

# Adjustable Swirl Diffusers



**AIR IN MOTION**

# Adjustable Swirl Diffusers

## L Series

### Application

Our L series circular swirl diffusers constitutes a perfected solution to the problems of high comfort air conditioning of high rooms and in a wide variety of applications. It's simple and cost effective design, with adjustable blades via electrical or manual operation in one of five sizes, provides an attractive solution to many air distribution requirements.

In the air conditioning of high rooms e.g. factories, exhibition halls, theatres or sports centres, energy saving requirements call for highly controlled air supply systems.

As there is usually a temperature difference between room and supply air, inertial and gravitational forces that have aerodynamic or thermodynamic effects, have to be taken into account in order to avoid the phenomena of draughts or low temperature areas. Consequently, when heating, the supply air has to be emitted into the room at a higher velocity and at a different angle than when cooling.

### Description

We have developed the L series range of diffusers with the above task in mind, each outlet consists of a round metal nozzle body constructed from a pressed steel cylinder, with a wide, radially extended rim also available to utilise the Coanda effect. Each unit independent of size has a central mechanism of six blades which are available in steel or in plastic (for sizes 250 to 400 dia).

### Fixings/Installations

The L series range of diffusers is suitable for installation in applications between 3.1 Metres and 30 Metres height and does not need to be mounted flush to the ceiling.

The diffuser will normally be installed for downward air flow, however, in special cases it is also suitable for installation with a sideways air flow.



### Finish

The L series circular outlet is available in a wide variety of finishes including standard BS and RAL powder coating.

Please refer to the product coding for a list of standard finishes.

Special finishes are available on request.



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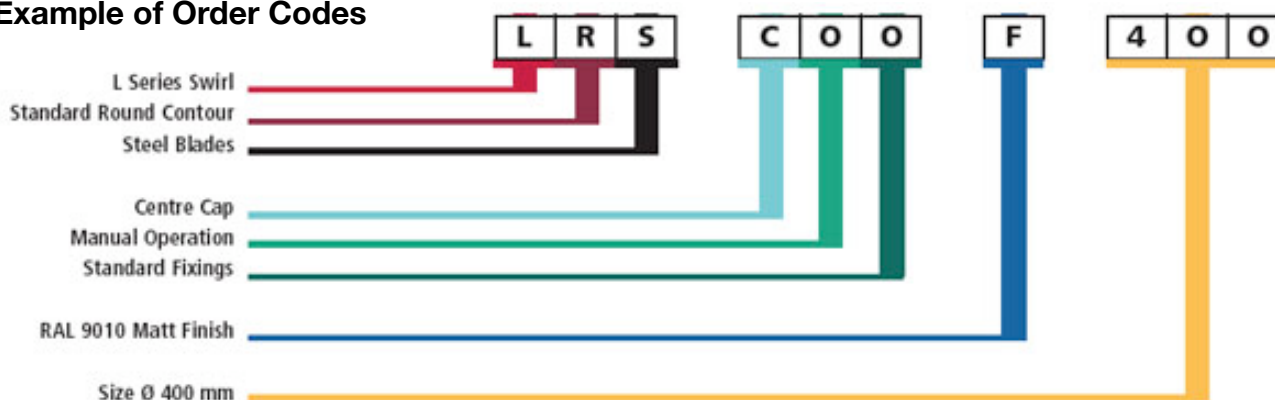
## Options and Order Codes

### Diffusers

1	2 - FRAME	3 - CORE	4 - ACCESSORIES	5 - ARRANGEMENT	6 - FIXINGS	7 - FINISH
<b>L</b>	<b>R</b> Standard Round <b>V</b> Extended Round <b>Q</b> Extended Square 1 Special	<b>S</b> Steel Blade <b>Z</b> Plastic Blade (up to ø400 only) 1 Special	<b>O</b> None <b>B</b> Ball Protection <b>C</b> Centre Cap (Supplied as Standard) <b>M</b> Equalising Mesh <b>N</b> Equalising Mesh and Centre Cap 1 Special	<b>O</b> Manual <b>E</b> Electric (Steel only) NMV24 Control <b>P</b> Pneumatic (Steel only) 1 Special	<b>O</b> None <b>F</b> Fixing Ring 1 Special	<b>F</b> RAL9010 Matt White Other standard colours available ; Matt Black <b>B</b> BS00E55 Gloss White <b>C</b> BS00E55 Satin White <b>H</b> BS00E55 Matt White <b>D</b> RAL9010 Gloss White <b>E</b> RAL9010 Satin White <b>G</b> RAL9006 Aluminium <b>3</b> Special Colours available on request <b>1</b>

**Note:** The items shown in red print above and in the order code example below are the standard options for this product. Unless shown otherwise on any quotation or order the units will be supplied in this configuration.

### Example of Order Codes



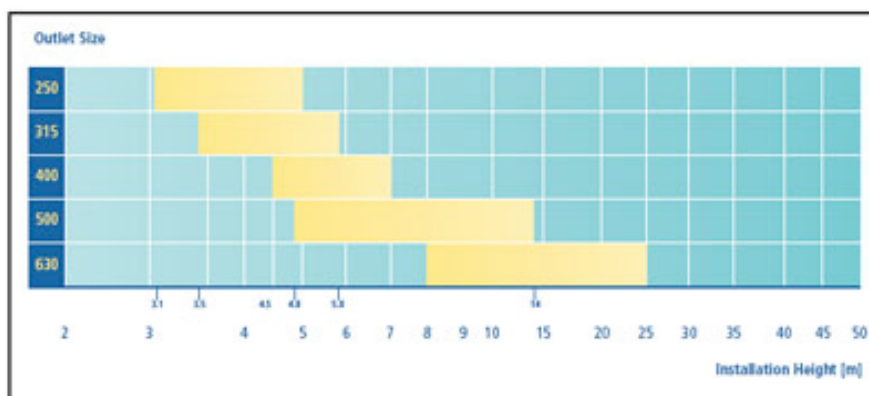
### Selection Information

Depending on the installation height a specific diffuser should be chosen in order to guarantee optimum ventilation of the occupied area without draughts. The recommended selection is based on empirical measurements and laboratory tests. The outlets should be selected using the table below.

### Operating range (min-max air volume per outlet)

We recommend specific air volume ranges for each size of diffuser. These are based on empirical measurements and laboratory tests.

Detailed selection information available on request.





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## Diffuser Dimensions

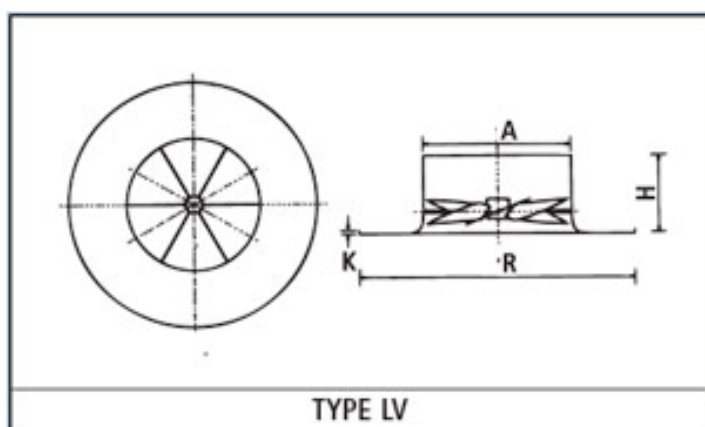
### Steel Blades

Type LRZ (Standard Round) LVZ (Extended Round)	Dimension	Unit	SIZE		
			250	315	400
Outside Connection Ø	A	mm	253	318	403
Outlet Height	H	mm	140	175	215
Standard Nozzle Ø	R	mm	330	415	535
Standard Nozzle Weight	-	kg	2,4	3,6	6,0
Extended Nozzle Ø	R1	mm	480	580	750
Edge rim Height (Extended)	K	mm	11	11	11
Extended Unit Weight	-	kg	2,7	3,8	6,3

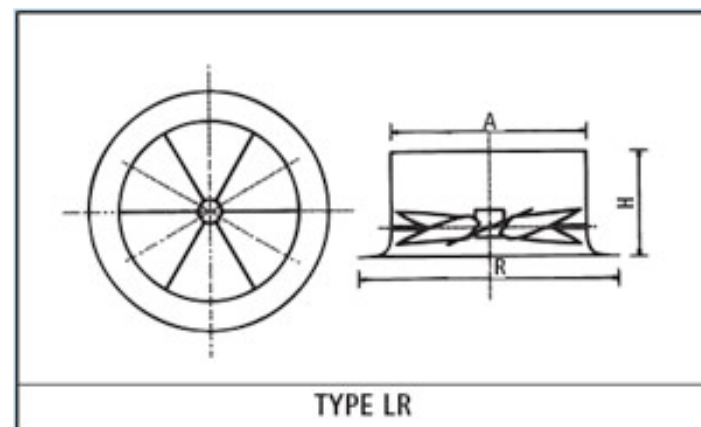
### Plastic Blades

Type LRS (Standard Round) LVS (Extended Round)	Dimension	Unit	SIZE				
			250	315	400	500	630
Outside Connection Ø	A	mm	253	318	403	503	633
Outlet Height	H	mm	140	175	215	280	355
Standard Nozzle Ø	R	mm	330	415	535	660	830
Standard Unit Weight	-	kg	2,4	3,6	6,0	8,5	13,2
Extended Nozzle Ø	R1	mm	480	580	750	925	1160
Edge rim Height (Extended)	K	mm	11	11	11	11	11
Extended Unit Weight	-	kg	2,7	3,8	6,3	8,9	14,5

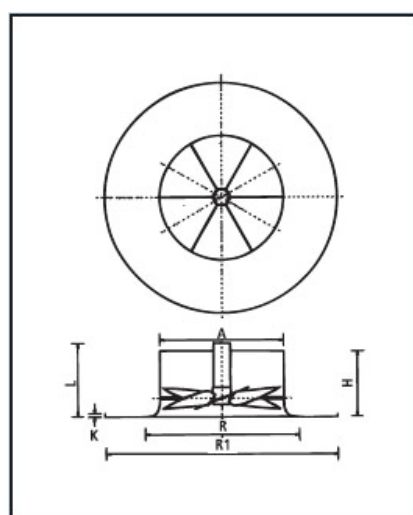
### Standard Round Frame



### Extended Round Frame



### Electrical Units / Standard and Extended Frame



Type LR-E (Standard Ring) LV-E (Extended Ring)	Dimension	Unit	SIZE				
			250	315	400	500	630
Outside Connection Ø	A	mm	253	318	403	503	633
Outlet Height	H	mm	140	175	215	280	335
Standard Nozzle Ø	R	mm	330	415	535	660	830
Overall Height	L	mm	278	288	293	318	355
Standard Nozzle Weight	-	kg	3,8	5,1	6,9	9,8	14,8
Extended Nozzle Ø	R1	mm	480	580	750	925	1160
Edge rim Height (Extended)	K	mm	11	11	11	11	11
Extended Overall Height	L	mm	285	295	300	325	345
Extended Unit Weight	-	kg	4,1	5,3	7,0	10,2	15,4

### Specifications:

L Series outlets consisting of a circular outer nozzle constructed of 1.5mm high grade CR1 pressed steel and complete with a central arrangement of 6 blades in 1.5mm Zintec Steel or plastic on Sizes up to Ø 400mm. Blades can be manually, electronically or pneumatically adjusted depending on specification.