



BASE-MOUNTED MODEL CAUA WITH DISCHARGE PLENUM

OPTIONAL INLET AIR BASE WITH AND WITHOUT FILTERS AND SCREENED DISCHARGE AIR PLENUM



PACKAGED VERTICAL SYSTEMS



- Screened Discharge Plenum**
 - Option CD60 - with Screened Openings on All Four Sides
 - Option CD61 - with Blockoff Plates for 2 or 3 Sided Discharge (blockoff plates are field installed)
 - Option CD62 - with Blockoff Plates for use with Model ACUC Cased Air Conditioning Coil *only*
- Model CAUA 350 or CAUA 400 Power-Vented or Separated-Combustion Upflow Heater**
- Inlet Air Mounting Base with Guarded Openings, Option AVA2**
 - with Option AWC1, 1" Disposable Flat Filters
 - with Option AWC4, 1" Permanent Aluminum Filters
 - with Option AWC6, 1" Pleated Disposable Filters

DESCRIPTION

As illustrated above, *when used together*, the optional inlet air base and discharge plenum change the Model CAUA upflow "ductable heating system" into an upflow "unit heater" or an "air turnover unit". Add the Model ACUC cased cooling coil, and it becomes a heating/cooling unit. The airflow through the upflow system is engineered to circulate the air in the building. When used in an air turnover application, an optional two-stage valve will provide the recommended lower temperature rise.

Or if used separately, the optional inlet air base can be installed on a Model CAUA 350 or 400 with discharge ductwork, or the screened discharge plenum can be used with an optional filter cabinet or mixing box.

The inlet air base and the Options CD60 and CD61 plenum are shipped separately for field installation. If a Model ACUC cased coil is ordered with a discharge plenum (Option CD62), the plenum is factory-installed on the cooling section. If the base is ordered with optional filters, the filters are installed at the factory.

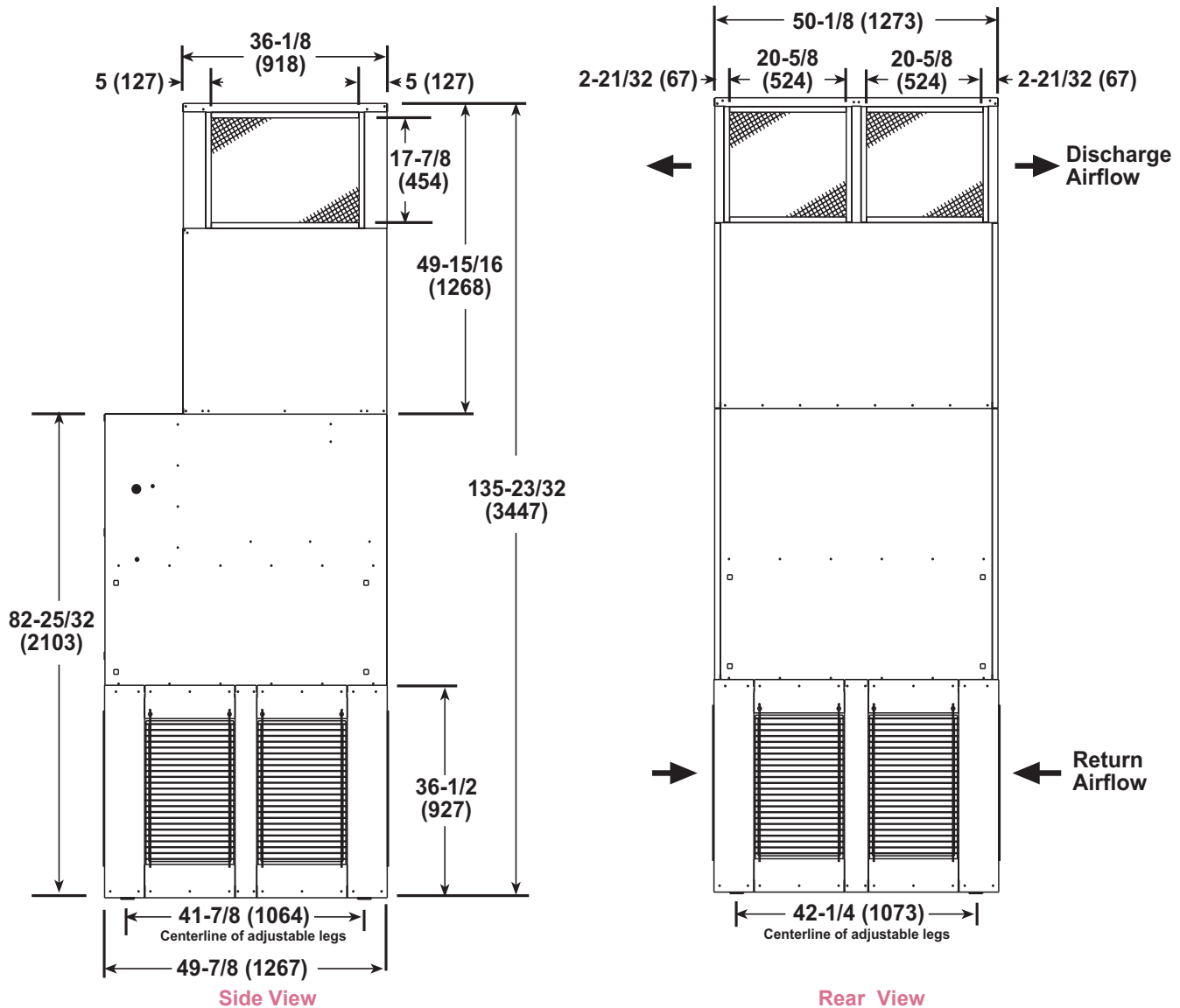
FEATURES OF BASE-MOUNTED MODEL CAUA WITH DISCHARGE PLENUM

- Discharge plenum and inlet air base are designed to match Model CAUA to create a packaged "stand alone" upflow system
- Heating or heating/cooling applications (cooling when equipped with Model ACUC cased cooling coil)
- Upflow system is engineered to circulate room air
- Adaptable for next-to-wall location
- Base has adjustable legs
- Base is available with easily removable filters (1" flat disposable, 1" permanent, or 1" pleated disposable)

TECHNICAL DATA - Base-Mounted Model CAUA with Discharge Plenum

Model CAUA Size		350		400		
BTUH Input	BTUH	350,000		400,000		
	kW	102.6		117.2		
BTUH Thermal Output (80%)	BTUH	280,000		320,000		
	kW	82.1		93.8		
Control Amps (24-volt)		1.1		1.1		
Full-Load Amps (230V) @ .0" w.c. ESP, 60 deg F Rise		13.6		13.8		
Standard Motor HP	with standard	(2) 1		(2) 1		
	direct drive motors	(2) 12-9		(2) 12-9		
Standard Blower Size (inches)		(2) 12-9		(2) 12-9		
Maximum Air Volume @ .2" w.c. ESP	cfm	5,000		5,000		
	m ³ /hr	8,495		8,495		
Air Volume Range with Optional Belt Drive	cfm	4,320 - 5,760		4,935 - 6,580		
	m ³ /hr	7,339 - 9,786		8,384 - 11,179		
Vent Connection Diameter (inches)		6		6		
Gas Connection (inches)	Natural Gas	3/4		3/4		
	Propane Gas	1/2		1/2		
Approximate Wt of the Model CAUA	Net	lbs.	445		464	
		kg	202		210	
	Shipping	lbs.	560		575	
		kg	254		261	
Approximate Wt of the Inlet Base Option AVA2 (with or without filters)	Net	lbs.	125		125	
		kg	57		57	
	Shipping	lbs.	175		175	
		kg	79		79	
Approximate Wt of Discharge Plenum Options CD60 and CD61	Net	lbs.	156		156	
		kg	71		71	
	Shipping	lbs.	220		220	
		kg	100		100	
Approximate Wt (lbs) of Discharge Plenum Option CD62 (add to weight of ACUC; see page 6)	Net	lbs.	89		89	
		kg	40		40	
	Shipping	lbs.	130		130	
		kg	59		59	

DIMENSIONS (inches and mm) - Model CAUA 350 and CAUA 400 with Optional Air Inlet Mounting Base and Discharge Plenum



HEIGHT NOTE: When Option CD62 and a Model ACUC cased cooling coil are ordered, the plenum height of 49-15/16" (1,268mm) includes both the Model ACUC cased cooling coil and the Option CD62 discharge plenum. The same height dimension applies to discharge plenum Options CD60 and CD61 used without the cooling coil.

CLEARANCES AND LOCATION - Model CAUA 350 and CAUA 400 with Optional Air Inlet Mounting Base and Discharge Plenum

Required Clearances to the Furnace Section and Flue		
	inches	mm
Right Side	0	0
Left Side	0	0
Front	3	76
Rear	0	0
Bottom	0	0
Flue	6	152
Connector		
Top	1	25

Position the base-mounted Model CAUA with discharge plenum in a location that will provide for return airflow and discharge airflow so that a comfort-level space temperature can be efficiently maintained. The effectiveness of this system depends on the ability to freely circulate the air throughout the building. Impeding the airflow at the discharge and/or inlet, either permanently or temporarily, will reduce the effectiveness of the system.

Return air circulates into the system through the openings in the base. The base must have three or four sides open, which means it can be placed next to a wall but not in a corner. Select a location where airflow is not obstructed on the open sides.

Discharge from the plenum may be from four, three or two sides depending on the installation. A clear path for discharge air should be maintained to provide a comfort-level temperature in the space.

Clearances listed in the table on the left must be maintained.



PRESSURE DROPS for Inlet Base with Filters, Discharge Plenum, and Cooling Coil

Use this table if the application includes both an inlet base with filters and a discharge plenum with or without a cooling coil. If the application uses a discharge plenum without the base, use this table to determine pressure drop through the discharge plenum; refer to Air Flow Pressure Drop Table for pressure drops for other components. If the application uses a base with filters but not a discharge plenum, use this table to determine pressure drop through the filters; refer to Air Flow Pressure Drop Table for pressure drops of other components.

Size	CFM	Inlet Air Base with Filters (1" clean filters) --exposed to open area on 3 or 4 sides						Discharge Plenum Option				Cooling Coil Model ACUC						ESP
		Disposable Flat Filters		Permanent Aluminum		Disposable Pleated						120		150		180		
		Open area on 4 Sides	Open area on 3 Sides	Open area on 4 Sides	Open area on 3 Sides	Open area on 4 Sides	Open area on 3 Sides	CD60 ^A	CD61 ^B	CD61 ^C	CD62 ^D	Wet	Dry	Wet	Dry	Wet	Dry	
		350	4,500	0.06	0.08	0.024	0.035	0.11	0.18	0.015	0.03	0.04	0.07	.13	.10	.18	.14	
5,000	0.07		0.09	0.027	0.040	0.13	0.20	0.02	0.04	0.05	0.08	.16	.13	.22	.18	.18	.15	
5,500	0.08		■	0.03	0.045	0.15	0.24	0.02	0.04	0.055	0.09	.18	.15	.25	.21	.21	.18	
5,760	0.08		■	0.032	0.049	0.17	0.27	0.03	0.05	0.06	0.10	■	■	■	■	■	■	
400	5,000	0.07	0.09	0.027	0.040	0.13	0.20	0.02	0.04	0.05	0.08	.16	.13	.22	.18	.18	.15	
	5,500	0.08	■	0.030	0.045	0.15	0.24	0.02	0.04	0.055	0.08	.18	.15	.25	.21	.21	.18	
	6,000	0.08	■	0.035	0.054	0.18	0.28	0.03	0.05	0.06	0.09	.21	.18	.31	.27	.25	.22	
	6,580	0.09	■	0.039	0.061	0.20	0.31	0.04	0.06	0.075	0.10	■	■	■	■	■	■	

- ^A 4 Sides Open (no blockoff plates)
- ^B 3 Sides Open (blockoff plate(s) on one side)
- ^C 2 Sides Open (blockoff plates on two sides)
- ^D Six blockoff plates installed (add to ACUC pressure drop)

AIR DELIVERY (CFM) - Applies to Model CAUA 350 and CAUA 400 equipped with all of the following:

- Two 1-HP Direct-drive Blower Motors
- Optional Air Inlet Mounting Base (with or without filters)
- Discharge Plenum Option CD60 or CD61

Size	Blower(s)	Motor(s)	@ .2" w.c. ESP	@ .4" w.c. ESP
350-400	(2)12-9	(2)1HP - factory set at high speed	5,000 CFM	4,800 CFM

NOTE: If a Model ACUC cooling coil is included, an optional belt-driven motor *must* be selected.

BLOWER CHART for Optional Belt-Drive Motor - Applies to Model CAUA 350 and CAUA 400 with both Optional Air Inlet Mounting Base and Discharge Plenum

The blower chart includes the static pressure drop through the heater. If using an inlet base *without* filters, the static pressure is negligible and is figured at zero. If using an inlet base with filters, a discharge plenum, and/or a cooling coil, calculate total external static pressure from the pressure drop table above.

Model CAUA heaters with both an optional air inlet mounting base and a discharge plenum are available in the temperature rises and motor horsepowers listed. If installing the system in an air turnover application that requires an even lower temperature rise, order the Model CAUA equipped with an optional two-stage gas valve.

Base-Mounted Model CAUA 350 with a Discharge Plenum

Temp Rise	CFM	0.2" w.c. ESP			0.4" w.c. ESP			0.6" w.c. ESP			0.8" w.c. ESP		
		RPM	HP	BHP	RPM	HP	BHP	RPM	HP	BHP	RPM	HP	BHP
60°F	4320	672	1.5	1.09	751	1.5	1.25	825	1.5	1.45	893	2	1.65
55°F	4710	720	1.5	1.34	794	2	1.56	864	2	1.78	929	3	2.05
50°F	5185	777	2	1.74	845	3	2.05	910	3	2.24	971	3	2.44
45°F	5760	848	3	2.38	910	3	2.63	970	3	2.84	1027	5	3.10

Base-Mounted Model CAUA 400 with a Discharge Plenum

Temp Rise	CFM	0.2" w.c. ESP			0.4" w.c. ESP			0.6" w.c. ESP			0.8" w.c. ESP		
		RPM	HP	BHP	RPM	HP	BHP	RPM	HP	BHP	RPM	HP	BHP
60°F	4935	743	1.5	1.48	814	2	1.73	882	2	1.95	945	3	2.17
55°F	5385	795	2	1.90	860	3	2.15	924	3	2.39	985	3	2.64
50°F	5925	863	3	2.60	924	3	2.75	983	3	2.96	1039	5	3.29
45°F	6580	942	5	3.33	997	5	2.63	1051	5	3.93	1104	5	4.22