

# SHW-DD Series

## Horizontal *Hydronic*

### Direct Drive Blower - Coil Unit

**Westair**  
Industries, Inc.

#### Description:

The **SHW-DD** series blower coil air handler provides a very competitive alternative to belt drive air handlers. These air handlers can be used where external static pressures do not exceed 0.60. They can be installed within the conditioned space as free-blow units or as remote units with duct systems. Standard 4 row coils can be used for cooling or heating. These air handlers are compact, with large removable panels on both sides for installation and ease of service. Separate filter panels are provided on both sides of unit. All motors are 115V, single phase, 3 speed.

Standard models are available in 4 popular sizes - 800, 1200, 1600, and 2000 nominal CFM (2 through 5 tons).

### *DIRECT DRIVE*

### *NOW WITH POSITIVE SLOPE DRAIN PAN*



#### FEATURES:

##### **CABINET -**

Fabricated of heavy gauge galvanized steel and coated with a baked on epoxy finish to provide maximum corrosion protection and lasting durability.

##### **COILS -**

Fabricated of 3/8 OD seamless copper tubes mechanically expanded to highly efficient aluminum fins to maximize heat transfer. All coils have manual air vents.

##### **INSULATION -**

The entire interior of the cabinet is insulated with one inch glass fiber insulation to maximize efficiency and reduce noise transmission. Insulation is anti-bacterial, anti-fungal, and is cleanable.

##### **FILTER -**

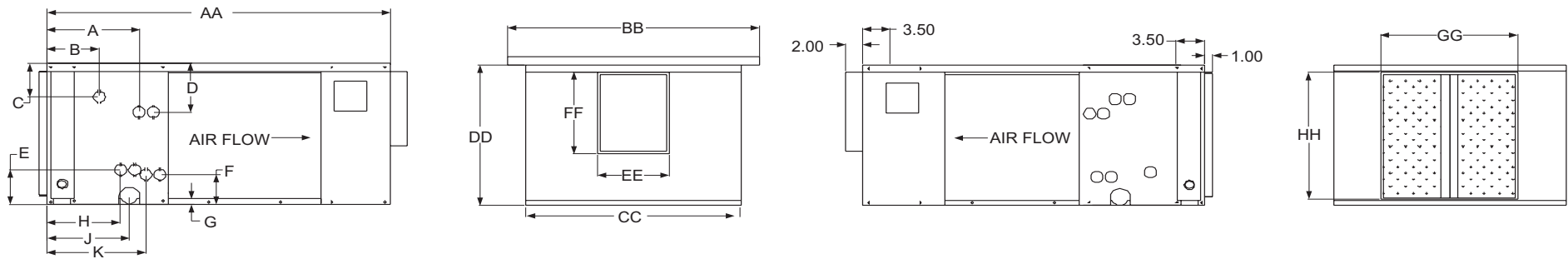
One inch throw away filters are provided as standard in all SHW-DD units. Space available for 2".

##### **ACCESSORIES -**

See Page 4 for accessories or contact the factory.

##### **MISCELLANEOUS -**

- Slotted mounting rails for easy installation. Rails are turned down 1/2" on each end for safer and easier installation.
- 4 x 4 junction box accepts a field installed (24/120V) relay / transformer for low voltage control.
- Header connections on the right side as standard. Knockouts are provided for conversion to the left side. (Looking with airflow)
- Drain pans are sloped and mastic-coated for corrosion protection. (connections on one side only)



### UNIT DIMENSIONS

MODEL	UNIT CABINET				BLOWER OUTLET		RETURN DUCT CONNECTION		STUBOUT LOCATION FOR WATER COILS									
	AA	BB	CC	DD	EE	FF	GG	HH	A	B	C	D	E	F	G	H	J	K
24SHW4-DD	37	32-1/2	27	18-7/8	8-3/4	10-7/8	18	16-1/4	11-1/4	6-5/16	4-1/2	6-1/2	4-1/2	3-15/16	1	8-15/16	10	12
36SHW4-DD	37	42	36-1/2	18-7/8	12-1/4	10-7/8	27-1/2	16-1/4	11-1/4	6-5/16	4-1/2	6-1/2	4-1/2	3-15/16	1	8-15/16	10	12
48SHW4-DD	39	43-1/2	38	22-7/8	13-5/8	11-7/8	29	20-1/4	11-1/4	6-5/16	3-3/4	5-3/4	4-1/2	3-15/16	1	8-15/16	10	12
60SHW4-DD	42	50-1/2	45	22-7/8	16	13-7/8	36	20-1/4	11-1/4	6-5/16	3-3/4	5-3/4	4-1/2	3-15/16	1	8-15/16	10	12

**NOTES:** 1) All drain connections are 3/4" MPT and located on one side only (same side as coil connections).

2) All units have knockouts on both sides for either right (standard) or left side coil stub outs. (Looking with airflow)

### GENERAL SPECIFICATIONS

MODEL	NOM. COOL TONS	FACE AREA SQ. FT.	TUBE SIZE	STD. MOTOR HP	VOLTS	PHASE	BLOWER SIZE	FILTER SIZE	4 ROW COIL	
									MANIFOLD CONNECTION	SHIPPING WEIGHT
24SHW4-DD	2	2.05	3/8	1/5	115	1	9 x 6	16 x 25	7/8" O/D (SWT)	150
36SHW4-DD	3	3.05	3/8	1/3	115	1	9 x 8	16 x 16 (2)	7/8" O/D (SWT)	175
48SHW4-DD	4	4.0	3/8	1/2	115	1	9 x 9	16 x 20 (2)	7/8" O/D (SWT)	210
60SHW4-DD	5	5.0	3/8	3/4	115	1	10 x 8	20 x 20 (2)	1-1/8" O/D (SWT)	245

**NOTES:** 1) All technical specifications subject to change without notice.

2) When SHW-DD units are used with hot water coil the leaving air temperature must not exceed 145 degrees. At high altitude conditions, blower motor may cutout at a lower LAT. Contact factory for information.

3) Contact factory for electric heat information (supplied by others).

COOLING PERFORMANCE DATA															
UNIT MODEL	CFM	GPM	P.D. FT. WTR.	45°F ENTERING WATER						42° ENTERING WATER					
				80°F DB/67°WB ENT. AIR			75°F DB/63°F WB ENT. AIR			80°F DB/67°F WB ENT. AIR			75°F DB/63°F WB ENT. AIR		
				TOTAL MBH	SENS MBH	TEMP. RISE	TOTAL MBH	SENS MBH	TEMP. RISE	TOTAL MBH	SENS MBH	TEMP. RISE	TOTAL MBH	SENS MBH	TEMP. RISE
24SHW4-DD	900 (HIGH)	3.0	1.2	20.4	16.9	13.6	16.5	16.5	11.0	22.3	17.6	14.9	17.0	15.5	11.3
		6.0	4.4	28.3	19.8	9.4	21.6	17.3	7.2	30.8	20.7	10.3	23.5	18.0	7.8
9.0		9.3	31.4	20.9	7.0	24.0	18.2	5.3	34.3	22.0	7.6	26.2	19.1	5.8	
24SHW4-DD	780 (LOW)	3.0	1.2	19.7	15.6	13.1	15.0	13.8	10.0	21.5	16.2	14.3	16.4	14.3	10.9
		6.0	4.4	26.3	18.0	8.8	20.0	15.7	6.7	28.6	18.9	9.5	21.9	16.4	7.3
9.0		9.3	28.8	19.0	6.4	22.0	16.5	4.9	31.4	20.0	7.0	23.9	17.3	5.3	
36SHW4-DD	1200 (HIGH)	4.0	2.0	28.8	23.4	14.4	22.0	20.7	11.0	31.4	24.4	15.7	24.0	21.5	12.0
		8.0	7.5	39.4	27.3	9.9	30.1	23.8	7.5	43.0	28.7	10.7	32.8	24.9	8.2
12.0		16.3	43.6	28.9	7.3	33.3	25.1	5.5	47.5	30.4	7.9	36.3	26.3	6.0	
36SHW4-DD	1100 (LOW)	4.0	2.0	28.6	22.4	14.3	21.8	19.8	10.9	31.2	23.3	15.6	23.8	20.5	11.9
		8.0	7.5	37.6	25.8	9.4	28.7	22.5	7.2	41.0	27.1	10.3	31.3	23.5	7.8
12.0		16.3	41.1	27.1	6.8	31.4	23.5	5.2	44.8	28.5	7.5	34.2	24.6	5.7	
48SHW4-DD	1540 (HIGH)	6.0	3.9	40.8	31.5	13.6	31.2	27.8	10.4	44.5	32.9	14.8	34.0	28.9	11.3
		10.0	10.3	50.8	35.2	10.2	38.8	30.7	7.8	55.4	37.0	11.1	42.3	32.1	8.5
13.0		17.0	54.7	36.7	8.4	41.7	31.9	6.4	59.6	38.6	9.2	45.5	33.4	7.0	
48SHW4-DD	1300 (LOW)	6.0	3.9	38.3	28.4	12.8	29.2	24.9	9.7	41.7	29.7	13.9	31.9	25.9	10.6
		10.0	10.3	46.4	31.4	9.3	35.4	27.3	7.1	50.6	33.0	10.1	38.6	28.6	7.7
13.0		17.0	49.5	32.6	7.6	37.8	28.3	5.8	54.0	34.4	8.3	41.2	29.6	6.3	
60SHW4-DD	2100 (HIGH)	6.0	1.8	45.5	38.9	15.2	38.2	38.2	12.7	49.6	40.4	16.5	37.9	35.8	12.6
		11.0	5.7	62.5	45.1	11.4	47.8	39.6	8.7	68.2	47.2	12.4	52.0	41.2	9.5
16.0		11.6	70.8	48.2	8.9	54.1	42.0	6.8	77.2	50.7	9.7	59.0	44.0	7.4	
60SHW4-DD	1880 (LOW)	6.0	1.8	44.2	36.5	14.7	35.8	35.8	11.9	48.2	37.9	16.1	36.8	33.5	12.3
		11.0	5.7	59.5	42.1	10.8	45.4	36.8	8.3	64.8	44.1	11.8	49.5	38.4	9.0
16.0		11.6	66.8	44.8	8.3	51.0	39.0	6.4	72.8	47.2	9.1	55.6	40.8	6.9	

BLOWER DATA									
UNIT MODEL	FAN SPD.	MTR. HP (120V)	MTR. AMPS (120V)	CFM vs. EXTERNAL STATIC PRESSURE					
				0.10	0.20	0.30	0.40	0.50	0.60
24SHW4-DD	HIGH	1/5	3.3	990	975	920	880	820	750
	LOW			865	830	790	760	720	670
36SHW4-DD	HIGH	1/3	6.5	1410	1345	1260	1180	1090	980
	LOW			1230	1200	1145	1080	1000	900
48SHW4-DD	HIGH	1/2	8.5	1750	1665	1580	1490	1390	1290
	LOW			1440	1400	1330	1270	1190	1100
60SHW4-DD	HIGH	3/4	10.6	2350	2270	2180	2060	1940	1800
	LOW			2040	1980	1920	1840	1760	1680

HEATING PERFORMANCE DATA						
UNIT MODEL	CFM	GPM (HTG.)	P.D. FT. WTR.	HEATING BTUH (1000) AT ENTERING WATER TEMPERATURE		
				140°F	160°F	180°F
24SHW4-DD	900 (HIGH)	3.0	1.2	38.5	49.5	60.5
		6.0	4.4	43.5	55.9	68.3
9.0		9.3	45.4	58.4	71.4	
24SHW4-DD	780 (LOW)	3.0	1.2	35.3	45.4	55.5
		6.0	4.4	39.5	50.8	62.1
9.0		9.3	41.2	52.9	64.7	
36SHW4-DD	1200 (HIGH)	4.0	2.0	53.4	68.6	83.9
		8.0	7.5	60.3	77.5	94.7
12.0		16.3	62.9	80.9	98.9	
36SHW4-DD	1100 (LOW)	4.0	2.0	50.7	65.1	79.6
		8.0	7.5	56.8	73.1	89.3
12.0		16.3	59.2	76.2	93.1	
48SHW4-DD	1540 (HIGH)	6.0	3.9	71.4	91.8	112.2
		10.0	10.3	77.8	100.0	122.2
13.0		17.0	80.2	103.1	126.0	
48SHW4-DD	1300 (LOW)	6.0	3.9	64.5	83.0	101.4
		10.0	10.3	69.5	89.3	109.2
13.0		17.0	71.3	91.6	112.0	
60SHW4-DD	2100 (HIGH)	6.0	1.8	89.2	114.6	140.1
		11.0	5.7	100.4	129.1	157.8
16.0		11.6	105.7	135.9	166.1	
60SHW4-DD	1880 (LOW)	6.0	1.8	83.6	107.4	131.3
		11.0	5.7	93.4	120.1	146.8
16.0		11.6	98.1	126.1	154.1	

**NOTES:**

1. Motors are 3 speed direct drive
2. All coils are 4 row



In keeping with its policy of continuous progress and product improvement, Westair reserves the right to make changes without notice.

## OPTIONS (all field installed)

### 1. Permanent filters

<u>PART NUMBER</u>	<u>FOR UNIT MODEL</u>
975-1	24SHW-DD
975-2	36SHW-DD
975-3	48SHW-DD
975-4	60SHW-DD



### 2. Discharge plenum with four way double - deflection grille (field installed).

<u>PART NUMBER</u>	<u>FOR UNIT MODEL</u>	<u>DEPTH</u>
24DP	24SHW-DD	6"
36DP	36SHW-DD	6"
48DP	48SHW-DD	6"
60DP	60SHW-DD	6"

(Discharge Plenum)

### 3. Relay / Transformer (24/120V) mounts directly on 4 x 4 junction box on each unit. Part number is **E301**.

### 4. Mixing box attaches to return end of air handler to allow entry of outside air (field installed). Dampers can be positioned for either rear / top or rear / bottom locations. Crank arms and linkage rod are furnished but not installed. Balance of hardware including motor and controls to be field supplied.

<u>PART NUMBER</u>	<u>FOR UNIT MODEL</u>	<u>DEPTH</u>
24MB	24SHW-DD	16"
36MB	36SHW-DD	16"
48MB	48SHW-DD	18"
60MB	60SHW-DD	18"



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