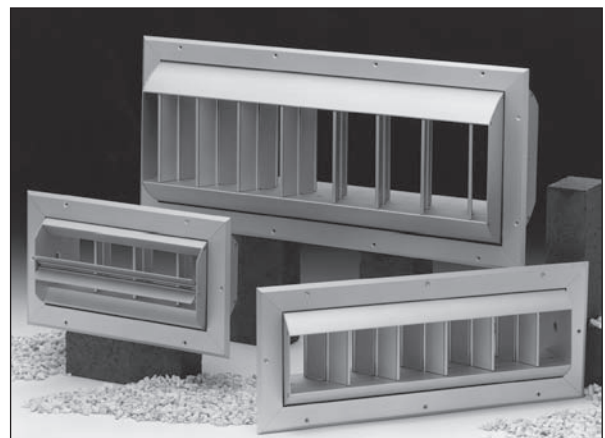


Air Diffusers

supply and exhaust
ventilation systems

drum jet diffusers



Brooke Air[®]

Drum Jet diffusers

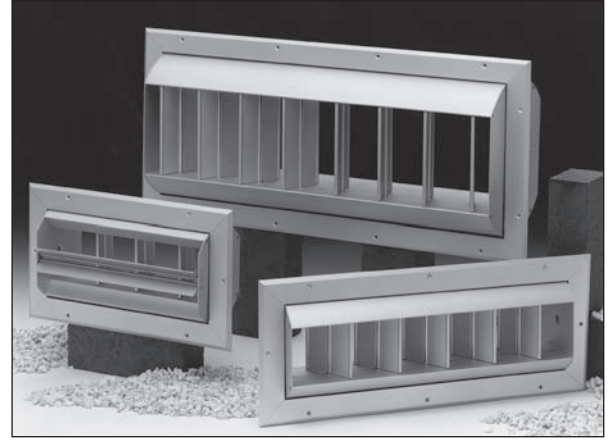
DESIGN FEATURES

introduction

The Brooke Air range of Drum Jet diffusers are high air capacity terminals designed for applications requiring a long jet throw.

They are ideally suited for exposed duct or sidewall installations in sports complexes, atria, factory workshops and warehouses.

The drum and guide vanes can be adjusted to give full jet spread and directional control, enabling the diffuser to be set up for optimum conditions in both heating and cooling modes.



In addition, to promote rapid diffusion in the vertical plane and reduce jet throws, a further set of adjustable blades can be fitted across the width of the drum outlet. (Type DJD)

The diffuser drum and frame are robustly constructed from anodised aluminium extrusions and incorporate brush strips to provide a low friction air tight seal.

type

DJ

controls

For general flow control, the Drum Jet diffuser is available with a key operated opposed blade damper, either fitted to the frame (DJ/OB) or supplied loose for duct mounting (OB/DM).

For installations where the diffuser is to be mounted in a main duct wall or a stub duct, the VED type equalising deflector with individually adjustable scoop and straightening blades can be fitted to equalise the discharge velocity. (Also available loose for duct mounting VED/DM). Alternatively, the duct mounted rhomboidal damper (RD/DM) can be specified for combined flow control and equalisation.

finishes

DJ diffusers are supplied as standard in silver anodised aluminium (SAA), but stove enamelled colours are also available in the BS or RAL ranges. See **Part I** for details.

NOTE: The powder coat finish is not recommended for Drum Jets.

fixings

The standard fixing method is by countersunk screw through the diffuser flange - SC.

ordering details

EXAMPLE :

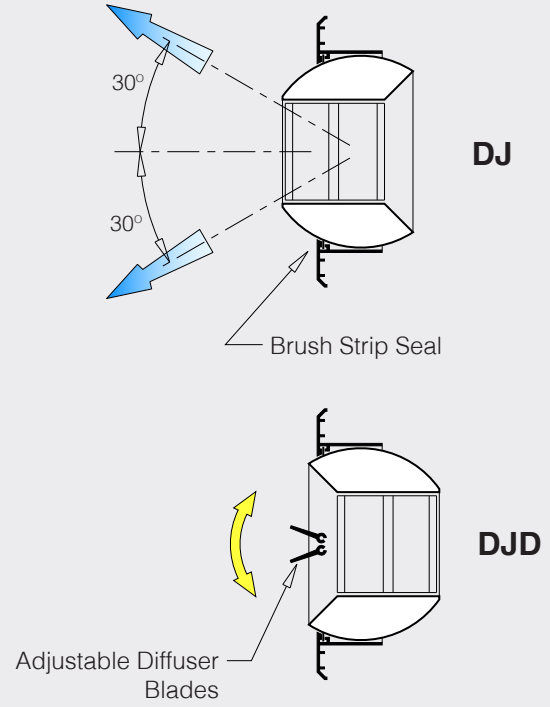
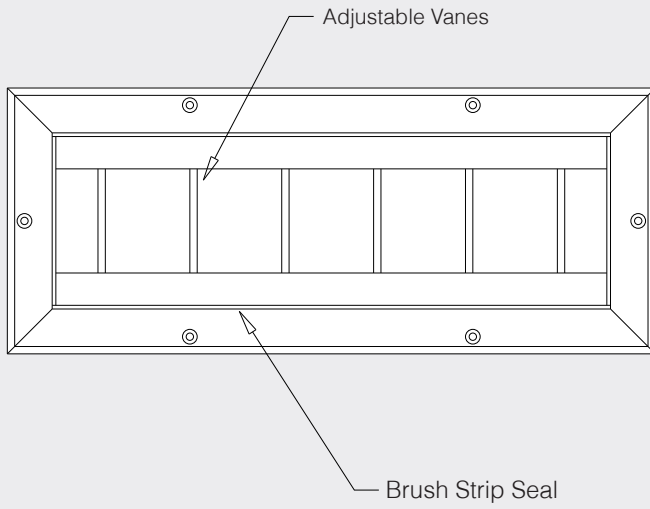
| <u>type</u> | <u>control</u> | <u>finish</u> | <u>size</u> | <u>quantity</u> |
|-------------|----------------|---------------|-------------|-----------------|
| DJ / | OB | / SAA | / 1806 | / 10 |

Drum Jet diffusers

DESIGN FEATURES

design features

DJ - DJD



Drum Jet diffusers

DESIGN FEATURES

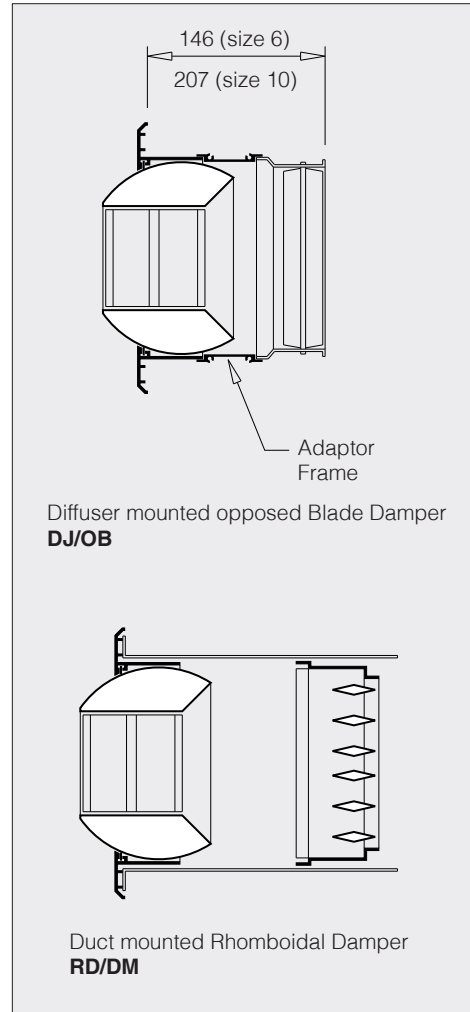
control options

OPPOSED BLADE DAMPER - OB

General purpose damper for installations with a reasonable length of stub duct.

RHOMBOIDAL DAMPER - RD

Suitable for installations with short or no stub ducts. The blade profiles can be progressively adjusted across the width of the diffuser to give an even velocity distribution at the outlet.

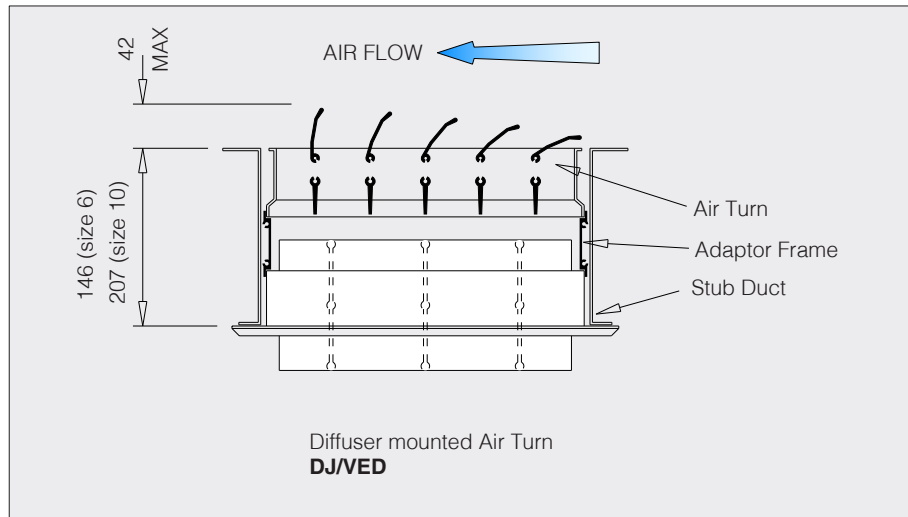


volume equalising

VOLUME EQUALISING DEFLECTOR - VED

Suitable for installations with short stub ducts and high air velocities in the main branch. The two sets of blades can be individually adjusted to give an even velocity distribution and can be adjusted for volume control.

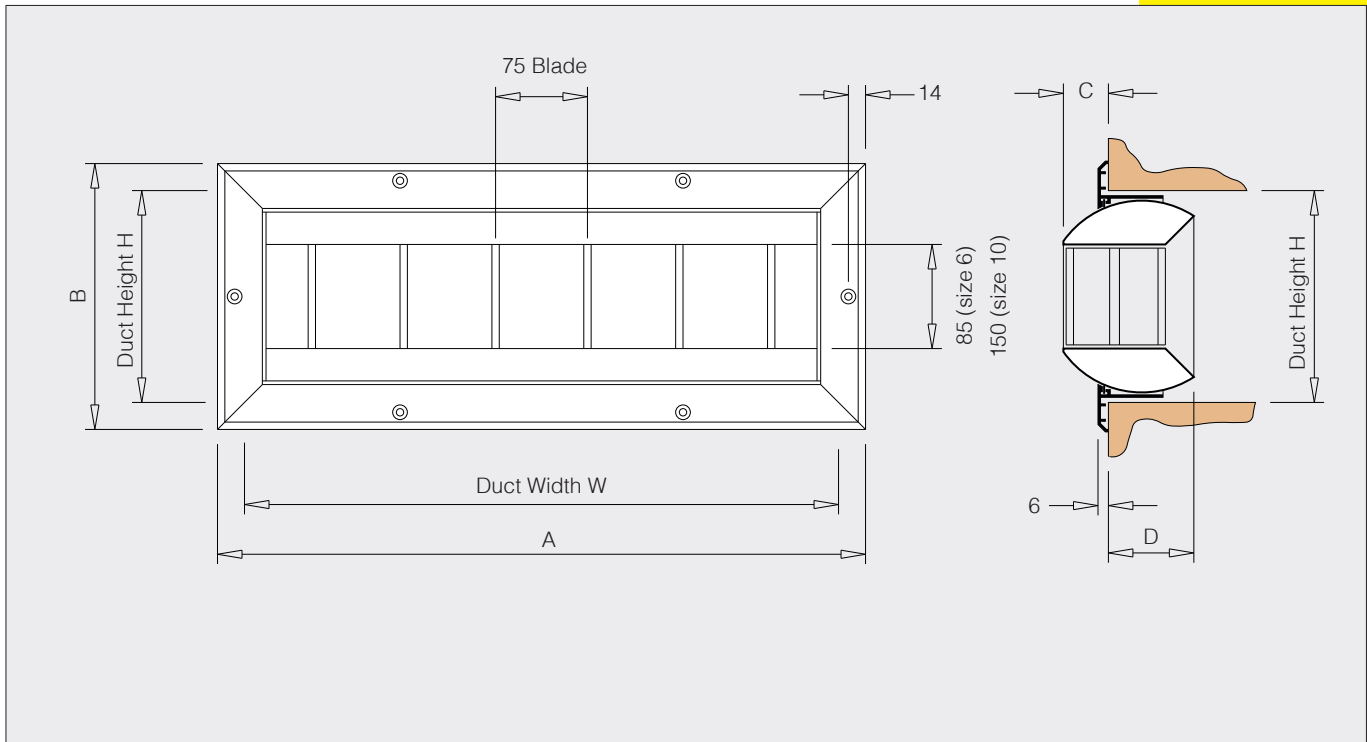
For easier volume control, an opposed blade damper can be supplied in addition to the VED.



Drum Jet diffusers

DIMENSIONS

dimensions

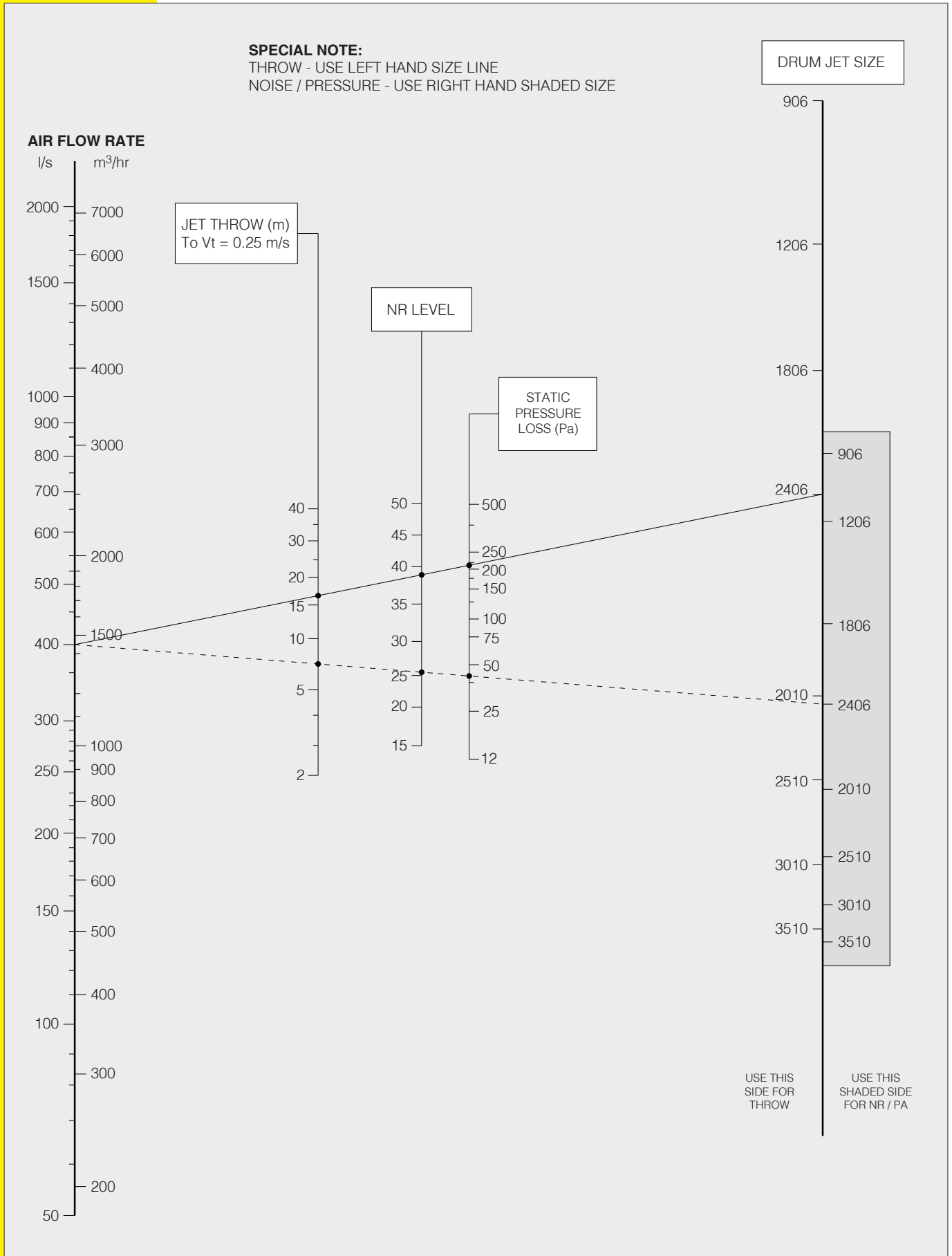


| SIZE | DIMENSIONS (mm) | | | | | | WEIGHT (Kg) |
|------|-----------------|-----|-----|-----|----|----|-------------|
| | A | B | W | H | C | D | |
| 906 | 300 | 217 | 261 | 170 | 36 | 87 | 1.5 |
| 1206 | 376 | 217 | 337 | 170 | 36 | 87 | 1.7 |
| 1806 | 529 | 217 | 490 | 170 | 36 | 87 | 2 |
| 2406 | 681 | 217 | 642 | 170 | 36 | 87 | 2.5 |

| SIZE | DIMENSIONS (mm) | | | | | | WEIGHT (Kg) |
|------|-----------------|-----|-----|-----|----|-----|-------------|
| | A | B | W | H | C | D | |
| 2010 | 579 | 319 | 540 | 271 | 63 | 138 | 5.5 |
| 2510 | 706 | 319 | 667 | 271 | 63 | 138 | 6.5 |
| 3010 | 833 | 319 | 794 | 271 | 63 | 138 | 7.0 |
| 3510 | 960 | 319 | 921 | 271 | 63 | 138 | 7.5 |

Drum Jet diffusers

SELECTION NOMOGRAM



Drum Jet diffusers

BASIS OF DATA

THROWS - Jet throws are based on isothermal conditions to a terminal velocity of 0.25m/s with straight vanes. Throws should be corrected in accordance with the following table to compensate for vane angle adjustments.

| VANE ANGLE | 0° | 5° | 10° | 20° | 30° | 40° | 60° |
|--------------|-----|-----|------|------|-----|------|-----|
| THROW FACTOR | 1.0 | 0.9 | 0.82 | 0.68 | 0.6 | 0.52 | 0.4 |

Noise data is expressed in terms of NR level with a room absorption factor of 8db.

Size **2406** Drum Jet supplying an air flow rate of 400 l/s

- Throw - 17m (Solid Line)
- Noise - NR26 (Dotted Line)
- Pressure loss - 45Pa

throws

noise levels

example

Diffuser programme literature

| | |
|---------------|---|
| part A | Introduction, Technical Overview and Selection Guide. |
| part B | Continuous Slot and Linear Louvre Diffusers. |
| part C | Multicore Square and Rectangular Diffusers. |
| part D | Laminar Flow Panels. |
| part E | Circular Diffusers. |
| part F | Drum Jet Diffusers. |
| part G | Supply and Extract Valves. |
| part H | Plenum Boxes |
| part I | Finshes and Conversion factors |



Brooke Air®

JC House,
Hurricane Way,
Wickford Business Park,
Wickford,
Essex SS11 8YB,
UK.

Tel: +44 (0)1268 572266
Fax: +44 (0)1268 560606
email: info@brookeair.co.uk
web: www.brookeair.co.uk