

# VAV Terminal Units

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# VAV Terminal Units

## Celmecc International

### *Leading the way in Air Control, Heating & Cooling*

At Celmecc International, it is our belief that working closely with our clients aids the mutual success of both organisations and for this reason we have adopted the following mission:

***“To excel in the commercial and industrial building industry by setting new standards with innovative products through leadership, first class customer service and engineering excellence.”***

It is with confidence that we at Celmecc International offer our VAV Terminal Units as part of our unique Aircontrol product range.

We trust that this concise brochure will assist all users in the area of VAV selection, application, design and installation techniques.



# AN series VAV Terminal Units

## Model AN 25 LPS - 1800 LPS

### Features

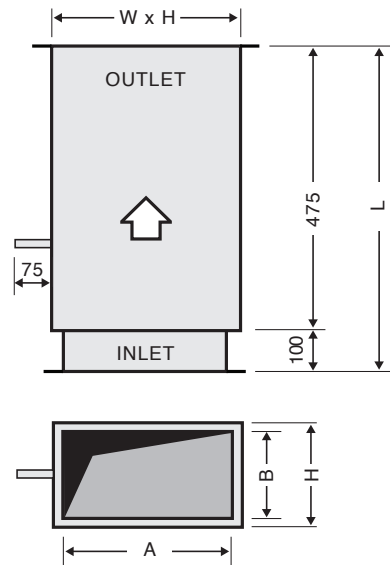
- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Low Resistance
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction of Twin Skin 1.2mm combined Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining, Perforated Steel finish
- Poly-Fibre Insulation, GREEN Star Rated

### Options

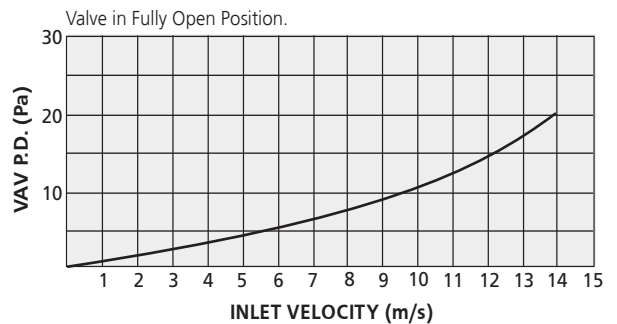
- 50mm / R1.4 Thermal Rated Insulation
- Plain Galvabond Steel inner panel finish
- Cold Track Seal Protection
- Actuators and VAV Controls fitted (supplied by others)
- Slip & Drive
- Round / Oval Inlets
- Left and right hand available
- Hospital Application
- Tropical Construction

### Model AN

No Heat. Left hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AN	AIRFLOW LPS			INLET A x B (mm)	OUTLET W x H (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s	@10.0 m/s				
02	25	80	100	100 x 100	150 x 250	150 x 250 x 575	8
03	40	120	150	100 x 150	150 x 250	150 x 250 x 575	8
04	50	160	200	100 x 200	150 x 250	150 x 250 x 575	8
05	75	240	300	150 x 200	200 x 250	200 x 250 x 575	9
06	100	320	400	200 x 200	250 x 250	250 x 250 x 575	10
08	150	480	600	300 x 200	350 x 250	350 x 250 x 575	12
10	200	640	800	400 x 200	450 x 250	450 x 250 x 575	14
12	250	800	1000	500 x 200	550 x 250	550 x 250 x 575	16
14	300	960	1200	600 x 200	650 x 250	650 x 250 x 575	18
16	350	1120	1400	700 x 200	750 x 250	750 x 250 x 575	20
18	400	1280	1600	800 x 200	850 x 250	850 x 250 x 575	22
20	450	1450	1800	900 x 200	950 x 250	950 x 250 x 575	24

- Minimum Inlet Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length reduce by 50mm / shaft 50mm long.

# AN series VAV Terminal Units

## Model AN-H/AN-V 500 LPS - 3600 LPS

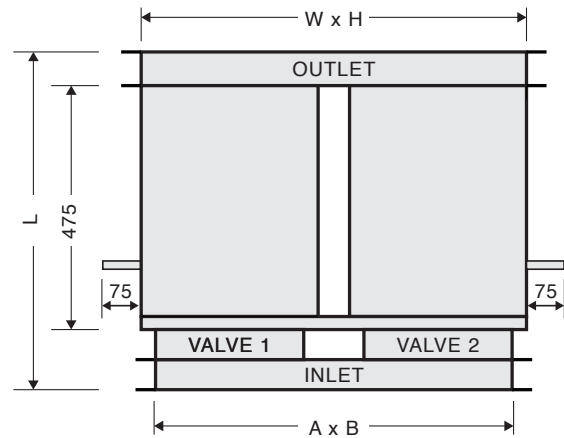
### Features

- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Low Resistance
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction of Twin Skin 1.2mm combined Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining, Perforated Steel finish
- Poly-Fibre Insulation, GREEN Star Rated

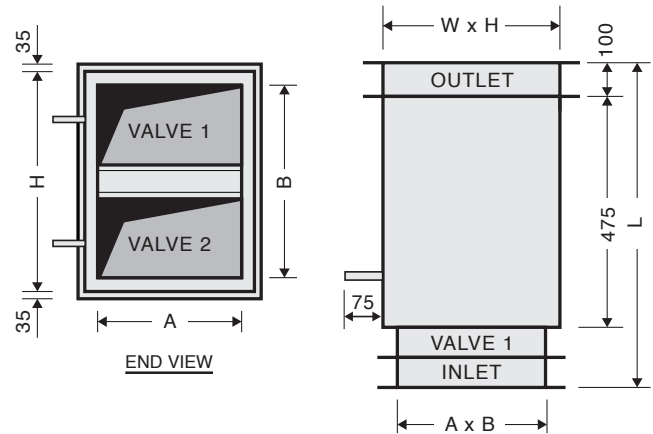
### Options

- Actuators and VAV Controls fitted (supplied by others)
- Hospital Application

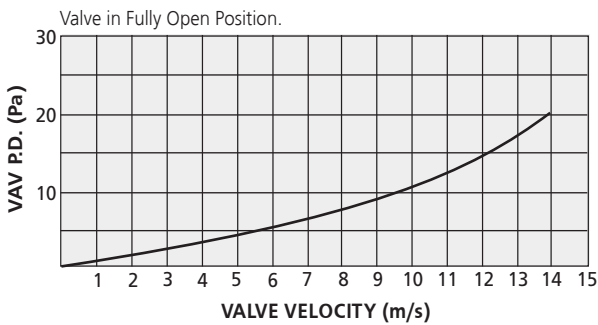
### Model AN-H Horizontal Format



### Model AN-V Vertical Format



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AN	AIRFLOW LPS *Valve Velocity			INLET A x B (mm)	OUTLET W x H (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s	@10.0 m/s				
H24	500	1600	2000	1120 x 200	1170 x 250	1170 x 250 x 775	35
H28	600	1920	2400	1320 x 200	1370 x 250	1370 x 250 x 775	40
H32	700	2240	2800	1520 x 200	1570 x 250	1570 x 250 x 775	45
H36	800	2560	3200	1720 x 200	1770 x 250	1770 x 250 x 775	50
H40	900	2880	3600	1920 x 200	1970 x 250	1970 x 250 x 775	55

\*AN-H Valve Velocity = AN-H Unit Inlet Velocity x 1.1

V24	500	1600	2000	500 x 520	550 x 570	550 x 570 x 775	35
V28	600	1920	2400	600 x 520	650 x 570	650 x 570 x 775	40
V32	700	2240	2800	700 x 520	750 x 570	750 x 570 x 775	45
V36	800	2560	3200	800 x 520	850 x 570	850 x 570 x 775	50
V40	900	2880	3600	900 x 520	950 x 570	950 x 570 x 775	55

\*AN-V Valve Velocity = AN-V Unit Inlet Velocity x 1.3

- Minimum Valve Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- 50mm INSULATION OPTION - Not Available.

# AE series VAV Terminal Units

## Model AE 30 LPS - 1800 LPS

0.25kW - 10.0kW Electric Heat

### Features

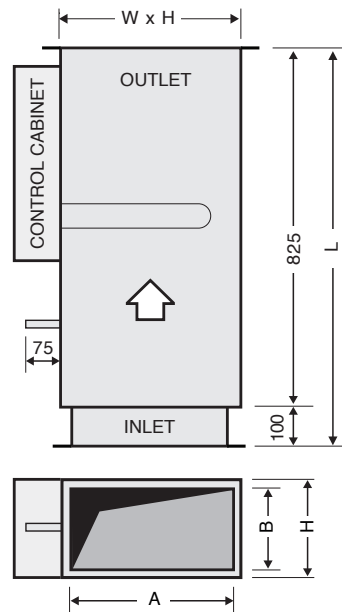
- Aerofoil Control Valve, ensuring even Air Distribution over Heating Elements
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction of Twin Skin 1.2mm combined Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining
- Finned Tubular Heaters to Assure Maximum Heat Transfer
- Full Range of Heater Options - 1Ø / 1STG, 2STG, 3STG, 3Ø / 1STG
- Side Entry for easy service
- Over Temperature Limit Protection - Manual Reset
- Prewired to Terminal Strip to Simplify Installation

### Options

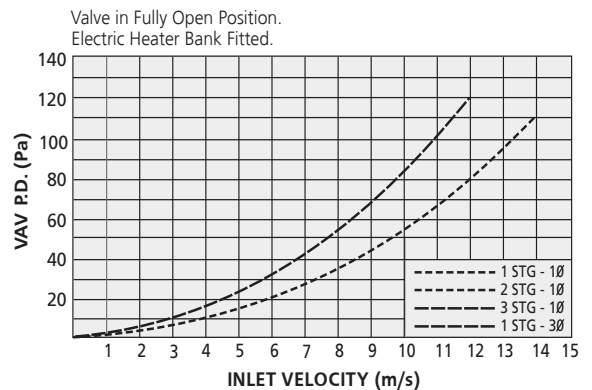
- 50mm / R1.4 Thermal Rated Insulation
- Circuit Breakers
- Adjustable Over Temperature Limit Protection with Manual Reset
- Air Proving Switch Complete with Airflow Sensor
- Heater Contactors
- Heater Solid State Relays
- Actuators and VAV Controls fitted (supplied by others)
- Slip & Drive
- Round / Oval Inlets
- Hospital Application
- Tropical Construction

### Model AE

Left hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AE	HEAT RANGE (kW)	AIRFLOW LPS			INLET A x B (mm)	OUTLET W x H (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
		@3.0 m/s	@8.0 m/s	@10.0 m/s				
02	0.25 - 0.625	30	80	100	100 x 100	250 x 250	250 x 250 x 925	17
03	0.25 - 0.625	50	120	150	100 x 150	250 x 250	250 x 250 x 925	17
04	0.25 - 1.0	60	160	200	100 x 200	250 x 250	250 x 250 x 925	17
05	0.25 - 1.5	90	240	300	150 x 200	250 x 250	250 x 250 x 925	17
06	0.25 - 2.0	120	320	400	200 x 200	250 x 250	250 x 250 x 925	17
08	0.5 - 3.3	180	480	600	300 x 200	350 x 250	350 x 250 x 925	21
10	0.525 - 4.6	240	640	800	400 x 200	450 x 250	450 x 250 x 925	24
12	0.525 - 6.0	300	800	1000	500 x 200	550 x 250	550 x 250 x 925	28
14	0.875 - 7.0	360	960	1200	600 x 200	650 x 250	650 x 250 x 925	31
16	0.875 - 8.4	420	1120	1400	700 x 200	750 x 250	750 x 250 x 925	35
18	1.05 - 9.6	480	1280	1600	800 x 200	850 x 250	850 x 250 x 925	38
20	1.2 - 10.5	540	1450	1800	900 x 200	950 x 250	950 x 250 x 925	42

- Minimum airflow to be based @ 3.0 m/s inlet velocity, or @ 50 l/s/kW reheat capacity, whichever is the greater.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length same as standard unit / shaft 50mm long.

# AE series VAV Terminal Units

## Model AE-H/AE-V 600 LPS - 3600 LPS

2.8kW - 20.1kW Electric Heat

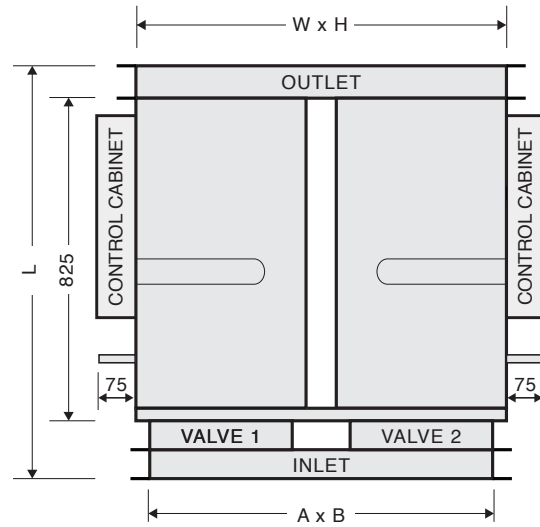
### Features

- Aerofoil Control Valve, ensuring even Air Distribution over Heating Elements
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction of Twin Skin 1.2mm combined Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining
- Finned Tubular Heaters to Assure Maximum Heat Transfer
- Full Range of Heater Options - 1 $\emptyset$  / 1STG, 2STG, 3STG, 3 $\emptyset$  / 1STG
- Side Entry for easy service
- Over Temperature Limit Protection - Manual Reset
- Prewired to Terminal Strips to Simplify Installation

### Options

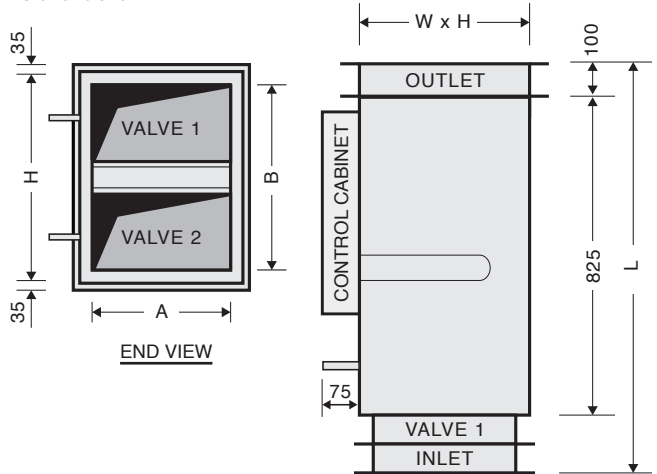
- Circuit Breakers
- Adjustable Over Temperature Limit Protection with Manual Reset
- Air Proving Switch Complete with Airflow Sensor
- Heater Contactors
- Heater Solid State Relays
- Actuators and VAV Controls fitted (supplied by others)
- Hospital Application

### Model AE-H Horizontal Format

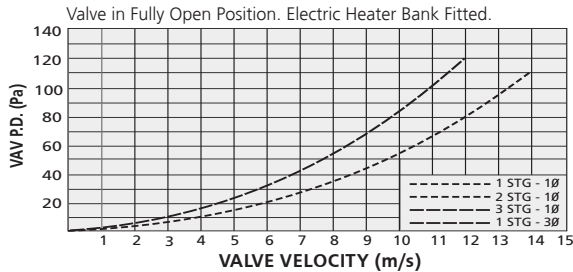


### Model AE-V Vertical Format

Left hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AE	HEAT RANGE (kW)	AIRFLOW LPS *Valve Velocity			INLET A x B (mm)	OUTLET W x H (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
		@3.0 m/s	@8.0 m/s	@10.0 m/s				
H24	2.8 - 12.0	600	1600	2000	1120 x 200	1170 x 250	1170 x 250 x 1125	60
H28	3.5 - 14.0	720	1920	2400	1320 x 200	1370 x 250	1370 x 250 x 1125	65
H32	4.2 - 16.8	840	2240	2800	1520 x 200	1570 x 250	1570 x 250 x 1125	70
H36	4.8 - 19.2	960	2560	3200	1720 x 200	1770 x 250	1770 x 250 x 1125	75
H40	5.5 - 20.1	1080	2880	3600	1920 x 200	1970 x 250	1970 x 250 x 1125	80

\*AE-H Valve Velocity = AE-H Unit Inlet Velocity x 1.1

V24	2.8 - 12.0	600	1600	2000	500 x 520	550 x 570	550 x 570 x 1125	60
V28	3.5 - 14.0	720	1920	2400	600 x 520	650 x 570	650 x 570 x 1125	65
V32	4.2 - 16.8	840	2240	2800	700 x 520	750 x 570	750 x 570 x 1125	70
V36	4.8 - 19.2	960	2560	3200	800 x 520	850 x 570	850 x 570 x 1125	75
V40	5.5 - 20.1	1080	2880	3600	900 x 520	950 x 570	950 x 570 x 1125	80

\*AE-V Valve Velocity = AE-V Unit Inlet Velocity x 1.3

- Minimum airflow to be based @ 3.0 m/s Valve Velocity, or @ 50 l/s/kW reheat capacity, whichever is the greater.
- 50mm INSULATION OPTION - Not Available.

# AW series VAV Terminal Units

## Model AW-S, AW-SS 25 LPS - 1450 LPS

1kW-14kW Hot Water Heat

### Features

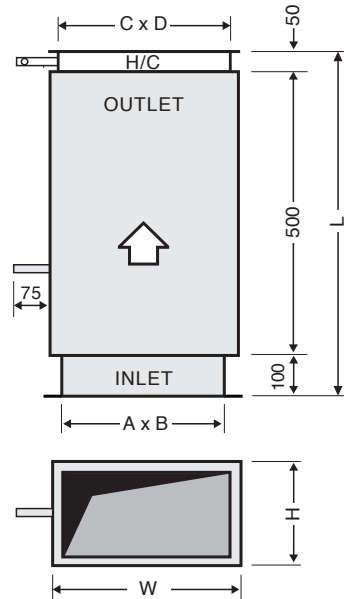
- Aerofoil Control Valve, ensuring even Air Distribution over Heating coil
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction
- 1mm Galvabond Steel
- Celmecc Flanges - 35mm TDF
- 25mm Acoustic/Thermal Lining, Perforated Aluminium foil finish
- Poly-Fibre Insulation, GREEN Star Rated
- Heating HW Coils of Seamless Pure Copper Mechanically Expanded Tube and Ripple Edge Aluminium Fin Construction to Assure Maximum Heat Transfer
- Heavy Gauge, Hard Drawn Copper Headers and Connections complete with Air Vents
- Coil Frames of 1.6mm Galvabond Steel

### Options

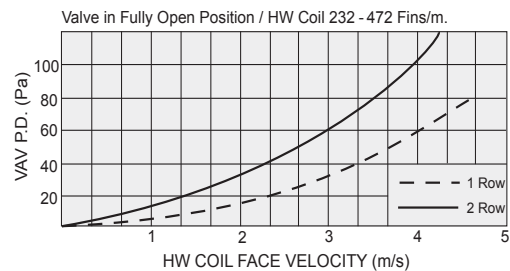
- 50mm / R1.4 Thermal Rated Insulation
- Insulation with non-perforated Aluminium foil finish
- Actuators and VAV Controls fitted (supplied by others)
- Round / Oval Inlets
- Heating Coil Access Panel
- Left or right hand available

### Model AW-S/AW-SS

Left hand shown.



### Pressure Drop Vs. Coil Face Velocity



### Capacity and dimensional data

SIZE AW	AIRFLOW LPS			HEATING Nominal kW (1 Row Coil)	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	MIN l/s	MAX l/s	Coil Velocity m/s					
02'S'	25	100	1.6	1.0	100 x 100	250 x 255	320 x 330 x 650	13
03'S'	40	150	2.4	1.5	100 x 150	250 x 255	320 x 330 x 650	13
04'S'	50	200	3.1	2.0	100 x 200	250 x 255	320 x 330 x 650	13
05'S'	75	300	3.0	2.9	150 x 200	400 x 255	470 x 330 x 650	14
06'S'	100	360	3.5	3.5	200 x 200	400 x 255	470 x 330 x 650	15
06'SS'	100	380	3.0	3.5	200 x 200	500 x 255	570 x 330 x 650	17
08'S'	150	450	3.5	4.4	300 x 200	500 x 255	570 x 330 x 650	17
08'SS'	150	460	3.0	4.4	300 x 200	600 x 255	670 x 330 x 650	20
10'S'	200	540	3.5	5.2	400 x 200	600 x 255	670 x 330 x 650	20
10'SS'	200	540	3.0	5.2	400 x 200	700 x 255	770 x 330 x 650	23
12'S'	250	630	3.5	6.1	500 x 200	700 x 255	770 x 330 x 650	23
12'SS'	250	740	3.0	7.2	500 x 200	650 x 380	720 x 455 x 650	25
14'S'	300	1070	3.5	10.4	600 x 200	800 x 380	870 x 455 x 650	27
16'S'	350	1210	3.5	11.7	700 x 200	900 x 380	970 x 455 x 650	29
18'S'	400	1340	3.5	13.0	800 x 200	1000 x 380	1070 x 455 x 650	32
20'S'	450	1450	3.5	14.0	900 x 200	1100 x 380	1170 x 455 x 650	35

- Above Heating Capacities are based on: Air  $\Delta T = 8^\circ K$  (1 Row Coil) / HHW  $\Delta T = 25^\circ K$ .
- Minimum LPS based on 2.5 m/s inlet velocity.
- 50mm INSULATION OPTION - overall dimensions and shaft length remain same as for above standard units.



# AFIN series Fan Assisted VAV Units - Fan in Parallel

## Model AFIN 100 LPS - 1400 LPS

### Features

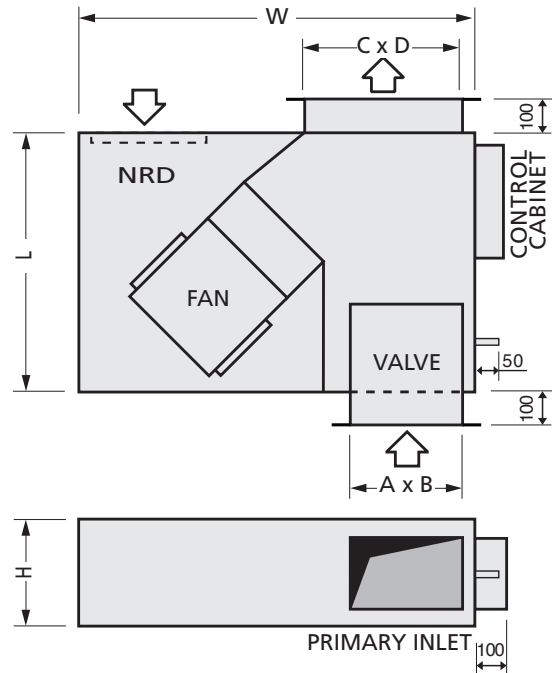
- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Low Resistance to Primary Airflow
- Linear Control
- Air Velocity Sensors
- Good Response despite Low Resistance
- Low Noise
- Acoustically Enclosed Fan to Minimise Noise Break-out
- Centrifugal Fan - Double Inlet - 240V / 1 $\phi$  / 50Hz
- Fan Configured to Blend Smoothly with Primary Airflow
- Fan Prewired to Terminal Strip to Simplify Installation
- Fan Motor Assembly Resiliently Mounted
- 25mm Acoustic / Thermal Insulation Lining, Perforated Aluminium Facing
- Poly-Fibre Insulation, GREEN Star Rated
- Minimal Cold Track Construction of 1mm Galvabond Steel
- Celmec Flanges - 35mm TDF
- Non Return Damper Located at Unit Inlet ensuring Stable Fan Operation and no Damper Flutter Noise
- One Point Access to Valve Drive, Controls & Electrics

### Options

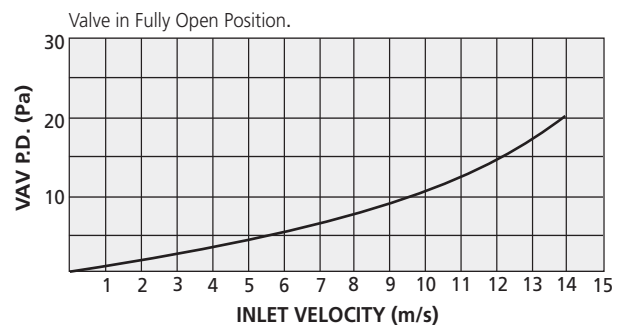
- 50mm / R1.4 Thermal Rated Insulation
- Fan Power Relays
- Circuit Breakers
- Manual Fan Speed Controller
- 0-10Vdc input Fan Speed Controller
- Actuators and VAV Controls fitted (supplied by others)
- Slip & Drive
- Round / Oval Inlets
- Left and right hand available

### Model AFIN

Right hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AFIN	PRIMARY AIRFLOW LPS			FAN RANGE l/s	FAN Motor W/Speed	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s	@10.0 m/s						
A03	40	120	150	100 - 200	192 / 1	100 x 150	350 x 325	1010 x 375 x 850	50
A04	50	160	200	100 - 200	192 / 1	100 x 200	350 x 325	1010 x 375 x 850	50
A05	75	240	300	100 - 200	192 / 1	150 x 200	350 x 325	1010 x 375 x 850	50
B06	100	320	400	100 - 400	184 / 3	200 x 200	350 x 325	1010 x 375 x 850	50
B08	150	480	600	150 - 600	315 / 3	300 x 200	550 x 325	1210 x 375 x 850	55
B10	200	640	800	150 - 600	315 / 3	400 x 200	550 x 325	1210 x 375 x 850	60
B12	250	800	1000	150 - 600	315 / 3	500 x 200	550 x 325	1210 x 375 x 850	65
C10	200	640	800	200 - 750	425 / 3	400 x 200	600 x 375	1310 x 425 x 850	70
C12	250	800	1000	200 - 750	425 / 3	500 x 200	600 x 375	1310 x 425 x 850	75
C14	300	960	1200	200 - 750	425 / 3	600 x 200	600 x 375	1310 x 425 x 850	80
D12	250	800	1000	300 - 950	600 / 3	500 x 200	700 x 375	1510 x 425 x 850	75
D14	300	950	1200	300 - 950	600 / 3	600 x 200	700 x 375	1510 x 425 x 850	80
D16	350	1120	1400	300 - 950	600 / 3	700 x 200	700 x 375	1510 x 425 x 850	85

- Minimum Primary Inlet Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- Fan LPS based on 50 Pa external resistance.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length add 50mm / shaft 50mm long.

# AFCN series Fan Assisted VAV Units - Fan in Series

## Model AFCN 100 LPS - 1250 LPS

### Features

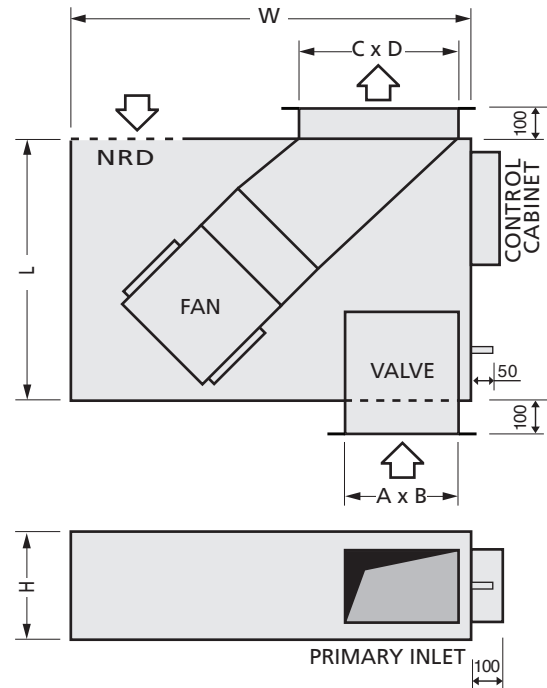
- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Low Resistance to Primary Airflow
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Acoustically Enclosed Fan to minimise Noise Break-out
- Centrifugal Fan - Double Inlet - 240V / 1 $\phi$  / 50Hz
- Fan Wired to Terminal Strip to Simplify Installation
- Fan Motor Assembly Resiliently Mounted
- Minimal Cold Track Construction of 1mm Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining with Perforated Aluminium Facing
- Poly-Fibre Insulation, GREEN Star Rated
- One Point Access to Valve Drive, Controls & Electrics

### Options

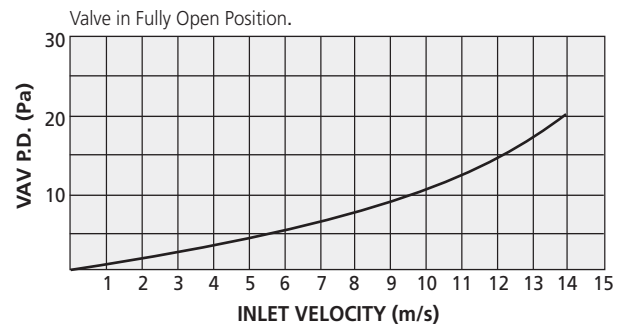
- 50mm / R1.4 Thermal Rated Insulation
- Fan Power Relays
- Circuit Breakers
- Manual Fan Speed Controller
- 0-10Vdc input Fan Speed Controller
- Actuators and VAV Controls fitted (supplied by others)
- Slip & Drive
- Round / Oval Inlets
- Left and right hand available

### Model AFCN

Right hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AFCN	PRIMARY AIRFLOW		FAN RANGE l/s	FAN Motor W/Speed	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	MIN l/s	MAX l/s						
A03	40	150	100 - 200	192 / 1	100 x 150	350 x 325	1010 x 375 x 850	50
A04	50	200	100 - 200	192 / 1	100 x 200	350 x 325	1010 x 375 x 850	50
B05	75	300	100 - 400	184 / 3	150 x 200	350 x 325	1010 x 375 x 850	50
B06	100	400	100 - 400	184 / 3	200 x 200	350 x 325	1010 x 375 x 850	50
B08/06	100	400	150 - 600	315 / 3	200 x 200	550 x 325	1210 x 375 x 850	55
B08	150	600	150 - 600	315 / 3	300 x 200	550 x 325	1210 x 375 x 850	55
C06	100	400	200 - 650	315 / 3	200 x 200	600 x 375	1310 x 425 x 850	70
C08	150	600	200 - 650	315 / 3	300 x 200	600 x 375	1310 x 425 x 850	70
C10	200	750	200 - 750	425 / 3	400 x 200	600 x 375	1310 x 425 x 850	70
D12	250	950	300 - 950	600 / 3	500 x 200	700 x 375	1510 x 425 x 850	75
E14	300	1200	600 - 1250	750 / 3	600 x 200	850 x 435	1610 x 485 x 850	85

- Minimum Primary Inlet Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- Fan LPS based on 50 Pa external resistance.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length add 50mm / shaft 50mm long.

# AFIE series Fan Assisted VAV Units - Fan in Parallel

## Model AFIE 100 LPS - 1400 LPS

250W - 5000W Electric Heat

### Features

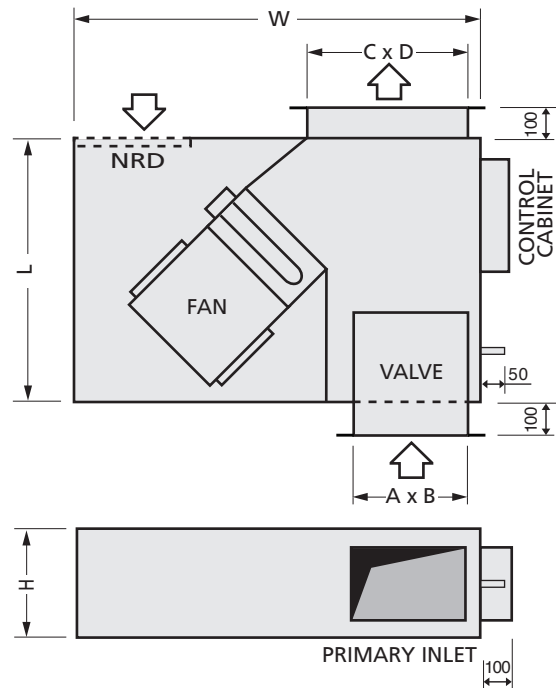
- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Low Resistance to Primary Airflow
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Acoustically Enclosed Fan to Minimise Noise Break-out
- Centrifugal Fan - Double Inlet - 240V / 1 $\phi$  / 50Hz
- Fan Configured to Blend Smoothly with Primary Airflow
- Non Return Damper Located at Unit Inlet ensuring Stable Fan Operation and no Damper Flutter Noise
- Finned Tubular Heaters to Assure Maximum Heat Transfer
- 25mm Acoustic /Thermal Lining with Perforated Aluminium Facing
- Full Range of Heater Options - 1 $\phi$  / 1STG, 2STG, 3STG, 3 $\phi$  / 1STG
- Slide Entry for easy service
- Air Flow Proving Switch
- Over Temperature Limit Protection - Manual Reset
- Fan and Reheat Elements Prewired to Terminal Strip to simplify Installation
- Minimal Cold Track Construction of 1mm Galvabond Steel
- Celmec Flanges - 35mm TDF
- One Point access to Valve Drive, Controls & Electrics

### Options

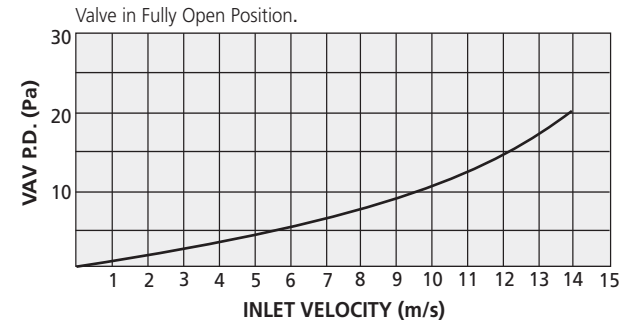
- 50mm / R1.4 Thermal Rated Insulation
- Fan Power Relays and Contactors
- Circuit Breakers
- Heater Contactors
- Heater Solid State Relays
- Adjustable Over Temperature Limit Protection - Manual Reset
- Manual Fan Speed Controller
- 0-10Vdc input Fan Speed Controller
- Actuators and VAV Controls fitted (supplied by others)
- Slip & Drive
- Round / Oval Inlets
- Left and right hand available

### Model AFIE

Right hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AFIE	PRIMARY AIRFLOW LPS			FAN RANGE	FAN Motor W/Speed	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s	@10.0 m/s						
A03	40	120	150	100 - 200	192 / 1	100 x 150	350 x 325	1010 x 375 x 850	50
A04	50	160	200	100 - 200	192 / 1	100 x 200	350 x 325	1010 x 375 x 850	50
A05	75	240	300	100 - 200	192 / 1	150 x 200	350 x 325	1010 x 375 x 850	50
B06	100	320	400	100 - 400	184 / 3	200 x 200	350 x 325	1010 x 375 x 850	50
B08	150	480	600	150 - 600	315 / 3	300 x 200	550 x 325	1210 x 375 x 850	55
B10	200	640	800	150 - 600	315 / 3	400 x 200	550 x 325	1210 x 375 x 850	60
C10	200	640	800	200 - 750	425 / 3	400 x 200	600 x 375	1310 x 425 x 850	70
C12	250	800	1000	200 - 750	425 / 3	500 x 200	600 x 375	1310 x 425 x 850	75
D14	300	950	1200	300 - 950	600 / 3	600 x 200	700 x 375	1510 x 425 x 850	80
D16	350	1120	1400	300 - 950	600 / 3	700 x 200	700 x 375	1510 x 425 x 850	85

- Minimum Primary Inlet Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- Fan LPS based on 50 Pa external resistance.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length add 50mm / shaft 50mm long.

# AFCE series Fan Assisted VAV Units - Fan in Series

## Model AFCE 100 LPS - 1250 LPS

250W - 5000W Electric Heat

### Features

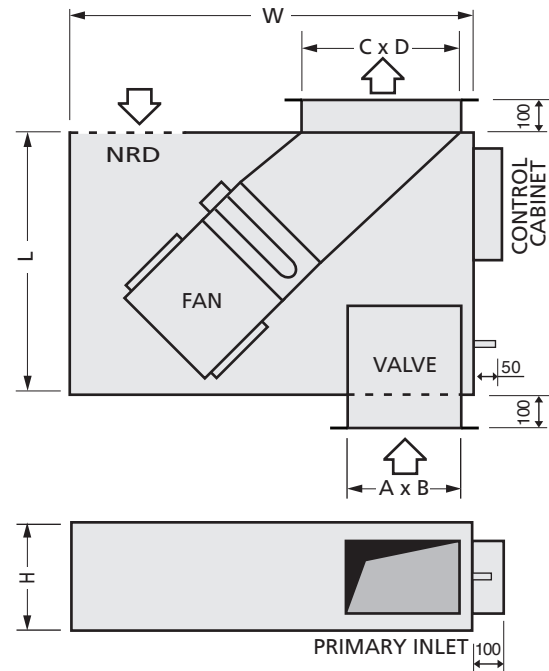
- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Low Resistance to Primary Airflow
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Acoustically Enclosed Fan to Minimise Noise Break-out
- Centrifugal Fan - Double Inlet - 240V / 1 $\phi$  / 50Hz
- Fan Configured to Blend Smoothly with Primary Airflow
- Finned Tubular Heaters to Assure Maximum Heat Transfer
- Full Range of Heater Options - 1 $\phi$  / 1STG, 2STG, 3STG, 3 $\phi$  / 1STG
- Slide Entry for easy service
- 25mm Acoustic / Thermal Lining with Perforated Aluminium Facing
- Air Flow Proving Switch
- Over Temperature Limit Protection - Manual Reset
- Fan and Reheat Elements Prewired to Terminal Strip to simplify Installation
- Minimal Cold Track Construction of 1mm Galvabond Steel
- Celmec Flanges - 35mm TDF
- One Point Access to Valve Drive, Controls & Electrics

### Options

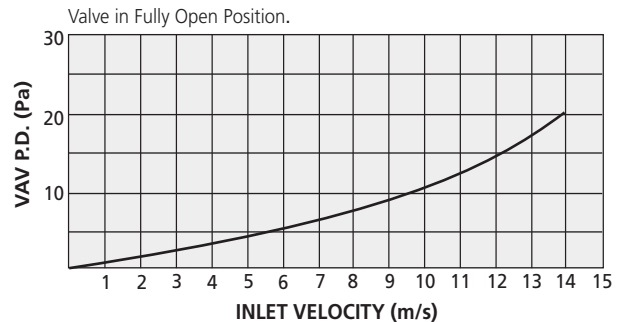
- 50mm / R1.4 Thermal Rated Insulation
- Fan Power Relays
- Circuit Breakers
- Heater Contactors
- Heater Solid State Relays
- Adjustable Over Temperature Limit Protection - Manual Reset
- Manual Fan Speed Controller
- 0-10Vdc input Fan Speed Controller
- Actuators and VAV Controls fitted (supplied by others)
- Slip & Drive
- Round / Oval Inlets
- Left and right hand available

### Model AFCE

Right hand shown.



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL AFCE	PRIMARY AIRFLOW		FAN RANGE l/s	FAN Motor W/Speed	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	MIN l/s	MAX l/s						
A03	40	150	100 - 200	192 / 1	100 x 150	350 x 325	1010 x 375 x 850	50
A04	50	200	100 - 200	192 / 1	100 x 200	350 x 325	1010 x 375 x 850	50
B05	75	300	100 - 400	184 / 3	150 x 200	350 x 325	1010 x 375 x 850	50
B06	100	400	100 - 400	184 / 3	200 x 200	350 x 325	1010 x 375 x 850	50
B08/06	100	400	150 - 600	315 / 3	200 x 200	550 x 325	1210 x 375 x 850	55
B08	150	600	150 - 600	315 / 3	300 x 200	550 x 325	1210 x 375 x 850	55
C10	200	750	200 - 750	425 / 3	400 x 200	600 x 375	1310 x 425 x 850	70
D12	250	950	300 - 950	600 / 3	500 x 200	700 x 375	1510 x 425 x 850	75
E14	300	1200	600 - 1250	750 / 3	600 x 200	850 x 435	1610 x 485 x 850	85

- Minimum Primary Inlet Velocity of 2.5m/s recommended to maintain optimum Velocity Sensing.
- Fan LPS based on 50 Pa external resistance.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length add 50mm / shaft 50mm long.

# AFIW Fan Assisted VAV Units - Fan in Parallel

## Model AFIW 100 LPS - 1100 LPS

1kW - 10kW Hot Water Heat

### Features

- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Linear Control
- Air Velocity Sensors
- Low Noise
- Acoustically Enclosed Fan to Minimise Noise Break-out
- Centrifugal Fan - Double Inlet - 240V / 1 $\phi$  / 50Hz
- Fan Configured to Blend Smoothly with Primary Airflow
- Non Return Damper Located at Unit Inlet ensuring Stable Fan Operation and no Damper Flutter Noise
- Fan Prewired to Terminal Strip to Simplify Installation
- Minimal Cold Track Construction of 1mm Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic/Thermal Lining with Perforated Aluminium Facing
- Poly-Fibre Insulation, GREEN Star Rated
- Heating HW Coils of Seamless Pure Copper Mechanically Expanded Tube and Ripple Edge Aluminium Fin Construction
- Heavy Gauge, Hard Drawn Copper Headers and Connections complete with Air Vents
- Coil Frames of 1.6mm Galvabond Steel
- One Point Access to Valve Drive, Controls & Electrics

### Options

- 50mm / R1.4 Thermal Rated Insulation
- Fan Power Relays
- Circuit Breakers
- Manual Fan Speed Controller
- 0-10Vdc input Fan Speed Controller
- Actuators and VAV Controls fitted (supplied by others)
- Round / Oval Inlets
- Left and right hand available

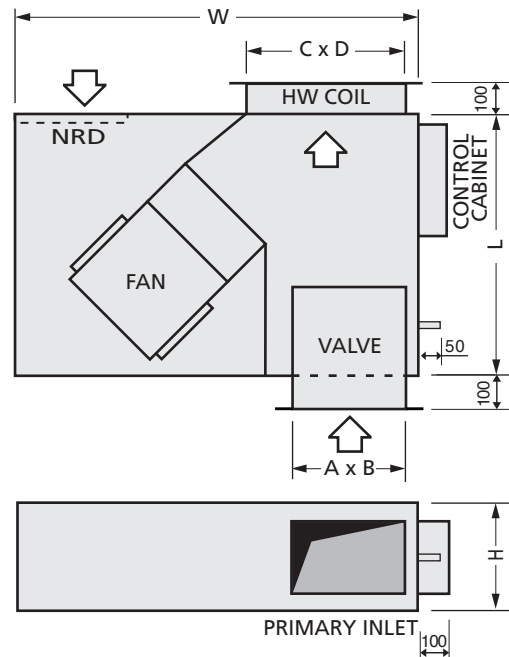
### Capacity and dimensional data

MODEL AFIW	PRIMARY AIRFLOW LPS		FAN RANGE l/s	FAN Motor W/Speed	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s						
A03	40	120	100 - 200	192 / 1	100 x 150	450 x 320	1010 x 375 x 850	50
A04	50	160	100 - 200	192 / 1	100 x 200	450 x 320	1010 x 375 x 850	50
A05	75	240	100 - 200	192 / 1	150 x 200	450 x 320	1010 x 375 x 850	50
B06	100	320	100 - 400	184 / 3	200 x 200	450 x 320	1010 x 375 x 850	50
B08	150	480	150 - 600	315 / 3	300 x 200	550 x 320	1210 x 375 x 850	55
B10	200	640	150 - 600	315 / 3	400 x 200	550 x 320	1210 x 375 x 850	60
B12	250	800	150 - 600	315 / 3	500 x 200	650 x 380	1310 x 425 x 850	65
C10	200	640	200 - 750	315 / 3	400 x 200	650 x 380	1310 x 425 x 850	70
C12	250	800	200 - 750	315 / 3	500 x 200	800 x 380	1510 x 425 x 850	75
C14	300	960	200 - 750	315 / 3	600 x 200	900 x 380	1510 x 425 x 850	80
D12	250	800	300 - 950	600 / 3	500 x 200	800 x 380	1510 x 425 x 850	75
D14	300	960	300 - 950	600 / 3	600 x 200	900 x 380	1510 x 425 x 850	80
D16	350	1100	300 - 950	600 / 3	700 x 200	1000 x 380	1610 x 425 x 850	85

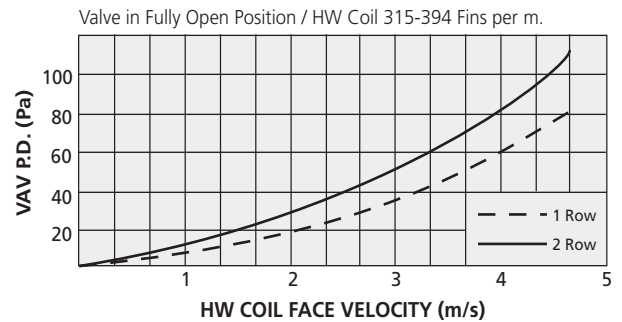
- Minimum Primary Inlet Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- Heating Capacities based on: Air  $\Delta T = 8^{\circ}K$  (1 Row Coil) HHW  $\Delta T = 25^{\circ}K$  - Coil Face Velocity 3.0 m/s.
- Fan LPS based on 50 Pa external resistance.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length add 50mm / shaft 50mm long.

### Model AFIW

Right hand shown.



### Pressure Drop Vs. Coil Face Velocity



# AFCW Fan Assisted VAV Units - Fan in Series

## Model AFCW 100 LPS - 1100 LPS

1kW - 10kW Hot Water Heat

### Features

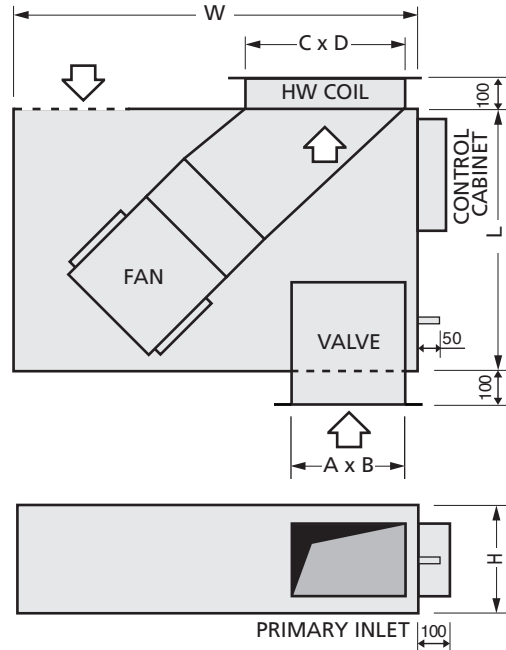
- Aerofoil Control Valve, ensuring Non Turbulent Airflow
- Linear Control
- Air Velocity Sensors
- Low Noise
- Acoustically Enclosed Fan to Minimise Noise Break-out
- Centrifugal Fan - Double Inlet - 240V / 1 $\phi$  / 50Hz
- Fan Configured to Blend Smoothly with Primary Airflow
- Non Return Damper Located at Unit Inlet ensuring Stable Fan Operation and no Damper Flutter Noise
- Fan Prewired to Terminal Strip to Simplify Installation
- Minimal Cold Track Construction of 1mm Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic/Thermal Lining with Perforated Aluminium Facing
- Poly-Fibre Insulation, GREEN Star Rated
- Heating HW Coils of Seamless Pure Copper Mechanically Expanded Tube and Ripple Edge Aluminium Fin Construction
- Heavy Gauge, Hard Drawn Copper Headers and Connections complete with Air Vents
- Coil Frames of 1.6mm Galvabond Steel
- One Point Access to Valve Drive, Controls & Electrics

### Options

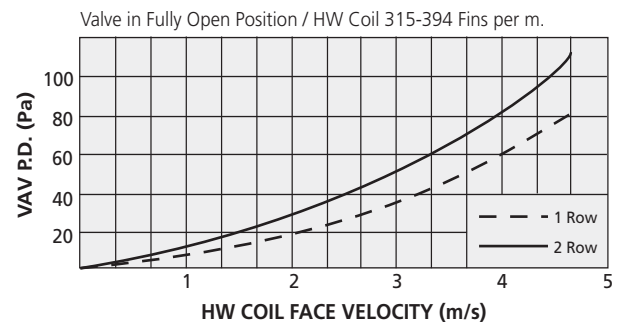
- 50mm / R1.4 Thermal Rated Insulation
- Fan Power Relays
- Circuit Breakers
- Manual Fan Speed Controller
- 0-10Vdc input Fan Speed Controller
- Actuators and VAV Controls fitted (supplied by others)
- Round / Oval Inlets
- Left and right hand available

### Model AFCW

Right hand shown.



### Pressure Drop Vs. Coil Face Velocity



### Capacity and dimensional data

MODEL AFCW	PRIMARY AIRFLOW		HEATING Nominal kW (1 Row Coil)	FAN RANGE l/s	FAN Motor W/Speed	INLET A x B (mm)	OUTLET C x D (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	MIN l/s	MAX l/s							
A03	40	150	1.9	100 - 200	192 / 1	100 x 150	450 x 320	1010 x 375 x 850	50
A04	50	200	1.9	100 - 200	192 / 1	100 x 200	450 x 320	1010 x 375 x 850	51
B05	75	300	3.9	100 - 400	184 / 3	150 x 200	450 x 320	1010 x 375 x 850	53
B06	100	400	3.9	100 - 400	184 / 3	200 x 200	450 x 320	1010 x 375 x 850	55
B08	150	600	5.8	150 - 600	315 / 3	300 x 200	550 x 320	1210 x 375 x 850	60
C05	75	300	6.0	200 - 650	315 / 3	150 x 200	650 x 320	1310 x 425 x 850	60
C06	100	400	6.0	200 - 650	315 / 3	200 x 200	650 x 320	1310 x 425 x 850	65
C08	150	600	6.0	200 - 650	315 / 3	300 x 200	650 x 320	1310 x 425 x 850	70
C10	200	750	7.2	200 - 750	425 / 3	400 x 200	650 x 380	1310 x 425 x 850	75
D12	250	950	8.8	300 - 950	600 / 3	500 x 200	800 x 380	1510 x 425 x 850	85
E14	300	1100	10.7	500 - 1100	750 / 3	600 x 200	850 x 445	1610 x 485 x 850	90

- Minimum Primary Inlet Velocity of 2.5 m/s recommended to maintain optimum Velocity Sensing.
- Heating Capacities based on: Air  $\Delta T = 8^{\circ}K$  (1 Row Coil) HHW  $\Delta T = 25^{\circ}K$  - Coil Face Velocity 3.0 m/s.
- Fan LPS based on 50 Pa external resistance.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length add 50mm / shaft 50mm long.

# D series Dual Duct VAV Terminal Units

## Model DAC-H 50 LPS - 1600 LPS

Horizontal Format

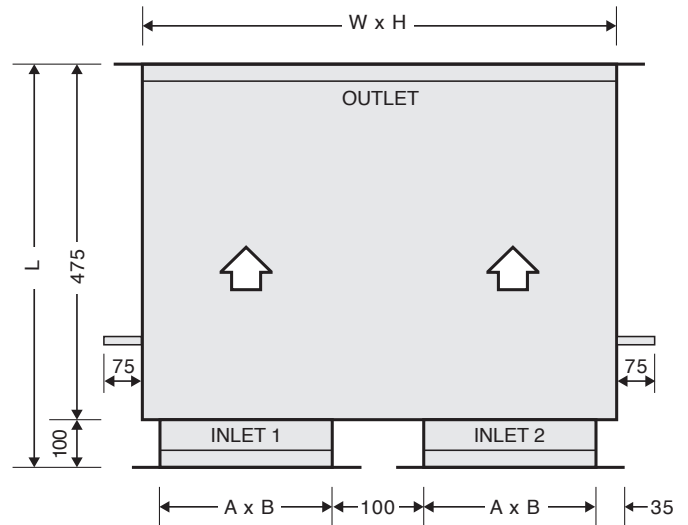
### Features

- Dual Aerofoil Control Valve assembly for independant control
- Non Turbulent Airflow
- Low Resistance
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction of Twin Skin 1.2mm combined Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining, Perforated Steel finish
- Poly-Fibre Insulation, GREEN Star Rated

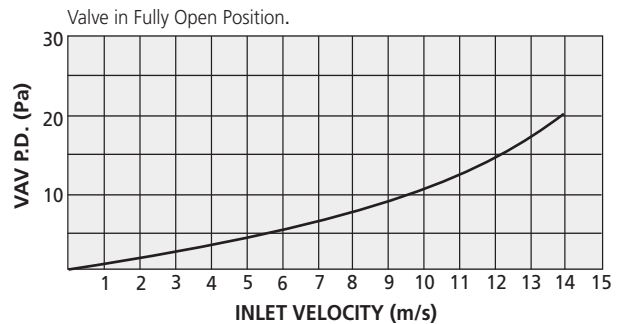
### Options

- 50mm / R1.4 Thermal Rated Insulation
- Actuators and VAV Controls fitted (supplied by others)
- Round / Oval Inlets
- Left and right hand available

### Model DAC-H



### Pressure Drop Vs. Inlet Velocity



### Capacity and dimensional data

MODEL DAC-H	AIRFLOW LPS (each valve)			INLETS A x B (mm)	OUTLET W x H (mm)	DIMENSIONS W x H x L (mm)	WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s	@10.0 m/s				
03	40	120	150	100 x 150	350 x 250	350 x 250 x 575	19
04	50	160	200	100 x 200	350 x 250	350 x 250 x 575	19
05	75	240	300	150 x 200	450 x 250	450 x 250 x 575	22
06	100	320	400	200 x 200	550 x 250	550 x 250 x 575	24
08	150	480	600	300 x 200	750 x 250	750 x 250 x 575	28
10	200	640	800	400 x 200	950 x 250	950 x 250 x 575	33
12	250	800	1000	500 x 200	1150 x 250	1150 x 250 x 575	38
14	300	960	1200	600 x 200	1350 x 250	1350 x 250 x 575	43
16	350	1120	1400	700 x 200	1550 x 250	1550 x 250 x 575	48
18	400	1280	1600	800 x 200	1750 x 250	1750 x 250 x 575	52

- Nominal LPS based on approx. 10.0 m/s inlet velocity, 5.0 m/s outlet velocity.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length same as standard unit / shafts 50mm long.

# D series Dual Duct VAV Terminal Units

## Model DAC-V 50 LPS - 2200 LPS

### Vertical Format

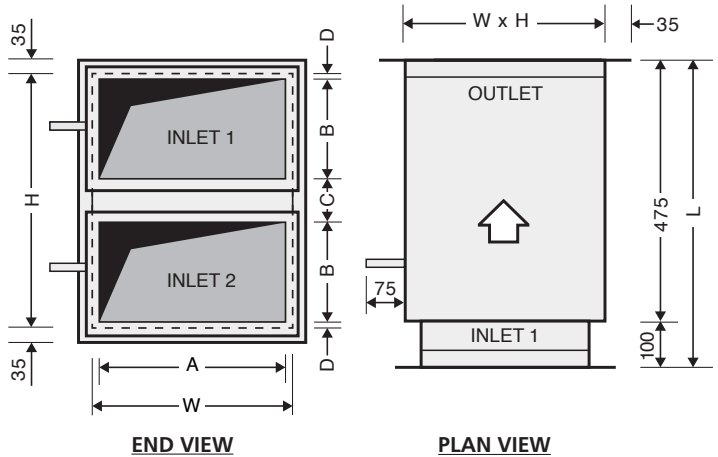
#### Features

- Dual Aerofoil Control Valve assembly for independent control
- Non Turbulent Airflow
- Low Resistance
- Good Response Despite Low Resistance
- Linear Control
- Air Velocity Sensors
- Low Noise
- Full shut off facility
- Minimal Cold Track Construction of Twin Skin 1.2mm combined Galvabond Steel
- Celmec Flanges - 35mm TDF
- 25mm Acoustic / Thermal Lining, Perforated Steel finish
- Poly-Fibre Insulation, GREEN Star Rated

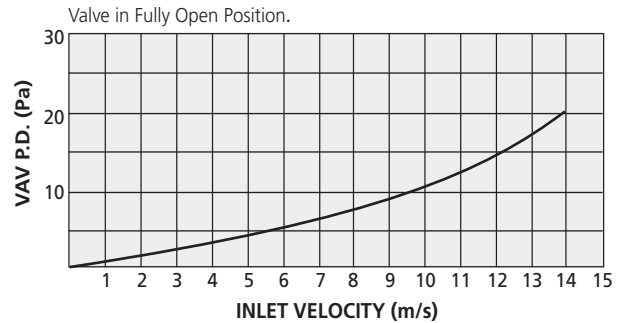
#### Options

- 50mm / R1.4 Thermal Rated Insulation (Models 03-18 only)
- Actuators and VAV Controls fitted (supplied by others)
- Round / Oval Inlets
- Left and right hand available

#### Model DAC-V



#### Pressure Drop Vs. Inlet Velocity



#### Capacity and dimensional data

MODEL DAC-V	AIRFLOW LPS (each valve)			INLETS A x B (mm)	OUTLET W x H (mm)	DIMENSIONS			WEIGHT Est (kg)
	@2.5 m/s	@8.0 m/s	@10.0 m/s			C	D	W x H x L (mm)	
03	40	120	150	100 x 150	150 x 550	150	50	150 x 550 x 575	19
04	50	160	200	100 x 200	150 x 550	100	25	150 x 550 x 575	19
05	75	240	300	150 x 200	200 x 550	100	25	200 x 550 x 575	22
06	100	320	400	200 x 200	250 x 550	100	25	250 x 550 x 575	24
08	150	480	600	300 x 200	350 x 550	100	25	350 x 550 x 575	28
10	200	640	800	400 x 200	450 x 550	100	25	450 x 550 x 575	33
12	250	800	1000	500 x 200	550 x 550	100	25	550 x 550 x 575	38
14	300	960	1200	600 x 200	650 x 550	100	25	650 x 550 x 575	43
16	350	1120	1400	700 x 200	750 x 550	100	25	750 x 550 x 575	48
18	400	1280	1600	800 x 200	850 x 550	100	25	850 x 550 x 575	52
20	450	1440	1800	900 x 200	950 x 550	100	25	950 x 550 x 575	43
22	500	1600	2000	1000 x 200	1050 x 550	100	25	1050 x 550 x 575	48
24	550	1760	2200	1100 x 200	1150 x 550	100	25	1150 x 550 x 575	52

- Nominal LPS based on approx. 10.0 m/s inlet velocity, 5.0 m/s outlet velocity.
- 50mm INSULATION OPTION - height add 50mm / width add 50mm / length same as standard unit / shafts 50mm long (Models 03-18 only).
- 50mm Insulation - Not Available on Models 20-24.



# Twin Duct VAV Terminal Units

## Twin Pack - TPO 225

### Twin Duct VAV unit

#### System Description

Twin Pack VAV units are designed to clip directly onto ductwork carrying two streams of conditioned air, namely Cold and Neutral air supplies. The ductwork is of a sandwich configuration.

The VAV's function is to mix the two air supplies in response to Room Temperature and Prescribed Terminal Airflow requirements.

As in the case of the standard VAV range, Twin Pack units employ CelmeC's well proven Aerofoil Valve design. This is a critical feature having a linear flow/stroke characteristic ensuring precise control response and accurate mixing of the two air supplies.

The Twin Pack system is further enhanced with its unique airflow sensing station which is independent of upstream and downstream system pressures and unaffected by turbulent air entry conditions.

There is no equal to CelmeC's patented Twin Pack VAV system.

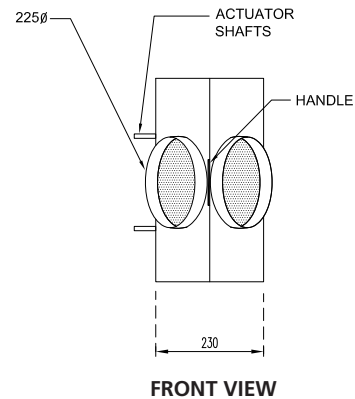
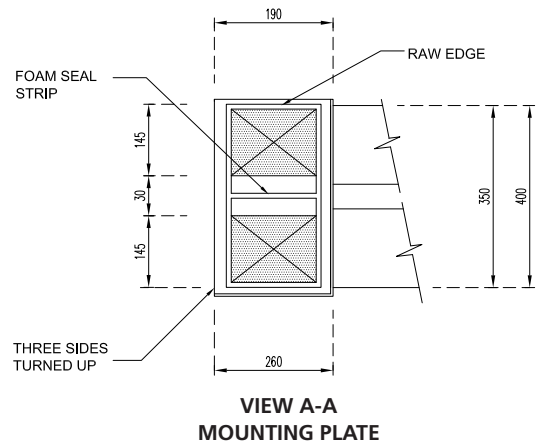
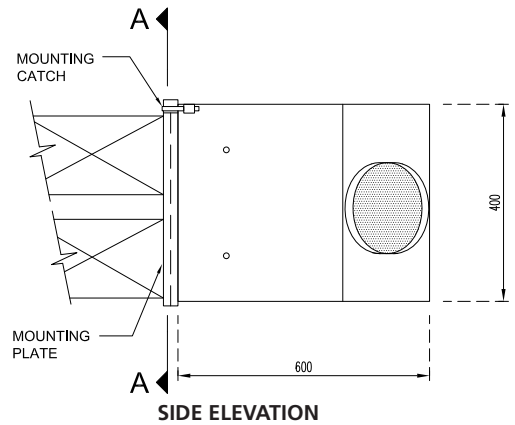
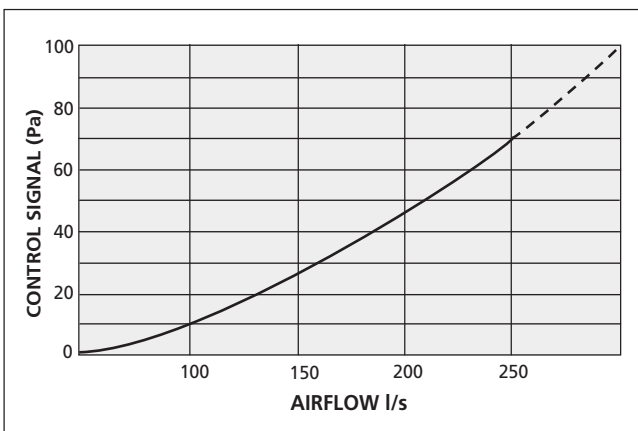
#### Features

- Modular VAV Networking Concept
- Ultimate Office Space Comfort
- Energy Savings
- Flexible Tenancy Alterations
- Lightweight Aluminium Construction
- Capacity Range 50 l/s - 250 l/s

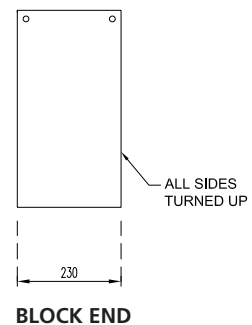
#### Options

- Stand-alone Control System, complete with Room Sensor Controller
- Factory Calibrated Controls to maintain specified requirements:
  - Max. / Min. Primary Flow (VAV function)
  - Secondary Flow / Make-up Air (Constant Terminal Flow function)
- Minimal Site Commissioning requirements

#### Control signal vs airflow



FRONT VIEW



BLOCK END

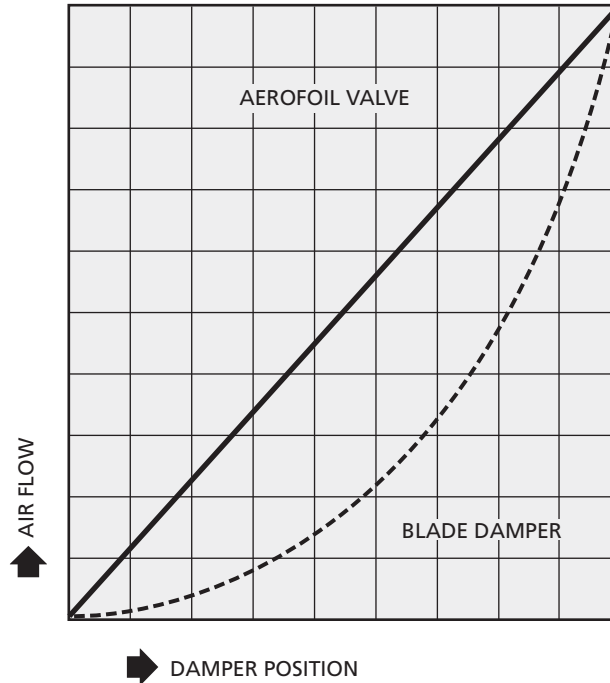
# VAV Terminal Units

## Air Control Features

### Linear Control

Accurate air flow control is provided by the Aerofoil type valve, configured to accept a standard 90° stroke, direct drive actuator.

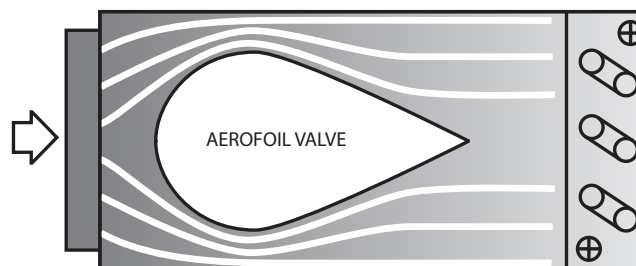
The valve has a near linear flow/stroke relationship as shown.



### Laminar Flow

The Celmec Aerofoil Valve produces laminar air flow patterns, in any position, as shown.

This ensures even air distribution across the face area of the duct, or across the downstream HHW heating coil or electric element.



### Air Resistance

Due to the Aerodynamic nature of the valve, static regain is achieved, permitting more efficient use of fan energy, as well as allowing flexibility in the future, should additional air flow be required.

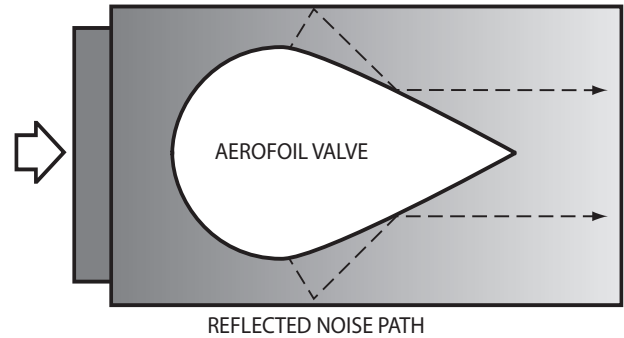
# VAV Terminal Units

## Acoustic Performance

### Radiated Noise

As a result of exhaustive Research and Development work, testing and experience with numerous VAV Air Valve configurations Celmec has developed a method of significantly reducing low to mid frequency noise and shifting high frequency noise energy away from Casing Break-out, towards the less critical direction of Unit Discharge, by means of reflection.

Consequently, the above technology and acoustic expertise have been combined by Celmec to create a full range of VAV Terminal Units which offer greatly reduced Radiated and Low Frequency Noise Levels compared to conventional systems.



### Sound power levels dB re 10<sup>-12</sup> W

'A' Series Single Duct VAV Terminal Units AN / AW													
PD-150Pa		Radiated SWL						Discharge SWL					
Size	AirFlow (LPS)	125	250	500	1K	2K	4K	125	250	500	1K	2K	4K
06	250	51	45	37	32	29	26	53	53	50	50	52	50
08	350	51	45	37	32	30	26	53	54	51	50	53	50
10	500	52	46	38	33	31	27	55	55	53	52	54	52
12	700	53	48	40	34	32	28	57	57	55	53	56	54
14	1000	55	50	42	35	33	30	59	60	57	56	58	57
16	1250	56	51	43	36	34	31	60	61	59	57	59	59
18	1550	57	52	44	37	34	32	62	62	60	58	60	60
20	1850	58	52	45	38	35	33	63	63	61	59	61	62

'A' Series Single Duct VAV Terminal Units AE													
PD-150Pa		Radiated SWL						Discharge SWL					
Size	AirFlow (LPS)	125	250	500	1K	2K	4K	125	250	500	1K	2K	4K
06	250	49	44	36	31	29	26	52	51	47	46	47	44
08	350	49	44	36	31	29	26	52	52	48	46	48	44
10	500	50	45	37	32	30	27	54	53	49	48	49	46
12	700	51	46	38	33	31	28	55	55	52	49	51	49
14	1000	53	48	41	34	32	30	58	58	54	52	53	52
16	1250	54	49	42	35	33	31	59	59	56	53	54	53
18	1550	55	50	43	36	34	31	61	60	57	54	55	55
20	1850	55	51	44	37	34	32	62	61	59	55	56	56

'D' Series Dual Duct VAV Terminal Units DAC													
PD-150Pa		Radiated SWL						Discharge SWL					
Size	AirFlow (LPS)	125	250	500	1K	2K	4K	125	250	500	1K	2K	4K
06	250	49	44	36	31	29	26	52	51	47	46	47	44
08	350	49	44	36	31	29	26	52	52	48	46	48	44
10	500	50	45	37	32	30	27	54	53	49	48	49	46
12	700	51	46	38	33	31	28	55	55	52	49	51	49

'AF' Series Fan Assistant VAV Units AFIN / AFIE / AFCN / AFCE														
	PD-150Pa	SP-100Pa	Radiated SWL						Discharge SWL					
Size	Primary Range (LPS)	Fan (LPS)	125	250	500	1K	2K	4K	125	250	500	1K	2K	4K
B	100-700	250	62	56	50	46	42	39	58	57	55	52	50	49
		350	65	59	53	49	46	45	62	61	57	56	55	57
C	200-1000	250	57	59	47	45	42	37	54	62	54	48	46	43
		500	64	65	53	54	53	52	63	68	60	57	58	58
D	250-1250	350	58	57	48	45	39	36	59	61	55	53	51	50
		700	69	65	57	58	54	54	70	70	65	64	64	66

# Electric Heater Bank Capacities

## "AE" TYPE VAV HEATING SELECTION SCHEDULE

### FINNED TUBULAR ELEMENT HEATER BANK CAPACITIES (Watts)

Min - Max l/s	AE03	AE04	AE05	AE06	AE08	AE10	AE12	AE14	AE16	AE18	AE20
	45-150	60-200	90-300	120-400	180-600	240-800	300-1000	360-1200	420-1400	480-1600	540-1850
<b>1-Ph / 1-Stage</b>	250	250	250	250		525 900		875	1050	1200	1375
	500	500	500	500	800	1050	1400	1750	2100	2400	2750
	625	625	625	625	1000	1300	1750	2200	2625	3000	3350
		1000	1000	1000	1600	2100	2800	3500	4200	4800	5500
				1500	1500	1650 2300 2500 3300	2100 2300 3500 4600	2800 3000 4500 6000	3650 4300		
<b>1-Ph / 2-Stage</b>	500	500	500	500	800	1050		1750	2100	2400	2750
		1000	1000	1000	1600	2100	2800	3500	4200	4800	5500
			1250	2000	3200	4200	5600	7000	8400	9600	
				1250	3300	4600	6000				
<b>1-Ph / 3-Stage</b>	750	750	750	750		1575		2625	3150	3600	4125
			1500	1500	2400	3150	4200	5250	6300	7200	8250
				1875	3000	3900	5250	6600	7875	9000	10050
<b>3-Ph / 1-Stage</b>	750	750	750	750		1575		2625	3150	3600	4125
			1500	1500	2400	3150	4200	5250	6300	7200	8250
				1875	3000	3900	5250	6600	7875	9000	10050

• Heater Bank capacities based on recommended minimum inlet velocity of 3.0 m/s or minimum 50 l/s per 1000W, whichever is greater.

## "AFIE / AFCE" TYPE VAV HEATING SELECTION SCHEDULE

### FINNED TUBULAR ELEMENT HEATER BANK CAPACITIES (Watts)

Element Type	(06)	(06)	(06)	(06)	(08F)	(08F)
<b>AFIE/AFCE</b>		<b>"B"-Fan</b>	<b>"B"-Fan</b>			
FAN Min-Max l/s		100-600	150-600			
<b>AFIE/AFCE</b>		<b>"C"-Fan</b>	<b>"C"-Fan</b>	<b>"C"-Fan</b>	<b>"C"-Fan</b>	<b>"C"-Fan</b>
FAN Min-Max l/s		200-750	200-750	200-750	200-750	250-750
<b>AFIE/AFCE</b>	<b>"A"-Fan</b>	<b>"D"-Fan</b>	<b>"D"-Fan</b>	<b>"D"-Fan</b>	<b>"D"-Fan</b>	<b>"D"-Fan</b>
FAN Min-Max l/s	75-200	300-950	300-950	300-950	300-950	300-950
<b>1-Ph / 1-Stage</b>	250	250	250	250		
	500	500	500	500	800	800
	625	625	625	625	1000	1000
	1000	1000	1000	1000	1600	1600
					1650	1650
Total - Watts	1500	1500	1500	1500	2500	2500
		2000	2000	2000	3300	3300
<b>1-Ph / 2-Stage</b>		500	500	500		
		1000	1000	1000	1600	1600
		1250	1250	1300	2000	2000
		2000	2000	2000	3200	3200
					3300	3300
Total - Watts		3000	3000	3000		5000
		4000	4000			
<b>1-Ph / 3-Stage</b>		750	750	750		
		1500	1500	1500	2400	2400
		1875	1875	1875	3000	3000
		3000	3000	3000		4800
Total - Watts						
<b>3-Ph / 1-Stage</b>		750	750	750		
		1500	1500	1500	2400	2400
		1875	1875	1875	3000	3000
		3000	3000	3000		4800
Total - Watts						

• Heater Bank capacities based on recommended minimum fan velocity of 3.0 m/s or minimum 50 l/s per 1000W, whichever is greater.

# VAV MAINTENANCE GUIDE

As with all equipment, periodic checks should be carried out on variable air volume terminal units. We suggest the following items be attended to at six monthly intervals.

**1. Electrical components:**

**Circuit Breakers, Fan Relays, Heater SSR's, Contactors, Terminal Blocks.**

Check operation and any sign of overheating, loose terminations, relay/contactors chatter or excessive switching, fused contact points or signs of deterioration of contact points.

**2. Fans / Fan Motors / Fan Bearings**

No maintenance required. Check operating Voltage, to be no less than 130V.

**3. Primary Air Damper**

No maintenance required. Operate damper from fully closed to fully open. Check for free operation.

**4. Actuator**

Check operation and if stroked correctly. Stroking should be carried out, starting with the damper in fully closed position. Check motor to shaft fixing to ensure positive response and full closure.

**5. Controls**

Refer to the control manufacturer's recommendations.

**6. Velocity Sensor**

No maintenance required. Connect a manometer across the velocity sensor monitoring end connections, manually operate damper and observe changes in the readings to ensure the velocity sensor is not blocked (reading should be 0 Pa in fully closed position only).

**7. Heating Elements (where applicable)**

Check operation and all connections are secure. Check for any signs of cable overheating, due to possibility of arcing from loose terminations.

**8. Heating Hot Water Coils (where applicable)**

No maintenance required. Check for water leaks.



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