# INVISIDOR STYLE

Designer Air Curtains





## CONTEMPORARY STYLE

Architects, M&E designers and building owners are constantly looking for ways of enhancing the appearance of the entrance environment without compromising on performance. The Invisidor STYLE range combines Biddle's patented technology along with contemporary design.

Available in a variety of finishes the Invisidor STYLE range has an eye-catching cylindrical profile and a distinctive perforated grille. With the design being modular, any door width can be covered, and buildings requiring vertical rather than horizontal air curtains can still use this range to create a 'top end' designer look to the entrance environment.

## COMFORT AND STYLE COMBINED

Specifically developed to bring not just performance benefits and energy savings but also high quality designer looks, designed to suit entrance environments where space is limited but looks and comfort are still important.

#### **FEATURES AND BENEFITS:**

- Stylish design
- Performance enhancing patented discharge rectifier
- Energy saving ECONTROL
- Choice of RAL paint colours, bright or brushed stainless steel
- Water or electric heating
- O Condensing boiler variants
- O Compact variants, for restricted space applications
- O Up to 24kW output
- Vertical or horizontal configurations
- Modular in nature (sizes from 1120mm to 2345mm) to suit any door width

#### 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.



### **HOW IT WORKS**

The Invisidor STYLE range 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 STYLE 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.

## MOUNTING HEIGHTS

#### **INVISIDOR STYLE COMPACT; WITH A MOUNTING HEIGHT OF UP TO 2.6M**

- Air curtain with patented rectifier
- 3-port diverting valve (fitted inside water heated units only)
- Return air sensor
- ECONTROL energy saving controller
- 3 metre length of control cable, with RJ4/4 plug fitted to either end
- Elliptical shape 362mm x 242mm

#### **INVISIDOR STYLE; WITH A MOUNTING HEIGHT OF UP TO 3.2M**

- Air curtain with patented rectifier
- 3-port diverting valve (fitted inside water heated units only)
- Return air sensor
- ECONTROL energy saving controller
- 3 metre length of control cable, with RJ4/4 plug fitted to either end
- Mounting brackets
- Elliptical shape 500mm x 350mm

## **CONTROLS**

#### **ENERGY SAVING: ECONTROL**

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

Connecting the ECONTROL to the Invisidor STYLE & STYLE Compact couldn't be easier - just plug one end of the cable in to the air curtain and the other end into the

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



## **TECHNICAL DETAILS**

#### **INVISDOR STYLE COMPACT**

Size		Horizontal	Vertical
Style	Comprising total width/height	1 x Style Compact-100	na
Compact-100		1130mm	na
Style	Comprising total width/height	1 x Style Compact-150	na
Compact-150		1650mm	1645mm
Style	Comprising total width/height	1 x Style Compact-200	1 x Style Compact-200
Compact-200		2130mm	2130mm
Style Compact-250	Comprising total width/height	1 x Style Compact-150 (left unit) & 1 x Style Compact-100 (right unit) 2775mm	1 x Style Compact-150 (bottom unit) & 1 x Style Compact-100 (top unit) 2775mm

O If units are joined together (either horizontally or vertically) then they are 'master/slaved' and the master unit and slave unit(s) are daisy chained together using the 3 metre length(s) of control cable supplied. Each unit requires its own electrical supply and water supply

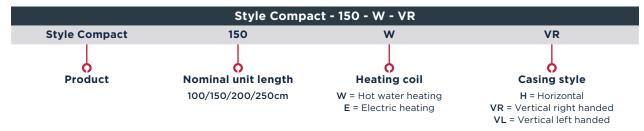
#### **INVISIOR STYLE**

Size		Horizontal	Vertical
Style-100	Comprising total width/height	1 x Style-100 1260mm	na na
Style-150	Comprising total width/height	1 x Style-150 1722mm	na na
Style-200	Comprising total width/height	1 x Style-200 2355mm	1 x Style-200 2355mm
Style-250	Comprising total width/height	1 x Style-150 (left unit) & 1 x Style-100 (right unit) 2977mm	1 x Style-150 (bottom unit) & 1 x Style-100 (top unit) 2977mm
Style-300	Comprising total width/height	1 x Style-150 (left unit) & 1 x Style-150 (right unit) 3439mm	1 x Style-200 (bottom unit) & 1 x Style-100 (top unit) 3610mm
Style-350	Comprising total width/height	1 x Style-200 (left unit) & 1 x Style-150 (right unit) 4072mm	na na
Style-400	Comprising total width/height	1 x Style-200 (left unit) & 1 x Style-200 (right unit) 4705mm	na na

O If units are joined together (either horizontally or vertically) then they are 'master/slaved' and the master unit and slave unit(s) are daisy chained together using the 3 metre length(s) of control cable supplied. Each unit requires its own electrical supply and water supply

#### **MODEL REFERENCE**

The model reference consists of a code giving unit size, coil and casing arrangement.



## **PERFORMANCE DATA**

	Speed	STYLE CO	<b>ИРАСТ-100</b>	STYLE COM	IPACT-150	STYLE COMPACT-200	
		LPHW at 82/71°C	Electrical heating	LPHW at 82/71°C	Electrical heating	LPHW at 82/71°C	Electrical heating
Heat output*	Low	5.3		7.9		10.0	
(kW)	Medium	5.5	9.0	8.2	12.0	10.4	18.0
	High 5.6	5.6		8.4		10.7	
	Low	0.2	259	0.3	74	0.519	
Air volume (m³/s)	Medium	0.2	276	0.40	00	0.555	
	High	0.2	94	0.43	25	0.590	
Noise level (dBA)	Low	5	50		9	50	
measured	Medium	5	3	53	3	5	4
3m from discharge	High	5	5	55	5	5	6

	Speed		STYLE-100	1		STYLE-150			STYLE-200	1
		2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating
Heat output* (kW)	Low	7.7	7.1		10.6	9.1		16.2	15.0	
(1,11)	Medium	9.2	8.2	12.0	14.9	12.8	18.0	17.8	16.8	24.0
	High	10.5	9.1		17.7	14.9		20.6	18.9	
	Low		0.258			0.338			0.540	
Air volume (m³/s)	Medium		0.333			0.516			0.628	
	High		0.404			0.658			0.786	
Noise level (dBA)	Low		42			43			45	
measured 3m from	Medium		51			51			54	
discharge	High		56			58			60	

<sup>\*</sup>Heat outputs stated are with an entering air temperature of 20°C

## **ELECTRICAL DATA**

	STYLE CO	MPACT-100	STYLE CO	MPACT-150	STYLE COMPACT-200		
	LPHW at Electrical 82/71°C heating		LPHW at 82/71°C	Electrical heating	LPHW at 82/71°C	Electrical heating	
Electrical supply (V/ph/Hz)	230/1/50	400/3/50	230/1/50	400/3/50	230/1/50	400/3/50	
Rated Power input (kW)	0.15	9.15	0.20	12.20	0.25	18.25	
Current per phase (A)	0.7	13.7	0.9	18.3	1.1	27.2	

	STYLE-100			STYLE-150			STYLE-200		
	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating
Electrical supply (V/ph/Hz)	230/1/50		400/3/50	230/	1/50	400/1/50	230/	1/50	400/3/50
Rated power input (kW)	0.3		12.3	0	.4	18.4	0	.6	24.6
Current per phase (A)	1.	.3	18.7	1.	8	27.9	2	.7	37.5

## **DIMENSIONAL & WEIGHT DATA**

	STYLE CON	1PACT-100	STYLE COI	MPACT-150	STYLE CON	1PACT-200
	LPHW at Electrical 82/71°C heating		LPHW at 82/71°C	Electrical heating	LPHW at 82/71°C	Electrical heating
Unit width/height** (mm)	112	20	16	40	2120	
Unit depth (mm)	36	52	36	62	362	
Unit height (mm)	24	12	24	42	242	
Horizontal unit weight (kg)	31		44		6	0
Vertical unit weight (kg)	3	1	5	4	7	0

	STYLE-100				STYLE-150			STYLE-200		
	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	
Unit width/height** (mm)	1250			1712			2345			
Unit depth (mm)	500			500			500			
Unit height (mm)		350		350			350			
Horizontal unit weight (kg)	70		85			115				
Vertical unit weight (kg)		70		95			125			

 $<sup>\</sup>ensuremath{^{**}\text{Ceiling/wall}}$  brackets and joining plates measure 5mm each

## **WATER DATA**

	STYLE CO	MPACT-100	STYLE COI	MPACT-150	STYLE COMPACT-200		
	LPHW at Electrical 82/71°C heating		LPHW at 82/71°C			Electrical heating	
Max. Water flow rate (I/s)	0.14	na	0.21	na	0.29	na	
Max. pressure drop* (kPa)	2.77	na	6.74	na	13.40	na	

	STYLE-100			STYLE-150			STYLE-200		
	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating	2-row coil at 82/71°C	3-row coil at 60/40°C	Electrical heating
Max. Water flow rate (I/s)	0.24	0.11	na	0.40	0.18	na	0.46	0.23	na
Max. Pressure drop* (kPa)	4.2	3.5	na	12.1	5.0	na	16.6	9.9	na

<sup>\*</sup>Combined pressure drop of coil and valve

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