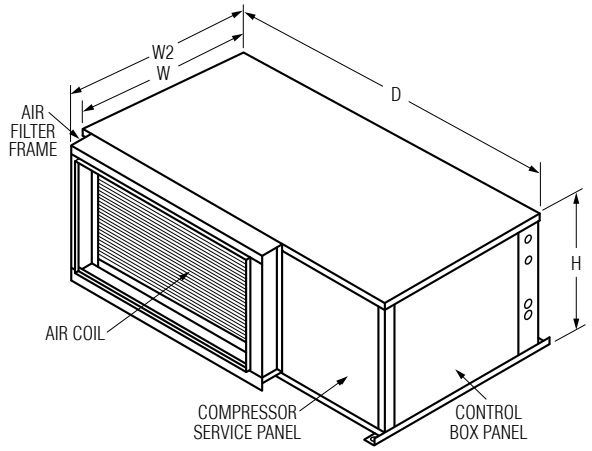
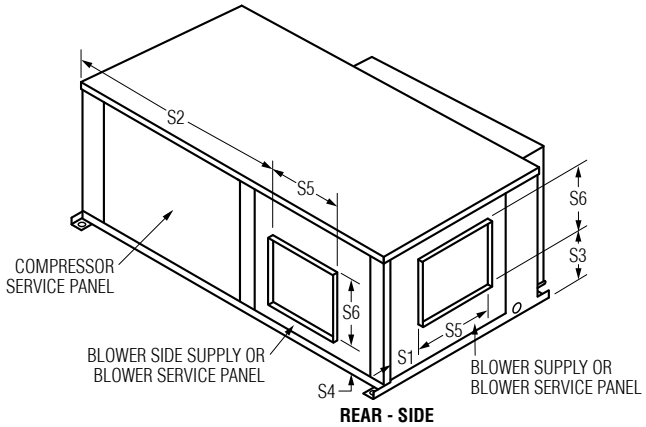
Engineered Comfort

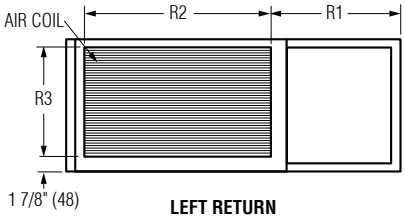
SERENITY HORIZONTAL PACKAGED WATER SOURCE HEAT PUMP WITH ECM MOTOR
LEFT RETURN
MODEL SERIES: 44PH • UNIT SIZES 6 – 72



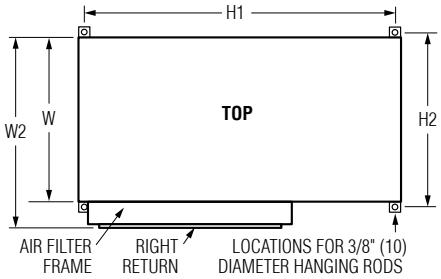
FRONT - LEFT RETURN

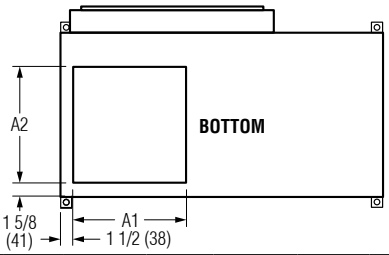


REAR - SIDE



LEFT RETURN





Dimensional Data with Optional Hydronic Heat and Waterside Economizer

Unit Size	W	W2
6, 9, 12	23 1/2 (597)	26 5/8 (676)
15, 18	25 1/2 (648)	28 5/8 (727)
24, 30	26 1/4 (667)	29 3/8 (746)
36, 42	26 1/4 (667)	29 3/8 (746)
48, 60	29 1/4 (743)	32 3/8 (822)
72	32 1/4 (819)	35 3/8 (899)

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Water Source HP
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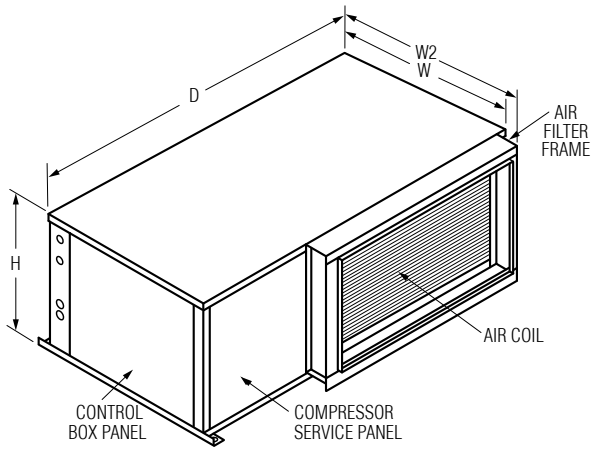
Dimensional Data for Standard Units

Unit Size	W	W2	D	H	S1	S2	S3	S4	S5	S6	R1	R2	R3	H1	H2	A1	A2	Filter Size
6, 9, 12	20 (508)	23 1/8 (587)	34 (864)	11 1/2 (292)	1 7/16 (36)	21 7/8 (555)	3 5/8 (92)	1 3/4 (45)	10 11/16 (272)	6 3/4 (171)	15 3/8 (391)	16 (406)	8 1/2 (216)	32 9/16 (827)	21 1/2 (546)	13 13/16 (352)	14 3/16 (360)	10 x 18 (254 x 457)
15, 18	22 (559)	25 1/8 (638)	43 (1092)	17 (432)	4 1/16 (103)	26 1/16 (662)	7 9/16 (192)	1 1/2 (39)	11 7/8 (302)	8 (204)	17 3/8 (442)	23 (584)	14 (356)	41 9/16 (1055)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	16 x 25 (406 x 653)
24	22 (559)	25 1/8 (638)	45 (1143)	18 (457)	1 7/16 (36)	29 1/8 (740)	6 1/8 (156)	2 3/4 (70)	13 7/16 (342)	9 1/8 (232)	16 3/8 (417)	26 (660)	15 (382)	43 9/16 (1106)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	16 x 28 (406 x 711)
30	22 (559)	25 1/8 (638)	45 (1143)	18 (457)	4 1/16 (103)	28 15/16 (735)	5 7/8 (149)	1 1/2 (39)	11 (280)	10 5/8 (270)	16 3/8 (417)	26 (660)	15 (382)	43 9/16 (1106)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	16 x 28 (406 x 711)
36	22 (559)	25 1/8 (638)	55 (1397)	19 (483)	2 13/16 (71)	36 13/16 (935)	6 5/8 (168)	1 3/4 (45)	14 3/8 (366)	10 5/8 (271)	18 7/16 (469)	33 15/16 (862)	16 (407)	53 9/16 (1360)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	18 x 36 (457 x 914)
42	22 (559)	25 1/8 (638)	55 (1397)	22 (559)	4 9/16 (116)	37 5/16 (948)	8 5/16 (211)	2 (51)	12 1/8 (308)	11 3/4 (299)	18 7/16 (469)	33 15/16 (862)	19 (483)	53 9/16 (1360)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	20 x 36 (508 x 660)
48	25 (635)	28 1/8 (714)	55 (1397)	22 (559)	4 9/16 (116)	37 5/16 (948)	8 5/16 (211)	2 (51)	12 1/8 (308)	11 3/4 (299)	18 7/16 (469)	33 15/16 (862)	19 (483)	53 9/16 (1360)	26 1/2 (673)	19 13/16 (504)	19 3/16 (487)	20 x 36 (508 x 660)
60	25 (635)	28 1/8 (714)	55 (1397)	22 (559)	4 9/16 (116)	34 9/16 (878)	8 3/16 (208)	2 (51)	14 7/8 (378)	11 3/4 (299)	18 7/16 (469)	33 15/16 (862)	19 (483)	53 9/16 (1360)	26 1/2 (673)	19 13/16 (504)	19 3/16 (487)	20 x 36 (508 x 660)
72	28 (711)	31 1/8 (791)	67 (1702)	24 (610)	4 9/16 (116)	44 3/8 (1127)	8 3/16 (208)	2 (51)	15 1/16 (383)	13 13/16 (351)	18 7/16 (469)	46 9/16 (1183)	21 (533)	65 9/16 (1665)	29 1/2 (749)	23 13/16 (605)	21 3/16 (538)	22 x 24 (559 x 610)

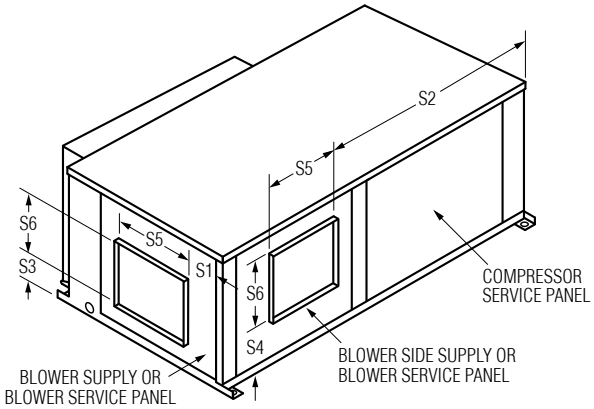
SCHEDULE TYPE:	Page 1 of 4. Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 10 - 23**	**44**	**1 - 23 - 23**	**44PH-1**

Engineered Comfort

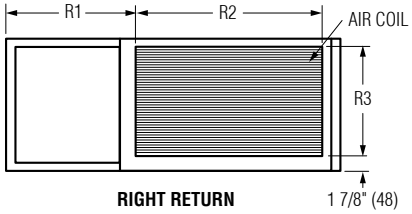
SERENITY HORIZONTAL PACKAGED WATER SOURCE HEAT PUMP WITH ECM MOTOR
RIGHT RETURN
MODEL SERIES: 44PH • UNIT SIZES 6 – 72



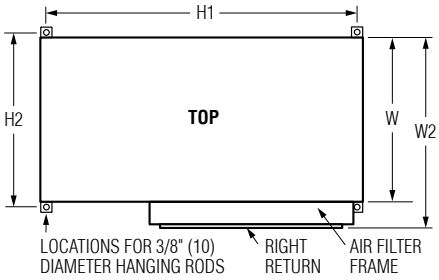
FRONT - RIGHT RETURN



REAR - SIDE



RIGHT RETURN



Dimensional Data with Optional Hydronic Heat and Waterside Economizer

Unit Size	W	W2
6, 9, 12	23 1/2 (597)	26 5/8 (676)
15, 18	25 1/2 (648)	28 5/8 (727)
24, 30	26 1/4 (667)	28 5/8 (727)
36, 42	26 1/4 (667)	28 5/8 (727)
48, 60	29 1/4 (743)	32 3/8 (822)
72	32 1/4 (819)	35 3/8 (899)

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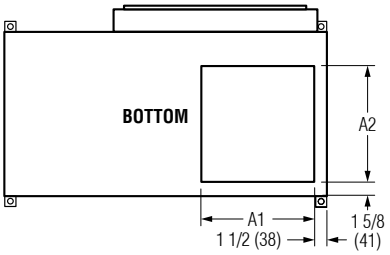


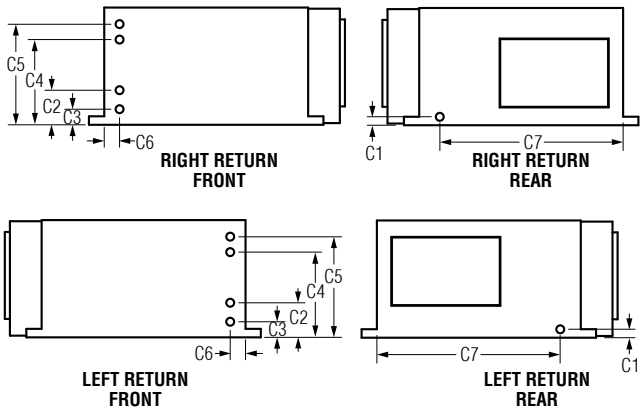
Dimensional Data For Standard Units

Unit Size	W	W2	D	H	S1	S2	S3	S4	S5	S6	R1	R2	R3	H1	H2	A1	A2	Filter Size
6, 9, 12	20 (508)	23 1/8 (587)	34 (864)	11 1/2 (292)	1 7/16 (36)	21 7/8 (555)	1 3/4 (44)	3 1/16 (78)	10 11/16 (272)	6 3/4 (171)	15 3/8 (391)	16 1/8 (410)	8 1/2 (216)	32 9/16 (827)	21 1/2 (546)	13 13/16 (352)	14 3/16 (360)	10 x 18 (254 x 457)
15, 18	22 (559)	25 1/8 (638)	43 (1092)	17 (432)	4 1/16 (103)	26 1/16 (662)	1 9/16 (40)	7 1/2 (191)	11 7/8 (302)	8 (204)	17 3/8 (442)	23 1/8 (587)	14 (356)	41 9/16 (1055)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	16 x 25 (406 x 653)
24	22 (559)	25 1/8 (638)	45 (1143)	18 (457)	1 7/16 (36)	29 1/8 (740)	2 3/4 (70)	6 1/8 (156)	13 7/16 (342)	9 1/8 (232)	16 3/8 (417)	26 1/8 (664)	15 (382)	43 9/16 (1106)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	16 x 28 (406 x 711)
30	22 (559)	25 1/8 (638)	45 (1143)	18 (457)	4 1/16 (103)	28 15/16 (735)	1 9/16 (40)	5 7/8 (150)	11 (280)	10 5/8 (270)	16 3/8 (417)	26 1/8 (664)	15 (382)	43 9/16 (1106)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	16 x 28 (406 x 711)
36	22 (559)	25 1/8 (638)	55 (1397)	19 (483)	2 13/16 (71)	36 13/16 (935)	1 3/4 (44)	6 5/8 (169)	14 3/8 (366)	10 5/8 (271)	18 7/16 (469)	34 9/16 (878)	16 (407)	53 9/16 (1360)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	18 x 36 (457 x 914)
42	22 (559)	25 1/8 (638)	55 (1397)	22 (559)	4 9/16 (116)	37 5/16 (948)	2 1/32 (52)	8 1/4 (210)	12 1/8 (308)	11 3/4 (299)	18 7/16 (469)	34 9/16 (878)	19 (483)	53 9/16 (1360)	23 1/2 (597)	16 13/16 (428)	16 3/16 (411)	20 x 36 (508 x 660)
48	25 (635)	28 1/8 (714)	55 (1397)	22 (559)	4 9/16 (116)	37 5/16 (948)	2 1/32 (52)	8 1/4 (210)	12 1/8 (308)	11 3/4 (299)	18 7/16 (469)	34 9/16 (878)	19 (483)	53 9/16 (1360)	26 1/2 (673)	19 13/16 (504)	19 3/16 (487)	20 x 36 (508 x 660)
60	25 (635)	28 1/8 (714)	55 (1397)	22 (559)	4 9/16 (116)	34 9/16 (878)	2 1/32 (52)	8 1/4 (210)	14 7/8 (378)	11 3/4 (299)	18 7/16 (469)	34 9/16 (878)	19 (483)	53 9/16 (1360)	26 1/2 (673)	19 13/16 (504)	19 3/16 (487)	20 x 36 (508 x 660)
72	28 (711)	31 1/8 (791)	67 (1702)	24 (610)	4 9/16 (116)	44 3/8 (1127)	2 1/32 (52)	8 3/16 (208)	15 1/16 (383)	13 13/16 (351)	18 7/16 (469)	46 9/16 (1183)	21 (533)	65 9/16 (1665)	29 1/2 (749)	23 13/16 (605)	21 3/16 (538)	22 x 24 (559 x 610)

SCHEDULE TYPE:	Page 2 of 4. Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 10 - 23**	**44**	**1 - 23 - 23**	**44PH-1**

Engineered Comfort

SERENITY HORIZONTAL PACKAGED WATER SOURCE HEAT PUMP WITH ECM MOTOR LEFT AND RIGHT RETURN MODEL SERIES: 44PH • UNIT SIZES 6 – 72



Dimensions Data - Coil Connections

Unit Size	C1 COND. DRAIN	C2 WATER OUT	C3 WATER IN	C4 POWER SUPPLY	C5 THERMO-STAT	C6 EDGE TO CONNECTIONS	C7 EDGE TO COND. DRAIN
6, 9, 12	7/8 (22)	3 13/32 (87)	1 9/16 (40)	8 3/8 (212)	9 7/8 (251)	1 1/2 (38)	18 (457)
15, 18	7/8 (22)	3 13/32 (87)	1 9/16 (40)	13 7/8 (352)	15 3/8 (390)	1 1/2 (38)	20 (507)
24	7/8 (22)	3 13/32 (87)	1 9/16 (40)	11 7/8 (301)	16 3/8 (416)	2 1/2 (964)	20 (507)
30	7/8 (22)	3 13/32 (87)	1 9/16 (40)	11 7/8 (301)	16 3/8 (416)	2 1/2 (964)	20 (507)
36	7/8 (22)	3 13/32 (87)	1 9/16 (40)	12 7/8 (327)	17 3/8 (441)	2 1/2 (964)	20 (507)
42	7/8 (22)	5 15/16 (150)	3 1/16 (77)	15 7/8 (403)	20 3/8 (517)	2 1/2 (964)	20 (507)
48	7/8 (22)	5 15/16 (150)	3 1/16 (77)	15 7/8 (403)	20 3/8 (517)	2 1/2 (964)	23 (584)
60	7/8 (22)	5 15/16 (150)	3 1/16 (77)	15 7/8 (403)	20 3/8 (517)	2 1/2 (964)	23 (584)
72	7/8 (22)	5 15/16 (150)	3 1/16 (77)	17 7/8 (454)	22 3/8 (568)	2 1/2 (964	25 (635)

STANDARD FEATURES:

- Heat pump system
- Refrigerant circuit
- Copper tube/Aluminum fin
- Cabinets are constructed with a minimum 16 ga. galvanized steel base and a combination of 16 and 20 ga. cabinet components
- ECM Ultra-high efficiency fan motor with overload protection
- High-efficiency rotary and scroll compressors
- Compressors mounted on rubber vibration isolators to minimize vibration transmission
- Highly efficient heat exchanger optimizes efficiency
- TXV metering device.
- 1/2" (13) dual density fiberglass insulation.
- Galvanized steel insulated condensate drain pan.
- Multiple return air configurations
- Flow control (1.0 to 20.0 GPM)
- Solid state control with thermostat
- 1" (25) throwaway filter
- Exceeds ASHRAE 90.1 efficiencies

OPTIONS:

❑ Other systems:
- ❑ Cooling Only
- ❑ Cooling with HW Heat
- ❑ Heat Pump with Hot Gas Reheat
- ❑ Heat Pump with Waterside Economizer

❑ 2" (51) Throwaway filter
❑ 1" (25) MERV 8 pleated filter
❑ 2" (51) MERV 8 pleated filter
❑ 1" (25) MERV 11 pleated filter
❑ 2" (51) MERV 11 pleated filter
❑ 1" (25) MERV 13 pleated filter
❑ 2" (51) MERV 13 pleated filter
❑ Toggle disconnect switch.
❑ Fused disconnect switch.
❑ Cupro-Nickel
❑ Standard geothermal
❑ Cupro-nickel geothermal
❑ Compressor sound blanket
❑ Vibration isolation pad
❑ Vibration pad & sound blanket
❑ Tin dipped hairpins
❑ Epoxy coating
❑ External flow control
❑ Freeze protection
❑ Thermostat/Controls (by Engineered Comfort)
❑ Valve package internal
❑ Valve package external (Ship loose)
❑ 2-Way valve
❑ 3-Way valve
❑ Flow control valve
❑ 1/2" (13) Foil face
❑ 1/2" (13) Fiber-free liner
❑ Ball valve
❑ Memory stop
❑ Condensate pump
❑ Condensate drain pan overflow switch
❑ Unit circuit breaker
❑ Special features: _____

Voltage:

Single phase, 60 Hz.
❑ 208V/230V ❑ 265V
Three phase, 60 Hz.
❑ 460V ❑ 575V

General Information

Unit Size	TON	CFM	GPM	Cooling*			Heating**		Compressor	Shipping Weight (lbs)	Operating Weight (lbs)
				Total Capacity (btuh)	Sensible Capacity (btuh)	EER	Capacity (btuh)	COP			
6	1/2	200	2	6,120	4,350	15.4	7,450	4.9	Rotary	140	125
9	3/4	300	2.5	9,130	6,000	14.0	11,180	4.4	Rotary	143	128
12	1	400	3	12,670	9,250	13.5	14,880	4.5	Rotary	145	130
15	1 1/4	500	3.8	15,220	10,800	17.0	18,020	5.6	Rotary	197	180
18	1 1/2	600	4.5	18,240	12,820	17.0	21,680	5.6	Rotary	207	190
24	2	800	6	24,320	17,590	16.4	28,170	5.2	Scroll	239	220
30	2 1/2	1000	7.5	30,370	21,900	16.0	24,240	5.0	Scroll	244	225
36	3	1200	9	36,470	25,840	17.0	43,260	5.0	Scroll	291	270
42	3 1/2	1400	10.5	42,580	28,440	15.0	49,270	4.6	Scroll	331	310
48	4	1600	12	48,820	33,110	15.0	53,360	4.6	Scroll	348	325
60	5	2000	15	58,720	41,100	15.0	72,390	4.6	Scroll	363	340
72	6	2200	18.0	71,000	53,700	15.0	78,000	4.2	Scroll	505	450

* Based on 86ºF Entering Water Temp., 80ºF DB 67ºF WB Air Temperature. Performance based upon 208/60/1 voltage.
** Based on 68°F Entering Water Temp., 68°F DB 59°F WB Air Temperature.

SCHEDULE TYPE:	Page 3 of 4. Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 10 - 23**	**44**	**1 - 23 - 23**	**44PH-1**

Engineered Comfort

SERENITY HORIZONTAL PACKAGED WATER SOURCE HEAT PUMP WITH ECM MOTOR LEFT AND RIGHT RETURN
MODEL SERIES: 44PH • UNIT SIZES 6 – 72

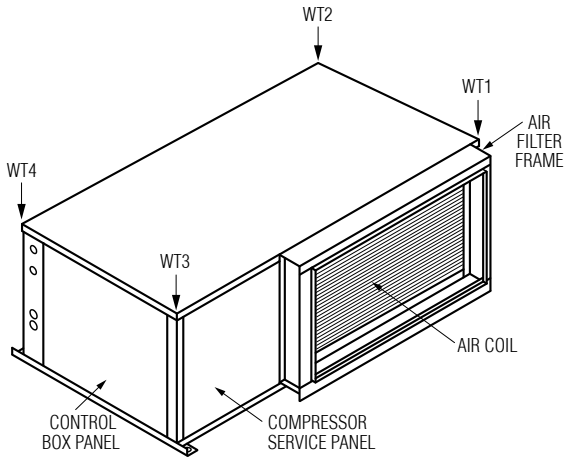
Electrical Data

Unit Size	Compressor				Supply Blower Motor		Single Point Power	
	Voltage-Hertz-Phase	RLA	LRA	QTY	FLA	HP	MCA	MOPD
6	208/230-60-1	2.5	17.7	1	2.2	1/4	5.3	15
	265-60-1	2.1	13.5	1	2.2	1/4	4.8	15
9	208/230-60-1	4.0	22.2	1	2.2	1/4	7.2	15
	265-60-1	3.3	18.8	1	2.2	1/4	6.3	15
12	208/230-60-1	5.6	29.0	1	2.2	1/4	9.2	15
	265-60-1	4.6	20.0	1	2.2	1/4	8.0	15
15	208/230-60-1	4.8	26.0	1	2.2	1/4	8.2	15
	265-60-1	4.2	25.0	1	2.2	1/4	7.5	15
18	208/230-60-1	7.7	38.0	1	2.2	1/4	11.8	15
	265-60-1	7.1	30.0	1	2.2	1/4	11.1	15
24	208/230-60-1	13.5	58.3	1	4.6	1/2	21.5	30
	265-60-1	9.0	54.0	1	3.2	1/2	14.5	20
	208/230-60-3	7.1	55.4	1	4.6	1/2	13.5	20
	460-60-3	3.5	28.0	1	3.2	1/2	7.6	15
30	208/230-60-1	14.1	73.0	1	4.6	1/2	22.2	30
	265-60-1	11.2	60.0	1	3.2	1/2	17.2	20
	208/230-60-3	8.9	58.0	1	4.6	1/2	15.7	20
	460-60-3	4.2	28.0	1	3.2	1/2	8.5	15
36	208/230-60-1	14.1	77.0	1	4.6	1/2	22.2	30
	265-60-1	12.2	72.0	1	3.2	1/2	18.5	30
	208/230-60-3	9.0	71.0	1	4.6	1/2	15.9	20
	460-60-3	5.6	38.0	1	3.2	1/2	10.2	15
42	208/230-60-1	17.9	112.0	1	6.3	3/4	28.7	40
	265-60-1	16.0	87.0	1	3.9	3/4	23.9	30
	208/230-60-3	13.5	88.0	1	6.3	3/4	23.2	30
	460-60-3	6.0	44.0	1	3.9	3/4	11.4	15
48	208/230-60-1	21.8	117.0	1	6.3	3/4	33.6	50
	265-60-1	16.3	98.0	1	3.9	3/4	24.3	40
	208/230-60-3	13.7	83.1	1	6.3	3/4	23.4	30
	460-60-3	6.2	41.0	1	3.9	3/4	11.7	15
60	208/230-60-1	26.3	134.0	1	6.3	3/4	39.2	60
	265-60-1	19.9	128.0	1	3.9	3/4	28.8	40
	208/230-60-3	15.6	110.0	1	6.3	3/4	25.8	40
	460-60-3	7.8	52.0	1	3.9	3/4	13.7	20
72	208/230-60-1	30.8	178.0	1	6.6	1	45.1	50
	208/230-60-3	19.6	136.0	1	6.6	1	31.1	40
	460-60-3	8.2	66.1	1	6.0	1	16.3	20

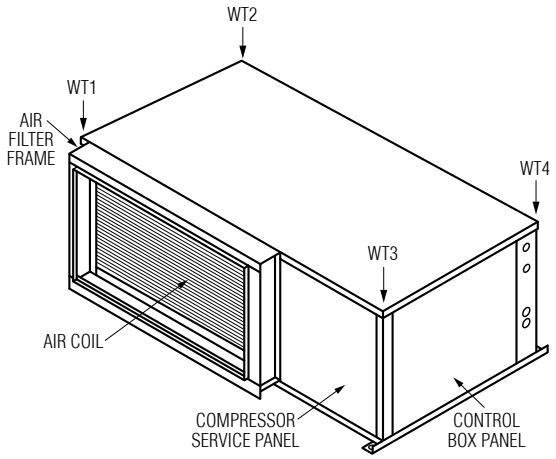
NOTE: Four wire power supply with neutral connection required for all 460 volt units with ECM motor.

Corner Weights

Unit Size	TOTAL WEIGHT	CORNER WT1	CORNER WT2	CORNER WT3	CORNER WT4
6	125	27	25	41	32
9	128	27	26	42	33
12	130	28	26	43	33
15	180	39	36	59	46
18	190	41	38	62	49
24	230	49	47	75	59
30	235	50	48	77	60
36	280	60	57	91	72
42	320	68	65	105	82
48	325	70	66	106	83
60	340	73	69	111	87
72	400	86	81	130	103



FRONT - RIGHT RETURN



FRONT - LEFT RETURN

SCHEDULE TYPE:	Page 4 of 4. Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**10 - 10 - 23**	**44**	**1 - 23 - 23**	**44PH-1**