

# ES Model Series Commercial Water Source Heat Pumps

Engineering  
Submittal  
Sheet



# BOSCH

## Overview and Certifications



- ▶ 2 to 6 ton capacities
- ▶ Two Stage Compact Cabinet
- ▶ Excellent replacement product for high-rises and condominiums
- ▶ Standard ECM EON constant CFM (Variable Speed) blower motors on all sizes

## Commercial WSHP Product Portfolio

Product	Water-to-Air							Water-to-Water			
	LM	ES	EP	LV	LM Splits	CA	EC	MC	WT	WW	
Price	\$\$\$	\$	\$+	\$	\$\$\$	\$	\$	\$	\$	\$	
Model Sizes <6 Ton	007			X	X						
	009			X	X						
	012			X	X						
	015			X	X						
	018			X	X						
	024	X		X	X	X					
	025		X						X		
	030	X		X	X						
	035		X						X		
	036	X		X	X	X					
	041				X						
	042			X	X						
	048	X		X	X	X					
	049		X						X		
	060	X		X	X	X				X	
	061		X							X	
	070	X		X	X					X	
071		X									
Model Sizes >6 Ton	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	X	
480								X			
600								X			
720								X			
<b>Capacities (WLHP)</b>	EER	14.8 - 20.8	13.2 - 17.5	14.2 - 17.5	12.2 - 14.9	14.1 - 18.2	12.2 - 12.7	13.0 - 16.0	18.6 - 19.0	12.6 - 14.7	12.3 - 13.8
	COP	4.9 - 6.5	3.8 - 5.4	5.0 - 5.8	4.3 - 5.1	4.9 - 6.0	4.3 - 4.6	4.2 - 5.6	5.4 - 5.5	4.2 - 4.7	4.2 - 4.6

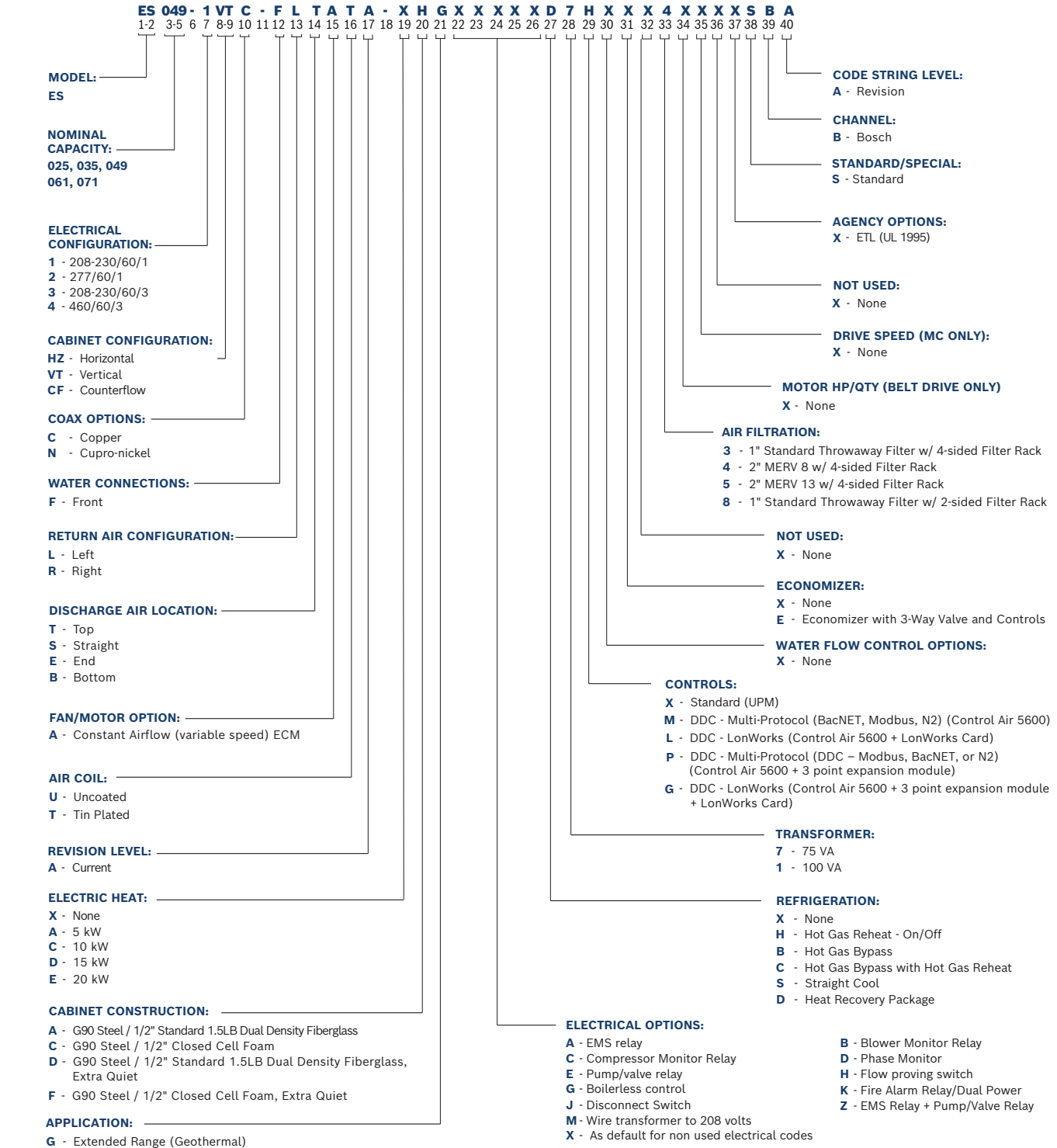
Featured model

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

# ES Model Series - Commercial Water Source Heat Pumps



## Model Nomenclature

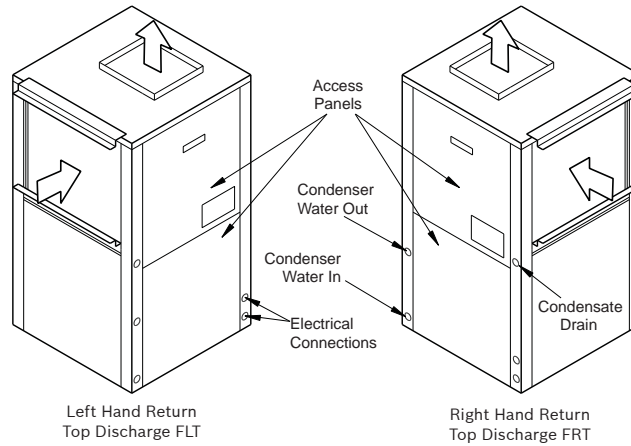


ES Model Series -  
Commercial Water Source Heat Pumps

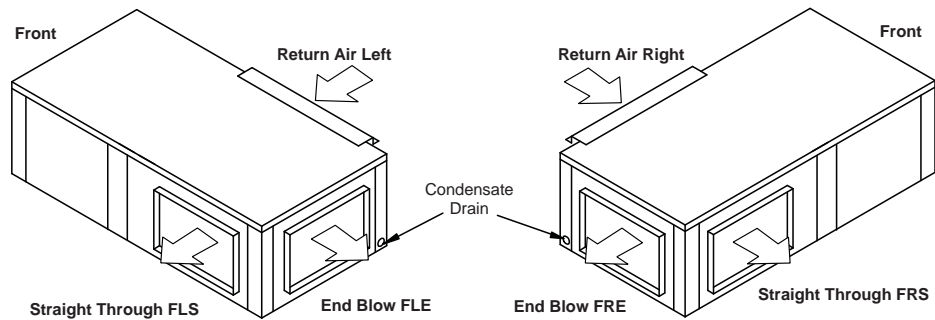


ASHRAE/AHRI/ISO 13256-1															
Model	Load	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump				Rated Airflow	Water Flow Rate (GPM)
		Cooling 86 deg.F		Heating 68 deg.F		Cooling 59 deg.F		Heating 50 deg.F		Cooling 77 deg.F		Heating 32 deg.F			
		Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP		
ES025	Part	18800	17.10	20500	5.70	21000	29.00	18000	4.50	20000	24.70	15500	3.80	500	6
	Full	26000	15.10	27600	5.10	29000	23.20	25000	4.50	27500	17.70	19000	3.60	800	6
ES035	Part	24000	16.20	27000	4.95	27000	27.35	22500	4.20	27000	23.10	20500	3.80	800	9
	Full	36000	14.00	43000	4.35	42000	21.25	36000	4.20	38000	15.70	28000	3.60	1200	9
ES049	Part	34000	16.00	39000	5.40	38000	24.00	32000	4.60	36000	21.80	28500	4.00	1250	12
	Full	48000	13.20	58000	4.80	54000	19.00	48000	4.20	49000	15.50	38000	3.60	1600	12
ES061 (HZ)	Part	42000	16.20	48000	5.05	48000	26.80	40000	4.30	45000	23.50	36500	3.80	1400	14
	Full	60000	14.60	72000	4.75	68000	21.20	61000	4.30	62000	16.80	49000	3.60	1800	14
ES061 (VT/CF)	Part	42000	16.60	48000	5.00	48000	26.00	40000	4.30	45000	23.50	36500	3.85	1400	14
	Full	60000	14.00	72000	4.70	68000	19.70	61000	4.20	62000	15.70	49000	3.60	2000	14
ES071	Part	51000	15.30	55000	4.40	57000	25.20	47000	4.00	56000	21.80	42000	3.70	1400	18
	Full	72000	13.50	80000	4.50	77000	19.60	68000	4.20	74000	15.60	53000	3.50	2200	18

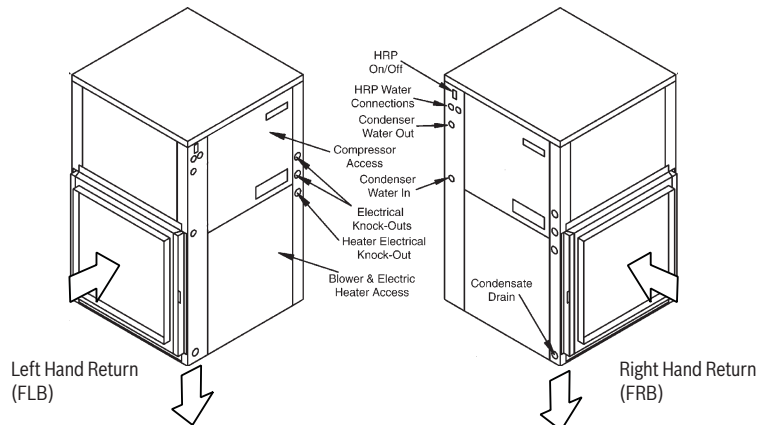
**Vertical Unit Configurations**



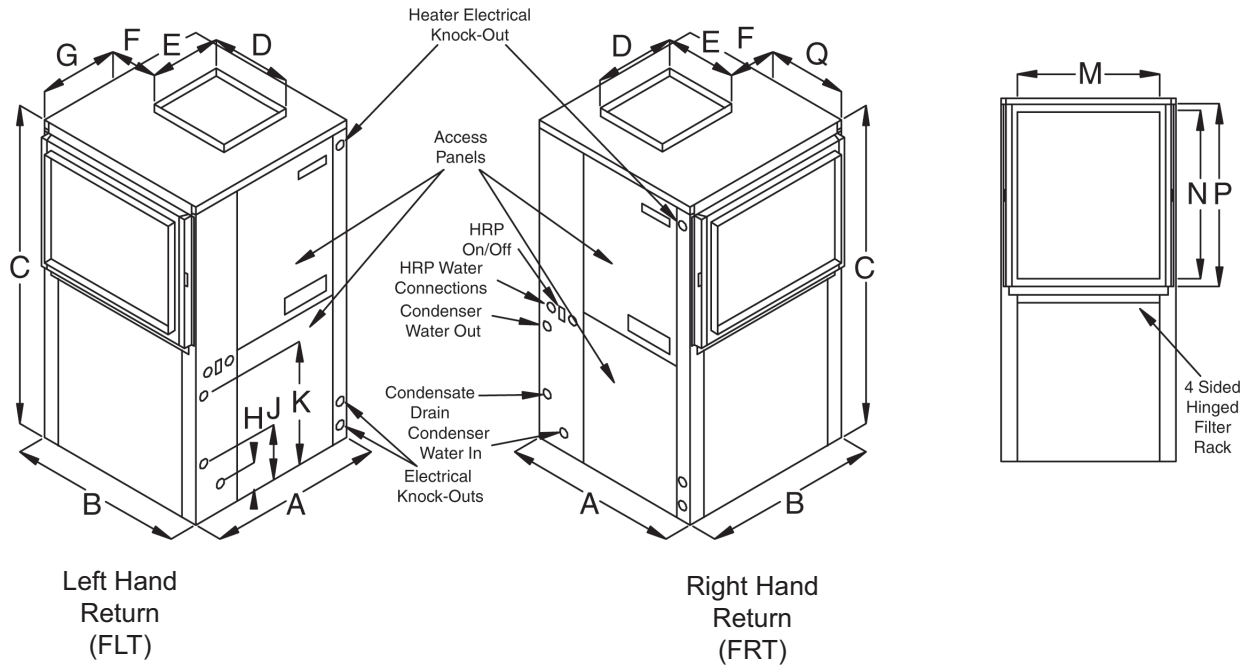
**Horizontal Unit Configurations**



**Counterflow Unit Configurations**



ES Vertical Unit Dimensions and Connections



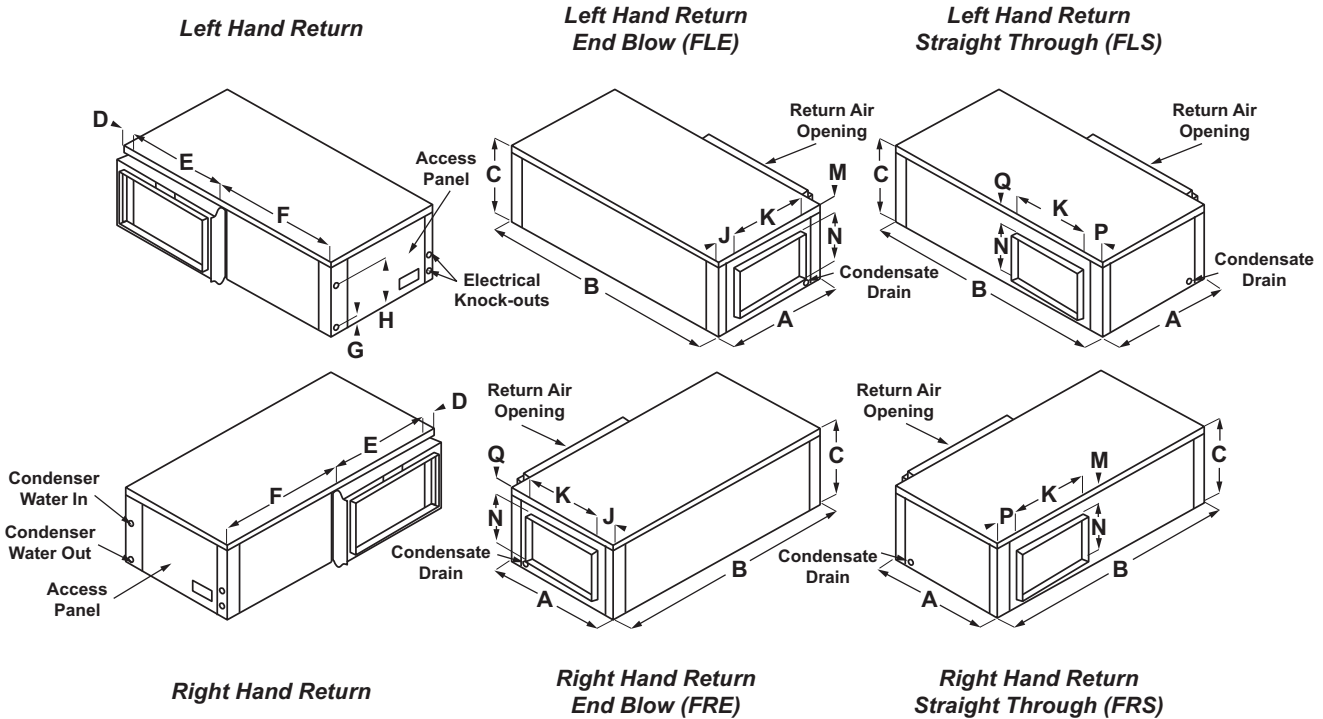
NOTES: All dimensions within +/- 0.125".  
 All condensate drain connections are 3/4" FPT.  
 All Heat Recovery Kit connections are 1/2" FPT.  
 Internal electric heat available on 208-230/1/60 top discharge units only  
 Internal Heat Recovery Kit available on 208-230 volt units only.  
 Specifications subject to change without notice.

ES Vertical Unit Dimensions

Model	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	Condenser Water Connections	Replacement Nominal Filter Size - 1" or 2" thick
	Width	Depth	Height	Discharge Depth	Discharge Width	Cabinet Edge to Discharge	Left Side to Discharge	Water In	Bottom to Condensate Drain	Water Out	R/A Duct Width	R/ADuct Flange Height	Filter Rack Height	Right Side to Discharge		
025	21.50	26.00	47.25	13.75	15.75	6.13	5.25	2.50	8.00	13.50	22.00	22.00	24.00	4.00	3/4" FPT	24 X 24
035	21.50	26.00	47.25	13.75	15.75	6.13	5.25	2.50	8.00	13.50	22.00	22.00	24.00	4.00	3/4" FPT	24 X 24
049	24.00	32.75	47.25	15.75	15.75	8.38	5.50	2.50	8.00	14.75	28.50	22.00	24.00	4.00	1" FPT	24 X 30
061	26.00	33.25	51.25	17.75	17.75	7.13	6.25	2.50	8.00	14.75	28.50	22.00	24.00	4.00	1" FPT	24 X 30
071	26.00	33.25	58.25	17.75	17.75	8.00	7.75	2.50	8.00	14.75	28.50	30.00	32.00	1.50	1" FPT	16 X 30 (2)

All dimensions within +/- 0.125". All condensate drain connections are 3/4" FPT. Specifications subject to change without notice. 1" filter rack extends 1.23" beyond the side of the unit. 2" filter rack extends 2.89" beyond the side of the unit. The 2" filter rack is 4 sided with a filter access door on one end and can accept either a 1" or 2" filter.

**ES Horizontal Unit - Dimensions and Connections**



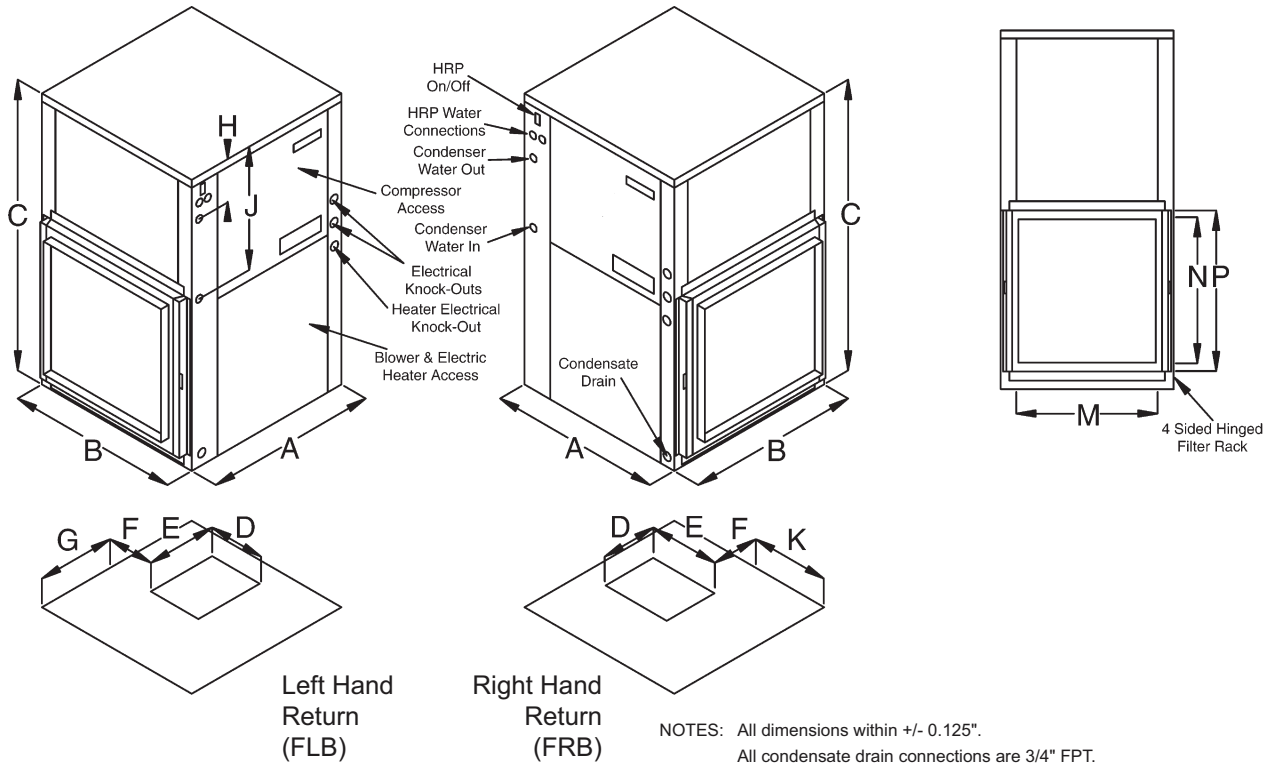
NOTES: All dimensions within +/- 0.125".  
 All condensate drain connections are 3/4" FPT.  
 All Heat Recovery connections are 1/2" FPT.  
 Internal electric heat available on 208-230 volt units only.  
 Internal Heat Recovery Kit available on 208-230 volt units only.  
 Units can be field converted between end blow and straight through supply air configurations.  
 Specifications subject to change without notice.

**ES Horizontal Unit Dimensions**

Model	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	T	Condenser Water Connections	Replacement Nominal Filter Size - 1" or 2" thick
	Width	Depth	Height	Cab End to Filter Rack	R/A Duct Width	Cab Front to Filter Rack	Water In	Water Out	Side to Discharge	Discharge Width	Top to Discharge (FLE & FRS)	Discharge Height	End to Discharge	Top to Discharge	Filter Rack Height	R/A Duct Flange Height		
025	26.00	54.50	21.75	2.00	30.00	22.50	2.50	13.50	4.50	13.75	3.00	15.75	4.50	3.00	20.00	18.00	3/4" FPT	20 X 30
035	26.00	54.50	21.75	2.00	30.00	22.50	2.50	13.50	4.50	13.75	3.00	15.75	4.50	3.00	20.00	18.00	3/4" FPT	20 X 30
049	30.00	68.00	21.75	2.50	33.50	32.00	2.50	14.50	5.81	15.75	3.00	15.75	5.81	2.00	20.00	18.00	1" FPT	20 X 34.5
061	30.00	68.00	21.75	2.50	33.50	32.00	2.50	14.50	7.66	17.75	2.00	17.75	7.66	2.00	20.00	18.00	1" FPT	20 X 34.5
071	30.00	78.00	21.75	2.50	44.00	31.50	2.50	14.50	3.50	17.75	2.75	17.75	7.66	1.00	20.00	18.00	1" FPT	20 X 24 (2)

All dimensions within +/- 0.125". All condensate drain connections are 3/4" FPT. Specifications subject to change without notice. 1" filter rack extends 1.23" beyond the side of the unit. 2" filter rack extends 2.89" beyond the side of the unit. The 2" filter rack is 4 sided with a filter access door on one end and can accept either a 1" or 2" filter.

ES Counterflow Unit - Dimensions and Connections



NOTES: All dimensions within +/- 0.125".  
All condensate drain connections are 3/4" FPT.  
All Heat Recovery Kit connections are 1/2" FPT.  
Internal electric heat available on 208-230/1/60 bottom discharge units only  
Internal Heat Recovery Kit available on 208-230 volt units only.  
Specifications subject to change without notice.

ES Counterflow Unit Dimensions

Model	A	B	C	D	E	F	G	H	J	K	M	N	P	Condenser Water Connections	Replacement Nominal Filter Size - 1" or 2" thick
	Width	Depth	Height	Discharge Depth	Discharge Width	Cabinet Edge to Discharge	Left Side to Discharge	Water Out	Water In	Right Side to Discharge	R/A Duct Width	R/A Duct Flange Height	Filter Rack Height		
025	21.50	26.00	47.25	9.25	10.25	6.00	5.50	8.50	19.50	9.75	22.00	22.00	24.00	3/4" FPT	24 X 24
035	21.50	26.00	47.25	9.25	10.25	6.00	5.50	8.50	19.50	9.75	22.00	22.00	24.00	3/4" FPT	24 X 24
049	24.00	32.75	47.25	10.75	11.50	11.13	6.88	7.50	18.50	8.75	28.00	22.00	24.00	1" FPT	24 X 30
061	26.00	33.25	51.25	12.00	12.50	8.38	5.00	9.75	21.75	10.50	28.00	22.00	24.00	1" FPT	24 X 30
071	26.00	33.25	58.25	12.75	13.50	9.75	4.50	7.00	20.25	11.00	28.00	30.00	32.00	1" FPT	16 X 30 (2)

All dimensions within +/- 0.125". All condensate drain connections are 3/4" FPT. Specifications subject to change without notice. 1" filter rack extends 1.23" beyond the side of the unit. 2" filter rack extends 2.89" beyond the side of the unit. The 2" filter rack is 4 sided with a filter access door on one end and can accept either a 1" or 2" filter.

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Operating Limits – Heating and Cooling	
<b>Heating</b>	<b>Extended Range</b>
Minimum ambient air temperature °F	40
Maximum ambient air temperature °F	85
Minimum evaporator entering air db/wb °F	50
Rated air coil entering air db/wb °F	68
Maximum evaporator entering air db/wb °F	80
Normal water coil entering fluid range °F	25-80*
Minimum water coil entering fluid °F	20*
<b>Cooling</b>	<b>Extended Range</b>
Minimum ambient air temperature °F	50
Maximum ambient air temperature °F	100
Minimum evaporator entering air db/wb °F	68/57
Rated air coil entering air db/wb °F	80/67
Maximum evaporator entering air db/wb °F	95/85
Minimum water coil entering fluid temperature °F	50
Water loop typical coil entering fluid range temperature °F	70/90
Maximum water coil entering fluid temperature °F	110

\* Antifreeze solution is required at these fluid temperatures.

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	
<b>Water</b>	0	1.000	1.000	1.000	1.000	1.000	1.000
<b>Propylene Glycol</b>	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
<b>Methanol</b>	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
<b>Ethanol</b>	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
<b>Ethylene Glycol</b>	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



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Waterside Pressure Drop			
Model	Water Flow Rate (GPM)	Pressure Drop (PSIG)	Pressure Drop (ft of H2O)
ES025	4.0	0.90	2.07
	5.0	1.34	3.10
	6.0	1.86	4.30
	7.0	2.46	5.68
	8.0	3.13	7.22
ES035	6.0	1.86	4.30
	7.5	2.78	6.43
	9.0	3.86	8.93
	10.5	5.10	11.8
	12.0	6.49	15.0
ES049	8.0	2.12	4.90
	10.0	3.17	7.32
	12.0	4.41	10.16
	14.0	5.81	13.41
	16.0	7.39	17.06
ES061	9.0	1.85	4.28
	11.5	2.88	6.65
	14.0	4.10	9.48
	16.5	5.52	12.74
	19.0	7.11	16.4
ES071	12.0	3.23	7.45
	15.0	4.82	11.13
	18.0	6.70	15.45
	21.0	8.84	20.39
	24.0	11.24	25.93

- All values based on pure water at EWT 70° F.

# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES025 Full Load (910 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	3	0.5	75/63	27.0	21.7	31.7	1.4	19.7	30	0.6	30	60	16.9	12.9	1.4	3.54
			80/67	28.8	22.4	33.5	1.4	20.7				70	16.9	12.3	1.5	3.22
			85/71	30.6	23.1	35.4	1.4	21.6				80	16.6	11.6	1.7	2.85
	4.5	1.1	75/63	27.9	22.0	32.3	1.3	21.4		60		17.5	13.4	1.4	3.65	
			80/67	29.7	22.7	34.2	1.3	22.6		70		17.2	12.6	1.5	3.26	
			85/71	31.6	23.4	36.2	1.3	23.8		80		17.2	12.2	1.7	2.94	
	6	1.8	75/63	28.3	22.2	32.6	1.3	22.3		60		18.0	13.9	1.4	3.72	
			80/67	30.2	22.9	34.6	1.3	23.6		70		18.0	13.2	1.6	3.37	
			85/71	32.1	23.6	36.6	1.3	25.0		80		17.6	12.5	1.7	2.99	
60	3	0.5	75/63	25.8	21.1	30.8	1.5	17.3	40	0.6	40	60	19.1	14.8	1.4	3.89
			80/67	27.5	21.8	32.6	1.5	18.1				70	19.4	14.6	1.6	3.58
			85/71	29.2	22.5	34.4	1.5	18.8				80	18.8	13.7	1.7	3.15
	4.5	1.1	75/63	26.6	21.5	31.4	1.4	18.8		60		20.1	15.9	1.5	4.05	
			80/67	28.4	22.1	33.2	1.4	19.8		70		20.0	14.7	1.6	3.67	
			85/71	30.2	22.8	35.1	1.5	20.8		80		19.8	14.3	1.8	3.3	
	6	1.8	75/63	27.0	21.6	31.6	1.4	19.6		60		20.7	16.4	1.5	4.14	
			80/67	28.8	22.4	33.5	1.4	20.7		70		20.4	16.2	1.6	3.71	
			85/71	30.7	23.0	35.5	1.4	21.8		80		20.0	14.7	1.8	3.31	
70	3	0.5	75/63	24.6	20.7	30.0	1.6	15.0	50	0.5	50	60	21.7	17.6	1.5	4.29
			80/67	26.1	21.4	31.7	1.7	15.7				70	21.1	17.3	1.6	3.8
			85/71	27.7	22.1	33.5	1.7	16.3				80	21.3	15.8	1.8	3.47
	4.5	1.1	75/63	25.3	20.9	30.5	1.6	16.3		60		22.9	18.6	1.5	4.46	
			80/67	27.0	21.7	32.3	1.6	17.2		70		22.3	17.6	1.6	3.97	
			85/71	28.7	22.4	34.1	1.6	18.0		80		22.1	16.6	1.8	3.57	
	6	1.8	75/63	25.7	21.1	30.7	1.5	17.0		60		23.7	19.6	1.5	4.57	
			80/67	27.4	21.8	32.6	1.5	17.9		70		23.6	17.9	1.7	4.15	
			85/71	29.2	22.5	34.4	1.5	18.8		80		22.8	17.3	1.8	3.66	
80	3	1.0	75/63	23.3	20.2	29.2	1.8	12.9	60	0.5	60	60	24.7	20.6	1.5	4.71
			80/67	24.8	20.9	30.9	1.8	13.5				70	24.3	19.5	1.7	4.22
			85/71	26.4	21.4	32.6	1.9	14.1				80	23.3	18.0	1.8	3.71
	4.5	1.0	75/63	24.0	20.4	29.6	1.7	14.0		60		26.2	22.6	1.6	4.89	
			80/67	25.6	21.2	31.4	1.7	14.7		70		25.9	20.2	1.7	4.42	
			85/71	27.2	21.8	33.1	1.8	15.5		80		24.6	19.0	1.9	3.85	
	6	1.7	75/63	24.3	20.6	29.8	1.7	14.6		60		26.8	21.7	1.6	4.98	
			80/67	26.0	21.3	31.6	1.7	15.4		70		26.2	21.8	1.7	4.44	
			85/71	27.7	21.9	33.4	1.7	16.2		80		25.2	19.8	1.9	3.91	
90	3	0.5	75/63	21.9	19.6	28.4	2.0	11.1	70	0.5	70	60	27.2	22.6	1.6	5.03
			80/67	23.4	20.3	30.1	2.0	11.6				70	27.1	21.6	1.7	4.55
			85/71	24.9	21.1	31.7	2.0	12.2				80	26.8	21.0	1.9	4.07
	4.5	1.0	75/63	22.6	19.9	28.8	1.9	12.0		60		29.0	24.2	1.6	5.23	
			80/67	24.2	20.5	30.5	1.9	12.6		70		28.8	23.6	1.8	4.71	
			85/71	25.8	21.2	32.2	1.9	13.3		80		28.1	22.2	2.0	4.2	
	6	1.7	75/63	22.9	20.0	29.0	1.8	12.4		60		30.0	24.9	1.6	5.35	
			80/67	24.5	20.7	30.7	1.9	13.1		70		29.1	23.9	1.8	4.73	
			85/71	26.2	21.4	32.5	1.9	13.8		80		28.9	23.1	2.0	4.27	
100	3	0.5	75/63	20.6	19.1	27.8	2.2	9.5	80	1.0	80	60	31.3	25.9	1.7	5.51
			80/67	22.1	19.8	29.3	2.2	10.0				70	29.9	25.0	1.8	4.8
			85/71	23.5	20.6	30.9	2.2	10.5				80	29.9	23.8	2.0	4.33
	4.5	1.0	75/63	21.3	19.3	28.1	2.1	10.2		60		32.8	28.2	1.7	5.64	
			80/67	22.8	20.0	29.7	2.1	10.8		70		31.9	27.1	1.9	5	
			85/71	24.3	20.9	31.4	2.1	11.4		80		30.7	24.6	2.1	4.38	
	6	1.7	75/63	21.5	19.4	28.2	2.0	10.5		60		33.4	28.4	1.7	5.7	
			80/67	23.0	20.3	29.9	2.1	11.2		70		32.9	27.9	1.9	5.09	
			85/71	24.6	21.0	31.6	2.1	11.8		80		32.6	25.6	2.1	4.56	
110	3	0.5	75/63	19.3	18.6	27.1	2.4	8.1	Extended Range - Anti-freeze required	1.0	Extended Range - Anti-freeze required	60	31.3	25.9	1.7	5.51
			80/67	20.6	19.4	28.6	2.4	8.5				70	29.9	25.0	1.8	4.8
			85/71	22.0	20.1	30.1	2.5	8.9				80	29.9	23.8	2.0	4.33
	4.5	1.0	75/63	19.9	18.8	27.4	2.3	8.6		60		32.8	28.2	1.7	5.64	
			80/67	21.3	19.6	28.9	2.3	9.2		70		31.9	27.1	1.9	5	
			85/71	22.7	20.3	30.5	2.4	9.7		80		30.7	24.6	2.1	4.38	
	6	1.6	75/63	20.1	18.9	27.5	2.3	8.9		60		33.4	28.4	1.7	5.7	
			80/67	21.6	19.7	29.1	2.3	9.4		70		32.9	27.9	1.9	5.09	
			85/71	23.0	20.5	30.7	2.3	10.0		80		32.6	25.6	2.1	4.56	

Extended Range - Anti-freeze required  
 AHR/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

**DISCLAIMER: The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.**

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

# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES025 Part Load (750 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	3	0.5	75/63	20.6	17.4	23.4	0.8	25.4	30	0.6	60	12.5	9.9	1.0	3.6	
			80/67	22.0	18.0	24.9	0.8	26.8				70	12.3	9.0	1.2	3.12
			85/71	23.4	18.6	26.4	0.8	28.3				80	11.9	7.9	1.3	2.65
	4.5	1.1	75/63	21.1	17.6	23.8	0.8	27.9		60	1.2	60	12.7	9.9	1.0	3.66
			80/67	22.6	18.2	25.3	0.8	29.7				70	12.6	9.2	1.2	3.18
			85/71	24.1	18.8	26.8	0.8	31.5				80	12.4	8.5	1.3	2.75
	6	1.8	75/63	21.3	17.7	23.9	0.7	29.2		60	1.9	60	13.0	10.2	1.0	3.72
			80/67	22.8	18.3	25.5	0.7	31.2				70	12.9	9.5	1.2	3.23
			85/71	24.4	18.9	27.0	0.7	33.2				80	12.5	8.6	1.3	2.76
60	3	0.5	75/63	19.6	17.0	22.7	0.9	21.0	40	0.6	60	14.5	11.6	1.0	4.11	
			80/67	20.9	17.5	24.1	0.9	22.2				70	14.2	10.7	1.2	3.51
			85/71	22.3	18.1	25.6	1.0	23.5				80	13.8	9.9	1.3	3.01
	4.5	1.1	75/63	20.0	17.2	23.0	0.9	22.9		60	1.1	60	14.9	11.9	1.0	4.21
			80/67	21.5	17.7	24.5	0.9	24.4				70	14.7	11.0	1.2	3.63
			85/71	22.9	18.3	26.0	0.9	25.9				80	14.2	10.5	1.3	3.1
	6	1.8	75/63	20.2	17.3	23.2	0.9	23.8		60	1.9	60	15.2	12.0	1.0	4.25
			80/67	21.7	17.9	24.7	0.9	25.5				70	14.8	11.2	1.2	3.64
			85/71	23.2	18.4	26.2	0.9	27.2				80	14.5	10.9	1.3	3.14
70	3	0.5	75/63	18.5	16.6	22.0	1.1	17.4	50	0.5	60	16.3	13.3	1.1	4.53	
			80/67	19.8	17.1	23.4	1.1	18.5				70	16.2	13.0	1.2	3.93
			85/71	21.1	17.8	24.7	1.1	19.5				80	15.9	12.0	1.4	3.41
	4.5	1.1	75/63	18.9	16.7	22.3	1.0	18.9		60	1.1	60	17.1	14.2	1.1	4.69
			80/67	20.3	17.3	23.7	1.0	20.1				70	16.7	13.2	1.2	4.03
			85/71	21.7	18.0	25.1	1.0	21.4				80	16.5	12.4	1.4	3.53
	6	1.8	75/63	19.1	16.8	22.5	1.0	19.5		60	1.8	60	17.7	14.8	1.1	4.83
			80/67	20.6	17.4	23.9	1.0	20.9				70	17.2	13.1	1.2	4.14
			85/71	22.0	18.0	25.3	1.0	22.3				80	16.6	12.6	1.4	3.54
80	3	1.0	75/63	17.4	16.0	21.4	1.2	14.5	60	0.5	60	18.8	15.3	1.1	5.06	
			80/67	18.6	16.8	22.6	1.2	15.4				70	18.4	15.1	1.2	4.37
			85/71	19.9	17.2	24.0	1.2	16.3				80	18.0	14.2	1.4	3.77
	4.5	1.0	75/63	17.8	16.2	21.6	1.1	15.6		60	1.1	60	19.5	16.7	1.1	5.19
			80/67	19.1	16.9	22.9	1.1	16.6				70	19.0	15.3	1.2	4.48
			85/71	20.4	17.5	24.3	1.2	17.7				80	18.9	14.7	1.4	3.93
	6	1.7	75/63	18.0	16.4	21.7	1.1	16.1		60	1.8	60	20.2	16.8	1.1	5.36
			80/67	19.3	16.9	23.1	1.1	17.3				70	19.5	15.8	1.3	4.56
			85/71	20.7	17.6	24.5	1.1	18.4				80	19.0	14.9	1.4	3.95
90	3	0.5	75/63	16.3	15.7	20.7	1.4	12.1	70	0.5	60	21.0	18.0	1.1	5.5	
			80/67	17.4	16.3	21.9	1.4	12.8				70	20.7	17.4	1.3	4.78
			85/71	18.6	16.9	23.2	1.4	13.6				80	20.0	16.0	1.4	4.11
	4.5	1.0	75/63	16.7	15.8	20.9	1.3	12.9		60	1.1	60	22.3	19.1	1.1	5.74
			80/67	17.9	16.5	22.2	1.3	13.8				70	21.8	18.4	1.3	4.95
			85/71	19.1	17.1	23.5	1.3	14.7				80	20.9	16.9	1.4	4.24
	6	1.7	75/63	16.8	15.5	21.0	1.3	12.9		60	1.8	60	22.7	19.7	1.1	5.81
			80/67	18.1	16.5	22.3	1.3	14.2				70	21.9	19.6	1.3	4.96
			85/71	19.4	17.1	23.6	1.3	15.2				80	21.6	17.6	1.5	4.35
100	3	0.5	75/63	15.3	15.2	20.1	1.5	10.0	80	1.0	60	23.5	20.2	1.2	5.95	
			80/67	16.3	15.9	21.3	1.5	10.7				70	22.9	19.2	1.3	5.13
			85/71	17.4	16.5	22.4	1.5	11.3				80	22.6	18.3	1.5	4.51
	4.5	1.0	75/63	15.6	15.3	20.3	1.5	10.6		60	1.0	60	24.7	21.7	1.2	6.16
			80/67	16.7	16.1	21.5	1.5	11.4				70	24.4	20.1	1.3	5.39
			85/71	17.8	16.7	22.7	1.5	12.1				80	23.4	19.0	1.5	4.61
	6	1.7	75/63	15.7	15.5	20.4	1.4	10.9		60	1.7	60	25.5	22.4	1.2	6.29
			80/67	16.9	16.1	21.6	1.4	11.7				70	24.6	21.1	1.3	5.4
			85/71	18.0	16.7	22.8	1.4	12.5				80	24.3	20.1	1.5	4.75
110	3	0.5	75/63	14.5	14.5	19.9	1.7	8.5	Extended Range - Anti-freeze required	1.0	60	23.5	20.2	1.2	5.95	
			80/67	15.3	15.3	20.8	1.7	9.0				70	22.9	19.2	1.3	5.13
			85/71	16.2	16.1	21.7	1.7	9.4				80	22.6	18.3	1.5	4.51
	4.5	1.0	75/63	14.7	14.7	19.9	1.7	8.9		60	1.0	60	24.7	21.7	1.2	6.16
			80/67	15.5	15.5	20.9	1.7	9.4				70	24.4	20.1	1.3	5.39
			85/71	16.6	16.2	22.0	1.7	10.0				80	23.4	19.0	1.5	4.61
	6	1.6	75/63	14.7	14.7	19.9	1.6	8.9		60	1.7	60	25.5	22.4	1.2	6.29
			80/67	15.6	15.6	20.9	1.6	9.6				70	24.6	21.1	1.3	5.4
			85/71	16.7	16.3	22.1	1.6	10.3				80	24.3	20.1	1.5	4.75

Extended Range - Anti-freeze required  
 AHR/ISO 13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

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# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES035 Full Load (1170 CFM)															
Cooling									Heating						
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP
50	4	0.9	75/63	37.7	28.9	45.0	2.1	17.8	30	0.9	60	24.8	18.5	2.1	3.46
			80/67	40.3	29.8	47.7	2.2	18.7			70	24.6	17.2	2.3	3.12
			85/71	42.9	30.6	50.5	2.2	19.6			80	24.1	16.2	2.5	2.79
	6.5	2.1	75/63	39.1	29.4	45.8	2.0	19.8		60	26.1	19.8	2.1	3.58	
			80/67	41.8	30.3	48.7	2.0	21.0		70	25.6	18.6	2.3	3.2	
			85/71	44.7	31.1	51.7	2.0	22.1		80	25.2	17.2	2.6	2.89	
	9	3.8	75/63	39.6	29.9	46.2	1.9	20.8		60	26.9	20.4	2.2	3.66	
			80/67	42.4	30.8	49.1	1.9	22.1		70	26.2	19.2	2.4	3.26	
			85/71	45.4	31.6	52.1	1.9	23.4		80	25.9	17.6	2.6	2.94	
60	4	0.9	75/63	36.0	28.1	43.9	2.3	15.5	40	0.9	60	28.3	21.7	2.2	3.79
			80/67	38.5	29.0	46.5	2.4	16.4			70	27.8	20.5	2.4	3.39
			85/71	41.0	29.9	49.2	2.4	17.2			80	27.4	19.1	2.6	3.07
	6.5	2.1	75/63	37.3	28.6	44.7	2.2	17.1		60	30.0	23.3	2.2	3.95	
			80/67	40.0	29.5	47.5	2.2	18.2		70	29.4	22.0	2.4	3.53	
			85/71	42.7	30.4	50.3	2.2	19.3		80	28.9	20.4	2.7	3.19	
	9	3.7	75/63	37.8	28.9	45.0	2.1	17.9		60	30.9	24.2	2.2	4.02	
			80/67	40.5	30.0	47.8	2.1	19.1		70	30.2	22.7	2.5	3.59	
			85/71	43.4	30.9	50.8	2.1	20.2		80	29.4	21.4	2.7	3.21	
70	4	0.9	75/63	34.2	27.4	42.8	2.5	13.5	50	0.9	60	32.0	25.1	2.3	4.12
			80/67	36.6	28.3	45.3	2.6	14.3			70	31.5	23.7	2.5	3.71
			85/71	39.1	29.2	47.9	2.6	15.0			80	30.8	22.5	2.7	3.32
	6.5	2.0	75/63	35.4	27.9	43.5	2.4	14.8		60	34.1	27.1	2.3	4.28	
			80/67	38.0	28.8	46.2	2.4	15.8		70	33.5	25.5	2.5	3.85	
			85/71	40.6	29.8	49.0	2.4	16.7		80	32.8	24.1	2.8	3.46	
	9	3.6	75/63	35.9	28.0	43.8	2.3	15.3		60	35.2	28.3	2.4	4.38	
			80/67	38.6	29.1	46.5	2.3	16.5		70	34.4	26.7	2.6	3.93	
			85/71	41.3	30.1	49.4	2.4	17.5		80	33.7	24.9	2.8	3.52	
80	4	0.9	75/63	32.4	26.8	41.7	2.8	11.7	60	0.9	60	36.0	28.8	2.4	4.46
			80/67	34.7	27.7	44.2	2.8	12.4			70	35.3	27.5	2.6	4.01
			85/71	37.1	28.4	46.7	2.8	13.1			80	34.7	25.9	2.8	3.6
	6.5	2.0	75/63	33.6	27.1	42.4	2.6	12.8		60	38.7	31.3	2.4	4.68	
			80/67	36.0	28.0	45.0	2.6	13.6		70	37.8	29.7	2.6	4.21	
			85/71	38.5	29.1	47.6	2.7	14.5		80	37.1	28.0	2.9	3.78	
	9	3.5	75/63	33.8	26.7	42.5	2.6	12.9		60	39.9	32.8	2.5	4.77	
			80/67	36.5	28.2	45.2	2.6	14.1		70	39.1	31.0	2.7	4.3	
			85/71	39.1	29.1	48.0	2.6	15.0		80	38.3	29.1	2.9	3.87	
90	4	0.8	75/63	30.7	25.8	40.8	3.0	10.2	70	0.9	60	40.2	32.7	2.5	4.8
			80/67	32.8	26.9	43.1	3.1	10.7			70	39.5	31.2	2.7	4.33
			85/71	35.1	27.7	45.5	3.1	11.3			80	38.8	29.7	2.9	3.91
	6.5	1.9	75/63	31.7	26.3	41.3	2.9	11.0		60	43.4	35.7	2.5	5.04	
			80/67	34.0	27.4	43.7	2.9	11.7		70	42.4	34.0	2.7	4.54	
			85/71	36.4	28.4	46.3	2.9	12.5		80	41.4	32.3	3.0	4.08	
	9	3.5	75/63	32.1	26.8	41.5	2.8	11.4		60	44.9	37.4	2.6	5.14	
			80/67	34.3	26.9	44.0	2.9	11.9		70	43.9	35.4	2.8	4.64	
			85/71	36.8	27.7	46.5	2.9	12.7		80	42.8	33.6	3.0	4.17	
100	4	0.8	75/63	28.9	25.2	39.9	3.3	8.8	80	0.9	60	44.6	36.8	2.5	5.13
			80/67	31.0	26.2	42.2	3.3	9.3			70	43.8	35.2	2.8	4.63
			85/71	33.1	27.2	44.5	3.4	9.8			80	42.9	33.6	3.0	4.18
	6.5	1.9	75/63	29.8	25.6	40.3	3.2	9.4		60	48.3	40.2	2.6	5.38	
			80/67	32.0	26.7	42.7	3.2	10.0		70	47.2	38.4	2.9	4.84	
			85/71	34.3	27.3	45.1	3.2	10.7		80	46.1	36.5	3.1	4.36	
	9	3.4	75/63	30.0	25.5	40.5	3.1	9.6		60	50.1	42.2	2.7	5.48	
			80/67	32.4	26.9	42.9	3.1	10.4		70	49.0	40.1	2.9	4.94	
			85/71	34.7	28.0	45.4	3.1	11.1		80	47.7	38.0	3.1	4.45	
110	4	0.8	75/63	27.1	24.4	39.1	3.6	7.5	Extended Range - Anti-freeze required	0.9	60	44.6	36.8	2.5	5.13
			80/67	29.0	25.5	41.2	3.7	7.9			70	43.8	35.2	2.8	4.63
			85/71	31.1	26.5	43.5	3.7	8.4			80	42.9	33.6	3.0	4.18
	6.5	1.8	75/63	27.8	24.9	39.4	3.5	8.0		60	48.3	40.2	2.6	5.38	
			80/67	29.9	25.6	41.7	3.5	8.5		70	47.2	38.4	2.9	4.84	
			85/71	32.1	26.9	44.0	3.5	9.1		80	46.1	36.5	3.1	4.36	
	9	3.3	75/63	28.2	24.8	39.6	3.4	8.2		60	50.1	42.2	2.7	5.48	
			80/67	30.3	25.8	41.8	3.5	8.7		70	49.0	40.1	2.9	4.94	
			85/71	32.6	26.6	44.2	3.5	9.4		80	47.7	38.0	3.1	4.45	

**Extended Range - Anti-freeze required**  
 AHR/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

**DISCLAIMER: The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.**

# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES035 Part Load (800 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	4	0.9	75/63	27.5	20.9	31.5	1.1	24.0	30	0.9	60	60	16.8	13.0	1.3	3.67
			80/67	29.6	21.6	33.7	1.2	25.1				70	16.5	12.0	1.5	3.16
			85/71	31.6	22.3	35.9	1.2	26.2				80	16.2	11.1	1.7	2.74
	6.5	2.1	75/63	28.2	21.2	32.0	1.1	26.5				60	17.6	13.8	1.4	3.77
			80/67	30.4	22.0	34.2	1.1	27.9				70	17.1	12.8	1.6	3.24
			85/71	32.6	22.6	36.5	1.1	29.3				80	16.8	11.7	1.8	2.81
	9	3.8	75/63	28.5	21.3	32.2	1.0	27.6				60	18.0	14.2	1.4	3.84
			80/67	30.7	22.1	34.5	1.1	29.2				70	17.5	13.2	1.6	3.29
			85/71	33.0	22.8	36.8	1.1	30.7				80	17.2	12.2	1.8	2.85
60	4	0.9	75/63	26.2	20.3	30.6	1.3	20.1	40	0.9	60	60	19.8	15.8	1.4	4.07
			80/67	28.2	21.1	32.7	1.3	21.2				70	19.4	14.7	1.6	3.53
			85/71	30.2	21.7	34.9	1.4	22.2				80	19.0	13.8	1.8	3.04
	6.5	2.1	75/63	26.9	20.6	31.1	1.2	22.0				60	20.9	16.7	1.5	4.22
			80/67	29.0	21.4	33.3	1.2	23.3				70	20.4	15.6	1.6	3.63
			85/71	31.1	22.1	35.5	1.3	24.6				80	19.9	14.5	1.9	3.14
	9	3.7	75/63	27.2	20.7	31.3	1.2	22.8				60	21.5	17.3	1.5	4.28
			80/67	29.3	21.5	33.5	1.2	24.3				70	20.9	16.1	1.7	3.69
			85/71	31.5	22.2	35.7	1.2	25.7				80	20.4	15.0	1.9	3.19
70	4	0.9	75/63	24.9	19.7	29.8	1.5	16.9	50	0.9	60	60	23.1	18.7	1.5	4.47
			80/67	26.7	20.5	31.8	1.5	17.9				70	22.7	17.6	1.7	3.88
			85/71	28.7	21.1	33.9	1.5	18.8				80	22.3	16.5	1.9	3.38
	6.5	2.0	75/63	25.5	20.0	30.2	1.4	18.4				60	24.4	20.1	1.5	4.61
			80/67	27.5	20.8	32.3	1.4	19.5				70	23.8	18.9	1.7	3.99
			85/71	29.5	21.4	34.4	1.4	20.7				80	23.5	17.5	2.0	3.48
	9	3.6	75/63	25.7	20.1	30.4	1.4	19.0				60	25.1	20.7	1.6	4.7
			80/67	27.8	20.9	32.5	1.4	20.3				70	24.5	19.5	1.8	4.05
			85/71	29.9	21.5	34.7	1.4	21.6				80	24.0	18.0	2.0	3.54
80	4	0.9	75/63	23.5	19.2	29.1	1.7	14.2	60	0.9	60	60	26.5	21.8	1.6	4.83
			80/67	25.3	20.0	31.0	1.7	15.0				70	25.9	20.6	1.8	4.2
			85/71	27.1	20.6	32.9	1.7	15.8				80	25.5	19.4	2.0	3.66
	6.5	2.0	75/63	24.1	19.4	29.4	1.6	15.3				60	28.2	23.4	1.7	4.99
			80/67	26.0	20.2	31.4	1.6	16.3				70	27.5	22.1	1.9	4.33
			85/71	28.0	20.8	33.4	1.6	17.4				80	27.0	20.7	2.1	3.78
	9	3.5	75/63	24.3	19.5	29.5	1.5	15.8				60	29.0	24.2	1.7	5.07
			80/67	26.3	20.3	31.5	1.6	16.9				70	28.3	22.8	1.9	4.4
			85/71	28.3	20.9	33.6	1.6	18.0				80	27.6	21.5	2.1	3.81
90	4	0.8	75/63	22.1	18.7	28.3	1.9	11.8	70	0.9	60	60	30.1	25.1	1.7	5.16
			80/67	23.9	19.5	30.2	1.9	12.6				70	29.4	23.8	1.9	4.49
			85/71	25.7	20.0	32.1	1.9	13.4				80	28.9	22.4	2.2	3.91
	6.5	1.9	75/63	22.7	18.9	28.6	1.8	12.7				60	32.2	27.0	1.8	5.37
			80/67	24.5	19.7	30.5	1.8	13.6				70	31.4	25.5	2.0	4.66
			85/71	26.4	20.3	32.5	1.8	14.6				80	30.6	24.0	2.2	4.03
	9	3.5	75/63	22.7	18.5	28.7	1.8	12.6				60	33.2	28.0	1.8	5.46
			80/67	24.7	19.8	30.7	1.8	14.0				70	32.3	26.4	2.0	4.74
			85/71	26.7	20.6	32.7	1.8	15.1				80	31.5	24.8	2.2	4.1
100	4	0.8	75/63	20.8	18.1	27.7	2.1	9.8	80	0.9	60	60	33.8	28.6	1.8	5.51
			80/67	22.5	18.8	29.5	2.1	10.5				70	33.2	27.2	2.0	4.82
			85/71	24.2	19.6	31.4	2.2	11.2				80	32.5	25.7	2.3	4.19
	6.5	1.9	75/63	21.2	18.4	27.9	2.0	10.5				60	36.2	30.8	1.9	5.7
			80/67	23.0	19.0	29.8	2.0	11.3				70	35.3	29.3	2.1	4.99
			85/71	24.9	19.7	31.7	2.1	12.1				80	34.6	27.6	2.3	4.36
	9	3.4	75/63	21.3	18.1	28.0	2.0	10.4				60	37.5	31.9	1.9	5.8
			80/67	23.1	18.7	29.8	2.1	11.3				70	36.5	30.3	2.1	5.08
			85/71	24.9	19.3	31.7	2.1	12.1				80	35.5	28.5	2.4	4.42
110	4	0.8	75/63	19.3	17.5	27.2	2.4	8.0	Extended Range - Anti-freeze required	0.9	60	60	33.8	28.6	1.8	5.51
			80/67	21.0	18.4	28.9	2.4	8.7				70	33.2	27.2	2.0	4.82
			85/71	22.6	19.1	30.7	2.4	9.3				80	32.5	25.7	2.3	4.19
	6.5	1.8	75/63	19.8	17.7	27.4	2.3	8.5				60	36.2	30.8	1.9	5.7
			80/67	21.5	18.4	29.1	2.3	9.2				70	35.3	29.3	2.1	4.99
			85/71	23.2	19.3	31.0	2.3	10.0				80	34.6	27.6	2.3	4.36
	9	3.3	75/63	19.8	17.7	27.4	2.3	8.6				60	37.5	31.9	1.9	5.8
			80/67	21.7	18.8	29.2	2.3	9.5				70	36.5	30.3	2.1	5.08
			85/71	23.4	19.8	31.0	2.3	10.3				80	35.5	28.5	2.4	4.42

Extended Range - Anti-freeze required  
 AHR/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

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# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES049 Full Load (1650 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	6	1.0	75/63	49.4	39.4	59.3	2.9	17.0	30	1.1	60	34.4	25.2	2.7	3.67	
			80/67	52.6	40.7	62.7	3.0	17.8				70	34.3	24.8	3.0	3.34
			85/71	55.9	41.8	66.2	3.0	18.6				80	34.1	23.5	3.3	3.04
	9	2.1	75/63	51.3	40.1	60.6	2.7	18.8		2.2	60	36.2	27.0	2.8	3.79	
			80/67	54.6	41.4	64.1	2.8	19.8			70	36.3	26.5	3.1	3.47	
			85/71	58.2	42.6	67.8	2.8	20.8			80	36.0	25.3	3.3	3.16	
	12	3.4	75/63	52.2	40.6	61.3	2.6	19.8		3.6	60	38.0	28.9	2.8	3.92	
			80/67	55.7	41.8	64.9	2.7	20.9			70	37.5	27.6	3.1	3.55	
			85/71	59.4	43.0	68.7	2.7	22.0			80	37.0	26.2	3.4	3.22	
60	6	1.0	75/63	47.2	38.5	57.9	3.1	15.1	40	1.0	60	38.4	29.8	2.9	3.94	
			80/67	50.3	39.7	61.1	3.2	15.9				70	38.0	28.5	3.1	3.58
			85/71	53.4	40.9	64.4	3.2	16.6				80	37.7	26.9	3.4	3.27
	9	2.0	75/63	49.0	39.2	59.1	2.9	16.6		2.1	60	40.4	31.8	2.9	4.08	
			80/67	52.3	40.5	62.5	3.0	17.6			70	40.3	30.3	3.2	3.74	
			85/71	55.7	41.7	66.0	3.0	18.5			80	40.2	28.5	3.4	3.43	
	12	3.4	75/63	50.0	39.6	59.7	2.9	17.5		3.5	60	43.1	32.9	3.0	4.27	
			80/67	53.3	40.9	63.2	2.9	18.5			70	42.1	31.3	3.2	3.85	
			85/71	56.9	42.1	66.9	2.9	19.6			80	41.6	30.4	3.5	3.51	
70	6	1.0	75/63	45.0	37.6	56.4	3.4	13.4	50	1.0	60	39.6	32.9	2.9	4.03	
			80/67	47.9	38.9	59.5	3.4	14.0				70	42.0	32.1	3.2	3.84
			85/71	51.0	40.0	62.8	3.5	14.7				80	41.5	30.4	3.5	3.5
	9	2.0	75/63	46.8	38.3	57.5	3.2	14.7		2.1	60	45.3	36.5	3.0	4.39	
			80/67	49.9	39.5	60.9	3.2	15.5			70	45.6	35.4	3.3	4.07	
			85/71	53.3	40.4	64.3	3.2	16.4			80	43.6	32.5	3.5	3.62	
	12	3.3	75/63	47.7	38.6	58.1	3.1	15.5		3.4	60	43.6	36.8	3.0	4.31	
			80/67	51.0	39.9	61.6	3.1	16.4			70	42.4	35.1	3.2	3.89	
			85/71	54.4	40.9	65.1	3.1	17.3			80	45.1	34.4	3.6	3.7	
80	6	1.0	75/63	42.7	36.7	55.0	3.6	11.7	60	1.0	60	48.2	38.6	3.1	4.59	
			80/67	45.6	37.8	58.1	3.7	12.4				70	47.3	36.3	3.3	4.17
			85/71	48.4	39.2	61.1	3.7	13.0				80	46.7	35.0	3.6	3.8
	9	2.0	75/63	44.4	37.3	56.0	3.4	12.9		2.0	60	47.7	40.7	3.1	4.58	
			80/67	47.5	38.5	59.2	3.5	13.7			70	50.6	39.3	3.4	4.38	
			85/71	50.5	39.9	62.4	3.5	14.4			80	49.1	38.3	3.7	3.92	
	12	3.3	75/63	45.3	37.6	56.6	3.3	13.6		3.4	60	49.5	42.5	3.1	4.7	
			80/67	48.5	38.8	59.9	3.4	14.4			70	48.2	40.6	3.3	4.24	
			85/71	51.7	40.2	63.2	3.4	15.2			80	50.5	41.2	3.7	3.99	
90	6	1.0	75/63	40.4	35.7	53.7	4.0	10.2	70	1.0	60	53.6	43.9	3.2	4.92	
			80/67	43.2	36.8	56.7	4.0	10.8				70	52.8	42.0	3.4	4.49
			85/71	45.8	38.4	59.6	4.1	11.3				80	51.7	40.0	3.7	4.07
	9	1.9	75/63	42.0	36.3	54.6	3.7	11.2		2.0	60	57.5	47.7	3.3	5.15	
			80/67	44.9	37.6	57.7	3.8	11.9			70	56.3	45.6	3.5	4.68	
			85/71	47.8	39.0	60.8	3.8	12.6			80	55.2	43.2	3.8	4.25	
	12	3.2	75/63	42.9	36.4	55.2	3.6	11.8		3.3	60	60.0	49.4	3.3	5.31	
			80/67	45.9	38.0	58.2	3.7	12.6			70	54.3	46.4	3.5	4.59	
			85/71	49.0	39.2	61.5	3.7	13.3			80	57.1	44.9	3.9	4.34	
100	6	0.9	75/63	38.0	34.8	52.6	4.3	8.8	80	1.0	60	59.3	49.3	3.3	5.26	
			80/67	40.6	36.2	55.4	4.4	9.2				70	58.6	47.1	3.6	4.82
			85/71	43.2	37.5	58.2	4.4	9.7				80	57.3	45.2	3.9	4.35
	9	1.9	75/63	39.6	35.4	53.3	4.1	9.7		2.0	60	64.2	53.3	3.4	5.55	
			80/67	42.4	36.7	56.3	4.1	10.3			70	62.5	51.5	3.7	5.01	
			85/71	45.2	37.9	59.3	4.2	10.9			80	61.5	48.5	3.9	4.56	
	12	3.1	75/63	40.5	35.4	53.8	4.0	10.2		3.3	60	66.6	56.3	3.4	5.66	
			80/67	43.3	36.9	56.8	4.0	10.8			70	65.0	53.7	3.7	5.14	
			85/71	46.2	38.4	59.8	4.0	11.5			80	63.6	49.7	4.0	4.68	
110	6	0.9	75/63	35.9	33.8	51.8	4.7	7.6	Extended Range - Anti-freeze required	1.0	60	59.3	49.3	3.3	5.26	
			80/67	38.4	35.0	54.5	4.8	8.0				70	58.6	47.1	3.6	4.82
			85/71	40.9	36.4	57.2	4.8	8.4				80	57.3	45.2	3.9	4.35
	9	1.8	75/63	37.2	34.4	52.2	4.5	8.3		2.0	60	64.2	53.3	3.4	5.55	
			80/67	39.7	35.9	55.0	4.5	8.8			70	62.5	51.5	3.7	5.01	
			85/71	42.4	37.2	57.9	4.6	9.3			80	61.5	48.5	3.9	4.56	
	12	3.0	75/63	37.9	34.6	52.5	4.4	8.7		3.3	60	66.6	56.3	3.4	5.66	
			80/67	40.5	36.1	55.4	4.4	9.2			70	65.0	53.7	3.7	5.14	
			85/71	43.3	37.5	58.3	4.4	9.8			80	63.6	49.7	4.0	4.68	

Extended Range - Anti-freeze required  
 AHR/ISO 13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

**DISCLAIMER: The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.**

# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES049 Part Load (1300 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	6	1.0	75/63	37.5	30.6	43.3	1.7	22.1	30	1.1	60	26.1	20.1	2.0	3.84	
			80/67	39.9	31.6	45.7	1.7	23.7				70	25.3	18.6	2.2	3.37
			85/71	42.4	32.6	48.2	1.7	25.7				80	24.6	17.1	2.4	2.96
	9	2.1	75/63	38.7	31.1	44.1	1.6	24.3		60	2.2	60	27.1	21.0	2.0	3.97
			80/67	41.2	32.1	46.6	1.6	26.3				70	26.2	19.5	2.2	3.47
			85/71	43.9	33.0	49.2	1.5	28.7				80	25.6	17.8	2.4	3.06
	12	3.4	75/63	39.3	31.4	44.6	1.5	25.6		60	3.6	60	27.9	21.5	2.0	4.08
			80/67	41.9	32.4	47.1	1.5	27.8				70	26.7	20.0	2.2	3.53
			85/71	44.7	33.2	49.8	1.5	30.4				80	26.0	18.3	2.5	3.11
60	6	1.0	75/63	35.7	29.8	42.1	1.9	18.9	40	1.0	60	29.3	23.2	2.0	4.25	
			80/67	38.0	30.8	44.4	1.9	20.3				70	28.5	21.7	2.2	3.73
			85/71	40.4	31.9	46.7	1.8	21.9				80	27.8	20.2	2.5	3.28
	9	2.0	75/63	36.8	30.3	42.8	1.8	20.7		60	2.1	60	30.6	24.4	2.0	4.41
			80/67	39.2	31.3	45.2	1.7	22.4				70	29.7	22.8	2.3	3.87
			85/71	41.8	32.4	47.7	1.7	24.4				80	28.9	21.3	2.5	3.39
	12	3.4	75/63	37.4	30.5	43.2	1.7	21.8		60	3.5	60	31.3	25.2	2.0	4.5
			80/67	39.9	31.5	45.7	1.7	23.7				70	30.4	23.5	2.3	3.94
			85/71	42.5	32.6	48.2	1.6	25.8				80	29.5	21.8	2.5	3.45
70	6	1.0	75/63	33.8	29.1	40.9	2.1	16.1	50	1.0	60	32.9	26.7	2.1	4.7	
			80/67	36.0	30.0	43.1	2.1	17.3				70	32.1	25.1	2.3	4.14
			85/71	38.3	31.2	45.3	2.1	18.6				80	31.4	23.5	2.5	3.64
	9	2.0	75/63	34.9	29.5	41.5	2.0	17.6		60	2.1	60	34.5	28.2	2.1	4.89
			80/67	37.2	30.4	43.8	2.0	19.0				70	33.5	26.6	2.3	4.29
			85/71	39.7	31.4	46.2	1.9	20.7				80	32.8	24.8	2.5	3.77
	12	3.3	75/63	35.4	29.8	41.9	1.9	18.5		60	3.4	60	35.4	29.1	2.1	5.01
			80/67	37.8	30.8	44.3	1.9	20.0				70	34.4	27.4	2.3	4.39
			85/71	40.4	31.9	46.7	1.8	21.8				80	33.5	25.6	2.5	3.85
80	6	1.0	75/63	31.9	28.4	39.8	2.3	13.6	60	1.0	60	36.7	30.4	2.1	5.17	
			80/67	34.1	29.2	41.9	2.3	14.6				70	35.8	28.8	2.3	4.57
			85/71	36.3	30.2	44.1	2.3	15.8				80	35.2	27.2	2.6	4.04
	9	2.0	75/63	32.9	28.8	40.3	2.2	14.9		60	2.0	60	38.6	32.3	2.1	5.43
			80/67	35.1	29.8	42.5	2.2	16.0				70	37.6	30.6	2.3	4.78
			85/71	37.6	30.7	44.8	2.2	17.4				80	36.7	28.9	2.6	4.21
	12	3.3	75/63	33.4	29.0	40.7	2.1	15.6		60	3.4	60	39.7	33.4	2.1	5.58
			80/67	35.7	30.0	42.9	2.1	16.9				70	38.7	31.6	2.3	4.91
			85/71	38.2	30.9	45.3	2.1	18.4				80	37.7	29.8	2.6	4.31
90	6	1.0	75/63	30.0	27.5	38.7	2.6	11.4	70	1.0	60	40.7	34.5	2.1	5.72	
			80/67	32.0	28.7	40.8	2.6	12.3				70	39.8	32.8	2.3	5.05
			85/71	34.2	29.7	42.9	2.6	13.3				80	39.0	31.1	2.6	4.46
	9	1.9	75/63	30.9	28.0	39.2	2.5	12.5		60	2.0	60	43.0	36.7	2.1	6.05
			80/67	33.1	28.9	41.3	2.5	13.5				70	41.9	34.9	2.3	5.32
			85/71	35.4	29.9	43.5	2.4	14.6				80	40.9	33.0	2.6	4.68
	12	3.2	75/63	31.5	28.1	39.5	2.4	13.1		60	3.3	60	44.3	38.0	2.1	6.25
			80/67	33.6	29.3	41.6	2.4	14.1				70	43.1	36.1	2.3	5.48
			85/71	36.0	30.1	43.9	2.3	15.4				80	42.0	34.1	2.6	4.81
100	6	0.9	75/63	28.2	26.7	37.8	2.9	9.7	80	1.0	60	44.9	38.7	2.1	6.34	
			80/67	30.2	27.9	39.8	2.9	10.4				70	43.9	36.9	2.3	5.59
			85/71	32.2	29.0	41.8	2.9	11.2				80	42.9	35.1	2.6	4.92
	9	1.9	75/63	29.0	27.2	38.2	2.8	10.4		60	2.0	60	47.5	41.3	2.1	6.76
			80/67	31.1	28.2	40.3	2.7	11.3				70	46.3	39.3	2.3	5.93
			85/71	33.3	29.3	42.4	2.7	12.3				80	45.1	37.3	2.5	5.2
	12	3.1	75/63	29.4	27.3	38.4	2.7	10.9		60	3.3	60	49.0	42.9	2.0	7.01
			80/67	31.6	28.4	40.5	2.7	11.8				70	47.7	40.8	2.3	6.13
			85/71	33.8	29.6	42.7	2.6	12.8				80	46.4	38.7	2.5	5.36
110	6	0.9	75/63	26.2	26.0	37.0	3.3	8.1	Extended Range - Anti-freeze required	1.0	60	44.9	38.7	2.1	6.34	
			80/67	28.2	27.2	38.9	3.2	8.7				70	43.9	36.9	2.3	5.59
			85/71	30.2	28.1	40.9	3.2	9.4				80	42.9	35.1	2.6	4.92
	9	1.8	75/63	27.1	26.3	37.4	3.1	8.7		60	2.0	60	47.5	41.3	2.1	6.76
			80/67	29.1	27.4	39.3	3.1	9.5				70	46.3	39.3	2.3	5.93
			85/71	31.2	28.7	41.3	3.0	10.3				80	45.1	37.3	2.5	5.2
	12	3.0	75/63	27.5	26.5	37.5	3.0	9.1		60	3.3	60	49.0	42.9	2.0	7.01
			80/67	29.6	27.8	39.5	3.0	9.9				70	47.7	40.8	2.3	6.13
			85/71	31.7	28.9	41.6	3.0	10.7				80	46.4	38.7	2.5	5.36

Extended Range - Anti-freeze required  
 AHR/ISO 13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

**DISCLAIMER: The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.**

# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES061 Full Load (1750 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	7.5	1.8	75/63	64.0	47.4	75.7	3.3	19.2	30	1.9	60	60	44.4	32.9	3.6	3.61
			80/67	68.3	48.2	80.2	3.4	20.1				70	43.8	31.3	4.0	3.25
			85/71	72.5	49.6	84.7	3.5	20.9				80	43.2	29.4	4.3	2.94
	11	3.5	75/63	66.2	47.9	77.1	3.1	21.3		3.7	60	60	46.6	35.0	3.7	3.72
			80/67	70.6	49.2	81.7	3.2	22.4				70	45.6	32.6	4.0	3.34
			85/71	75.2	50.3	86.5	3.2	23.4				80	45.0	30.9	4.4	3.02
	15	6.1	75/63	67.3	48.8	77.7	3.0	22.7		6.5	60	60	47.8	36.2	3.7	3.79
			80/67	72.0	49.8	82.5	3.0	23.9				70	46.7	33.4	4.0	3.39
			85/71	76.7	51.1	87.4	3.1	25.1				80	46.0	31.9	4.4	3.06
60	7.5	1.8	75/63	61.3	46.2	74.1	3.7	16.8	40	1.8	60	60	50.3	38.4	3.8	3.92
			80/67	65.3	47.4	78.4	3.7	17.6				70	49.4	36.3	4.1	3.52
			85/71	69.5	48.5	82.7	3.8	18.3				80	48.7	34.4	4.5	3.18
	11	3.5	75/63	63.3	47.1	75.3	3.4	18.5		3.6	60	60	53.0	40.8	3.8	4.05
			80/67	67.7	48.0	79.8	3.5	19.5				70	51.9	38.6	4.2	3.64
			85/71	72.0	49.4	84.4	3.5	20.5				80	51.0	36.2	4.6	3.28
	15	6.0	75/63	64.5	47.6	76.0	3.3	19.7		6.3	60	60	54.6	42.3	3.9	4.13
			80/67	69.0	48.8	80.6	3.3	20.8				70	53.5	40.0	4.2	3.71
			85/71	73.5	50.0	85.4	3.4	21.8				80	52.4	37.6	4.6	3.34
70	7.5	1.7	75/63	58.5	45.0	72.5	4.0	14.6	50	1.8	60	60	56.4	44.0	3.9	4.22
			80/67	62.4	46.1	76.6	4.1	15.4				70	55.7	42.1	4.3	3.81
			85/71	66.5	47.1	80.9	4.1	16.1				80	54.9	39.9	4.7	3.44
	11	3.4	75/63	60.5	45.8	73.6	3.8	16.1		3.5	60	60	59.8	47.2	4.0	4.38
			80/67	64.6	46.9	77.9	3.8	17.0				70	58.6	44.6	4.4	3.94
			85/71	69.0	48.0	82.4	3.9	17.9				80	57.6	42.4	4.8	3.55
	15	5.9	75/63	61.7	46.0	74.3	3.6	17.0		6.1	60	60	62.0	49.0	4.1	4.48
			80/67	65.9	47.5	78.7	3.7	18.0				70	60.5	46.3	4.4	4.01
			85/71	70.4	48.5	83.3	3.7	19.0				80	59.4	43.9	4.8	3.62
80	7.5	1.7	75/63	55.6	43.8	70.9	4.4	12.7	60	1.8	60	60	63.4	50.4	4.1	4.53
			80/67	59.5	44.7	74.9	4.4	13.4				70	62.2	48.0	4.5	4.08
			85/71	63.3	46.2	79.0	4.5	14.0				80	61.4	45.8	4.9	3.69
	11	3.3	75/63	57.7	44.2	72.0	4.1	14.0		3.5	60	60	67.3	54.0	4.2	4.7
			80/67	61.6	45.6	76.1	4.2	14.8				70	65.8	51.2	4.6	4.22
			85/71	65.7	46.9	80.4	4.2	15.6				80	64.7	48.8	5.0	3.82
	15	5.8	75/63	58.8	44.6	72.6	4.0	14.7		6.0	60	60	70.0	56.2	4.3	4.8
			80/67	62.7	46.3	76.8	4.0	15.6				70	68.4	53.4	4.6	4.32
			85/71	67.1	47.4	81.3	4.1	16.5				80	66.6	50.5	5.0	3.88
90	7.5	1.7	75/63	52.7	42.6	69.3	4.8	11.1	70	1.7	60	60	70.5	57.0	4.3	4.82
			80/67	56.4	43.7	73.2	4.8	11.7				70	69.4	54.5	4.7	4.35
			85/71	60.0	45.1	77.2	4.9	12.2				80	68.2	51.9	5.1	3.94
	11	3.3	75/63	54.7	42.9	70.4	4.5	12.1		3.4	60	60	75.2	61.2	4.4	5
			80/67	58.5	44.3	74.3	4.6	12.8				70	73.7	58.4	4.8	4.5
			85/71	62.3	45.9	78.4	4.6	13.5				80	72.0	55.5	5.2	4.06
	15	5.6	75/63	55.7	43.2	70.9	4.4	12.7		5.9	60	60	78.4	63.8	4.5	5.11
			80/67	59.6	44.8	75.0	4.4	13.5				70	76.6	60.7	4.9	4.6
			85/71	63.6	46.4	79.2	4.5	14.3				80	74.8	57.7	5.3	4.15
100	7.5	1.6	75/63	49.9	41.1	68.0	5.2	9.6	80	1.7	60	60	78.0	63.9	4.5	5.09
			80/67	53.3	42.6	71.7	5.3	10.1				70	76.7	61.2	4.9	4.6
			85/71	57.0	43.9	75.7	5.4	10.6				80	75.4	58.5	5.3	4.16
	11	3.2	75/63	51.6	41.7	68.8	5.0	10.4		3.3	60	60	83.5	68.7	4.6	5.27
			80/67	55.3	43.0	72.7	5.0	11.0				70	81.7	65.6	5.0	4.75
			85/71	58.9	44.7	76.6	5.1	11.6				80	80.0	62.6	5.5	4.29
	15	5.5	75/63	52.5	42.0	69.2	4.8	10.9		5.8	60	60	87.1	71.7	4.7	5.38
			80/67	56.3	43.5	73.2	4.9	11.6				70	85.1	68.4	5.1	4.85
			85/71	60.1	45.2	77.2	4.9	12.3				80	83.0	65.3	5.6	4.37
110	7.5	1.6	75/63	46.8	40.0	66.7	5.7	8.2	Extended Range - Anti-freeze required	1.6	60	60	86.0	74.0	4.8	5.65
			80/67	50.1	41.6	70.3	5.8	8.7				70	84.0	71.0	5.1	5.15
			85/71	53.8	42.5	74.1	5.9	9.2				80	82.0	68.0	5.4	4.65
	11	3.1	75/63	48.3	40.6	67.3	5.5	8.9		3.1	60	60	90.0	79.0	4.9	5.95
			80/67	52.0	42.0	71.2	5.5	9.4				70	88.0	76.0	5.2	5.45
			85/71	55.6	43.6	75.0	5.6	10.0				80	86.0	73.0	5.5	4.95
	15	5.4	75/63	49.2	40.9	67.7	5.3	9.3		5.4	60	60	94.0	82.0	5.0	6.25
			80/67	53.0	42.4	71.7	5.4	9.9				70	92.0	79.0	5.3	5.75
			85/71	56.8	43.8	75.6	5.4	10.5				80	90.0	76.0	5.6	5.25

Extended Range - Anti-freeze required  
 AHR/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

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# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES061 Part Load (1320 CFM)																
Cooling									Heating							
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	7.5	1.8	75/63	49.0	36.1	55.1	1.7	28.3	30	1.9	3.7	60	34.1	26.1	2.7	3.71
			80/67	52.4	37.1	58.5	1.7	30.2				70	34.0	24.3	3.1	3.26
			85/71	55.8	38.0	61.9	1.7	32.1				80	33.7	22.9	3.5	2.86
	11	3.5	75/63	50.2	36.6	55.8	1.6	31.5				60	35.4	27.1	2.7	3.84
			80/67	53.7	37.7	59.3	1.6	33.7				70	35.1	25.3	3.1	3.34
			85/71	57.3	38.6	63.0	1.6	36.0				80	34.8	23.8	3.5	2.93
	15	6.1	75/63	50.9	36.9	56.3	1.5	33.5				60	36.2	27.9	2.7	3.91
			80/67	54.5	38.0	59.9	1.5	36.1				70	35.6	26.5	3.1	3.39
			85/71	58.2	38.9	63.6	1.5	38.6				80	35.4	24.4	3.5	2.98
60	7.5	1.8	75/63	46.9	35.3	53.7	2.0	23.8	40	1.8	3.6	60	38.6	30.3	2.7	4.13
			80/67	50.2	36.2	57.0	2.0	25.5				70	38.3	28.6	3.1	3.62
			85/71	53.5	37.0	60.3	2.0	27.2				80	38.0	27.0	3.5	3.19
	11	3.5	75/63	48.1	35.8	54.5	1.8	26.2				60	40.3	31.7	2.8	4.28
			80/67	51.5	36.7	57.9	1.8	28.1				70	39.7	30.1	3.1	3.74
			85/71	55.0	37.6	61.3	1.8	30.1				80	39.3	28.3	3.5	3.3
	15	6.0	75/63	48.7	36.1	54.9	1.8	27.7				60	41.3	32.7	2.8	4.38
			80/67	52.2	37.0	58.4	1.7	29.9				70	40.6	31.0	3.1	3.83
			85/71	55.8	37.9	61.9	1.7	32.1				80	40.3	28.9	3.5	3.37
70	7.5	1.7	75/63	44.8	34.1	52.4	2.2	20.1	50	1.8	3.5	60	43.6	35.0	2.8	4.59
			80/67	47.8	35.4	55.5	2.2	21.6				70	43.0	33.2	3.1	4.02
			85/71	51.1	36.2	58.7	2.2	23.1				80	42.4	31.6	3.5	3.53
	11	3.4	75/63	45.9	34.6	53.1	2.1	22.0				60	45.6	36.9	2.8	4.77
			80/67	49.1	35.9	56.3	2.1	23.7				70	44.8	34.9	3.1	4.18
			85/71	52.5	36.7	59.7	2.1	25.4				80	44.2	33.1	3.5	3.67
	15	5.9	75/63	46.6	35.0	53.5	2.0	23.1				60	46.9	38.1	2.8	4.88
			80/67	49.9	36.2	56.8	2.0	25.0				70	46.0	36.0	3.2	4.27
			85/71	53.3	37.2	60.2	2.0	26.9				80	45.2	34.1	3.5	3.74
80	7.5	1.7	75/63	42.5	33.4	51.1	2.5	17.0	60	1.8	3.5	60	48.8	40.2	2.8	5.06
			80/67	45.6	34.3	54.1	2.5	18.3				70	48.1	38.3	3.2	4.43
			85/71	48.5	35.5	57.1	2.5	19.6				80	47.5	36.3	3.6	3.91
	11	3.3	75/63	43.6	33.8	51.7	2.4	18.4				60	51.3	42.4	2.9	5.27
			80/67	46.8	34.8	54.9	2.3	20.0				70	50.3	40.4	3.2	4.62
			85/71	49.9	36.0	58.0	2.3	21.5				80	49.5	38.3	3.6	4.05
	15	5.8	75/63	44.3	34.1	52.1	2.3	19.4				60	52.8	44.0	2.9	5.4
			80/67	47.5	35.1	55.3	2.3	21.0				70	51.8	41.7	3.2	4.73
			85/71	50.8	36.3	58.5	2.2	22.7				80	50.7	39.6	3.6	4.13
90	7.5	1.7	75/63	40.4	32.3	50.0	2.8	14.3	70	1.7	3.4	60	54.4	45.6	2.9	5.53
			80/67	43.2	33.4	52.8	2.8	15.4				70	53.4	43.5	3.2	4.86
			85/71	46.1	34.4	55.7	2.8	16.5				80	52.7	41.4	3.6	4.28
	11	3.3	75/63	41.4	32.8	50.5	2.7	15.5				60	57.2	48.5	2.9	5.76
			80/67	44.3	34.0	53.4	2.6	16.7				70	56.1	46.0	3.2	5.06
			85/71	47.4	35.1	56.4	2.6	18.1				80	55.1	43.7	3.6	4.44
	15	5.6	75/63	42.0	33.0	50.8	2.6	16.2				60	59.1	50.2	2.9	5.91
			80/67	45.0	34.3	53.8	2.6	17.6				70	57.8	47.6	3.3	5.19
			85/71	48.2	35.1	56.9	2.5	19.1				80	56.5	45.2	3.6	4.54
100	7.5	1.6	75/63	38.1	31.4	48.9	3.2	11.9	80	1.7	3.3	60	60.2	51.2	2.9	6
			80/67	40.8	32.7	51.5	3.2	12.9				70	59.0	49.0	3.3	5.27
			85/71	43.6	33.5	54.3	3.1	13.9				80	58.0	46.7	3.7	4.65
	11	3.2	75/63	39.0	31.9	49.3	3.0	12.9				60	63.5	54.6	3.0	6.25
			80/67	41.9	33.1	52.1	3.0	14.0				70	62.1	52.0	3.3	5.49
			85/71	44.8	34.2	54.9	3.0	15.1				80	60.8	49.4	3.7	4.84
	15	5.5	75/63	39.6	32.1	49.6	2.9	13.5				60	65.6	56.6	3.0	6.42
			80/67	42.5	33.3	52.4	2.9	14.7				70	64.1	53.9	3.3	5.63
			85/71	45.5	34.4	55.3	2.9	15.9				80	62.6	51.1	3.7	4.95
110	7.5	1.6	75/63	35.9	30.6	48.0	3.6	10.0	Extended Range - Anti-freeze required	5.8	3.2	60	68.0	60.0	3.0	7.0
			80/67	38.5	31.6	50.5	3.6	10.8				70	66.5	58.0	3.3	6.3
			85/71	41.1	32.6	53.1	3.5	11.6				80	65.0	56.0	3.6	5.6
	11	3.1	75/63	36.8	30.8	48.3	3.4	10.7				60	71.0	63.0	3.0	7.5
			80/67	39.4	31.9	50.9	3.4	11.6				70	69.5	61.0	3.3	6.8
			85/71	42.2	33.0	53.6	3.4	12.6				80	68.0	59.0	3.6	6.1
	15	5.4	75/63	37.2	31.0	48.5	3.3	11.1				60	74.0	65.0	3.0	7.9
			80/67	40.0	32.1	51.2	3.3	12.1				70	72.5	63.0	3.3	7.2
			85/71	42.8	33.5	53.9	3.2	13.2				80	71.0	61.0	3.6	6.5

Extended Range - Anti-freeze required  
 AHR/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

**DISCLAIMER: The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.**

# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES071 Full Load (2350 CFM)																	
Cooling									Heating								
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP		
50	9	1.6	75/63	70.5	55.5	85.0	4.2	16.7	30	1.6	60	50.5	36.7	4.2	3.49		
			80/67	75.1	57.3	89.8	4.3	17.5				70	49.8	34.7	4.6	3.16	
			85/71	79.7	59.0	94.7	4.4	18.3				80	49.0	32.8	5.0	2.87	
	13	3.0	75/63	72.5	56.4	86.2	4.0	18.1			60	3.1	60	52.5	38.6	4.3	3.58
			80/67	77.3	58.1	91.2	4.1	19.0					70	51.7	36.2	4.7	3.25
			85/71	82.2	59.8	96.4	4.1	20.0					80	50.7	34.3	5.0	2.95
	18	5.3	75/63	73.7	57.1	87.0	3.9	19.1			60	5.6	60	53.9	39.9	4.3	3.65
			80/67	78.7	58.8	92.1	3.9	20.1					70	52.5	37.2	4.7	3.28
			85/71	83.8	60.4	97.4	4.0	21.2					80	51.9	35.3	5.1	3
60	9	1.5	75/63	67.5	54.5	83.0	4.6	14.8	40	1.6	60	56.8	42.5	4.4	3.79		
			80/67	71.9	55.9	87.7	4.6	15.5				70	55.9	40.5	4.8	3.44	
			85/71	76.4	57.5	92.5	4.7	16.2				80	55.1	38.3	5.1	3.14	
	13	2.9	75/63	69.5	55.1	84.3	4.3	16.0			60	3.1	60	59.4	44.9	4.5	3.91
			80/67	74.1	56.8	89.1	4.4	16.9					70	58.3	42.6	4.8	3.55
			85/71	78.9	58.4	94.1	4.5	17.7					80	57.1	40.2	5.2	3.23
	18	5.2	75/63	70.7	55.7	85.1	4.2	16.8			60	5.5	60	61.2	46.6	4.5	3.99
			80/67	75.5	57.4	90.0	4.2	17.8					70	60.0	44.2	4.8	3.63
			85/71	80.3	59.3	95.1	4.3	18.7					80	58.6	41.4	5.2	3.29
70	9	1.5	75/63	64.5	52.9	81.2	4.9	13.1	50	1.6	60	63.7	49.1	4.5	4.11		
			80/67	68.7	54.7	85.7	5.0	13.7				70	62.5	46.8	4.9	3.74	
			85/71	73.0	56.3	90.3	5.1	14.4				80	61.7	44.5	5.3	3.42	
	13	2.9	75/63	66.3	54.0	82.3	4.7	14.1			60	3.0	60	66.8	51.9	4.6	4.26
			80/67	70.8	55.5	87.0	4.8	14.9					70	65.6	49.5	5.0	3.88
			85/71	75.4	57.2	91.8	4.8	15.7					80	64.4	47.0	5.3	3.53
	18	5.1	75/63	67.5	54.5	83.0	4.6	14.8			60	5.3	60	69.2	54.1	4.6	4.37
			80/67	72.2	56.0	87.9	4.6	15.7					70	67.7	51.4	5.0	3.97
			85/71	76.9	57.8	92.8	4.7	16.5					80	66.4	48.7	5.4	3.61
80	9	1.5	75/63	61.4	51.7	79.4	5.3	11.5	60	1.5	60	71.2	56.1	4.7	4.45		
			80/67	65.4	53.8	83.7	5.4	12.1				70	69.8	53.6	5.1	4.05	
			85/71	69.6	55.2	88.2	5.5	12.7				80	68.9	51.1	5.4	3.71	
	13	2.8	75/63	63.2	52.5	80.5	5.1	12.4			60	2.9	60	75.1	59.7	4.8	4.62
			80/67	67.5	54.2	85.0	5.1	13.1					70	73.6	56.9	5.1	4.21
			85/71	71.8	56.0	89.6	5.2	13.8					80	72.2	54.1	5.5	3.83
	18	5.0	75/63	64.2	53.2	81.1	5.0	13.0			60	5.2	60	78.0	62.2	4.8	4.74
			80/67	68.6	55.0	85.7	5.0	13.8					70	76.3	59.3	5.2	4.31
			85/71	73.2	56.8	90.4	5.0	14.5					80	74.6	56.3	5.6	3.92
90	9	1.4	75/63	58.2	50.7	77.7	5.8	10.1	70	1.5	60	79.1	63.6	4.8	4.79		
			80/67	62.1	52.2	81.9	5.8	10.7				70	77.7	61.0	5.2	4.37	
			85/71	66.0	54.3	86.2	5.9	11.2				80	76.3	58.2	5.6	3.98	
	13	2.8	75/63	59.9	51.4	78.6	5.5	10.8			60	2.9	60	83.8	67.8	4.9	4.98
			80/67	64.1	53.0	83.0	5.6	11.5					70	82.1	64.8	5.3	4.53
			85/71	68.3	54.7	87.4	5.6	12.1					80	80.4	61.8	5.7	4.13
	18	4.9	75/63	61.0	51.5	79.2	5.4	11.3			60	5.1	60	87.2	70.9	5.0	5.11
			80/67	65.2	53.4	83.7	5.4	12.0					70	85.3	67.6	5.4	4.65
			85/71	69.6	55.1	88.2	5.5	12.7					80	83.3	64.4	5.8	4.23
100	9	1.4	75/63	55.0	49.4	76.1	6.2	8.8	80	1.5	60	87.5	71.4	5.0	5.12		
			80/67	58.8	51.0	80.2	6.3	9.3				70	85.9	68.6	5.4	4.67	
			85/71	62.6	52.8	84.3	6.4	9.8				80	84.3	65.7	5.8	4.26	
	13	2.7	75/63	56.5	50.1	76.9	6.0	9.4			60	2.8	60	92.9	76.3	5.1	5.31
			80/67	60.5	52.0	81.0	6.1	10.0					70	91.0	73.1	5.5	4.84
			85/71	64.6	53.5	85.4	6.1	10.6					80	89.1	69.8	5.9	4.41
	18	4.8	75/63	57.5	50.5	77.3	5.9	9.8			60	5.0	60	96.9	80.0	5.2	5.45
			80/67	61.6	52.5	81.6	5.9	10.4					70	94.7	76.3	5.6	4.97
			85/71	65.8	54.3	86.0	5.9	11.1					80	92.5	72.8	6.0	4.52
110	9	1.4	75/63	51.6	48.2	74.5	6.8	7.6	Extended Range - Anti-freeze required	1.5	60	87.5	71.4	5.0	5.12		
			80/67	55.2	50.3	78.4	6.9	8.1				70	85.9	68.6	5.4	4.67	
			85/71	58.9	51.9	82.4	6.9	8.5				80	84.3	65.7	5.8	4.26	
	13	2.7	75/63	53.1	48.8	75.1	6.5	8.1			60	2.8	60	92.9	76.3	5.1	5.31
			80/67	57.0	50.2	79.2	6.6	8.6					70	91.0	73.1	5.5	4.84
			85/71	60.8	52.4	83.3	6.6	9.1					80	89.1	69.8	5.9	4.41
	18	4.7	75/63	54.1	48.6	75.6	6.4	8.5			60	5.0	60	96.9	80.0	5.2	5.45
			80/67	57.9	51.0	79.7	6.4	9.0					70	94.7	76.3	5.6	4.97
			85/71	61.9	53.0	83.9	6.5	9.6					80	92.5	72.8	6.0	4.52

Extended Range - Anti-freeze required  
 AHR/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.  
 Tabulated unit performance does not include fan or pump power corrections required for AHR/ISO standard performance ratings.  
 Unit performance may be interpolated. Extrapolation is not allowed.  
 For conditions other than rating conditions provided, consult the BST selection software.  
 Ratings below 40°F are with a methanol solution.

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# ES Model Series - Commercial Water Source Heat Pumps



Capacity Data ES071 Part Load (1850 CFM)																						
Cooling									Heating													
Entering Water Temp (°F)	Water flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp DB/WB (°F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power (kW)	EER	Entering Fluid Temp (°F)	Pressure Drop PSI (FOH)	Entering Air Temp (°F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP							
50	9	1.6	75/63	55.0	44.1	63.9	2.6	21.2	30	1.6	60	37.2	27.4	3.2	3.45							
			80/67	58.8	45.5	67.8	2.6	22.7				70	36.9	25.8	3.5	3.05						
			85/71	62.7	46.9	71.7	2.6	24.1				80	36.7	24.0	4.0	2.71						
	13	3.0	75/63	56.3	44.6	64.7	2.4	23.1				30	3.1	60	38.5	28.4	3.2	3.57				
			80/67	60.3	46.0	68.7	2.4	24.8							70	37.9	26.9	3.6	3.13			
			85/71	64.3	47.4	72.8	2.4	26.4							80	37.9	25.0	4.0	2.79			
	18	5.3	75/63	57.1	45.1	65.2	2.3	24.5							30	5.6	60	39.4	29.2	3.2	3.64	
			80/67	61.2	46.4	69.3	2.3	26.3										70	38.7	27.5	3.6	3.19
			85/71	65.4	47.8	73.5	2.3	28.2										80	38.4	25.6	4.0	2.83
60	9	1.5	75/63	52.5	43.1	62.5	2.9	18.1	40	1.6	60							42.4	32.3	3.2	3.89	
			80/67	56.2	44.5	66.1	2.9	19.4										70	41.8	30.5	3.6	3.43
			85/71	59.8	46.1	69.9	2.9	20.7										80	41.7	28.6	4.0	3.06
	13	2.9	75/63	53.7	43.8	63.2	2.7	19.6				40	3.1	60				44.0	33.7	3.2	4.03	
			80/67	57.5	45.2	66.9	2.7	21.0										70	43.3	31.8	3.6	3.55
			85/71	61.4	46.7	70.9	2.7	22.5										80	42.6	30.2	4.0	3.13
	18	5.2	75/63	54.6	43.9	63.7	2.6	20.6							40	5.5	60	45.1	34.8	3.2	4.12	
			80/67	58.4	45.6	67.5	2.6	22.2										70	44.3	32.9	3.6	3.62
			85/71	62.6	46.8	71.6	2.6	23.9										80	43.6	30.9	4.0	3.19
70	9	1.5	75/63	50.0	42.2	61.0	3.2	15.5	50	1.6	60							47.9	37.7	3.2	4.35	
			80/67	53.5	43.7	64.5	3.2	16.6										70	47.3	35.7	3.6	3.84
			85/71	57.1	45.2	68.1	3.2	17.8										80	46.7	33.7	4.0	3.41
	13	2.9	75/63	51.2	42.5	61.7	3.1	16.7				50	3.0	60				49.8	39.9	3.2	4.5	
			80/67	54.9	44.0	65.3	3.1	18.0										70	49.1	37.4	3.6	3.99
			85/71	58.6	45.7	69.1	3.0	19.3										80	48.4	35.4	4.0	3.54
	18	5.1	75/63	52.0	42.8	62.1	3.0	17.5							50	5.3	60	51.3	41.0	3.3	4.61	
			80/67	55.7	44.3	65.8	2.9	18.9										70	50.4	38.6	3.6	4.09
			85/71	59.6	46.1	69.7	2.9	20.4										80	49.6	36.6	4.0	3.63
80	9	1.5	75/63	47.4	41.2	59.6	3.6	13.2	60	1.5	60							53.9	43.5	3.3	4.83	
			80/67	50.8	42.4	63.0	3.6	14.2										70	53.0	41.5	3.6	4.29
			85/71	54.2	44.2	66.4	3.6	15.3										80	52.3	39.3	4.0	3.82
	13	2.8	75/63	48.6	41.6	60.2	3.4	14.2				60	2.9	60				56.3	46.0	3.3	5.04	
			80/67	52.2	43.0	63.7	3.4	15.4										70	55.2	43.7	3.6	4.46
			85/71	55.8	44.4	67.3	3.4	16.5										80	54.3	41.3	4.0	3.96
	18	5.0	75/63	49.3	41.9	60.6	3.3	14.9							60	5.2	60	58.0	47.7	3.3	5.18	
			80/67	52.9	43.5	64.2	3.3	16.1										70	56.8	45.3	3.6	4.58
			85/71	56.7	44.8	67.9	3.3	17.4										80	55.7	42.8	4.0	4.06
90	9	1.4	75/63	44.8	39.9	58.3	4.0	11.2	70	1.5	60							60.3	49.8	3.3	5.36	
			80/67	48.1	41.4	61.5	4.0	12.1										70	59.1	47.5	3.6	4.76
			85/71	51.4	42.9	64.8	3.9	13.0										80	58.1	45.2	4.0	4.23
	13	2.8	75/63	45.9	40.5	58.8	3.8	12.0				70	2.9	60				63.1	52.6	3.3	5.59	
			80/67	49.3	41.9	62.1	3.8	13.0										70	61.8	50.2	3.7	4.96
			85/71	52.7	43.7	65.5	3.8	14.1										80	60.5	47.6	4.0	4.4
	18	4.9	75/63	46.6	40.8	59.2	3.7	12.6							70	5.1	60	65.2	54.7	3.3	5.76	
			80/67	50.1	42.2	62.6	3.7	13.7										70	63.7	52.1	3.7	5.1
			85/71	53.7	44.0	66.1	3.6	14.8										80	62.3	49.3	4.0	4.52
100	9	1.4	75/63	42.1	39.0	57.1	4.5	9.4	80	1.5	60							66.9	56.3	3.3	5.89	
			80/67	45.2	40.6	60.1	4.4	10.2										70	65.6	53.9	3.7	5.24
			85/71	48.4	42.0	63.3	4.4	11.0										80	64.3	51.3	4.0	4.66
	13	2.7	75/63	43.1	39.4	57.5	4.3	10.1				80	2.8	60				70.3	59.7	3.3	6.15	
			80/67	46.4	40.9	60.7	4.2	11.0										70	68.7	57.0	3.7	5.47
			85/71	49.7	42.6	63.9	4.2	11.9										80	67.2	54.2	4.1	4.86
	18	4.8	75/63	43.8	39.7	57.8	4.2	10.6							80	5.0	60	72.8	62.1	3.4	6.34	
			80/67	47.1	41.4	61.0	4.1	11.5										70	70.9	59.2	3.7	5.63
			85/71	50.6	42.6	64.4	4.1	12.5										80	69.2	56.1	4.1	4.99
110	9	1.4	75/63	39.6	37.7	56.2	5.0	8.0	Extended Range	1.5	60							66.9	56.3	3.3	5.89	
			80/67	42.5	39.5	59.0	4.9	8.6										70	65.6	53.9	3.7	5.24
			85/71	45.4	41.2	61.9	4.9	9.3										80	64.3	51.3	4.0	4.66
	13	2.7	75/63	40.5	38.3	56.5	4.8	8.5				Extended Range	2.8	60				70.3	59.7	3.3	6.15	
			80/67	43.5	39.8	59.5	4.7	9.2										70	68.7	57.0	3.7	5.47
			85/71	46.6	41.5	62.5	4.7	10.0										80	67.2	54.2	4.1	4.86
	18	4.7	75/63	41.1	38.6	56.7	4.7	8.8							Extended Range	5.0	60	72.8	62.1	3.4	6.34	
			80/67	44.2	40.3	59.7	4.6	9.6										70	70.9	59.2	3.7	5.63
			85/71	47.4	41.9	62.8	4.5	10.4										80	69.2	56.1	4.1	4.99

**Extended Range - Anti-freeze required**

AHRI/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Tabulated unit performance does not include fan or pump power corrections required for AHRI/ISO standard performance ratings.

Unit performance may be interpolated. Extrapolation is not allowed.

For conditions other than rating conditions provided, consult the BST selection software.

Ratings below 40°F are with a methanol solution.

**DISCLAIMER: The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.**

# ES Model Series - Commercial Water Source Heat Pumps



Electrical Data - ECM (Standard) Constant Airflow Motor															
Model	Voltage Code	Rated Voltage	Voltage Min/Max	Compressor			Single Point Power				Dual Point Power				
				QTY	RLA	LRA	FLA	Min Circuit Amps	MOP Calculation	Max Fuse/HACR	Compressor			Total Unit	
											QTY	RLA	LRA	Min. Circuit Amps	Max Fuse/HACR
025	1	208-230/1/60	197/253	1	11.7	58.3	2.8	17.4	29.1	25	1	11.7	58.3	14.6	25
	2	265-277/1/60	239/291	1	9.1	54.0	2.6	14.0	23.1	20					
035	1	208-230/1/60	197/253	1	15.6	83.0	4.3	23.8	39.4	35	1	15.6	83.0	19.5	35
	3	208-230/3/60	197/253	1	11.6	73.0	4.3	18.8	30.4	30	1	11.6	73.0	14.5	25
049	4	460/3/60	414/506	1	5.7	38.0	4.1	11.2	16.9	15					
	1	208-230/1/60	197/253	1	21.2	104.0	6.8	33.3	54.5	50	1	21.2	104.0	26.5	45
	3	208-230/3/60	197/253	1	14.0	83.1	6.8	24.3	38.3	35	1	14.0	83.1	17.5	30
061	4	460/3/60	414/506	1	6.4	41.0	5.5	13.5	19.9	15					
	1	208-230/1/60	197/253	1	26.9	139.9	6.8	40.4	67.3	60	1	26.9	139.9	33.6	60
	3	208-230/3/60	197/253	1	16.5	110.0	9.1	29.7	46.2	45	1	16.5	110.0	20.6	35
071	4	460/3/60	414/506	1	7.2	52.0	6.9	15.9	23.1	20					
	1	208-230/1/60	197/253	1	29.7	179.2	9.1	46.2	75.9	70	1	29.7	179.2	37.1	60
	3	208-230/3/60	197/253	1	17.6	136.0	9.1	31.1	48.7	45	1	17.6	136.0	22.0	35
	4	460/3/60	414/506	1	8.5	66.1	6.9	17.5	26.0	25					

Note: Resistance value tolerance +/- 7%.  
All resistance values must be measured with compressor at room temperature.

1st Data plate for units with EH - compressor power connection									
Models	Voltage Code	Voltage/Phase/Hz	Voltage Min/Max	Compressor			Total Unit		
				QTY	RLA	LRA	Min Circuit Amps	MOP Calculation	Max Fuse/HACR
025	1	208-230/1/60	197/253	1	11.7	58.3	14.6	26.3	25
035	1	208-230/1/60	197/253	1	15.6	83.0	19.5	35.1	35
	3	208-230/3/60	197/253	1	11.6	73.0	14.5	26.1	25
049	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
061	1	208-230/1/60	197/253	1	26.9	139.9	33.6	60.5	60
	3	208-230/3/60	197/253	1	16.5	110.0	20.6	37.1	35
071	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

# ES Model Series - Commercial Water Source Heat Pumps



2nd data plate for units with EH - Constant Airflow ECM motor												
Model	Electric Heater Rated kW	Stage	Heater Watts		Heater Amps		Motor FLA (A)	Circuit	MCA		MOP	
			240V	208V	240V	208V		Fuses	240V	208V	240V	208V
025	4.8	1	4,800	3,600	20.0	17.3	2.8	-	28.5	25.1	30	30
025	9.6	1	9,600	7,200	40.0	34.6	2.8	-	53.5	46.8	60	50
035	4.8	1	4,800	3,600	20.0	17.3	4.3	-	30.4	27.0	35	30
035	9.6	1	9,600	7,200	40.0	34.6	4.3	-	55.4	48.6	60	50
049	4.8	1	4,800	3,600	20.0	17.3	6.8	-	33.5	30.1	35	35
049	9.6	1	9,600	7,200	40.0	34.6	6.8	-	58.5	51.8	60	60
049	14.4	2	14400	10800	60.0	51.9	6.8	F1/F2	83.5	73.4	90	80
								F3/F4				
061	4.8	1	4,800	3,600	20.0	17.3	9.1	-	36.4	33.0	40	35
061	9.6	1	9,600	7,200	40.0	34.6	9.1	-	61.4	54.6	70	60
061	14.4	2	14400	10800	60.0	51.9	9.1	F1/F2	86.4	76.3	90	80
								F3/F4				
061	19.2	2	19200	14000	80.0	69.2	9.1	F1/F2	111.4	97.9	125	100
								F3/F4				
071	4.8	1	4,800	3,600	20.0	17.3	9.1	-	36.4	33.0	40	35
071	9.6	1	9,600	7,200	40.0	34.6	9.1	-	61.4	54.6	70	60
071	14.4	2	14400	10800	60.0	51.9	9.1	F1/F2	86.4	76.3	90	80
								F3/F4				
071	19.2	2	19200	14000	80.0	69.2	9.1	F1/F2	111.4	97.9	125	100
								F3/F4				

# ES Model Series - Commercial Water Source Heat Pumps



# BOSCH

Blower Performance Const Airflow ECM Motor														
Model	Fan Speed	Rated Airflow	Adjust	Tap	Available External Static Pressure (in. wc. Wet coil and filter included)									
					0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
<b>025 Part Load</b>	Hi	600	+	A	600	600	600	600	600	600	600	600	-	-
	Med	500	Normal	A	500	500	500	500	500	500	500	500	-	-
	Low	425	-	A	425	425	425	425	425	425	425	425	-	-
<b>025 Full Load</b>	Hi	900	+	A	900	900	900	900	900	900	900	900	-	-
	Med	750	Normal	A	750	750	750	750	750	750	750	750	-	-
	Low	650	-	A	650	650	650	650	650	650	650	650	-	-
<b>035 Part Load</b>	Hi	1200	+	A	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
	Med	1050	Normal	A	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
	Low	900	-	A	900	900	900	900	900	900	900	900	900	900
<b>035 Full Load</b>	Hi	1400	+	A	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
	Med	1225	Normal	A	1225	1225	1225	1225	1225	1225	1225	1225	1225	1225
	Low	1050	-	A	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
<b>049 Part Load</b>	Hi	1100	+	B	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
	Med	925	Normal	B	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250
	Low	800	-	B	1063	1063	1063	1063	1063	1063	1063	1063	1063	1063
<b>049 Full Load</b>	Hi	1700	+	B	1760	1760	1760	1760	1760	1760	1760	1760	1760	1760
	Med	1500	Normal	B	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
	Low	1275	-	B	1360	1360	1360	1360	1360	1360	1360	1360	1360	1360
<b>061 Part Load</b>	Hi	1725	+	A	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725
	Med	1500	Normal	A	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
	Low	1275	-	A	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275
<b>061 Full Load</b>	Hi	2300	+	A	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
	Med	2000	Normal	A	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	Low	1700	-	A	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
<b>071 Part Load</b>	Hi	1850	+	A	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
	Med	1600	Normal	A	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
	Low	1500	-	A	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525
<b>071 Full Load</b>	Hi	2300	+	A	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
	Med	2200	Normal	A	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
	Low	1900	-	A	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900

# ES Model Series - Commercial Water Source Heat Pumps



# BOSCH

Physical Data					
Description	025	035	049	061	071
Compressor Type (Qty 1)	Scroll	Scroll	Scroll	Scroll	Scroll
Refrigeration Charge (oz)	68	68	78	90	111
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
Evaporator Coil					
Coil Type	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin
Air Coil Dimensions Vertical (H x L)	24 X 21	24 X 21	24 X 27	24 X 27	32 X 27
Air Coil Dimensions Horizontal (H x L)	18 X 28	18 X 28	20 X 32.5	20 X 32.5	20 X 43
Row(s)	3	3	3	3	3
Motor & Blower					
Fan Motor Type/Speeds	ECM Const Air Flow/3	ECM Const Air Flow/3	ECM Const Air Flow/3	ECM Const Air Flow/3	ECM Const Air Flow/3
Fan Motor (HP)	1/3	1/2	3/4	1	1
Blower Wheel Size (Dia. x W)	9x7	9x7	10x8	11x9	11x9
Water Coil					
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
Vertical Cabinet					
Nominal size of Standard Filter - 1" (H x L)	24 X 24	24 X 24	24 X 30	24 X 30	16 X 30 (2)
Weight - Operating (lbs)	290	290	318	390	450
Weight - Shipping (lbs)	315	315	348	415	495
Horizontal Cabinet					
Nominal size of Standard Filter - 1" (H x L)	20 X 30	20 X 30	20 X 34.5	20 X 34.5	20 X 24 (2)
Weight - Operating (lbs)	290	290	318	390	450
Weight - Shipping (lbs)	315	315	348	415	495

ES Model Series -  
Commercial Water Source Heat Pumps



Horizontal Cabinet Corner Weights										
Configuration			Left Hand Evaporator				Right Hand Evaporator			
Model	Unit	Total	Left Front*	Right Front*	Left Back	Right Back	Left Front*	Right Front*	Left Back	Right Back
025	Lbs	290	72	102	58	58	72	102	58	58
	kg	132	33	46	26	26	33	46	26	26
035	Lbs	290	72	102	58	58	72	102	58	58
	kg	132	33	47	26	26	33	47	26	26
049	Lbs	318	79	111	64	64	79	111	64	64
	kg	145	36	51	29	29	36	51	29	29
061	Lbs	390	97	137	78	78	97	137	78	78
	kg	177	44	62	35	35	44	62	35	35
071	Lbs	450	112	158	90	90	112	158	90	90
	kg	205	51	72	41	41	51	72	41	41

\*Front is control box end