

ALUMINIUM GRILLES

LINEAR SUPPLY AND EXHAUST AIR

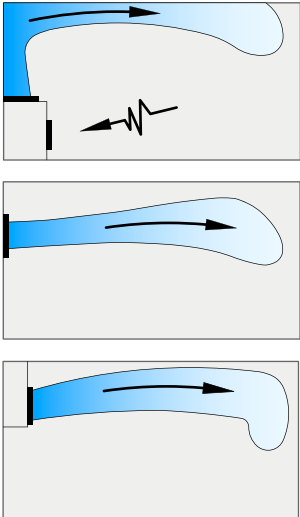


AIR IN MOTION

Supply and exhaust air

LINEAR BAR GRILLES

introduction



The FB and FN type Linear grille offers a wide range of blade formats to meet both architectural and system requirements and is ideally suited to sidewall, bulkhead or cill applications.

Grilles can be supplied in modular units or, for continuous applications, in single sections up to 3m. All core types are optionally available as removable items, or alternatively, can be supplied without frames.

Hinged core sections can also be supplied to provide access to concealed control valves, thermostats or switches.

For continuous applications, make-up sections can be manufactured to suit internal or external corner details. Grilles can also be curved to suit architectural features.



type FB - FN

control Opposed blade volume control damper - OB
Adjustable vertical rear blades - SV

options For all additional available options, border styles, fixings, finishes and plenums see document **PART L**

fixings Standard fixing method is by countersunk screw through the flange - SC
Recommended secret fixing method is by removable core - RC

finish Standard finish is satin anodised aluminium - SAA

sizes Linear grilles are available in standard heights ranging from 40 mm up to 600 mm and in single section lengths of up to 3m, depending on the height.

Note that grille heights less than 50 mm cannot be fitted with OB dampers.

ordering details

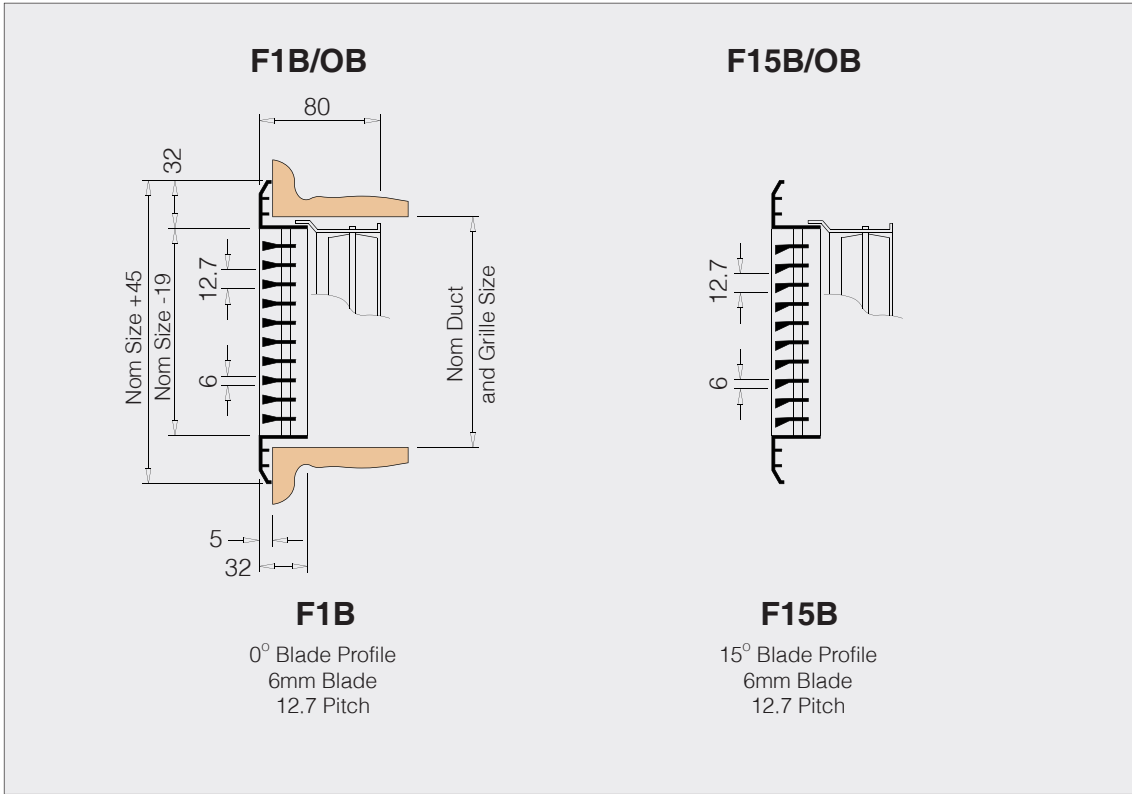
example:

type	control	borders	fixing	finish	width	height	quantity
F1B	/ OB	/ 32	/ SC	/ SAA	/ 1000	/ 300	/ 6

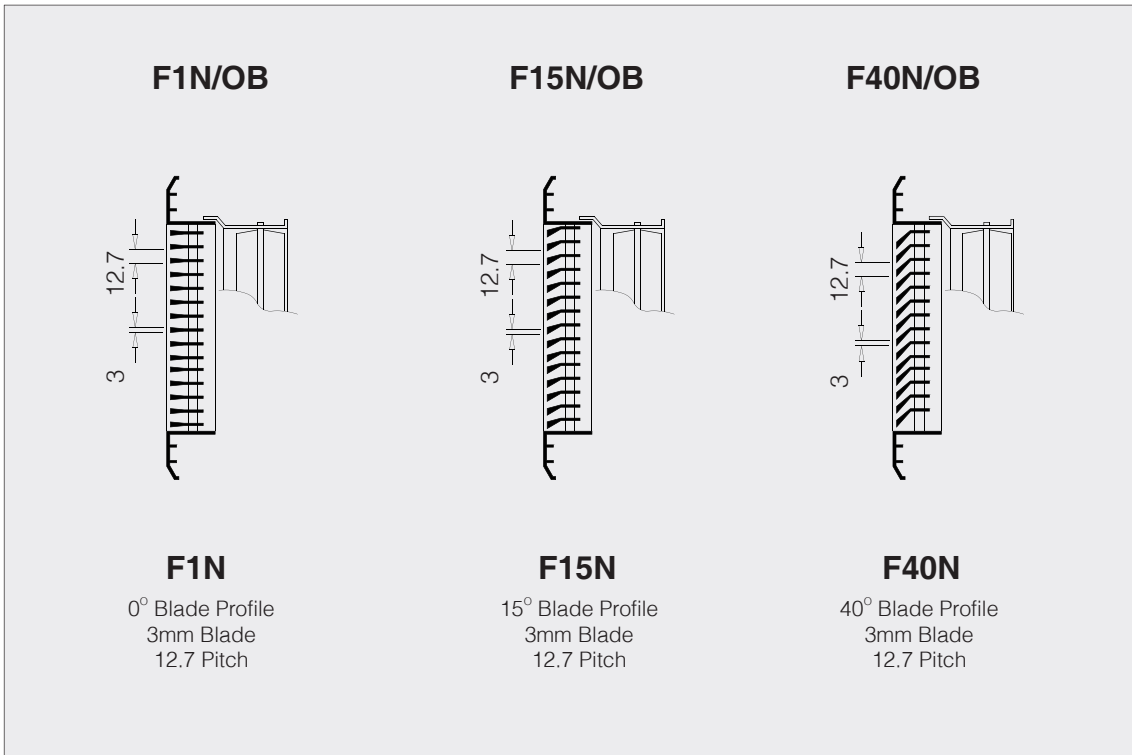
Supply and exhaust air

DIMENSIONS

**6mm blade
12.7 pitch**



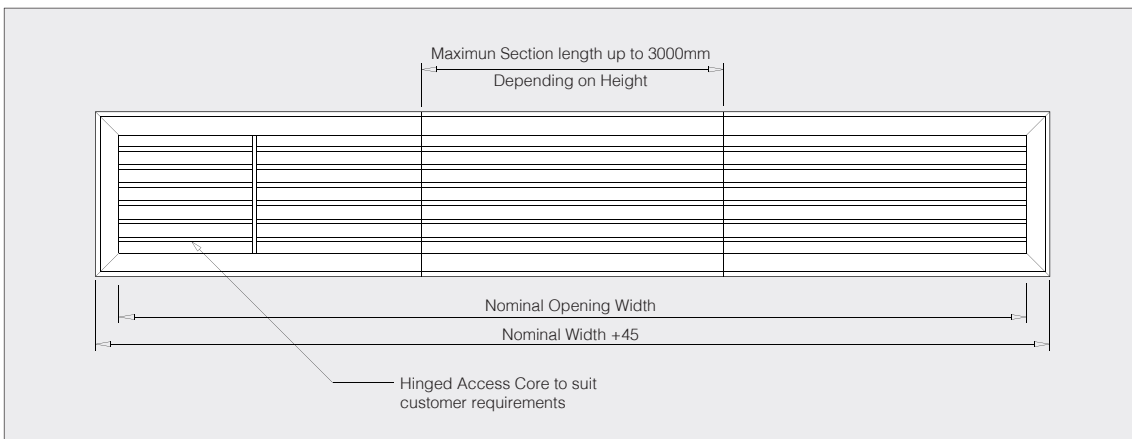
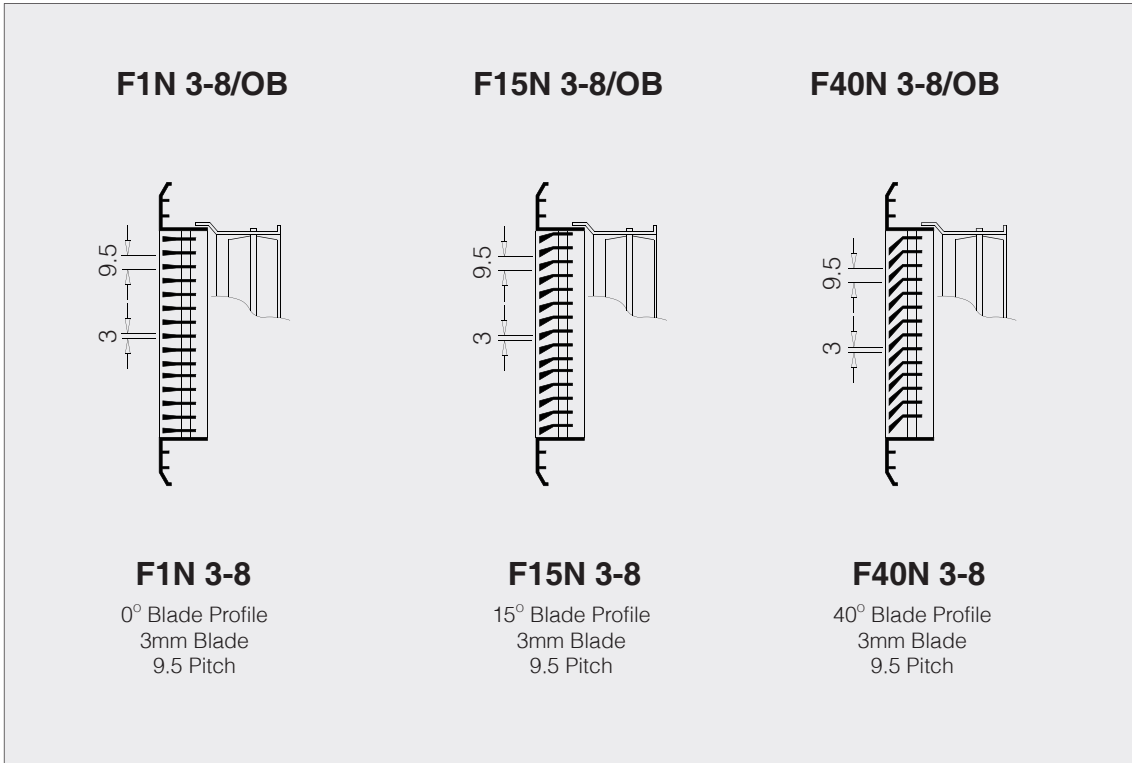
**3mm blade
12.7 pitch**



Supply and exhaust air

DIMENSIONS

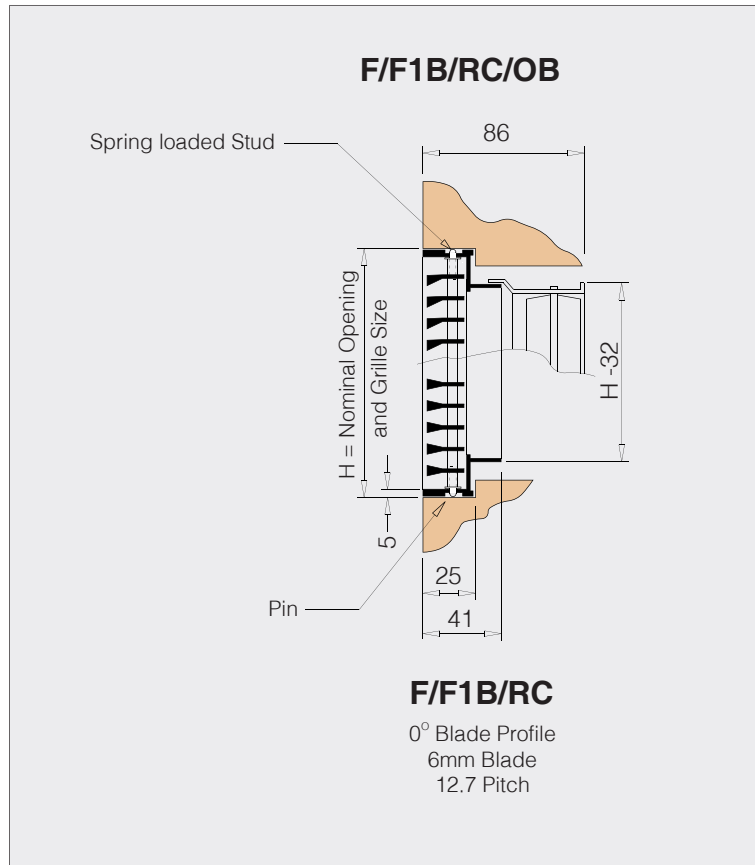
9.5mm pitch
3mm blade



Supply and exhaust air

DIMENSIONS

recessed frame



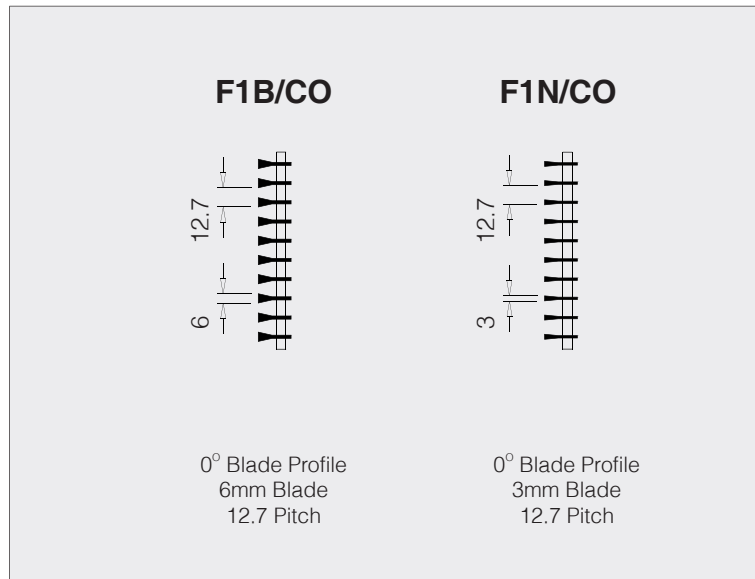
F/ Recessed Frame.

All core types.

Spring loaded removable core fixings.

Ideal for sidewall applications.

core only



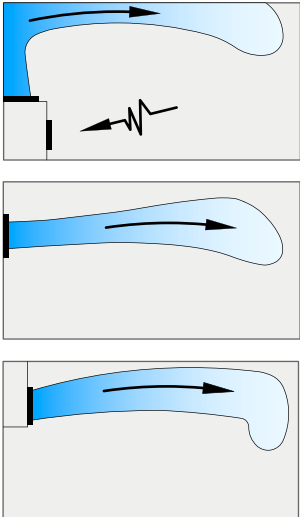
All blade types available as Core Only : **CO**

Available with spring loaded stud: **RC**

Supply and exhaust air

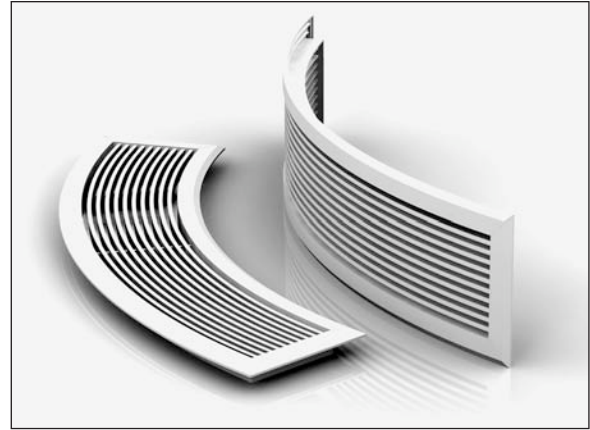
CURVED LINEAR BAR GRILLES

introduction



The F1B and F1N type Linear grilles are both available in curved sections. These may be either ceiling/cill curved or sidewall curved units.

Grilles can be supplied in modular units or, for continuous applications, in single sections up to 2.5m.



type F1B - F1N (Note: only available with 0° deflection blades) **C**

control Dampers in the plenum box or duct.

options For all additional available options, fixings, finishes and plenums see document **PART L**

fixings Standard fixing method is by countersunk screw through the flange - SC

finish Standard finish is powder coated - PC

sizes Linear grilles are available in standard heights ranging from 40 mm up to 600 mm and in single section lengths of up to 2.5m, depending on the height.

Note that grille heights less than 50 mm cannot be fitted with OB dampers.

flange Flange size 25mm square edge.

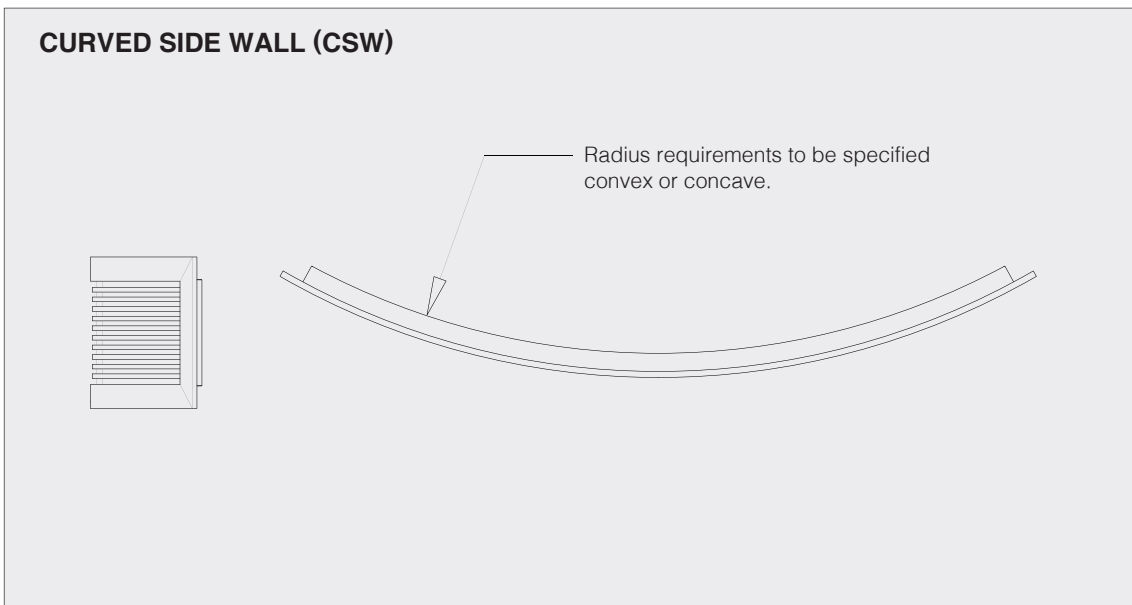
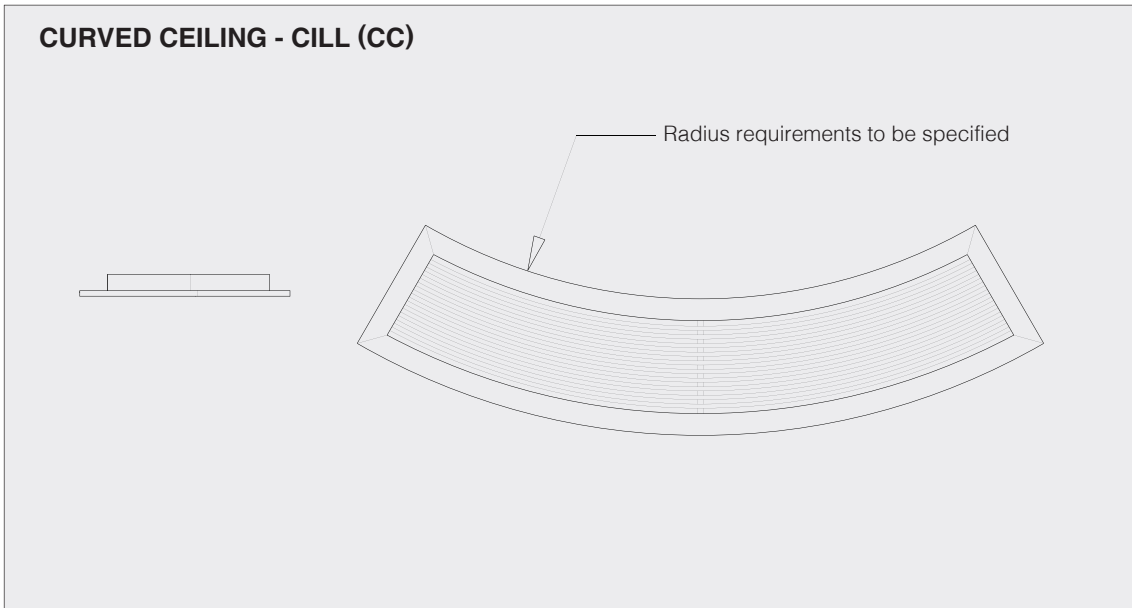
ordering details

example:

type	control	borders	fixing	finish	width	height	quantity
F1B	/ OB	/ 25	/ SC	/ PC	/ 1000	/ 300	/ 6

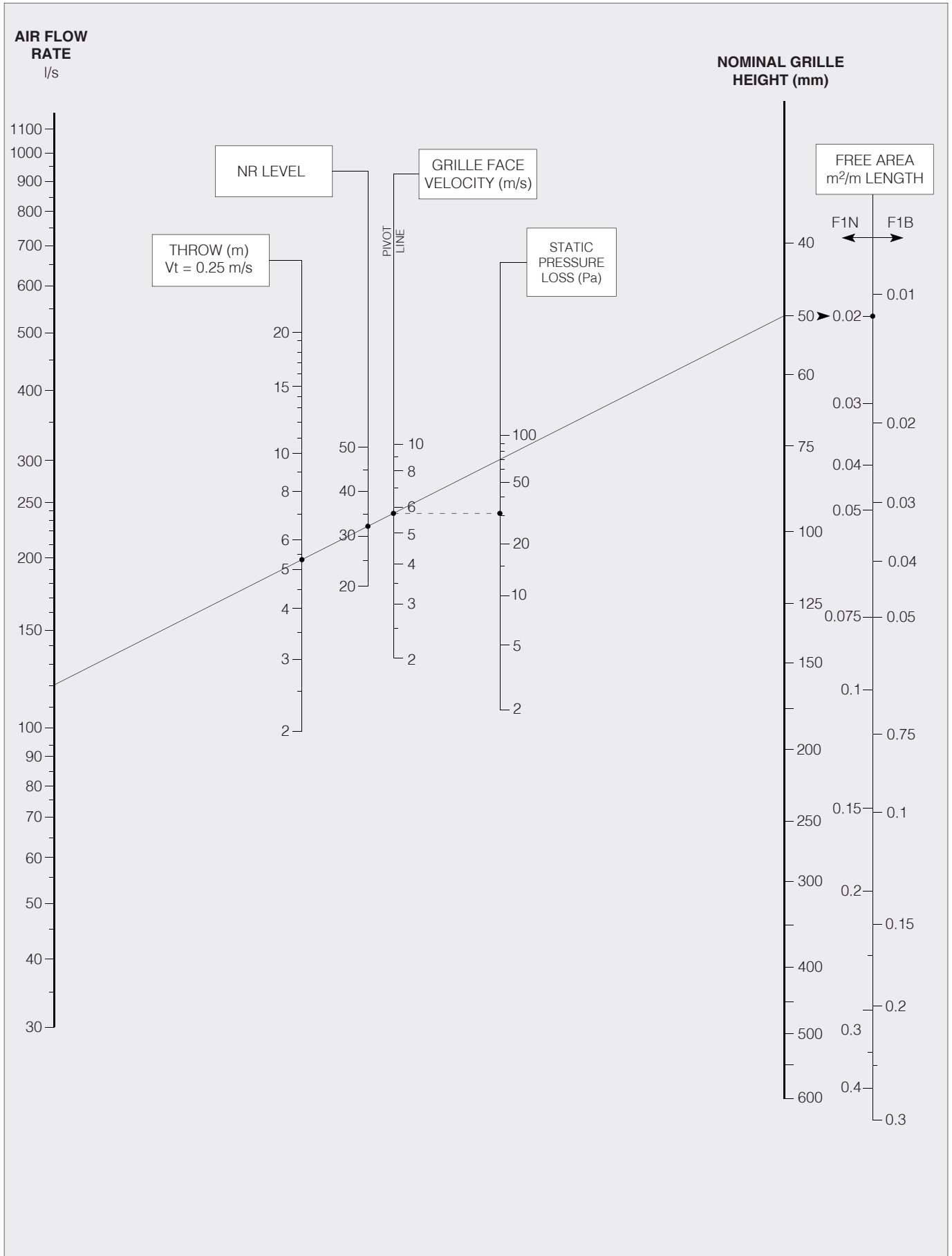
Supply and exhaust air

DIMENSIONS



Supply and exhaust air

SELECTION NOMOGRAM



Supply and exhaust air

BASIS OF DATA

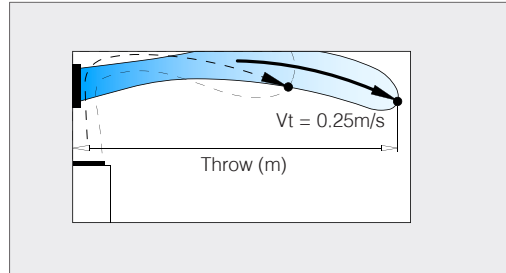
Throw data is for a 1.2m sidewall grille positioned within 250mm of a ceiling surface and is based on a terminal velocity (V_t) of 0.25m/s and a cooling differential of 10°C. For mounting distances greater than this reduce the throws by a factor of 0.7.

Additional factors can be applied for other temperature differentials. Acoustic data is presented in terms of NR levels based on a room absorption factor of 8dB.

note

		F1N, F15N	F40N
NOMOGRAM DATA IS BASED ON F1B AND F15B GRILLE TYPES. FOR FIN, F15N AND F40N GRILLES, THE FOLLOWING CORRECTION FACTORS SHOULD BE APPLIED	THROW (m)	x0.9	x0.75
	NR LEVEL	-3	0
	FACE VELOCITY	x0.85	x0.85
	PRESSURE LOSS	x0.8	0

correction factors



TERMINAL VELOCITY CORRECTION FACTORS				
LENGTH (m)	0.5	2.0	2.5	3.0+
THROW CORRECTION	0.9	1.0	1.1	1.1
NR CORRECTION	-3	+4	+3	+5

TEMPERATURE CORRECTION FACTORS		
DIFFERENTIAL TEMPERATURE	0°C	+10°C
SIDEWALL THROW FACTOR	1.1	1.15
CILL THROW FACTOR	1.1	1.2

exhaust

EXHAUST APPLICATIONS				
		F1B / F15B	F1N / F15N	F40N
FOR EXHAUST GRILLES, APPLY THE FOLLOWING CORRECTION FACTORS TO THE SUPPLY GRILLE DATA.	P_{se}	$P_s \times 1.3$	$P_s \times 1.2$	$P_s \times 1.3$
	NR_e	NR + 5	NR + 7	NR + 7

example

SELECTION EXAMPLE				
	GRILL TYPE	THROW (m)	NR	Ps (Pa)
1200mm WIDE SUPPLY GRILLE 50mm HIGH, PASSING AN AIR FLOW RATE OF 120l/s/m (144 l/s total)	F1B, F15B	5.4	32	32
	F1N, F15N	4.9	29	26
	F40N	4.0	32	32
F1N FREE AREA = $1.2 \times 0.02 = 0.024\text{m}^2$ F1B FREE AREA = $1.2 \times 0.012 = 0.014\text{m}^2$				

Grille programme literature

part A	Introduction & technical overview
part B	Adjustable Blade, Supply Air.
part C	Fixed Blade, Exhaust Air.
part D	Continuous, Linear, Supply / Exhaust Air.
part E	Cill & Floor, Supply / Exhaust Air.
part F	Sight / Lightproof & Fireproof.
part G	Domestic Grilles.
part H	Rigidcore & Flexicore Grilles.
part I	Spot Louvres.
part J	Flow control / Equalisation & Pressure Regulating dampers.
part K	Plenum Boxes & Pan Adaptors.
part L	Control / Frame / Fixing / Finish options & Jet Drop Characteristics.

