Publication
DIFFUSERS
section 2

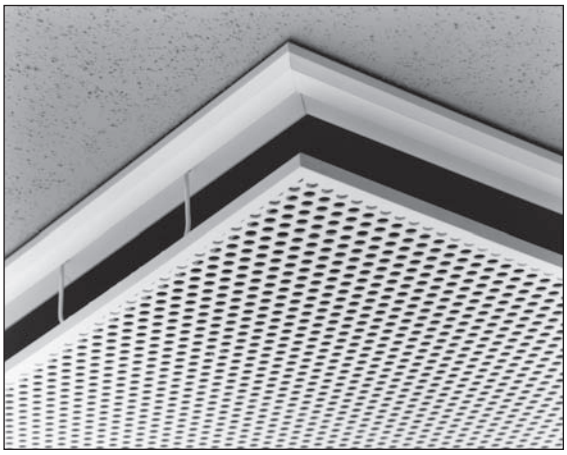
PART D

SEPT 2005

Air Diffusers

supply and exhaust ventilation systems

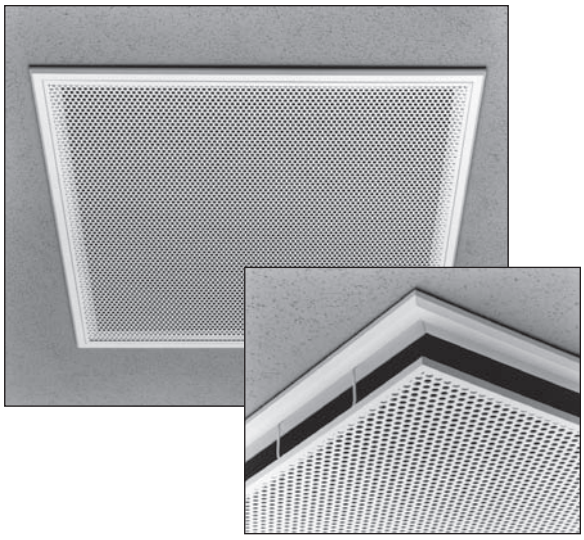
laminar flow panels



Brooke Air®

Laminar Flow Panels

DESIGN FEATURES



introduction

The Laminar Flow Panel has been developed for applications such as clean rooms, laboratories and operating theatres where it is generally necessary to introduce a stable, low velocity laminar air stream into the occupied zone without entraining room air.

The plenum chamber of the unit contains perforated baffle plates to distribute air evenly, resulting in a near uniform jet velocity up to 2.5m from the panel face. The perforated face plate is fitted with spring clips and is easily removed to facilitate cleaning.

type

LFP

control

Quadrant (FDQ) or cord operated (FDC) flap dampers as standard.

options

Plenums are available with either top or side entry Inlet configurations.

fixings

Plenums are supplied fitted with hanging brackets to take 8mm drop rod supports.

finish

Plenum chambers are manufactured in 22swg mild steel with white powder coated frame and face plate as standard (PC).
A wide range of optional colours are however available in the BS and RAL ranges. See **Part I** for details.

sizes

The units are manufactured in two sizes to suit 600mm and 1200mm ceiling grids.

ordering details

When ordering, state the required size and spigot configuration, the damper type, and the finish.

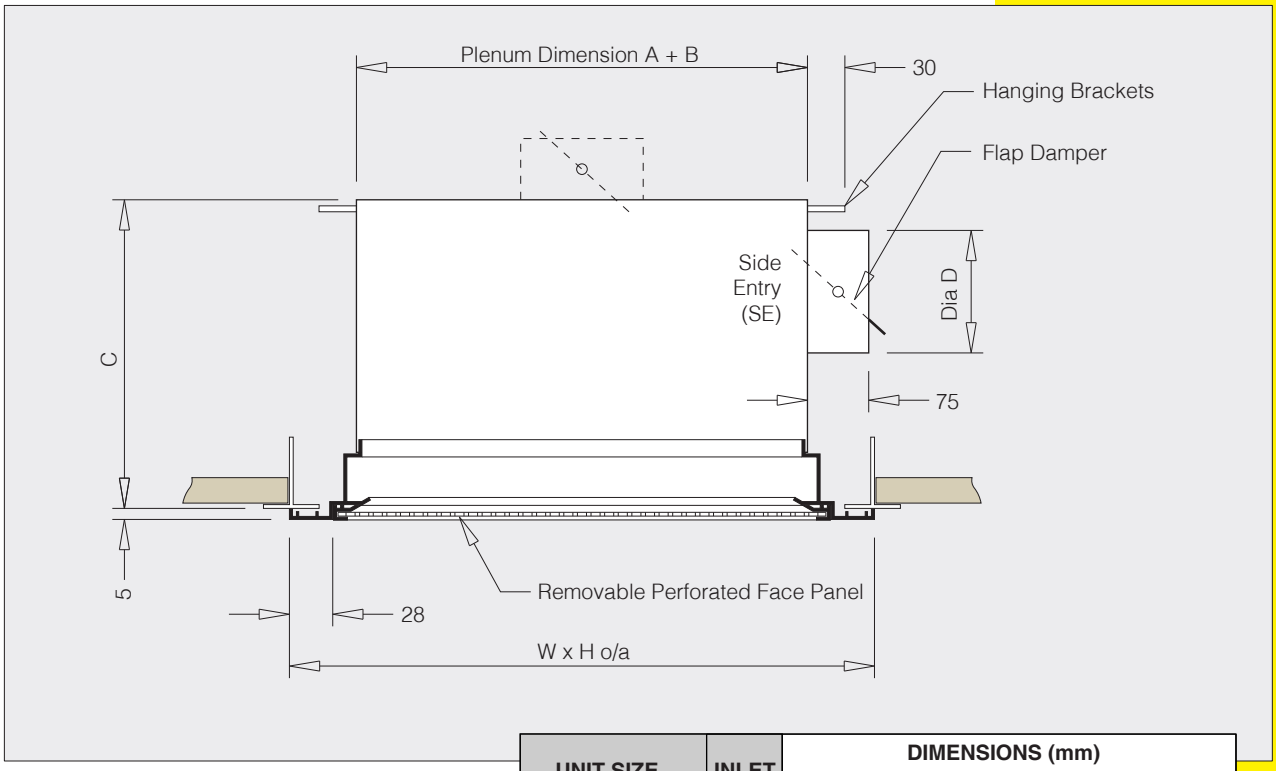
Orders should state whether the units are to fit a lay-in or concealed 'T' ceiling system.

EXAMPLE :

type	control	finish	size	quantity
LFP/SE	FDQ	WHITE (PC)	600 x 600	4

PERFORMANCE DATA

dimensions



UNIT SIZE	INLET	DIMENSIONS (mm)					
		W	H	A	B	C	D
600 x 600	TE	600	600	508	508	250	200
600 x 600	SE	600	600	508	508	300	200
1200 x 600	TE	1200	600	1108	508	300	300
1200 x 600	SE	1200	600	1108	508	420	300

NOTE: Overall dimensions W and H are reduced to 595 and 1195 for lay-in ceiling systems.

jet velocity

Velocities are expressed as an average airstream velocity within a vertical distance of 2.5m from the panel face and relate to a temperature differential of -10°C.
Average velocities for a differential of -5°C can be found by applying factors of 0.75 for the 600 x 600 unit.

noise levels

Noise data is expressed in terms of NR level with an assumed absorption of 4db for typical semi reverberant applications.

	AIR FLOW RATE (l/s)		20	40	60	80	100	120	140	160
600 x 600	AVE. AIR VELOCITY (M/S)		0.21	0.42	0.48	0.63	0.71	0.78	0.84	0.86
	STATIC PRESSURE LOSS (P/A)			1	3	4	6	8	10	12
	NR LEVEL	TOP ENTRY					14	18	22	25
		SIDE ENTRY				16	22	27	31	34

	AIR FLOW RATE (l/s)		75	100	125	150	175	200	225	250
1200 x 600	AVE. AIR VELOCITY (M/S)		0.36	0.44	0.53	0.61	0.68	0.73	0.78	0.83
	STATIC PRESSURE LOSS (P/A)		1	2	3	3	4	5	7	8
	NR LEVEL	TOP ENTRY						14	17	20
		SIDE ENTRY						12	16	19

Diffuser programme literature

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