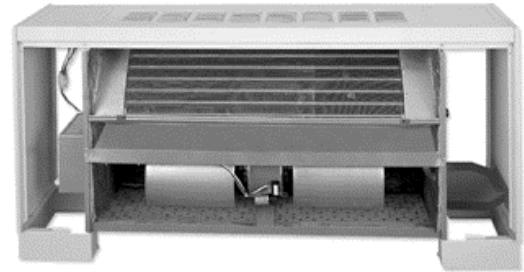


## Vertical Floor Fan Coil Unit (Model FW)



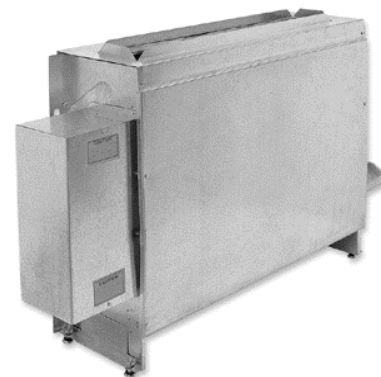
**Figure 1: Model FWX Vertical Exposed**

*Model FW Vertical Floor fan coil units are designed to maximize flexibility of selection and installation.*

*The units are designed to exceed the stringent quality standards of the institutional market, while remaining cost competitive in the light commercial segment of the market.*



**Figure 2: Model FWI Vertical Inclined Top**



**Figure 3: Model FWC Vertical Concealed**

## Physical Data

Table 1: ARI Standard Ratings

Model	Unit Size	Coil		Airflow CFM (dry flow)	Cooling Capacity		Water		Power Input (Watts)
		Rows	FPI		QT (BTUH)	QS (BTUH)	Flow Rate (GPM)	WPD ft. wg	
FWC	20	3	10	270	6900	5100	1.6	1.2	75
	25	3	10	400	10700	7700	2.4	2.8	125
	30	3	10	440	11200	8900	2.5	4.3	155
	40	3	10	680	15300	11700	3.4	3.1	245
	50	3	10	1010	23200	18500	5.1	7.1	425
	60	3	10	1180	28400	21600	6.2	10.5	455
	20	4	10	260	8700	6100	1.9	2.3	65
	25	4	10	380	13100	9000	2.9	5.4	120
	30	4	10	410	13300	10000	2.9	7.6	145
	40	4	10	650	18800	13800	4.1	5.8	225
	50	4	10	980	28500	21900	6.2	12.1	415
60	4	10	1110	33400	24700	7.3	18.2	450	
FWX FWI	20	3	10	250	6500	4800	1.5	1.1	75
	25	3	10	360	10100	7200	2.2	2.5	120
	30	3	10	400	10600	8200	2.4	3.9	135
	40	3	10	620	14400	11000	3.2	2.8	200
	50	3	10	970	22600	17900	5.0	6.8	395
	60	3	10	1080	26900	20400	5.9	9.5	425
	20	4	10	230	8100	5700	1.8	2.1	65
	25	4	10	340	12000	8200	2.7	4.6	115
	30	4	10	380	12600	9400	2.8	6.9	125
	40	4	10	600	17500	12800	3.9	5.1	185
	50	4	10	940	27600	21200	6.0	11.4	365
60	4	10	1020	31500	23200	6.9	16.4	415	

**Note:** Based on 80°F Dry Bulb (DB) and 67°F Wet Bulb (WB) Entering Air Temperature (EAT), 45°F Entering Water Temperature (EWT), 10°F temperature rise, high fan speed. Motor type is Permanent Split Capacitor (PSC) and motor voltage is 115/1/60. Airflow under dry coil conditions. Model FWX and FWI tested at 0.0" External Static Pressure (ESP). Model FWC tested at 0.05" ESP.

**Table 2: Heating Capacity**

Model	Unit Size	Nominal CFM	1 Row			2 Row			3 Row			4 Row		
			QS (MBH)	GPM	WPD	QS (MBH)	GPM	WPD	QS (MBH)	GPM	WPD	QS (MBH)	GPM	WPD
FWC FWX FWI	20	250	8.5	0.4	0.3	15.5	0.8	1.5	19.5	1.0	0.5	22.6	1.2	0.8
	25	375	12.5	0.6	0.5	22.6	1.1	2.9	29.0	1.5	1.0	33.7	1.7	1.7
	30	500	13.6	0.7	0.9	24.8	1.3	5.1	32.4	1.7	1.8	37.8	1.9	3.1
	40	750	19.5	1.0	2.1	33.3	1.7	1.9	45.4	2.3	1.4	53.4	2.7	2.4
	50	1000	23.9	1.2	0.7	44.8	2.3	3.5	61.5	3.1	2.6	72.2	3.7	4.5
	60	1250	31.9	1.6	6.2	55.0	2.8	5.6	75.9	3.9	4.3	88.9	4.5	7.4

**Note:** Based on 70°F DB EAT, 180°F EWT, 40°F temperature drop, high fan speed.

**Table 3: Unit Weight Data**

Component		Unit Size					
		20	25	30	40	50	60
FWC Base Unit		62 (21)	71 (32)	79 (36)	91 (41)	118 (54)	135 (61)
FWX Base Unit		86 (39)	95 (43)	104 (47)	117 (53)	144 (65)	162 (74)
FWI Base Unit		88 (40)	98 (44)	107 (49)	121 (55)	149 (68)	168 (76)
Total Coil Rows	1 Row - Dry	8 (4)	10 (5)	11 (5)	13 (6)	15 (7)	18 (8)
	1 Row - Wet	10 (5)	12 (5)	13 (6)	15 (7)	18 (8)	21 (10)
	2 Row - Dry	11 (5)	13 (6)	15 (7)	18 (8)	22 (10)	26 (12)
	2 Row - Wet	14 (6)	16 (7)	18 (8)	22 (10)	27 (12)	32 (15)
	3 Row - Dry	14 (6)	17 (8)	19 (9)	24 (11)	29 (13)	34 (15)
	3 Row - Wet	17 (8)	21 (10)	24 (11)	30 (14)	36 (16)	42 (19)
	4 Row - Dry	17 (8)	20 (9)	23 (10)	29 (13)	36 (16)	42 (19)
	4 Row - Wet	21 (10)	25 (11)	29 (13)	36 (16)	45 (20)	53 (24)
	5 Row - Dry	20 (9)	24 (11)	27 (12)	34 (15)	42 (19)	49 (22)
	5 Row - Wet	25 (11)	30 (14)	34 (15)	42 (19)	53 (24)	63 (29)

**Note:** Unit weight data is in pounds (kilograms).

### Fan Performance Curves

Fan curves on the following pages depict actual performance of each motor tap without any additional fan balance adjustment. Actual capacities that fall below each curve can be obtained by adding an adjustment device.

FW fan coil units are equipped with PSC motors with three separate windings (High, Medium, and Low) that provide variable horsepower outputs. Most often, size selections are conservative and actual CFM requirements and/or external static pressure requirements are lower than those specified. In this case, the unit fan motor can run at low or medium tap, substantially reducing the operating cost of the unit.

All fan curves are for 115/1/60 motors and include losses for a cabinet, electric heater, 3- or 4-row coil, and clean 1" throwaway filter. For other coil configurations, adjust performance curves based on pressure losses for the coils.

For additional high static pressure applications and rating points, contact the factory.

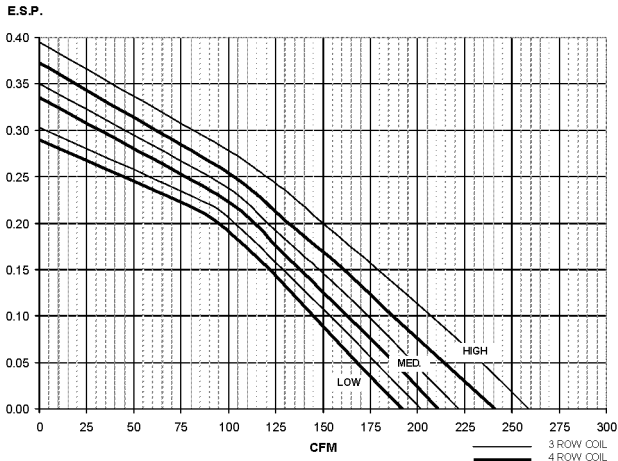


Figure 4: Model FWX/FWI Size 20

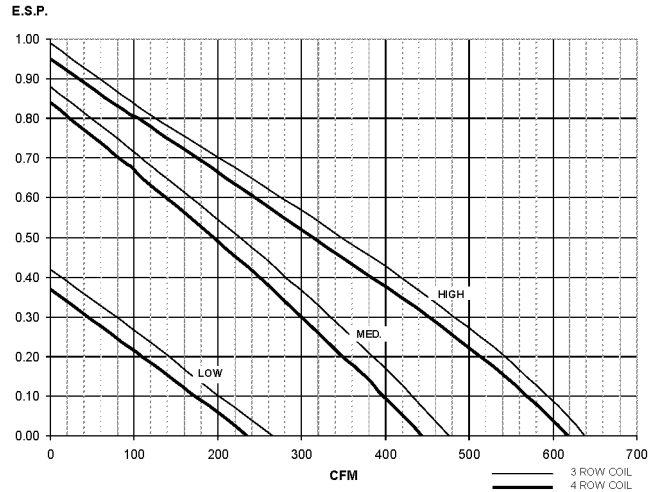


Figure 7: Model FWX/FWI Size 40

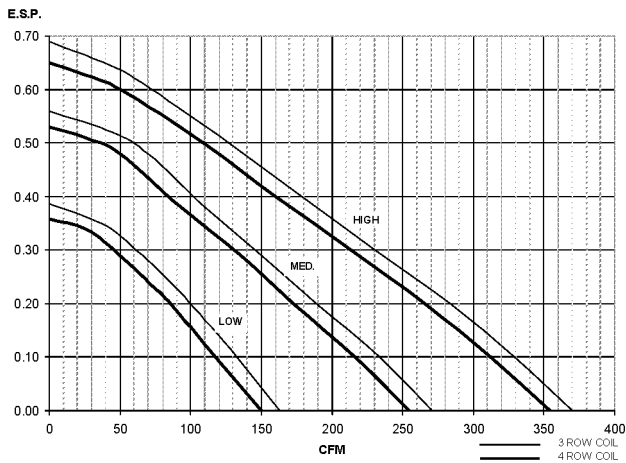


Figure 5: Model FWX/FWI Size 25

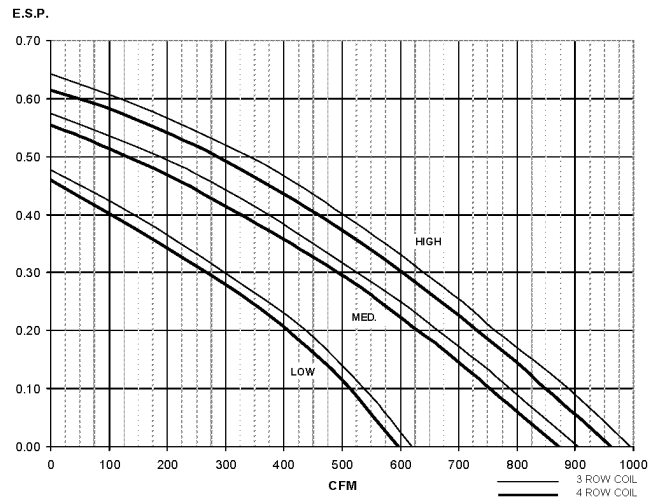


Figure 8: Model FWX/FWI Size 50

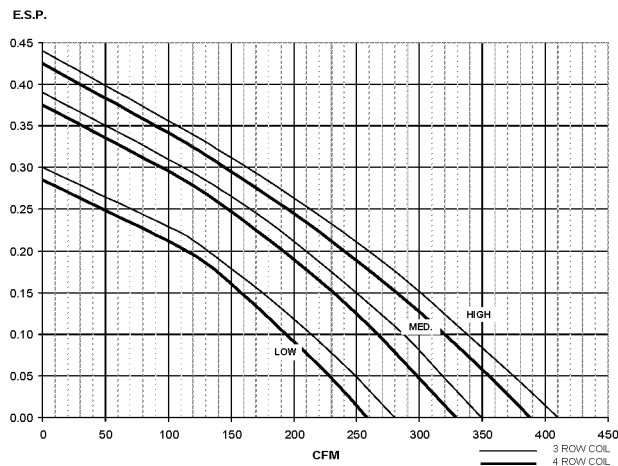


Figure 6: Model FWX/FWI Size 30

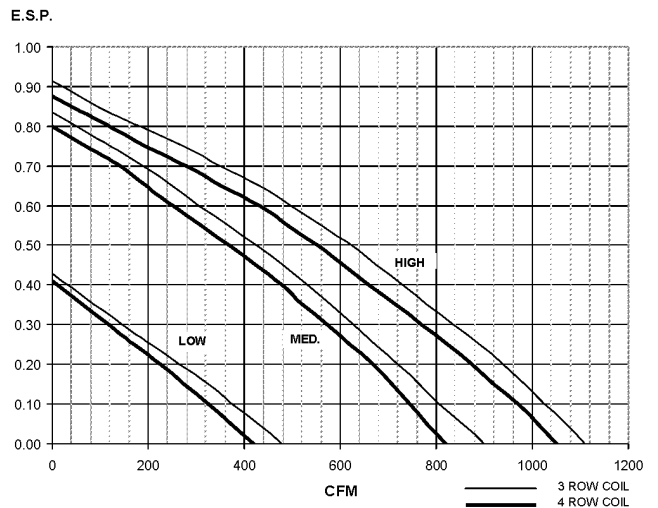


Figure 9: Model FWX/FWI Size 60

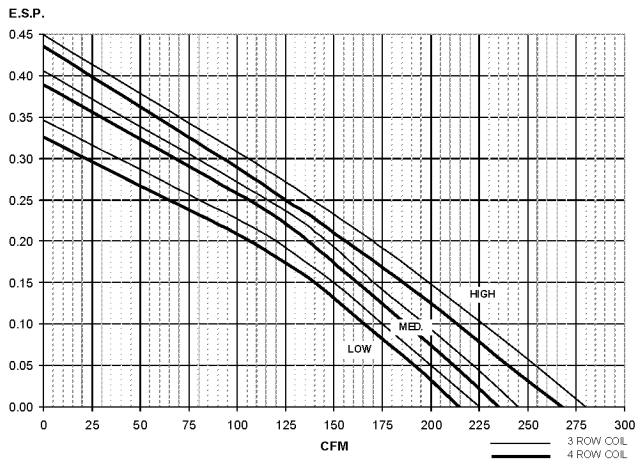


Figure 10: Model FWC Size 20

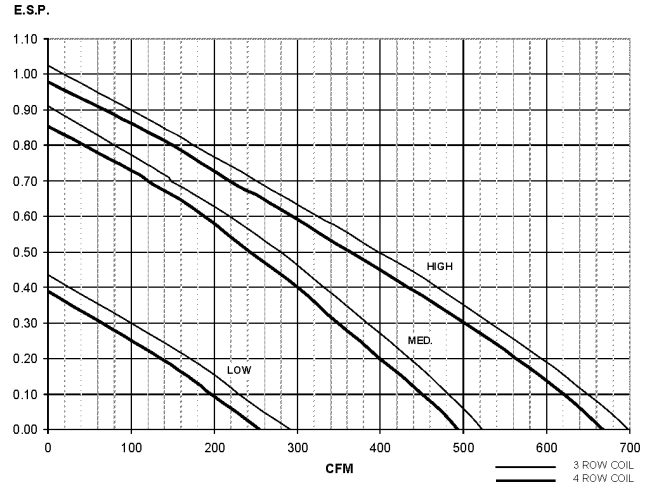


Figure 13: Model FWC Size 40

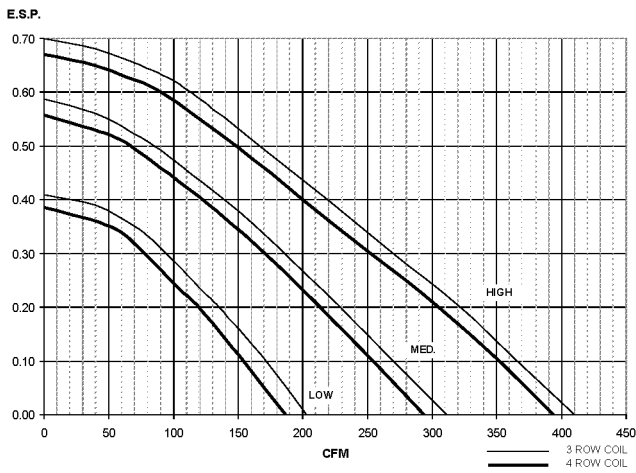


Figure 11: Model FWC Size 25

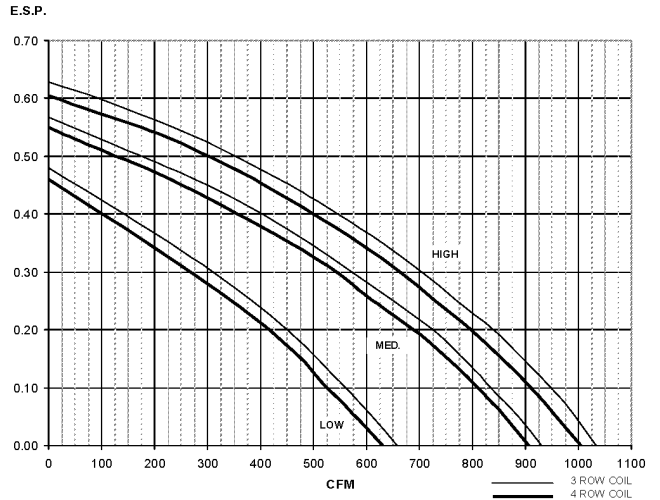


Figure 14: Model FWC Size 50

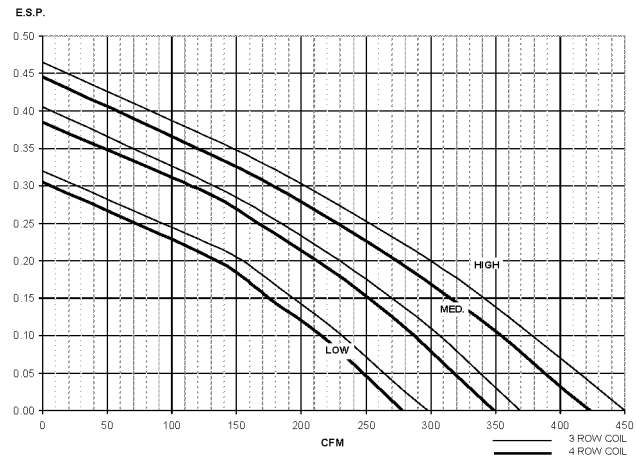


Figure 12: Model FWC Size 30

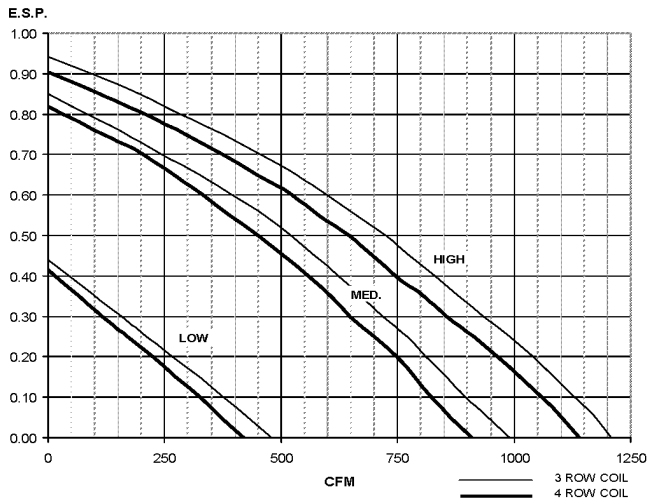


Figure 15: Model FWC Size 60

## Motor, Fan, and Sound Data

Table 4: Motor and Fan Data

Unit Size	Fan Speed	Motor hp (Qty.)	# of Fans	115 Volts		208-230 Volts		277 Volts	
				Amperes	Watts	Amperes	Watts	Amperes	Watts
20	High	(1) 1/30	1	0.5	57	0.4	77	0.3	71
	Medium	(1) 1/50		0.4	39	0.2	49	0.2	48
	Low	(1) 1/60		0.3	33	0.2	43	0.2	41
25	High	(1) 1/15	1	1.0	125	0.5	120	0.5	120
	Medium	(1) 1/30		0.7	90	0.3	80	0.3	80
	Low	(1) 1/60		0.5	60	0.2	60	0.2	60
30	High	(1) 1/10	2	1.7	165	0.8	158	0.6	162
	Medium	(1) 1/30		0.8	76	0.4	75	0.3	65
	Low	(1) 1/60		0.5	47	0.3	54	0.2	41
40	High	(1) 1/6	2	2.5	261	1.4	284	1.0	254
	Medium	(1) 1/12		1.6	162	0.8	171	0.6	152
	Low	(1) 1/40		0.8	75	0.4	79	0.3	74
50	High	(1) 1/8	3	1.6	215	0.9	216	0.7	214
		(1) 1/6		2.1	257	0.9	233	0.9	255
	Medium	(1) 1/15		1.3	145	0.5	109	0.5	132
		(1) 1/12		1.3	156	0.5	106	0.6	151
	Low	(1) 1/40		0.7	69	0.3	63	0.3	86
		(1) 1/40		0.6	75	0.3	62	0.3	84
60	High	(2) 1/6	4	5.0	522	2.8	568	2.0	508
	Medium	(2) 1/12		3.2	324	1.6	342	1.2	304
	Low	(2) 1/40		1.6	150	0.8	158	0.6	148

**Notes:** Motor electrical data is nameplate data. Actual data varies with application.

230 volt motor is nameplated for 208-230/1/60. Use 230 volt motor data for 208 volt applications.

Unit size 30, 208-230 and 277 volt motors are 1/12 hp at high tap.

**Table 5: Sound Data**

Unit Size	Fan Speed	SCFM	Total Sound Power Level						
			Octave Band/Center Frequency (Hz)						
			2/125	3/250	4/500	5/1000	6/2000	7/4000	8/8000
20	High	250	55	54	46	44	38	33	26
	Medium	211	50	52	45	42	36	31	25
	Low	192	49	51	44	41	35	30	25
25	High	350	55	58	53	52	46	42	33
	Medium	250	53	50	46	43	40	33	28
	Low	150	47	43	37	37	36	27	27
30	High	413	56	56	48	44	38	32	26
	Medium	349	52	54	44	40	34	27	25
	Low	258	47	47	38	34	27	23	24
40	High	618	62	62	56	52	47	42	37
	Medium	443	58	57	50	46	42	36	34
	Low	235	47	41	35	30	23	21	24
50	High	865	69	65	58	59	50	46	40
	Medium	688	67	62	55	52	46	42	36
	Low	442	55	51	46	38	32	26	25
60	High	1050	64	66	59	64	51	46	40
	Medium	820	63	62	54	52	47	41	35
	Low	416	48	46	40	35	27	22	24

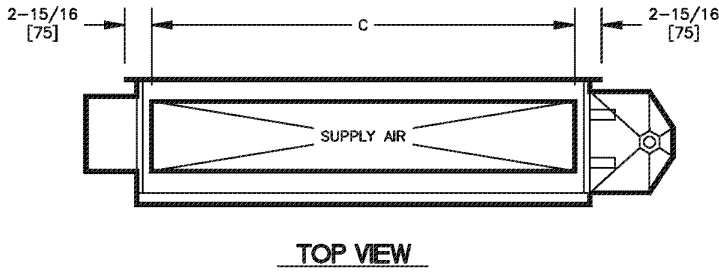
**Notes:** Sound data tested in accordance with ARI 350-86.

Sound levels are expressed in decibels, dB RE:  $1 \times 10^{-12}$  watts.

Total sound power level data is based on Model FWX with fan CFM at corresponding motor tap with 115/1/60 volt motor, 3- or 4-row coil, 1" throwaway filter, 0.0" external static pressure, and standard rated internal pressure losses.

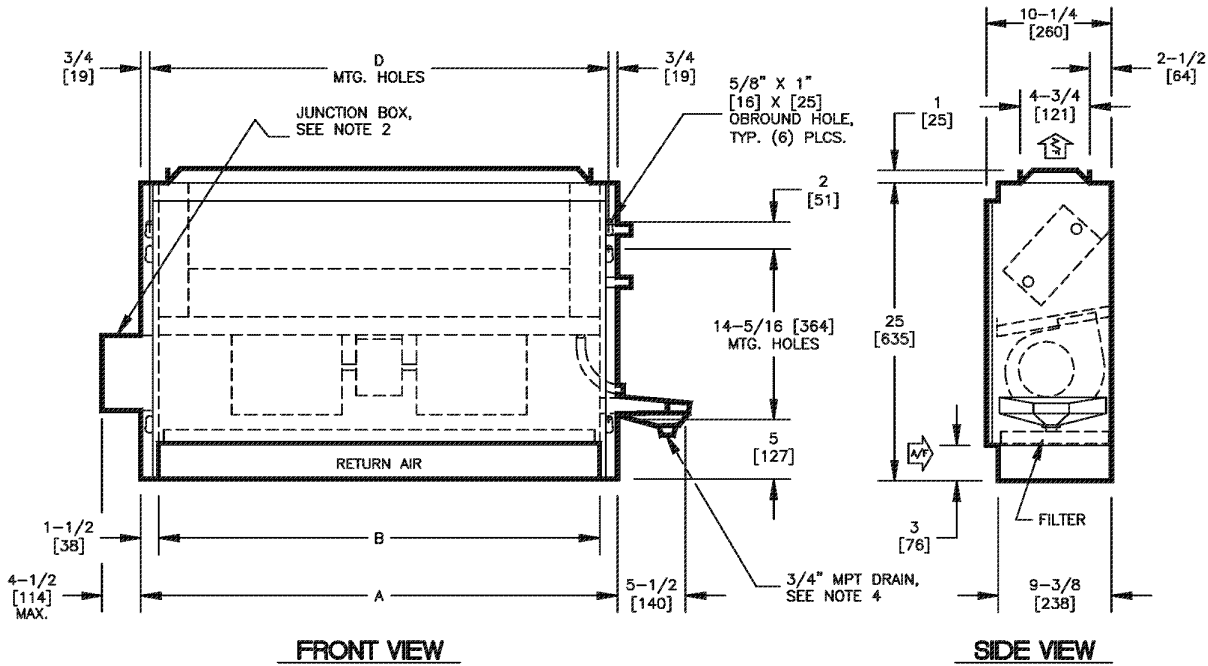
## Dimensional Data

Drawings are not to scale and are not for installation purposes.



**NOTES:**

1. All dimensions are Inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
2. Junction box size and location varies with unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
3. Right hand unit shown, left hand unit similar, but opposite.
4. Auxiliary drain pan ships loose for field installation.

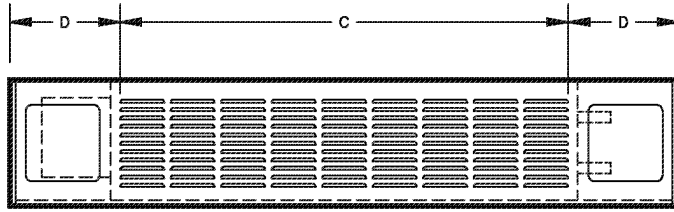


### DIMENSIONS - In [mm]

UNIT SIZE	A	B	C	D
20	30 [762]	27 [686]	24-1/8 [613]	28-1/2 [724]
25	36 [914]	33 [838]	30-1/8 [765]	34-1/2 [876]
30	40 [1016]	37 [940]	34-1/8 [867]	38-1/2 [978]
40	50 [1270]	47 [1194]	44-1/8 [1121]	48-1/2 [1232]
50	60 [1524]	57 [1448]	54-1/8 [1375]	58-1/2 [1486]
60	70 [1778]	67 [1702]	64-1/8 [1629]	68-1/2 [1740]

**Figure 16: Model FWC – Concealed Unit**

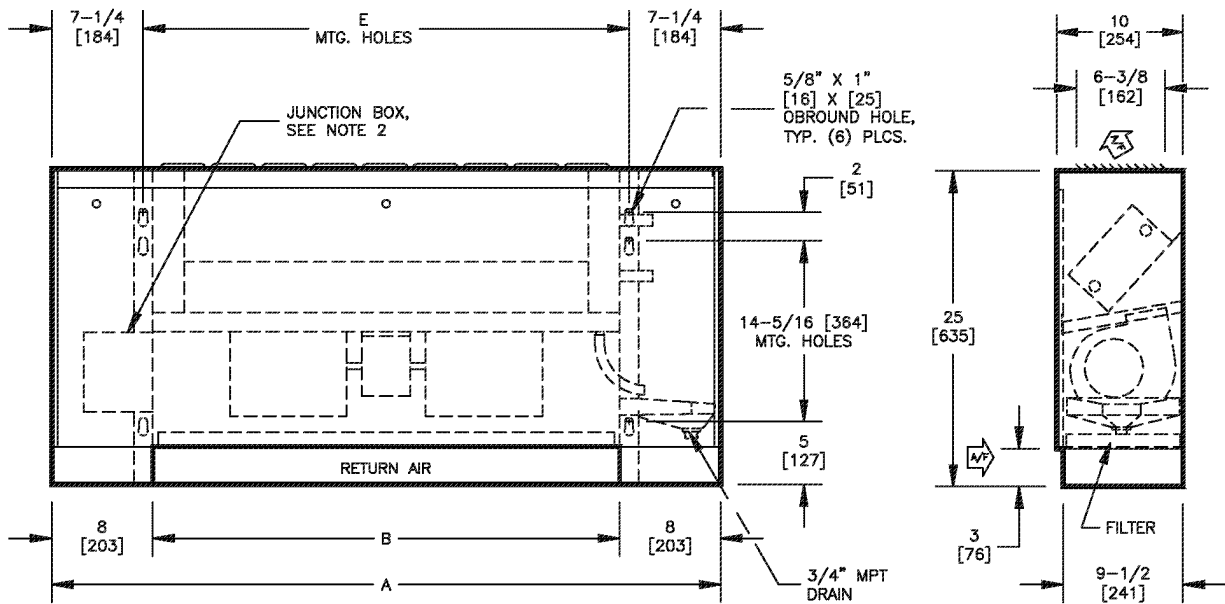




**TOP VIEW**

**NOTES:**

1. All dimensions are inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
2. Junction box size and location varies with unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
3. Standard cabinet finish is "Pearl White Satin".
4. Right hand unit shown, left hand unit similar, but opposite.



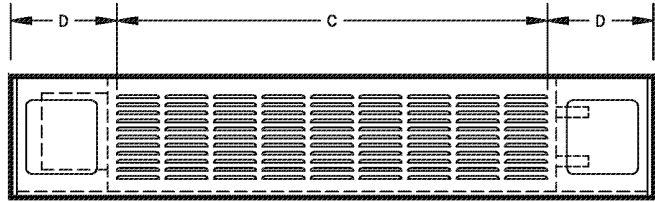
**FRONT VIEW**

**SIDE VIEW**

**DIMENSIONS - In [mm]**

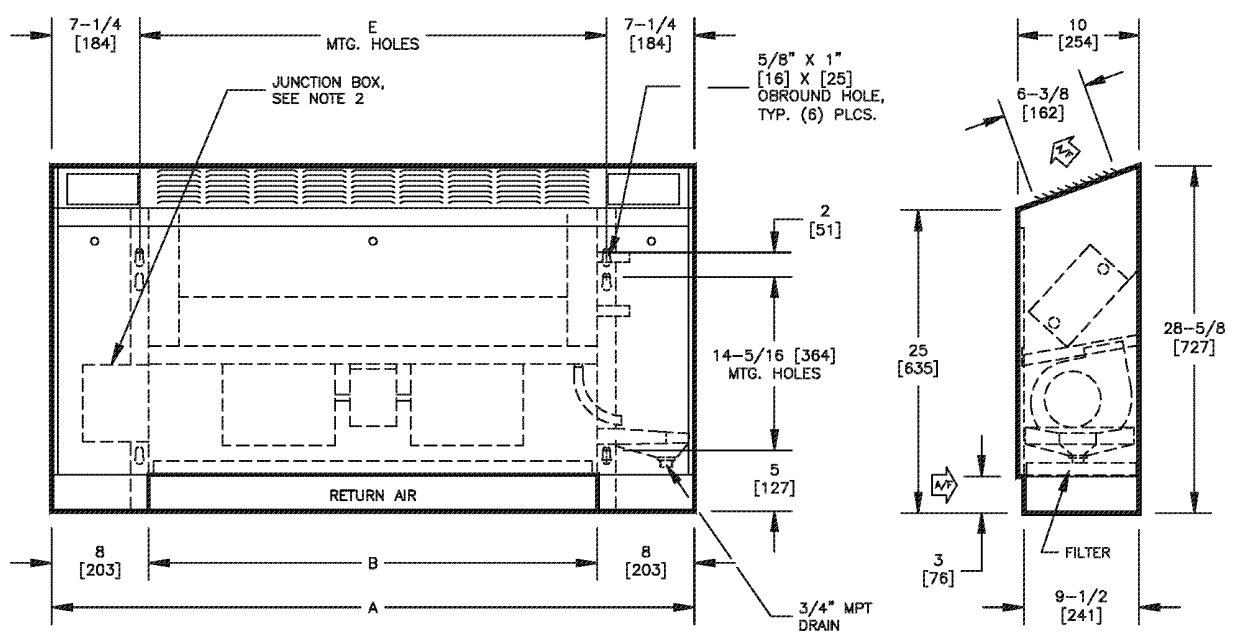
UNIT SIZE	A	B	C	D	E
20	43 [1092]	27 [686]	23-1/2 [597]	9-3/4 [248]	28-1/2 [724]
25	49 [1245]	33 [838]	27-1/2 [699]	10-3/4 [273]	34-1/2 [876]
30	53 [1346]	37 [940]	31-1/2 [800]	10-3/4 [273]	38-1/2 [978]
40	63 [1600]	47 [1194]	43-1/2 [1105]	9-3/4 [248]	48-1/2 [1232]
50	73 [1854]	57 [1448]	51-1/2 [1308]	10-3/4 [273]	58-1/2 [1486]
60	83 [2108]	67 [1702]	63-1/2 [1613]	9-3/4 [248]	68-1/2 [1740]

**Figure 17: Model FWX – Exposed Unit**



**TOP VIEW**

- NOTES:**
1. All dimensions are Inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
  2. Junction box size and location varies with unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
  3. Standard cabinet finish is "Pearl White Satin".
  4. Right hand unit shown, left hand unit similar, but opposite.



**FRONT VIEW**

**SIDE VIEW**

**DIMENSIONS - In [mm]**

UNIT SIZE	A	B	C	D	E
20	43 [1092]	27 [686]	23-1/2 [597]	9-3/4 [248]	28-1/2 [724]
25	49 [1245]	33 [838]	27-1/2 [699]	10-3/4 [273]	34-1/2 [876]
30	53 [1346]	37 [940]	31-1/2 [800]	10-3/4 [273]	38-1/2 [978]
40	63 [1600]	47 [1194]	43-1/2 [1105]	9-3/4 [248]	48-1/2 [1232]
50	73 [1854]	57 [1448]	51-1/2 [1308]	10-3/4 [273]	58-1/2 [1486]
60	83 [2108]	67 [1702]	63-1/2 [1613]	9-3/4 [248]	68-1/2 [1740]

**Figure 18: Model FWI – Slope Top Unit**

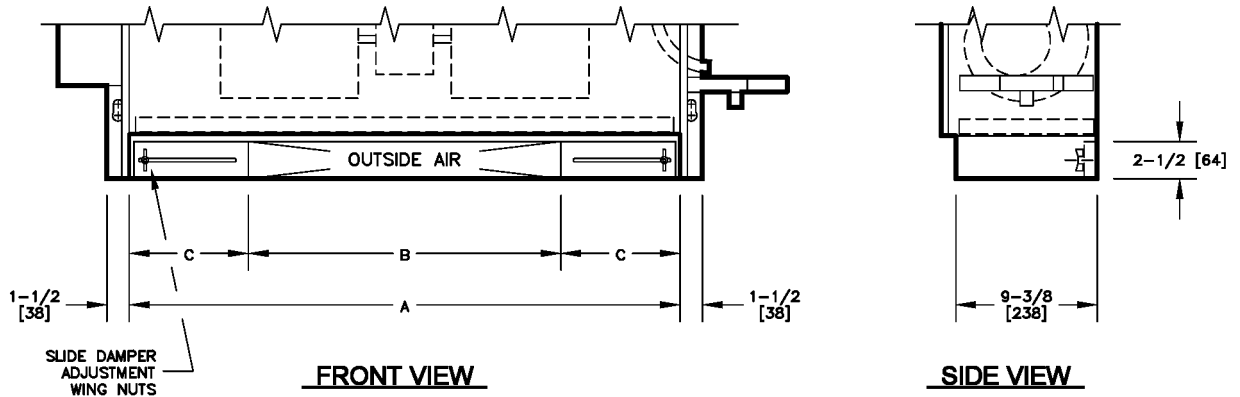
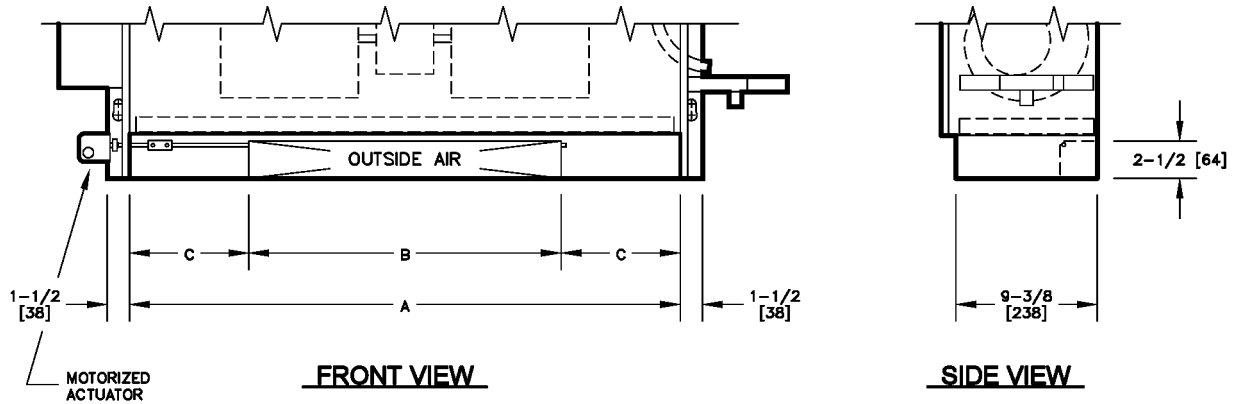


Figure 19: Outside Air Inlet Location, Manual Damper Option



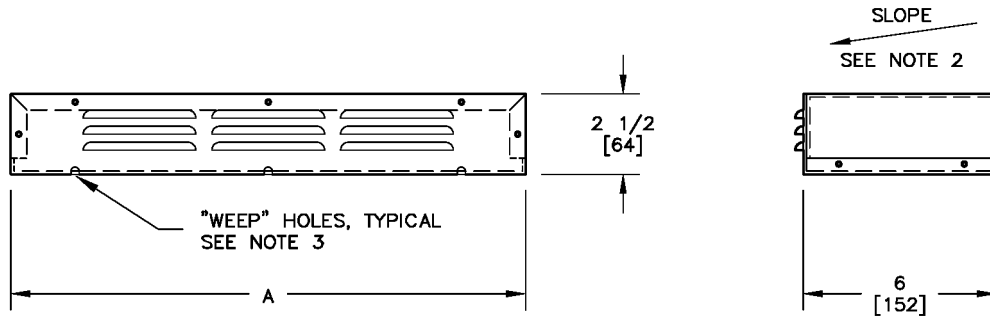
**DIMENSIONS - In [mm]**

UNIT SIZE	A	B	C
20	27 [686]	16 [406]	5-1/2 [140]
25	33 [838]	19 [483]	7 [178]
30	37 [940]	21 [533]	8 [203]
40	47 [1194]	27 [686]	10 [254]
50	57 [1448]	33 [838]	12 [305]
60	67 [1702]	39 [991]	14 [356]

**NOTES:**

1. All dimensions are Inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
2. Model FWC unit shown, typical for models FWX and FWI.
3. The standard damper options may not provide freeze protection under all conditions and applications. Other forms of freeze protection may be required.
4. Right hand unit shown, left hand unit is similar but opposite.

Figure 20: Outside Air Inlet Location, Motorized Damper Option



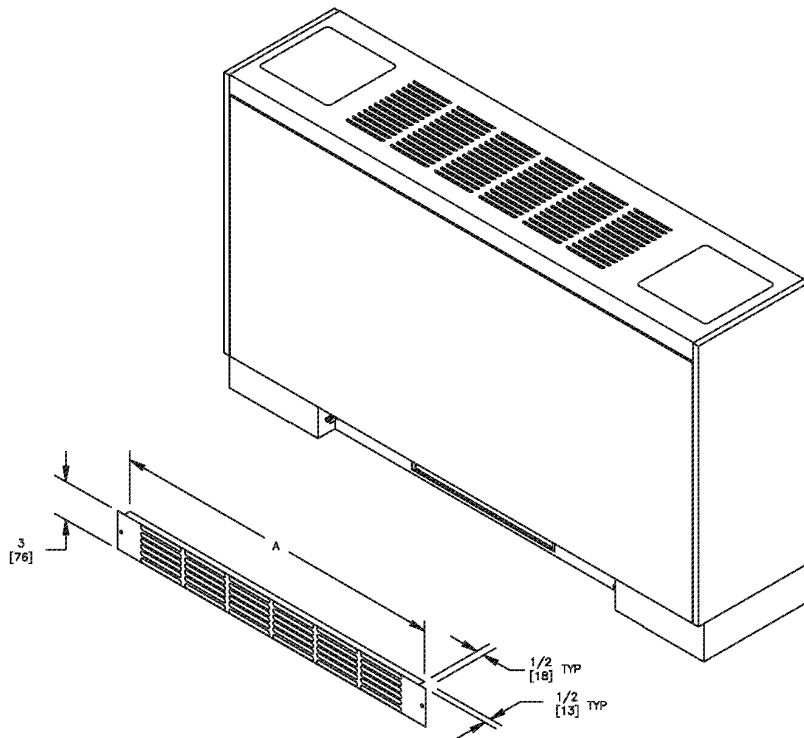
**DIMENSIONS - In [mm]**

UNIT SIZE	A
20	16 [406]
25	19 [483]
30	21 [533]
40	27 [686]
50	33 [838]
60	39 [991]

**NOTES:**

1. Material is .050" thick aluminum.
2. Wall box should be installed pitched slightly toward exterior surface of wall.
3. "Weep" holes should not be obstructed when sealing box to wall.

**Figure 21: Outside Air Wall Box Assembly**

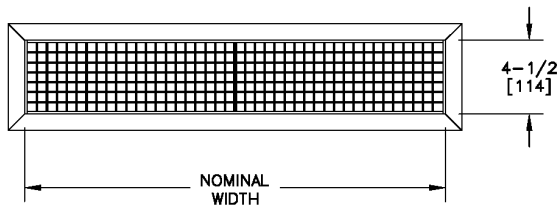


UNIT SIZE	A	# BANKS
20	26-11/16 [678]	5
25	32-11/16 [830]	6
30	36-11/16 [932]	7
40	46-11/16 [1186]	9
50	56-11/16 [1440]	11
60	66-11/16 [1694]	13

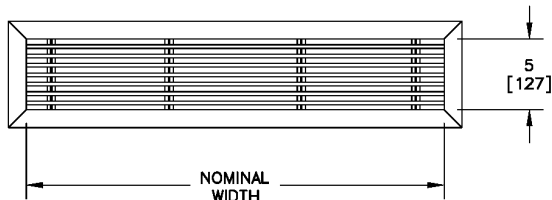
**NOTES:**

1. All dimensions are Inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
2. Standard cabinet finish is "Pearl White Satin".
3. Model FWX unit shown, typical for model FWI.
4. Return grille is held in place with sheet metal screws.

**Figure 22: Stamped Louver Return Air Grille**



**Double Deflection Grille**



**Linear Bar Grille**

**CONSTRUCTION**

- Frame: - Rollformed Aluminum
- Blades: - Rollformed Aluminum, Airfoil Shape
  - Individually Adjustable Deflection
  - 3/4" [19mm] Spacing on Centers
- Finish: - Powder Coat Baked Enamel
  - Color to Match Specified Unit Finish

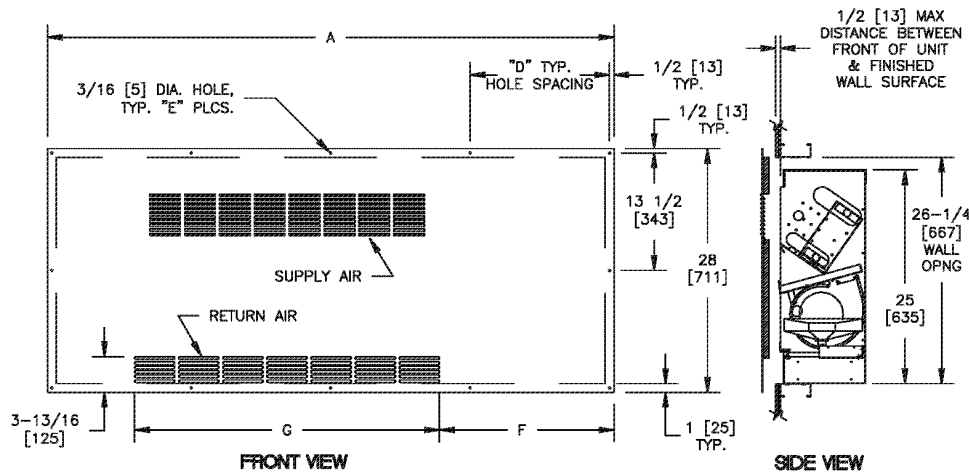
UNIT SIZE	NOMINAL WIDTH
20	25 [635]
25	31 [787]
30	35 [889]
40	45 [1143]
50	55 [1397]
60	65 [1651]

**CONSTRUCTION**

- Frame: - Extruded Aluminum
- Blades: - Extruded Aluminum
  - 15° Fixed Deflection
  - 1/2" [13mm] Spacing on Centers
- Finish: - Powder Coat Baked Enamel
  - Color to Match Specified Unit Finish

- NOTES:
1. All dimensions are Inches [millimeters]. Metric values are soft conversion.
  2. All grille dimensions are nominal.
  3. All grilles are shipped installed on unit.

**Figure 23: Optional Discharge Grilles**



- NOTES:
1. All dimensions are Inches [millimeters]. All dimensions are  $\pm 1/4"$  [6mm]. Metric values are soft conversion.
  2. Wall panel provides air seal at front of unit. Installed location is critical to proper unit operation.
  3. Install unit centered in wall opening dimensions shown.
  4. Unit may require raised support to achieve proper vertical alignment with wall panel.
  5. Right hand unit shown, left hand unit opposite.
  6. Mounting hardware furnished by others.
  7. Width of wall opening is the "C" dimension from the table.

**DIMENSIONS - In [mm]**

UNIT SIZE	A	B	C	D	E	F	G
20	55 [1397]	27 [688]	53 [1348]	18 [457]	10	20-1/16 [510]	24-7/8 [632]
25	61 [1549]	33 [838]	59 [1499]	15 [381]	12	20-1/2 [521]	30 [762]
30	65 [1651]	37 [940]	63 [1600]	16 [408]	12	20 [508]	35 [889]
40	75 [1905]	47 [1194]	73 [1854]	18 1/2 [470]	12	19-15/16 [506]	45-3/8 [1153]
50	85 [2159]	57 [1448]	83 [2108]	14 [358]	16	19-7/8 [505]	55-1/4 [1403]
60	95 [2413]	67 [1702]	93 [2382]	11-3/4 [298]	20	19-13/16 [503]	65-3/8 [1661]

**Figure 24: Standard Decorator Wall Panel**



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Published in U.S.A.  
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