

**COLMAN**  
*Air Distribution*

ENGINEERED AIR PRODUCTS

# THERMAL SWIRL DIFFUSERS

## TH SERIES



**TH**  
SERIES

# DISTRIBUTION PATTERNS & FIXING OPTIONS

## Application

The TH Thermal Swirl Diffuser can provide cool or warm air to a variety of applications and are particularly useful for air distribution in double height or larger spaces.

Minimum recommended height is 2.7 metres up to a maximum of 20 metres.

## Description

A circular set of steel deflection blades are arranged in a circular or square aluminium panel.

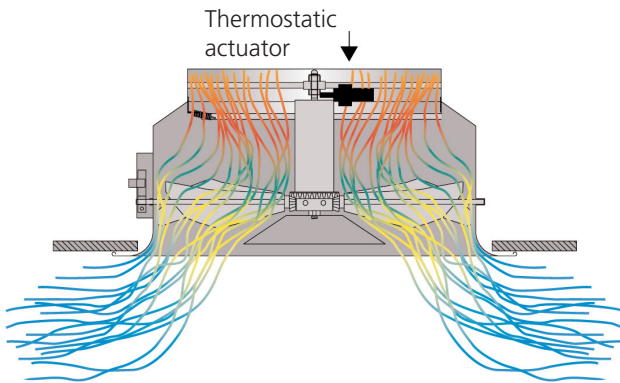
A temperature controlled actuator determines the blade angle required without the need for a power supply.

The diffuser can be direct duct mounted or within a 595 x 595 lay in ceiling grid. Circular or square plenums are available with the product.

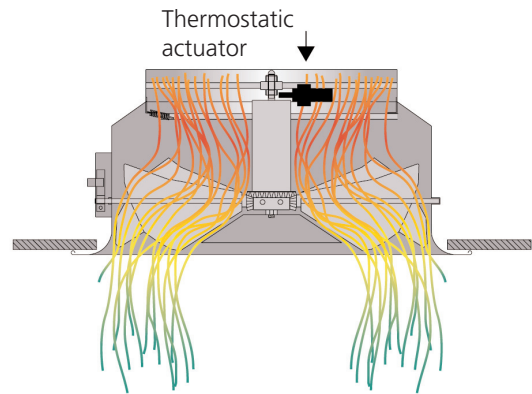
## Fixing

The diffusers are fixed by screwing or riveting through the neck.

## Flow in Cooling



## Flow in Heating



A Thermostatic actuator is located on the bracket of the diffuser, this adjusts the angle of the blades automatically with a temperature range of 15°C to 30°C.



Colman TH Thermal Swirl Diffusers installed at Clayhills Business Park.

# OPTIONS & ORDER CODES

## Options and Order Codes

### Diffuser Codes

1. SERIES	2. STYLE	3. ACCESSORIES	4. ARRANGEMENT	6. FIXING	7. FINISH
<b>TH</b>	<b>R</b> Circular <b>Q</b> Square (595 x 595)	<b>0</b> None <b>1</b> Equalising Grid	<b>0</b> Swirl Pattern	<b>A</b> Neck Fixing	<b>F</b> RAL 9010 matt white <b>E</b> RAL 9010 gloss white <b>3</b> RAL 9006 <b>1</b> Special

Please note that the maximum swirl size available for THQ type is 315 diameter.  
Blades come reinforced as standard for sizes 500 and 630.

### Example of Order Codes

**Diffuser Code: THR00AF 315**

315 Nominal Size  
Circular Thermal Swirl Diffuser in white (RAL 9010).

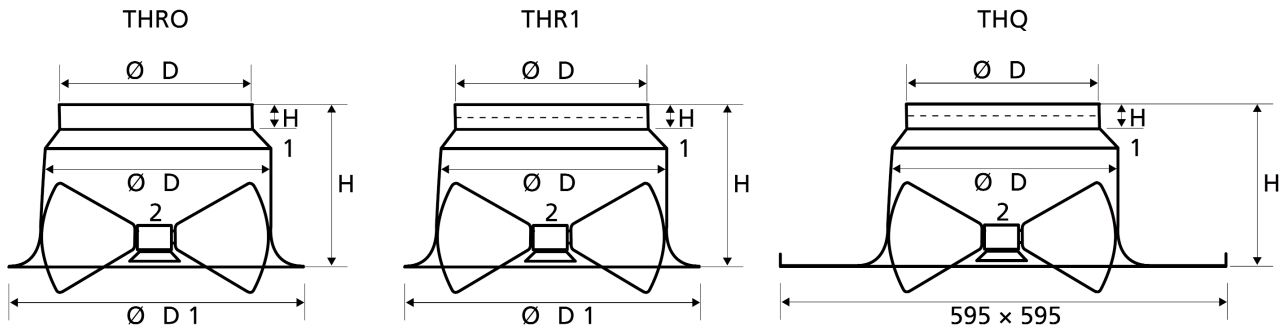
### Plenum Codes

1. SERIES	2. LINING	3. TYPE	4. ACCESSORIES	5. ARRANGEMENT	6. SPIGOT TYPE	7. SPIGOT DIAMETER
<b>L</b>	<b>L</b> Lined <b>N</b> Unlined	<b>S</b> Square <b>C</b> Circular	<b>0</b> None <b>M</b> Monoblade cord operated damper	<b>S</b> Supply (comes with equalising grids) <b>E</b> Extract	<b>R</b> Round — Side entry <b>S</b> Square — Side entry <b>T</b> Round — Top entry <b>U</b> Square — Top entry <b>1</b> Special	<b>A</b> 100 <b>J</b> 450 <b>B</b> 125 <b>L</b> 160 <b>C</b> 150 <b>T</b> 175 <b>D</b> 200 <b>M</b> 180 <b>E</b> 250 <b>R</b> 225 <b>F</b> 300 <b>P</b> 280 <b>G</b> 350 <b>N</b> 315 <b>H</b> 400 <b>1</b> Special

Please contact the Sales Office for Plenum dimensions.

# DIMENSIONS

## Diffuser Dimensions



Nominal Dimensions	ØD	ØD1	ØD2	H	H1
200	198	316	242	174	40
250	248	404	315	200	40
315	313	472	375	235	40
400	398	601	460	260	50
500	498	787	570	315	60
630	628	903	700	320	65

# PERFORMANCE DATA

Nominal Size	Volume (l/s)	Pressure Drop (Pa)	Throw to 0.25 m/s Velocity	Noise Rating (NR)
200	50	<10	1.8	18
	80	10	2.2	30
	110	15	2.8	35
250	100	<10	1.9	23
	140	11	3	29
	180	17	4	35
315	120	<10	2	18
	160	10	2.7	23
	200	15	3.3	32
400	200	<10	2	20
	280	10	2.6	25
	400	14	4.2	32
500	350	<10	2.3	20
	480	12	3.4	28
	600	17	4.5	35
630	600	<10	3.9	22
	825	13	4.8	29
	1100	19	6.3	36

Performance is for curved blades at a 45 degree angle.  
 Pressure drop shown is the static figure for diffuser only.  
 All NR ratings are based on room absorption of 8db, dampers fully open.

# PRODUCT RANGES

GRILLES	DIFFUSERS	LOUVRES
Linear Bar	Linear Slot	External
Ceiling	Louvre Face	Circular
Sidewall	Sidewall	Door
Floor	Perforated Face	Screens
Computer Floor	Circular	Penthouse
Cill	Swirl	Sand Louvres
Single & Double Deflection	Ceiling	Roof Louvres
Egg Crate	Sidewall Fixed & Adjustable	
Hinged Core	Jet Flow / Nozzle	
Door Transfer	Repus Displacement Ventilation	
Security and Prison		
Supply and Extract Valves		

## BESPOKE SERVICE

We offer a bespoke design service where standard products do not fit the requirements of the build, we also supply products in special colours and finishes including bronze, brass, gold and chrome to meet Architectural design specifications.



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