

HEATING | COOLING | VENTILATION

RONDELL®

Energy-efficient Air Curtains for revolving and circular sliding doors

  
Versatile

HEATING, COOLING & VENTILATION

Beechmount Home Park, Navan, Co. Meath  
Tel: 00 353 46 902 9444 Email: [sales@versatile.ie](mailto:sales@versatile.ie)

[www.versatile.ie](http://www.versatile.ie)

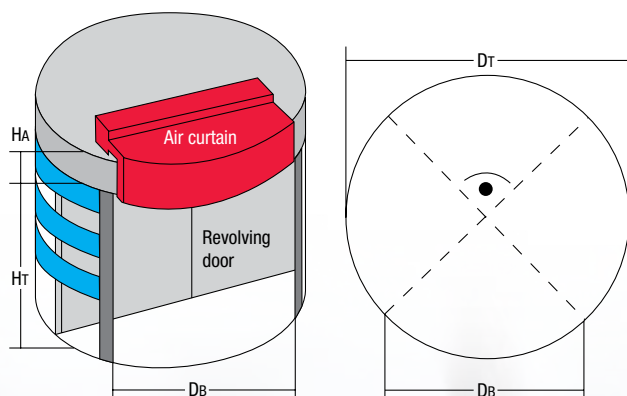
## Technical Data > Rondell

Model	Length of unit	Air quantity	Heat output at PWW 60/40°C	Water connections	Output of electric heating at 400V	Electric connections, fans, rated output			Sound level min/max	Weight
	mm	m <sup>3</sup> /h	kW**	female thread	400 V/kW	Volt 50Hz	kW	A	dB(A)*	kg
2001-2	1000	1800	11.60	2 x 3/4"	3/6/9	230	0.55	2.40	40/52	52
2001.25-2	1250	1800	11.60	2 x 3/4"	3/6/9	230	0.55	2.40	40/52	56
2001.25-3	1250	2700	17.40	2 x 3/4"	3/6/9	230	0.82	3.60	40/53	59
2001.5-3	1500	2700	17.40	2 x 3/4"	4/8/12	230	0.82	3.60	40/53	62
2001.5-4	1500	3600	23.20	2 x 3/4"	4/8/12	230	1.10	4.80	40/55	65
2002-4	2000	3600	23.20	2 x 3/4"	6/12/18	230	1.10	4.80	40/55	69
2002-5	2000	4500	29.00	2 x 3/4"	6/12/18	230	1.36	6.00	40/57	72
2002.5-5	2500	4500	29.00	2 x 3/4"	6/12/18	230	1.36	6.00	40/57	76
2002.5-6	2500	5400	34.80	2 x 3/4"	10/20/30	230	1.65	7.20	40/59	83
2002.5-7	2500	6300	40.50	2 x 1"	10/20/30	230	1.92	8.40	40/60	86
2002.75-6	2750	5400	34.80	2 x 3/4"	10/20/30	230	1.65	7.20	40/59	87
2002.75-7	2750	6300	40.50	2 x 1"	10/20/30	230	1.92	8.40	40/60	90
2003-8	3000	7200	46.50	2 x 1"	10/20/30	230	2.20	9.60	40/62	95

\* Measured in 3 metres distance

Subject to technical alterations

## Dimensioning > Rondell



Type of mounting: ☐ built-in (EB) ☐ on top (AB) ☐ front (VB)

For dimensioning the air volume

Passage/blow-out height HT = \_\_\_\_\_ mm

Number of door wings FZ = \_\_\_\_\_

Passage angular dimension = \_\_\_\_\_ °

Speed of the door / min. dZ = \_\_\_\_\_ U/min

Standard is 3 to 4 rev/min

For dimensioning the revolving door unit, the following main measurements are required:

Decisive for the unit's size

Diameter of door unit DT = \_\_\_\_\_ mm

Passage width DB = \_\_\_\_\_ mm

Height of attic HA = \_\_\_\_\_ mm

Dimensioning the heating device

t<sub>A</sub> outside temperature \_\_\_\_\_ °C

(in relation to location)

E.g. -2°C for Belfast but

-1°C for Dublin

Existing heating medium  
PWW (pump hot water) = \_\_\_\_\_ °C

Electrical energy = \_\_\_\_\_ V

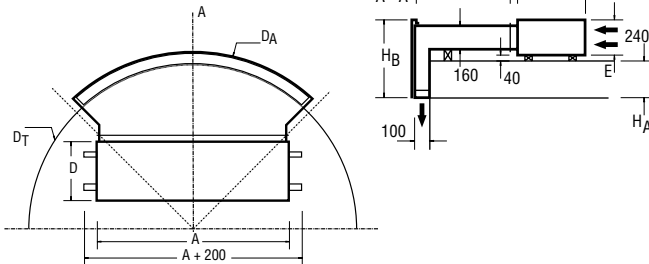
Unit will not be put into production until we have received drawings from revolving door manufacturer.



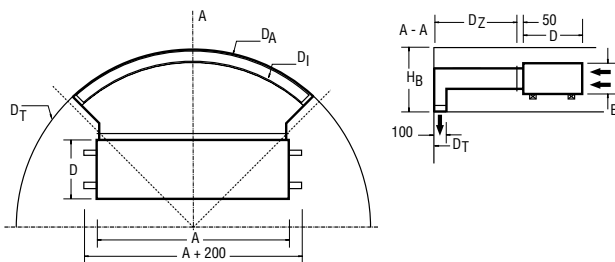
# Type: *Rondell*

## > *Rondell* Types of Mounting

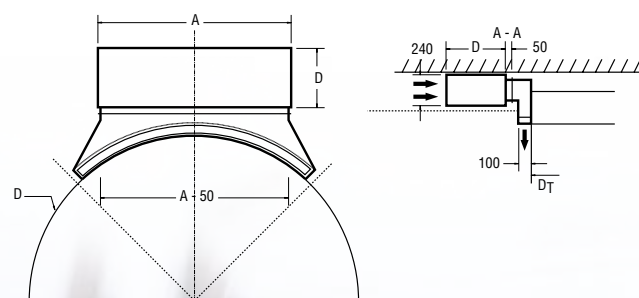
### *Air curtain installed on a revolving door (type "AB")*



### *Air curtain installed in the revolving door (type "EB")*



### *Air curtain installed outside the revolving door (type "VB")*



## > *Rondell* Function

The air curtain blows warm air downwards to the front of the opening of the revolving door. This warm air stream is heating the inside air down to the bottom and shields it from cold outside air. The duct with the aluminium blow-out vanes matches the door radius.

## > *Rondell* Technical Description

Revolving doors and air curtains seem to be contradictory but in practice this proves to be an excellent combination.

The use of a revolving door inside a building prevents draught. With no direct connection between inside and outside air, optimal inside climatic conditions are achieved.

When the door revolves, cold air is entrained with the door wing and the difference in temperature between outside and inside air results in a cold zone directly behind the door.

For heating the incoming air, an air curtain is to be installed directly behind or inside the revolving door which leads to pleasurable climatic conditions in the entrance area.

By using a temperature control, both an optimum result and low energy consumption is achieved.

A (mm) = length

D (mm) = depth

E (mm) = height

A-50 (mm) = width of blow-out duct

D\_T (mm) = diameter revolving door

D\_A (mm) = outer diameter of blow-out duct

D\_I (mm) = inner diameter of blow-out duct

D\_Z (mm) = length of blow-out duct

H\_A (mm) = height of the attic

H\_B (mm) = height of faceplate



# Correction Factors

## > Energy Saving

**Versatile advocate the use of low water temperature for energy saving.  
Our standard outputs are based on flow and return of 60/40.**

**\*\* LSA air curtains are supplied for a warm water supply with a temperature of **60°C** and a return temperature of **40°C**, inlet temperature **+20°C**. It is not necessary to supply the air curtain with other heat exchangers. See conversion table for other water temperature supplies and example below.**

T° Water °C	T°air		
	+15°C	+18°C	+20°C
100/80	2.77	2.65	2.56
90/70	2.38	2.25	2.17
80/60	1.98	1.86	1.78
70/50	1.58	1.46	1.38
60/40	1.20	1.08	1.00
55/35	1.00	0.89	0.80

## > Example

The Effect M 2000 P60/40 gives 20.8kW with an air inlet temperature of 20°C. If the system gives water temperatures of 90°/70°C then the factor is 2.17. The capacity will become  $2.17 \times 20.8 = 45.14\text{kW}$ .

