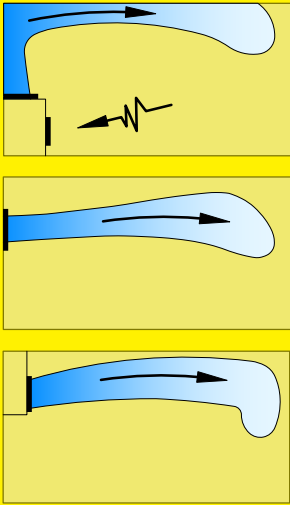


# Supply and exhaust air

## 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

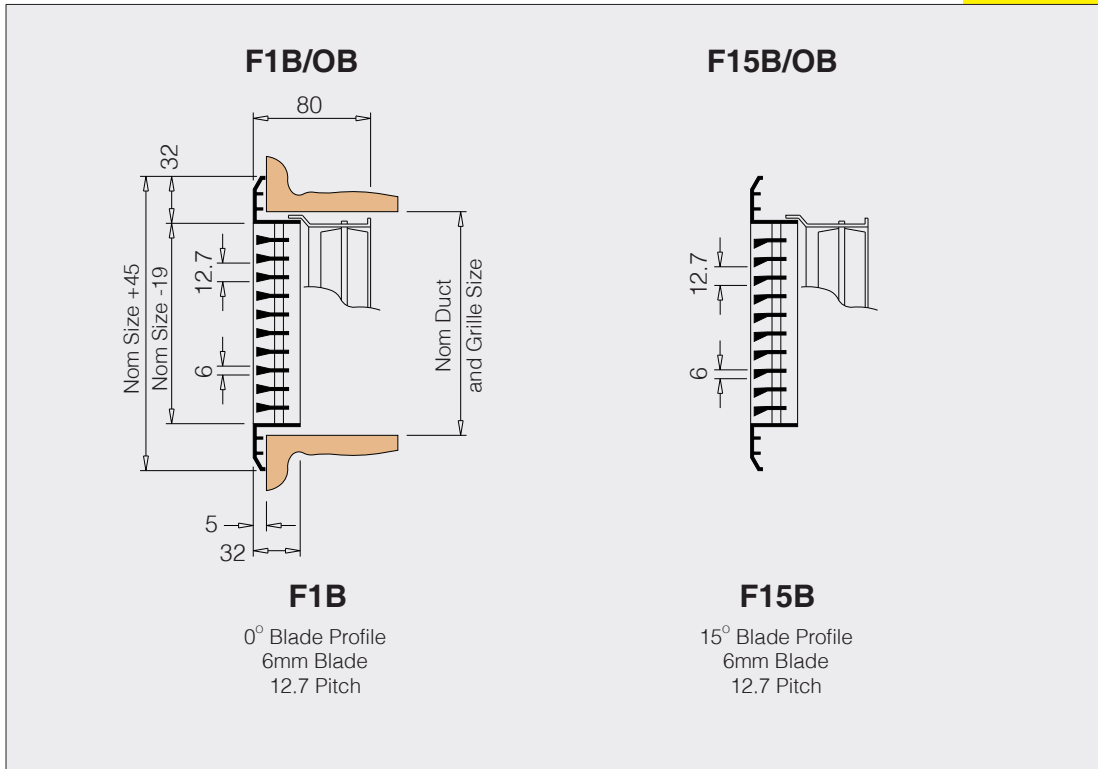
#### example:

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

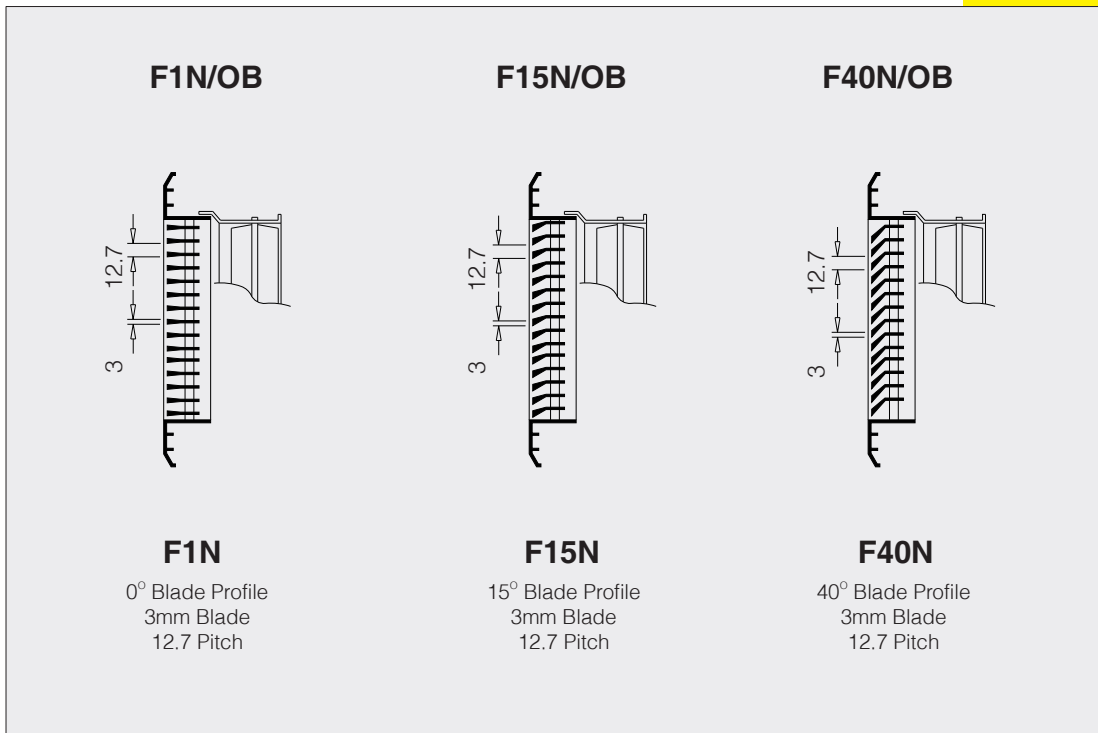
# Supply and exhaust air

## DIMENSIONS

6mm blade  
12.7 pitch



3mm blade  
12.7 pitch

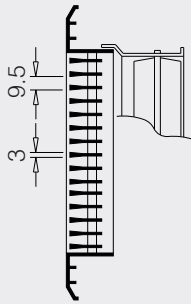


# Supply and exhaust air

## DIMENSIONS

9.5mm pitch  
3mm blade

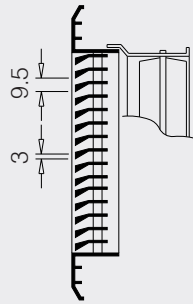
**F1N 3-8/OB**



**F1N 3-8**

0° Blade Profile  
3mm Blade  
9.5 Pitch

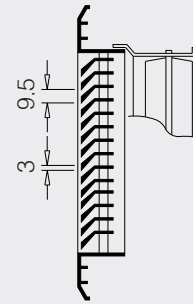
**F15N 3-8/OB**



**F15N 3-8**

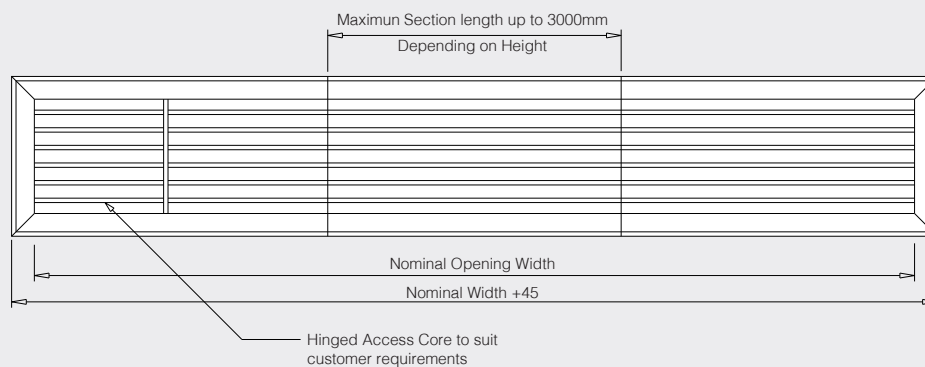
15° Blade Profile  
3mm Blade  
9.5 Pitch

**F40N 3-8/OB**



**F40N 3-8**

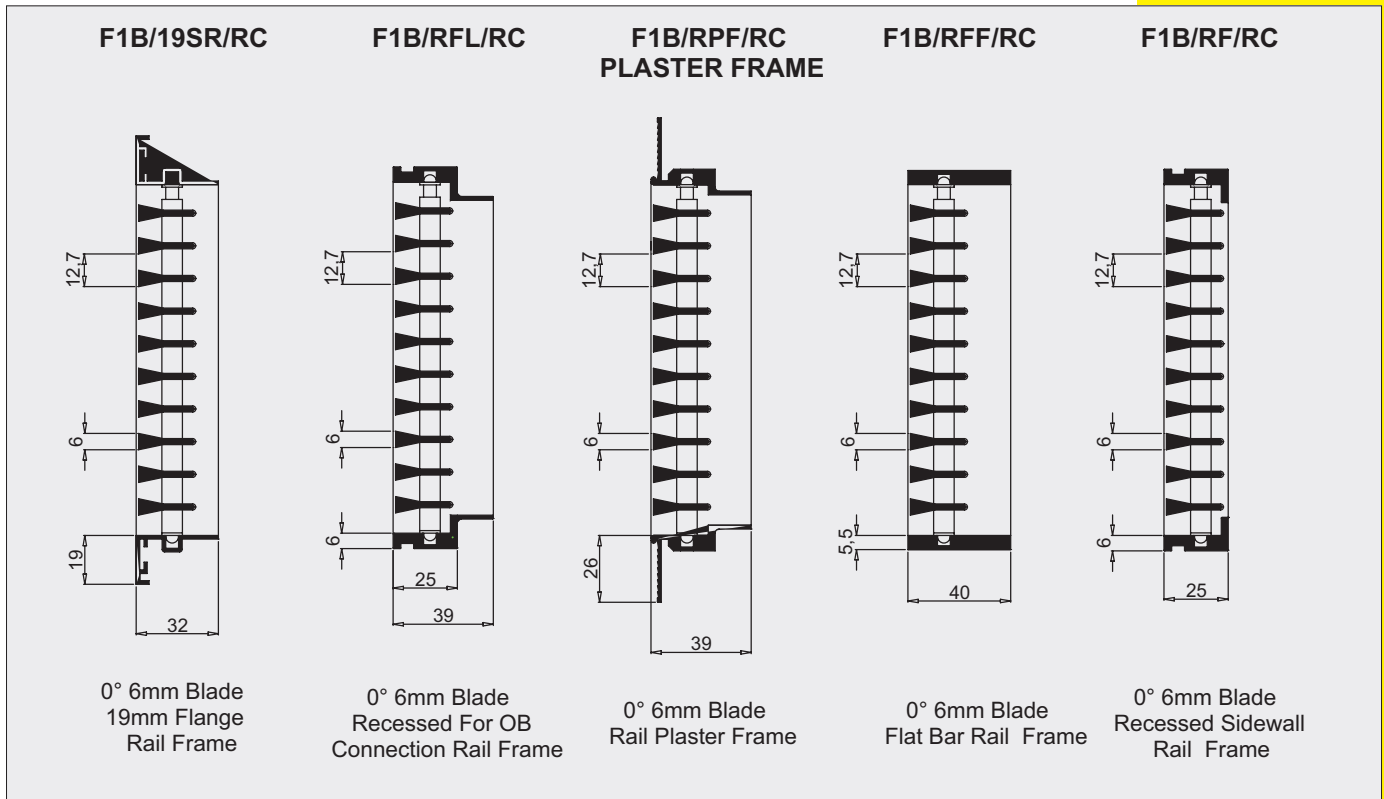
40° Blade Profile  
3mm Blade  
9.5 Pitch



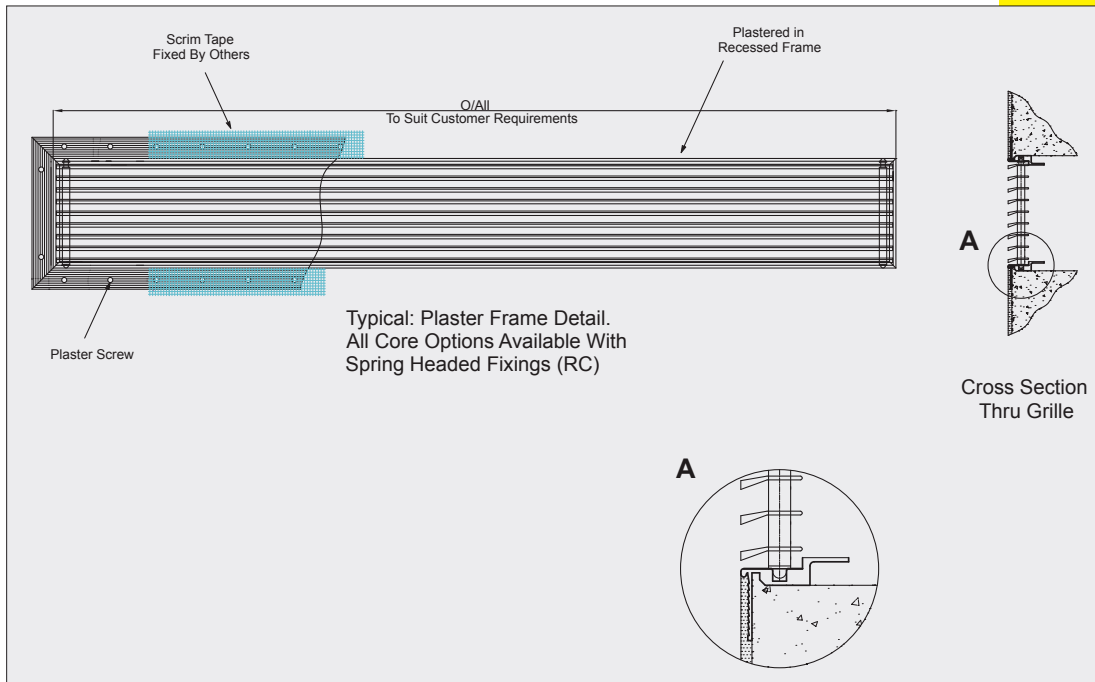
# Supply and exhaust air

## DIMENSIONS

recessed  
frame options



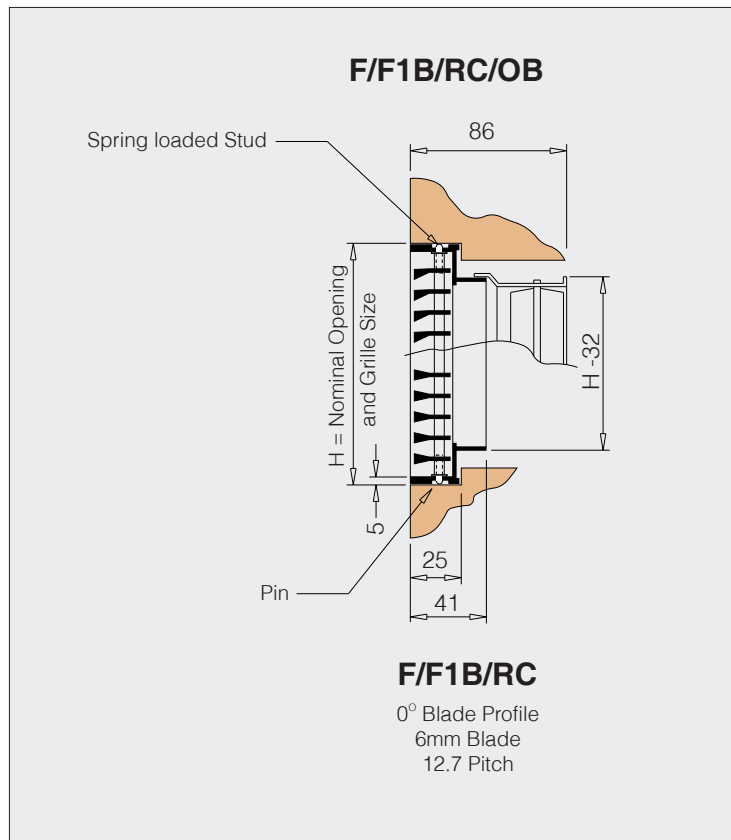
### All Core Options Available



# Supply and exhaust air

## DIMENSIONS

### recessed frame



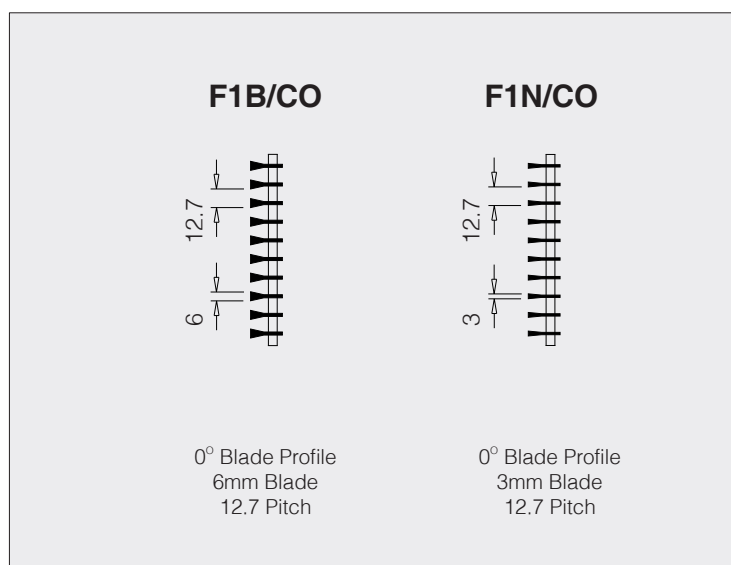
**F/** Recessed Frame.

All core types.

Spring loaded removable core fixings.

Ideal for sidewall applications.

### core only

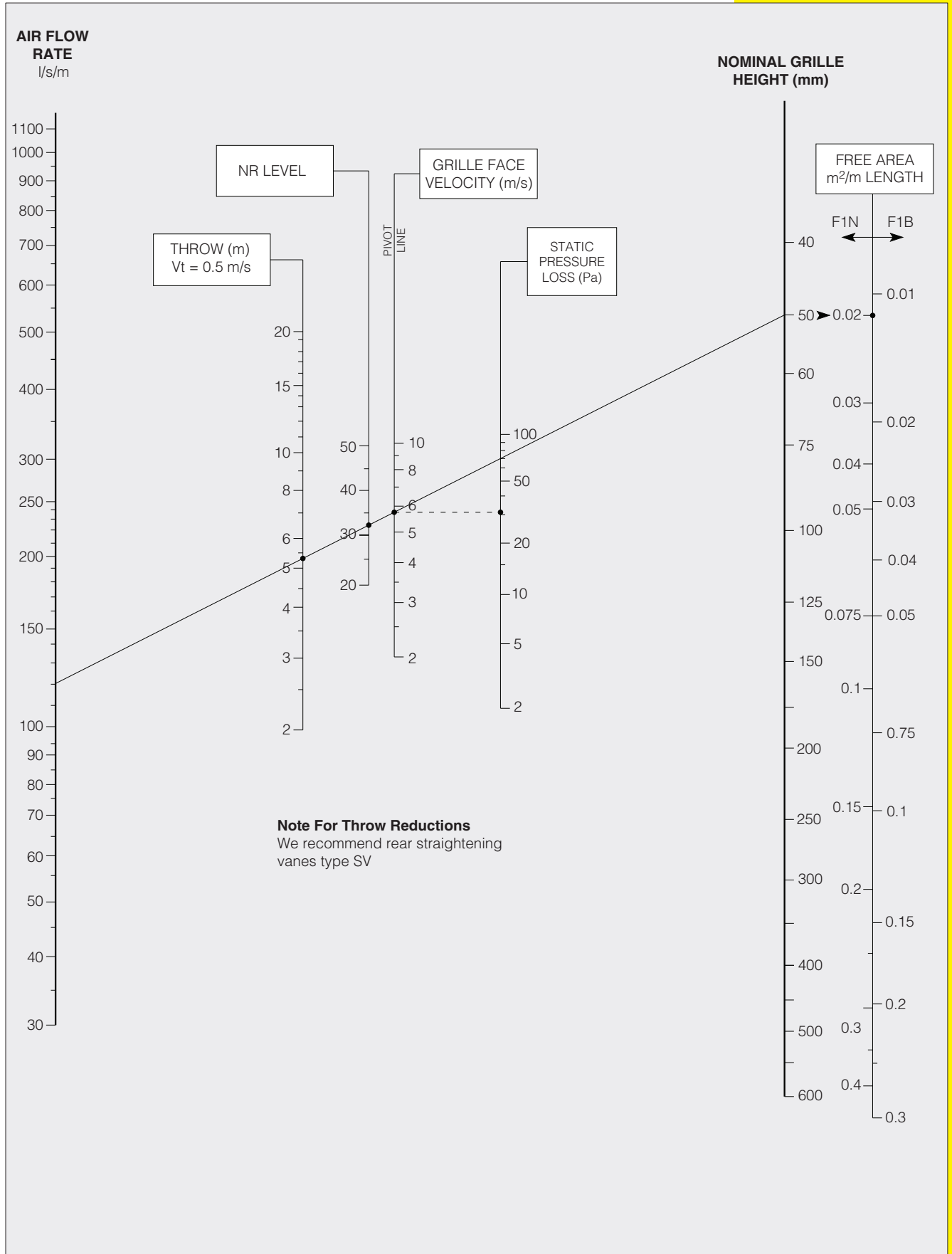


All blade types available as Core Only : **CO**

Available with spring loaded stud: **RC**

# Supply and exhaust air

## 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 0.5m/s and a cooling differential of 10°C. For mounting distances greater than this reduce the throws by a factor of 0.7.

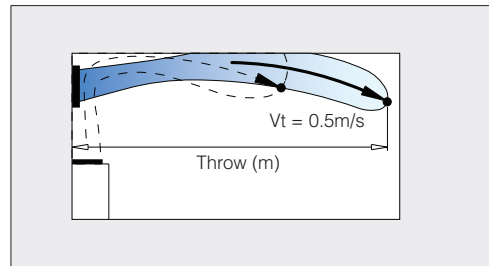
Additional factors can be applied for other temperature differentials. Acoustic data is presented in terms of NR levels based on a room absorption factor of 8dB.

### note

NOMOGRAM DATA IS BASED ON F1B AND F15B GRILLE TYPES. FOR F1N, 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

CORRECTIONS FOR LATERAL JET SPREAD		
	30°	45°
THROW FACTOR	0.75	0.55
NR ADDITION	+4	+8
Ps FACTOR	1.25	1.5



CORRECTION FACTORS FOR GRILLE LENGTHS				
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				
FOR EXHAUST GRILLES, APPLY THE FOLLOWING CORRECTION FACTORS TO THE SUPPLY GRILLE DATA.		F1B / F15B	F1N / F15N	F40N
	Pse	Ps x 1.3	Ps x 1.2	Ps x 1.3
	NRe	NR + 5	NR + 7	NR + 7

### example

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