobtrusive design: perfect for areas where space is limited



Safe casing
The Knockonwood DBE's case is always at a safe temperature to touch, whatever the output

DBE (Dynamic Boost Effect)
DBE technology offers on-demand output boosts and increased efficiency when used with low flow temperature heating systems



One-touch boost
DBE control panel allows the user to increase the radiators output when required

Low-H₂O heat exchanger
Low mass, low water content heat exchanger that uses 90% less water than conventional units

Connections
All connections enclosed within the feet

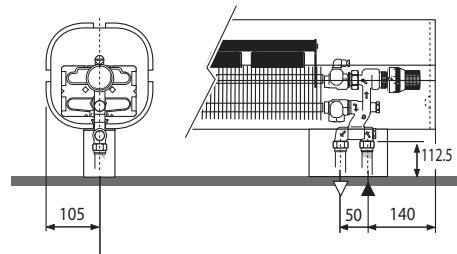
Supplied as Standard

- Finish 700, natural oak
- Complete in one piece
- Fully pre-assembled product
- DBE system complete with 240 volts AC/ 12 volts DC power, control and operation
- Feet with pipe guard
- Low-H₂O heat exchanger type 15
- Air vent elbow 1/8" + drain cock 1/2"
- Jaga Comap valve with Eurocone connections at the bottom of the foot, left or right. Full technical details for this valve, available on request
- Jaga Comap thermostatic head



Connections

Jaga Comap valve to the floor



- The valves offered by Jaga are completely concealed within the standard casing
- All connections are exchangeable to either the left or right support
- Use Eurocone couplings

Electric connection

- Female connector to be provided in the foot
- 240 volts AC/ 12 volts DC power supply transformer plug is supplied
- Socket outlet to be provided adjacent to the radiator

Casing:

Shall be manufactured from 4 No. pieces of curved finished wood laminate, at least 16mm thick and FSC or PEFC labelled. The sections shall be finished in a veneer to the specified colour, which shall be coated with a scratch resistant polyurethane varnish with 40% gloss finish. It shall be supplied complete with fixed 120mm high box section feet with cover plate TRV valve and head shall be concealed within the casing. Access shall be by means of a hinged end cover plate.

Heat Exchanger:

Shall be manufactured from seamless copper tubes, fitted with aluminium fins. The fins shall provide high contact area to the tubes, guaranteeing optimum efficiency across a wide range of flow & return water temperatures. The heat exchanger shall be complete with 2No. Brass 1/2" BSP connections. Generally these shall be same end connections except where specified to the alternative, and be suitable for left or right-hand installation.

The complete heat exchanger assembly shall be non corrosive and the whole assembly shall be electro statically lacquered with dirt repellent and dust proof anthracite grey epoxy polyester lacquer RAL 7024- gloss degree 70%.

The heat exchanger shall be supplied complete with 1/8" BSP air vent & 1/2" BSP drain cock, and the whole assembly to be pressure tested to 20 bar, with a maximum working pressure of 10 bar. The element shall be of sufficient quality to be provided with the manufacturer's 30 year guarantee.

Fan Unit:

The unit shall be complete with one or more fan activator sections. The sections shall be powered by a 12 volt DC supply via a dedicated 240 volt power supply transformer plug. Multiple units shall be connected to the low voltage supply with suitable connecting cables. Control of the fan activators shall be modulating fan speed dependant on measured space temperature against the control set point. The speed shall be able to be adjusted automatically from the comfort setting (67% of maximum) to zero when the temperature set point is reached.

A manual boost override facility shall also be included to allow the fan to run at 100% for a user definable period. Temperature control shall be by means of a microprocessor circuit board fixed to the heat exchanger. The circuit board shall be complete with a range of user definable temperature set points together with a surface contact temperature sensor to provide low water temperature hold off control of the fan.

The processor shall also have the facility to be connected to a computer with dedicated software to enable adjustments of the standard parameters by the user. An interlinked operating panel shall be included, which offers indicating LED's for power, comfort and boost status, together with boost override button.

Noise level of each DBE unit shall be less than 29 dB(A) internal sound in comfort mode, and less than 35 dB(A) per unit in boost mode.