



MINI FREESTANDING DBE

performance on demand

Ideal for refurbishment projects where trench heating is not practical



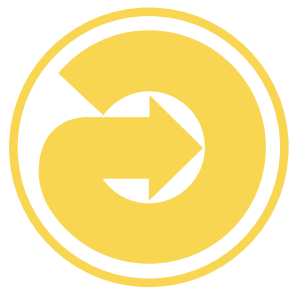
Perfect for low flow temperature heating systems, the Mini Freestanding DBE is ideal for:

- Large glazed areas
- Retail
- Offices
- Schools and universities

Designed to fit unobtrusively underneath large windows, the Mini Freestanding DBE provides maximum heat from the smallest of appliances and remains operationally quiet even at the highest outputs



Low-H₂O technology cuts energy consumption without reducing output, while all connections can be hidden within the Mini Freestanding DBE's adjustable feet



jaga

Mini Freestanding DBE

Outputs

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

Height ▼	Type ▼	Length ▶						
			810	1010	1210	1410	1810	2410
280	11	watt standby	871	1089	1307	1525	1960	2614
		watt comfort	1021	1389	1607	1975	2560	3514
		watt boost	1121	1589	1807	2275	2960	4114
16	16	watt standby	1146	1433	1720	2006	2579	3439
		watt comfort	1396	1933	2200	2756	3579	4939
		watt boost	1496	2133	2420	3056	3979	5539



All dimensions in millimetres. See correction factor table opposite for other general conditions
For an explanation of standby, comfort and boost refer to Product Specifications on page 63.

Acoustic Data

Sound pressure and correction factors

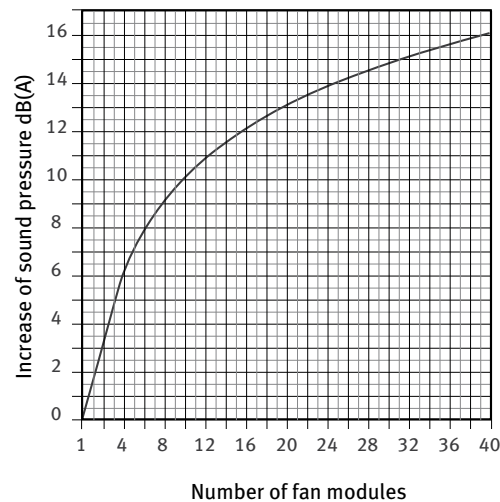
Type	dB(A)	
	Comfort	Boost
11	29	35
16	27	31

Several appliances with an equal sound level in a room

Number dB(A)	Correction dB(A)	$P_2 = P_1 + 10 \log n$ $P_1 =$ sound level one appliance $P_2 =$ sound level to be calculated $n =$ number of appliances
2	+3.0	
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)

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

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

Equation to determine water mass flow rate (m)

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

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



Mini Freestanding DBE

Colours



Traffic white



Sandblast grey metallic

Correction Factors

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

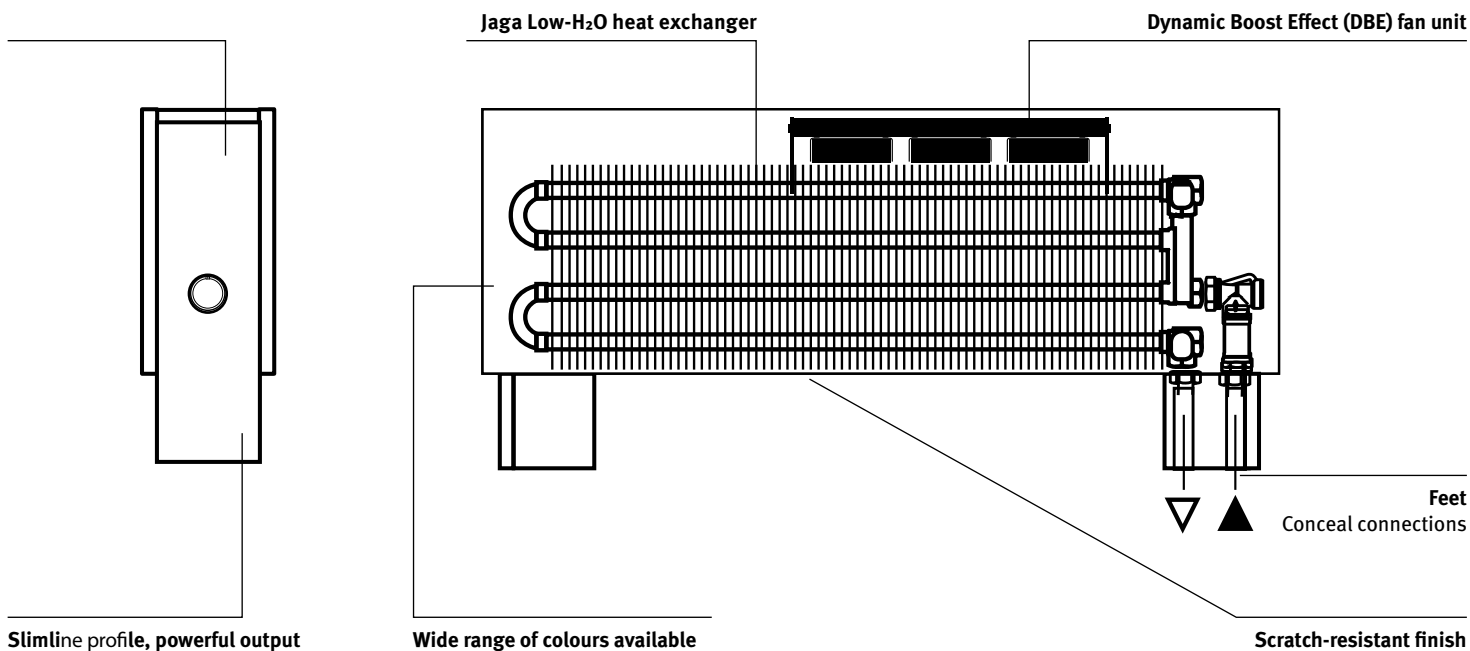
TF ▼	TL ▼	TR ▶	30	35	40	45	50	55	60	65	70
80	20		0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10
	24		0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.97	1.02
75	20		0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05
	24		0.57	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.95
70	20		0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	
	24		0.52	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.

Mini Freestanding DBE



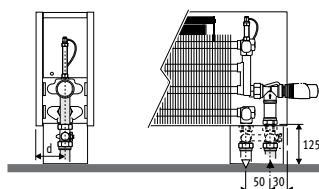
LOW H₂O 30
YEAR GUARANTEE

Supplied as Standard

- Complete casing in colour 133 traffic white or 001 sandblast grey metallic
- Fully pre-assembled product
- Jaga thermostatic valve and extension pipe with 1/2" connections at the bottom of the foot, left or right
- Sleeve couplings
- DBE system complete with 240 volts AC/ 12 volts DC power, control and operation
- Twin Low-H₂O heat exchanger
- Removable grille
- Feet with pipe guard
- Straight air vent 1/8"

Connections

Jaga Comap valve to the floor



Sleeve couplings, thermostatic head and H-piece: see connection accessories.

d = 65mm for type 11
90mm for type 16

- 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 one piece, manufactured from 1.25mm thick galvanized double profile steel plate. It shall be supplied complete with fixed or adjustable feet of the specified height. The following options shall also be available: box section feet with cover plate and perforation for TRV head and cover rosettes for the feet. Other options shall be as specified.

The top grille shall be formed from 0.8mm thick galvanized double profile steel plate, with backwards angled profile.

The casing and grille shall be finished with a lacquered finish to the specified colour. The coating shall be a scratch resistant, epoxy polyester powder, which is sprayed electrostatically and baked at a temperature of 200°C. It shall be UV resistant to ASTM G53.

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 and 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 electrostatically 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 and 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 dependent 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.

