

user-friendly



energy saving



green



intelligent

invisidor
AIR CURTAINS **DOORFLOW**

Hassle Free Comfort

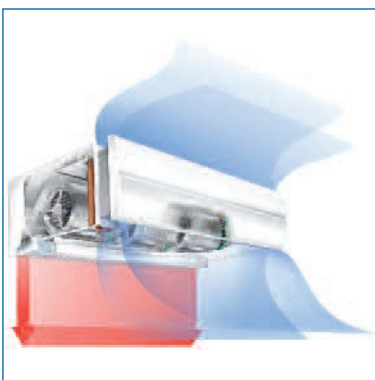
The latest development in a long line of market leading air curtains, *Invisidor DOORFLOW*, has been developed to be not just of a minimalist design but also to minimise maintenance, bring a continuous and consistent long lasting level of performance and maximise energy savings.

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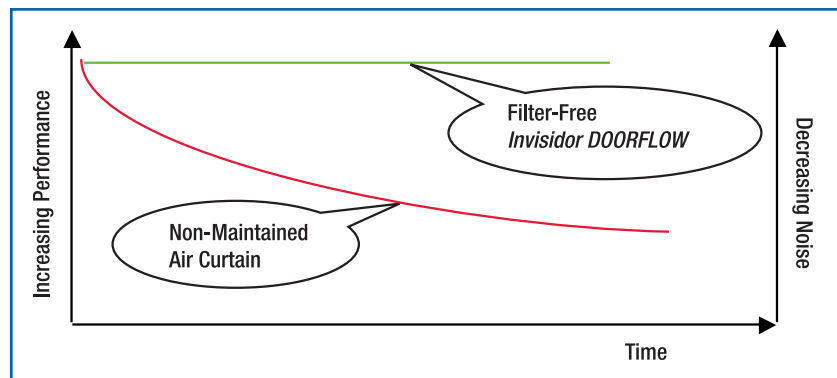
- Minimalist design
- Filter-free
- Long lasting performance
- Energy saving ECONTROL
- Performance enhancing patented discharge rectifier
- Choice of RAL paint colours
- Water or electric heating
- Suitable for low water temperatures
- Mounting height up to 3.5m
- Four models, four widths and four styles – free hanging, recessed, cassette and single grille cassette



Minimal Maintenance, Long Lasting Performance

Air curtains are acknowledged to enhance comfort conditions in the entrance environment. However with routine maintenance procedures, such as cleaning filters, often ignored a drop-off in performance and an increase in noise all too often results.

With this in mind the *Invisidor DOORFLOW* has been carefully developed to minimise maintenance. A purpose designed coil/heater battery reduces the build-up of dust and debris between the coil fins to such an extent that filters are no longer necessary. Having no filters means the *Invisidor DOORFLOW* doesn't just offer minimal maintenance but also provides a continuous and consistent long lasting level of performance.



Available in a variety of paint finishes, *Invisidor DOORFLOW* has a minimalist style, being designed to look good in all types of entrance environment – from fashionable boutiques to schools and colleges. And because it is modular in nature any number of units can be joined together to create one seamless air curtain covering any door width.

As with all air curtains from Biddle the *Invisidor DOORFLOW* uses Biddle's proven, patented rectifier to supply conditioned air at low speed with minimum turbulence, ensuring the air stream reaches the floor and doesn't escape to the outside. Comfort within the entrance area is therefore enhanced without any energy wastage.

Whether using water or electric heating, an advanced energy saving controller – the *ECONTROL* – when combined with the *Invisidor DOORFLOW* air curtain optimises energy savings. Operated either manually or automatically the *ECONTROL* will not just control air curtain performance but will also control comfort conditions in the entrance environment through energy saving adjustment of air volume and temperature. Timer clocks, door contact switches or room thermostats can still be linked to the air curtain for added flexibility.

Patented Rectifier

So as to minimise turbulence in the discharge airstream, and ensure the air reaches the floor, Biddle have invested heavily in the development of the patented rectifier. This rectifier comprises an optimised number of blades, with a precise relationship between their length and spacing, to create a laminar airstream which reduces turbulence and energy consumption and increases throw for a given air volume.



Energy Saving **ECONTROL**

The new ECONTROL will ensure air curtain performance is optimised whilst minimising energy usage.

Connecting the ECONTROL to the Invisidor DOORFLOW couldn't be easier – just plug one end of the cable in to the air curtain and the other end into the controller.

In 'Auto' mode ECONTROL will automatically adjust the air curtain's heat output to optimise air curtain performance, control the space at the selected set point temperature (range = 18-25°C) and minimise energy usage.

In 'Manual' mode ECONTROL simply provides the air curtain with either half heat or full heat.

Regardless of whether the air curtain is in 'Auto' or 'Manual' mode the user can:

- select fan speed
- turn the heating off and operate the air curtain as an ambient unit



Selecting an Invisidor **DOORFLOW**

Select the most appropriate model by reference to the codes below:

DF-M-150-W2-R
 R = Recessed, F = Exposed, C = Cassette,
 SGC = Single Grille Cassette
 W2, W3, W4 = Hot water heating, E = Electric heating
 Size = 100, 150, 200, 250
 Model = S, M, L, T

What's included with an Invisidor **DOORFLOW** ?

- Air curtain with patented rectifier
- 3-port diverting valve (supplied loose for fitting external to water heated units)
- Return air sensor
- ECONTROL energy saving controller
- 15 metre length of control cable, with RJ4/4 plug fitted to both ends
- Mounting brackets

If units are joined together then they are 'master/slaved' and the master unit and slave unit(s) are daisy chained together using the control cable supplied. Each unit requires its own electrical supply and water supply.



Technical Data

DF S - 2.7m Maximum mounting height

Available as casing style 'F', 'R' or 'C'

Nominal Unit Width		1.0m					1.5m				
Model Code		DF S-100-W4# High Output Coil		DF S-100-W2# Low Output Coil		DF S-100-E#	DF S-150-W4# High Output Coil		DF S-150-W2# Low Output Coil		DF S-150-E#
Max. Installation Height	m	2.7		2.7		2.7	2.7		2.7		2.7
Optimum Door Width	m	0.8		0.8		0.8	1.3		1.3		1.3
Air Volume	Low	0.211		0.211		0.211	0.325		0.325		0.325
	Medium	0.273		0.273		0.273	0.412		0.412		0.412
	High	0.357		0.357		0.357	0.535		0.535		0.535
LPHW Flow & Return Temperatures	°C	60/40	80/60	82/71	80/60	na	60/40	80/60	82/71	80/60	na
Heating Capacity with 20°C entering air	Low	4.4	5.5	5.5	4.3	2.4 / 4.8	7.4	13.0	9.0	7.4	4.7 / 9.4
	Medium	5.2	6.5	6.5	5.1	2.4 / 4.8	8.6	15.3	10.4	8.5	4.7 / 9.4
	High	6.1	7.6	7.6	6.0	2.4 / 4.8	10.2	18.2	12.2	10.0	4.7 / 9.4
Water Flow Rate (Max)	l/s	0.074	0.138	0.168	0.073	na	0.123	0.222	0.270	0.12	na
Water Pressure Drop (Inc Valve)	kPa	0.4	3.4	1.6	0.3	na	1.3	5.6	4.4	0.9	na
Electrical Supply		230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz	230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz
Rated Power Input	kW	0.22		0.22		5.0	0.33		0.33		10.0
Current per Phase	A	0.96		0.96		8.20	1.44		1.44		15.94
Noise Level at Medium Speed	dB(A)	43		43		43	45		45		45
Weight	Model F	33		31		35	49		46		53
	Model R	32		30		34	48		45		52
	Model C	36		34		37	54		51		56

Nominal Unit Width		2.0m					2.5m				
Model Code		DF S-200-W4# High Output Coil		DF S-200-W2# Low Output Coil		DF S-200-E#	DF S-250-W4# High Output Coil		DF S-250-W2# Low Output Coil		DF S-250-E#
Max. Installation Height	m	2.7		2.7		2.7	2.7		2.7		2.7
Optimum Door Width	m	1.8		1.8		1.8	2.3		2.3		2.3
Air Volume	Low	0.429		0.429		0.429	0.536		0.536		0.536
	Medium	0.547		0.547		0.547	0.684		0.684		0.684
	High	0.714		0.714		0.714	0.892		0.892		0.892
LPHW Flow & Return Temperatures	°C	60/40	80/60	82/71	80/60	na	60/40	80/60	82/71	80/60	na
Heating Capacity with 20°C entering air	Low	10.2	17.7	12.2	10.2	7.1 / 14.2	13.0	22.5	15.6	13.2	7.1 / 14.2
	Medium	12.0	20.9	14.3	12.0	7.1 / 14.2	15.4	26.6	18.2	15.4	7.1 / 14.2
	High	14.2	25.1	16.7	14.0	7.1 / 14.2	18.3	31.9	21.3	18.0	7.1 / 14.2
Water Flow Rate (Max)	l/s	0.172	0.305	0.372	0.171	na	0.221	0.388	0.474	0.220	na
Water Pressure Drop (Inc Valve)	kPa	2.9	9.1	8.9	2.0	na	5.3	14.0	15.3	3.5	na
Electrical Supply		230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz	230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz
Rated Power Input	kW	0.44		0.44		15.0	0.55		0.55		15.0
Current per Phase	A	1.92		1.92		23.66	2.40		2.40		24.14
Noise Level at Medium Speed	dB(A)	46		46		46	47		47		47
Weight	Model F	64		60		69	81		76		88
	Model R	62		58		67	79		74		86
	Model C	70		66		73	89		84		93

Add casing style 'F' or 'R' or 'C' to complete model code

Technical Data

DF M -3.1m Maximum mounting height

Available as casing style 'F', 'R' or 'C'

Nominal Unit Width		1.0m					1.5m				
		DF M-100-W4# High Output Coil		DF M-100-W2# Low Output Coil		DF M-100-E#	DF M-150-W4# High Output Coil		DF M-150-W2# Low Output Coil		DF M-150-E#
Max. Installation Height	m	3.1		3.1		3.1	3.1		3.1		3.1
Optimum Door Width	m	0.8		0.8		0.8	1.3		1.3		1.3
Air Volume	Low	0.283		0.283		0.283	0.395		0.395		0.395
	Medium	0.332		0.332		0.332	0.478		0.478		0.478
	High	0.392		0.392		0.392	0.592		0.592		0.592
LPHW Flow & Return Temperatures	°C	60/40	80/60	82/71	80/60	na	60/40	80/60	82/71	80/60	na
Heating Capacity with 20°C entering air	Low	5.3	9.8	6.6	5.2	4.7 / 9.4	8.4	14.9	10.1	8.3	7.1 / 14.2
	Medium	5.8	10.8	7.2	5.7	4.7 / 9.4	9.5	16.9	11.4	9.4	7.1 / 14.2
	High	6.5	12.1	8.0	6.3	4.7 / 9.4	10.8	19.4	12.9	10.6	7.1 / 14.2
Water Flow Rate (Max)	l/s	0.078	0.147	0.178	0.076	na	0.131	0.237	0.286	0.129	na
Water Pressure Drop (Inc Valve)	kPa	0.5	3.8	1.8	0.3	na	1.5	6.0	4.9	1.0	na
Electrical Supply		230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz	230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz
Rated Power Input	kW	0.33		0.33		10.0	0.44		0.44		15.0
Current per Phase	A	1.44		1.44		15.94	1.92		1.92		23.66
Noise Level at Medium Speed	dB(A)	46		46		46	47		47		47
Weight	Model F	37		35		39	53		51		57
	Model R	36		34		38	52		49		56
	Model C	40		38		41	58		55		60

Nominal Unit Width		2.0m					2.5m				
		DF M-200-W4# High Output Coil		DF M-200-W2# Low Output Coil		DF M-200-E#	DF M-250-W4# High Output Coil		DF M-250-W2# Low Output Coil		DF M-250-E#
Max. Installation Height	m	3.1		3.1		3.1	3.1		3.1		3.1
Optimum Door Width	m	1.8		1.8		1.8	2.3		2.3		2.3
Air Volume	Low	0.566		0.566		0.566	0.678		0.678		0.678
	Medium	0.663		0.663		0.663	0.811		0.811		0.811
	High	0.784		0.784		0.784	0.987		0.987		0.987
LPHW Flow & Return Temperatures	°C	60/40	80/60	82/71	80/60	na	60/40	80/60	82/71	80/60	na
Heating Capacity with 20°C entering air	Low	12.2	21.4	14.6	12.2	9.5 / 19.0	15.3	26.5	18.1	15.2	11.9 / 23.8
	Medium	13.6	23.9	16.0	13.4	9.5 / 19.0	17.2	29.9	20.2	17.0	11.9 / 23.8
	High	15.1	26.6	17.7	14.8	9.5 / 19.0	19.5	34.1	22.7	19.1	11.9 / 23.8
Water Flow Rate (Max)	l/s	0.182	0.324	0.393	0.180	na	0.236	0.415	0.504	0.233	na
Water Pressure Drop (Inc Valve)	kPa	3.3	9.8	9.9	2.2	na	6.0	16.2	17.2	4.0	na
Electrical Supply		230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz	230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz
Rated Power Input	kW	0.66		0.66		20.0	0.77		0.77		25.0
Current per Phase	A	2.88		2.88		31.86	3.36		3.36		39.59
Noise Level at Medium Speed	dB(A)	49		49		49	50		50		50
Weight	Model F	72		68		77	89		84		96
	Model R	70		66		75	87		82		94
	Model C	78		74		81	97		92		101

Technical Data

DF L - 3.5m Maximum mounting height

Available as casing style 'F', 'R' or 'C'

Nominal Unit Width		1.0m					1.5m				
Model Code		DF L-100-W4# High Output Coil		DF L-100-W2# Low Output Coil		DF L-100-E#	DF L-150-W4# High Output Coil		DF L-150-W2# Low Output Coil		DF L-150-E#
Max. Installation Height	m	3.5		3.5		3.5	3.5		3.5		3.5
Optimum Door Width	m	0.8		0.8		0.8	1.3		1.3		1.3
Air Volume	Low	0.325		0.325		0.325	0.439		0.439		0.439
	Medium	0.416		0.416		0.416	0.570		0.570		0.570
	High	0.521		0.521		0.521	0.731		0.731		0.731
LPHW Flow & Return Temperatures	°C	60/40	80/60	82/71	80/60	na	60/40	80/60	82/71	80/60	na
Heating Capacity with 20°C entering air	Low	5.8	10.7	7.2	5.6	4.7 / 9.4	9.0	16.0	10.8	8.8	7.1 / 14.2
	Medium	6.7	12.5	8.3	6.4	4.7 / 9.4	10.6	19.0	12.6	10.3	7.1 / 14.2
	High	7.6	14.4	9.4	7.3	4.7 / 9.4	12.3	22.2	14.6	11.9	7.1 / 14.2
Water Flow Rate (Max)	l/s	0.092	0.175	0.208	0.089	na	0.149	0.271	0.324	0.145	na
Water Pressure Drop (Inc Valve)	kPa	0.6	4.3	2.4	0.5	na	1.9	6.3	6.2	1.3	na
Electrical Supply		230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz	230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz
Rated Power Input	kW	0.58		0.58		10.0	0.77		0.77		15.0
Current per Phase	A	2.52		2.52		17.02	3.36		3.36		25.10
Noise Level at Medium Speed	dB(A)	48		48		48	48		48		48
Weight	Model F	35		33		37	50		47		54
	Model R	33		32		36	49		46		53
	Model C	38		36		39	55		52		57

Nominal Unit Width		2.0m					2.5m				
Model Code		DF L-200-W4# High Output Coil		DF L-200-W2# Low Output Coil		DF L-200-E#	DF L-250-W4# High Output Coil		DF L-250-W2# Low Output Coil		DF L-250-E#
Max. Installation Height	m	3.5		3.5		3.5	3.5		3.5		3.5
Optimum Door Width	m	1.8		1.8		1.8	2.3		2.3		2.3
Air Volume	Low	0.651		0.651		0.651	0.765		0.765		0.765
	Medium	0.832		0.832		0.832	0.986		0.986		0.986
	High	1.043		1.043		1.043	1.253		1.253		1.253
LPHW Flow & Return Temperatures	°C	60/40	80/60	82/71	80/60	na	60/40	80/60	82/71	80/60	na
Heating Capacity with 20°C entering air	Low	13.4	23.6	15.9	13.2	9.5 / 19.0	16.6	28.8	19.4	16.5	11.9 / 23.8
	Medium	15.7	27.7	18.3	15.2	9.5 / 19.0	19.5	34.1	22.6	19.0	11.9 / 23.8
	High	18.0	32.0	20.9	17.4	9.5 / 19.0	22.7	39.8	26.0	21.9	11.9 / 23.8
Water Flow Rate (Max)	l/s	0.217	0.389	0.464	0.212	na	0.273	0.484	0.579	0.267	na
Water Pressure Drop (Inc Valve)	kPa	4.5	11.1	13.6	3.0	na	7.9	21.8	22.5	5.1	na
Electrical Supply		230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz	230V/1ph/50Hz		230V/1ph/50Hz		400V/3ph/50Hz
Rated Power Input	kW	1.15		1.15		20.0	1.34		1.34		25.0
Current per Phase	A	5.04		5.04		34.02	5.88		5.88		42.11
Noise Level at Medium Speed	dB(A)	51		51		51	51		51		51
Weight	Model F	67		63		73	84		79		91
	Model R	65		61		71	81		76		89
	Model C	73		69		76	91		86		95

Add casing style 'F' or 'R' or 'C' to complete model code

Technical Data

DF T - 3.1m Maximum mounting height

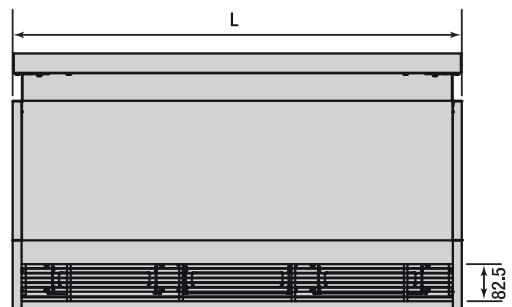
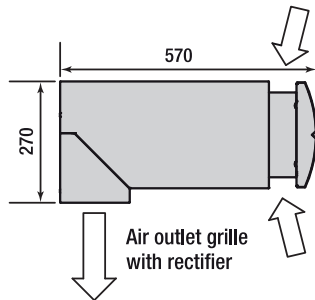
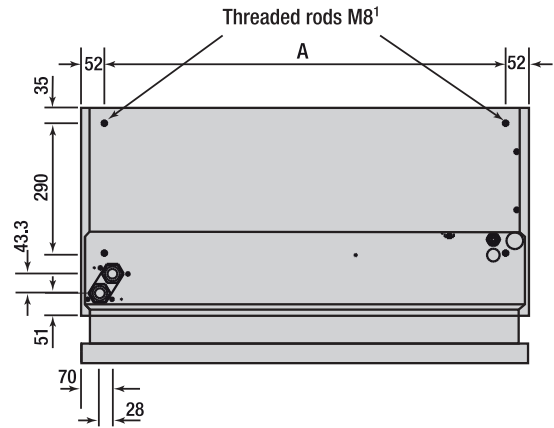
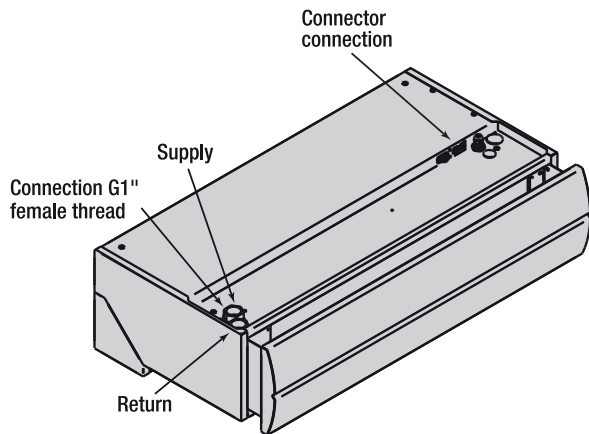
Available as casing style 'SGC' only

Nominal Unit Width		1.15m			1.65m					
Model Code		DF T-100-W3 SGC High Output Coil	DF T-100-W2 SGC Low Output Coil	DF T-100-E SGC	DF T-150-W3 SGC High Output Coil	DF T-150-W2 SGC Low Output Coil	DF T-150-E SGC			
Max. Installation Height	m	3.1	3.1	3.1	3.1	3.1	3.1			
Optimum Door Width	m	0.8	0.8	0.8	1.3	1.3	1.3			
Air Volume	Low	m ³ /s	0.291	0.301	0.315	0.512	0.549	0.579		
	Medium		0.329	0.340	0.357	0.578	0.618	0.652		
	High		0.409	0.419	0.438	0.648	0.693	0.728		
LPHW Flow & Return Temperatures	°C	60/40	82/71	80/60	na	60/40	82/71	80/60	na	
Heating Capacity with 20°C entering air	Low	kW	8.5	9.4	7.9	6.0 / 12.0	14.6	16.3	13.4	9.0 / 18.0
	Medium		9.3	10.2	8.6	6.0 / 12.0	15.9	17.5	14.4	9.0 / 18.0
	High		10.8	11.7	9.8	6.0 / 12.0	17.2	18.9	15.5	9.0 / 18.0
Water Flow Rate (Max)	l/s	0.131	0.261	0.121	na	0.213	0.422	0.191	na	
Water Pressure Drop (Inc Valve)	kPa	4.1	11.3	2.8	na	2.8	10.9	2.6	na	
Electrical Supply		230V/1ph/50Hz	230V/1ph/50Hz	400V/3ph/50Hz	230V/1ph/50Hz	230V/1ph/50Hz	400V/3ph/50Hz			
Rated Power Input	kW	0.25	0.25	12.3	0.40	0.40	18.5			
Current per Phase	A	1.0	1.0	18.5	1.7	1.7	27.9			
Noise Level at Medium Speed	dB(A)	55	55	55	58	58	58			
Weight	kg	30	29	28	43	42	41			

Nominal Unit Width		2.25m				
Model Code		DF T-200-W3 SGC High Output Coil	DF T-200-W2 SGC Low Output Coil	DF T-200-E SGC		
Max. Installation Height	m	3.1	3.1	3.1		
Optimum Door Width	m	1.8	1.8	1.8		
Air Volume	Low	m ³ /s	0.553	0.577	0.601	
	Medium		0.621	0.650	0.672	
	High		0.773	0.806	0.836	
LPHW Flow & Return Temperatures	°C	60/40	82/71	80/60	na	
Heating Capacity with 20°C entering air	Low	kW	17.4	18.9	16.0	12.0 / 24.0
	Medium		18.9	20.5	16.7	12.0 / 24.0
	High		22.2	23.9	19.9	12.0 / 24.0
Water Flow Rate (Max)	l/s	0.274	0.534	0.243	na	
Water Pressure Drop (Inc Valve)	kPa	11.2	24.2	4.2	na	
Electrical Supply		230V/1ph/50Hz	230V/1ph/50Hz	400V/3ph/50Hz		
Rated Power Input	kW	0.50	0.50	24.6		
Current per Phase	A	2.0	2.0	37.0		
Noise Level at Medium Speed	dB(A)	57	57	57		
Weight	kg	54	53	52		

Dimensional Drawings

Exposed Units - Style F

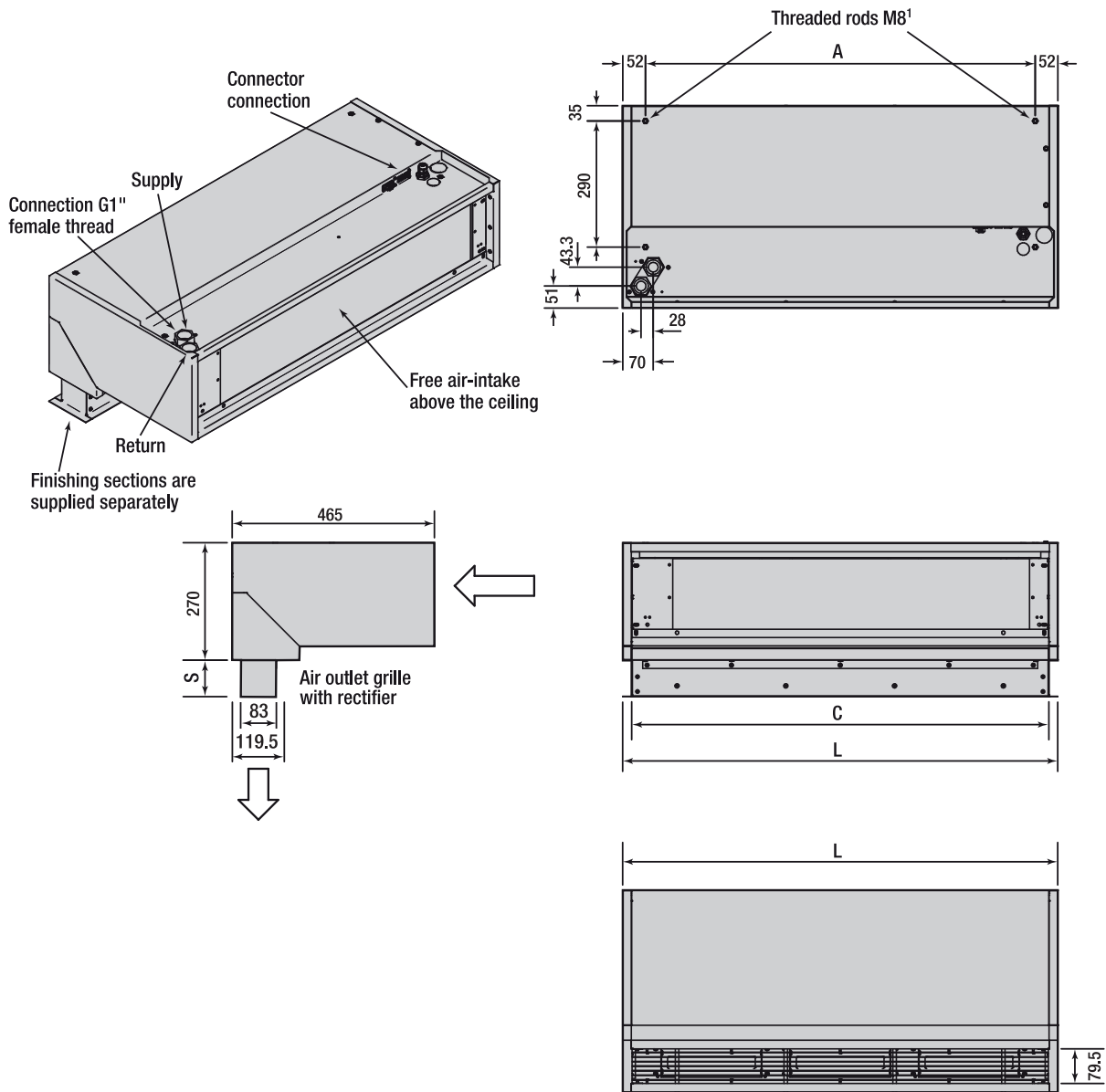


Type	L	A
DF S/M/L	1000	896
	1500	1396
	2000	1896
	2500	2396

All dimensions are in mm.

¹ The 1000, 1500 and 2000 mm versions feature a 4 x M8 internal thread, while the 2500 mm version has a 6 x M8 internal thread.

Dimensional Drawings Ceiling Recessed Units - Style R



Type	L	A	C	S
DF S/M/L	1000	896	960	50-115
	1500	1396	1460	
	2000	1896	1960	
	2500	2396	2460	

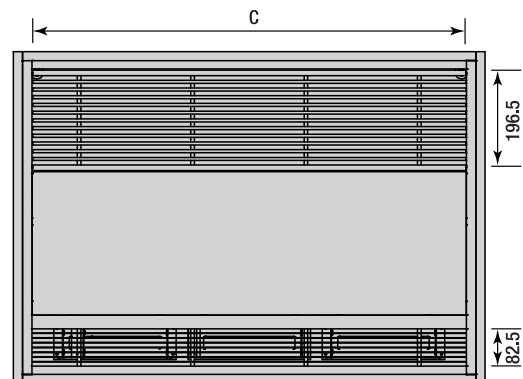
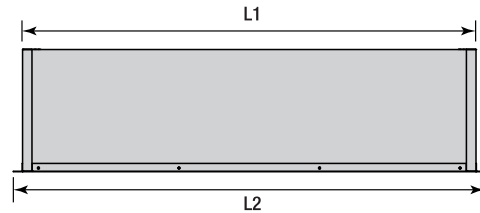
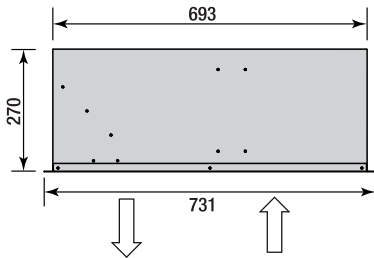
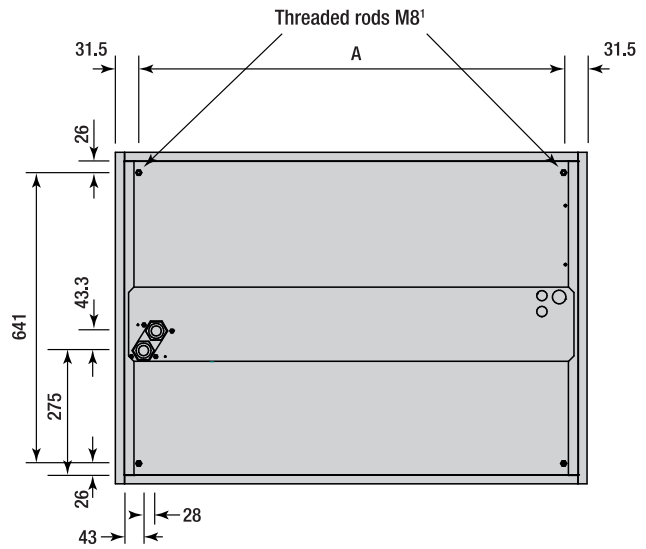
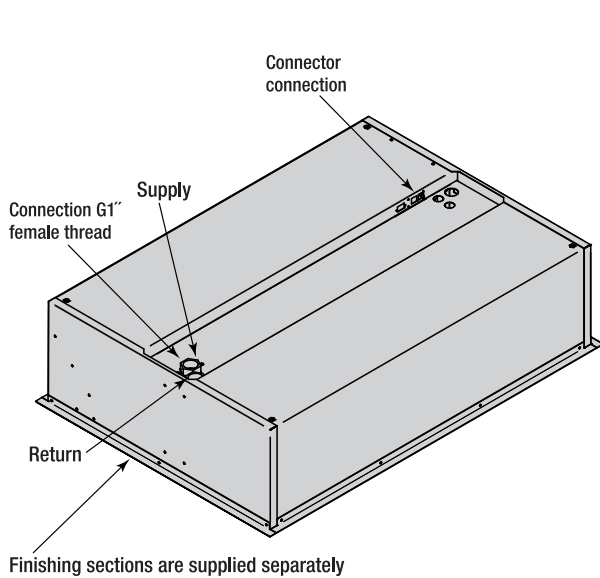
All dimensions are in mm.

Daylight openings (if cover mouldings are used): -for air discharge 92 x (C+8) mm.

For safety reasons electrical heated and ambient units come with a guard grille.

¹ The 1000, 1500 and 2000 mm versions feature a 4 x M8 internal thread, while the 2500 mm version has a 6 x M8 internal thread.

Dimensional Drawings Cassette Units - Style C



Type	L1	L2	A	C
DF S/M/L	1000	1040	937	958
	1500	1540	1437	1458
	2000	2040	1937	1958
	2500	2540	2437	2458

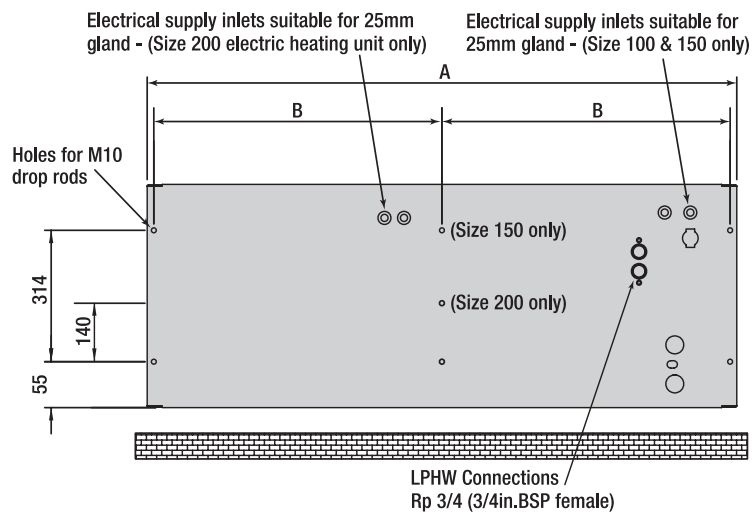
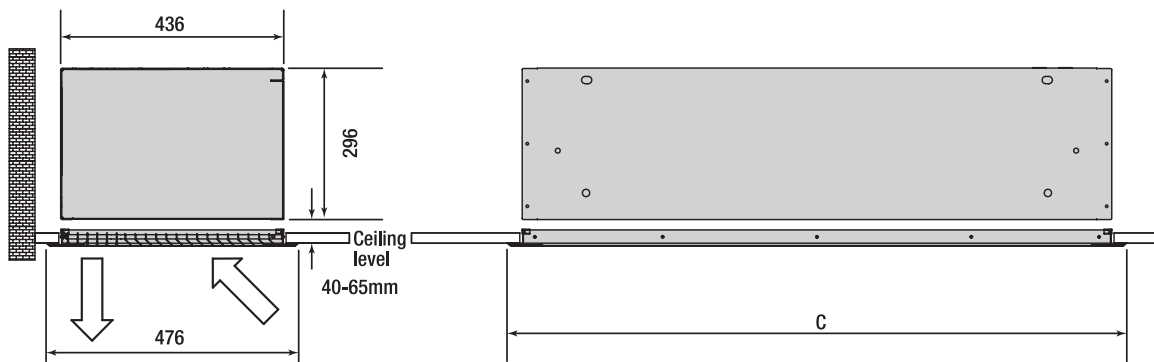
All dimensions are in mm.

Daylight openings (if cover mouldings are used): -for air discharge (L1 + 8) x 701 mm.

¹ The 1000, 1500 and 2000 mm versions feature a 4 x M8 internal thread, while the 2500 mm version has a 6 x M8 internal thread.

Dimensional Drawings

Single Grille Cassette Units - Style SGC

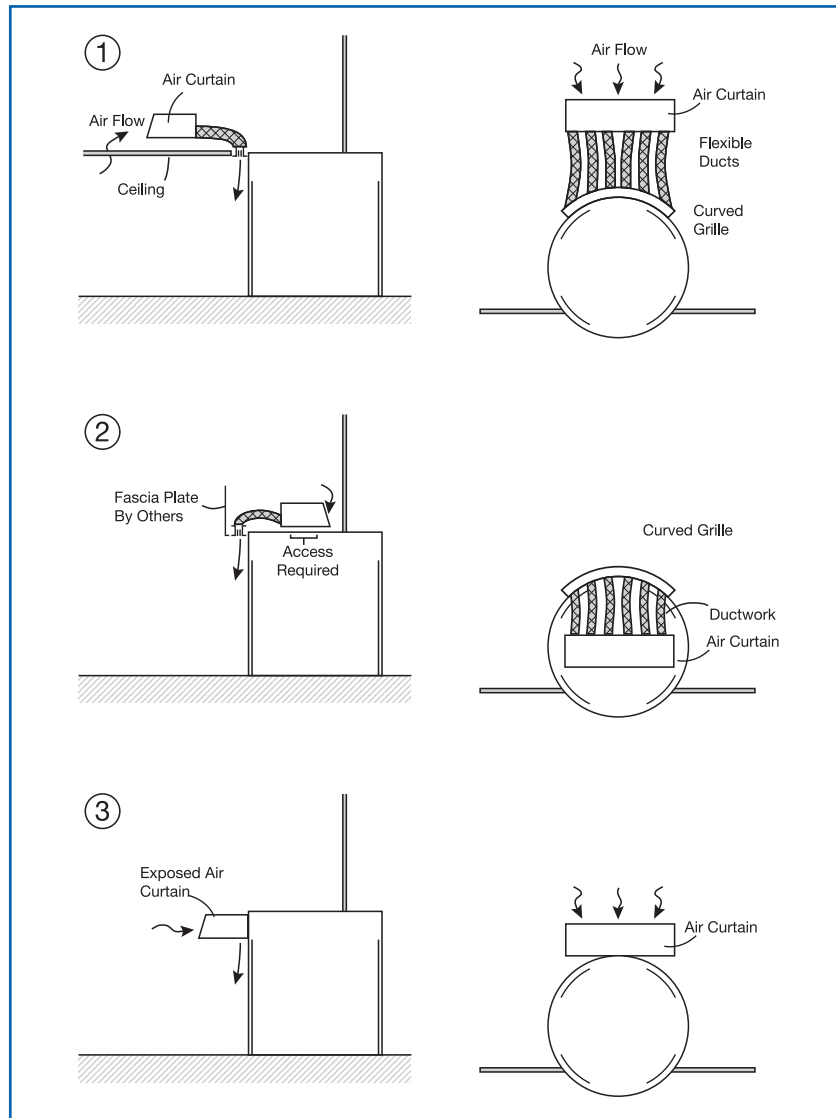
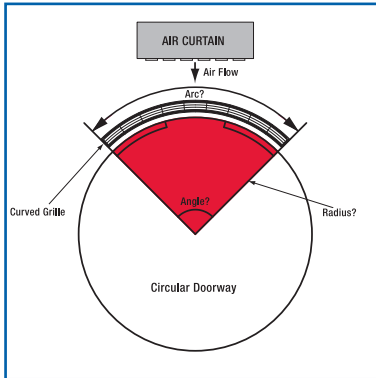


Type	A	B	C
DF T	1150	n/a	1190
	1650	800	1690
	2240	1095	2290

All dimensions are in mm.

Circular Doorways

When an air curtain is to be used in conjunction with revolving doors or any other form of circular doorway we are able to use a variant of the recessed model installed either adjacent to or directly above the door. Given certain key dimensions we manufacture a bespoke discharge grille to fit perfectly with the curvature of the door, and ensure optimum climate separation around the circular doorway.



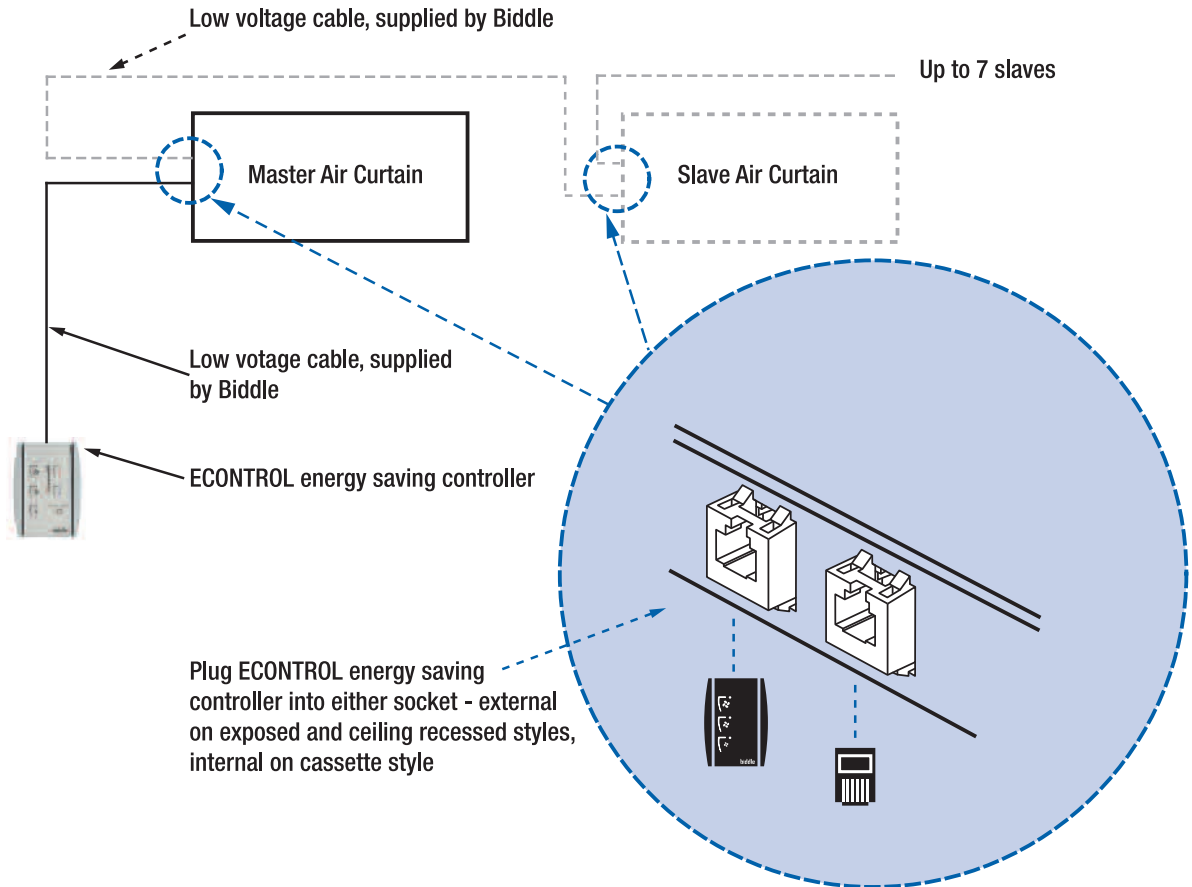
Installation & Maintenance

Units can be specified for free-hanging, cassette or recessed installation and all are compatible with universal fixing systems, allowing longitudinal adjustment for flush fitting.

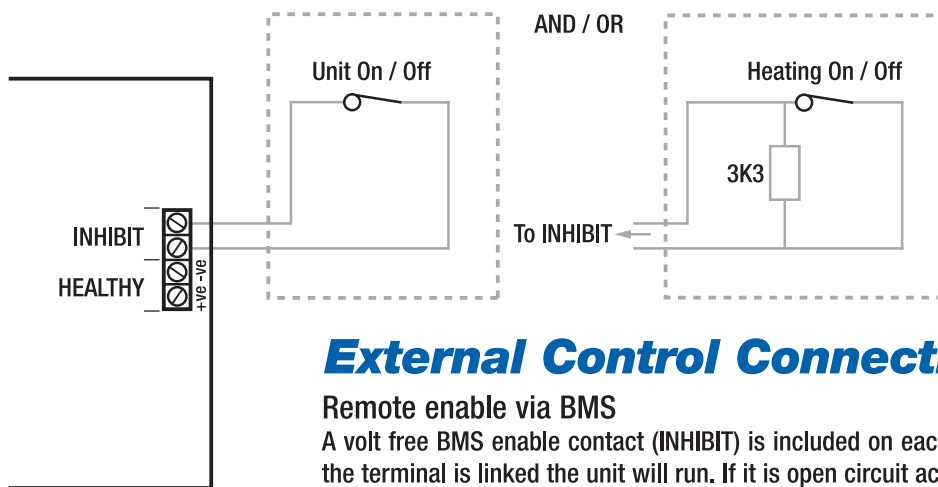
The separately supplied suspension brackets can be inserted in the recesses in the top of the unit and then fixed to a mounting rail to allow horizontal adjustment. Special brackets are available for wall mounting. A full installer kit with separate grilles is also supplied for recessed applications.

On delivery, all Invisidor units include detailed installer, control and wiring instructions and maintenance notes.

Wiring Schematic



Controls Schematic



External Control Connections

Remote enable via BMS

A volt free BMS enable contact (INHIBIT) is included on each unit as standard. If the terminal is linked the unit will run. If it is open circuit across the terminal the unit will switch off.

Remote Heating Control via BMS

To facilitate fan only operation (i.e. no heating) a 3.3k Ω resistance should be wired across the INHIBIT terminal.

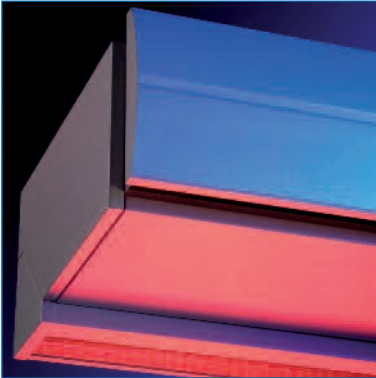
Fault Output (Electric Heated Air Curtains Only)

A fault signal indicator is provided for when the electric elements overheat and the safety cut-out has operated. A healthy system provides a 24V DC signal at the terminals whereas an overheat fault provides 0V DC.

Materials, Components & Specifications

Control & Operation

By adjusting heat output and fan speed the ECONTROL ensures air curtain performance is optimised whilst minimising energy usage. It is connected to the unit by a low voltage data cable with a RJ4/4 plug on both ends. Multiple units are also connected in this way.

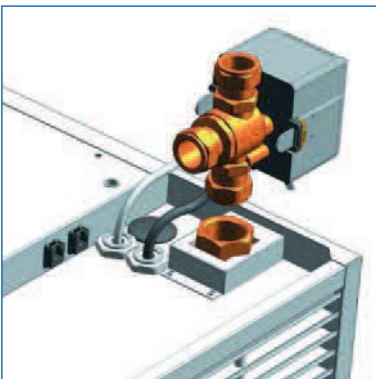


Electrical Connections

LPHW units are connected to the mains supply by a 2 metre cable. The 3-phase mains supply cable used with electric heated units enters the air curtain via a cable gland on top of the unit and is then connected to a terminal strip within the unit. The water connections and the socket for the RJ4/4 plug are located on top of the unit.

Casing

The casing is made from zinc plated sheet steel and incorporates an inspection panel. Both the discharge grille, incorporating the patented rectifier, and the inlet grille are made of anodized aluminium. As standard the exposed, ceiling recessed and cassette units are painted white (RAL9016) and the grille on the single grille cassette unit is painted white (RAL9010). Alternative colours can be supplied if requested.

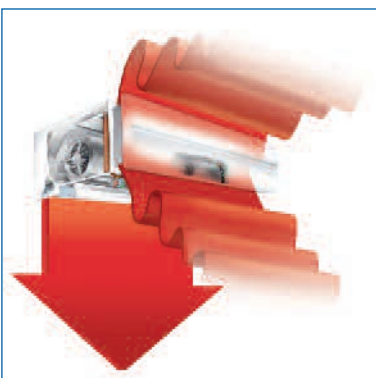


Motor/Fan Assembly

The air curtain is fitted with two or more (depending on size) dual-inlet vibration-free centrifugal fans. Each fan is driven by a suspended rotor motor. The fan casing and impeller are made from either zinc coated steel or plastic, depending on the model. The motors are manufactured according to EN60-335-1, protection class IP44 and insulation class F. They are fitted as standard with thermal contacts which break the circuit if the maximum allowable motor temperature is exceeded.

Heater Battery

The LPHW coil comprises 3/8" copper pipes and aluminium fins. The water supply connections for the exposed, ceiling recessed and cassette units are 1" BSP female thread and for the single grille cassette unit 3/4" BSP female thread. The test pressure is 9 bars and the maximum operating pressure is 8 bars at 175°C. The electric heating coil is made of U-tube-shaped stainless rods.



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- Biddle Air Systems Limited
St. Mary's Road, Nuneaton
Warwickshire CV11 5AU

Tel: +44 (0)24 7638 4233
Fax: +44 (0)24 7637 3621
Email: sales@biddle-air.co.uk
<http://www.biddle-air.com>

- Biddle B.V.
P.O. Box 15
NL-9288 ZG Kootstertille
The Netherlands

Tel: +31 (0)512 335555
Fax: +31 (0)512 331424

- Biddle GmbH
Emil - Hoffmann - Straße 55-59
50996 Köln
Germany

Tel: +49 (0)2236 96900
Fax: +49 (0)2236 969010

- Biddle
21 Allée de Vendanges
77183 Croissy Beaubourg
France

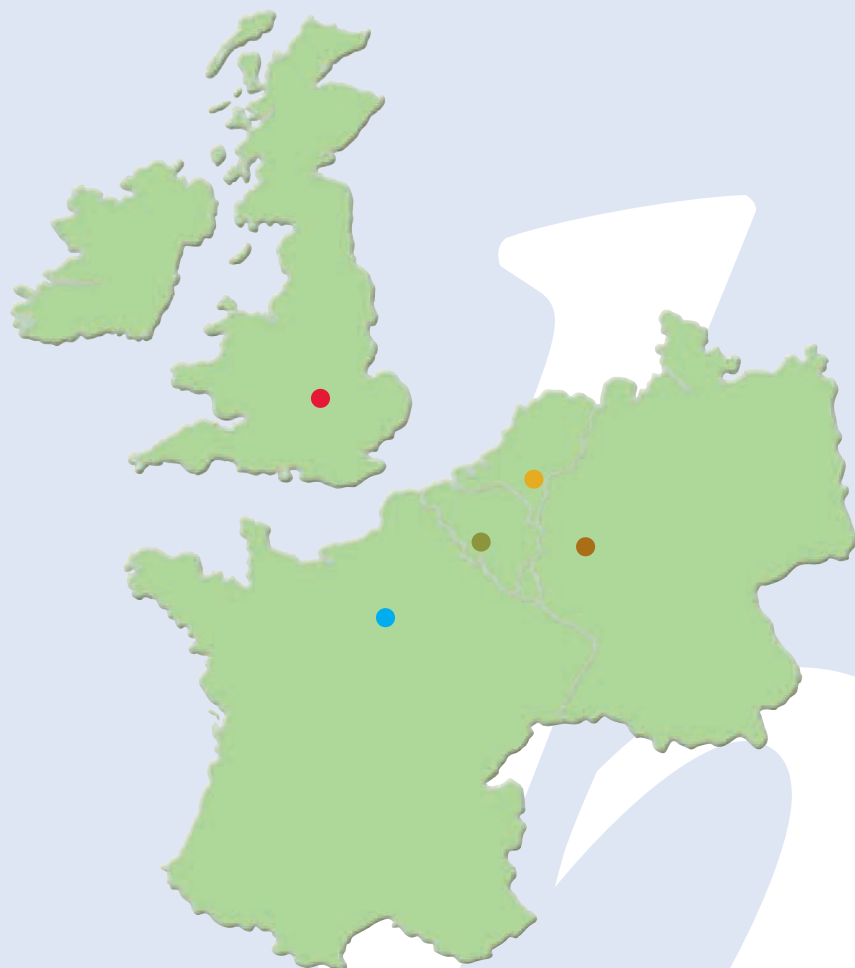
Tel: +33 (0) 1 64 11 15 55
Fax: +33 (0) 1 64 11 15 66

- Biddle NV
Business Park E19
Battelsesteenweg 455E
2800 Mechelen
Belgium

Tel: +32 (0) 15 287676
Fax: +32 (0) 15 287677



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The information given in this brochure is, to the best of our knowledge, correct at the time of going to print. However, Biddle Air Systems are constantly looking at ways of improving their products and services and therefore reserve the right to change without prior notice any of the data contained in this publication.
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Nine Point High - Nuneaton - 024 7634 6909 - info@nine-point-high.co.uk