



Volume control dampers

Incorporating



NCA Series 900 Standard VCDs and shut-off dampers

- Volume control dampers and low leakage shut-off dampers for general purpose applications
- Aerodynamic and corrosion resistant aluminium blades as standard
- Out-of-airstream geared drive system for minimal maintenance
- Square, circular and flat oval connections for all types of ductwork
- Manual or actuator control



NCA Series 900 dampers

Slimline, opposed blade dampers for general purpose air control applications, available in two types:

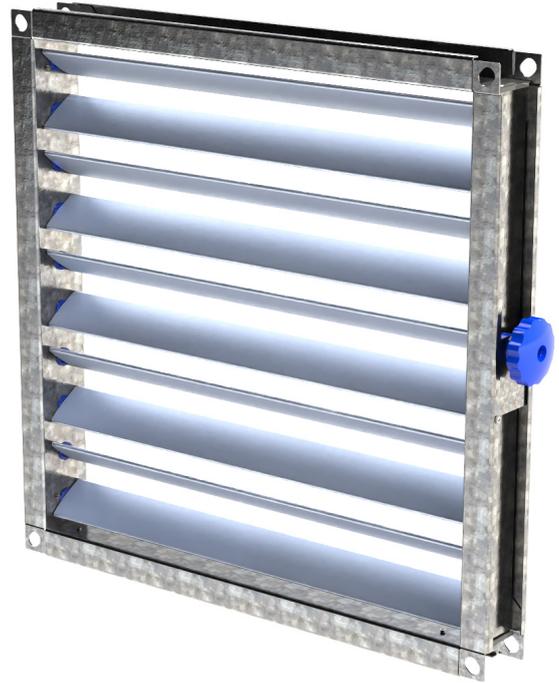
S900B: Standard volume control dampers

S900C: Shut-off dampers

Both series comprise galvanised steel outer frames (and cases if required), extruded aluminium blades and a precision drive train for easy, low torque operation.

The use of extruded aluminium blades as standard, with an absence of fold or crimp features contributes to the facilitation of easy cleaning and minimisation of noise.

Control is facilitated by either manual plastic handles, locking quadrants, or a full range of electronic and pneumatic actuators.



Design features

Material	S900B:	Galvanised steel frame (and case if required) Extruded aluminium blades Plastic drive components
	S900C:	Galvanised steel frame (and case if required) Extruded aluminium blades Stainless steel side seals Silicone rubber blade tip seals Plastic drive components
Sizes	Minimum:	100mm x 100mm nominal
	S900B: S900C:	Maximum single unit: 1000mm width, 1000mm height or 1000mm diameter Maximum single unit: 1000mm width, 700mm height or 700mm diameter Above any of these, units will be manufactured in sections or with mullions.
Finish		Bare metal
Mass/m² face area		16kg (S900BA - 1000mm x 1000mm nominal size), smaller units will be proportionally heavier. Models B, C and D will be approximately 50% heavier due to case.
Free area		80% maximum

Quality assurance

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



Assessed to ISO 9001
Cert/Ref no. 1186

Configurations

Series 900B: Standard VCDs

Standard volume control dampers for general purpose applications.

Constructed with extruded aluminium blades and a galvanised steel frame/case.

Aerofoil profile blades keep noise generation and pressure drops to a minimum, while a system of nylon gears, protected from dust and debris by being mounted outside of the airstream within the frame, ensures low operating torque and long term, smooth operation with minimal maintenance.



Series 900C: Shut-off dampers

Modified volume control dampers with additional seals for a greater shut off.

Shut-off dampers have the same basic construction as standard VCDs, with the same galvanised steel frame/case and fully protected gear train.

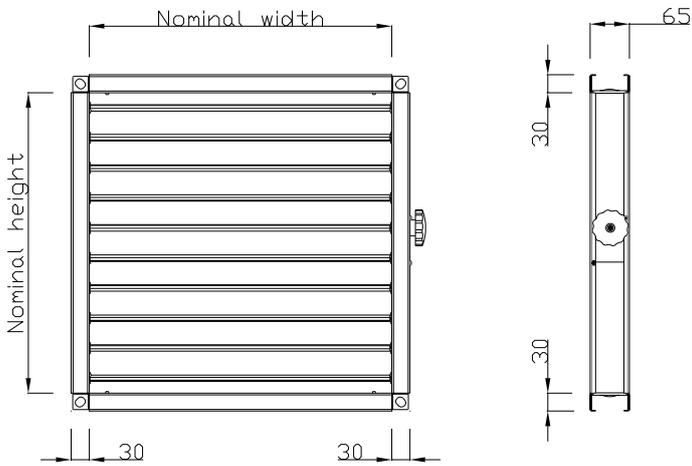
Blades are extruded aluminium aerofoils and alternate between those fitted with a flexible silicone rubber seal and a non-sealed version.

Stainless steel side seals are fitted between the blade ends and the frame.

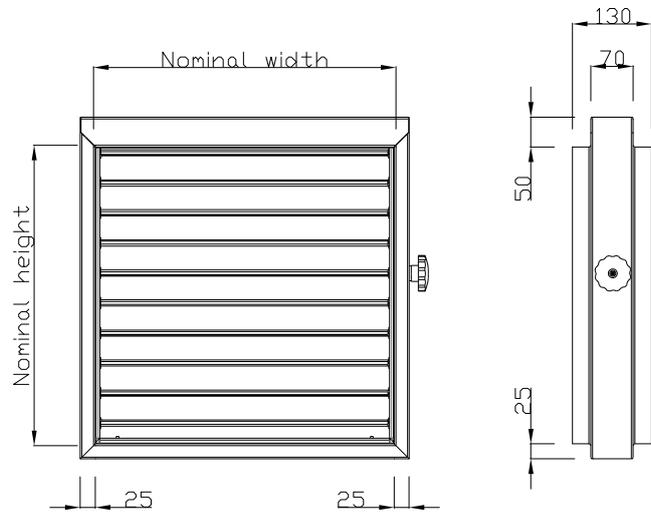


Technical drawings

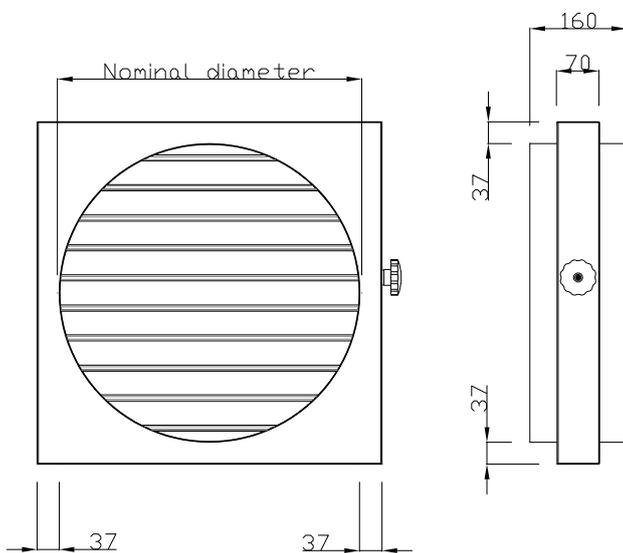
Model A: Square flanged (no case)



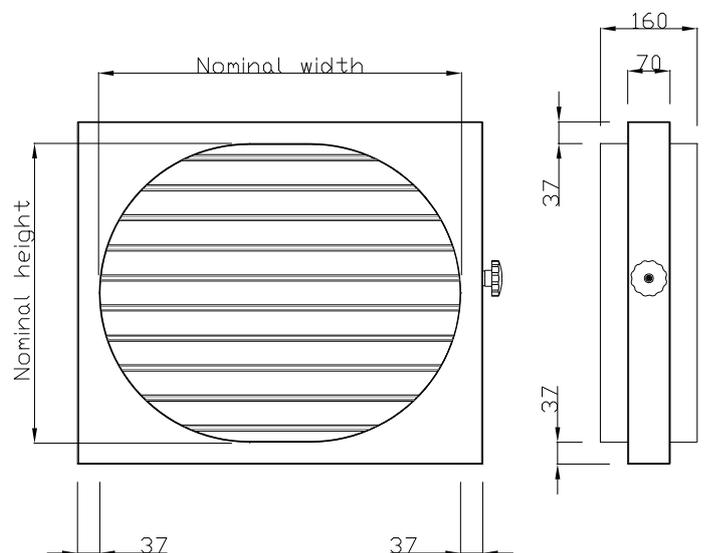
Model B: Square spigotted



Model C: Circular spigotted



Model D: Flat oval spigotted



Spigots: Model B spigots supplied 6mm under nominal size.
Model C and D spigots supplied 3mm under nominal size.

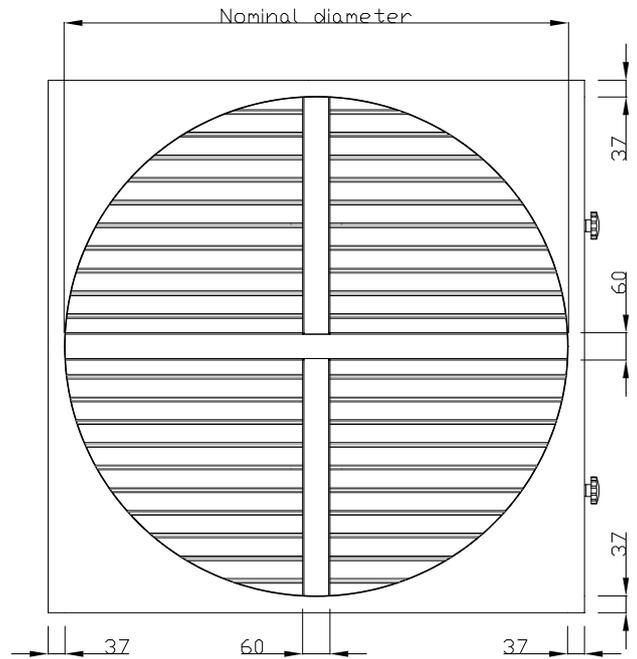
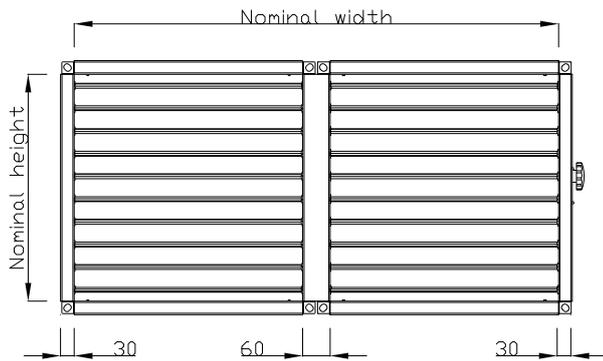
Technical drawings

Multiple units

If nominal width, height or diameter exceed the maximums detailed on page 2, units will be manufactured with mullions. If stated nominal height or diameter are exceeded, two control devices will be required.

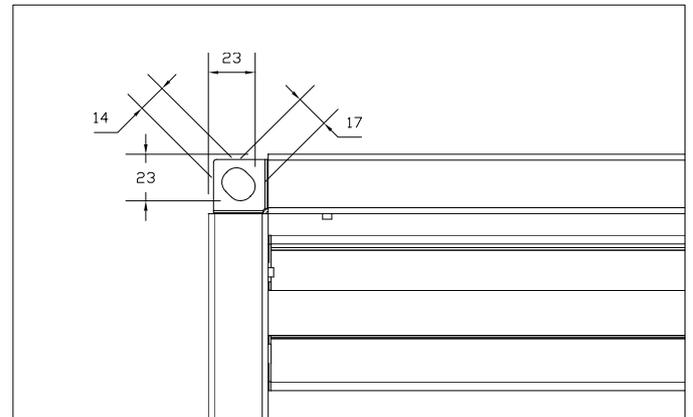
Very large units may need to be made in separate sections for joining together on site.

Alternatively, Series HVC-VCD aluminium volume control dampers are more suitable for sizes above 1m x 1m, and do not require two control devices for units with nominal height exceeding 1m.



Model A fixing holes

Square flanged S900 dampers (Model A) have prepunched fixing holes in each corner to facilitate easy connection to flanged ductwork.



Control options

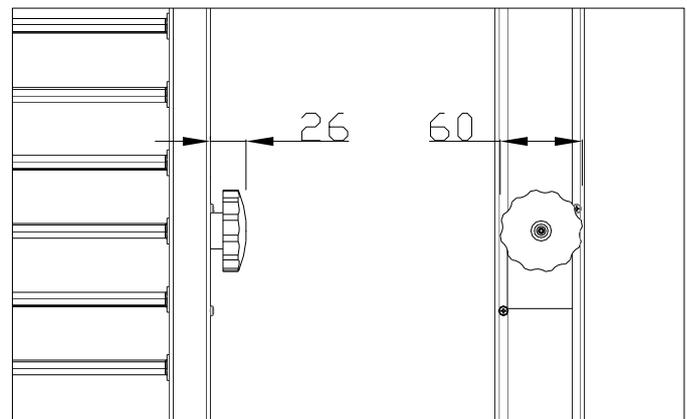
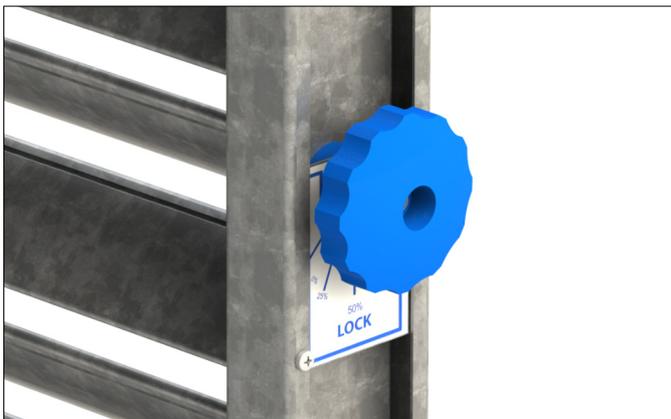
Manual plastic handles

Standard control method on S900B models (volume control).

The blue nylon handle is ergonomically designed for ease of use. An embossed arrow on the handle and a sticker on the handle mounting plate show blade position without needing to look inside the duct.

Lockable with a single pozidrive screw in the handle centre (supplied).

Image below shows galvanised blades which have now been replaced by extruded aluminium.

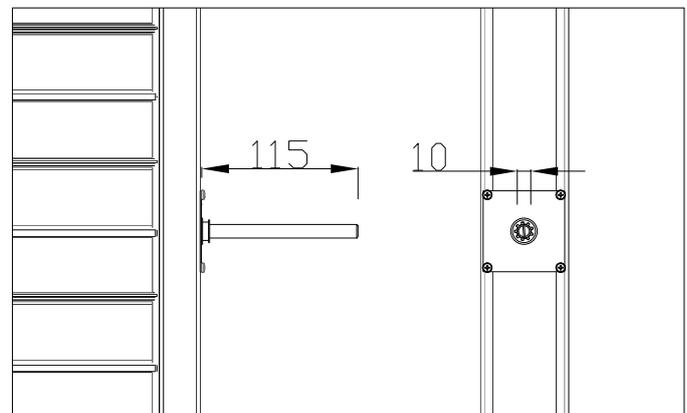


Extended spindles

Standard control method on S900C models (shut-off).

Permits fitting of an actuator:

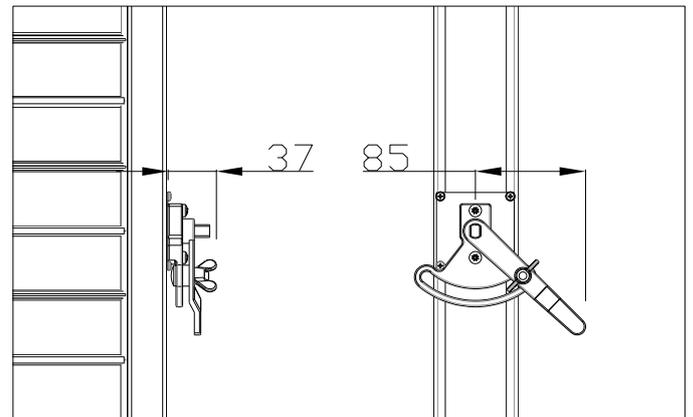
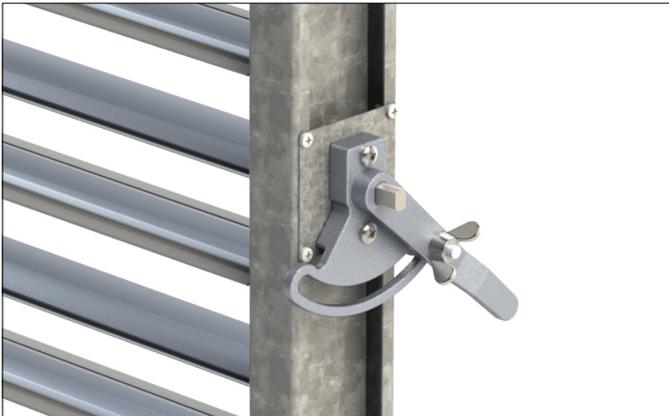
- BZP steel
- 10mm diameter
- Extends 115mm from damper case



Control options continued

Locking quadrants

Cast aluminium locking quadrants can be fitted as an alternative to standard plastic handles.



Actuators

HVC can supply a range of factory fitted electronic and pneumatic actuators with S900 dampers, from leading manufacturers including:

- **Belimo** - Standard applications
- **Schischek** - Very robust and explosion proof
- **Kinetrol** - Pneumatic



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.

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



Series	Suitable for S900 dampers up to			Voltage		Action		
	0.4m ²	1.0m ²	2.0m ²	24V	230V	Power open power close	Spring return	Modulating
LM24A	✓			✓		✓		
LM24A-SR	✓			✓		✓		✓
LM230A	✓				✓	✓		
LM230ASR	✓				✓	✓		✓
NM24A		✓		✓		✓		
NM24A-SR		✓		✓		✓		✓
NM230A		✓			✓	✓		
NM230ASR		✓			✓	✓		✓
SM24A			✓	✓		✓		
SM24A-SR			✓	✓		✓		✓
SM230A			✓		✓	✓		
SM230ASR			✓		✓	✓		✓
LF24	✓			✓			✓	
LF24-SR	✓			✓			✓	✓
LF230	✓				✓		✓	
NF24A		✓		✓			✓	
NF24A-SR		✓		✓			✓	✓
NFA		✓		✓	✓		✓	
SF24A			✓	✓			✓	
SF24A-SR			✓	✓			✓	✓
SFA			✓	✓	✓		✓	

Schischek actuators

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

ATEX approved depending on the model.

All actuators are factory fitted and tested to confirm good operation.

Please contact us for more information.



Kinetrol actuators

We can factory fit S900 dampers with Kinetrol's range of compressed air driven pneumatic actuators. A range of additional options including spring return modules can be fitted to enhance functionality.

ATEX approved depending on the model.

All actuators are factory fitted and tested to confirm good operation.

Please contact us for more information.



Finish

Bare metal only



Ordering codes

Example

1 - 400 x 400 - S900BA - Belimo LM24A-SR

Codes

1)	Quantity		
2)	Size (mm)	(Width x height)	
3)	Series	S900B S900C	Volume control damper Shut-off damper
	Connection	A B C D	Square flanged Square spigotted Circular spigotted Flat oval spigotted
4)	Control	*nothing* EX LQ (Actuator)	S900B - Lockable plastic handle S900C - Extended spindle Extended spindle Locking quadrant State actuator code When ordering a spring return actuator, please state whether you require spring open or spring close operation.

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

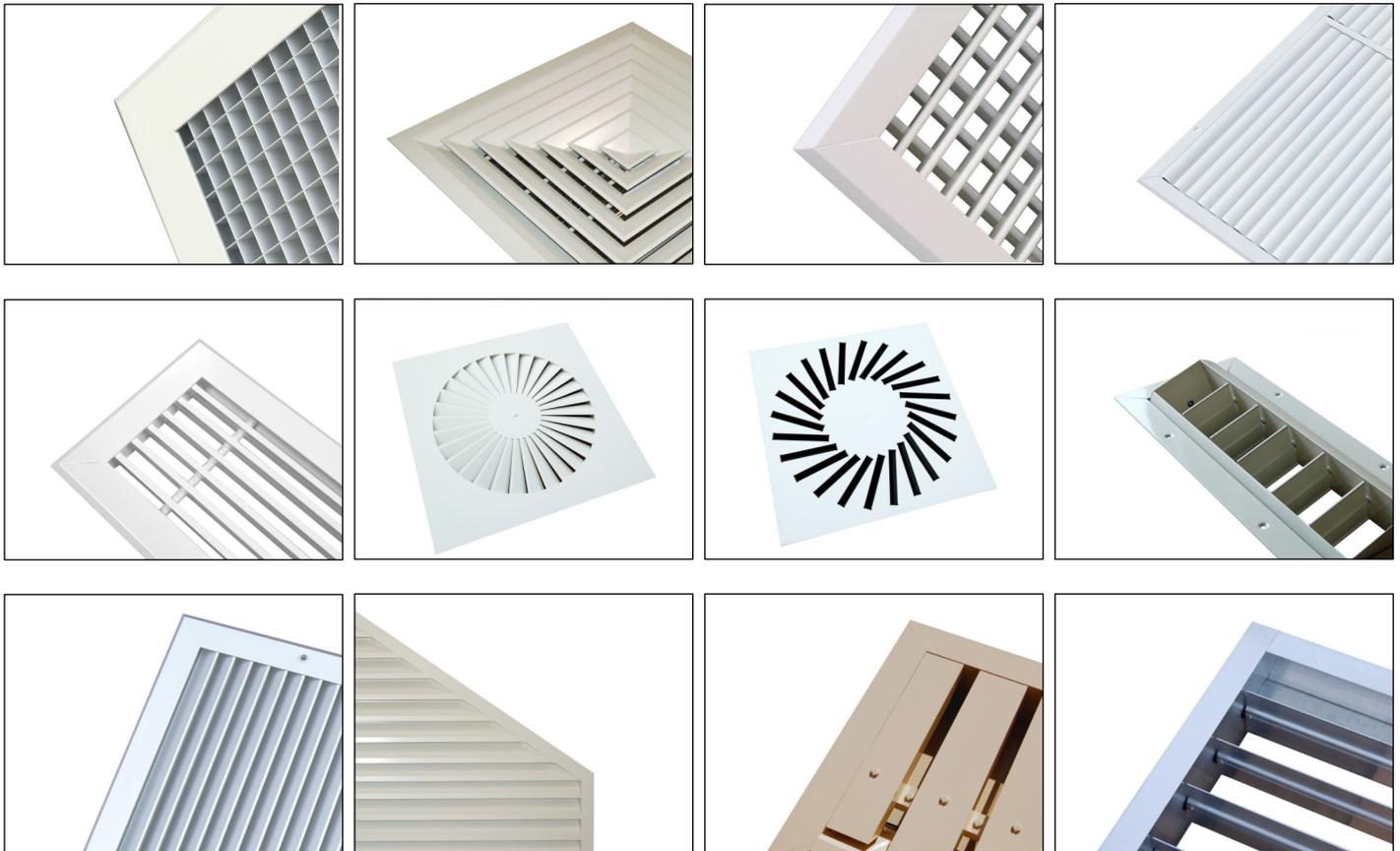
Leave code section blank if no option is required.

HVC & NCA products

HVC offers 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





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