EMAIR

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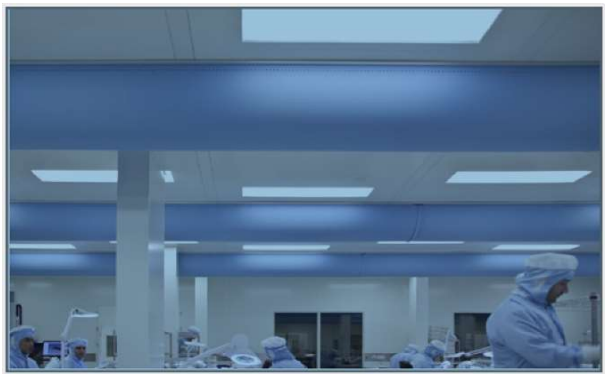
SECTION




RELAX
TAKE IT
EASY

TEXTILE DUCTING

PRIHODA textile ducts are versatile and cost effective air distribution ducts manufactured from polyester, polyethylene or polyurethane cloth. The ducts can be used in most applications ranging from industrial, electronic, food processing and chemical installations to commercial offices and supermarket applications.

All ducts are laser cut and purpose made to suit requirements and are available in a variety of shapes and sizes and colours.

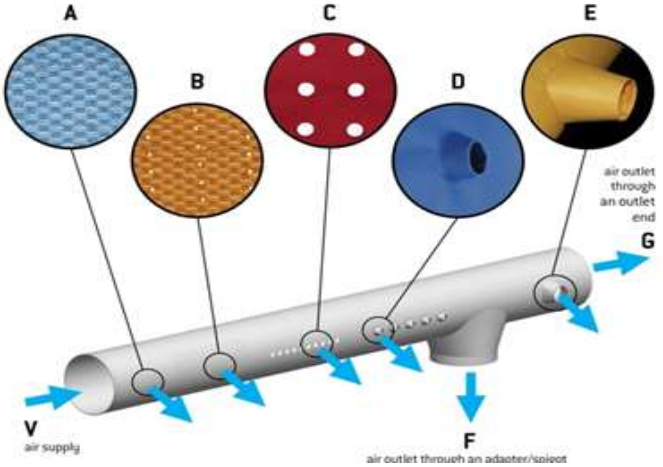
The ducts are purpose manufactured and available in a variety shapes, sizes and colours to meet requirements. They may be used for both supply and return air systems with various configurations available

All products use endless fibre material limiting particle shedding and as such, the majority of fabrics may be used in clean room applications with antistatic and antibacterial options available as well.

The ducts are easily maintained and are washable for hygienic or aesthetic purposes.

Various installation methods and systems are available to meet most requirements.

PRODUCT DESIGNATION	PERMEABILITY	WEIGHT	MATERIAL	ATTRIBUTES					
Prihoda Premium (PMI/NMI)	YES/NO	220gr/m²	100% Polyester	✓	B	✓	✓	✓	✗
Prihoda classic (PMS/NMS)	YES/NO	200gr/m²	100% Polyester	✗	B	✗	✓	✓	✗
Prihoda Recycled (PMSre/NMSre)	YES/NO	200gr/m²	100% Polyester (recycled)	✗	B	✗	✓	✓	✗
Prihoda Light (PLS/NLS)	YES/NO	70gr/m²	100% Polyester	✗	B	✗	✓	✓	✗
Prihoda Durable (NMR)	NO	340gr/m²	Polyester & Polyurethane	✓	B	✓	✓	✓	✗
Prihoda Glass (NHE)	NO	460gr/m²	Glass fibre & Polyurethane	✗	A	✗	✗	✗	✗
Prihoda Plastic (NMF)	NO	300gr/m²	Polyester & PVC	✗	B	✗	✗	✓	✓
Prihoda Foil (NLF)	NO	85gr/m²	Polyethylene	✗	✗	✗	✗	✗	✓
Prihoda Translucent (NMT)	NO	385gr/m²	90% PVC 10% Polyester	✗	C	✗	✗	✗	✓

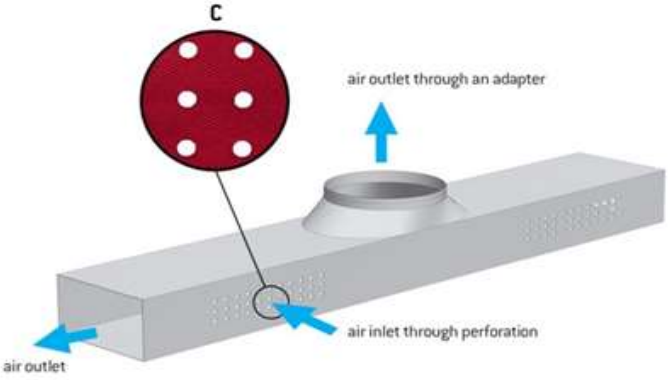


✓ AVAILABLE
✗ UNAVAILABLE

Antibacterial	Fire Resistance class	Antistatic	Machine washable	Suitable for clean rooms	Water repelant

Air passes through either -

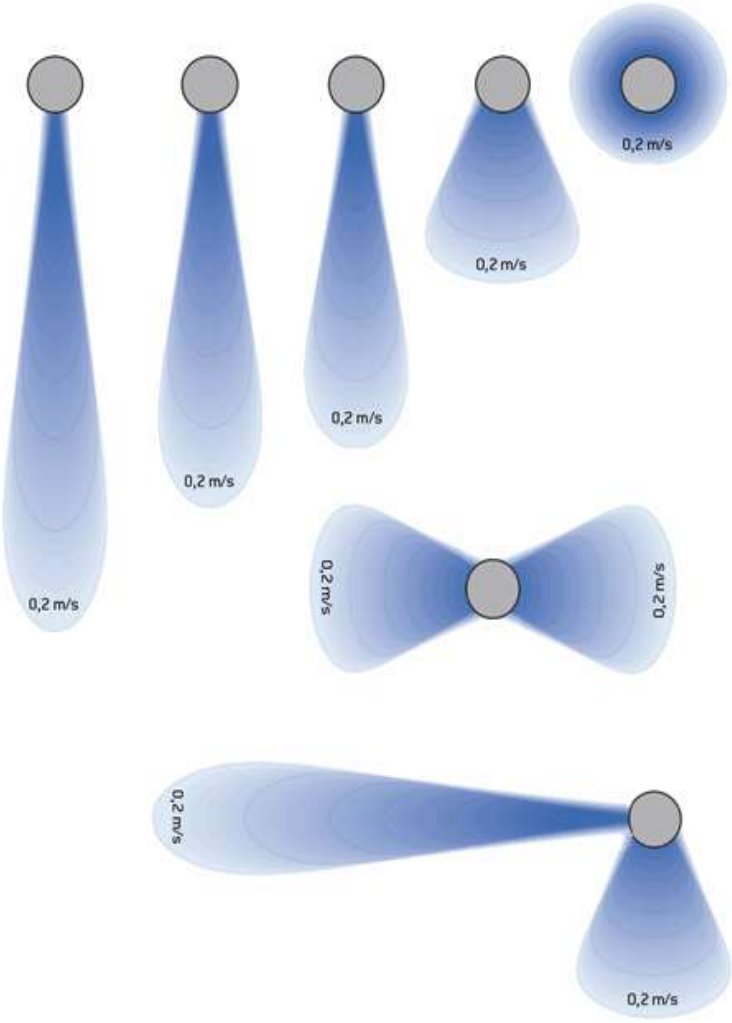
A - permeable fabric material
B - micro perforations
C - perforations
D - small fabric nozzles
E - large fabric nozzles
F - outlet
G - outlet end



Fire resistance to European Standard EN 13501-1
PMI/NMI/PMS/PMSre are also certified to UL723

TEXTILE DUCTING

By combining the use of micro perforations, perforations and the various types of nozzles available, we are able to provide an infinite number of distribution patters to meet exacting requirements.



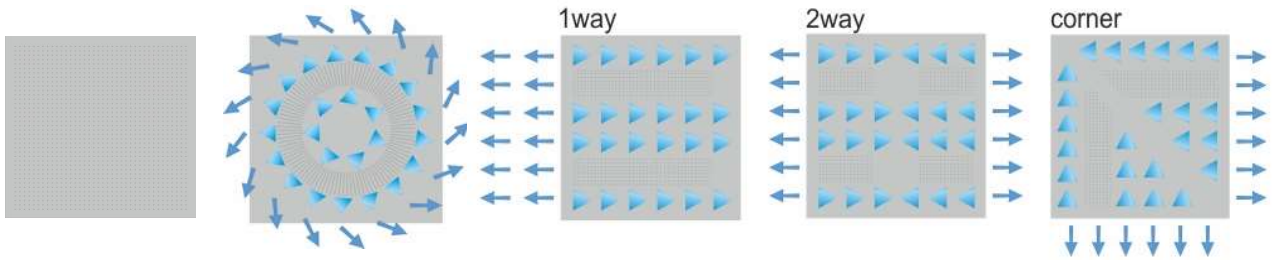
A double duct system has been designed and developed to limit condensation in airconditioning applications. A heat transfer coefficient of up to 3.5W/m^2/K being achievable using the double duct system.

A membrane type duct enables the client to alternate between heating and cooling distribution patterns within the same duct.

TEXTILE DIFFUSER OUTLETS

SquAireTex perfo

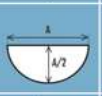
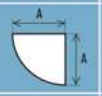
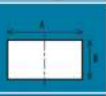
SquAireTex flow



TEXTILE DUCTING

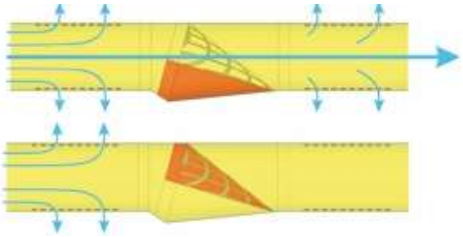
Various shapes and installation systems are available for all types of ducts. For supply air ducts, Circular, Half round, Quarter round, Segment and Sector configurations are standard with other shapes available on request. As the standard return air ducts are supplied with internal or external aluminium frame, the shapes of these ducts is limited to Square, rectangular or Triangular sections.

Installation options include aluminium or stainless steel or plastic profiles, galvanised or stainless steel wire support, tensionig systems, with all the necessary peripheral components.

POSITIVE PRESSURE ONLY	C	CIRCULAR		The standard shape, easy maintenance, preferentially recommended.
	H	HALF-ROUND		For use where there is not enough space for circular diffuser and aesthetic applications.
	Q	QUARTER-ROUND		For use where there is not enough space for circular diffuser, in aesthetic applications and if the diffuser is to be installed in the corner of a room.
	SG	SEGMENT		For use where there is not enough height for a half-round diffuser.
	SC	SECTOR		Available if the room corner construction requires a different shape to quarter round.
OVER PRESSURE AND NEGATIVE PRESSURE	S	SQUARE		This shape requires a special suspension structure (provided) to clamp and support all corners.
	T	TRIANGULAR		The triangular shape is maintained by placing a heavy weight at the bottom of the duct to maintain tension on the walls of the material.

PRIHODA ACCESSORIES

SHUT OFF DAMPERS

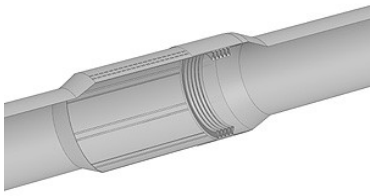


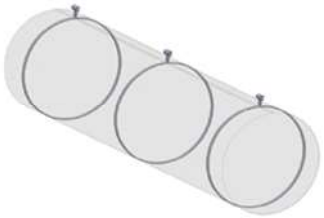
ADJUSTABLE BENDS

TENSIONING SYSTEMS

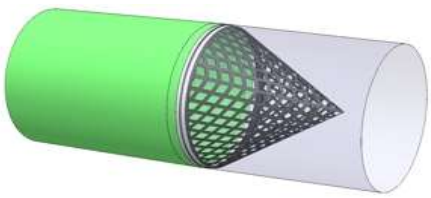
BALANCING DAMPERS

ADJUSTABLE LENGTH

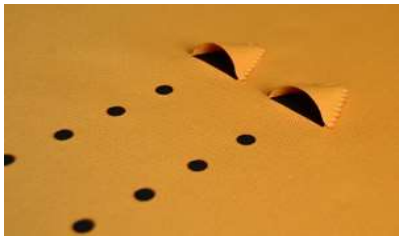


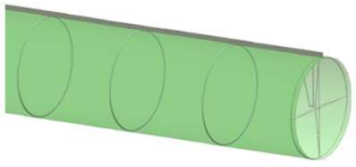


FLOW EQUALISER

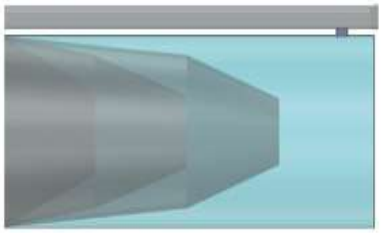


POCKET OUTLETS



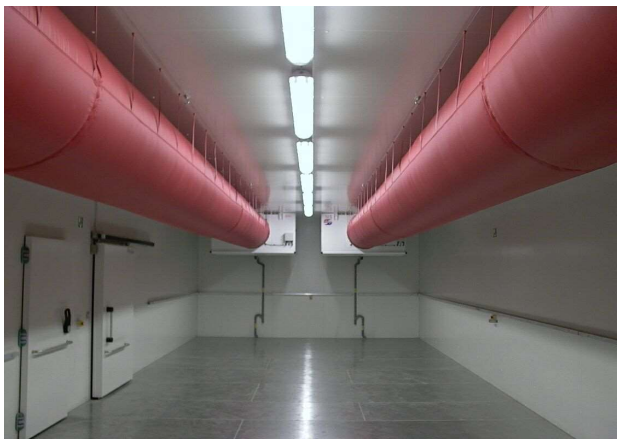


BEAT ABSORBER



NOZZLES

TEXTILE DUCTING



COLD ROOMS

CLEAN ROOMS

INDOOR POOLS

GREENHOUSES

SHOW ROOMS

TEMPORARY STRUCTURES

MANUFACTURING

OFFICES

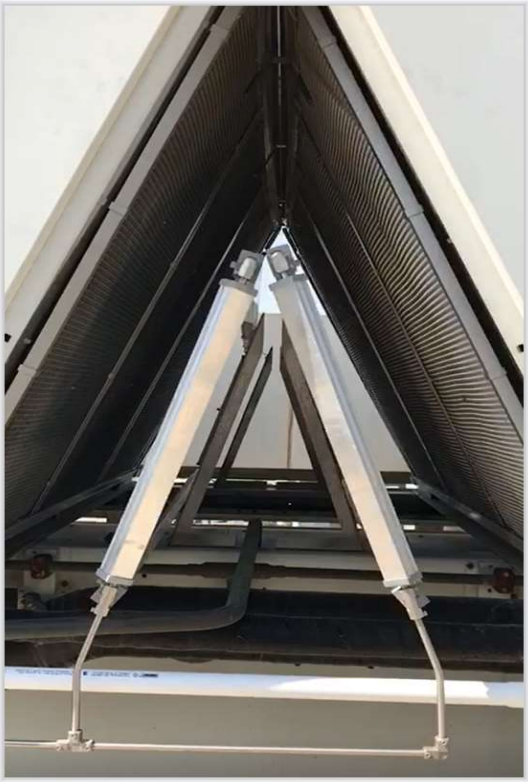
ADIABATIC SYSTEMS

SMART COOLING

Suitable for new or retrofit installations
Increases system energy efficiency and chiller capacity improving COP / EER values
Systems are pupose designed to suit instalation and climatic conditions
Can be retrofitted on site to most types and configurations of chillers
Uses adiabatic principle to lower inlet air temperature to chiller condensing sections
Functional when external temperature exceeds 24 degrees C and when relative humidity levels are below 60%
All components specifically designed and suitable for high humidity environments
Improves chiller maintenace and life span
System has the added advantage of simultaneously protecting condensing coils from debris and extreme weather conditions

System comprises of the following components

- Main pump and water reticulation housing
- 2 stage inlet primary water filters
- Electro magnetic water descaling system
- UV light for prevention of legionella bacteria and other water borne diseases
- High pressure pump
- Stainless steel water distribution system
- Stainless steel atomising nozzles
- Valves and fittings
- Integrated microprocessor control
- Reflective membrane facilitating and improving evaporation of water
- Drainage system for unevaporated water
- Recycling system for reuse of unevaporated water including filtration and make up tanks



FAN COIL UNITS

CASSETTE CHILLED WATER FAN COIL UNITS

SKYSTAR

1,2 or 3 row coils for 2 pipe systems
2+ 1 rows for 4 pipe system
Galvanised steel construction
Radial 6 speed fan
Copper / Aluminium coil
Insulated plastic ABS condensate tray
RAL 9003 Diffuser
Smaller sizes suitable for installation in 600 x 600 ceiling module
Fresh air intakle
Take off for remote diffuser
Integrated condensate pump
Wired remote control
Varied distribution patterns

SK

2 pipe units
7 sizes cooling capacity 1.25 - 10.93 kW
Airflows from 310 - 1820 m3/h

4 pipe units
11 sizes cooling capacity 1.49 - 9.69 kW
Airflows from 310 - 1730 m3/h

SK STANDARD

SK-ECM

2 pipe units
5 sizes cooling capacity 1.84 - 10.89 kW
Airflows from 310 - 1770 m3/h

4 pipe units
5 sizes cooling capacity 1.85 - 9.76 kW
Airflows from 310 - 1770 m3/h

Variable speed controlled fan

MD -600 METAL OUTLET
(SMALLER SIZES ONLY)

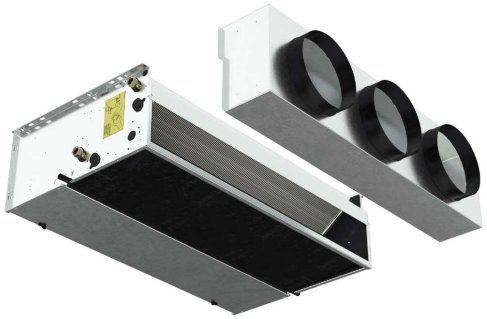
Additional extras

2/3way valves
Pressure independent valves
Electric reheat
Water reheat
Condensate pumps
Inlet and outlet plenums
Wall mounted temperature / speed controllers
Infra-red remote control
Electrostatic filter

MCT

DUCTED CHILLED WATER FAN COIL UNITS

CARISMA CRSL



3 row models @ 0 Pa external pressure
7 sizes cooling capacity 2.14 - 9.89 kW
Airflows from 340 - 2100 m3/h

4 row models @ 0 Pa external pressure
7 sizes cooling capacity 2.39 - 11.29 kW
Airflows from 340 - 2100 m3/h

3 or 4 row coils for 2 pipe systems
1 or 2 row additional row coils for 4 pipe systems
Galvanised steel construction
Double inlet 5 speed Centrifugal fan
Copper / Aluminium coil
Insulated plastic ABS condensate tray
Polypropelene filter in galvanbised gasing

CARISMA CRSL-ECM

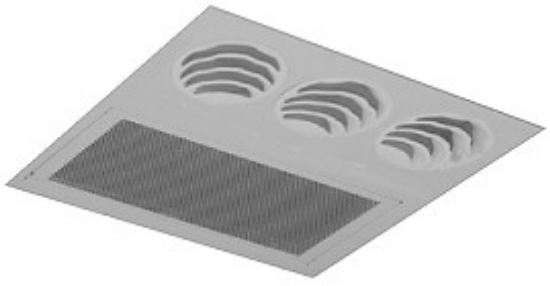
3 row models @ 0 Pa external pressure
4 sizes cooling capacity 2.11 - 10.91 kW
Airflows from 330 - 2460 m3/h

4 row models @ 0 Pa external pressure
7 sizes cooling capacity 2.33 - 12.32 kW
Airflows from 330 - 2460 m3/h

3 or 4 row coils for 2 pipe systems
1 or 2 row additional coils for 4 pipe systems
Galvanised steel construction
Double inlet 5 speed EC Centrifugal fan
Copper / Aluminium coil
Insulated plastic ABS condensate tray
Polypropelene filter in galvanbised gasing

Additional extras

2/3way valves
Pressure independent valves
Electric reheat
Water reheat
Condensate pumps
Inlet and outlet plenums
Wall mounted temperature / speed controllers
Diffuser outlet - CCN
Electronic plate filter



CRSL - CCN

DUCTED CHILLED WATER FAN COIL UNITS

MAESTRO MTL

3 row models @ 0 Pa external pressure
5 sizes cooling capacity 4.06 - 15.79 kW
Airflows from 995 - 4400 m3/h

4 row models @ 0 Pa external pressure
7 sizes cooling capacity 4.67 - 31.22 kW
Airflows from 940 - 7840 m3/h

6 row models @ 0 Pa external pressure
2 sizes cooling capacity 16.28 - 39.53 kW
Airflows from 3190 - 7435 m3/h

3, 4 or 6 row coils for 2 pipe systems
1 or 2 row additional row coils for 4 pipe systems
Galvanised steel construction
Double inlet 5 speed Centrifugal fans
Copper / Aluminium coil
Insulated plastic ABS condensate tray
Polypropelene filter in galvanised gasing

MAESTRO MTL-ECM

3 row models @ 0 Pa external pressure
4 sizes cooling capacity 3.0 - 12.26 kW
Airflows from 505 - 3535 m3/h

4 row models @ 0 Pa external pressure
4 sizes cooling capacity 2.9 - 15.06 kW
Airflows from 460 - 3475 m3/h

3 or 4 row coils for 2 pipe systems
1 or 2 row additional coils for 4 pipe systems
Galvanised steel construction
Double inlet 5 speed EC Centrifugal fans
Copper / Aluminium coil
Insulated plastic ABS condensate tray
Polypropelene filter in galvanised gasing

Additional extras

2/3way valves
Pressure independent valves
Electric reheat
Water reheat
Condensate pumps
Inlet and outlet plenums
Wall mounted temperature / speed controllers
Low temperature cut out (on MTL only)
Electronic plate filter

FAN COIL UNITS

FLOOR, SIDE WALL AND MIDWALL UNITS

3 or 4 row coils for 2 pipe systems
2+ 1 rows for 4 pipe system
Galvanised steel construction
Centrifugal 5 speed fan
Copper / Aluminium coil
Insulated plastic ABS condensate tray

CRC
CRC-ECM (WITH EC FAN)

CFR
CFR-ECM (WITH EC FAN)

FLY

KIT FOR RECESED APPLICATIONS

CRC

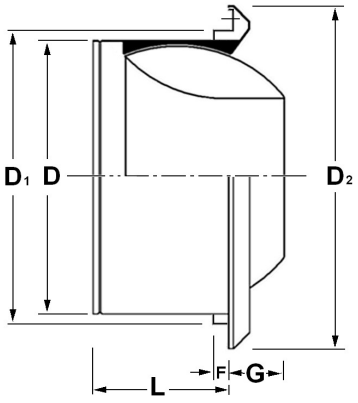
CFP-ECM (WITH EC FAN)

JET NOZZLES

AJN

Spun aluminium alloy jet nozzle with special gasket seal between spherical element and the outer frame
Manually adjustable discharge nozzle - motorised option also available on request
For ceiling or wall installation at heights of 2,4m - 11,5m
Fixing by means screws concealed by a removable front ring
Pinted RAL9016 Standard - mill finish or non standard colours available on request
Sizes from 160mm to 400mm diameter

Size	D	D1	D2	L	F	G
160	158	165	198	99	10	28
200	197	211	248	110	12	28
250	246	259	303	140	12	28
315	310	325	382	165	12	43
400	394	409	485	203	14	51



Quick Selection

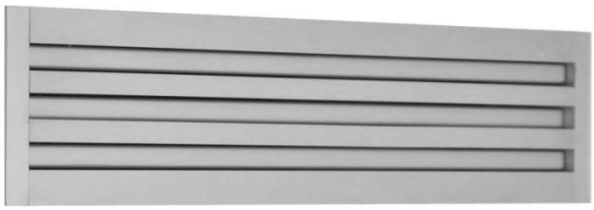
Size	THROW									Terminal Velocity m/s
	10m			20m			30m			
	m3/h	Pa	dB[A]	m3/h	Pa	dB[A]	m3/h	Pa	dB[A]	
160	88	14	<20	172	50	<20	256	121	27	0.25
200	110	11	<20	228	28	<20	310	53	22	
250	138	<10	<20	280	19	<20	385	32	20	
315	180	<10	<20	350	11	<20	540	28	<20	
400	234	<10	<20	465	<10	<20	702	13	<20	
160	172	50	<20	335	181	44	505	420	50	0.50
200	228	28	<20	439	97	38	661	218	45	
250	280	18	<20	553	68	34	830	140	40	
315	350	11	<20	690	42	28	1055	97	33	
400	465	<10	<20	930	25	20	1394	48	26	
160	335	163	44	-	-	-	-	-	-	1.00
200	439	97	38	875	410	-	-	-	-	
250	553	68	34	1102	243	53	-	-	-	
315	690	42	28	1400	160	48	2106	372	-	
400	930	25	20	1860	85	42	2783	243	53	

Noise level shown are sound pressure levels dB[A] assuming 8dB room attenuation
All data for isothermal conditions

LINEAR DIFFUSERS

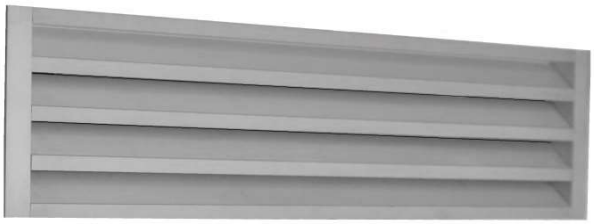
SALA

Linear diffuser 1 or 2 way blow configurations
Vertical or horizontal discharge
Lengths from 300mm to 2500mm
From single to 8 slot configuration
Suitable for ceiling or bulkhead applications
Powder coated or natural anodised finish
Manufactured from extruded aluminium sections
Hit & miss damper available on request SALH
Frame size 32mm



SALD

Linear diffuser in 1 or 2 way blow configurations
Lengths from 300mm to 2500mm
From single to 8 slot configuration
Suitable for ceiling applications
Powder coated or natural anodised finish
Manufactured from extruded aluminium sections
Available with opposed blade damper SALO
Frame size 32mm



UP

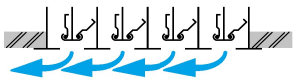
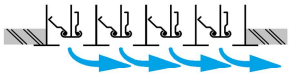
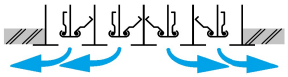
Linear unlined plenum
Suitable for couplnig with linear diffusers
Galvanised finish
Side or top entry spigots
Available with Butterfly damper UPO

LPO

Linear lined plenum - 10mm insulation
Suitable for coupling with linear diffusers
Galvanised finish
Side or top entry spigots
Available with Butterfly damper LPO

SLOT DIFFUSER SELECTION

SALA - HORIZONTAL THROW

	1 SLOT				2 SLOT				3 SLOT				4 SLOT				
	Throw 1 Way (m)																
l/s /m	Pa	NC	Min	Max	Pa	NC	Min	Max	Pa	NC	Min	Max	Pa	NC	Min	Max	l/s /m
15	3	-	0.6	2.4													**15**
30	10	-	1.5	5.2													**30**
45	23	22	2.1	6.1	5	-	1.5	5.5									**45**
60	38	29	3.0	7.3	10	-	2.1	7.3									**60**
75	61	35	3.7	8.2	17	20	2.7	7.9	8	-	2.1	7.3	3	-	1.5	6.1	**75**
110					28	29	3.7	9.8	13	20	3.0	9.8	8	-	2.7	8.5	**110**
125					38	30	4.3	10.4	18	24	3.4	10.1	10	-	3.0	9.8	**125**
140					48	35	4.9	11.3	23	27	4.0	10.7	13	20	3.4	10.4	**140**
155					61	38	5.5	11.9	28	30	4.3	11.6	15	23	3.7	11.3	**155**
185					86	43	6.7	13.1	38	35	5.2	12.8	23	28	4.0	12.5	**185**
215									51	38	6.1	13.7	28	32	5.2	13.4	**215**
250									66	42	7.0	14.6	38	35	5.8	14.6	**250**
275													48	38	6.7	15.5	**275**
310													61	41	7.3	16.5	**310**

	5 SLOT				6 SLOT				7 SLOT				8 SLOT				
	Throw 1 Way (m)																
l/s /m	Pa	NC	Min	Max	Pa	NC	Min	Max	Pa	NC	Min	Max	Pa	NC	Min	Max	l/s /m
125	3	-	2.7	9.1													**125**
140	8	-	3.0	10.4													**140**
155	10	18	3.4	11.3	8	-	3.0	10.4									**155**
185	15	-	4.0	12.2	10	0	3.7	12.2	8	-	3.4	11.3					**185**
215	18	27	4.6	13.7	13	23	4.3	13.4	10	20	4.0	13.1	8	-	3.7	12.5	**215**
250	25	30	5.5	14.3	18	27	4.9	14.3	13	24	4.3	14.0	10	20	4.3	14.0	**250**
275	30	33	6.1	15.5	23	30	5.5	15.2	18	27	4.9	14.9	13	23	4.9	14.9	**275**
310	38	27	6.7	16.5	25	23	6.1	16.5	20	30	5.5	16.2	15	26	5.5	15.8	**310**
340	46	39	7.3	17.1	33	35	6.7	16.8	23	32	6.1	16.8	18	28	5.8	16.8	**340**
370	56	41	7.9	18.0	38	37	7.3	17.7	28	34	6.7	17.7	20	31	6.4	17.7	**370**
400					46	9	7.9	18.3	33	36	7.3	18.3	25	33	7.0	18.3	**400**
430					53	35	8.8	19.2	38	38	7.9	18.9	30	35	7.3	18.9	**430**
460									43	40	8.5	19.8	33	36	7.9	19.8	**460**
500													38	39	8.5	20.7	**500**
540													46	41	9.1	21.3	**540**

NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)

NC levels based on 1200 long diffuser
Throws based on 3.2m long diffuser
Max throw based on terminal velocity of 0.25m/s
Min throw based on terminal velocity of 0.85m/s
All data for isothermal conditions

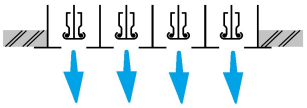
CORRECTION FACTORS

IF DIFFUSER LENGTH IS	1.0m	2.0m	2.5m	3.0m	4.0m	5.0m	6.0m
ADJUST NC LEVEL BY	-1	+2	+3	+5	+5	+6	8
MULTIPLY THROW BY	0.55	0.8	0.9	1	1.05	1.1	1.1

SLOT DIFFUSER SELECTION

EMAIR

SALA - VERTICAL THROW



	1 SLOT				2 SLOT				3 SLOT				4 SLOT				
l/s /m	Pa	NC	Min	Max	Pa	NC	Min	Max	Pa	NC	Min	Max	Pa	NC	Min	Max	l/s /m
25	3	-	1.2	2.1													**25**
30	5	-	1.5	2.7													**30**
40	8	-	1.8	3.0													**40**
50	10	-	2.1	3.7	3	-	1.2	2.7									**50**
60	15	18	2.4	4.0	3	-	1.5	2.7									**60**
70	25	24	3.0	4.9	5	-	2.1	3.7	3	-	1.8	3.0					**70**
80	30	27	3.4	5.5	8	-	2.4	4.0	3	-	2.1	3.7					**80**
95	41	32	4.0	6.4	10	17	3.0	4.9	5	-	2.4	4.0	3	-	2.1	3.7	**95**
110	56	36	4.9	7.6	15	21	3.4	5.5	8	-	2.7	4.3	3	-	2.4	4.0	**110**
125	76	39	5.5	8.8	18	25	4.0	6.4	8	-	3.0	4.9	5	-	2.7	4.3	**125**
140	94	42	6.1	9.8	23	28	4.6	7.0	10	19	3.7	5.8	5	-	3.0	4.9	**140**
155					28	30	4.9	7.6	13	22	4.0	6.4	8	-	3.4	5.5	**155**
185					41	25	5.8	9.1	18	27	4.6	7.0	10	20	4.3	6.7	**185**
215					56	39	6.7	10.7	25	30	5.5	8.8	15	24	4.9	7.6	**215**
250									33	34	6.4	10.4	18	26	5.5	8.8	**250**
280									41	37	7.0	11.3	25	30	6.1	9.8	**280**
310									51	39	7.9	12.5	30	33	6.7	10.7	**310**
350													38	36	7.6	12.2	**350**

	5 SLOT				6 SLOT				7 SLOT				8 SLOT				
l/s /m	pa	NC	Min	Max	pa	NC	Min	Max	pa	NC	Min	Max	pa	NC	Min	Max	l/s /m
125	3	-	2.7	4.3													**125**
155	5	-	3.4	5.5													**155**
185	8	-	3.7	5.8													**185**
215	10	19	4.3	6.7	5	-	4.0	6.4									**215**
250	13	22	4.9	7.6	8	19	4.6	7.0									**250**
280	15	25	5.5	8.8	10	22	5.2	8.2									**280**
310	18	28	6.1	9.8	13	24	5.5	8.8	10	21	4.9	7.6					**310**
250	23	31	6.7	10.7	15	27	6.1	9.8	13	24	5.5	8.8					**250**
390	30	34	7.6	12.2	20	30	6.7	10.7	15	27	6.4	10.4	10	23	6.1	9.8	**390**
425	36	36	8.2	13.1	23	32	7.6	12.2	18	30	7.0	11.3	13	26	6.7	10.7	**425**
465	43	39	8.8	14.0	28	35	8.2	13.1	20	33	7.6	12.2	15	28	7.3	11.6	**465**
500	51	41	9.4	15.2	33	37	8.8	14.0	25	34	8.2	13.1	20	30	7.6	12.2	**500**
545					41	39	9.4	14.6	30	36	8.8	14.0	23	32	8.2	13.1	**545**
620					51	42	11.0	16.5	38	39	10.1	15.5	30	36	9.4	15.2	**620**
665													37	41	9.8	16.4	**665**

NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)

NC levels based on 1200 long diffuser
Throws based on 3.2m long diffuser
Max throw based on terminal velocity of 0.25m/s
Min throw based on terminal velocity of 0.85m/s
All data for isothermal conditions

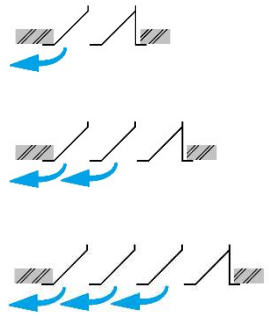
CORRECTION FACTORS

IF DIFFUSER LENGTH IS	1.0m	2.0m	2.5m	3.0m	4.0m	5.0m	6.0m
ADJUST NC LEVEL BY	-1	+2	+3	+5	+5	+6	8
MULTIPLY THROW BY	0.6	0.9	0.95	1	1.05	1.1	1.1

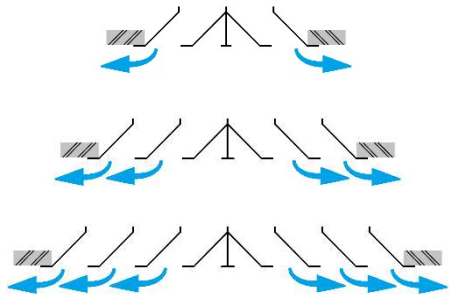
LIN DIFFUSER SELECTION

SALD - HORIZONTAL THROW

ONE WAY BLOW



TWO WAY BLOW



DATA FOR AIR DISTRIBUTION IN EACH DIRECTION

1 SLOT

600L					900L					1200L					1500L				
l/s /m	Pa	NC	Min	Max	**l/s /m**	Pa	NC	Min	Max	**l/s /m**	Pa	NC	Min	Max	**l/s /m**	Pa	NC	Min	Max
25	11	-	0.9	1.8	**35**	11	-	1.2	2.1	**50**	11	-	1.5	2.7	**60**	11	-	1.5	2.4
30	15	-	1.5	2.1	**40**	15	-	1.8	2.7	**55**	15	-	1.8	3.7	**70**	15	-	1.5	2.7
35	20	-	1.5	2.7	**50**	20	-	2.1	3.0	**65**	20	20	2.1	4.0	**80**	20	21	1.8	3.0
40	28	22	1.8	3.0	**60**	28	24	2.4	3.4	**75**	28	25	2.4	4.0	**95**	28	26	2.1	3.7
45	38	27	2.1	3.7	**70**	38	29	2.7	4.6	**95**	38	30	2.7	4.9	**115**	38	31	2.7	4.3
55	56	32	2.4	4.0	**85**	56	34	3.0	5.2	**115**	56	34	3.0	5.5	**140**	56	35	3.0	4.9

2 SLOT

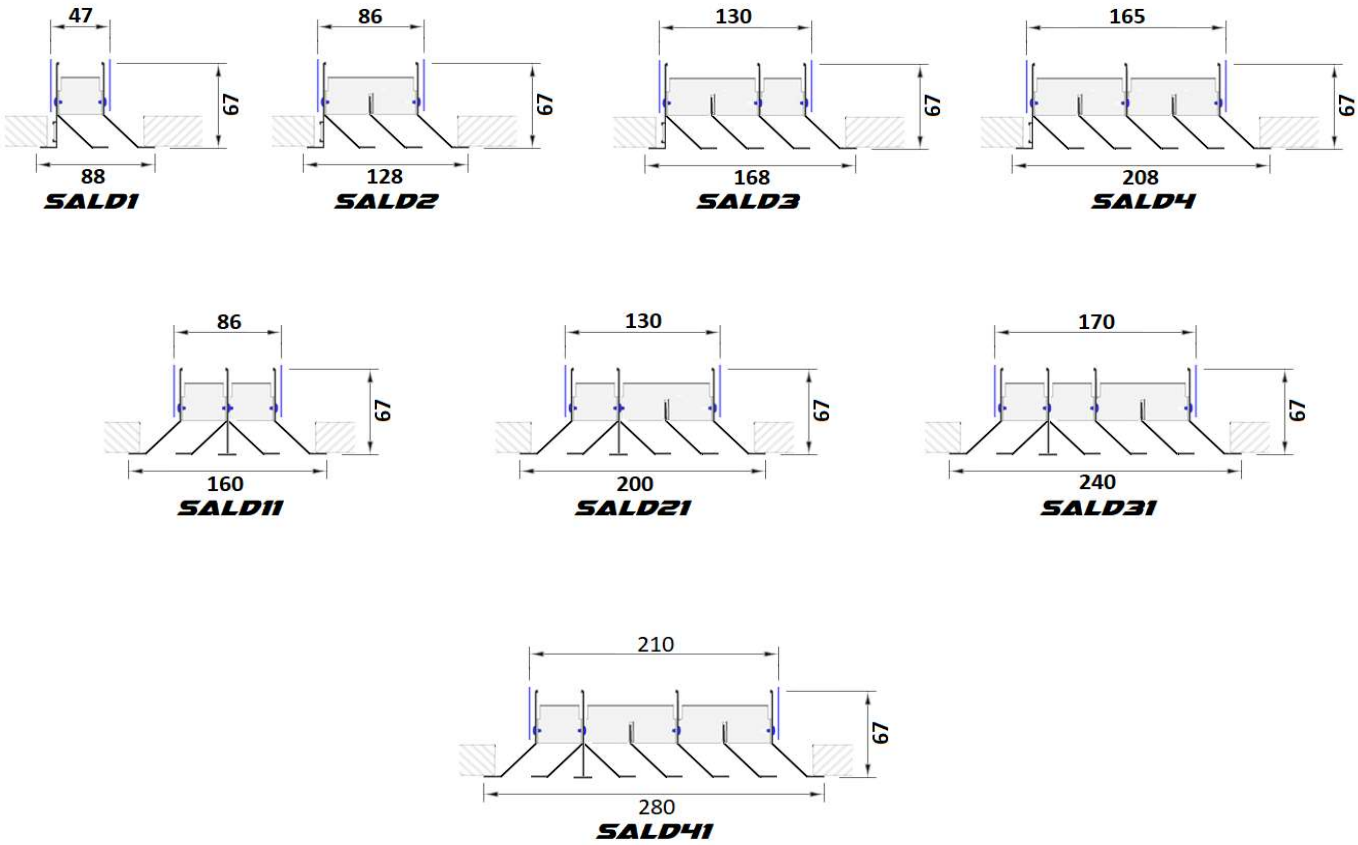
600L					900L					1200L					1500L				
l/s /m	Pa	NC	Min	Max	**l/s /m**	Pa	NC	Min	Max	**l/s /m**	Pa	NC	Min	Max	**l/s /m**	Pa	NC	Min	Max
30	4	-	0.9	1.5	**40**	4	-	0.9	1.8	**55**	4	-	1.2	2.1	**95**	4	-	1.5	2.4
35	5	-	0.9	1.8	**50**	5	-	1.2	2.4	**65**	5	-	1.2	2.4	**115**	5	-	1.5	2.7
40	8	-	1.2	2.1	**60**	8	-	1.5	2.7	**75**	8	-	1.5	2.7	**140**	8	-	1.8	3.0
45	11	-	1.5	2.7	**70**	11	-	1.8	3.4	**95**	11	20	2.1	3.7	**165**	11	21	2.1	3.7
55	15	22	1.8	3.0	**85**	15	24	2.1	3.7	**115**	15	25	2.4	4.3	**190**	15	26	2.7	4.3
65	20	27	2.1	3.4	**100**	20	29	2.4	4.3	**130**	20	30	2.7	4.9	**215**	20	31	3.0	4.9
75	28	30	2.4	3.7	**115**	28	32	3.0	4.9	**150**	28	33	3.0	5.8	**235**	28	34	3.4	5.5

3 SLOT

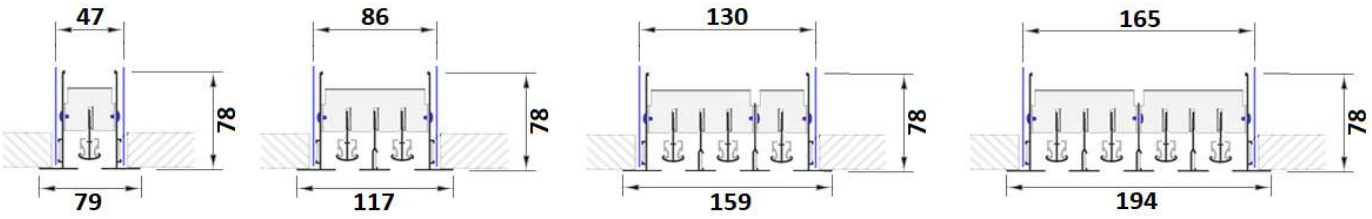
600L					900L					1200L					1500L				
l/s /m	Pa	NC	Min	Max	l/s /m	Pa	NC	Min	Max	l/s /m	Pa	NC	Min	Max	l/s /m	Pa	NC	Min	Max
40	3	-	0.9	1.5	**60**	3	-	0.9	2.1	**75**	3	-	1.2	2.4	**95**	3	-	1.5	2.7
45	5	-	0.9	1.8	**70**	5	-	1.2	2.7	**95**	5	-	1.5	3.0	**115**	5	-	1.8	3.4
55	8	-	1.5	2.4	**85**	8	-	1.8	3.0	**115**	8	20	2.1	3.7	**140**	8	21	2.1	4.0
65	10	22	1.8	3.0	**100**	10	24	2.1	3.7	**130**	10	25	2.4	4.3	**165**	10	26	2.7	4.6
75	13	25	2.1	3.7	**115**	13	27	2.4	4.3	**150**	13	28	2.7	4.9	**190**	13	29	3.0	5.2
85	15	26	2.4	4.0	**130**	15	30	2.7	4.9	**170**	15	31	3.0	5.5	**215**	15	32	3.4	5.8
95	23	31	2.7	4.6	**145**	23	33	3.0	5.5	**190**	23	34	3.4	5.8	**235**	23	35	3.7	6.1
105	25	34	3.0	5.2	**160**	25	36	3.7	5.8	**210**	25	37	4.0	6.4	**260**	25	38	4.3	6.7
115	28	36	3.4	5.8	**170**	28	38	4.0	6.4	**225**	28	39	4.3	7.0	**285**	28	40	4.6	7.3
125	36	38	3.7	6.4	**185**	36	40	4.3	7.0	**245**	36	41	4.6	7.6	**305**	36	42	4.9	7.9
135	41	40	4.3	6.7	**200**	41	42	4.6	7.6	**265**	41	42	4.9	8.5	**330**	41	43	5.2	8.5

NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)
Max throw based on terminal velocity of 0.25m/s
Min throw based on terminal velocity of 0.85m/s
All data for isothermal conditions

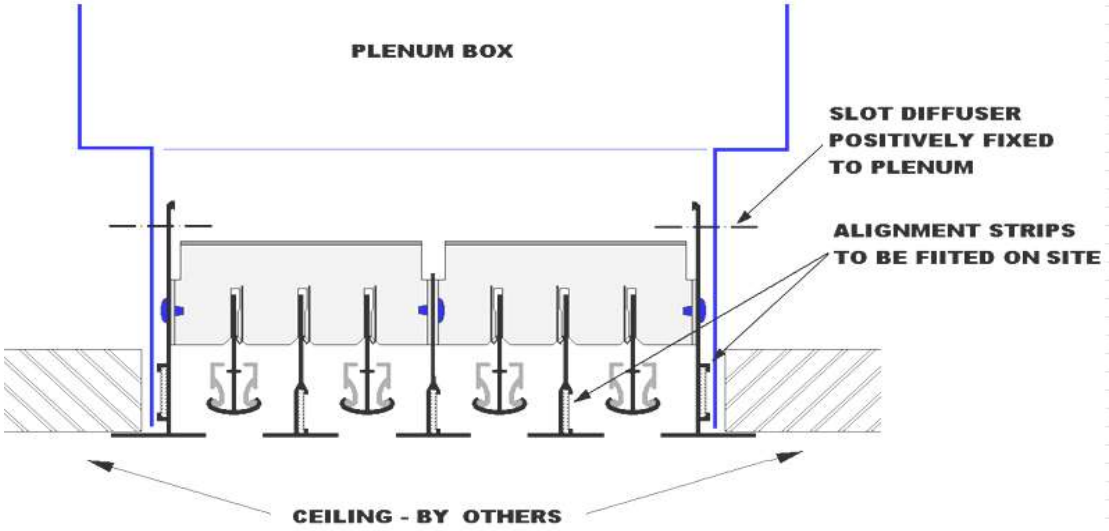
SALD SIZES


47
67
88
SALD1
86
67
128
SALD2
130
67
168
SALD3
165
67
208
SALD4
86
67
160
SALD11
130
67
200
SALD21
170
67
240
SALD31
210
67
280
SALD41
160
67
240
SALD22
200
67
280
SALD23
240
67
320
SALD 24
240
67
320
SALD33
280
67
360
SALD34
320
67
400
SALD44

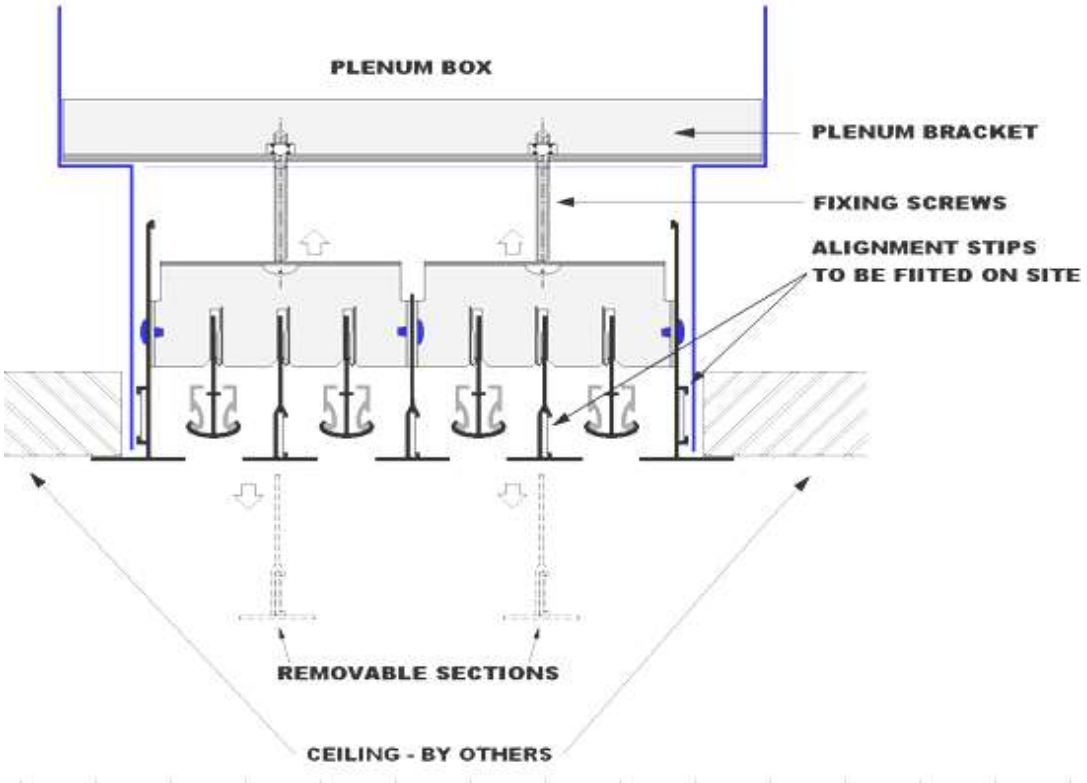
SLOT DIFFUSER



POSITIVE FIXING TO PLENUM BOX



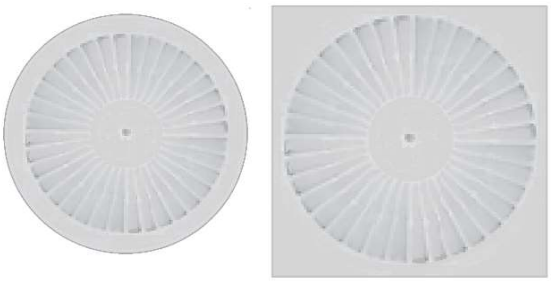
BRACKET FIXING



SUPPLY AIR DIFFUSERS

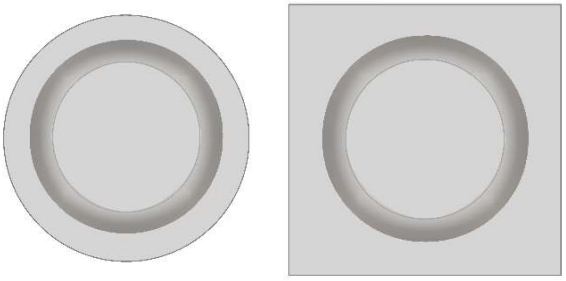
CSS / CSQ

Constant volume diffuser with top entry spigot
Sizes available - 150, 175, 200, 250, 300
& 350mm dia inlet
Powder coated finish with galvanised plenum
Suitable for installation in open, suspended or
plaster ceilings
Maximum installation height of 3.5m above floor level
Face plate 595 x 595 overall
Circular or square plate
Available with installation rings for plaster ceiling



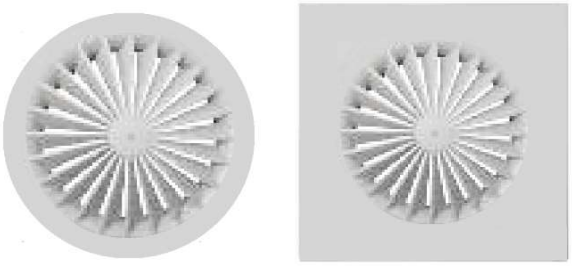
CPS / CPQ

Constant volume diffuser with top entry spigot
Sizes available - 150, 175, 200, 250, 300
& 350mm dia inlet
Powder coated finish with galvanised plenum
Suitable for installation in open, suspended or
plaster ceilings
Maximum installation height of 3.5m above floor level
Face plate 595 x 595 overall
Circular or square plate
Available with installation rings for plaster ceiling



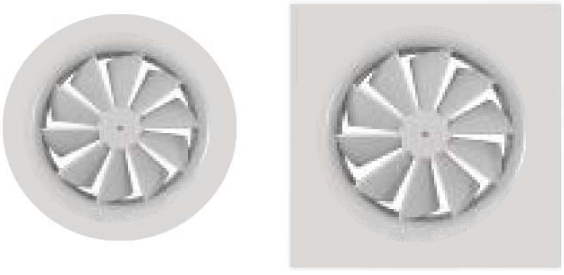
RSC / RSQ

Constant volume diffuser with top or side entry spigot
Sizes available - 150, 175, 200 & 250mm diameter inlet
Powder coated finish with galvanised plenum
Suitable for installation in open, suspended or
plaster ceilings
Maximum installation height of 3.5m above floor level
Face plate 595 x 595 overall
Optional damper butterfly or floating
Circular or square plate
Available with installation rings for plaster ceiling



ROC / ROQ

Constant volume diffuser with direct top entry or
side entry plenum
Sizes available - 150, 175, 200, 250 315 & 400mm
diameter inlet
Powder coated finish with optional galvanised plenum
Suitable for installation in open or plaster ceilings
Maximum installation height of 5.0m above floor level
Optional damper with plenum application
Circular or square plate
Available with installation rings for plaster ceiling



All units available with electric reheat

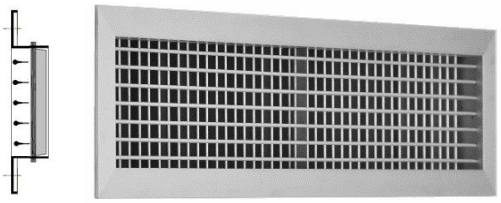
SUPPLY AIR GRILLES

SG1

Single deflection grille with adustable blades
Sizes from 100 x 100mm to 2000 x 1000mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
19mm blade spacing (12mm blade spacing on request)
Available with opposed blade damper SG1O
Frame size 32mm - 16mm available on request

SG2

Double deflection grille with adustable blades
Sizes from 100 x 100mm to 2000 x 1000mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
19mm blade spacing (12mm blade spacing on request)
Available with opposed blade damper SG2O
Frame size 32mm - 16mm available on request

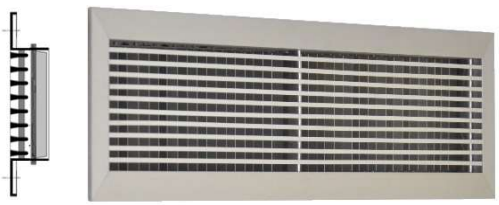


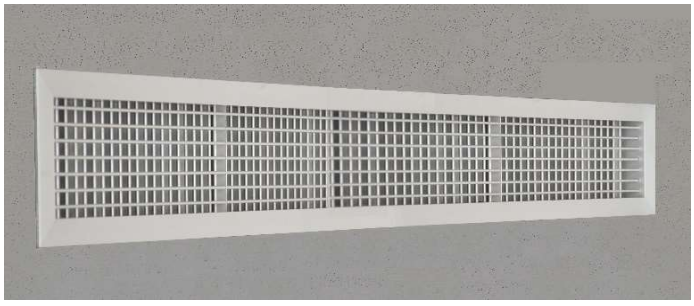
SF1

Single deflection grille with fixed 0^{o} or 15^{o} blades
Sizes from 100 x 100mm to 2000 x 600mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
12mm blade spacing
Available with opposed blade damper SF1O
Frame size 32mm - 16mm available on request

SF2

Double deflection grille with fixed frontal 0^{o} or 15^{o}
Sizes from 100 x 100mm to 2000 x 600mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
12mm blade spacing
Available with opposed blade damper SF2O
Frame size 32mm - 16mm available on request





QUICK SELECTION SG1 SG2

EMAIR

Size (mm)		150 x 125	200 x 150 250 x 125	250 x 150 350 x 100	300 x 150 350 x 125	250 x 200 350 x 125	300 x 300 450 x 150	400 x 200 500 x 150	400 x 250 660 x 150	450 x 250 560 x 200	500 x 250 830 x 150	450 x 350 710 x 200	450 x 350 600 x 250
Air Vol. l/s													
25	Throw Min m	1.8	1.5										
	Max m	3.0	2.4										
	Stat. Press Pa	-	-										
	NC - (max)	20	20										
35	Throw Min m	2.7	2.4	2.1	1.8								
	Max m	4.6	3.7	3.0	2.7								
	Stat. Press Pa	5	-	-	-								
	NC - (max)	20	20	20	20								
45	Throw Min m	3.7	3.0	2.7	2.4	2.1							
	Max m	5.8	4.9	4.3	3.7	3.4							
	Stat. Press Pa	8	3	-	-	-							
	NC - (max)	20	20	20	20	20							
70	Throw Min m	5.8	4.6	4.0	3.7	3.4	2.7	2.4					
	Max m	8.5	7.3	6.4	5.5	5.2	4.6	4.0					
	Stat. Press Pa	18	8	5	3	-	-	-					
	NC - (max)	25	20	20	20	20	20	20					
95	Throw Min m	7.6	6.1	5.5	4.9	4.3	3.7	3.4	3.0				
	Max m	11.9	9.8	8.2	7.6	6.7	5.8	5.2	4.9				
	Stat. Press Pa	23	13	8	5	3	-	-	-				
	NC - (max)	35	25	20	20	20	20	20	20				
120	Throw Min m		7.6	6.7	6.1	5.5	4.9	4.3	4.0	3.7	3.4		
	Max m		11.9	10.4	9.4	8.5	7.3	6.7	6.1	5.5	5.2		
	Stat. Press Pa		15	10	8	5	3	-	-	-	-		
	NC - (max)		30	25	20	20	20	20	20	20	20		
140	Throw Min m			7.9	7.3	6.4	5.3	5.2	4.6	4.3	4.0	3.7	3.7
	Max m			12.5	11.3	10.4	8.8	7.9	7.3	6.7	6.4	5.8	5.5
	Stat. Press Pa			18	10	8	5	3	-	-	-	-	-
	NC - (max)			30	25	20	20	20	20	20	20	20	20
165	Throw Min m					8.5	6.7	5.8	5.5	4.9	4.6	4.6	4.3
	Max m					13.7	10.4	9.1	8.5	7.9	7.3	7.0	6.7
	Stat. Press Pa					10	5	5	3	-	-	-	-
	NC - (max)					30	20	20	20	20	20	20	20
190	Throw Min m					9.8	7.6	6.7	6.1	5.8	5.5	5.2	4.9
	Max m					15.2	11.9	10.7	9.8	8.8	8.2	7.9	7.6
	Stat. Press Pa					18	8	5	3	3	-	-	-
	NC - (max)					30	20	20	20	20	20	20	20
210	Throw Min m						8.5	7.6	7.0	6.4	6.1	5.8	5.5
	Max m						13.4	11.9	11.0	10.1	9.4	8.8	8.5
	Stat. Press Pa						8	5	5	3	3	-	-
	NC - (max)						25	20	20	20	20	20	20
235	Throw Min m						9.5	8.5	7.6	7.0	6.7	6.4	6.1
	Max m						14..6	13.1	12.2	11.3	10.4	9.8	9.4
	Stat. Press Pa						10	8	5	5	3	3	-
	NC - (max)						25	20	20	20	20	20	20
280	Throw Min m						11.3	10.1	9.1	8.5	7.9	7.6	7.3
	Max m						17.7	15.8	14.6	13.4	12.5	11.9	11.3
	Stat. Press Pa						15	10	8	5	5	3	3
	NC - (max)						30	25	20	20	20	20	20
330	Throw Min m							11.9	11.0	10.1	9.4	8.8	8.2
	Max m							18.6	16.8	15.5	14.6	13.7	13.1
	Stat. Press Pa							13	10	8	5	5	5
	NC - (max)							30	25	20	20	20	20
380	Throw Min m								12.5	11.6	10.7	10.1	9.4
	Max m								19.2	17.7	16.8	15.5	14.9
	Stat. Press Pa								13	8	8	5	5
	NC - (max)								30	25	20	20	20
425	Throw Min m								14.0	12.8	11.9	12.3	10.7
	Max m								21.9	20.1	18.9	17.7	16.8
	Stat. Press Pa								15	10	8	8	5
	NC - (max)								35	30	25	20	20
475	Throw Min m									14.3	13.4	12.5	11.9
	Max m									22.6	20.7	19.8	18.6
	Stat. Press Pa									13	10	8	8
	NC - (max)									30	30	25	25
570	Throw Min m										16.2	15.2	14.3
	Max m										25.0	23.5	22.6
	Stat. Press Pa										15	13	10
	NC - (max)										35	30	30
660	Throw Min m												16.8
	Max m												26.2
	Stat. Press Pa												13
	NC - (max)												30

Minimum throw based on V_t 0.6m/s terminal velocity - 0^o deflection
Maximum throw based on V_t 0.4m/s terminal velocity - 0^o deflection
NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)
All data for isothermal conditions

QUICK SELECTION SG1 SG2

EMAIR

Size (mm)		915 x 250 450 x 400	500 x 450 910 x 300	610 x 500 910 x 400	910 x 600 1120 x 350	915 x 610 1120 x 400	1320 x 450 915 x 660	1220 x 610 1015 x 760	1220 x 760 1525 x 610	1220 x 1000 1525 x 910	1425 x 1000 1210 x 1210	1425 x 1220
Air Vol. l/s												
285	Throw Min m	2.7	1.8	1.5								
	Max m	4.3	3.0	2.4								
	Stat. Press Pa	8	-	-								
	NC - (max)	20	20	20								
330	Throw Min m	4.0	2.7	2.4	2.1	1.8						
	Max m	6.4	4.6	3.7	3.0	2.7						
	Stat. Press Pa	13	5	-	-	-						
	NC - (max)	25	20	20	20	20						
380	Throw Min m	5.2	3.7	3.0	2.7	2.4	2.1					
	Max m	8.2	5.8	4.9	4.3	3.7	3.4					
	Stat. Press Pa	23	8	3	-	-	-					
	NC - (max)	35	20	20	20	20	20					
425	Throw Min m		5.8	4.6	4.0	3.7	3.4	2.7	2.4			
	Max m		8.5	7.3	6.4	5.5	5.2	4.6	4.0			
	Stat. Press Pa		18	8	5	3	-	-	-			
	NC - (max)		25	20	20	20	20	20	20			
470	Throw Min m		7.6	6.1	5.5	4.9	4.3	3.7	3.4	3.0		
	Max m		11.9	9.8	8.2	7.6	6.7	5.8	5.2	4.9		
	Stat. Press Pa		23	13	8	5	3	-	-	-		
	NC - (max)		35	25	20	20	20	20	20	20		
565	Throw Min m			7.6	6.7	6.1	5.5	4.9	4.3	4.0	3.7	3.4
	Max m			11.9	10.4	9.4	8.5	7.3	6.7	6.1	5.5	5.2
	Stat. Press Pa			15	10	8	5	3	-	-	-	-
	NC - (max)			30	25	20	20	20	20	20	20	20
660	Throw Min m				7.9	7.3	6.4	5.3	5.2	4.6	4.3	4.0
	Max m				12.5	11.3	10.4	8.8	7.9	7.3	6.7	6.4
	Stat. Press Pa				18	10	8	5	3	-	-	-
	NC - (max)				30	25	20	20	20	20	20	20
755	Throw Min m						8.5	6.7	5.8	5.5	4.9	4.6
	Max m						13.7	10.4	9.1	8.5	7.9	7.3
	Stat. Press Pa						10	5	5	3	-	-
	NC - (max)						30	20	20	20	20	20
850	Throw Min m						9.8	7.6	6.7	6.1	5.8	5.5
	Max m						15.2	11.9	10.7	9.8	8.8	8.2
	Stat. Press Pa						18	8	5	3	3	-
	NC - (max)						30	20	20	20	20	20
945	Throw Min m							8.5	7.6	7.0	6.4	6.1
	Max m							13.4	11.9	11.0	10.1	9.4
	Stat. Press Pa							8	5	5	3	3
	NC - (max)							25	20	20	20	20
1415	Throw Min m							9.5	8.5	7.6	7.0	6.7
	Max m							14..6	13.1	12.2	11.3	10.4
	Stat. Press Pa							10	8	5	5	3
	NC - (max)							25	20	20	20	20
1890	Throw Min m							11.3	10.1	9.1	8.5	7.9
	Max m							17.7	15.8	14.6	13.4	12.5
	Stat. Press Pa							15	10	8	5	5
	NC - (max)							30	25	20	20	20
1360	Throw Min m								11.9	11.0	10.1	9.4
	Max m								18.6	16.8	15.5	14.6
	Stat. Press Pa								13	10	8	5
	NC - (max)								30	25	20	20
2830	Throw Min m									12.5	11.6	10.7
	Max m									19.2	17.7	16.8
	Stat. Press Pa									13	8	8
	NC - (max)									30	25	20
3300	Throw Min m									14.0	12.8	11.9
	Max m									21.9	20.1	18.9
	Stat. Press Pa									15	10	8
	NC - (max)									35	30	25
3775	Throw Min m										14.3	13.4
	Max m										22.6	20.7
	Stat. Press Pa										13	10
	NC - (max)										30	30
4250	Throw Min m											16.2
	Max m											25.0
	Stat. Press Pa											15
	NC - (max)											35
4725	Throw Min m											19.0
	Max m											29.3
	Stat. Press Pa											20
	NC - (max)											35

Minimum throw based on V_t 0.6m/s terminal velocity - 0^o deflection
Maximum throw based on V_t 0.4m/s terminal velocity - 0^o deflection
NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)
All data for isothermal conditions

QUICK SELECTION SGF SF2

SUPPLY AIR FOR 0° AND 15° BLADE

Pressure drop (Pa)	3	5	10	13	18	23	30	35	43
Effective velocity (m/s)	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**
Height 50mm									
Volume (l/s)	31	42	53	64	73	84	95	106	116
NC	<20	<20	<20	22	24	26	29	31	33
Throw (m)	2.2	2.8	3.4	4	4.9	5.5	6.1	6.5	6.8
Height 75mm									
Volume (l/s)	70	94	119	142	166	188	212	235	257
NC	<20	<20	21	24	27	30	32	34	36
Throw (m)	3.1	4	5.2	6.1	7.1	8	8.9	9.5	9.8
Height 100mm									
Volume (l/s)	109	146	181	219	255	291	327	363	398
NC	<20	<20	22	26	29	32	34	36	38
Throw (m)	3.7	4.9	6.5	7.7	8.9	10.1	11	11.6	12.2
Height 125mm									
Volume (l/s)	148	198	246	296	3678	394	444	494	541
NC	<20	21	24	27	30	33	35	38	39
Throw (m)	4.3	5.8	7.4	8.9	10.4	11.6	12.9	13.8	14.4
Height 150mm									
Volume (l/s)	187	249	339	374	159	498	560	621	684
NC	<20	22	25	28	31	34	36	39	40
Throw (m)	4.9	6.8	8.3	9.8	11.6	13.2	14.4	15.3	16.2
Height 200mm									
Volume (l/s)	264	352	441	528	616	705	792	881	967
NC	<20	22	26	30	33	36	38	40	42
Throw (m)	5.8	8	9.8	11.9	13.8	15.6	17.4	18.3	18.9
Height 250mm									
Volume (l/s)	342	456	570	684	796	910	1024	1139	1252
NC	20	23	25	31	34	37	39	41	43
Throw (m)	6.8	8.9	11.3	13.5	15.6	17.7	19.6	20.8	21.7
Height 300mm									
Volume (l/s)	419	559	699	839	978	1119	1257	1396	1537
NC	21	24	28	32	35	38	40	42	44
Throw (m)	7.4	9.8	12.2	15	17.4	19.9	21.7	22.9	24.1

DATA BASED ON THE FOLLOWING

Nominal size grille 1200mm long

Throw at 0.5m/s terminal velocity with ceiling effect

NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)

Grille without OBD

All data for isothermal conditions

CORRECTION FACTORS -

For grilles installed more than 150mm from ceiling multiply throw by 0.7

If grille length is	600	1200	1800	2500	3000
NC level	-3	0	+2	+3	+4
Throw	0.71	0	1.22	1.41	1.58

For grilles with OBD

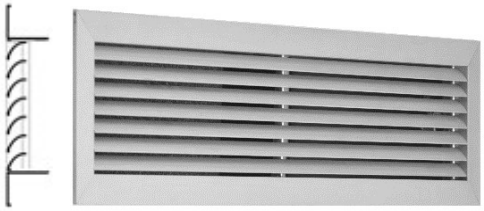
Pressure drop x 1.2

Noise level +5dB

RETURN AIR GRILLES

RG1

Single deflection grille, 45° fixed blade
Sizes from 100 x 100mm to 2500 x 2500mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
19mm blade spacing (12mm blade spacing on request)
Available with opposed blade damper RG1O
Frame size 32mm - 16mm available on request



RASB

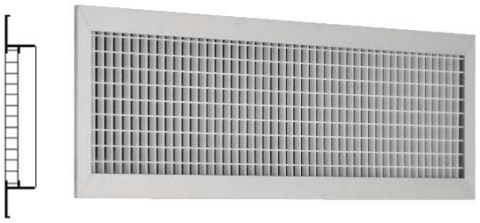
Single deflection grille, 45° fixed blade
Sizes from 100 x 100mm to 2500 x 2500mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
25mm blade spacing (19mm blade spacing on request)
Available with opposed blade damper RASBO
Frame size 32mm - 16mm available on request

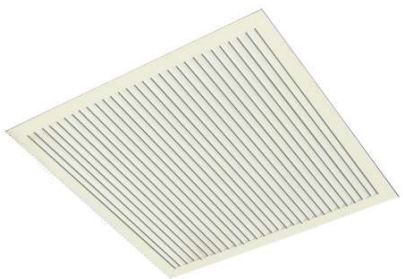
AEC

Aluminium egg crate grille
Sizes from 100 x 100mm to 1200 x 600mm
Powder coated or natural anodised finished frame
Suitable for duct or spigot mounting
Frame from extruded aluminium section and aluminium core
Available with opposed blade damper AECO
Frame size 32mm

PEC

Plastic egg crate grille
Sizes from 100 x 100mm to 1200 x 600mm
Powder coated or natural anodised finished frame - core white
Suitable for duct or spigot mounting
Frame from extruded aluminium section and plastic core
Available with opposed blade damper PECO
Frame size 32mm





FILTER GRILLES

SG1-F

Single deflection grille, fixed blade
Sizes from 100 x 100mm to 3000 x 3000mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
19mm blade spacing (12mm blade spacing on request)
Available with opposed blade damper RG1O
Frame size 32mm - 16mm available on request

RG3-F

Hinged single deflection grille, fixed blade with removable filter matt
Sizes from 100 x 100mm to 1200 x 600mm
Powder coated or natural anodised finish
Suitable for duct or spigot mounting
Manufactured from extruded aluminium sections
19mm blade spacing (12mm blade spacing on request)
Available with opposed blade damper RG3O-F
Frame size 32mm - 16mm available on request

AEC-F

Hinged aluminium egg crate grille with removable filter matt
Sizes from 100 x 100mm to 1200 x 600mm
Powder coated or natural anodised finished frame
Suitable for duct or spigot mounting
Frame from extruded aluminium section and aluminium core
Available with opposed blade damper AEC-FO
Frame size 32mm

PEC-F

Hinged plastic egg crate grille with removable filter matt
Sizes from 100 x 100mm to 1200 x 600mm
Powder coated or natural anodised finished frame - core white
Suitable for duct or spigot mounting
Frame from extruded aluminium section and plastic core
Available with opposed blade damper PEC-FO
Frame size 32mm

QUICK SELECTION RG1

EMAIR

Size (mm)		200 x 100	200 x 125	200 x 150 300 x 100	200 x 200 400 x 100	250 x 200 500 x 100	300 x 200 450 x 150	450 x 150 650 x 100	350 x 200 500 x 150	400 x 200 550 x 150	450 x 200 600 x 150	450 x 300 700 x 200
Air Vol. l/s												
47	Stat. Press Pa	57	20	12	7.5	5	5	2.5	2.5	2.5	2.5	
	NC (max)	30	20	20	20	20	20	20	20	20	20	
71	Stat. Press Pa		45	32	17	10	7.5	7.5	5	5	5	
	NC (max)		30	25	20	20	20	20	20	20	20	
94	Stat. Press Pa		80	55	32	20	10	10	7.5	7.5	7.5	2.5
	NC (max)		35	35	30	20	20	20	20	20	20	20
118	Stat. Press Pa			82	47	32	20	15	10	10	7.5	5
	NC (max)			40	35	30	25	20	20	20	20	20
141	Stat. Press Pa				72	45	30	22	15	12.5	10	5
	NC - db (max)				40	35	30	25	25	20	20	20
165	Stat. Press Pa					62	42	32	22	20	12.5	7.5
	NC (max)					40	35	30	30	25	25	20
189	Stat. Press Pa					77	52	40	30	22	20	7.5
	NC (max)					40	35	35	30	30	25	20
212	Stat. Press Pa						65	50	40	32	25	10
	NC (max)						40	40	35	30	30	20
236	Stat. Press Pa						80	62	47	40	32	10
	NC (max)						40	40	35	35	30	25
283	Stat. Press Pa							82	70	52	42	17
	NC (max)							45	40	40	40	30
331	Stat. Press Pa									72	57	25
	NC (max)									45	40	35
378	Stat. Press Pa										75	32
	NC (max)										45	35
425	Stat. Press Pa											40
	NC (max)											40
472	Stat. Press Pa											50
	NC (max)											40
567	Stat. Press Pa											75
	NC (max)											45

Size (mm)		600 x 300 750 x 250	500 x 450 750 x 300	600 x 450 900 x 300	900 x 400 1225 x 300	750 x 600 900 x 500	900 x 600 1225 x 450	1225 X 450	1000 x 900 1225 x 750	1225 x 900 1425 x 750	1425 x 900	1525 x 900
Air Vol. l/s												
118	Stat. Press Pa	2.5										
	NC (max)	20										
141	Stat. Press Pa	5	2.5									
	NC (max)	20	20									
165	Stat. Press Pa	5	2.5	2.5								
	NC (max)	20	20	20								
189	Stat. Press Pa	5	5	2.5								
	NC (max)	20	20	20								
212	Stat. Press Pa	7.5	5	2.5								
	NC - db (max)	20	20	20								
236	Stat. Press Pa	7.5	5	5	2.5							
	NC (max)	20	20	20	20							
283	Stat. Press Pa	10	7.5	5	5	2.5						
	NC (max)	20	20	20	20	20						
331	Stat. Press Pa	12.5	10	7.5	5	2.5	2.5					
	NC (max)	25	20	20	20	20	20					
378	Stat. Press Pa	17	10	10	5	5	2.5					
	NC (max)	30	25	20	20	20	20					
425	Stat. Press Pa	25	12.5	10	7.5	5	2.5					
	NC (max)	35	30	25	20	20	20					
472	Stat. Press Pa	32	17	10	7.5	5	5	2.5				
	NC (max)	35	30	30	20	20	20	20				
567	Stat. Press Pa	42	27	20	10	7.5	5	5	2.5			
	NC (max)	40	35	30	25	20	20	20	20			
661	Stat. Press Pa	57	37	27	12.5	10	7.5	5	7.5	2.5		
	NC (max)	45	40	35	30	25	20	20	20	20		
755	Stat. Press Pa	75	47	35	17	10	10	5	5	2.5		
	NC (max)	50	45	40	35	30	25	20	20	20		
850	Stat. Press Pa		60	42	22	12.5	10	7.5	5	5	2.5	2.5
	NC (max)		45	40	40	35	30	20	20	20	20	20
944	Stat. Press Pa		72	50	30	17	10	7.5	5	5	2.5	2.5
	NC (max)		50	45	40	35	30	25	20	20	20	20
1180	Stat. Press Pa			75	45	30	20	10	7.5	5	5	5
	NC (max)			50	45	40	35	30	25	20	20	20
1416	Stat. Press Pa				65	42	30	15	10	7.5	5	5
	NC (max)				50	45	40	35	30	20	25	20
1652	Stat. Press Pa				82	55	40	22	12.5	10	7.5	7.5
	NC (max)				50 +	50	45	40	35	30	30	25
1889	Stat. Press Pa					70	50	30	17	10	10	7.5
	NC (max)					50	50	45	40	35	30	30

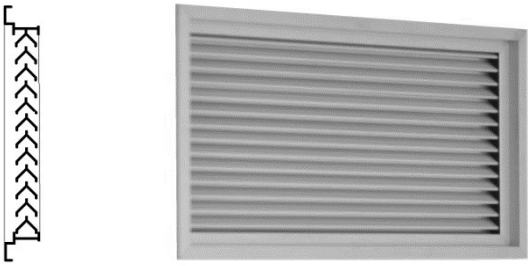
NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)

TRANSFER/DOOR GRILLES

EMAIR

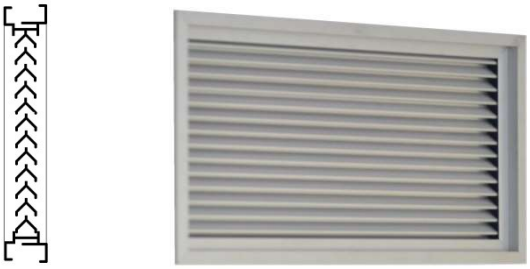
DV

Fixed blade "no sight" transfer grille
Sizes from 100 x 100mm to 600 x 1800mm
Rattleproof blade fixing
Powder coated or natural anodised finish
Suitable for partition mounting
Manufactured from extruded aluminium sections
19mm blade spacing



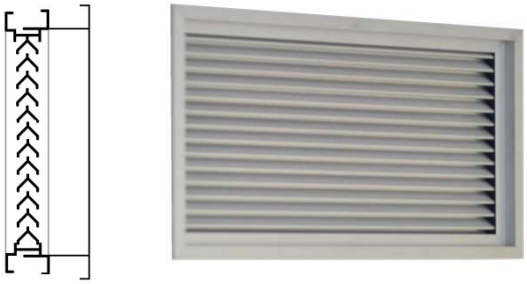
DVT

Fixed blade "no sight" door grille
Sizes from 100 x 100mm to 600 x 1800mm
Rattleproof blade fixing
Powder coated or natural anodised finish
Complete with matching rear frame
Suitable for partition or door mounting
Manufactured from extruded aluminium sections
19mm blade spacing



DVTN

Fixed blade "no sight" door grille
Sizes from 100 x 100mm to 600 x 1800mm
Rattleproof blade fixing
Powder coated or natural anodised finish
Complete with matching rear frame and light baffle plate
Suitable for partition or door mounting
Manufactured from extruded aluminium sections
19mm blade spacing



RG1

Single deflection grille, 45° fixed blade
Sizes from 100 x 100mm to 2500 x 2500mm
Powder coated or natural anodised finish
Suitable for wall, duct or spigot mounting
Manufactured from extruded aluminium sections
19mm blade spacing (12mm blade spacing on request)
Available with opposed blade damper RG1O
Frame size 32mm - 16mm available on request

QUICK SELECTION DV

EMAIR

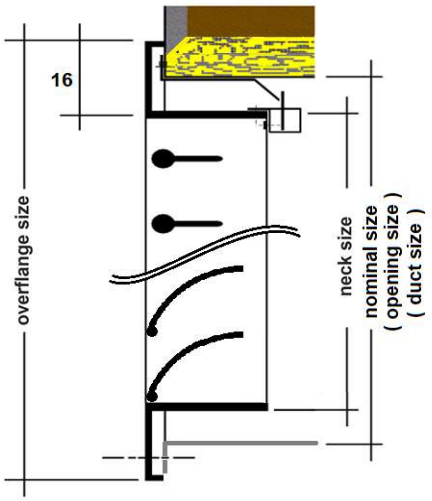
SIZE		200 x 100	300 x 100	400 x 100	500 x 100	600 x 100	350 x 200	400 x 200	450 x 200	500 x 200	550 x 200	600 x 200	400 x 350
				200 x 200	250 x 200	300 x 200			300 x 300	400 x 250		400 x 300	
Area	m^2	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.14
Flow l/s													
10	Pa	6	3	2	1	1	1	1	1	1	1	1	1
	NC	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
20	Pa	21	9	5	3	3	2	1	1	1	1	1	1
	NC	25	23	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
30	Pa	46	20	11	7	5	3	3	2	2	2	1	1
	NC	32	28	26	23	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
40	Pa		35	19	12	9	6	4	4	3	3	2	2
	NC		35	32	28	24	21	< 20	< 20	< 20	< 20	< 20	< 20
50	Pa		54	30	19	13	9	7	5	4	4	3	2
	NC		42	37	33	28	25	23	21	< 20	< 20	< 20	< 20
75	Pa				42	29	19	14	11	9	8	7	5
	NC					37	34	30	27	24	24	24	< 20
100	Pa					51	33	25	20	16	13	11	8
	NC					42	40	38	35	30	30	30	26
125	Pa						52	39	31	25	21	17	12
	NC						44	42	38	35	35	35	29
150	Pa							56	44	36	29	25	18
	NC							45	42	39	39	39	32
175	Pa								60	48	40	33	24
	NC								45	43	43	43	37
200	Pa										52	44	31
	NC										47	46	41
250	Pa												48
	NC												49

SIZE		600 x 250	400 x 400	600 x 300	500 x 400	600 x 350	550 x 400	600 x 400	500 x 500	600 x 450	600 x 500	600 x 550	600 x 600
		500 x 300		450 x 400									
Area	m^2	0.15	0.16	0.18	0.2	0.21	0.22	0.24	0.25	0.27	0.3	0.33	0.36
Flow l/s													
10	Pa	1	1	1	1	1	1	1	1	1	1	1	1
	NC	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
20	Pa	1	1	1		1	1	1	1	1	1	1	1
	NC	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
30	Pa	1	1	1	1	1	1	1	1	1	1	1	1
	NC	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
40	Pa	2	1	1	1	1	1	1	1	1	1	1	1
	NC	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
50	Pa	2	2	2	1	1	1	1	1	1	1	1	1
	NC	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
75	Pa	4	4	3	3	2	2	2	2	2	1	1	1
	NC	22	21	20	<20	<20	<20	<20	<20	<20	<20	<20	<20
100	Pa	7	6	5	4	4	3	3	3	2	2	2	2
	NC	26	25	24	21	21	<20	<20	<20	<20	<20	<20	<20
125	Pa	11	9	8	6	6	5	4	4	4	3	3	2
	NC	28	28	27	26	25	23	<20	<20	<20	<20	<20	<20
150	Pa	16	13	11	9	8	7	6	6	5	4	3	3
	NC	32	32	32	31	30	28	25	23	22	21	<20	<20
175	Pa	21	18	14	12	11	10	8	7	6	5	4	4
	NC	36	36	35	34	33	32	28	27	26	25	25	24
200	Pa	27	23	19	15	14	12	10	10	8	7	6	5
	NC	38	37	37	36	36	35	33	32	31	30	28	27
250	Pa	42	36	29	23	21	19	16	15	13	10	9	7
	NC	43	42	42	41	41	40	38	36	34	33	32	31
300	Pa	61	52	41	33	30	27	23	21	18	15	12	10
	NC	46	46	46	45	45	44	41	40	39	38	35	34
350	Pa			56	45	41	37	31	28	24	20	16	14
	NC			49	48	47	45	44	43	42	41	39	38
400	Pa				58	53	48	40	37	32	26	21	18
	NC				51	50	49	48	47	46	44	43	42
450	Pa							51	47	40	32	27	22
	NC							51	50	47	46	45	44
500	Pa								57	49	40	33	27
	NC								52	49	48	47	46
550	Pa									59	48	39	33
	NC									51	50	49	48

NC Noise Criteria of sound pressure levels with 8dB room absorption (L_w ref:10^{-12}watts)

GRILLE FIXING

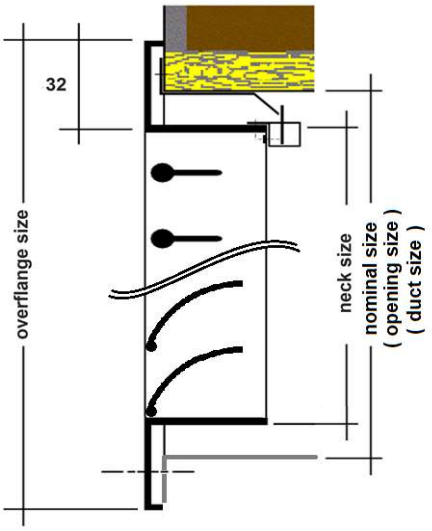
STANDARD GRILLES - 16mm FRAME



NOMINAL SIZE = OPENING SIZE = DUCT SIZE

NECK SIZE = NOMINAL SIZE - 14mm
O/FLANGE SIZE = NOMINAL +15mm

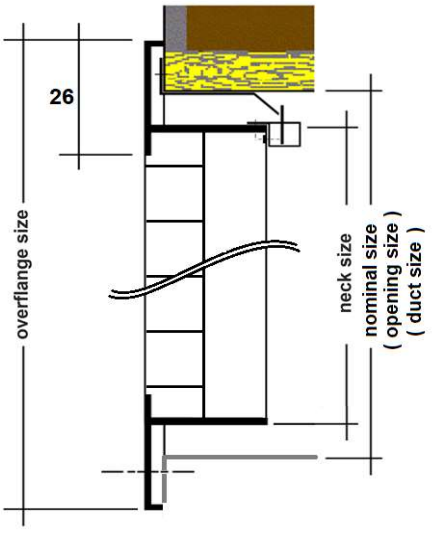
STANDARD GRILLES - 32mm FRAME



NOMINAL SIZE = OPENING SIZE = DUCT SIZE

NECK SIZE = NOMINAL SIZE - 14mm
O/FLANGE SIZE = NOMINAL +47mm

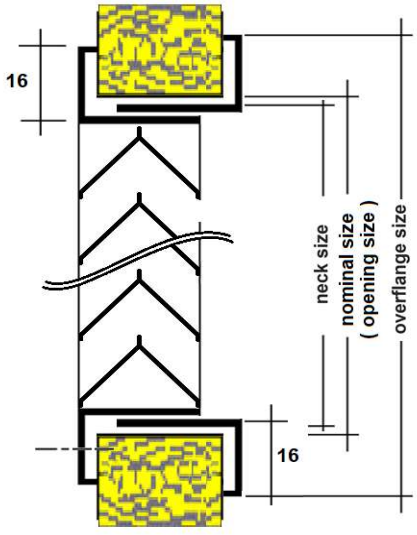
EGG CRATE GRILLES



NOMINAL SIZE = OPENING SIZE = DUCT SIZE

NECK SIZE = NOMINAL SIZE - 7mm
O/FLANGE SIZE = NOMINAL +30mm

DOOR GRILLES 16mm FRAME



NOMINAL SIZE = OPENING SIZE

NECK SIZE = OPENING SIZE - 7mm
OVER FLANGE SIZE = OPENING SIZE + 22mm

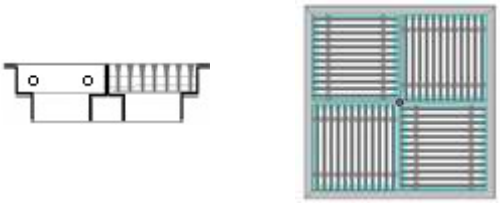
FLOOR GRILLES

FG1

Single deflection floor grille with fixed blades
Sizes from 100 x 100mm to 1000 x 600mm
Powder coated or natural anodised finish
Suitable for installation in raissed access floor panels
Manufactured from extruded aluminium sections
12mm blade spacing - pencil proof
Available with opposed blade damper FG1O
Various frame styles available

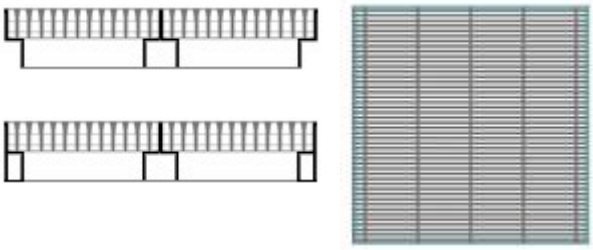
FG4

Single deflection floor grille with fixed blades
Sizes from 200 x 200mm to 400 x 400mm
Powder coated or natural anodised finish
Suitable for installation in raissed access floor panels
Manufactured from extruded aluminium sections
12mm blade spacing - pencil proof
Available with opposed blade damper FG1O
Various frame styles available



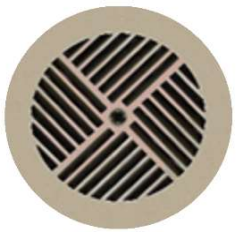
FGS

Single deflection floor grille with fixed blades
Sizes from 100 x 100mm to 600 x 600mm
Natural anodised finish pencilproof design
Suitable for installation in raised access floors
Manufactured from extruded aluminium sections
12mm blade spacing - pencil proof
Available with opposed blade damper FGSO
Various frame styles available

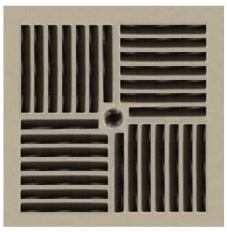


SKR

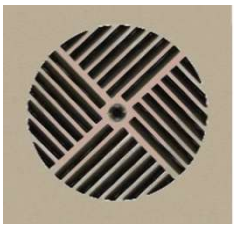
FKR



FKQ



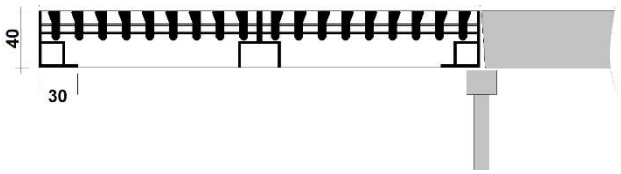
FKS



FLOOR GRILLES

FRAME A

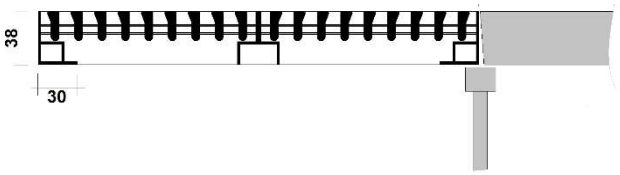
Raised floor panel outlet
Suitable for use with particle board raised access floor systems or masonry openings in floor slabs



NOT TO SCALE

FRAME B

Raised floor panel outlet
Suitable for use with particle board raised access floor systems or masonry openings in floor slabs



NOT TO SCALE

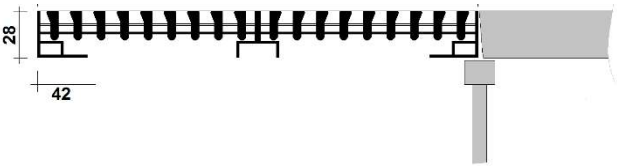
FRAME C

Raised floor panel outlet
Suitable for use with particle board raised access floor systems or masonry openings in floor slabs

NOT TO SCALE

FRAME D

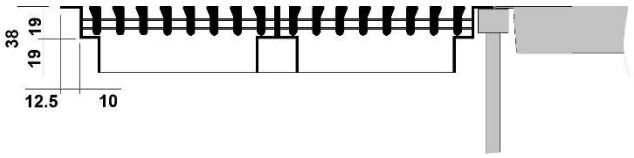
Raised floor panel outlet
Suitable for use with particle board raised access floor systems or masonry openings in floor slabs



NOT TO SCALE

FRAME E

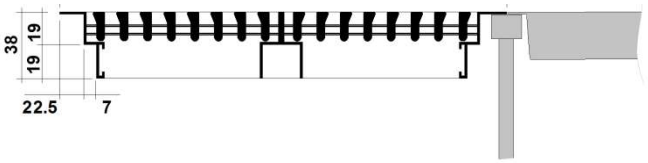
Raised floor panel outlet
Suitable for use with steel encapsulated raised access floor systems or masonry openings in floor slabs
May be used on floors with carpet finishes



NOT TO SCALE

FRAME F

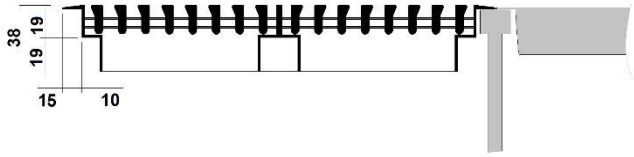
Raised floor panel outlet
Suitable for use with steel encapsulated raised access floor systems or masonry openings in floor slabs
May be used on floors with carpet finishes



NOT TO SCALE

FRAME G

Raised floor panel outlet
Suitable for use with steel encapsulated raised access floor systems or masonry openings in floor slabs
May be used on floors with carpet finishes

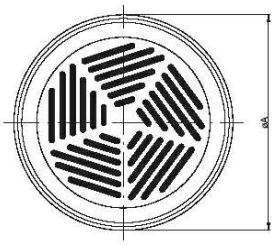


NOT TO SCALE

FLOOR OUTLETS

SKR

Sizes 150 and 200 diameter
Powder coated finish
Suitable for installation in raised access floor panels - max 50mm thick
Manufactured from dia cast aluminium
Optional swirl element
Optional dirt trap
Optional flow adjustment

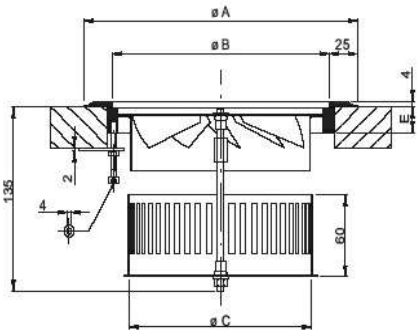


DIMENSIONS

	A	B	C	E
size 150	190	140	124	14
size 200	240	190	160	19

Maximum point load at centre - 30 x 30mm section

size 150	98 kg
size 200	82 kg



TECHNICAL DATA HORIZONTAL DISCHARGE

150 DIA

Air flow [l/s]	5.6	8.3	11.1	13.9	16.7	19.4	22.2	25.00	27.8
Throw [m]	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
Pressure drop [Pa]	2	5	8	15	21	30	40	46	54
Sound pressure dB[A]	17	20	23	26	30	33	37	40	44

200 DIA

Air flow [l/s]	5.6	8.3	11.1	13.9	16.7	19.4	22.2	27.8	55.6
Throw [m]	0.2	0.3	0.4	0.5	0.6	0.9	1.0	1.1	1.3
Pressure drop [Pa]	2	5	8	15	21	30	40	54	39
Sound pressure dB[A]	17	20	23	26	30	33	37	44	47

TECHNICAL DATA VERTICAL DISCHARGE

150 DIA

Air flow [l/s]	5.6	8.3	11.1	13.9	16.7	19.4	22.2	25.00	27.8
Throw [m]	0.5	0.8	1.3	1.6	1.8	2.0	2.3	2.55	2.8
Pressure drop [Pa]	2	5	8	15	21	30	40	46	54
Sound pressure dB[A]	17	20	23	26	30	33	37	40	44

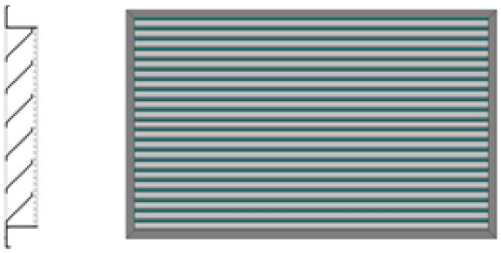
200 DIA

Air flow [l/s]	5.6	8.3	11.1	13.9	16.7	19.4	22.2	27.8	55.6
Throw [m]	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.7	2.0
Pressure drop [Pa]	-	3	5	7.5	10	14	20	30	42
Sound pressure dB[A]	17	20	23	26	30	33	37	44	47

EXTERNAL LOUVRES

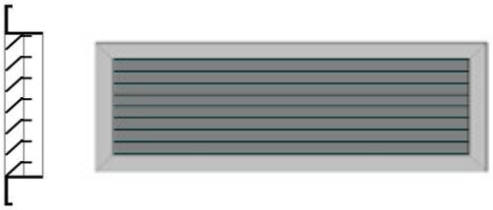
EWL

Fixed blade louvre for use on external walls
Sizes from 100 x 100mm to 2500 x 2500mm
Powder coated or natural anodised finish
Manufactured from extruded aluminium sections
58 - 61mm blade spacing
Available with opposed blade damper EWLO
Frame size 38mm - 50mm available on request
Also available in a channel section frame



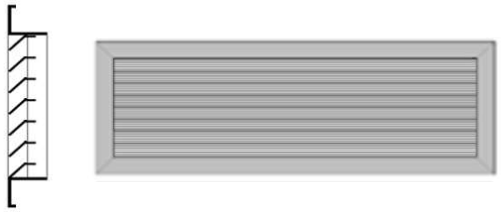
RASB

Fixed blade louvre for use on external walls
Sizes from 100 x 100mm to 2500 x 2500mm
Powder coated or natural anodised finish
Suitable for timer frame or angle sub frame mounting
Manufactured from extruded aluminium sections
Smooth blade 25mm blade spacing
Available with opposed blade damper RASBO
Frame size 32mm - 50mm available on request
Also available in a channel section frame

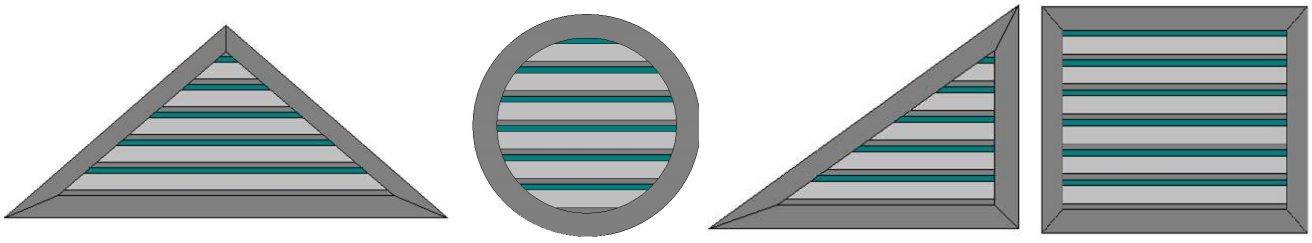


RARB

Fixed blade louvre for use on external walls
Sizes from 100 x 100mm to 2500 x 2500mm
Powder coated or natural anodised finish
Suitable for timer frame or angle sub frame mounting
Manufactured from extruded aluminium sections
Ribbed blade with 25mm blade spacing
Available with opposed blade damper RARBO
Frame size 32mm - 50mm available on request
Also available in a channel section frame



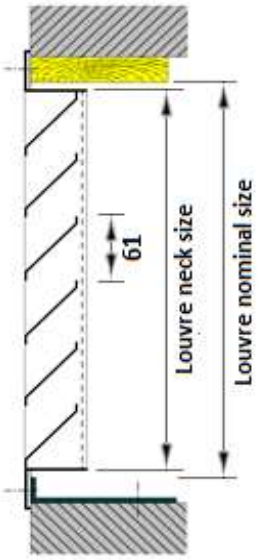
VARIOUS SHAPES AVAILABLE



Non rectangular or square shapes - powder coated finish only

LOUVRE SELECTION

FACE VELOCITY (m/s)	Inlet		Exhaust	
	pa	dB[A]	pa	dB[A]
0.50	2	<30	2	<30
0.75	4	<30	3	<30
1.00	6	<30	5	30
1.25	9	31	8	32
1.50	13	34	11	35
1.75	18	37	14	38
2.00	23	39	18	40
2.25	29	41	23	42
2.50	35	44	28	45
2.75	42	46	33	47
3.00	50	49	39	50
3.25	58	51	46	52
3.50	67	54	53	55
3.75	77	56	60	57
4.00	87	58	68	59
4.25	98	59	77	60
4.50	110	61	86	62
4.75	122	63	95	64
5.00	135	65	105	>65
5.25	149	>65	116	>65
5.50	163	>65	127	>65
5.75	178	>65	138	>65
6.00	193	>65	150	>65
6.25	209	>65	163	>65
6.50	226	>65	176	>65
6.75	244	>65	189	>65
7.00	262	>65	203	>65

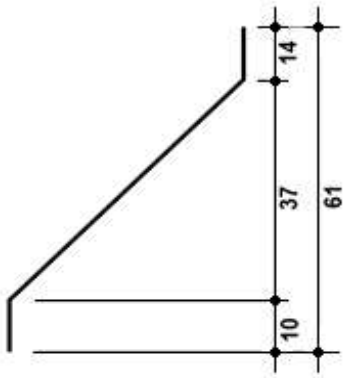


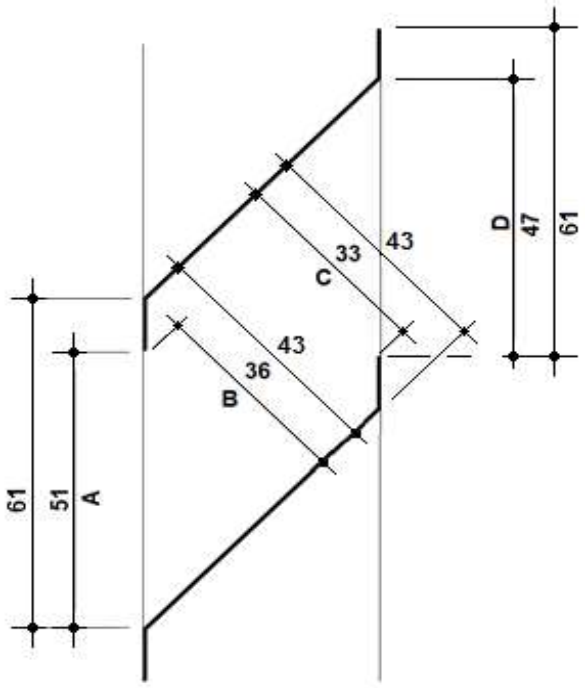
Face area (m^2) = louvre width - 0.0 15m x louvre height - 0.061m

$$\text{Face Velocity (m/s)} = \frac{\text{Air volume } m^3/s}{\text{Face Area } m^2}$$

TABLE 1							
dB[A] correction values (C_f)							
face area m^2	0.2	0.5	1.0	1.5	2.0	3.0	4.0
C_f dB[A]	-7	-3	0	+2	+3	+5	+6

FREE AREA CALCULATIONS





FREE AREA

A ≈ 83% (51 / 61)
B ≈ 83% (36 / 43)
C ≈ 77% (33 / 43)
D ≈ 77% (47 / 61)

PLEASE NOTE THE ABOVE CALCULATIONS DO NOT CONSIDER THE LAST BLADE OR ANGLE OF THE FLOW THE CORRECTED AREA ONCE THE LAST BLADE AND ANGLE OF THE FLOW ARE CONSIDERED CAN BE SHOWN BY THE FOLLOWING EXAMPLES

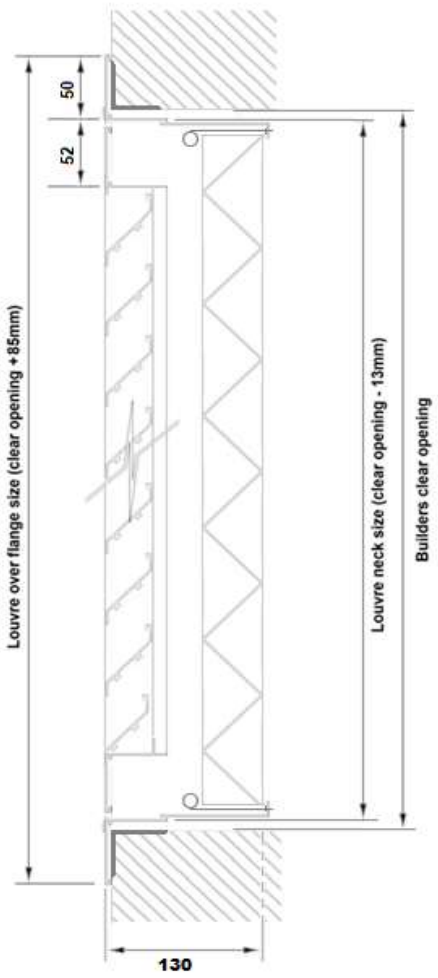
LOUVRE NECK HEIGHT	No of Blades	GEOMETRIC FREE AREA (m) / m LENGTH			
		A	B	C	D
Height 500	8	0.357	0.252	0.231	0.329
		71.4%	50.4%	46.2%	65.8%
Height 1000	16	0.765	0.540	0.495	0.705
		76.5%	54.0%	49.5%	70.5%
Height 1500	24	1.173	0.828	0.759	1.081
		78.2%	55.2%	50.6%	72.1%
Height 2000	32	1.581	1.116	1.023	1.457
		79.1%	55.8%	51.2%	72.9%

A = 51mm * n-1 blades
B = 36mm * n-1 blades
C = 33mm * n-1 blades
D = 47mm * n-1 blades

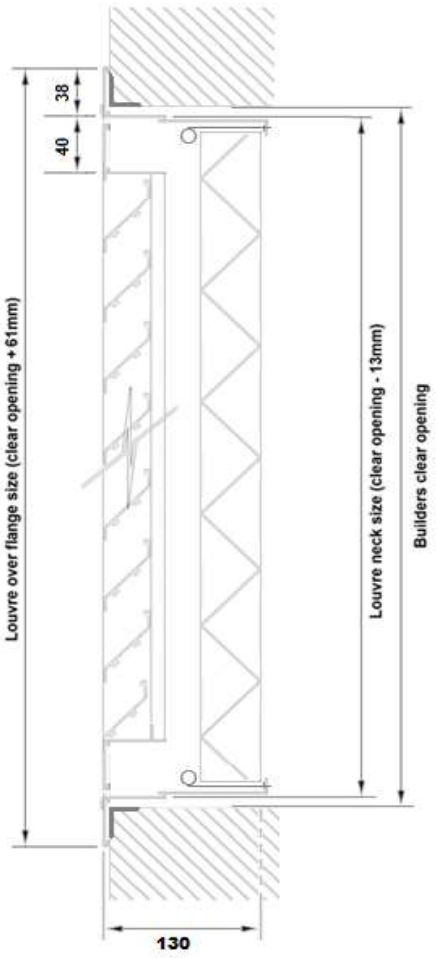
THE ABOVE FREE AREAS GIVEN ARE THE **GEOMETRIC** FREE AREAS - OUR SELCTION CHARTS USE THE **EFFECTIVE** FREE AREA WHICH CONSIDER THE MAXIMUM VELOCITIES BETWEEN THE BLADES OF EXTERNAL LOUVRES FOR ALL CALCULATIONS

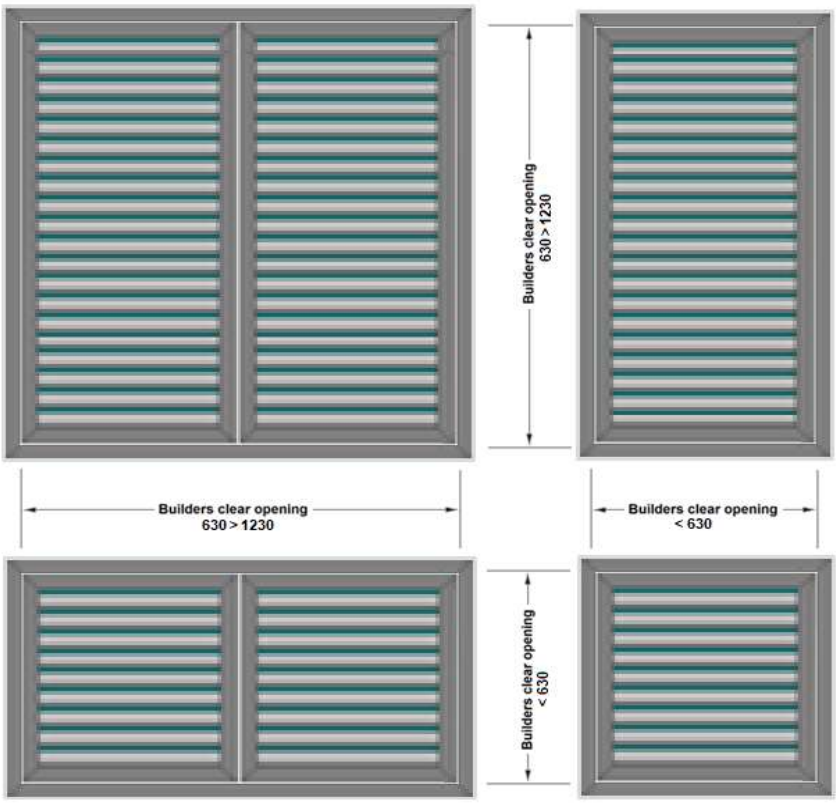
LOUVRE DETAIL

EWL50F - 50mm Frame



EWL38F - 38mm Frame

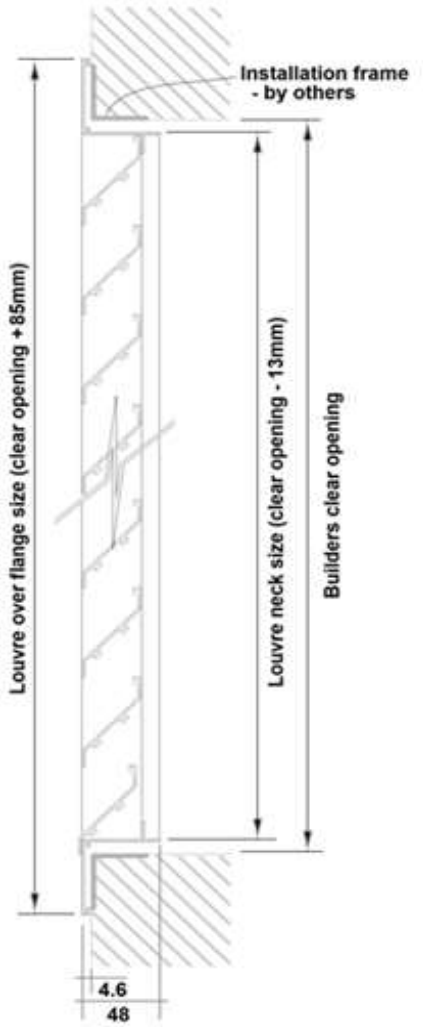




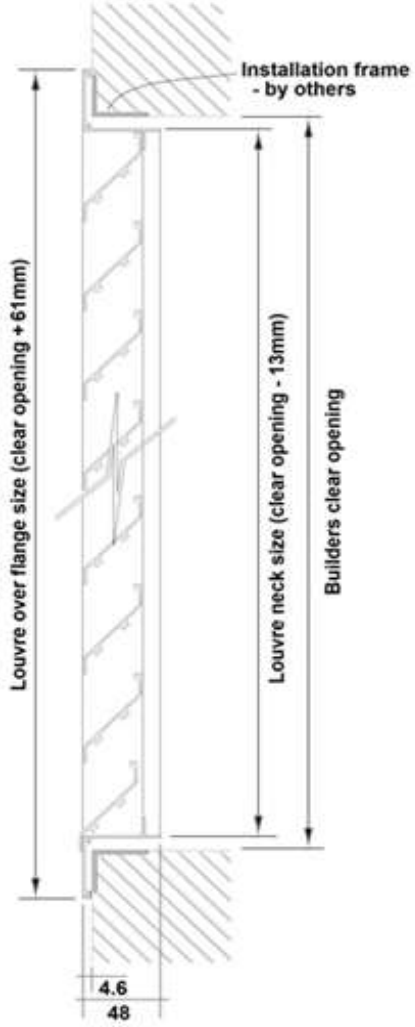
MAXIMUM SIZE 1230 x 1230 CLEAR OPENING
ALL ITEMS WITH PIANO TYPE HINGE AND SPRING CLIP CLOSURE

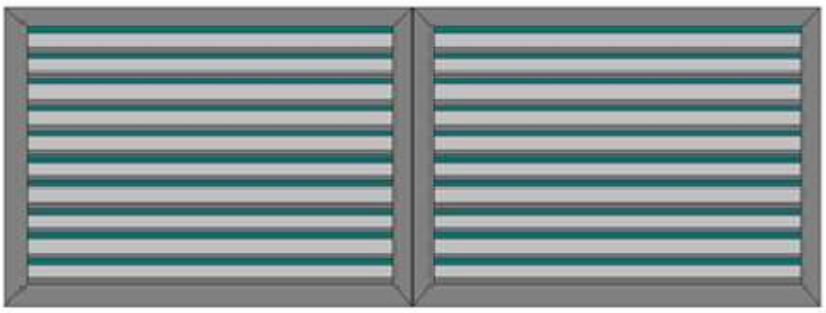
LOUVRE DETAIL

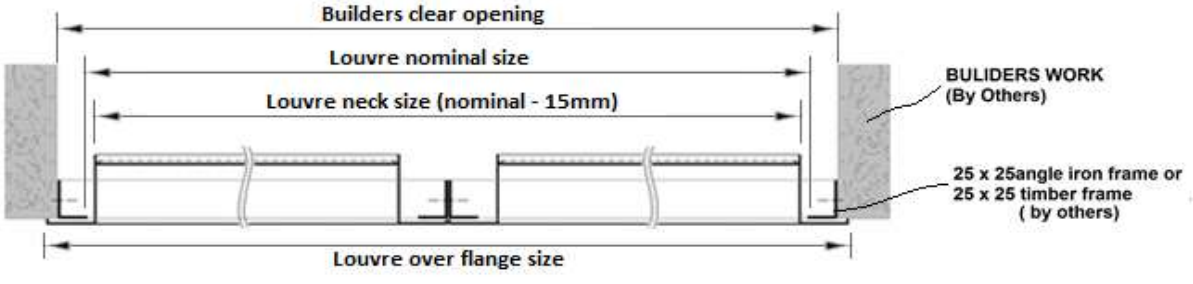
EWL50 - 50mm Frame



EWL38 - 38mm Frame





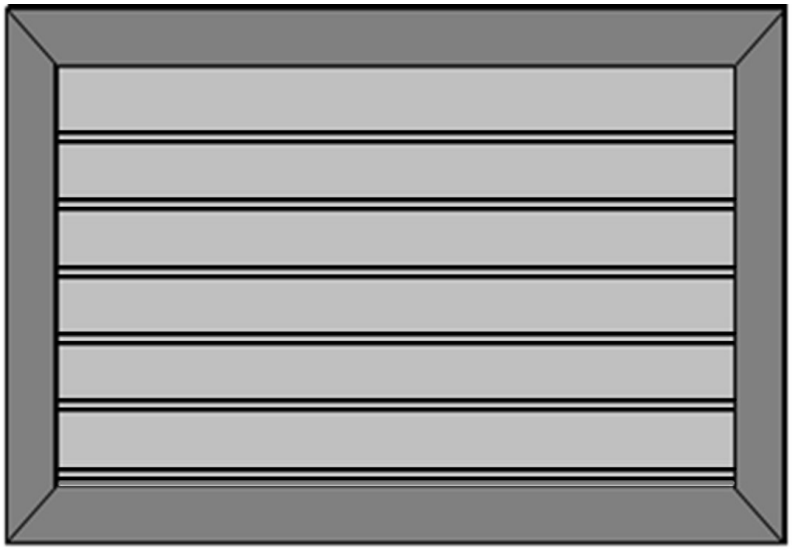


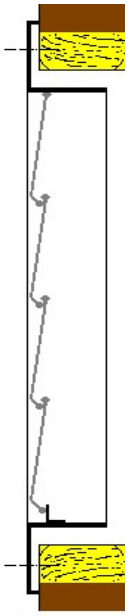
ORDERING SIZE = NOMINAL SIZE WIDTH X HEIGHT

GPR

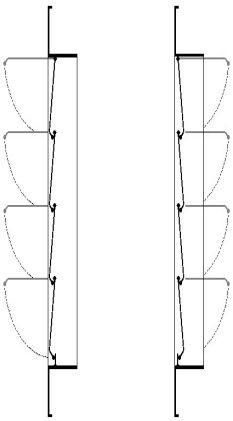
Aluminium 1.0mm formed aluminnium blade with 50 x 50
Extruded aluminium frame
Wall or duct mounted
Screw fixing though flange with punched and counter sunk holes
Wire Mesh Screen

Natural anodised

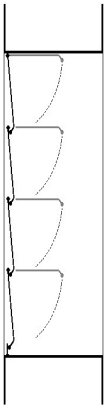


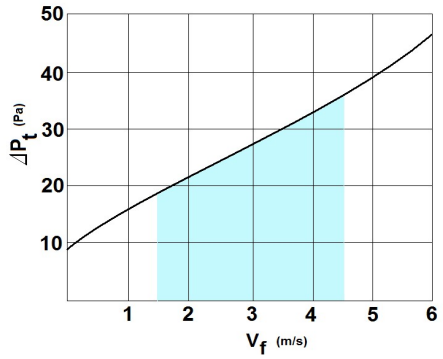


GPR-A GPR-B



GPR-D (DUCT MOUNTED)





Recommended velocities

V_f Face air velocity m/s

ΔP_t Total pressure loss in Pa

NB - values shown are for even flow across relief outlet - should flow not be even the pressure drop should be calculated at maximum velocity

DAMPERS

EMC

Opposed blade low leakage control damper
CLASS 3 - UNI EN 1751:2003
Double skin blade
Manual or motorised operation
Sizes from 200 x 150mm to 1200 x 1950mm
Manufactured from extruded aluminium sections
Horizontal or vertical installation independent of air flow
Casing length 120mm standard
Internal linkage system
Operating temperature Min -30°C, Max - 80°C

ESD

Parallel blade smoke damper
Single skin blade
Motorised operation
Sizes from 200 x 150mm to 1500 x 2400mm
Manufactured from galvanised steel
Horizontal or vertical installation independent of air flow
Casing length 180mm standard

ECD

Opposed blade volume control damper
Aluminium aerofoil blade
Sizes from 150 x 150mm to 2000 x 1950mm
Manual or motorised operation
Casing from galvanised steel
Horizontal or vertical installation independent of air flow
Casing length 180mm standard

Also available in low leakage version - ECD-LL

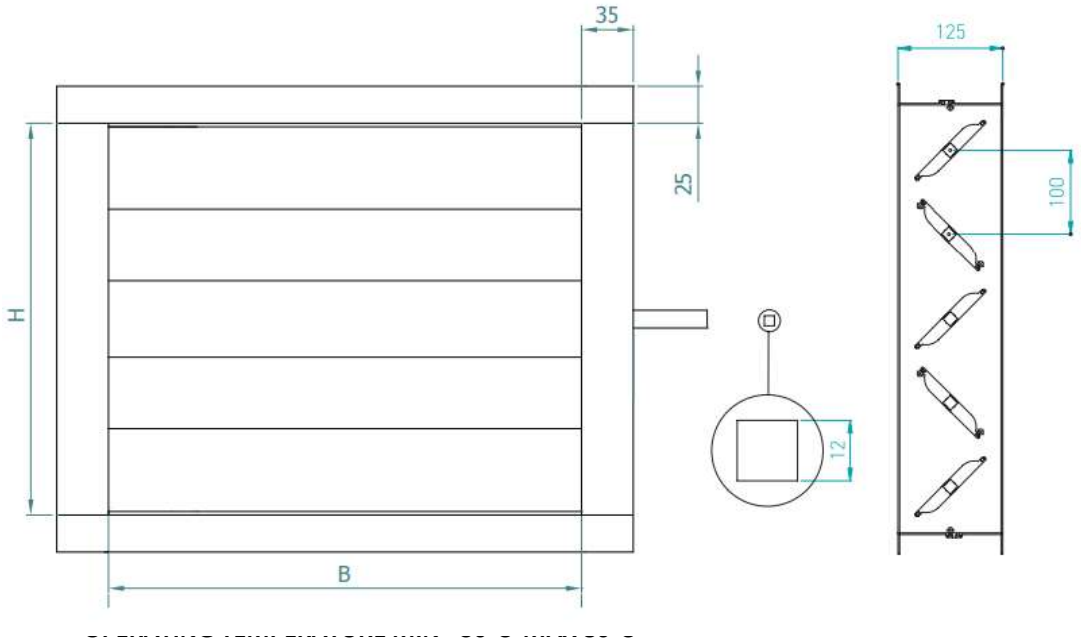
ECD-A

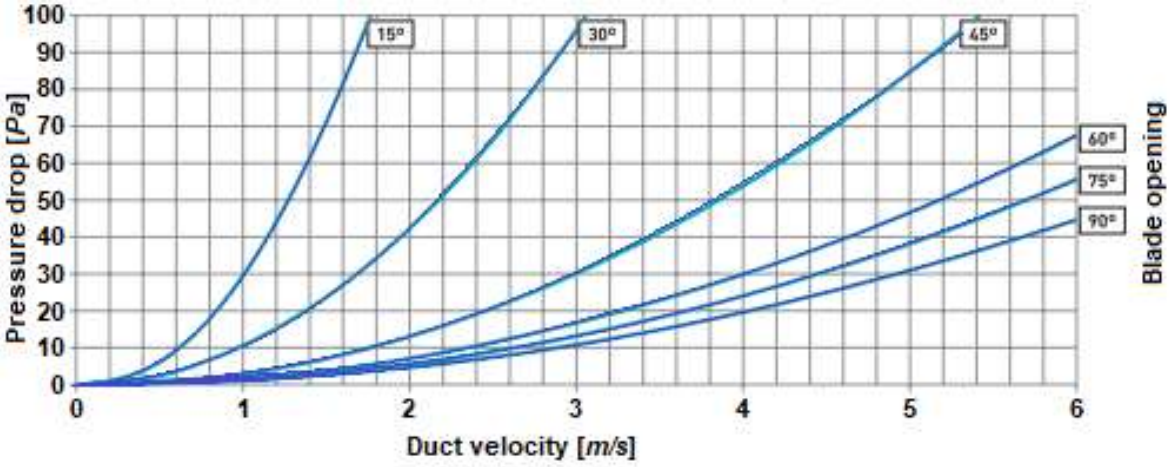
Opposed blade volume control damper
Single skin aluminium blade
Sizes from 150 x 150mm to 1200 x 2400mm
Manual or motorised operation
Casing from galvanised steel
Horizontal or vertical installation independent of air flow
Casing length 180mm standard

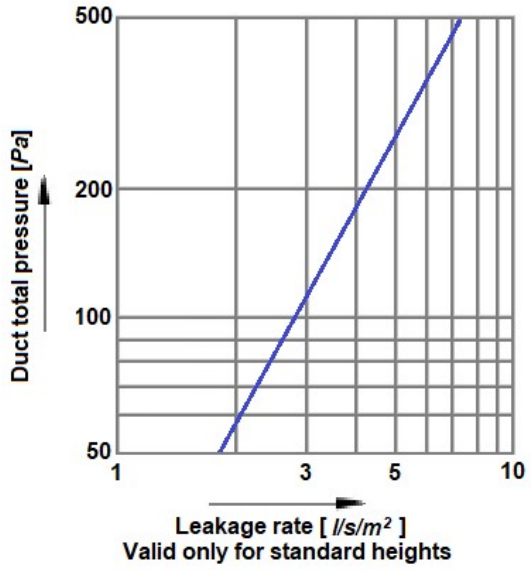
ENRD

Parallel blade non return damper
Single skin blade
Gravity dependent operation
Sizes from 150 x 150mm to 1200 x 1950mm
Manufactured from galvanised steel
Vertical installation independent of air flow
Casing length 180mm standard

EMC DAMPER DETAIL







FIRE DAMPERS

EFD

Parallel blade fire damper with fusible link
Manual or motorised operation
Combi fire damper and volume control damper
SABS approved and tested to SANS193 2 hour rated
Sizes from 150 x 150mm to 1500 x 1500mm
Manufactured from galvanised steel
Horizontal or vertical installation independent of air flow
Complete with inspection panel
Casing length 350mm standard
Optional 250mm or 500mm casing length

EFD-R

Circular butterfly blade fire damper with fusible link
Manual or motorised operation
Combi fire damper and volume control damper
SABS approved and tested to SANS193 2 hour rated
Sizes from 125mm Ø to 400mm Ø
Manufactured from galvanised steel
Horizontal or vertical installation independent of air flow
Complete with inspection panel
Casing length 350mm standard
Optional 250mm or 500mm casing length

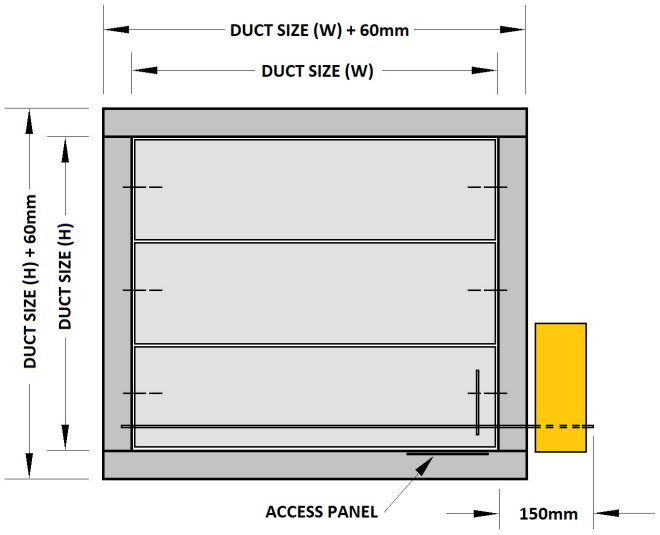
EFD-B

Circular butterfly blade fire damper with fusible bulb
Manual operation
SABS approved and tested to SANS193 2 hour rated
Sizes from 100mm Ø to 200mm Ø
Manufactured from galvanised steel
Horizontal or vertical installation independent of air flow
Casing length 350mm standard
Optional 250mm or 500mm casing length

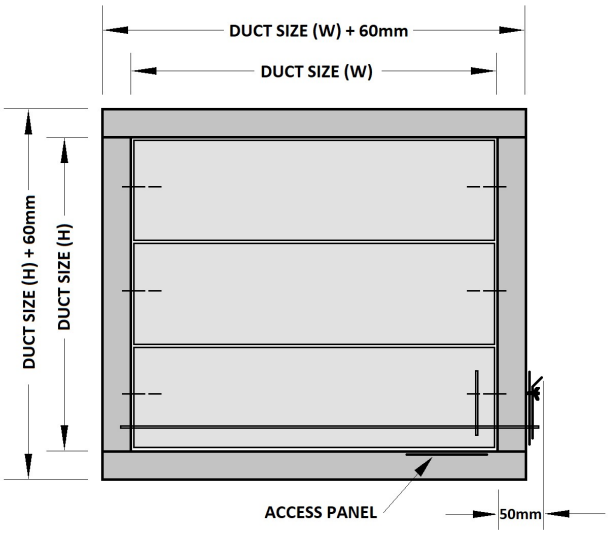
IBD

Curtain blade type fire damper with fusible link
Manual operation
SABS approved and tested to SANS193 2 hour rated
Horizontal installation sizes from 200mm x 200mm
to 1200 x 1200mm
Vertical installation sizes from 200mm x 200mm
to 900 x 900mm
Manufactured from galvanised steel
Casing length 120mm standard

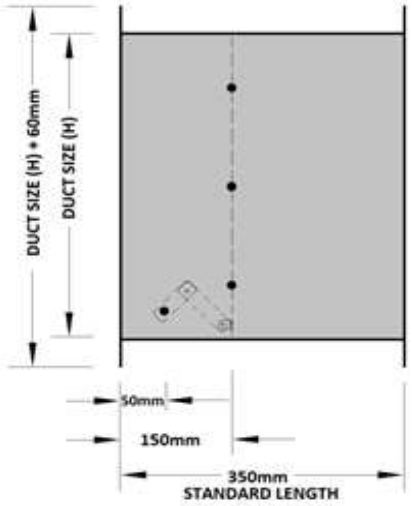
FIRE DAMPER DETAIL

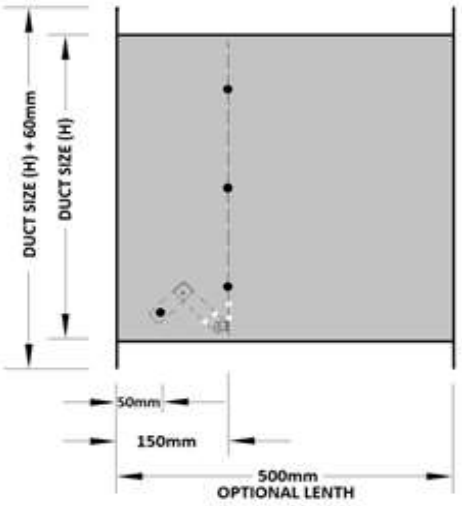


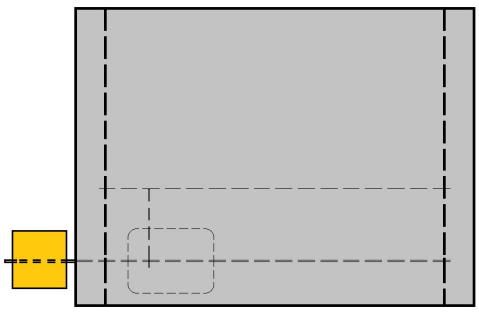
MOTORISED DAMPER



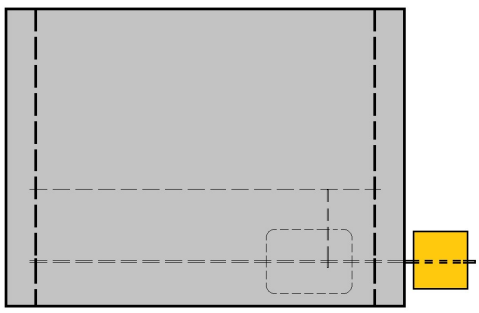
MANUAL DAMPER







LEFT HAND



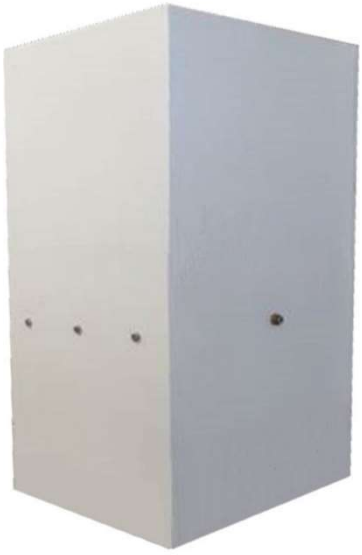
RIGHT HAND

DAMPERS UP TO 1200 X 1200 SUPPLIED IN 1 PIECE - BIGGER ITEMS SUPPLIED IN MULTIPLE SECTIONS

DAMPER INSTALLATION INDEPENDENT OF AIR LFOW

FRESH AIR UNITS

FFS



The versatile FFS fresh air units are purposefully designed and built for installation in data centre plant rooms and white spaces, where the introduction of external fresh air is required in designated areas. Besides the introduction of the fresh air, the units are equipped to prevent external airborne contaminants, such as smoke, from being introduced into the data centre.

Primarily designed for use in data centres, with high concentrations of mechanical equipment and air change rates as low as 1 per hour, individual units are suitable for room areas up to 250m^2.

The Fan Filter Units may be used as stand alone systems, incorporating a smoke detection system, but are more commonly used In combination with an alarm generating system, such as smoke detection, gas suppression, HSSD systems, etc.,(by others) , which are generally already present in data centres.

The unit assembly comprises of three self contained modules - a fan and air sampling section accommodating the smoke detector, sampling probes or measuring nozzles, a bypass damper section and a filter section.

The continuous fan operation draws in the outside air through the external louvre, across the air sampling points and in to the fan chamber. During normal operation, the air is supplied to the data centre space via the damper and filter section. Should the presence of smoke be detected by the system, the damper is closed via a failsafe actuator. The closure of the damper isolates the filter section and re-cycles the air flow externally.

The fan ensures that the air is being constantly monitored, even in the event of an alarm activation. Once the conditions for the alarm have been overcome the damper opens to resume normal supply air flow.

The standard FFS unit features

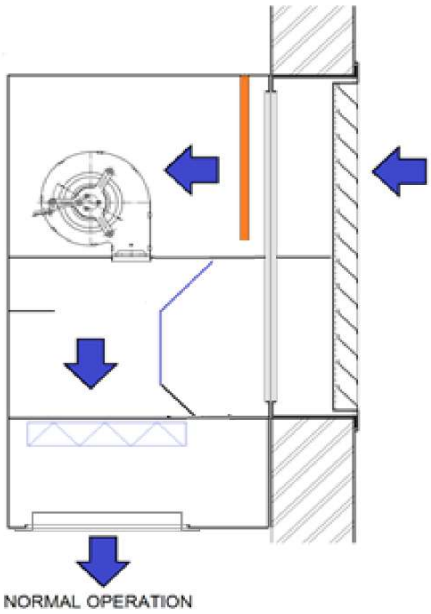
- EU2 washable pleated primary filter
- 304 Stainless steel painted casing
- By-pass damper section
- Forward curve centrifugal fan - 200v/1ph/50Hz which is continuously powered.
- Failsafe actuator which drives the damper - actuators may be 220v or 24v, spring return, on/off or 2..10v signal dependant on system application.
- ON/OFF switch
- 220V single phase power connection
- Units can be mounted on standard brick walls or double skin container type applications
- Low pressure
- Easy installation - wall frame and external louvre included

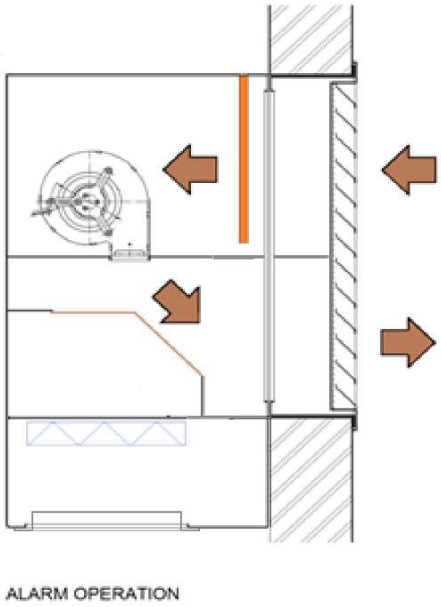
Various custom sizes, assemblies, finishes and filter efficiencies are available on request.

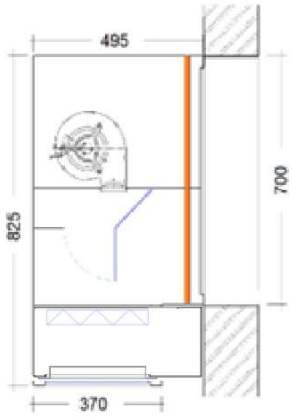
Model	Airflow	Power input (fan)		Fan speed
FFS250	70 l/s	125W	0.58A	1150 rpm
FFS500	140 l/s	245W	1.07A	2380 rpm
FFS750	210 l/s	250W	1.14A	2490 rpm

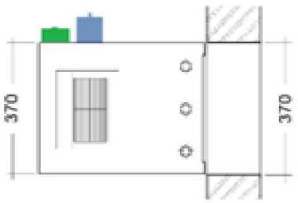
Minimum external operating conditions - temperature -20^{o}C

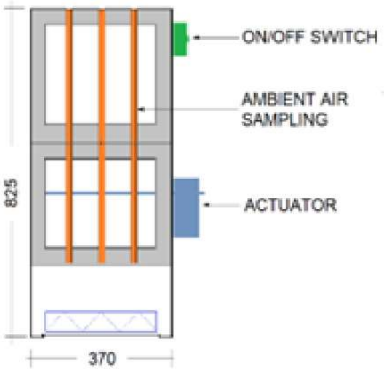
FFS INSTALLATION

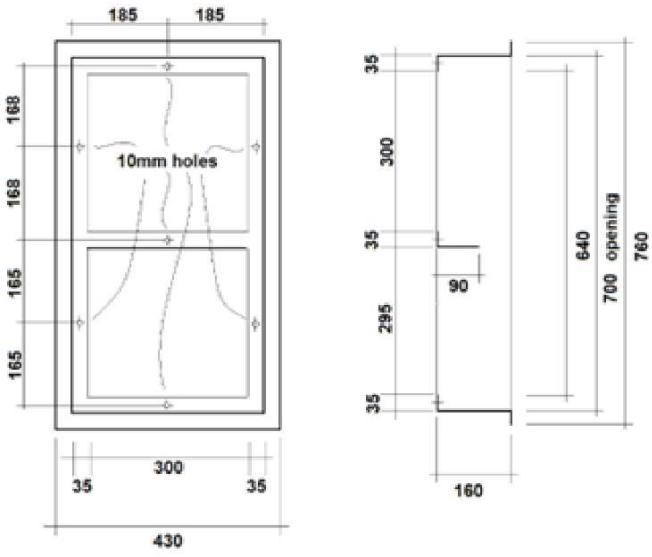












WALL SLEEVE DETAIL (BY OTHERS) BASED ON 160MM CONTAINER WALL

FAN ASSISTED OUTLET

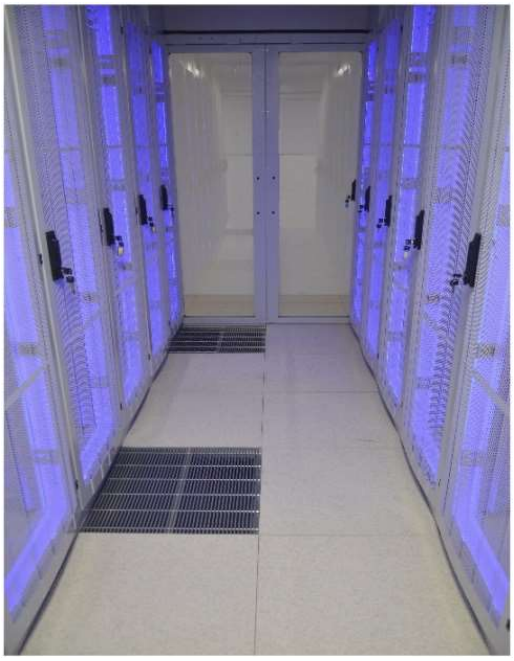
VP4

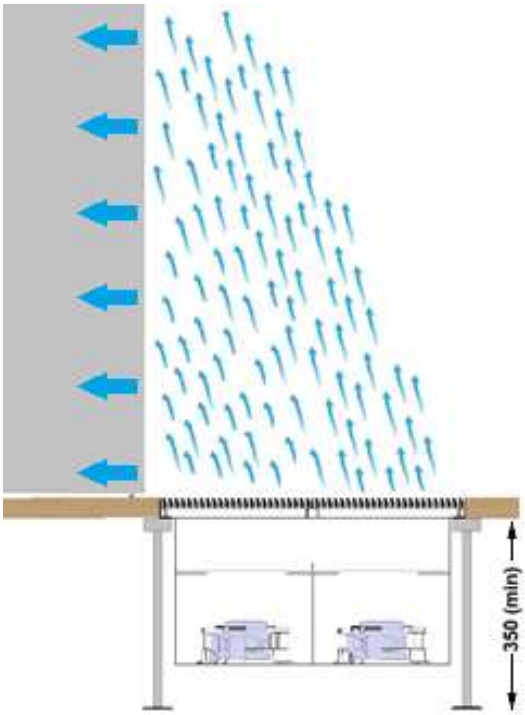
Comprising of a directional aluminium floor grille, housing and booster fans.
Multiple EC Fan technology
220v Single phase supply
Floor grille powder coated or natural anodised finish
Adjustable pattern grille
Housing powder coated black
Variety of control options available -
- On/Off control
- Manual fan speed control
- Variable speed control based on temperature
- Variable speed control based on pressure

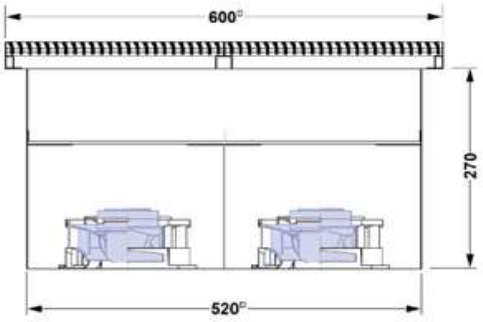
Provides direct cooling to high density server racks
Increases air supply to hot spot areas
Can be used in open plan or cold isle applications

Variable airflow from 200 to 1000 l/s
Frames available to suit most raised access floor installations

Individual control for top and bottom half of rack



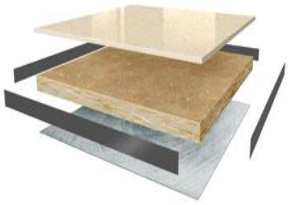




Flow *l/s*	200	300	400	500	600	700	800	900	1000
Amperage	0.16	0.28	0.53	0.96	1.45	2.15	3.20	4.30	4.60
Noise level dB[A]	48	55	60	65	69	72	75	77	80

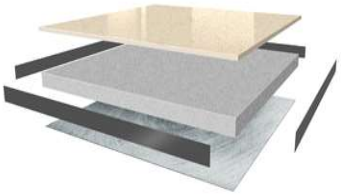
dB[A] level is sound pressure level of unit measured 1.5m above floor in open area

ACCESS FLOORING



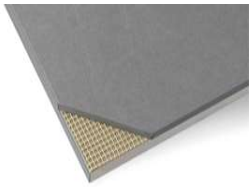
PARTICLE BOARD CORE

30 / 38mm thick, high density particleboard 680 -720kg/m^3 mixed with thermosetting resin, low emission E1 class as per EN3132-1



CALCIUM SULPHATE CORE

28, 30, 32, 34, 36 & 38mm thick, gypsum and cellulose fibres, 1450kg/m^3 with organic fibres, class "O"



X-FLOOR

Inert monolithic and uniform structured ceramic panel with average density of 2200 kg/m^3

AVAILABLE TOP COVERINGS

Parquet
Linoleum
Vinyl
Rubber
Ceramic
Marble and granite
Stone
Glass
Stainless steel

CONSTRUCTION

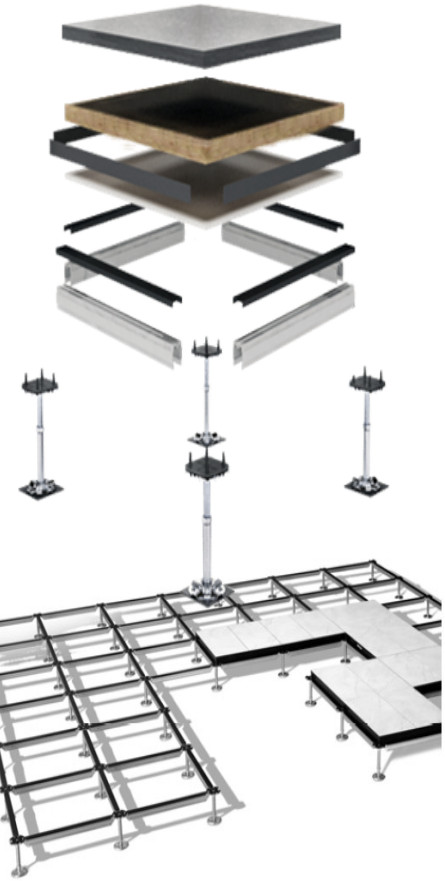
Modular sizes from 400 to 1200mm

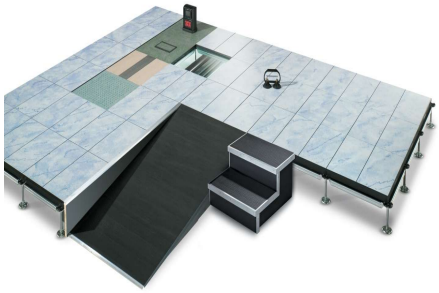
UTILIZATION

Various applications - internal and external

FIXING

Stringer and Pedestal or stringerless pedestal





Newfloor
STEP IT UP

ACCESS FLOORING

TECHNICAL CARACTERISTICS OF NEWFLOOR RAISED ACCESS FLOOR

PANEL TYPE	T38AA
Body Material	High denisity particle board weight > 720kg/m^3
Top covering	High pressure laminate Linoleum Rubber
Bottom covering	**0.05mm Aluminium film**
Edging	0,5mm ABS plastic - non creak self extinguishing
Maximum concentrated load in centre of panel per EN12825	430N
Ultimate load in centre of panel per EN12825	1350N
Distributed load NFP67101	1850N
Classification to EN 12825	4A21
Nominal load	4 500N
Breaking load	>9 000N
Deflection	max 2,5mm
Reaction to fire class EN13501-1	B_{FL}-s1
UNI8457/UNI9174	CL. 1
Resistance to fire ISO834	REI30

ABET 577

PANEL TYPE	T38AT
Body Material	High denisity particle board weight > 720kg/m^3
Top covering	High pressure laminate Linoleum Rubber
Bottom covering	**0.5mm galvanised steel plate**
Edging	0,5mm ABS plastic - non creak self extinguishing
Maximum concentrated load in centre of panel per EN12825	550N
Ultimate load in centre of panel per EN12825	1150N
Distributed load NFP67101	2250N
Classification to EN 12825	5A21
Nominal load	5 000N
Breaking load	>10 000N
Deflection	max 2,5mm
Reaction to fire class EN13501-1	B_{FL}-s1
UNI8457/UNI9174	CL. 1
Resistance to fire ISO834	REI30

Newfloor
STEP IT UP

ACCESS FLOORING

TECHNICAL CARACTERISTICS OF NEWFLOOR RAISED ACCESS FLOOR

PANEL TYPE	G34HA
Body Material	High density calcium sulphate weight > 1450kg/m^3
Top covering	High pressure laminate Linoleum Rubber
Bottom covering	**0.05mm Aluminium film**
Edging	0,5mm ABS plastic - non creak self extinguishing
Maximum concentrated load in centre of panel per EN12825	630N
Ultimate load in centre of panel per EN12825	1020N
Distributed load NFP67101	2500N
Classification to EN 12825	4A21
Nominal load	4 500N
Breaking load	>9 000N
Deflection	max 2,5mm
Reaction to fire class EN13501-1	B_{FL}-s1
UNI8457/UNI9174	CL. 1
Resistance to fire ISO834	REI120

ABET 577

PANEL TYPE	G34HT
Body Material	High density calcium sulphate weight > 1450kg/m^3
Top covering	High pressure laminate Linoleum Rubber
Bottom covering	**0.5mm galvanised steel plate**
Edging	0,5mm ABS plastic - non creak self extinguishing
Maximum concentrated load in centre of panel per EN12825	1100N
Ultimate load in centre of panel per EN12825	1950N
Distributed load NFP67101	3900N
Classification to EN 12825	6A21
Nominal load	6 000N
Breaking load	>12 000N
Deflection	max 2,5mm
Reaction to fire class EN13501-1	B_{FL}-s1
UNI8457/UNI9174	CL. 1
Resistance to fire ISO834	REI120

TECHNICAL CARACTERISTICS OF NEWFLOOR RAISED ACCESS FLOOR PANELS - PARTICLE BOARD INNER BODY

SUMMARISED TEST REPORT (TRANSLATED)

Results of test number 181104

Particle board panel with aluminium bottom and high pressure laminate top

The test was conducted using a standard calcium sulphate panel 34mm thick with 0,5mm ABS edging, bottom 0,05mm aluminium film and top with Sommer Tarkett HPL product.

The test panel size was 600 x 600mm and 40mm thick weighing 11.8kg each. The components were glued to the body using a "41 H" product supplied by the company Eurocollanti.
The stringers used were the type H38

The test was conducted as prescribed by the UNI EN12825:2003 standard dated 01/05/2003 for "Raised access floors".
The test consisted of :-

- A static weight applied on the panel in a constant manner and increasing to destruction to a point exceeding the graphic force/deformation of the item.
- Vertical weight on the pedestal until it reaches at least 4 times the nominal declared value
- Determination of the permanent deformation of the panel after having exposed the panel to the nominal declared weight value for a period of 30 minutes.

the Nominal values given were as follows -

- Panels installed with pedestals and stringers : 2,80 kN
- Panels installed with pedestals without stringers : 1,80 kN

Ambient conditions at the time of the test

Ambient temperature	19°C
Relative humidity	58%

Results of the test

Static weight placed on the items

- Height of pedestal - 205mm
- Finished floor height - 250mm

Installation - pedestals screwed into the base with stingers clipped in

Application point of load	Load applied in N to the following points of deflection			Maximum load achieved [N]
	2,5mm	3,0mm	4,0mm	
On the side in the centre of the panel	2913	3586	4728	7630
In the centre of the panel	3211	3822	5325	12659
Diagonally 70mm from the edge	3485	4342	5920	7140

Installation - pedestals screwed into the base with stingers securely screwed to pedestal head

Application point of load	Load applied in N to the following points of deflection			Maximum load achieved [N]
	2,5mm	3,0mm	4,0mm	
On the side in the centre of the panel	3150	3768	4916	8078

Installation - pedestals screwed into the base without stingers

Application point of load	Load applied in N to the following points of deflection			Maximum load achieved [N]
	2,5mm	3,0mm	4,0mm	
On the side in the centre of the panel	2016	2388	3112	7266
In the centre of the panel	2967	3468	5525	12250
Diagonally 70mm from the edge	3665	4369	5100	6626

Distributed load NFP67101 3900N

Newfloor STEP IT UP

TECHNICAL CARACTERISTICS OF NEWFLOOR RAISED ACCESS FLOOR PANELS - PARTICLE BOARD INNER BODY

SUMMARISED TEST REPORT (TRANSLATED)

Results of test number 181103

Calcium sulphate panel with aluminium bottom and high pressure laminate top

The test was conducted using a standard calcium sulphate panel 34mm thick with 0,5mm ABS edging, bottom 0,05mm aluminium film and top with Sommer Tarkett HPL product.

The test panel size was 600 x 600mm and 40mm thick weighing 11.8kg each. The components were glued to the body using a "41 H" product supplied by the company Eurocollanti.
The stringers used were the type H38

The test was conducted as prescribed by the UNI EN12825:2003 standard dated 01/05/2003 for "Raised access floors".
The test consisted of :-

- A static weight applied on the panel in a constant manner and increasing to destruction to a point exceeding the graphic force/deformation of the item.
- Vertical weight on the pedestal until it reaches at least 4 times the nominal declared value
- Determination of the permanent deformation of the panel after having exposed the panel to the nominal declared weight value for a period of 30 minutes.

the Nominal values given were as follows -

- Panels installed with pedestals and stringers : 3,80 kN
- Panels installed with pedestals without stringers : 3,30 kN

Ambient conditions at the time of the test

Ambient temperature	20°C
Relative humidity	61%

Results of the test

Static weight placed on the items

- Height of pedestal - 205mm
- Finished floor height - 250mm

Installation - pedestals screwed into the base with stingers clipped in

Application point of load	Load applied in N to the following points of deflection			Maximum load achieved [N]
	2,5mm	3,0mm	4,0mm	
On the side in the centre of the panel	3386	4157	5540	8669
In the centre of the panel	4119	4958	6524	12900
Diagonally 70mm from the edge	6503	7659	-	8110

Installation - pedestals screwed into the base with stingers securely screwed to pedestal head

Application point of load	Load applied in N to the following points of deflection			Maximum load achieved [N]
	2,5mm	3,0mm	4,0mm	
On the side in the centre of the panel	5557	6539	8111	8923

Installation - pedestals screwed into the base without stingers

Application point of load	Load applied in N to the following points of deflection			Maximum load achieved [N]
	2,5mm	3,0mm	4,0mm	
On the side in the centre of the panel	3017	3612	4684	8692
In the centre of the panel	4047	4829	6271	10600
Diagonally 70mm from the edge	5016	6015	-	7081

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ACCESS FLOORING

INTERNAL APPLICATIONS

EXTERNAL APPLICATIONS

BEFORE

AFTER

ACCESSORIES

STAIRS

RAMP

AIR OUTLETS

ELECTRICAL

SUCTION CUPS

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BRUSH ENTRIES

CBE

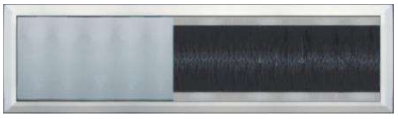
Manufactured for use in panel or pressurised raised access floor systems. The cable entries comprise of a rigid extruded aluminium frame and black polypropylene bristles.

Three different frame styles are available -

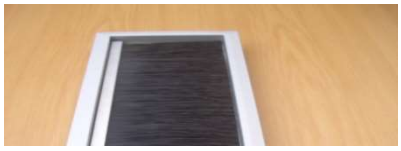
- flat drop in frame for recessed mounting, with front fixing - CBS
- bevelled drop in frame for use in laminated or carpet finish with front fixing - CBB
- flangeless frame for use in particle board raised access floor systems CBF

CBS

CBB-C



CBF



All products are available as feed through or supplied in two halves for retrofitting into existing systems and are available in a variety of sizes to suit most requirements.

The use of the panels ensures the orderly management and distribution of cabling through raised access floors whilst maintaining plenum air loss to a minimum. Additional cover plates plates are available in a variety of sizes to blank off sections or or whole entries which are not in use - CB..-C

The entry frames and cover plates are manufactured from satin natural anodised aluminium as standard, painted finishes are also available on request. The easily removable cover plates are 3mm thick and are suitable to walk on ensuring the safety of of personnel working in unpopulated areas of the floor.

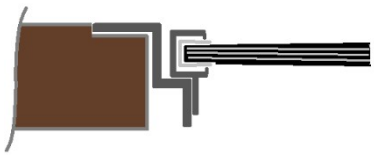
Features

- ease of installation
- recessed or flush mounted
- maintains air pressure in for void
- reduces dust contamination of air plenum
- retrofitable two section frame

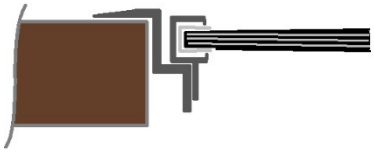
Standard sizes

- 525mm x 180mm
- 380mm x 180mm
- 180mm x 180mm

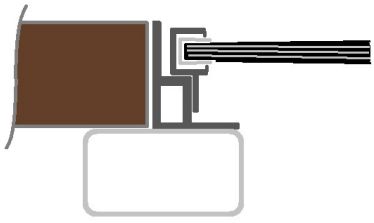
CBS Drop in frame



CBB Drop in frame



CBF Raised floor frame



CB □ - □ - □

- □ **O**- No cover plate / **C** - Cover plate
- □ **1** - Single frame / **2** - Splitable frame
- □ **F** - Flangeless frame / **S** - Drop in Straight frame / **B** - Drop in Bevelled frame