

# PRODUCT RANGE

**AIR HANDLING UNITS**

PACKAGED AIR CONDITIONING UNITS

SPLIT SYSTEM AIR CONDITIONING UNITS

**TERMINAL PRODUCTS**

Fan Coil

VAV

Constant Volume

Induction

Fan Assisted VAV

HEAT RECOVERY PLANT

HEAT PUMPS

CONTROL SYSTEMS

REFRIGERATION

DAMPERS

FILTERS

**DIFFUSERS**

Linear Slot

Louvre Face

Sidewall

Perforated Face

Vee Face Two Way

Circular

Swirl

Ceiling

Sidewall Fixed and Adjustable

Jet Flow

**ACOUSTIC PRODUCTS**

Attenuators

**DISPLACEMENT**

**GRILLES**

Linear Bar

Ceiling

Sidewall

Floor

Computer Floor

Cill

Single and Double Deflection

Egg Crate

Hinged Core

Door Transfer

Security and Prison

**LOUVRES**

External

Circular

Door

Screens

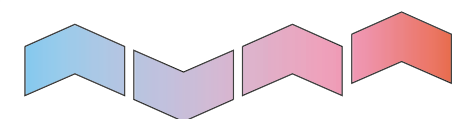
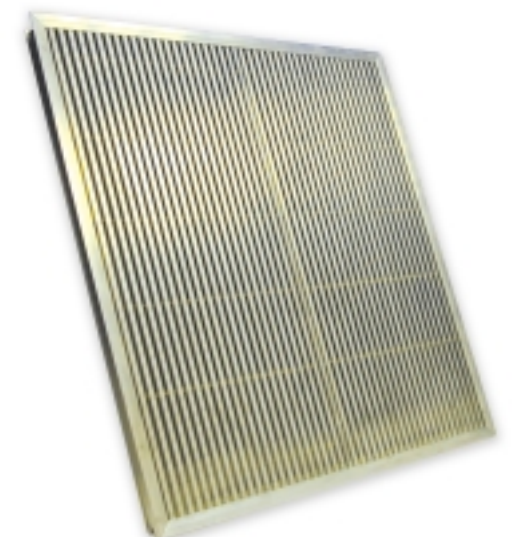
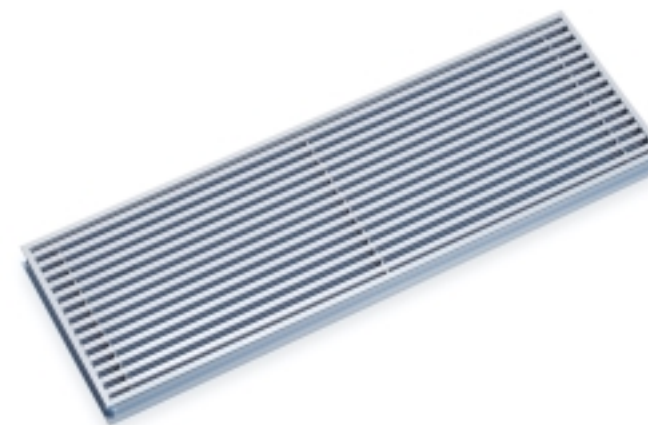
Penthouse

Acoustic

# COLMAN MODUCEL

ENGINEERED AIR DISTRIBUTION

## FLOOR OUTLETS AND GRILLES



Air Distribution and Air Handling

Oldfields Business Park  
 Birrell Street, Fenton  
 Stoke-on-Trent ST4 3ES  
 Telephone: +44 (0)1782 599995  
 Facsimile: +44 (0)1782 599220  
 email: colman.moducel@eaton-williams.com



## B SERIES FLOOR SWIRL DIFFUSER



### Application:

The B series floor/swirl diffusers are designed for use in raised access flooring systems where the floor cavity is used as a pressurised supply air plenum.

The B series core design achieves a local ventilation within the occupied zone of 1.80 m. where a specific room air condition is required to maintain optimum comfort conditions for people or machinery. Above this zone, a warm air cushion develops below the ceiling where the warm and used-up air can be collected and extracted.

### Description:

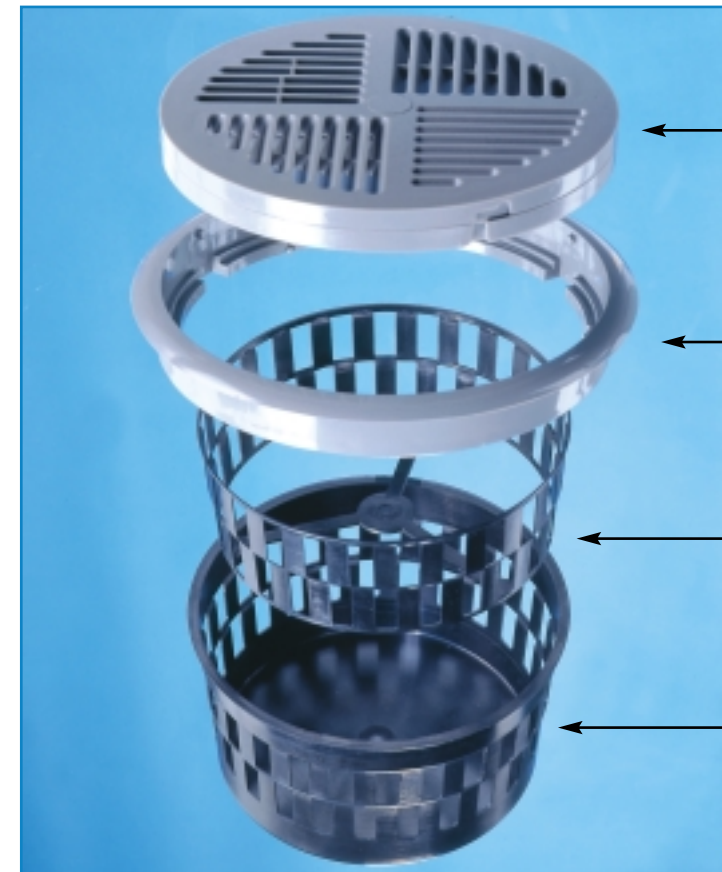
The B series floor/swirl diffusers are manufactured from both fire retardant U/L 94 compliant Polycarbonate, or Aluminium.

- 200mm and 150mm sizes available.

### Features:

- High impact Polycarbonate manufacture. Complies with U/L Standard 94 for flammability.
- Nominal size 200mm diameter. Low profile design.
- Dust/dirt collection basket catches items which may fall through the diffuser faceplate. Removable for cleaning.
- Optional flow regulator damper which can be adjusted without removing the diffuser core.
- Low pressure drop core/damper assembly design.
- Carpet trim ring secures carpet and prevents edges fraying.
- Simple and secure installation by concealed mounting clamps or threaded mounting ring.
- Grey or Black as standard. Other colours available on request.

## BTP



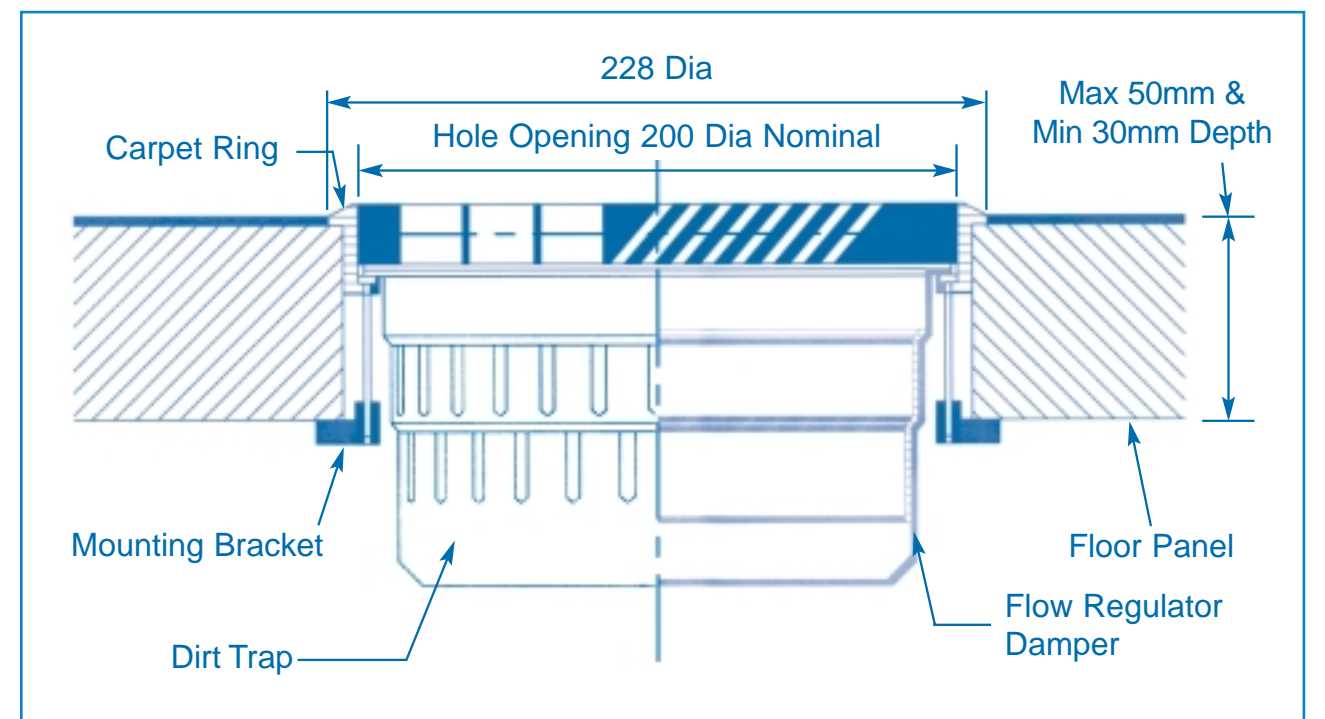
Floor diffuser Core 200mm Diameter

Carpet ring with mounting clamp

Manually adjusted flow damper (optional)  
requires dust/dirt collection basket

Dust/dirt collection basket (optional)

## BTP - SECTION

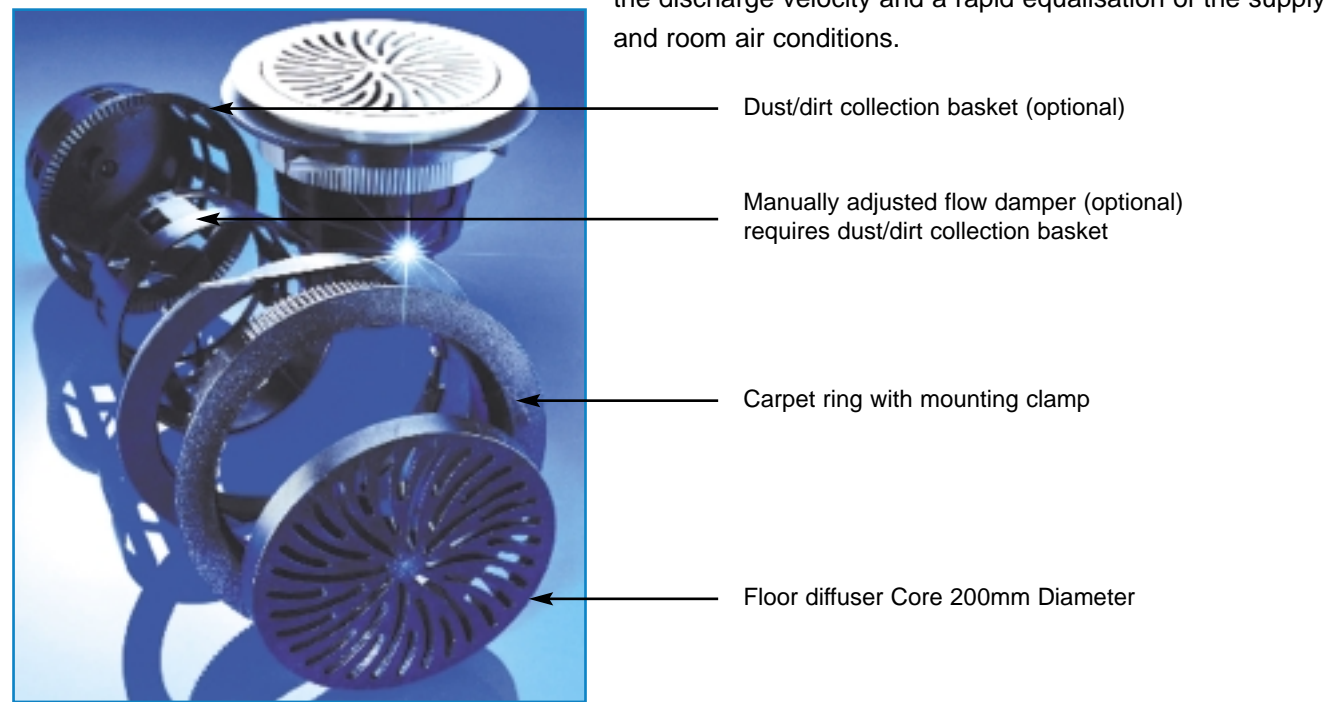


INSTALLATION HOLE SIZE	
Trim Ring	Recessed Mount
ø 210mm	ø 200mm

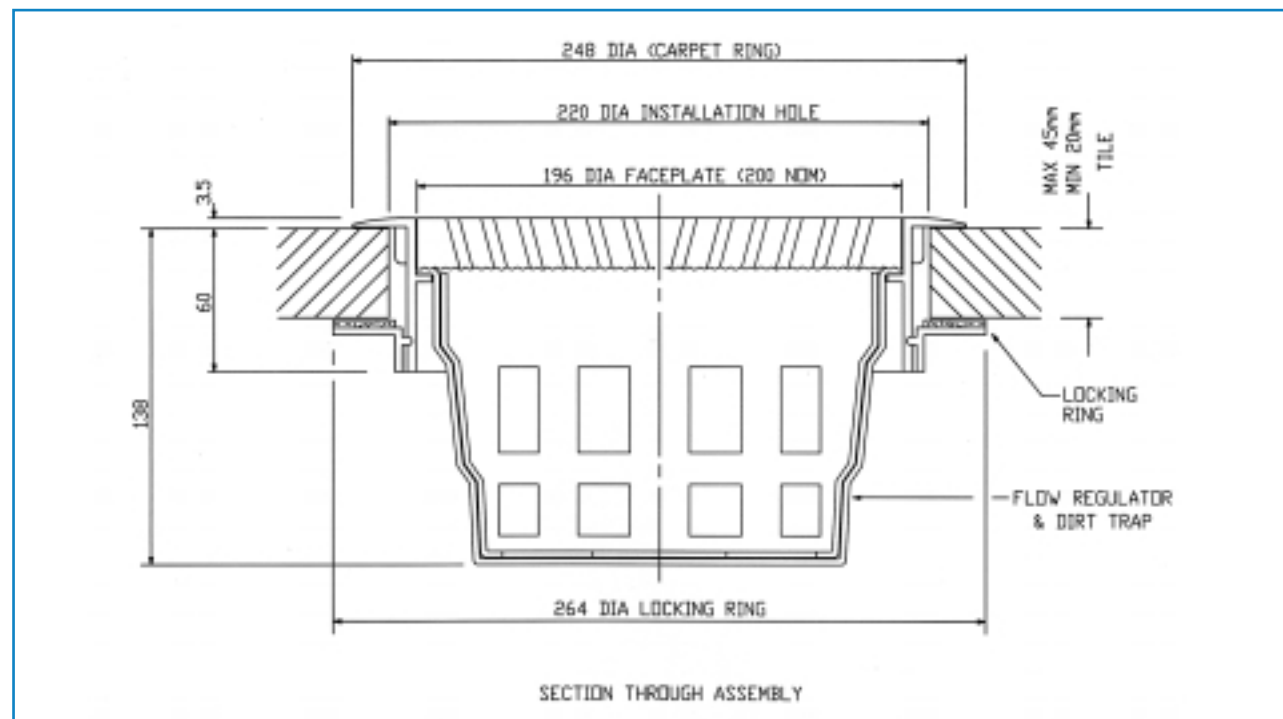
Design Changes Reserved

## BTS

Where there are excessive heat loads and/or large air change rates, we recommend use of the BTS floor swirl outlet. This diffuser has been specially designed with radial slots to maximise the induction effect. This causes greater quantities of secondary (room) air to be entrained into the air stream resulting in a quicker reduction in the discharge velocity and a rapid equalisation of the supply and room air conditions.



## BTS - SECTION

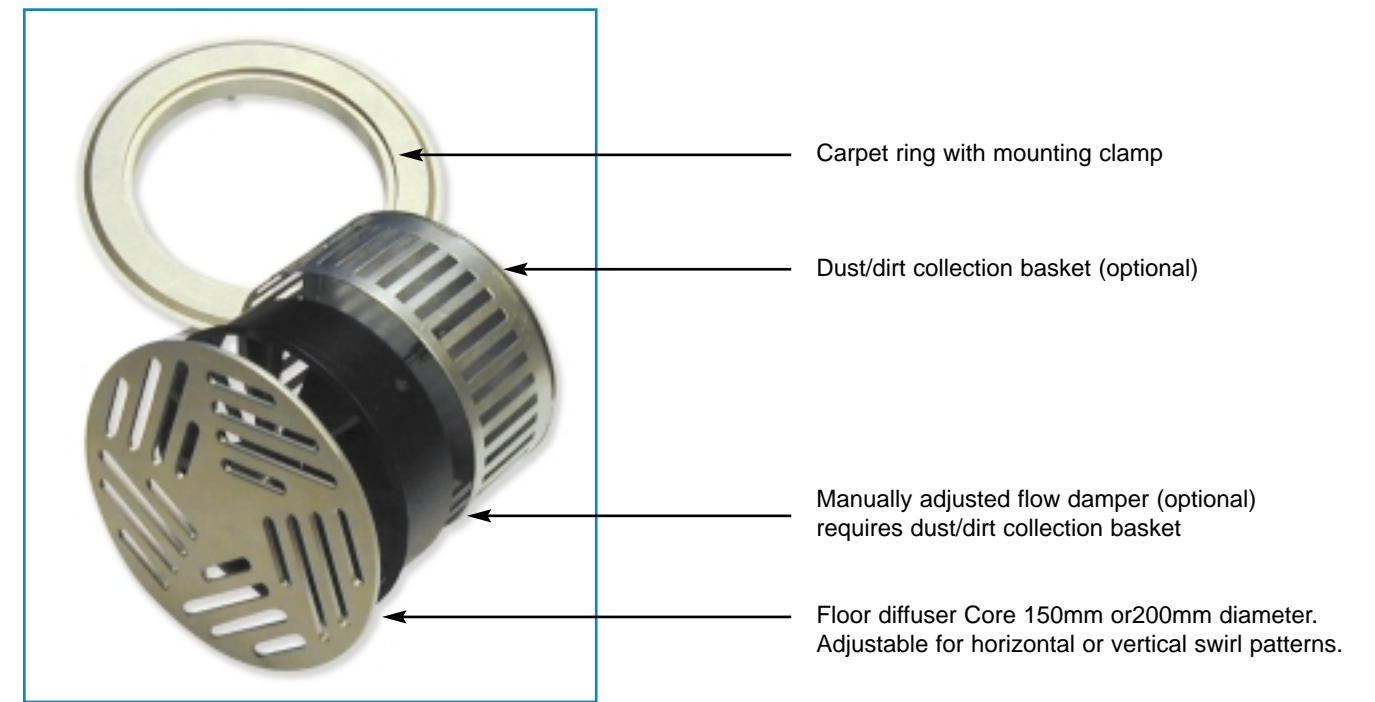


INSTALLATION HOLE SIZE	
Trim Ring	Recessed Mount
Ø 248mm	Ø 200mm

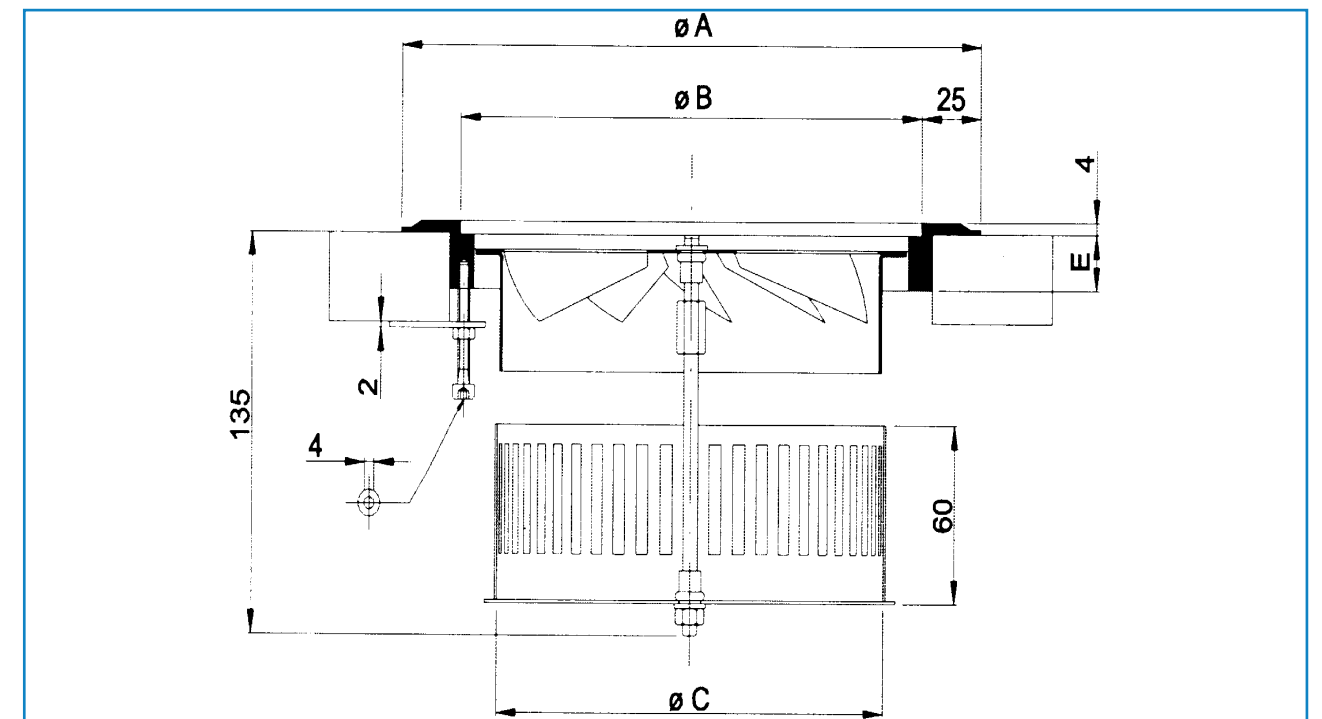
Design Changes Reserved

## BTG

The BTG floor swirl outlet is manufactured from aluminium and is used for supply of cooled and heated air.



## BTG - SECTION

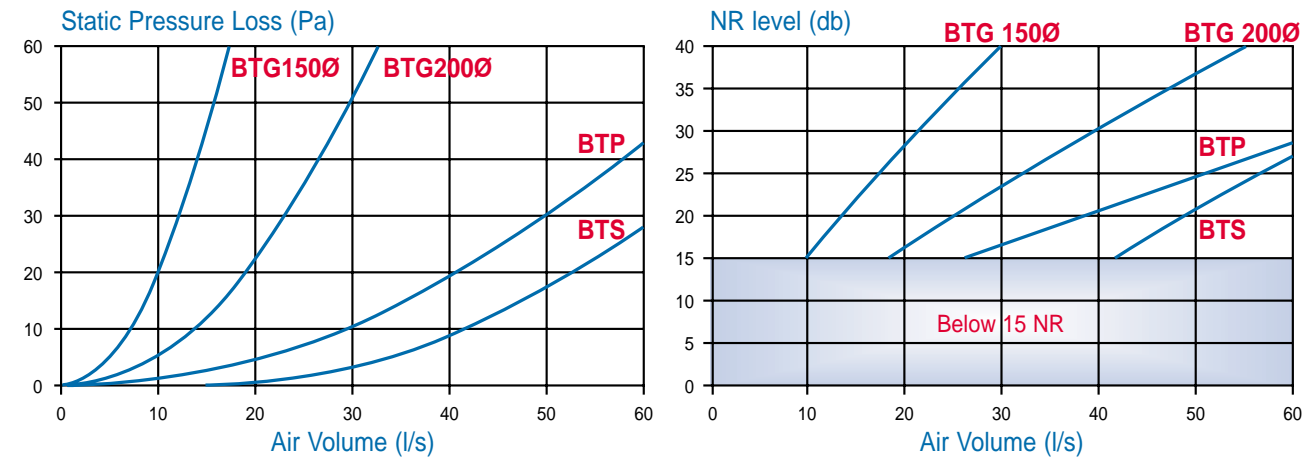


Size	ØA	ØB	ØC	E
150	190	140	124	14
200	240	190	160	19

Design Changes Reserved

## PERFORMANCE DATA

The technical data detailed below has been derived from tests conducted at independant laboratories. The static pressure loss and NR levels are given for the units mounted in a pressurised floor with dampers fully open.



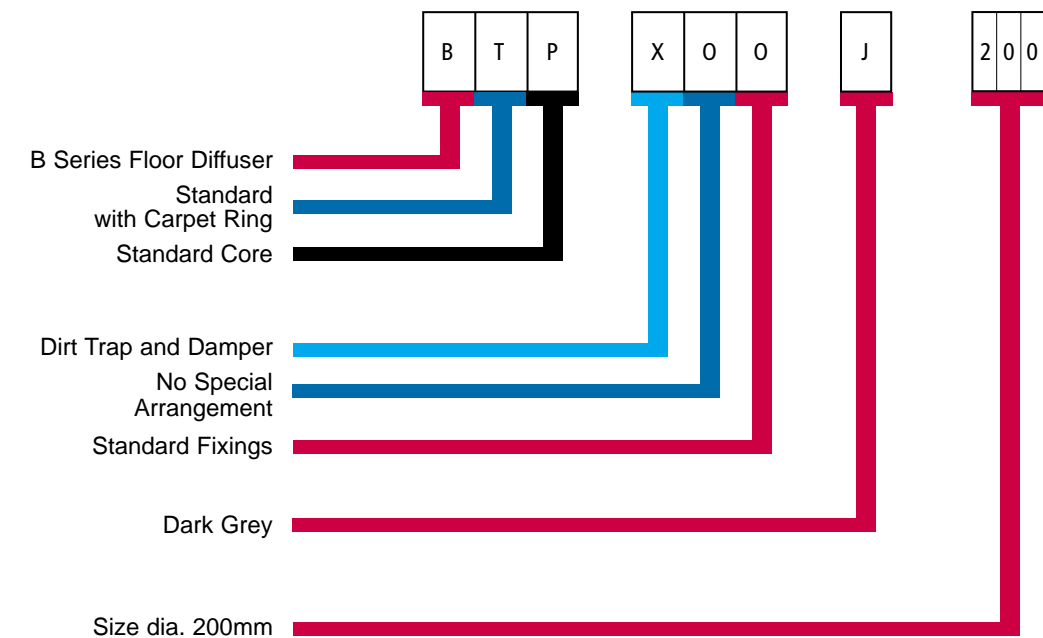
Note: Correction factor for model BTG with vertical air pattern = multiply by 0.8 NR level includes 8dB correction for room allowance.

## OPTIONS & ORDER CODES - FLOOR DIFFUSER (CIRCULAR)

1	2 FRAME	3 FACEPLATE	4 ACCESSORIES	5 ARRANGEMENT	6 FIXING	7 FINISH
B	T Standard With Carpet Trim Ring	P Standard	0 None	0 None	0 Standard Mounting Bracket	J Grey
R	Recessed Mounting	S Swirl (Polycarbonate)	W Dirt Trap	1 Special	F Fixing Ring	8 Matt black
1	Special	G Swirl (Aluminium)	X Standard with Dirt Trap and Damper		1 Special	M Aluminium Ball Blasted
		1 Special	1 Special			A Anodised (Colour TBC)
						N Aluminium Ball Polished
						1 Special

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.

## EXAMPLES OF ORDER CODES



## INSTALLATION

Instructions on how to install the diffuser are supplied with each order. Copies are available upon request

Design Changes Reserved

## T SERIES COMPUTER FLOOR GRILLES



### Model TJJ

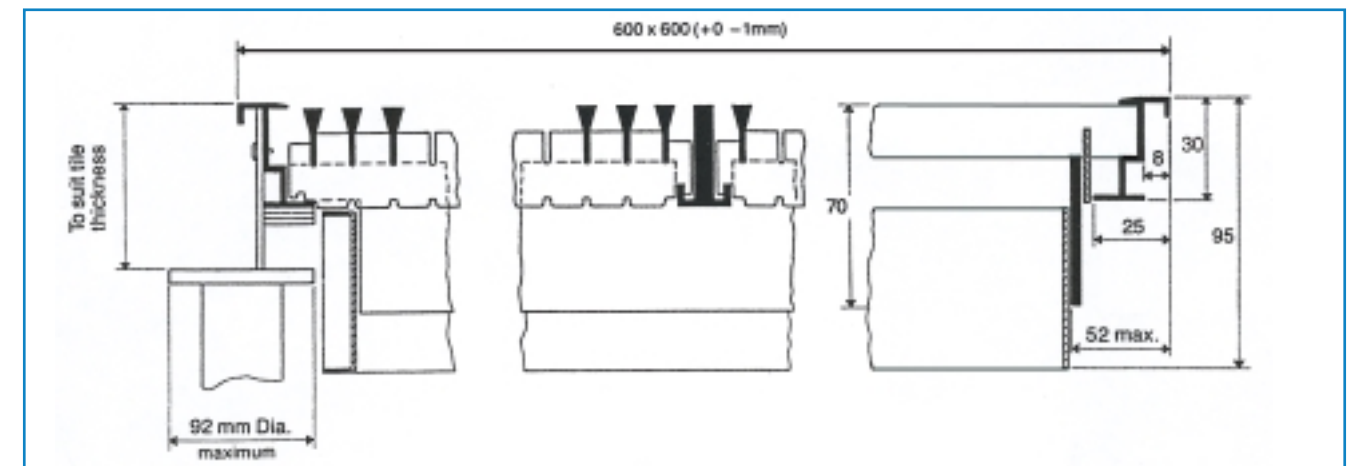
The TJJ Computer Floor Grille has been specifically designed to replace a modular computer floor tile with an aesthetically pleasing air distribution device, without affecting the floor construction. This allows for the grille to be resited to suit changes in room layout or additional loading.

Computer floor grilles are suitable for both supply and extract air and are manufactured in 600 x 600 nominal size. Corner sections are designed to accommodate most floor manufacturers' support jacks and tile thickness from 30mm to 90mm.

Opposed blade volume controls are available with adjustment through the grille face.

High quality aluminium extrusions are used throughout the manufacture of the TJJ range.

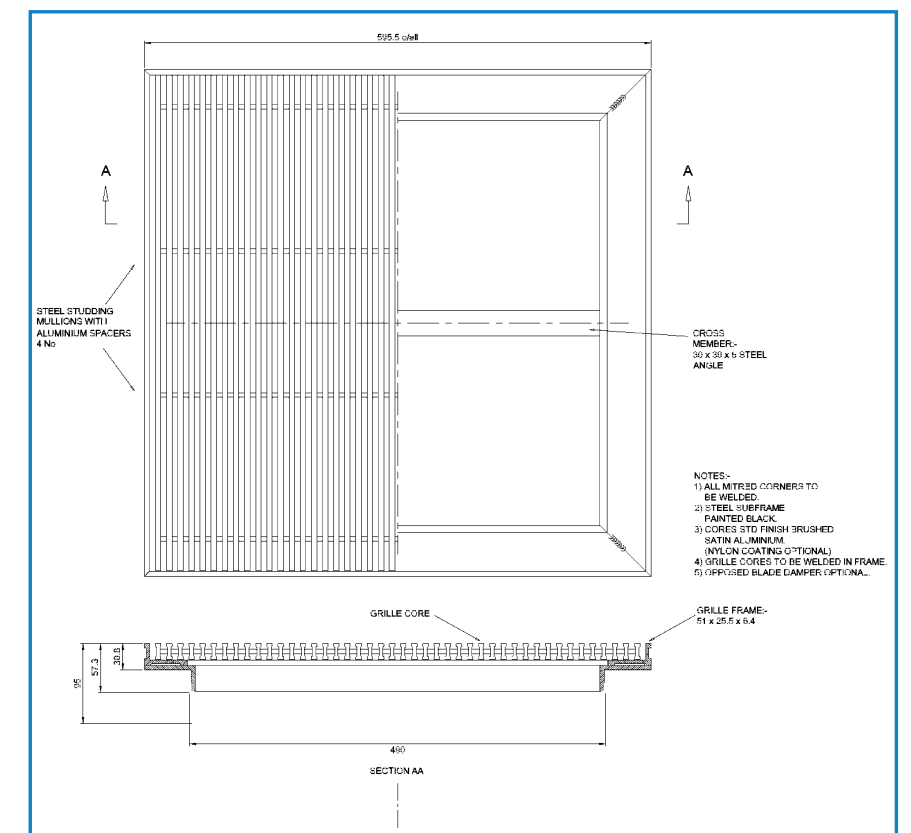
The core is constructed from 6.4mm bars on 12.5mm centres.



### Model TJH

This grille has a top core of extruded aluminium similar to model TJJ but this core is fixed to a rolled steel sub-frame producing a very robust grille which can withstand heavy loading. Model TJH has been successfully tested to the requirements of specification PSA MOB PF2 PS/SP-U PARTS A, B AND C DATED MARCH 1992.

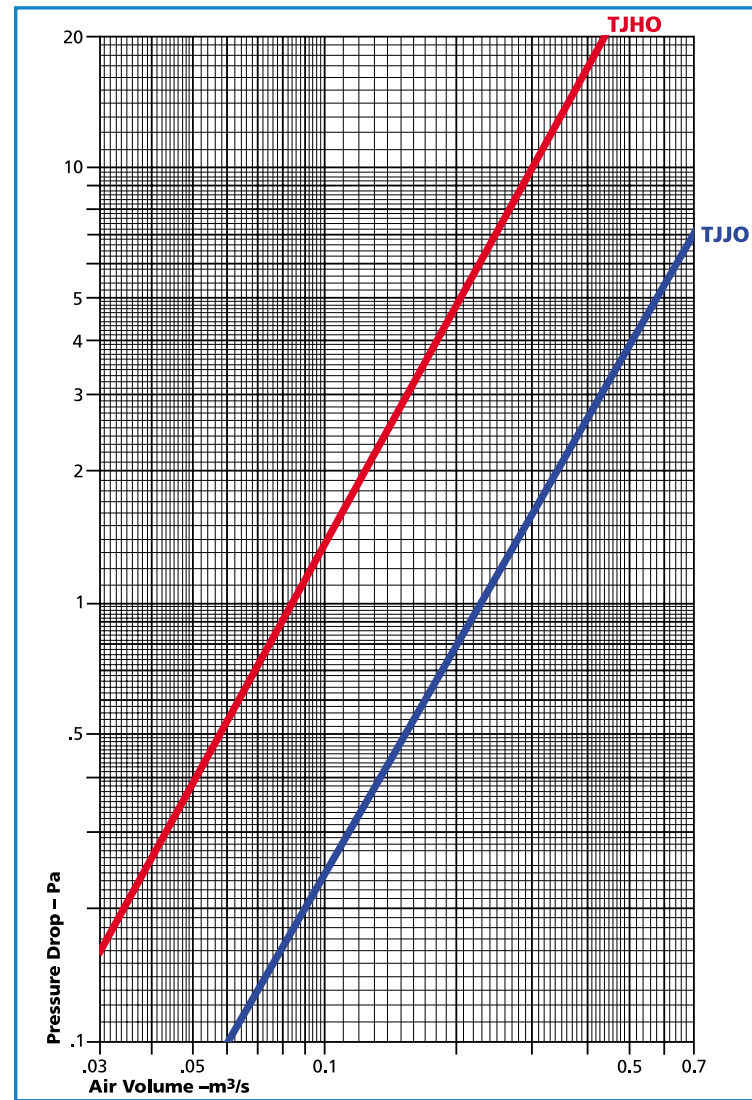
The load performance of the TJH grille makes it suitable for use in computer room floors or other areas where heavy grade floors are specified.



# PERFORMANCE DATA

## Instructions for use of graph

Select air volume required on lower edge of main graph. Trace the line vertically upward until required grille line is required. Read off horizontally to the left for pressure drop.



## T SERIES LINEAR FLOOR GRILLES

### Introduction

Colman 'T' Series is a comprehensive range of supply and return air linear bar grilles for incorporation in floor applications. The range includes a wide variety of frames and core styles which will co-ordinate with most building environments and provide an aesthetic and cost effective solution to the air distribution requirements.

### Frame Styles:

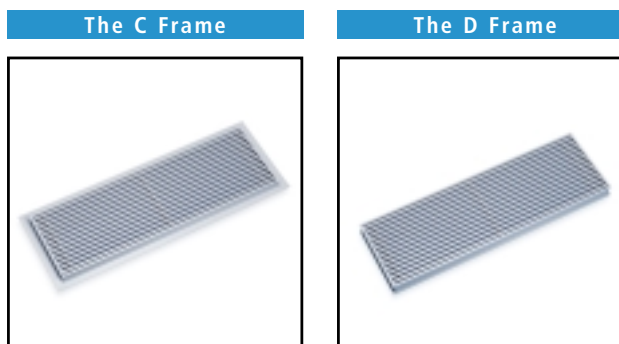
All frames are fabricated from high quality aluminium extrusions and are available in maximum one piece construction of 1800mm long and in increments of 12.5mm height starting from 75mm.

For continuous line application core heights are limited to a maximum of 300mm and are manufactured in equal divisions of the total length. Positive alignment keys are supplied to ensure continuous unbroken appearance.

The C frame is a recess mount design that can be built into floor systems and does not require extra support brackets in this application. Please specify where the unit is being used in a floor

The D frame is most suited to cill applications where visible flanges are not required.

Special frame styles and fixing systems are available on request.



## 'C' Core Supply

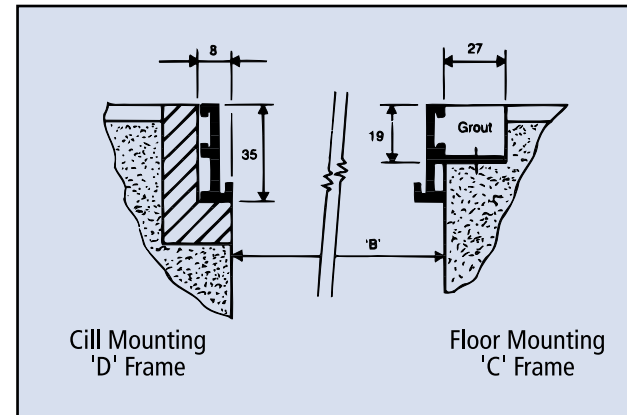
Air Volume m³/s/m	Throw m Min. Max.	Diffuser Height mm	Face Velocity m/s	Pressure Drop Pa	Sound Rating NC
0.039	1.1 - 1.5	50			-
0.101	1.7 - 2.2	100	1.25	3	-
0.164	2.2 - 2.9	150			-
0.047	1.3 - 1.7	50			-
0.122	2.1 - 2.6	100	1.50	4	-
0.197	2.8 - 3.7	150			-
0.054	1.5 - 2.1	50			-
0.142	2.5 - 3.1	100	1.75	6	-
0.229	3.2 - 4.2	150			-
0.062	1.8 - 2.4	50			-
0.162	2.8 - 3.6	100	2.00	7	-
0.262	3.8 - 4.9	150			-
0.070	2.0 - 2.7	50			-
0.182	3.2 - 4.0	100	2.25	9	-
0.295	4.3 - 5.5	150			-
0.078	2.2 - 3.0	50			-
0.203	3.5 - 4.5	100	2.50	11	-
0.328	4.8 - 6.2	150			-
0.085	2.4 - 3.3	50			-
0.223	3.9 - 4.9	100	2.75	14	-
0.360	5.3 - 6.8	150			-
0.093	2.7 - 3.6	50			-
0.243	4.3 - 5.4	100	3.00	16	-
0.393	5.6 - 7.5	150			-
0.101	2.9 - 3.9	50			-
0.263	4.7 - 5.8	100	3.25	19	-
0.426	6.3 - 8.2	150			22
0.109	3.1 - 4.2	50			-
0.284	5.0 - 6.2	100	3.50	22	-
0.459	7.0 - 8.9	150			23
0.116	3.4 - 4.5	50			19
0.304	5.4 - 6.8	100	3.75	25	22
0.124	3.6 - 4.8	50			21
0.324	5.7 - 7.2	100	4.00	29	24
0.132	3.8 - 5.1	50			22
0.344	6.1 - 7.6	100	4.25	33	25
0.140	4.0 - 5.4	50			24
0.365	6.4 - 8.1	100	4.50	37	28
0.147	4.2 - 5.7	50			27
0.385	6.8 - 8.5	100	4.75	41	29
0.155	4.4 - 6.0	50			23
0.405	7.0 - 8.8	100	5.00	45	31

## 'D' Core Supply

Air Volume m³/s/m	Throw m Min. Max.	Diffuser Height mm	Face Velocity m/s	Pressure Drop Pa	Sound Rating NC
0.047	3.0 - 3.5	50			-
0.122	3.9 - 4.3	100	1.5	5	-
0.197	4.2 - 5.1	150			-
0.054	3.2 - 3.8	50			-
0.142	4.2 - 4.7	100	1.75	7	-
0.229	4.5 - 5.5	150			-
0.062	3.4 - 4.1	50			-
0.162	4.5 - 5.0	100	2.0	10	-
0.262	5.0 - 6.1	150		21	-
0.070	3.4 - 4.3	50			-
0.182	4.9 - 5.5	100	2.25	12	20
0.295	5.3 - 6.6	150			25
0.078	3.7 - 4.5	50			-
0.203	5.2 - 5.9	100	2.5	15	22
0.328	5.7 - 7.0	150			30
0.085	3.9 - 4.8	50			-
0.223	5.5 - 6.2	100	2.25	18	24
0.360	6.1 - 7.6	150			33
0.093	4.0 - 5.0	50			22
0.243	6.8 - 6.6	100	3.0	22	27
0.100	4.2 - 5.2	50			24
0.263	6.2 - 7.0	100	3.25	26	30
0.109	4.3 - 5.5	50			25
0.284	6.5 - 7.4	100	3.5	30	33
0.116	4.5 - 5.8	50			28
0.304	6.8 - 7.7	100	3.75	34	37
0.124	4.7 - 6.0	50			29
0.324	7.1 - 8.1	100	4.0	39	39
0.132	4.9 - 6.3	50			31
0.140	5.0 - 6.5	50			33
0.147	5.2 - 6.8	50			36
0.155	5.4 - 7.1	50			37

## Fixing Details

The diagram below illustrates the standard mounting methods plus show the methods available for mitred sections.



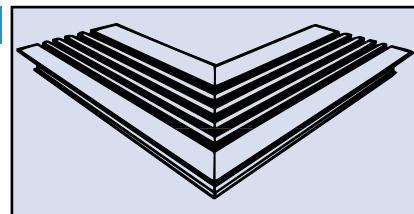
## Mitred Corners

Mitred corners are available, cut to any angle, and are all purpose made to special order. Available in three methods for cill, ceiling or sidewall applications. Standard leg length is 500mm over flange measured from inside of angle.

### Method E

Cill Flat Corner

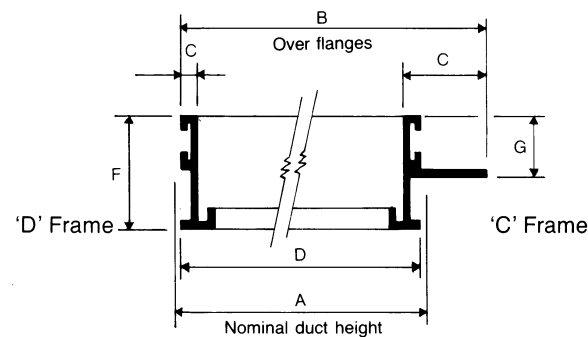
NOT AVAILABLE WITH 'Y' and 'Z' cores  
Direction of air pattern to be advised when used with D cores.



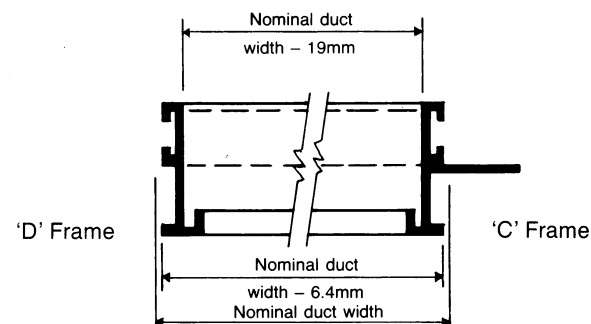
## Finish:

The grilles are available in a wide variety of finishes including standard BS and RAL powder coating or anodised aluminium. Please refer to the product coding section within this brochure for a list of standard finishes. Special finishes are available on request.

## Frame Styles C and D



LATERAL SECTION



LONGITUDINAL SECTION

Models	A	B	C	D	E	F	G
TCC, TCD	Nominal duct height	A + 35	27.4	A - 6.4	21	35	19
TDC, TDD	Nominal duct height	A - 6	6.4	A - 6.4	-	35	-

**Cores:** The frames indicated above are available in combination with cores shown

## 'T' Series Return

Air Volume m <sup>3</sup> /s/m	Grille Height mm	Face Velocity m/s	Cores 'C' & 'D'	
			Pressure Drop Pa	NC
0.12	100			
0.20	150			
0.28	200	1.5	6	
0.35	250			17
0.43	300			18
0.14	100			22
0.23	150			18
0.32	200	1.75	9	20
0.41	250			21
0.50	300			22
0.16	100			24
0.26	150			21
0.37	200	200	11	24
0.47	250			25
0.58	300			26
0.19	100			28
0.30	150			24
0.41	200	2.25	15	28
0.53	250			28
0.58	300			29
0.21	100			29
0.33	150			27
0.46	200	2.50	18	29
0.59	250			30
0.72	300			31

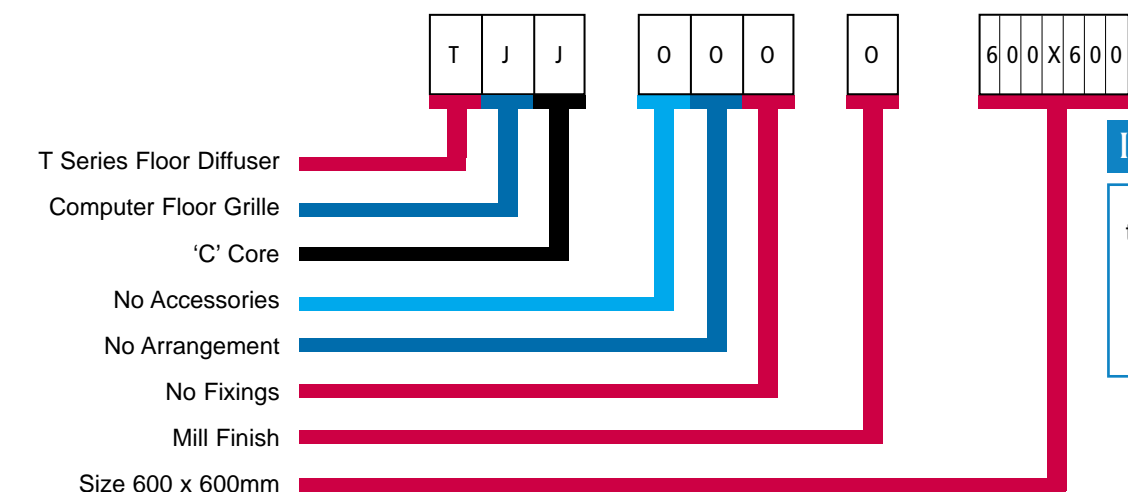
Air Volume m <sup>3</sup> /s/m	Grille Height mm	Face Velocity m/s	Cores 'C' & 'D'	
			Pressure Drop Pa	NC
0.23	100			30
0.37	150			30
0.51	200	2.75	22	32
0.67	250			33
0.79	300			34
0.25	100			32
0.40	150			33
0.55	200	3.00	26	35
0.71	250			36
0.86	300			37
0.26	100			34
0.43	150			36
0.60	200	3.25	30	37
0.77	250			38
0.93	300			39
0.28	100			36
0.46	150			38
0.65	200	3.50	36	40
0.83	250			41
1.04	300			42

## OPTIONS & ORDER CODES - FLOOR DIFFUSER (SQUARE)

1	2 FRAME	3 FACEPLATE	4 ACCESSORIES	5 ARRANGEMENT	6 FIXING	7 FINISH
T	J Computer Floor Grille C Recessed Frame D Flangeless Frame 1 Special	C 6.4mm Bars @ 12.5mm Centres 0 Degrees Deflection D 6.4mm Bars @ 12.5mm Centres 15 Degrees Deflection H Heavy Duty J "C" Core For Computer Floor Grille 1 Special	0 None V Face Operated Volume Control X Face Operated Volume Control Painted Matt Black 1 Special	0 None A Intermediate - No End Caps B Straight - 2 End Cap C Straight - RH End Cap D Straight - LH End Cap E 90 Degree Mitred Corner H Mitred Corner - (Angle TBA) 1 Special	0 None D Universal Extended Bracket E Spring Clips U Universal Bracket 1 Special	0 Mill Finish A Anodised Colour TBA 8 Matt Black C BS 00 E55 Gloss White D BS 00 E55 Matt White E RAL 9010 Gloss F RAL 9010 Matt G RAL 9010 Satin H BS 00 ESS 3 RAL 9006 9 Satin Anodised 1 Special

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. Floor tile depth to be advised at time of order.

## EXAMPLES OF ORDER CODES



## INSTALLATION

Instructions on how to install the diffuser are supplied with each order. Copies are available upon request

Design Changes Reserved