

VAV System

Zonal Control for your MVHR system



KEY FEATURES

- Variable air volume (VAV) ventilation system with compatible controller and VAV dampers
- Independent monitoring and air flow regulation for individual area requirements
- Intelligent, internet controlled dampers for fine adjustment of air flow
- Real time data transfer and regulation of VAV dampers from a central monitoring station
- Allows users to control the system through smartphone and PC
- Optimises the performance of an MVHR unit and reduces the ongoing operating costs of your ventilation system
- Helps analyse ventilation and heating (optional) energy costs by zone
- Doesn't require a BMS system
- Up to 63 dampers can be connected to a central unit
- Suitable for all commercial Duplexvent MVHR units

VAV System

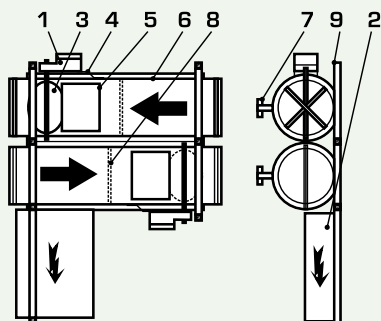
The VAV System grants building managers a ventilation system that can responsively adapt to changes in ventilation demand in each section of large rooms or the building without the need for a BMS System.

The Airflow VAV system can be integrated with any commercial Duplexvent MVHR unit via an Ethernet cable and, due to the improved efficiency it provides, keeps the ongoing operating costs of the ventilation system down.

When integrated, the entire system is permanently and immediately controlled so that the central unit gives exactly the required air without unnecessarily wasting energy.

Various designs of the dampers enable them to be installed in various locations of the ventilation system and thanks to a comprehensive range of sizes, give this VAV system a wide range of applications.

KEY COMPONENTS



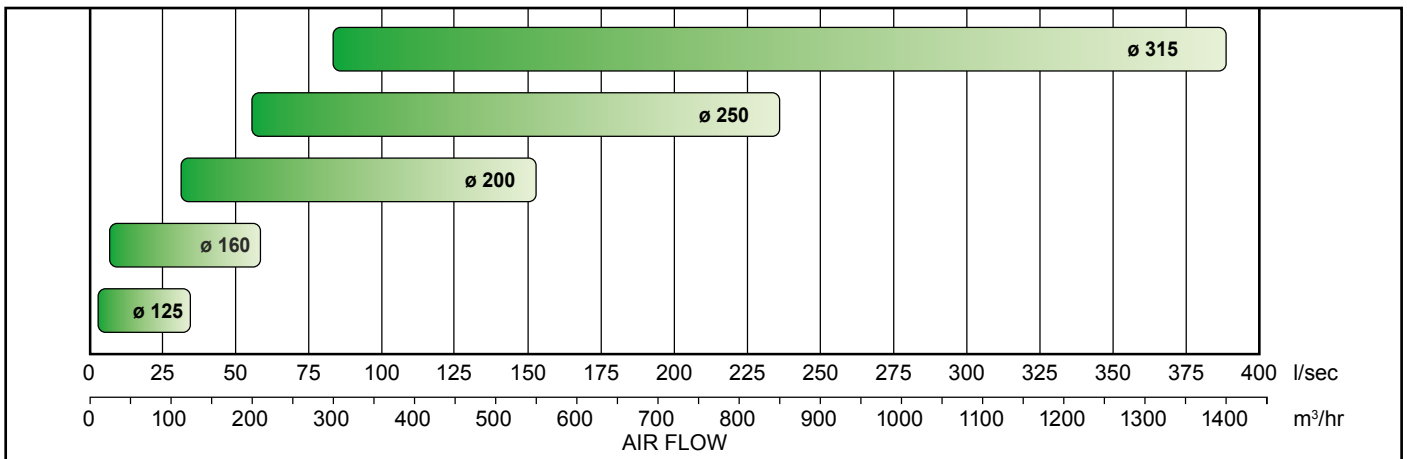
Key:

- | | |
|--|---|
| 1. Servo drive (has air flow measurement) | 5. Inspection opening (access to inner parts) |
| 2. Connection terminals for digital module | 6. Tube with 15mm thermal insulation |
| 3. Regulating valves (includes sealant) | 7. Handle of the inspection cover |
| 4. Servo drive casing | 8. Air flow sensor |
| | 9. Frame of VAV damper |

VAV SYSTEM RANGE

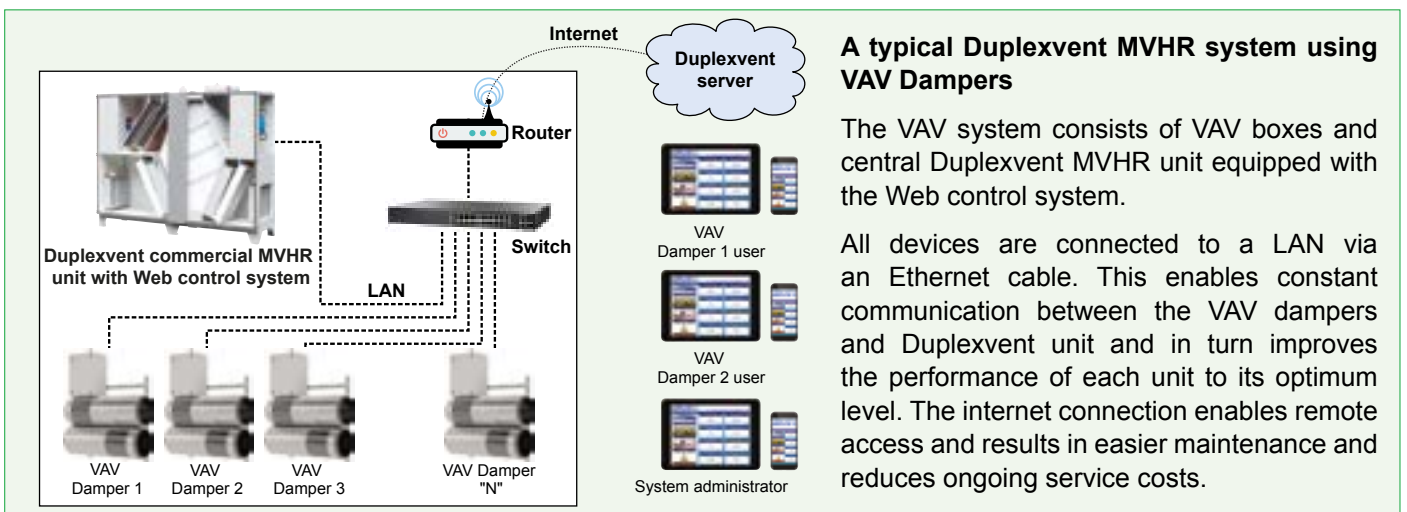


UNIT SELECTION



EXAMPLE SYSTEM

Duplexvent commercial MVHR unit with Web control

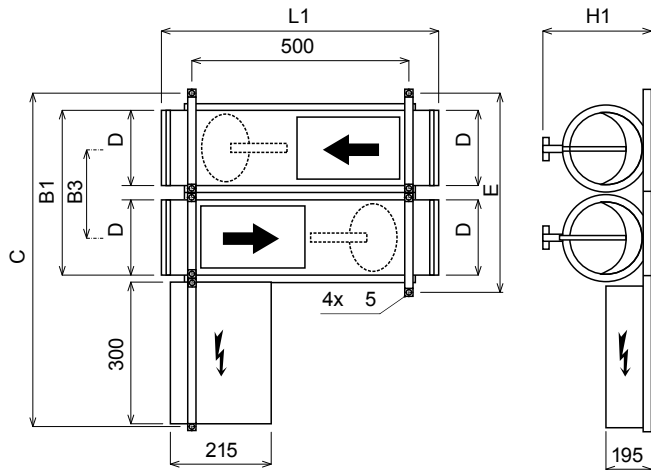


PERFORMANCE

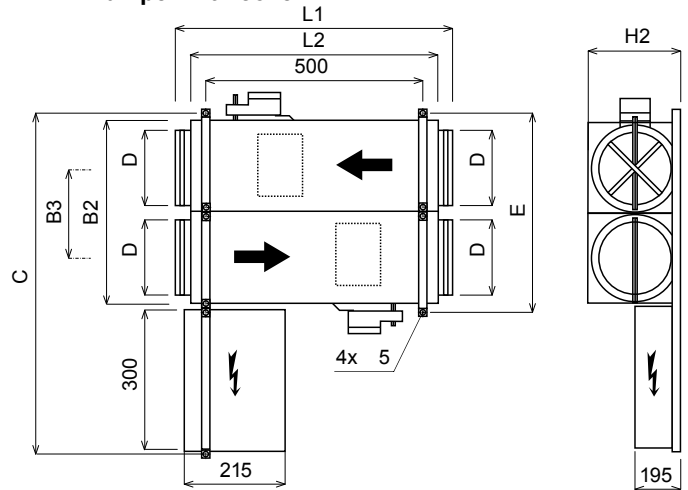
VAV Damper	Working Point		Acoustic Performance L_{wa} (dB)								L_{wa} (dB)
	Pressure Loss (Pa)	Air Flow Volume (m³/hr) / (l/sec)	63	125	250	500	1000	2000	4000	8000	
125	50	120 / 33	45.0	44.4	43.6	40.7	33.1	30.8	22.6	18.9	41.0
160		180 / 50	49.3	46.5	47.5	44.8	37.0	26.3	15.4	5.7	44.4
200		450 / 125	54.0	49.1	42.0	31.8	18.2	13.2	6.0	4.0	36.9
250		750 / 208	54.6	49.7	42.6	32.4	18.8	14.0	6.8	4.8	37.7
315		1300 / 361	55.7	50.8	43.7	33.5	19.9	14.8	7.6	5.6	38.5
125	50	120 / 33	49.0	49.9	54.1	52.8	47.0	43.5	41.3	41.7	53.5
160		180 / 50	42.6	54.0	52.0	53.5	47.5	43.4	36.6	31.5	53.6
200		450 / 125	52.1	49.9	47.9	47.5	42.1	34.2	32.7	23.7	47.6
250		750 / 208	52.7	50.5	48.5	48.1	42.7	35.0	33.5	24.5	48.4
315		1300 / 361	53.8	51.6	49.6	49.2	43.8	35.8	34.3	25.3	49.2
125	50	120 / 33	43.7	48.4	57.5	60.1	51.5	50.9	49.7	50.9	60.1
160		180 / 50	48.0	51.7	57.1	59.8	52.5	48.5	44.8	43.3	59.3
200		450 / 125	42.0	52.6	52.9	51.9	49.4	46.5	43.9	36.5	54.4
250		750 / 208	48.0	53.2	53.5	52.5	50.0	47.3	44.7	37.3	55.2
315		1300 / 361	59.0	54.3	54.6	53.6	51.1	48.1	45.5	38.1	56.0

DIMENSIONS

VAV Damper without cover



VAV Damper with cover



Values in brackets apply to VAV dampers (diameter symbol) 200-315 with servos inside

VAV Damper	B1 (mm)	B2 (mm)	B3 (mm)	C (mm)	D (mm)	E (mm)	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)
125/125	387	397	198	800	125	429	590	540	155	185
160/160	457	467	235	870	160	499	590	540	190	220
200/200	537 (588)	547 (659)	304 (358)	1055	200	685	600	550	230	265
250/250	642 (698)	647 (781)	362 (418)	1175	250	804	700	650	280	315
315/315	765 (826)	777 (905)	419 (480)	1300	315	929	850	800	345	380

INSTALLATION

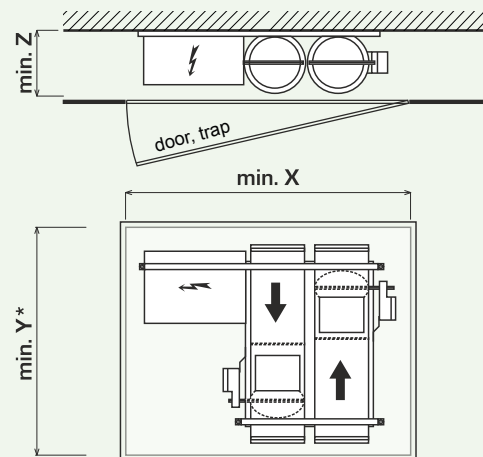
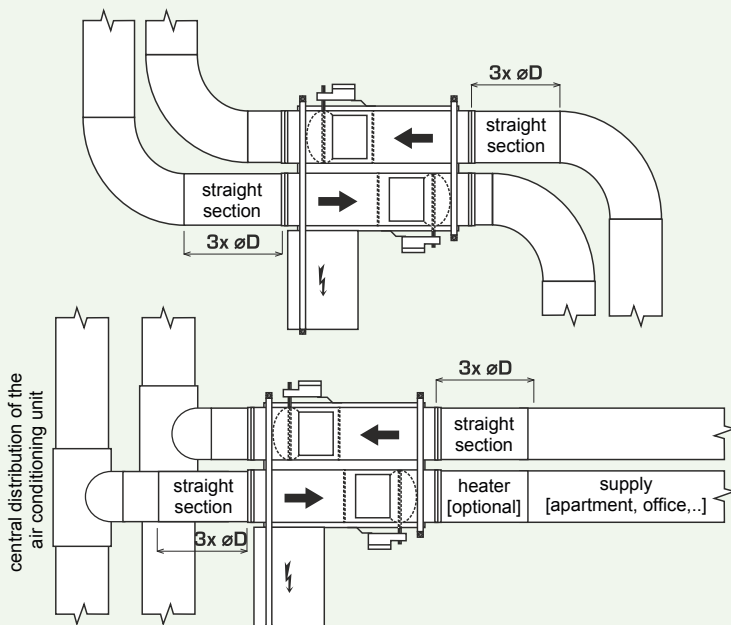
In order to achieve accurate flow control, it is necessary to keep a minimum calming distance of three times the diameter of the damper connection before the damper after an elbow or bend.

* Applies to VAV \varnothing 200-315 Dampers with servos inside

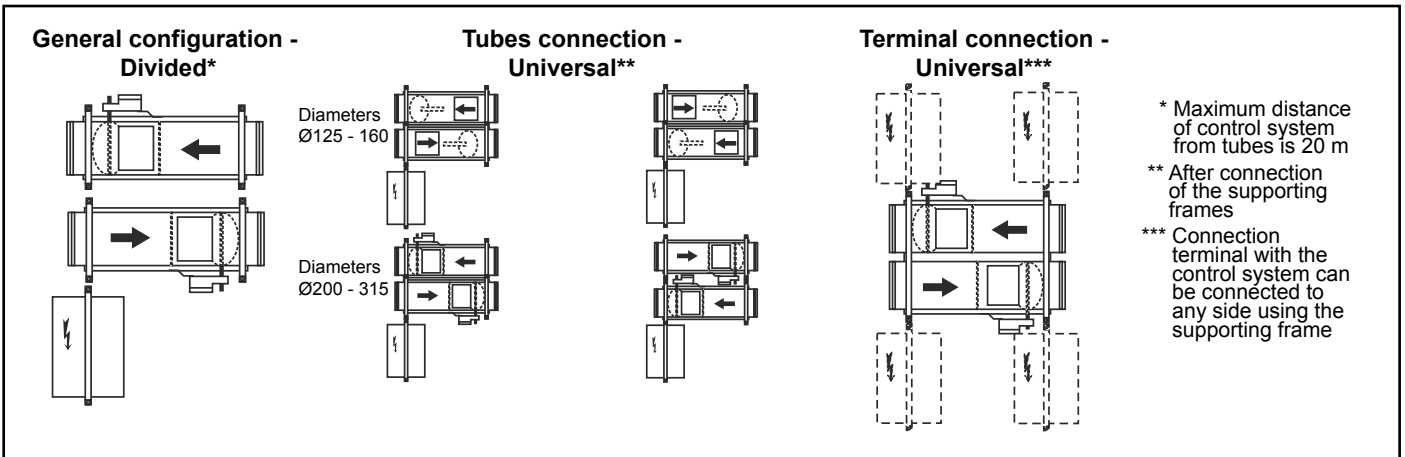
** When electric or water heaters are connected, this distance must be increased

The VAV damper box must remain accessible for commissioning the system and its ongoing maintenance

VAV Damper	X* (mm)	Y** (mm)	Z (mm)
125/125	750	500	225
160/160	850	500	225
200/200	1000	650	270
250/250	1100	750	320
315/315	1250	850	385



CONFIGURATION



CONTROLLERS

The following Airflow controllers can be used to control the VAV System:

WB1 Touch Controller

A digital, colour touch screen controller that enables the user to set all modes for the VAV system, including weekly scheduling and adjusting the entire system. This controller provides the user in-depth system information.



WB1 Touch controller

WB2 Rotary Controller

A variable speed controller with temperature adjustment (if equipped with the heater) and a switch off function.



WB2 Rotary controller



BC2 Rotary controller

BC2 Rotary Controller

A variable speed controller with a switch off function.

VAV PART NUMBERS

	Description	Part Number
	VAV Damper 125	90000736
	VAV Damper 160	90000737
	VAV Damper 200	90000738
	VAV Damper 250	90000739
	VAV Damper 315	90000740
	Metal Cover for VAV Damper 125	90000741
	Metal Cover for VAV Damper 160	90000742
	Metal Cover for VAV Damper 200	90000743
	Metal Cover for VAV Damper 250	90000744
	Metal Cover for VAV Damper 315	90000745

	Description	Part Number
	VAV Control Box	90000746
	WB1 Touch controller	90000710
	WB2 Rotary controller	90000785
	BC2 Rotary controller	90000408
	Switch 8-Port	90000734
	Switch 24-Port	90000735
	Router	90000733

Call: 01494 560800

Visit: airflow.com



Airflow Developments Limited
Aidelle House, Lancaster Road,
Cressex Business Park,
High Wycombe, Buckinghamshire,
United Kingdom, HP12 3QP

E-mail: info@airflow.com
Telephone: +44 (0) 1494 525252

airflow.com

© Airflow Developments Limited. Airflow Developments Limited reserve the right, in the interests of continuous development, to alter specifications without prior notice. All orders are accepted subject to our conditions of sale which are available on request

