



Single Duct VAV Terminal Unit

VAV-1000 Series



Flying Horse Pressure Independent Type Single Duct VAV Terminal Unit is a compact factory unit which regulates the air flow of conditioned air into an occupied space in response to a control signal, usually a thermostat. The clean and efficient design of these single duct VAV terminal unit result in a system component which has minimal pressure drop reducing fan horsepower requirements, and low noise generation for quiet operation. A compact configuration makes this unit easier to use in today's crowded mechanical spaces or in retrofitting existing systems.

Features

- ◆ Capacities ranging from 31-1888 l/s
- ◆ Pressure independent operation
- ◆ Can be used for VAV or CAV application
- ◆ Cooling only or heating & cooling application
- ◆ Available with electronic and direct digital controls
- ◆ Individually adjustable minimum and maximum air volumes
- ◆ Factory calibrated to job requirements
- ◆ Full range of accessories available (i.e. heater boxes, hot water coils, fans, attenuator etc.)
- ◆ Inlet connection bead offers a means for secure flex duct connections
- ◆ Left hand or right hand external DDC mounting panel

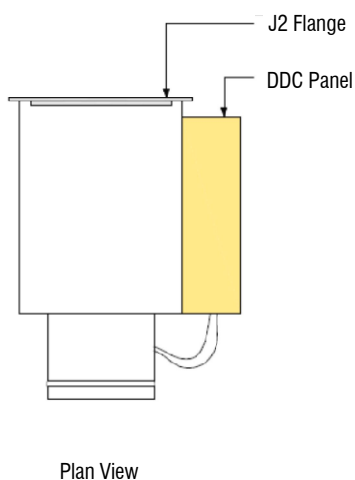
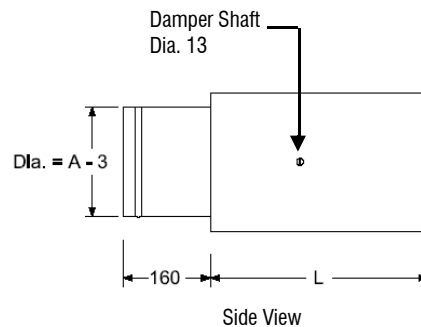
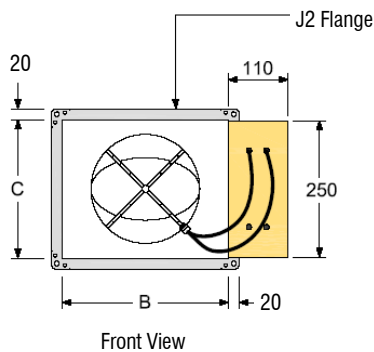
Unit Size	Model No.	Flow (l/s)		Flow (cfm)	
		Min	Max	Min	Max
06	VAV - 1000 - 06	31	212	66	450
08	VAV - 1000 - 08	62	378	132	800
10	VAV - 1000 - 10	104	637	221	1350
12	VAV - 1000 - 12	143	991	304	2100
14	VAV - 1000 - 14	207	1416	439	3000
16	VAV - 1000 - 16	268	1888	568	4000



Single Duct VAV Terminal Unit

VAV-1000 Series

Unit Size	Model No.	Dimension (mm)			
		Inlet	Outlet		Length
		A	B	C	L
06	VAV - 1000 - 06	152	305	203	400
08	VAV - 1000 - 08	203	305	254	400
10	VAV - 1000 - 10	254	356	318	400
12	VAV - 1000 - 12	305	406	381	400
14	VAV - 1000 - 14	356	508	445	500
16	VAV - 1000 - 16	406	610	457	500



Construction

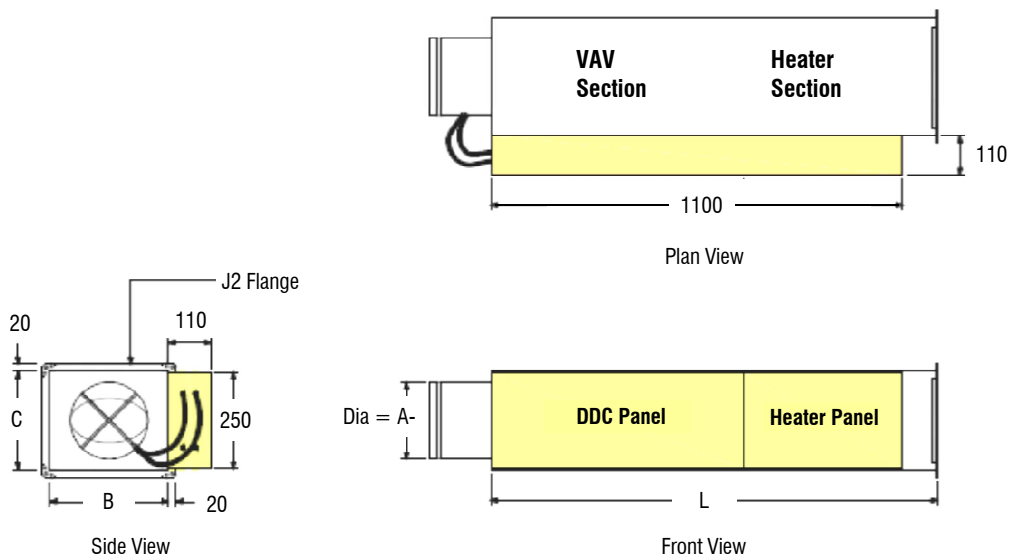
- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
- ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
- ◆ Internal protection
 - G.I. perforated sheet for cooling application
 - G.I. sheet for cooling and heating application
- ◆ Blade type damper constructed of two layers of heavy gauge galvanized steel with peripheral gasket
- ◆ 12 points field replaceable cross flow sensor
- ◆ Plated damper shaft is mounted in self-lubricated bearing
- ◆ UL94 flame retardant type pneumatic tubing
- ◆ Discharge outlet complete with J2 flange
- ◆ Special liners and insulation available
- ◆ Left hand and right hand external DDC panel



Single Duct VAV Terminal Unit with Electric Heater VAV-10RH Series

Construction

- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
- ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
- ◆ G.I. sheet for internal protection
- ◆ Blade type damper constructed of two layers of heavy gauge galvanized steel with peripheral gasket
- ◆ 12 points field replaceable cross flow sensor
- ◆ Plated damper shaft is mounted in self-lubricated bearing
- ◆ UL94 flame retardant type pneumatic tubing
- ◆ Black heat type heating element - finned tubular
- ◆ Manual reset over heat cut out
- ◆ Heater on/off contactor for 1-stage or multi-stage
- ◆ Special liners and insulation available
- ◆ J2 flange for air outlet
- ◆ Left hand or right hand external DDC and heater panel



Unit Size	Model No.	Flow (l/s)		Dimension (mm)				Heating Element kW
		Min	Max	Inlet A	Outlet B C		Length L	
06	VAV - 10RH - 06	31	212	152	305	203	1150	0.5 1.0 1.5 2.0
08	VAV - 10RH - 08	62	378	203	305	254	1150	
10	VAV - 10RH - 10	104	637	254	356	318	1150	
12	VAV - 10RH - 12	143	991	305	406	381	1150	
14	VAV - 10RH - 14	207	1416	356	508	445	1250	
16	VAV - 10RH - 16	268	1888	406	610	457	1250	

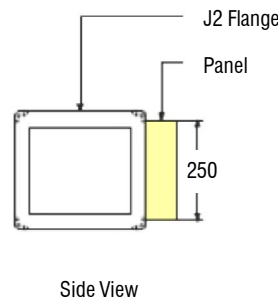
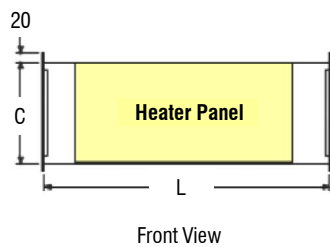
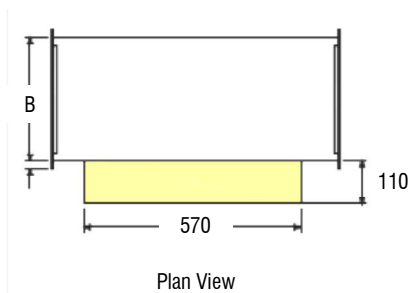
Electric Heater Box

RH Series



Construction

- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
- ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
- ◆ G.I. sheet for internal protection
- ◆ Black heat type heating element
 - finned tubular
- ◆ Manual reset over heat cut out
- ◆ Heater on/off contactor for 1-stage or multi-stage
- ◆ Special liners and insulation available
- ◆ J2 flange for air inlet and outlet
- ◆ Left hand or right hand external heater panel



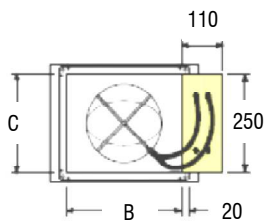
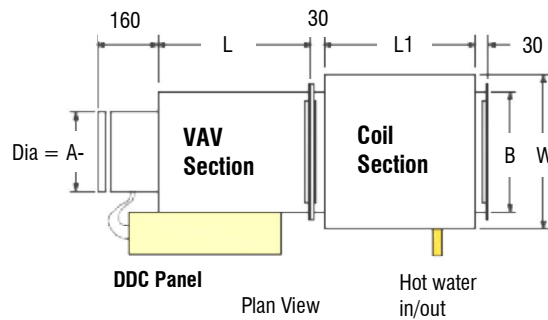
Unit Size	Model No.	Dimension (mm)			Heating Element kW
		Outlet		Length	
		B	C	L	
06	RH - 06	305	203	750	0.5 1.0 1.5 2.0
08	RH - 08	305	254	750	
10	RH - 10	356	318	750	
12	RH - 12	406	381	750	
14	RH - 14	508	445	750	
16	RH - 16	610	457	750	



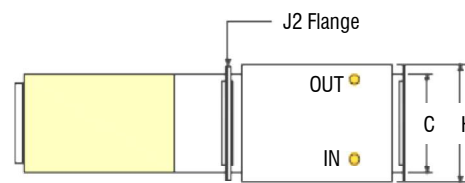
Single Duct VAV Terminal Unit with Hot Water Coil VAV-10RW Series

Construction

- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
- ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
- ◆ G.I. sheet for internal protection
- ◆ Blade type damper constructed of two layers of heavy gauge galvanized steel with peripheral gasket
- ◆ 12 points field replaceable cross flow sensor
- ◆ Plated damper shaft is mounted in self-lubricated bearing
- ◆ UL94 flame retardant type pneumatic tubing
- ◆ Copper tube and aluminium fin construction
- ◆ 1-row or multi-row high capacity coils
- ◆ Bottom access door
- ◆ Air vent
- ◆ Completed with testing valve
- ◆ Special liners and insulation available
- ◆ J2 flange for air inlet and outlet
- ◆ Left hand or right hand for hot water in/out



Side View



Front View

Unit Size	Model No.	Flow (l/s)		VAV Section				Coil Section			In/out Pipe Dia
		Min	Max	Inlet A	Outlet B C		Length L	Length L1	Width W	Height H	
06	VAV - 10RW - 06	31	212	152	305	203	400	460	375	253	20
08	VAV - 10RW - 08	62	378	203	305	254	400	460	375	304	20
10	VAV - 10RW - 10	104	637	254	356	318	400	460	426	368	20
12	VAV - 10RW - 12	143	991	305	406	381	400	460	476	431	20
14	VAV - 10RW - 14	207	1416	356	508	445	500	460	578	495	20
16	VAV - 10RW - 16	268	1888	406	610	457	500	460	680	507	20

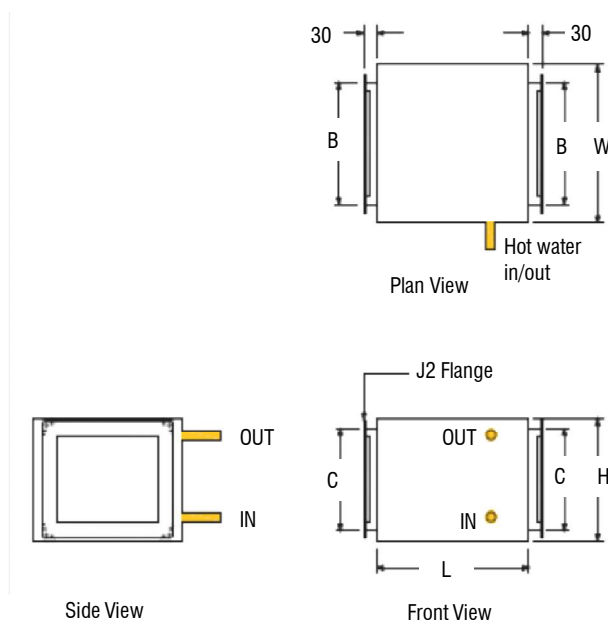
Hot Water Coil

RW Series



Construction

- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
 - ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
 - ◆ G.I. sheet for internal protection
 - ◆ Copper tube and aluminium fin construction
 - ◆ 1-row or multi-row high capacity coils
 - ◆ Bottom access door
 - ◆ Air vent
 - ◆ Completed with testing valve
 - ◆ Special liners and insulation available
- ◆ J2 flange for air inlet and outlet
 - ◆ Left hand or right hand for hot water in/out



Unit Size	Model No.	Outlet		Length L	Width W	Height H	In/out Pipe Dia
		B	C				
06	RW - 06	305	203	460	375	253	20
08	RW - 08	305	254	460	375	304	20
10	RW - 10	356	318	460	426	368	20
12	RW - 12	406	381	460	476	431	20
14	RW - 14	508	445	460	578	495	20
16	RW - 16	610	457	460	680	507	20

Single Duct VAV Terminal Unit with Fan Powered VAV-10FP Series



Flying Horse Fan Powered VAV Terminal Unit can provide flexibility for a wide range of HVAC applications. Substantial savings in operating costs may be realized through efficient recovery of waste heat, enhanced heating performance and reduced central system HP for fan powered systems. The primary air section and the recirculating fan section operate independent of each other, except that both are under control of the same room thermostat. They are sequenced so that both sections generally do not operate at the same time. The primary air section responds to a demand for cooling, while the recirculating fan section responds to a demanding for heating.

Features

- ◆ Pressure independent operation
- ◆ Cooling only or heating & cooling application
- ◆ Available with electronic and direct digital controls
- ◆ Individually adjustable minimum and maximum air volumes
- ◆ Factory calibrated to job requirements
- ◆ Full range of accessories available (i.e. heater boxes, hot water coils, attenuator etc.)
- ◆ Inlet connection bead offers a means for secure flex duct connections

Construction

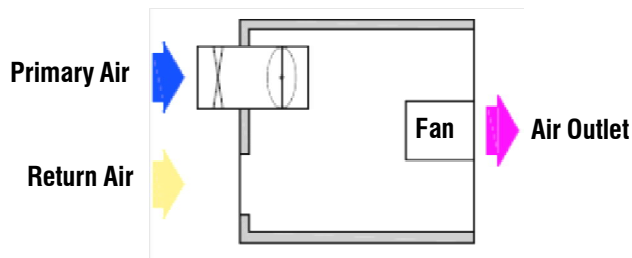
- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
- ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
- ◆ Internal protection
 - G.I. sheet
- ◆ Blade type damper constructed of two layers of heavy gauge galvanized steel with peripheral gasket
- ◆ 12 points field replaceable cross flow sensor
- ◆ Plated damper shaft is mounted in self-lubricated bearing
- ◆ UL94 flame retardant type pneumatic tubing
- ◆ Completed with 3-speed switch (Hi-Mid-Lo)
- ◆ Aluminium air filter at return air inlet
- ◆ Bottom access door (Optional)
- ◆ Discharge outlet complete with J2 flange
- ◆ Special liners and insulation available
- ◆ External DDC panel



Single Duct VAV Terminal Unit with Fan Powered VAV-10FP Series

Series Type

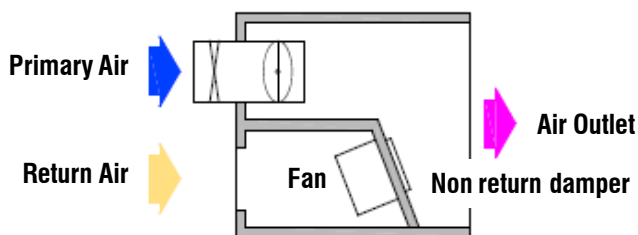
Unit Size	Model No.	Primary Air Flow (l/s)		Supply Fan	
		Min	Max	W	Max Flow (l/s)
06	VAV - 10FP - 06S	31	212	275	252
08	VAV - 10FP - 08S	62	378	200	430
10	VAV - 10FP - 10S	104	637	300	637



- ◆ Re-circulating fan and primary air inlet are in series
- ◆ Re-circulating fan interlock with air handling unit
- ◆ Mixed primary air and return air discharge by re-circulating fan maintain constant air volume supply
- ◆ Air re-circulation in the result of comfort

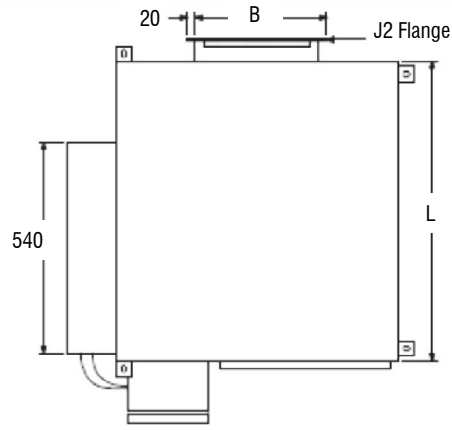
Parallel Type

Unit Size	Model No.	Primary Air Flow (l/s)		Supply Fan	
		Min	Max	W	Max Flow (l/s)
06	VAV - 10FP - 06P	31	212	275	252
08	VAV - 10FP - 08P	62	378	200	430
10	VAV - 10FP - 10P	104	637	300	637

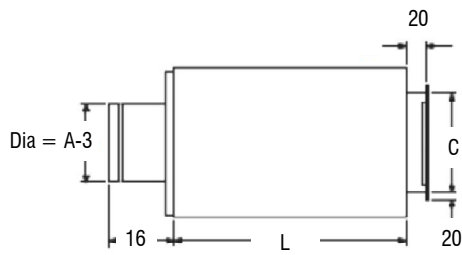


- ◆ Re-circulating fan and primary air inlet are in parallel
- ◆ On a further decrease in temperature at minimum primary air, re-circulating fan is energised to supply warm ceiling plenum air
- ◆ Variable air volume supply in cooling mode
- ◆ Constant air volume supply in heating mode

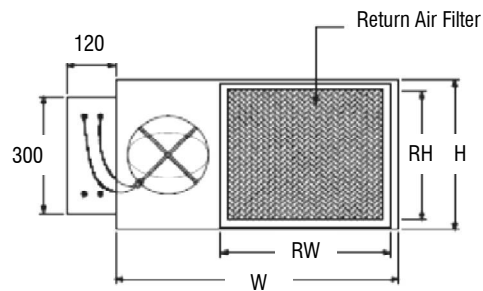
Fan Powered VAV Terminal Unit with Fan Powered VAV-10FP Series



Plan View



Side View



Front View

Unit Size	Model No.	Dimension (mm)							
		Inlet A	Casing			Air Outlet		Return Air	
			L	W	H	B	C	RW	RH
06	VAV - 10FP - 06S	152	575	600	300	305	203	370	290
08	VAV - 10FP - 08S	203	770	700	385	305	254	420	370
10	VAV - 10FP - 10S	254	800	800	435	356	318	455	425
06	VAV - 10FP - 06P	152	700	650	300	400	200	370	290
08	VAV - 10FP - 08P	203	770	850	385	400	250	420	370
10	VAV - 10FP - 10P	254	850	900	435	500	250	455	425

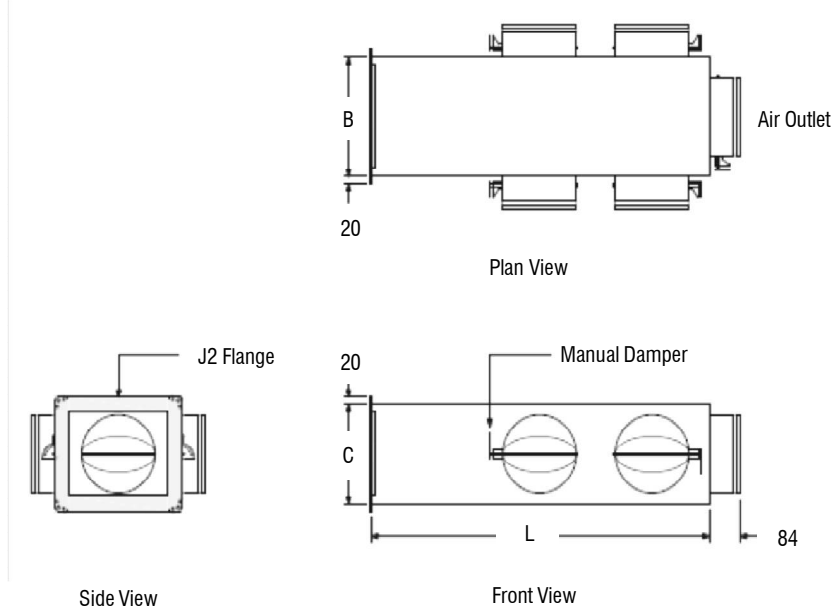
Multi-outlet Attenuator

MOA Series



Construction

- ◆ 0.8 or 1.0mm thick G.I. construction meet DW144 requirement
- ◆ Internal insulation
 - fiberglass 25mm thick, 32-48Kg/m³ density or
 - Class 0 closed-cell elastomeric 25mm thick, 50Kg/m³ density
- ◆ Internal protection
 - G.I. perforated sheet for cooling application
 - G.I. sheet for cooling and heating application
- ◆ Max. 5 nos. of outlet
- ◆ All outlets completed with manual dampers with hand locking quadrants
- ◆ Special length and outlet dia. available
- ◆ J2 flange connection for air inlet

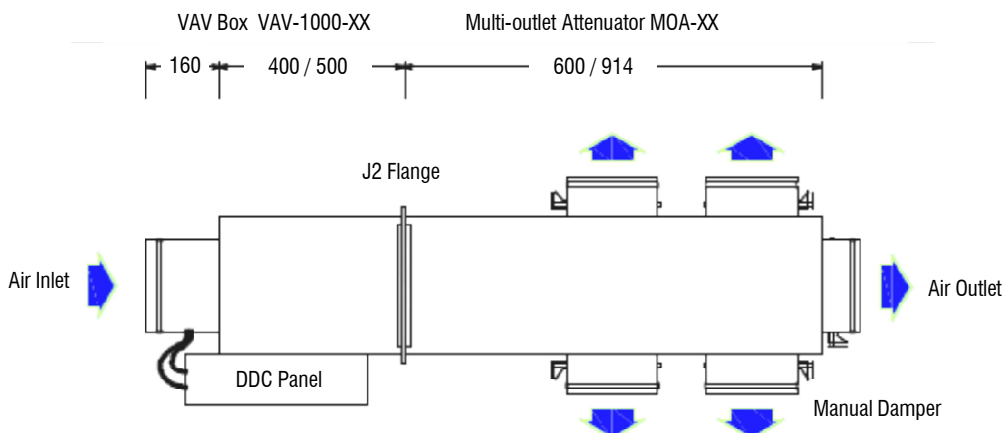


Unit Size	Model No.	Air Inlet		Length L	Outlet Dia
		B	C		
06	MOA - 06	305	203	600 / 914	145
08	MOA - 08	305	254	600 / 914	145/195
10	MOA - 10	356	318	600 / 914	195/245
12	MOA - 12	406	381	600 / 914	195/245
14	MOA - 14	508	445	600 / 914	245/295
16	MOA - 16	610	457	600 / 914	245/295

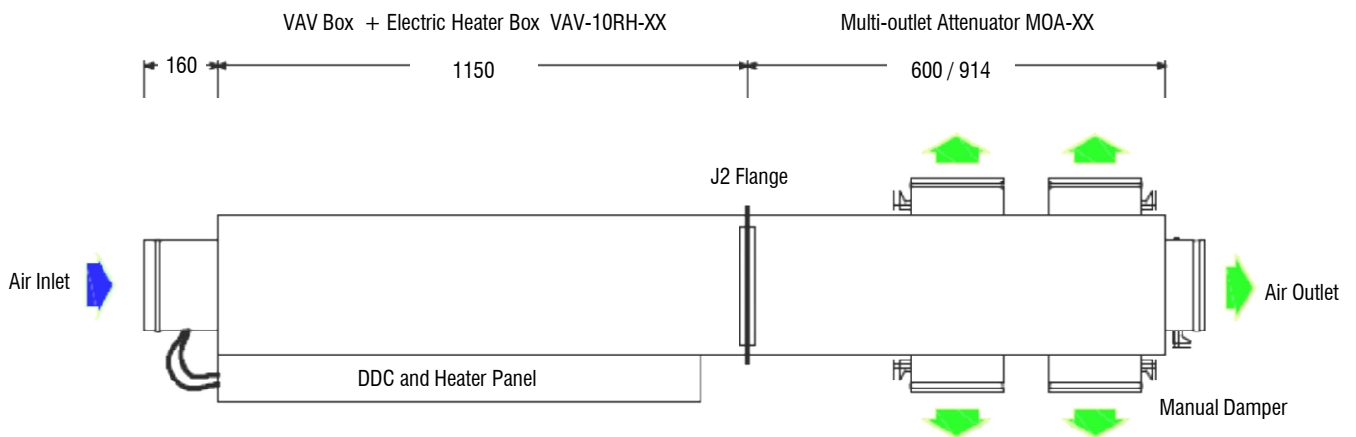


Single Duct VAV Terminal Unit Assembly

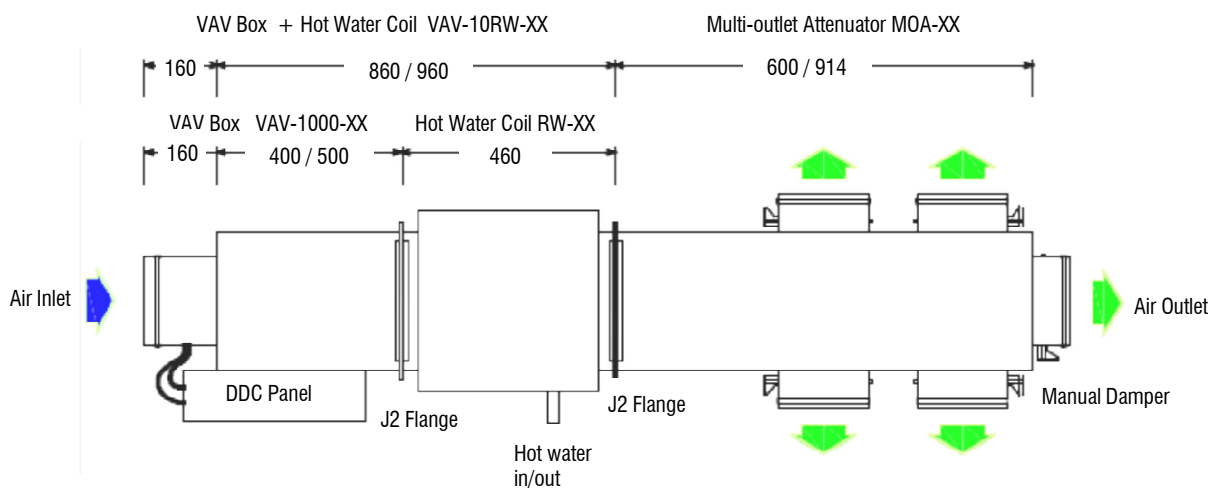
◆ VAV Box + Multi-outlet Attenuator



◆ VAV Box + Electric Heater Box + Multi-outlet Attenuator

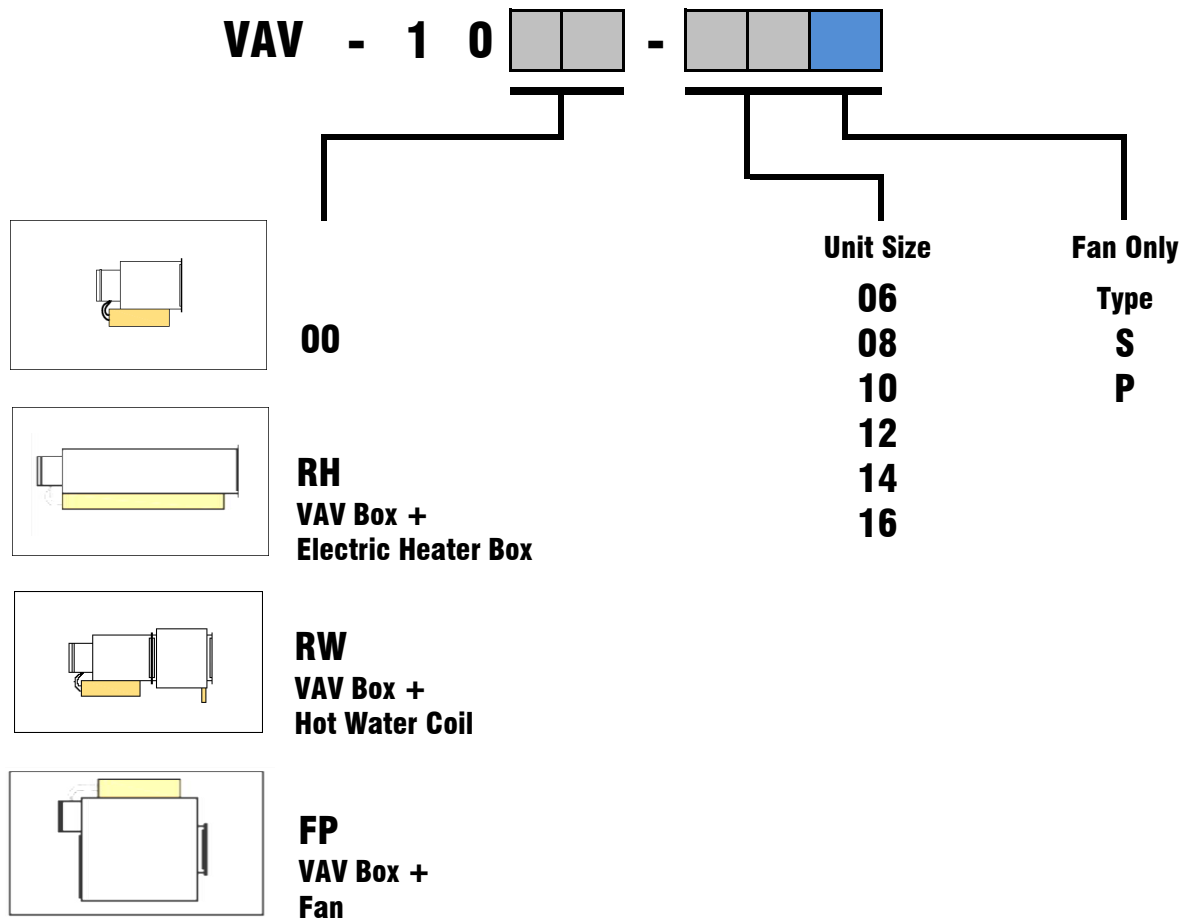


◆ VAV Box + Hot Water Coil + Multi-outlet Attenuator

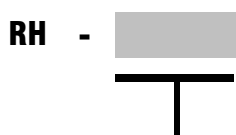




Model Selection Guide

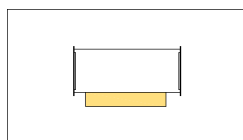


Model for Single Unit



Unit Size

06
08
10
12
14
16

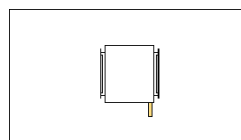


Electric Heater



Unit Size

06
08
10
12
14
16

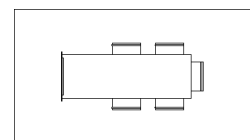


Hot Water Coil



Unit Size

06
08
10
12
14
16



Multi-outlet Attenuator