Bradflo

AIR HANDLING REFERENCE CATALOGUE

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Bradflo is a leading Australian brand of air distribution, air handling and ventilation products, components, and accessories.

Distributed by Reece HVAC-R Group branches (Metalflex, Actrol and Reece HVAC), Bradflo's scope of quality products are selected to offer customers the convenience of a comprehensive one-stop shop. A further strength is our ability to design and manufacture quality customised products.

At Bradflo we understand the importance of the information required on commercial jobs and we offer in-depth description, design dimensions, tech drawings, engineering graphs and performance data on all our products to help you make better decisions on what products you require.

Contents

1. Grilles & Louvres

Ordering procedure

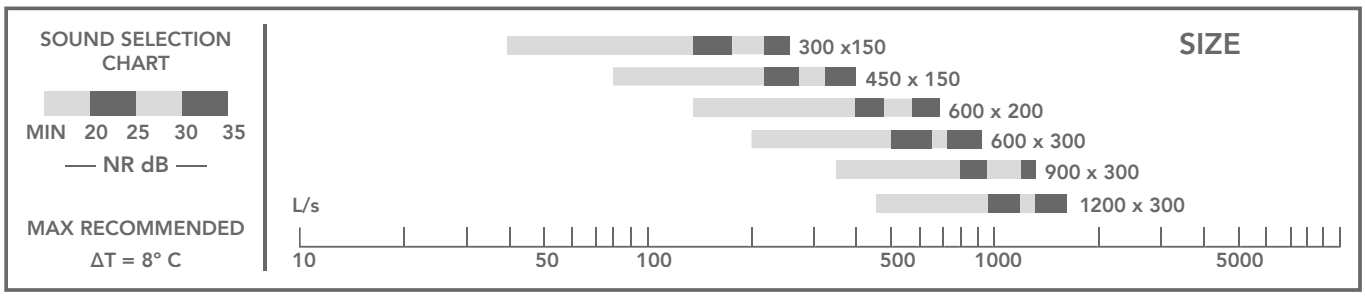
Using the chart below select your requirement and substitute the underscored text below.

Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 12" x 12" (300mm x 300mm) grille with a removable core, the ordering code would be AURR1212 (When ordering it is not necessary to include the periods [..])

Specials: Curved face grilles (AURC) to suit round rigid ducting and other sizes are available upon request. Please contact your nearest branch.

Selection guide



Product size numbers

		"Y" SIZE										
"Type"	"X" Size	**04** (100)	**06** (150)	**08** (200)	**10** (250)	**12** (300)	**14** (350)	**16** (400)	**18** (450)	**20** (500)	**24** (600)	**Colour**
AUR (Fixed core)	**10** (250)											Powdercoated white
AURR (Removeable core)	12 (300)											
	14 (350)											
	16 (400)											
	18 (450)											
	20 (500)											
	24 (600)											Special

Description

The 1.11 (AUR) grilles are designed for use in supply and return air applications.

Double deflection grilles have horizontal front blades and vertical rear blades.

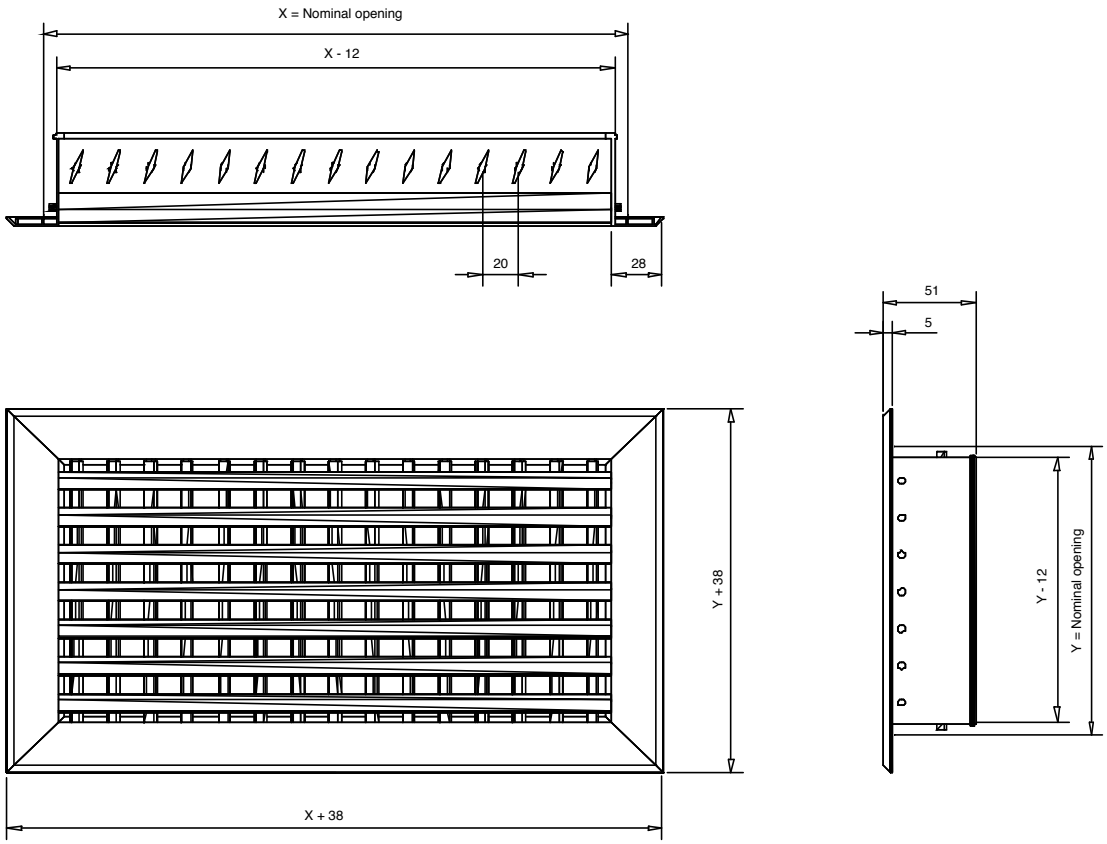
The AURR type grille has a removable core for cleaning or installation.

All grilles feature attractively designed extruded aluminium features. The blades are aerodynamically designed to provide optimum air flow and low sound pressure level performance.

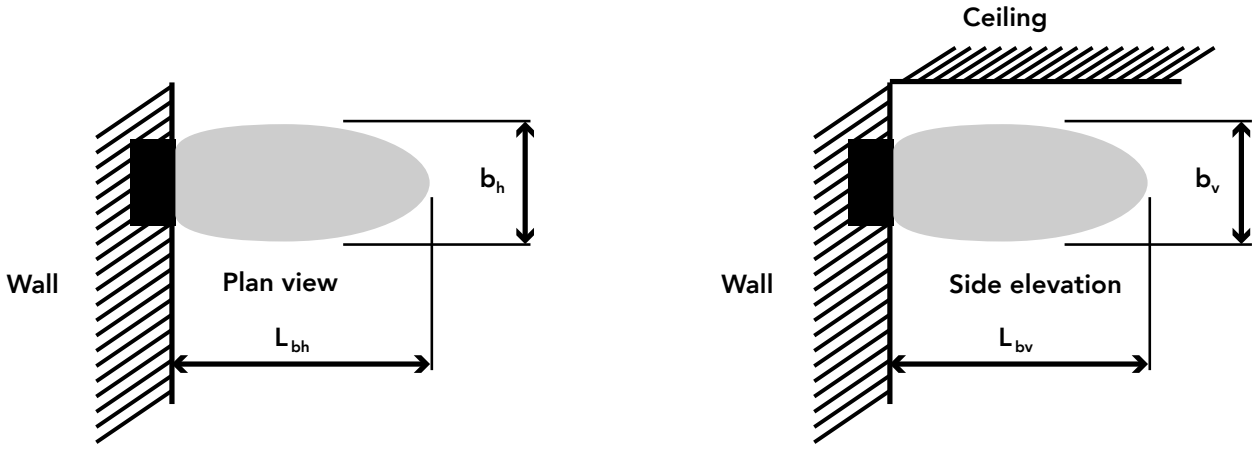
Standard finishes are natural anodised or powdercoat white. There are 15 other colours available at no additional cost. Please contact your nearest Bradflo branch for the selection range.

Other non-standard colours are available upon request.

Design dimensions



Description



0° blowing

b_h = L0.3 x 0.3
Lbh = L0.3 x 0,5

45°blowing

b_h = L0.3 x 1.5
L_{bh} = L0.3 x 0,5

0° blowing

b_v = L0.3 x 0.09
L_{bv} = L0.3 x 0,5

0° blowing

b_v = L0.3 x 0.06
L_{bv} = L0.3 x 0,4

Free Area of AUR Grille (m2)

Y/X	300	400	450	500	600	750	900	1200
150	0.029	0.038	0.043	0.048	0.058	0.072	0.087	0.116
200	0.038	0.051	0.058	0.064	0.077	0.097	0.116	0.156
250	0.048	0.065	0.073	0.081	0.097	0.122	0.146	0.195
300	0.058	0.078	0.088	0.097	0.117	0.147	0.176	0.235
400	0.078	0.104	0.117	0.130	0.157	0.196	0.236	0.314

Free area for standard size double deflection grilles.

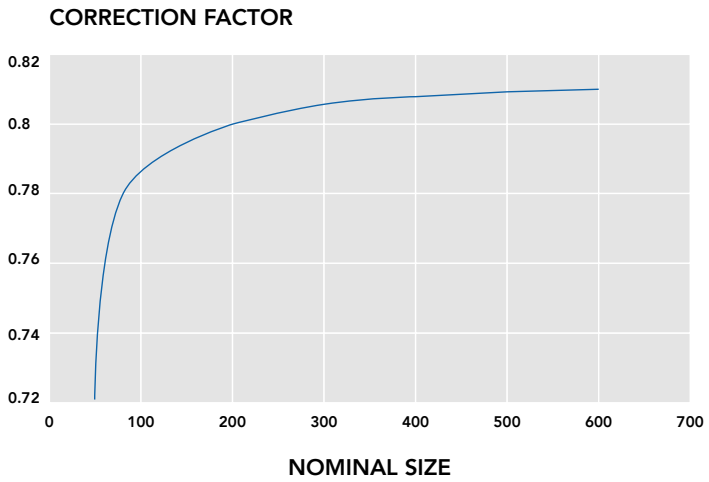
Free Area Factor

To calculate the free area, the grille's nominal area is multiplied by f_1, where f_1 is a correction factor and is determined by the graph. For single deflection the nominal size is the grille's "Y" dimension. For double deflection it is the grille's "X" dimension.

Example:

Size 300 x 150 single deflection. From the graph, f_1 = 0.79 for the grille height of 150. The grille's free area is therefore: 300/1000 x150/1000 x 0.79 = 0.0355m^2.

For a double deflection include the factor f_1 for the grille length. The free area would therefore be: 300/1000 x 150/1000 x 0.79 x 0.80 = 0.0284m^2.



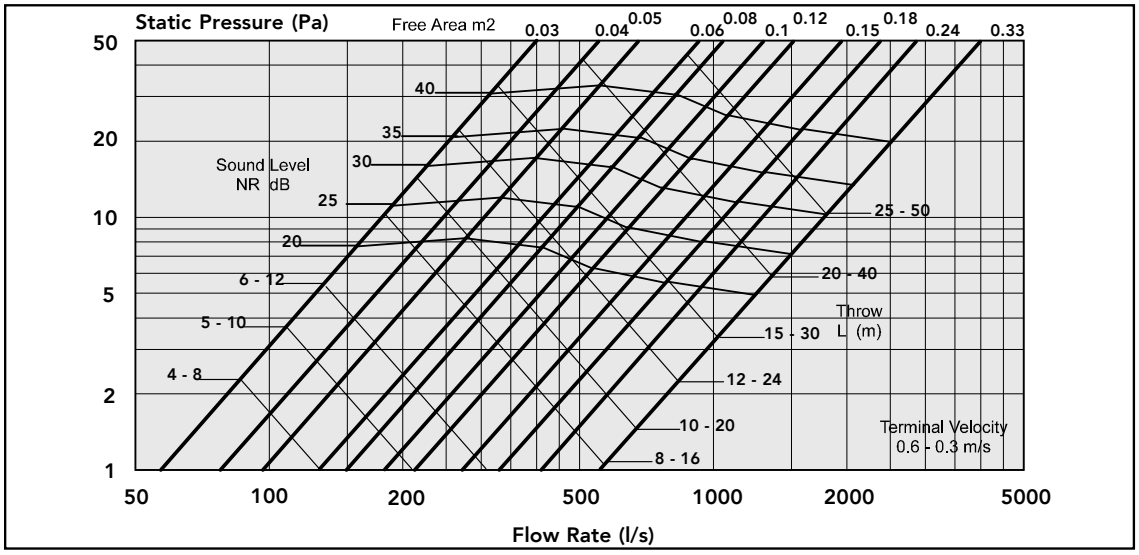
Engineering Graphs

Throws shown are to a terminal velocity of 0.60

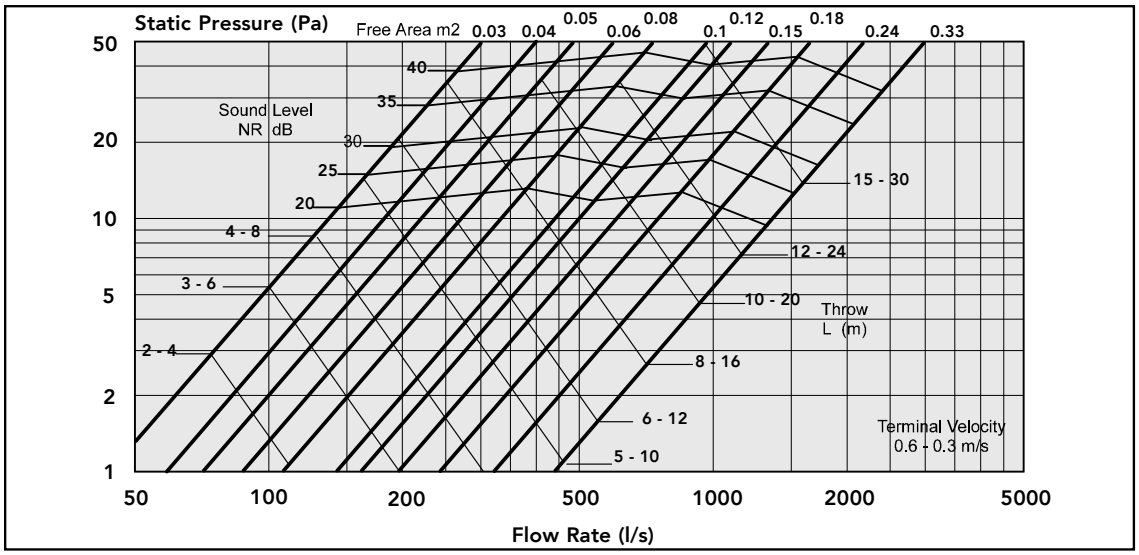
m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

Performance data (0⁰ deflection)



Performance data (22⁰ deflection)



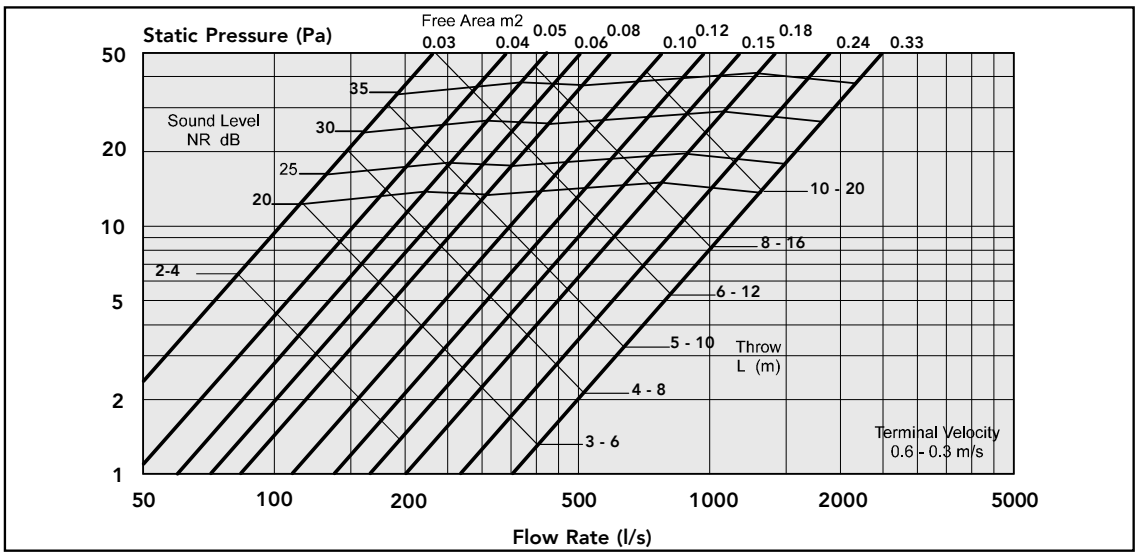
These graphs are for selection only and should not be used for commissioning

Engineering Graphs

Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

Performance data (45⁰ deflection)



These graphs are for selection only and should not be used for commissioning.

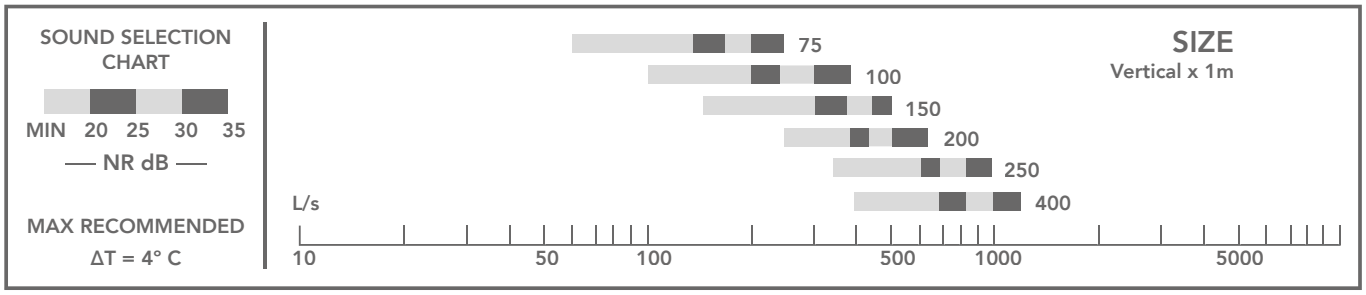
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 12" x 8" (300mm x 200mm) standard 15° deflection grille, the ordering code would be **AAF1208**. (When ordering it is not necessary to include the periods [..])

Selection guide



Product size numbers

		"Y" SIZE										
"Type"	**"X" Size**	**04** (100)	**06** (150)	**08** (200)	**10** (250)	**12** (300)	**14** (350)	**16** (400)	**18** (450)	**20** (500)	**24** (600)	Colour
	10 (250)											Powdercoated white
	12 (300)											
AST (0° (extra slim blade)	**14** (350)											
AAT (0° (15o extra slim blade)	**16** (400)											
	18 (450)											
	20 (500)											
Special	**24** (600)											Special

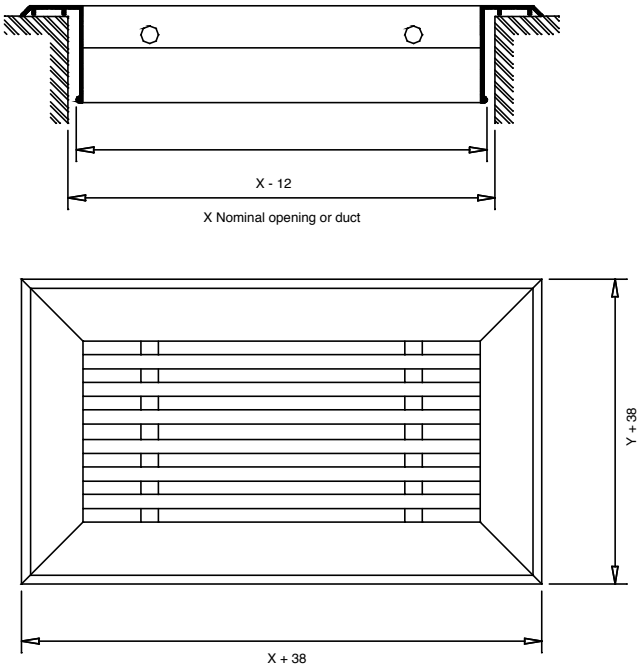
Description

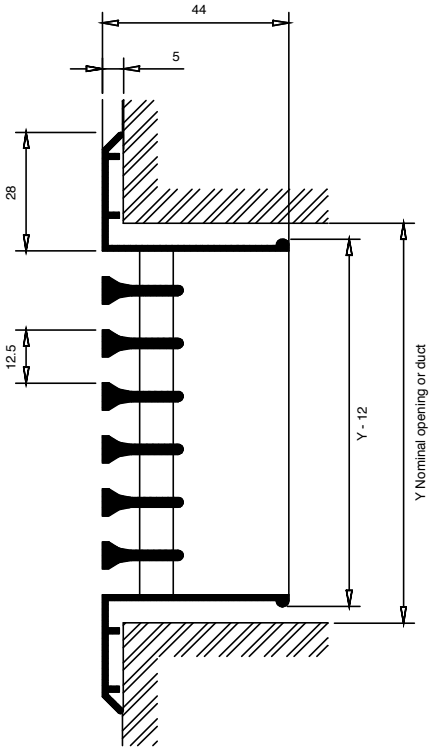
Model 1.21 (ASG) grilles have been designed for use in supply, return or exhaust air applications. They are recommended for side wall, or sill mounting.

All grille core assemblies are mounted in a sturdy frame and can be either fixed core for security purposes or removable core for easy access. For Y sizes over 500mm and X sizes over 1200mm the core is fixed.

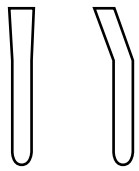
The grilles are manufactured from high quality aluminium extrusion with a choice of four blade styles with 0° or 15° air stream.

Standard finishes are natural anodised and white electrostatic powdercoat. There are also 15 other colours available at no additional cost. Contact your local Bradflo branch for any special requirement you may have.





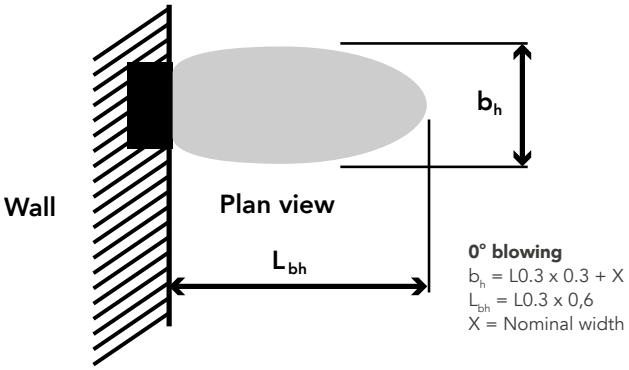
Blade profiles available

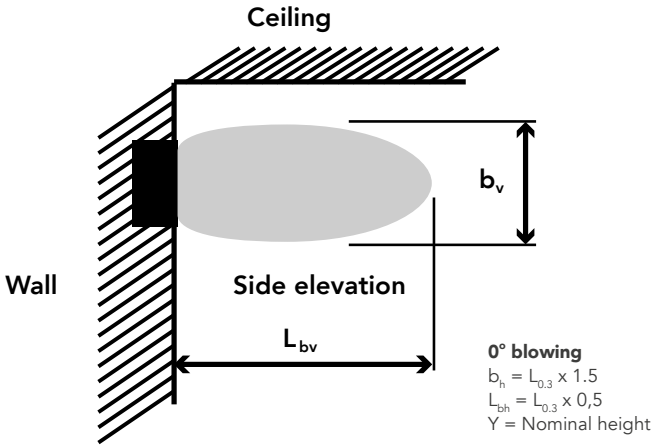


ST **0°**

AT **15°**

Description





Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_W

The generated sound power level L_W dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

L_W = NR + K_{ok}

Correction table for grilles of length other than 1 metre.

Grille length (m)	0.5 1 1.5 2 3+
Add to NR value	-3 0 +2 +3 +5
Multiply throw by	0.8 1 1.2 1.35 1.5

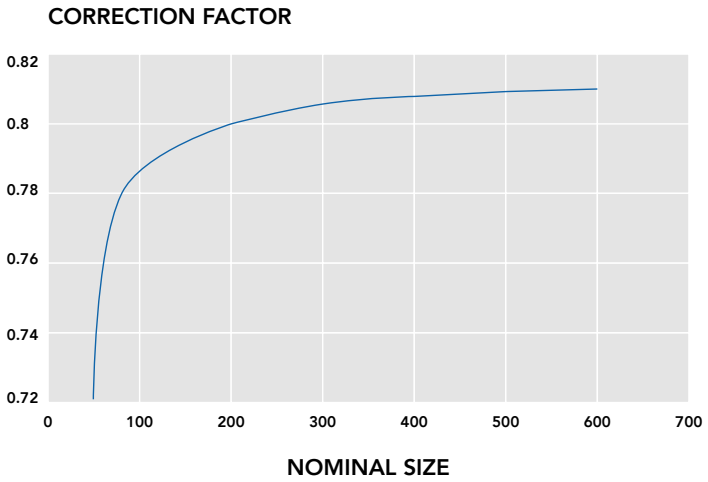
Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
All	+6	+5	+3	-2	-8	-13	-15
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Free Area Factor

To evaluate the free area, the grilles' nominal area is multiplied by f_1 where f_1 is a correction factor and is determined by the graph.

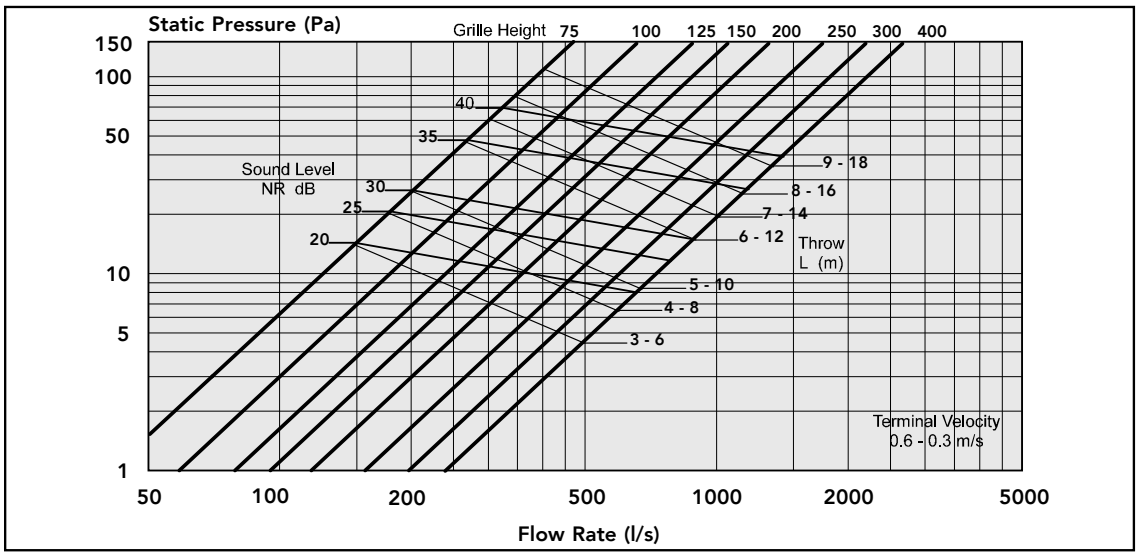


Engineering Graphs

Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

ASF grille x 1000 mm long ("X" dim)



For return or exhaust air, the pressure drop and noise level may be calculated as follows.

Pressure drop

Pdra = P_d x 1.2

Noise level

NR_{ra} = NR + 8

These graphs are for selection only and should not be used for commissioning.

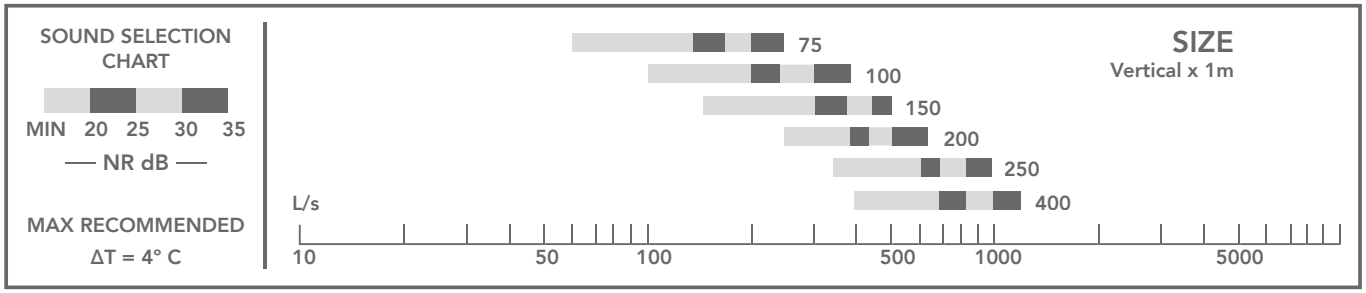
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 12" x 8" (300mm x 200mm) standard 15° deflection grille, the ordering code would be **AAF1208**. (When ordering it is not necessary to include the periods [..])

Selection guide



Product size numbers

		"Y" SIZE										
"Type"	**"X" Size**	**04** (100)	**06** (150)	**08** (200)	**10** (250)	**12** (300)	**14** (350)	**16** (400)	**18** (450)	**20** (500)	**24** (600)	**Colour**
ASFF (0° deflection)	**10** (250)											Powdercoated white
AAFF (15o deflection)	**12** (300)											
ASTF (0o slim blade)	**14** (350)											
AATF (15o slim blade)	**16** (400)											
ASIF (0o deflection)	**18** (450)											
AAIF (15o deflection)	**20** (500)											
ASIF (0o slim blade)	**24** (600)											Special
AAIF (15o slim blade)												
Special												

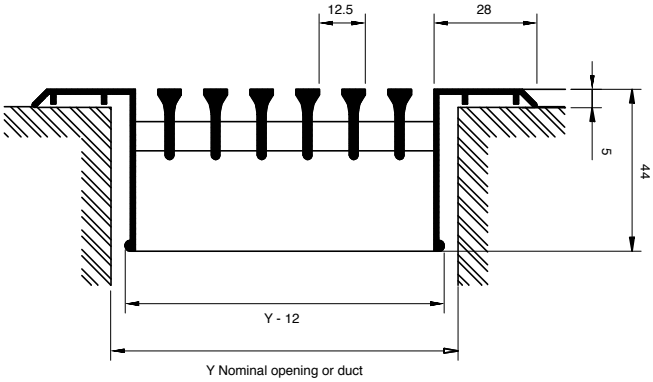
Description

Model 1.22 (ASGF) grilles have been designed for use in supply, return or exhaust air applications. They are recommended for floor mounting. (for wall mounting refer section 1.21 (ASG).

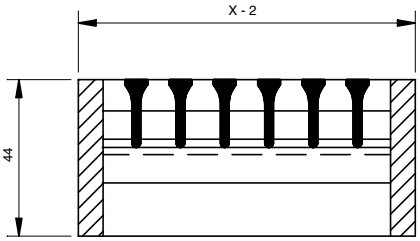
All grille core assemblies are mounted in a sturdy frame and can be either fixed core for security purposes or removable core for easy access.

For Y sizes over 500mm and X sizes over 1200mm the core is fixed. The grilles are manufactured from high quality aluminium extrusion with a choice of four blade styles with 0° or 15° air stream.

Standard finishes are natural anodised and white electrostatic powdercoat. There are also 15 other colours available at no additional cost. Contact your local Bradflo branch for any special requirement you may have.

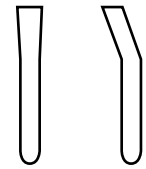


Flanged frame



"I" frame

Blade profiles available



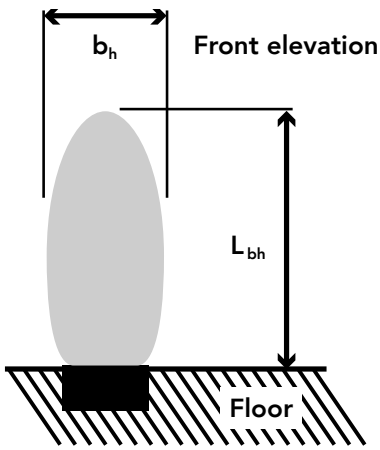
ST **0°**

AT **15°**

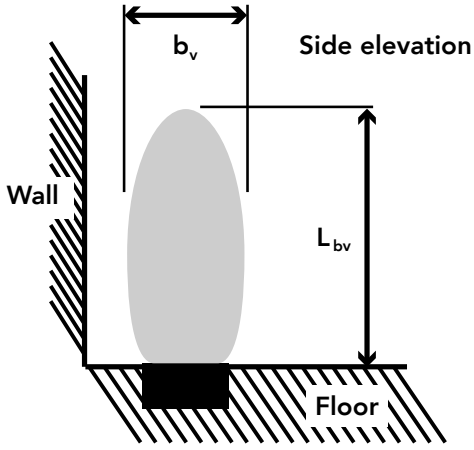
IMPORTANT!

The ASGF floor grille (1.22) has been designed to withstand an evenly distributed load of 70 kg with a built in safety factor of two (2). If the load on the grille is likely to exceed 70 kg then that load should be specified at the time of ordering for specific design and pricing.

Description



0° blowing
b_h = L0.3 x 0.3 + X
L_{bh} = L0.3 x 0,6
X = Nominal width



0° blowing
b_h = $L_{0.3}$ x 1.5
L_{bh} = $L_{0.3}$ x 0,5
Y = Nominal height

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_W

The generated sound power level L_W dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

L_W = NR + K_{ok}

Correction table for grilles of length other than 1 metre.

Grille length (m)	0.5 1 1.5 2 3+
Add to NR value	-3 0 +2 +3 +5
Multiply throw by	0.8 1 1.2 1.35 1.5

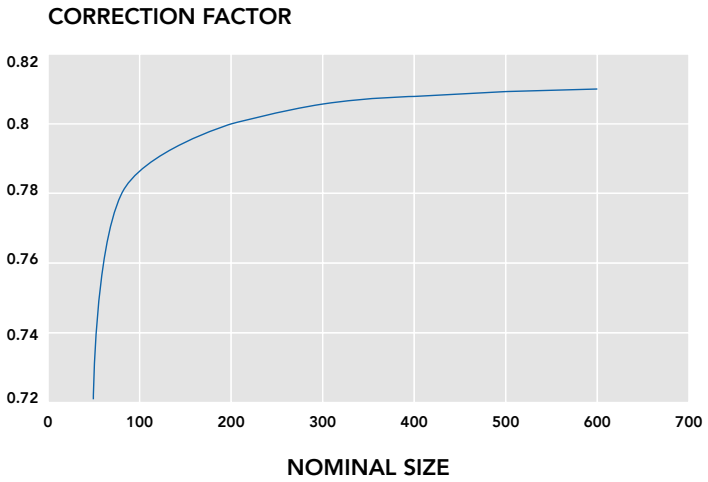
Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
All	+6	+5	+3	-2	-8	-13	-15
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Free Area Factor

To evaluate the free area, the grilles' nominal area is multiplied by f_1 where f_1 is a correction factor and is determined by the graph.

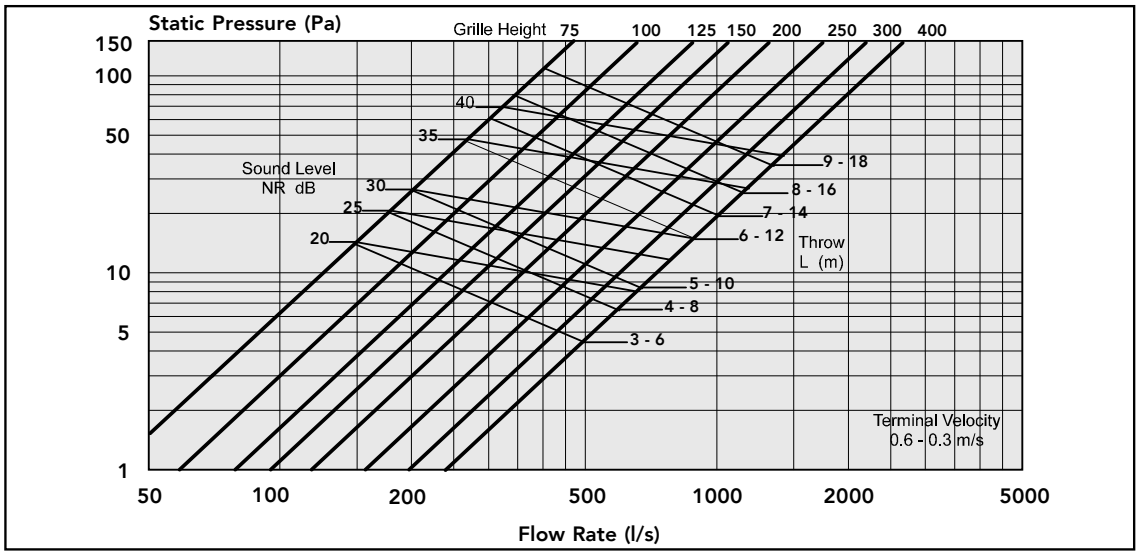


Engineering Graphs

Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

ASGF grille x 1000 mm long ("X" dim)



For return or exhaust air, the pressure drop and noise level may be calculated as follows.

Pressure drop

Pdra = P_d x 1.2

Noise level

NR_{ra} = NR + 8

These graphs are for selection only and should not be used for commissioning

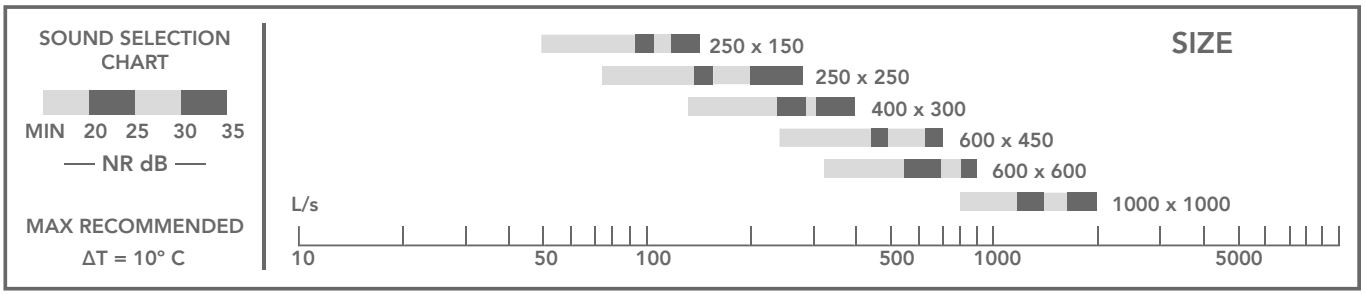
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 12" x 8" (300mm x 200mm) standard 15° deflection grille, the ordering code would be **ARG1824.** (When ordering it is not necessary to include the periods [..])

Selection guide



Product size numbers

		"Y" SIZE										
"Type"	"X" Size	14 (350)	16 (400)	18 (450)	20 (500)	24 (600)	30 (750)	36 (900)				Colour
ARG	**14** (350)											Powdercoated white
ARGF (with filter)	**16** (400)											
	18 (450)											
	20 (500)											
	24 (600)											

Special sizes

Special colours

Description

The 1.31 (ARG) grilles are designed for use in exhaust or return air situations, and may be mounted in a wall or ceiling. This grille is an attractive, robust unit manufactured from aluminium extrusion and powder coated to provide a long lasting finish.

The core is removable as standard for "Y" sizes up to and including 1000mm. Standard finish is white electrostatic powdercoat. There are also 15 other colours to choose from at no additional cost. Contact your local Bradflo branch for any special requirement you may have.

Air Filtration

A filter is offered as a standard option in removable core grilles. This filter is easily removed for cleaning, easy access or replacement.

General Description

The filter media is manufactured in a synthetic nonwoven material. It offers low air resistance, long life and satisfactory dust extraction efficiency with particular emphasis on the collection of fluff, linters and pollens.

Physical Properties of filter material

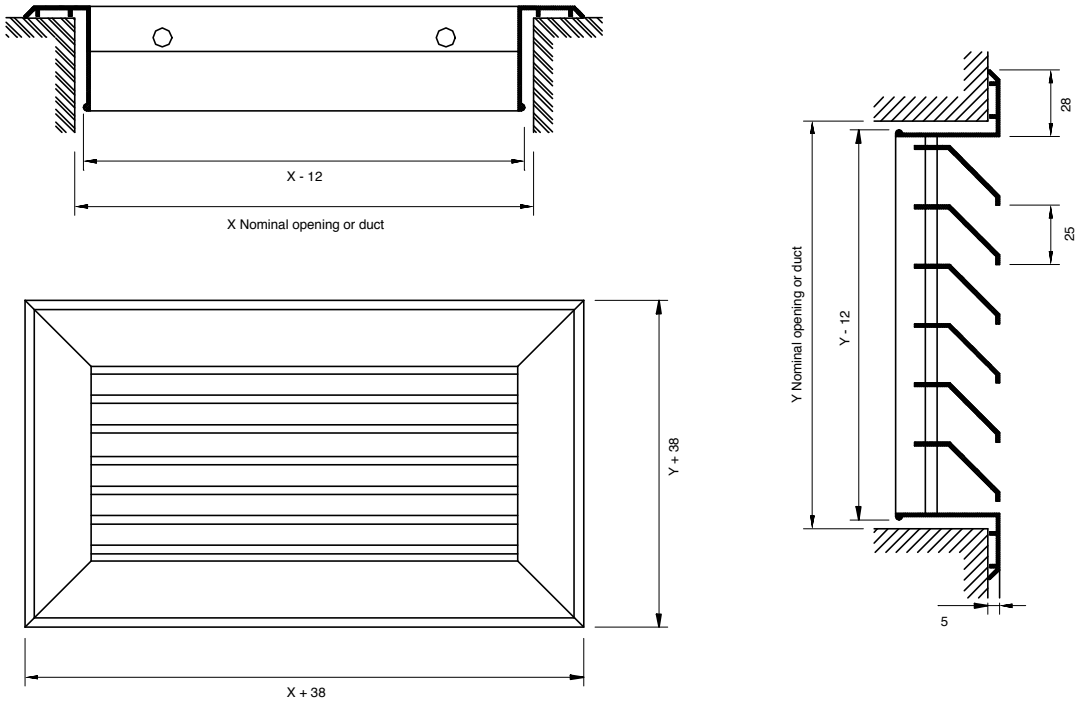
Temperature resistance: 120o C constant.

Fire resistance: Manufactured in fire retardent resin system.

Performance

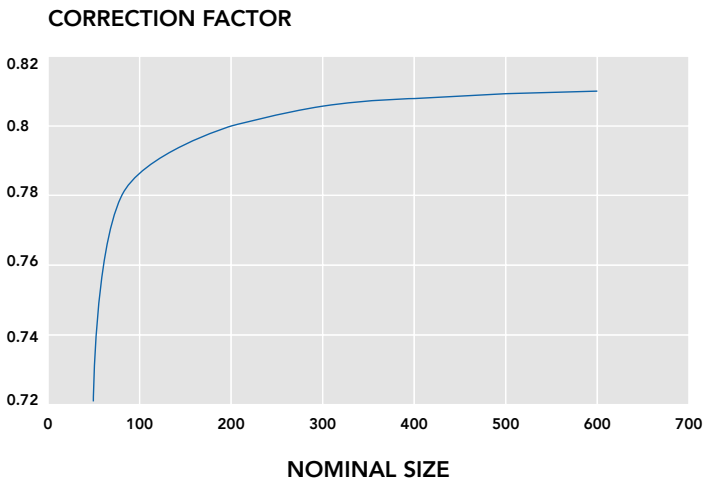
When tested to AS1132-1973 methods 2 and 4 the following results were obtained. Initial resistance at 1.8 m/s was 27 Pa. When loaded to a final resistance of 125 Pa the average resistance was found to be 53.7% and the dust holding capacity 290 g/m2.

Note! AS1132 method 4 uses test dust #4.



Free Area Factor

To calculate the free area, the grilles' nominal area is multiplied by f_1 where f_1 is a correction factor and is determined by the graph.



FREE AREA OF ARG GRILLE (M^2)

Y/X	250	300	400	600	750	900	1000	1200
150	0.026	0.031	0.041	0.046	0.062	0.092	0.013	0.123
200	0.047	0.056	0.075	0.084	0.113	0.169	0.188	0.225
300	0.057	0.069	0.092	0.103	0.138	0.207	0.230	0.276
450	0.089	0.107	0.143	0.160	0.214	0.321	0.356	0.428
600	0.121	0.145	0.193	0.217	0.289	0.434	0.482	0.579
900	0.184	0.220	0.294	0.331	0.044	0.661	0.735	0.882
1000	0.205	0.246	0.327	0.368	0.491	0.737	0.819	0.982
1200	0.247	0.296	0.395	0.444	0.592	0.888	0.987	1.184

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

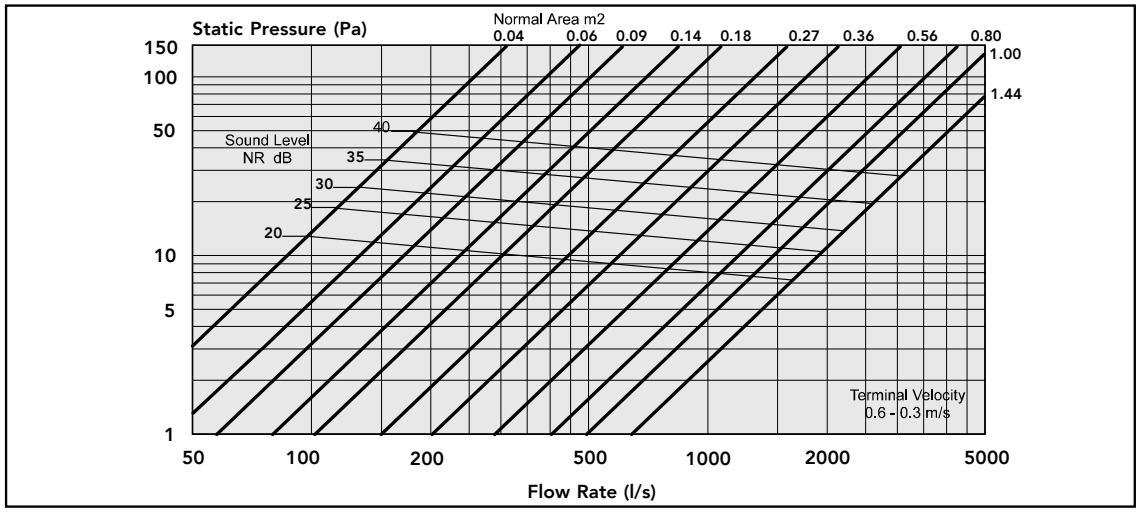
$L_w = NR + K_{ok}$

Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
All	+5	+7	+4	-3	-8	-12	-15
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Performance data



These graphs are for selection only and should not be used for commissioning

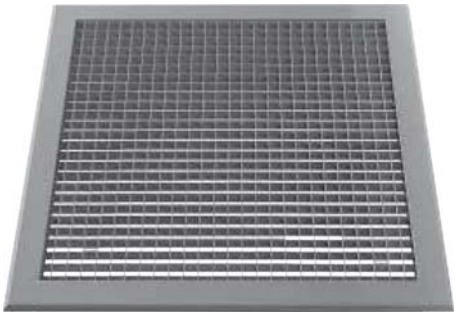
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

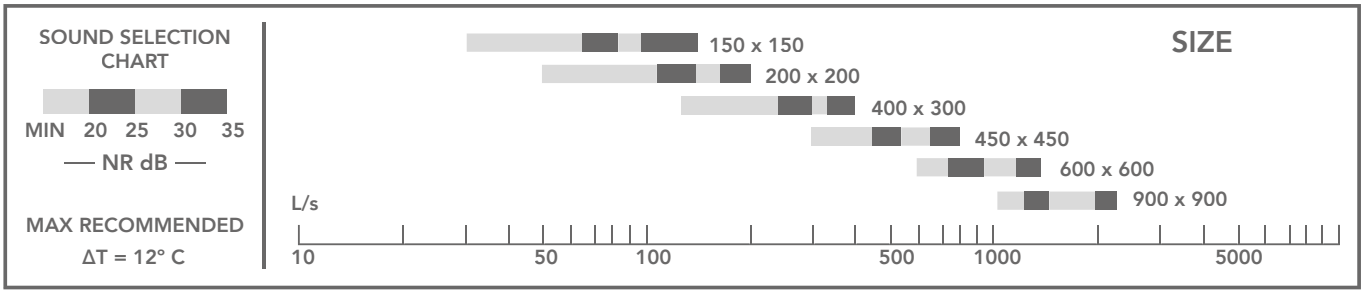
Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 18" x 24" (450 x 600) egg crate grille, hinged with a filter, the ordering code would be **AEHF1824**. {When ordering it is not necessary to include the periods [..]) Special sizes are available upon request.

Contact your nearest Bradflo office.



Selection guide



Product size numbers

"Type"	"X" Size	14 (350)	16 (400)	18 (450)	20 (500)	24 (600)	30 (750)	36 (900)				Colour
AEC (with filter)	**6"** (150)											Powdercoated white
AECS (Ceiling Clip)	**8"** (200)											
AECRC (Removeable core)	**10"** (250)											
AEHF (Hinged with filter)	**12"** (300)											
AEH (Hinged with no filter)	**14"** (350)											
AECRI (Removeable inner)	**16"** (400)											
AECR (Removeable grille)	**18"** (450)											
	20" (500)											
Special sizes	**24"** (600)											Special colours

Description

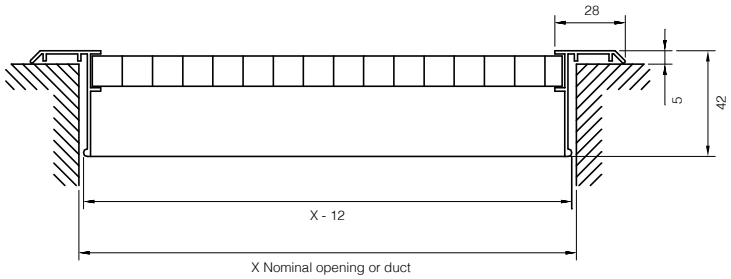
The 1.32 (AEC) grilles are designed for use in exhaust or return air situations and may be mounted in walls or ceilings. They are not to be used for floor mounting.

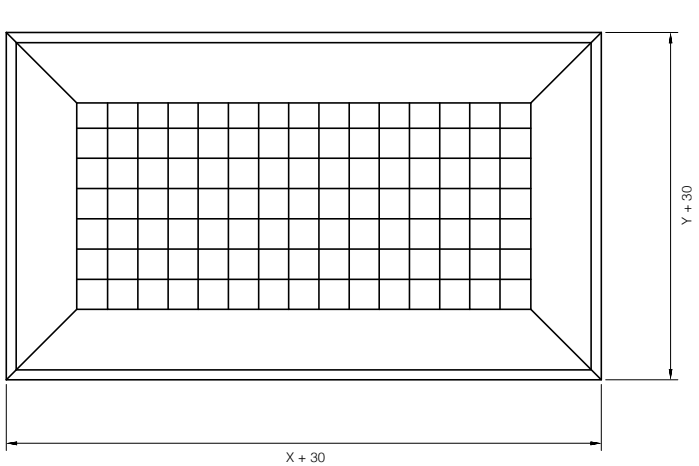
The grilles have extruded aluminium frames with a 13mm x 13mm x 13mm aluminium egg crate core. Hinged models are available as standard and provide easy access to filters or other equipment. Grilles up to 600mm x 600mm are available with spring retaining clip for fast and efficient mounting in ceilings.

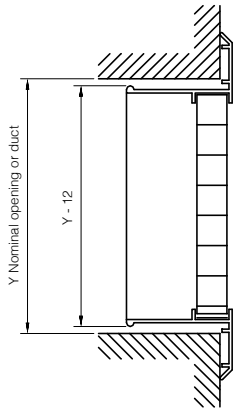
The free area of the grille is >90% of the nominal area, providing maximum air flow and very low noise levels.

Finish

Standard finish is white electrostatic powdercoat. There are also 15 other colours to choose from at no additional cost. Contact your local Bradflo branch for any special requirement you may have.







Air Filtration

A filter is offered as a standard option in removable and hinged core grilles. This filter is easily removed for cleaning, easy access or replacement.

General Description

The filter media is manufactured in a synthetic nonwoven material. It offers low air resistance, long life and satisfactory dust extraction efficiency with particular emphasis on the collection of fluff, linters and pollens.

Physical Properties of filter material

Performance

When tested to AS1132-1973 methods 2 and 4 (Report No. 1558/95), the following results were obtained. Initial resistance at 1.8 m/s was 35 Pa. When loaded to a final resistance of 250 Pa the average resistance was found to be 85.3% and the dust holding capacity 411 g/m2.

Note! AS1132 method 4 uses test dust #4.

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

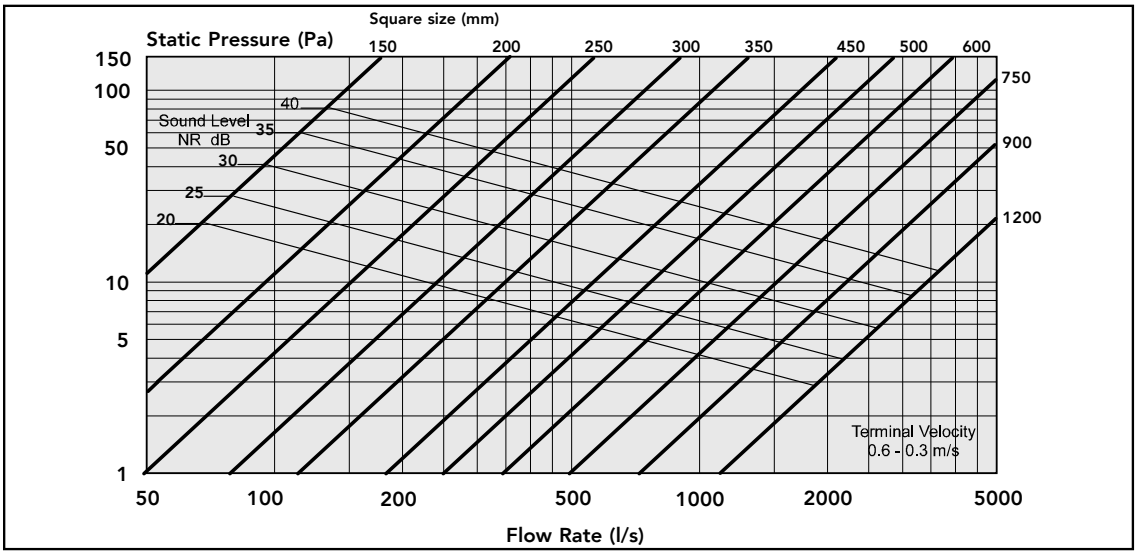
$L_w = NR + K_{ok}$

Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
All	+14	+14	+6	-8	-5	-4	-8
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Performance data



These graphs are for selection only and should not be used for commissioning.

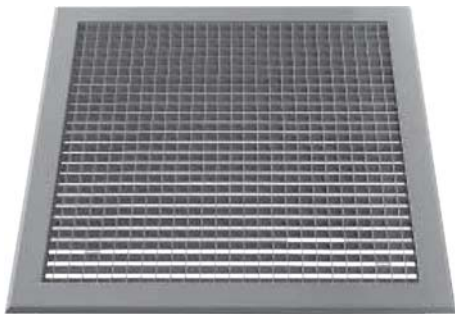
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

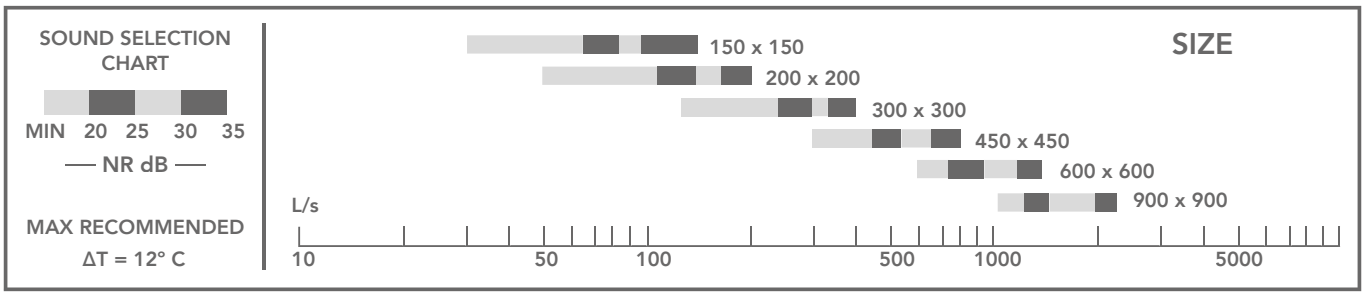
Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 18" x 24" (450 x 600) egg crate grille, hinged with a filter, the ordering code would be **AELHF1824**. {When ordering it is not necessary to include the periods [..])Special sizes are available upon request.

Contact your nearest Bradflo office.



Selection guide



Product size numbers

"Type"	"X" Size	6" (150)	8" (200)	10" (250)	12" (300)	14" (350)	16" (400)	18" (450)	20" (500)	24" (600)	28" (700)	36" (900)	40" (1000)	Colour
AECL (Fixed core)	**6"** (150)													Powdercoated white
AECLS (Ceiling Clip)	**8"** (200)													
AECLRC (Removable core)	**10"** (250)													
AELHF (Hinged with filter)	**12"** (300)													
AELH (Hinged with no filter)	**14"** (350)													
AECLRI (Removable inner)	**16"** (400)													
AECLR (Removable grille)	**18"** (450)													
	20" (500)													
Special sizes	**24"** (600)													Special colours

Description

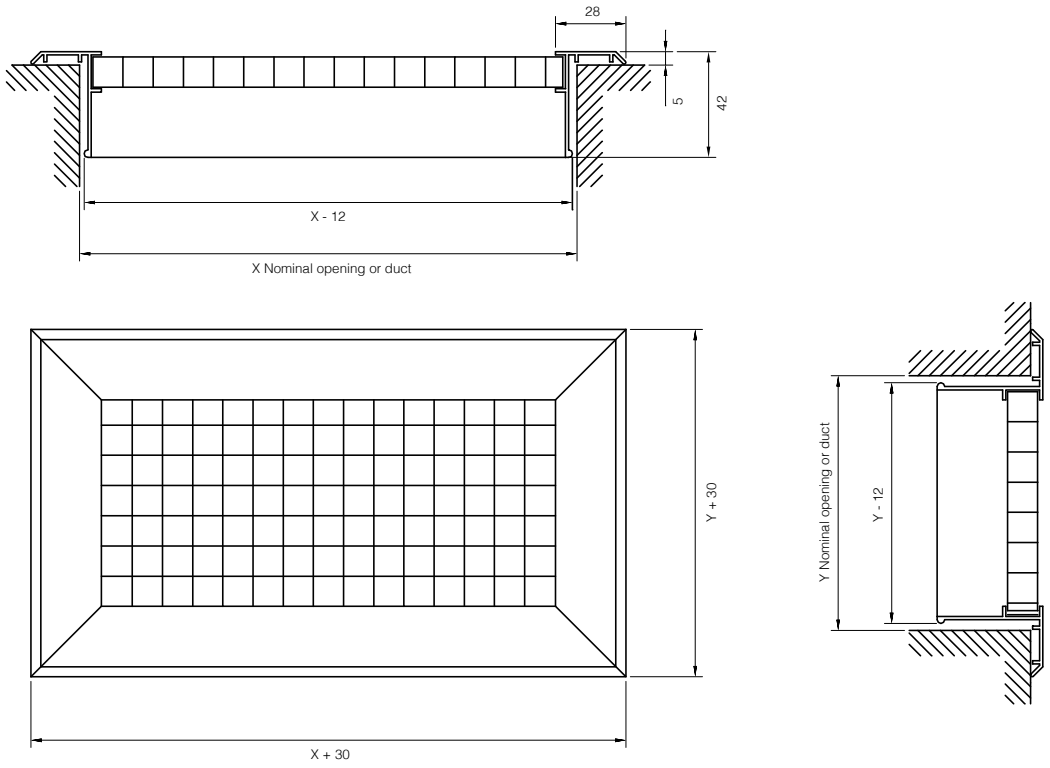
The 1.33 (AECL) grilles are designed for use in exhaust or return air situations and may be mounted in walls or ceilings. They are not to be used for floor mounting. The grilles have extruded aluminium frames with a 15mm x 15mm x 13mm aluminium egg crate core. Hinged models are available as standard and provide easy access to filters or other equipment. Grilles up to 600mm x 600mm are available with spring retaining clip for fast and efficient mounting in ceilings.

The free area of the grille is >90% of the nominal area, providing maximum air flow and very low noise levels.

Finish

Standard finish is white electrostatic powdercoat. There are also 15 other colours to choose from at no additional cost. Contact your local Bradflo branch for any special requirement you may have.

Performance data



Air Filtration

A filter is offered as a standard option in removable and hinged core grilles. This filter is easily removed for cleaning, easy access or replacement.

General Description

The filter media is manufactured in a synthetic nonwoven material. It offers low air resistance, long life and satisfactory dust extraction efficiency with particular emphasis on the collection of fluff, linters and pollens.

Physical Properties of filter material

Performance

When tested to AS1132-1973 methods 2 and 4 the following results were obtained. Initial resistance at 1.8 m/s was 35 Pa When loaded to a final resistance of 250 Pa the average resistance was found to be 85.3% and the dust holding capacity 411 g/m2.

Note! AS1132 method 4 uses test dust #4.

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_W

The generated sound power level L_W dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

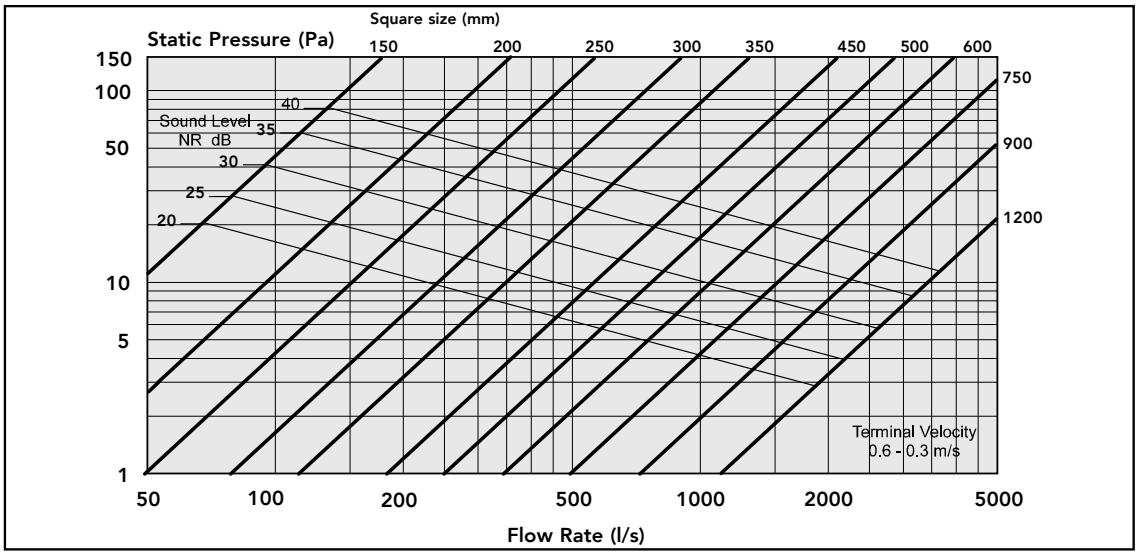
$$L_W = NR + K_{ok}$$

Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
All	+14	+14	+6	-8	-5	-4	-8
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Performance data



These graphs are for selection only and should not be used for commissioning

Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

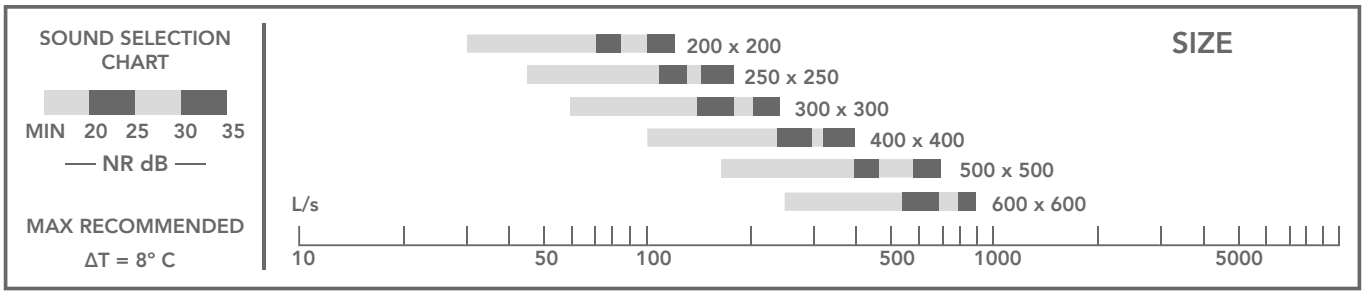
Type..X..Y (X & Y are the nominal neck sizes of the grille, see overleaf.)

Example: If your requirement is for a 12" x 12" (300mm x 300mm) curved blade (2 way blow) grille, the ordering code would be ACB2B1212. {When ordering it is not necessary to include the periods [..])

Specials:

Special sizes are available upon request. Please contact your nearest Bradflo office.

Selection guide



Product size numbers

"Type"	"X" Size	6" (150)	8" (200)	10" (250)	12" (300)	14" (350)	16" (400)	18" (450)	20" (500)	24" (600)	Colour
ACB2B (2 way blow)	**06** (150)										
ACBMB (Multi blow)	**08** (200)										
	10 (250)										
	12 (300)										
	14 (350)										Powdercoated white Special colours
	16 (400)										
	18 (450)										
	20 (500)										
Special sizes	**24** (600)										

Description

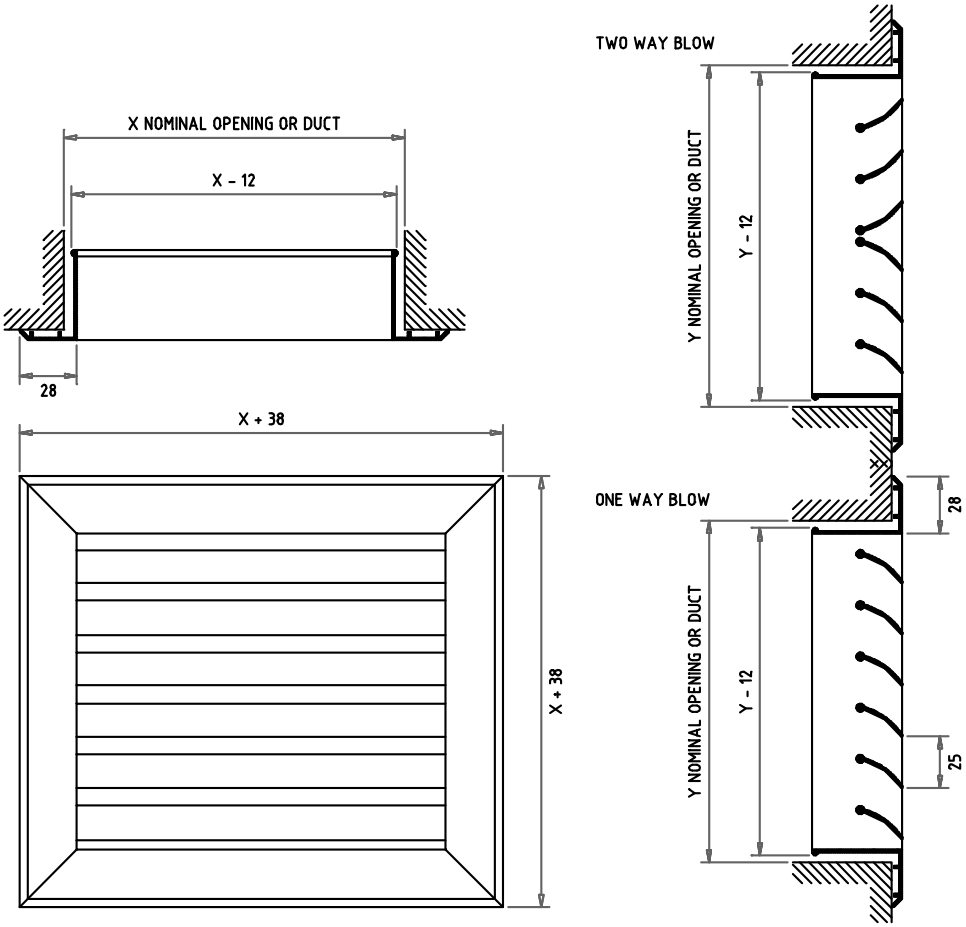
Model 1.41 (ACB) grilles have been designed for supply air situations and are especially suited for evaporative cooling systems. These grilles are available in 1, 2, 3 or 4 way air flow patterns. The ACB2B may be configured to a 1 or 2 way blow and the ACBMB may be configured to all directions above. Note that when using a neck reducer (ANAG) the configuration of the ACBMB must be carried out prior to fitting the neck reducer. The blade profiles have been designed to provide the most efficient operation at the lowest possible sound level.

The main components of the grille are manufactured from extruded aluminium.

Finish

Standard finish is white electrostatic powdercoat. There are also 15 other colours available at no additional cost.

Contact your local Bradflo branch for any special requirement you may have.

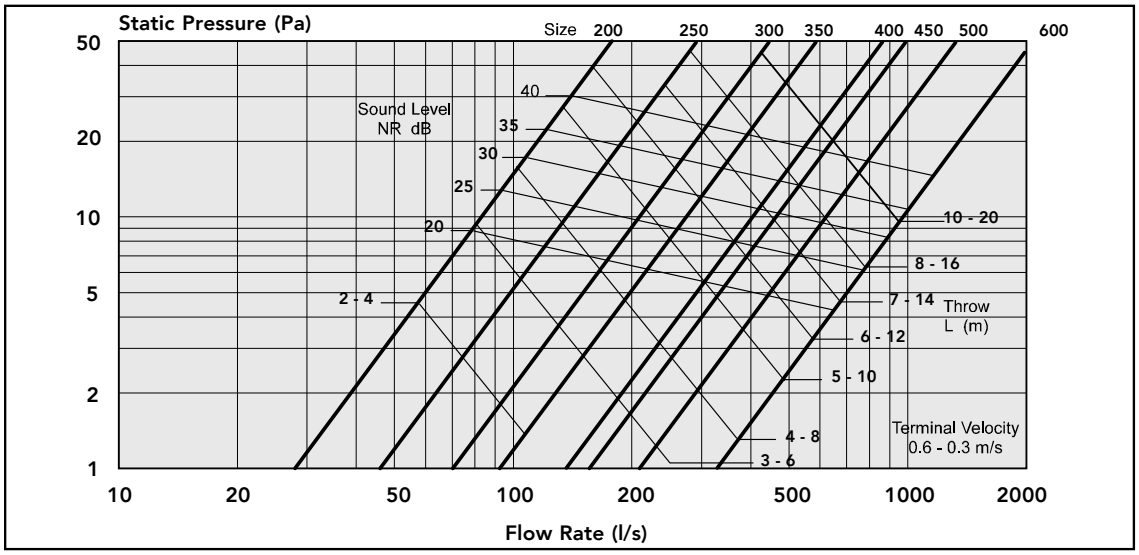


Engineering Graphs

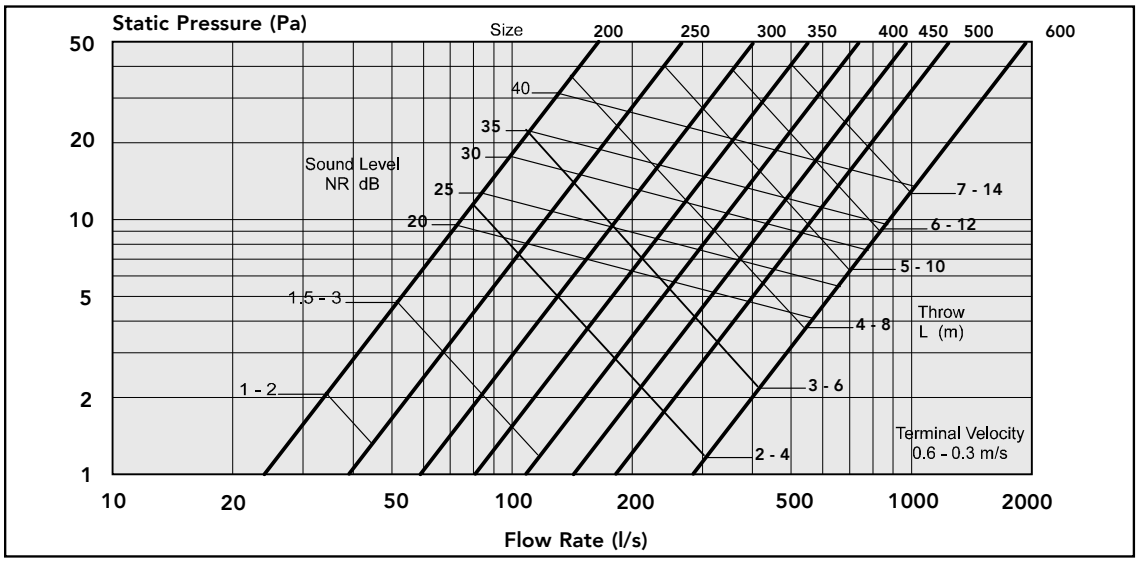
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

Performance data (1-way blow)



Performance data (2-way blow)



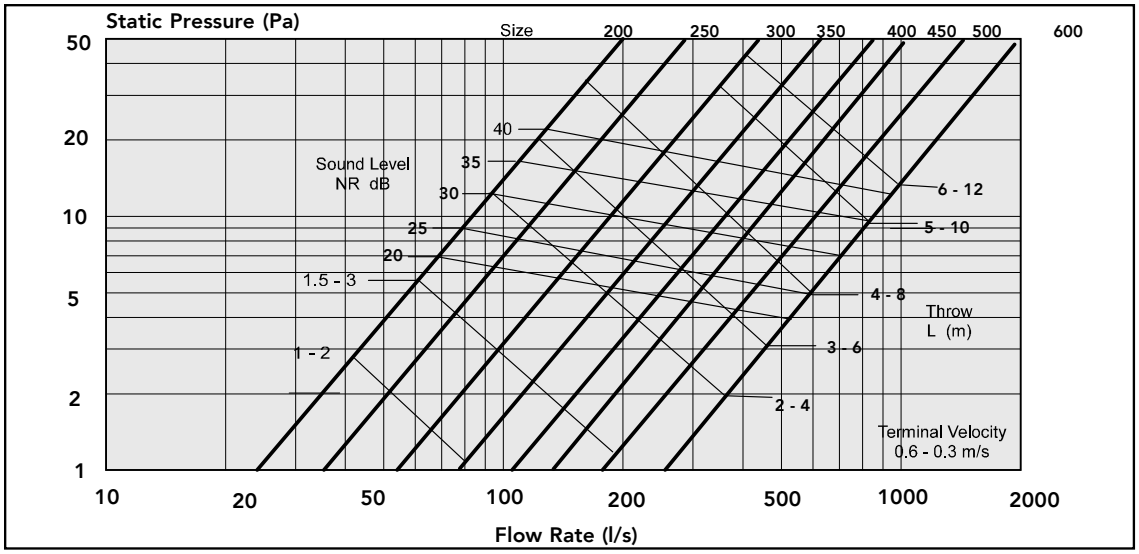
These graphs are for selection only and should not be used for commissioning

Engineering Graphs

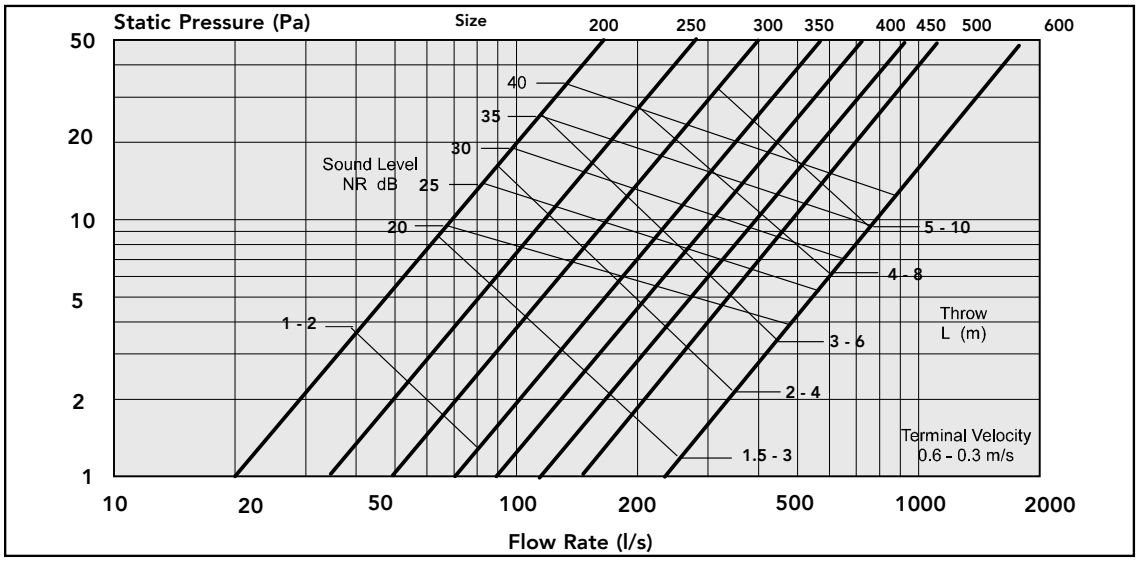
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

Performance data (3-way blow)

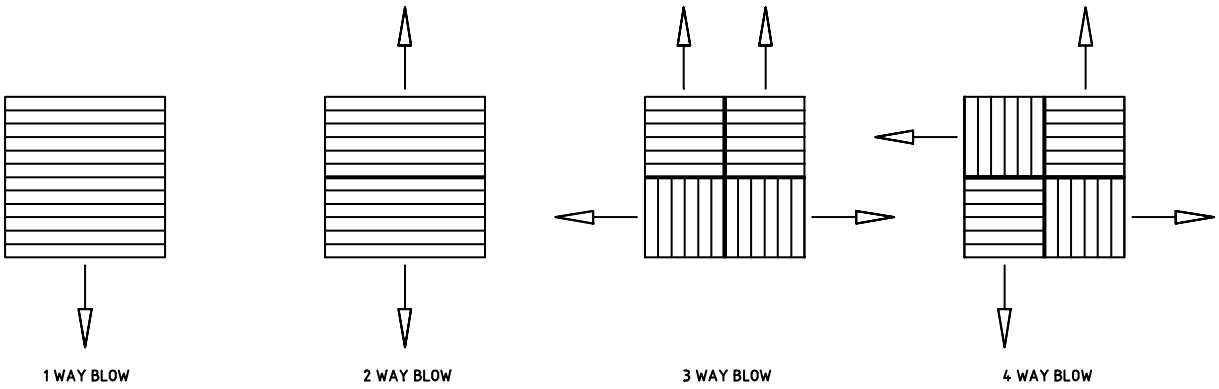


Performance data (4-way blow)



These graphs are for selection only and should not be used for commissioning

Air pattern configuration



Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

Correction table for grilles of length other than 1 metre.

Frequency (cycles per second)							
Size	125	250	500	1000	2000	4000	8000
All	+16	+14	+12	+6	-1	-6	-8
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Air pattern

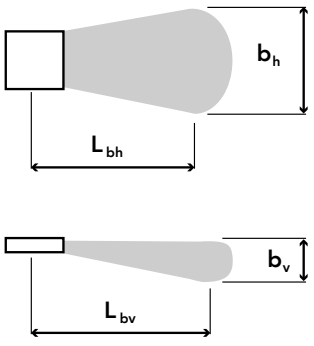
(with isothermal air supply)

$b_h = L_{0.3} \times 0.03$

$L_{bh} = L_{0.3} \times 0.5$

$b_v = L_{0.3} \times 0.05$

$L_{bv} = L_{0.3} \times 0.4$



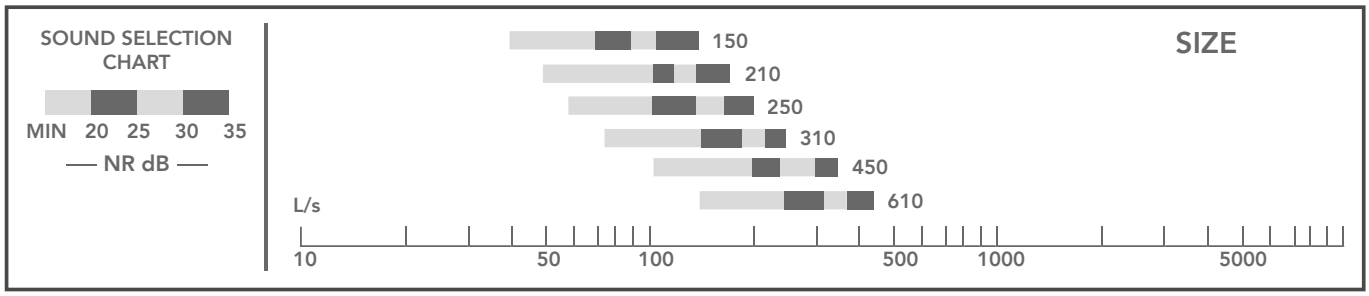
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X..Y (X & Y are the nominal neck sizes of the register, see over leaf)

Example: If your requirement is for a 24" x 12" (600 x 300) aluminium door register, the ordering code would be **AADR2412**. {When ordering it is not necessary to include the periods [..])

Selection guide



Product size numbers

"Type"	"X" Size	6" (150)	8" (200)	10" (250)	12" (300)	16" (400)	18" (450)	20" (500)	22" (550)	24" (600)	Colour
AADR	**12"** (300)										
	18" (450)										
	24" (600)										Natural Anodised

Special sizes

Engineering Graphs

The 1.52 (AADR) door registers have horizontally mounted blades firmly fixed into a frame. To ensure a pleasing appearance an adjustable rear frame covers the opening on the opposite side of the door. A unique spring clip method eliminates the need for screws of any sort when fixing the register to the door.

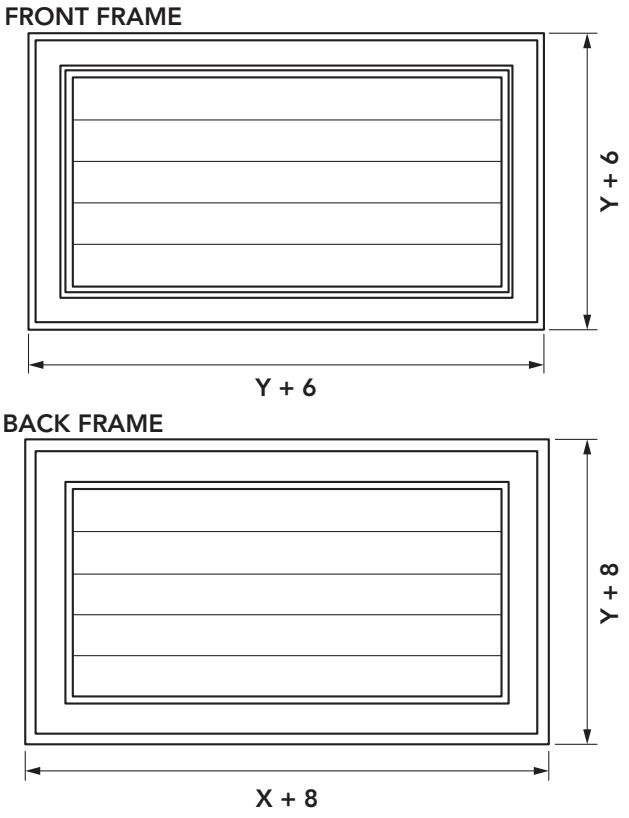
All registers are manufactured from natural anodised aluminium extrusion and will fit doors from 30mm to 45mm thick. The blade profiles ensure maximum air flows at minimum sound levels.

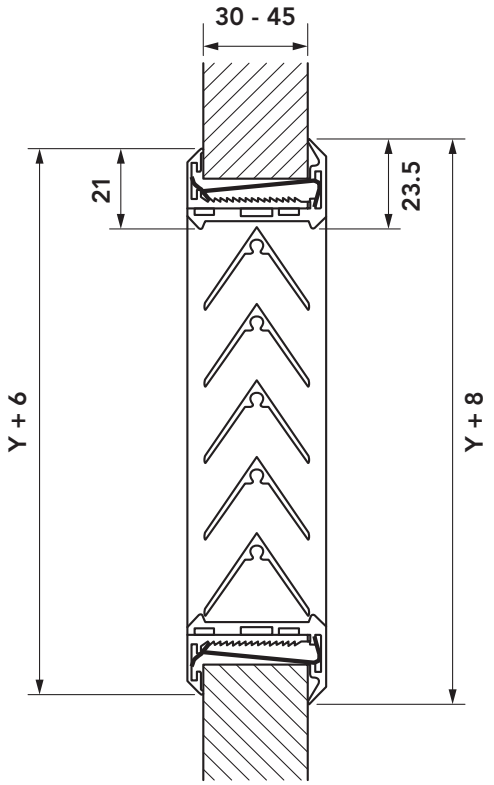
Finish

Standard finish is natural anodised. There are also 15 other colours to choose from at no additional cost.

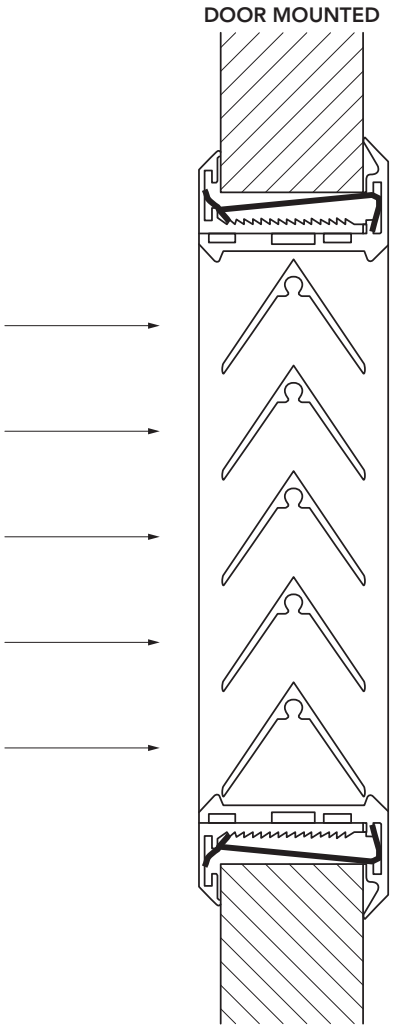
Contact your local Bradflo branch for any special requirement you may have.

Design dimensions





Installation



Free Area Factor

To calculate the free area, the grilles' nominal area is multiplied by f_1 where f_1 is a correction factor and is determined by the graph.

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

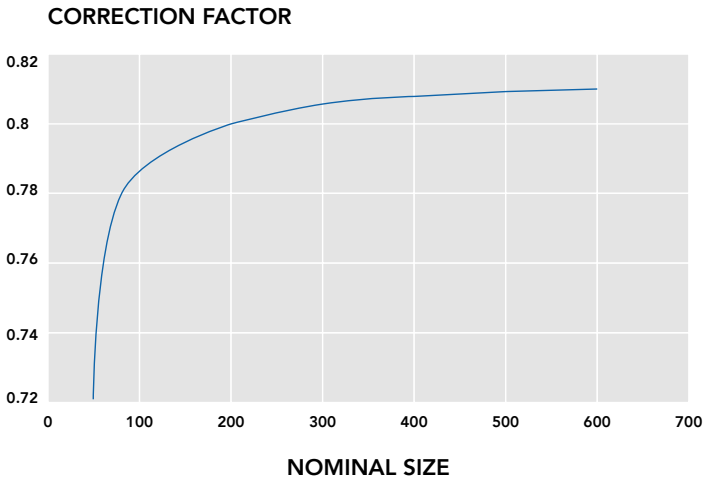
$L_w = NR + K_{ok}$

Opening Size	Free Area
600 x 150	0.062
600 x 210	0.093
600 x 250	0.114
600 x 310	0.145
600 x 450	0.216
600 x 610	0.300

Correction table for grilles of length other than 1 metre.

Frequency (cycles per second)							
Size	125	250	500	1000	2000	4000	8000
All	+15	+14	+12	+7	+1	-4	-6
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}



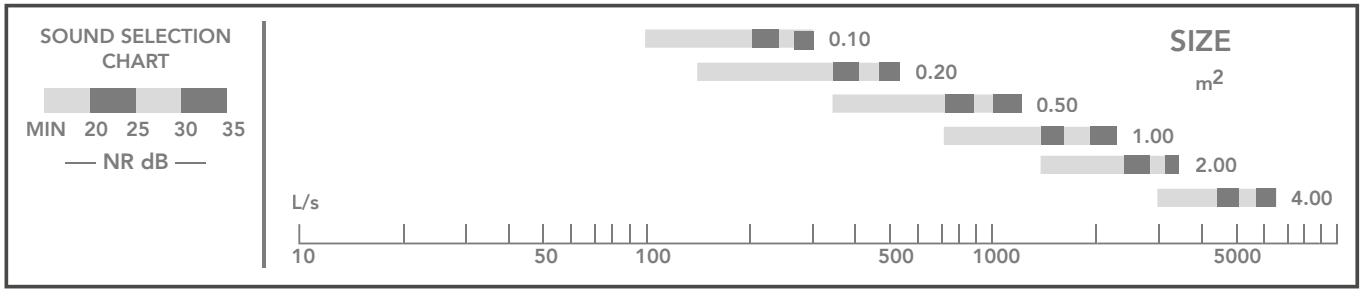
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X..Y (X & Y are the nominal neck sizes of the louvre, see overleaf.)

Example: If your requirement is for a 24" x 12" (600 x 300) slimline flange mounted weather louvre, the ordering code would be **AWLSF2412**. {When ordering it is not necessary to include the periods [..])

Selection guide



Product size numbers

"Type"	"X" Size	06 (150)	08 (200)	10 (250)	12 (300)	16 (400)	18 (450)	20 (500)	24 (600)			Colour
AWLSF	**06** (150)											
	08 (200)											
	10 (250)											
	12 (300)											Powdercoated white
	16 (400)											
	18 (450)											Special colours
	20 (500)											
	24 (600)											

Special sizes

Description

The 1.64 slimline weather louvre has been designed to ensure a low ingress of water whilst maintaining maximum air flow at low noise levels. The weather louvre may be used for supply or exhaust applications.

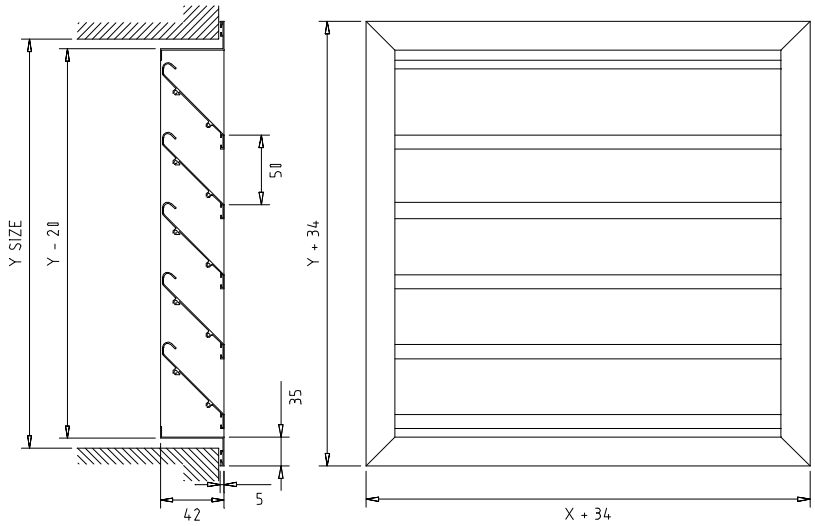
Standard weather louvre's are manufactured with either flanged frame for surface mounting or channel frame for recess mounting. Blades and frames are manufactured from extruded aluminium.

Finish

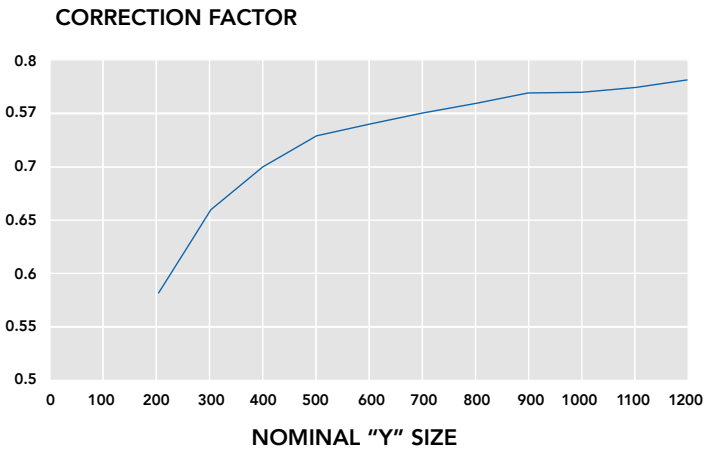
Standard finish is natural anodised. There are also 15 other colours to choose from. Contact your local Bradflo branch for any special requirement you may have.

Design and mm dimensions

Most sizes can be manufactured, however, contact your nearest Bradflo branch with your special sizes. Bird wire is fitted to the rear of the weather louvre as standard.



These graphs are for selection only and should not be used for commissioning



To calculate the free area , the louvre's nominal area is multiplied by f_1 where f1 is a correction factor and is determined by the graph above.

2. Diffusers

Ordering procedure

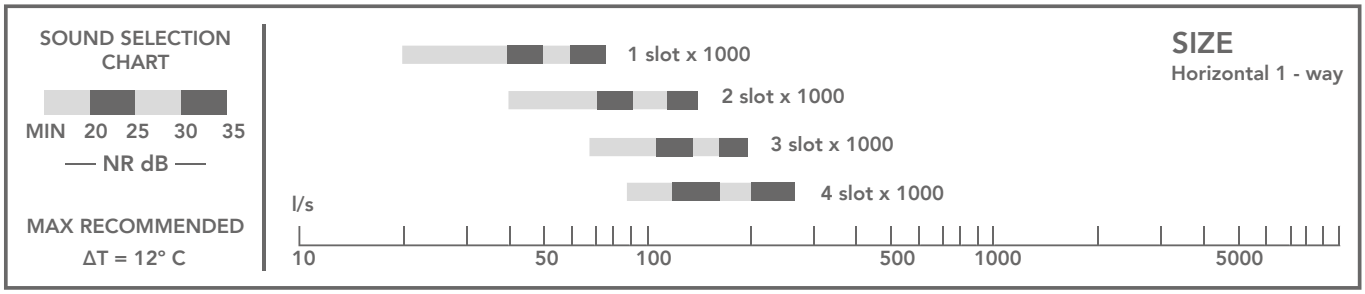
Using the chart below select your requirement and substitute the underscored text below.

Type..X..S (X & Y are the nominal neck sizes of the diffuser, see overleaf.) For corners the ordering code is **Type..S.**

Example: If your requirement is for a 2 slot linear diffuser with one end and 1200mm long, the ordering code would be **ALDA1E482.** {When ordering it is not necessary to include the periods [..]). For a 2 slot 90° corner the ordering code would be **ALDA902**.

Note! Other sizes are available. Please contact your nearest Bradflo office.

Selection guide



Product size numbers

		Number of slots, "S"										
Type	**"X" Size**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**			**Colour**
ALDA2E (2 ends)	**24** (600)											Powder coat white
ALDA1E (1 end)	**36** (900)											Black internal blades
ALDA0E (0 ends)	**48** (1200)											
	72 (1800)											
	108 (2700)											
ALDAC90 (90⁰ corner)												
ALDAC135 (135⁰ corner)												
												Special colours

Special sizes

Description

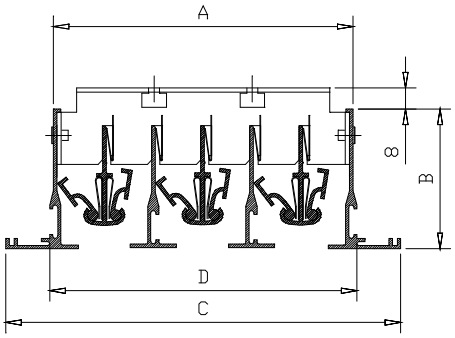
The 2.12 (ALDA) linear diffuser is a versatile product designed for supply, return or exhaust air systems. The design incorporates concealed aligning keyways for continuous application. Centre T-rails are easily removed to simplify installation.

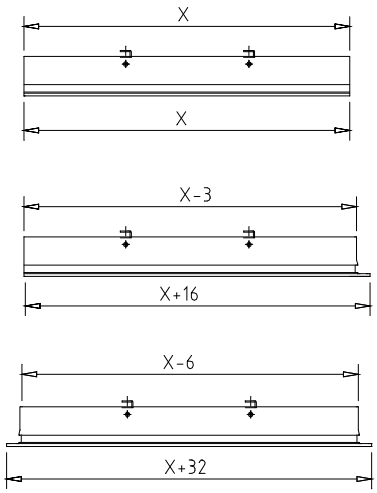
The blades are adjustable to facilitate an air pattern through 180°. Maximum length of each individual piece is 2700mm. Please discuss your requirement with your nearest Bradflo office.

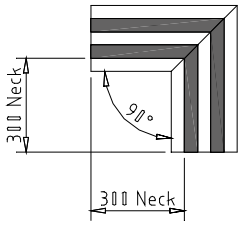
Finish

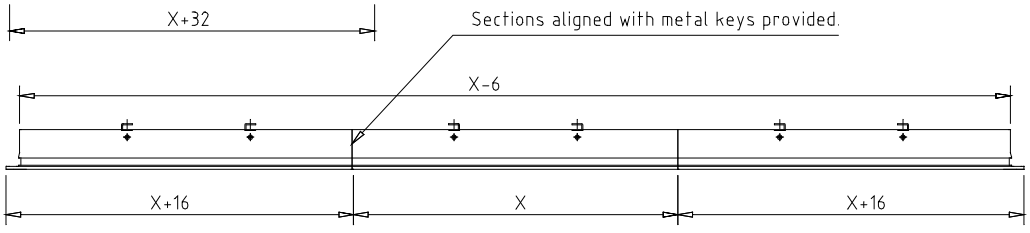
Standard finish is natural anodised or white electrostatic powdercoat. There are also 15 other colours to choose from at no additional cost. Contact your local Bradflo branch for any special requirement you may have.

Slot	A	B	C	D
1	40	53	77	50
2	78	53	115	88
3	116	53	153	126
4	154	53	192	164
5	192	53	230	202
6	230	53	268	240
7	269	53	306	279
8	307	53	344	317

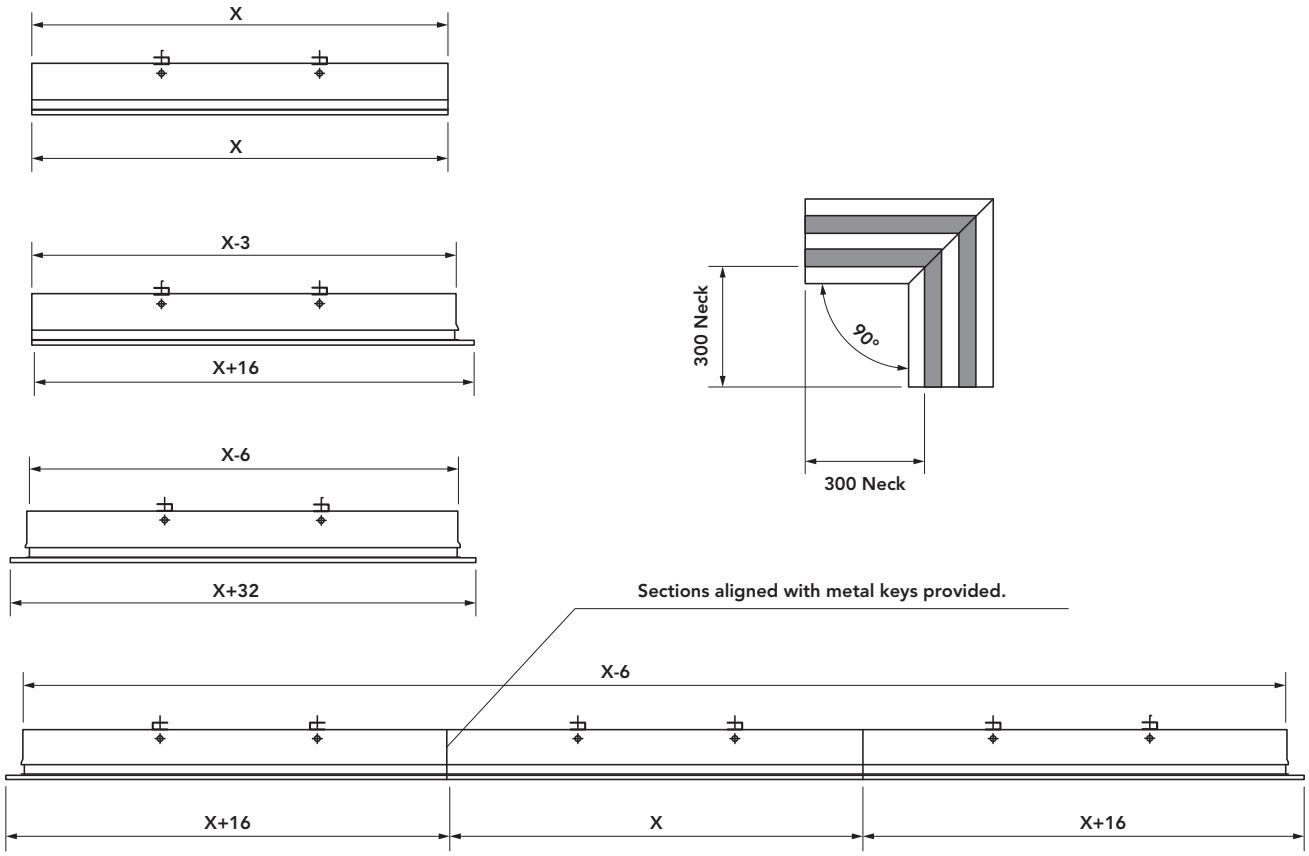








Description



Bradflo reserves the right to make changes to product without prior notice

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

	Frequency (cycles per second)						
No. Slots	125	250	500	1000	2000	4000	8000
1	+22	+12	+10	+6	+5	-2	-6
2	+23	+14	+10	+6	+5	-2	-6
3	+20	+15	+10	+6	+5	-1	-6
4	+21	+14	+10	+6	+5	0	-7
6	+21	+14	+10	+6	+5	0	-7
8	+20	+14	+10	+6	+5	-5	-6
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Air pattern

(with isothermal air supply)

$b_h = L_{0.3} \times 0.02 + \text{length}$

$L_{bh} = L_{0.3} \times 0.7$

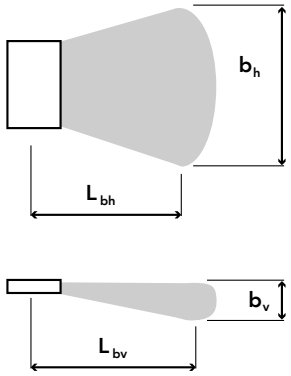
$b_v = L_{0.3} \times 0.07$

$L_{bv} = L_{0.3} \times 0.6$

Model 2.12 is a diffuser which provides variable air flow pattern controls by means of individually operated blades. This type of control does afford some degree of volume adjustment.

The design of the blades is such that noise generation is kept to a minimum.

Data shown in engineering graphs is for lengths of 1000 mm. For other lengths, refer to the correction tables below.



Correction tables

Diffuser length (m)	0.5	1	1.5	2	3
Add to NR value	-3	0	+2	+3	+5
Multiply throw by	0.7	1	1.25	1.4	1.55

Horizontal pattern

Diffuser length (m)	0.5	1	1.5	2	3
Add to NR value	-3	0	+2	+3	+5
Multiply throw by	0.7	1	1.2	1.4	1.5

Vertical pattern

Diffuser length (m)	0.5	1	1.5	2	3
Add to NR value	-3	0	+2	+3	+5

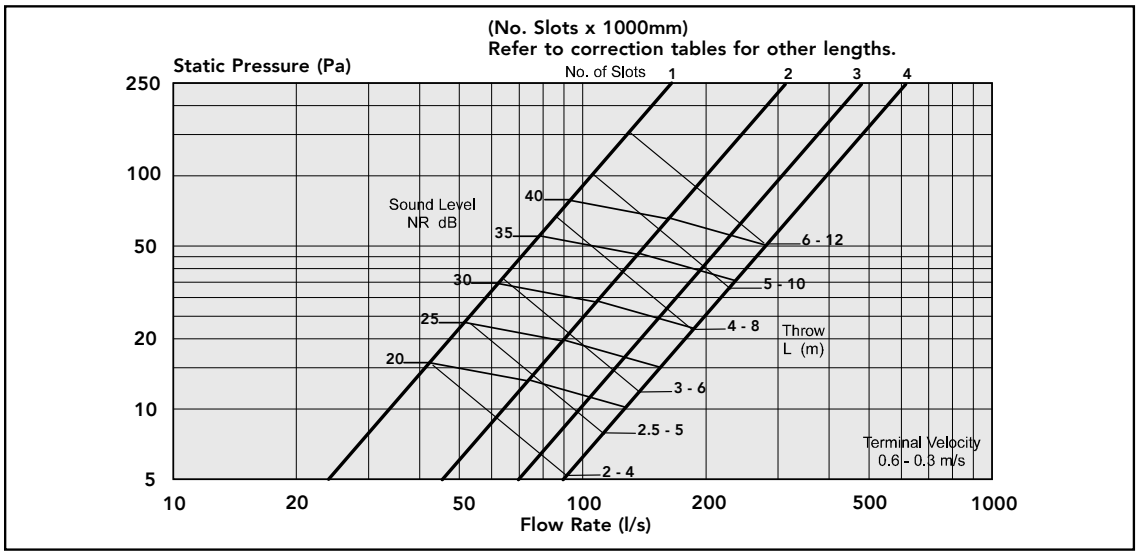
Return air

Engineering Graphs

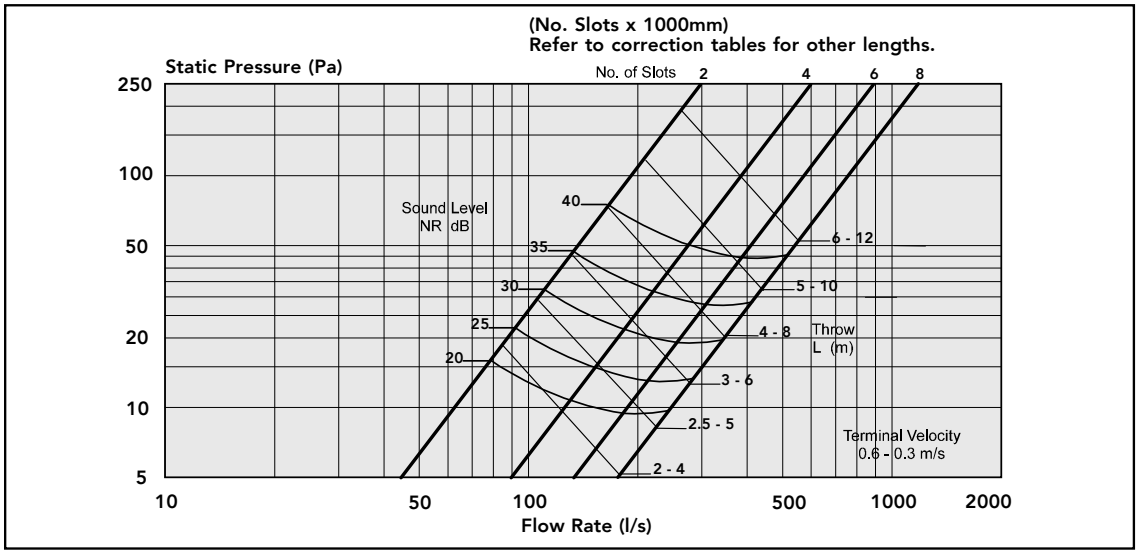
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

ALDA horizontal 1-way pattern



ALDA horizontal 2-way pattern



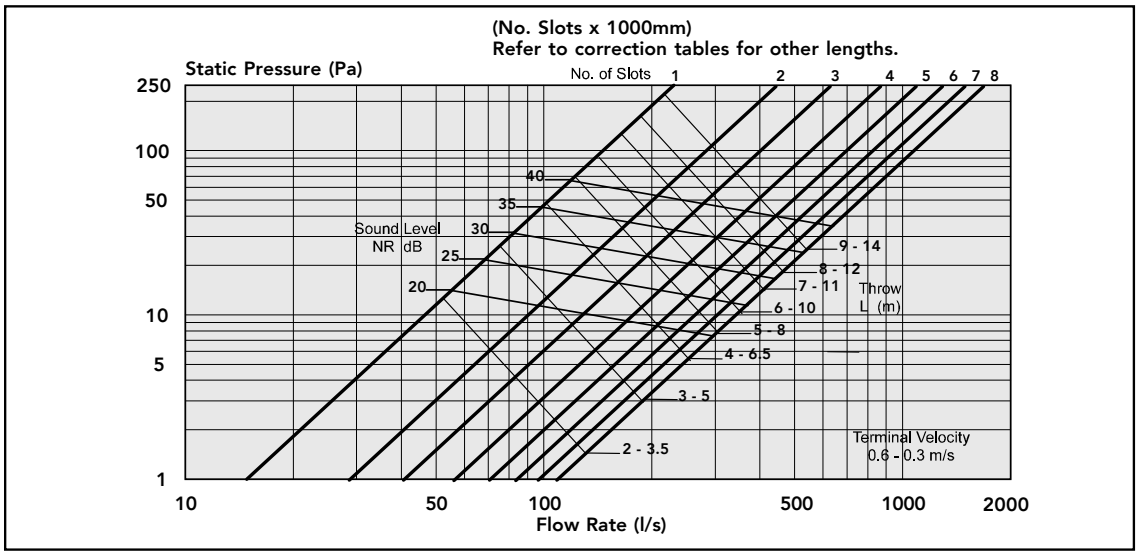
These graphs are for selection only and should not be used for commissioning

Engineering Graphs

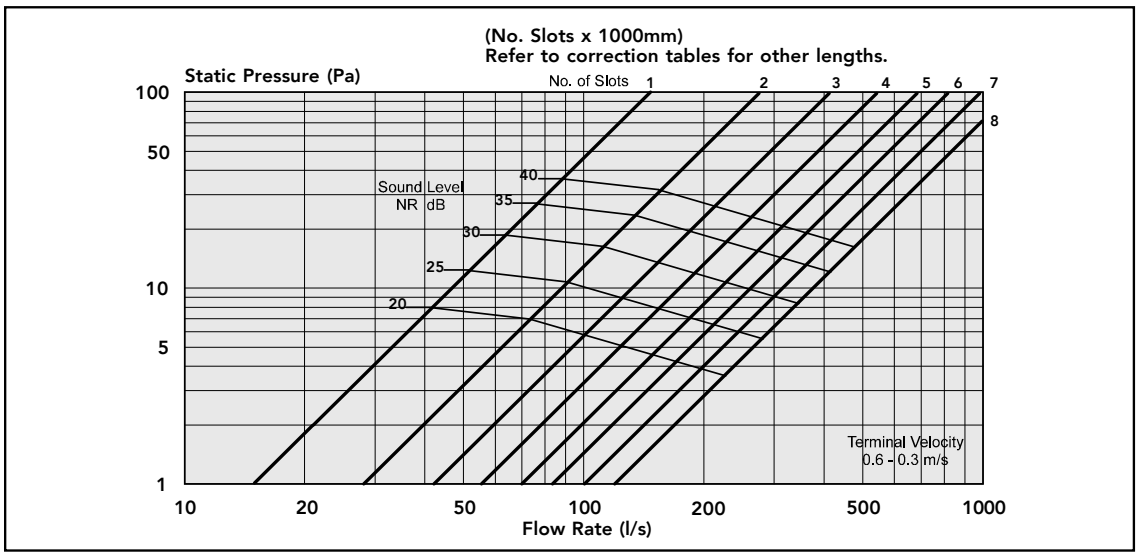
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s 0.30 m/s	0.30 m/s 0.15 m/s

ALDA vertical projection



ALDA return air



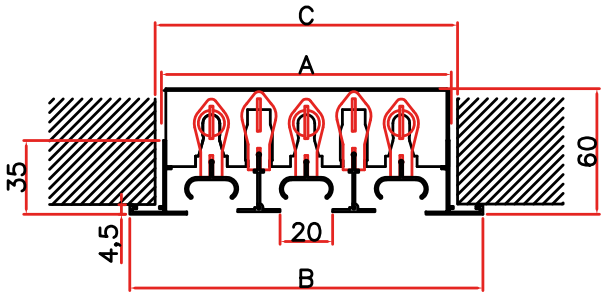
These graphs are for selection only and should not be used for commissioning

Description

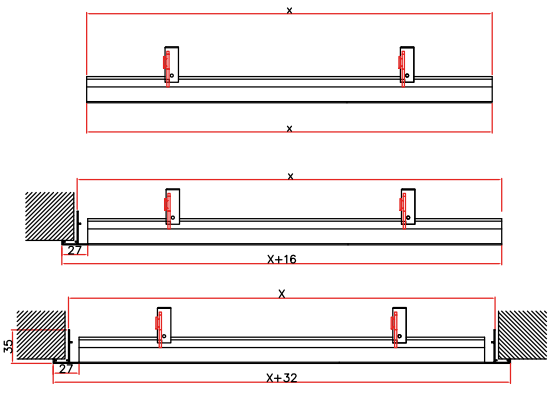
U-Blade Linear Diffuser

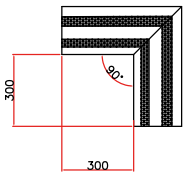
U Blade Linear diffusers are a versatile product designed for supply, return or exhaust air systems. The design incorporates concealed aligning keyways for continuous application. Centre T-rails are easily removed to simplify installation. The blades are adjustable to facilitate an air pattern through 180°.

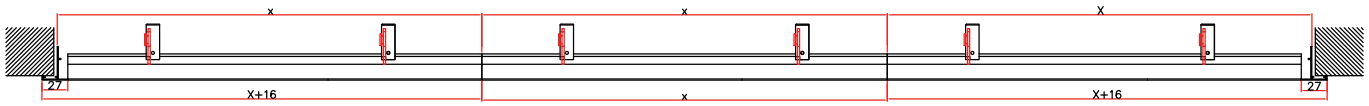
Maximum length of each individual piece is 2700mm.



Slots	A	B	C
1	40	72	50
2	80	112	90
3	120	152	130
4	160	192	170
5	200	232	210
6	240	272	250
7	280	312	290
8	320	352	330







Description

Air pattern

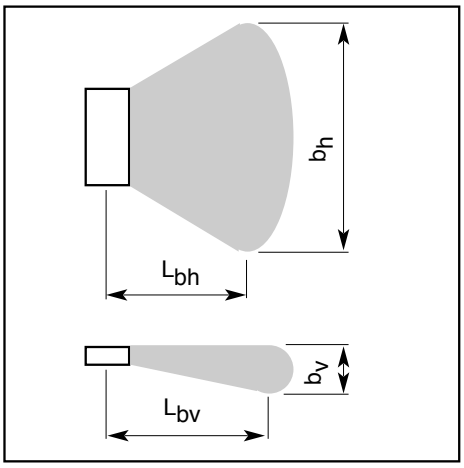
(with isothermal air supply)

$b_h = L_{0.3} \times 0.02 + \text{length}$

$L_{bh} = L_{0.3} \times 0.7$

$b_v = L_{0.3} \times 0.07$

$L_{bv} = L_{0.3} \times 0.6$



Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$$L_w = NR + K_{ok}$$

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
1	+22	+12	+10	+6	+5	-2	-6
2	+23	+14	+10	+6	+5	-2	-6
3	+20	+15	+10	+6	+5	-1	-6
4	+21	+14	+10	+6	+5	0	-7
6	+21	+14	+14	+6	+5	0	-7
8	+20	+14	+10	+6	+5	-5	-6
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Data shown in engineering graphs is for lengths of 1000 mm. For other lengths, refer to the correction tables below.

Correction table

Horizontal Pattern

Grille length (m)	0.5	1	1.5	2	3
Add to NR value	-3	0	+2	+3	+5
Multiply throw by	0.7	1	1.25	1.4	1.55

Vertical Pattern

Grille length (m)	0.5	1	1.5	2	3
Add to NR value	-3	0	+2	+3	+5
Multiply throw by	0.7	1	1.25	1.4	1.55

Return Air

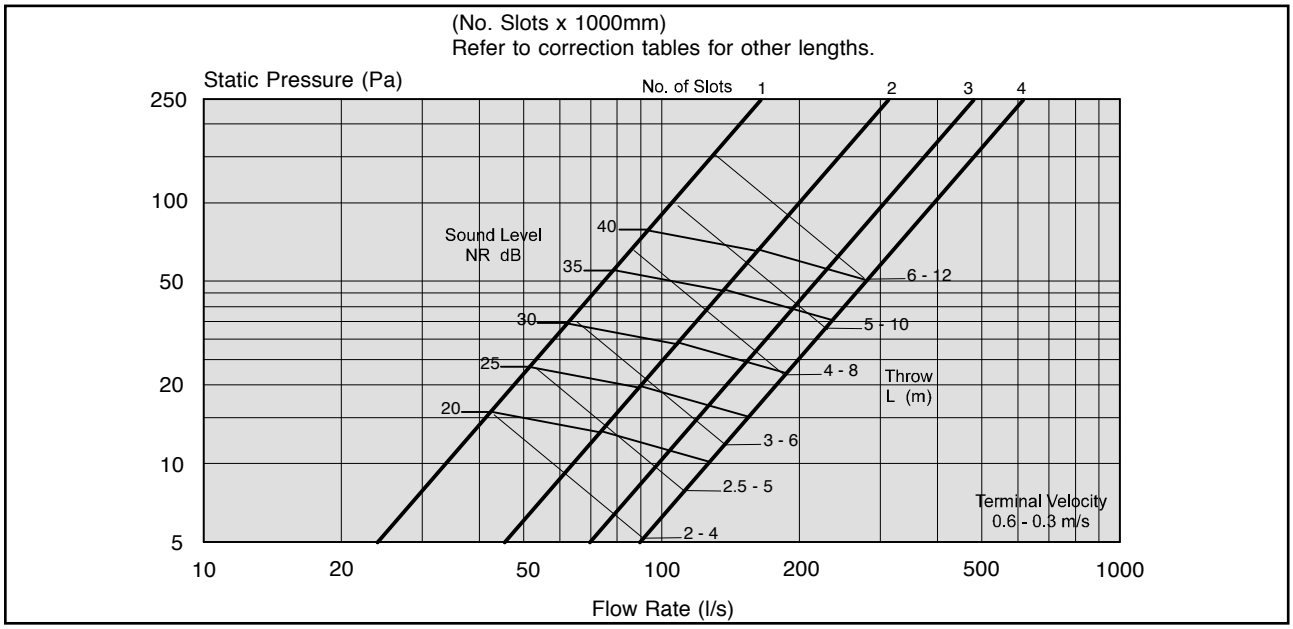
Grille length (m)	0.5	1	1.5	2	3
Add to NR value	-3	0	+2	+3	+5

Engineering Graphs

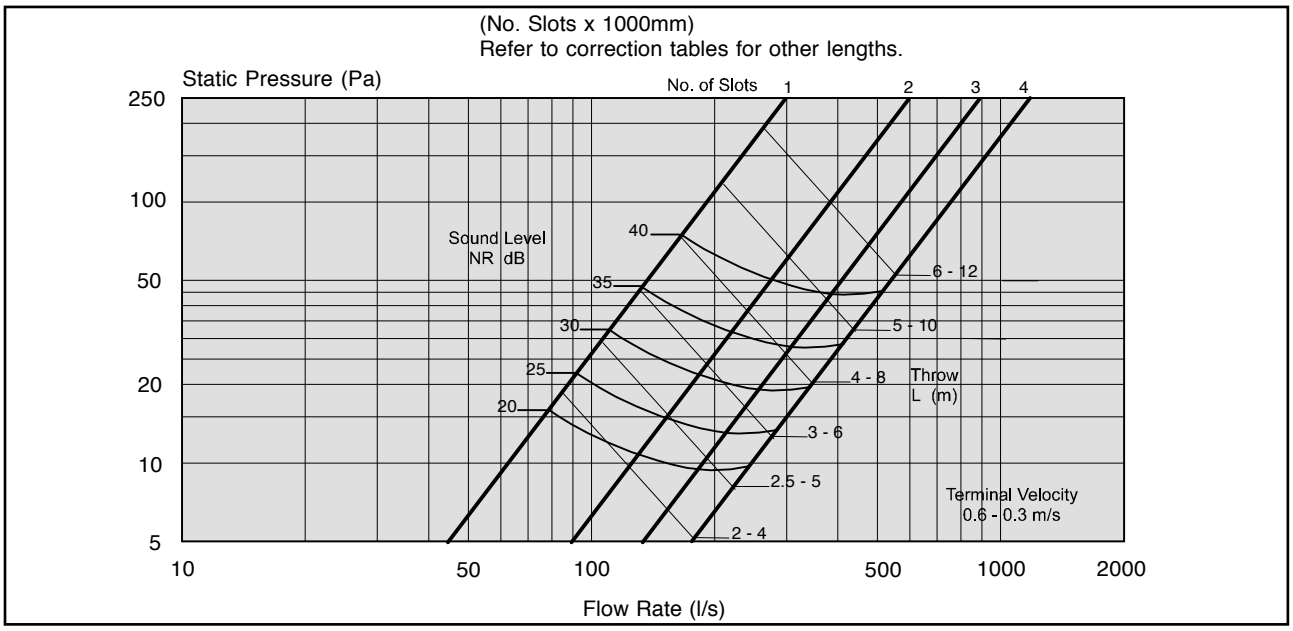
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

ALD horizontal 1-way pattern



ALD horizontal 2-way pattern



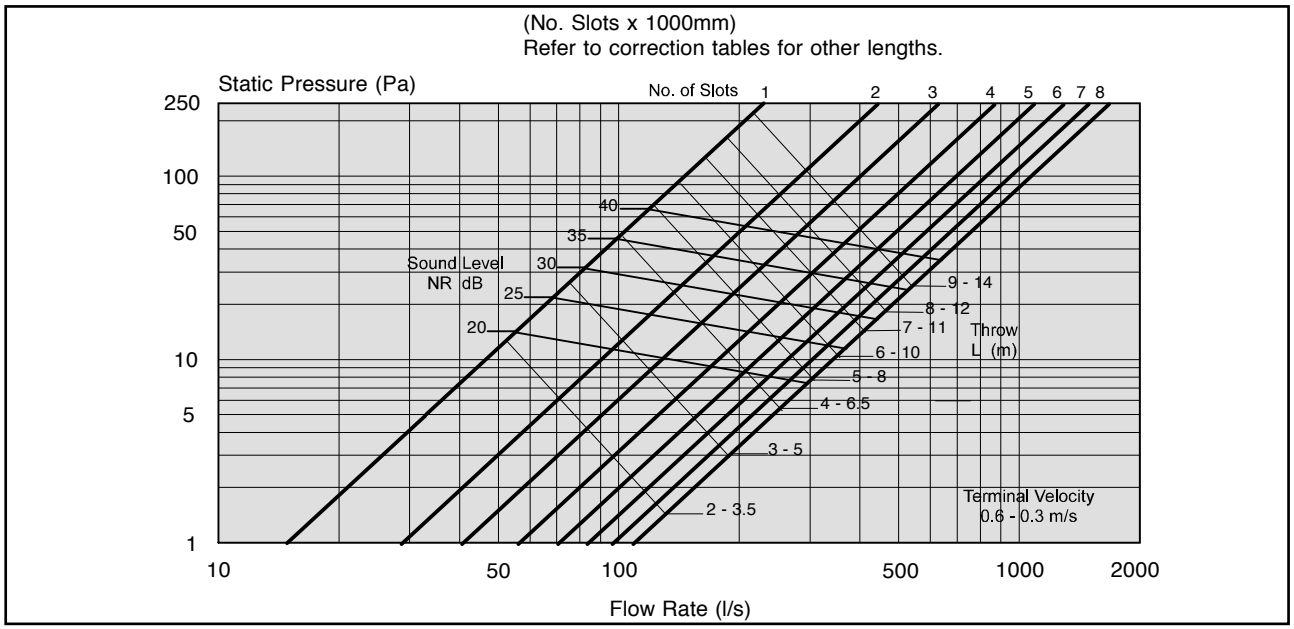
These graphs are for selection only and should not be used for commissioning.

Engineering Graphs

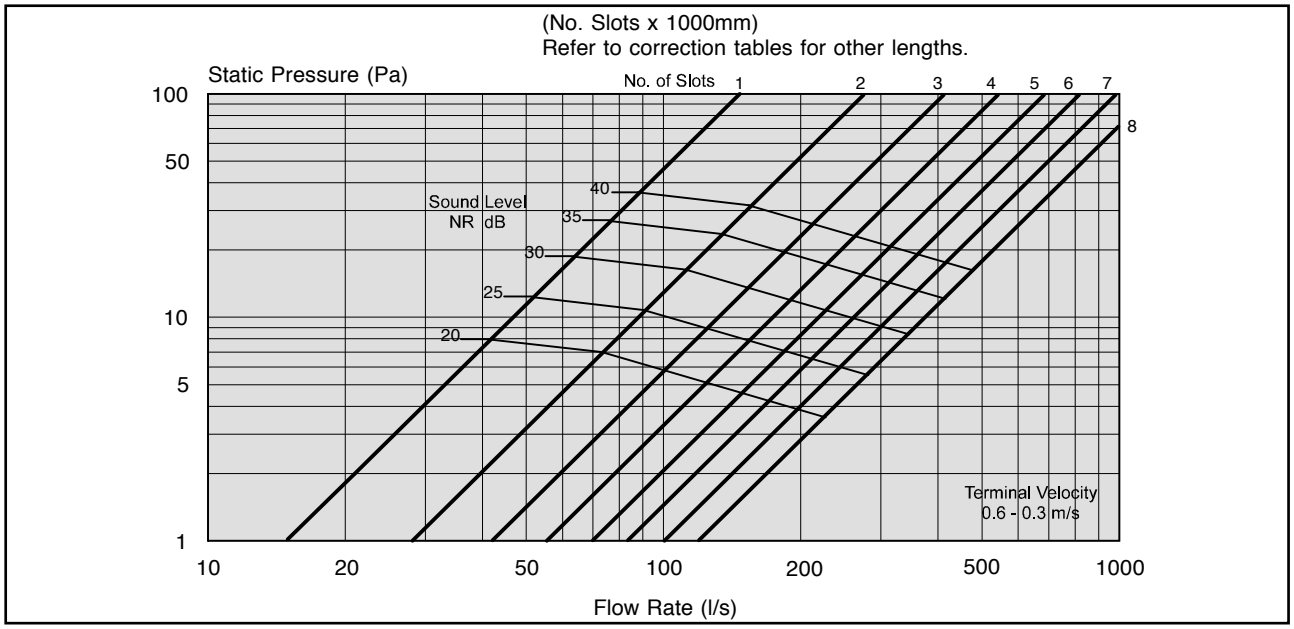
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. Throw is given for equal slots in each direction.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

ALD vertical projection



ALD return air



These graphs are for selection only and should not be used for commissioning.

Ordering procedure

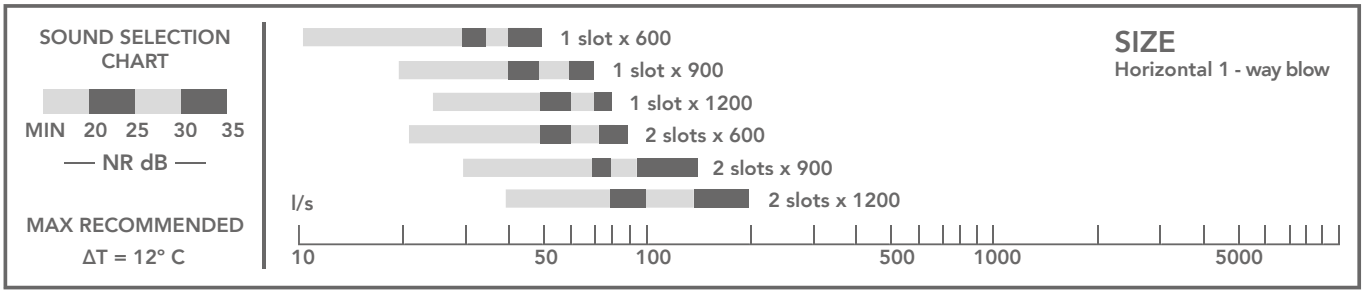
Using the chart below select your requirement and substitute the underscored text below.

Type..S..X..I (X is the overall length of the diffuser.)

Example: If your requirement is for a 2 slot insulated plenum diffuser 1200mm long with a 225 dia. inlet, the ordering code would be **AVPAI24809.** {When ordering it is not necessary to include the periods [..]).

Note! Other sizes are available. Please contact your nearest Bradflo office.

Selection guide



Product size numbers

		Number of slots, "S"					Inlet diameter "I"					
Type	**"X" Size**	**1**	**2**				**08 (200)**	**09 (225)**	**10 (250)**			**Colour**
ALDA2E (2 ends)	**24** (600)											
ALDA1E (1 end)	**36** (900)											
ALDA0E (0 ends)	**48** (1200)											

Description

The 2.13 (AVPA) is a linear plenum diffuser designed to suit ceiling T-Bar systems. It has been designed specifically for perimeter air distribution systems although it can be used for other applications.

Special consideration has been given to the various T-Bar ceiling systems in common use. The 2.13 is compatible with T-Bar face sizes from 25 to 30 mm. The insulation is 25mm thick glasswool with the ends uninsulated. Other types of insulation are available

The 2.13 diffusers are designed to handle maximum air quantities at the lowest practicable sound levels and are available in either one or two slot configurations.

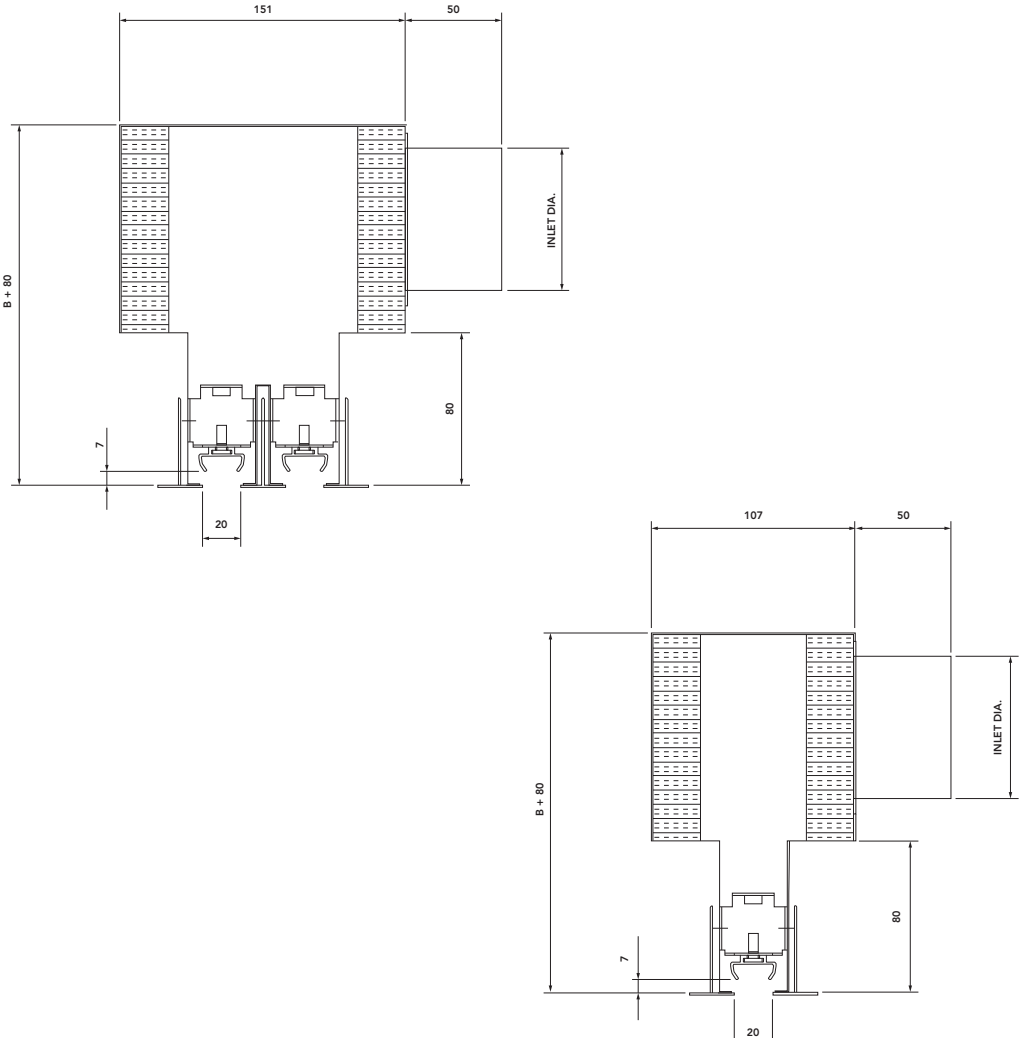
All diffusers are manufactured from galvanised steel and aluminium. The blade position is adjustable through the face of the diffuser.

Finish

All visible surfaces in situ are painted black.

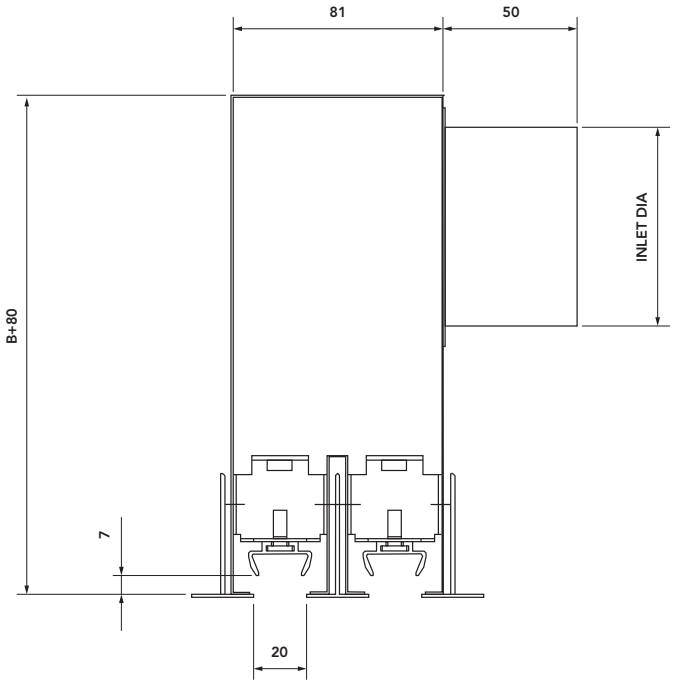
Design dimensions

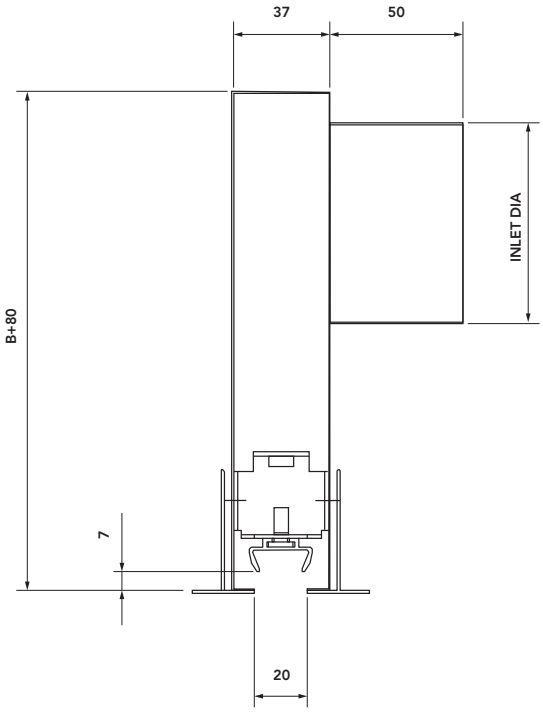
AVPAI Insulated



Design Dimensions

AVPA Non Insulated





Standard sizes available.

Frequency (cycles per second)				
No. Slots	Size	Overall Length	B	Inlet Diameter
1	600-200	600	250	200
1	900-200	900	250	200
1	900-225	900	275	225
1	1200-200	1190	250	200
1	1200-225	1190	275	225
1	1200-250	1190	300	250
2	600-200	600	250	200
2	900-200	900	250	200
2	900-225	900	275	225
2	1200-200	1190	250	200
2	1200-225	1190	275	225
2	1200-250	1190	300	250

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
No. Slots	125	250	500	1000	2000	4000	8000
1	+14	+16	+11	+6	+5	0	0
2	+15	+12	+8	+6	+5	-5	-21
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Sound absorption ΔL dB

The sound absorption shown relates to a reduction of the sound power level calculated from duct to room. The orifice loss is included in the values.

	Frequency (cycles per second)						
No. Slots	125	250	500	1000	2000	4000	8000
1	14	9	9	15	15	15	14
2	14	10	9	13	7	10	11
Tol+/-	2	2	2	2	2	2	2

Air pattern

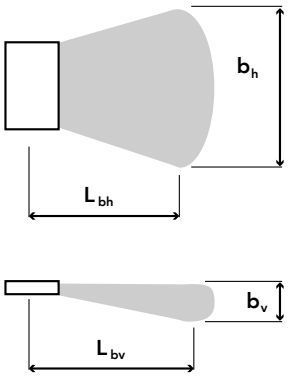
(with isothermal air supply)

$b_h = L_{0.3} \times 0.02$ + length

$L_{bh} = L_{0.3} \times 0.6$

$b_v = L_{0.3} \times 0.08$

$L_{bv} = L_{0.3} \times 0.5$

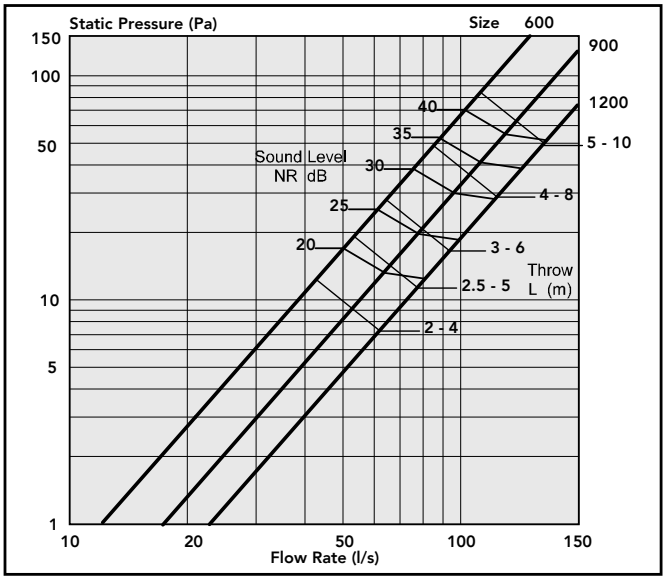


Engineering Graphs

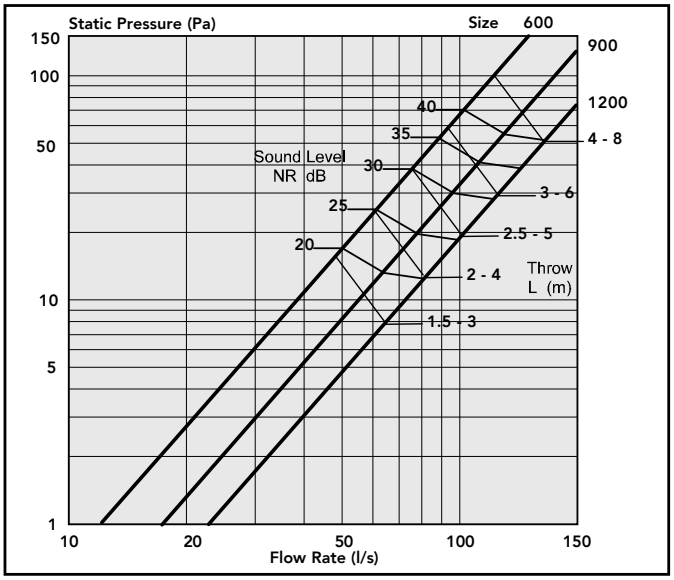
Throws shown are to a terminal velocity of 0.60m/s and 0.30 m/s.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

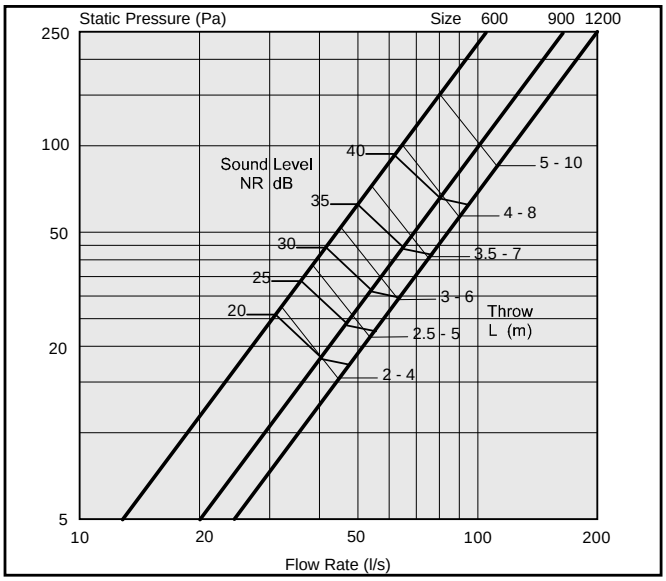
AVPA 2 Slots 1-way blow



AVPA 2 Slots 2-way blow



AVPA 1 Slots 1-way blow



These graphs are for selection only and should not be used for commissioning

Ordering procedure

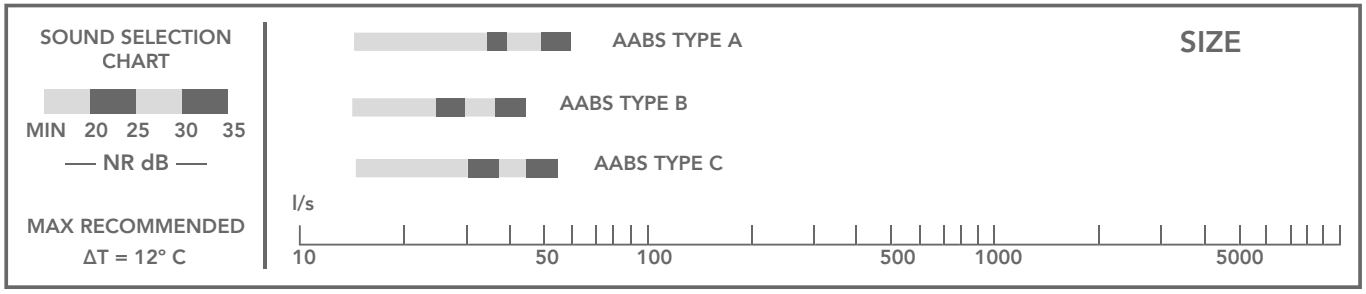
Using the chart below select your requirement and substitute the underscored text below.

Type..X..I (X is the overall length of the air boot).

Example: If your requirement is for a 1200mm long diffuser with a 200 dia. inlet, to suit a 12mm slot 90° blow, the ordering code would be **AABSB4808**. {When ordering it is not necessary to include the periods [..]).

Note! Other sizes are available. Please contact your nearest Bradflo office.

Selection guide



Product size numbers

		Inlet diameter "I"										
"Type"	**"X" Size**	**05** (125)	**06** (150)	**07** (175)	**08** (200)	**10** (250)						**Colour**
AABSA (single 20mm slot)												
AABSB (single 12mm slot)												
AABSC (single 20mm 180° deflection)												

Description

The 2.21 (AABS) diffusers are designed to be fitted to recessed fluorescent light fittings. They may also be used in conjunction with a ceiling T-Bar system.

Full details of the light fittings must be provide to ensure the correct interface of the light with the air boot. This is essential to ensure optimum air distribution performance is obtained from the combination.

Insulated versions of the diffuser plenum are not insulated at the ends. Three basic types of blade and slot width provide air flow direction of 90° up to 180°.

All diffusers are manufactured from galvanised sheet steel and aluminium blades which may be adjusted via the outlet slot.

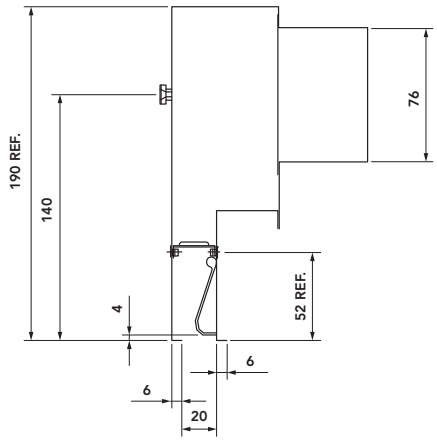
Australian standard

The 2.21 diffuser complies with the requirements of the Australian Standard AS 2946 - 1987

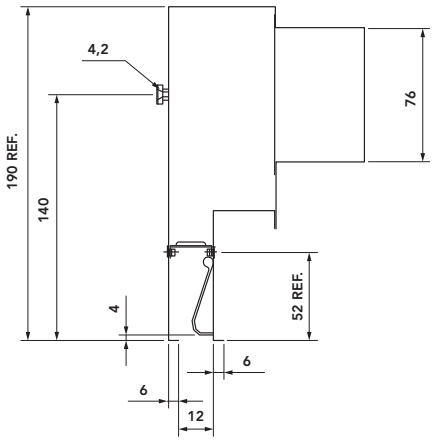
Finish

All visible surfaces are painted flat black.

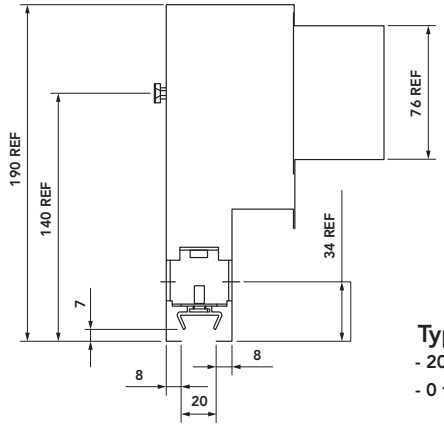
Design dimensions



Type A - single side
- 20 mm slot
- 0 to 90° air deflection



Type B - single side
- 12 mm slot
- 0 to 90° air deflection



Type C - single side
- 20 mm slot
- 0 to 180° air deflection

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

	Frequency (cycles per second) Hz						
Size	125	250	500	1000	2000	4000	8000
A -Single	+9	+14	+12	+3	+3	-9	-28
B -Single	+13	+10	+9	-1	-2	-18	-22
C -Single	+13	+10	+9	-1	-2	-18	-22
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Sound absorption ΔL dB

The sound absorption shown relates to a reduction of the sound power level calculated from duct to room. The end reflection is included in the values.

	Frequency (cycles per second) Hz						
Size	125	250	500	1000	2000	4000	8000
A -Single	13	9	4	0	0	0	0
B -Single	14	10	5	1	0	0	0
C -Single	14	10	5	1	0	0	0
Tol+/-	2	2	2	2	2	2	2

Air pattern

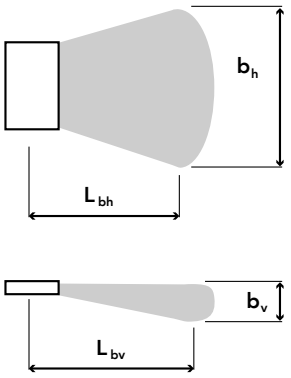
(with isothermal air supply)

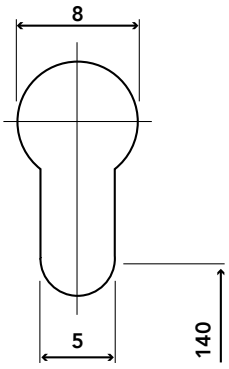
$b_h = L_{0.3} \times 0.02$ + length

$L_{bh} = L_{0.3} \times 0.6$

$b_v = L_{0.3} \times 0.08$

$L_{bv} = L_{0.3} \times 0.5$





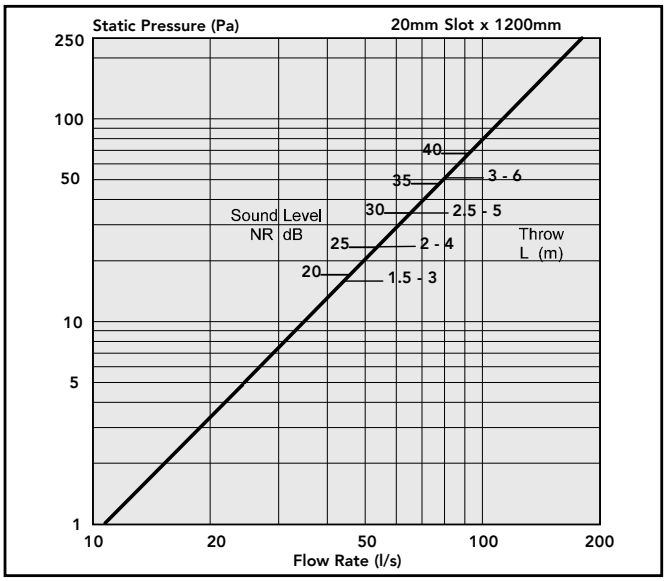
Dimensions for the keyhole slot for fitting.

Engineering Graphs

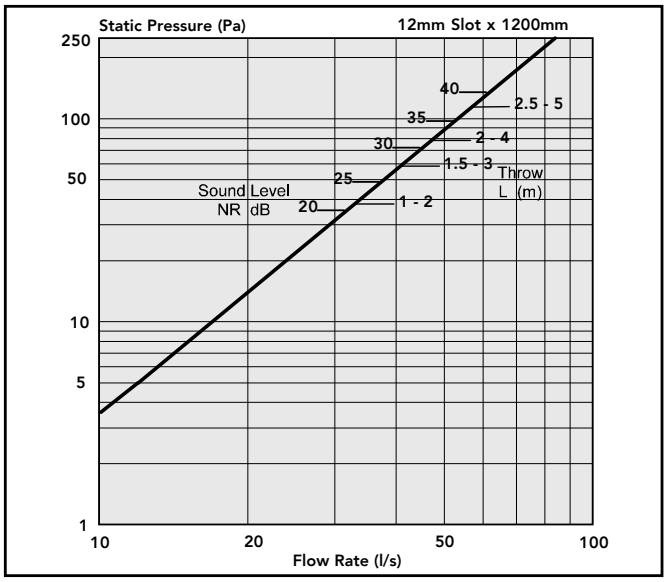
Throws shown are to a terminal velocity of 0.60m/s and 0.30 m/s.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

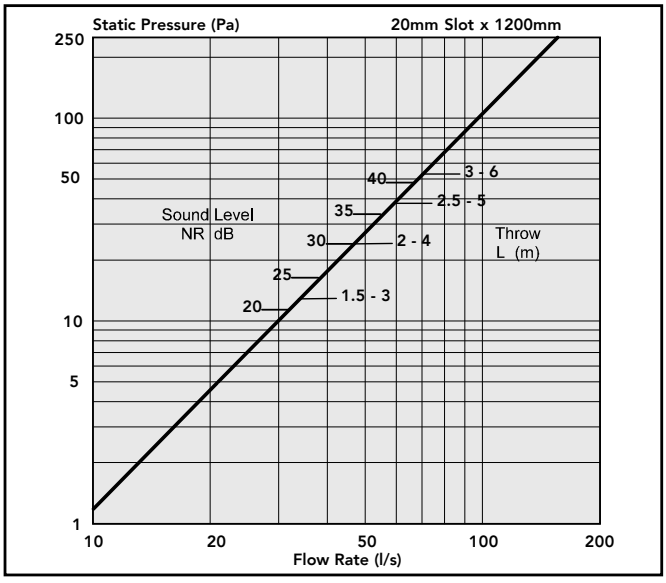
AABD Type A



AABD Type B



AABD Type C



These graphs are for selection only and should not be used for commissioning

Ordering procedure

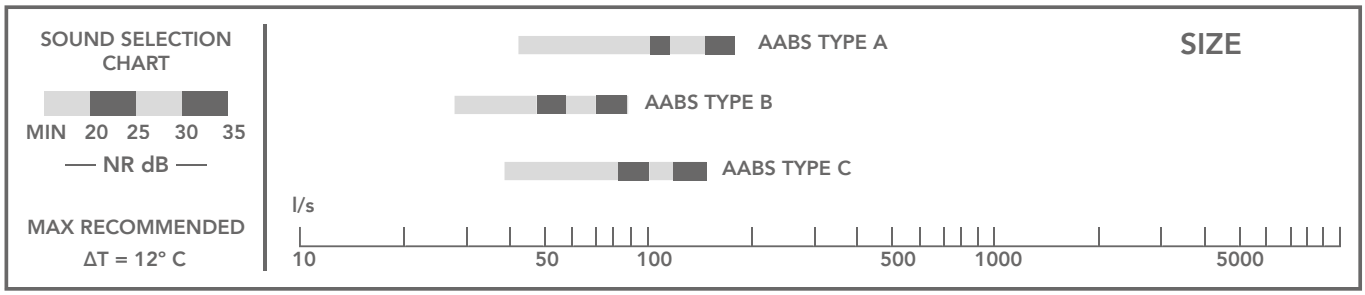
Using the chart below select your requirement and substitute the underscored text below.

Type..X..I + (the distance between the two inside faces of the diffuser, to suit the luminaire) (X is the overall length of the diffuser).

Example: If your requirement is for a 1200mm long diffuser with a 200 dia. inlet, 12mm slot 900 blow with 300 mm between the diffusers, the ordering code would be **AABDB4808 + 300.** {When ordering it is not necessary to include the periods [..]).

Note! Other sizes are available. Please contact your nearest Bradflo office.

Selection guide



Product size numbers

		Inlet diameter "I"										
"Type"	"X" Size	05 (125)	06 (150)	07 (175)	08 (200)	10 (250)						Colour
AABDA (single 20mm slot)	**24** (600)											
AABDB (single 12mm slot)	**36** (900)											
AABDC (single 20mm 180° deflection)	**48** (1200)											

Description

The 2.22 (AABD) diffusers are designed to be fitted to recessed fluorescent light fittings. They may also be used in conjunction with a ceiling T-Bar system.

Full details of the light fittings must be provided to ensure the correct interface of the light with the air boot. This is essential to ensure optimum air distribution performance is obtained from the combination.

Insulated versions of the diffuser plenum are not insulated at the ends.

Three basic types of blade and slot width provide air flow direction of 90° up to 180°.

All diffusers are manufactured from galvanised sheet steel and aluminium blades which may be adjusted via the outlet slot.

Australian standard

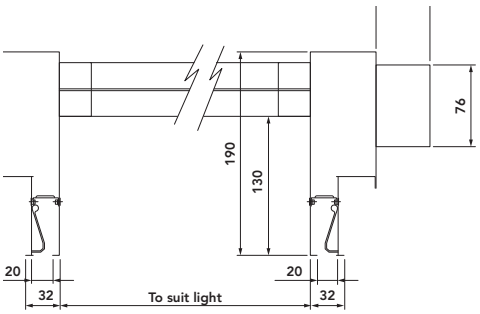
The 2.22 diffuser complies with the requirements of the Australian Standard AS 2946 - 1987

Finish

All visible surfaces are painted flat black.

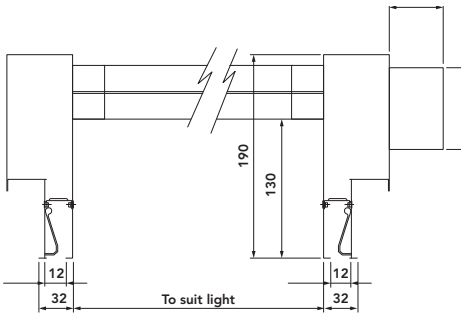
Note! These sizes are available as standard products. Variations are available upon request. Contact Bradflo with your specific requirements.

Design dimensions



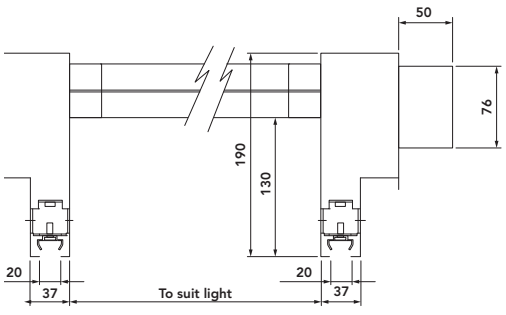
Type A - double sided

- 20 mm slot
-0 to 90° deflection



Type B - double sided

- 12 mm slot
-0 to 90° deflection



Type C - double sided

- 20 mm slot
-0 to 180° deflection

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second) Hz						
No. Slots	125	250	500	1000	2000	4000	8000
A -Double	+10	+15	+12	+1	-1	-16	-25
B -Double	+10	+7	+7	-8	-2	-15	-26
C -Double	+14	+17	+9	+5	-2	-16	-27
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Sound absorption ΔL dB

The sound absorption shown relates to a reduction of the sound power level calculated from duct to room. The end reflection is included in the values.

	Frequency (cycles per second) Hz						
No. Slots	125	250	500	1000	2000	4000	8000
A -Double	13	9	4	0	0	0	0
B -Double	13	9	4	0	0	0	0
C -Double	13	9	4	0	0	0	0
Tol+/-	2	2	2	2	2	2	2

Air pattern

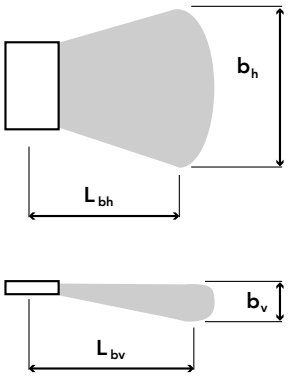
(with isothermal air supply)

$b_h = L_{0.3} \times 0.02$ + length

$L_{bh} = L_{0.3} \times 0.6$

$b_v = L_{0.3} \times 0.08$

$L_{bv} = L_{0.3} \times 0.5$

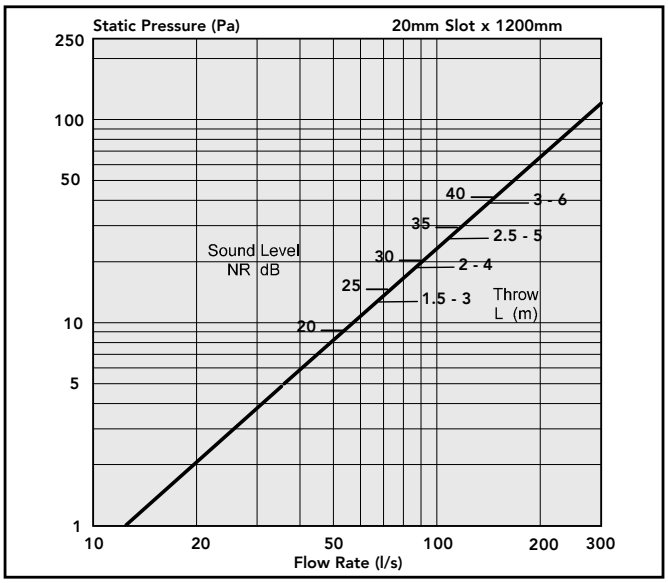


Engineering Graphs

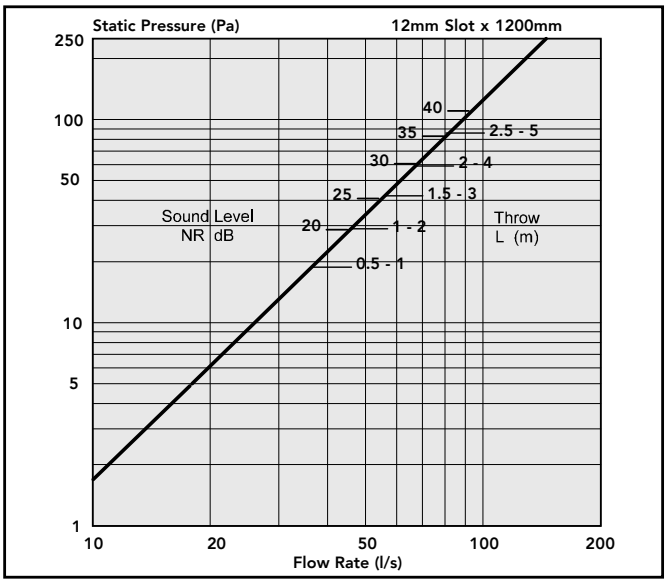
Throws shown are to a terminal velocity of 0.60m/s and 0.30 m/s.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

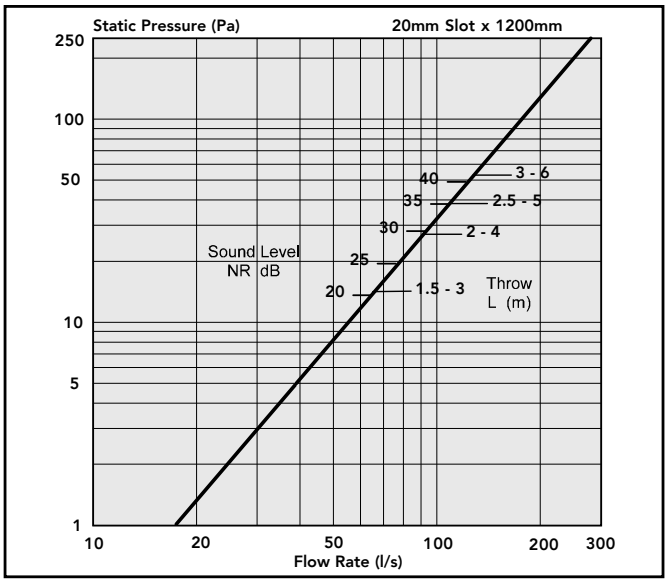
AABD Type A



AABD Type B



AABD Type C



These graphs are for selection only and should not be used for commissioning

Description

The high volume swirl diffuser provides a uniform radial pattern of air across the ceiling to provide a good temperature distribution with minimal draughts in the occupied zones. The design ensures comfort can be maintained across a broad range of flow rates.

It is designed to be either flush ceiling mounted in a grid section or plasterboard mounted. The plenum is fitted with an internal diffuser plate to improve the pressure distribution. The diffuser is secured by a single centre screw and hidden from view behind a push-on decorative cap.

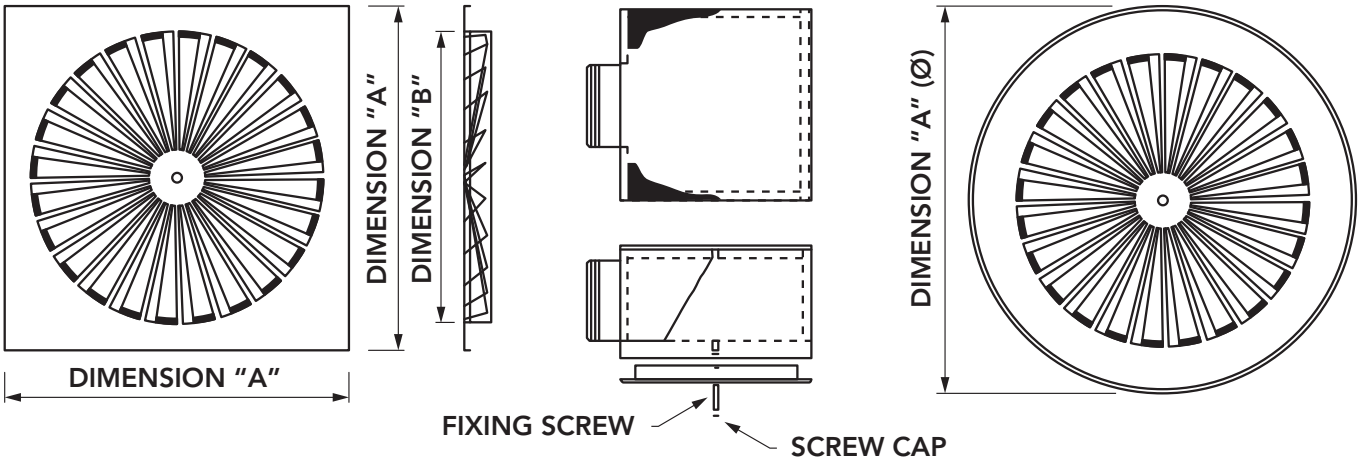
For lower flow rates, restriction rings (#1 to 5) are available for the PHVSD595-496 (3209585) and aesthetically hides inside the neck behind diffuser face. The standard finish is a white (RAL9016) powder-coat but other colours are available by special order.

Application

This type of diffuser utilises the coanda effect to efficiently traverse the ceiling and envelope the occupied space with a supply of conditioned air. It is important to separate the units adequately to avoid undesirable collision velocities.

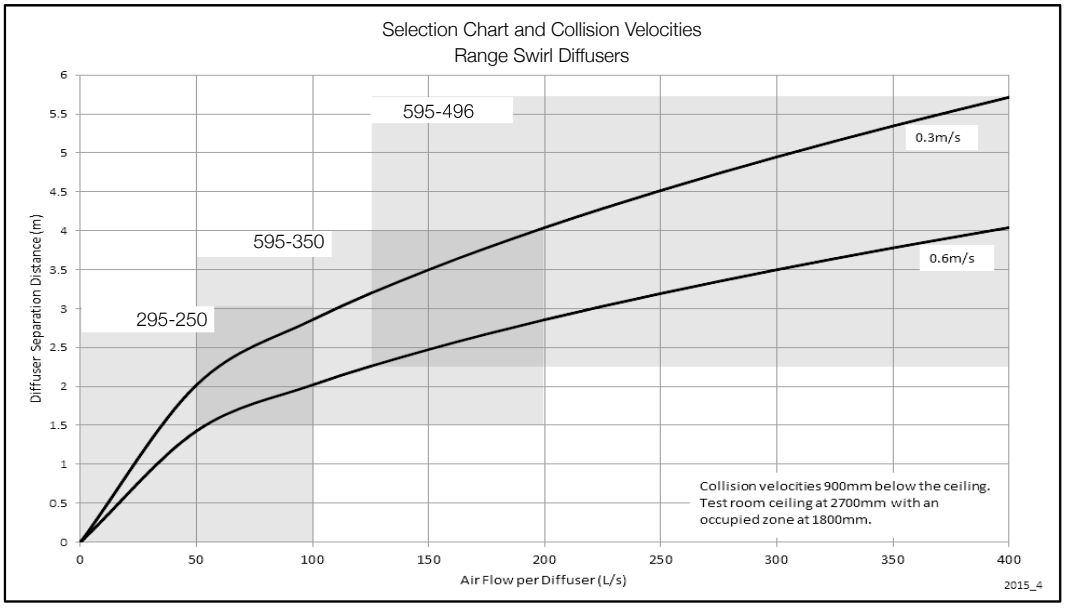
Code	Description	Dimension "A"	Dimension "B"
3209961	SWIRL DIFFUSER- 295 SQUARE 250 NECK	295	250
3215244	SWIRL DIFFUSER- 296 SQUARE RAL9003	296	296
3209548	SWIRL DIFFUSER- 370 SQUARE 250 NECK	370	250
3209581	SWIRL DIFFUSER- 395 SQUARE 350 NECK	395	350
3209781	SWIRL DIFFUSER- 445 SQUARE 350 NECK	445	350
3209960	SWIRL DIFFUSER- 595 SQUARE 350 NECK	595	350
3209585	SWIRL DIFFUSER- 595 SQUARE 496 NECK	595	496
3209963	SWIRL DIFFUSER- 295 ROUND 250 NECK	295	250
3209551	SWIRL DIFFUSER- 470 ROUND 350 NECK	470	350
3209584	SWIRL DIFFUSER- 600 ROUND 496 NECK	600	496
3209962	SWIRL DIFFUSER- 675 ROUND 496 NECK	675	496

There are five sizes of ring insert available to downsize PHVSD595-496 (3209585) for lower flow outlets.



SWIRL DIFFUSER | **INSTALLATION TO PLENUIM** | **ROUND**

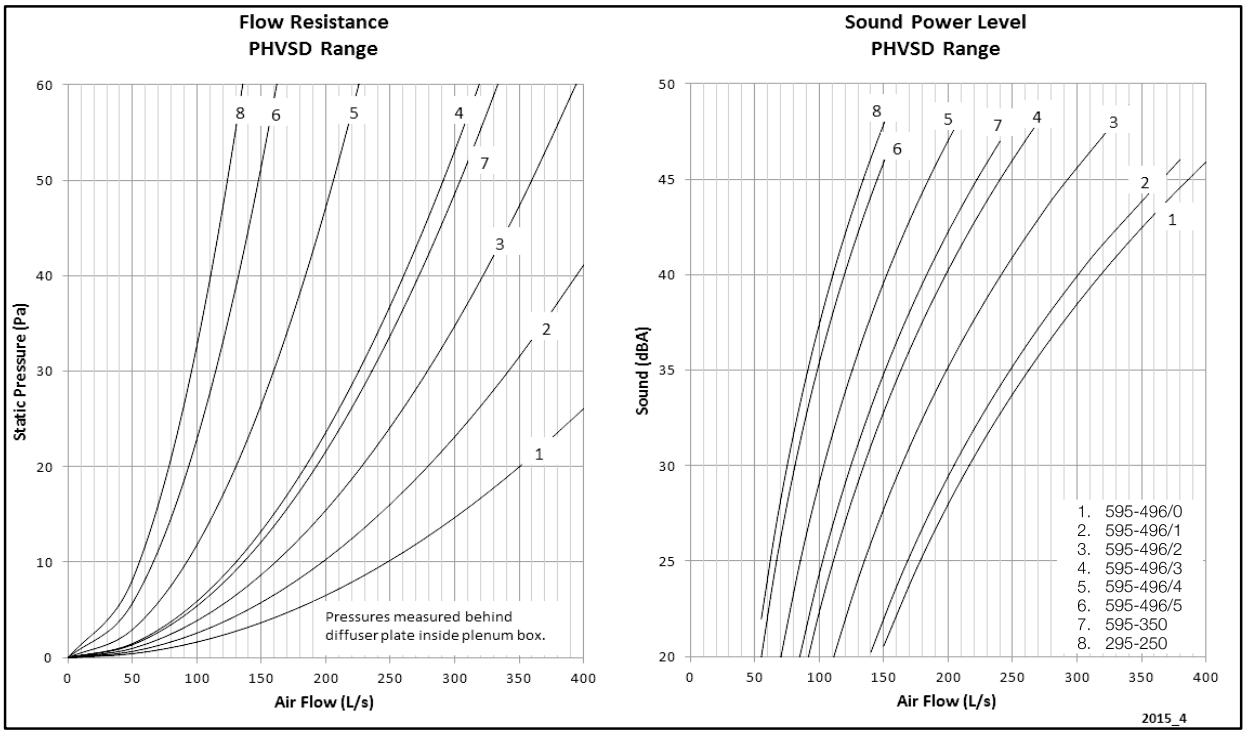
Selection Guide



These graphs are for selection only and should not be used for commissioning

Disclaimer: *Products in this specification manual must by regulation be installed by licensed and registered trade people. The manufacturer/distributor reserves the right to vary specifications or delete models from their range without prior notification. Dimensions are nominal measurements only. Dimensions and set-outs listed are correct at time of publication however the manufacturer/distributor takes no responsibility for printing errors.*

Performance Graphs



These graphs are for selection only and should not be used for commissioning

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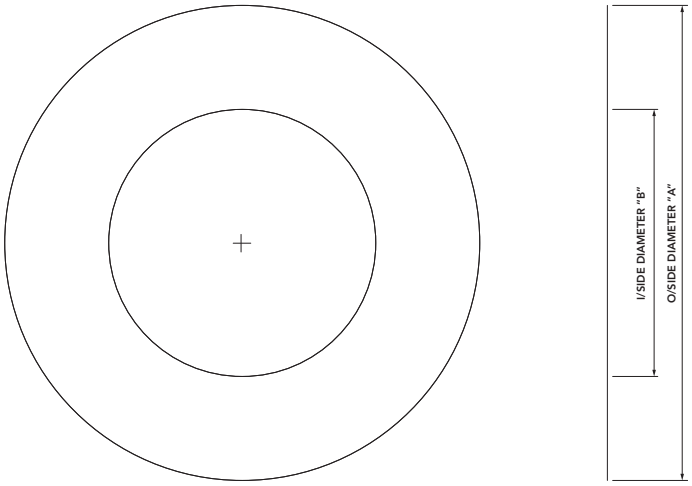
Description

Code	Description	Dimension "A" (mm)	Dimension "B" (mm)
3215251	Swirl Diffuser Reducing Ring 493mm – 410mm	493	410
3215252	Swirl Diffuser Reducing Ring 493mm – 360mm	493	360
3215242	Swirl Diffuser Reducing Ring 493mm – 320mm	493	320
3215253	Swirl Diffuser Reducing Ring 493mm – 270mm	493	270
3215243	Swirl Diffuser Reducing Ring 493mm – 230mm	493	230



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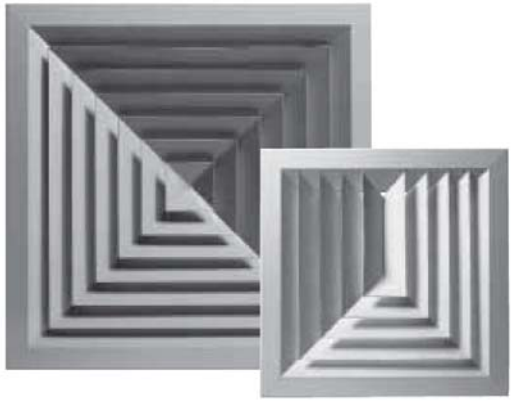
Ordering procedure

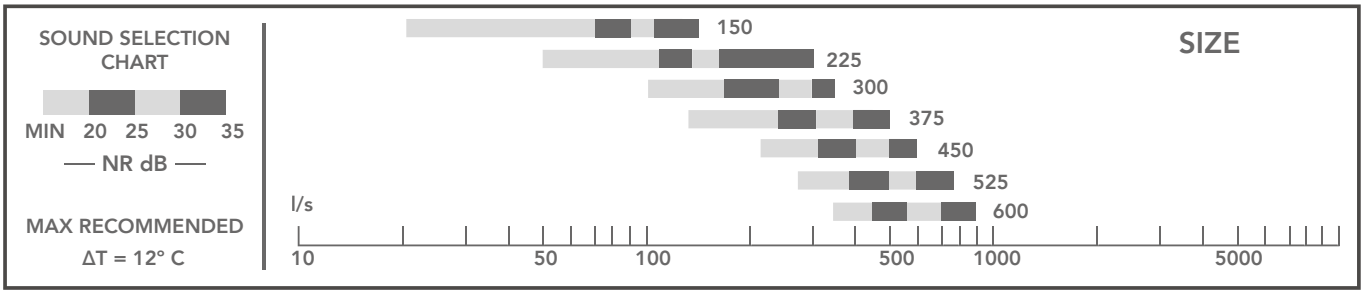
Using the chart below select your requirement and substitute the underscored text below.

ACT..T..B..X..Y (X & Y are the nominal neck sizes of the diffuser, see overleaf.)

Example: If your requirement is for a 12" x 12" (300mm x 300mm) 2 Way Corner blow diffuser, the ordering code would be **ACT2C1212.** {When ordering it is not necessary to include the periods [..])



Selection guide



Product size numbers

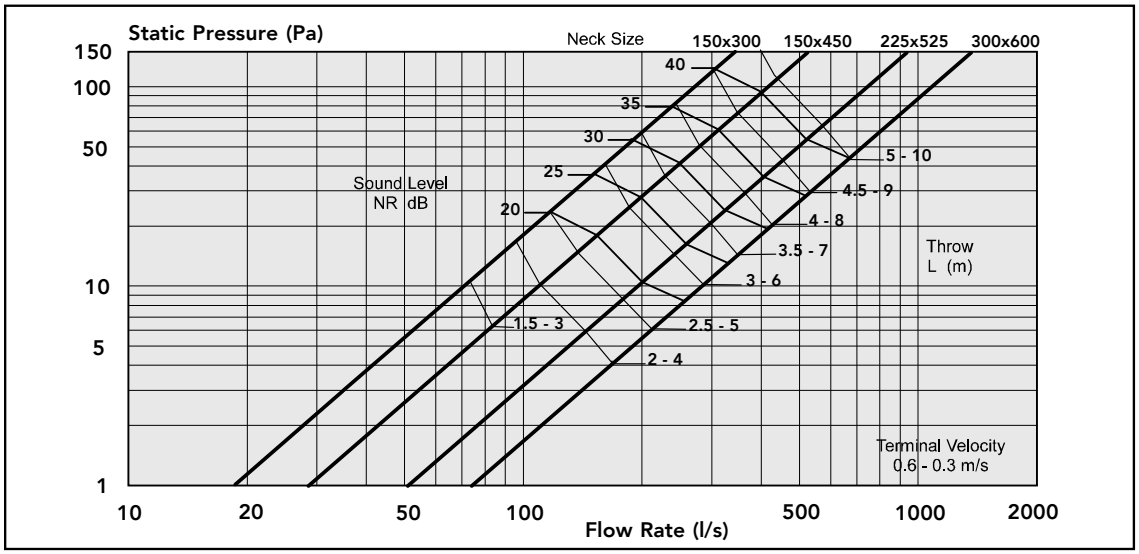
				Inlet diameter "I"										
"T"	"Type"	"B"	"X" Size	06	09	12	15	18	21	24				Colour
1	1 Way blow	**W**	**06** (150)											Powdercoat White
2	2 Way blow	**W**	**09** (225)											
2	2 Way corner blow	**C**	**12** (300)											
3	3 Way blow	**W**	**15** (375)											
4	4 Way blow	**W**	**18** (450)											
			21 (525)											
	Special blow		**24** (600)											Special colours

Engineering Graphs

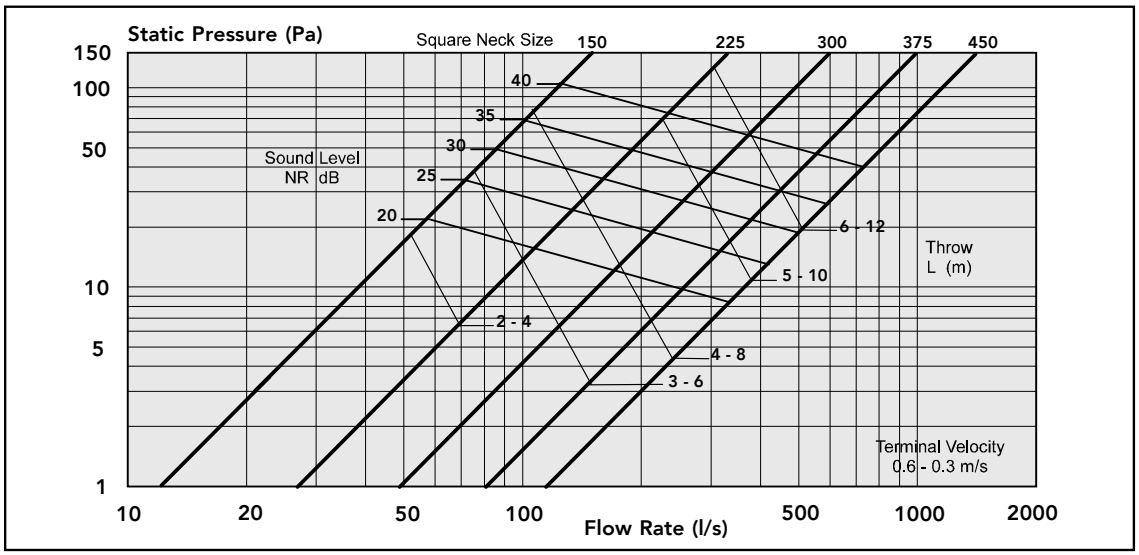
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. The following graphs apply to all Bradflo Directional Diffusers in sections 2.31 to 2.37. These graphs are for selection only and should not be used for commissioning.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

4-way pattern (rectangular)



1-way pattern (square)



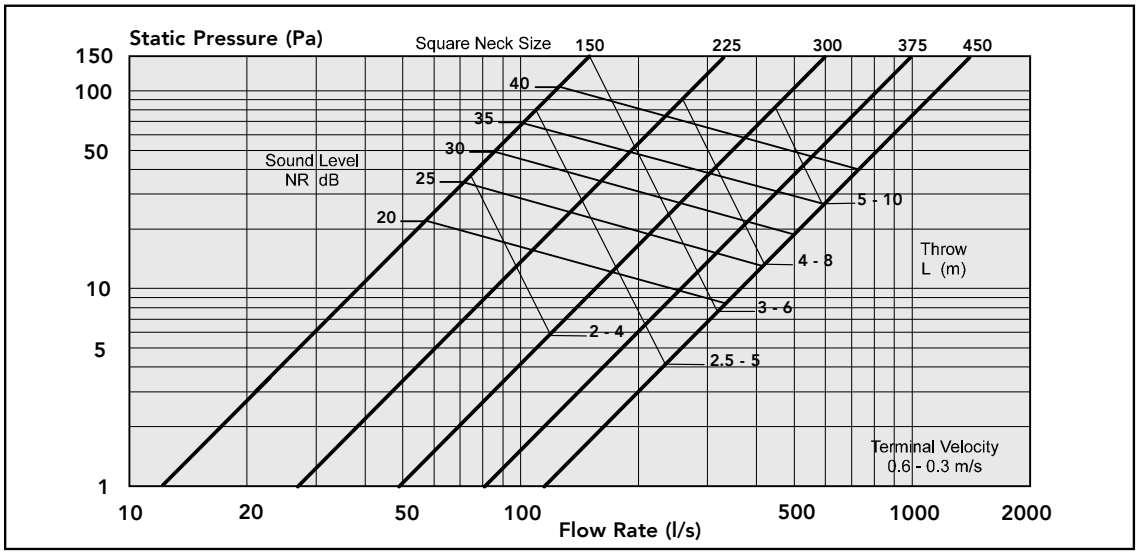
These graphs are for selection only and should not be used for commissioning

Engineering Graphs

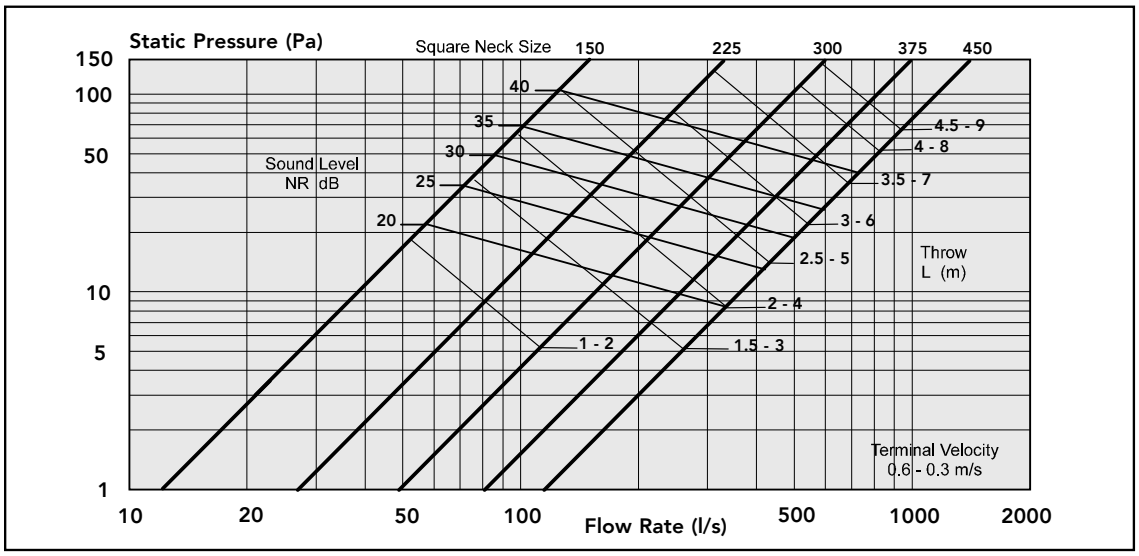
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. The following graphs apply to all Bradflo Directional Diffusers in sections 2.31 to 2.37. These graphs are for selection only and should not be used for commissioning.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

2-way pattern (square)



3-way pattern (square)



These graphs are for selection only and should not be used for commissioning

Description

The 2.35 (ACB) square cone type directional diffuser is all aluminium construction and has been designed to meet modern building requirements.

The standard bevel frame is suitable for tile or plaster ceilings.

To maximise versatility, the 2.35 series diffuser offers a number of different blow patterns.

The core section is removable for easy installation and maintenance.

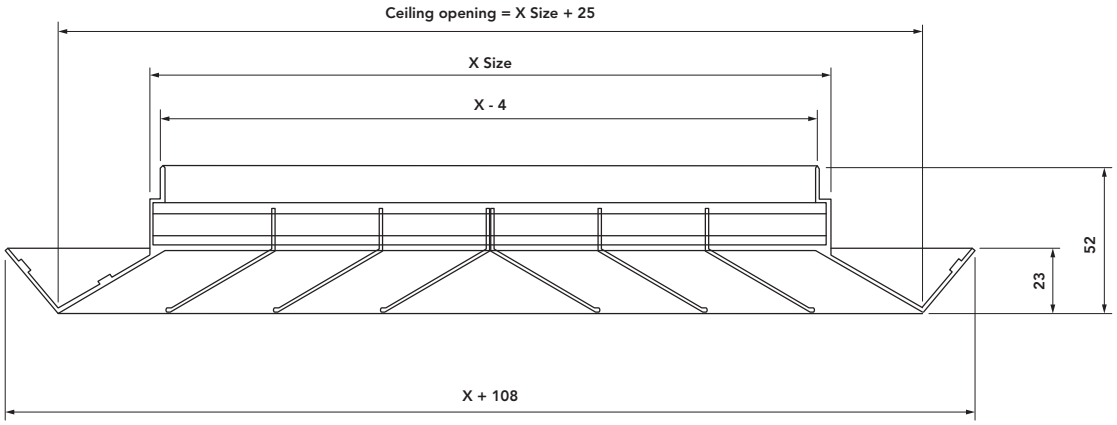
As with all Bradflo air products, this diffuser offers maximum air flow characteristics whilst maintaining low noise levels.

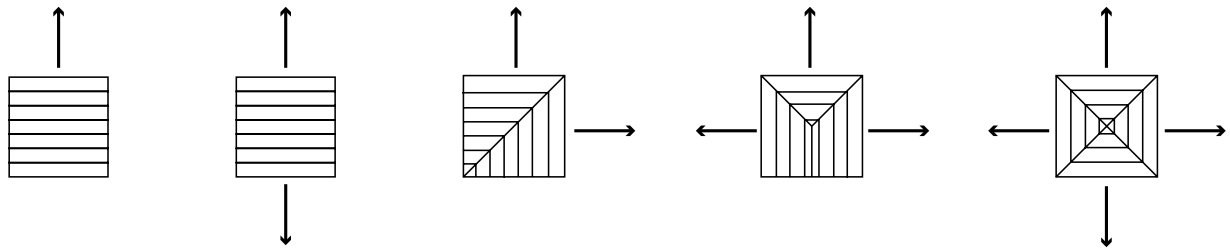
Finish

The standard finish is powdercoat white, baked at a temperature of 180 deg. C. There are fifteen other standard colours available. Other colours are available as specials upon request.

Note! Blanking plates are available for all diffuser types as a special order. Refer to following pages for performance data.

Design dimensions





TYPE 1 TYPE 2 TYPE 2C TYPE 3 TYPE 4

Ordering procedure

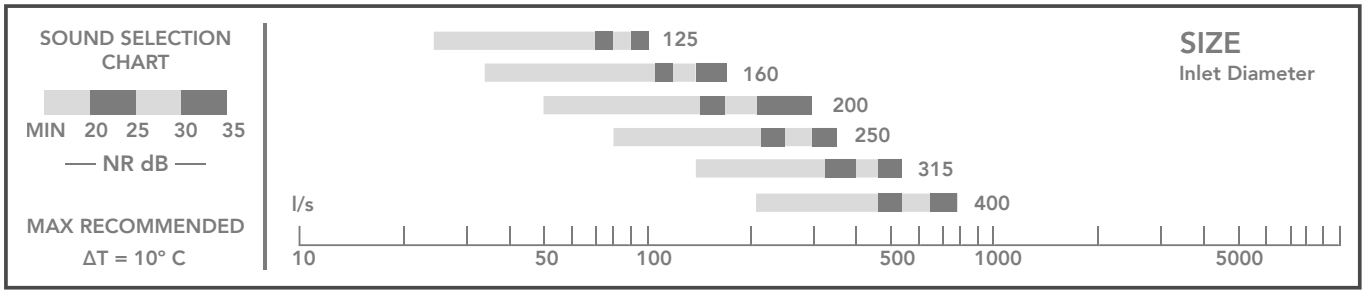
Using the chart below select your requirement and substitute the underscored text below.

Type..X (X is the nominal neck diameter of the diffuser).

Example: If your requirement is for a 200 mm diameter ceiling diffuser, the ordering code would be

ACDRA200 {When ordering it is not necessary to include the periods [..]).

Selection guide



Product size numbers

"Type"	"X" Size											Colour
ACDRA	**125**											Powder coat white
	160											
	200											
	250											
	315											
	400											
	500											
												Special colours

Description

The 2.42 (ACDRA) diffuser is a adjustable multiple cone diffuser which provides a horizontal and vertical pattern. The core of the diffuser is easily removed for fitting and cleaning.

The diffuser may be ceiling mounted or mounted in exposed duct work.

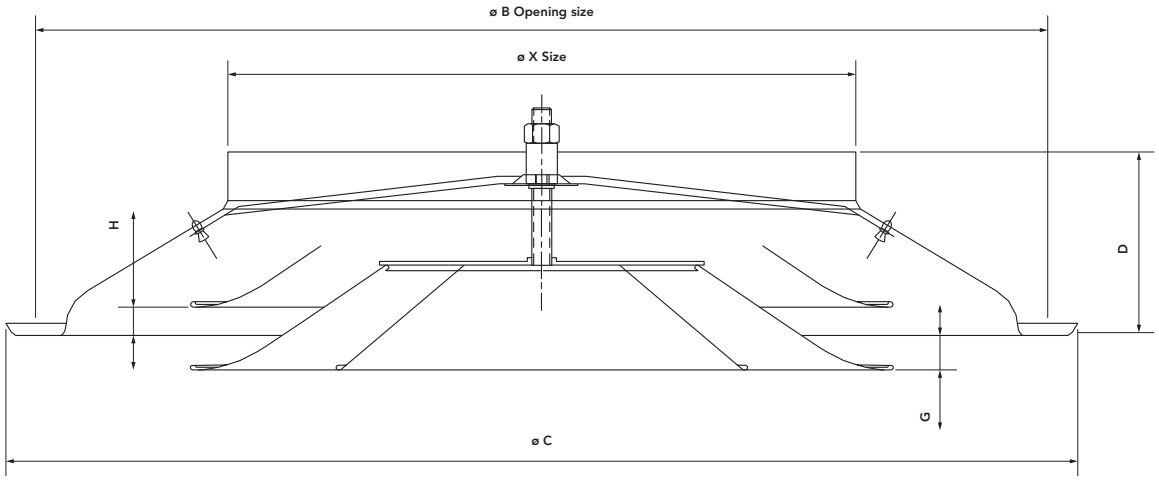
Standard construction is steel.

Finish

Standard finish is white powder coated paint applied to a pre-treated surface and baked at 180o C to ensure a tough surface that resists damage, fading and discolouration.

Special colours are available. Contact your nearest Bradflo office with your requirements.

Design dimensions



X Size	Dia. B	Dia. C	D	G	H
125	270	305	90	13	10
160	270	305	80	13	10
200	330	378	92	14	13
250	420	477	107	17	16
315	530	591	126	20	20
400	630	703	138	24	24
500	780	845	150	30	30

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

Correction table for grilles of length other than 1 metre.

	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
125	+14	+12	+11	+8	+4	-4	-8
160	+14	+16	+11	+8	+3	-5	-9
200	+15	+13	+11	+6	+2	-6	-8
250	+17	+16	+11	+6	+	-8	-8
315	+15	+15	+12	-6	+1	-8	-8
400	+18	+16	+13	-6	+1	-7	-9
Tol+/-	2	2	2	2	2	2	2

Correction factor k_{ok}

Sound absorption ΔL dB

The sound absorption shown relates to a reduction of the sound power level calculated from duct to room. The end reflection is included in the values.

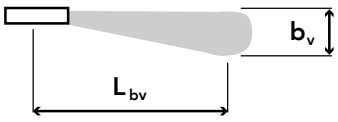
	Frequency (cycles per second)						
Size	125	250	500	1000	2000	4000	8000
125	16	12	7	2	0	0	0
160	14	10	5	1	0	0	0
200	13	9	4	0	0	0	0
250	11	7	3	0	0	0	0
315	10	6	2	0	0	0	0
400	9	5	1	0	0	0	0
Tol+/-	2	2	2	2	2	2	2

Air pattern

(with isothermal air supply)

$b_v = L_{0.3} \times 0.06$

$L_{bv} = L_{0.3} \times 0.65$

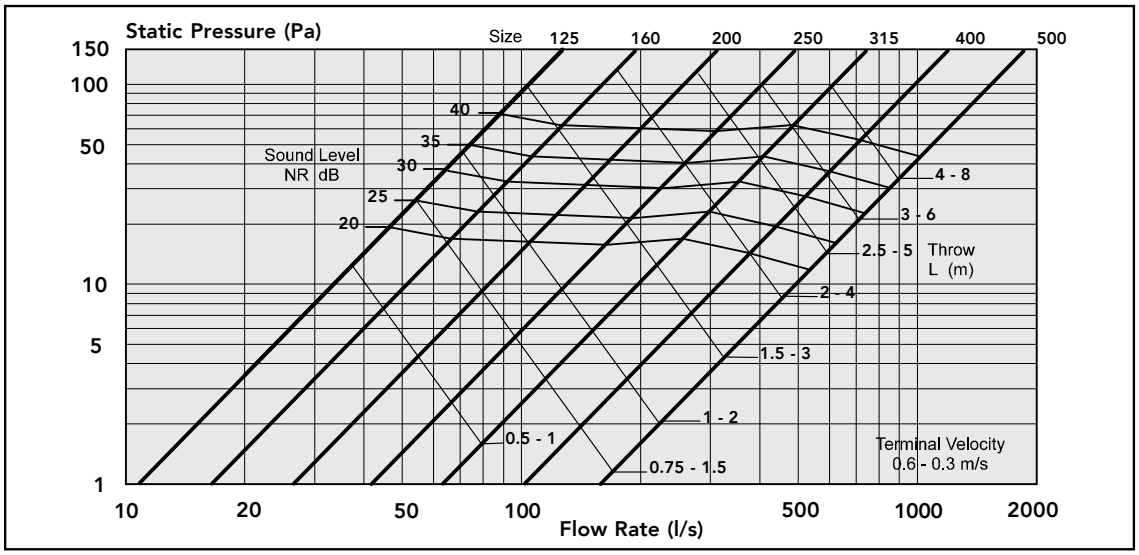


Engineering Graphs

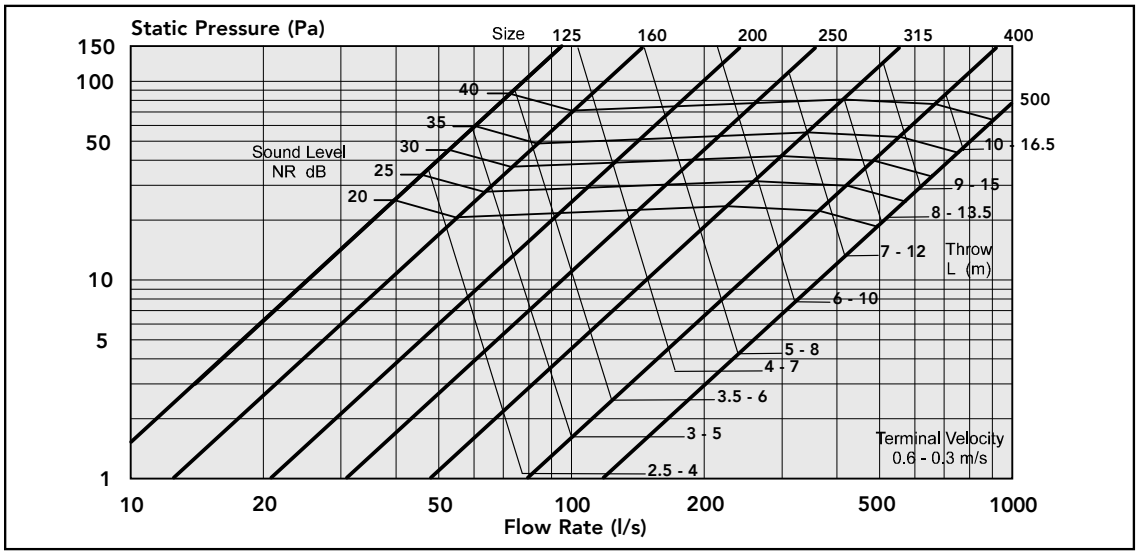
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. These graphs are for selection only and should not be used for commissioning.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

ARA Horizontal blow (dimension G)



ARA Vertical blow (dimension H)



These graphs are for selection only and should not be used for commissioning

Ordering procedure

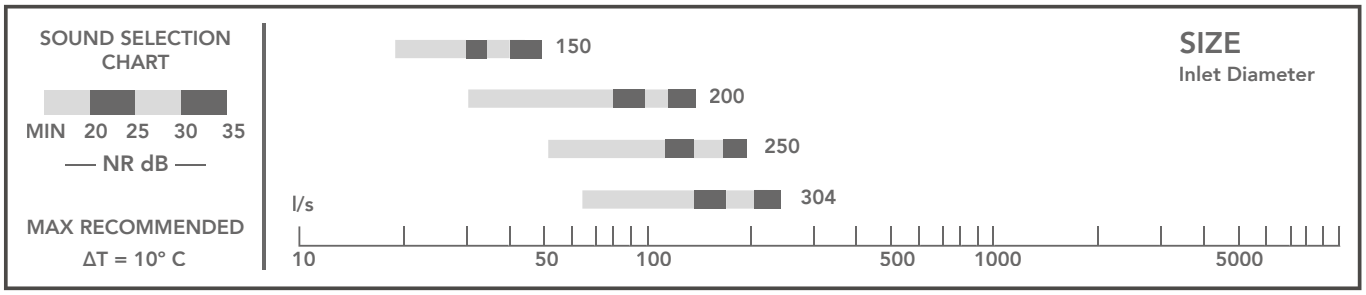
Using the chart below select your requirement and substitute the underscored text below.

Type..X (X is the nominal neck diameter of the diffuser).

Example: If your requirement is for a 200 mm diameter ceiling diffuser, the ordering code would be

ARCD200 {When ordering it is not necessary to include the periods [..]).

Selection guide



Product size numbers

"Type"	"X" Size	"B" Size	"C" Size								Colour
ARCD	**150**	**310**	**145**								Powder coat white
	200		**165**								
	250		**175**								
	300	**460**	**190**								
											Special colours

Description

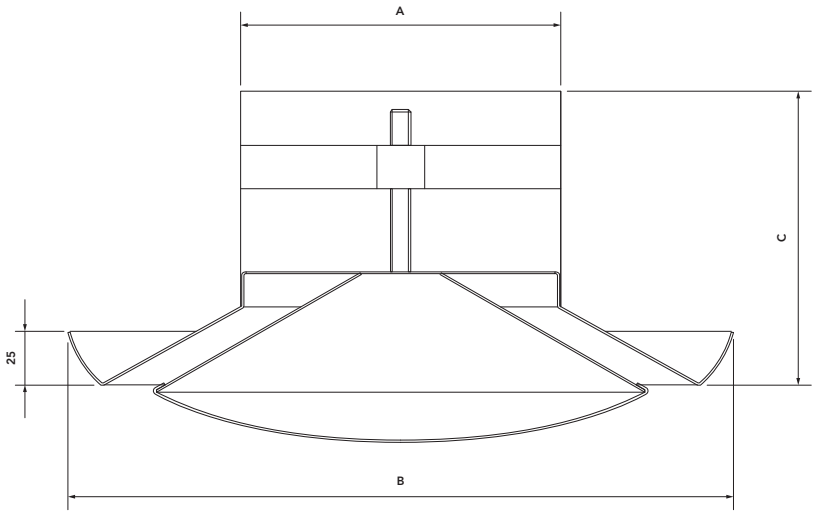
The 2.43 (ARCD) Round ceiling diffuser is fabricated from spun aluminium. The diffuser has a round spigot to suit flexible duct. The core is adjustable and acts as both balancing damper and pattern control.

The diffuser may be easily fixed into position using special fixing clips provided.

Finish

Standard finish is white electrostatic powdercoat. There are also 15 other colours available to choose from at no additional cost. Contact your nearest Bradflo office for any special requirement you may have.

Design dimensions



Product Code	A	B	C
ARCD150	150	310	145
ARCD200	200	360	165
ARCD250	250	410	175
ARCD300	300	460	190

Performance Data

Note! Throw data is at a terminal velocity of 0.5m/s. Air supply is isothermal.

Inlet Diameter mm (in)	Discharge Gap mm (in)	Airflow l/s (cfm)	Statistic Pressure pa (In H_2O)	Throw m (ft)	Sound Power Level Octave band centre frequency (Hz)							
					63	125	250	500	1000	2000	4000	8000
150 (5.9)	40 (1.6)	40 (85)	5.5 (.022)	.92 (3.0)	45.0	46.0	45.0	45.0	42.0	34.5	26.5	28.5
	32 (1.25)		7.5 (.030)	1.40 (4.6)	45.0	45.5	43.5	45.0	44.0	35.5	21.5	29.5
	25 (1.0)		23 (0.90)	1.70 (5.60)	43.5	51.5	48.5	45.0	42.0	36.5	30.0	2.3
	40 (1.6)	75 (158)	6.5 (0.26)	1.35 (4.4)	44.5	46.5	44.5	45.0	43.5	33.5	26.5	28.5
	32 (1.25)		8.5 (0.34)	1.70 (5.6)	46.0	52.0	50.0	50.5	51.0	43.5	34.5	23.5
	25 (1.0)		44 (.173)	2.03 (6.7)	47.0	54.0	50.5	50.0	50.5	39.5	31.5	29.5
	40 (1.6)	100 (212)	7 (.028)	1.80 (5.9)	45.0	49.5	47.5	49.0	49.0	41.0	25.5	28.5
	32 (1.25)		13 (.051)	2.50 (8.2)	47.0	52.0	49.0	51.0	51.5	44.5	34.5	23.5
	25 (1.0)		63 (.248)	3.00 (9.8)	48.0	54.0	52.5	50.5	52.5	46.0	36.5	29.0
	40 (1.6)	150 (318)	13 (.051)	2.15 (7.1)	29.5	55.5	54.0	56.5	58.0	52.5	44.5	33.5
	32 (1.25)											
	25 (1.0)											
	40 (1.6)	200 (424)	21 (.083)	2.95 (9.7)	57.5	66.0	63.0	64.0	66.0	62.0	55.0	50.5
	32 (1.25)		30 (.118)	3.4 (11.2)	56.0	64.0	63.0	61.5	64.5	60.5	52.5	49.0
	25 (1.0)		120 (.472)	3.8 (12.5)	51.5	63.0	63.5	61.0	60.5	58.5	51.5	44.5
200 (7.9)	40 (1.6)	75 (158)	16 (.063)	.95 (3.1)	42.0	45.0	40.5	35.5	31.5	22.5	17.5	22.0
	32 (1.25)		30 (.118)	1.5 (4.9)	42.0	45.0	42.5	36.0	32.0	24.5	17.5	23.0
	25 (1.0)		75 (.295)	1.8 (5.9)	42.5	57.0	47.0	43.5	38.0	34.0	25.0	23.0
	40 (1.6)	100 (212)	18 (.071)	1.75 (5.7)	41.5	44.5	41.0	36.0	32.0	23.0	17.5	22.5
	32 (1.25)		55 (.217)	1.85 (6.1)	41.5	48.5	46.5	41.5	37.5	33.5	21.5	23.0
	25 (1.0)		103 (.406)	2.0 (6.6)	42.0	49.5	49.5	47.5	43.0	40.0	33.5	22.5
	40 (1.6)	150 (318)	35 (.138)	2.1 (6.9)	45.0	51.5	48.5	44.0	41.0	36.5	22.5	22.5
	32 (1.25)		96 (.378)	2.2 (7.2)	44.0	54.0	53.5	49.0	45.5	41.5	21.5	37.0
	25 (1.0)		170 (.669)	2.6 (8.5)	44.0	54.5	56.0	56.0	52.0	49.0	44.0	37.0
	40 (1.6)	200 (424)	57 (.224)	2.4 (7.9)	48.0	58.0	55.0	50.5	48.0	45.0	34.5	29.0
	32 (1.25)		180 (.709)	2.65 (8.7)	48.0	60.0	60.5	57.0	53.0	51.0	42.5	37.0
	25 (1.0)		265 (1.04)	3.0 (9.8)	47.5	59.0	60.5	62.5	59.5	55.0	51.5	47.0
	40 (1.6)	250 (530)	95 (.374)	3.1 (10.2)	51.0	64.0	61.5	57.0	55.5	53.0	45.5	35.5
	32 (1.25)		260 (1.02)	3.35 (11)	51.5	65.0	65.5	63.0	59.5	57.0	51.5	45.0
	40 (1.6)	300 (636)	220 (.866)	3.75 (12.3)	55.5	67.5	65.0	60.0	58.5	55.5	48.5	37.5
	32 (1.25)		500 (1.97)	3.9 (12.8)	53.0	64.5	65.0	69.5	65.5	64.0	59.0	55.5
250 (9.8)	40 (1.6)	100 (212)	12 (.047)	1.05 (3.4)	42.5	41.5	35.5	31.0	26.0	11.5	16.5	28.0
	32 (1.25)		15 (.059)	1.35 (4.4)	42.5	41.5	37.0	32.0	26.5	15.5	17.5	27.5
	25 (1.0)		40 (.157)	2.2 (7.2)	42.0	44.0	43.5	39.5	36.5	30.0	24.5	22.0
	40 (1.6)	150 (138)	18 (.071)	1.65 (5.4)	43.0	41.5	38.5	34.0	29.5	16.0	17.5	27.5
	32 (1.25)		20 (.079)	1.85 (6.1)	44.0	45.0	40.5	34.5	32.0	29.5	17.5	28.5
	25 (1.0)		73 (.287)	2.8 (9.2)	44.0	50.5	48.0	43.5	41.5	38.5	28.0	21.5
	40 (1.6)	200 (424)	27 (.106)	1.8 (5.9)	45.0	47.5	43.0	39.5	36.0	25.5	17.5	27.5
	32 (1.25)		50 (.197)	2.35 (7.7)	45.0	50.5	46.0	41.5	39.0	32.5	17.5	28.5
	25 (1.0)		110 (.433)	3.40 (11.2)	43.5	54.5	52.5	48.5	47.0	44.5	36.5	28.5
	40 (1.6)	250 (350)	42 (.165)	2.85 (9.3)	48.0	53.5	49.5	44.5	42.5	36.5	17.5	27.5
	32 (1.25)		65 (.256)	3.0 (9.8)	46.0	53.5	51.5	47.0	47.0	39.0	17.5	36.0
	25 (1.0)		165 (.650)	3.8 (12.5)	47.0	57.0	59.5	55.0	52.5	50.5	45.5	35.5
	40 (1.6)	300 (636)	60 (.236)	3.05 (10.0)	51.5	59.0	53.5	49.0	47.0	42.5	32.0	27.5

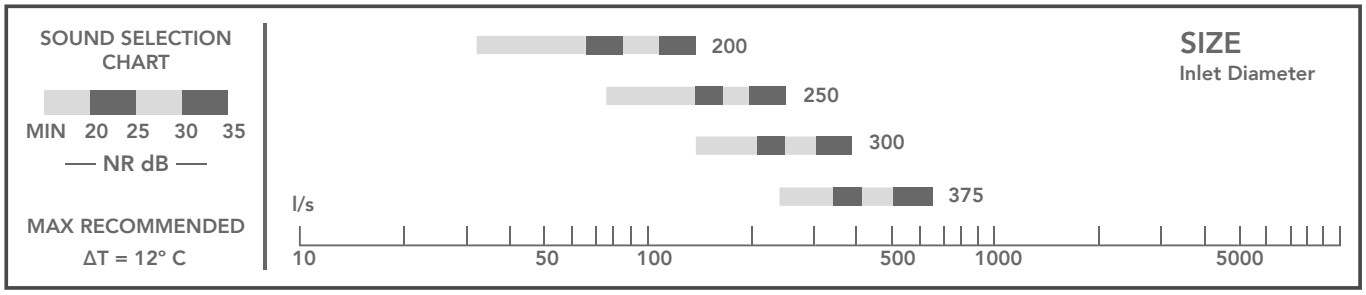
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X..N (X is the nominal neck diameter of the diffuser).

Example: If your requirement is for three 250 mm diameter Jet diffusers mounted on a plate, the ordering code would be **AJD2503.** {When ordering it is not necessary to include the periods [..]).

Selection guide



Description

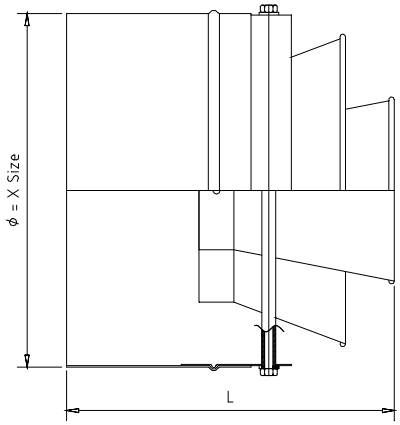
The 2.51 (AJD) diffusers are designed for air conditioning or ventilating large areas such as sports centres, theatres, entertainment and industrial areas.

The diffusers are able to operate at a high air throughput. By rotating the nozzle through 360 degrees, the air pattern may be adjusted from a jet pattern to a diffused pattern.

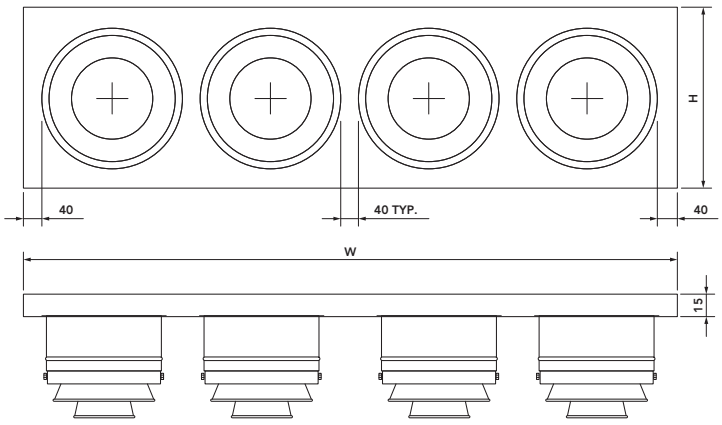
Finish

The diffuser core is manufactured from spun aluminium and the outer case is steel. The entire assembly is powder coated in a range of standard colours. Contact your nearest Bradflo Office with your requirement.

Design dimensions



Product Code:	Exact Neck Metric ØA	Nom. Neck Imperial ØA	Ceiling Cut Out Size	Height Metric H	Face Size Metric ØB
AJD	200	8	220	115	280
AJD	250	10	270	115	330
AJD	300	12	320	115	380
AJD	350	14	370	115	430
AJD	400	16	420	115	480



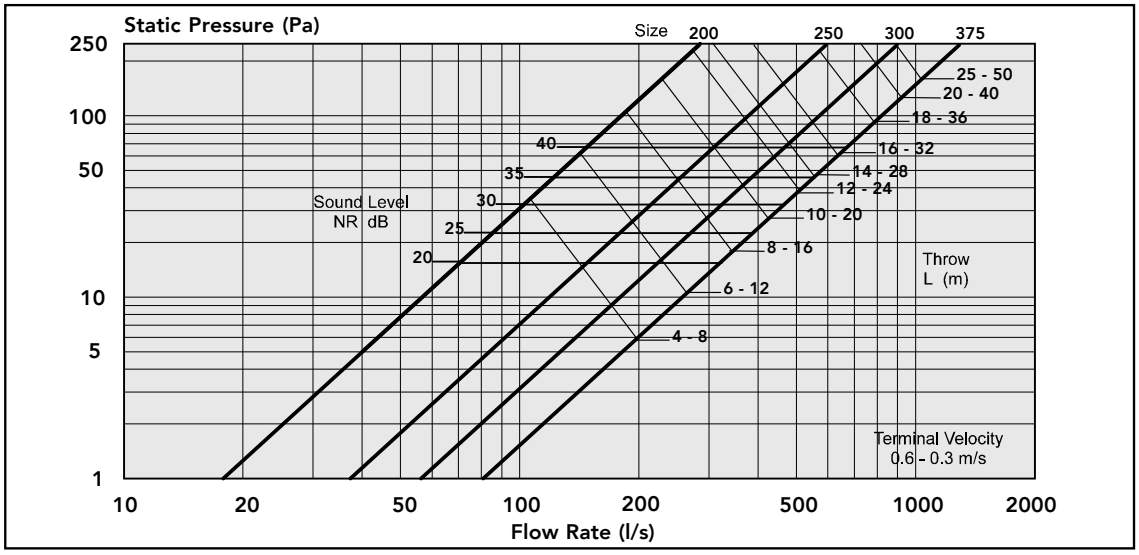
			NO. OF JETS			
			1	2	3	4
X-Size Dia.	H	L	W	W	W	W
200	280	225	280	520	760	1000
250	330	265	330	620	910	1200
300	380	300	380	720	1060	1400
375	455	300	455	870	1285	1700

Engineering Graphs

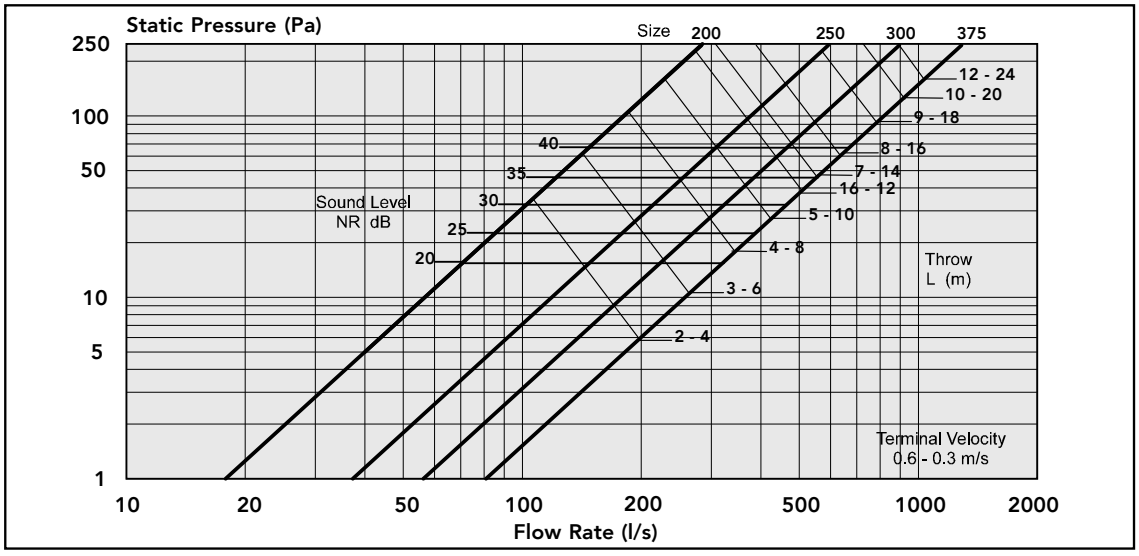
Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

AJD Jet pattern



AJD Diffused pattern



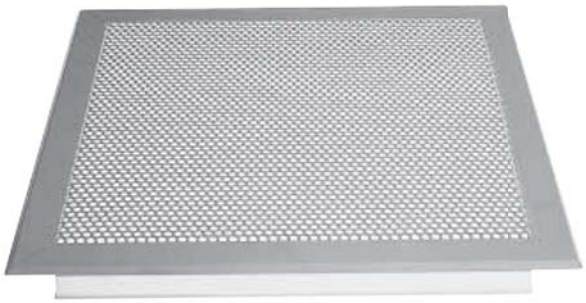
These graphs are for selection only and should not be used for commissioning

Ordering procedure

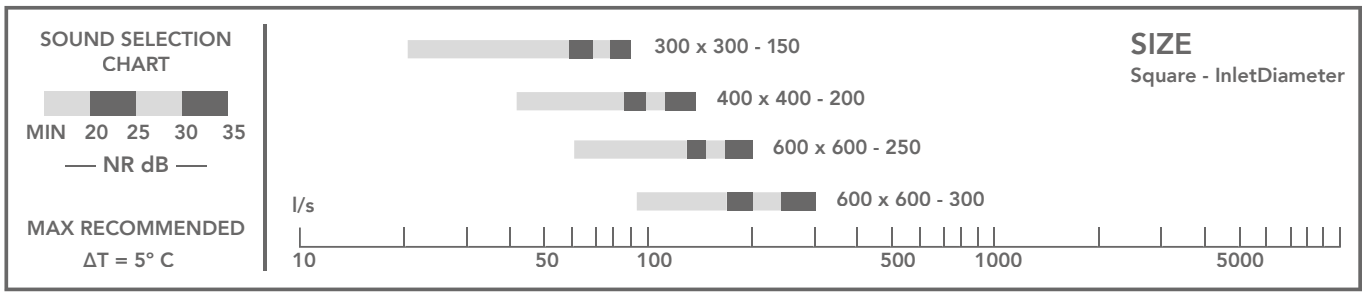
Using the chart below select your requirement and substitute the underscored text below.

Type..X..C (X is the nominal face size of the diffuser).

Example: If your requirement is for a 400 mm square perforated diffuser with a 200 mm dia inlet, the ordering code would be **APD1608.** {When ordering it is not necessary to include the periods [..]).



Selection guide



Product size numbers

	Size	X Size	Inlet dia.
A	300 x 300 - 125	300	150
B	400 x 400 - 200	400	200
C	600 x 600 - 250	600	250
D	600 x 600 - 300	600	300

Description

The 2.61 (APD) perforated diffuser is designed for flush mounting and suspended ceilings.

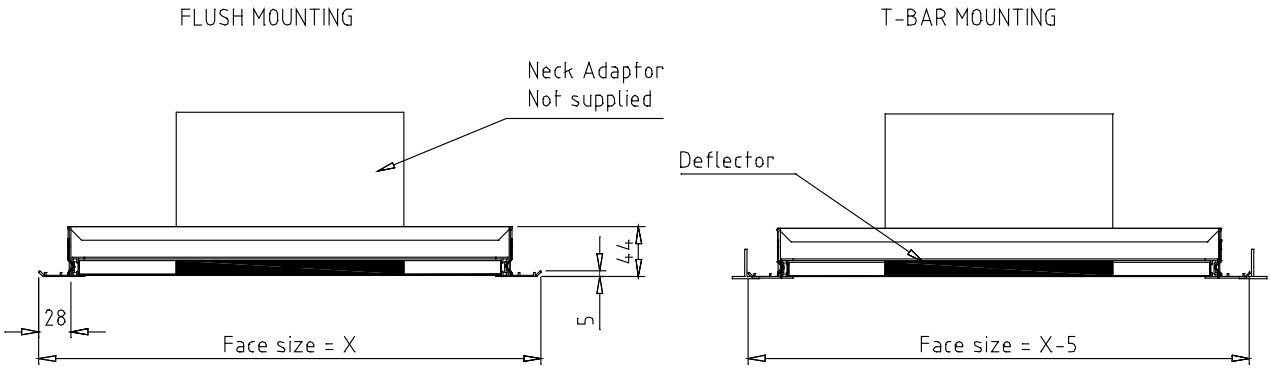
The diffuser is available in 1,2,3 or 4-way blow configurations.

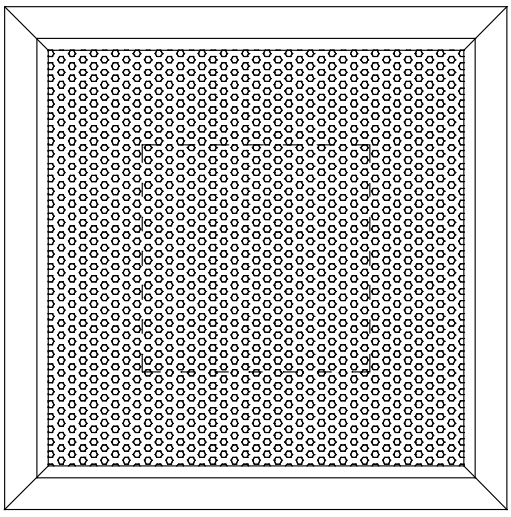
The perforated face may be removed from the frame for installation and cleaning.

The frames are made from aluminium with a perforated,galvanised core.

Finish

Each diffuser is powdercoated white unless otherwise specified. There are 15 standard colours to choose from.





Note!
Diffuser is shown in a 4-way blow configuration.

Sound data

NR levels for the grille may be determined from the engineering graph.

Sound power level L_w

The generated sound power level L_w dB is calculated by adding the correction factor K_{ok} (see table) to the sound level NR dB according to the formula:

$L_w = NR + K_{ok}$

	Frequency (cycles per second) Hz						
Size	125	250	500	1000	2000	4000	8000
A	+3	+2	+5	+8	+4	-6	-13
B	+2	+1	+5	+8	+3	-10	-15
C	+2	0	+5	+9	0	-12	-15
D	+2	0	+5	+9	+1	-13	-15
Tol+/-	2	2	2	2	2	2	2

k_{ok} with diffused pattern

Sound absorption ΔL dB

The sound absorption shown relates to a reduction of the sound power level calculated from duct to room. The end reflection is included in the values.

	Frequency (cycles per second) Hz						
Size	125	250	500	1000	2000	4000	8000
A	13	8	4	3	1	1	0
B	11	6	3	2	1	0	0
C	10	5	2	1	1	0	0
D	8	4	1	1	0	0	0
Tol+/-	2	2	2	2	2	2	2

Air pattern

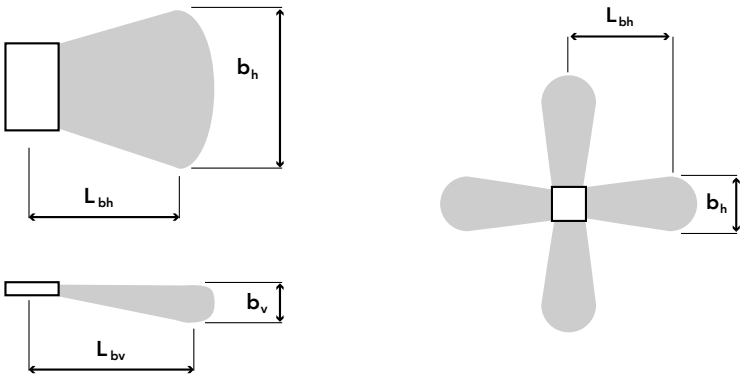
(with isothermal air supply)

$b_h = L_{0.3} \times 0.03$

$L_{bh} = L_{0.3} \times 0.65$

$b_v = L_{0.3} \times 0.06$

$L_{bv} = L_{0.3} \times 0.65$

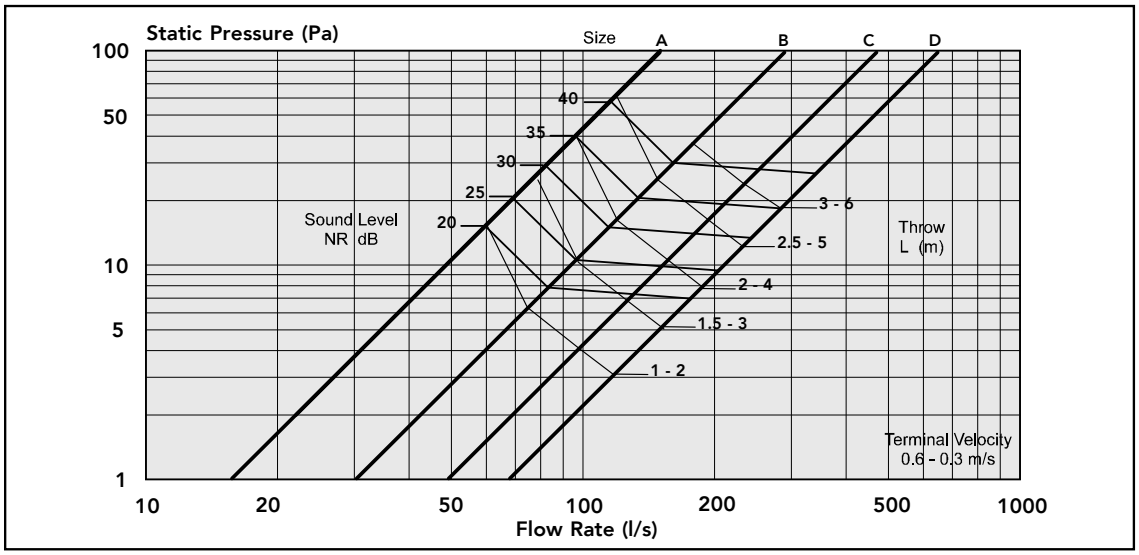


Engineering Graphs

Throws shown are to a terminal velocity of 0.60 m/s and 0.30 m/s. These graphs are for selection only and should not be used for commissioning.

Terminal velocity	Approximate air velocity in room
0.60 m/s	0.30 m/s
0.30 m/s	0.15 m/s

APR 4-way pattern



These graphs are for selection only and should not be used for commissioning

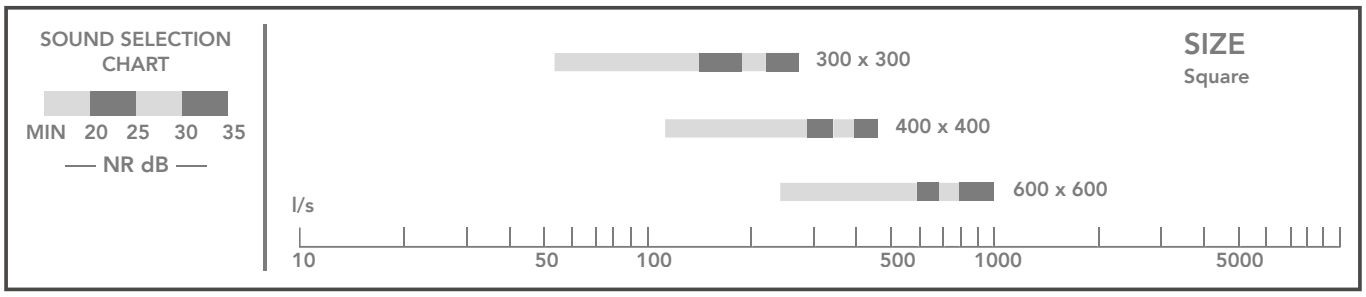
Ordering procedure

Using the chart below select your requirement and substitute the underscored text below.

Type..X (X is the nominal face size of the diffuser).

Example: If your requirement is for a 400 mm square perforated return air grille, the ordering code would be **APDE16.** {When ordering it is not necessary to include the periods [..]

Selection guide



Product size numbers

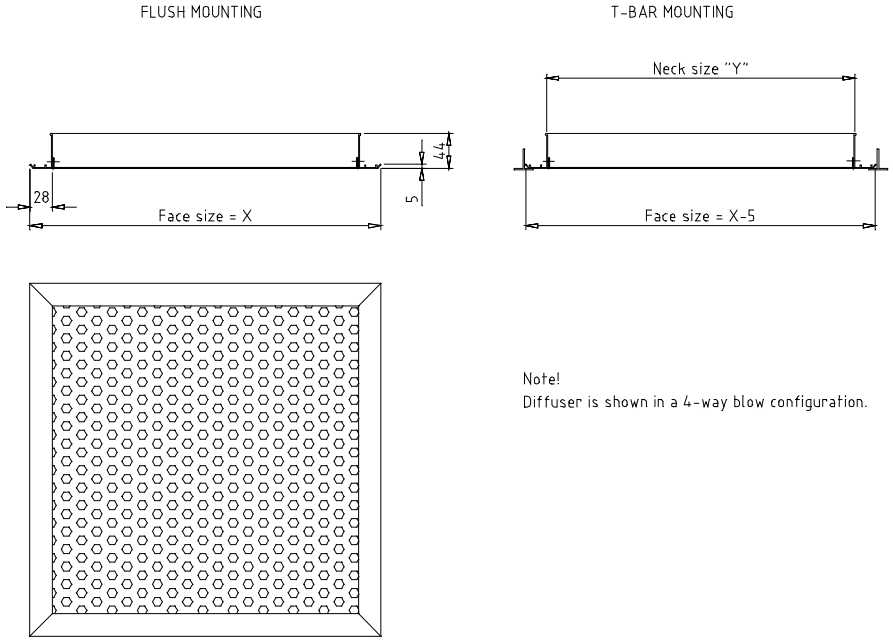
Size	X Size	Y Size
300 x 300	300	244
400 x 400	400	344
600 x 600	600	544

Description

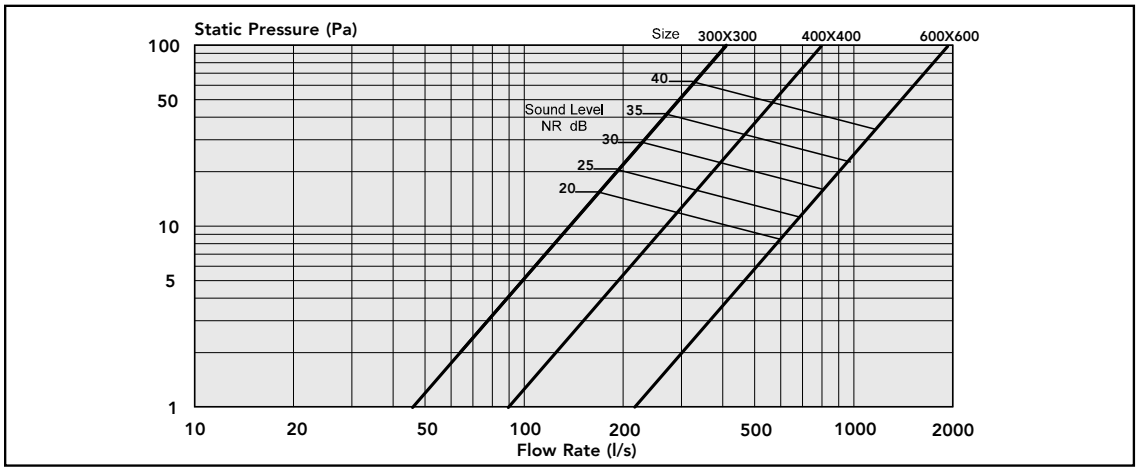
The 2.62 (APDE) perforated grille is designed for flush mounting and suspended ceilings. The perforated face is fixed in the frame. The frames are made from aluminium with a perforated, galvanised core.

Finish

Each diffuser is powdercoated white unless otherwise specified. There are 15 standard colours to choose from.



APDE performance graph



These graphs are for selection only and should not be used for commissioning

3. Plenums

Description

The 3.1 plenum box is for use with grilles and diffusers. The plenum is manufactured from galvanised steel.

Ordering procedure

Using the chart below, select your requirement and substitute the underscored text **ADC..X..Y..D**

Example: If your requirement is for a 375 mm square plenum with a 200 mm dia. inlet, the ordering code would be: **ADC151508**

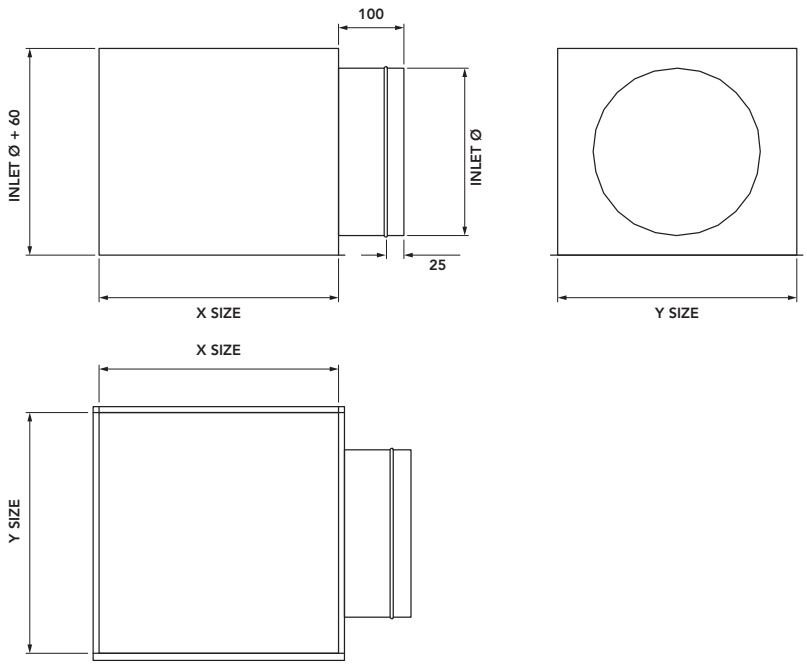
Other sizes are available upon request. Please contact your nearest Bradflo office.

Product size numbers

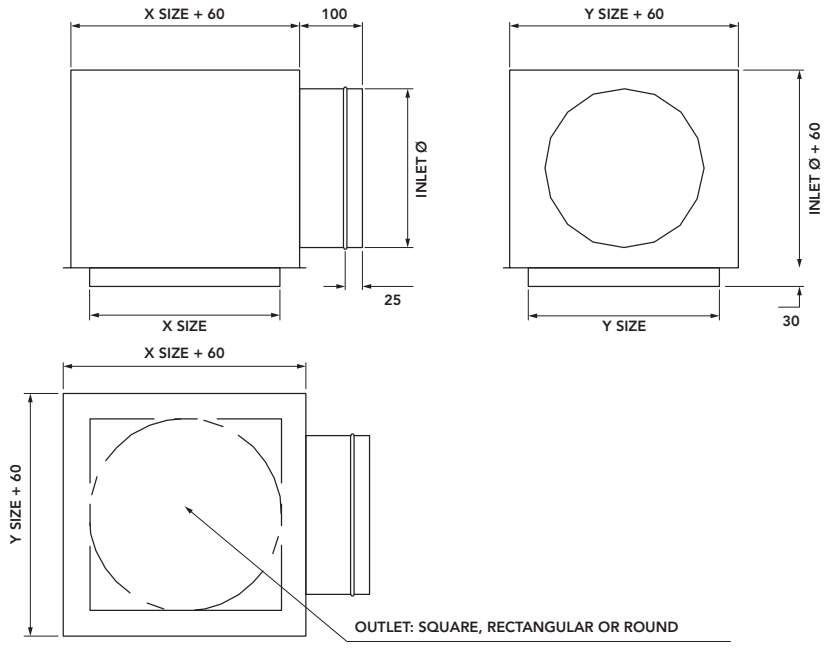
		Number of slots, "S"					Inlet diameter "I"					
Type	**"X" Size**	**06** (150)	**08** (200)	**09** (225)	**10** (250)	**12** (300)	**15** (325)	**16** (400)	**18** (450)	**24** (600)		**Inlet Dia. "D"**
ADC	**06** (150)											**06** (150)
	08 (200)											**08** (200)
	09 (225)											**10** (250)
	10 (250)											**12** (300)
	12 (300)											
	15 (375)											
	16 (400)											
	18 (450)											
Special sizes	**24** (600)											

Design dimensions

Inlet larger than the outlet



Inlet smaller than the outlet



Description

The 3.2 insulated plenum box is for use with grilles and diffusers. The plenum is manufactured from galvanised steel and internally insulated with black faced glasswool. Other types of insulation is available upon request including external polyurethane foam.

Ordering procedure

Using the chart below, select your requirement and substitute the underscored text **ADCI..X..Y..D.**

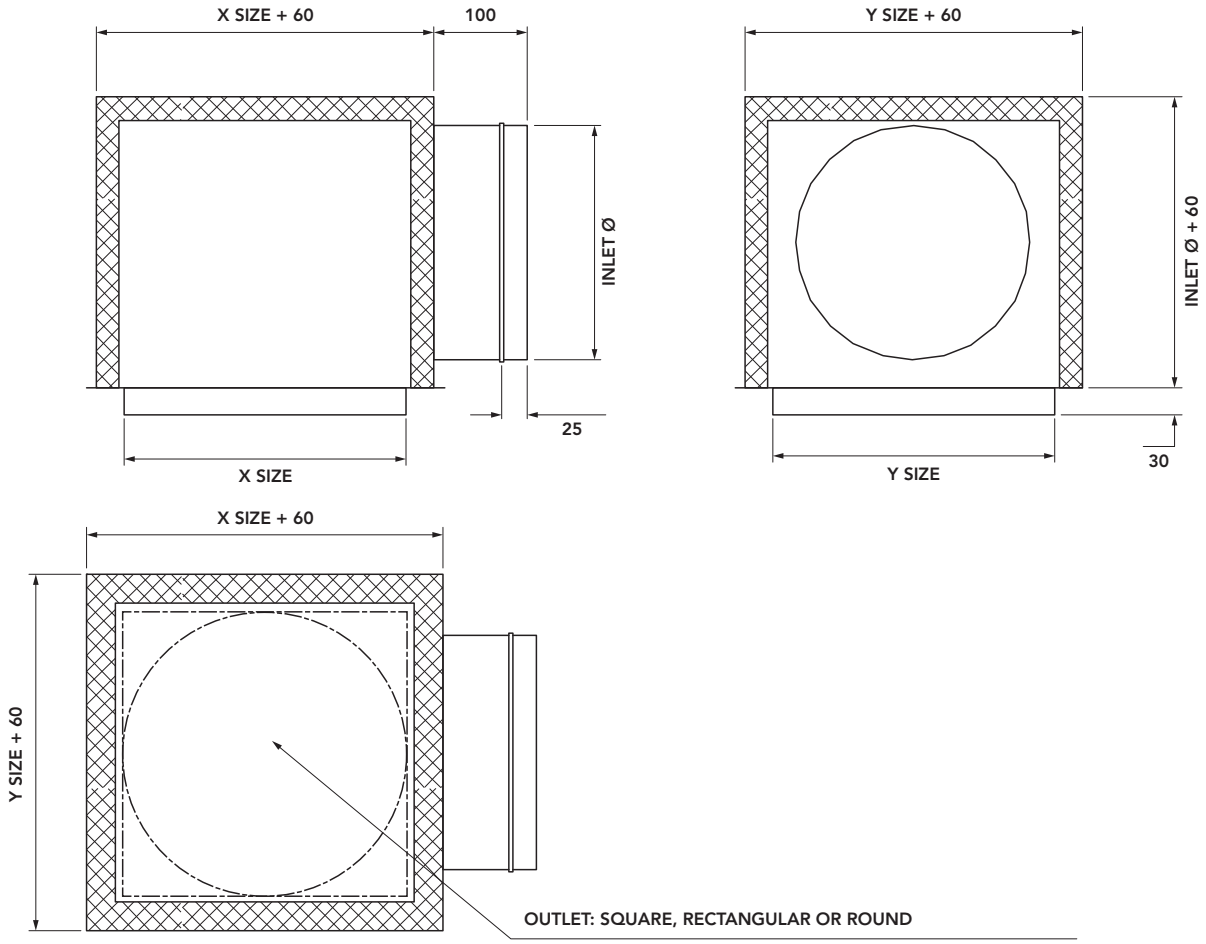
Example: If your requirement is for a 375 mm square plenum with a 200 mm dia. inlet, the ordering code would be: **ADCI151508.**

Other sizes are available upon request. Please contact your nearest Bradflo office.

Product size numbers

		Number of slots, "S"					Inlet diameter "I"					
Type	**"X" Size**	**06** (150)	**08** (200)	**09** (225)	**10** (250)	**12** (300)	**15** (325)	**16** (400)	**18** (450)	**24** (600)		**Inlet Dia. "D"**
ADCI	**06** (150)											**06** (150)
	08 (200)											**08** (200)
	09 (225)											**10** (250)
	10 (250)											**12** (300)
	12 (300)											
	15 (375)											
	16 (400)											
	18 (450)											
Special sizes	**24** (600)											

Design dimensions



Description

The ASA is a plenum suitable for use with all types of linear grilles and diffusers. It is manufactured from galvanised steel.

Ordering procedure

Using the chart below, select your requirements and substitute the underscored text **ASA..N..U..D..E**

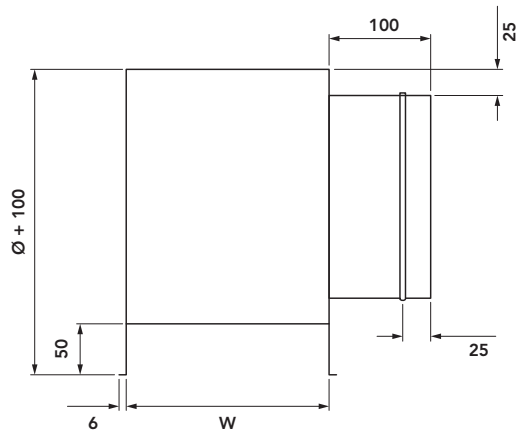
Example: If your requirement is for a 4 slot 1200 mm long linear plenum with a 200 mm dia. inlet and a left hand end, the ordering code would be: **ASA..4..48..08.**.EL (When ordering it is not necessary to include the periods [..])

Other sizes are available upon request. Please contact your nearest Bradflo office.

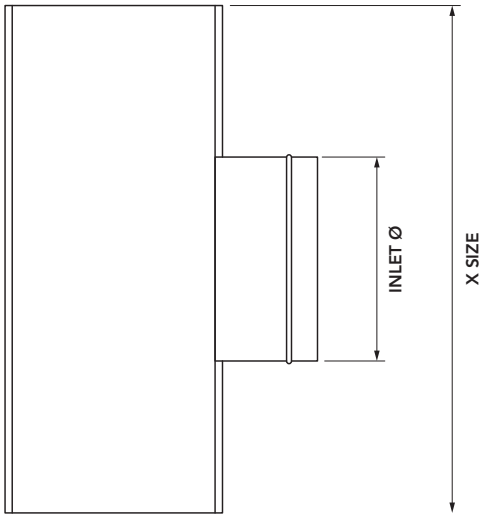
Product size numbers

Type	No. of Slots "N"	Length "X"	Inlet dia."D"	No. of Ends "E"	Colour
ASA	**1**	**24** (600)	**08** (200)	**0E** (No ends)	Matt black on inside faces
	2	**36** (900)	**09** (225)	**EL** (One end left)	
	3	**48** (1200)	**10** (250)	**ER** (One end right)	
	4	**60** (1800)		**2E** (Two ends)	
	5				
	6				
	7				
	8				

Design dimensions



SLOTS	W
1	48
2	86
3	124
4	162
5	200
6	238
7	277
8	315



4. Fittings & Accessories

Dampers, Equalisers & Measures

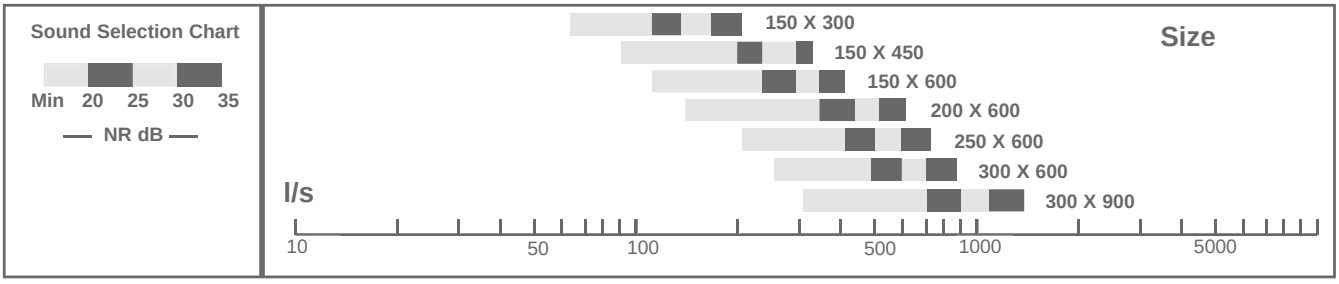
Ordering Procedure

Using the chart below, select your requirements and substitute the underscored text below.
AOBD..X..Y

Example: If your requirement is for a 200mm square opposed blade damper, the ordering code would be: **AOBD0808** (When ordering it is not necessary to include the periods (..)).

Special sizes are available upon request. Contact your nearest Bradflo Office.

Selection guide



Product size numbers

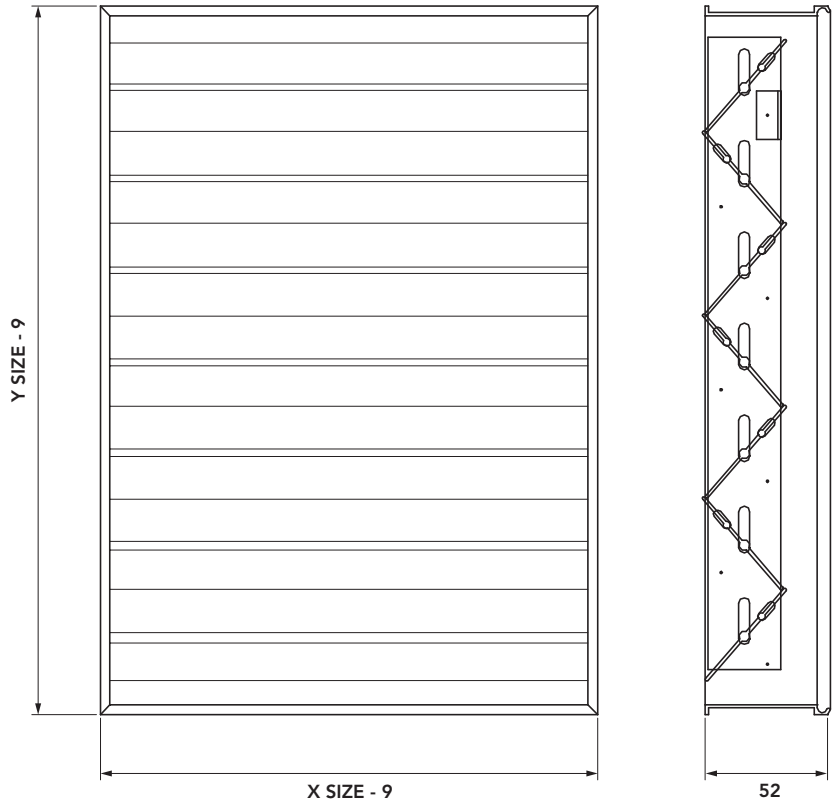
		"Y" Size										
Type	**"X" Size**	**06** (150)	**08** (200)	**10** (250)	**12** (300)	**14** (350)	**16** (400)	**18** (450)	**20** (500)	**24** (600)	**36** (900)	**Colour**
AOBD	**06** (150)											**Black**
	08 (200)											
	10 (250)											
	12 (300)											
	14 (350)											
	16 (400)											
	18 (450)											

Description

The 4.31 opposed blade damper has been designed to fit on grilles. Adjustment is carried out through the face of the grille.

The damper is manufactured from extruded aluminium and is painted matt black as standard.

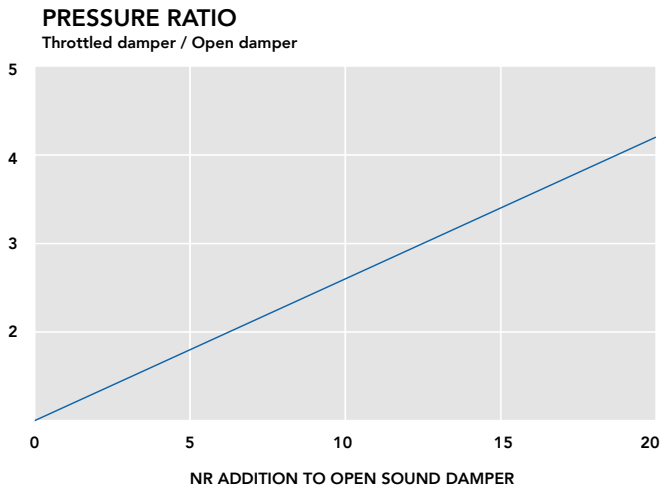
Design dimensions



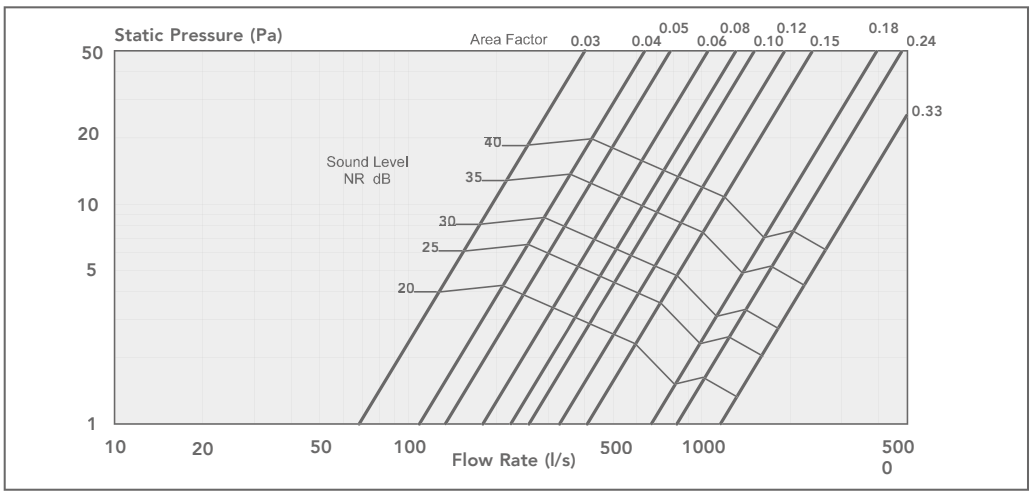
Note! Maximum X size is 450 mm per section. For larger grilles, dampers must be made in sections to suit.

Sound data

NR levels for the damper may be
determined from the engineering graph.



Free area in m2 for standard sizes								
X/Y	200	300	400	500	600	750	900	1200
150	0.02	0.04	0.05	0.06	0.07	0.10	0.11	0.15
200	0.03	0.05	0.07	0.08	0.10	0.13	0.15	0.21
250	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.26
300	0.05	0.08	0.10	0.13	0.16	0.20	0.23	0.31
350	0.06	0.09	0.12	0.15	0.18	0.23	0.27	0.36
400	0.07	0.10	0.14	0.17	0.21	0.26	0.31	0.42
450	0.08	0.11	0.16	0.20	0.23	0.29	0.35	0.47



These graphs are for selection only and should not be used for commissioning

Description

The 4.34 (ASSD) adjustable stream splitter is designed for use on large duct take offs in industrial or relatively low cost commercial systems. The stream splitter damper has a screw adjustment through the face of the grille or diffuser. Standard finish is matt black over galvanised steel.

Ordering Procedure

Using the chart below, select your requirements and substitute the underscored text below.
ASSD..X..Y

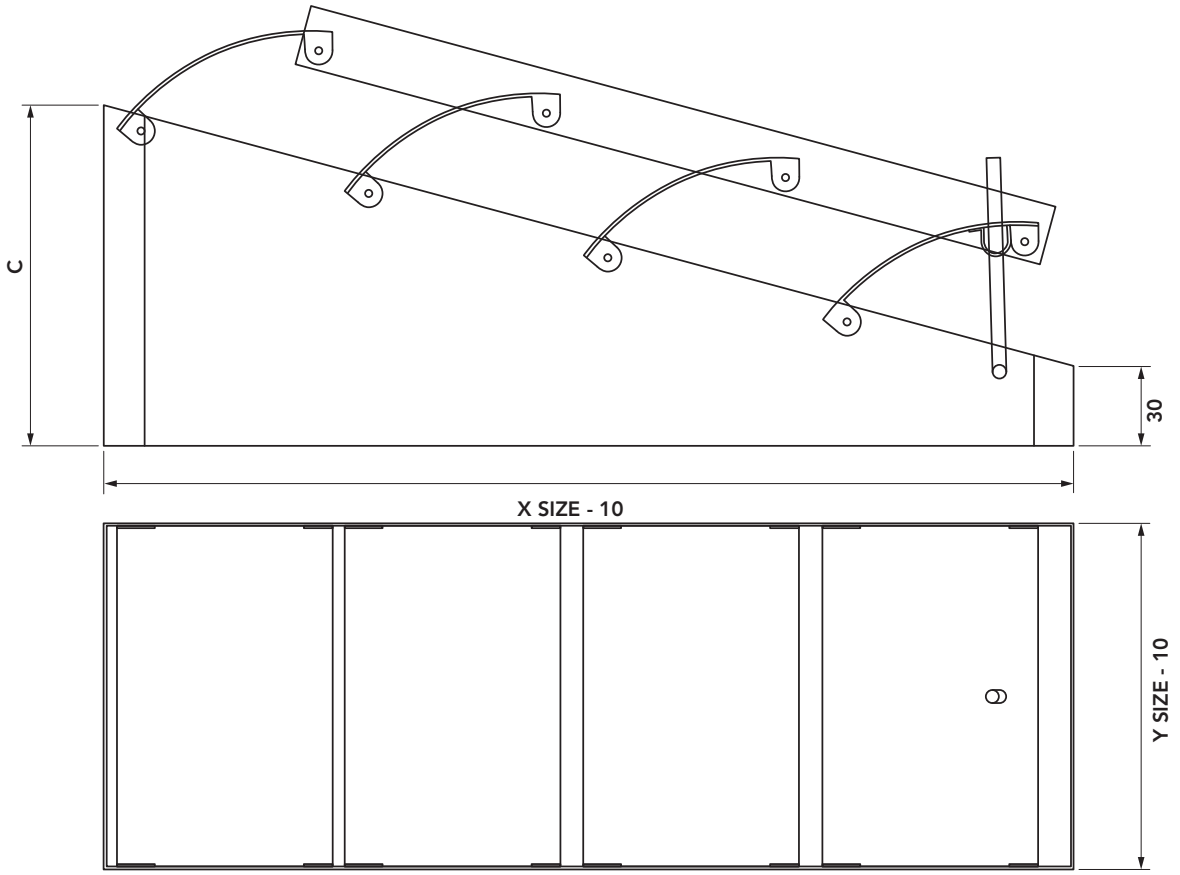
Example: If your requirement is for a 200mm x 400mm damper, the ordering code would be: **ASSD..08..16.** (When ordering it is not necessary to include the periods (..)).

Specials sizes are available. Contact your nearest Bradflo office.

Product size numbers

		"Y" Size										
Type	**"X" Size**	**06** (150)	**08** (200)	**9** (225)	**10** (250)	**12** (300)	**15** (375)	**16** (400)				**Colour**
AOBD	**06** (150)											**Black**
	08 (200)											
	9 (225)											
	10 (250)											
	12 (300)											
	15 (375)											
	18 (450)											
	24 (600)											
Special												

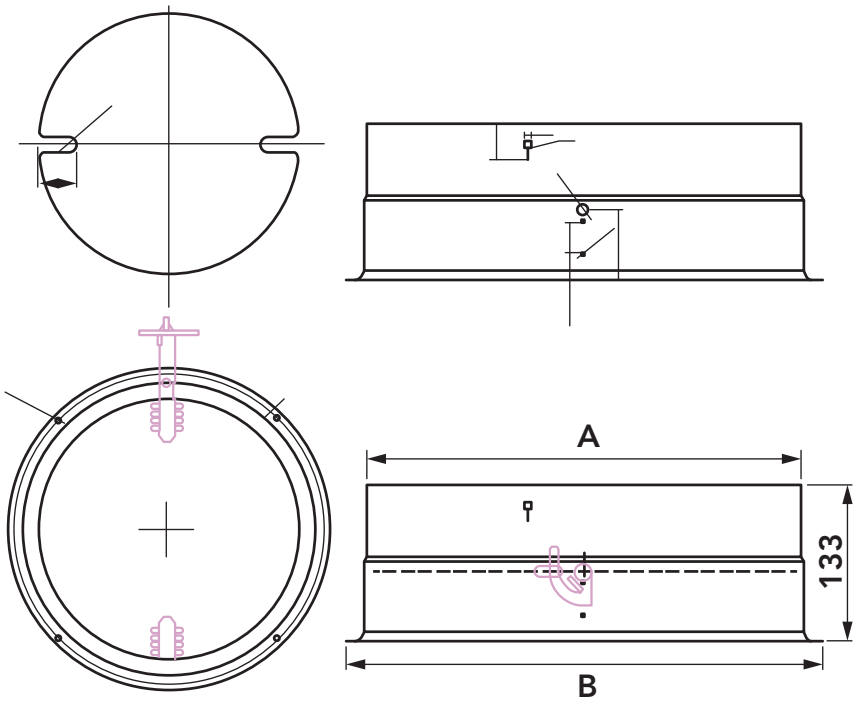
Design dimensions



Note! C = (X x 0.258) +30

Description

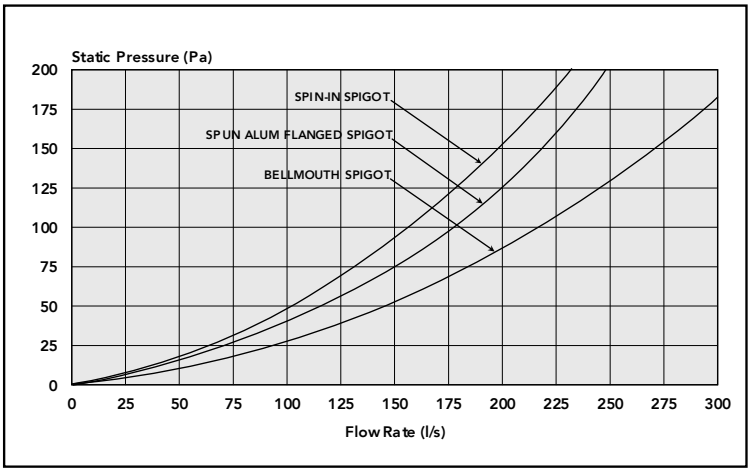
The Bellmouth spigot and damper is a high efficiency, energy saving product suitable for both high and low velocity applications. The spigot is manufactured from galvanised steel.



Product	Product Description	A mm	B mm
1610411	BELLMOUTH SPIGOT & DAMPER 150MM	150	195
1610412	BELLMOUTH SPIGOT & DAMPER 200MM	200	245
1610413	BELLMOUTH SPIGOT & DAMPER 250MM	250	295
1610414	BELLMOUTH SPIGOT & DAMPER 300MM	298	343
1610415	BELLMOUTH SPIGOT & DAMPER 350MM	350	395
1610416	BELLMOUTH SPIGOT & DAMPER 400MM	400	445

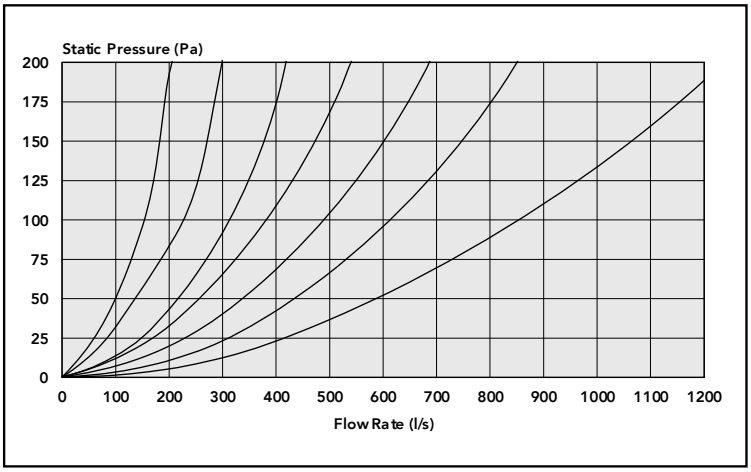
Performance comparison (150mm duct)

Comparative static pressure/air-flow tests indicate that the Bellmouth spigot is over 20% more efficient than equivalent spun aluminium or steel flanged spigots or spinning spigots.

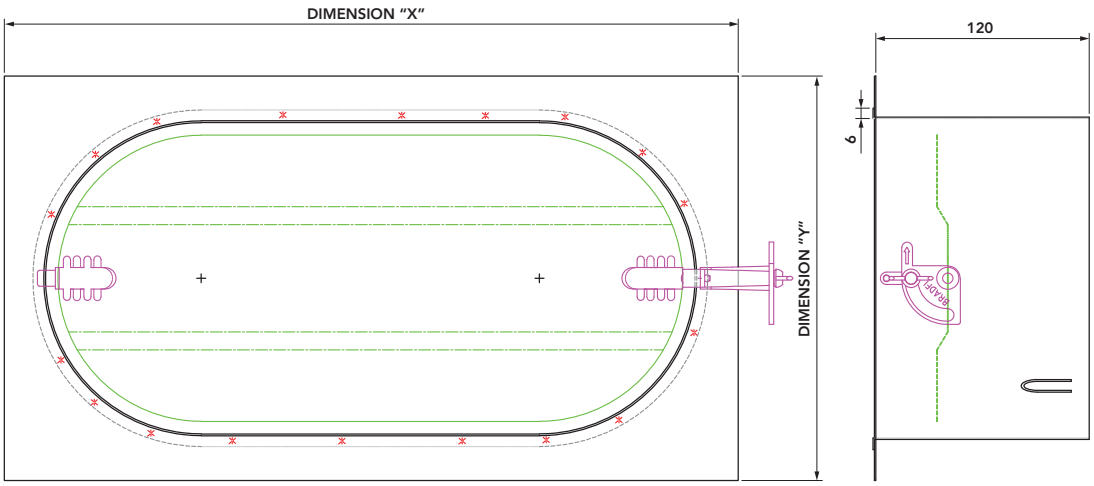


Performance data

The performance data for the Bellmouth spigots has been based on tests undertaken without ducting attached. The additional pressure drop resulting from the flexible ducting needs to be accounted for in the final calculations.



Design dimensions



Code	Description	Dimension "X" (mm)	Dimension "Y" (mm)
3209558	Ovalised Damper Spigot 150mm	228	146
3209560	Ovalised Damper Spigot 200mm	286	176
3209561	Ovalised Damper Spigot 250mm	350	206
3209562	Ovalised Damper Spigot 300mm	415	226
3209565	Ovalised Damper Spigot 350mm	476	252
3209568	Ovalised Damper Spigot 400mm	545	270

Disclaimer: *Products in this specification manual must by regulation be installed by licensed and registered trade people. The manufacturer/distributor reserves the right to vary specifications or delete models from their range without prior notification. Dimensions are nominal measurements only. Dimensions and set-outs listed are correct at time of publication however the manufacturer/distributor takes no responsibility for printing errors.*

Bradflo offers a range of flexible insulated duct for commercial applications. Speak to your local Bradflo contact for more information.

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