



Incorporating



Volume control dampers

NCA Series 800B Heavy duty volume control dampers

- Heavy duty volume control damper for balancing applications
- Robust galvanised steel frame and blades
- Square, circular and flat oval connections for all types of ductwork
- Variety of control options including comprehensive range of actuators



NCA Series 800B

Designed to suit applications requiring a large balancing damper without requiring a high level of shut-off, S800B heavy duty volume control dampers are cost effective and robust units, perfect for industrial applications.

Suitability for high airflow velocities is provided by the robust construction utilising a 180mm deep galvanised steel frame, roll formed 1.5mm thick galvanised steel triple v blade and steel drive system.

Minimal resistance to airflow is another benefit of the large format design, with the 150mm blade pitch giving a maximum free area of around 80%.

Large single section sizes are possible thanks to the low torque characteristics of the drive system, meaning single sections of up to 1.2m x 2m can be manufactured and driven from a single actuator.



Design features

Material	Galvanised steel frame and blades Zinc plated steel drive system components Optional seals from silicone rubber and stainless steel
Sizes	Minimum: 200mm x 155mm nominal Maximum single unit: 1200mm width, 2000mm height or 1200mm diameter. Above any of these dimensions, units would be made in sections
Frame	40mm flanges, 180mm overall depth
Operation	Parallel blade, linkage driven
Controls	Standard: Extended spindle for motorisation by others Optional: Locking quadrant Factory fitted electronic, pneumatic or ATEX rated actuators Please see pages 6 - 7 for more information on controls
Max recommended velocity	10 m/s
Temperature range	-40°C to 300°C -40°C to 220°C if equipped with silicone rubber blade edge seals Specification of an actuator may alter this range

Quality assurance

HVC Supplies (Stourbridge) Ltd is an ISO 9001 certified company.



Assessed to ISO 9001
Cert/Ref No. 1186

Certification

S800B heavy duty volume control dampers have been tested for resistance to airflow in accordance with:

BS EN 1751:2014

The testing was carried out in July 2019 by BSRIA in Preston, England.

Copies of the test reports are available on request.

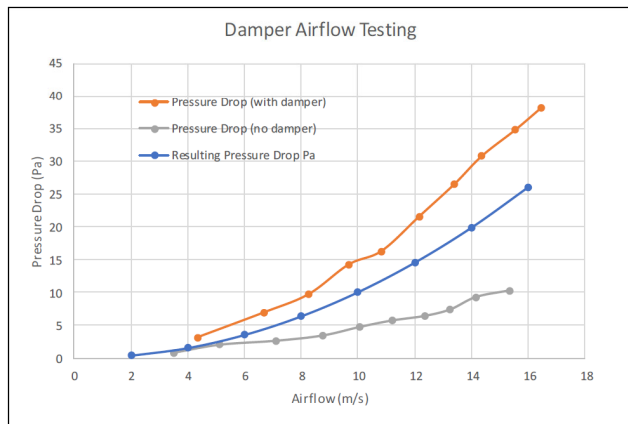


Test results

Resistance to airflow

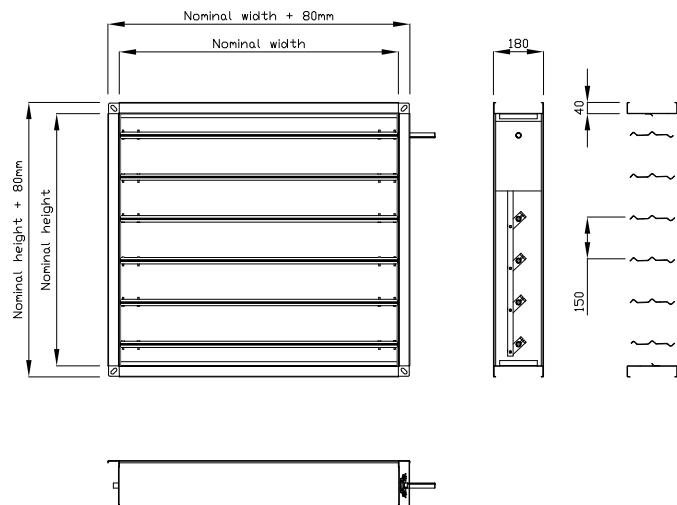
Tested unit size: 500mm x 455mm nominal

The blue line gives the resistance to airflow caused by the damper

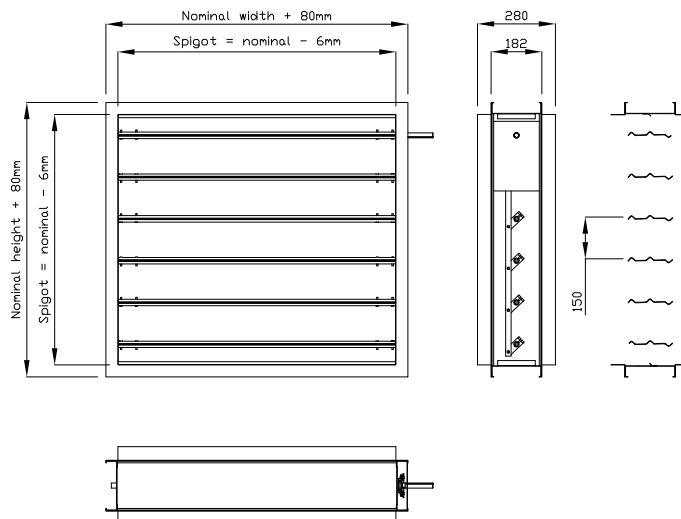


Technical drawings

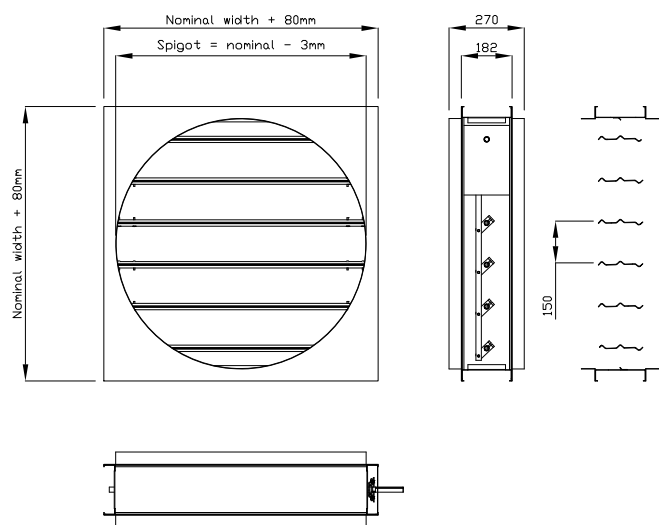
Model A: Square flanged



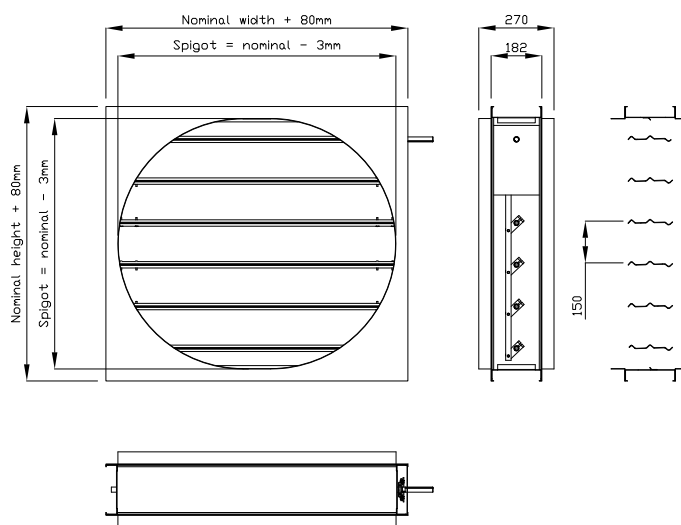
Model B: Square spigotted



Model C: Circular spigotted



Model D: Flat oval spigotted



Stop gaps

S800 dampers are built with the top blade in a set position.

Small stop gaps are fitted at the top and bottom of any size of damper for blades to seal against, however due to the large 150mm blade pitch, some sizes will require a larger stop gap between the bottom blade and the bottom frame which will adversely impact active area and thus performance.

To minimise the required bottom stop gap size and thus maximise free area, take the minimum nominal height of 155mm, and add any multiple of 150mm, e.g. 305mm, 455mm, 605mm etc.

Controls

Extended spindle (standard control method unless stated)

Allows fitting of an actuator on the side of the damper.

- 18mm diameter zinc plated mild steel bar.
- Extends 90mm from actuator mounting plate.
- Fitted to first blade unless requested.

Important note: Spindle is too large for Belimo LF series actuators

Picture below shows S800C damper.



Locking quadrant

Permits manual operation with position locking function.

- Heavy duty 3mm thick zinc plated steel lever complete with blue plastic sleeve.
- Laser cut 'OPEN' and 'CLOSED' position indicators in mounting plate.
- Large format wing nut for easy position locking.

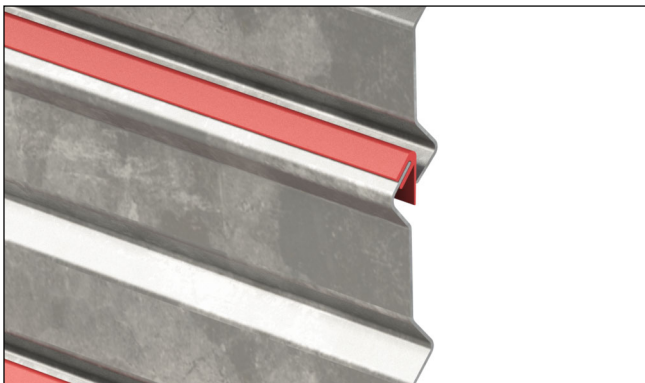
Picture below shows S800C damper.



Additional seals

Blade edge seals

- Silicone rubber, working temperature range -40°C to 220°C
- Flipper profile to reduce gaps between adjacent blades when closed
- Dark grey (shown red in cut through image below for clarity)



Frame side seals

- Grade 301 stainless steel, 0.25mm thick
- Reduce any gaps between the blade ends and frame sides



Belimo actuators

We recommend the use of Belimo actuators for applications in non-specialist environments.

All actuators are factory fitted and tested to confirm good operation. Other than connection to wiring, no alteration to the actuator is required on site.

Please see the below table to find the series of Belimo actuator you require for your application.



Series	Mounting location		Suitable for S800 dampers up to			Voltage		Power open power close	Action	
	Outboard	Inboard	0.4m ²	1.0m ²	4.0m ²	24V	230V*		Spring return	Modulating
LM24A	✓		✓			✓		✓		
LM24A-SR	✓		✓			✓		✓		✓
LM230A	✓		✓				✓	✓		
LM230ASR	✓		✓				✓	✓		✓
NM24A	✓			✓		✓		✓		
NM24A-SR	✓			✓		✓		✓		✓
NM230A	✓			✓			✓	✓		
NM230ASR	✓			✓			✓	✓		✓
SM24A	✓				✓	✓		✓		
SM24A-SR	✓				✓	✓		✓		✓
SM230A	✓				✓		✓	✓		
SM230ASR	✓				✓		✓	✓		✓
LF series	Not suitable - Spindle is too large									
NF24A	✓			✓		✓			✓	
NF24A-SR	✓			✓		✓			✓	✓
NFA	✓			✓		✓	✓		✓	
SF24A	✓				✓	✓			✓	
SF24A-SR	✓				✓	✓			✓	✓
SFA	✓				✓	✓	✓		✓	

*Suitable for 240V supply.

Schischek explosion-proof actuators

Schischek produce a range of specialist explosion-proof actuators for use in areas with potentially explosive atmospheres; E.G. petro-chemical plants, whisky distilleries and grain silos.

ATEX approved.

All actuators are factory fitted and tested to confirm good operation. Other than connection to wiring, no alteration to the actuator is required on site.

Please contact us for more information on explosion-proof actuators with S800 dampers.



Kinetrol pneumatic actuators

We can factory fit dampers with Kinetrol's compressed air driven pneumatic actuators. A range of additional options including spring return modules can be fitted to enhance functionality.

ATEX approved.

All actuators are factory fitted and tested to confirm good operation. Other than connection to pneumatic lines, no alteration to the actuator is required on site.

Please contact us for more information on pneumatic actuators with S800 dampers.



Finish

Bare metal only



Ordering codes

Example

1 - 500 x 500 - S800BAG - Belimo SM24A-SR

Codes

1)	Quantity		
2)	Size (mm)	(Width x height)	
3)	Series	S800B	Heavy duty volume control damper
	Connection	A B C D	Square flanged Square spigotted Circular spigotted Flat oval spigotted
	Material	G	Galvanised steel frame and blades
4)	Optional seals	SS ES	Stainless steel side seals Silicone rubber blade edge seals (suitable temperature range -70°C to 220°C)
5)	Control	EX LQ (Actuator)	Extended spindle (standard) Locking quadrant State actuator code
When ordering a spring return actuator, please specify whether you require spring open or spring close operation. If not stated, spring closed will be supplied as standard.			

Important: Size will be taken to be nominal unless stated otherwise.

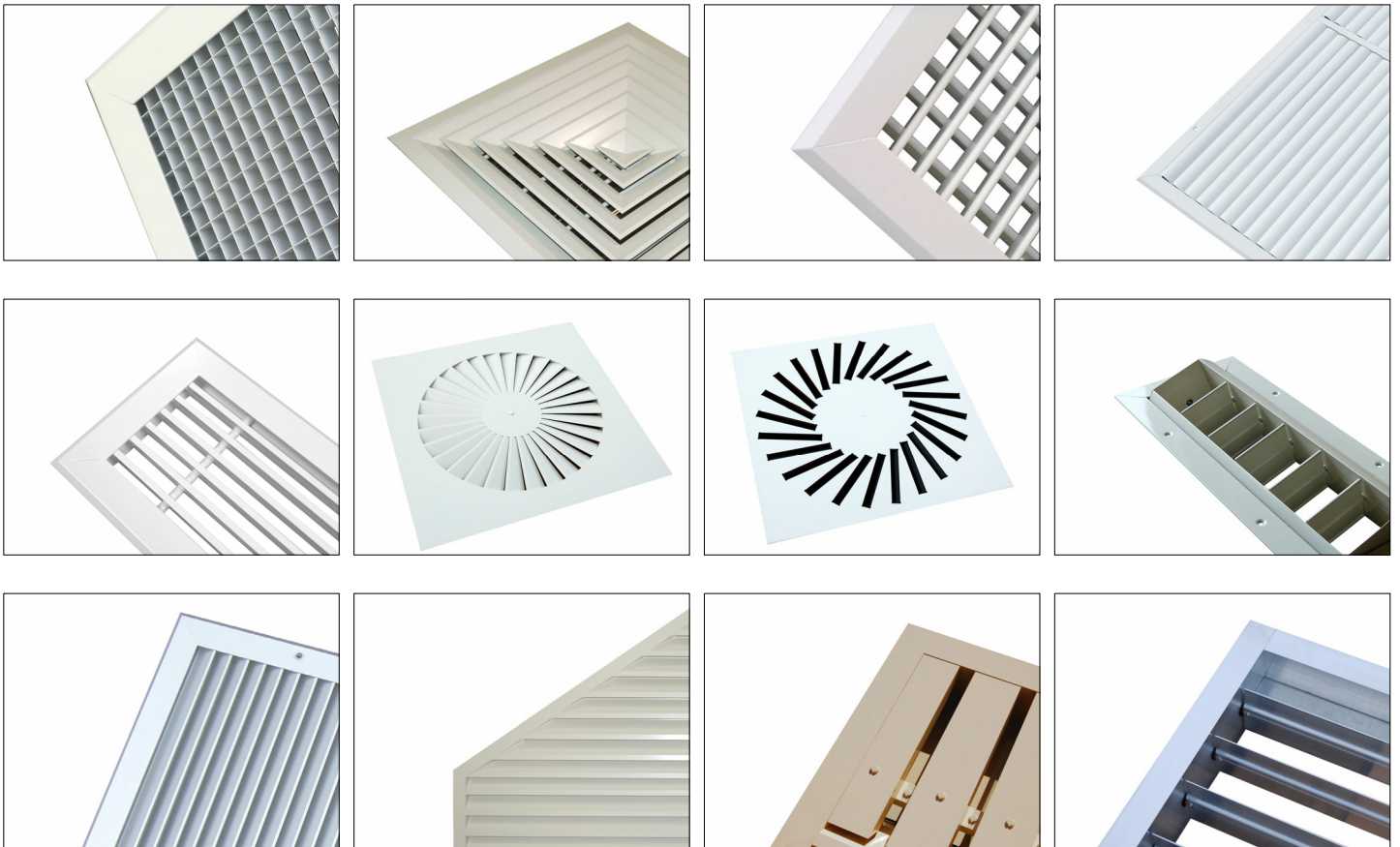
Leave code section blank if no option is required.

HVC & NCA products

HVC offer the significant advantage of manufacturing both in duct and duct terminal equipment, making us a one stop shop for all your HVAC needs.

The products shown below are a selection, not an exhaustive list. Go to www.h-v-c.com for details on all HVC and NCA products.

HVC: Grilles, Diffusers, Louvres and Volume Control Dampers



NCA: Fire and volume control dampers





Assessed to ISO 9001
Cert/Ref No. 1186

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