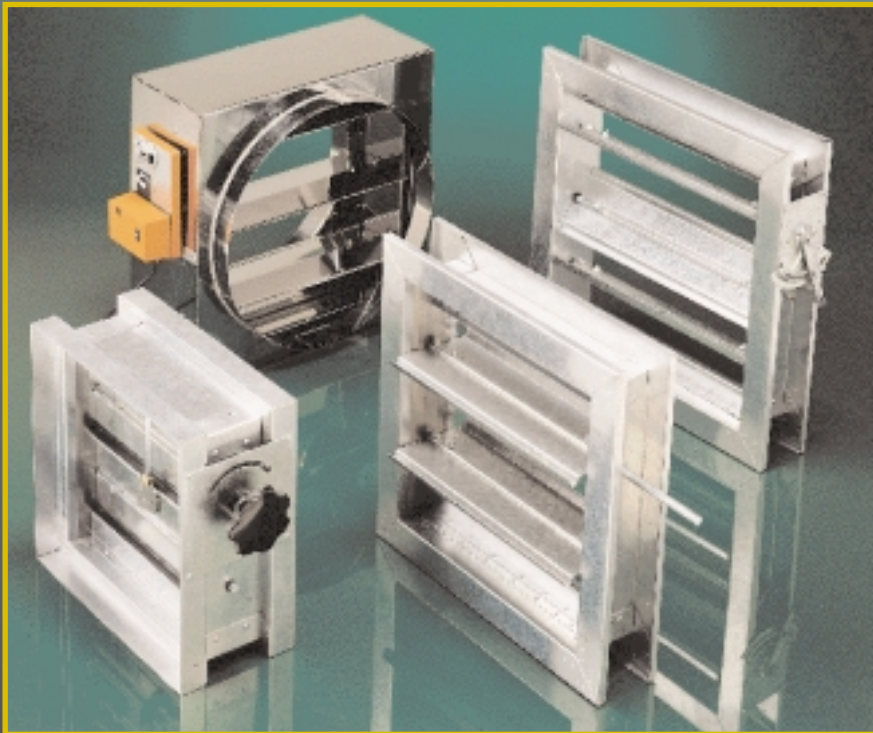


Advanced Air (UK) Limited

CONTROL SMOKE AND BALANCING DAMPERS

1000 SERIES - UNIVERSAL



Features

Robust construction of galvanised steel, with stainless steel options

Opposed or parallel blade pattern

Unsealed, semi-sealed, or fully sealed option

Flanged, spigotted, sleeve or wall mounting

Manual or motorised (electric or pneumatic)

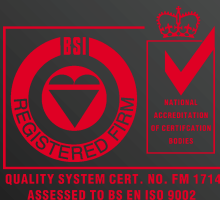
Airfoil blade option-1100 Series

Approvals

Quality Assurance system assessed to BS EN ISO 9002

Shock tested to DEF standard 07-55

Conformance to DW 142 as appropriate



INTRODUCTION The Advanced Air Universal range of control dampers is designed to balance and/or control air flow through ducts, walls and floors, and may also be used to restrict the spread of smoke through a building. The range incorporates features required by specifiers, contractors and fire authorities, and embodies the combined experience of Nailor Industries Inc. (Canada and United States of America) and Advanced Air (UK) Limited, in design, manufacture, sales and service of dampers.

QUALITY ASSURANCE Advanced Air dampers are manufactured in accordance with a Quality Assurance system assessed to BS EN ISO 9002. The company is registered to this standard with BSI (Certificate No. FM 1714) and with the Loss Prevention Certification Board (Certificate No. 128).

DESCRIPTION The Universal range is robustly constructed in all galvanised steel, with options of stainless steel blades, or stainless steel blades and casing (430 Grade). There are models suitable for low, medium and high pressure applications, with a variety of sealing options.

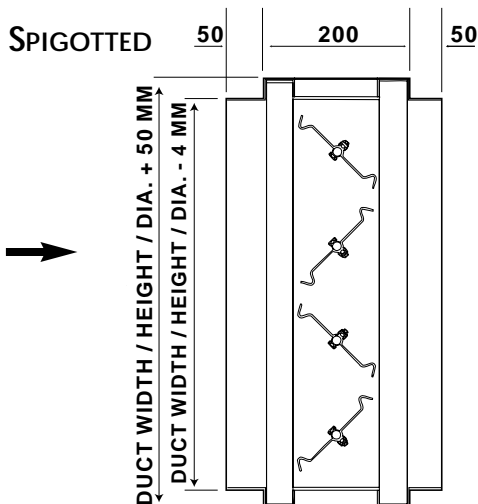
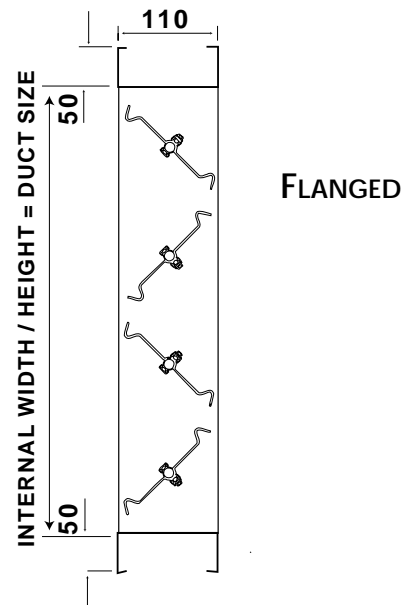
Dampers are supplied with flanged, spigotted, wall or sleeve mounting, and either manual or motorised (electric or pneumatic) control is available, as required.

Standard blade format is the aerodynamically designed ribbed blade (1000 Series), with an airfoil blade option (1100 Series).

Whatever your application, Advanced Air's Sales Office would be pleased to advise on the most suitable model from the Universal range.

MODEL RANGE

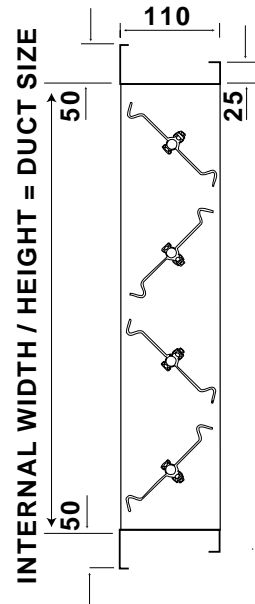
	PARALLEL BLADE	OPPOSED BLADE
MODEL REF	1031	1041
MINIMUM. DUCT SIZE W x H	150 x 150	150 x 150
MAXIMUM. DUCT SIZE W x H	1200 x 1800	1200 x 1800



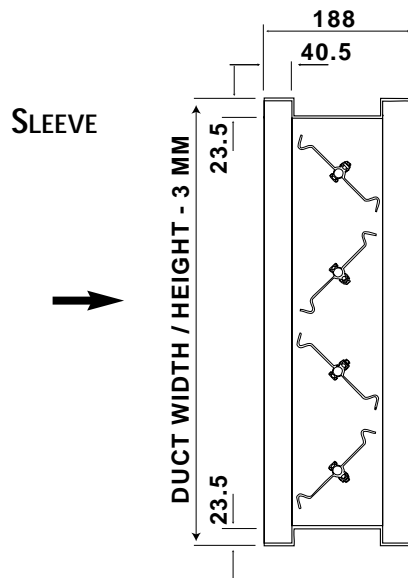
	PARALLEL BLADE	OPPOSED BLADE
MODEL REF	1011 - 11/2/3	1021 - 11/2/3
MINIMUM. DUCT SIZE W x H	100 Ø OR 100 x 100	100 Ø OR 100 x 100
MAXIMUM. DUCT SIZE W x H	1150 Ø OR 1150 x 1750	1150 Ø OR 1150 x 1750

Spigots may be circular (1), or flat oval (2), or square/rectangular (3).

	PARALLEL BLADE	OPPOSED BLADE
MODEL REF	1051	1061
MINIMUM. DUCT SIZE W x H	100 x 100	100 x 100
MAXIMUM. DUCT SIZE W x H	1200 x 1800	1200 x 1800



WALL/FLANGE



	PARALLEL BLADE	OPPOSED BLADE
MODEL REF	1011	1021
MINIMUM. DUCT SIZE W x H	150 x 150	150 x 150
MAXIMUM. DUCT SIZE W x H	1200 x 1800	1200 x 1800

For full details of product coding, see back page.

Airfoil Blade versions of all types (except fully sealed) are available, designated 1100 Series. Side linkage only. (Model Refs. 1111, 1121, 1141 etc.).

SYSTEM PRESSURE Standard products are suitable for use up to 1500 Pa. On request, 1000 Series units can be strengthened to allow use up to 2000 Pa or 2500 Pa. Maximum velocity recommended - 15 m/s.

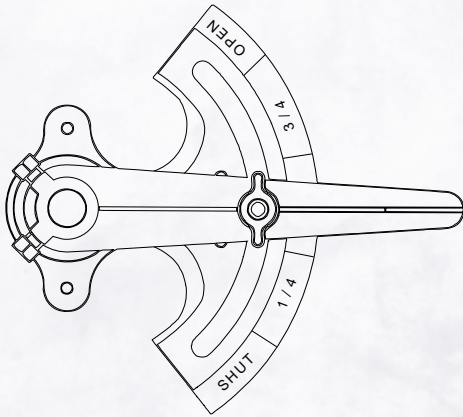
- NOTES**
1. The drive spindle position varies dependent on duct height and the number of blades - full details are available from our Sales Office. Drive spindle is 1/2" diameter.
 2. Drive spindles and controls are normally located on the right hand side of the damper casing, as viewed in the direction of the arrow in the above drawings.
 3. For sizes greater than the maximum size shown, multi-module construction can be supplied. For details of the number and location of actuators for multiple sections, contact the Sales Office.
 4. Within the maximum and minimum stated dimensions, increments of 25mm in height are preferred.
 5. Dependent on model and duct height, the blades in sleeved and flanged models may protrude, when in the open position, by up to 25mm on each side. Full details are available from the Sales Office. A deep case option, to avoid any protrusion, is available.

SMOKE CONTROL For application as a **smoke damper**, the use of a model with **parallel blades, side seals** and **oilite bearings** is recommended.

Note that the drive spindle comes through the casing direct from the drive blade - the 1000 Series is therefore not suitable as a smoke damper when the damper is to be built into a wall or partition. In this case, consider the Advanced Air 1200 Series Smoke and Fire dampers.

MANUAL OPERATION

HAND LOCKING QUADRANT



ELECTRICAL ACTUATORS

MODELS AVAILABLE INCLUDE

On/Off

On/Spring return Off

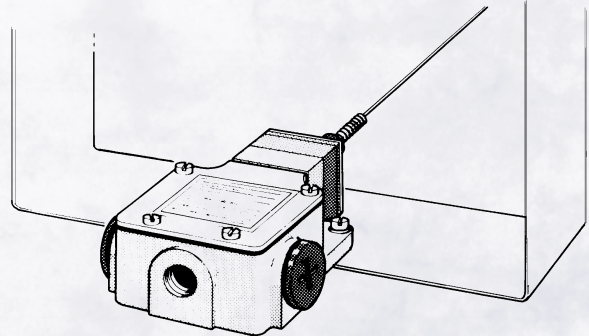
Modulating

PNEUMATIC ACTUATION
is also available

**For full details of Actuator options, please
contact the Sales Office**

ELECTRICAL MICRO-SWITCH

to provide remote indication of whether the blades are open or closed.
The micro-switch may also be connected to any warning device or controls circuit.



2 POLE - 1 NORMALLY CLOSED
+ 1 NORMALLY OPEN

SNAP ACTION

SUITABLE FOR UP TO 240V, 3A.

SEALS

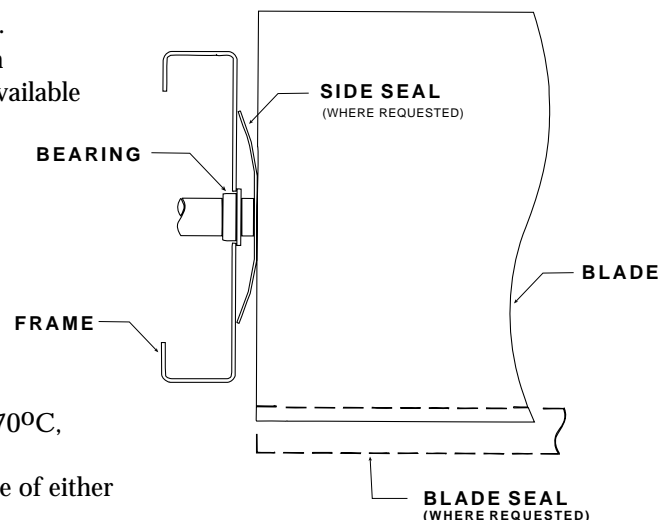
STANDARD UNIT is supplied without side seals, sills or blade seals.
SEMI-SEALED unit includes stainless steel side jamb seals and sills.
FULLY SEALED unit also includes UPVC blade seals, to maximum operating temperature of 80°C. Higher temperature seals are available - please contact the Sales Office.

BEARINGS

Selcon bearings are fitted as standard - maximum operating temperature is 80°C.

OPTIONS AVAILABLE ARE:

- Oilite bearings - normal maximum operating temperature is 70°C, with a high temperature version operating up to 200°C.
- Stainless steel bearings, with maximum operating temperature of either 400°C or 650°C, as specified.



WEIGHT CHART

ADVANCED AIR - 1000/1100 SERIES - NETT WEIGHTS

All weights are approximate and in kilograms

NOTES

1. Weights stated are for non-spigotted models.
2. Spigotted + 20%.
3. Extra weight has to be added for drive options - if required.

NOMINAL DAMPER SIZE (MM)	WIDTH (MM)							
	200	300	400	600	800	1000	1200	
HEIGHT (MM)	150	6	7	9	10	12	15	18
	300	7	9	10	13	16	20	22
	450	9	10	12	16	21	24	30
	600	10	13	15	21	25	30	35
	750	12	15	18	24	30	35	40
	900	15	18	21	27	33	39	45
	1050	16	21	24	31	37	45	50
	1200	20	22	27	35	42	49	57
	1350	21	25	30	37	46	54	63
	1500	22	30	33	42	50	60	69
	1650	25	30	35	45	54	64	75
1800	27	33	37	48	60	70	80	

TORQUE CHART 1000 Series control dampers - torque to open (Nm).

DUCT VELOCITY M/S	300 X 300		600 X 600		900 X 900	
	PARALLEL	OPPOSED	PARALLEL	OPPOSED	PARALLEL	OPPOSED
5	2.5	2.5	10	5	10	7
10	2.5	2.5	13	6	14	11.5
15	2.5	2.5	13	7.5	14	12.5

The above results were determined by experimentation on side linkage dampers with side jamb seals. The tests were performed in a clean air system at 2000 Pa corrected pressure and are for guidance only.

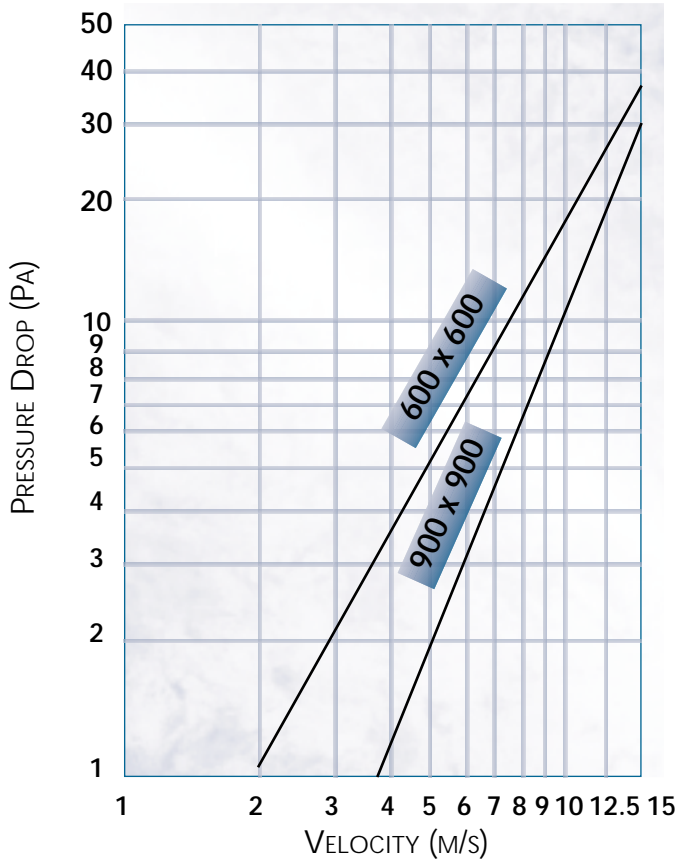
No Side Seals multiply by .9

Side Seals and Blade Seals multiply x 1.1

For Multi-section (joined) units multiply by a further 1.2

PERFORMANCE DATA

PRESSURE DROP - FULLY OPEN

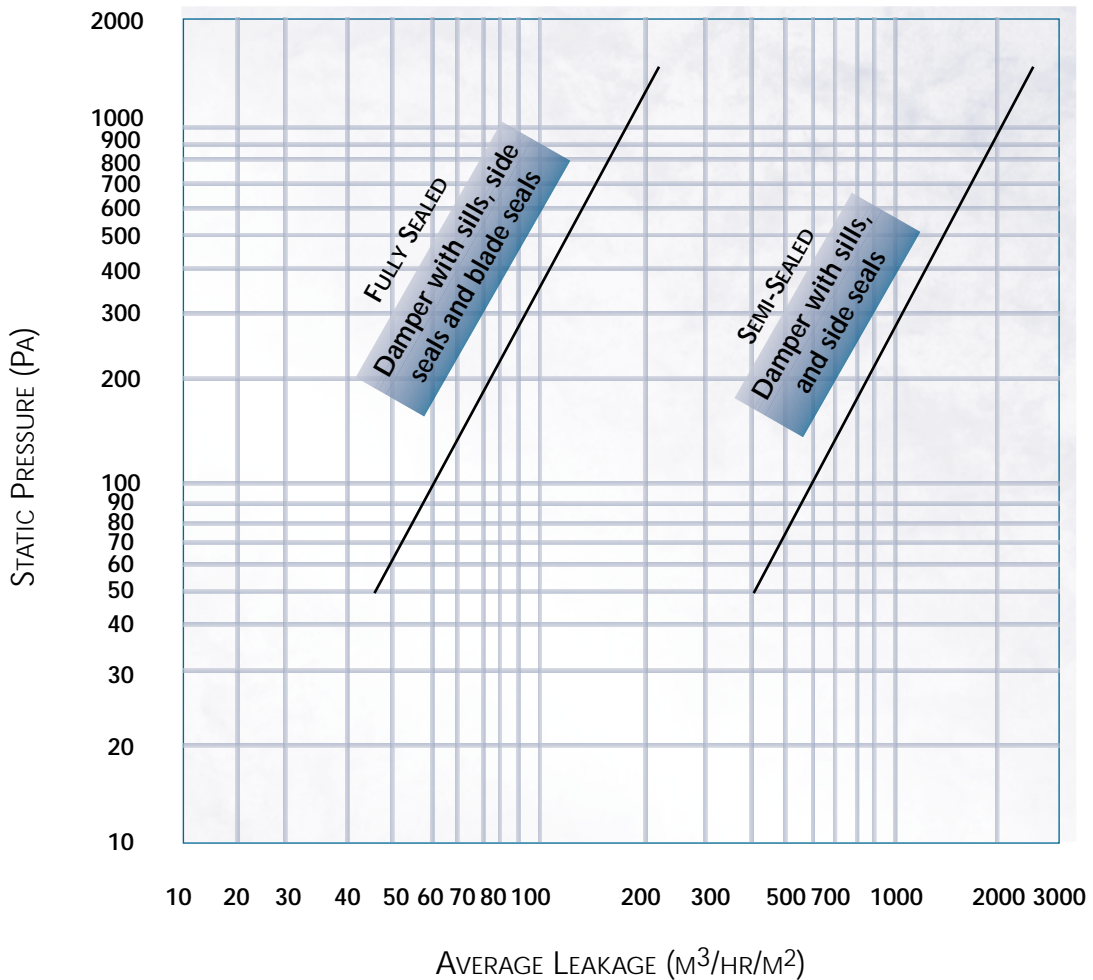


This graph is for standard units (no sills or seals)

For units with sills and side seals ADD 20%

For units with airfoil blades SUBTRACT 50%

BLADE LEAKAGE



TYPICAL ORDER DETAIL

MODEL REF	SIZE (W x H)MM	QUANTITY	FEATURES
1011-10	500 x 500	10	OILITE BEARINGS TO SUIT MOTOR

PRODUCT CODING					
1 PRODUCT GROUP	2 MODEL	3 OPERATION	4 SEALS	5 DUCT CONNECTION	6 (a)(d) MATERIAL
10. RIBBED BLADE	0. BASE	0. FACE LINKAGE (RHS)	0. FULLY	0. BASE	0. GALV
11. AIRFOIL BLADE	1. PARALLEL DUCT SLEEVE	1. SIDE LINKAGE (RHS)	1. NONE	1. CIRCULAR SPIGOT	1. 430 GRADE S/S BLADES
	2. OPPOSED DUCT SLEEVE	2. FACE LINKAGE (LHS)	2. SEMI S/S SIDE SEALS + SILLS	2. FLAT OVAL SPIGOT	2. 430 CASING
	3. PARALLEL FLANGED	3. SIDE LINKAGE (LHS)		3. RECT SPIGOT	(c) GRADE S/S BLADES & CASING
	4. OPPOSED FLANGED	4. FACE LINKAGE (BOTH)		4. 160 CASE (b) DEPTH	7. 430 CASING
	5. PARALLEL WALL FLANGED	5. SIDE LINKAGE (BOTH)		5. 200 CASE (b) DEPTH	(c) GRADE S/S BLADES & CASING
	6. OPPOSED WALL FLANGED	NON STD.			FACE LINKAGE & BRKTS

NOTES

- (a) Casing = frame or frame and case where relevant.
 (b) Applies to flanged models only.
 (c) Some components on these models are made from galv. mild steel.
 (d) 430 Grade stainless steel is not suitable for hostile or corrosive environments.

ASSOCIATED PRODUCTS

Other fully tested and approved product groups available include:

- ◆ SERIES 0100/0200 - CURTAIN FIRE DAMPERS
- ◆ SERIES 1200 - FIRE/SMOKE/CONTROL DAMPERS
- ◆ SERIES 1400 - SLIMLINE BALANCE AND CONTROL DAMPERS
- ◆ SERIES 2300 - LEAKAGE RATED FIRE/SMOKE DAMPERS
- ◆ SERIES 2400 - INSULATED FIRE/SMOKE DAMPERS
- ◆ SERIES 4000 - FIRE RATED DIFFUSER ASSEMBLIES
- ◆ SERIES 0800 - ACCESS DOORS
- ◆ SMOKE MANAGEMENT SYSTEMS

The information contained in this publication is correct at the time of printing. Continuous product development means that from time to time product specifications and other information will change. The company therefore reserves the right to modify or withdraw any of the products described without prior notice

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