

WT and WW Model Series Commercial Water Source Heat Pumps

Engineering
Submittal
Sheet



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Overview and Certifications



- ▶ 2 to 35 ton capacities
- ▶ Modular design gives you the flexibility to install units individually or in any combination
- ▶ Single or Two Stage Scroll Compressors for quiet operation
- ▶ Excellent option for snow melt and pool heating

Commercial WSHP Product Portfolio

Product	Water-to-Air										Water-to-Water	
	LM	LM Splits	ES	EP	QV	LV	CA	EC	MC		WT	WW
Price	\$\$\$	\$\$\$	\$\$\$-	\$\$	\$+	\$	\$	\$\$	\$\$		\$\$	\$\$
Model Sizes <6 Ton	007			X		X						
	009			X		X	X					
	012			X		X	X					
	015			X		X	X					
	018			X	X	X	X					
	024	X	X	X	X	X						
	025		X								X	
	030	X		X	X	X						
	035		X								X	
	036	X	X	X	X	X						
	041					X						
	042			X	X	X						
	048	X	X	X	X	X						
	049		X								X	
	060	X	X	X	X	X					X	
Model Sizes >6 Ton	061		X								X	
	070	X		X		X					X	
	071		X									
	072							X				
	096							X				
	120							X				X
	122											X
	150							X				
	151							X				
	180							X				X
	181							X				
	210							X				X
	240							X				X
	300							X				
	360							X	X			X
	420											X
	480								X			
	600								X			
	720								X			

☐ Featured model

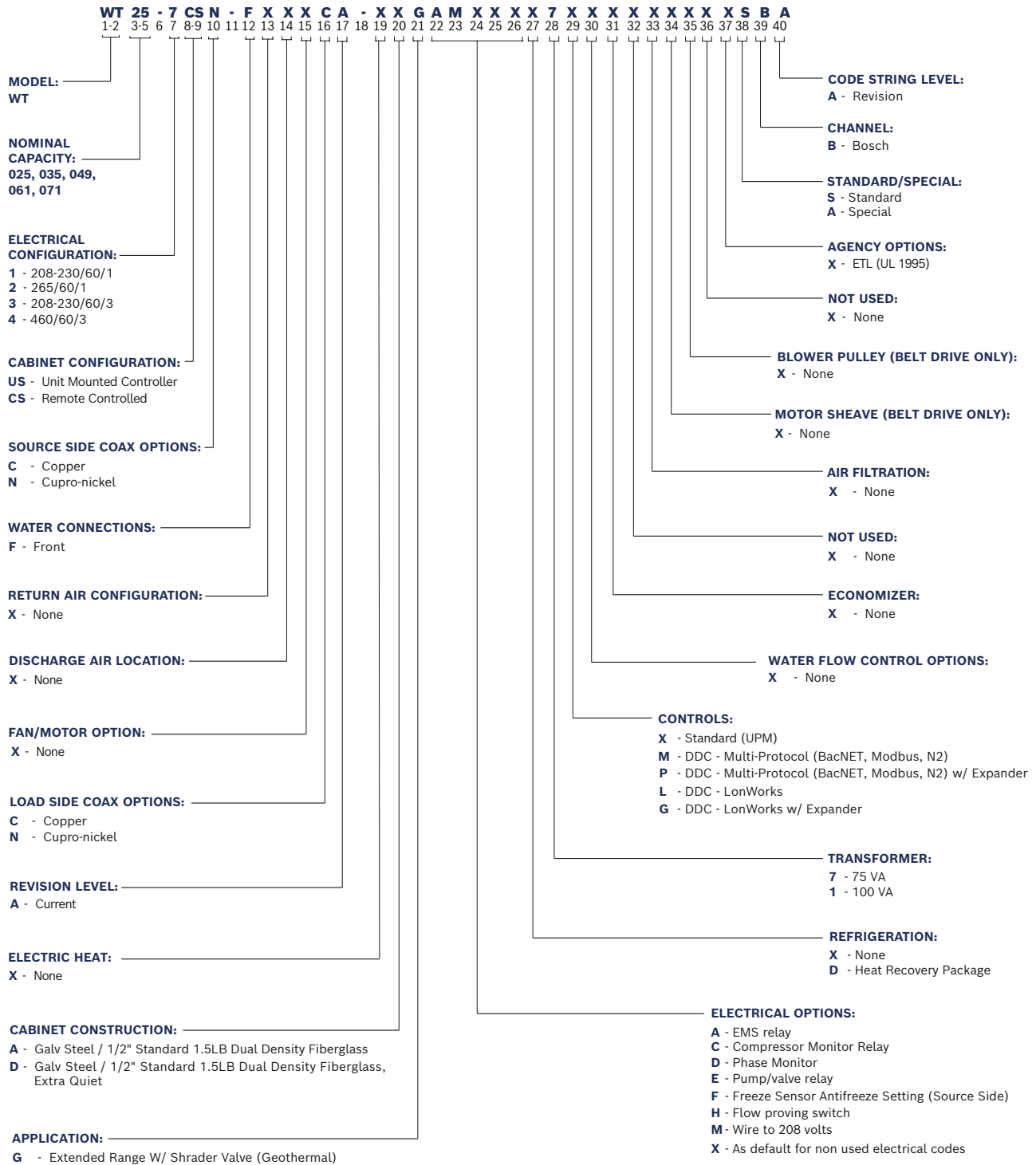
Bosch Thermotechnology Corp.
Londonderry, NH • Watertown, MA • Ft. Lauderdale, FL

WT and WW Model Series - Commercial Water Source Heat Pumps



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Model Nomenclature - WT

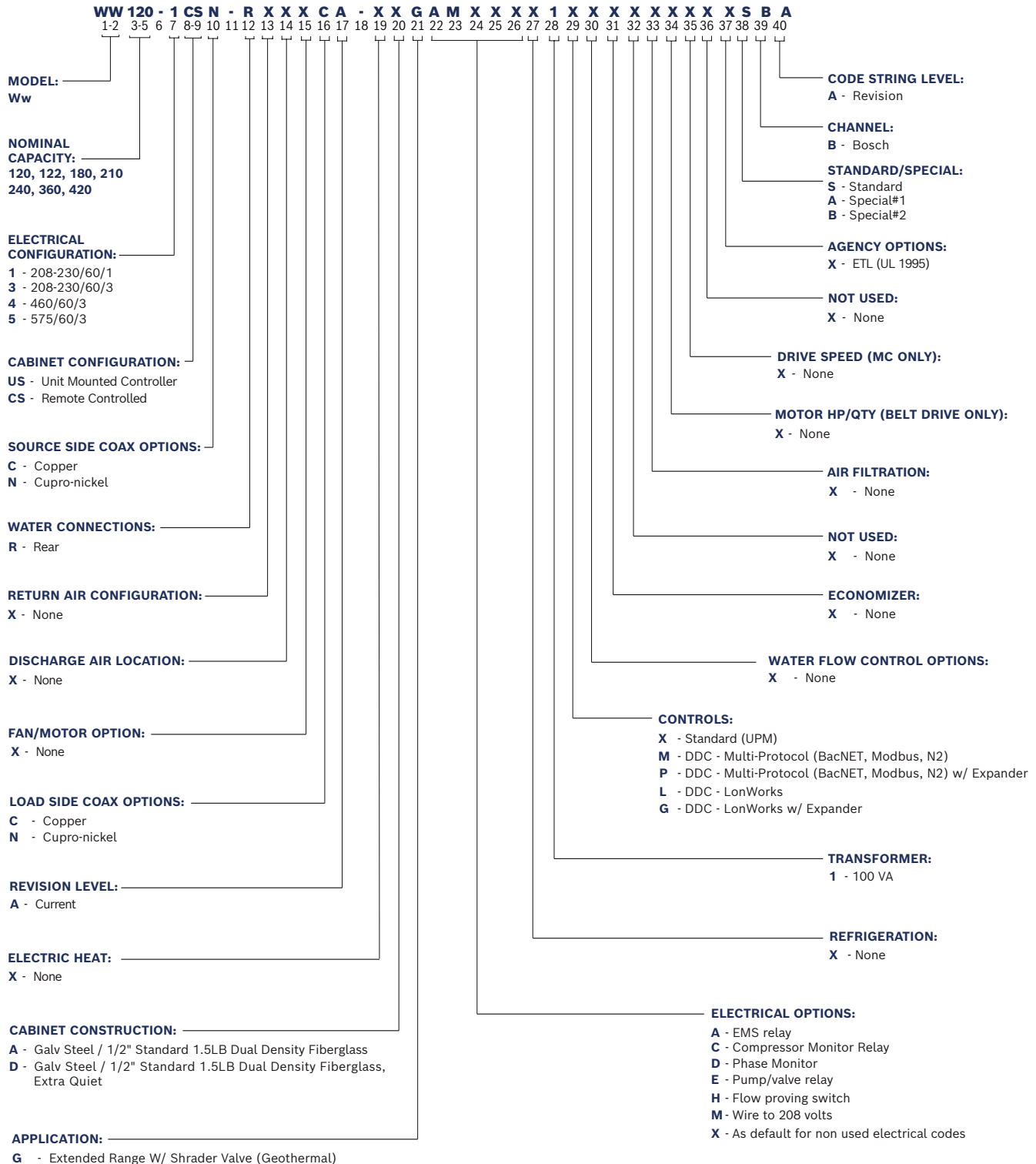


WT and WW Model Series - Commercial Water Source Heat Pumps



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Model Nomenclature - WW



WT and WW Model Series - Commercial Water Source Heat Pumps



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ASHRAE/AHRI/ISO Ratings (13256-1) - WT Model

Model Number	Load	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump				Source Water Flow Rate (GPM)	Load Water Flow Rate (GPM)
		Cooling 86 deg.F		Heating 68 deg.F		Cooling 59 deg.F		Heating 50 deg.F		Cooling 77 deg.F		Heating 32 deg.F			
		Capacity BTU/h	EER	Capacity BTU/h	COP	Capacity BTU/h	EER	Capacity BTU/h	COP	Capacity BTU/h	EER	Capacity BTU/h	COP		
WT025	Full	21000	13.40	29000	4.40	24500	21.20	23600	3.50	22500	15.90	18200	2.95	6	6
	Part	15500	14.70	21800	4.60	18500	25.70	17000	3.70	18000	22.10	14900	3.10	6	6
WT035	Full	29000	12.40	43000	4.30	34000	19.95	34000	3.50	30000	14.60	26800	2.80	9	9
	Part	21700	12.73	31500	4.55	25000	21.78	24900	3.45	24000	18.09	21600	2.95	9	9
WT049	Full	39000	12.60	56000	4.10	45000	19.70	46000	3.50	41000	14.55	36400	2.80	10	10
	Part	29000	12.85	41000	4.40	33500	23.60	32600	3.40	32500	19.25	28100	2.90	10	10
WT061	Full	49000	12.90	70300	4.20	55500	19.65	57300	3.50	51000	14.80	44900	2.85	13	13
	Part	37000	13.30	50300	4.40	42500	22.75	40100	3.40	41000	18.85	34400	2.90	13	13
WT071	Full	57500	12.30	84100	4.20	64000	18.80	69200	3.40	60000	14.30	53500	2.80	15	15
	Part	43500	12.45	64700	4.40	50500	20.65	51700	3.35	48500	17.60	44500	2.90	15	15

ASHRAE/AHRI/ISO Ratings (13256-1) - WW Model

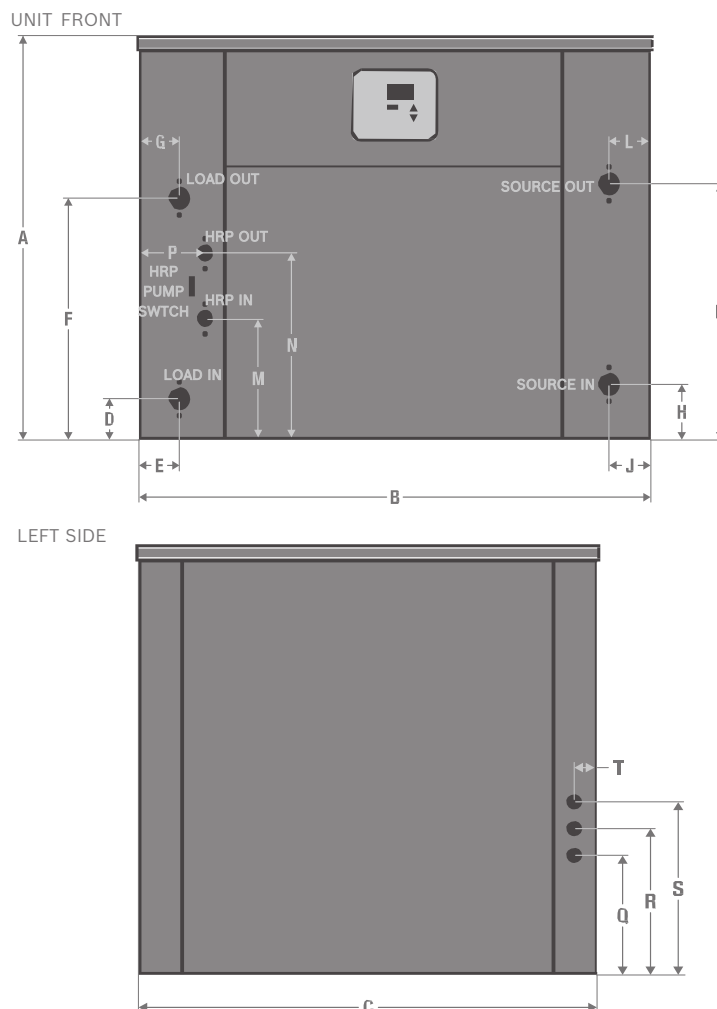
Model Number	Load	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump				Source Water Flow Rate (GPM)	Load Water Flow Rate (GPM)
		Cooling 86 deg.F		Heating 68 deg.F		Cooling 59 deg.F		Heating 50 deg.F		Cooling 77 deg.F		Heating 32 deg.F			
		Capacity BTU/h	EER	Capacity BTU/h	COP	Capacity BTU/h	EER	Capacity BTU/h	COP	Capacity BTU/h	EER	Capacity BTU/h	COP		
WW120	Full	102200	11.73	136900	4.40	125000	19.20	129000	3.70	116000	15.50	103500	3.00	30	30
WW122	Part	54900	12.30	78500	4.20	63500	19.00	63600	3.40	61000	16.70	56000	3.20	30	30
	Full	114000	13.80	160800	4.60	130000	21.30	129500	3.80	119500	16.10	102500	2.95	30	30
WW180	Full	127000	13.80	180500	4.50	143000	20.70	148500	3.80	132500	15.90	121000	3.20	34	27
WW210	Full	164200	13.20	239500	4.40	185500	19.10	194000	3.70	171500	15.10	156000	3.00	40	32
WW240	Full	222000	13.50	320000	4.40	249500	19.20	258500	3.70	232500	15.50	206500	3.00	56	44
WW360	Full	254000	13.80	361500	4.50	286500	20.70	297000	3.80	265000	15.90	242000	3.20	68	54
WW420	Full	328300	13.20	479000	4.40	370500	19.10	387500	3.70	343000	15.10	312000	3.00	80	64

WT and WW Model Series - Commercial Water Source Heat Pumps



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WT Dimensional Drawings



WT Unit Dimensions

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	Water Connections	HRP Connections
	Height	Width	Depth	Load Side Water In Height	Left Side to Load Side Water In	Load Side Water Out Height	Left Side to Load Side Water Out	Source Side Water In Height	Right Side to Source Side Water In	Source Side Water Out Height	Right Side to Source Side Water Out	HRP Water In Height	HRP Water Out Height	Left Side to HRP Water Out	Electrical Knockout Heights			Left Side to Electrical Knockouts		
WT025	24.00	32.50	24.00	2.20	1.70	13.20	1.70	3.75	1.50	14.25	1.95	7.15	11.00	4.25	6.55	8.05	9.55	1.25	3/4" FPT	1/2" FPT
WT035	24.00	32.50	24.00	2.30	2.30	14.30	2.50	3.70	2.55	15.70	2.55	7.15	11.00	4.25	6.55	8.05	9.55	1.25	3/4" FPT	1/2" FPT
WT049	24.00	32.50	24.00	2.30	2.10	14.30	2.65	2.75	2.65	14.75	2.65	7.15	11.00	4.25	6.55	8.05	9.55	1.25	1" FPT	1/2" FPT
WT061	24.00	32.50	24.00	2.80	1.38	14.80	2.63	2.51	2.00	14.38	3.40	7.15	11.00	4.25	6.55	8.05	9.55	1.25	1" FPT	1/2" FPT
WT071	24.00	32.50	24.00	3.00	2.25	17.25	2.25	3.25	2.25	17.00	2.25	7.15	11.00	4.25	6.55	8.05	9.55	1.25	1" FPT	1/2" FPT

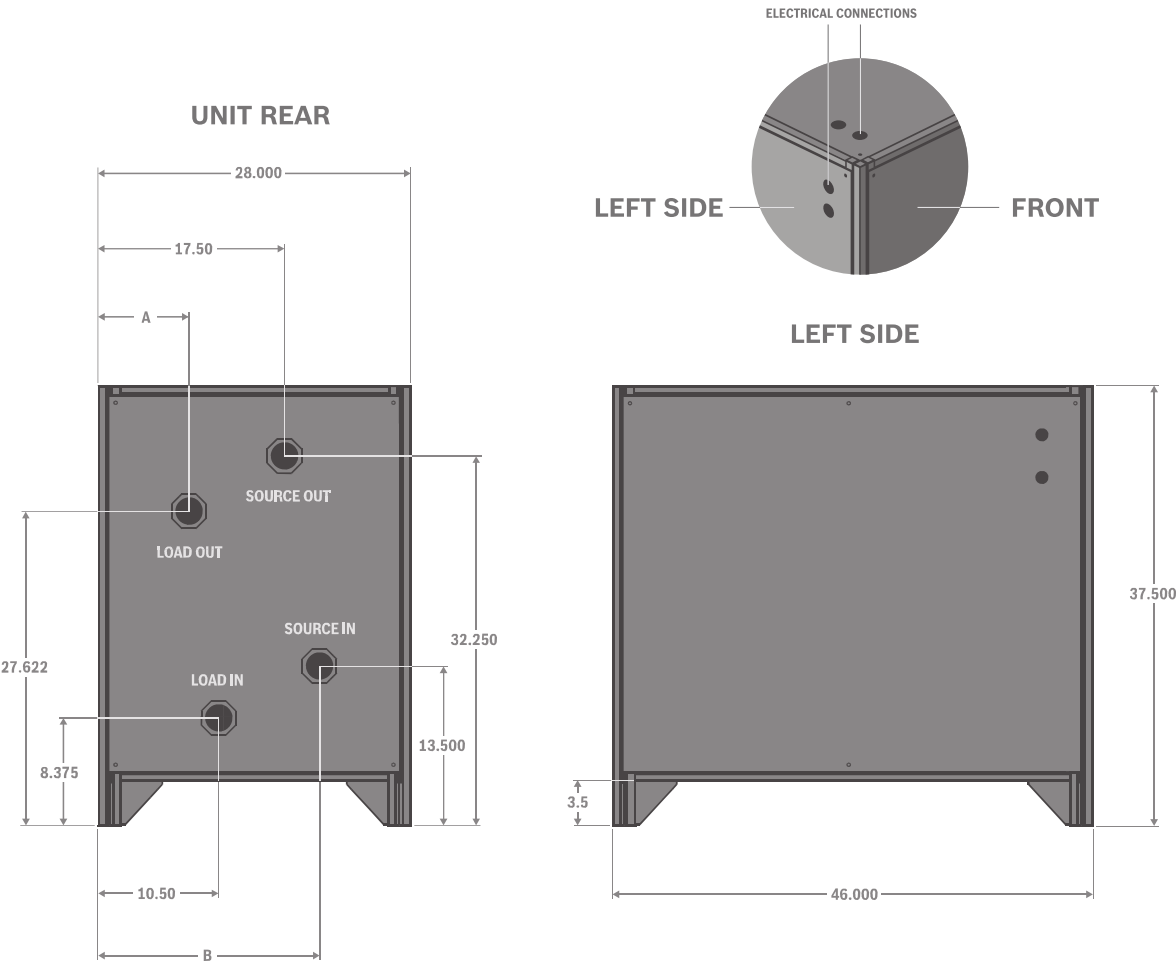
All dimensions in inches unless otherwise noted.

All dimensions within $\pm 0.125"$.

Specifications subject to change without notice.



WW120/122/180/210 Dimensional Drawings

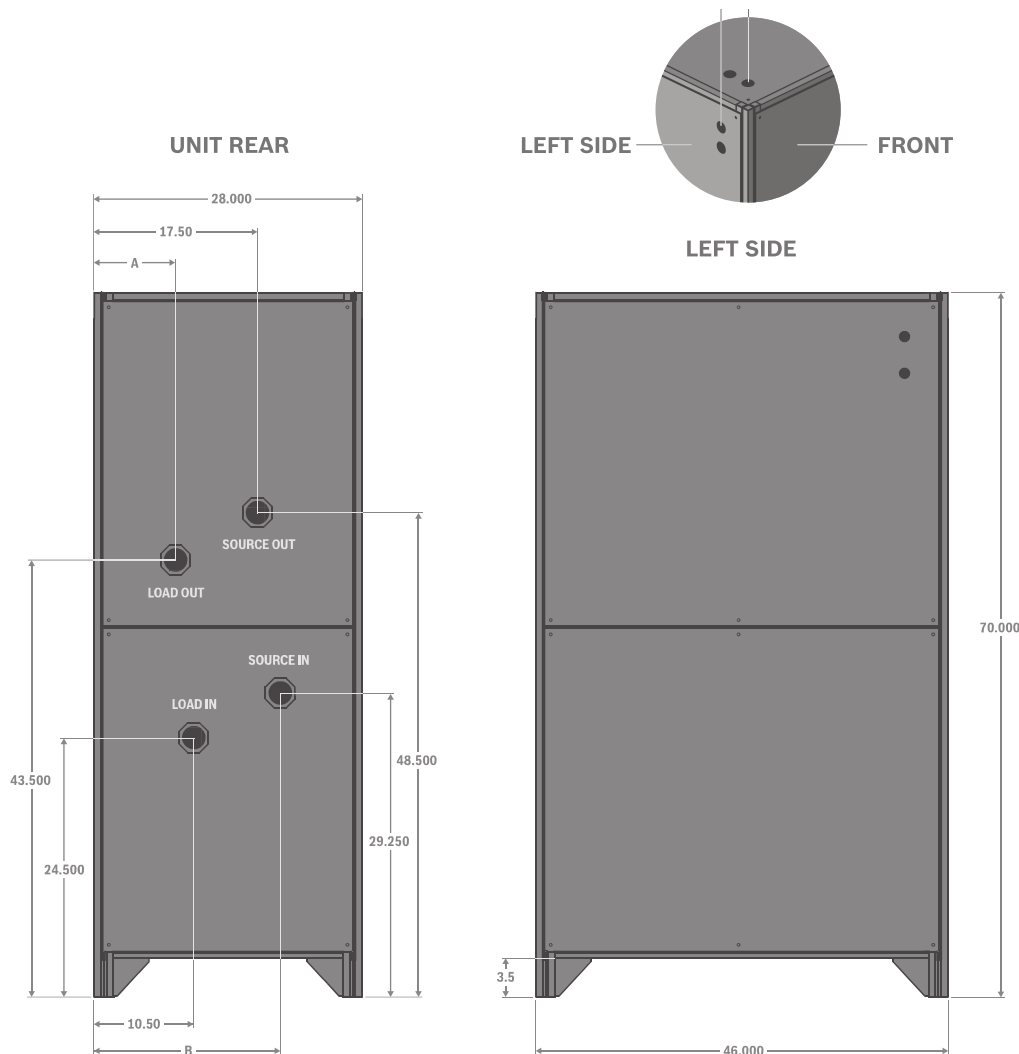


WW120/122/180/210 Unit Dimensions

Model	Height	Width	Depth	A	B	Source Water In Height	Source Water Out Height	Right Side to Source Water Out	Load Water Out Height	Load Water In Height	Right Side to Load Water In	Unit Leg Height	Water Connections	HRP Connections
				Right Side to Load Water Out	Right Side to Source Water In									
WW120	37.50	28.00	46.00	8.50	19.50	13.50	32.25	17.50	27.62	8.37	10.50	3.50	1-1/4" FPT	-
WW122	37.50	28.00	46.00	8.50	19.50	13.50	32.25	17.50	27.62	8.37	10.50	3.50	1-1/4" FPT	1/2" FPT
WW180	37.50	28.00	46.00	4.50	23.50	13.50	32.25	17.50	27.62	8.37	10.50	3.50	1-1/2" FPT	-
WW210	37.50	28.00	46.00	4.50	23.50	13.50	32.25	17.50	27.62	8.37	10.50	3.50	1-1/2" FPT	-

All dimensions in inches unless otherwise noted.
All dimensions within ± 0.125 ".
Specifications subject to change without notice.

WW240/360/420 Dimensional Drawings



WW240/360/420 Unit Dimensions

Model	Height	Width	Depth	A	B	Source Water In Height	Source Water Out Height	Right Side to Source Water Out	Load Water Out Height	Load Water In Height	Right Side to Load Water In	Unit Leg Height	Water Connections	HRP Connections
				Right Side to Load Water Out	Right Side to Source Water In									
WW240	70.00	28.00	46.00	8.50	19.50	29.25	48.50	17.50	43.50	24.50	10.50	3.50	2" FPT	-
WW360	70.00	28.00	46.00	4.50	23.50	29.25	48.50	17.50	43.50	24.50	10.50	3.50	2" FPT	-
WW420	70.00	28.00	46.00	4.50	23.50	29.25	48.50	17.50	43.50	24.50	10.50	3.50	2" FPT	-

All dimensions in inches unless otherwise noted.

All dimensions within $\pm 0.125"$.

Specifications subject to change without notice.

WT and WW Model Series - Commercial Water Source Heat Pumps



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Operating Limits – Heating and Cooling	
Cooling	Standard Unit
Minimum ambient air temperature °F	50
Maximum ambient air temperature °F	100
Minimum entering load fluid temperature °F	50
Typical entering load fluid temperature °F	55
Maximum entering load fluid temperature °F	90
Minimum entering source fluid temperature °F	50
Water loop typical entering source fluid range temperature °F	70-90
Maximum entering source fluid temperature °F	110
Heating	Standard Unit
Minimum ambient air temperature °F	50
Maximum ambient air temperature °F	100
Minimum entering load fluid temperature °F	60
Typical entering load fluid temperature °F	100-110
Maximum entering load fluid temperature °F	120
Minimum entering source fluid temperature °F	30*
Water loop typical entering source fluid range temperature °F	50-70
Maximum entering source fluid temperature °F	90

* Antifreeze solution is required at these fluid temperatures.

*Maximum and minimum fluid conditions are at unit rated flow rate.

*Maximum and minimum operating limits may not be combined. If one value is at either maximum or minimum, the other value(s) must be within normal operating range.

Antifreeze Correction							
Antifreeze Type	Antifreeze Volume %	Cooling			Heating		WPD Correction Factor EWT 30 °F
		EWT 90 Deg.F			EWT 30 Deg. F		
		Total Cap.	Sens. Cap	Power	Htg. Cap	Power	
Water	0	1.000	1.000	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.997	0.997	1.004	0.989	0.997	1.060
	10	0.994	0.994	1.006	0.986	0.995	1.125
	15	0.990	0.990	1.009	0.978	0.988	1.190
	25	0.983	0.983	1.016	0.960	0.979	1.300
Methanol	5	0.997	0.997	1.003	0.990	0.997	1.060
	10	0.996	0.996	1.005	0.979	0.993	1.100
	15	0.994	0.994	1.008	0.970	0.990	1.140
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.160
	10	0.996	0.996	1.004	0.960	0.988	1.230
	15	0.992	0.992	1.006	0.944	0.983	1.280
	25	0.986	0.986	1.009	0.917	0.974	1.400
Ethylene Glycol	5	0.997	0.997	1.003	0.993	0.998	1.060
	10	0.995	0.995	1.004	0.986	0.996	1.120
	15	0.992	0.992	1.005	0.980	0.993	1.190
	25	0.988	0.988	1.009	0.970	0.990	1.330
	30	0.985	0.985	1.012	0.965	0.987	1.400

WT and WW Model Series - Commercial Water Source Heat Pumps



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WT Waterside Pressure Drop					
Model	GPM	Chilled Fluid Side (55°F)		Cond. Fluid Side (85°F)	
		Pressure Drop (PSIG)	Pressure Drop (ft of H2O)	Pressure Drop (PSIG)	Pressure Drop (ft of H2O)
WT025	3.0	0.56	1.30	0.51	1.18
	4.0	0.95	2.18	0.86	1.98
	5.0	1.41	3.26	1.28	2.95
	6.0	1.96	4.52	1.78	4.10
	8.0	3.29	7.59	2.98	6.88
WT035	4.5	1.85	4.26	1.67	3.86
	6.0	3.10	7.14	2.81	6.47
	7.5	4.63	10.68	4.19	9.67
	9.0	6.43	14.82	5.82	13.43
	12.0	10.78	24.88	9.77	22.54
WT049	6.0	1.10	2.54	1.00	2.30
	8.0	1.85	4.26	1.67	3.86
	10.0	2.76	6.37	2.50	5.77
	12.0	3.83	8.85	3.47	8.01
	16.0	6.44	14.85	5.83	13.45
WT061	7.5	1.41	3.24	1.27	2.94
	10.0	2.36	5.44	2.14	4.93
	12.5	3.53	8.13	3.19	7.37
	15.0	4.89	11.29	4.43	10.23
	20.0	8.21	18.95	7.44	17.17
WT071	9.0	2.01	4.65	1.83	4.23
	12.0	3.38	7.80	3.08	7.10
	15.0	5.05	11.65	4.60	10.60
	18.0	7.01	16.18	6.38	14.72
	24.0	11.77	27.15	10.71	24.71

• All values based upon pure water at the indicated temperature

WT and WW Model Series - Commercial Water Source Heat Pumps



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WW Waterside Pressure Drop					
Model	GPM	Chilled Fluid Side (55°F)		Cond. Fluid Side (85°F)	
		Pressure Drop (PSIG)	Pressure Drop (ft of H2O)	Pressure Drop (PSIG)	Pressure Drop (ft of H2O)
WW120	18.0	2.36	5.5	2.05	4.7
	22.0	3.39	7.8	2.94	6.8
	26.0	4.58	10.6	3.97	9.2
	30.0	5.93	13.7	5.14	11.9
	34.0	7.43	17.1	6.44	14.8
WW122	18.0	2.36	5.5	2.05	4.7
	22.0	3.39	7.8	2.94	6.8
	26.0	4.58	10.6	3.97	9.2
	30.0	5.93	13.7	5.14	11.9
	34.0	7.43	17.1	6.44	14.8
WW180	22.0	2.04	4.7	1.70	3.9
	26.0	2.75	6.3	2.29	5.3
	30.0	3.56	8.2	2.96	6.8
	34.0	4.46	10.3	3.71	8.6
	38.0	5.44	12.6	4.54	10.5
WW210	25.0	2.56	5.9	2.13	4.9
	30.0	3.56	8.2	2.96	6.8
	35.0	4.69	10.8	3.91	9.0
	40.0	5.97	13.8	4.98	11.5
	45.0	7.38	17.0	6.15	14.2
WW240	36.0	2.36	5.4	2.06	4.7
	44.0	3.39	7.8	2.95	6.8
	52.0	4.57	10.6	3.99	9.2
	60.0	5.92	13.7	5.16	11.9
	68.0	7.41	17.1	6.47	14.9
WW360	44.0	2.05	4.7	1.69	3.9
	52.0	2.77	6.4	2.29	5.3
	60.0	3.58	8.3	2.96	6.8
	68.0	4.48	10.3	3.71	8.6
	76.0	5.48	12.6	4.53	10.4
WW420	50.0	2.58	5.9	2.13	4.9
	60.0	3.58	8.3	2.96	6.8
	70.0	4.72	10.9	3.91	9.0
	80.0	6.01	13.9	4.97	11.5
	90.0	7.42	17.1	6.14	14.2

- All values based upon pure water at the indicated temperature

WT and WW Model Series - Commercial Water Source Heat Pumps



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Electrical Data - WT Model

Model	Voltage Code	Voltage/ Hz/ Phase	Voltage Min/ Max	Compressor			Total Unit		
				QTY	RLA	LRA	Min Circuit Amps	MOP calculation	Max Fuse/ HACR
WT025	1	208-230/1/60	197/253	1	11.7	58.3	14.6	26.3	25
	2	265-277/1/60	239/291	1	9.1	54.0	11.4	20.5	20
	3	208-230/3/60	197/253	1	6.5	55.4	8.1	14.6	15
	4	460/3/60	414/506	1	3.5	28.0	4.4	7.9	15
WT035	1	208-230/1/60	197/253	1	15.6	83.0	19.5	35.1	35
	2	265-277/1/60	239/291	1	13.0	72.0	16.3	29.3	25
	3	208-230/3/60	197/253	1	11.6	73.0	14.5	26.1	25
	4	460/3/60	414/506	1	5.7	38.0	7.1	12.8	15
WT049	1	208-230/1/60	197/253	1	21.2	104.0	26.5	47.7	45
	3	208-230/3/60	197/253	1	14.0	83.1	17.5	31.5	30
	4	460/3/60	414/506	1	6.4	41.0	8.0	14.4	15
WT061	1	208-230/1/60	197/253	1	26.9	139.0	33.6	60.5	60
	3	208-230/3/60	197/253	1	16.5	110.0	20.6	37.1	35
	4	460/3/60	414/506	1	7.2	52.0	9.0	16.2	15
WT071	1	208-230/1/60	197/253	1	29.7	179.2	37.1	66.8	60
	3	208-230/3/60	197/253	1	17.6	136.0	22.0	39.6	35
	4	460/3/60	414/506	1	8.5	66.1	10.6	19.1	15

Resistance value tolerance +/- 7%.

All resistance values must be measured with compressor at room temperature.

Electrical Data - WW Model

Model	Voltage Code	Voltage/ Hz/ Phase	Voltage Min/ Max	Compressor			Total Unit	
				QTY	RLA	LRA	Min Circuit Amps	Max Fuse/ HACR
WW120	3	208-230/3/60	197/253	1	33.3	239.0	41.6	70
	4	460/3/60	414/506	1	17.9	125.0	22.4	40
	5	575/3/60	518/632	1	12.8	80.0	16.0	25
WW122	1	208-230/1/60	197/253	2	28.3	178.0	63.7	90
	3	208-230/3/60	197/253	2	19.2	136.0	43.2	60
	4	460/3/60	414/506	2	8.7	66.1	19.6	25
	5	575/3/60	518/632	2	6.9	55.3	15.5	20
WW180	3	208-230/3/60	197/253	1	48.1	245.0	60.1	100
	4	460/3/60	414/506	1	18.6	125.0	23.3	40
	5	575/3/60	518/632	1	14.7	100.0	18.4	30
WW210	3	208-230/3/60	197/253	1	50.6	325.0	63.3	110
	4	460/3/60	414/506	1	26.9	173.0	33.6	60
	5	575/3/60	518/632	1	23.7	132.0	29.6	50
WW240	3	208-230/3/60	197/253	2	33.3	239.0	74.9	100
	4	460/3/60	414/506	2	17.9	125.0	40.3	50
		575/3/60	518/632	2	12.8	80.0	28.8	40
WW360	3	208-230/3/60	197/253	2	48.1	245.0	108.2	150
	4	460/3/60	414/506	2	18.6	125.0	41.9	60
	5	575/3/60	518/632	2	14.7	100.0	33.1	45
WW420	3	208-230/3/60	197/253	2	50.6	325.0	113.9	150
	4	460/3/60	414/506	2	26.9	173.0	60.5	80
	5	575/3/60	518/632	2	23.7	132.0	53.3	70

Resistance value tolerance +/- 7%.

All resistance values must be measured with compressor at room temperature.

WT and WW Model Series - Commercial Water Source Heat Pumps



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Physical Data - WT Model

Description	025	035	049	061	071
Compressor Type (Qty 1)	Scroll	Scroll	Scroll	Scroll	Scroll
Refrigeration Charge (oz)	48	59	62	72	90
Max Water Working Pressure (PSIG/kPa)	450/3100	450/3100	450/3100	450/3100	450/3100
Number of Refrigeration Circuits	1	1	1	1	1
Water Coils					
Connection Type	FPT	FPT	FPT	FPT	FPT
Size	3/4"	3/4"	1"	1"	1"
Water Coil Type	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial
Coil Volume (gal)	0.49	0.49	0.64	0.77	1.05
Cabinet					
Weight - Operating (lbs)	240	250	280	310	430
Weight - Shipping (lbs)	260	270	300	330	450

Physical Data - WW Model

Description	120	122	180	210	240	360	420
Compressor Type (Qty 1)	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Refrigeration Charge (oz/circuit)	140	85	210	220	140	210	220
Max Water Working Pressure (PSIG/kPa)	450/3100	450/3100	450/3100	450/3100	450/3100	450/3100	450/3100
Number of Refrigeration Circuits	1	2	1	1	2	2	2
Water Coils							
Connection Type	FPT	FPT	FPT	FPT	FPT	FPT	FPT
Size	1 1/4"	1 1/4"	1 1/2"	1 1/2"	2"	2"	2"
Water Coil Type	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial
Coil Volume (gal)	1.00	1.00	3.31	3.31	1.00	3.31	3.31
Cabinet							
Weight - Operating (lbs)	648	720	850	890	1230	1550	1700
Weight - Shipping (lbs)	670	740	870	910	1260	1580	1730



WT & WW Capacity Data



For authorized users only.

- ▶ For extended performance data please access Bosch Select Tool 2.0 (BST2.0) in your device
- ▶ To obtain an access, please scan the QR code and enter your information(for authorized users with login credentials)



Scan QR Code