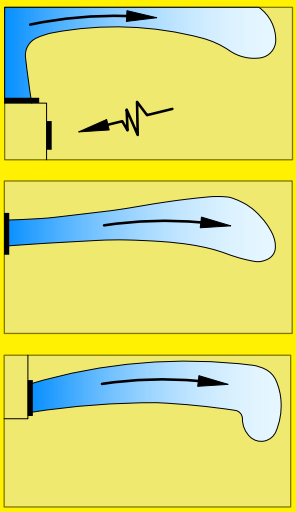
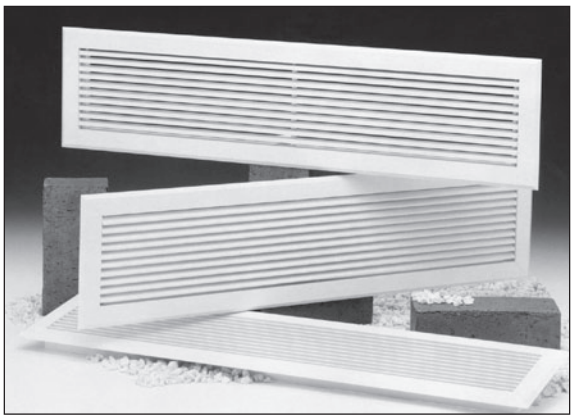
Supply and exhaust air

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:

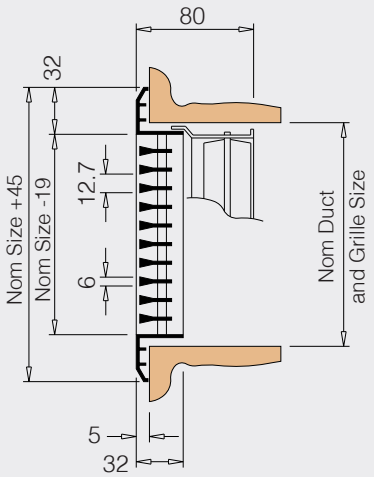
type	control	borders	fixing	finish	width	height	quantity
F1B	/ OB	/ 32	/ SC	/ SAA	/ 1000	/ 300	/ 6

Supply and exhaust air

DIMENSIONS

6mm blade 12.7 pitch

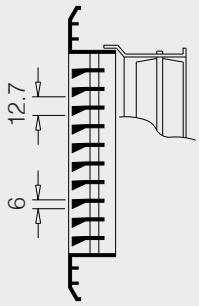
F1B/OB



F1B

0° Blade Profile
6mm Blade
12.7 Pitch

F15B/OB

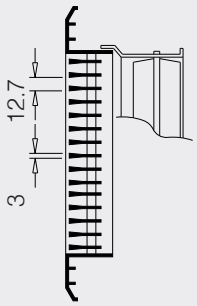


F15B

15° Blade Profile
6mm Blade
12.7 Pitch

3mm blade 12.7 pitch

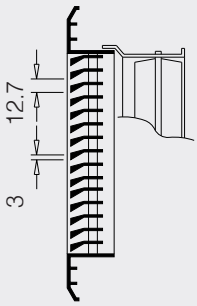
F1N/OB



F1N

0° Blade Profile
3mm Blade
12.7 Pitch

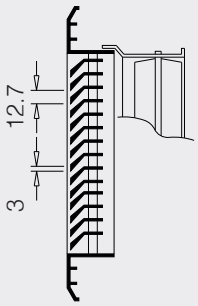
F15N/OB



F15N

15° Blade Profile
3mm Blade
12.7 Pitch

F40N/OB

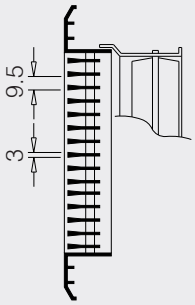


F40N

40° Blade Profile
3mm Blade
12.7 Pitch

9.5mm pitch
3mm blade

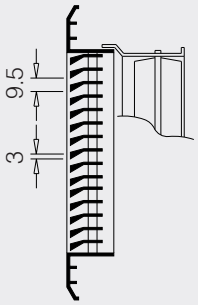
F1N 3-8/OB



F1N 3-8

0° Blade Profile
3mm Blade
9.5 Pitch

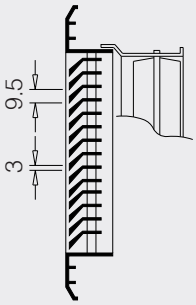
F15N 3-8/OB



F15N 3-8

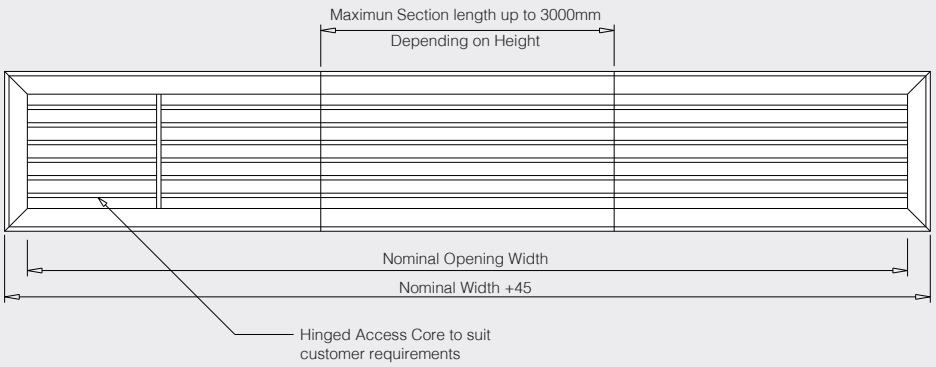
15° Blade Profile
3mm Blade
9.5 Pitch

F40N 3-8/OB



F40N 3-8

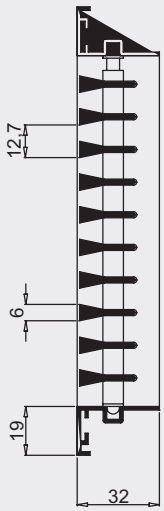
40° Blade Profile
3mm Blade
9.5 Pitch



DIMENSIONS

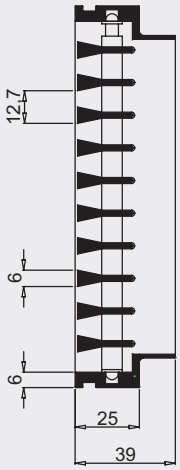
recessed
frame options

F1B/19SR/RC



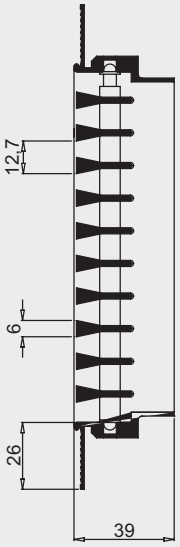
0° 6mm Blade
19mm Flange
Rail Frame

F1B/RFL/RC



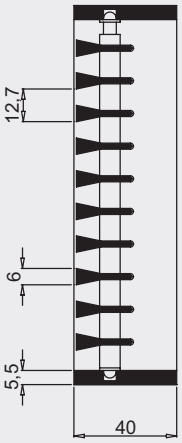
0° 6mm Blade
Recessed For OB
Connection Rail Frame

F1B/RPF/RC
PLASTER FRAME



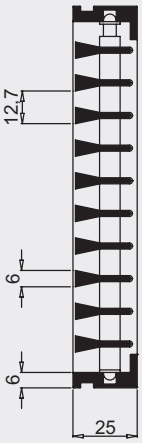
0° 6mm Blade
Rail Plaster Frame

F1B/RFF/RC



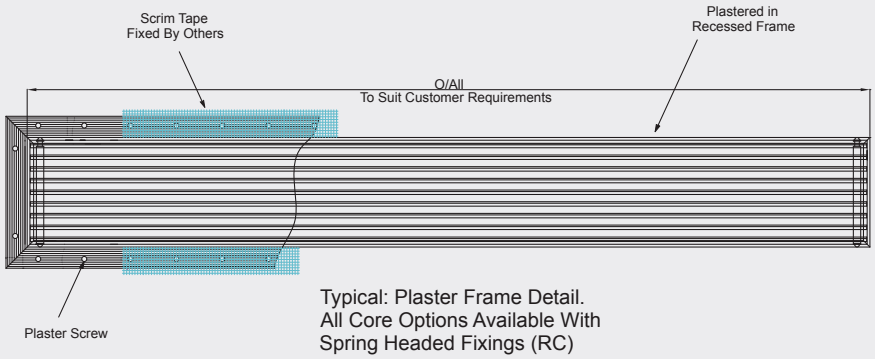
0° 6mm Blade
Flat Bar Rail Frame

F1B/RF/RC

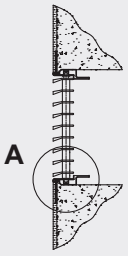


0° 6mm Blade
Recessed Sidewall
Rail Frame

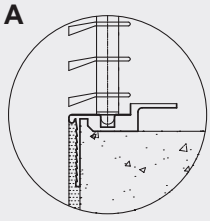
All Core Options Available



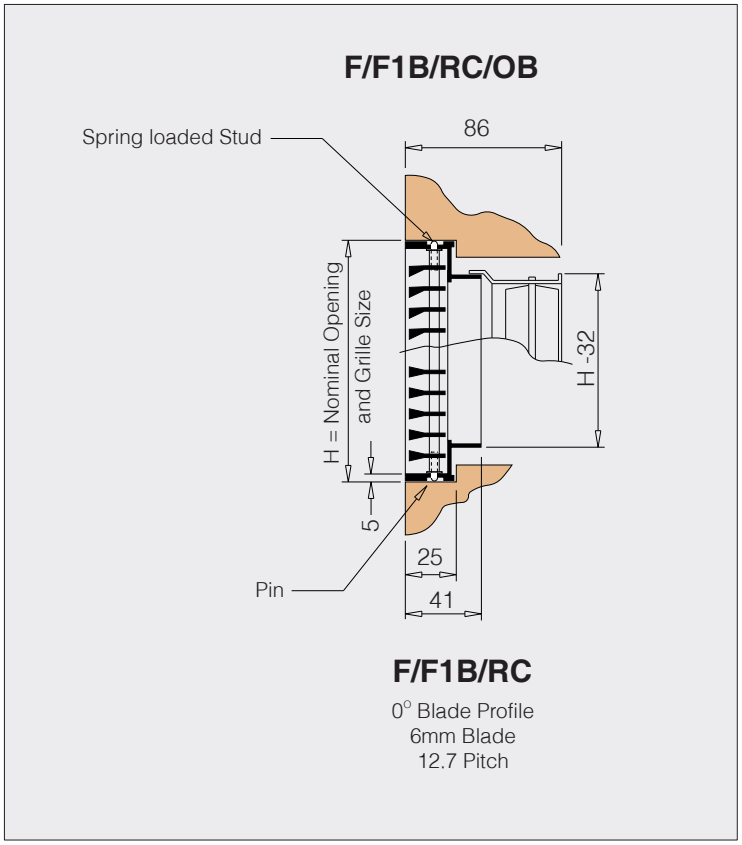
Typical: Plaster Frame Detail.
All Core Options Available With
Spring Headed Fixings (RC)



Cross Section
Thru Grille

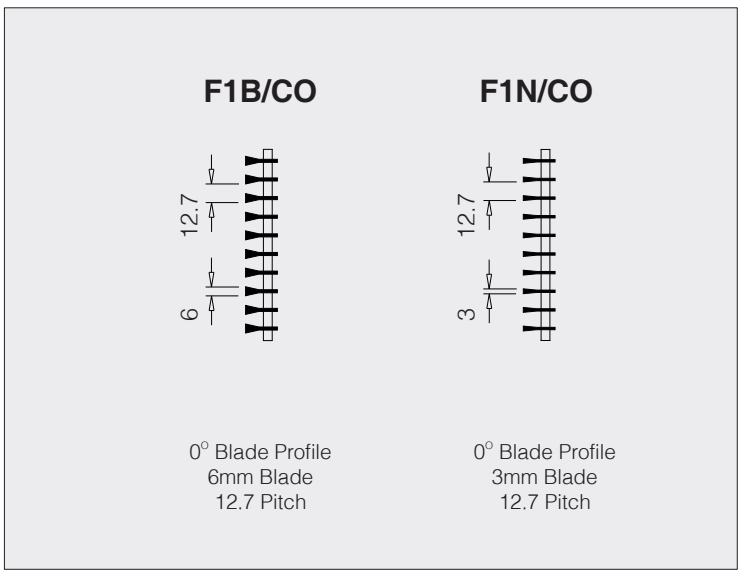


recessed frame



F/ Recessed Frame.
All core types.
Spring loaded removable core fixings.
Ideal for sidewall applications.

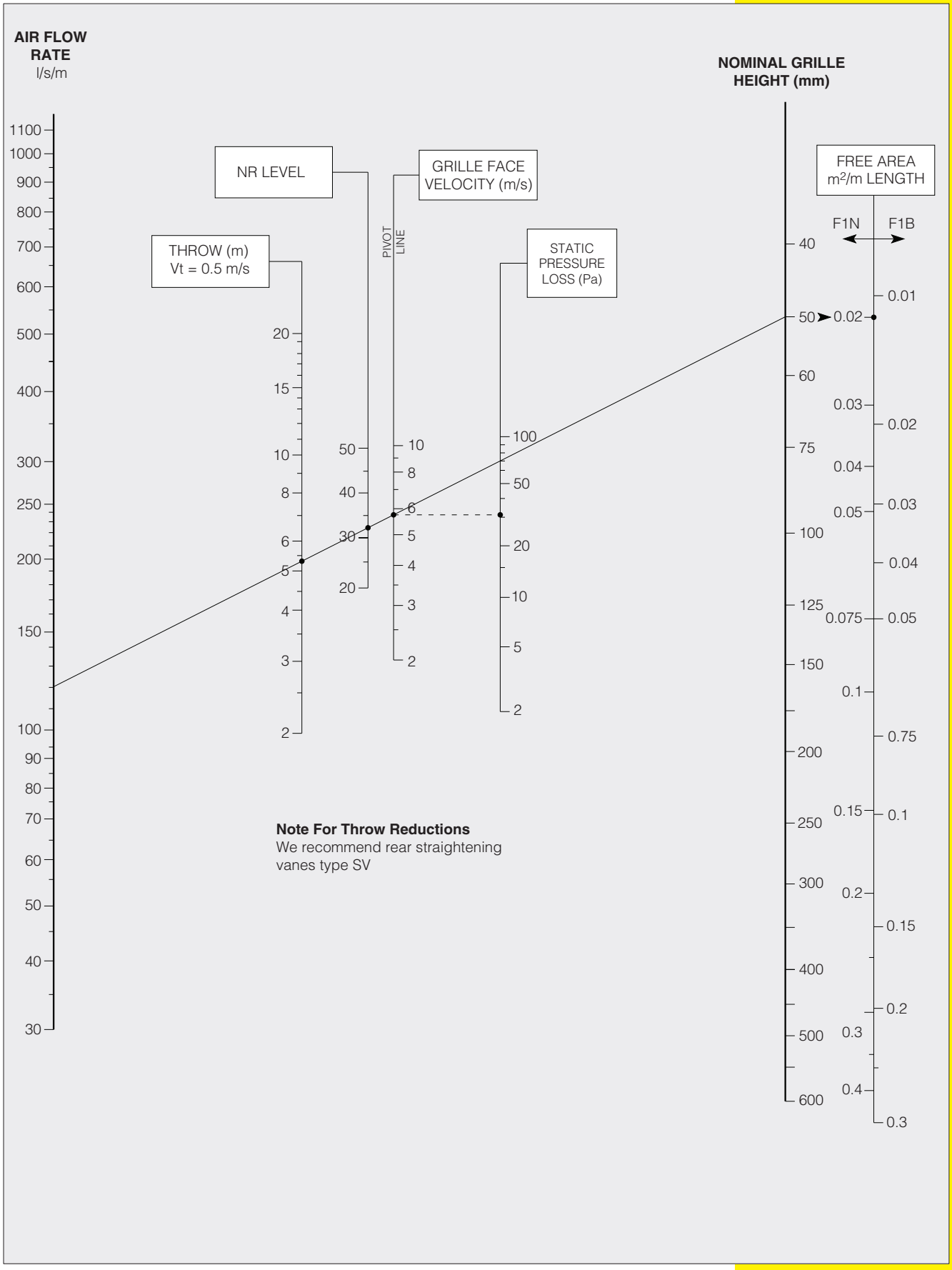
core only



All blade types available as Core Only : **CO**
Available with spring loaded stud: **RC**

Supply and exhaust air

SELECTION NOMOGRAM



Note For Throw Reductions
We recommend rear straightening vanes type SV

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 (Vt) 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.

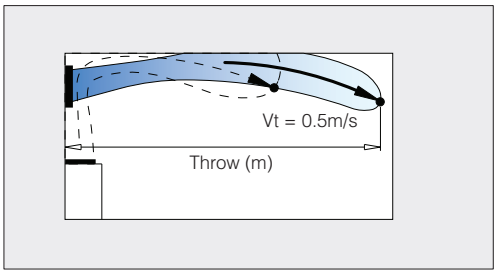
Additional factors can be applied for other temperature differentials. Acoustic data is presented in terms of NR levels based on a room absorption factor of 8dB.

note

		F1N, F15N	F40N
NOMOGRAM DATA IS BASED ON FIB 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

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 = 0.024m² F1B FREE AREA = 1.2 x 0.012 = 0.014m²			