



Product Data

36S Water Control Weathermaster® Induction Air Terminals

19.4-131.9 cfm
1770-8900 Btuh

2- and 4-Pipe System Terminals for Cooling and Heating Multistory Buildings

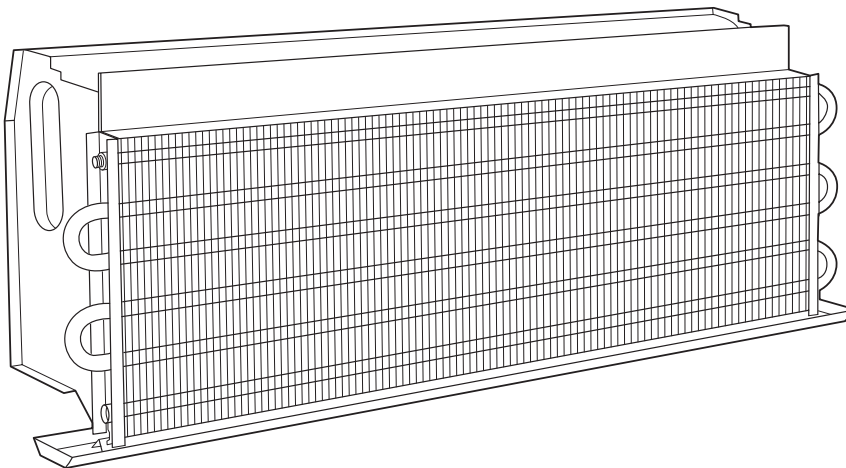
Features/Benefits

Space-savers in thousands of high-rise installations

Water control Weathermaster induction systems use 36S series air terminals for space-saving and economical air conditioning in office buildings, hotels, schools, and apartments to provide year-round comfort in each room. Nine models are available in loby, horizontal and vertical configurations; 5 for 2-pipe systems and 4 for 4-pipe systems. Each model comes in 4 sizes, each with a choice of 5 different nozzle arrangements to provide desired air flow. Terminals may be furred-in or enclosed in optional, decorator-styled cabinets. When you specify 36S terminals, you choose from the best selection of models and capacities in the industry; and you are able to match the equipment to your job requirements more closely than has ever been possible before. Carrier's optimized computer selection assures that the terminals you buy meet the performance and sound criteria you need, without causing additional operating expense or energy waste as a result of improperly sized components.

Since 36S air terminals require no cumbersome ductwork that robs valuable space, building height requirements can be less, an important factor in lowering total building cost. And that's not all — see the section entitled 14 Great Reasons to Choose a Carrier 36S Induction System on the next page!

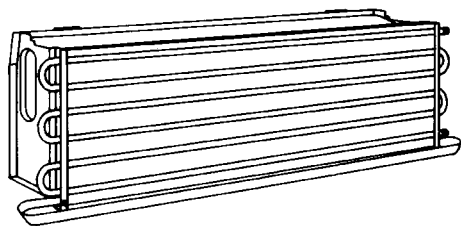
Carrier, the most experienced maker of air terminals, builds the units of the 36S series to exacting standards governing product quality. Units are rated in accordance with the American Refrigeration Institute (ARI) Standard 445-87. And the nationwide Carrier Factory Service team stands behind every 36S terminal. You can't buy a better unit anywhere. If you're going induction, you can't afford not to consider the units of the 36S series.



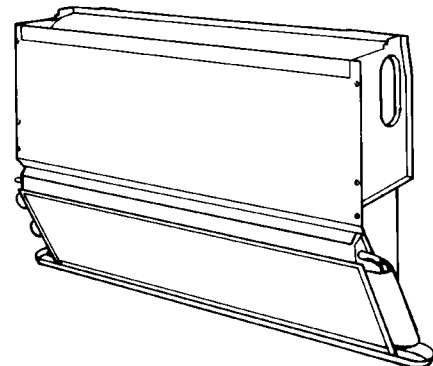
14 Great Reasons to choose a Carrier 36S induction system

- **Heat and Cool from a single terminal** — and you can choose the most economical central station way to heat...hot water, steam, electric.
- **Energy savings with gravity heat** — on vertical units, you can shut down the air distribution system and save fan horsepower. Hot water circulates to maintain the temperature in unoccupied rooms. Simple, economical convector heating.
- **Heat reclaim/energy conservation** — you can easily adapt an economizer cycle along with other reclaim/energy conservation methods such as double-bundle condensers, etc. to a 36S induction system. The system may be 2-pipe or 4-pipe to best match the building's energy needs.
- **Low central station air handling system costs** — you save installation costs by minimizing building service connections for electricity, water, and drainage; you save operating, maintenance, and control costs since you can use high efficiency air cleaning equipment to realize decorating cost savings, while at the same time improving odor and pollen control ...and you can use sprayed-coil dehumidifiers for more effective quality air supply and winter humidification.
- **Automatic actual load adjustment** — system operating costs are not materially affected by the excess capacity of the system. The terminals automatically adjust to actual loads, thus allowing you wide design latitude without paying the penalty of high operating costs.
- **Quiet, reliable operation** — each terminal has a specially designed balancing damper, acoustical plenum insulation, and high efficiency nozzles and coils to ensure reliably quiet operation. And no moving parts.

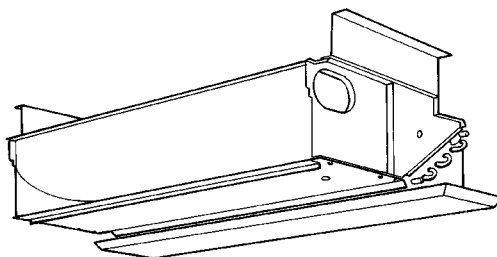
Carrier has the right induction terminal for every 2-pipe system...



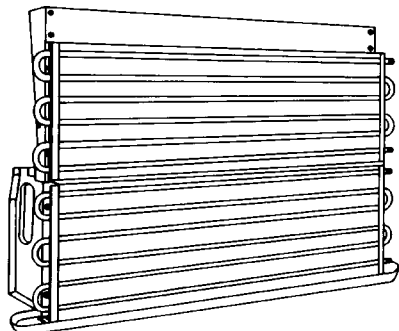
36SL lobby, single coil; measures only a foot high; for applications where the window arrangement calls for a small terminal with high capacity.



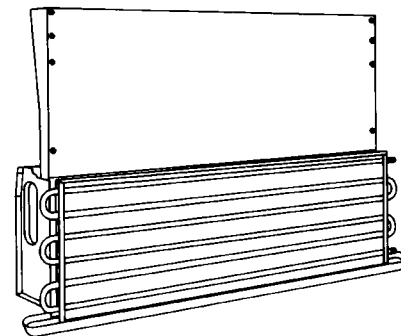
36SV measuring less than 8-in. deep, this standard wall-hung unit is a real space saver.



36SH the standard horizontal unit; ceiling mount to save valuable floor space.



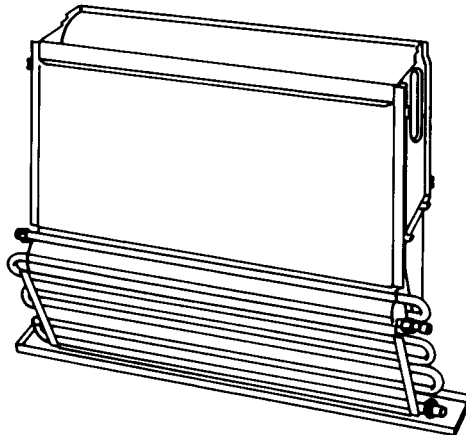
36ST a high-capacity vertical unit with a double-size coil for maximum cooling performance.



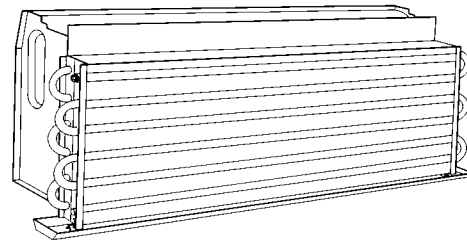
36SC a vertical wall-hung unit with high-efficiency recovery stack; for use in areas where higher capacities are needed.

- **Positive ventilation** — the primary air is always provided with a positive amount of outside ventilation air directly added to every module served by a 36S air terminal.
- **Constant air movement** — the primary air provides continuous air motion and circulation throughout the room.
- **Reliable temperature control** — each room is its own zone. Room occupants can have the temperature as they like it, and the unit responds to individual room requirements.
- **Greater rentable area** — typically, units are wall-hung or may be ceiling mounted so your design can make maximum use of rentable floor area.
- **Reduced floor-to-floor height requirements** — the smaller, high-velocity air ducts used in these systems, along with small water pipes, can mean great savings in the overall height of the building itself.
- **Positive year-round humidity control** — the exterior zone humidity can be easily controlled by dehumidifying the constant air supply in the summer and humidifying during the winter.
- **Complete design flexibility** — the wide range of capacities and models, coupled with the fact the Carrier offers units for both 2- and 4-pipe systems, leaves you an almost unlimited range of cost-trimming, energy saving design options.
- **Mechanical equipment is located remote from the room occupants** — the central system approach removes the sound-generating components from the building occupants. Simplifies equipment selection.

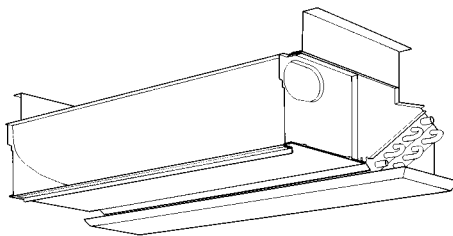
...and every 4-pipe system, too!



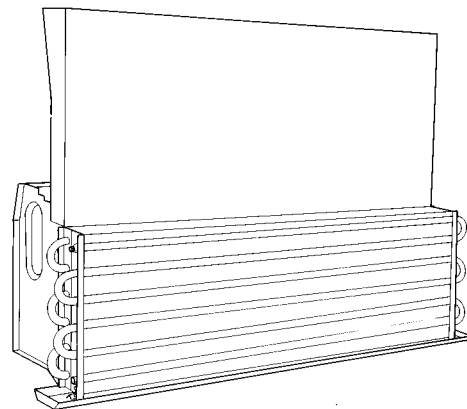
36SD standard vertical wall-hung unit with back-to-back coils.



36SM lobby, double coil unit; small terminal that fits under virtually every window.



36SJ the standard horizontal unit with double coil; may be ceiling mounted to save floor space.



36SP vertical wall-hung unit with high efficiency recovery stack and double coil; use in areas where high capacities are a must.

Going 2-pipe or 4-pipe?

Check the advantages of each system...

Either way, Carrier has the induction terminals you need for your high-rise application

	2-pipe changeover	4-pipe
Best overall performance		X
Lowest operating cost		X
Best heat recovery potential		X
Lowest first cost	X	
Lowest installation cost	X	
Lowest control cost	X	
Lowest primary air required		X

Two-pipe non-changeover systems are less costly than 2-pipe changeover systems. However, the application potential of non-changeover systems is somewhat limited to areas with fairly mild winter design conditions. For this reason, the non-changeover 2-pipe system has been omitted from the cost comparison table.

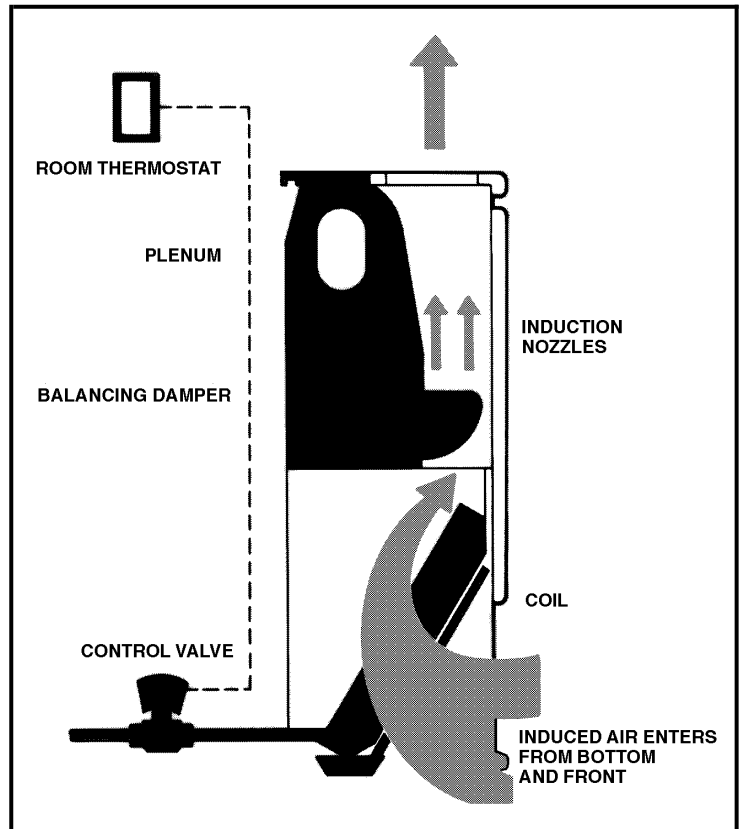
How Water Control Induction Terminals work

A mixture of outdoor and return air is conditioned in the central station air handling apparatus and distributed thru a high-velocity, high-pressure duct system to the terminal unit. Typically, this duct runs up the side of the building, feeding into space-saving narrow take-off ducts on each floor. The conditioned primary air flows into the *unit plenum* and passes thru its *balancing damper* to the *induction nozzles*. This balancing damper can handle up to 3-in. wg pressure drop without adversely affecting the unit's sound power level. The entire plenum is surrounded with acoustical insulation.

As the primary air leaves the nozzles, it induces secondary (room) air thru the unit's coils. Depending on the temperature of the water supplied to the coils, the secondary air will either be cooled or heated. In a 4-pipe system, separate circuits are provided for hot and cold water.

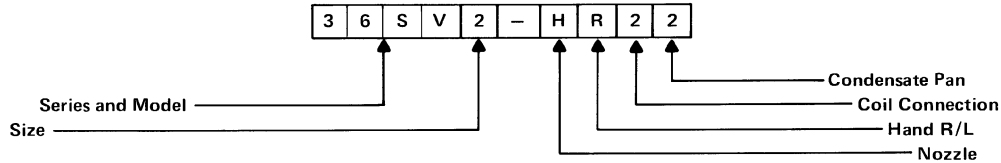
Unit capacity is controlled either manually or by a *room thermostat* which modulates a field-installed *control valve*. The valve, in turn, modulates the water flow thru the coils to maintain the desired room temperature.

Depending on the degree of modular flexibility desired, one thermostat can control one or more units. Also, units may be used to feed air to adjacent units.



Unit designations

Water Control Weathermaster® Air Terminals are designated by series, model, size, nozzles, hand, coil connections, and condensate pan.



Series and Model	36SL 36SC 36ST 36SV 36SH	2-pipe units	Lobby unit Vertical unit with recovery stack Vertical unit with double coil Vertical wall-hung unit Horizontal unit
	36SD 36SP 36SM 36SJ	4-pipe units	Vertical wall-hung unit Vertical unit with recovery stack Lobby unit Horizontal unit
Size	1 2 3 4		Nominal 24-in. unit Nominal 32-in. unit Nominal 40-in. unit Nominal 52-in. unit
Nozzle*	F (Light Grey)		Provides highest coil capacity per cfm of primary air. Used where sensible cooling is high in relation to ventilation requirements.
	G (Red)		Gives performance midway between F and H.
	H (Black)		Provides nominal coil capacity per cfm of primary air. Used for average office buildings with normal lighting loads and glass areas.
	J (Black and Grey Alternate)		Gives performance midway between H and K.
	K (Grey)		Provides highest coil capacity per unit size and highest air quantities. Used for high ventilation and high total loads.
Hand†	R L		Right-hand coil connection when facing unit Left-hand coil connection when facing unit
Coil Connections	0 1 2 3		Standard sweat fittings Sweat fittings with manual air vent Flare fittings Flare fittings with manual air vent
Condensate Pan	0 or 1 2		Standard emergency condensate pan Drainable condensate pan, connections same hand as coil

*Nozzles are designed to optimize the thermal efficiency at minimum sound power generation. They are suitable for handling up to 175 F supply air. Primary air quantity is controlled by the number and diameter of the holes in the nozzle.

†On 4-pipe units, coil hand is determined by the cooling coil which is inside. The heating coil (outside) connections are at the opposite end.

Water control packages are field-supplied.

Unit selection criteria (general)

After room air conditioning loads have been calculated and the primary air quantity determined, the induction air terminals can be selected. To calculate coil loads for the units, the primary air cooling capacity is subtracted from the room load.

Primary air cooling capacity depends upon the exposure and type of system being designed. The air quantity should satisfy the ventilation and dehumidification requirements of the conditioned space as well as other system requirements. These system requirements are discussed in detail in the *Carrier System Design Manual*. Both this manual and the *Engineering Guide for Weathermaster® Induction Systems* should be consulted for a more complete explanation of system requirements.

When an induction air terminal is selected, 2 parameters must be satisfied: the unit must supply the air at an acceptable sound power level and it must have enough unit capacity to maintain the proper room temperature.

SOUND SELECTION GUIDE*
For Various NC Levels and Room Effects

NC LEVEL	ROOM EFFECT † ($L_w - L_p$)	NOZZLE PRESSURE (in. wg)				
		Unit Nozzle Arrangement				
		F	G	H	J	K
30	8 dB	2.4	2.2	2.0	1.8	1.5
35		3.0	2.7	2.5	2.4	2.0
40		3.5	3.5	3.2	3.1	2.6
45		3.5	3.5	3.5	3.5	3.5
30	10 dB	2.6	2.4	2.2	2.1	1.7
35		3.3	3.1	2.9	2.7	2.3
40		3.5	3.5	3.5	3.4	3.0
45		3.5	3.5	3.5	3.5	3.5

*Based upon size 2 units with 1.5 in. wg damper drop.

†For 4000- and 8000-Hz center-band frequencies increased by 1 and 2 dB, respectively, over given value per Carrier Engineering Guide for Sound and Air Conditioned Space and the ASHRAE Guide and Data Books. This literature can also be referred to for NC level recommendations for specific applications. For unit sound power level data, refer to the unit application data literature.

NOTE: Boldface entries are the commonly accepted levels for an office space.

Accessories

Enclosures — decorator-styled factory built cabinets are available for 36S Series Weathermaster® induction air terminals. For details, consult your Carrier representative. Grilles, runouts, choice of colors, and additional enclosure accessories for a column-to-column appearance are also available. Certified prints showing details of the enclosure accessories are available upon request. All unit enclosures must maintain published minimum free areas to ensure unit performance.

Special unit lengths — can be built to accommodate a mullion (dead space), special application, or special requirement and are considered on a special order basis.

Furred-in application accessories for vertical units*

Discharge grille frame — made of stamped steel with a baked prime finish. Holds either the discharge grille with access door or the plastic discharge grille sections.

Discharge grille with access door — also has a baked prime finish made of stamped steel.

Two types of plastic discharge grille sections — aerodynamically designed, modular construction; 4- and 7-blade configurations.

Recirculation grille panel and frame — made of stamped steel, with baked prime finish. Easily removable for service, maintenance.

*Standard color is parchment beige; other colors available on a special order basis.

Base unit accessories

Lint screen — is required to maintain maximum coil efficiency. The galvanized screen and frame attaches to coil with 2 lint screen clips provided with the base unit, protects coil from dirt and lint. Easily removable for cleaning. Sized to each coil or unit requirement. Aluminum screens available on a special-order basis.

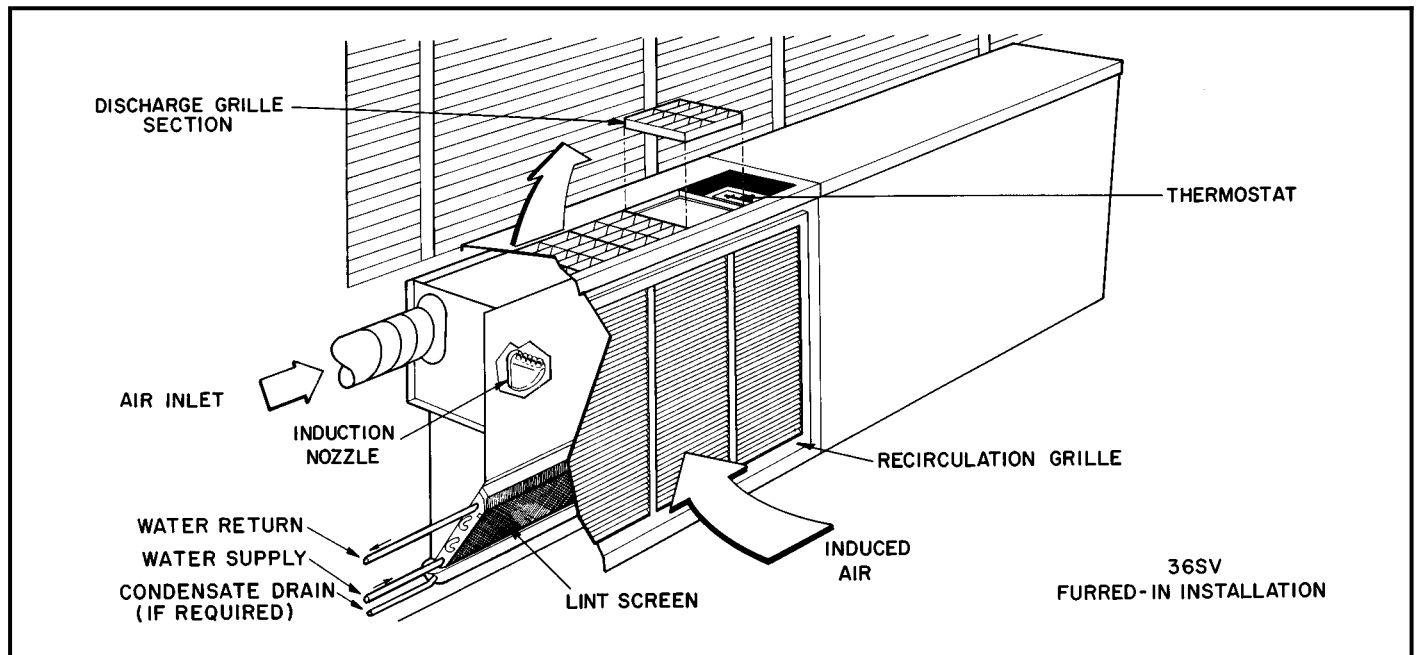
Wall mounting strip — required for hanging all vertical units, enclosures, enclosure accessories. For details, consult your Carrier representative.

Emergency condensate pan — available for times of high latent loads, such as start-up or abnormal condition. The optional drainable pan has 5/8-in. ODF sweat connection and is available for all models and sizes.

Air transition fitting — provides air transition from the oval entrance on the unit to a standard 4-in. round duct. Maximum air quantity is 220 cfm.

Coil connections — four types of coil connections available: 1/2-in. ODF sweat connections are supplied standard. Optional connections: 1/2-in. ODF sweat with manual air vent; 1/2-in. ODM flare; 1/2-in. ODM flare with manual air vent.

Typical installation



Manual unit selection (example)

Cooling — The cooling capacity of the induction unit is determined by the combined secondary coil and primary air cooling capacities at design conditions. In 4-pipe applications, the heating coil is assumed to be neutral for selection purposes.

1. Determine job requirements.

Given:

Type of unit	36SV
Total room sensible cooling load	5645 Btuh
Design room temperature (t_{rm})	76 F
Entering primary air temperature (t_{pa})	56 F
Minimum primary air quantity	60 cfm
Entering water temperature	52 F
Maximum desired room sound level ($L_w - L_p$) and NC	8 and 35

2. Determine required primary air capacity. Subtract this capacity from total cooling load to determine required coil capacity.

Since the room temperature minus the primary air temperature (76 F – 56 F) is 20 F Δt , use the 36SV Cooling Coil Capacities table directly to read the capacity for 60 cfm of primary air:

Primary air capacity at 60 cfm = 1296 Btuh
 Required coil capacity = 5645 – 1296 = 4349 Btuh

Since the room temperature minus the entering water temperature (76 F – 52 F) is 24 F and the Cooling Coil Capacities table is based upon 25 F temperature difference, the required coil capacity must be corrected for the 24 F temperature difference.

Use formula:

$$\text{Corrected coil capacity} = \frac{25}{24} \times 4349 = 4523 \text{ Btuh}$$

3. Determine unit size, water flow nozzle arrangement, and nozzle pressure.

Enter the 36SV Cooling Coil Capacities table at 60 cfm. Select a size 2H unit with a rated coil capacity 4469 Btuh. Since rated unit capacity is below that required, more than the table base 1.50 gpm is required. Coil Capacity Multipliers For Flow Rates table must be used. Required capacity must be divided by unit rating at 1.50 gpm to obtain a factor for use with this table.

$$\text{Factor} = \frac{4523}{4469} = 1.01$$

The table indicates that a flow rate of 1.60 gpm will be necessary to obtain the required capacity. Nozzle pressure is 2.11 in. wg.

4. Select unit size to meet sound level requirements specified. Refer to Sound Selection Guide table. Verify that nozzle pressure of selected unit is acceptable from a sound standpoint. Since maximum desired room sound level at ($L_w - L_p$) and NC is 8 and 35, an H nozzle arrangement has a maximum allowable nozzle pressure of 2.50 in. wg. Selected unit will be satisfactory.

5. Final selection, therefore, is a 36SV-2H unit.

Heating — The total heating load required is the combined room heating load (transmission) and the load required to temper the primary air to room temperature (primary air heating load). In 4-pipe applications, assume the cooling coil is neutral.

1. Determine job requirements for unit selected.

Given:

Room heating load (transmission)	5200 Btuh
Design room temperature (t_{rm})	76 F
Design primary air temperature (t_{pa})	50 F
Primary air quantity	60 cfm
Entering water flow	1.60 gpm
Unit selected for cooling	36SV-2H

2. Determine primary air heating load. Use formula:

$$\text{Primary air heating load (Btuh)} = \text{cfm} \times 1.08 \times (t_{rm} - t_{pa})$$

$$\text{Primary air heating load} = 60 \times 1.08 \times (76 - 50)$$

$$\text{Primary air heating load} = 1685 \text{ Btuh}$$

3. Determine total unit heating load. Use formula:

$$\text{Unit heating load (Btuh)} = \text{primary air heating load} + \text{room heating load}$$

$$\text{Unit heating load} = 1685 + 5200$$

$$\text{Unit heating load} = 6885 \text{ Btuh}$$

4. Determine entering water temperature required to meet required total heating load. Use formulas:

$$\text{Total heating load} = \left(\frac{t_{ew} - t_{rm}}{25} \right) \times \text{corr coil rating at 25 F } \Delta t$$

$$t_{ew} = t_{rm} + \left(\frac{\text{total heating load}}{\text{corr coil rating at 25 F } \Delta t} \right) \times 25$$

$$t_{ew} = 76 + \frac{6885}{4469} \times 25 = 114.5 \text{ F}$$

Gravity heating

1. Determine job requirements.

Given:

Gravity heating load	3500 Btuh
Design room temperature (during shutdown) . . .	60 F

2. Adjust load to coil water flow rate. Since the Gravity Heating Capacities table is based upon 1.50 gpm and the coil has a gpm of 1.60, the load must be adjusted to an equivalent 1.50 gpm to use the table. Use the following formula:

$$\text{Corrected heating load} = \frac{\text{actual heating load}}{\text{correction factor}}$$

$$\text{Corrected heating load} = \frac{3500}{1.03} = 3400$$

3. Determine entering water temperature required to meet required gravity heating load. From the 36SV Gravity Heating Capacities table, read the temperature difference for the selected unit at the required capacity. By interpolation, the temperature difference for a 36SV-2H unit with a gravity heating capacity of 3400 Btuh is 93.6 F. Use formula:

$$t_{ew} = \text{temperature difference} + \text{design room temperature}$$

$$t_{ew} = 93.6 + 60 = 153.6 \text{ F}$$

Performance data

36S SERIES COIL CAPACITY MULTIPLIERS FOR FLOW RATES

GPM	NOZZLE ARRANGEMENT																			
	F				G				H				J				K			
	Unit Size																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
0.6	0.91	0.90	0.85	0.82	0.88	0.85	0.82	0.79	0.85	0.84	0.80	0.77	0.83	0.82	0.78	0.76	0.84	0.82	0.78	0.76
0.8	0.94	0.92	0.90	0.88	0.91	0.89	0.86	0.84	0.90	0.88	0.85	0.83	0.87	0.85	0.83	0.81	0.89	0.86	0.83	0.80
1.0	0.96	0.95	0.94	0.93	0.95	0.93	0.92	0.91	0.94	0.93	0.91	0.90	0.93	0.92	0.90	0.89	0.93	0.92	0.90	0.88
1.2	0.98	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.97	0.96	0.96	0.95	0.96	0.96	0.95	0.94	0.96	0.96	0.95	0.94
1.4	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.99	0.99	0.99	0.98
1.5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.6	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02
1.8	1.02	1.02	1.02	1.03	1.02	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.03	1.03	1.04	1.04	1.03	1.03	1.04	1.04
2.0	1.03	1.03	1.04	1.04	1.04	1.04	1.05	1.05	1.04	1.05	1.05	1.06	1.04	1.05	1.06	1.06	1.04	1.05	1.06	1.07
2.2	1.04	1.05	1.05	1.06	1.04	1.05	1.06	1.06	1.05	1.06	1.07	1.07	1.05	1.06	1.07	1.08	1.05	1.06	1.07	1.08

NOTE: For capacities at other than 1.50 gpm, multiply capacities from Cooling Coil Capacities table by above multipliers.

COIL WATER PRESSURE DROP (ft water)

GPM									
0.60	0.80	1.00	1.20	1.40	1.50	1.60	1.80	2.00	2.20
1.60	2.70	3.90	5.40	7.20	8.00	9.00	11.00	13.40	15.70

NOTE: Table shows single coil pressure drops, all units, except 36ST. For 36ST at the same gpm, multiply above values by 2.

APPROXIMATE UNIT OPERATING WEIGHTS (lbs)

MODEL 36	UNIT SIZE			
	1	2	3	4
SL	18	23	28	35
SC	29	37	45	58
ST	32	40	49	63
SV	28	37	43	54
SH	33	42	49	61
SM	23	28	35	44
SP	34	42	52	67
SD	34	44	52	66
SJ	38	48	56	70

NOTE: Weights include water in the coil but do not include field-supplied control valve packages.

ACCESSORY LINT SCREENS (in.)*

LOCATION	UNIT SIZE				36 - UNIT TYPE
	1	2	3	4	
Directly On Coil	25 $\frac{1}{8}$ x 10	33 x 10	41 x 10	53 x 10	All Models
Over Return Air Grille	x 11 $\frac{1}{2}$	43 x 11 $\frac{1}{2}$	51 x 11 $\frac{1}{2}$	63 x 11 $\frac{1}{2}$	SH, SJ only

*14 x 18 mesh; 1/2 in. thick.

STANDARD RATINGS

SIZE AND NOZZLE	PRIMARY AIR FLOW (Cfm)	COOLING CAPACITY (Btuh)						
		36SV,SH	36SL	36SC	36ST	36SD,SJ	36SM	36SP
1F	19.4	1960	2060	2510	2720	1770	1940	2360
2F	25.3	2600	2730	3330	3600	2340	2570	3130
3F	31.1	3290	3460	4220	4570	2960	3250	3970
4F	40.8	4210	4430	5390	5840	3790	4160	5070
1G	27.2	2570	2650	3180	3500	2320	2440	2930
2G	35.4	3370	3450	4140	4550	3030	3170	3810
3G	43.5	4220	4330	5180	5710	3800	3980	4770
4G	57.1	5330	5460	6550	7210	4800	5020	6030
1H	38.9	3090	3090	3650	4080	2790	2780	3290
2H	50.5	4030	4030	4740	5310	3620	3630	4270
3H	62.2	5010	5010	5910	6620	4510	4510	5320
4H	81.6	6330	6330	7460	8350	5700	5700	6710
1J	50.8	3380	3290	3780	4340	3040	2900	3330
2J	64.9	4350	4240	4870	5590	3910	3730	4290
3J	81.3	5380	5230	6000	6890	4840	4600	5280
4J	105.5	6730	6560	7550	8660	6050	5770	6640
1K	62.8	3590	3410	3850	4500	3230	2900	3270
2K	81.6	4610	4370	4930	5770	4150	3710	4190
3K	100.5	5680	5380	6070	7100	5110	4570	5160
4K	131.9	7100	6740	7610	8900	6390	5730	6470

36SL,SC,SV,SH

APPROXIMATE COIL WATER QUANTITIES

UNIT SIZE	1	2	3	4
GALLONS	0.13	0.17	0.21	0.26
LBS	1.10	1.40	1.70	2.20

NOTE: For 36ST, SM, SP, SJ, and SD values, double the values shown in the table.

Units are rated in accordance with ARI Standard 445-87, under the following conditions: 1.5 gpm of 50 F water, 8-ft water pressure drop thru coil (16-ft for 36ST), 75 F db and 57 F wb air entering coil, 1.5 in. wg nozzle static pressure.

36SL loby unit (2-pipe)

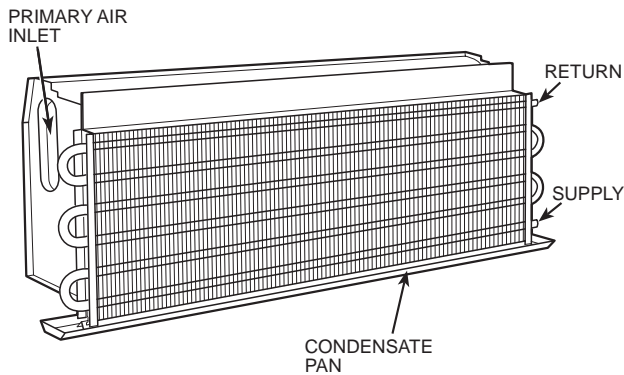
The 36SL in its standard enclosure measures only about 12 inches high and 10 inches deep. The base unit is shipped from the factory with the following:

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **drain pan**, assembled ready for wall mounting
- **removable plenum end plug**, located in one of the primary air inlets

- **two lint screen clips**, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil.
- **speed nuts**, located in the back flange on each end of the plenum for leveling the unit with field-supplied 10–24 bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



BASE RIGHT-HAND UNIT

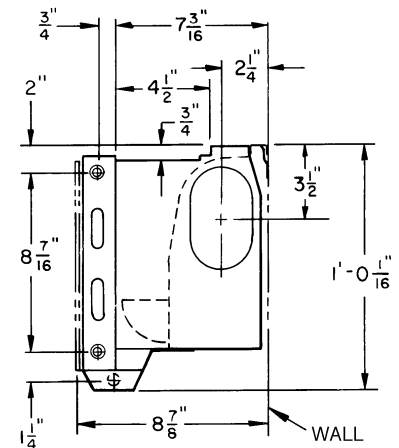
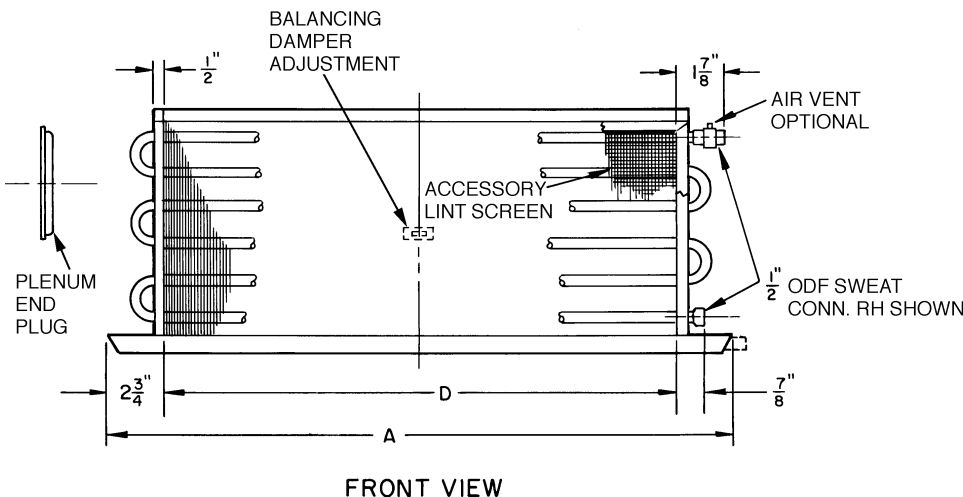
GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	3780	3150	2550	1955	1385
2	5040	4200	3400	2605	1845
3	6300	5250	4255	3260	2310
4	8190	6825	5530	4235	3000

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE		1	2	3	4
Dimensions (in.)	A	29½	37½	45½	57½
	D	24⅞	32	40	52
Minimum Free Areas (sq in.)	Discharge Grille	81	108	135	175
	Recirculation Grille	124	165	206	269

This is not a certified print. Certified dimensions available upon request.



Performance data

36SL COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																			
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89																			
20	432	1.59	0.94			0.81															
25	540	2.48	1.47	0.97		1.26	0.74														
30	648	3.57	2.11	1.39		1.82	1.07	0.71		0.89											
35	756	3125	2.88	1.90	1.10	2.48	1.46	0.97		1.21	0.71										
40	864		3.76	2.48	1.44	3.24	1.91	1.26	0.73	1.58	0.94				0.92						
45	972		3.14	1.82		2.42	1.60	0.93	2.01	1.19	0.78		1.17	0.72							
50	1080		3.88	2.25		2.99	1.97	1.14	2.48	1.46	0.96	0.56	1.45	0.89					0.95		
55	1188		5326	5299		4390	4687	4968	3617	3993	4300	4612	3241	3673					3011		
60	1296			2.72		3.62	2.39	1.39	3.00	1.77	1.17	0.68	1.75	1.07	0.68				3161		
65	1405			3.24			2.85	1.65	3.57	2.11	1.39	0.81	2.09	1.28	0.81				1.36	0.81	
70	1512			6304			5308	5626	4048	4469	4812	5162	3582	4060	4387				3305	3742	
75	1620			3.80			3.34	1.94		2.48	1.63	0.95	2.45	1.50	0.95				3444	3898	
80	1730			6804			3.88	2.25		2.87	1.90	1.10	2.84	1.74	1.11				3444	3898	
85	1838						5897	6250		4915	5293	5677	3899	4419	4775				1.86	1.10	0.72
90	1942							2.58		3.30	2.18	1.26	3.26	2.00	1.27	0.75	2.13	1.26	0.83		
95	2055							6552		5128	5523	5924	4050	4590	4959	5446	3706	4195	4609		
100	2160							6847		3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43	1.44	0.95		
105	2265							6847		5337	5747	6164	4196	4756	5138	5643	3830	4336	4764		
110	2375										2.80	1.62		2.57	1.63	0.97	2.74	1.62	1.07		
115	2482										3.32	2.18		2.88	1.83	1.09	3.08	1.82	1.20	0.69	
120	2590										3.72	2.53		3.14	1.82	1.21	3.43	2.03	1.34	0.77	
125	2700										7136	6399		3.50	2.03	1.21	3.43	2.03	1.34	0.77	
130	2810										7419	6629		3.87	2.25	1.34	3.80	2.25	1.48	0.86	
135	2918											6596		3.92	2.48	1.48	4.295	2.48	1.63	0.95	
140	3022													2.48	1.63	0.97	4.295	2.48	1.63	0.95	
145	3130													2.72	1.79	1.04	5.523	2.72	1.79	1.04	
150	3240													2.97	1.96	1.14		2.97	1.96	1.14	
155	3350													3.24	2.13	1.24		3.24	2.13	1.24	
160	3460													3.51	2.32	1.34		3.51	2.32	1.34	
165	3565													8119	5988	6594		5451	5988	6594	
170	3675													3.80	2.51	1.45		3.80	2.51	1.45	
														8317	6710	7369		5561	6110	6728	
																2.45			2.70	1.57	
																7523			6229	6859	
																2.64			2.91	1.69	
																7675			6346	6988	
																2.83			3.12	1.81	
																7824			6462	7115	
																3.03			3.34	1.94	
																7972			6575	7240	
																3.23			3.56	2.07	
																8116			6686	7363	
																3.44			3.80	2.20	
																8259			6796	7483	
																3.66				2.34	
																8400				7602	
																3.89				2.49	
																8539				7719	

Boldface italics indicate nozzle pressure (in. wg).
 Ratings based on:
 25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes)
 Δt = t_{rm} - t_{ew}
 where, t_{rm} = room temperature
 t_{ew} = ent water temperature
 All ratings include allowance for lint screen.

- NOTES:
1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$
 2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.
 3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

36SC vertical unit with recovery stack (2-pipe)

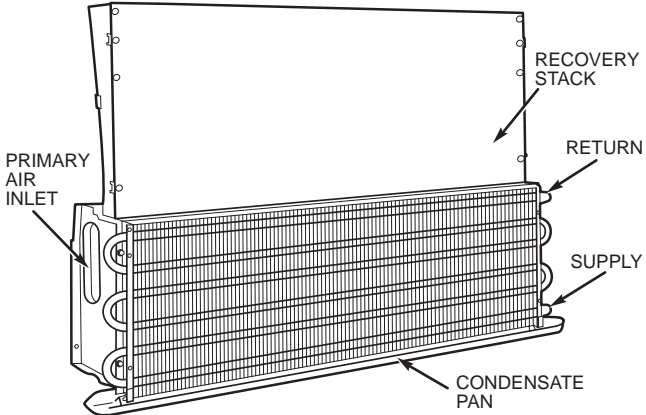
The 36SC in its standard enclosure measures 25 inches high and 10 inches deep. The base unit is the standard 36SL with an added recovery stack. The stack increases unit coil capacity with reduced sound power levels. The unit is shipped from the factory with the following:

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **recovery stack and drain pan**, assembled ready for wall mounting

- **removable plenum end plug**, located in one of the primary air inlets
- **two lint screen clips**, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil.
- **speed nuts**, located in the back flange on each end of the plenum with two 10–24 bolts for leveling the unit.

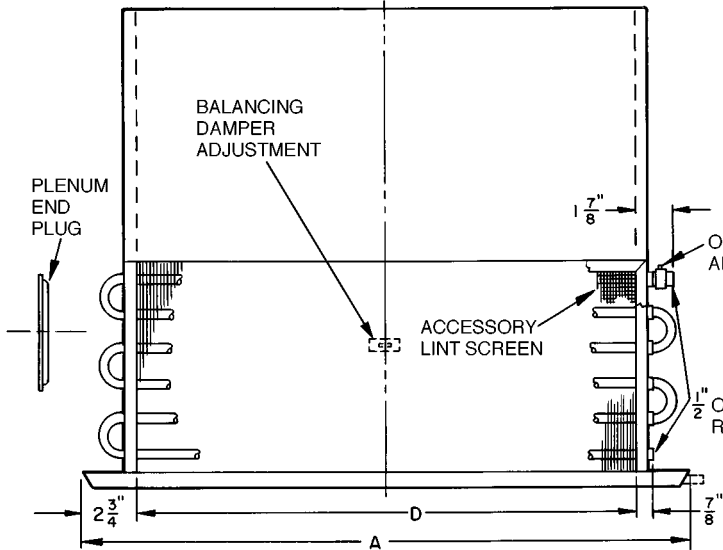
The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



BASE RIGHT-HAND UNIT

This is not a certified print. Certified dimensions available upon request.



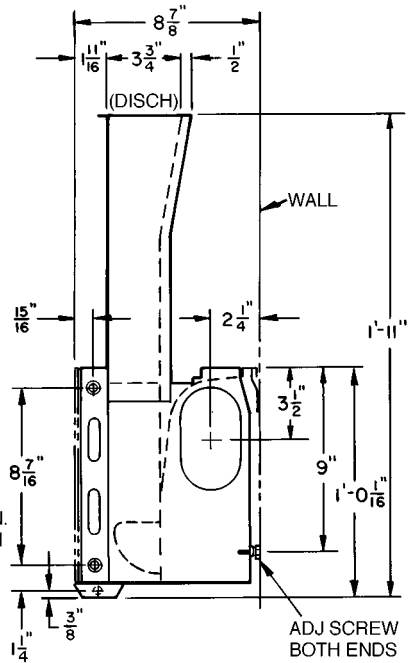
FRONT VIEW

GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	5555	4630	3750	2875	2035
2	7410	6175	5000	3830	2715
3	9260	7715	6250	4790	3395
4	12,035	10,030	8125	6225	4410

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE		1	2	3	4
Dimensions (in.)	A	29½	37½	45½	57½
	D	24⅞	32	40	52
Minimum Free Areas (sq in.)	Discharge Grille	81	108	135	175
	Recirculation Grille	237	315	394	512



RIGHT SIDE VIEW

Performance data

36SC COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																			
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89 1969																			
20	432	1.59 2591	0.94 2665			0.81 2581															
25	540	2.48 3204	1.47 3297	0.97 3357		1.26 3005	0.74 3283														
30	648	3.57 3812	2.11 3922	1.39 3994		1.82 3404	1.07 3718	0.71 3970		0.89 3114											
35	756		2.88 4543	1.90 4626	1.10 4602	2.48 3781	1.46 4130	0.97 4410		1.21 3425	0.71 3781										
40	864		3.76 5159	2.48 5254	1.44 5226	3.24 4142	1.91 4524	1.26 4831	0.73 5120	1.58 3719	0.94 4106			0.92 3296							
45	972			3.14 5878	1.82 5847		2.42 4902	1.60 5235	0.93 5548	2.01 4000	1.19 4415	0.78 4755		1.17 3516	0.72 3986						
50	1080			3.88 6498	2.25 6465		2.99 5268	1.97 5625	1.14 5962	2.48 4268	1.46 4712	0.96 5075	0.56 5443	1.45 3726	0.89 4223					0.95 3404	
55	1188				2.72 7079		3.62 5622	2.39 6003	1.39 6363	3.00 4527	1.77 4997	1.17 5382	0.68 5772	1.75 3926	1.07 4450	0.68 4808				1.15 3574	
60	1296				3.24 7691			2.85 6370	1.65 6752	3.57 4777	2.11 5273	1.39 5679	0.81 6091	2.09 4119	1.28 4668	0.81 5044				1.36 3737	0.81 4230
65	1405				3.80 8301			3.34 6728	1.94 7131		2.48 5540	1.63 5966	0.95 6399	2.45 4304	1.50 4878	0.95 5271				1.60 3893	0.95 4407
70	1512							3.88 7077	2.25 7501		2.87 5799	1.90 6246	1.10 6699	2.84 4483	1.74 5081	1.11 5490				1.86 4044	1.10 4578
75	1620								2.58 7862		3.30 6051	2.18 6517	1.26 6990	3.26 4656	2.00 5278	1.27 5702	0.75 6262			2.13 4190	1.26 4743
80	1730								2.94 8216		3.76 6297	2.48 6782	1.44 7274	3.71 4824	2.27 5468	1.45 5908	0.86 6488			2.43 4331	1.44 4902
85	1838								3.32 8563			2.80 7040	1.62 7551		2.57 5653	1.63 6108	0.97 6708			2.74 4467	1.62 5057
90	1942								3.72 8903			3.14 7293	1.82 7822		2.88 5834	1.83 6303	1.09 6922			3.08 4600	1.82 5207
95	2055											3.50 7541	2.03 8088		3.21 6010	1.21 6493	3.43 7131			2.03 4729	
100	2160											3.87 7783	2.25 8348		3.56 6182	2.26 6679	1.34 7334			3.80 4855	2.25 5496
105	2265											2.48 8603			3.92 6350	2.50 6860	1.48 7534			2.48 5635	1.63 6191
110	2375											2.72 8853			2.74 7038	1.63 7729			2.72 5771	1.79 6341	1.04 6982
115	2482											2.97 9100			2.99 7212	1.78 7920			2.97 5904	1.96 6487	1.14 7143
120	2590											3.24 9342			3.26 7383	1.94 8107			3.24 6035	2.13 6630	1.24 7300
125	2700											3.51 9580			3.54 7550	2.10 8291			3.51 6162	2.32 6770	1.34 7455
130	2810											3.80 9815			3.83 7715	2.27 8472			3.80 6287	2.51 6907	1.45 7606
135	2918														2.45 8650				2.70 7042	1.57 7755	
140	3022														2.64 8824				2.91 7175	1.69 7901	
145	3130														2.83 8996				3.12 7305	1.81 8044	
150	3240														3.03 9165				3.34 7433	1.94 8185	
155	3350														3.23 9332				3.56 7559	2.07 8324	
160	3460														3.44 9496				3.80 7683	2.20 8460	
165	3565														3.66 9658					2.34 8595	
170	3675														3.89 9818					2.49 8727	

NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at } 25 \text{ F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

36ST vertical high-capacity unit (2-pipe)

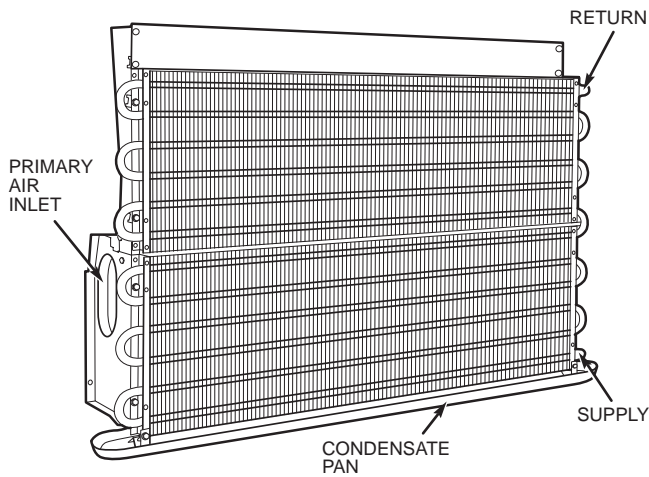
The 36ST in its standard enclosure measures 25 inches high and 10 inches deep. This unit provides the highest capacity per cfm of primary air of any model. It is shipped from the factory with the following:

- **plenum**
- **one 12-tube coil**, with copper tubes and aluminum fins
- **recovery stack and drain pan**, assembled and ready for wall mounting

- **removable plenum end plug**, located in one of the primary air inlets.
- **four lint screen clips**, taped to the bottom of the drain pan, to attach two accessory lint screens to the coil.
- **speed nuts**, located on the back flange on each end of the plenum, with 10–24 bolts for leveling the unit.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. Two accessory lint screens and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



BASE RIGHT-HAND UNIT

GRAVITY HEATING CAPACITIES (Btuh)

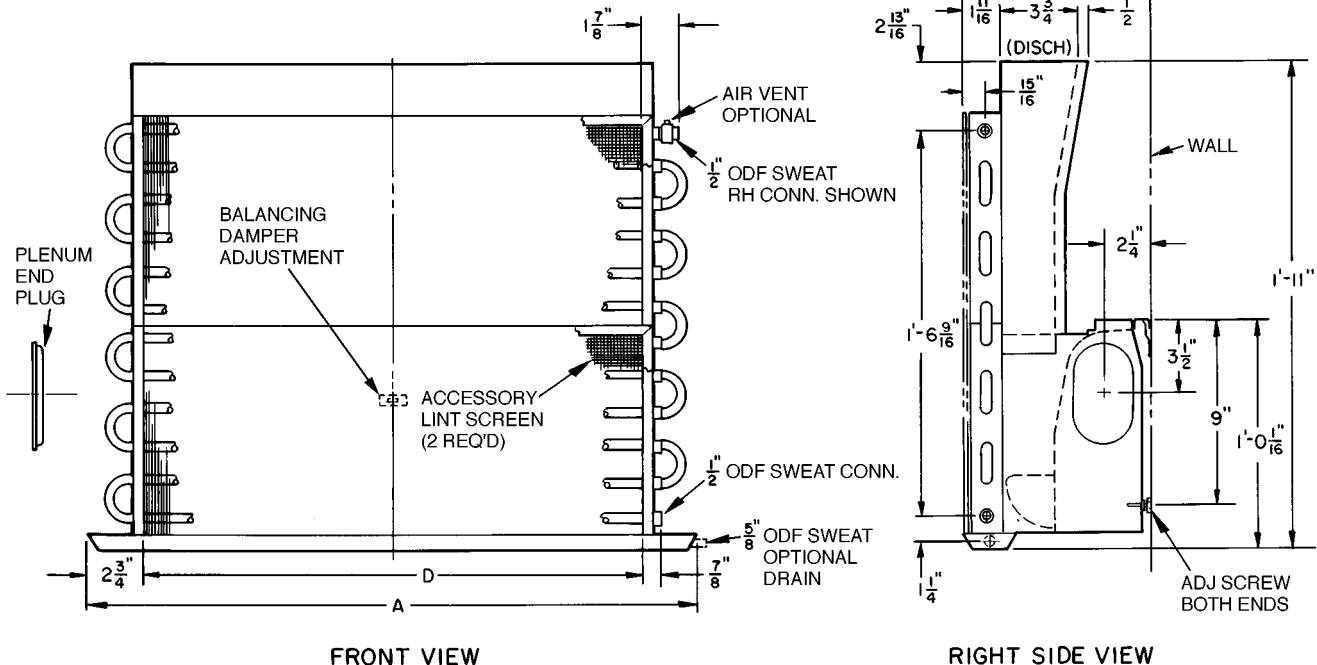
UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	7080	5900	4780	3660	2595
2	9440	7865	6370	4880	3460
3	11,800	9835	7970	6105	4325
4	15,340	12,785	10,360	7935	5620

NOTE:

For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE		1	2	3	4
Dimensions (in.)	A	29½	37½	45½	57½
	D	24⅞	32	40	52
Minimum Free Areas (sq in.)					
Discharge Grille		81	108	135	175
Recirculation Grille		473	630	788	1023

This is not a certified print. Certified dimensions available upon request.



Performance data

36ST COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																					
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K					
		Unit Size																					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
15	324	0.89 2131																					
20	432	1.59 2803	0.94 2884			0.81 2839																	
25	540	2.48 3467	1.47 3567	0.97 3632		1.26 3306	0.74 3611																
30	648	3.57 4125	2.11 4244	1.39 4321		1.82 3744	1.07 4089	0.71 4367		0.89 3484													
35	756		2.88 4915	1.90 5005	1.10 4979	2.48 4159	1.46 4543	0.97 4851		1.21 3831	0.71 4230												
40	864		3.76 5582	2.48 5684	1.44 5655	3.24 4556	1.91 4976	1.26 5314	0.73 5632	1.58 4160	0.94 4593			0.92 3784									
45	972			3.14 6359	1.82 6326		2.42 5393	1.60 5758	0.93 6103	2.01 4474	1.19 4939	0.78 5319		1.17 4037	0.72 4576					0.95 3974			
50	1080			3.88 7031	2.25 6995		2.99 5795	1.97 6188	1.14 6558	2.48 4775	1.46 5271	0.96 5677	0.56 6088	1.45 4278	0.89 4849					1.15 4173			
55	1188				2.72 7660		3.62 6184	2.39 6603	1.39 6999	3.00 5064	1.77 5590	1.17 6021	0.68 6457	1.75 4508	1.07 5109	0.68 5520							
60	1296				3.24 8332			2.85 7007	1.65 7427	3.57 5343	2.11 5899	1.39 6353	0.81 6813	2.09 4729	1.28 5360	0.81 5791					1.36 4363	0.81 4939	
65	1405				3.80 8981			3.34 7400	1.94 7844		2.48 6197	1.63 6674	0.95 7158	2.45 4941	1.50 5601	0.95 6051					1.60 4546	0.95 5146	
70	1512							3.88 7784	2.25 8251		2.87 6487	1.90 6987	1.10 7493	2.84 5147	1.74 5834	1.11 6303					1.86 4722	1.10 5345	0.72 5873
75	1620								2.58 8648		3.30 6769	2.18 7290	1.26 7819	3.26 5346	2.00 6059	1.27 6546	0.75 7189				2.13 4892	1.26 5538	0.83 6084
80	1730								2.94 9038		3.76 7045	2.48 7587	1.44 8137	3.71 5539	2.27 6278	1.45 6783	0.86 7449				2.43 5056	1.44 5724	0.95 6289
85	1838								3.32 9419			2.80 7876	1.62 8447		2.57 6491	1.63 7012	0.97 7701	2.74 5216	1.62 5905	1.07 6487			
90	1942								3.71 9794			3.14 8159	1.82 8750		2.88 6698	1.83 7236	1.09 7947	3.08 5371	1.82 6080	1.20 6680	0.69 7356		
95	2055											3.50 8435	2.03 9047		3.21 6900	2.04 7455	1.21 8187	3.43 5522	2.03 6251	1.34 6868	0.77 7562		
100	2160											3.87 8707	2.25 9338		3.56 7097	2.26 7668	1.34 8421	3.80 5669	2.25 6417	1.48 7050	0.86 7764		
105	2265											2.48 9624			3.92 7290	2.50 7876	1.48 8649		2.48 6580	1.63 7229	0.95 7960		
110	2375											2.72 9904			2.74 8080	1.63 8873		2.72 6739	1.79 7403	1.04 8152			
115	2482											2.97 10179			2.99 8280	1.78 9093		2.97 6894	1.96 7574	1.14 8340			
120	2590											3.24 10450			3.26 8476	1.94 9308		3.24 7046	2.13 7741	1.24 8524			
125	2700											3.51 10717			3.54 8668	2.10 9519		3.51 7195	2.32 7905	1.34 8704			
130	2810											3.80 10979			3.83 8857	2.27 9727		3.80 7341	2.51 8065	1.45 8881			
135	2918																				2.70 8223	1.57 9054	
140	3022																				2.91 8377	1.69 9225	
145	3130																				3.12 8529	1.81 9392	
150	3240																				3.34 8679	1.94 9557	
155	3350																				3.56 8826	2.07 9719	
160	3460																				3.80 8971	2.20 9878	
165	3565																					2.34 10035	
170	3675																					2.49 10190	

Boldface italics indicate nozzle pressure (in. wg)

Ratings based on:

25 Δt, 1.50 gpm, 16-ft water coil pressure drop (all sizes)

Δt = t_{rm} - t_{ew}

where, t_{rm} = room temperature

t_{ew} = ent water temperature

All ratings include allowance for lint screen.

NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

36SV standard vertical unit (2-pipe)

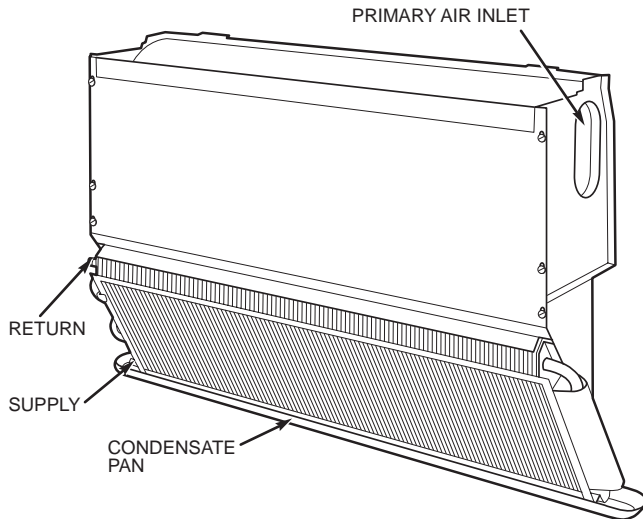
The 36SV in its standard enclosure measures 22 inches high and 8 inches deep. The unit is shipped from the factory with the following:

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **drain pan**, assembled ready for wall mounting
- **removable plenum end plug**, located in one of the primary air inlets

- **two lint screen clips**, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil.
- **speed nuts**, located in the back flange on each end of the plenum for leveling the unit with 10–24 field-supplied bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



GRAVITY HEATING CAPACITIES (Btuh)

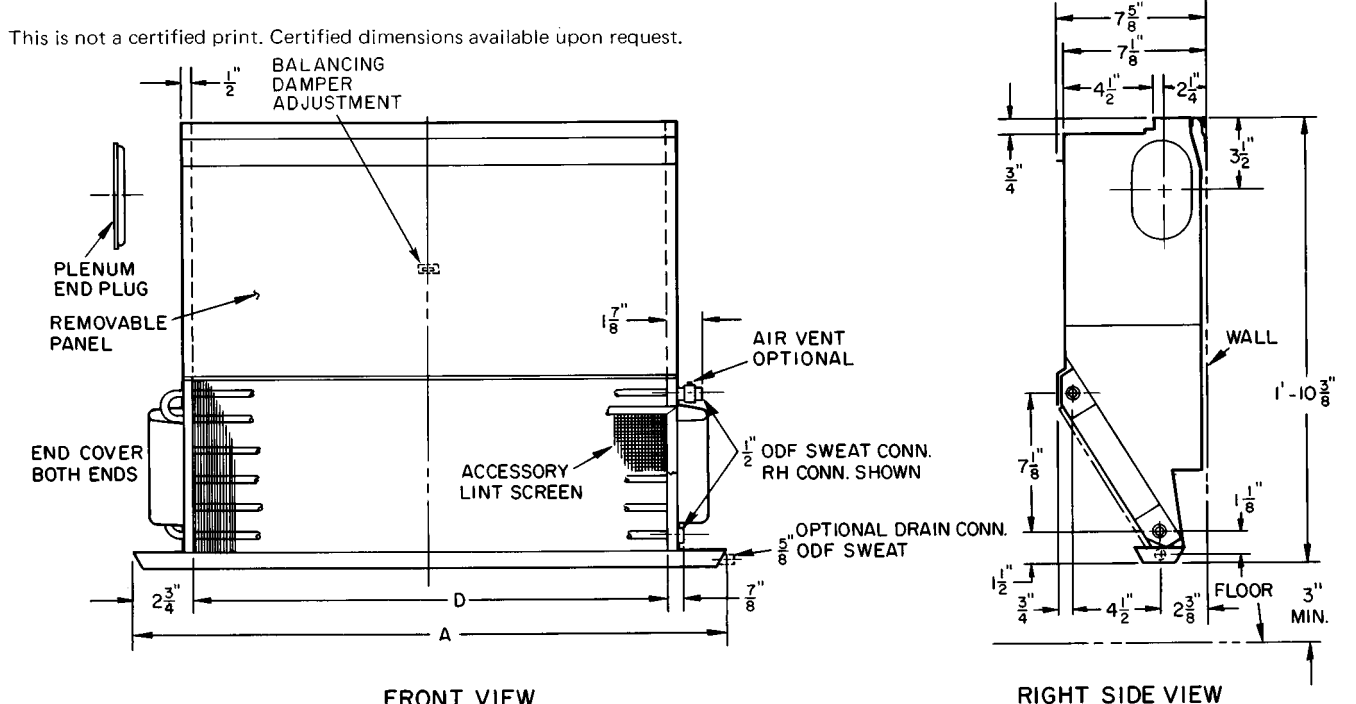
UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	4080	3400	2755	2110	1495
2	5440	4535	3675	2815	1995
3	6800	5665	4590	3515	2495
4	8840	7365	5965	4570	3240

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
Dimensions (in.)				
A	29½	37½	45½	57½
D	24½	32	40	52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	234	288	343	439

BASE LEFT-HAND UNIT

This is not a certified print. Certified dimensions available upon request.



FRONT VIEW

RIGHT SIDE VIEW

Performance data

36SV COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																				
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K				
		Unit Size																				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
15	324	0.89																				
		1537																				
20	432	1.59	0.94			0.81																
		2022	2080			2098																
25	540	2.48	1.47	0.97		1.26	0.74															
		2501	2573	2620		2443	2669															
30	648	3.57	2.11	1.39		1.82	1.07	0.71		0.89												
		2976	3062	3118		2767	3022	3227		2639												
35	756		2.88	1.90	1.10	2.48	1.46	0.97		1.21	0.71											
			3546	3611	3592	3074	3357	3585		2902	3204											
40	864		3.76	2.48	1.44	3.24	1.91	1.26	0.73	1.58	0.94				0.92							
			4028	4101	4080	3367	3678	3927	4163	3152	3479				2940							
45	972			3.14	1.82		2.42	1.60	0.93	2.01	1.19	0.78		1.17	0.72							
				4588	4564		3986	4256	4511	3389	3742	4030		3137	3555							
50	1080			3.88	2.25		2.99	1.97	1.14	2.48	1.46	0.96	0.56	1.45	0.89				0.95			
				5073	5046		4283	4573	4847	3617	3993	4300	4612	3324	3767				3169			
55	1188				2.72		3.62	2.39	1.39	3.00	1.77	1.17	0.68	1.75	1.07	0.68			1.15			
					5526		4570	4880	5173	3836	4235	4561	4892	3503	3970	4289			3328			
60	1296				3.24			2.85	1.65	3.57	2.11	1.39	0.81	2.09	1.28	0.81			1.36	0.81		
					6004			5179	5489	4048	4469	4812	5162	3674	4164	4499			3479	3939		
65	1405							3.34	1.94		2.48	1.63	0.95	2.45	1.50	0.95			1.60	0.95		
								5470	5797		4695	5056	5423	3839	4352	4702			3625	4104		
70	1512							2.25	2.87	1.90	1.10	2.84	1.74	1.11				1.86	1.10	0.72		
								6098	4915	5293	5677	3999	4533	4897				3765	4263	4683		
75	1620							2.58	3.30	2.18	1.26	3.26	2.00	1.27	0.75	2.13	1.26	0.83				
								6392	5128	5523	5924	4154	4708	5086	5586	3901	4416	4852				
80	1730							2.94	3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43	1.44	0.95				
								6680	5337	5747	6164	4304	4878	5270	5788	4032	4564	5015				
85	1838								3.32			2.80	1.62		2.57	1.63	0.97	2.74	1.62	1.07		
									6962			5966	6399		5043	5449	5984	4159	4709	5173		
90	1942											3.14	1.82		2.88	1.83	1.09	3.08	1.82	1.20	0.69	
												6181	6629		5204	5622	6175	4283	4849	5327	5866	
95	2055											3.50	2.03		3.21	2.04	1.21	3.43	2.03	1.34	0.77	
												6390	6854		5361	5792	6361	4403	4985	5476	6030	
100	2160												2.25		3.56	2.26	1.34	3.80	2.25	1.48	0.86	
													7074		5514	5958	6543	4521	5118	5622	6191	
105	2265												2.48		3.92	2.50	1.48		2.48	1.63	0.95	
													7290						5247	5765	6348	
110	2375												2.72			2.74	1.63		2.72	1.79	1.04	
													7503			6278	6895		5374	5904	6501	
115	2482												2.97			2.99	1.78		2.97	1.96	1.14	
													7711			6433	7065		5498	6040	6651	
120	2590												3.24			3.26	1.94		3.24	2.13	1.24	
													7917			6586	7232		5619	6173	6797	
125	2700												3.51			3.54	2.10		3.51	2.32	1.34	
													8119			6735	7396		5738	6303	6941	
130	2810																2.27		3.80	2.51	1.45	
																	7558		5854	6431	7082	
135	2918																2.45			2.70	1.57	
																	7716			6557	7220	
140	3022																2.64			2.91	1.69	
																	7872			6680	7356	
145	3130																2.83			3.12	1.81	
																	8025			6802	7490	
150	3240																3.03			3.34	1.94	
																	8176			6921	7621	
155	3350																3.23			3.56	2.07	
																	8325			7038	7750	
160	3460																3.44			3.80	2.20	
																	8471			7154	7877	
165	3565																				2.34	
																					8002	
170	3675																				2.49	
																					8126	

Boldface Italics indicate nozzle pressure (in. wg).
 Ratings based on:
 25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes)
 Δt = t_{rm} - t_{ew}
 where, t_{rm} = room temperature
 t_{ew} = ent water temperature
 All ratings include allowance for lint screen.

- NOTES:
1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$
 2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.
 3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

36SH standard horizontal unit (2-pipe)

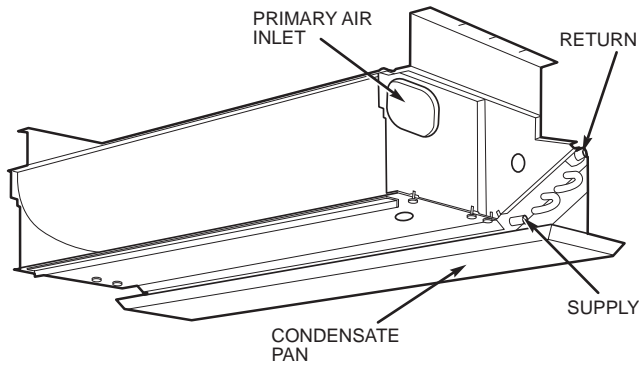
The 36SH in its standard enclosure measures 12 inches deep. The unit is shipped from the factory with the following:

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **drain pan**, assembled
- **two Z brackets** for mounting unit to a rigid flat horizontal surface
- **removable plenum end plug**, located in one of the primary air inlets

- **two screws and a lint clip**, taped to the front panel of the unit, to attach an accessory lint screen to the coil (with enclosure models, the lint screen can be attached to the recirculation grille for easy accessibility).
- **two standard lint screen offerings**, on coil face or on recirculation grille.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional drain connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

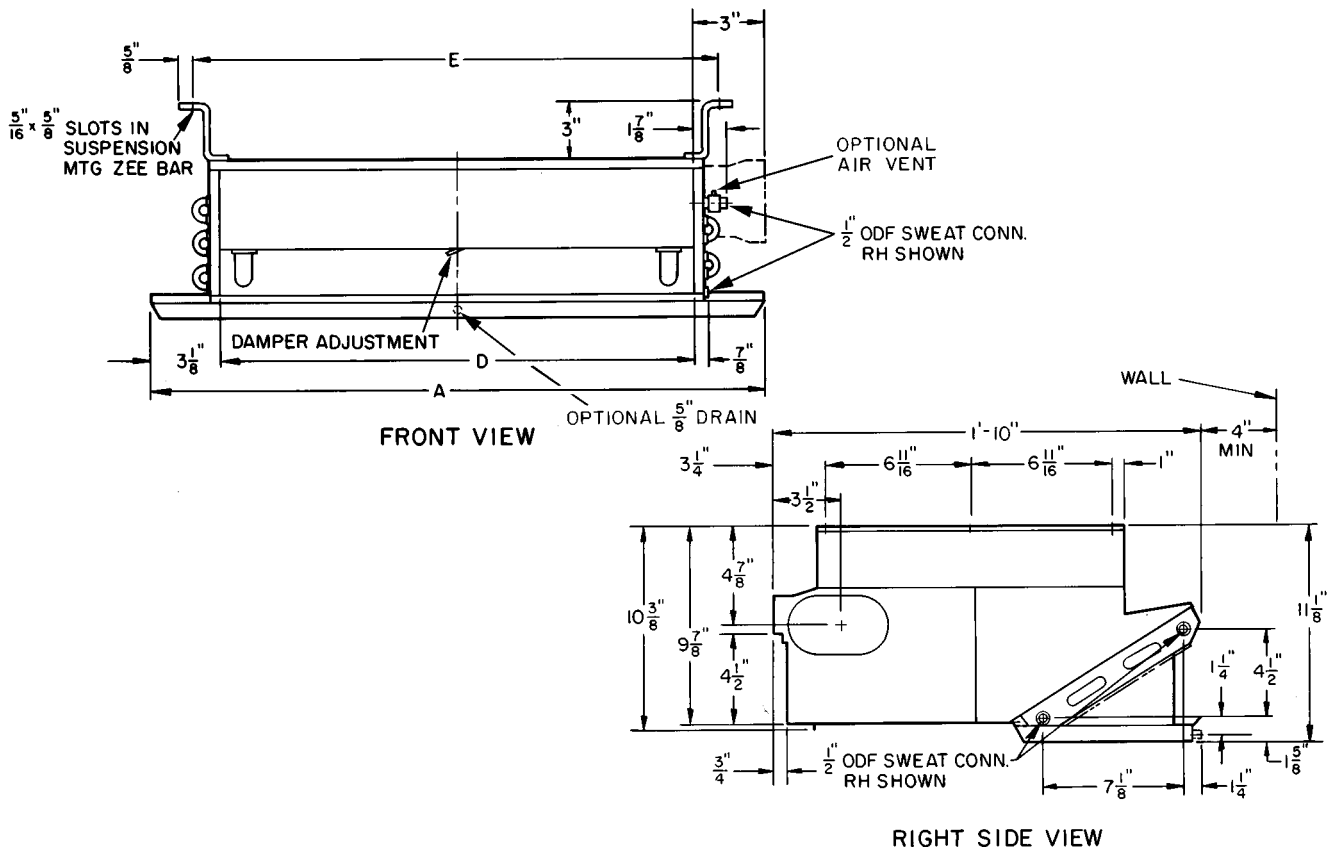
Dimensions and physical data



BASE RIGHT-HAND UNIT

UNIT SIZE	1	2	3	4	
Dimensions (in.)	A	30 ³ / ₄	38 ¹ / ₄	46 ¹ / ₄	58 ³ / ₄
	D	24 ⁵ / ₈	32	40	52
	E	27	34 ⁷ / ₈	42 ⁷ / ₈	54 ⁷ / ₈
Minimum Free Areas (sq in.)	Discharge Grille	81	108	135	175
	Recirculation Grille	234	288	343	439

This is not a certified print. Certified dimensions available upon request.



Performance data

36SH COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																			
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89																			
20	432	1.59	0.94			0.81															
25	540	2.48	1.47	0.97		1.26	0.74														
30	648	3.57	2.11	1.39		1.82	1.07	0.71		0.89											
35	756	2.88	1.90	1.10		2.48	1.46	0.97		1.21	0.71										
40	864	3.76	2.48	1.44		3.24	1.91	1.26		1.58	0.94			0.92							
45	972		3.14	1.82		2.42	1.60	0.93	2.01	1.19	0.78		1.17	0.72							
50	1080		3.88	2.25		2.99	1.97	1.14	2.48	1.46	0.96	0.56	1.45	0.89					0.95		
55	1188		2.72	1.55		3.62	2.39	1.39	3.00	1.77	1.17	0.68	1.75	1.07	0.68				1.15		
60	1296		3.24	1.82		2.85	1.65	1.05	3.57	2.11	1.39	0.81	2.09	1.28	0.81				1.36	0.81	
65	1405		2.72	1.55		3.34	1.94	1.26	3.34	2.11	1.39	0.81	2.45	1.50	0.95				1.60	0.95	
70	1512		2.72	1.55		2.25	1.48	1.05	2.87	1.90	1.10	2.84	1.74	1.11					1.86	1.10	0.72
75	1620		2.94	1.65		2.58	1.65	1.05	3.30	2.18	1.26	3.26	2.00	1.27	0.75				2.13	1.26	0.83
80	1730		3.32	1.82		2.94	1.94	1.26	3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43	1.44	0.95			
85	1838		3.32	1.82		3.32	1.94	1.26	3.32	2.18	1.26	3.76	2.48	1.44	0.86	2.43	1.44	0.95			
90	1942		3.14	1.82		2.80	1.62	1.05	2.80	1.62	1.05	2.80	1.62	1.05	2.57	1.63	0.97	2.74	1.62	1.07	
95	2055		3.50	2.03		3.14	1.82	1.05	3.14	1.82	1.05	3.50	2.03	1.26	2.88	1.83	1.09	3.08	1.82	1.20	0.69
100	2160		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	3.21	2.04	1.21	3.43	2.03	1.34	0.77
105	2265		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	3.56	2.26	1.34	3.80	2.25	1.48	0.86
110	2375		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	3.92	2.50	1.48	4.52	2.48	1.63	0.95
115	2482		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	4.12	2.74	1.63	5.11	2.72	1.79	1.04
120	2590		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	4.27	2.99	1.78	5.37	2.97	1.96	1.14
125	2700		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	4.42	3.26	1.94	5.64	3.24	2.13	1.24
130	2810		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	4.57	3.51	2.10	5.91	3.51	2.32	1.34
135	2918		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	4.72	3.76	2.26	6.18	3.76	2.48	1.44
140	3022		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	4.87	4.01	2.41	6.45	4.01	2.64	1.54
145	3130		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	5.02	4.26	2.56	6.72	4.26	2.80	1.64
150	3240		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	5.17	4.51	2.71	7.00	4.51	2.96	1.74
155	3350		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	5.32	4.76	2.86	7.27	4.76	3.12	1.84
160	3460		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	5.47	5.01	3.01	7.55	5.01	3.28	1.94
165	3565		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	5.62	5.26	3.16	7.82	5.26	3.44	2.04
170	3675		3.50	2.03		3.50	2.03	1.26	3.50	2.03	1.26	3.50	2.03	1.26	5.77	5.51	3.31	8.10	5.51	3.60	2.14

NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

36SD standard vertical unit (4-pipe)

The 36SD base unit is shipped from the factory with the following:

- plenum
- two 6-tube coils
- drain pan, assembled ready for wall mounting
- removable plenum end plug, located in one of the primary air inlets

- two lint screen clips, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil
- speed nuts, located in the back flange on each end of the plenum for leveling the unit with field-supplied 10–24 bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 7, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data

GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	3670	3060	2480	1900	1345
2	4895	4080	3310	2535	1795
3	6120	5100	4130	3165	2245
4	7955	6630	5370	4115	2915

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
Dimensions (in.)				
A	29 ³ / ₈	37 ³ / ₈	45 ³ / ₈	57 ³ / ₈
D	24 ¹ / ₈	32	40	52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	134	175
Recirculation Grille	237	315	394	512

BASE UNIT
(Shown with optional flare fittings)

This is not a certified print. Certified dimensions available upon request.

FRONT VIEW

RIGHT SIDE VIEW

36SJ standard horizontal unit (4-pipe)

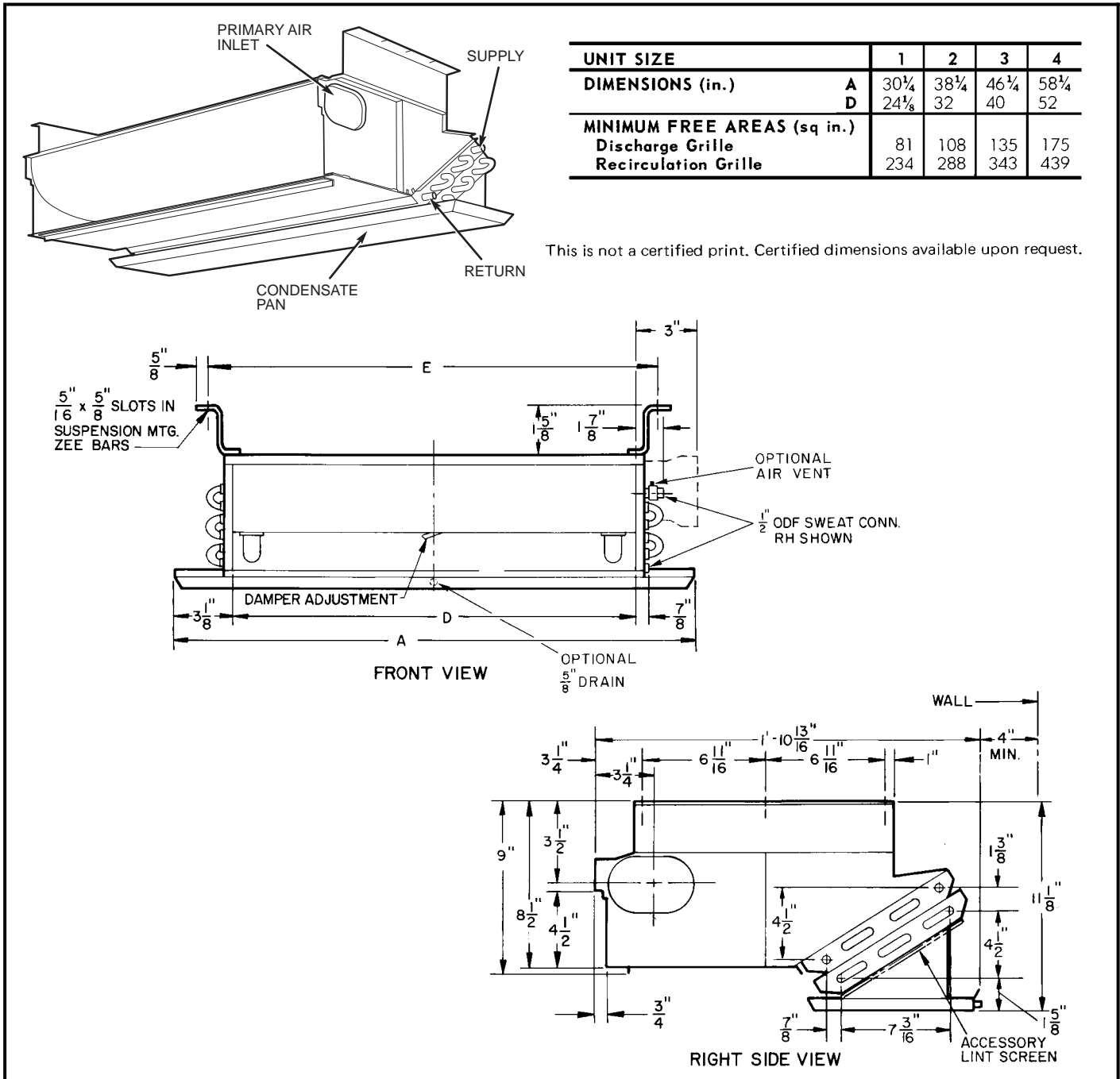
The 36SJ base unit is shipped from the factory with the following:

- plenum
- two 6-tube coils
- drain-pan, assembled
- two Z brackets for mounting unit to a rigid flat horizontal surface
- removable plenum end plug, located in one of the primary air inlets

- two screws and a lint clip, taped to the front panel of the unit, to attach an accessory lint screen to the coil
- two standard lint screen offerings, on coil face or on recirculation grille.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 7, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



36SM loboy unit (4-pipe)

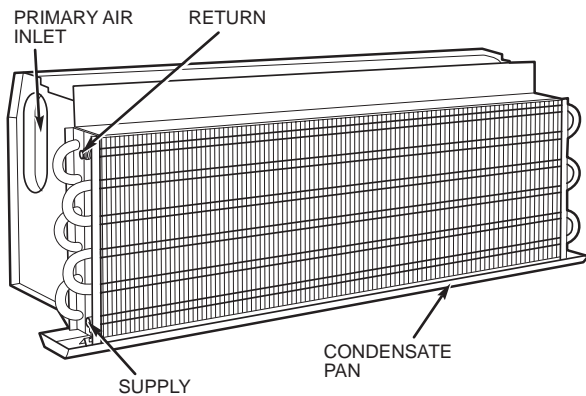
The 36SM base unit is shipped from the factory with the following:

- plenum
- two 6-tube coils
- drain pan, assembled ready for wall mounting
- removable plenum end plug, located in one of the primary air inlets

- two lint screen clips, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil.
- speed nuts, located in the back flange on each end of the plenum for leveling the unit with field-supplied 10–24 bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 7, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



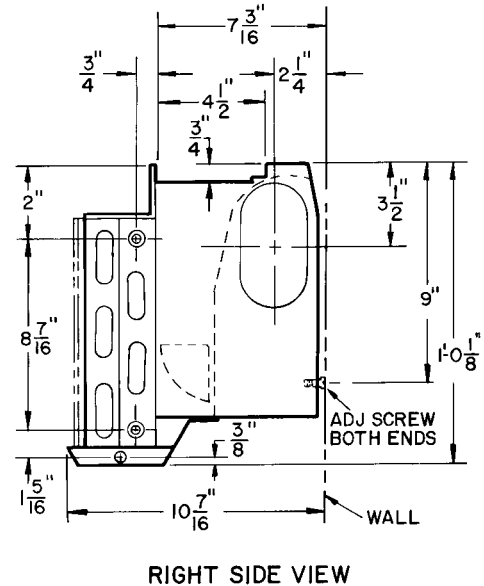
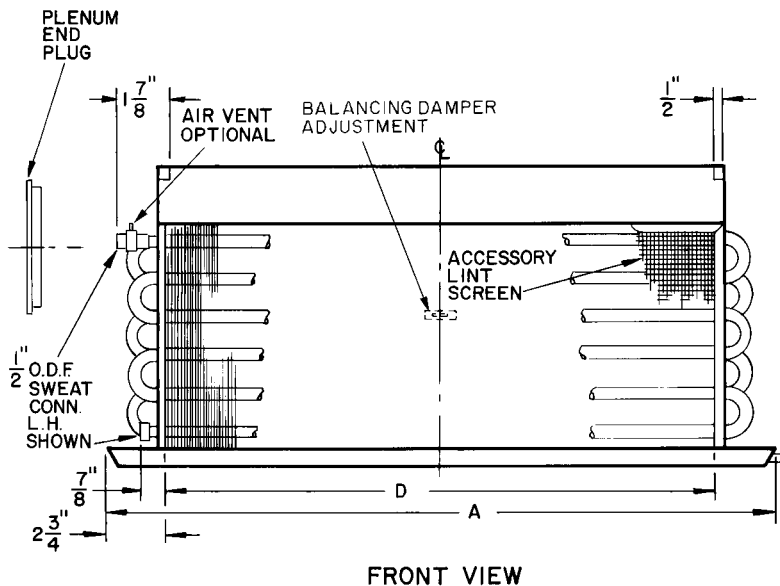
GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water - Room Temp) (F)				
	140	120	100	80	60
1	3402	2835	2297	1758	1247
2	4536	3780	3062	2344	1663
3	5670	4725	3827	2930	2079
4	7371	6142	4975	3808	2703

NOTE: For capacities other than 1.50 gpm, use the following multipliers — 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
DIMENSIONS (in.)				
A	29 ³ / ₈	37 ¹ / ₂	45 ¹ / ₂	57 ¹ / ₂
D	24 ¹ / ₈	32	40	52
MINIMUM FREE AREAS (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	124	165	206	269

This is not a certified print. Certified dimensions available upon request.



36SP vertical unit with recovery stack (4-pipe)

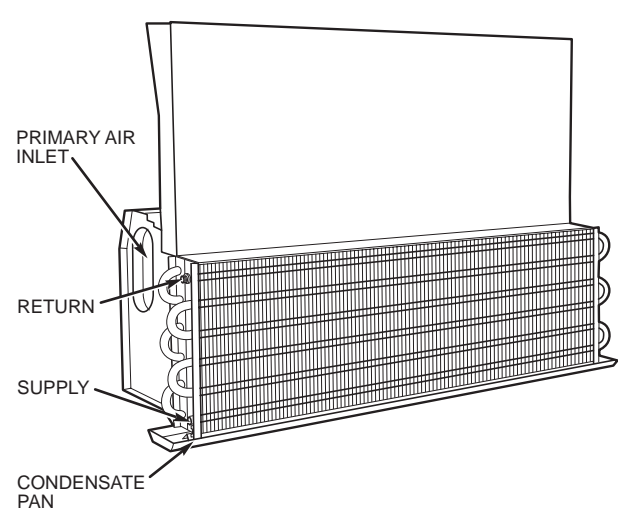
The 36SP base unit is shipped from the factory with the following:

- **plenum**
- **two 6-tube coils**
- **recovery stack and drain pan**, assembled ready for wall mounting
- **removable plenum end plug**, located in one of the primary air inlets

- **two lint screen clips**, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil
- **speed nuts**, located in the back flange on each end of the plenum, with two 10–24 bolts for leveling the unit.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 7, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

Dimensions and physical data



PRIMARY AIR INLET
RETURN
SUPPLY
CONDENSATE PAN

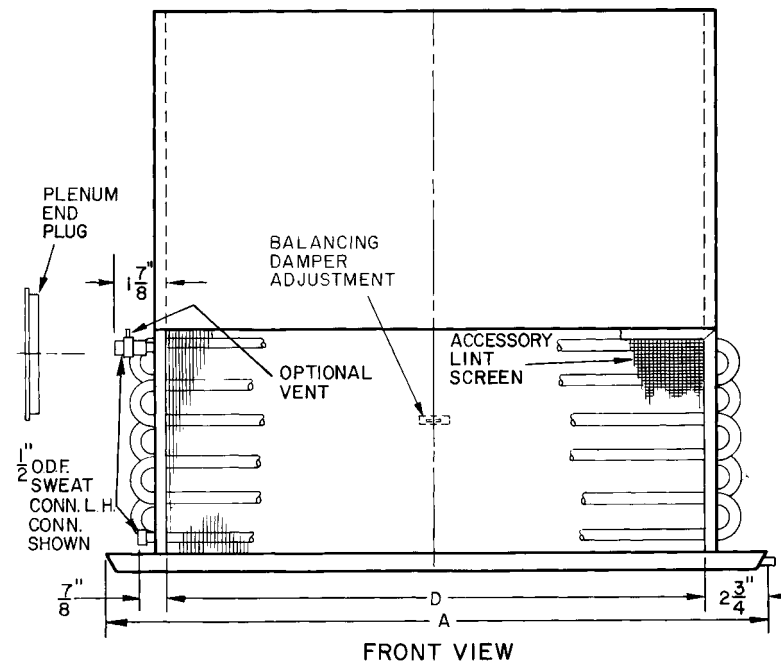
GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	5000	4167	3375	2584	1834
2	6670	5558	4502	3446	2446
3	8333	6944	5625	4305	3055
4	10,833	9027	7312	5597	3972

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

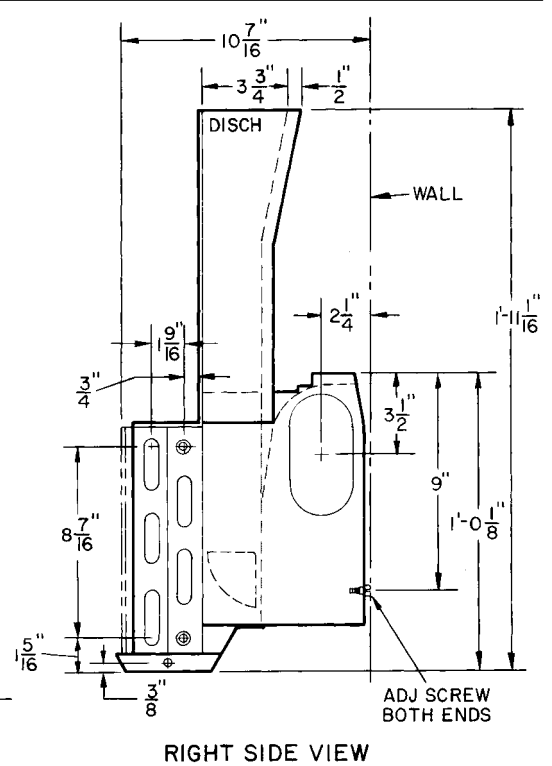
UNIT SIZE	1	2	3	4
DIMENSIONS (in.)				
A	29½	37½	45½	57½
D	24¾	32	40	52
MINIMUM FREE AREAS (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	237	315	394	512

This is not a certified print. Certified dimensions available upon request.



PLENUM END PLUG
BALANCING DAMPER ADJUSTMENT
OPTIONAL VENT
ACCESSORY LINT SCREEN
1/2" ODF SWEAT CONN. L.H. CONN. SHOWN

FRONT VIEW



DISCH
WALL
ADJ SCREW BOTH ENDS

RIGHT SIDE VIEW

Performance data

36SP COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																			
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89 1851																			
20	432	1.59 2436	0.94 2505			0.81 2375															
25	540	2.48 3012	1.47 3100	0.97 3156		1.26 2765	0.74 3021														
30	648	3.57 3584	2.11 3687	1.39 3754		1.82 3132	1.07 3421	0.71 3652		0.89 2803											
35	756		2.88 4270	1.90 4348	1.10 4326	2.48 3479	1.46 3800	0.97 4057		1.21 3083	0.71 3403										
40	864		3.76 4850	2.48 4939	1.44 4912	3.24 3811	1.91 4162	1.26 4445	0.73 4710	1.58 3347	0.94 3695			0.92 2900							
45	972			3.14 5525	1.82 5496		2.42 4510	1.60 4816	0.93 5104	2.01 3000	1.19 3974	0.78 4280		1.17 3094	0.72 3508						
50	1080			3.88 6108	2.25 6077		2.99 4847	1.97 5175	1.14 5485	2.48 3841	1.46 4241	0.96 4568	0.56 4899	1.45 3279	0.89 3716			0.95 2893			
55	1188				2.72 6654		3.62 5172	2.39 5523	1.39 5854	3.00 4074	1.77 4497	1.17 4894	0.68 5195	1.75 3455	1.07 3916	0.68 4231		1.15 3038			
60	1296				3.24 7230			2.85 5861	1.65 6212	3.57 4300	2.11 4746	1.39 5111	0.81 5482	2.09 3625	1.28 4108	0.81 4439		1.36 3177	0.81 3596		
65	1405				3.80 7812			3.34 6190	1.94 6562		2.48 4986	1.63 5370	0.95 5760	2.45 3788	1.50 4293	0.95 4591		1.60 3309	0.95 3746		
70	1512							3.88 6511	2.25 6901		2.87 5219	1.90 5621	1.10 6030	2.84 3945	1.74 4471	1.11 4831		1.86 3438	1.10 3899		
75	1620								2.58 7233		3.30 5446	2.18 5865	1.26 6291	3.26 4098	2.00 4645	1.27 5018	0.75 5511	2.13 3562	1.26 4032		
80	1730								2.94 7559		3.76 5667	2.48 6104	1.44 6547	3.71 4245	2.27 4812	1.45 5200	0.86 5710	2.43 3682	1.44 4167		
85	1838								3.32 7878		2.80 6336	1.62 6796		2.57 4975	1.63 5375	0.97 5903	2.74 3797	1.62 4300			
90	1942								3.72 8191		3.14 6564	1.82 7090		2.88 5134	1.83 5547	1.09 6092	3.08 3910	1.82 4426			
95	2055										3.50 6787	2.03 7280		3.21 5289	2.04 5714	1.21 6275	3.43 4020	2.03 4551			
100	2160										3.87 7005	2.25 7513		3.56 5440	2.26 5878	1.34 6454	3.80 4127	2.25 4672			
105	2265											2.48 7743		3.92 5588	2.50 6037	1.48 6630		2.48 4790	1.63 5262	0.95 5795	
110	2375											2.72 7968			2.74 6194	1.63 6802		2.72 4906	1.79 5390	1.04 5935	
115	2482											2.97 8190			2.99 6397	1.78 6970		2.97 5018	1.96 5514	1.14 6072	
120	2590											3.24 8408			3.26 6497	1.94 7134		3.24 5130	2.13 5636	1.24 6205	
125	2700											3.51 8622			3.54 6644	2.10 7296		3.51 5238	2.32 5757	1.34 6337	
130	2810											3.80 8834			3.83 6790	2.27 7455		3.80 5344	2.51 5871	1.45 6465	
135	2918														2.45 7612			2.70 5986	1.57 6592		
140	3022														2.64 7765			2.91 6099	1.69 6716		
145	3130														2.83 7917			3.12 6210	1.81 6837		
150	3240														3.03 8065			3.34 6318	1.94 6957		
155	3350														3.23 8212			3.56 6425	2.07 7076		
160	3460														3.44 8357			3.80 6531	2.20 7191		
165	3565														3.66 8500				2.34 7306		
170	3675														3.89 8640				2.49 7418		

NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

Guide specifications

For standard installations with enclosures

1. **Furnish and install** _____ Model 36S Water Control Weathermaster® units of the type, size and arrangement shown on the plans.
- 2a. **Base unit assembly** shall consist of an air inlet, air plenum, induction nozzles, water coil assembly (lint screen or filter), air transition fitting, air plug and nondrainable (drainable) condensate pan.
- 2b. **Air plenum** shall be constructed of galvanized steel. Internal areas shall be acoustically and thermally insulated with neoprene-coated fiber glass. Plenum shall be designed for series connection or feed-thru, and shall contain primary air balancing damper arranged for independent manual adjustment of primary air volume. Recovery stack and outlet collar where required shall be cold-rolled steel painted black.
- 2c. **Induction nozzles** of heat resistant, pliable plastic shall be designed for minimum noise generation. Nozzle arrangement shall be selected to provide capacities as specified.
- 2d. **Water coil assembly** shall consist of a single-row reversible coil with copper tubing mechanically expanded to aluminum plate fins. (Two separate coils shall be furnished for 4-pipe operation.) Coil connections shall be 1/2-in. ODF sweat (1/2-in. ODM flare) (1/2-in. ODF sweat with vent) (1/2-in. ODM flare with vent). Coil shall be suitable for working pressures up to 250 psig. Nondrainable (drainable) galvanized steel condensate pan shall complete the assembly.
- 2e. **Air transition fitting** for connection to 4-in. runout duct shall be die-formed, streamlined and interchangeable with removable air plug.
- 2f. **Lint screen** shall be of fine mesh, properly supported and readily removable for servicing.
- 3a. **Base unit enclosure** shall be constructed of not lighter than 18-gage, cold-rolled steel, bonderized, recoatable baked prime finish. Enclosure shall consist of: removable front access panel with snap-in fasteners to permit easy removal for routine inspection and servicing of unit and controls; removable plastic discharge grille sections designed for 4-way adjustment of air flow;

mounting brackets and suitable accessories for base unit assembly as shown on the plans.

- 3b. **Under-window type enclosures** shall be floor-fed or side-fed as indicated on drawings. Floor-fed enclosures for SV,SC,ST shall be complete with decorative side panels and pedestals with louvers as required. Side-fed enclosures for model SV shall be complete with knockout.
- 3c. **Runout enclosure and panel sections** shall be constructed of not lighter than 18-gage cold-rolled steel, bonderized, recoatable baked prime finish.
- 3d. **Overhead horizontal enclosure** for model SH shall be complete with support brackets for base unit, hinged bottom panel, and single-blade discharge grille.

For vertical furred-in installations

Omit paragraphs 3a, b, c and d. Add paragraphs 4 and 5.

- 4a. **Discharge grille assembly** shall consist of grille frame with integral mounting collar and removable plastic grille sections, designed for individual 4-way adjustment of air flow. Grille frames shall be constructed of not lighter than 18-gage cold-rolled steel, bonderized, recoatable baked prime finish, with rolled edges and corners. Frame shall be provided with mounting holes for securing to window stool.
- 4b. **Recirculating grille panel** shall be constructed of not lighter than 18-gage cold-rolled steel, bonderized, recoatable baked prime finish. Panel shall have louvered section with free area not less than indicated on plans and shall be designed for easy removal from frame for routine inspection and servicing. Panel shall fit securely in a frame and be provided with necessary stiffener channels to prevent warping. The frame shall be constructed of black iron angles, welded at corner sections, bonderized and finished in recoatable prime coat. Frame shall be provided with holes or suitable devices for attachment to metal lath or tile block.
- 4c. **All custom enclosures** must meet published minimum free area requirements.
5. Refer to temperature control system specifications for induction unit controls.

