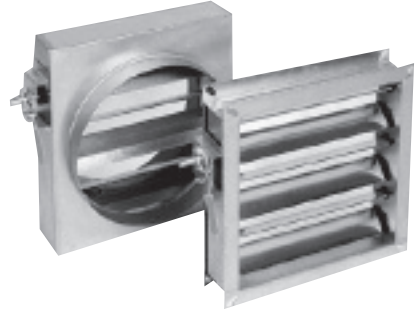


Duct Dampers

Description

For control and balancing of supply and extract air systems. All dampers are fitted with opposed blade action, airfoil blades as standard. The angles of the blades are adjusted via the robust, hand operated, lockable quadrant or with an optional extended spindle suitable for motorisation. The linkage system is enclosed and positioned out of the airstream. Casing leakage conforms to HVCA specification DW144 and Eurotest 2/2 classes A-C.



Construction

The casing is available fully flanged or with square/rectangular, circular or flat oval spigots and is manufactured from 1.2mm galvanised mild steel. Stainless steel casing is optional in grades 304, 316 or 430. The blades are galvanised mild steel with the option of extruded aluminium airfoil section or stainless steel grades 304, 316 or 430. An optional side seal gasket is available.

Size

From 100 x 100 to 1000 x 1000 in one module. Multiple assemblies can be supplied.

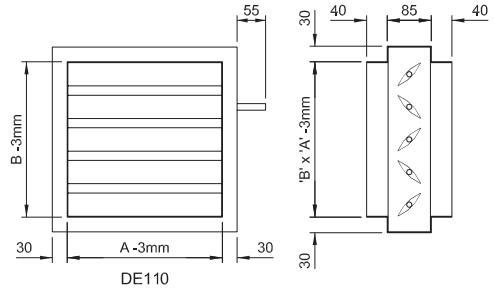
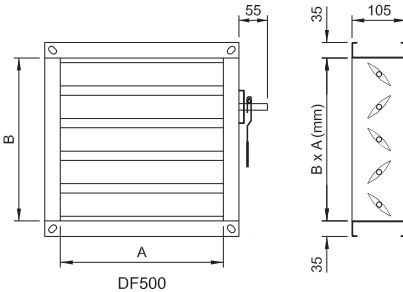
How to Specify

STATE QUANTITY, THE PRODUCT CODING AND THE SIZE WIDTH X HEIGHT

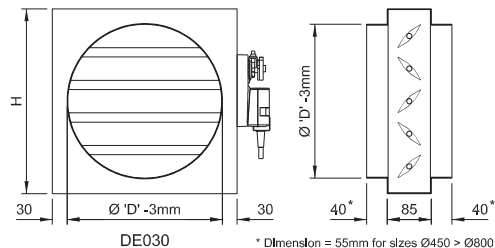
e.g. 10 Qty. DF500+0M 300 x 150

Product Type	Connection	Operation	Bearings
DF Flanged Casing	5 35mm Flange	0 Manual Locking Quadrant	0 Nylon
DE Spigotted Casing	3 30mm Flange	1 Extended Drive Shaft	1 Oilite Bronze
DS Flanged 65mm Deep Casing	0 Circular Spigot	3 Electric Motor Fitted	
	1 Rectangular or Square Spigot		

Seals	Finish
0 None	G Galvanised Case Galvanised Blades
1 Stainless Steel Side Seals	M Galvanised Case Aluminium Blades
	W Galvanised Case S/Steel (430) Blades
	S S/Steel (430) Case S/Steel (430) Blades



Ø D	H	Ø D	H
100	140	450	510
125	195	500	580
150	210	550	640
200	260	600	700
250	320	650	770
300	385	700	770
350	385	750	830
400	460	800	895



* Dimension = 55mm for sizes Ø450 > Ø800

Technical Data Volume Control Dampers

Seal Effectiveness

The loss of air through the blades of a damper at various duct pressure differentials is given in the table for guidance.

Differential Duct Pressure (Pa)	Blade Leakage Chart I/s - M ² (M ² = Duct Area)							
	200	300	400	500	600	800	1000	2000
DF500+0M (Standard)	350	400	450	525	575	700	900	-
D7310+1M (Fully Sealed)	12	17	20	24	28	33	40	-
DH603+2M (Heavy Duty Fully Sealed)	4	6	8	9	12	15	17	29

Pressure Drop

Data for pressure drop is based on both a standard flanged unit and a fully sealed flanged unit of 600 x 600

Duct Air Velocity (M/s)		Pressure Loss (Total Pa)								
		2	3	4	5	6	7	8	9	10
DF500+0M	30° Closed	3	9	22	47	75	110	140	190	220
	15° Closed	-	-	2	6	12	22	32	46	60
	Fully Open	-	-	-	-	-	-	-	2	3
D7310+1M	30° Closed	-	12	21	35	55	75	90	110	150
	15° Closed	-	4	7	11	18	23	30	40	48
	Fully Open	-	-	2	4	5	7	9	11	14
DH603+2M	30° Closed	-	11	33	50	68	95	120	140	200
	15° Closed	-	-	-	-	5	20	32	44	55
	Fully Open	-	-	-	-	-	-	5	12	21

Damper Height	Weight Chart (Kg)								
	Damper Width								
	200	300	400	500	600	700	800	900	1000
100	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
200	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	7.0
300	3.0	4.0	4.5	5.5	6.0	6.5	7.0	8.0	9.0
400	4.0	5.0	6.0	6.5	7.5	8.5	9.0	10.0	10.5
500	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.0	12.0
600	5.5	6.5	7.5	9.0	10.0	11.0	12.0	13.0	14.0
700	6.0	7.5	9.0	10.5	12.0	13.0	14.0	15.0	15.5
800	7.0	8.5	9.5	11.0	12.5	13.5	15.0	16.5	17.5
900	7.5	9.0	11.0	12.5	13.5	15.0	15.5	17.0	19.0
1000	8.0	10.0	12.0	13.5	15.5	17.0	17.5	19.0	21.0

For Heavy Duty Type Multiply by 1.5

Weight

These values have been rounded up and down to whole numbers and are illustrated for estimation purposes only.

Duct Pressure (Pa)	Damper Type	Torque Rating (Nm)			
		Damper Size			
		250 x 250	500 x 500	750 x 750	1000 x 1000
250	Sealed	4.4	6.7	11.8	14.0
250	Unsealed	1.6	2.5	4.5	5.4
500	Sealed	5.0	7.3	13.1	16.0
500	Unsealed	1.8	3.1	5.6	7.0
750	Sealed	5.5	7.9	14.5	18.0
750	Unsealed	2.0	3.6	6.7	8.5
1000	Sealed	6.1	8.5	15.6	20.0
1000	Unsealed	2.2	4.1	7.8	10.3

Torque Rating

These values have been rounded up and down to whole numbers and are illustrated for estimation purposes only.