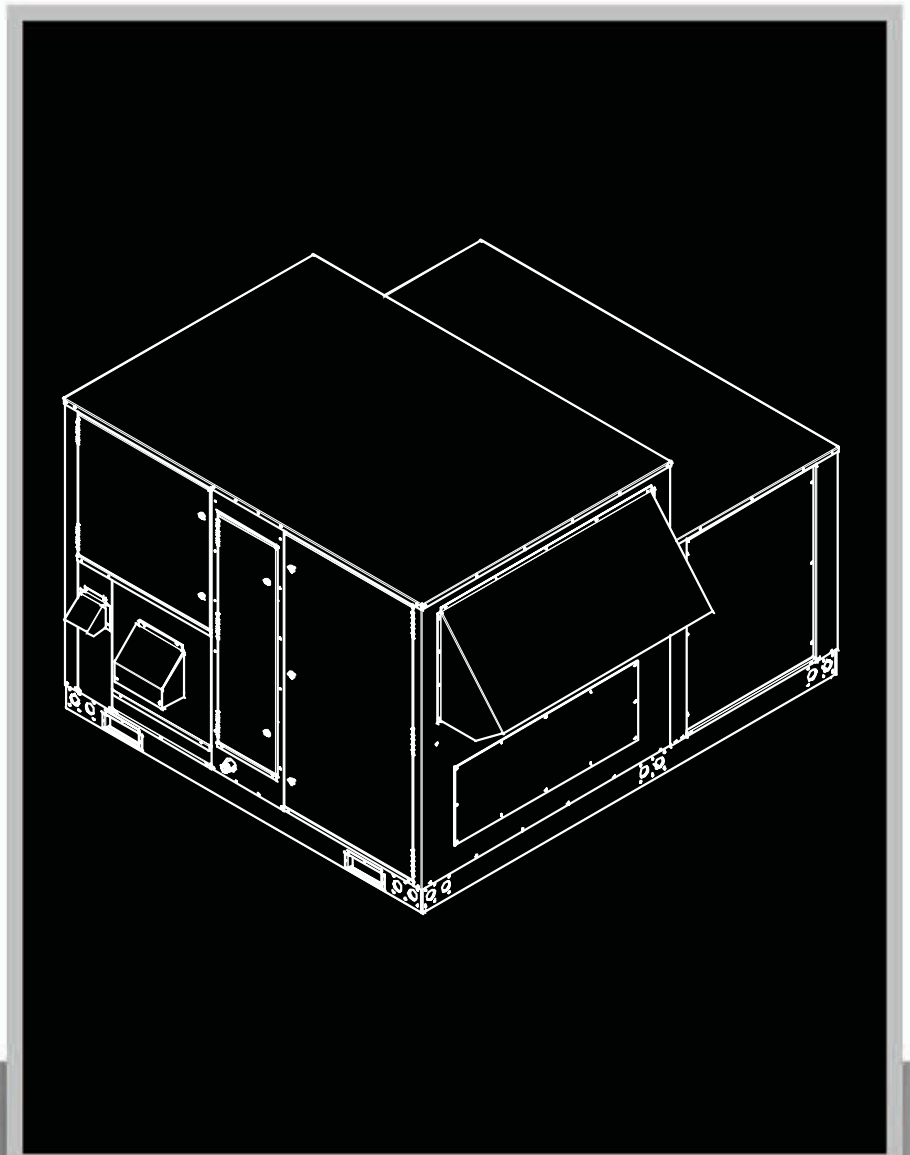


FHP Manufacturing Company

## Total Rooftop Solution — SERIES TRS

### Supplemental Data - Water Source Heat Pump



# Nomenclature

<b>TRS</b>	<b>W</b>	<b>240</b>	<b>C</b>	<b>A</b>	<b>3</b>	<b>A</b>
<b>Model</b>	<b>Type</b>	<b>Unit Size</b>	<b>Cabinet Size</b>	<b>Air Flow</b>	<b>Voltage</b>	<b>Design Series</b>
<b>TRS</b>	<b>G = GSHP</b> <b>W = WSHP</b>	<b>150</b> <b>180</b> <b>210</b> <b>200</b> <b>240</b> <b>300</b> <b>360</b> <b>420</b>	<b>B = 150-210</b> <b>C = 200-420</b>	<b>A = Vertical Supply / Vertical Return</b> <b>C = Horizontal Supply / Vertical Return</b>	<b>3 = 208-230/3</b> <b>4 = 460/3</b>	<b>A</b>

# SERIES TRSW/G - B CABINET

## SPECIFICATIONS

<b>MODEL TRSW</b>	
<b>RECIRCULATING AIR UNITS</b>	
<b>Performance per ISO 13256-1 - Water Loop 1</b>	
Airflow Cubic Feet Per Minute (CFM)	
Cooling Capacity (Btu/h)	
Condenser Water Flow Gallons Per Minute (GPM)	
Energy Efficient Ratio (EER)	
Heating Capacity (Btu/h)	
Coefficient Of Performance (COP)	
<b>Performance per ISO 13256-1 - Ground Loop 2</b>	
Airflow Cubic Feet Per Minute (CFM)	
Cooling Capacity (Btu/h)	
Condenser Water Flow Gallons Per Minute (GPM)	
Energy Efficient Ratio (EER)	
Heating Capacity (Btu/h)	
Coefficient Of Performance (COP)	
<b>Physical Data</b>	
Number of Refrigerant Circuits	
Refrigerant Charge R410A (ounce/circuit)	
Evaporation Area Per Square Feet (sq. ft.)	
Evaporation Row / Fins Per Inch (fpi)	
Supply Fan Horse Power (Hp) Range	
Supply Fan Size/Type-Forward Curve (FC)	
Filter Area Square Feet (sq. ft.)	
Drain Connection (mpt.)	
Coaxial Water Coil Connections - Outside Diameter Sweat (OD)	
Base Unit Weight (pounds)	

	<b>150</b>	<b>180</b>	<b>210</b>
Airflow Cubic Feet Per Minute (CFM)	5,000	6,000	6,000
Cooling Capacity (Btu/h)	164,390	199,072	222,472
Condenser Water Flow Gallons Per Minute (GPM)	31.25	37.5	43.8
Energy Efficient Ratio (EER)	14.9	14.9	15.3
Heating Capacity (Btu/h)	198,666	241,608	265,856
Coefficient Of Performance (COP)	5.29	5.18	5.50
Airflow Cubic Feet Per Minute (CFM)	5,000	6,000	6,000
Cooling Capacity (Btu/h)	171,048	206,992	231,598
Condenser Water Flow Gallons Per Minute (GPM)	31.25	37.5	43.8
Energy Efficient Ratio (EER)	16.81	16.7	17.2
Heating Capacity (Btu/h)	128,646	155,900	167,484
Coefficient Of Performance (COP)	3.82	3.95	4.03
Number of Refrigerant Circuits	2	2	2
Refrigerant Charge R410A (ounce/circuit)	175	208	259
Evaporation Area Per Square Feet (sq. ft.)	12.00	12.00	12.00
Evaporation Row / Fins Per Inch (fpi)	4/12	4/12	6/12
Supply Fan Horse Power (Hp) Range	3-10	3-10	3-10
Supply Fan Size/Type-Forward Curve (FC)	15 x 15	15 x 15	15 x 15
Filter Area Square Feet (sq. ft.)	13.30	13.30	13.30
Drain Connection (mpt.)	1-1/4"	1-1/4"	1-1/4"
Coaxial Water Coil Connections - Outside Diameter Sweat (OD)	1 /58"	1 /58"	-
Base Unit Weight (pounds)	1860	1900	1920

- Rating based on 80.6°F Dbt/66.2 °F Wbt entering air, 86.0 °F entering water temperature condition for cooling and 68 °F Dbt /59.0 °F Wbt entering air, 68.0°F entering water for heating.
- Rating based on 80.6°F Dbt/66.2 °F Wbt entering air, 77.0 °F entering water temperature condition for cooling and 68 °F Dbt/59.0 °F Wbt entering air, 32 °F entering fluid for heating.

<b>MODEL TRSW</b>	
<b>UNIT AND COMPONENT WEIGHTS</b>	
Base Unit <sup>1</sup>	
Hot Gas Reheat	
Electric Heater	
Dampers	
Power Exhaust	
Curb 14"	
Curb 24"	

	<b>150</b>	<b>180</b>	<b>210</b>
Base Unit <sup>1</sup>	1,960	2,000	2,020
Hot Gas Reheat	75	75	75
Electric Heater	75	75	75
Dampers	60	60	60
Power Exhaust	375	375	375
Curb 14"	275	275	275
Curb 24"	375	375	375

- Base unit weight includes packaged direct expansion (Dx) cooling coil with largest available evaporator blower motor.
- Adder for Energy Conservation Wheel (ECW) is based on the largest wheel available.

## COMPONENT PRESSURE DROP DATA

### Unit Sizes 150 through 210

Component	Supply Air CFM								
	1300	1950	2600	3250	3900	4550	5200	5850	6500
Cabinet Loss	.05	.09	.12	.19	.24	.37	.50	.63	.77
2" Cleanable Filters	.01	.02	.03	.05	.06	.07	.08	.09	.10
2" Pleated 30% Filters	.05	.07	.10	.12	.15	.18	.22	.26	.30
4" Pleated 30% Filters	.05	.06	.08	.09	.11	.14	.17	.20	.24
4" Pleated 65% Filters	.07	.10	.12	.15	.17	.21	.26	.30	.35
4" Pleated 95% Filters	.15	.18	.22	.26	.30	.37	.45	.53	.60
Evaporator coil	—	.10	.13	.15	.25	.29	.30	.34	.45
Hot Gas Reheat Coil -1 Circuit	.04	.05	.06	.07	.08	.10	.11	.13	.15
Electric Heat	.01	.02	.04	.06	.08	.12	.15	.19	.24
Economizer	.01	.02	.04	.07	.10	.13	.17	.22	.27

# SERIES TRSW/G - B CABINET

## COOLING CAPACITY DATA - RECIRCULATING

<b>TRSW150 RECIRCULATING</b>					
Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	31.3				
Pounds Per Square Inch (PSI)	5.08				
Cubic Feet Per Minute (CFM)	5,000				
Total Capacity- Btu/h	201,460	193,992	186,570	178,966	171,458
Watts	6,400	7,112	7,884	8,706	9,642
Heat Rejected - Btu/h	223,232	217,170	211,366	205,524	200,226
<b>TRSW180 RECIRCULATING</b>					
Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	37.5				
Pounds Per Square Inch (PSI)	4.18				
Cubic Feet Per Minute (CFM)	6,000				
Total Capacity- Btu/h	241,294	232,742	224,290	215,584	206,654
Watts	8,326	9,140	9,992	10,940	12,016
Heat Rejected - Btu/h	269,822	262,762	255,968	249,236	242,752
<b>TRSW210 RECIRCULATING</b>					
Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	43.8				
Pounds Per Square Inch (PSI)	5.51				
Cubic Feet Per Minute (CFM)	6,000				
Total Capacity- Btu/h	267,346	260,630	251,068	241,150	230,868
Watts	8,966	9,908	10,892	11,958	13,136
Heat Rejected - Btu/h	297,730	292,886	285,372	277,758	270,136

- Notes: 1. Cooling capacities shown are based on 80°F Dbt / 67°F Wbt entering air coil conditions.  
 2. Cooling capacities shown are gross capacities. For net capacities, multiply blower Break Horse Power (Bhp) required times 2,545 and subtract from total and sensible Btu/h in tables.  
 3. To convert water pressure drop from PSI to feet of H<sub>2</sub>O, multiply by 2.31.

# SERIES TRSW/G - B CABINET

## HEATING CAPACITY DATA - RECIRCULATING

### TRSW150 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	31.3				
Pounds Per Square Inch (PSI)	5.88				
Cubic Feet Per Minute (CFM)	5,000				
Total Capacity- Btu/h	120,324	135,750	157,264	176,994	197,694
Watts	8,762	9,002	9,326	9,628	9,882
Heat Rejected - Btu/h	87,068	103,012	122,798	142,032	162,166

### TRSW180 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	37.5				
Pounds Per Square Inch (PSI)	4.29				
Cubic Feet Per Minute (CFM)	6,000				
Total Capacity- Btu/h	148,	166,910	192,968	216,238	241,448
Watts	10,472	10,898	11,508	12,080	12,736
Heat Rejected - Btu/h	107,812	127,260	149,852	173,070	196,896

### TRSW210 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	43.8				
Pounds Per Square Inch (PSI)	5.51				
Cubic Feet Per Minute (CFM)	6,000				
Total Capacity- Btu/h	158,350	180,216	209,654	237,344	266,406
Watts	11,088	11,546	12,118	12,652	13,210
Heat Rejected - Btu/h	116,580	137,924	165,366	191,898	219,720

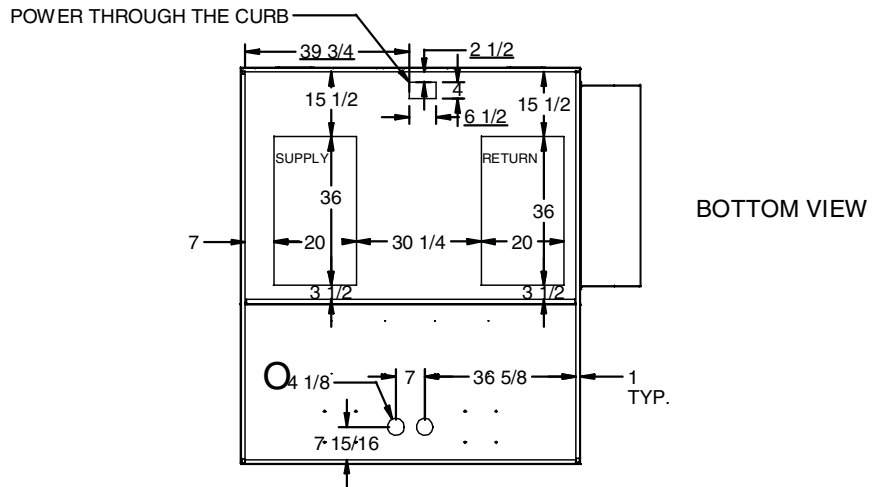
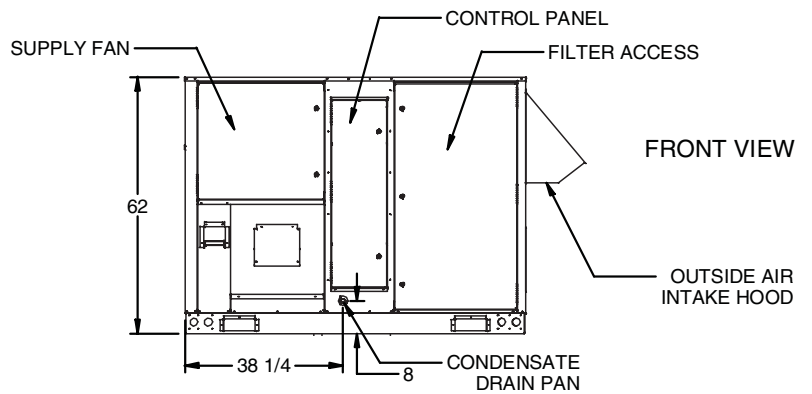
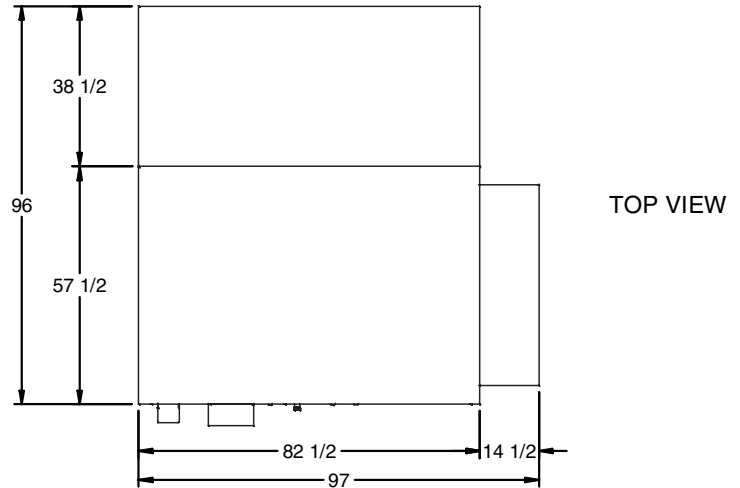
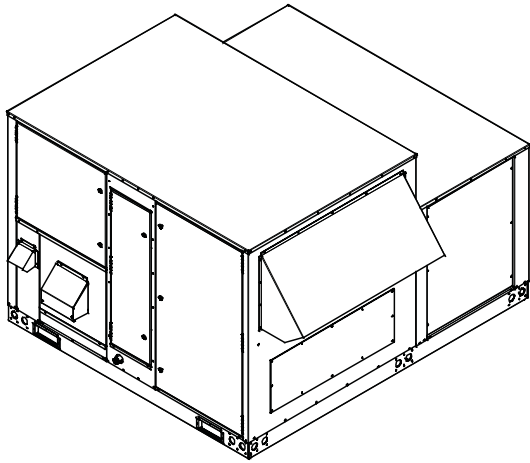
Notes: 1. Cooling capacities shown are based on 80°F Dbt / 67°F Wbt entering air coil conditions.

2. Cooling capacities shown are gross capacities. For net capacities, multiply blower Break Horse Power (Bhp) required times 2,545 and subtract from total and sensible Btu/h in tables.

3. To convert water pressure drop from pounds pr square inch (PSI) to feet of H<sub>2</sub>O, multiply by 2.31.

# SERIES TRSW/G - B CABINET

## BASE UNIT



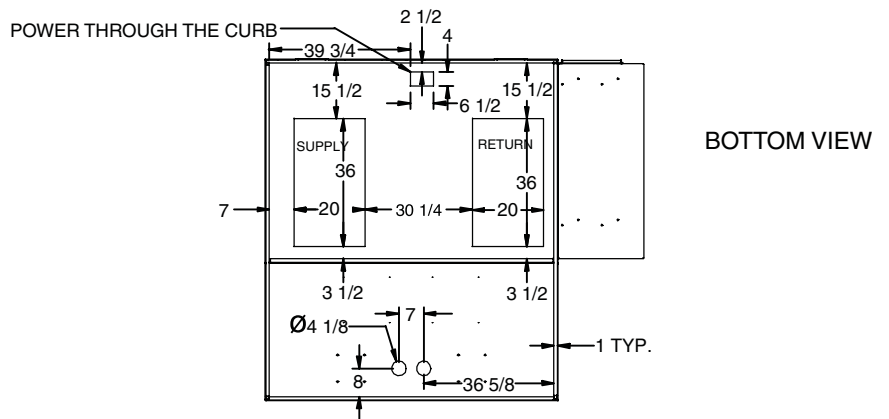
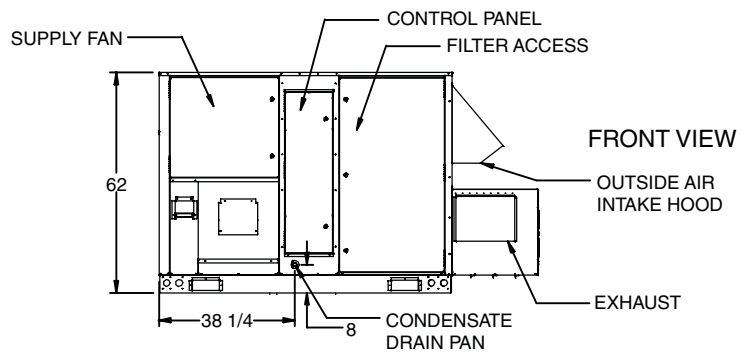
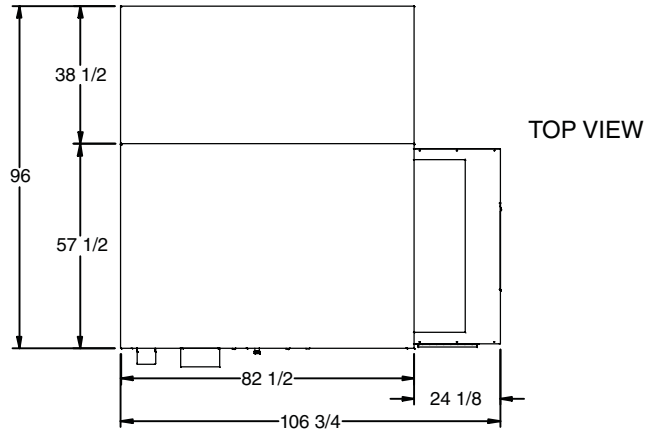
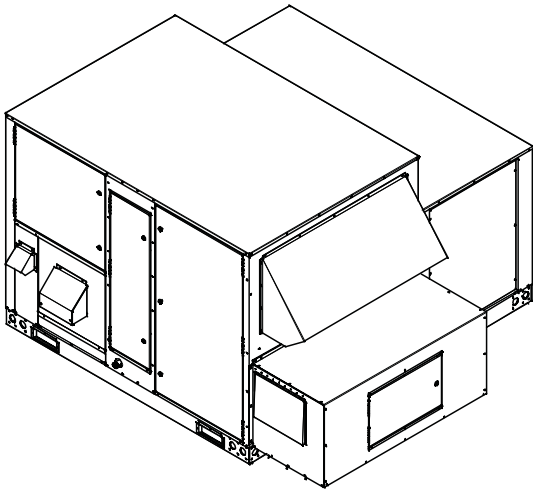
All dimensions are in inches.

Service Clearance: FHP recommends a minimum of 24" to 36" on all sides of unit. The control panel side should have at least 36" clearance.

This sheet is for general information purposes only and should not be used for construction or installation. All products must be set-up, assembled, installed and used in accordance with all applicable instructions, the instruction manual (s) provided as well as requirements of governmental authorities.

# SERIES TRSW/G - B CABINET

## BASE UNIT WITH EXHAUST



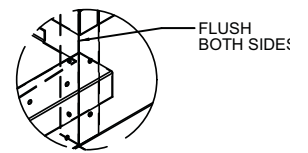
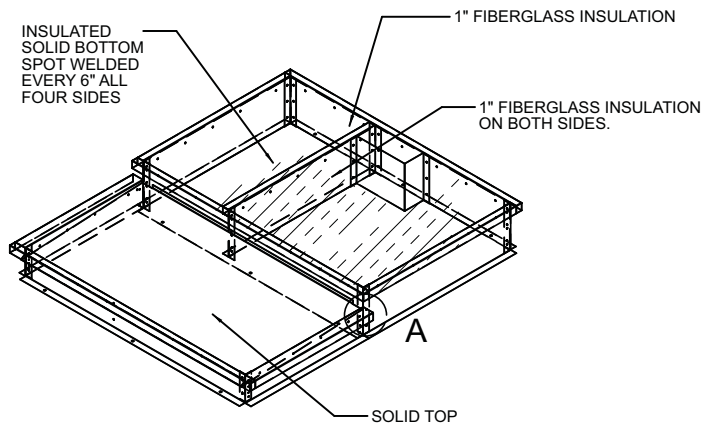
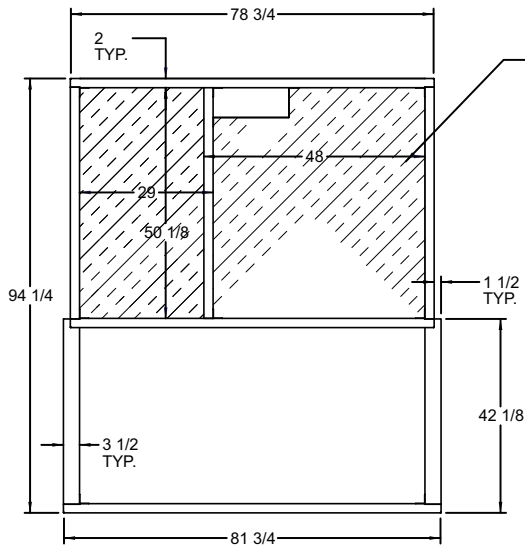
All dimensions are in inches.

Service Clearance: FHP recommends a minimum of 24" to 36" on all sides of unit. The control panel side should have at least 36" clearance.

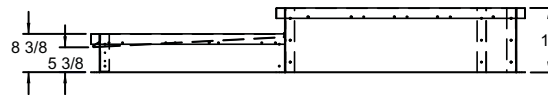
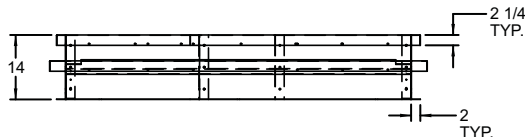
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# SERIES TRSW/G - B CABINET

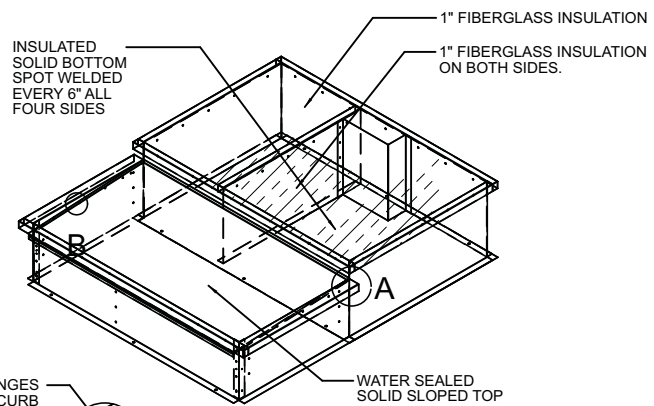
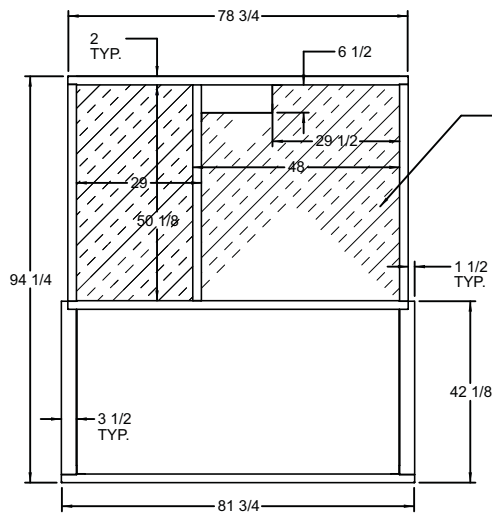
## ROOF CURB



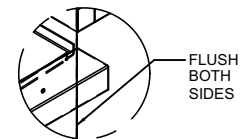
DETAIL A



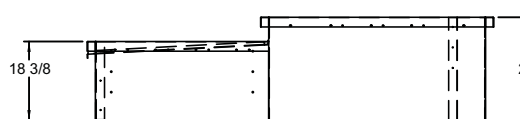
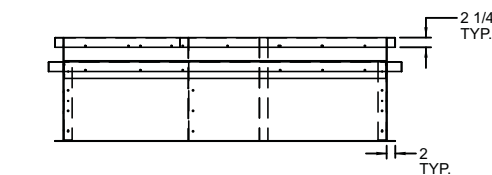
## 14 INCH CURB



DETAIL B



DETAIL A



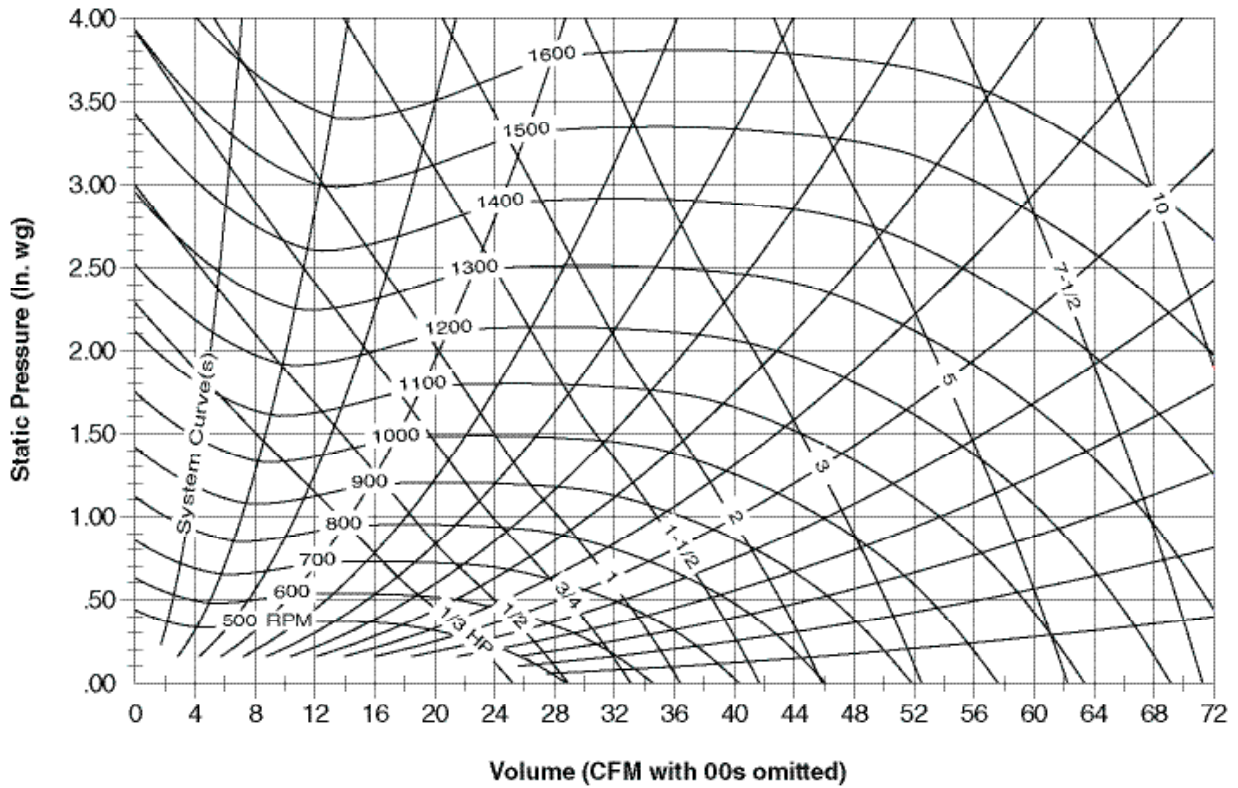
## 24 INCH CURB



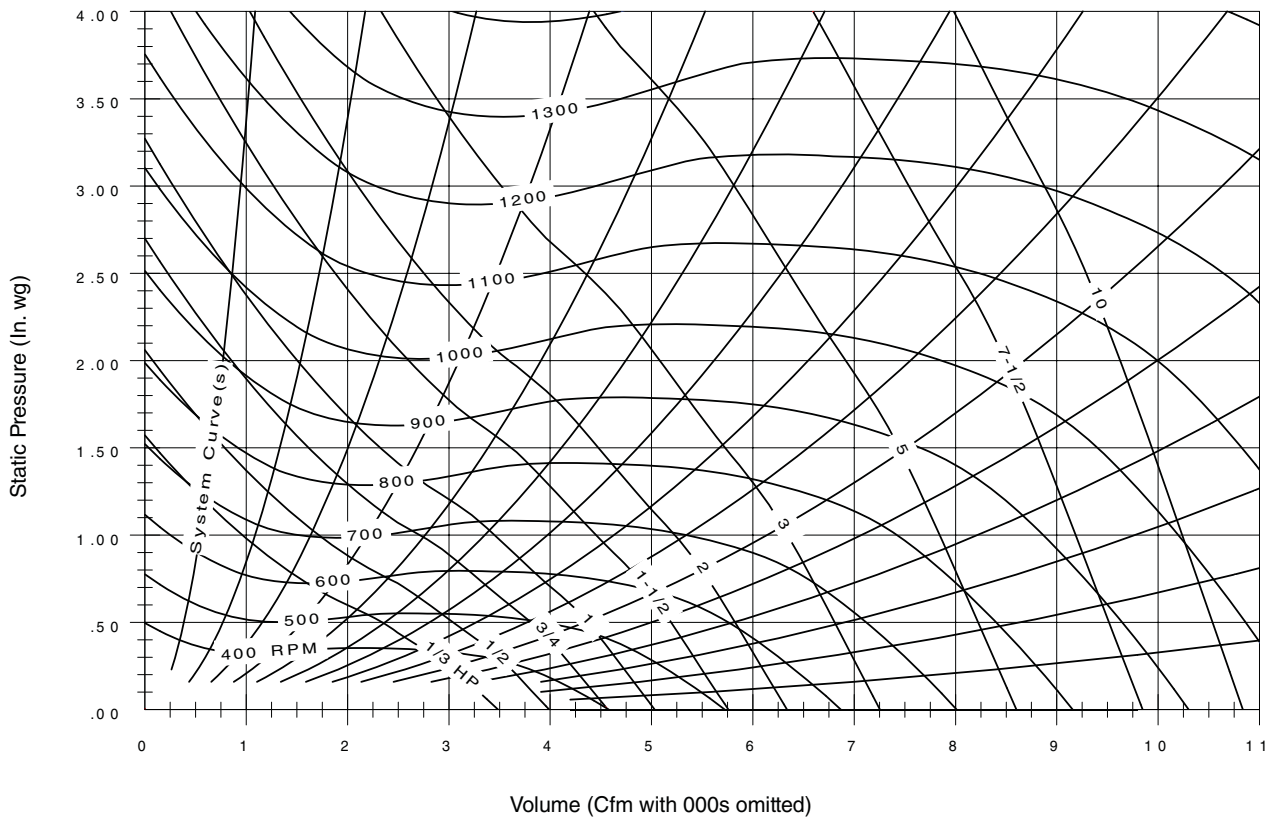
# SERIES TRSG/W - B CABINET

# SUPPLY & EXHAUST BLOWER PERFORMANCE

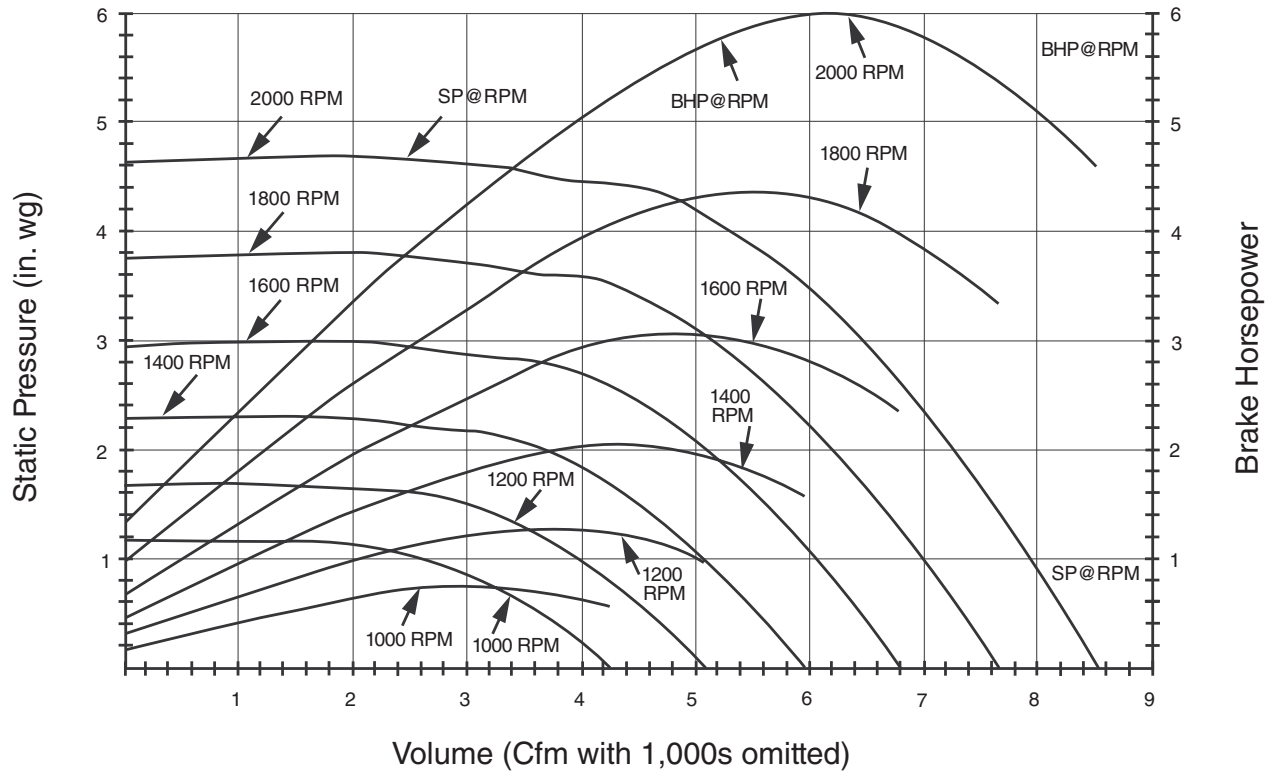
## Forward Curve (FC) 12 X 12



## Forward Curve (FC) 15 X 15

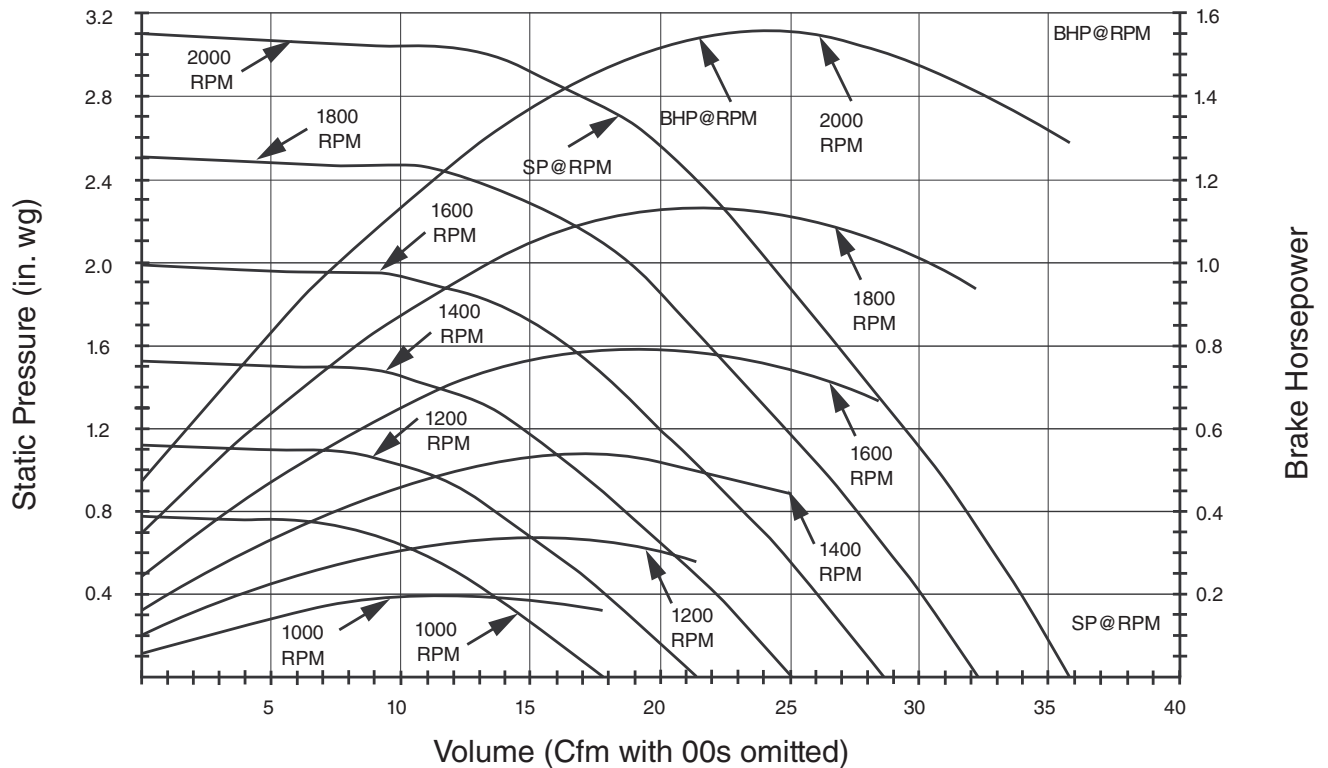


**Plenum 15**



Note: Do not exceed maximum fan revolutions per minute (RPM) of 2055.

**Plenum 18.5**



Note: Do not exceed maximum fan revolutions per minute (RPM) of 1800.

# SERIES TRSW/G - C CABINET

## SPECIFICATIONS

MODEL TRS	200	240	300	360	420
<b>RECIRCULATING AIR UNITS</b>					
<b>Performance per ISO 13256-1 - Water Loop 1</b>					
Airflow Cubic Feet Per Minute (CFM)	6,000	8,000	10,000	12,000	12,000
Cooling Capacity (Btu/h)	225,066	263,654	358,174	414,688	477,606
Condenser Water Flow Gallons Per Minute (GPM)	41.7	50.0	62.5	75.0	87.6
Energy Efficient Ratio (EER)	15.8	16.4	13.9	14.3	14.7
Heating Capacity (Btu/h)	264,276	298,834	439,652	497,222	583,648
Coefficient Of Performance (COP)	5.31	5.61	4.90	4.92	4.98
<b>Performance per ISO 13256-1 - Ground Loop 2</b>					
Airflow Cubic Feet Per Minute (CFM)	6,000	8,000	10,000	12,000	12,000
Cooling Capacity (Btu/h)	234,082	274,346	372,950	430,604	496,578
Condenser Water Flow Gallons Per Minute (GPM)	41.7	50.0	62.5	75.0	75.0
Energy Efficient Ratio (EER)	17.7	18.5	15.59	15.9	16.5
Heating Capacity (Btu/h)	167,404	190,026	285,872	315,926	373,286
Coefficient Of Performance (COP)	3.95	4.18	3.77	3.69	3.82
<b>Physical Data</b>					
Number of Refrigerant Circuits	2	2	2	2	2
Refrigerant Charge R410A (ounce/circuit)	310	314	363	370	488
Evaporation Area Per Square Feet (sq. ft.)	23.00	23.00	23.00	23.00	23.00
Evaporation Row / Fins Per Inch (fpi)	4/12	4/12	4/12	4/12	6/12
Supply Fan Horse Power (Hp) Range	3-10	3-15	3-15	3-20	3-20
Supply Fan Size/Type-Forward Curve (FC)	15 x 15	15 x 15	18 x 18	18 x 18	18 x 18
Filter Area Square Feet (sq. ft.)	24.00	24.00	24.00	24.00	24.00
Drain Connection (mpt.)	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"
Coaxial Water Coil Connections - Outside Diameter Sweat (ODS)	-	2 1/8"	2 1/8"	2 1/8"	2 1/8"
Base Unit Weight (pounds)	3150	3200	3300	3380	3800

1. Rating based on 80.6°F Dbt/66.2°F Wbt entering air, 86.0 °F entering water temperature condition for cooling and 68 °F Dbt/59.0°F Wbt entering air, 68.0 °F entering water for heating.
2. Rating based on 80.6°F Dbt/66.2°F Wbt entering air, 77.0 °F entering water temperature condition for cooling and 68 °F Dbt/59.0°F Wbt entering air, 32 °F entering fluid for heating

MODEL TRS	200	240	300	360	420
<b>UNIT AND COMPONENT WEIGHTS (LB)</b>					
Base Unit <sup>1</sup>	3,250	3,350	3,450	3,530	3,950
Hot Gas Reheat	120	120	120	120	120
Electric Heater	100	100	100	100	100
Dampers	125	125	125	125	125
Power Exhaust	525	525	525	525	525
Curb 14"	305	305	305	305	305
Curb 24"	425	425	425	425	425

1. Base unit weight includes packaged direct expansion (Dx) cooling coil with largest available evaporator blower motor.

<b>COMPONENT PRESSURE DROP DATA</b>									
<b>Unit Sizes 200 through 420</b>									
<b>Supply Air CFM</b>									
Component	2800	3400	4000	4400	5000	7000	8500	10000	12000
Cabinet Loss	.06	.14	.22	.30	.38	.42	.50	.61	.72
2" Cleanable Filters	.01	.01	.02	.02	.04	.06	.08	.10	.12
2" Pleated 30% Filters	.04	.05	.07	.09	.10	.17	.25	.32	.38
4" Pleated 30% Filters	.02	.03	.05	.06	.08	.15	.21	.27	.32
4" Pleated 65% Filters	.05	.06	.08	.10	.12	.20	.29	.36	.44
4" Pleated 95% Filters	.08	.10	.12	.14	.18	.30	.40	.50	.60
Evaporator coil	—	—	—	.20	.22	.23	.29	.35	.88
Hot Gas Reheat Coil -1 circuit	.04	.04	.05	.06	.07	.08	.10	.13	.25
Electric Heat	.10	.11	.12	.13	.14	.16	.18	.20	.22
Economizer	.01	.02	.03	.04	.05	.06	.08	.10	.12

# SERIES TRSW/G - C CABINET

## COOLING CAPACITY DATA - RECIRCULATING

### TRSW200 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	41.7				
Pounds Per Square Inch (PSI)	5.38				
Cubic Feet Per Minute (CFM)	6,000				
Total Capacity- Btu/h	272,630	263,230	253,752	243,856	233,638
Watts	8,746	9,692	10,670	11,724	12,884
Heat Rejected - Btu/h	302,604	295,052	287,566	279,898	272,244

### TRSW240 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	50.0				
Pounds Per Square Inch (PSI)	7.48				
Cubic Feet Per Minute (CFM)	8,000				
Total Capacity- Btu/h	318,208	307,412	296,054	284,430	272,398
Watts	9,954	10,988	12,110	13,334	14,702
Heat Rejected - Btu/h	351,988	343,394	334,538	325,710	316,934

### TRSW300 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	62.5				
Pounds Per Square Inch (PSI)	4.50				
Cubic Feet Per Minute (CFM)	10,000				
Total Capacity- Btu/h	438,194	423,322	407,834	391,778	375,138
Watts	15,672	17,044	18,610	20,398	22,438
Heat Rejected - Btu/h	490,748	478,684	466,620	454,700	443,018

### TRSW360 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	75.0				
Pounds Per Square Inch (PSI)	6.70				
Cubic Feet Per Minute (CFM)	12,000				
Total Capacity- Btu/h	500,420	484,588	467,908	450,454	432,254
Watts	20,182	20,898	22,026	23,584	25,586
Heat Rejected - Btu/h	568,496	553,288	538,554	524,444	511,048

### TRSW420 RECIRCULATING

Entering Water Temperature (EWT)	45	55	65	75	85
Gallons Per Minute (GPM)	87.6				
Pounds Per Square Inch (PSI)	5.57				
Cubic Feet Per Minute (CFM)	12,000				
Total Capacity- Btu/h	576,286	557,854	538,478	517,996	497,104
Watts	19,586	21,674	23,932	26,404	29,154
Heat Rejected - Btu/h	643,792	630,102	615,986	601,426	587,554

Notes: 1. Cooling capacities shown are based on 80°F Dbt / 67°F Wbt entering air coil conditions.

2. Cooling capacities shown are gross capacities. For net capacities, multiply blower Break Horse Power (Bhp) required times 2,545 and subtract from total and sensible Btu/h in tables.

3. To convert water pressure drop from pounds pr square inch (PSI) to feet of H<sub>2</sub>O, multiply by 2.31.

# SERIES TRSW/G - C CABINET

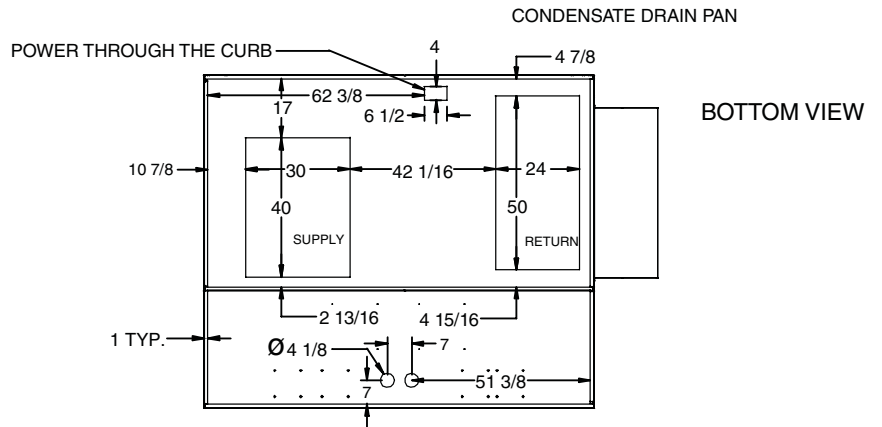
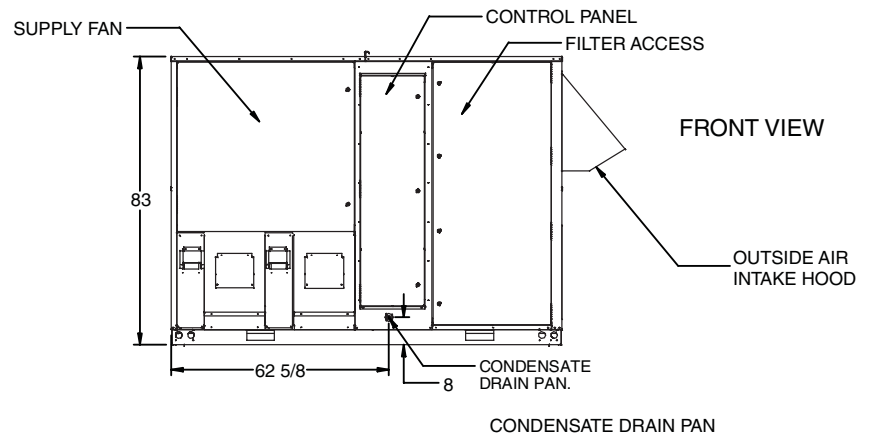
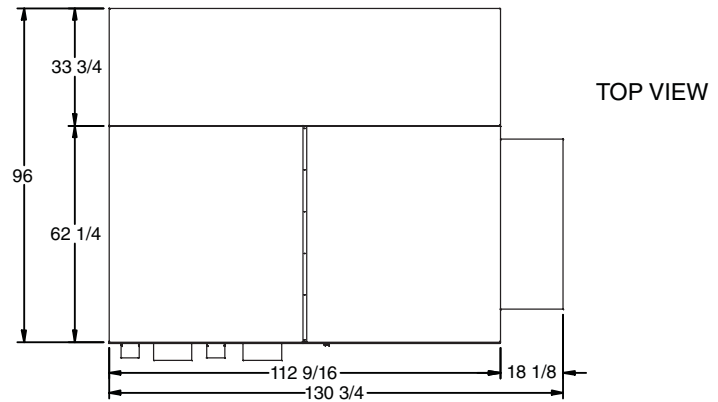
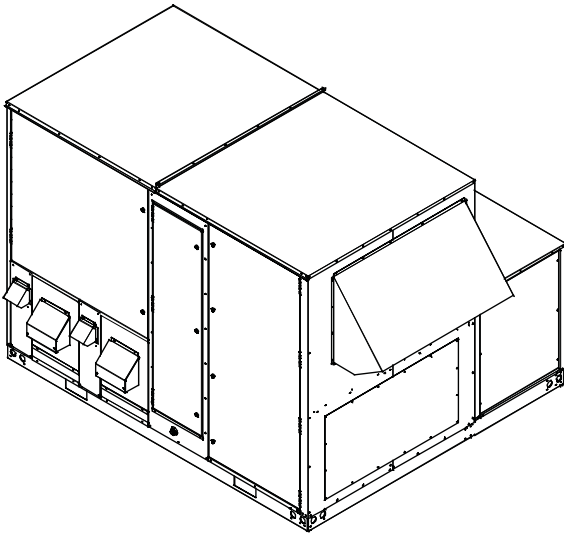
## HEATING CAPACITY DATA - RECIRCULATING

<b>TRSW200 RECIRCULATING</b>					
Entering Water Temperature (EWT)	30	40	50	60	70
Gallons Per Minute (GPM)	41.7				
Pounds Per Square Inch (PSI)	5.56				
Cubic Feet Per Minute (CFM)	6,000				
Total Capacity- Btu/h	157,982	181,554	209,348	236,638	264,574
Watts	11,286	11,786	12,430	13,030	13,650
Heat Rejected - Btu/h	115,988	138,162	163,406	189,376	217,292
<b>TRSW240 RECIRCULATING</b>					
Entering Water Temperature (EWT)	30	40	50	60	70
Gallons Per Minute (GPM)	50.0				
Pounds Per Square Inch (PSI)	7.70				
Cubic Feet Per Minute (CFM)	8,000				
Total Capacity- Btu/h	179,346	206,200	237,146	266,394	299,970
Watts	12,258	12,774	13,422	14,006	14,744
Heat Rejected - Btu/h	133,868	159,216	189,452	217,904	250,190
<b>TRSW300 RECIRCULATING</b>					
Entering Water Temperature (EWT)	30	40	50	60	70
Gallons Per Minute (GPM)	62.5				
Pounds Per Square Inch (PSI)	5.36				
Cubic Feet Per Minute (CFM)	10,000				
Total Capacity- Btu/h	267,312	303,554	348,614	391,485	436,206
Watts	19,382	20,260	21,398	22,542	23,812
Heat Rejected - Btu/h	194,802	229,658	271,418	311,154	352,628
<b>TRSW360 RECIRCULATING</b>					
Entering Water Temperature (EWT)	30	40	50	60	70
Gallons Per Minute (GPM)	75.0				
Pounds Per Square Inch (PSI)	7.97				
Cubic Feet Per Minute (CFM)	12,000				
Total Capacity- Btu/h	296,644	339,534	391,070	441,342	495,452
Watts	22,160	23,210	24,406	25,694	27,234
Heat Rejected - Btu/h	215,428	254,160	303,660	351,324	401,028
<b>TRSW420 RECIRCULATING</b>					
Entering Water Temperature (EWT)	30	40	50	60	70
Gallons Per Minute (GPM)	87.6				
Pounds Per Square Inch (PSI)	6.58				
Cubic Feet Per Minute (CFM)	12,000				
Total Capacity- Btu/h	352,350	402,032	461,114	521,258	583,400
Watts	25,760	27,096	28,636	30,300	32,160
Heat Rejected - Btu/h	255,804	301,542	357,168	414,958	471,830

- Notes: 1. Heating mode capacity tables use 20% Propylene Glycol (P.G.) by volume for entering fluid temperature below 40 °F.  
 2. Heating capacities shown are based on 70 °F entering air coil condition.  
 3. To convert water pressure drop from Pounds Per Square Inch (PSI) to feet of H<sub>2</sub>O, multiply by 2.31.

# SERIES TRSW/G - C CABINET

## BASE UNIT



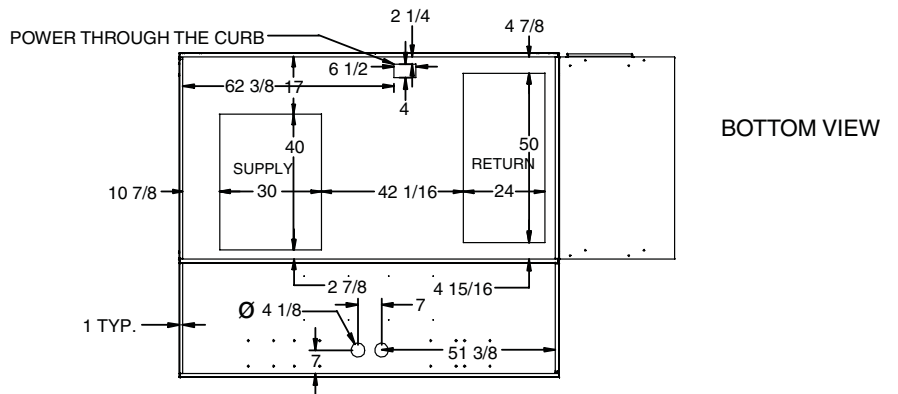
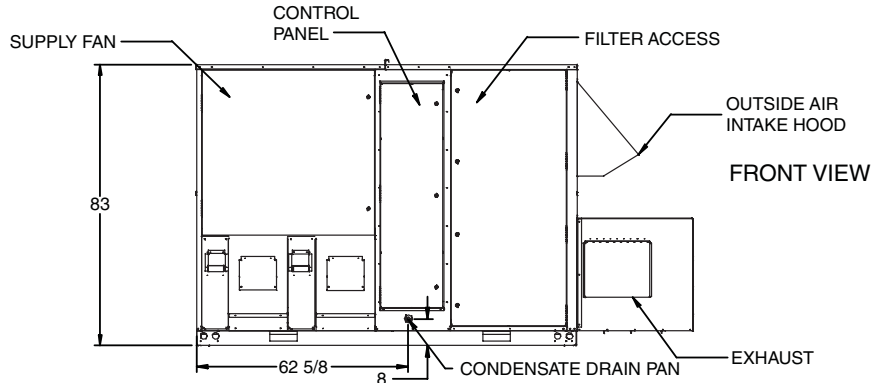
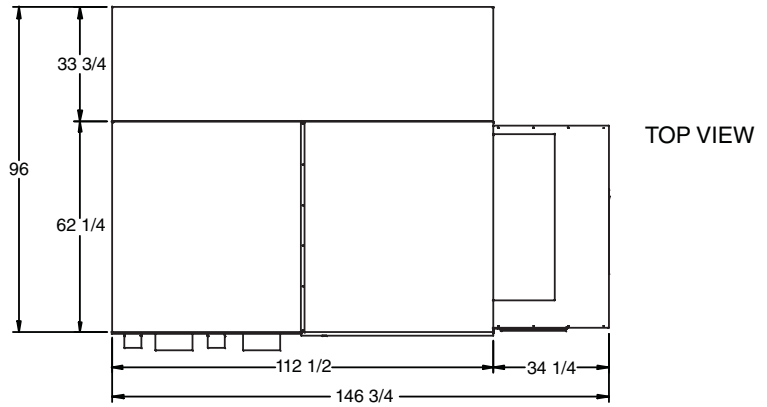
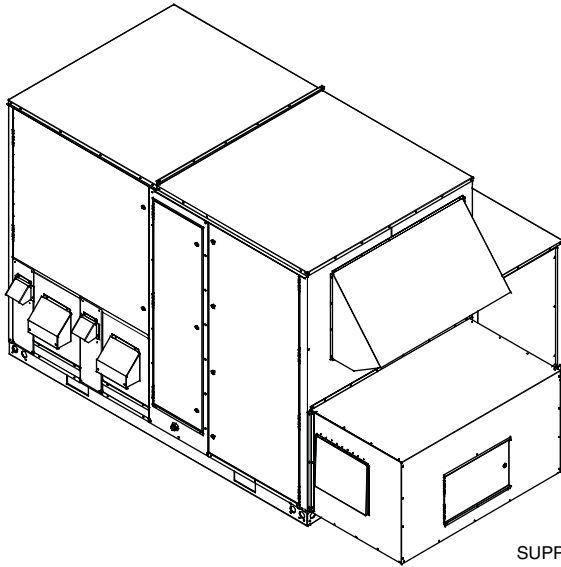
All dimensions are in inches.

Service Clearance: FHP recommends a minimum of 24" to 36" on all sides of unit. The control panel side should have at least 36" clearance.

This sheet is for general information purposes only and should not be used for construction or installation. All products must be set-up, assembled, installed and used in accordance with all applicable instructions, the instruction manual (s) provided as well as requirements of governmental authorities.

# SERIES TRSW/G - C CABINET

## BASE UNIT WITH EXHAUST



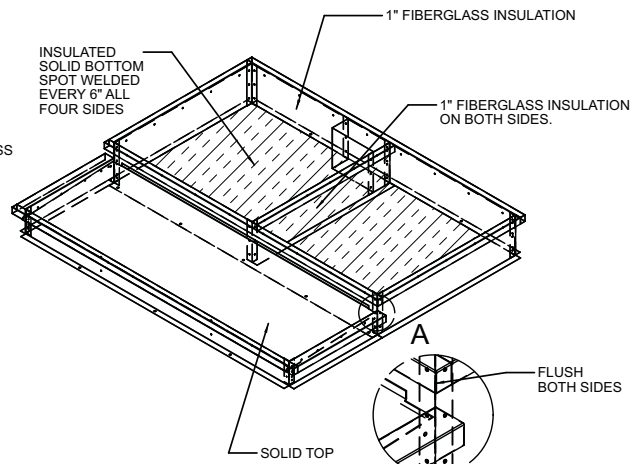
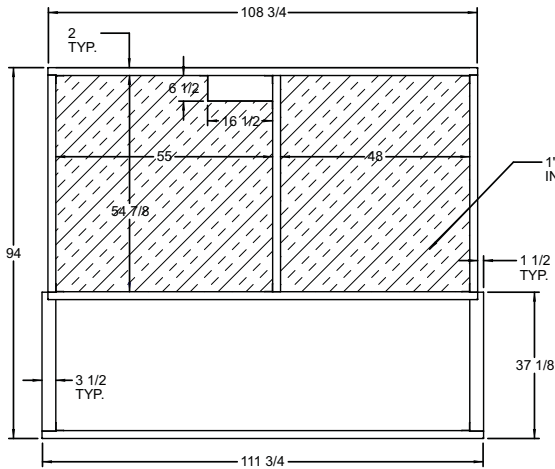
All dimensions are in inches.

Service Clearance: FHP recommends a minimum of 24" to 36" on all sides of unit. The control panel side should have at least 36" clearance.

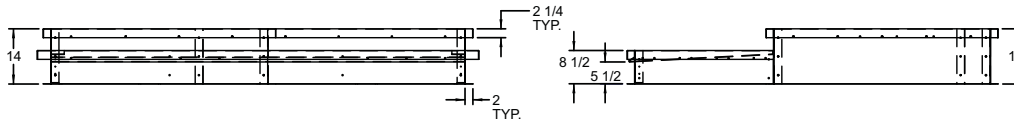
This sheet is for general information purposes only and should not be used for construction or installation. All products must be set-up, assembled, installed and used in accordance with all applicable instructions, the instruction manual (s) provided as well as requirements of governmental authorities.

# SERIES TRSW/G - C CABINET

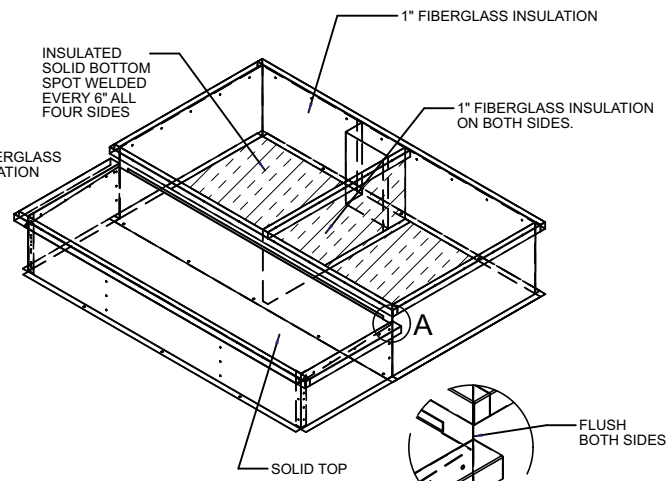
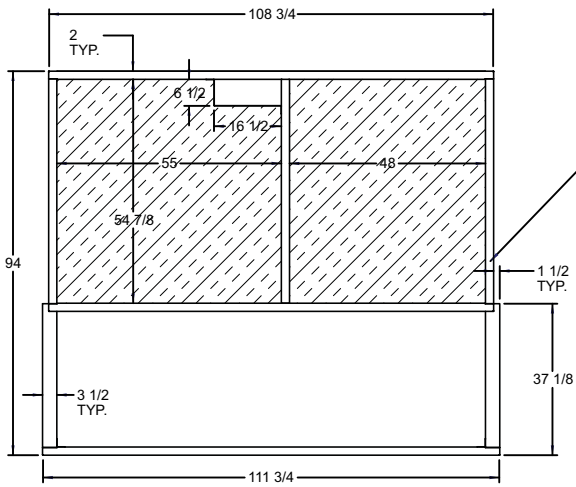
## ROOF CURB



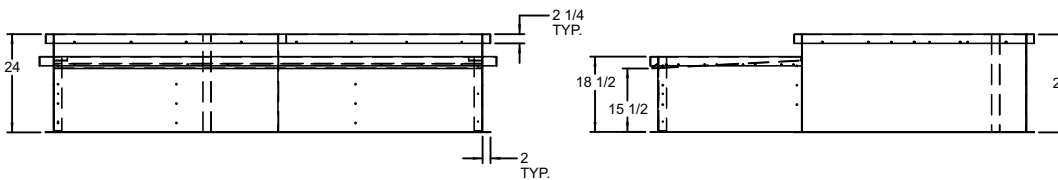
DETAIL A



## 14 INCH CURB



DETAIL A

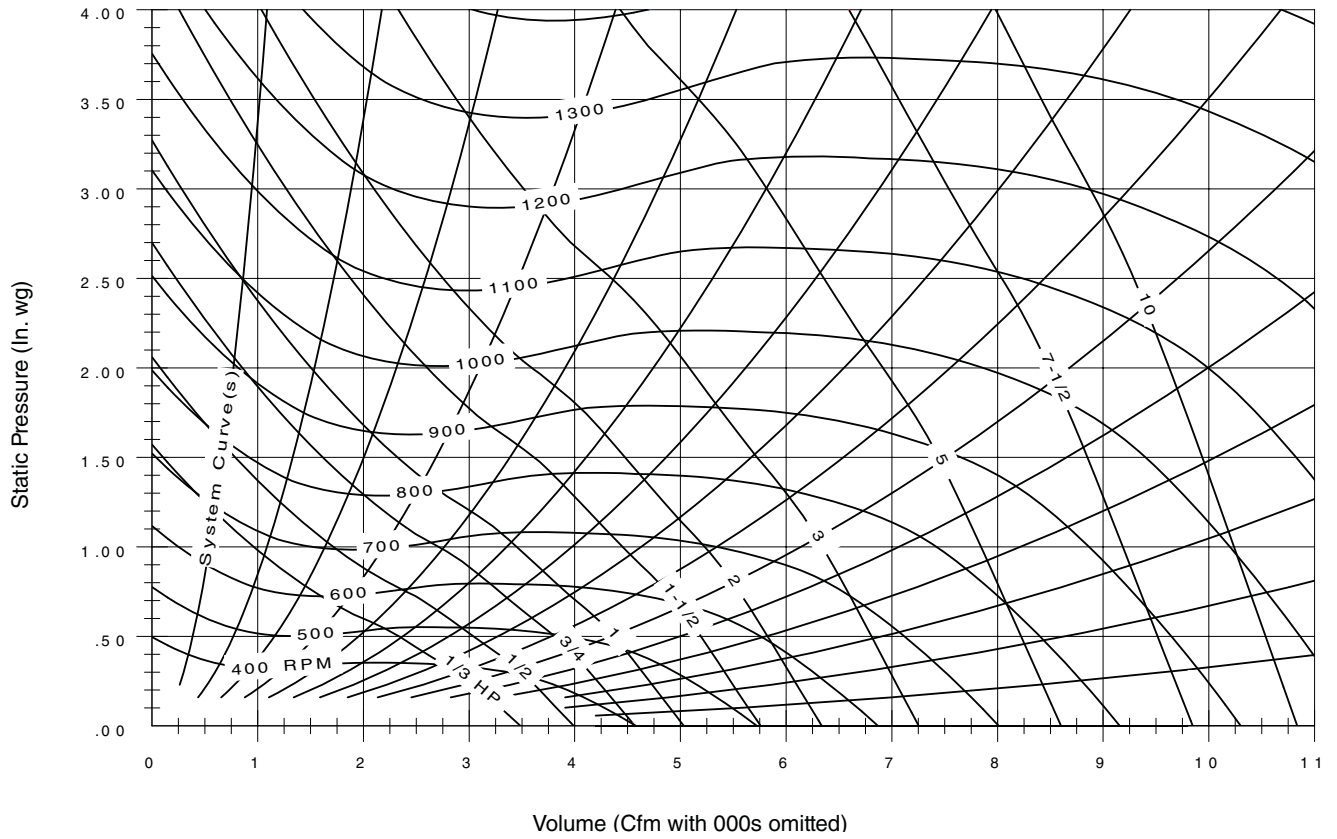


## 24 INCH CURB

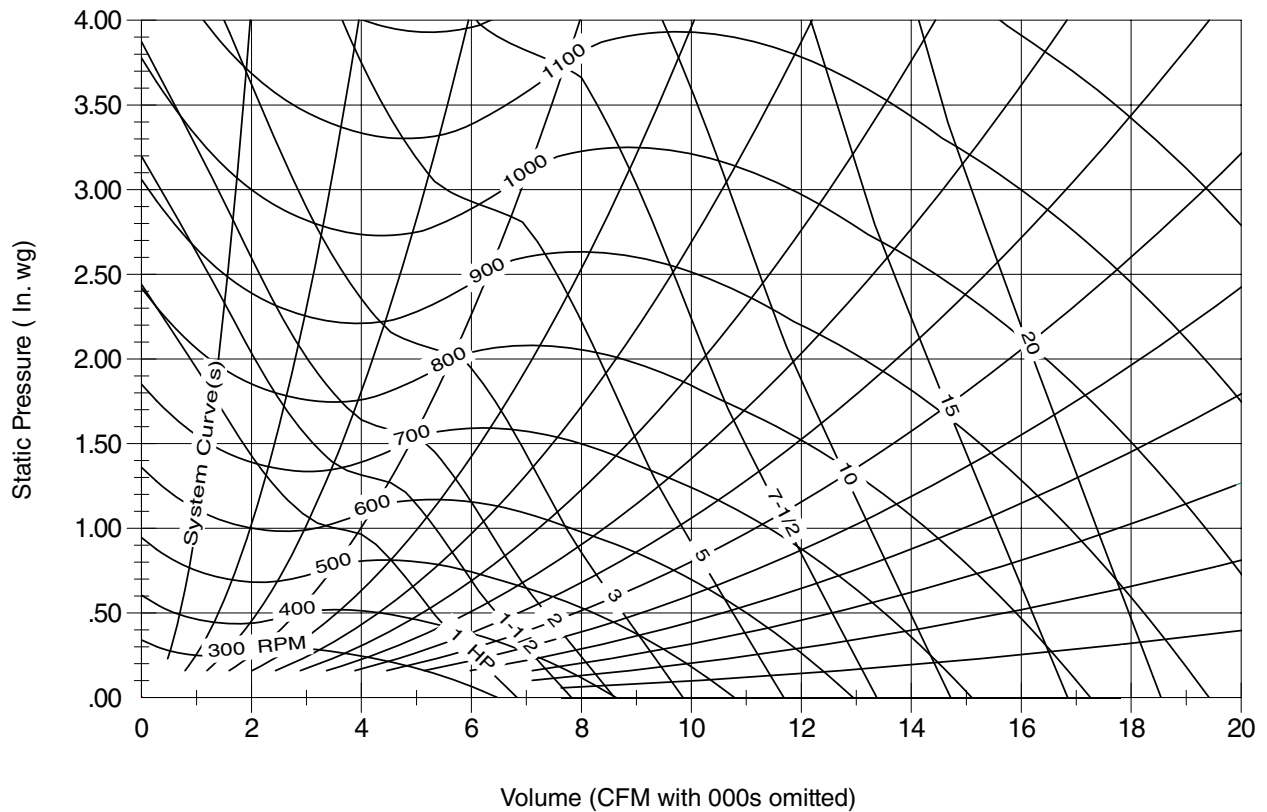


# SERIES TRSW/G - C CABINET FC 15 X 15

## SUPPLY & EXHAUST BLOWER PERFORMANCE



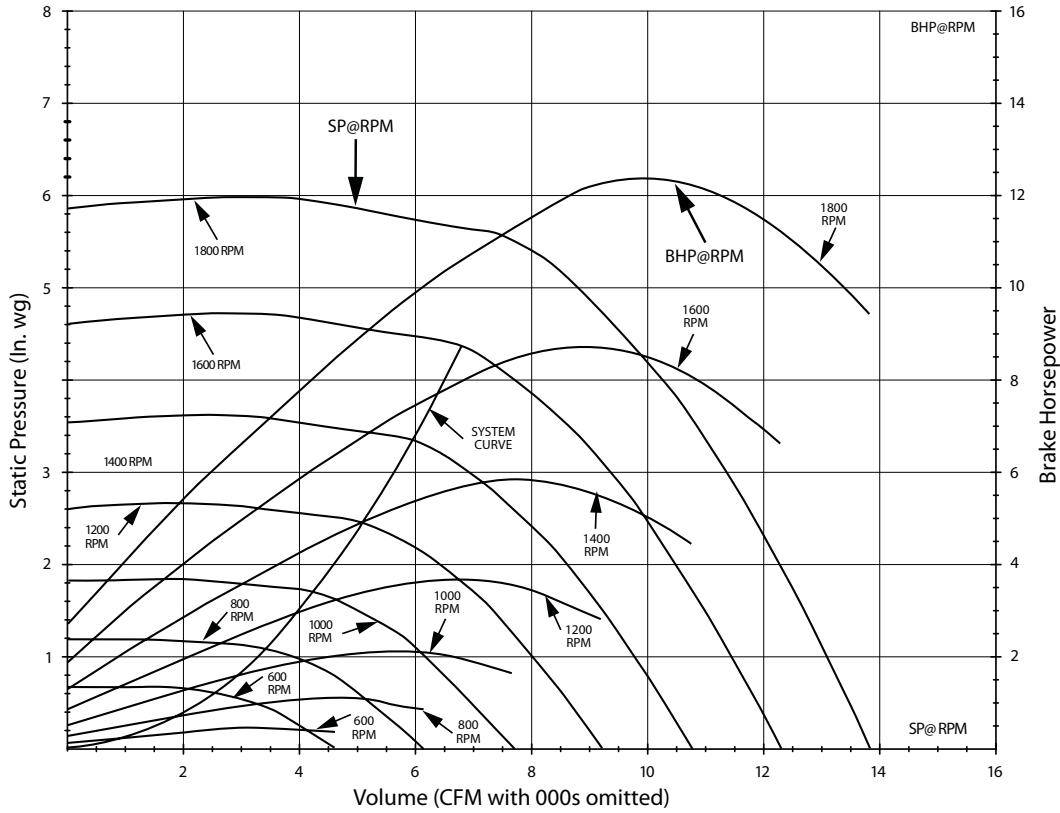
# FC 18 X 18



# SERIES TRSW/G - C CABINET

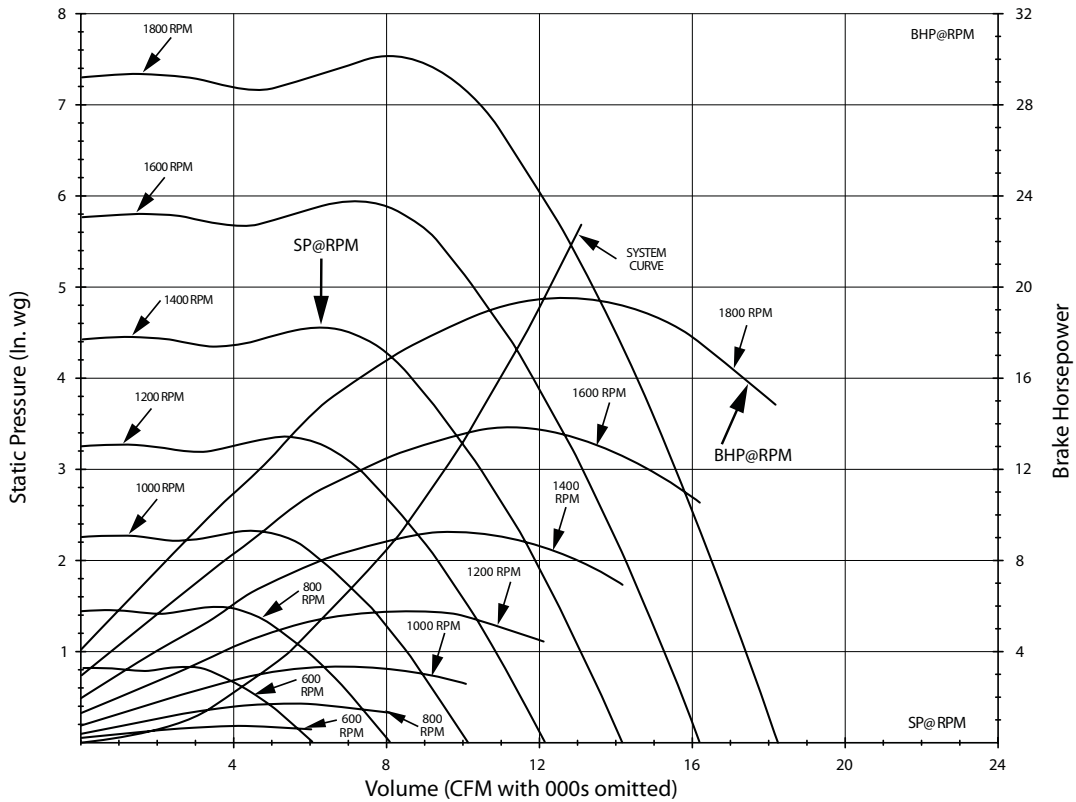
## Plenum 24.5

### SUPPLY & BLOWER PERFORMANCE



**Note:** Do not exceed maximum fan revolutions per minute (RPM) of 1600.

## Plenum 27



**Note:** Do not exceed maximum fan revolutions per minute (RPM) of 1575.

# SERIES TRSW/G

## HEATING CAPACITY DATA - ELECTRIC HEAT DATA

### A CABINET

kW (240-480 / 208)	Amps			Minimum Entering Air Temp (°F)	Maximum Entering Air Temp (°F)	Minimum Temp Rise (°F)	Maximum Temp Rise (°F)	Minimum Leaving Air Temp (°F)	Maximum Leaving Air Temp (°F)
	240/3/60	480/3/60	208/3/60						
5 / 3.8	12.0	6.0	10.4	-20 °F	75 °F	N/A	76 °F	N/A	151 °F
7.5 / 5.6	18.0	9.0	15.6						
10 / 7.5	24.1	12.0	20.8						
15 / 11.3	36.1	18.0	31.4						
20 / 15.0	48.1	24.1	41.6						
25 / 18.8	60.1	30.1	52.2						
30 / 22.5	72.2	36.1	62.5						
35 / 26.3	84.2	42.1	73.0						
40 / 30.0	96.2	48.1	83.3						

### B CABINET

kW (240-480 / 208)	Amps			Minimum Entering Air Temp (°F)	Maximum Entering Air Temp (°F)	Minimum Temp Rise (°F)	Maximum Temp Rise (°F)	Minimum Leaving Air Temp (°F)	Maximum Leaving Air Temp (°F)
	240/3/60	480/3/60	208/3/60						
10 / 7.5	24.1	12.0	20.8	-20 °F	75 °F	N/A	76 °F	N/A	151 °F
15 / 11.3	36.1	18.0	31.4						
20 / 15.0	48.1	24.1	41.6						
25 / 18.8	60.1	30.1	52.2						
30 / 22.6	72.2	36.1	62.5						
35 / 26.3	84.2	42.1	73.0						
40 / 30.0	96.2	48.1	83.3						
50 / 37.5	120.3	60.1	104.1						
60 / 45.0	144.3	72.2	124.9						

### C CABINET

kW (240-480 / 208)	Amps			Minimum Entering Air Temp (°F)	Maximum Entering Air Temp (°F)	Minimum Temp Rise (°F)	Maximum Temp Rise (°F)	Minimum Leaving Air Temp (°F)	Maximum Leaving Air Temp (°F)
	240/3/60	480/3/60	208/3/60						
10 / 7.5	24.1	12.1	20.8	-20 °F	75 °F	N/A	76 °F	N/A	151 °F
15 / 11.3	36.1	18.1	31.2						
20 / 15	48.1	24.1	41.6						
30 / 22.5	72.2	36.1	62.5						
40 / 30	96.2	48.1	83.3						
50 / 37.5	120.3	60.1	104.1						
60 / 45	144.3	72.2	124.9						
80 / 60	192.4	96.2	166.5						
100		120.3							

Cabinet	B				
Model			150	180	210
Quantity			2	2	2
<b>Rated Load Amps - (RLA) each</b>					
208-230-60/3			22.5	25.0	29.5
460/60/3			10.6	12.2	14.8
<b>Locked Rotor Amps - (LRA) each</b>					
208-230-60/3			149	195	195
460/60/3			75	95	95
Cabinet	C				
Model	200	240	300	360	420
Quantity	2	2	2	2	4
<b>Rated Load Amps - (RLA) each</b>					
208-230-60/3	29.5	30.2	48.1	55.8	30.2
460/60/3	14.8	16.7	18.6	27.0	16.7
<b>Locked Rotor Amps - (LRA) each</b>					
208-230-60/3	195	225	245	340	225
460/60/3	95	114	150	173	114
<b>SUPPLY /EXHAUST FAN MOTORS</b>					
Cabinet	A				
Hp	3/4	1	1½		
<b>Full Load Amps - (RLA) each</b>					
208-230-60/3	3.4	3.2	4.8		
460/60/3	1.7	1.5	2.0		
Cabinet	B				
Hp	2	3	5	7½	
<b>Full Load Amps - (RLA) each</b>					
208-230-60/3	6.3	9.8	15.7	22.3	
460/60/3	2.9	4.1	6.8	10.0	
Cabinet	C				
Hp	7½	10	15	20	
<b>Full Load Amps - (RLA) each</b>					
208-230-60/3	22.3	29.0	43.4	57.0	
460/60/3	10.0	12.9	18.9	24.5	

**Total Unit FLA, MCA and MFS Calculation**

**For units without factory-mounted electric heat:**

1. Total Units Amps = (all compressor RLA) + (all condenser fan FLA) + (supply fan motor FLA) + (exhaust fan motor FLA)
2. MCA = (1.25 x largest compressor RLA) + (other compressor RLA + supply fan motor FLA + all condenser fan motor FLA + exhaust fan motor FLA)
3. MFS = (2.25 x largest compressor RLA) + (other compressor RLA + supply fan motor FLA + all condenser fan motor FLA + exhaust fan motor FLA)

**For units with factory-mounted electric heat:**

**1. Total Units Amps — select the largest of the following:**

- a. (All compressor RLA) + (all condenser fan FLA) + (supply fan motor FLA) + (exhaust fan motor FLA)
- b. Electric heater amps + (supply fan motor FLA) + (exhaust fan motor FLA)

**2. MCA — select the largest of the following:**

- a. (1.25 x largest compressor RLA) + (other compressor RLA + all condenser fan motor FLA + supply fan motor FLA + exhaust fan motor FLA)
- b. (1.25 x electric heater amps) + (supply fan motor FLA + exhaust fan motor FLA)

**3. MFS — select the largest of the following:**

- a. (2.25 x largest compressor RLA) + (other compressor RLA + supply fan motor FLA + all condenser fan motor FLA + exhaust fan motor FLA)
- b. (2.25 x supply fan motor FLA) + electric heat amps + exhaust fan motor FLA

**Notes:**

- a. For MFS, round down to the nearest fuse size: 15, 20, 25, 30, 35, 40, 45, 60, 70, 80, 90, 100, 110, 125, 175, 200, 250, 300
- b. Under no circumstances should the MFS value be less than MCA. If the value computed for MFS is less than the MCA value, increase the MFS value to the fuse size that just exceeds the MCA value.
- c. MCA = Minimum CKT Ampacity, MFS = Maximum Fuse Size
- d. See Page 27 for electric heat data

Installation Code and Annual Inspections: All installations and service of FHP equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by FHP and conform to all requirements set forth in the FHP manuals and all applicable governmental authorities pertaining to the installation, service and operation of the equipment. To help facilitate optimum performance and safety, FHP recommends that a qualified contractor annually inspect your FHP equipment and perform service where necessary, using only replacement parts sold and supplied by FHP.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through FHP representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

These products are not for residential use.

This document is intended to assist licensed professionals in the exercise of their professional judgment.

Specifications are subject to change without notice.